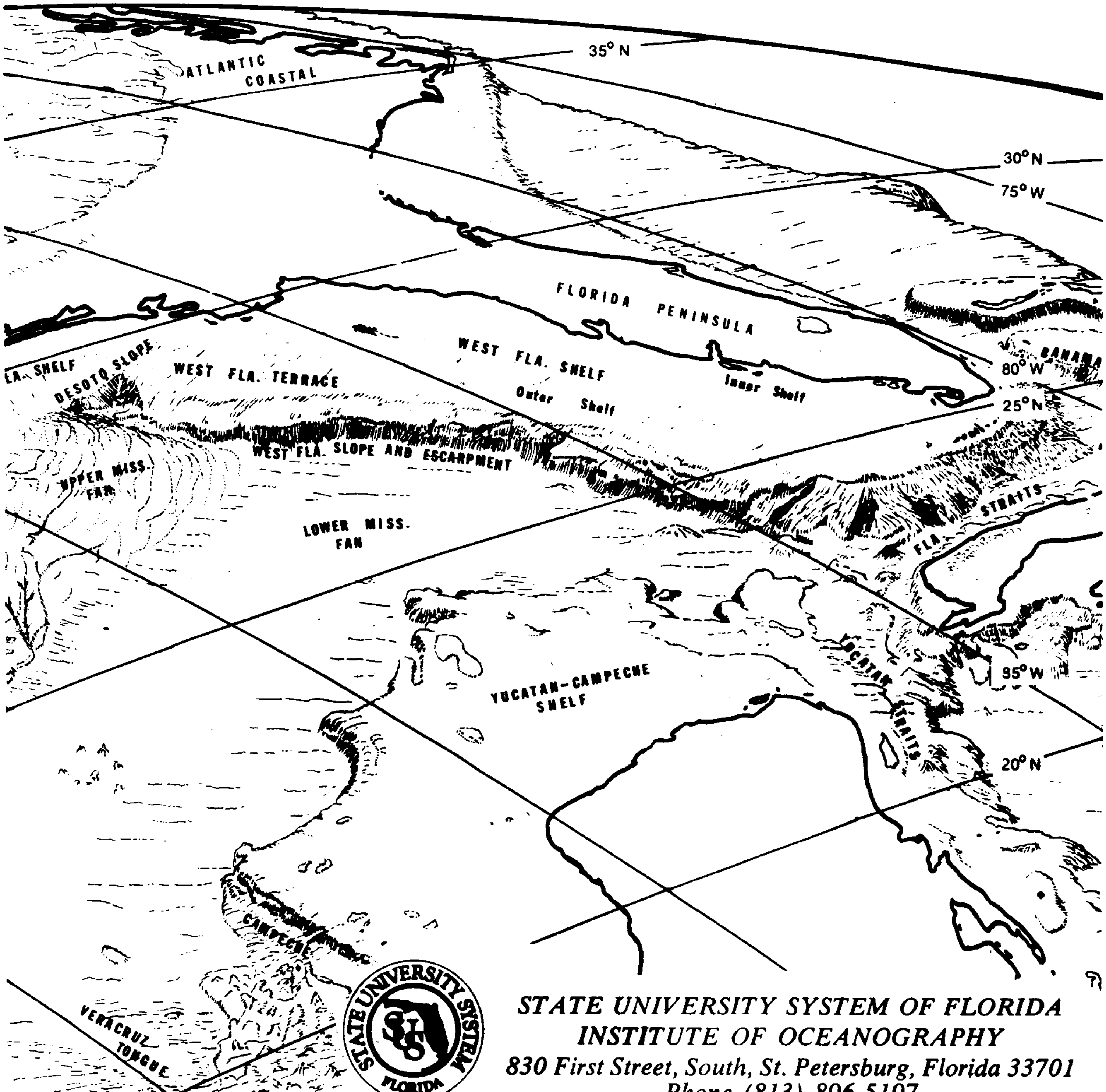
1977 - 26

PRINCIPAL INVESTIGATORS FINAL REPORTS

BLM CONTRACT NO. 08550-CT5-30

VOLUME VI (XII)



STATE UNIVERSITY SYSTEM OF FLORIDA
INSTITUTE OF OCEANOGRAPHY
830 First Street, South, St. Petersburg, Florida 33701
Phone (813) 896-5197

...rsity of Florida ...esville • *Florida State University Tallahassee* • *Florida A. & M. University Tallahassee* • *University of South Florida Tampa* • *Florida Atlantic University Boca Raton*

...rsity of West Florida Pensacola • *Florida Technological University Orlando* • *University of North Florida Jacksonville* • *Florida International University Miami*

DATA MANAGEMENT AND STATISTICAL ANALYSIS GROUP
-DMSAG-
ENVIRONMENTAL BASELINE MONITORING OF THE MAFLA OCS

University of South Florida, Department of Mathematics

Principal Investigator:
Chris P. Tsokos

Associate Investigators:
Stephen C. Smeach
T. L. Smith
John C. Turner
Robert M. Witenhafer

TABLE OF CONTENTS

INTRODUCTION

The Data Management and Statistical Analysis Group (DMSAG) is responsible for the creation and maintenance of the data base for the Environmental Baseline and Rig Monitoring Study of the MAFLA OCS (BLM Contract Number 08550-CT5-30). In addition DMSAG is responsible for preparation of various inventory reports, completion of miscellaneous management requests relative to the data base, performance of statistical analyses, and other miscellaneous analytical manipulations of the scientific data, as set forth in the work statement governing this contract.

During the time period May, 1975 to November, 1976, DMSAG personnel have been involved in fulfilling the objectives stated in the work statement of the contract. In section II of this report details are given as to what the final data base will look like, how to retrieve data from it, and how data was stored prior to being placed in final form.

Problems that we have encountered in fulfilling P.I. requests for data and statistical analyses will be discussed in section III. Further, the types of analyses that DMSAG have done will be detailed in that section. Section IV contains DMSAG's recommendations for improving the working relationship with the P.I.'s and the Program Manager. Further comments on how to improve the project as a whole will also be discussed. Section V, the appendices, contain all of the data formats developed and used by DMSAG in creating the data base and descriptions of each format. Appendix A will include the formats while Appendix B will contain the format descriptions.

SCIENTIFIC DATA BASE

During the past year DMSAG has created and maintained on magnetic tape a data base of scientific data that consists of data concerning the initial collection and transferral of samples for the respective P.I.'s and the data obtained from the analysis of those samples by these same P.I.'s. While the exact structure of the data base changed as time went on, it basically consisted of five sections. These five sections were as follows:

Data Set Name	Contents
1. MAFLA.WORK	All Unedited Data
2. MAFLA.INV	All Inventory Data
3. MAFLA.SCI	All Scientific Data
4. MAFLA.TAX	All Taxonomic Abundance Data
5. MAFLA.HC	All Hydrocarbon Data

All data, when first entered into the data base, was put into MAFLA.WORK until it was verified and corrected. It was then transferred to one of the other sections for final storage. The section containing the hydrocarbon data was created when we had difficulties with the data we received via magnetic tape. As these difficulties are cleared up, the data is transferred to MAFLA.SCI.

The final corrected data base will be contained on only one magnetic tape. It will be created using the following attributes: record format-fixed blocks, logical record length-80 bytes, block size-16,000 bytes, and labels. This one tape will be called MAF01 and will be initialized and constructed on an IBM 360 system. Further it will be a 9 track magnetic tape with 1600 BPI (bytes per inch).

The tape, MAFL01, will contain all data supplied to us by the P.I.'s both in the Area Monitoring and Rig Monitoring phases of the program. Table 2.1 shows how the data will be organized when all data is received and verified. The column "number of records" deals with the number of 80 byte card images contained in each file. Thus, if any of the files were to be punched out onto a card deck each record would correspond to one card. We have never received any data from Dr. Hopkins dealing with the dredge/trawl program. However, all of his data for the Dive program has been received, placed in the data bank, and analyzed statistically.

The data appearing on this tape will be in two forms. All scientific and inventory data can be retrieved from the tape by using the enitre DMSAG file name. For example, to retrieve Dr. LaRock's data you tell the computer to accept only cards having MAFL0218 as the first eight characters. The second form that data appears in has no DMSAG file name on each record. Instead a keycard appears before and after each file to designate the file. These keycards take the DMSAG file name with the words BEGIN or END following the name. To retrieve Dr. Blake's abundance data you would tell the computer to accept all cards after MAFL0205ABEGIN and accept all cards before MAFL0205AEND. An asterisk has been placed in front of the DMSAG file name for all files needing to be accessed by this second method. Also to distinguish Area Monitoring and Rig Monitoring data we use the following codes: For Area Monitoring-MAFL and for Rig Monitoring-RIGM.

CONTENTS OF MAFLA SCIENTIFIC DATA BASE

TABLE 2.1

DMSAG File	FILE NAME	NUMBER OF RECORDS	RESPONSIBLE P.I.
MAFLO203N	Neuston Trace Metal Data	64	P. Betzer
MAFLO203R	Refractory Trace Metal Data	46	P. Betzer
MAFLO203W	Weak-Acid Soluble Trace Metal Data	44	P. Betzer
MAFLO203Z	Zooplankton Trace Metal Data	46	P. Betzer
MAFLO204M	Macro-Invertebrate Trace Metal Data	227	S. Betzer
MAFLO204R	Replicated Trace Metal Data	75	S. Betzer
MAFLO204T	Invertebrate Taxonomic Trace Metal Data	221	S. Betzer
MAFLO205B	Macro-Invertebrate Biomass Data	316	N. Blake
MAFLO206B	Foraminifera Sample Density Data	270	W. Bock
MAFLO207L	Demersal Fish Meristics Data	820	S. Bortone
MAFLO209C	Calculated Data Analysis	3,071	J. Calder
MAFLO209H	Hydrocarbon Peak Data	14,457	J. Calder
MAFLO209R1	Hydrocarbon Ratios Card 1	449	J. Calder
MAFLO209R2	Hydrocarbon Ratios Card 2	449	J. Calder
MAFLO209S1	Hydrocarbon Summary Card 1	449	J. Calder
MAFLO209S2	Hydrocarbon Summary Card 2	449	J. Calder
MAFLO210A	Neuston Collection (Oceanographic) Data	92	S. Collard
MAFLO210B	Neuston Collection (Meteorological) Data	92	S. Collard
MAFLO210F	Fish Abundance Data	93	S. Collard
MAFLO210I	Invertebrate Abundance Data	284	S. Collard
MAFLO210L	Larvae Abundance Data	126	S. Collard
MAFLO210T	Neuston Totals and Volume/Weight Data	92	S. Collard

TABLE 2.1 continued

DMSAG FILE	FILE NAME	NUMBER OF RECORDS	RESPONSIBLE P.I.
MAFLO211A	Standard Sediment Parameter Data	542	L. Doyle
MAFLO211B	Box-Core Color Description Data	1,376	L. Doyle
MAFLO213Q	Dive-Station Quadrat Data	120	T. Hopkins
MAFLO214A	Surface Sediment Clay Mineralogy Data	83	W. Huang
MAFLO214B	Suspended Mineralogy Data	46	W. Huang
MAFLO215	Phytoplankton Primary Productivity Data	182	R. Iverson
MAFLO216	DOC, POC Data	45	G. Knauer
MAFLO217B	Macro-Invertebrate Biomass Data	379	H. Kritzler
MAFLO218	Sediment ATP Data	128	P. LaRock
MAFLO219A	Sediment Organic Carbon Data	45	J. & T. Lytle
MAFLO219B	Hydrocarbon Benthic Ratio Data	36	J. & T. Lytle
MAFLO219H	Hydrocarbon Peak Data	4,417	J. & T. Lytle
MAFLO219R	Sediment Organic Carbon Ratio Data	45	J. & T. Lytle
MAFLO219S	Summary of Gas Chromatography Data	66	J. & T. Lytle
MAFLO221	Transmissometry Data	1,087	F. Manheim
MAFLO222C	Zooplankton Collection Data	47	F. Maturo/ J. Caldwell
MAFLO223L	Demersal Fish Meristics Data	753	G. Mayer
MAFLO225H	Hydrocarbon Peak Data	9,132	P. Meyers
MAFLO225R1	Hydrocarbon Ratio Data Card 1	134	P. Meyers
MAFLO225R2	Hydrocarbon Ratio Data Card 2	134	P. Meyers
MAFLO225S	Summary of Gas Chromatography Data	265	P. Meyers
MAFLO225T	Taxonomic Hydrocarbon Data	185	P. Meyers
MAFLO227A	Sediment Trace Metal Data	63	B. Presley
MAFLO229L	Demersal Fish Meristics Data	1,015	R. Shipp

TABLE 2.1 continued

DMSAG FILE	FILE NAME	NUMBER OF RECORDS	RESPONSIBLE P.I.
MAFLO232B	Macro-Invertebrate Biomass Data	486	B. Vittor
MAFLO233N	Carbonate and Skeletal Sand Constituent (Particle Counts)	84	H. Wanless
MAFLO233P	Carbonate and Skeletal Sand Constituent (Percentage)	652	H. Wanless
MAFLO235S	STD Data	2,245	M. Rinkel
MAFLO235X	XBT Data	535	M. Rinkel
MAFLO205A	Mollusc Abundance Data	2,219	N. Blake
MAFLO206A	Foraminifera Abundance Data	9,229	W. Bock
MAFLO206R	Foraminifera Relic Abundance Data	2,178	W. Bock
MAFLO217A	Polychaete Abundance Data	8,589	H. Kritzler
MAFLO232A	Polychaete Abundance Data	5,461	B. Vittor
MAFLO207N	Demersal Fish Count Data	389	S. Bortone
MAFLO223N	Demersal Fish Count Data	278	G. Mayer
MAFLO229N	Demersal Fish Count Data	444	R. Shipp
MAFLO222Z	Zooplankton Abundance Data	4,104	F. Maturo/ J. Caldwell
MAFLO213A	Epifaunal-Epifloral Abundance Data	664	T. Hopkins
MAFLO226A	Micro-Mollusc Abundance Data	84	D. Moore
MAFLO226R	Micro-Mollusc Relic Abundance Data	423	D. Moore
MAFLO222M	Meiofaunal Abundance Data	2,952	F. Maturo/ M. Crezee
RIGMO206A	Foraminifera Abundance Data	1,465	W. Bock
RIGMO206B	Foraminifera Sample Density Data	74	W. Bock
RIGMO211A	Standard Sediment Parameter Data	148	L. Doyle
RIGMO214A	Surface Sediment Clay Mineralogy Data	74	W. Huang
RIGMO219A	Sediment Organic Carbon Data	74	J. & T. Lytle

TABLE 2.1 continued

DMSAG FILE	FILE NAME	NUMBER OF RECORDS	RESPONSIBLE P.I.
RIGM0219B	Hydrocarbon Benthic Ratio Data	73	J. & T. Lytle
RIGM0219H	Hydrocarbon Peak Data	5,342	J. & T. Lytle
RIGM0219R	Sediment Organic Carbon Ratio Data	74	J. & T. Lytle
RIGM0225H	Hydrocarbon Peak Data	9,941	P. Meyers
RIGM0225R1	Hydrocarbon Ratio Data Card 1	141	P. Meyers
RIGM0225R2	Hydrocarbon Ratio Data Card 2	141	P. Meyers
RIGM0225S	Summary of Gas Chromatography Data	282	P. Meyers
RIGM0255T	Taxonomic Hydrocarbon Data	78	P. Meyers
RIGM0227A	Sediment Trace Metal Data	74	B. Presley
RIGM0227M	Invertebrate Trace Metal Data	148	B. Presley
RIGM0227T	Invertebrate Taxonomic Trace Metal Data	148	B. Presley
MAFL0100	BLM Cruise Station Data	457	
MAFL0101	Box Core Program	1,607	
MAFL0102	Dive Program	1,256	
MAFL0103	Dredge/Trawl Program	605	
MAFL0104	Water Column Program	616	
RIGM0100	BLM Cruise Station Data	134	
RIGM0102	Dive Program	669	
RIGM0103	Dredge/Trawl Program	754	

INFORMATION AND DATA ANALYSIS PROVIDED TO PRINCIPAL INVESTIGATORS

The following services have been provided to the principal investigators of the MAFLA project by DMSAG personnel. They are considered in groups which required similar data manipulation.

1. As far as possible, all principal investigators have received formatted listings of their data as it appears in the data bank following verification, editing, and, in many instances, consultations with the investigators regarding necessary format modification. Several difficulties did arise, though:

    a) Changes in instrumentation, terminology of sampling identification, and precision of recorded results were often detected only upon the receipt of sample data by DMSAG.

    b) There seems to be extensive use of non-standard taxonomic identifiers by the MAFLA principal investigators. Due to the fact that much of the software developed by DMSAG requires absolute consistency of spelling and notation, much effort was expended in ensuring this within the data for each principal investigator. The effort required to synoptize the taxonomy among all investigators would be prohibitively expensive, though desirable.

    c) The hydrocarbon data has involved certain particular problems. For one thing, it is very voluminous, comprising more than half of the data bank. Also, the automatic procedures used in large-scale chromatographic work have provided much information which is in addition to that required for this project. Due to the amount of this data and the problems attendant to its entry in the data bank, we have been unable to perform extensive analysis on it.

d) Requests have often been received for listings of data while it is still in the process of editing and previous to verification by the principal investigator. The dilemma of whether to immediately respond or await verification has been exacerbated by the apparent unwillingness of some investigators to verify their data as it exists in the data bank.

e) Delays in the submission of data to DMSAG by the principal investigators have created obvious difficulties. Not only do these delays make it difficult for DMSAG to provide timely service, but the ensuing concentration of activity just prior to report deadlines results in an inefficient allocation of resources by DMSAG personnel, but also in increased difficulty in acquiring necessary data processing resources-keypunching, software development, and computer time.

f) On several occasions it has been requested of DMSAG that a formatted dump of the complete data base be produced. While these may be of value to those requesting them, it should be realized that such an undertaking is highly expensive in time and money due to the necessary reallocation of large amounts of manpower and computer time. One of these requests had to be fulfilled during a major holiday weekend resulting in a tremendous loss of morale among

DMSAG personnel.

2. Much of the analysis of abundance data, especially from the Box-Core Program, was carried out using various routines developed for the implementation of the Standard Operating Procedure (SOP) proposed by Dr. Kritzler. Among these are the following types of analysis:

   a) raw listings and summary data including numbers of species, animals and percent of sample for each taxonomic designation, replicate, or sample.

   b) density estimated by species, replicate, and sample.

   c) Shannon-Weaver diversity/evenness measures by sample.

   d) affinities between replicates and between stations including Sander's affinities, Morisita's minimal percentage affinities, and the index of similarity.

   e) Mountford's pairwise clustering of affinities.

   f) Cole species affinities within station.

The output of the relevant routines, as determined by the principal investigators, was provided for the following investigators: Blake, Bock, Bortone, Caldwell, Collard, Kritzler, Mayer, Shipp, and Vittor. For Hopkins and Crezee, only the diversity/evenness measures were obtained from the SOP. In addition, the following analyses were also delivered:

   a) Collard-correlation between several taxonomic category abundances and the oceanographic/meteorological factors observed; analyses of variance for total abundances of various taxonomical levels with location, sample period, and time of collection (day/night) using several variance-reducing data transformations; tabulations of abundances for species by station and stations by species.

b) Crezee-tabulation of station totals by species; correlation of meiofaunal abundances with sediment mean grain size; tabulation, by station, of the numbers of turbellarians, gastrotrichs, copepods, and nematodes collected.

c) Hopkins (Dive Program Data only)- diversity/evenness measures by stations, coral type within station, quadrat, and coral type within quadrat for each sample period and for the sample periods combined; correlations of hard and soft coral abundances with stations and quadrat; analysis of variance for selected hard and soft species at each station, of abundance versus species and quadrat.

d) Bortone, Mayer, Shipp-determination of frequency distributions of demersal fish length data by species and biomass data by species and station.

e) Vittor-correlations between sediment grain size characteristics and diversity/evenness measures, total abundance, and total number of species for each station, by sample periods.

3. Perhaps the most requested data listings are those of sedimentary data including grain size characteristics, trace metals, hydrocarbon, mineralogy, and ATP. This should be considered in the design of any future study of this type. In view of the fact that at least a qualitative assessment is required of the relationship between sedimentary and biological factors and observing the occurrence of microhabitats in the box-core stations, we are forced to conclude that it may be necessary to acquire sedimentary information for every

core in order to validly quantify such assessments.

4. In addition to the analyses discussed above and the routine transmittal of data listings to those requesting them, the following analyses have also been performed:

   a) Lytles-correlations between sediment grain size characteristics and hydrocarbon summary data (total aliphatics, total aromatics, total organic carbons).

   b) Meyers-graphing of chromatographic data (retention time versus percent of sample for peak).

   c) Pyle-conversion of geophysical shot point locations to Universal Transverse Mercator projection in feet (see Appendix B) and their mapping at 1:1,000,000 scale.

   d) Doyle-calculation of mean grain size for standard sedimentary parameter data.

5. Several requests for analysis have been made to DMSAG which were not applicable to the intended data. Many times the problem was that the data needed to do the requested analyses had never been collected. Also, this has resulted in a confusion of the distinction between categorical and numerical data. In addition, the method of collection and the variability of the data have made some statistical results lose value. Such a problem has recently occurred as a result of a request by S. Betzer. Similar difficulties have also resulted from requests by Collard, Hopkins, and others.

6. Finally, all STD data was sent to all principal investigators.

RECOMMENDATIONS

One of the greatest difficulties in this project has been the lack of standardization regarding channels of communication. It would help greatly if it were made clear that all requests of DMSAG should be sent in writing to the director of DMSAG.

Secondly, the work statement is not clear concerning the responsibility for the various phases of data preparation. The responsibility for transcribing raw data into DMSAG format and the verification of data as entered in the data bank should be more clearly established.

The opportunity for DMSAG personnel to meet with the principal investigators of each program should be more formally established as a part of the quarterly meetings. Presently, such discussions occur haphazardly.

Finally, some mechanism needs to be established so that DMSAG may be aware of secondary and tertiary data and sample transmittal. We have, on occasion, needed to know the final recipient of a sample or who received data from a given source. Our limited information combined with the errors found in the records of some primary transfers has limited our ability to answer such questions.

APPENDIX A

DMSAG DATA FORMAT DESCRIPTIONS

DMSAG INVENTORY DATA FILE 0100

BLM Cruise Station Data

RECORD FORMAT DESCRIPTION

Columns	Entry	Description
1- 4	MAFL	BLM-OCS Area Designation
5- 8	0100	DMSAG File Code
10-13	XXXX	BLM Cruise Number
15-13	XXXX	Research Vessel Identification
20-22	XXX	Chief Scientist Initials
24-26	XXX	Sample Method (See Table I)
23-31	XXXX	Station Number
33-39	XXXXXX	Latitude
40	A,B,C,D, E or F	Latitude-Longitude Format Code (See Table II)
41-47	XXXXXXX	Longitude
49-53	XXXXX	Water Depth (to a tenth)
54	F or M	Feet or Meter Indicator
56-61	XXXXXX	Date (Year/Month/Day)
63-66	XXXX	Start Time (GMT Hours/Minutes)
68-71	XXXX	Stop Time (GMT Hours/Minutes)
73	X	Inventory File Key, IFK (See Table III)
74-75	XX	Number of Inventory File Records
77-80	XXXX	DMSAG Sequencer

DMSAG INVENTORY DATA FILE 0101

Box Core Program

RECORD FORMAT DESCRIPTION

Columns	Entry	Description
1- 4	MAFL	BLM-OCS Area Designation
5- 8	0101	DMSAG File Code
10-12	XXX	Sample I.D.
14-15	XX	Number of Photographs
17-19	XXX	Depth of Core (centimeters)
21-22	XX	Number of Subsamples
24-25	XX	P.I. Code: Sediment Analysis
27-28	XX	P.I. Code: Sediment Archives
30-31	XX	P.I. Code: X-Radiography
33-34	XX	P.I. Code: Hydrocarbon Analysis (1 gal.)
36-37	XX	P.I. Code: Hydrocarbon Analysis (1/2 gal.)
39-40	XX	P.I. Code: Hydrocarbon Analysis (1 pt.)
42-43	XX	P.I. Code: Trace Metal Analysis
45-46	XX	P.I. Code: ATP Analysis
48-49	XX	P.I. Code: Micromollusc Identification
51-52	XX	P.I. Code: Foraminifera Identification
54-55	XX	P.I. Code: Meiofauna Identification
57-58	XX	P.I. Code: Macrofauna Identification
77-80	XXXX	DMSAG Sample DMSAG Sequencer

DMSAG INVENTORY DATA FILE 0102

Diving Program

RECORD FORMAT DESCRIPTION

Columns	Entry	Description
1- 4	MAFL	BLM-OCS Area Designation
5- 8	0102	DMSAG File Code
10-13	XXXX	Sample I.D.
15-16	XX	Number of Subsamples
18-20	XXX	Preservation Method (Table I)
22-23	XX	P.I. Code: Trace Metal Analysis
24-25	Blank or QC	TMA Quality Control Indicator
27-28	XX	P.I. Code: Algal Hydrocarbon Analysis
29-30	Blank or QC	AHA Quality Control Indicator
32-33	XX	P.I. Code: Macrofaunal Hydrocarbon Analysis
34-35	Blank or QC	MHA Quality Control Indicator
37-38	XX	P.I. Code: Histopathology
40-41	XX	P.I. Code: Invertebrate Identification
43-44	XX	P.I. Code: Sediment Analysis
46-47	XX	P.I. Code: Clay Mineralogy Analysis
49-50	XX	P.I. Code: Foraminifera Identification
52-53	XX	P.I. Code: Archive Sediment
54-55	XX	P.I. Code: Archive Clay Mineralogy
56-57	XX	P.I. Code: Archive Foraminifera Identification
77-80	XXXX	DMSAG Sequencer

DMSAG INVENTORY DATA FILE 0103

Dredge/Trawl Program

RECORD FORMAT DESCRIPTION

Columns	Entry	Description
1- 4	MAFL	BLM-OCS Area Designation
5- 8	0103	DMSAG File Code
10-13	XXXX	Sample I.D.
15-16	XX	Number of Subsamples
18-20	XXX	Preservation Method Code (See Table 1)
22-23	XX	P.I. Code: Trace Metal Analysis
24-25	Blank or QC	TMA Quality Control Indicator
27-28	XX	P.I. Code: Histopathology
30-31	XX	P.I. Code: Demersal Fish Identification
33-34	XX	P.I. Code: Algal Hydrocarbon Analysis
35-36	Blank or QC	AHA Quality Control Indicator
38-39	XX	P.I. Code: Macrofaunal Hydrocarbon Analysis
40-41	Blank or QC	MHA Quality Control Indicator
43-44	XX	P.I. Code: Invertebrate Identification
77-80	XXXX	DMSAG Sequencer

Table 1. DMSAG Preservation Method Codes.

Code	Preservation Method
001	Freeze
002	Dry
003	Alcohol
004	Dietrich's
005	Formalin

DMSAG INVENTORY DATA FILE 0104

Water Column Program

RECORD FORMAT DESCRIPTION

Columns	Entry	Description
1- 4	MAFL	BLM-OCS Area Designation
5- 8	0104	DMSAG File Code
10-13	XXXX	Sample I.D.
15-16	XX	Number of Subsamples
18-20	XXX	Preservation Method
22-23	XX	P.I. Code: Neuston Identification
25-26	XX	P.I. Code: Neuston Hydrocarbons
28-29	XX	P.I. Code: Neuston Trace Metals
31-32	XX	P.I. Code: Zooplankton Identification
34-35	XX	P.I. Code: Zooplankton Hydrocarbons
37-38	XX	P.I. Code: Zooplankton Trace Metals
40-41	XX	P.I. Code: Phytoplankton: Chl-A
43-44	XX	P.I. Code: Phytoplankton: C-14
46-47	XX	P.I. Code: Dissolved Hydrocarbons
49-50	XX	P.I. Code: Particulate Hydrocarbons
52-53	XX	P.I. Code: Dissolved Organic Carbon
55-56	XX	P.I. Code: Particulate Organic Carbon
58-59	XX	P.I. Code: Water Column Trace Metals
61-62	XX	P.I. Code: Suspended Minerals
64-65	XX	P.I. Code: STD Observations
67-68	XX	P.I. Code: XBT Observations
70-71	XX	P.I. Code: Transmissometry
77-80	XXXX	DMSAG Sequence

DMSAG SCIENTIFIC DATA FILE 0201L

RECORD FORMAT DESCRIPTION

Columns	Entry	Description
1- 4	MAFL	BLM-OCS Area Designation
5- 9	0201	DMSAG File Name
10-12	XXX	Species Counter for Current Sample
14-15	XX	L-Record Counter for Current Species
17-22	IIIIIf	First Length Measurement (mm)
24-29	IIIIIf	First Weight Measurement (g)
31-36	IIIIIf	Second Length Measurement (mm)
38-43	IIIIIf	Second Weight Measurement (g)
45-50	IIIIIf	Third Length Measurement (mm)
52-57	IIIIIf	Third Weight Measurement (g)
59-64	IIIIIf	Fourth Length Measurement (mm)
66-71	IIIIIf	Fourth Weight Measurement (g)
75	D or T	Dredge or Trawl Indicator
77-80	XXXX	DMSAG Sequencer

NOTE: Data elements in the file are demersal fish meristic values (lengths, and weights). For data entries, I..., f... denote integer and fractional components, respectively.

DMSAG SCIENTIFIC DATA FILE 0203N

RECORD FORMAT DESCRIPTION

Columns	Entry	Description
1- 4	MAFL	BLM-OCS Area Designation
5- 9	0203N	DMSAG Scientific Data File Name
10-13	XXXX	Sample I.D.
15-22	IIIIffff	Iron Concentration (parts per million dry weight)
24-31	IIIIffff	Chromium Concentration (parts per million dry weight)
33-40	IIIIffff	Nickel Concentration (parts per million dry weight)
42-49	IIIIffff	Cadmium Concentration (parts per million dry weight)
51-58	IIIIffff	Vanadium Concentration (parts per million dry weight)
60-67	IIIIffff	Lead Concentration (parts per million dry weight)
69-76	IIIIffff	Copper Concentration (parts per million dry weight)
77-80	XXXX	DMSAG Sequencer

NOTE: Data elements within this file are trace metal concentration values for representative neuston species. For data entries I... and f..., denote integral and fractional parts of values, respectively.

DMSAG SCIENTIFIC DATA FILE 0203N

RECORD FORMAT DESCRIPTION

Columns	Entry	Description
1- 4	MAFL	BLM-OCS Area Designation
5- 9	0203N	DMSAG Scientific Data File Name
10-13	XXXX	Sample I.D.
15-22	IIIIffff	Iron Concentration (parts per million dry weight)
24-31	IIIIffff	Chromium Concentration (parts per million dry weight)
33-40	IIIIffff	Nickel Concentration (parts per million dry weight)
42-49	IIIIffff	Cadmium Concentration (parts per million dry weight)
51-58	IIIIffff	Vanadium Concentration (parts per million dry weight)
60-67	IIIIffff	Lead Concentration (parts per million dry weight)
69-76	IIIIffff	Copper Concentration (parts per million dry weight)
77-80	XXXX	DMSAG Sequencer

NOTE: Data elements within this file are trace metal concentration values for representative neuston species. For data entries I... and f..., denote integral and fractional parts of values, respectively.

DMSAG SCIENTIFIC DATA FILE 0203R

RECORD FORMAT DESCRIPTION

Columns	Entry	Description
1- 4	MAFLA	BLM-OCS Area Designation
5- 9	0203R	DMSAG Scientific Data File Name
10-13	XXXX	Sample I.D.
15-20	IIIIff	Suspended Particulate Matter (μg/ℓ)
21-26	IIffff	Percent Silicon
27-32	IIffff	Percent Copper
33-38	IIffff	Percent Cadmium
39-44	IIffff	Percent Lead
45-50	IIffff	Percent Iron
51-56	IIffff	Percent Aluminum
57-62	IIffff	Percent Chromium
63-68	IIffff	Percent Nickel
69-74	IIffff	Percent Vanadium
77-80	XXXX	DMSAG Sequencer

NOTE: Data elements within this file are trace metal percentages (refractory fraction). For data entries I... and f... denote integral and fractional parts of values, respectively.

DMSAG SCIENTIFIC DATA FILE 0203Z

RECORD FORMAT DESCRIPTION

Columns	Entry	Description
1- 4	MAFL	BLM-OCS Area Description
5- 9	0203Z	DMSAG Scientific Data File Name
10-13	XXXX	Sample I.D.
15-20	IIIfff	Percent Iron
22-27	IIIfff	Percent Chromium
29-34	IIIfff	Percent Nickel
36-41	IIIfff	Percent Cadmium
43-48	IIIfff	Percent Vanadium
50-55	IIIfff	Percent Lead
57-62	IIIfff	Percent Copper
77-80	XXXX	DMSAG sequencer

NOTE: Data elements within this file are zooplankton trace metal values. For data entries I... and f... denote integral and fractional parts of values, respectively.

DMSAG SCIENTIFIC DATA FILE 0203W

RECORD FORMAT DESCRIPTION

Columns	Entry	Description
1- 4	MAFL	BLM-OCS Area Designation
5- 9	0203W	DMSAG Scientific Data File Name
10-13	XXXX	Sample I.D.
15-20	IIIIff	Suspended Particulate Matter (μg/ℓ)
22-27	IIffff	Percent Calcium
29-34	IIffff	Percent Copper
36-41	IIffff	Percent Cadmium
43-48	IIffff	Percent Lead
50-55	IIffff	Percent Iron
57-62	IIffff	Percent Chromium
64-69	IIffff	Percent Nickel
71-76	IIffff	Percent Vanadium
77-80	XXXX	DMSAG Sequencer

NOTE: Data elements within this file are trace metal percentages (weak acid soluble fraction). For data entries I... and f... denote integral and fractional parts of values, respectively.

DMSAG SCIENTIFIC DATA FILE 0204M

RECORD FORMAT DESCRIPTION

Columns	Entry	Description
1- 4	MAFL	BLM-OCS Area Designation
5- 9	0204M	DMSAG Scientific Data File Name
10-12	XXX	Sample I.D.
14-21	IIIIffff	Cadmium Concentration (parts per million dry weight)
23-30	IIIIffff	Iron Concentration (parts per million dry weight)
32-39	IIIIffff	Copper Concentration (parts per million dry weight)
41-48	IIIIffff	Lead Concentration (parts per million dry weight)
50-57	IIIIffff	Vanadium Concentration (parts per million dry weight)
59-66	IIIIffff	Chromium Concentration (parts per million dry weight)
68-75	IIIIffff	Nickel Concentration (parts per million dry weight)
77-80	XXXX	DMSAG Sequencer

NOTE: Data elements within this file are trace metal concentration values for representative macroinvertebrate species. For data entries I... and f..., denote integral and fractional parts of values, respectively.

DMSAG SCIENTIFIC DATA FILE 0204R

RECORD FORMAT DESCRIPTION

Columns	Entry	Description
1- 4	MAFL	BLM-OCS Area Designation
5- 9	0204R	DMSAG Scientific Data File Name
10-12	XXX	Sample I.D.
14-21	IIIIffff	Cadmium Concentration (parts per million dry weight)
23-30	IIIIffff	Iron Concentration (parts per million dry weight)
32-39	IIIIffff	Copper Concentration (parts per million dry weight)
41-48	IIIIffff	Lead Concentration (parts per million dry weight)
50-57	IIIIffff	Vanadium Concentration (parts per million dry weight)
59-66	IIIIffff	Chromium Concentration (parts per million dry weight
68-75	IIIIffff	Nickel Concentration (parts per million dry weight)
77-80	XXXX	DMSAG Sequencer

NOTE: Data elements within this file are trace metal concentration values of representative macroinvertebrate species. For data entries I..., and f..., denote integral and fractional parts of values, respectively.

DMSAG SCIENTIFIC DATA FILE 0204T

RECORD FORMAT DESCRIPTION

Column	Entry	Description
1- 4	MAFL	BLM-OCS Area Designation
5- 9	0204T	DMSAG Scientific Data File Name
10-12	XXX	Sample I.D.
14-20	XXXXXXX	Collection I.D. Number
22-57	XXX...XXX	Species Identification
77-80	XXXX	DMSAG Sequencer

DMSAG SCIENTIFIC DATA FILE 0205A

RECORD FORMAT DESCRIPTION

Columns	Entry	Description
1- 4	PHY: CLS: FAM: Blank	Taxonomic Level Descriptor
5-35	XXX...XXX	Phylum, Class, Family or Species Name
37-39	XXX	Number of Individuals Counted in Box-Core Replicate A
41-43	XXX	Number of Individuals Counted in Box-Core Replicate B
45-47	XXX	Number of Individuals Counted in Box-Core Replicate C
49-51	XXX	Number of Individuals Counted in Box-Core Replicate D
53-55	XXX	Number of Individuals Counted in Box-Core Replicate E
57-59	XXX	Number of Individuals Counted in Box-Core Replicate F
61-63	XXX	Number of Individuals Counted in Box-Core Replicate G
65-67	XXX	Number of Individuals Counted in Box-Core Replicate H
69-71	XXX	Number of Individuals Counted in Box-Core Replicate I
73-75	XXX	Number of Individuals Counted in Box-Core Replicate K
77-80	XXXX	DMSAG Sequence

NOTE: Data elements within this file are absolute abundance values for the taxon indicated by the Taxonomic Level Descriptor: Phylum (PHY:), Family (FAM:), or Species (Blank, no entry).

DMSAG SCIENTIFIC DATA FILE 0205B

RECORD FORMAT DESCRIPTION

Columns	Entry	Description
1- 4	MAFL	BLM-OCS Area Designation
5- 9	0205B	DMSAG Scientific Data File Name
10-12	XXX	Sample I.D.
14-21	IIIIIIIf	Molluscan Biomass (m.g., wet weight)
23-30	IIIIIIIf	Polychaete Biomass (m.g., wet weight)
32-39	IIIIIIIf	Crustacean Biomass (m.g., wet weight)
41-48	IIIIIIIf	Echinoderm Biomass (m.g., wet weight)
50-57	IIIIIIIf	Miscellany Biomass (m.g., wet weight)
77-80	XXXX	DMSAG Sequencer

NOTE: Data elements within this file are macroinvertebrate biomass values. For data entries, I... and f... denote integral and fractional parts of values, respectively.

DMSAG SCIENTIFIC DATA FILE 0206A

RECORD FORMAT DESCRIPTION

Columns	Entry	Description
1- 4	PHY: CLS: FAM: BLANK	Taxonomic Level Description
5-35	XXX...XXX	Phylum, Class, Family, or Species Name
37-40	XXXX	Total Number of Forams in Replicate A
42-45	XXXX	Total Number of Live Forams in Replicate A
47-50	XXXX	Total Number of Forams in Replicate K
57-60	XXXX	Total Number of Live Forams in Replicate K
77-80	XXXX	DMSAG sequencer

NOTE: Data elements within this file are absolute abundance values for the taxon defined by the Taxonomic Level Description: Phylum (PHY:), Class (CLS:), Family (FAM:), or Species (BLANK). Specifically, this file is used for storage of foraminifera abundance data: Total, Live.

DMSAG SCIENTIFIC DATA FILE 0206B

RECORD FORMAT DESCRIPTION

Columns	Entry	Description
1- 4	MAFL	BLM-OCS Area Designation
5- 9	0206B	LMSAG Scientific Data File Names
10-12	XXX	Replicate I.D.
14-18		Milliliters After Sieving
20-25	XXXXXX	Total Specimens Per Milliliter
27-32	XXXXXX	Live Specimens Per Milliliter
34-39	XXXXXX	Total Specimens Per Sample
41-46	XXXXXX	Live Specimens Per Sample
48-54	XXX:XXX	Planktonic To Benthonic Ratio
56-59	IIIf	Percent Live
61-64	XXXX	Number Species Per 300 (Total)
66-69	XXXX	Number Species Per 300 (Live)
77-80	XXXX	DMSAG sequencer

NOTE: For data entries, I... and f... mean integral and fractional parts of values, respectively.

DMSAG SCIENTIFIC DATA FILE 0206R

RECORD FORMAT DESCRIPTION

Columns	Entry	Description
1- 4	PHY: CLS: FAM: BLANK	Taxonomic Level Description
5-35	XXX...XXX	Phylum, Class, Family, or Species Name
37-40	XXXX	Total Number of Forams Present
77-80	XXXX	DMSAG Sequencer

NOTE: Data elements within this file are absolute abundance values for the taxon defined by the Taxonomic Level Description: Phylum (PHY:), Class (CLS:), Family (FAM:), or Species (BLANK). Specifically, this file is used for the storage of foraminifera abundance data: Total.

DMSAG SCIENTIFIC DATA FILE 0207L

RECORD FORMAT DESCRIPTION

Columns	Entry	Description
1- 4	MAFL	BLM-OCS Area Designation
5- 9	0207	DMSAG File Name
10-12	XXX	Species Counter for Current Sample
14-15	XX	L-Record Counter for Current Species
17-22	IIIIIf	First Length Measurement (mm)
24-29	IIIIIf	First Weight Measurement (g)
31-36	IIIIIf	Second Length Measurement (mm)
38-43	IIIIIf	Second Weight Measurement (g)
45-50	IIIIIf	Third Length Measurement (mm)
52-57	IIIIIf	Third Weight Measurement (g)
59-64	IIIIIf	Fourth Length Measurement (mm)
66-71	IIIIIf	Fourth Weight Measurement (g)
75	D or T	Dredge or Trawl Indicator
77-80	XXXX	DMSAG Sequencer

NOTE: Data elements in the file are demersal fish meristic values (lengths, and weights). For data entries, I..., f... denote integer and fractional components, respectively.

DMSAG SCIENTIFIC DATA FILE 0207N

RECORD FORMAT DESCRIPTION

Columns	Entry	Description
1- 4	PHY: CLS: FAM: BLANK	Taxonomic Level Descriptor
5-35	XX...XX	Phylum, Class, Family or Species Name
37-39	XXX	Species Counter for Current Sample
41-44	XXXX	Species Abundance (Number of Individuals)
46-49	XXXX	Number of Individuals Measured
51-54	XXXX	Number of Individuals Weighed
56-59	XXXX	Total Weight This Sample (grams) to nearest .1 (right justified).
65	X	Species Abundance Quality Code (Q_1)
66	X	Length-Weight Quality Code (Q_2)
75	D or T	Dredge or Trawl Indicator
77-80	XXXX	DMSAG Sequencer

NOTE: Data elements in this file are absolute abundance values for demersal fish. Taxa defined by the taxonomic level descriptor: (Phylum (PHY:), Class (CLS:), Family (FAM:), or Species (Blank, No Entry).

DMSAG SCIENTIFIC DATA FILE 0209C

RECORD FORMAT DESCRIPTION

Columns	Entry	Description
1- 4	MAFL	BLM-OCS Area Description
5- 9	0209C	DMSAG Scientific Data File Name
11-20	XX...XX	Retention Index
21-30	XX...XX	OEP
71	H or B	Fraction
72-73	XX	Left justified Sample Type (N, D, W, P, Z, or other)
74	F or O	Column type
76	X	Sample period (1, 2, or 3)
77-80	XXXX	Station number

DMSAG SCIENTIFIC DATA FILE 0209H

RECORD FORMAT DESCRIPTION

Columns	Entry	Description
1- 4	MAFL	BLM-OCS Area Designation
5- 9	0209H	DMSAG Scientific Data File Name
11-20	XX...XX	Retention time
21-30	XX...XX	Retention index
31-40	XX...XX	Area
41-50	XX...XX	Weight µg
51-60	XX...XX	Weight (per)
61-70	XX...XX	µg/ℓ or µg/g
71	H or B	Fraction
72-73	XX	Left justified Sample type (N, D, W, P, Z, or other)
74	F or O	Column type
76	X	Sample period (1, 2, or 3)
77-80	XXXX	Station number

DMSAG SCIENTIFIC DATA FILE 0209S1

RECORD FORMAT DESCRIPTION

Columns	Entry	Description
1- 4	MAFL	BLM-OCS Designation
5-10	0209S1	DMSAG Scientific Data File Name
11-20	XX...XX	Size (grams or liters)
23-24	XX	Chromatograph date - year
25	/	slash
26-27	XX	Chromatograph data - month
28	/	slash
29-30	XX	Chromatograph data - day
31-40	XX...XX	Extract weight (mg)
41-50	XX...XX	Total 1
51-60	XX...XX	Total 2
61-70	XX...XX	Average OEP
71	H or B	Fraction
72-73	XX	Left justified Sample type (N, D, W, P, Z or other)
74	F or O	Column type
76	X	Sample period (1, 2, or 3)
77-80	XXXX	Station number

DMSAG SCIENTIFIC DATA FILE 0209S2

RECORD FORMAT DESCRIPTION

Columns	Entry	Description
1- 4	MAFL	BLM-OCS Area Designation
5-10	0209S2	DMSAG Scientific Data File Name
11-20	XX...XX	Pris Retention Index
21-30	XX...XX	Phyt Retention Index
71	H or B	Fraction
72-73	XX	Left justified Sample type (N, D, W, P, Z, or Other)
74	F or O	Column type
76	X	Sample period (1, 2, or 3)
77-80	XXXX	Station number

DMSAG SCIENTIFIC DATA FILE 0209R1

RECORD FORMAT DESCRIPTION

Columns	Entry	Description
1- 4	MAFL	BLM-OCS Area Designation
5-10	0209R1	DMSAG Scientific Data File Name
11-20	XX...XX	Ratio of Pris to Phyt
21-30	XX...XX	Ratio of Phyt to NC18
31-40	XX...XX	Ratio of Pris to NC17
41-50	XX...XX	Ratio of Sumalk = NC20 to Sumalk >=NC21
51-60	XX...XX	Ratio of Pris + Phyt to Sumalk
61-70	XX...XX	Ratio of Sumalk to NC16
71	H or B	Fraction
72-73	XX	Left justified Sample type (N. D, W, P, Z or Other)
74	F or O	Column type
76	X	Sample period (1, 2, or 3)
77-80	XXXX	Station number

DMSAG SCIENTIFIC DATA FILE 0209R2

RECORD FORMAT DESCRIPTION

Columns	Entry	Description
1- 4	MAFL	BLM-OCS Area Designation
5-10	0209R2	DMSAG Scientific Data File Name
11-20	XX...XX	Ratio of odd to even
21-30	XX...XX	Ratio of odd to even = NC20
31-40	XX...XX	Ratio of odd to even >NC21
71	H or B	Fraction
72-73	XX	Left justified Sample type (N, D, W, P, Z, or Other)
74	F or O	Column type
76	X	Sample period (1, 2, or 3)
77-80	XXXX	Station number

DMSAG SCIENTIFIC DATA FILE 0210(*)

RECORD FORMAT DESCRIPTION

Columns	Entry	Description
1- 4	MAFL	BLM-OCS Area Description
5- 8	0210	DMSAG Scientific Data File Name
9	I, F, L	Neuston Category I = Adult, L = Larvae, F = Fish
10-13	XXXX	Sample I.D.
14-15	XX	Index Card (continuation column)
17-22	XXXX	Phylum, Family Code
23-25	IIIII	Number of Individuals in Split Sample
27-32	XXXX	Phylum Family Code
33-35	IIIII	Number of Individuals in Split Sample
37-42	XXXX	Phylum, Family Code
43-45	IIIII	Number of Individuals in Split Sample
47-52	XXXX	Phylum and Family Code
53-55	IIIII	Number of Individuals in Split Sample
57-62	XXXX	Phylum Family Code
63-65	IIIII	Number of Individuals in Split Sample
67-72	XXXX	Phylum and Family Code
73-75	IIIII	Number of Individuals in Split Sample
77-80	XXXX	DMSAG Sequencer

NOTE: For data entries, I..., and f..., denote integral and fractional parts of values, respectively.

DMSAG SCIENTIFIC DATA FILE 0210A

RECORD FORMAT DESCRIPTION

Columns	Entry	Description
1- 4	MAFL	BLM-OCS Area Designation
5- 9	0210A	DMSAG Scientific Data File Name
10-13	XXXX	Sample I.D.
15-20	XXXXXX	Data (Year, month, day)
22-25	XXXX	(Local) Time net set
27-30	XXXX	(Local) Time net hauled
32-34	III	Ship heading (magnetic north)
36-39	IIII	Engine m.p.m.'s
41-42	XX	Current
44	X	Sea State (Beaufort Scale)
46-51	XXXXXX	Flowmeter reading (start)
53-58	XXXXXX	Flowmeter reading (stop)
60-61	II	Secchi Disk Depth (meters)
63	X	Forel Color
65-68	IIff	Bucket Temperature (°C)
70-72	IIf	Surface Salinity (°/oo)
74-75	If	pH
77-80	XXXX	DMSAG sequencer

NOTE: For data entries, I... and f... denote integral fractional parts of values, respectively.

DMSAG SCIENTIFIC DATA FILE 0210B

RECORD FORMAT DESCRIPTION

Columns	Entry	Description
1- 4	MAFL	BLM-OCS Area Designation
5- 9	0210B	DMSAG Scientific Data File Name
10-13	XXX	Sample I.D.
15-16	II	Wind Direction Code
18-19	II	Wind Speed
21-22	II	Range of Wind Speed
24-25	II	Maximum Gust
27-30	XXXX	Cloud Cover Code
32-33	II	Weather Code
35	I	Visibility in Miles
37-40	IIff	Barometer
42-48	IIIIfff	Light in Foot Candles
50-53	IIff	Air Temperature (in °C)
55-58	XXXX	Moon Rise (Local Time)
60-63	XXXX	Moon Set (Local Time)
65-68	XXXX	Sun Rise (Local Time)
70-73	XXXX	Sunset (Local Time)
75	I	Moon Phase Code
77-80	XXXX	DMSAG Sequencer

NOTE: For data entries, I... and f..., denote integral and fractional parts of values, respectively.

DMSAG SCIENTIFIC DATA FILE 0210T

RECORD FORMAT DESCRIPTION

Columns	Entry	Description
1- 4	MAFL	BLM-OCS Area Designation
5- 9	0210T	DMSAG Scientific Data File Name
10-12	XXX	Sample I.D.
14-17	IIII	Volume of Sample (milliliter)
19-21	III	Number of Splits
23-25	III	Total Invertebrate Phyla + Larvae
27-29	III	Total Adult Invertebrate Families
31-33	III	Total Fish Families
35-37	III	Total Fish Eggs
39-41	III	Total Larval Type
43-45	III	Total Larvae
47-51	IIIff	Volume of Sample Contents Bigger than 2.5 cm (in mi)
53-57	IIIff	Volume of Sargassum
59-63	IIIff	Weight of Tar
65-67	III	Neuston Collection Number
77-80	XXXX	DMSAG Sequencer

NOTE: For data entries, I..., and f..., denote integral and fractional parts of values, respectively.

DMSAG SCIENTIFIC DATA FILE 0210V

RECORD FORMAT DESCRIPTION

Columns	Entry	Description
1- 4	MAFL	BLM-OCS Area Designation
5- 9	0210V	DMSAG Scientific Data File
10-13	XXXX	Sample I.D.
15-18	IIII	Volume of Sample (ml.)
20-24	IIIff	Volume of Sample Contents Bigger than 2.5 cm. (in ml.)
26-30	IIIff	Volume of Sargassum (in ml.)
32-36	IIIff	Weight of Tar (in grams)
38-42	IIIff	Weight of Plastic (in grams)
44-48	IIIff	Weight of Other Debris (in grams)
77-80	XXXX	DMSAG Sequencer

NOTE: For data entries, I... and f..., denote integral and fractional parts of values, respectively.

DMSAG SCIENTIFIC DATA FILE 0211A

RECORD FORMAT DESCRIPTION

Columns	Entry	Description
1- 4	MAFL	BLM-OCS Area Designation
5- 9	0211A	DMSAG Scientific Data File Name
10-12	XXX	Sample I.D.
13-14	01 02	Analysis Method Key
16-20	IIIff	Percent Weight of Sediments Greater than 2 mm
22-26	IIIff	Percent Weight of Sediments in 2.0000-1.0000 mm range
28-32	IIIff	Percent Weight of Sediments in 1.0000-0.5000 mm range
34-38	IIIff	Percent Weight of Sediments in 0.5000-0.2500 mm range
40-44	IIIff	Percent Weight of Sediments in 0.2500-0.1250 mm range
46-50	IIIff	Percent Weight of Sediments in 0.1250-0.0625 mm range
52-56	IIIff	Percent Weight of Sediments in 0.0625-0.0040 mm range
58-62	IIIff	Percent Weight of Sediments in Less Than 0.0040 mm
64-68	IIIff	Percent $CaCO_3$
77-80	XXXX	DMSAG Sequencer

NOTE: Data elements within this file are Standard Sediment Parameter values for phi-classes as defined above. For data entries, I... and f..., denote integral and fractional parts of values, respectively. Analysis Method Key is either 01 or 02, according as Sieve or Settling Tube procedures were employed.

DMSAG SCIENTIFIC DATA FILE 0211B

RECORD FORMAT DESCRIPTION

Columns	Entry	Description
1- 4	MAFL	BLM-OCS Area Designation
5- 9	0211B	DMSAG Scientific Data File name
10-12	XXX	Sample I.D.
14-24	XX.XXXXX/XX	Color Code From Chart
26-36	XX.XXXXX/XX	Color Code From Chart
38-40	IIf	Depth in cm.
77-80	XXXX	DMSAG Sequencer

NOTE: For data entries, I... and f... denote integral and fractional parts of values, respectively.

DMSAG SCIENTIFIC DATA FILE 0213A

RECORD FORMAT DESCRIPTION

Columns	Entry	Description
1- 4	PHY: CLS: FAM: BLANK	Taxonomic Level Description
5-35	XXX...XXX	Phylum, Class, Family or Species Name
37-38	XX	Quadrat Number
40-43	XXXX	Species Counts This Quadrat
45-48	XXXX	Species Abundance (number of individuals)
50	X	Coral Type (H=Hard, S=Soft)
77-80	XXXX	DMSAG Sequencer

NOTE: Data elements in this file on epifaunal and epifloral species abundance values.

DMSAG SCIENTIFIC DATA FILE 0213Q

RECORD FORMAT DESCRIPTION

Columns	Entry	Description
1- 4	MAFL	BLM-OCS Area Description
5- 9	0213Q	DMSAG File Name
10-13	XXXX	Sample I.D.
15-16	XX	Quadrat Number
18-20	XXX	Maximum Quadrat Depth (ft.)
22-24	XXX	Minimum Quadrat Depth (ft.)
26-29	XXXX	Number of Species this Quadrat
31-34	IIIf	Species/Square Meter
36-39	XXXX	Number of Individuals
41-44	IIIf	Individuals/Square Meter
46-48	IIf	Temperature in °C
77-80	XXXX	DMSAG Sequencer

NOTE: Data elements within this file are Dive Station Quadrat characteristics. For data entries, I..., and f..., denote integral and fractional parts of values, respectively.

DMSAG SCIENTIFIC DATA FILE 0214A

RECORD FORMAT DESCRIPTION

Columns	Entry	Description
1- 4	MAFL	BLM-OCS Area Designation
5- 9	0214	DMSAG Scientific Data File Name
10-12	XXX	Sample I.D.
14-18	IIIff	Percent Smectite
20-24	IIIff	Percent Chlorite
26-30	IIIff	Percent Illite
32-36	IIIff	Percent Kaolinite
38-42	IIIff	Percent Chlorite-Vermiculite
77-80	XXXX	DMSAG Sequencer

NOTE: Data elements within this file are percentages of sedimentary clay minerals. For data entries I... and f..., denote integral and fractional parts of values, respectively.

DMSAG SCIENTIFIC DATA FILE 0214B

RECORD FORMAT DESCRIPTION

Columns	Entry	Descriptions
1- 4	MAFL	BLM-OCS Area Designation
5- 9	0214B	DMSAG Scientific Data File Name
10-12	XXX	Sample I.D.
14-18	IIIff	Percent Smectite
19-23	IIIff	Percent Chlorite
24-28	IIIff	Percent Illite
29-33	IIIff	Percent Kaolinite
34-38	IIIff	Percent Talc
39-43	IIIff	Percent Quartz
44-48	IIIff	Percent Feldspar
49-53	IIIff	Percent Aragonite
54-58	IIIff	Percent Low Magnesium Calcite
59-63	IIIff	Percent High Magnesium Calcite
64-68	IIIff	Percent Dolomite
77-80	XXXX	DMSAG Sequencer

NOTE: Data elements within this file are percentages of suspended clays and minerals. For data entries I... and f..., denote integral and fractional parts of values, respectively.

DMSAG SCIENTIFIC DATA FILE 0223L

RECORD FORMAT DESCRIPTION

Columns	Entry	Description
1- 4	MAFL	BLM-OCS Area Description
5- 9	0223L	DMSAG File Name
10-12	XXX	Species Counter for Current Sample
14-15	XX	L-Record Counter for Current Species
17-22	IIIIIf	First Length Measurement (mm)
24-29	IIIIIf	First Weight Measurement (g)
31-36	IIIIIf	Second Length Measurement (mm)
38-43	IIIIIf	Second Weight Measurement (g)
45-50	IIIIIf	Third Length Measurement (mm)
52-57	IIIIIf	Third Weight Measurement (g)
59-64	IIIIIf	Fourth Length Measurement (mm)
66-71	IIIIIf	Fourth Weight Measurement (g)
75	D or T	Dredge or Trawl Indicator
77-80	XXXX	DMSAG Sequencer

NOTE: Data elements in the file are demersal fish meristic values (lengths, and weights). For data entries, I..., and f..., denote integer and fractional components, respectively.

DMSAG SCIENTIFIC DATA FILE 0215

RECORD FORMAT DESCRIPTION

Columns	Entry	Description
1- 4	MAFL	BLM-OCS Area Designation
5- 8	0215	DMSAG Scientific Data File Name
10-13	XXXX	Start Time for Sampling Procedure (hours, minutes GMT)
15-18	XXXX	Stop Time for Sampling Procedure (hours, minutes GMT)
20-22	XXX	Sample Depth (meters)
24-28	IIfff	First Chlorophyll-a value
30-34	IIfff	Second Chlorophyll-a value
36-40	IIfff	Third Chlorophyll-a value
42-46	IIfff	First Primary Productivity Value ($mgC/m^2/hr$)
48-52	IIfff	Second Primary Productivity Value ($MgC/M^2/hr$)
54-58	IIfff	Third Primary Productivity Value ($mgC/m^2/hr$)
60-65	IIffff	Solar Radiation Value (E/m^2)
67-72	IIIIff	Assimilation Value ($mgC.mgChl\text{-}a)/E/m^2/hr$)
77-80	XXXX	DMSAG Sequencer

NOTE: Data elements within the file are phyoplankton productivity, chlorophyll-a, and assimilation values. For data entries, I... and f..., denote integral and fractional parts of values, respectively.

DMSAG SCIENTIFIC DATA FILE 0216

RECORD FORMAT DESCRIPTION

Columns	Entry	Description
1- 4	MAFL	BLM-OCS Area Designation
5- 8	0216	DMSAG Scientific Data File Name
10-15	IIffff	First POC Value
17-22	IIffff	Second POC Value
24-29	IIffff	Third POC Value
31-36	IIffff	First DOC Value
38-43	IIffff	Second DOC Value
45-50	IIffff	Third DOC Value
77-80	XXXX	DMSAG Sequencer

NOTE: Data elements within this file are Particulate Organic Carbon (POC) and Dissolved Organic Carbon (DOC) values. For data entries I... and f..., denote integral and fractional parts of values, respectively.

DMSAG SCIENTIFIC DATA FILE 0217A

RECORD FORMAT DESCRIPTION

Columns	Entry	Description
1- 4	PHY: CLS: FAM: BLANK	Taxonomic Level Descriptor
5-35	XXX...XXX	Phylum, Class, Family or Species Name
37-39	XXX	Number of Individuals Counted in Box-Core Replicate A
41-43	XXX	Number of Individuals Counted in Box-Core Replicate B
45-47	XXX	Number of Individuals Counted in Box-Core Replicate C
49-51	XXX	Number of Individuals Counted in Box-Core Replicate D
53-55	XXX	Number of Individuals Counted in Box-Core Replicate E
57-59	XXX	Number of Individuals Counted in Box-Core Replicate F
61-63	XXX	Number of Individuals Counted in Box-Core Replicate G
65-67	XXX	Number of Individuals Counted in Box-Core Replicate H
69-71	XXX	Number of Individuals Counted in Box-Core Replicate I
73-75	XXX	Number of Individuals Counted in Box-Core Replicate K
77-80	XXXX	DMSAG Sequencer

NOTE: Data elements within this file are absolute abundance values for the taxon indicated by the Taxonomic Level Descriptor: Phylum (PHY:), Class (CLS:), Family (FAM:), or Species (Blank, no entry).

DMSAG SCIENTIFIC DATA FILE 0217B

RECORD FORMAT DESCRIPTION

Columns	Entry	Description
1- 4	MAFL	BLM-OCS Area Designation
5- 9	0217	DMSAG Scientific Data File Name
10-12	XXX	Sample I.D.
14-21	IIIIIIIf	Molluscan Biomass (m.g., wet weight preserved)
23-30	IIIIIIIf	Polychaete Biomass (m.g., wet weight preserved)
32-39	IIIIIIIf	Crustacean Biomass (m.g., wet weight preserved)
41-48	IIIIIIIf	Echinoderm Biomass (m.g., wet weight preserved)
50-57	IIIIIIIf	Miscellany Biomass (m.g., wet weight preserved)
77-80	XXXX	DMSAG Sequencer

NOTE: Data elements within this file are macroinvertebrate biomass values. For data entries, I... and f..., denote integral and fractional parts of values, respectively.

DMSAG SCIENTIFIC DATA FILE 0218

RECORD FORMAT DESCRIPTION

Columns	Entry	Description
1- 4	MAFL	BLM-OCS Area Designation
5- 8	0218A	DMSAG Scientific Data File Name
10-12	XXX	Sample I.D.
14-18	IIIIf	Sediment ATP Values (ng/g)
20-24	IIIIf	Standard Deviation for All Replicates
26-29	IIff	Sediment Wet Weight (g/cm^3)
31-34	IIff	Sediment Dry Weight (g/cm^3)
36-38	Iff	Ionic Efficiency
40-42	Iff	Adsorption Efficiency
44-46	Iff	Total Efficiency
77-80	XXXX	DMSAG Sequencer

NOTE: Data elements within this file are Sediment ATP values. For data entries, I... and f..., denote integral and fractional parts of values, respectively.

DMSAG SCIENTIFIC DATA FILE 0219A

RECORD FORMAT DESCRIPTION

Columns	Entry	Description
1- 4	MAFL	BLM-OCS Area Designation
5- 9	0219A	DMSAG Scientific Data File Name
10-12	XXX	Sample I.D.
14-19	IIIIIf	Sediment Dry Weight (grams)
21-24	IIff	Percent Carbonate
26-29	IIff	Percent Organic Carbon
31-35	IIIff	Lipid Weight (milligrams)
37-41	IIIff	Aliphatic Weight (milligrams)
43-47	IIIff	Aromatic Weights (milligrams)
77-80	XXXX	DMSAG Sequencer

NOTE: For data entries I... and f..., denote integral and fractional parts of values, respectively.

DMSAG SCIENTIFIC DATA FILE 0219R

RECORD FORMAT DESCRIPTION

Columns	Entry	Description
1- 4	MAFL	BLM-OCS Area Designation
5- 9	0219R	DMSAG Scientific Data File Name
10-12	XXX	Sample I.D.
14-18	IIII.f	Ratio of Lipids to Acidic Sediments
20-23	IIII.f	Ratio of Lipids to Total Sediments
25-27	IIf	Ratio of Lipids to Organic Carbons
29-32	IIff	Ratio of Total Hydrocarbons to Lipids
34-37	IIff	Ratio of Aliphatic HC to Aromatic HC
39-42	IIff	Ratio of Aliphatic HC to Acidic Sediments
44-47	IIff	Ratio of Aliphatic HC to Total Sediments
49-51	Iff	Ratio of Aliphatic HC to Organic Carbons
53-55	Iff	Ratio of Aliphatic HC to Lipid
57-60	IIff	Ratio of Aromatic HC to Acidic Sediments
62-64	Iff	Ratio of Aromatic HC to Total Sediments
66-68	Iff	Ratio of Aromatic HC to Organic Carbons
70-72	Iff	Ratio of Aromatic HC to Lipid
77-80	XXXX	DMSAG Sequencer

NOTE: For data entries, I... and f..., denote integral and fractional parts of values, respectively.

DMSAG SCIENTIFIC DATA FILE 0219S

RECORD FORMAT DESCRIPTION

Columns	Entry	Description
1- 4	MAFL	BLM-OCS Area Designation
5- 9	0219S	DMSAG File Name
10-12	XXX	Sample I.D.
14-17	XXXX	Total Peaks Aliphatics Fraction (ppb total sediment)
19-22	XXXX	Total Peaks Aromatic Fraction (ppb total sediment)
24-27	XXXX	Total N-Alkanes (ppb total sediment)
29-33	IIIff	Percent of N-Alkanes/Total Aliphatics
35-39	IIIff	Ratio of Aliphatics to Aromatics
41-45	IIIff	Ratio of C17 to C29
47-51	IIIff	Ratio of C17 to PRIS
53-57	IIIff	Ratio of C18 to PHY
59-63	IIIff	Ratio of PRIS to PHY
77-80	XXXX	DMSAG Sequencer

NOTE: For data entries I... and f..., denote integral and fractional parts of values, respectively.

DMSAG SCIENTIFIC DATA FILE 0219B

RECORD FORMAT DESCRIPTION

Columns	Entry	Description
1- 4	MAFL	BLM-OCS Area Designation
5- 9	0219B	DMSAG Scientific Data File Name
10-12	XXX	Sample I.D.
14-19	IIIfff	Aliphatic Weight (ppm)
20-25	IIIfff	Aromatic Weight (ppm)
26-31	IIIfff	N-Alkanes (ppm)
32-36	Iffff	Ratio of Pristane and Phytane to N-Alkanes
37-40	Ifff	Ratio of Pristane to C-17
41-43	Iff	Ratio of Phytane to C-18
44-46	Iff	Ratio of Pristane to Phytane
47-51	IIIIf	Ratio of N-Alkanes to n-C16
52-54	IIf	Percent N-Alkanes to Aliphatics
55-59	IIIff	Ratio of Odd to Even
60-64	IIIff	C10-C20 Odd to Even
65-69	IIIff	C21-C31 Odd to Even
70-75	IIIfff	Ratio of C12-C20 to C21-C31
77-80	XXXX	DMSAG Sequencer

NOTE: For data entries, I... and f..., denote integral and fractional parts of values, respectively.

DMSAG SCIENTIFIC DATA FILE 0219H

RECORD FORMAT DESCRIPTION

Columns	Entry	Description
1- 4	MAFL	BLM-OCS Area Designation
5- 9	0219H	DMSAG file Code
10-12	XXX	Sample I.D.
14-18	IIIff	Retention Time
20-24	XXXXX	Kovats
26-30	IIIff	Micrograms
32-36	IIIff	Retention Time
38-42	XXXXX	Kovats
44-48	IIIff	Micrograms
77-80	XXXX	DMSAG Sequencer

NOTE: Data elements within this file are Gas Chromatography results. For data entries I... and f..., denote integral and fractional parts of values, respectively.

DMSAG SCIENTIFIC DATA FILE 0221

RECORD FORMAT DESCRIPTION

Columns	Entry	Description
1- 4	MAFL	BLM-OCS Area Designation
5- 8	0221	DMSAG File Number
10-13	XXXX	Sample I.D.
15-18	IIII	Depth in Meters
20-24	IIIff	Percent Transmission
76	Blank or F	if on-station then leave blank, if off-station then use F and use lower sequences corresponding to two stations
77-80	XXXX	DMSAG Sequencer

NOTE: Data in the files pertain to transmissometry data. II.. and ff.., denote integral and fractional parts of measurements, respectively.

DMSAG SCIENTIFIC DATA FILE 0222C

RECORD FORMAL DESCRIPTION

Columns	Entry	Description
1- 4	MAFL	BLM-OCS Area Description
5- 9	0222C	DMSAG File Name
11-14	XXXX	Minimum Depth Fished
16-19	XXXX	Maximum Depth Fished
21-25	IIIff	Volume 1 Water Filtered (cubic meter)
27-30	XXXX	Displacement and Volume (milliliters)
32-35	XXXX	Volume of Jelly Fish
37-41	IIfff	Replacement and Volume (ml/m^3)
43-45	XXX	Number of Species (records in File 0222Z)
47-49	XXX	Number of Splits
51-57	IIIffff	Biomass (grams)
77-80	XXXX	DMSAG Sequencer

NOTE: Data elements within this file are zooplankton collection characteristics. For data entries I..., f..., denote integral and fractional components respectively.

DMSAG SCIENTIFIC DATA FILE 0222M

RECORD FORMAT DESCRIPTION

Columns	Entry	Description
1- 4	PHY: CLS: FAM: Blank	Taxonomic Level Descriptor
5-35	XX...XX	Phylum, Class, Family or Species Name
37-41	XXXXX	Number of Individuals Counted in Box-Core Replicate A
43-47	XXXXX	Number of Individuals Counted in Box-Core Replicate I
49-53	XXXXX	Number of Individuals Counted in Box-Core Replicate K
77-80	XXXX	DMSAG Sequencer

NOTE: Data elements within this file are absolute abundance values for the taxon indicated by the Taxonomic Level Descriptor: (Phylum (PHY:), Class (CLS:), Family (FAM:), or Species (Blank, no entry).

DMSAG SCIENTIFIC DATA FILE 0222Z

RECORD FORMAT DESCRIPTION

Columns	Entry	Description
1- 4	PHY: CLS: FAM: Blank	Taxonomic Level Description
5-35	XXX...XXX	Phylum, Class, Family or Species Name
37-39	XXX	Species Counter
41-44	XXXX	Species Abundance
77-80	XXXX	DMSAG Sequencer

NOTE: Data elements within this file are absolute abundance values for zooplankton taxa, defined by the Taxonomic Level Description: Phylum (PHY:), Class (CLS:), Family (FAM:), or Species (blank, no value).

DMSAG SCIENTIFIC DATA FILE 0217A

RECORD FORMAT DESCRIPTION

Columns	Entry	Description
1- 4	PHY: CLS: FAM: Blank	Taxonomic Level Descriptor
5-35	XXX...XXX	Phylum, Class, Family or Species Name
37-39	XXX	Number of Individuals Counted in Box-Core Replicate A
41-43	XXX	Number of Individuals Counted in Box-Core Replicate B
45-47	XXX	Number of Individuals Counted in Box-Core Replicate C
49-51	XXX	Number of Individuals Counted in Box-Core Replicate D
53-55	XXX	Number of Individuals Counted in Box-Core Replicate E
57-59	XXX	Number of Individuals Counted in Box-Core Replicate F
61-63	XXX	Number of Individuals Counted in Box-Core Replicate G
65-67	XXX	Number of Individuals Counted in Box-Core Replicate H
69-71	XXX	Number of Individuals Counted in Box-Core Replicate I
73-75	XXX	Number of Individuals Counted in Box-Core Replicate K
77-80	XXXX	DMSAG Sequencer

NOTE: Data elements within this file are absolute abundance values for the taxon indicated by the Taxonomic Level Descriptor: Phylum (PHY:), Class (CLS:), Family (FAM:), or Species (Blank, no entry).

DMSAG SCIENTIFIC DATA FILE 0217B

RECORD FORMAT DESCRIPTION

Columns	Entry	Description
1- 4	MAFL	BLM-OCS Area Designation
5- 9	0217	DMSAG Scientific Data File Name
10-12	XXX	Sample I.D.
14-21	IIIIIIIf	Molluscan Biomass (m.g., wet weight preserved)
23-30	IIIIIIIf	Polychaete Biomass (m.g., wet weight preserved)
32-39	IIIIIIIf	Crustacean Biomass (m.g., wet weight preserved)
41-48	IIIIIIIf	Echinoderm Biomass (m.g., wet weight preserved)
50-57	IIIIIIIf	Miscellany Biomass (m.g., wet weight preserved)
77-80	XXXX	DMSAG Sequencer

NOTE: Data elements within this file are macroinvertebrate biomass values. For data entries, I... and f..., denote integral and fractional parts of values, respectively.

DMSAG SCIENTIFIC DATA FILE 0218

RECORD FORMAT DESCRIPTION

Columns	Entry	Description
1- 4	MAFL	BLM-OCS Area Designation
5- 8	0218A	DMSAG Scientific Data File Name
10-12	XXX	Sample I.D.
14-18	IIIIf	Sediment ATP Values (ng/g)
20-24	IIIIf	Standard Deviation for all Replicates
26-29	IIff	Sediment Wet Weight (g/cm^3)
31-34	IIff	Sediment Dry Weight (g/cm^3)
36-38	Iff	Ionic Efficiency
40-42	Iff	Adsorption Efficiency
44-46	Iff	Total Efficiency
77-80	XXXX	DMSAG Sequencer

NOTE: Data elements within this file are Sediment ATP values. For data entries, I... and f..., denote integral and fractional parts of values, respectively.

DMSAG SCIENTIFIC DATA FILE 0219A

RECORD FORMAT DESCRIPTION

Columns	Entry	Description
1- 4	MAFL	BLM-OCS Area Designation
5- 9	0219A	DMSAG Scientific Data File Name
10-12	XXX	Sample I.D.
14-19	IIIIIf	Sediment Dry Weight (grams)
21-24	IIff	Percent Carbonate
26-29	IIff	Percent Organic Carbon
31-35	IIIff	Lipid Weight (milligrams)
37-41	IIIff	Aliphatic Weight (milligrams)
43-47	IIIff	Aromatic Weights (Milligrams)
77-80	XXXX	DMSAG Sequencer

NOTE: For data entries, I... and f..., denote integral and fractional parts of values, respectively.

DMSAG SCIENTIFIC DATA FILE 0219B

RECORD FORMAT DESCRIPTION

Columns	Entry	Description
1- 4	MAFL	BLM-OCS Area Designation
5- 9	0219B	DMSAG Scientific Data File Name
10-12	XXX	Sample I.D.
14-19	IIIfff	Aliphatic Weight (ppm)
20-25	IIIfff	Aromatic Weight (ppm)
26-31	IIIfff	N-Alkanes (ppm)
32-36	Iffff	Ratio of Pristane and Phytane to N-Alkanes
37-40	Ifff	Ratio of Pristane to C-17
41-43	Iff	Ratio of Phytane to C-18
44-46	Iff	Ratio of Pristane to Phytane
47-51	IIIIf	Ratio of N-Alkanes to n-C16
52-54	IIf	Percent N-Alkanes to Aliphatics
55-59	IIIff	Ratio of Odd to Even
60-64	IIIff	C10-C20 Odd to Even
65-69	IIIff	C21-C31 Odd to Even
70-75	IIIfff	Ratio of C12-C20 to C21-C31
77-80	XXXX	DMSAG Sequencer

NOTE: For data entries, I..., and f..., denote integral and fractional parts of values, respectively.

DMSAG SCIENTIFIC DATA FILE 0219H

RECORD FORMAT DESCRIPTION

Columns	Entry	Description
1- 4	MAFL	BLM-OCS Area Designation
5- 9	0219H	DMSAG File Code
10-12	XXX	Sample I.D.
14-18	IIIff	Retention Time
20-24	XXXXX	Kovats
26-30	IIIff	Micrograms
32-36	IIIff	Retention Time
38-42	XXXXX	Kovats
44-48	IIIff	Micrograms
77-80	XXXX	DMSAG Sequencer

NOTE: Data elements within this file are Gas Chromatography results. For data entries I... and f..., denote integral and fractional parts of values, respectively.

DMSAG SCIENTIFIC DATA FILE 0219R

RECORD FORMAT DESCRIPTION

Columns	Entry	Description
1- 4	MAFL	BLM-OCS Area Designation
5- 9	0219R	DMSAG Scientific Data File Name
10-12	XXX	Sample I.D.
14-18	IIII.f	Ratio of Lipids to Acidic Sediments
20-23	IIII.f	Ratio of Lipids to Total Sediments
25-27	IIf	Ratio of Lipids to Organic Carbons
29-32	IIff	Ratio of Total Hydrocarbons to Lipids
34-37	IIff	Ratio of Aliphatic HC to Aromatic HC
39-42	IIff	Ratio of Aliphatic HC to Acidic Sediments
44-47	IIff	Ratio of Aliphatic HC to Total Sediments
49-51	Iff	Ratio of Aliphatic HC to Organic Carbons
53-55	Iff	Ratio of Aliphatic HC to Lipid
57-60	IIff	Ratio of Aromatic HC to Acidic Sediments
62-64	Iff	Ratio of Aromatic HC to Total Sediments
66-68	Iff	Ratio of Aromatic HC to Organic Carbons
70-72	Iff	Ratio of Aromatic HC to Lipid
77-80	XXXX	DMSAG Sequencer

NOTE: For data entries, I..., and f..., denote integral and fractional
parts of values, respectively.

DMSAG SCIENTIFIC DATA FILE 0219S

RECORD FORMAT DESCRIPTION

Columns	Entry	Description
1- 4	MAFL	BLM-OCS Area Designation
5- 9	0219S	DMSAG File Name
10-12	XXX	Sample I.D.
14-17	XXXX	Total Peaks Aliphatics Fraction (ppb total sediment)
19-22	XXXX	Total Peaks Aromatic Fraction (ppb total sediment)
24-27	XXXX	Total N-Alkanes (ppb total sediment)
29-33	IIIff	Percent of N-Alkanes/Total Aliphatics
35-39	IIIff	Ratio of Aliphatics to Aromatics
41-45	IIIff	Ratio of C17 to C29
47-51	IIIff	Ratio of C17 to PRIS
53-57	IIIff	Ratio of C18 to PHY
59-63	IIIff	Ratio of PRIS to PHY
77-80	XXXX	DMSAG Sequencer

NOTE: For data entries I..., and f..., denote integral and fractional parts of values, respectively.

DMSAG SCIENTIFIC DATA FILE 0221

RECORD FORMAT DESCRIPTION

Columns	Entry	Description
1- 4	MAFL	BLM-OCS area Designation
5- 8	0221	DMSAG File Number
10-13	XXXX	Sample I.D.
15-18	IIII	Depth in Meters
20-24	IIIff	Percent Transmission
76	Blank or F	if on-station then leave blank, if off-station then use F and use lower sequences corresponding to two stations
77-80	XXXX	DMSAG Sequencer

NOTE: Data in the files pertain to transmissometry data. II..., and ff..., denote integral and fractional parts of measurements, respectively.

DMSAG SCIENTIFIC DATA FILE 0222C

RECORD FORMAL DESCRIPTION

Columns	Entry	Description
1- 4	MAFL	BLM-OCS Area Description
5- 9	0222C	DMSAG File Name
11-14	XXXX	Minimum Depth Fished
16-19	XXXX	Maximum Depth Fished
21-25	IIIff	Volume 1 Water Filtered (cubic meter)
27-30	XXXX	Displacement and Volume (milliliters)
32-35	XXXX	Volume of Jelly Fish
37-41	IIfff	Replacement and Volume (ml/m^3)
43-45	XXX	Number of Species (records in File 0222Z)
47-49	XXX	Number of Splits
51-57	IIIffff	Biomass (grams)
77-80	XXXX	DMSAG Sequencer

NOTE: Data elements within this file are zooplankton collection characteristics. For data entries I..., f..., denote integral and fractional components, respectively.

DMSAG SCIENTIFIC DATA FILE 0222M

RECORD FORMAT DESCRIPTION

Columns	Entry	Description
1- 4	PHY: CLS: FAM: Blank	Taxonomic Level Descriptor
5-35	XX...XX	Phylum, Class, Family or Species Name
37-41	XXXXX	Number of Individuals Counted in Box-Core Replicate A
43-47	XXXXX	Number of Individuals Counted in Box-Core Replicate I
49-53	XXXXX	Number of Individuals Counted in Box-Core Replicate K
77-30	XXXX	DMSAG Sequencer

NOTE: Data elements within this file are absolute abundance values for the taxon indicated by the Taxonomic Level Descriptor: Phylum (PHY:), Class (CLS:), Family (FAM:), or Species (Blank, no entry).

DMSAG SCIENTIFIC DATA FILE 0222Z

RECORD FORMAT DESCRIPTION

Columns	Entry	Description
1- 4	PHY: CLS: FAM: Blank	Taxonomic Level Description
5-35	XXX...XXX	Phylum, Class, Family or Species Name
37-39	XXX	Species Counter
41-44	XXXX	Species Abundance
77-80	XXXX	DMSAG Sequencer

NOTE: Data elements within this file are absolute abundance values for zooplankton taxa, defined by the Taxonomic Level Description: Phylum (PHY:), Class (CLS:), Family (FAM:), or Species (blank, no value).

DMSAG SCIENTIFIC DATA FILE 0223M

RECORD FORMAT DESCRIPTION

Columns	Entry	Description
1- 4	PHY: CLS: FAM: Blank	Taxonomic Level Descriptor
5-35	XX...XX	Phylum, Class, Family or Species Name
37-39	XXX	Species Counter for Current Sample
41-44	XXXX	Species Abundance (number of individuals)
46-49	XXXX	Number of Individuals Measured
51-54	XXXX	Number of Individuals Weighed
56-59	XXXX	Total Weight this Sample (grams)
65	X	Species Abundance Quality Code (Q_1)
66	X	Length-Weight Quality Code (Q_2)
68-69	XX	Number of Length-Weight Records in File 0223L
75	D or T	Dredge or Trawl Indicator
77-80	XXXX	DMSAG Sequencer

NOTE: Data elements in this file are absolute abundance values for demersal fish. Taxa defined by the taxonomic level descriptor Phylum (PHY:), Family (FAM:), or Species (Blank, no entry).

DMSAG SCIENTIFIC DATA FILE 0225H

RECORD FORMAT DESCRIPTION

Columns	Entry	Description
1- 4	MAFL	BLM-OCS Area Designation
5-9	0225H	DMSAG Scientific Data File Name
11-15	II.ff	Retention time
19-25	IIII.ff	Retention index
35-44	IIIIIIIII	Area
45-53	IIII.ffff	μg/peak
55-60	III.ff	Percent
65-73	IIII.ffff	μg/g
75	P or B	Fraction (P = Pet ether, B = Benzene)
76	F or O	Column type (F = FFAP, O = OV101)
77-80	XXXX	DMSAG Sequencer

DMSAG SCIENTIFIC DATA FILE 0225R1

RECORD FORMAT DESCRIPTION

Columns	Entry	Description
1- 4	MAFL	BLM-OCS Area Description
5-10	0225R1	DMSAG Scientific Data File Name
11-20	XX...XX	Isp/N-Alk
21-30	XX...XX	Branched/Normal
31-40	XX...XX	Odd/Even
41-50	XX...XX	Odd/Even ≤ 20
51-60	XX...XX	Odd/Even >20
61-70	XX...XX	N-Alk/All
75	P or B	Fraction (P = Pet ether, B = Benzene)
76	F or O	Column type (F = FFAP, O = OV101)
77-80	XXXX	DMSAG Sequencer

DMSAG SCIENTIFIC DATA FILE 0225R2

RECORD FORMAT DESCRIPTION

Columns	Entry	Description
1- 4	MAFL	BLM-OCS Area Designation
5-10	0225R2	DMSAG Scientific Data File Name
11-20	XX...XX	N-Alk/NC16
21-30	XX...XX	N-Alk $\leq$ 20/N-Alk > 20
*31-40	XX...XX	Pris/Phyt
*41-50	XX...XX	Pris/NC17
*51-60	XX...XX	Phyt/NC18
75	P or B	Fraction (P = Pet ether, B = Benzene)
76	F or O	Column Type (F = FFAP, O = OV101)
77-80	XXXX	DMSAG Sequencer

DMSAG SCIENTIFIC DATA FILE 0225S

RECORD FORMAT DESCRIPTION

Columns	Entry	Description
1- 4	MAFL	BLM-OCS Area Designation
5- 9	0225S	DMSAG Scientific Data File Name
11-15	XXXXX	Number of peaks
16-23	IIII.fff	Sample Weight in grams
24-31	IIII.fff	µg hydrocarbon/g of sample
75	P or B	Fraction (P = Pet ether, B = Benzene)
76	F or O	Column type (F = FFAP, O = OV101)
77-80	XXXX	DMSAG Sequencer

DMSAG SCIENTIFIC DATA FILE 0225T

RECORD FORMAT DESCRIPTION

Columns	Entry	Description
1- 4	MAFL	BLM-OCS Area Designation
5- 9	0225T	DMSAG Scientific Data File Name
10-12	XXX	Sample I.D.
14-20	XXXXXXX	Analysis I.D. Number
22-57	XXX...XXX	Species Identification
59-60	XX	Dry to Wet Weight Conversion Factor
62	X	Replicate Code
77-80	XXXX	DMSAG Sequencer

DMSAG SCIENTIFIC DATA FILE 0226R

RECORD FORMAT DESCRIPTION

Columns	Entry	Description
1- 4	PHY: CLS: FAM: BLANK	Taxonomic Level Description
5-35	XXX...XXX	Phylum, Class, Family, or Species Name
37-40	XXXX	Total Number of Micromollusc Present
77-80	XXXX	DMSAG Sequencer

NOTE: Data elements within this file are absolute abundance values for the taxon defined by the Taxonomic Level Description: Phylum (PHY:), Class (CLS:), Family (FAM:), or Species (BLANK). Specifically, this file is used for storage of Micromollusc abundance data: Total.

DMSAG SCIENTIFIC DATA FILE 0227A

RECORD FORMAT DESCRIPTION

Columns	Entry	Description
1- 4	MAFL	BLM-OCS Area Designation
5- 9	0227	DMSAG Scientific Data File Name
10-12	XXX	Sample I.D.
14-17	IIff	Percent Iron constituent
19-23	IIIff	Lead concentration (parts per million)
25-29	IIIff	Copper concentration (parts per million)
31-35	IIIff	Nickel concentration (parts per million)
43-47*	IIIff*	Cadmium concentration (parts per million)
49-53	IIIff	Vanadium concentration (parts per million)
55-59	IIIff	Barium concentration (parts per million)
77-88	XXXX	DMSAG Sequencer

NOTE: Data elements within this file are sediment trace metal concentration values (parts per million). For data entries, I..., and f..., denote integral and fractional parts of values, respectively.

* A minus sign in column 43 means "less than".

DMSAG SCIENTIFIC DATA FILE 0227M

RECORD FORMAT DESCRIPTION

Columns	Entry	Description
1- 4	MAFL	BLM-OCS Area Designation
5- 9	0227M	DMSAG Scientific Data File Name
10-12	XXX	Sample I.D.
14-21	IIIIffff	Cadmium Concentration (parts per million dry weight
23-30	IIIIffff	Iron Concentration (parts per million dry weight)
32-39	IIIIffff	Copper Concentration (parts per million dry weight)
41-48	IIIIffff	Lead Concentration (parts per million dry weight)
50-57	IIIIffff	Vanadium Concentration (parts per million dry weight)
59-66	IIIIffff	Chromium Concentration (parts per million dry weight)
68-75	IIIIffff	Nickel Concentration (parts per million dry weight)
77-80	XXXX	DMSAG Sequencer

NOTE: Data elements within this file are trace metal concentration values for representative macroinvertebrate species. For data entries, I..., and f..., denote integral and fractional parts of values, respectively.

DMSAG SCIENTIFIC DATA FILE 0227T

RECORD FORMAT DESCRIPTION

Columns	Entry	Description
1- 4	MAFL	BLM-OCS Area Designation
5- 9	0227T	DMSAG Scientific Data File Name
10-12	XXX	Sample I.D.
14-20	XXXXXXX	Analysis I.D. Number
22-57	XXX...XXX	Species Identification
59-60	XX	Dry to Wet Weight Conversion Factor
62	X	Replicate Code
77-80	XXXX	DMSAG Sequencer

DMSAG SCIENTIFIC DATA FILE 0229L

RECORD FORMAT DESCRIPTION

Columns	Entry	Description
1- 4	MAFL	BLM-OCS Area Designation
5- 9	0229L	DMSAG File Name
10-12	XXX	Species Counter for Current Sample
14-15	XX	L-Record Counter for Current Species
17-22	IIIIIf	First Length Measurement (mm)
24-29	IIIIIf	First Weight Measurement (g)
31-36	IIIIIf	Second Length Measurement (mm)
38-43	IIIIIf	Second Weight Measurement (g)
45-50	IIIIIf	Third Length Measurement (mm)
52-57	IIIIIf	Third Weight Measurement (g)
59-64	IIIIIf	Fourth Length Measurement (mm)
66-71	IIIIIf	Fourth Weight Measurement (g)
75	D or T	Dredge or Trawl Indicator
77-80	XXXX	DMSAG Sequencer

NOTE: Data elements in the file are demersal fish meristic values (lengths, and weights). For data entries, I..., f..., denote integer and fractional components, respectively.

DMSAG SCIENTIFIC DATA FILE 0229M

RECORD FORMAT DESCRIPTION

Columns	Entry	Description
1- 4	PHY: CLS: FAM: BLANK	Taxonomic Level Descriptor
5-35	XX...XX	Phylum, Class, Family or Species Name
37-39	XXX	Species Counter for Current Sample
41-44	XXXX	Species Abundance (number of individuals)
46-49	XXXX	Number of Individuals Measured
51-54	XXXX	Number of Individuals Weighed
56-59	XXXX	Total Weight This Sample (grams)
65	X	Species Abundance Quality Code (Q_1)
66	X	Length-Weight Quality Code (Q_2)
68-69	XX	Number of Length-Weight Records in File 0229L
75	D or T	Dredge or Trawl Indicator
77-90	XXXX	DMSAG Sequencer

NOTE: Data elements in this file are absolute abundance values for demersal fish. Taxa defined by the taxonomic level descriptor: Phylum (PHY:), Class (CLS:), Family (FAM:), or Species (BLANK, no entry).

DMSAG SCIENTIFIC DATA FILE 0232A

RECORD FORMAT DESCRIPTION

Columns	Entry	Description
1- 4	PHY: CLS: FAM: Blank	Taxonomic Level Descriptor
5-35	XXX...XXX	Phylum, Class, Family or Species Name
37-39	XXX	Number of Individuals Counted in Box-Core Replicate A
41-43	XXX	Number of Individuals Counted in Box-Core Replicate B
45-47	XXX	Number of Individuals Counted in Box-Core Replicate C
49-51	XXX	Number of Individuals Counted in Box-Core Replicate D
53-55	XXX	Number of Individuals Counted in Box-Core Replicate E
57-59	XXX	Number of Individuals Counted in Box-Core Replicate F
61-63	XXX	Number of Individuals Counted in Box-Core Replicate G
65-67	XXX	Number of Individuals Counted in Box-Core Replicate H
69-71	XXX	Number of Individuals Counted in Box-Core Replicate I
73-75	XXX	Number of Individuals Counted in Box-Core Replicate K
77-80	XXXX	DMSAG Sequencer

NOTE: Data elements within this file are absolute abundance values for the taxon indicated by the Taxonomic Level Descriptor: Phylum (PHY:) Class (CLS:), Family (FAM:), or Species (Blank, no entry).

DMSAG SCIENTIFIC DATA FILE 0232B

RECORD FORMAT DESCRIPTION

Columns	Entry	Description
1- 4	MAFL	BLM-OCS Area Designation
5- 9	0232	DMSAG Scientific Data File Name
10-12	XXX	Sample I.D.
14-21	IIIIIIIf	Molluscan Biomass (m.g., wet weight preserved)
23-30	IIIIIIIf	Polychaete Biomass (m.g., wet weight preserved)
32-39	IIIIIIIf	Crustacean Biomass (m.g., wet weight preserved)
41-48	IIIIIIIf	Echinoderm Biomass (m.g., wet weight preserved)
50-57	IIIIIIIf	Miscellany Biomass (m.g., wet weight preserved)
77-80	XXXX	DMSAG Sequencer

NOTE: Data elements within this file are macroinvertebrate biomass values. For data entries, I..., and f..., denote integral and fractional parts of values, respectively.

DMSAG SCIENTIFIC DATA FILE 0233N

RECORD FORMAT DESCRIPTION

Columns	Entry	Description
1- 4	MAFL	BLM-OCS Area Designation
5- 9	0233N	DMSAG Scientific Data File Name
10-12	XXX	Replicate I.D.
14-37	XX...XX	Grain Type Nomenclature
39-43	IIIII	Number Counts in 4000 - 2000 μ grain size fraction
45-49	IIIII	Percent composition in 2000 - 1000 μ grain size fraction
51-55	IIIII	Percent composition in 1000 - 500 μ grain size fraction
57-61	IIIII	Percent composition in 500 - 250 μ grain size fraction
63-67	IIIII	Percent composition in 250 - 125 μ grain size fraction
69-73	IIIII	Percent composition in 125 - 62.5 μ grain size fraction
77-80	XXXX	DMSAG Sequencer

NOTE: Data elements within this file are carbonate and skeletal sand constituent percentages. For data entries II..., denote integer parts.

DMSAG SCIENTIFIC DATA FILE 0233P

RECORD FORMAT DESCRIPTION

Columns	Entry	Description
1- 4	MAFL	BLM-OCS Area Designation
5- 9	0233P	DMSAG Scientific Data File Name
10-12	XXX	Replicate I.D.
14-37	XX...XX	Grain Type Nomenclature
39-43	IIIff	Percent composition in 4000 - 2000 μ grain size fraction
45-49	IIIff	Percent composition in 2000 - 1000 μ grain size fraction
51-55	IIIff	Percent composition in 1000 - 500 μ grain size fraction
57-61	IIIff	Percent composition in 500 - 250 μ grain size fraction
63-67	IIIff	Percent composition in 250 - 125 μ grain size fraction
69-73	IIIff	Percent composition in 125 - 62.5 μ grain size fraction
77-80	XXXX	DMSAG Sequencer

NOTE: Data elements within this file are carbonate and skeletal sand constituent percentages. For data entries, II..., ff..., denote integer and fractional parts, respectively.

APPENDIX B

CORRESPONDENCE FOR PLOTS

DMSAG FILE 0101
BLM-MAFLA BOX CORE INVENTORY DESTINATION DATA

BLM-OCS AREA	DMSAG FILE	SAMPLE ID	NO. PHOTOS	CORE DEPTH (CM)	NO. SUB-SMPL	SED. ANAL.	SED. ARCH.	X-RAD	HYDR. 1 Gal	HYDR. ¼ Gal	HYDR. 1 Pt.	T.M. ANAL.	ATP	MICRO MOLL.	FORAM	MEIO-FAUNA	MACRO FAUNA	T.M. Q.C.	DMSAG SEQUENCE
MAFL	0101																		
MAFL	0101																		
MAFL	0101																		
MAFL	0101																		
MAFL	0101																		
MAFL	0101																		
MAFL	0101																		
MAFL	0101																		
MAFL	0101																		
MAFL	0101																		
MAFL	0101																		
MAFL	0101																		
MAFL	0101																		
MAFL	0101																		
MAFL	0101																		
MAFL	0101																		
MAFL	0101																		
MAFL	0101																		
MAFL	0101																		
MAFL	0101																		
MAFL	0101																		
MAFL	0101																		
MAFL	0101																		
MAFL	0101																		
MAFL	0101																		
MAFL	0101																		
MAFL	0101																		
MAFL	0101																		

DMSAG FILE 0102

BLM-MAFLA DIVE STATION INVENTORY DESTINATION DATA

BLM-OCS AREA	DMSAG FILE	SAMPLE ID	NO. SUB SPL.	PRES. METH.	TM ANAL.	TM QC	ALGAL HYDR.	AH QC	MACR HYDR	MH QC	HIST	INV. ID	SED. ANAL.	CLAY	FORAM	ARCHIVE SED.	ARCHIVE CLAY	ARCHIVE FORAM	DMSAG SEQUENCE
MAFL	0102																		
MAFL	0102																		
MAFL	0102																		
MAFL	0102																		
MAFL	0102																		
MAFL	0102																		
MAFL	0102																		
MAFL	0102																		
MAFL	0102																		
MAFL	0102																		
MAFL	0102																		
MAFL	0102																		
MAFL	0102																		
MAFL	0102																		
MAFL	0102																		
MAFL	0102																		
MAFL	0102																		
MAFL	0102																		
MAFL	0102																		
MAFL	0102																		
MAFL	0102																		
MAFL	0102																		
MAFL	0102																		
MAFL	0102																		
MAFL	0102																		
MAFL	0102																		
MAFL	0102																		
MAFL	0102																		

SAMPLING PERIOD ______________ DATE ____________

[illegible] FILE 0204
WATER COLUMN INVENTORY [illegible] DATA

BLM [illegible] AREA				[illegible] FILE			
1	2	3	4	5	6	7	8
M	A	F	2	0	2	0	4
M	A	F	2	0	2	0	4
M	A	F	2	0	2	0	4
M	A	F	2	0	2	0	4
M	A	F	2	0	2	0	4
M	A	F	2	0	2	0	4
M	A	F	2	0	2	0	4
M	A	F	2	0	2	0	4
M	A	F	2	0	2	0	4
M	A	F	2	0	2	0	4
M	A	F	2	0	2	0	4
M	A	F	2	0	2	0	4
M	A	F	2	0	2	0	4
M	A	F	2	0	2	0	4
M	A	F	2	0	2	0	4
M	A	F	2	0	2	0	4
M	A	F	2	0	2	0	4
M	A	F	2	0	2	0	4
M	A	F	2	0	2	0	4
M	A	F	2	0	2	0	4
M	A	F	2	0	2	0	4
M	A	F	2	0	2	0	4
M	A	F	2	0	2	0	4
M	A	F	2	0	2	0	4
M	A	F	2	0	2	0	4
M	A	F	2	0	2	0	4

SAMPLE ID | NO. SUB SM[illegible] | SAMPLE [illegible] | NEUSTON | ZOOPLANKTON | [illegible] | DISS HC | PART HC | DISS OC | PART OC | [illegible] | SUSP MIN | [illegible] | [illegible] | [illegible] | [illegible] SEDIMENT

DMSAG FILE 0103

BLM-MAFLA TRAWL/DREDGE INVENTORY DESTINATION DATA

BLM-OCS AREA	DMSAG FILE	SAMPLE ID	NO. SUB SPL	PRES. METH.	TM ANAL	TM QC	ALGAL AH HYDR.	AH QC	MACR HYDR	MH QC	HIST	DEM FISH	INV. ID		DMSAG SEQUENCE
MAFL	0103	X	X	X	X		X		X		X	X	X	X	X
MAFL	0103	X	X	X	X		X		X		X	X	X	X	X
MAFL	0103	X	X	X	X		X		X		X	X	X	X	X
MAFL	0103	X	X	X	X		X		X		X	X	X	X	X
MAFL	0103	X	X	X	X		X		X		X	X	X	X	X
MAFL	0103	X	X	X	X		X		X		X	X	X	X	X
MAFL	0103	X	X	X	X		X		X		X	X	X	X	X
MAFL	0103	X	X	X	X		X		X		X	X	X	X	X
MAFL	0103	X	X	X	X		X		X		X	X	X	X	X
MAFL	0103	X	X	X	X		X		X		X	X	X	X	X
MAFL	0103	X	X	X	X		X		X		X	X	X	X	X
MAFL	0103	X	X	X	X		X		X		X	X	X	X	X
MAFL	0103	X	X	X	X		X		X		X	X	X	X	X
MAFL	0103	X	X	X	X		X		X		X	X	X	X	X
MAFL	0103	X	X	X	X		X		X		X	X	X	X	X
MAFL	0103	X	X	X	X		X		X		X	X	X	X	X
MAFL	0103	X	X	X	X		X		X		X	X	X	X	X
MAFL	0103	X	X	X	X		X		X		X	X	X	X	X
MAFL	0103	X	X	X	X		X		X		X	X	X	X	X
MAFL	0103	X	X	X	X		X		X		X	X	X	X	X
MAFL	0103	X	X	X	X		X		X		X	X	X	X	X
MAFL	0103	X	X	X	X		X		X		X	X	X	X	X
MAFL	0103	X	X	X	X		X		X		X	X	X	X	X
MAFL	0103	X	X	X	X		X		X		X	X	X	X	X
MAFL	0103	X	X	X	X		X		X		X	X	X	X	X
MAFL	0103	X	X	X	X		X		X		X	X	X	X	X
MAFL	0103	X	X	X	X		X		X		X	X	X	X	X
MAFL	0103	X	X	X	X		X		X		X	X	X	X	X

DMSAG FILE 0201N
DEMERSAL FISH COUNT DATA

SPECIES IDENTIFICATION	SPECIES INDEX	NUMBER INDIVIDUALS	NUMBER MEASURED	NUMBER WEIGHED	TOTAL WEIGHT THIS SAMPLE	Q_1	Q_2	LR	D/T	DMSAG SEQUENCE
1–35	36–40	41–45	46–50	51–55	56–63	64–65	66–67	68–70	71–74	75–80

SAMPLING PERIOD ____________ DATE ______ PRINCIPAL INVESTIGATOR: R. C. BAIRD

DMSAG FILE 0201L
DEMERSAL FISH MERISTICS DATA

SPECIES INDEX	L-REC NO.	LENGTH (1)	WEIGHT (1)	LENGTH (2)	WEIGHT (2)	LENGTH (3)	WEIGHT (3)	LENGTH (4)	WEIGHT (4)	D/T	DMSAG SEQUENCER
FL0201L											
FL0201L											
FL0201L											
FL0201L											
FL0201L											
FL0201L											
FL0201L											
FL0201L											
FL0201L											
FL0201L											
FL0201L											
FL0201L											
FL0201L											
FL0201L											
FL0201L											
FL0201L											
FL0201L											
FL0201L											
FL0201L											
FL0201L											
FL0201L											
FL0201L											
AT10201L											
AT10201L											
AT10201L											
AT10201L											
AT10201L											
AT10201L											

SAMPLING PERIOD ______________ DATE __________ PRINCIPAL INVESTIGATOR: R. C. BAIRD

DMSAG FILE G202N
NEUTON TRACE METAL DATA

CCS IDA	DMSAG FILE	SAMPLE I.D.	Fe	Cr	Ni	Cd	V	Pb	Cu	DMSAG SEQUENCER

SAMPLING PERIOD ____________ DATE ___________

PRINCIPAL INVESTIGATOR: P. R. BETZER

DMSAG FILE 0203R
REFRACTORY FRACTION TRACE ELEMENT DATA

BLM-OCS AREA	DMSAG FILE	SAMPLE I.D.	SUSP. PARTIC. MATTER	% Si	% Cu	% Cd	% Pb	% Fe	% Al	% Cr	Ni	V	DMSAG SEQUENCER
M A F L	O 2 0 3 R												
M A F L	O 2 0 3 R												
M A F L	O 2 0 3 R												
M A F L	O 2 0 3 R												
M A F L	O 2 0 3 R												
M A F L	O 2 0 3 R												
M A F L	O 2 0 3 R												
M A F L	O 2 0 3 R												
M A F L	O 2 0 3 R												
M A F L	O 2 0 3 R												
M A F L	O 2 0 3 R												
M A F L	O 2 0 3 R												
M A F L	O 2 0 3 R												
M A F L	O 2 0 3 R												
M A F L	O 2 0 3 R												
M A F L	O 2 0 3 R												
M A F L	O 2 0 3 R												
M A F L	O 2 0 3 R												
M A F L	O 2 0 3 R												
M A F L	O 2 0 3 R												
M A F L	O 2 0 3 R												
M A F L	O 2 0 3 R												
M A F L	O 2 0 3 R												
M A F L	O 2 0 3 R												
M A F L	O 2 0 3 R												
M A F L	O 2 0 3 R												
M A F L	O 2 0 3 R												
M A F L	O 2 0 3 R												

SAMPLING PERIOD ____________ DATE ____________

PRINCIPAL INVESTIGATOR: P. R. BETZER

DMSAG FILE 0216
ORGANIC CARBON DATA

LM-CCS AREA					DMSAG FILE			POC DETERMINATIONS 1	POC DETERMINATIONS 2	POC DETERMINATIONS 3	DOC DETERMINATIONS 1	DOC DETERMINATIONS 2	DOC DETERMINATIONS 3	DMSAG SEQUENCE
1	2	3	4	5	6	7	8	10–15	17–22	24–29	31–36	38–43	45–50	77–80
M	A	F	1	0	2	1	6							
M	A	F	1	0	2	1	6							
M	A	F	1	0	2	1	6							
M	A	F	1	0	2	1	6							
M	A	F	1	0	2	1	6							
M	A	F	1	0	2	1	6							
M	A	F	1	0	2	1	6							
M	A	F	1	0	2	1	6							
M	A	F	1	0	2	1	6							
M	A	F	1	0	2	1	6							
M	A	F	1	0	2	1	6							
M	A	F	1	0	2	1	6							
M	A	F	1	0	2	1	6							
M	A	F	1	0	2	1	6							
M	A	F	1	0	2	1	6							
M	A	F	1	0	2	1	6							
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]							
M	A	F	1	0	2	1	6							
M	A	F	1	0	2	1	6							
M	A	F	1	0	2	1	6							
M	A	F	1	0	2	1	6							
M	A	F	1	0	2	1	6							
M	A	F	1	0	2	1	6							
M	A	F	1	0	2	1	6							
M	A	F	1	0	2	1	6							
M	A	F	1	0	2	1	6							
M	A	F	1	0	2	1	6							
M	A	F	1	0	2	1	6							

PRINCIPAL INVESTIGATOR: GEORGE KNAUER

DMSAG FILE 0215
PHYTOPLANKTON DATA

BLM-OCS AREA (1–4)	DMSAG FILE (5–8)	9	TIME (GMT) START (10–14)	TIME (GMT) STOP (15–18)	DEPTH (19–23)	CHLOROPHYLL-a DETERMINATIONS 1	2	3	PRODUCTIVITY DETERMINATIONS 1	2	3	SOLAR RADIATION	ASSIMILATION	DMSAG SEQUENCE (77–80)
M A F L	0 2 1 5													
M A F [illegible]	0 [illegible] [illegible] 5													
[illegible] A F [illegible]	0 [illegible] [illegible] 5													
M [illegible] F [illegible]	[illegible] [illegible] 1 5													
M A F [illegible]	[illegible] 2 1 5													
M A F [illegible]	[illegible] 2 2 [illegible]													
[illegible] A F [illegible]	0 [illegible] [illegible] [illegible]													
[illegible] A F L	0 2 1 5													
[illegible] A F L	0 2 1 5													
M A F [illegible]	0 2 1 5													
[illegible]	[illegible]													
[illegible]	[illegible]													
[illegible]	[illegible]													
[illegible]	[illegible]													
[illegible]	[illegible]													
[illegible]	[illegible]													
[illegible]	[illegible]													
[illegible]	[illegible]													
[illegible]	[illegible]													
[illegible]	[illegible]													
[illegible]	[illegible]													
[illegible]	[illegible]													
[illegible]	[illegible]													
[illegible]	[illegible]													
[illegible]	[illegible]													
[illegible]	[illegible]													
[illegible]	[illegible]													
M A [illegible]	[illegible] 2 [illegible] 5													

SAMPLING PERIOD ____________

PRINCIPAL INVESTIGATOR: RICHARD L. IVERSON

DATE ____________

DMSAG FILE 0214B
SUSPENDED MINERALOGY DATA

BLM-OCS AREA (1–4)	DMSAG FILE (5–9)	SAMPLE I.D. (10–13)	SMECTITE	CHLORITE	ILLITE	KAOLIN	TALC	QUARTZ	FELDSPAR	ARAGONITE	L.M. CALCITE	H.M. CALCITE	DOLOMITE	DMSAG SEQUENCE
M A F L	C 2 1 4 B													
M A F L	C 2 1 4 B													
M A F L	C 2 1 4 B													
M A F L	C 2 1 4 B													
M A F L	C 2 1 4 B													
M A F L	C 2 1 4 B													
M A F L	C 2 1 4 B													
M A F L	C 2 1 4 B													
M A F L	C 2 1 4 B													
M A F L	C 2 1 4 B													
M A F L	C 2 1 4 B													
M A F L	C 2 1 4 B													
M A F L	C 2 1 4 B													
M A F L	C 2 1 4 B													
M A F L	C 2 1 4 B													
M A F L	C 2 1 4 B													
M A F L	C 2 1 4 B													
M A F L	C 2 1 4 B													
M A F L	C 2 1 4 B													
M A F L	C 2 1 4 B													
M A F L	C 2 1 4 B													
M A F L	C 2 1 4 B													
M A F L	C 2 1 4 B													
M A F L	C 2 1 4 B													
M A F L	C 2 1 4 B													
M A F L	C 2 1 4 B													
M A F L	C 2 1 4 B													
M A F L	C 2 1 4 B													

SAMPLING PERIOD ____________ DATE ________ PRINCIPAL INVESTIGATOR: W. H. HUANG

IMSAG FILE 0223L
DEMERSAL FISH MERISTICS DATA

1	2	3	4	5	6	7	8	9	SPECIES INDEX (10–12)	L-REC NO. (13–16)	LENGTH (1)	WEIGHT (1)	LENGTH (2)	WEIGHT (2)	LENGTH (3)	WEIGHT (3)	LENGTH (4)	WEIGHT (4)	D/T	IMSAG SEQUENCE
M	A	F	1	C	2	2	3	1												
M	A	F	1	C	2	2	3	1												
M	A	F	1	C	2	2	3	1												
M	A	F	1	C	2	2	3	1												
M	A	F	1	C	2	2	3	1												
M	A	F	1	C	2	2	3	1												
M	A	F	1	C	2	2	3	1												
M	A	F	1	C	2	2	3	1												
M	A	F	1	C	2	2	3	1												
M	A	F	1	C	2	2	3	1												
M	A	F	1	C	2	2	3	1												
M	A	F	1	C	2	2	3	1												
M	A	F	1	C	2	2	3	1												
M	A	F	1	C	2	2	3	1												
M	A	F	1	C	2	2	3	1												
M	A	F	1	C	2	2	3	1												
M	A	F	1	C	2	2	3	1												
M	A	F	1	C	2	2	3	1												
M	A	F	1	C	2	2	3	1												
M	A	F	1	C	2	2	3	1												
M	A	F	1	C	2	2	3	1												
M	A	F	1	C	2	2	3	1												
M	A	F	1	C	2	2	3	1												
M	A	F	1	C	2	2	3	1												
M	A	F	1	C	2	2	3	1												
M	A	F	1	C	2	2	3	1												
M	A	F	1	C	2	2	3	1												
M	A	F	1	C	2	2	3	1												

SAMPLING PERIOD ____________ DATE ________ PRINCIPAL INVESTIGATOR: G. F. MAYER

DMSAG FILE 0213Q
DIVE STATION QUADRAT DATA

SAMPLE ID — QUAD — QUAD DEPTH (Ft.) FROM TO — # SPECIES — SP/M² — INDIV. — IND/M² — DMSAG SEQUENCER

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
M	A	F	L	0	2	1	3	0																																																																									
M	A	F	L	0	2	1	3	0																																																																										
M	A	F	L	0	2	1	3	0																																																																									
M	A	F	L	0	2	1	3	0																																																																									
M	A	F	L	0	2	1	3	0																																																																									
M	A	F	L	0	2	1	3	0																																																																									
M	A	F	L	0	2	1	3	0																																																																									
M	A	F	L	0	2	1	3	0																																																																									
M	A	F	L	0	2	1	3	0																																																																									
M	A	F	L	0	2	1	3	0																																																																								
M	A	F	L	0	2	1	3	0																																																																									
M	A	F	L	0	2	1	3	0																																																																								
M	A	F	L	0	2	1	3	0																																																																							
M	A	F	L	0	2	1	3	0																																																																							
M	A	F	L	0	2	1	3	0																																																																								
M	A	F	L	0	2	1	3	0																																																																								
M	A	F	L	0	2	1	3	0																																																																								
M	A	F	L	0	2	1	3	0																																																																							
M	A	F	L	0	2	1	3	0																																																																								
M	A	F	L	0	2	1	3	0																																																																							
M	A	F	L	0	2	1	3	0																																																																							
M	A	F	L	0	2	1	3	0																																																																							
M	A	F	L	0	2	1	3	0																																																																								
M	A	F	L	0	2	1	3	0																																																																								
M	A	F	L	0	2	1	3	0																																																																								
M	A	F	L	0	2	1	3	0																																																																								
M	A	F	L	0	2	1	3	0																																																																								
M	A	F	L	0	2	1	3	0																																																																								

SAMPLING PERIOD ______________ DATE ______________

PRINCIPAL INVESTIGATOR: THOMAS S. HOPKINS

DMSAG FILE 0214A
SURFACE SEDIMENT CLAY MINERALOGY DATA

BLM-OCS AREA	DMSAG FILE	SAMPLE ID	SMECTITE	CHLORITE	ILLITE	KAOLINITE	CHLORITE-VERMIC	DMSAG SEQUENCE
MAFL	0214A							
MAFL	0214A							
MAFL	0214A							
MAFL	0214A							
MAFL	0214A							
MAFL	0214A							
MAFL	0214A							
MAFL	0214A							
MAFL	0214A							
MAFL	0214A							
MAFL	0214A							
MAFL	0214A							
MAFL	0214A							
MAFL	0214A							
MAFL	0214A							
MAFL	0214A							
MAFL	0214A							
MAFL	0214A							
MAFL	0214A							
MAFL	0214A							
MAFL	0214A							
MAFL	0214A							
MAFL	0214A							
MAFL	0214A							
MAFL	0214A							
MAFL	0214A							
MAFL	0214A							
MAFL	0214A							

SAMPLING PERIOD ____________

PRINCIPAL INVESTIGATOR: WEN H. HUANG

DATE ____________

DMSAG FILE 0213A

EPIFAUNAL & EPIFLORAL ABUNDANCE DATA

SPECIES IDENTIFICATION | QUADRAT NUMBER | SPECIES COUNTER | SPECIES ABUNDANCE | DMSAG SEQUENCER

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80

SAMPLING PERIOD ________ DATE ________ PRINCIPAL INVESTIGATOR: T. S. HOPKINS

DMSAG FILE 02118
BOX CORE COLOR DESCRIPTION DATA

SAMPLE ID	COLOR FROM CHART — FROM	COLOR FROM CHART — TO	DEPTH (CM)	DMSAG SEQUENCE
F 1 0 2 1 1 B	. /	. /		
F 1 0 2 1 1 B	. /	. /		
F 1 0 2 1 1 B	. /	. /		
F 1 0 2 1 1 B	. /	. /		
F 1 0 2 1 1 B	. /	. /		
F 1 0 2 1 1 B	. /	. /		
A F 1 0 2 1 1 B	. /	. /		
A F 1 0 2 1 1 B	. /	. /		
A F 1 0 2 1 1 B	. /	. /		
A F 1 0 2 1 1 B	. /	. /		
A F 0 2 1 1 B	. /	. /		
A F 0 2 1 1 B	. /	. /		
[illegible]	. /	. /		
[illegible]	. /	. /		
A F 1 0 2 1 1 B	. /	. /		
[illegible]	. /	. /		
A F 1 0 2 1 1 B	. /	. /		
A F 1 0 2 1 1 B	. /	. /		
[illegible]	. /	. /		
A F 1 0 2 1 1 B	. /	. /		
A F 1 0 2 1 1 B	. /	. /		
A F 1 0 2 1 1 B	. /	. /		
A F 1 0 2 1 1 B	. /	. /		
A F 1 0 2 1 1 B	. /	. /		
A F 1 0 2 1 1 B	. /	. /		
A F 1 0 2 1 1 B	. /	. /		
A F 1 0 2 1 1 B	. /	. /		
A F 1 0 2 1 1 B	. /	. /		

SAMPLING PERIOD ______________ DATE ______________ PRINCIPAL INVESTIGATOR: LARRY J. DOYLE

DMSAG FILE 0211A
STANDARD SEDIMENT PARAMETER DATA

BLM-OCS AREA	DMSAG FILE	SAMPLE ID	AM*	PHI CLASS RANGE: >2	2-1	1-.5	.5-.25	.25-.125	.125-.063	.063-.004	<.004	%$CaCO_3$	DMSAG SEQUENCER
MAFL	0211		A										
MAFL	0211		A										
MAFL	0211		A										
MAFL	0211		A										
MAFL	0211		A										
MAFL	0211		A										
MAFL	0211		A										
MAFL	0211		A										
MAFL	0211		A										
MAFL	0211		A										
MAFL	0211		A										
MAFL	0211		A										
MAFL	0211		A										
MAFL	0211		A										
MAFL	0211		A										
MAFL	0211		A										
MAFL	0211		A										
MAFL	0211		A										
MAFL	0211		A										
MAFL	0211		A										
MAFL	0211		A										
MAFL	0211		A										
MAFL	0211		A										
MAFL	0211		A										
MAFL	0211		A										
MAFL	0211		A										
MAFL	0211		A										
MAFL	0211		A										

*AM = Analysis Method

SAMPLING PERIOD ______

PRINCIPAL INVESTIGATOR: LARRY J. DOYLE

DATE ______

DMSAG FILE 0210V
NEUSTON COLLECTION DATA (Volume & Weight)

BLM-OCS AREA	DMSAG FILE	SAMPLE ID	VOL. OF SAMPLE	VOL. > 2.5 cm	WEIGHT OF SARGASSUM	WEIGHT OF TAR	WEIGHT OF PLASTIC	WEIGHT OF OTHER DEBRIS	DMSAG SEQUENCE
MAFL	0210V								
MAFL	0210V								
MAFL	0210V								
MAFL	0210V								
MAFL	0210V								
MAFL	0210V								
MAFL	0210V								
MAFL	0210V								
MAFL	0210V								
MAFL	0210V								
MAFL	0210V								
MAFL	0210V								
MAFL	0210V								
MAFL	0210V								
MAFL	0210V								
MAFL	0210V								
MAFL	0210V								
MAFL	0210V								
MAFL	0210V								
MAFL	0210V								
MAFL	0210V								
MAFL	0210V								
MAFL	0210V								
MAFL	0210V								
MAFL	0210V								
MAFL	0210V								
MAFL	0210V								
MAFL	0210V								

SAMPLING PERIOD ___________ DATE _________ PRINCIPAL INVESTIGATOR: SNEED B. COLLARD

DMSAG FILE 0203Z
ZOOPLANKTON TRACE METAL DATA

LM-OCS AREA (2–3)	DMSAG FILE (4–9)	SAMPLE ID (10–14)	Fe (15–21)	Cr (22–28)	Ni (29–35)	Cd (36–42)	V (43–49)	Pb (50–56)	Cu (57–63)	(64–75)	DMSAG SEQUENCE (76–80)
A F	L 0 2 0 3 Z	X	X	X	X	X	X	X	X		X
A F	L 0 2 0 3 Z	X	X	X	X	X	X	X	X		X
A F	L 0 2 0 3 Z	X	X	X	X	X	X	X	X		X
A F	L 0 2 0 3 Z	X	X	X	X	X	X	X	X		X
A F	L 0 2 0 3 Z	X	X	X	X	X	X	X	X		X
A F	L 0 2 0 3 Z	X	X	X	X	X	X	X	X		X
A F	L 0 2 0 3 Z	X	X	X	X	X	X	X	X		X
A F	L 0 2 0 3 Z	X	X	X	X	X	X	X	X		X
A F	L 0 2 0 3 Z	X	X	X	X	X	X	X	X		X
A F	L 0 2 0 3 Z	X	X	X	X	X	X	X	X		X
A F	L 0 2 0 3 Z	X	X	X	X	X	X	X	X		X
A F	L 0 2 0 3 Z	X	X	X	X	X	X	X	X		X
A F	L 0 2 0 3 Z	X	X	X	X	X	X	X	X		X
A F	L 0 2 0 3 Z	X	X	X	X	X	X	X	X		X
A F	L 0 2 0 3 Z	X	X	X	X	X	X	X	X		X
A F	L 0 2 0 3 Z	X	X	X	X	X	X	X	X		X
A F	L 0 2 0 3 Z	X	X	X	X	X	X	X	X		X
A F	L 0 2 0 3 Z	X	X	X	X	X	X	X	X		X
A F	L 0 2 0 3 Z	X	X	X	X	X	X	X	X		X
A F	L 0 2 0 3 Z	X	X	X	X	X	X	X	X		X
A F	L 0 2 0 3 Z	X	X	X	X	X	X	X	X		X
A F	L 0 2 0 3 Z	X	X	X	X	X	X	X	X		X
A F	L 0 2 0 3 Z	X	X	X	X	X	X	X	X		X
A F	L 0 2 0 3 Z	X	X	X	X	X	X	X	X		X
A F	L 0 2 0 3 Z	X	X	X	X	X	X	X	X		X
A F	L 0 2 0 3 Z	X	X	X	X	X	X	X	X		X
A F	L 0 2 0 3 Z	X	X	X	X	X	X	X	X		X
A F	L 0 2 0 3 Z	X	X	X	X	X	X	X	X		X

SAMPLING PERIOD ________ DATE ________

PRINCIPAL INVESTIGATOR: PETER BETZER

ENSAC FILE 0205W
WEAK-ACID SOLUBLE TRACE ELEMENTS DATA

SLM-OCS AREA (1–4)	ENSAC FILE (5–8)	SAMPLE ID (9–13)	SUSP.-PARTIC. MATTER (14–20)	% Ca (21–27)	% Cu (28–34)	% Cd (35–41)	% Pb (42–48)	% Fe (49–55)	% Cr (56–62)	% Ni (63–69)	% V (70–75)	ENSAC SEQUENCE (76–80)
M A F 2	0 2 0 3	W	X	X	X	X	X	X	X	X	X	
M A F 2	0 2 0 3	W	X	X	X	X	X	X	X	X	X	
M A F 2	0 2 0 3	W	X	X	X	X	X	X	X	X	X	
M A F 2	0 2 0 3	W	X	X	X	X	X	X	X	X	X	
M A F 2	0 2 0 3	W	X	X	X	X	X	X	X	X	X	
[illegible]	[illegible]	[illegible]	X	X	X	X	X	X	X	X	X	
[illegible]	[illegible]	[illegible]	X	X	X	X	X	X	X	X	X	
[illegible]	[illegible]	[illegible]	X	X	X	X	X	X	X	X	X	
[illegible]	[illegible]	[illegible]	X	X	X	X	X	X	X	X	X	
[illegible]	[illegible]	[illegible]	X	X	X	X	X	X	X	X	X	
[illegible]	[illegible]	[illegible]	X	X	X	X	X	X	X	X	X	
[illegible]	[illegible]	[illegible]	X	X	X	X	X	X	X	X	X	
[illegible]	[illegible]	[illegible]	X	X	X	X	X	X	X	X	X	
[illegible]	[illegible]	[illegible]	X	X	X	X	X	X	X	X	X	
[illegible]	[illegible]	[illegible]	X	X	X	X	X	X	X	X	X	
[illegible]	[illegible]	[illegible]	X	X	X	X	X	X	X	X	X	
[illegible]	[illegible]	[illegible]	X	X	X	X	X	X	X	X	X	
[illegible]	[illegible]	[illegible]	X	X	X	X	X	X	X	X	X	
[illegible]	[illegible]	[illegible]	X	X	X	X	X	X	X	X	X	
[illegible]	[illegible]	[illegible]	X	X	X	X	X	X	X	X	X	
[illegible]	[illegible]	[illegible]	X	X	X	X	X	X	X	X	X	
[illegible]	[illegible]	[illegible]	X	X	X	X	X	X	X	X	X	
[illegible]	[illegible]	[illegible]	X	X	X	X	X	X	X	X	X	
[illegible]	[illegible]	[illegible]	X	X	X	X	X	X	X	X	X	
[illegible]	[illegible]	[illegible]	X	X	X	X	X	X	X	X	X	
[illegible]	[illegible]	[illegible]	X	X	X	X	X	X	X	X	X	
[illegible]	[illegible]	[illegible]	X	X	X	X	X	X	X	X	X	
M A F 2	0 2 0 3	W	X	X	X	X	X	X	X	X	X	

SAMPLING PERIOD ____________ DATE ____________

PRINCIPAL INVESTIGATOR: PETER BETZER

DMSAG FILE 0204M
INVERTEBRATE TRACE METAL DATA

BLM-OCS AREA (1–4)	DMSAG FILE (5–8)	SAMPLE ID (9–12)	Cd	Fe	Cu	Pb	V	Cr	Ni	DMSAG SEQUENCER (77–80)
M A F L	0 2 0 4	M								
M A F L	0 2 0 4	M								
M A F L	0 2 0 4	M								
M A F L	0 2 0 4	M								
M A F L	0 2 0 4	M								
M A F L	0 2 0 4	M								
M A F L	0 2 0 4	M								
M A F L	0 2 0 4	M								
M A F L	0 2 0 4	M								
M A F L	0 2 0 4	M								
M A F L	0 2 0 4	M								
M A F L	0 2 0 4	M								
M A F L	0 2 0 4	M								
M A F L	0 2 0 4	M								
M A F L	0 2 0 4	M								
M A F L	0 2 0 4	M								
M A F L	0 2 0 4	M								
M A F L	0 2 0 4	M								
M A F L	0 2 0 4	M								
M A F L	0 2 0 4	M								
M A F L	0 2 0 4	M								
M A F L	0 2 0 4	M								
M A F L	0 2 0 4	M								
M A F L	0 2 0 4	M								
M A F L	0 2 0 4	M								
M A F L	0 2 0 4	M								
M A F L	0 2 0 4	M								
M A F L	0 2 0 4	M								

SAMPLING PERIOD ____________ DATE ____________ PRINCIPAL INVESTIGATOR: SUSAN B. BETZER

DMSAG FILE 0204R
INVERTEBRATE TRACE METAL DATA

BLM-OCS AREA (1–4)	DMSAG FILE (5–8)	SAMPLE ID (9–12)	Cd	Fe	Cu	Pb	V	Cr	Ni	DMSAG SEQUENCER
M A F L	0 2 2 4	R								
M A F L	0 2 2 4	R								
M A F L	0 2 2 4	R								
M A F L	0 2 2 4	R								
M A F L	0 2 2 4	R								
M A F L	0 2 2 4	R								
M A F L	0 2 2 4	R								
M A F L	0 2 2 4	R								
M A F L	0 2 2 4	R								
M A F L	0 2 2 4	R								
M A F L	0 2 2 4	R								
M A F L	0 2 2 4	R								
M A F L	0 2 2 4	R								
M A F L	0 2 2 4	R								
M A F L	0 2 2 4	R								
M A F L	0 2 2 4	R								
M A F L	0 2 2 4	R								
M A F L	0 2 2 4	R								
M A F L	0 2 2 4	R								
M A F L	0 2 2 4	R								
M A F L	0 2 2 4	R								
M A F L	0 2 2 4	R								
M A F L	0 2 2 4	R								
M A F L	0 2 2 4	R								
M A F L	0 2 2 4	R								
M A F L	0 2 2 4	R								
M A F L	0 2 2 4	R								
M A F L	0 2 2 4	R								

SAMPLING PERIOD ____________ DATE __________

PRINCIPAL INVESTIGATOR: SUSAN B. BETZER

DMSAG FILE 0204T
TAXONOMIC DATA FOR INVERTEBRATE TRACE METAL DETERMINATIONS

OCS AREA (1–2)	DMSAG FILE NAME (4–9)	SAMPLE ID (10–12)	ANALYSIS ID NUMBER (14–20)	SPECIES IDENTIFICATION (22–57)	WT. FACTOR (59–60)	REPLICATE CODE (62)	(64–75)	DMSAG SEQUENCER (77–80)
AF	2020 4T							
AF	2020 4T							
AF	2020 4T							
AF	2020 4T							
AF	2020 4T							
[illegible]	[illegible]							
AF	2020 4T							
AF	2020 4T							
AF	2020 4T							
AF	2020 4T							
AF	2020 4T							
AF	2020 4T							
AF	2020 4T							
AF	2020 4T							
AF	2020 4T							
AF	2020 4T							
AF	2020 4T							
AF	2020 4T							
AF	2020 4T							
AF	2020 4T							
AF	2020 4T							
AF	2020 4T							
AF	2020 4T							
AF	20 204 T							
AF	20 204 T							
AF	20 204 T							
AF	20 204 T							
AF	20 204 T							

SAMPLING PERIOD ____________ DATE ____________ PRINCIPAL INVESTIGATOR: SUSAN B. BETZER

DMSAG FILE 0205A
MOLLUSCAN SPECIES ABUNDANCE DATA

REPLICATE I.D.

SPECIES IDENTIFICATION																																			A				B				C				D				E				F				G				H				I				K					DMSAG SEQUENC		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79

PRINCIPAL INVESTIGATOR: NORMAN J. BLAKE

DMSAG FILE 0205B
INVERTEBRATE BIOMASS DATA

BLM-OCS AREA					DMSAG FILE				REP			MOLLUSCA									POLYCHAETA									CRUSTACEA									ECHINODERMS									OTHER																										DMSAG SEQUENCE			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79
M	A	F	L	0	2	0	5	B				X									X									X									X									X									X																		X			
M	A	F	L	0	2	0	5	B				X									X									X									X									X									X																		X			
M	A	F	L	0	2	0	5	B				X									X									X									X									X									X																		X			
M	A	F	L	0	2	0	5	B				X									X									X									X									X									X																		X			
M	A	F	L	0	2	0	5	B				X									X									X									X									X									X																		X			
M	A	F	L	0	2	0	5	B				X									X									X									X									X									X																		X			
M	A	F	L	0	2	0	5	B				X									X									X									X									X									X																		X			
M	A	F	L	0	2	0	5	B				X									X									X									X									X									X																		X			
M	A	F	L	0	2	0	5	B				X									X									X									X									X									X																		X			
M	A	F	L	0	2	0	5	B				X									X									X									X									X									X																		X			
M	A	F	L	0	2	0	5	B				X									X									X									X									X									X																		X			
M	A	F	L	0	2	0	5	B				X									X									X									X									X									X																		X			
M	A	F	L	0	2	0	5	B				X									X									X									X									X									X																		X			
M	A	F	L	0	2	0	5	B				X									X									X									X									X									X																		X			
M	A	F	L	0	2	0	5	B				X									X									X									X									X									X																		X			
M	A	F	L	0	2	0	5	B				X									X									X									X									X									X																		X			
M	A	F	L	0	2	0	5	B				X									X									X									X									X									X																		X			
M	A	F	L	0	2	0	5	B				X									X									X									X									X									X																		X			
M	A	F	L	0	2	0	5	B				X									X									X									X									X									X																		X			
M	A	F	L	0	2	0	5	B				X									X									X									X									X									X																		X			
M	A	F	L	0	2	0	5	B				X									X									X									X									X									X																		X			
M	A	F	L	0	2	0	5	B				X									X									X									X									X									X																		X			
M	A	F	L	0	2	0	5	B				X									X									X									X									X									X																		X			
M	A	F	L	0	2	0	5	B				X									X									X									X									X									X																		X			
M	A	F	L	0	2	0	5	B				X									X									X									X									X									X																		X			
M	A	F	L	0	2	0	5	B				X									X									X									X									X									X																		X			
M	A	F	L	0	2	0	5	B				X									X									X									X									X									X																		X			
M	A	F	L	0	2	0	5	B				X									X									X									X									X									X																		X			

PRINCIPAL INVESTIGATOR: NORMAN J. BLAKE

DMSAG FILE 0206A
FORMINIFERA ABUNDANCE DATA

SPECIES IDENTIFICATION | REPLICATE A (TOTAL, LIVE) | REPLICATE B (TOTAL, LIVE) | DMSAG SEQUENCE

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79

SAMPLING PERIOD ____________ DATE ____________

PRINCIPAL INVESTIGATOR: WAYNE D. BOCK

DMSAG FILE 0206B
FORAMINIFERA SAMPLE DENSITY DATA

BLM-CCS AREA	DMSAG FILE	REPLICATE ID	MLS AFTER SIEVING	TOTAL SPEC./ ML	LIVE SPEC./ ML	TOTAL SPEC./SAMPLE	LIVE SPEC./ SAMPLE	PLANKTONIC/ BENTHONIC RATIO	% LIVE	SPECIES/300 TOTAL	SPECIES/300 LIVE	DMSAG SEQUENCER
MAF	LO206B							:				
MAF	LO206B							:				
MAF	LO206B							:				
MAF	LO206B							:				
MAF	LO206B							:				
MAF	LO206B							:				
MAF	LO206B							:				
MAF	LO206B							:				
MAF	LO206B							:				
MAF	LO206B							:				
MAF	LO206B							:				
MAF	LO206B							:				
MAF	LO206B							:				
MAF	LO206B							:				
MAF	LO206B							:				
MAF	LO206B							:				
MAF	LO206B							:				
MAF	LO206B							:				
MAF	LO206B							:				
MAF	LO206B							:				
MAF	LO206B							:				
MAF	LO206B							:				
MAF	LO206B							:				
MAF	LO206B							:				
MAF	LO206B							:				
MAF	LO206B							:				
MAF	LO206B							:				
MAF	LO206B							:				

SAMPLING PERIOD ____________ DATE ____________ PRINCIPAL INVESTIGATOR: WAYNE D. BOCK

DMSAG FILE 0206R
FORMINIFERA ABUNDANCE DATA

SPECIES IDENTIFICATION — TOTAL — DMSAG SEQUENCE

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80

SAMPLING PERIOD __________ DATE __________

PRINCIPAL INVESTIGATOR: WAYNE D. BOCK

DMSAG FILE 0207L
DEMERSAL FISH MERISTICS DATA

1	2	3	4	5	6	7	8	9	SPECIES INDEX (10–12)	L-PEC NO. (13–16)	LENGTH (1) (17–22)	WEIGHT (1) (23–29)	LENGTH (2) (30–36)	WEIGHT (2) (37–43)	LENGTH (3) (44–50)	WEIGHT (3) (51–57)	LENGTH (4) (58–64)	WEIGHT (4) (65–71)	D/T (72–75)	DMSAG SEQUENCER (76–80)
M	A	F	L	0	2	0	7	L												
M	A	F	L	0	2	0	7	L												
M	A	F	L	0	2	0	7	L												
M	A	F	L	0	2	0	7	L												
M	A	F	L	0	2	0	7	L												
M	A	F	L	0	2	0	7	L												
M	A	F	L	0	2	0	7	L												
M	A	F	L	0	2	0	7	L												
M	A	F	L	0	2	0	7	L												
M	A	F	L	0	2	0	7	L												
M	A	F	L	0	2	0	7	L												
M	A	F	L	0	2	0	7	L												
M	A	F	L	0	2	0	7	L												
M	A	F	L	0	2	0	7	L												
M	A	F	L	0	2	0	7	L												
M	A	F	L	0	2	0	7	L												
M	A	F	L	0	2	0	7	L												
M	A	F	L	0	2	0	7	L												
M	A	F	L	0	2	0	7	L												
M	A	F	L	0	2	0	7	L												
M	A	F	L	0	2	0	7	L												
M	A	F	L	0	2	0	7	L												
M	A	F	L	0	2	0	7	L												
M	A	F	L	0	2	0	7	L												
M	A	F	L	0	2	0	7	L												
M	A	F	L	0	2	0	7	L												
M	A	F	L	0	2	0	7	L												
M	A	F	L	0	2	0	7	L												

SAMPLING PERIOD ____________ DATE __________ PRINCIPAL INVESTIGATOR: S. A. BORTONE

DMSAG FILE 0207N
DEMERSAL FISH COUNT DATA

SPECIES IDENTIFICATION	SPECIES INDEX	NUMBER INDIVIDUALS	NUMBER MEASURED	NUMBER WEIGHED	TOTAL WEIGHT THIS SAMPLE	C_1 C_2	LR	D/T	DMSAG SEQUENCE
1–35	36–40	41–45	46–50	51–55	56–63	64–66	67–72	73–76	77–80

SAMPLING PERIOD ____________ DATE ________ PRINCIPAL INVESTIGATOR: S. A. BORTONE

DMSAG SCIENTIFIC DATA FILE 0209C
RECORD FORMAT DESCRIPTION

BLM-OCS AREA				DMSAG FILE					RETENTION INDEX											OFP																																																		Fraction	Sample type		Col.type		S.P.	Station			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
M	A	F	L	0	2	0	9	C																																																																						
M	A	F	L	0	2	0	9	C																																																																						
M	A	F	L	0	2	0	9	C																																																																						
M	A	F	L	0	2	0	9	C																																																																						
M	A	F	L	0	2	0	9	C																																																																						
M	A	F	L	0	2	0	9	C																																																																						
M	A	F	L	0	2	0	9	C																																																																						
M	A	F	L	0	2	0	9	C																																																																						
M	A	F	L	0	2	0	9	C																																																																						
M	A	F	L	0	2	0	9	C																																																																						
M	A	F	L	0	2	0	9	C																																																																						
M	A	F	L	0	2	0	9	C																																																																						
M	A	F	L	0	2	0	9	C																																																																						
M	A	F	L	0	2	0	9	C																																																																						
M	A	F	L	0	2	0	9	C																																																																						
M	A	F	L	0	2	0	9	C																																																																						
M	A	F	L	0	2	0	9	C																																																																						
M	A	F	L	0	2	0	9	C																																																																						
M	A	F	L	0	2	0	0	C																																																																						
M	A	F	L	0	2	0	9	C																																																																						
M	A	F	L	0	2	0	9	C																																																																						
M	A	F	L	0	2	0	9	C																																																																						
M	A	F	L	0	2	0	9	C																																																																						
M	A	F	L	0	2	0	9	C																																																																						
M	A	F	L	0	2	0	9	C																																																																						
M	A	F	L	0	2	0	9	C																																																																						
M	A	F	L	0	2	0	9	C																																																																						
M	A	F	L	0	2	0	9	C																																																																						

DMSAG SCIENTIFIC DATA FILE 0209H
RECORD FORMAT DESCRIPTION

BLM-OCS AREA	DMSAG FILE	RETENTION TIME	RETENTION INDEX	AREA	WEIGHT (ug)	WEIGHT (per)	ug/l or ug/g	Fraction	Sample type	Col. type	S.P.	Station
MAFL	0209H											
MAFL	0209H											
MAFL	0209H											
MAFL	0209H											
MAFL	0209H											
MAFL	0209H											
MAFL	0209H											
MAFL	0209H											
MAFL	0209H											
MAFL	0209H											
MAFL	0209H											
MAFL	0209H											
MAFL	0209H											
MAFL	0209H											
MAFL	0209H											
MAFL	0209H											
MAFL	0209H											
MAFL	0209H											
MAFL	0209H											
MAFL	0209H											
MAFL	0209H											
MAFL	0209H											
MAFL	0209H											
MAFL	0209H											
MAFL	0209H											
MAFL	0209H											
MAFL	0209H											
MAFL	0209H											

DMSAG SCIENTIFIC DATA FILE 0209R1

RECORD FORMAT DESCRIPTION

BLM-OCS AREA			DMSAG FILE							PRIS/Phyt	Phyt/NC18	Pris/NC17	Sumalk=NC20/ Sumalk>=NC21	Pris + Phyt/ Sumalk	Sumalk/NC16	FRACTION	Sample Type	Col.Type		S.P. Station	
1	2	3	4	5	6	7	8	9	10	11–19	20–29	30–40	41–48	49–59	60–69	70–71	72–73	74	75	76–78	79–80
M	A	F	L	0	2	0	9	R	1										X		
M	A	F	L	0	2	0	9	R	1										X		
M	A	F	L	0	2	0	9	R	1										X		
M	A	F	L	0	2	0	9	R	1										X		
M	A	F	L	0	2	0	9	R	1										X		
M	A	F	L	0	2	0	9	R	1										X		
M	A	F	L	0	2	0	9	R	1										X		
M	A	F	L	0	2	0	9	R	1										X		
M	A	F	L	0	2	0	9	R	1										X		
M	A	F	L	0	2	0	9	R	1										X		
M	A	F	L	0	2	0	9	R	1										X		
M	A	F	L	0	2	0	9	R	1										X		
M	A	F	L	0	2	0	9	R	1										X		
M	A	F	L	0	2	0	9	R	1										X		
M	A	F	L	0	2	0	9	R	1										X		
M	A	F	L	0	2	0	9	R	1										X		
M	A	F	L	0	2	0	9	R	1										X		
M	A	F	L	0	2	0	9	R	1										X		
M	A	F	L	0	2	0	9	R	1										X		
M	A	F	L	0	2	0	9	R	1										X		
M	A	F	L	0	2	0	9	R	1										X		
M	A	F	L	0	2	0	9	R	1										X		
M	A	F	L	0	2	0	9	R	1										X		
M	A	F	L	0	2	0	9	R	1										X		
M	A	F	L	0	2	0	9	R	1										X		
M	A	F	L	0	2	0	9	R	1										X		
M	A	F	L	0	2	0	9	R	1										X		
M	A	F	L	0	2	0	9	R	1										X		

DMSAG SCIENTIFIC DATA FILE 0209R2
RECORD FORMAT DESCRIPTION

BLM-OCS DMSAG
AREA FILE

ODD/EVEN

ODD/EVEN=NC20

ODD/EVEN≥NC21

Fraction

Sample type

Col. type

S.P.

Station

1	2	3	4	5	6	7	8	9	10
M	A	F	L	0	2	0	9	R	2
M	A	F	L	0	2	0	9	R	2
M	A	F	L	0	2	0	9	R	2
M	A	F	L	0	2	0	9	R	2
M	A	F	L	0	2	0	9	R	2
M	A	F	L	0	2	0	9	R	2
M	A	F	L	0	2	0	9	R	2
M	A	F	L	0	2	0	9	R	2
M	A	F	L	0	2	0	9	R	2
M	A	F	L	0	2	0	9	R	2
M	A	F	L	0	2	0	9	R	2
M	A	F	L	0	2	0	9	R	2
M	A	F	L	0	2	0	9	R	2
M	A	F	L	0	2	0	9	R	2
M	A	F	L	0	2	0	9	R	2
M	A	F	L	0	2	0	9	R	2
M	A	F	L	0	2	0	9	R	2
M	A	F	L	0	2	0	9	R	2
M	A	F	L	0	2	0	9	R	2
M	A	F	L	0	2	0	9	R	2
M	A	F	L	0	2	0	9	R	2
M	A	F	L	0	2	0	9	R	2
M	A	F	L	0	2	0	9	R	2
M	A	F	L	0	2	0	9	R	2
M	A	F	L	0	2	0	9	R	2
M	A	F	L	0	2	0	9	R	2
M	A	F	L	0	2	0	9	R	2
M	A	F	L	0	2	0	9	R	2

BLM-OCS DMSAG

DMSAG SCIENTIFIC DATA FILE 0209S1
RECORD FORMAT DESCRIPTION

AREA (1–4)	FILE (5–9)	SIZE (10)	Chromatograph Date yr mon day (21–28)	Extract Wt	Total 1	Total 2	Average OEP	Fraction	Sample Type	Col. Type (75)	S.P.	Station Number
MAFL	0209S	1	XX / /							X		
MAFL	0209S	1	XX / /							X		
MAFL	0209S	1	XX / /							X		
MAFL	0209S	1	XX / /							X		
MAFL	0209S	1	XX / /							X		
MAFL	0209S	1	XX / /							X		
MAFL	0209S	1	XX / /							X		
MAFL	0209S	1	XX / /							X		
MAFL	0209S	1	XX / /							X		
MAFL	0209S	1	XX / /							X		
MAFL	0209S	1	XX / /							X		
MAFL	0209S	1	XX / /							X		
MAFL	0209S	1	XX / /							X		
MAFL	0209S	1	XX / /							X		
MAFL	0209S	1	XX / /							X		
MAFL	0209S	1	XX / /							X		
MAFL	0209S	1	XX / /							X		
MAFL	0209S	1	XX / /							X		
MAFL	0209S	1	XX / /							X		
MAFL	0209S	1	XX / /							X		
MAFL	0209S	1	XX / /							X		
MAFL	0209S	1	XX / /							X		
MAFL	0209S	1	XX / /							X		
MAFL	0209S	1	XX / /							X		
MAFL	0209S	1	XX / /							X		
MAFL	0209S	1	XX / /							X		
MAFL	0209S	1	XX / /							X		
MAFL	0209S	1	XX / /							X		

DMSAG SCIENTIFIC DATA FILE 0209S2
RECORD FORMAT DESCRIPTION

BLM-OCS DMSAG

AREA FILE

Retention Index

Pris

Phyt

Fraction

Sample type

Col. type

S.P.

Station number

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
M	A	F	L	C	2	0	9	S	2																																																																							
M	A	F	L	C	2	0	9	S	2																																																																							
M	A	F	L	C	2	0	9	S	2																																																																							
M	A	F	L	C	2	0	9	S	2																																																																							
M	A	F	L	C	2	0	9	S	2																																																																							
M	A	F	L	C	2	0	9	S	2																																																																							
M	A	F	L	C	2	0	9	S	2																																																																							
M	A	F	L	C	2	0	9	S	2																																																																							
M	A	F	L	C	2	0	9	S	2																																																																							
M	A	F	L	C	2	0	9	S	2																																																																							
M	A	F	L	C	2	0	9	S	2																																																																							
M	A	F	L	C	2	0	9	S	2																																																																							
M	A	F	L	C	2	0	9	S	2																																																																							
M	A	F	L	C	2	0	9	S	2																																																																							
M	A	F	L	C	2	0	9	S	2																																																																							
M	A	F	L	C	2	0	9	S	2																																																																							
M	A	F	L	C	2	0	9	S	2																																																																							
M	A	F	L	C	2	0	9	S	2																																																																						
M	A	F	L	C	2	0	9	S	2																																																																							
M	A	F	L	C	2	0	9	S	2																																																																							
M	A	F	L	C	2	0	9	S	2																																																																							
M	A	F	L	C	2	0	9	S	2																																																																							
M	A	F	L	C	2	0	9	S	2																																																																							
M	A	F	L	C	2	0	9	S	2																																																																							
M	A	F	L	C	2	0	9	S	2																																																																							
M	A	F	L	C	2	0	9	S	2																																																																							
M	A	F	L	C	2	0	9	S	2																																																																							
M	A	F	L	C	2	0	9	S	2																																																																							

DMSAG FILE 0210 (*)
NEUSTON SPECIES ABUNDANCE DATA

1–8	C	SAMPLE ID	INDEX	PHY FAM	ABUN	PHY FAM	ABUN	PHY FAM	ABUN	PHY FAM	ABUN	PHY FAM	ABUN	PHY FAM	ABUN	DMSAG SEQUENCED
A F L 0 2 1 0																
A F L 0 2 1 0																
A F L 0 2 1 0																
A F L 0 2 1 0																
A F L 0 2 1 0																
A F L 0 2 1 0																
A F L 0 2 1 0																
A F L 0 2 1 0																
A F L 0 2 1 0																
A F L 0 2 1 0																
A F L 0 2 1 0																
A F L 0 2 1 0																
A F L 0 2 1 0																
A F L 0 2 1 0																
A F L 0 2 1 0																
A F L 0 2 1 0																
A F L 0 2 1 0																
A F L 0 2 1 0																
A F L 0 2 1 0																
A F L 0 2 1 0																
A F L 0 2 1 0																
A F L 0 2 1 0																
A F L 0 2 1 0																
A F L 0 2 1 0																
A F L 0 2 1 0																
A F L 0 2 1 0																
A F L 0 2 1 0																
A F L 0 2 1 0																

SAMPLING PERIOD ______________ DATE ____________

PRINCIPAL INVESTIGATOR: SNEED B. COLLARD

DMSAG FILE 021CA
NEUSTON COLLECTION DATA (OCEANOGRAPHY)

BLM-OCS AREA	DMSAG FILE	SAMPLE ID	YR	MO	DA	TIME SET (LOCAL)	TIME HAUL (LOCAL)	HEADING	ENGINE RPM	CURR	SEA STATE	FLOWMETER START	FLOWMETER STOP	DESK [illegible]	[illegible]	BUCKET TEMP	SFC SALINITY	pH	DMSAG [illegible]
M A F L B	2 1	0 A	X			X	X	X	X	X	X	X		X	X		X	X	X
M A F L B	2 1	0 A	X			X	X	X	X	X	X	X		X	X		X	X	X
M A F L B	2 1	0 A	X			X	X	X	X	X	X	X		X	X		X	X	X
M A F L C	2 1	0 A	X			X	X	X	X	X	X	X		X	X		X	X	X
M A F L C	2 1	0 A	X			X	X	X	X	X	X	X		X	X		X	X	X
M A F L C	2 1	0 A	X			X	X	X	X	X	X	X		X	X		X	X	X
[illegible]	[illegible]	[illegible]	X			X	X	X	X	X	X	X		X	X		X	X	X
[illegible]	[illegible]	[illegible]	X			X	X	X	X	X	X	X		X	X		X	X	X
[illegible]	[illegible]	[illegible]	X			X	X	X	X	X	X	X		X	X		X	X	X
[illegible]	[illegible]	[illegible]	X			X	X	X	X	X	X	X		X	X		X	X	X
M A F L [illegible]	2 1	0 A	X			X	X	X	X	X	X	X		X	X		X	X	X
[illegible]	[illegible]	[illegible]	X			X	X	X	X	X	X	X		X	X		X	X	X
[illegible]	[illegible]	[illegible]	X			X	X	X	X	X	X	X		X	X		X	X	X
[illegible]	[illegible]	[illegible]	X			X	X	X	X	X	X	X		X	X		X	X	X
M A F L C	[illegible]	[illegible]	X			X	X	X	X	X	X	X		X	X		X	X	X
[illegible]	[illegible]	[illegible]	X			X	X	X	X	X	X	X		X	X		X	X	X
[illegible]	[illegible]	[illegible]	X			X	X	X	X	X	X	X		X	X		X	X	X
[illegible]	[illegible]	[illegible]	X			X	X	X	X	X	X	X		X	X		X	X	X
M A F L D	2 1	0 A	X			X	X	X	X	X	X	X		X	X		X	X	X
M A F L C	2 1	0 A	X			X	X	X	X	X	X	X		X	X		X	X	X
[illegible]	[illegible]	[illegible]	X			X	X	X	X	X	X	X		X	X		X	X	X
[illegible]	[illegible]	[illegible]	X			X	X	X	X	X	X	X		X	X		X	X	X
[illegible]	[illegible]	[illegible]	X			X	X	X	X	X	X	X		X	X		X	X	X
[illegible]	[illegible]	[illegible]	X			X	X	X	X	X	X	X		X	X		X	X	X
[illegible]	[illegible]	[illegible]	X			X	X	X	X	X	X	X		X	X		X	X	X
[illegible]	[illegible]	[illegible]	X			X	X	X	X	X	X	X		X	X		X	X	X
[illegible]	[illegible]	[illegible]	X			X	X	X	X	X	X	X		X	X		X	X	X

SAMPLING PERIOD ____________ DATE ____________ PRINCIPAL INVESTIGATOR: SNEED B. COLLARD.

DMSAG FILE 0210B
NUESTON COLLECTION DATA (METEOROLOGICAL)

BLM-OCS AREA	DMSAG FILE	SAMPLE ID	WIND DIR.	WIND SPEED	RANGE	MAX. GUST	CLOUD COVER	WEATHER	VIS.	BAROMETER	LIGHT	AIR TEMP.	MOON RISE (Local)	MOON SET (Local)	SUN RISE (Local)	SUN SET (Local)	MOON PHASE	DMSAG SEQUENCER
M A F L O	2 1 0	B																
M A F L O	2 1 0	B																
M A F L O	2 1 0	B																
M A F L O	2 1 0	B																
M A F L O	2 1 0	B																
M A F L O	2 1 0	B																
M A F L O	2 1 0	B																
M A F L O	2 1 0	B																
M A F L O	2 1 0	B																
M A F L O	2 1 0	B																
M A F L O	2 1 0	B																
M A F L O	2 1 0	B																
M A F L O	2 1 0	B																
M A F L O	2 1 0	B																
M A F L O	2 1 0	B																
M A F L O	2 1 0	B																
M A F L O	2 1 0	B																
M A F L O	2 1 0	B																
M A F L O	2 1 0	B																
M A F L O	2 1 0	B																
M A F L O	2 1 0	B																
M A F L O	2 1 0	B																
M A F L O	2 1 0	B																
M A F L O	2 1 0	B																
M A F L O	2 1 0	B																
M A F L O	2 1 0	B																
M A F L O	2 1 0	B																
M A F L O	2 1 0	B																

SAMPLING PERIOD __________ DATE __________

PRINCIPAL INVESTIGATOR: SNEED B. COLLARD

DMSAG FILE C210T
NEUSTON TOTALS AND VOLUME DATA

BLM-OCS AREA	DMSAG FILE	SAMPLE ID	MI DISP	SPLITS	INVERTEBRATES TOT PHY+LAR AD	FAMS	FISH FAMS	EGGS	LARVAE	LARVAE	Vol > 2.5cm	VOL. OF SARGASSUM	WEIGHT OF TAR	NEUSTON COLL. #	DMSAG SEQUENCE
MAF	10	210	T												
MAF	10	210	T												
MAF	10	210	T												
MAF	10	210	T												
MAF	10	210	T												
MAF	10	210	T												
MAF	10	210	T												
MAF	10	210	T												
MAF	10	210	T												
MAF	10	210	T												
MAF	10	210	T												
MAF	10	210	T												
MAF	10	210	T												
MAF	10	210	T												
MAF	10	210	T												
MAF	102	210	T												
MAF	102	210	T												
MAF	[illegible]	[illegible]	T												
MAF	10	210	T												
MAF	10	210	T												
MAF	102	10	T												
MAF	10	210	T												
MAF	10	210	T												
MAF	10	210	T												
MAF	10	210	T												
MAF	10	210	T												
MAF	10	210	T												
MAF	10	210	T												

SAMPLING PERIOD ____________ DATE ____________

PRINCIPAL INVESTIGATOR: SNEED COLLARD

DMSAG SCIENTIFIC DATA FILE 0209S1
RECORD FORMAT DESCRIPTION

BLM-OCS DMSAG

AREA FILE SIZE

Chromatograph Date: yr mon day; Extract Wt; Total 1; Total 2; Average OEP; Fraction; Sample Type; Col. Type; S.P.; Station Number

1	2	3	4	5	6	7	8	9	10	11–20	21	22	23–24	25	26–27	28	29–74	75	76–80
M	A	F	L	0	2	0	9	S	1		X	X		/		/		X	
M	A	F	L	0	2	0	9	S	1		X	X		/		/		X	
M	A	F	L	0	2	0	9	S	1		X	X		/		/		X	
M	A	F	L	0	2	0	9	S	1		X	X		/		/		X	
M	A	F	L	0	2	0	9	S	1		X	X		/		/		X	
M	A	F	L	0	2	0	9	S	1		X	X		/		/		X	
M	A	F	L	0	2	0	9	S	1		X	X		/		/		X	
M	A	F	L	0	2	0	9	S	1		X	X		/		/		X	
M	A	F	L	0	2	0	9	S	1		X	X		/		/		X	
M	A	F	L	0	2	0	9	S	1		X	X		/		/		X	
M	A	F	L	0	2	0	9	S	1		X	X		/		/		X	
M	A	F	L	0	2	0	9	S	1		X	X		/		/		X	
M	A	F	L	0	2	0	9	S	1		X	X		/		/		X	
M	A	F	L	0	2	0	9	S	1		X	X		/		/		X	
M	A	F	L	0	2	0	9	S	1		X	X		/		/		X	
M	A	F	L	0	2	0	9	S	1		X	X		/		/		X	
M	A	F	L	0	2	0	9	S	1		X	X		/		/		X	
M	A	F	L	0	2	0	9	S	1		X	X		/		/		X	
M	A	F	L	0	2	0	9	S	1		X	X		/		/		X	
M	A	F	L	0	2	0	9	S	1		X	X		/		/		X	
M	A	F	L	0	2	0	9	S	1		X	X		/		/		X	
M	A	F	L	0	2	0	9	S	1		X	X		/		/		X	
M	A	F	L	0	2	0	9	S	1		X	X		/		/		X	
M	A	F	L	0	2	0	9	S	1		X	X		/		/		X	
M	A	F	L	0	2	0	9	S	1		X	X		/		/		X	
M	A	F	L	0	2	0	9	S	1		X	X		/		/		X	
M	A	F	L	0	2	0	9	S	1		X	X		/		/		X	
M	A	F	L	0	2	0	9	S	1		X	X		/		/		X	

DMSAG SCIENTIFIC DATA FILE 0209S2
RECORD FORMAT DESCRIPTION

BLM-OCS DMSAG AREA FILE — Retention Index: Pris, Phyt — Fraction, Sample type, Col.type, S.P., Station number

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
M	A	F	L	0	2	0	9	S	2																																																																								
M	A	F	L	0	2	0	9	S	2																																																																									
M	A	F	L	0	2	0	9	S	2																																																																									
M	A	F	L	0	2	0	9	S	2																																																																								
M	A	F	L	0	2	0	9	S	2																																																																							
M	A	F	L	0	2	0	9	S	2																																																																								
M	A	F	L	0	2	0	9	S	2																																																																								
M	A	F	L	0	2	0	9	S	2																																																																								
M	A	F	L	0	2	0	9	S	2																																																																								
M	A	F	L	0	2	0	9	S	2																																																																								
M	A	F	L	0	2	0	9	S	2																																																																							
M	A	F	L	0	2	0	9	S	2																																																																							
M	A	F	L	0	2	0	9	S	2																																																																							
M	A	F	L	0	2	0	9	S	2																																																																							
M	A	F	L	0	2	0	9	S	2																																																																							
M	A	F	L	0	2	0	9	S	2																																																																							
M	A	F	L	0	2	0	9	S	2																																																																							
M	A	F	L	0	2	0	9	S	2																																																																							
M	A	F	L	0	2	0	9	S	2																																																																							
M	A	F	L	0	2	0	9	S	2																																																																							
M	A	F	L	0	2	0	9	S	2																																																																								
M	A	F	L	0	2	0	9	S	2																																																																							
M	A	F	L	0	2	0	9	S	2																																																																							
M	A	F	L	0	2	0	9	S	2																																																																							
M	A	F	L	0	2	0	9	S	2																																																																							
M	A	F	L	0	2	0	9	S	2																																																																							
M	A	F	L	0	2	0	9	S	2																																																																							
M	A	F	L	0	2	0	9	S	2																																																																							

DNSAG FILE 02173
INVERTEBRATE BIOMASS DATA

BLM-OCS AREA	DNSAG FILE	REP	MOLLUSCA	POLYCHAETA	CRUSTACEA	ECHINODERMS	OTHER	DNSAG SEQUENCER
MAFL	02173							
MAFL	02173							
MAFL	02173							
MAFL	02173							
MAFL	02173							
MAFL	02173							
MAFL	02173							
MAFL	02173							
MAFL	02173							
[illegible]	[illegible]							
[illegible]	[illegible]							
[illegible]	[illegible]							
[illegible]	[illegible]							
[illegible]	[illegible]							
[illegible]	[illegible]							
[illegible]	[illegible]							
[illegible]	[illegible]							
[illegible]	[illegible]							
[illegible]	[illegible]							
[illegible]	[illegible]							
[illegible]	[illegible]							
[illegible]	[illegible]							
[illegible]	[illegible]							
[illegible]	[illegible]							
[illegible]	[illegible]							
[illegible]	[illegible]							
[illegible]	[illegible]							
MAFL	02173							

PRINCIPAL INVESTIGATOR: HENRY J. KRITZLER

DMSAG FILE 0217A
POLYCHAETE SPECIES ABUNDANCE DATA

SPECIES IDENTIFICATION

REPLICATE I.D.

DMSAG

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80

PRINCIPAL INVESTIGATOR: HENRY J. KRITZLER

DMSAC FILE C219A
SEDIMENT ORGANIC CARBON DATA

BLM-OCS AREA (1–4)	DMSAC FILE (5–7)	SAMPLE ID (8–12)	DRY WEIGHT SEDIMENT (g) (14–19)	% CARBONATE (21–24)	% ORG. CAR. (26–29)	LIPID WT. (mill.) (31–35)	ALIPHATIC WT. (mill.) (37–42)	AROM. WT. (mill.) (44–47)	DMSAC SEQUENCE (77–80)
MAFL	C21	9A							
MAFL	C21	9A							
MAFL	C21	9A							
MAFL	C21	9A							
MAFL	C21	9A							
MAFL	C21	9A							
MAFL	C21	9A							
MAFL	C21	9A							
MAFL	C21	9A							
MAFL	C21	9A							
MAFL	C21	9A							
MAFL	C21	9A							
MAFL	C21	9A							
MAFL	C21	9A							
MAFL	C21	9A							
MAFL	C21	9A							
MAFL	C21	9A							
MAFL	C21	9A							
MAFL	C21	9A							
MAFL	C21	9A							
MAFL	C21	9A							
MAFL	C21	9A							
MAFL	C21	9A							
MAFL	C21	9A							
MAFL	C21	9A							
MAFL	C21	9A							
MAFL	C21	9A							
MAFL	C21	9A							

SAMPLING PERIOD ______________ DATE ____________

PRINCIPAL INVESTIGATORS: J. AND T. LYTLE

DMSAG FILE 0218
SEDIMENT ATP DATA

BLM-OCS AREA	DMSAG FILE	SAMPLE ID	ATP ng/g	S.D.	WET	DRY	I.EFF.	A.EFF.	T.EFF.	DMSAG SEQUENCE
MA FL	0218									
MA FL	0218									

PRINCIPAL INVESTIGATOR: PAUL A. LAROCK

EMSAG FILE 0219H
GAS CHROMATOGRAPHY

BLM-OCS AREA (1–4)	EMSAG FILE (5–7)	SAMPLE I.D. (8–9)	RETENTION TIME	KOVATS	MICROGRAMS	RETENTION TIME	KOVATS	MICROGRAMS	EMSAG SEQUENCE
MAFL	021	9H							
MAFL	021	9H							
MAFL	021	9H							
MAFL	021	9H							
MAFL	021	9H							
MAFL	021	9H							
MAFL	021	9H							
MAFL	021	9H							
MAFL	021	9H							
MAFL	021	9H							
MAFL	021	9H							
MAFL	021	9H							
MAFL	021	9H							
MAFL	021	9H							
MAFL	021	9H							
MAFL	021	9H							
MAFL	021	9H							
MAFL	021	9H							
MAFL	021	9H							
MAFL	021	9H							
MAFL	021	9H							
MAFL	021	9H							
MAFL	021	9H							
MAFL	021	9H							
MAFL	021	9H							
MAFL	021	9H							
MAFL	021	9H							
MAFL	021	9H							

SAMPLING PERIOD ____________ DATE ________ PRINCIPAL INVESTIGATOR: J. AND T. LYTLE

DLMS FILL DATA

HYDROCARBON SUMMARY FOR BENTHIC ALGAE

DLM-OCS DATA	EMSAG FILE	SAMPLE ID	ALIPHATIC WEIGHT	AROMATIC WEIGHT	N-ALKANES WEIGHT	Pris + Phy/ n-alkanes	Pris/ C17	Phy/ C18	Pris/ Phy	n-alkanes/ C16	Σn-alk/ [illegible]	odd/ even	C10–C20/ odd even	C21–C31/ odd even	C12–C20/ C21–C31	EMSAG SEQUENCE
[illegible]	[illegible]	[illegible]														
[illegible]	[illegible]	[illegible]														
[illegible]	[illegible]	[illegible]														
[illegible]	[illegible]	[illegible]														
[illegible]	[illegible]	[illegible]														
[illegible]	[illegible]	[illegible]														
[illegible]	[illegible]	[illegible]														
[illegible]	[illegible]	[illegible]														
[illegible]	[illegible]	[illegible]														
[illegible]	[illegible]	[illegible]														
[illegible]	[illegible]	[illegible]														
[illegible]	[illegible]	[illegible]														
[illegible]	[illegible]	[illegible]														
[illegible]	[illegible]	[illegible]														
[illegible]	[illegible]	[illegible]														
[illegible]	[illegible]	[illegible]														
[illegible]	[illegible]	[illegible]														
[illegible]	[illegible]	[illegible]														
[illegible]	[illegible]	[illegible]														
[illegible]	[illegible]	[illegible]														
[illegible]	[illegible]	[illegible]														
[illegible]	[illegible]	[illegible]														
[illegible]	[illegible]	[illegible]														
[illegible]	[illegible]	[illegible]														
[illegible]	[illegible]	[illegible]														
[illegible]	[illegible]	[illegible]														
[illegible]	[illegible]	[illegible]														
[illegible]	[illegible]	[illegible]														
[illegible]	[illegible]	[illegible]														

SAMPLING PERIOD ______________ DATE ____________

PRINCIPLE INVESTIGATORS: DRS. JULIA AND THOMAS LYTLE

EMSAG FILE 0219H
GAS CHROMATOGRAPHY

BLM-OCS AREA	EMSAG FILE	SAMPLE I.D.	RETENTION TIME	KOVATS	MICROGRAMS	RETENTION TIME	KOVATS	MICROGRAMS	EMSAG SEQUENCE
N A F L	0 2 1	9 H							
N A F L	0 2 1	9 H							
N A F L	0 2 1	9 H							
N A F L	0 2 1	9 H							
N A F L	0 2 1	9 H							
N A F L	0 2 1	9 H							
N A F L	0 2 1	9 H							
N A F L	0 2 1	9 H							
N A F L	0 2 1	9 H							
N A F L	0 2 1	9 H							
N A F L	0 2 1	9 H							
N A F L	0 2 1	9 H							
N A F L	0 2 1	9 H							
N A F L	0 2 1	9 H							
N A F L	0 2 1	9 H							
N A F L	0 2 1	9 H							
N A F L	0 2 1	9 H							
N A F L	0 2 1	9 H							
N A F L	0 2 1	9 H							
N A F L	0 2 1	9 H							
N A F L	0 2 1	9 H							
N A F L	0 2 1	9 H							
N A F L	0 2 1	9 H							
N A F L	0 2 1	9 H							
N A F L	0 2 1	9 H							
N A F L	0 2 1	9 H							
N A F L	0 2 1	9 H							

SAMPLING PERIOD ________ DATE ______ PRINCIPAL INVESTIGATOR: J. AND T. LYTLE

DMSAG FILE 02195
SUMMARY OF GAS CHROMATOGRAPHY DATA

LM-OCS AREA	DMSAG FILE	SAMPLE I.D.	TOTAL ALIPH.	TOTAL AROM.	TOTAL N-ALKANES	N-ALKANES TOT. ALIPH.	ALIPH/ AROM.	C17/ C29	C17/ PRIS	C18/ PHY	PRIS/ PHY	DMSAG SEQUENCER
AF	202	195										
AF	202	195										
AF	202	195										
AF	202	195										
AF	202	195										
AF	202	195										
AF	202	195										
AF	202	195										
AF	202	195										
AF	202	195										
AF	202	195										
MAF	202	195										
MAF	202	195										
MAF	202	195										
MAF	202	195										
MAF	202	195										
MAF	202	195										
MAF	202	195										
MAF	202	195										
MAF	202	195										
MAF	202	195										
MAF	202	195										
MAF	202	195										
MAF	202	195										
MAF	202	195										
MAF	202	195										
MAF	202	195										
MAF	202	195										

SAMPLING PERIOD ____________ DATE ________ PRINCIPLE INVESTIGATOR: J. AND T. LYTLE

DMSAG FILE 0219B
HYDROCARBON SUMMARY FOR BENTHIC ALGAE

BLM-OCS AREA	DMSAG FILE	SAMPLE ID		ALIPHATIC WEIGHT	ARAMATIC WEIGHT	N-ALKANES WEIGHT	Pris + Phy/ n-alkanes	Pris/ C17	Phy/ C18	Pris/ Phy	n-alkanes/ C16	Σn-alk/ Alphi	odd/ even	C10-C20/ odd,even	C21-C31/ odd,even	C12-C20/ C21-C31	DMSAG SEQUENCER
MAFL	0219	B	X														X
MAFL	0219	B	X														X
MAFL	0219	B	X														X
MAFL	0219	B	X														X
MAFL	0219	B	X														X
MAFL	0219	B	X														X
MAFL	0219	B	X														X
MAFL	0219	B	X														X
MAFL	0219	B	X														X
MAFL	0219	B	X														X
MAFL	0219	B	X														X
MAFL	0219	B	X														X
MAFL	0219	B	X														X
MAFL	0219	B	X														X
MAFL	0219	B	X														X
MAFL	0219	B	X														X
MAFL	0219	B	X														X
MAFL	0219	B	X														X
MAFL	0219	B	X														X
MAFL	0219	B	X														X
MAFL	0219	B	X														X
MAFL	0219	B	X														X
MAFL	0219	B	X														X
MAFL	0219	B	X														X
MAFL	0219	B	X														X
MAFL	0219	B	X														X
MAFL	0219	B	X														X
MAFL	0219	B	X														X

SAMPLING PERIOD ________ DATE ________ PRINCIPLE INVESTIGATORS: DRS. JULIA AND THOMAS LYTLE

ZOOPLANKTON COLLECTION DATA

FISHING DEPTH FROM	FISHING DEPTH TO	M^3 FILTERED	DISPLACE. VOL. (ML)	JELLY FACTOR	DISPLAC. VOL. (ML/M^3)	NUMBER SPECIES	SPLITS	BIOMASS (grams)	DREAG SEDIMENTER

SAMPLING PERIOD ____________ DATE ____________

PRINCIPAL INVESTIGATOR: FRANK J. MATURO AND JOHN CALDWELL

DMSAG FILE 0221
TRANSMISSOMETRY DATA

BLM-OCS AREA (1–3) · DMSAG FILE NAME (4–8) · SAMPLE ID (9–13) · DEPTH(M) (14–18) · % TRANS (19–25) · DMSAG SEQUENCER (77–80)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
M	A	F	L	0	2	2	1	X					X					X						X																																																							
M	A	F	L	0	2	2	1	X					X					X						X																																																								
M	A	F	L	0	2	2	1	X					X					X						X																																																							
M	A	F	L	0	2	2	1	X					X					X						X																																																							
M	A	F	L	0	2	2	1	X					X					X						X																																																							
M	A	F	L	0	2	2	1	X					X					X						X																																																							
M	A	F	L	0	2	2	1	X					X					X						X																																																							
M	A	F	L	0	2	2	1	X					X					X						X																																																							
M	A	F	L	0	2	2	1	X					X					X						X																																																							
M	A	F	L	0	2	2	1	X					X					X						X																																																							
M	A	F	L	0	2	2	1	X					X					X						X																																																							
M	A	F	L	0	2	2	1	X					X					X						X																																																							
M	A	F	L	0	2	2	1	X					X					X						X																																																							
M	A	F	L	0	2	2	1	X					X					X						X																																																							
M	A	F	L	0	2	2	1	X					X					X						X																																																							
M	A	F	L	0	2	2	1	X					X					X						X																																																							
M	A	F	L	0	2	2	1	X					X					X						X																																																							
M	A	F	L	0	2	2	1	X					X					X						X																																																							
M	A	F	L	0	2	2	1	X					X					X						X																																																							
M	A	F	L	0	2	2	1	X					X					X						X																																																							
M	A	F	L	0	2	2	1	X					X					X						X																																																							
M	A	F	L	0	2	2	1	X					X					X						X																																																							
M	A	F	L	0	2	2	1	X					X					X						X																																																							
M	A	F	L	0	2	2	1	X					X					X						X																																																							
M	A	F	L	0	2	2	1	X					X					X						X																																																							
M	A	F	L	0	2	2	1	X					X					X						X																																																							
M	A	F	L	0	2	2	1	X					X					X						X																																																							
M	A	F	L	0	2	2	1	X					X					X						X																																																							

SAMPLING PERIOD ______________ DATE __________

PRINCIPAL INVESTIGATOR: F. S. MANHEIM

DNSAG FILE 02222
ZOOPLANKTON ABUNDANCE DATA

SPECIES IDENTIFICATION | SPECIES CODE ID | SPECIES ABUNDANCE | DNSAG SEQUENCE

SAMPLING PERIOD ____________ DATE ____________

PRINCIPAL INVESTIGATOR: FRANK MATURO AND
JOHN CALDWELL

DMSAG FILE 0222M
MEIOFAUNAL ABUNDANCE DATA

DMSAG SEQUENC[illegible]

SPECIES IDENTIFICATION

REPLICATE ABUNDANCE

A I K

SAMPLING PERIOD ____________ DATE ________

PRINCIPAL INVESTIGATOR: FRANK J. MATURO AND MICHAEL R. CREZEE

DMSAG FILE 0217B
INVERTEBRATE BIOMASS DATA

BLM-OCS AREA	DMSAG FILE	REP	MOLLUSCA	POLYCHAETA	CRUSTACEA	ECHINODERMS	OTHER	DMSAG STATION

PRINCIPAL INVESTIGATOR: HENRY J. KRITZLER

DMSAG FILE C217A
POLYCHAETE SPECIES ABUNDANCE DATA

SPECIES IDENTIFICATION

REPLICATE I.D.

DMSAG SEQUENCE

PRINCIPAL INVESTIGATOR: HENRY J. KRITZLER

OMSAG FILE [illegible]19A
SEDIMENT ORGANIC CARBON DATA

BLM-OCS AREA	OMSAG FILE	SAMPLE ID	DRY WEIGHT SEDIMENT (g)	% CARBONATE	% ORG. CAR.	LIPID WT. (mg)	ALIPHATIC WT. (mg)	AROM. WT. (mg)	OMSAG SEQUENCE
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

SAMPLING PERIOD ______________ DATE ____________

PRINCIPAL INVESTIGATORS: [illegible]

DMSAG FILE 0213
SEDIMENT ATP DATA

BLM-OCS AREA	DMSAG FILE	SAMPLE ID	ATP ng/g	S.D.	WET	DRY	I.EFF.	A.EFF.	T.EFF.	DMSAG SEQUENCE

PRINCIPAL INVESTIGATOR: PAUL A. LAROCK

DNSAG FILE 0219H
GAS CHROMATOGRAPHY

BLM-OCS AREA (1–4)	DNSAG FILE (5–7)	SAMPLE I.D. (8–12)	RETENTION TIME	KOVATS	MICROGRAMS	RETENTION TIME	KOVATS	MICROGRAMS	(50–75)	DNSAG SEQUENCE (76–80)
MA FL	021	9H								
MA FL	021	9H								
MA FL	021	9H								
MA FL	021	9H								
MA FL	021	9H								
MA FL	021	9H								
MA FL	021	9H								
MA FL	021	9H								
MA FL	021	9H								
MA FL	021	9H								
MA FL	021	9H								
MA FL	021	9H								
MA FL	021	9H								
MA FL	021	9H								
MA FL	021	9H								
MA FL	021	9H								
MA FL	021	9H								
MA FL	021	9H								
MA FL	021	9H								
MA FL	021	9H								
MA FL	021	9H								
MA FL	021	9H								
MA FL	021	9H								
MA FL	021	9H								
MA FL	021	9H								
MA FL	021	9H								
MA FL	021	9H								
MA FL	021	9H								

SAMPLING PERIOD __________ DATE ______ PRINCIPAL INVESTIGATOR: J. AND T. LYTLE

EMSAG FILE C2192
HYDROCARBON SUMMARY FOR BENTHIC ALGAE

BLM-OCS AREA	EMSAG FILE	SAMPLE ID	ALIPHATIC WEIGHT	ARAMATIC WEIGHT	N-ALKANES WEIGHT	Pris + Phy/ n-alkanes	Pris/ C17	Phy/ C18	Pris/ Phy	n-alkanes/ C16	[illegible]	odd/ even	C10-C20/ odd,even	C21-C31/ odd,even	C12-C20/ C21-C31	EMSAG SEQUENCE

SAMPLING PERIOD __________ DATE __________ PRINCIPLE INVESTIGATORS: DRS. JULIA AND THOMAS LYTLE

DMSAG FILE 0212S
SUMMARY OF GAS CHROMATOGRAPHY DATA

BLM-OCS AREA	DMSAG FILE	SAMPLE I.D.	TOTAL ALIPH.	TOTAL AROM.	TOTAL N-ALKANES	N-ALKANES TOT. ALIPH.	ALIPH/AROM.	C17/C29	C17/PRIS	C18/PHY	PRIS/PHY	DMSAG SEQUENCER
1 2 3	4 5 6	7 8 9 10 11 12	13–17	18–22	23–27	28–33	34–39	40–45	46–51	52–57	58–63	76–80
MA-	202	195										
MA-	202	195										
MA-	202	195										
MA-	202	195										
MA-	202	19-										
[illegible]	[illegible]	[illegible]										
MA-	202	195										
MA-	202	195										
MA-	202	195										
[illegible]	[illegible]	[illegible]										
MA-	202	19-										
MA-	202	195										
MA-	202	195										
MA-	202	195										
[illegible]	[illegible]	[illegible]										
[illegible]	[illegible]	[illegible]										
[illegible]	[illegible]	[illegible]										
[illegible]	[illegible]	[illegible]										
[illegible]	[illegible]	[illegible]										
[illegible]	[illegible]	[illegible]										
[illegible]	[illegible]	[illegible]										
[illegible]	[illegible]	[illegible]										
[illegible]	[illegible]	[illegible]										
[illegible]	[illegible]	[illegible]										
[illegible]	[illegible]	[illegible]										
[illegible]	[illegible]	[illegible]										
[illegible]	[illegible]	[illegible]										

SAMPLING PERIOD ____________ DATE ________ PRINCIPLE INVESTIGATOR: J. AND T. LYTLE

DMSAG FILE 0219B
HYDROCARBON SUMMARY FOR BENTHIC ALGAE

BLM-OCS AREA	DMSAG FILE	SAMPLE ID	13	ALIPHATIC WEIGHT	ARAMATIC WEIGHT	N-ALKANES WEIGHT	Pris + Phy/ n-alkanes	Pris/ C17	Phy/ C18	Pris/ Phy	n-alkanes/ C16	Zn-alk/ Alpht	odd/ even	C10-C20/ odd,even	C21-C31/ odd,even	C12-C20/ C21-C31	76	DMSAG SEQUENCE
M A F L	0 2 1 9	B	X														X	
M A F L	0 2 1 9	B	X														X	
M A F L	0 2 1 9	B	X														X	
M A F L	0 2 1 9	B	X														X	
M A F L	0 2 1 9	B	X														X	
M A F L	0 2 1 9	B	X														X	
M A F L	0 2 1 9	B	X														X	
M A F L	0 2 1 9	B	X														X	
M A F L	0 2 1 9	B	X														X	
M A F L	0 2 1 9	B	X														X	
M A F L	0 2 1 9	B	X														X	
M A F L	0 2 1 9	B	X														X	
M A F L	0 2 1 9	B	X														X	
M A F L	0 2 1 9	B	X														X	
M A F L	0 2 1 9	B	X														X	
M A F L	0 2 1 9	B	X														X	
M A F L	0 2 1 9	B	X														X	
M A F L	[illegible]	[illegible]	X														X	
M A F L	0 2 1 9	B	X														X	
M A F L	0 2 1 9	B	X														X	
M A F L	0 2 1 9	B	X														X	
M A F L	0 2 1 9	B	X														X	
M A F L	0 2 1 9	B	X														X	
M A F L	0 2 1 9	B	X														X	
M A F L	0 2 1 9	B	X														X	
M A F L	0 2 1 9	B	X														X	
M A F L	0 2 1 9	B	X														X	
M A F L	0 2 1 9	B	X														X	

SAMPLING PERIOD ____________ DATE __________ PRINCIPLE INVESTIGATORS: DRS. JULIA AND THOMAS LYTLE

ZOOPLANKTON COLLECTION DATA

	Fishing Depth From	Fishing Depth To	M³ Filtered	Displace Vol. (ML)	Jelly Factor	Displac. Vol. (ML/M³)	Number Species	Splits	Biomass (grams)	[illegible]
A F L 0 2 2 2 0										
A F L 0 2 2 2 0										
A F L 0 2 2 2 0										
A F L 0 2 2 2 0										
A F L 0 2 2 2 0										
A F L 0 2 2 2 0										
A F L 0 2 2 2 0										
A F L 0 2 2 2 0										
A F L 0 2 2 2 0										
A F L 0 2 2 2 0										
A F L 0 2 2 2 0										
A F L 0 2 2 2 0										
A F L 0 2 2 2 0										
A F L 0 2 2 2 0										
A F L 0 2 2 2 0										
A F L 0 2 2 2 0										
A F L 0 2 2 2 0										
[illegible]										
A F L 0 2 2 2 0										
A F L 0 2 2 2 0										
[illegible]										
[illegible]										
[illegible]										
[illegible]										
[illegible]										
[illegible]										
[illegible]										
A F L 0 2 2 2 0										

[illegible] PERIOD ____________ DATE ____________

PRINCIPAL INVESTIGATOR: FRANK J. [illegible] AND JOHN CALDWELL

DMSAG FILE 0221
TRANSMISSOMETRY DATA

BLM-OCS AREA (1–3)	DMSAG FILE NAME (4–8)	SAMPLE ID (9–13)	DEPTH(M) (14–18)	% TRANS (19–24)	25	26–76	DMSAG SEQUENCER (77–80)
MAF	L0221	X	X	X	X		
MAF	L0221	X	X	X	X		
MAF	L0221	X	X	X	X		
MAF	L0221	X	X	X	X		
MAF	L0221	X	X	X	X		
MAF	L0221	X	X	X	X		
MAF	L0221	X	X	X	X		
MAF	L0221	X	X	X	X		
MAF	L0221	X	X	X	X		
MAF	L0221	X	X	X	X		
MAF	L0221	X	X	X	X		
MAF	L0221	X	X	X	X		
MAF	L0221	X	X	X	X		
MAF	L0221	X	X	X	X		
MAF	L0221	X	X	X	X		
MAF	L0221	X	X	X	X		
MAF	L0221	X	X	X	X		
MAF	L0221	X	X	X	X		
MAF	L0221	X	X	X	X		
MAF	L0221	X	X	X	X		
MAF	L0221	X	X	X	X		
MAF	L0221	X	X	X	X		
MAF	L0221	X	X	X	X		
MAF	L0221	X	X	X	X		
MAF	L0221	X	X	X	X		
MAF	L0221	X	X	X	X		
MAF	L0221	X	X	X	X		
MAF	L0221	X	X	X	X		

SAMPLING PERIOD ______________ DATE __________ PRINCIPAL INVESTIGATOR: F. S. MANHEIM [illegible] FILE 022Z

ZOOPLANKTON ABUNDANCE DATA

SPECIES IDENTIFICATION

SPECIES [illegible]

SPECIES ABUNDANCE

[illegible]

[illegible]NG PERIOD ________________ DATE ____________

PRINCIPAL INVESTIGATOR: FRANK MATURO AND

JOHN CALDWELL

DMSAG FILE 0222M
MEIOFAUNAL ABUNDANCE DATA

SPECIES IDENTIFICATION — REPLICATE ABUNDANCE (A, J, K) — DMSAG SEQUENCER

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80

SAMPLING PERIOD ____________ DATE ________ PRINCIPAL INVESTIGATOR: FRANK J. MATURO AND MICHAEL R. CREZEE

DMSAG SCIENTIFIC DATA FILE 0225H
RECORD FORMAT DESIGNATION

BLM-OCS AREA	DMSAG FILE	RETENTION TIME	RETENTION INDEX	AREA	µg/peak	PERCENT	µg/g	FRACTION	COL. TYPE	DMSAG SEQUENCER
MAFL	0225H									
MAFL	0225H									
MAFL	0225H									
MAFL	0225H									
MAFL	0225H									
MAFL	0225H									
MAFL	0225H									
MAFL	0225H									
MAFL	0225H									
MAFL	0225H									
MAFL	0225H									
MAFL	0225H									
MAFL	0225H									
MAFL	0225H									
MAFL	0225H									
MAFL	0225H									
MAFL	0225H									
MAFL	0225H									
MAFL	0225H									
MAFL	0225H									
MAFL	0225H									
MAFL	0225H									
MAFL	0225H									
MAFL	0225H									
MAFL	0225H									
MAFL	0225H									
MAFL	0225H									
MAFL	0225H									

DMSAG FILE 0223N
DEMERSAL FISH COUNT DATA

SPECIES IDENTIFICATION	SPECIES INDEX	NUMBER INDIVIDUALS	NUMBER MEASURED	NUMBER WEIGHED	TOTAL WEIGHT THIS SAMPLE	Q_1Q_2	LR	D/T	DMSAG SEQUENCER
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35	36 37 38 39 40	41 42 43 44 45	46 47 48 49 50	51 52 53 54 55	56 57 58 59 60 61 62 63 64	65 66 67	68 69 70	71 72 73 74 75 76	77 78 79 80

SAMPLING PERIOD ________ DATE ________ PRINCIPAL INVESTIGATOR: G. S. MAYER

DMSAG SCIENTIFIC DATA FILE 0225R1
RECORD FORMAT DESCRIPTION

BLM-OCS DMSAG

AREA · FILE · ISP/N-ALK · BRANCHED/NORMAL · ODD/EVEN · ODD/EVEN≤20 · ODD/EVEN>20 · N-ALK/ALL · FRACTION · COL. TYPE · DMSAG SEQUENCER

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
M	A	F	L	0	2	2	5	R	1																																																																						
M	A	F	L	0	2	2	5	R	1																																																																							
M	A	F	L	0	2	2	5	R	1																																																																						
M	A	F	L	0	2	2	5	R	1																																																																						
M	A	F	L	0	2	2	5	R	1																																																																						
M	A	F	L	0	2	2	5	R	1																																																																						
M	A	F	L	0	2	2	5	R	1																																																																						
M	A	F	L	0	2	2	5	R	1																																																																						
M	A	F	L	0	2	2	5	R	1																																																																						
M	A	F	L	0	2	2	5	R	1																																																																						
M	A	F	L	0	2	2	5	R	1																																																																						
M	A	F	L	0	2	2	5	R	1																																																																						
M	A	F	L	0	2	2	5	R	1																																																																						
M	A	F	L	0	2	2	5	R	1																																																																						
M	A	F	L	0	2	2	5	R	1																																																																					
M	A	F	L	0	2	2	5	R	1																																																																						
M	A	F	L	0	2	2	5	R	1																																																																						
M	A	F	L	0	2	2	5	R	1																																																																						
M	A	F	L	0	2	2	5	R	1																																																																						
M	A	F	L	0	2	2	5	R	1																																																																						
M	A	F	L	0	2	2	5	R	1																																																																						
M	A	F	L	0	2	2	5	R	1																																																																						
M	A	F	L	0	2	2	5	R	1																																																																						
M	A	F	L	0	2	2	5	R	1																																																																						
M	A	F	L	0	2	2	5	R	1																																																																						
M	A	F	L	0	2	2	5	R	1																																																																						
M	A	F	L	0	2	2	5	R	1																																																																						
M	A	F	L	0	2	2	5	R	1																																																																						

DMSAG SCIENTIFIC DATA FILE 0225S
Record Format Description

BLM-OCS AREA | DMSAG FILE | # of Peaks | Sample Weight (g) | µg/g | FRACTION | COL. TYPE | DMSAG SEQUENCER

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
M	A	F	L	0	2	2	5	S																																																																							
M	A	F	L	0	2	2	5	S																																																																							
M	A	F	L	0	2	2	5	S																																																																							
M	A	F	L	0	2	2	5	S																																																																							
M	A	F	L	0	2	2	5	S																																																																							
M	A	F	L	0	2	2	5	S																																																																							
M	A	F	L	0	2	2	5	S																																																																							
M	A	F	L	0	2	2	5	S																																																																							
M	A	F	L	0	2	2	5	S																																																																							
M	A	F	L	0	2	2	5	S																																																																							
M	A	F	L	0	2	2	5	S																																																																							
M	A	F	L	0	2	2	5	S																																																																							
M	A	F	L	0	2	2	5	S																																																																							
M	A	F	L	0	2	2	5	S																																																																							
M	A	F	L	0	2	2	5	S																																																																							
M	A	F	L	0	2	2	5	S																																																																							
M	A	F	L	0	2	2	5	S																																																																							
M	A	F	L	0	2	2	5	S																																																																							
M	A	F	L	0	2	2	5	S																																																																							
M	A	F	L	0	2	2	5	S																																																																							
M	A	F	L	0	2	2	5	S																																																																							
M	A	F	L	0	2	2	5	S																																																																							
M	A	F	L	0	2	2	5	S																																																																							
M	A	F	L	0	2	2	5	S																																																																							
M	A	F	L	0	2	2	5	S																																																																							
M	A	F	L	0	2	2	5	S																																																																							
M	A	F	L	0	2	2	5	S																																																																							
M	A	F	L	0	2	2	5	S																																																																							

DMSAG FILE 0225T
TAXONOMIC DATA FOR HYDROCARBON DETERMINATIONS

BLM-OCS AREA (1–4) · DMSAG FILE NAME (5–9) · SAMPLE ID · ANALYSIS ID NUMBER · SPECIES IDENTIFICATION · WT. FACTOR · REPLICATE CODE · DMSAG SEQUENCE

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
M	A	F	L	0	2	2	5	T				X								X																																					X			X		X													X				
M	A	F	L	0	2	2	5	T				X								X																																					X			X		X													X				
M	A	F	L	0	2	2	5	T				X								X																																					X			X		X													X				
M	A	F	L	0	2	2	5	T				X								X																																					X			X		X													X				
M	A	F	L	0	2	2	5	T				X								X																																					X			X		X													X				
M	A	F	L	0	2	2	5	T				X								X																																					X			X		X													X				
M	A	F	L	0	2	2	5	T				X								X																																					X			X		X													X				
M	A	F	L	0	2	2	5	T				X								X																																					X			X		X													X				
M	A	F	L	0	2	2	5	T				X								X																																					X			X		X													X				
M	A	F	L	0	2	2	5	T				X								X																																					X			X		X													X				
M	A	F	L	0	2	2	5	T				X								X																																					X			X		X													X				
M	A	F	L	0	2	2	5	T				X								X																																					X			X		X													X				
M	A	F	L	0	2	2	5	T				X								X																																					X			X		X													X				
M	A	F	L	0	2	2	5	T				X								X																																					X			X		X													X				
M	A	F	L	0	2	2	5	T				X								X																																					X			X		X													X				
M	A	F	L	0	2	2	5	T				X								X																																					X			X		X													X				
M	A	F	L	0	2	2	5	T				X								X																																					X			X		X													X				
M	A	F	L	0	2	2	5	T				X								X																																					X			X		X													X				
M	A	F	L	0	2	2	5	T				X								X																																					X			X		X													X				
M	A	F	L	0	2	2	5	T				X								X																																					X			X		X													X				
M	A	F	L	0	2	2	5	T				X								X																																					X			X		X													X				
M	A	F	L	0	2	2	5	T				X								X																																					X			X		X													X				
M	A	F	L	0	2	2	5	T				X								X																																					X			X		X													X				
M	A	F	L	0	2	2	5	T				X								X																																					X			X		X													X				
M	A	F	L	0	2	2	5	T				X								X																																					X			X		X													X				
M	A	F	L	0	2	2	5	T				X								X																																					X			X		X													X				
M	A	F	L	0	2	2	5	T				X								X																																					X			X		X													X				
M	A	F	L	0	2	2	5	T				X								X																																					X			X		X													X				

SAMPLING PERIOD ________________ DATE __________ PRINCIPAL INVESTIGATOR: PHILIP MEYERS

DMSAG SCIENTIFIC DATA FILE 0225R2
RECORD FORMAT DESCRIPTION

BLM-OCS DMSAG

AREA	FILE	N-ALK/NC16	N-ALK(≤20/>20)	PRIS/Phyt	PRIS/NC17	Phyt/NC18	FRACTION	COL. TYPE	DMSAG SEQUENCER
MAFL	0225R2								
MAFL	0225R2								
MAFL	0225R2								
MAFL	0225R2								
MAFL	0225R2								
MAFL	0225R2								
MAFL	0225R2								
MAFL	0225R2								
MAFL	0225R2								
MAFL	0225R2								
MAFL	0225R2								
MAFL	0225R2								
MAFL	0225R2								
MAFL	0225R2								
MAFL	0225R2								
MAFL	0225R2								
MAFL	0225R2								
MAFL	0225R2								
MAFL	0225R2								
MAFL	0225R2								
MAFL	0225R2								
MAFL	0225R2								
MAFL	0225R2								
MAFL	0225R2								
MAFL	0225R2								
MAFL	0225R2								
MAFL	0225R2								
MAFL	0225R2								

DMSAG FILE 0226R
MICROMOLLUSC ABUNDANCE DATA

SPECIES IDENTIFICATION — TOTAL — DMSAG SEQUENCE

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80

SAMPLING PERIOD ____________ DATE __________ PRINCIPAL INVESTIGATOR: DONALD R. MOORE

SUMMARY OF HYDROCARBON DATA

N-CCS AREA	DMSAG FILE	SAMPLE ID	ODD/EVEN	ISOPRENOID/ N-ALKANE	BRANCHED N-ALKANES	PRIS/ PHY	PRIS/ N-C17	TOTAL ALKANES	TOTAL AROMATICS	ESTIMATED SAMPLE SIZE	DMSAG SEQUENCE

PRINCIPAL INVESTIGATOR: PHILIP MEYERS

DMSAG FILE 0227M
INVERTEBRATE TRACE METAL DATA

DOCS TA		DMSAG FILE				SAMPLE ID	Cd	Fe	Cu	Pb	V	Cr	Ni	DMSAG SEQUENCER
3	4	5	6	7	8	9	13–21	22–30	31–39	40–48	49–57	58–66	67–75	76–80
F	L	0	2	2	7	M								
F	L	0	2	2	7	M								
F	L	0	2	2	7	M								
F	L	0	2	2	7	M								
F	L	0	2	2	7	M								
F	L	0	2	2	7	M								
F	L	0	2	2	7	M								
F	L	0	2	2	7	M								
F	L	0	2	2	7	M								
F	L	0	2	2	7	M								
F	L	0	2	2	7	M								
F	L	0	2	2	7	M								
F	L	0	2	2	7	M								
F	L	0	2	2	7	M								
F	L	0	2	2	7	M								
F	L	0	2	2	7	M								
F	L	0	2	2	7	M								
F	L	0	2	2	7	M								
F	L	0	2	2	7	M								
F	L	0	2	2	7	M								
F	L	0	2	2	7	M								
F	L	0	2	2	7	M								
F	L	0	2	2	7	M								
F	L	0	2	2	7	M								
F	L	0	2	2	7	M								
F	L	0	2	2	7	M								
F	L	0	2	2	7	M								
F	L	0	2	2	7	M								

LING PERIOD ______ DATE ______ PRINCIPAL INVESTIGATOR: BOBBY PRESLEY

EMSAC FILE 02?5L
DEMERSAL FISH STATISTICS DATA

SPECIES INDEX	L-REC NO.	LENGTH (1)	WEIGHT (1)	LENGTH (2)	WEIGHT (2)	LENGTH (3)	WEIGHT (3)	LENGTH (4)	WEIGHT (4)	D/T	EMSAC SEQUENCE

LOG FIELD ________ DATE ________ PRINCIPAL INVESTIGATOR: R. L. SHIPP

DMSAG FILE 0227T
TAXONOMIC DATA FOR INVERTEBRATE TRACE METAL DETERMINATIONS

BLM-OCS AREA (1–3)	DMSAG FILE NAME (4–9)	SAMPLE ID (10–12)	ANALYSIS ID NUMBER (14–20)	SPECIES IDENTIFICATION (22–57)	WT. FACTOR (59–60)	REPLICATE CODE (62)	DMSAG SEQUENCE (77–80)
MAF	LO227T						
MAF	LO227T						
MAF	LO227T						
MAF	LO227T						
MAF	LO227T						
MAF	LO227T						
MAF	LO227T						
MAF	LO227T						
MAF	LO227T						
MAF	LO227T						
MAF	LO227T						
MAF	LO227T						
MAF	LO227T						
MAF	LO227T						
[illegible]AF	LO227T						
[illegible]AF	LO227T						
[illegible]	[illegible]						
[illegible]	[illegible]						
[illegible]	[illegible]						
[illegible]AF	LO227T						
[illegible]	[illegible]						
[illegible]AF	LO227T						
[illegible]F	LO227T						
MAF	LO227T						
MAF	LO227T						
MAF	LO227T						
MAF	LO227T						
MAF	LO227T						

SAMPLING PERIOD ______________ DATE __________

PRINCIPAL INVESTIGATOR: BOBBY PRESLEY

DMSAG FILE 0232A
POLYCHAETE SPECIES ABUNDANCE DATA

SPECIES IDENTIFICATION

REPLICATE I.D.

A B C D E F G H I K

DMSAG SEQUENCE

PRINCIPAL INVESTIGATOR: BARRY A. VITTOR

DMSAG FILE 0229N
DEMERSAL FISH COUNT DATA

SPECIES IDENTIFICATION (1–35)	SPECIES INDEX (36–40)	NUMBER INDIVIDUALS (41–45)	NUMBER MEASURED (46–50)	NUMBER WEIGHED (51–55)	TOTAL WEIGHT THIS SAMPLE (56–63)	Q_1Q_2 (64–66)	LR (67–70)	(71–73)	P/T (74–76)	DMSAG SEQUENCE (77–80)

SAMPLING PERIOD ____________ DATE ________ PRINCIPAL INVESTIGATOR: R. L. SHIPP

DMSAG FILE 0233N
CARBONATE & SKELETAL SAND CONSTITUENT DATA
(PARTICLE COUNTS)

CCS ZA | DMSAG FILE | SAMPLE ID | GRAIN TYPES | 4000-1000μ | 2000-1000μ | 1000-500μ | 500-250μ | 250-125μ | 125-62.5μ | DMSAG SEQUENCER

FILING FIELD ______________ DATE __________ PRINCIPAL INVESTIGATOR: HAROLD R. WANLESS

DMSAG FILE 0232B
INVERTEBRATE BIOMASS DATA

BLM-OCS AREA (1–5)	DMSAG FILE (6–9)	REP (10–12)	MOLLUSCA (13–21)	POLYCHAETA (22–30)	CRUSTACEA (31–39)	ECHINODERMS (40–48)	OTHER (49–57)	(58–76)	DMSAG SEQUENCE (77–80)
MAF LO	2328								
MAF LO	2328								
MAF LO	2328								
MAF LO	2328								
MAF LO	2328								
MAF LO	2328								
MAF LO	2328								
MAF LO	2328								
MAF LO	2328								
MAF LO	2328								
[illegible]	[illegible]								
[illegible]	[illegible]								
[illegible]	[illegible]								
[illegible]	[illegible]								
[illegible]	[illegible]								
[illegible]	[illegible]								
[illegible]	[illegible]								
[illegible]	[illegible]								
[illegible]	[illegible]								
[illegible]	[illegible]								
[illegible]	[illegible]								
[illegible]	[illegible]								
[illegible]	[illegible]								
[illegible]	[illegible]								
[illegible]	[illegible]								
[illegible]	[illegible]								
[illegible]	[illegible]								
[illegible]	[illegible]								

PRINCIPAL INVESTIGATOR: BARRY A. VITTOR

DMSAC FILE 0329
ICHTHYOFAUNA ARCHIVE DATA

I-OCS STA	DMSAC FILE NAME	UNIV	CATALOG #	SPECIES IDENTIFICATION	DATE	ADULTS	JUVENILES	DMSAC SEQUENCE

[illegible] PUNCHED ____________ DATE ________ PRINCIPAL INVESTIGATOR: R. L. SHIPP

DMSAG FILE 0233P
CARBONATE & SKELETAL SAND CONSTITUENT DATA
(PERCENTAGES)

M-OCS AREA (2–4)	DMSAG FILE (5–8)	SAMPLE ID (9–12)	GRAIN TYPES (13)	% 4000-2000µ (38)	% 2000-1000µ (44)	% 1000-500µ (50)	% 500-250µ (56)	% 250-125µ (62)	% 125-62.5µ (68)	DMSAG SEQUENCER (74)	(75)	(76)
A F L	0 2 3	3 ?	X	X	X	X	X	X	X	X	X	X
A F L	0 2 3	3 ?	X	X	X	X	X	X	X	X	X	X
A F L	0 2 3	3 ?	X	X	X	X	X	X	X	X	X	X
A F L	0 2 3	3 ?	X	X	X	X	X	X	X	X	X	X
[illegible]	[illegible]	[illegible]	X	X	X	X	X	X	X	X	X	X
[illegible]	[illegible]	[illegible]	X	X	X	X	X	X	X	X	X	X
[illegible]	[illegible]	[illegible]	X	X	X	X	X	X	X	X	X	X
[illegible]	[illegible]	[illegible]	X	X	X	X	X	X	X	X	X	X
[illegible]	[illegible]	[illegible]	X	X	X	X	X	X	X	X	X	X
A F L	0 2 3	2 ?	X	X	X	X	X	X	X	X	X	X
[illegible]	[illegible]	[illegible]	X	X	X	X	X	X	X	X	X	X
[illegible]	[illegible]	[illegible]	X	X	X	X	X	X	X	X	X	X
[illegible]	[illegible]	[illegible]	X	X	X	X	X	X	X	X	X	X
[illegible]	[illegible]	[illegible]	X	X	X	X	X	X	X	X	X	X
[illegible]	[illegible]	[illegible]	X	X	X	X	X	X	X	X	X	X
[illegible]	[illegible]	[illegible]	X	X	X	X	X	X	X	X	X	X
[illegible]	[illegible]	[illegible]	X	X	X	X	X	X	X	X	X	X
[illegible]	[illegible]	[illegible]	X	X	X	X	X	X	X	X	X	X
[illegible]	[illegible]	[illegible]	X	X	X	X	X	X	X	X	X	X
[illegible]	[illegible]	[illegible]	X	X	X	X	X	X	X	X	X	X
[illegible]	[illegible]	[illegible]	X	X	X	X	X	X	X	X	X	X
[illegible]	[illegible]	[illegible]	X	X	X	X	X	X	X	X	X	X
[illegible]	[illegible]	[illegible]	X	X	X	X	X	X	X	X	X	X
[illegible]	[illegible]	[illegible]	X	X	X	X	X	X	X	X	X	X
[illegible]	[illegible]	[illegible]	X	X	X	X	X	X	X	X	X	X
[illegible]	[illegible]	[illegible]	X	X	X	X	X	X	X	X	X	X
[illegible]	[illegible]	[illegible]	X	X	X	X	X	X	X	X	X	X
[illegible]	[illegible]	[illegible]	X	X	X	X	X	X	X	X	X	X

SAMPLING PERIOD ____________ DATE ______________

PRINCIPAL INVESTIGATOR: HAROLD R. WANLESS

BENTHIC POLYCHAETE FAUNA OF MAFLA STUDY TRANSECTS V AND VI

University of Alabama, Marine Science Programs

Principal Investigator:
Barry A. Vittor

TABLE OF CONTENTS

ABSTRACT

Polychaetous annelids from MAFLA Transects V and VI were identified and counted for three sample series: June and September, 1975 and January, 1976. The mean numbers of species identified were similar at the two transects, but differed seasonally (June: 87; September: 67; January: 65). Abundance also changed seasonally (June: 583/0.54 m^2; September: 326; January: 676). Biomass estimates differed between seasons, but not between transects. Species diversity, abundance and biomass appear to be related to sediment particle size. Lower values occur in finer sediments. Distributions of dominant species and families also appear to be related to sediment type, but may also be related to geographical location.

BENTHIC POLYCHAETE FAUNA OF MAFLA
STUDY TRANSECTS V AND VI

INTRODUCTION

Polychaetous annelids are recognized as an important component of soft bottom macro-infauna. As relatively immotile members of the benthos, they are good indicators of the impacts of environmental perturbation. The effects of habitat changes have been studied by many authors, including McNulty (1961, 1970), Godcharles (1971), O'Connor (1972), and others. Most studies of Gulf of Mexico polychaetes have been descriptive, however (Hartman, 1951; Foster, 1969; Taylor, 1971; Kritzler, 1973; Vittor, 1976).

The purpose of the MAFLA polychaete program was to characterize the benthos of areas leased for oil exploration and development, in order to establish a baseline environmental condition against which future habitat changes could be evaluated. This paper is the final report for the 1975-76 polychaete analysis portion of the MAFLA program (for Transects V and VI). Key elements of this analysis included the sampling effort itself, polychaete identification and enumeration, and correlation of sediment characteristics with polychaete abundance, diversity, and assemblages. Seasonal aspects of these parameters were also evaluated.

MATERIALS AND METHODS

Transects V and VI included 18 stations, which were sampled during June and September, 1975 and January, 1976. During each sample period, nine (9) replicate 0.06 m^2 box cores were obtained per station. Each sample was sub-sampled for standard sediment parameter analysis, performed by Dr. Larry Doyle of the University of South Florida.

Each box core was sieved through a 0.5 mm mesh sieve immediately after collection. Material retained was placed in cotton bags and narcotized for 30 min. in 15% $MgSO_4$. The samples were then transferred to 10% buffered formalin, and transported to the Dauphin Island Sea Lab for processing.

Rough-sorting of the infaunal samples involved staining with 1% Rose bengal vital stain, and removal of all visible fauna to 70% EtOH. These animals were then fine-sorted into the following groups: Mollusca; Polychaeta; Arthropoda; Echinodermata; and Other (eg. Porifera, Cnidaria, Sipuncula, etc.). Each group was blotted dry, and a wet weight biomass determination made with a Mettler brand balance (accuracy ±0.1 mg). All mollusks were shipped to Dr. Normal Blake for analysis. The arthropod, echinoderm and other fractions were archived in the Invertebrate Museum of the Dauphin Island Sea Lab.

All polychaetes were identified to the family level initially. With few exceptions, they were further identified to species level and counted. After this processing, all individuals were returned to 70% EtOH and archived.

Most (approximately two-thirds) of the nearly 350 species identified were verified during two visits to the Smithsonian Institution. Most of the remaining taxa represent new species or species not represented in the Division of Worms of the Smithsonian. Comparison with specimens held at the Allan Hancock Foundation will be necessary to verify many of the latter category.

RESULTS

The complete list of all species identified is provided in Appendix A of this report. The complete file of station data is available upon request, from the Data Management Group (DMSAG).

Sediments

Sediment data provided by Dr. Doyle are summarized in Table 1. Sediments along Transect V (West Florida Shelf) are considerably coarser than those sampled

Table 1. Mean phi sediment particle diameter, sorting coefficient (phi), and $CaCO_3$ content for surface sediments (from L. Doyle, 1976).

Station	Depth (m)	Sample Period I Mean ø	σ ø	$CaCO_3$ (%)	Sample Period II Mean ø	σ ø	$CaCO_3$ (%)	Sample Period III Mean ø	σ ø	$CaCO_3$ (%)	Classification
2528	38	-0.1	1.4	57.2	0.5	0.5	14.6	0.6	0.8	19.9	Coarse sand-rubble
2529	38	-0.3	1.2	76.0	0.3	0.9	76.7	0.3	0.7	27.1	Coarse sand-rubble
2530	41	-0.2	1.3	66.3	0.4	0.8	76.1	0.4	0.7	38.3	Coarse sand-rubble
2531	45	-0.5	0.9	84.5	0.1	1.1	89.6	0.4	0.8	45.4	Coarse sand-rubble
2532	52	0.8	1.1	78.0	0.1	0.9	82.8	0.1	0.9	82.4	Coarse sand
2533	68	0.5	0.8	86.0	0.5	0.7	74.4	0.4	0.8	23.2	Coarse sand
2534	74	-0.4	1.1	89.2	0.2	0.7	90.4	0.5	0.9	75.2	Coarse sand-rubble
2535	118	2.6	0.7	70.1	2.5	0.8	57.4	2.5	0.7	61.1	Fine sand-silt
2536	191	2.4	0.8	0	2.0	1.1	67.1	2.3	0.9	41.3	Fine sand-silt
2637	21	2.0	0.4	13.4	2.4	0.7	7.5	2.7	0.6	11.1	Fine sand
2638	25	3.0	0.4	18.2	2.9	0.4	12.2	2.8	0.7	0	Fine sand-silt
2639	32	1.6	1.1	21.5	2.2	0.7	15.5	1.8	0.7	15.0	Medium sand
2640	36	1.1	0.6	16.6	1.7	0.8	1.1	0.2	0.9	25.4	Coarse sand
2641	37	2.0	0.4	4.6	0.6	0.6	7.9	1.9	0.4	4.0	Medium sand
2642	36	1.6	0.9	9.2	1.6	0.7	0.4	1.0	0.4	3.6	Medium sand
2643	70	-0.1	1.4	83.8	0.6	0.8	76.1	-0.1	1.4	77.2	Coarse sand-rubble
2644	75	0.4	1.1	87.5	0.1	1.0	87.4	0.0	1.1	87.0	Coarse sand
2645	107	-0.4	0.8	87.5	0.6	0.9	81.5	0.2	1.0	4.1	Coarse sand-rubble

on Transect VI (Mississippi-Alabama Shelf). DeSoto Canyon appears to delimit the boundary between the calcareous sediments of Transect V and the riverine silts and sands of Transect VI. Whereas high $CaCO_3$ content along the former transect indicates presence of quantities of coralline rubble, high values at the three deep stations on Transect VI indicate the contribution of foraminferan tests to the sediments.

Major substrate types can be identified as follows:

1. Coarse sand and coralline rubble to a depth of approximately 74 m along Transect V (mean organic carbon content = 0.9%);

2. Fine sand and silt (largely calcium cabonate) at depths greater than 100 m on Transect V (negligible organic carbon content);

3. Very fine riverine sand and silt within the influence of the Mississippi and Mobile River plumes, to a depth of 30 m along Transect VI (mean organic carbon content = 0.4%);

4. Mixed sand, silt and shell hash sediments at depths up to 70 m on Transect VI (mean organic carbon content = 0.19%);

5. Foraminferan sands at depths greater than 70 m on Transect VI (mean organic carbon content = 2.7%).

Significant seasonal changes in sediment particle size distribution may have occurred, as a result of passage of Hurricane ELOISE between the transects approximately four days before the September 1975 box coring cruise. A general decrease in mean particle diameter occurred after June.

Ploychaete Species and Individual Abundance

The numbers of species and individuals collected during the 1975-76 study period are shown in Table 2. These data showed significant differences due to both season and station effects, when tested with Friedman's analysis of variance ($p<0.01$ in each case). Transect V stations contained both more polychaete and

Table 2. Numbers of species and individuals at Transect V and VI station, expressed as number per 0.54 m^2.

	June		September		January	
	#Spp.	#Indiv.	#Spp.	#Indiv.	#Spp.	#Indiv.
[T]ansect V						
2528	129	1169	102	444	96	1098
2529	95	869	102	676	81	878
2530	106	779	88	609	87	1237
2531	108	524	99	626	90	1138
2532	103	441	75	336	84	959
2533	93	488	52	160	66	569
2534	108	456	46	92	76	410
2535	45	128	21	41	33	278
2536	38	85	31	51	34	118
Means	92	549	68	337	72	743
SD	±53	±359	±41	±241	±40	±463
[Tra]nsect VI						
2637	44	345	26	93	34	288
2638	44	224	30	165	29	152
2639	95	1049	71	391	68	796
2640	102	1437	77	545	77	999
2641	79	631	89	393	63	1256
2642	89	509	83	386	64	708
2643	94	359	68	266	61	404
2644	88	370	73	321	73	520
2645	108	640	74	281	66	362
Means	82	618	66	316	59	609
SD	±45	±405	±36	±183	±32	±389

more individuals, on the average, than stations along Transect VI. This pattern weakened with the September sample, when the two transects were essentially the same with respect to numbers of species and individuals.

Variability (SD) estimates were the same for both transects, suggesting that the combination of substrate differences and intra-station variation was nearly equal for the two shelf areas.

It is interesting to note that patterns of species and individual numbers along the transects are reversed with respect to depth. This indicates that depth *per se* is insignificant compared with sediment type (refer to Table 1 for depth and sediment data). Stated in another way, fine sand and silt sediments support fewer species and individuals than coarse sand sediments, regardless of the locations or sources of these sediments. In fact, highest polychaete abundance occurs in transitional sediments, which consist of sand, silt and shell/rubble.

Polychaete Biomass

Wet weight biomass data for Transect V and VI are summarized in Table 3. As with number of species and individuals, total polychaete biomass estimates differ significantly with respect to both season and station ($p<0.01$ in each case). The dramatic decline in biomass during September could be attributed to either seasonal succession or the effects of Hurricane ELOISE (or both). Unfortunately, corresponding-season samples have not been obtained in 1976.

In general, transition zone sediments supported a higher standing crop of polychaetes than either very fine or foraminiferan sediments. The average size of polychaetes at stations on Transect VI appeared to be somewhat greater than that for Transect V. This difference, if real, may relate to the differences in family distributions, between the two areas. Syllids and spionids which dominate many stations on Transect V are very small, but numerous. This pattern will be discussed in a following section.

Table 3. Polychaete biomass at stations along Transects V and VI, expressed as grams wet weight per 0.54 m^2.

	June	September	January
Transect V			
2528	8.05	4.34	2.89
2529	3.97	1.68	2.73
2530	4.48	1.75	4.07
2531	3.36	2.31	4.36
2532	2.07	0.43	3.98
2533	3.38	0.26	2.50
2534	1.78	0.16	2.01
2535	3.28	0.03	0.61
2536	0.99	0.14	0.45
Means	3.49	1.23	2.62
SD	±2.04	±1.44	±1.42
Transect VI			
2637	4.68	0.92	0.62
2638	2.71	0.95	0.59
2639	7.62	2.24	5.20
2640	5.40	3.01	4.35
2641	2.39	2.03	2.57
2642	2.24	2.58	1.41
2643	4.18	1.27	1.24
2644	2.34	1.50	2.89
2645	3.00	1.06	1.71
Means	3.84	1.73	2.29
SD	±1.81	±0.76	±1.63

Polychaete Species Diversity

Measures of polychaete species diversity H', H_{max}, and J' were calculated by the Data Management Group, and are summarized in Table 4. These statistics were used according to Pielou (1969), and are defined as follows:

(a) $H' = -\Sigma \log_2 p_i(p_i)$, where p_i = proportion of individuals of species i in sample

(b) $H_{max} = \ln S$, where S = no. of species

(c) $J' = H'/H_{max}$

The decreases in H' and H_{max} from the June to the September samples again reflect seasonal succession and/or hurricane effects on the benthos. Surprisingly, evenness of diversity (J') did not change, indicating that species became less abundant uniformly through the community; some species decreased to extinction. Recovery of species adapted to sediment perturbation appeared to have taken place by January. On the average, the numbers of species present did not increase significantly. This suggests that recruitment of species dependent on dispersion by Gulf currents, and/or species with seasonal reproduction, did not occur. The June, 1976 sampling effort should indicate whether such recruitment has now taken place.

In general, lower species diversity occurred in the finer sediments (see Table 5 for station means), regardless of time of sampling. As a result of the differences between transects, with respect to location of such substrates, diversity (as H') did not vary linearly with water depth. That is, within the depth limits of this study, we cannot suggest that deeper stations support more diverse (and probably more stable) polychaete assemblages. This relationship will be dealt with further in a later section.

Highest mean H' values occurred at stations characterized by coarse sand/rubble sediments. Presumably, these habitats present a greater diversity of

Table 4. Measures of polychaete diversity for Transects V and VI during 1975-76.

Station	Sample I			Sample II			Sample III		
	H'	H_{max}	J'	H'	H_{max}	J'	H'	H_{max}	J'
2528	3.95	4.86	0.81	4.08	4.62	0.88	3.83	4.53	0.84
2529	3.76	4.55	0.83	3.74	4.62	0.81	3.46	4.37	0.79
2530	3.83	4.65	0.82	3.59	4.48	0.80	3.80	4.47	0.85
2531	3.89	4.67	0.83	3.80	4.60	0.83	3.40	4.50	0.75
2532	4.18	4.60	0.91	3.51	4.32	0.81	3.67	4.43	0.83
2533	4.08	4.52	0.90	3.39	3.95	0.86	3.38	4.19	0.81
2534	4.22	4.67	0.90	3.64	3.83	0.95	3.84	4.33	0.89
2535	3.39	3.78	0.90	2.75	3.04	0.90	2.02	3.47	0.58
2536	3.31	3.64	0.91	3.21	3.43	0.94	2.95	3.53	0.84
2637	2.91	3.78	0.77	2.73	3.26	0.84	2.66	3.53	0.76
2638	3.08	3.78	0.81	2.44	3.40	0.72	2.76	3.37	0.82
2639	3.79	4.55	0.83	3.79	4.26	0.89	3.42	4.22	0.81
2640	3.60	4.62	0.78	3.18	4.34	0.73	3.70	4.33	0.85
2641	3.44	4.36	0.79	3.87	4.47	0.87	3.10	4.13	0.75
2642	3.75	4.49	0.84	3.95	4.42	0.89	3.46	4.16	0.83
2643	4.07	4.54	0.90	3.60	4.22	0.85	3.57	4.11	0.87
2644	3.87	4.48	0.86	3.75	4.29	0.87	3.64	4.29	0.85
2645	3.99	4.78	0.85	3.87	4.30	0.90	3.91	4.17	0.94
Means	3.73	4.40	0.85	3.49	4.12	0.85	3.37	4.12	0.81

Table 5. Average diversity of polychaetes, as H', for Transects V and VI during the 1975-76 MAFLA study.

ransect V

Station	Depth(m)	H' ±SD	Coefficient of Variation (%)
2528	38	3.95±0.13	3.3
2529	38	3.65±0.17	4.7
2530	41	3.74±0.13	3.5
2531	45	3.70±0.26	7.0
2532	52	3.79±0.35	9.2
2533	68	3.62±0.40	11.0
2534	74	3.90±0.29	7.4
2535	118	2.72±0.69	25.4
2536	191	3.16±0.19	6.0

ransect VI

Station	Depth(m)	H' ±SD	Coefficient of Variation (%)
2637	21	2.77±0.13	4.7
2638	25	2.76±0.32	11.6
2639	32	3.67±0.21	5.7
2640	36	3.49±0.28	8.0
2641	37	3.47±0.39	11.2
2642	36	3.72±0.25	6.7
2643	70	3.75±0.28	7.5
2644	75	3.75±0.12	3.2
2645	107	3.92±0.06	1.5

niche space, and hence the spectrum of space resources (as sediment complexity) is larger than for those stations where a very fine, uniform sediment is found.

Dominant Species of Polychaetes

Table 6 summarizes the occurrence of dominant polychaetes at the 18 stations. Dominant species are considered to be those representing at least 5% of the total number of individuals at a station (regardless of biomass, however). If a species was dominant during any of the surveys conducted, its presence is so-indicated for the appropriate station(s).

Most of the species listed have not previously been recorded from the northeastern Gulf of Mexico (see Perkins and Savage, 1975). Several records represent range extensions for genera and families. Additional species appear to be unknown to science, and have been assigned provisional labels. A complete list of species found along Transects V and VI is provided in Appendix A.

Several interesting patterns appear in Table 6. Syllids, glycerids, goniadids, and spionids are most dominant in the coarse sand/rubble sediments of Transect V, and, to a lesser extent, in the coarse sediments of Transect VI. Paraonids dominate the latter habitats. Stations characterized by fine sand-silt substrates, on the other hand, are dominated by nereids, lumbrinerids, cirratulids, opheliids, and such individual species as *Paraprionospio pinnata*, *Aedicira belgicae*, *Cossura* A, and *Magelona* spp. It should be noted that species which occur especially in coarser sediments exhibit more extensive branchial/cirral development. Finer (and generally more organic-rich) sediments support a fauna characterized by reduced parapodial and accessory structure development. Whether this pattern reflects the evolution of alternative respiratory strategies is unknown, but warrants further study.

Table 6. Occurrence of dominant polychaetes along Transects V and VI during 1975-76. Species which comprise at least 5% of the total individuals at a station during one or more sample periods, are defined as numerically dominant.

Species/Station	2528	2529	2530	2531	2532	2533	2534	2535	2636	2637	2638	2639	2640	2641	2642	2643	2644	2645
epidonotus sublevis																		x
mphinomid A																	x	x
yllis spongicola	x																	
yllis cornuta						x	x										x	
yllis hyalina	x	x	x	x	x													
yllis regulata				x														
xogene dispar			x	x		x	x						x			x	x	x
xogene A																	x	
phaerosyllis pirifera		x	x	x	x	x											x	
yllid A									x									
eratocephale B										x	x							
ebsterinereis tridentata										x	x			x	x	x		
eanthes B										x				x				
glaophamus circinata									x									
aralacydonia paradoxa								x	x									
lycera papillosa				x		x												
lycera capitata	x	x	x	x	x	x	x										x	x
oniada teres								x										
oniada littorea		x	x	x				x										
unice vittata	x						x						x					
uphis A									x									
umbrineris parvipedata	x									x	x	x	x	x				
umbrineris cruzensis																		x
rotodorvillea kefersteini																	x	
pio pettiboneae						x		x	x									
araprionospio pinnata		x						x	x	x	x		x	x				
colelepis squamata					x	x												
rionospio cirrobranchiata					x	x	x	x										
rionospio cristata		x	x	x	x	x	x						x		x			
oprionospio dayi							x											
ygospio elegans						x												
agelona pacifica										x								
agelona B										x	x							
oecilochaetus johnsoni												x						
aryx annulosus												x						
aryx marioni								x	x			x						
aryx setigera												x						
ossura A								x		x	x	x						
aploscoloplos foliosus									x									
irrophorus lyriformis									x									
icidea fauveli															x	x		

Table 6. (Continued)

n Species/Station	2528	2529	2530	2531	2532	2533	2534	2535	2536	2637	2638	2639	2640	2641	2642	2643	2644	2645
Aricidea fragilis																	x	
Aricidea suecica									x							x		x
Aricidea jeffreysii																x		
Aricidea wassi															x			
Paraonis gracilis					x	x								x	x			
Paraonides lyra																x	x	
Aedicira belgicae									x			x		x	x			
Armandia maculata										x			x		x			
Mediomastus californiensis												x	x	x	x			
Asychis carolinae											x							
Samythella eliasoni														x		x	x	
Ampharete A																x	x	x

A detailed review of polychaete affinities is not warranted at this time. Problems with computation of the indices used to describe assemblages, and inconclusive data (except as noted in Table 6), preclude effective analysis.

Polychaete-Sediment Relationships

Statistical analysis of key population and sediment information has provided insight into animal-sediment relationships in the MAFLA area. As stated earlier, sediment particle size did not vary regularly with depth (Table 1). The regression of mean phi on depth was not significant ($b=0.0034$; $p>0.10$).

Significant patterns were found in the relationship between species diversity (H') and mean phi. The following regressions were estimated:

June $b = -0.256$; $p<0.05$

September $b = -0.346$; $p<0.05$

January $b = -0.410$; $p<0.01$

The change in slopes of the regression lines is systematic and thus, interesting. Part of the change can doubtless be attributed to the decrease in H' with season (Table 4). Although mean phi values did not appear to have changed drastically, the slight decrease in mean particle diameter before the September sample period may account for some of the increase in slope of the regression of H' on mean phi. This would reinforce the statement that H' is affected by sediment particle size: in fact, H' decreases as mean particle diameter decreases.

DISCUSSION

There are four general areas of interest in the data presented. These are: animal-sediment relationships; seasonal effects on polychaetes; effects of hurricanes on the benthos; and the rate of polychaete recruitment after perturbations have occurred. These are obviously interrelated to some extent, but will be discussed independently where possible, because of their important implications for assessing the impacts of oil exploration and exploitation on the benthos.

Animal-sediment relationships have been well-described for many areas. Examples include reviews by Jones (1950) and Thorson (1957), studies by Sanders (1956, 1958) in Buzzard's Bay, Lie (1968) in Puget Sound, Nichols (1970) in Port Madison, Washington, Boesch (1972) in Virginia, Vittor (1976) in the northeastern Gulf of Mexico, and many others.

In this program, the importance of the effect of particle size on species diversity lies in possible changes in sediments as a result of oil well drilling and operation. Even a gradual decrease in mean size may cause a decrease in polychaete diversity, and probably in abundance as well.

Seasonal changes in water mass characteristics (current direction, temperature and turbidity especially) can also be expected to impact polychaete diversity and abundance. Most of this effect at Transects V and VI appears to be related to the availability of larvae for recruitment into the community. Thus, temperature changes could cause death of some species, but most likely would have the greatest impact on reproduction of existing adults.

Because of the temporal limitations of this program (primarily the lack of a September, 1976 sample), we cannot distinguish between seasonal and hurricane effects on benthic polychaetes in this area. Hurricane ELOISE appears to have caused changes in surficial sediments, especially along Transect V, but both the Mississippi-Alabama Shelf and the West Florida Shelf are described as unstable sedimentologically (L. Doyle, personal communication). Hence, it is difficult to attribute any changes in surface sediments to hurricane activity: such changes may normally occur in response to severe fall and winter storms.

An argument against the preceding statement exists in the significant recovery of populations by January, despite extremely severe storm activity immediately before (and during) that sampling cruise. Polychaete populations appeared to have recovered very rapidly after the September low. Whether full recover of diversity occurred remains to be seen (assuming that peak levels are reached during early summer).

Should sediments be disrupted by oil well activity, then, polychaete populations may decline significantly, but may also recover swiftly, if the sediments themselves revert to essentially normal conditions (assuming no chemical changes).

CONCLUSIONS

The findings of the 1975-76 benthic polychaete program for Transects V and VI can be summarized as follows:

1. The numbers of species and individuals differed, with respect to both season and location. September values were generally lowest for both parameters, while stations with fine sediments supported fewest species and individuals.
2. Polychaete wet weight biomass estimates also varied with season and location (sediment type). Seasonal and sediment effects were the same as for numbers of species and individuals.
3. Species diversity and evenness were highest during June. The decrease in H' and H_{max} in September coincided with decreases in species and individual abundance.
4. Dominant species are distributed according to sediment type and geographical location. Family groupings show the same patterns.
5. Species diversity decreases as mean sediment particle size decreases, regardless of season or geographical location.

ACKNOWLEDGEMENTS

The following individuals are gratefully acknowledged for technical assistance in this project: Gary R. Gaston; Joan M. Uebelacker; Paul G. Johnson; Joseph C. Harp; and John M. Stapleton. The Report was typed by Edna P. Brinkman. Sediment data was received from Dr. Larry Doyle of the University of South Florida. Diversity measures were provided by the Data Management Group at the University of South Florida. Organic carbon values were also obtained through the Data Management Group, from Drs. Julia and Thomas Lytle of the Gulf Coast Research Laboratory. The cooperation and assistance of the Division of Worms, Smithsonian Institution, is gratefully acknowledged.

LITERATURE CITED

Boesch, D.F. 1972. Species diversity of marine macrobenthos in the Virginia area. Chesapeake Science. 13:206-211.

Foster, M. 1969. New species of Spionidae (Polychaeta) from the Gulf of Mexico and Caribbean Sea, with a partial revision of the genus Prionospio. Proc. Biol. Soc. Wash. 82:381-400.

Godcharles, M.F. 1971. A study of effects of a commercial dredge on benthic communities in estuarine areas. Fla. Dept. Nat. Resources Mar. Res. Lab., Tech. Ser. No. 64. 51 pp.

Hartman, O. 1951. The littoral marine annelids of the Gulf of Mexico. Publ. Inst. Mar. Sci., Univ. Tex. 2:7-124.

Jones, N.S. 1950. Marine bottom communities. Biol. Rev. 25:283-313.

Kritzler, H. 1973. Diversity, biomass and systematics of the benthic polychaete biocenoses of a selected estuary and an offshore platform. Project report to Gulf Universities Research Consortium, Offshore Ecology Investigation. 14 pp.

Lie, U. 1968. A quantitative study of benthic infauna in Puget Sound, Washington, U.S.A., in 1963-64. Fisk Dir. Skr. (Ser. Havunders). 14:229-556.

McNulty, J.K. 1961. Ecological effects of sewage pollution in Biscayne Bay, Florida: sediments and distribution of benthic and fouling macro-organisms. Bull. Mar. Sci. Gulf Caribb. 11:394-447.

__________ 1970. Effects of abatement of domestic sewage on the benthos, volumes of zooplankton, and the fouling organisms of Biscayne Bay, Florida. Stud. Trop. Oceanogr. (Miami), No. 9. 107 pp.

Nichols, F.H. 1970. Benthic polychaete assemblages and their relationship to the sediment in Port Madison, Washington. Mar. Biol. 6:48-57.

O'Connor, J.S. 1972. The benthic macrofauna of Moriches Bay, New York. Biol. Bull. 142:84-102.

Perkins, T.H. and T. Savage. 1975. A bibliography and checklist of polychaetous annelids of Florida, the Gulf of Mexico, and the Caribbean Region. Fla. Mar. Res. Publ. No. 14. 62 pp.

Pielou, E.C. 1969. An introduction to mathematical ecology. Wiley-Interscience. New York. 286 pp.

Sanders, H.L. 1956. Oceanography of Long Island Sound, 1952-54. X. Biology of Marine bottom communities. Bull. Bingham Oceanogr. Coll. 15:345-414.

__________ 1958. Benthic studies in Buzzards Bay. I. Animal-sediment relationships. Limnol. Oceanogr. 3:245-258.

Taylor, J.L. 1971. Polychaetous annelids and benthic environments in Tampa Bay, Florida. Doctoral dissertation, Univ. Fla. 1332 pp.

Thorson, G. 1957. Bottom communities. Pp. 461-543 in J.W. Hedgpeth, Ed., Treatise on Marine Ecology and Paleoecology. Vol. I. Waverly Press, Baltimore.

Vittor, B.A. 1976. Abundance and diversity of polychaetous annelids on the Alabama-Mississippi near Continental Shelf. Proc. Fla. Acad. Sci. (in press).

APPENDIX A

List of Polychaetous Annelids
from MAFLA Transects V and VI

Family: Aphroditidae
Aphrodite Sp. A

Family: Polynoidae
Antinoella angusta
Antinoella sarsi
Harmothoe imbricata
Lepidasthenia maculata
Lepidonotus sublevis
Lepidonotus variabilis

Family: Polyodontidae
Eupanthalis kinbergi
Polyondontes lupina

Family: Eulepethidae
Grubeulepis fimbriata
Grubeulepis mexicana
Grubeulepis sulcatisetis
Mexieulepis weberi

Family: Sigalionidae
Euleanira ehlersi
Euthalanessa Sp. A
Leanira n. hystricis
Pholoe minuta
Psammolyce ctenidophora
Sigalion arenicola
Sthenelais boa
Sthenelais limicola

Family: Chrysopetalidae
Bhawania goodei
Paleanotus chrysolepis
Paleanotus heteroseta

Family: Euphrosinidae
Euphrosine Sp. A

Family: Amphinomidae
Amphinomid Sp. A
Chloeia viridis
Chloeia englochis
Paramphinome pulchella
Pseudoeurythoe n. ambigua

Family: Pisionidae
Pisione remota

Family: Phyllodocidae
Anaitides groenlandica
Anaitides panamensis
Eteone heteropoda
Eteone lactea
Eteone Sp. A
Eulalia bilineata
Eulalia sanguinea
Hesionura elongata
Lugia rarica
Mystides Sp. A
Paranaitis speciosa
Phyllodoce castanea
Phyllodoce tubicola
Protomystides bidentata

Family: Pilargidae
Ancistrosyllis jonesi
Otopsis Sp. A
Pilargis pacifica
Sigambra tentaculata
Synelmis albini

Family: Hesionidae
Gyptis vittata
Hesionella Sp. A
Hesionid Sp. A
Kefersteinia cirrata
Nereimyra Sp. A
Parahesione luteola
Podarke agilis
Podarke berrisfordi
Podarke obscura

Family: Syllidae
Autolytus prolifer
Autolytus Sp. A
Brania clavata
Brania pusilla
Eurysyllis tuberculata
Eusyllis lamelligera
Eusyllis Sp. A
Exogene dispar
Exogene gemmifera
Exogene Sp. A
Odontosyllis Sp. A
Odontosyllis fulgarans
Pionosyllis uraga
Sphaerosyllis pirifera
Syllis alternata
Syllis n. armillaris
Syllis cornuta
Syllis ferrugina
Syllis gracilis

Family: Syllidae (continued)
Syllis hyalina
Syllis prolifera
Syllis regulata
Syllis spongicola
Trypanosyllis ankyloseta
Trypanosyllis prampramensis
Trypanosyllis sebra

Family: Sphaerodoridae
Ephesiella claparedii
Sphaerodoridium benguellarium

Family: Nereidae
Ceratocephala Sp. B
Ceratonereis irritablis
Ceratonereis mirabilis
Ceratonereis versipedata
Neanthes Sp. A
Neanthes Sp. B
Nereis falsa
Nereis grayi
Nereis riisei
Nereis Sp. A
Websterinereis tridentata

Family: Nephtyidae
Aglaophamus circinata
Aglaophamus verrilli
Micronephtys Sp. A
Nephtys bucera
Nephtys picta
Nephtys squamosa

Family: Paralacydoniidae
Paralacydonia paradoxa

Family: Glyceridae
Glycera americana
Glycera capitata
Glycera longipinnis
Glycera oxycephala
Glycera papillosa
Glycera tesselata
Hemipodus roseus

Family: Goniadidae
Glycinde nordmanni
Goniada littorea
Goniada norvegica
Goniada teres
Goniadella gracilis
Progoniada regularis

Family: Eunicidae
Eunice antennata
Eunice indica
Eunice kinbergi
Eunice siciliensis
Eunice vittata
Eunice websteri
Eunice Sp. A
Lysidice ninetta collaris
Lysidice ninetta ninetta
Marphysa sanguinea
Nematonereis unicornis

Family: Onuphidae
Diopatra cuprea cuprea
Diopatra cuprea spirobranchus
Diopatra n. dubia
Epidiopatra papillosa
Leptoecia Sp. A
Onuphis conchylega
Onuphis eremita
Onuphis holobranchiata
Onuphis magna
Onuphis microcephala
Onuphis nebulosa
Onuphis pallidula
Onuphis Sp. A
Paraonuphis antarctica
Rhamphobranchium atlanticum

Family: Lysaretidae
Lysarete brasiliensis

Family: Lumbrineridae
Lumbrineris aberrans
Lumbrineris albidentata
Lumbrineris bassi
Lumbrineris coccinea
Lumbrineris cruzensis
Lumbrineris erecta
Lumbrineris impatiens
Lumbrineris inflata
Lumbrineris latreilli
Lumbrineris paradoxa
Lumbrineris parvipedata
Lumbrineris tenuis
Lumbrineris tetraura
Lumbrineris Sp. A
Ninoe nigripes

Family: Arabellidae

Arabella iricolor
Arabella mutans
Arabellid Sp. A
Drilonereis filum
Drilonereis longa
Drilonereis magna
Notocirrus Sp. A

Family: Dorvilleidae

Dorvillea caeca
Dorvillea neglecta
Dorvillea rubrovittata
Dorvillea rudolphi
Dorvillea sociabilis
Ophryotrocha puerilis
Protodorvillea kefersteini

Family: Spionidae

Aonides mayaguezensis
Apoprionospio dayi
Apoprionospio pygmaea
Dispio uncinata
Laonice cirrata
Malacoceros vanderhorsti
Microspio pigmentata
Minuspio cirrifera
Minuspio japonica
Minuspio longibranchiata
Nerine agilis
Nerinides tridentata
Paraprionospio pinnata
Polydora ciliata
Polydora ligni
Polydora websteri
Polydora Sp. A
Polydorella Sp. A
Prionospio cirrobranchiata
Prionospio cristata
Prionospio heterobranchiata
Prionospio steenstrupi
Pygospio elegans
Rhynchospio inflatus
Scolecolepides viridis
Scolelepis squamata
Scolelepis texana
Spio pettiboneae
Spiophanes bombyx
Spiophanes berkeleyorum
Spiophanes wigleyi

Family: Magelonidae

Magelona n. pacifica
Magelona pettiboneae
Magelona polydentata
Magelona Sp. B
Magelona Sp. C

Family: Poecilochaetidae

Poecilochaetus johnsoni
Poecilochaetus serpens

Family: Chaetopteridae

Mesochaetopterus n. capensis
Phyllochaetopterus Sp. A
Spiochaetopterus oculatus

Family: Cirratulidae

Caulleriella killariensis
Chaetozone gayheadia
Chaetozone setosa
Cirratulus hedgpethi
Dodecacaeria concharum
Tharyx annulosus
Tharyx marioni
Tharyx setigera

Family: Cossuridae

Cossura delta
Cossura Sp. A

Family: Orbiniidae

Haploscoloplos foliosus
Haploscoloplos fragilis
Haploscoloplos robostus
Orbinia americana
Phylo felix
Scoloplos capensis
Scoloplos rubra
Schroederella parliani

Family: Paraonidae

Aedicira belgicae
Aricidea fauveli
Aricidea fragilis
Aricidea jeffreysii
Aricidea suecica
Aricidea taylori
Aricidea wassi
Cirrophoris branchiatus
Cirriphorus lyriformis
Paraonis gracilis
Paraonides lyra

Family: Questidae
Questa caudicirra

Family: Opheliidae
Ammotrypane Sp. A
Armandia agilis
Armandia maculata
Ophelina cylindricaudata
Ophelina Sp. A
Polyophthalmus translucens
Travisia forbesii
Travisia Sp. A

Family: Scalibregmidae
Asclerocheilus Sp. A
Hyboscolex longiseta
Paraschlerocheilus Sp. A
Scalibregma inflatum
Scalibregma Sp. A
Sclerocheilus oculatus
Sclerocheilus Sp. A

Family: Capitellidae
Capitella capitata
Capitellid Sp. A
Leiocapitella glabra
Leiochrides pallidior
Mediomastus californiensis
Notomastus americanus
Notomastus hemipodus
Notomastus latericeus

Family: Maldanidae
Asychis carolinae
Asychis elongata
Asychis Sp. A
Axiothella mucosa
Clymenella torquata
Euclymene delineata
Euclymene lumbricoides
Euclymene oerstedii
Euclymene Sp. B
Macroclymene zonalis
Praxillella elongata
Praxillura ornata
Praxillura Sp. A

Family: Oweniidae
Myriochele bioculatum
Owenia fusiformis

Family: Flabelligeridae
Diplocirrus capensis
Pherusa ehlersi
Pherusa inflata

Family: Sabellariidae
Lygdamis Sp. A
Sabellaria vulgaris vulgaris

Family: Pectinariidae
Cistenides gouldii
Lagis Sp. A
Pectinaria koreni koreni

Family: Ampharetidae
Amage auricula
Ampharete acutifrons
Ampharete americana
Ampharete parvidentata
Ampharetid Sp. A
Amphicteis gunneri
Amphicteis Sp. A
Isolda pulchella
Melinna maculata
Samythella eliasoni

Family: Terebellidae
Amaeana accraensis
Amaeana trilobata
Loimia viridis
Loimia Sp. A
Pista brevibranchiata
Pista cristata
Pista macrolobata
Pista palmata
Pista quadrilobata
Polycirrus caroliensis
Polycirrus n. eximius
Telothelepus Sp. A
Thelepus setosus

Family: Trichobranchidae
Terebellides stroemi
Trichobranchus glacialis

Family: Sabellidae
Chone duneri
Desdemona Sp. A
Euchone incolor
Fabricia n. atlantica
Hypsicomus elegans
Hypsicomus Sp. A
Jasmineira bilobata
Jasmineira caudata
Megalomma bioculatum
Megalomma lobiferum
Megalomma quadrioculatum
Potamilla reniformis
Potamilla spathiferus
Sabella melanostigma
Sabella microphthalma

Family: Serpulidae

Ficopomatus n. macrodon
Hydroides bandaensis
Hydroides crucigera
Hydroides elegans
Hydroides protulicola
Metavermilia Sp. A
Neovermilia capensis
Pomatoceros americanus
Pomatoleios caerulescens
Protula tubularia
Pseudovermilia occidentalis
Serpula vermicularis
Vermiliopsis annulata

APPENDIX B

RECOMMENDATIONS FOR FURTHER STUDY

Particular attention should be given to seasonal changes in polychaete populations in future studies. The most critical sample period, September, has been missed in the 1976-77 program. As a result, only tentative comparisons between the 1975-76 and 1976-77 studies can be drawn.

Polychaete taxonomy must be better-defined. It is apparent that many new species have been identified from the MAFLA area. It is imperative that good scientific descriptions of these forms be encouraged immediately. Future reference to a provisionally-named species will have no meaning to critical reviewers.

Attainment of a catalog of all species identified, and their status, should be a major goal of future programs. Verified species names should be distinguished from provisional names or temporary labels. As species nomenclature is refined, the catalog should be updated, and corresponding changes made in the data base file.

APPENDIX C

PROBLEMS ENCOUNTERED

Most problems encountered during the 1975-76 program can be listed as follows:

1. Rough-sorting funds were inadequate for both Transects V and VI (funds were budgeted only for Transect VI);

2. Additional time and money was needed for travel to the Smithsonian Institution. The time we spent there last year proved invaluable in accomplishing accurate identifications of species. However, more time was needed but not available, due to limitations of funds.

3. Many more species than expected were found in the samples, slowing our progress substantially. Undescribed forms in particular accounted for much lost time.

APPENDIX D

PUBLICATIONS AND WORKS IN PROGRESS

Published papers:

Vittor, B.A. (In Press) Abundance and diversity of polychaetous annelids on the Alabama-Mississippi near Continental Shelf. Proceedings, Florida Academy of Science.

Papers in progress:

Vittor, B.A., G. Gaston, P. Johnson and J. Uebelacker. Abundance and distribution of polychaetes in the northeastern Gulf of Mexico.

Vittor, B.A., G. Gaston, P. Johnson and J. Uebelacker. Checklist of polychaetous annelids from the MAFLA program.

CARBONATE SEDIMENT CONSTITUENTS AND MOLLUSCAN LITHOTOPES ON THE MAFLA CONTINENTAL SHELF

University of Miami, Rosenstiel School of Marine and Atmospheric Science

Principal Investigator:
Harold R. Wanless

Associate Investigator:
Jeffrey Dravis

CONTENTS

Carbonate Sediment Constituents

by

Harold R. Wanless and Jeffrey Dravis

INTRODUCTION

During the past two years, the surface sediment from the 108 box coring stations taken on the continental shelf of the eastern Gulf of Mexico have been analyzed by the authors for carbonate and biogeneous constituent composition. The goals of this study were to analyze the sedimentary constituents in a manner and a detail that would permit a) utilization of sedimentary attributes to help interpret the biological and physical processes influencing and controlling the benthic habitat and substrate dynamics and b) characterization of the critical substrate attributes most responsive to the biological communities and bottom physical processes.

Previous research provides a general framework of the carbonate sediment environments of the MAFLA shelf. Ludwick (1964) mapped general surface sediment facies between the Mississippi River Delta and Cape San Blas. This provides little information on carbonate sediment constituents, but recognizes a long carbonate-rich deep reef (sandy) and inter-reef (muds and sands) facies towards the shelf margin south of the Mississippi-Alabama zone (Figure 1. To the west of DeSoto Canyon, he terms the equivalent depth zone as western Florida lime mud facies, in which are dispersed pinnacle and other positive zones considered to be reefal. He concluded that the western Florida lime mud facies was of broader seaward extent than the Mississippi-Alabama reef and inter-reef facies and was muddier, had smaller median grain size and contained significantly less terrigeneous material.

Ludwick defines two sand facies on the northeastern shelf section. Mississippi-Alabama sand facies occurs in 12-80 m of water to the west of

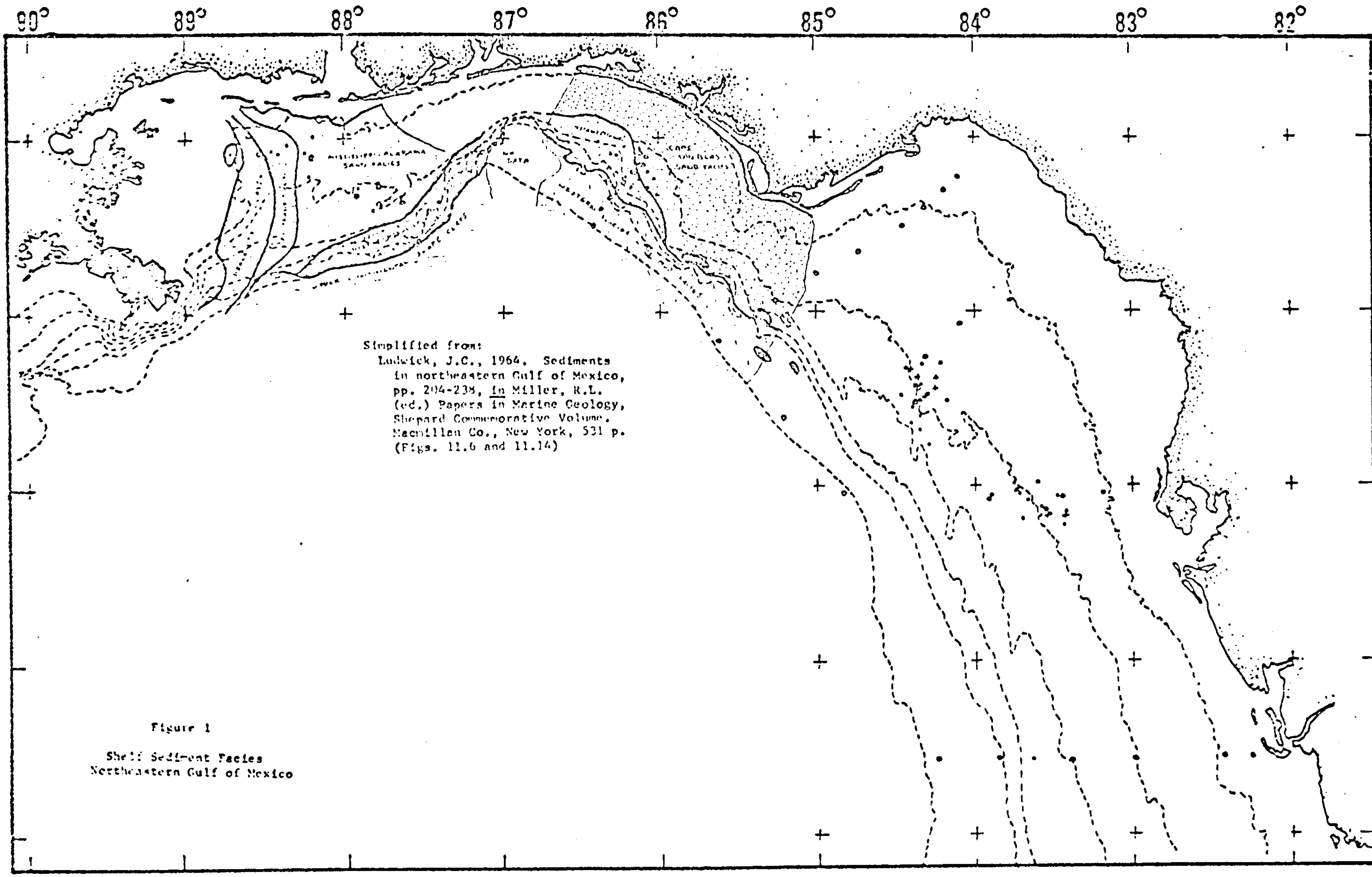
DeSoto Canyon, and the Cape San Blas sand facies occurs from nearshore to the 50 to 100 m contour. Both facies contain from 10-90% shell debris of coarse sand to granule sizes. Average carbonate content of the western sand is seven percent; of the eastern is ten percent.

Ludwick defines a broad crescent-shaped transitional zone between the Cape San Blas sand facies and the western Florida lime mud facies. This is, as shown by this study, a most complex zone of carbonate-rich sediments, which is in part equivalent to the coralline algae and oolitic zones of Gould and Steward (1956) to the southeast.

Gould and Stewart (1956) classified the western Florida shelf sediments in terms of dominant constituent composition. They recognized six general zones lying roughly parallel to the coastline. These are, from landward to seaward: shelly quartz sand, quartzose shell sand, shell sand, algal sand, oolite sand, and foraminiferal sand and silt (Figure 2). They describe the algal sand as comprising lithothaminoid clumps, which in many places form "a continuous blanket over the bottom" (ibid, p. 9) and in several areas cap rocky mounds or pinnacles rising over ten meters above the bottom. They noted that in water deeper than 60 m only dead, weathered coralline algae was recovered.

The oolitic zone, in which ooids make up over 50% of the sediment, is a broad zone in the south between 80 and 110 m in depth. North of 27°30' the oolitic zone narrows to a few kilometers in width. It is not mapped north of 28°30'.

Back (1972) provides considerably more detail as to the character of carbonate sedimentation in the vicinity of the Florida Middle Ground and indicates the complexity of distribution of carbonate sediment-producing organisms and resultant sediments.



Simplified from:
Ludwick, J.C., 1964. Sediments in northeastern Gulf of Mexico, pp. 204-238, in Miller, R.L. (ed.) Papers in Marine Geology, Shepard Commemorative Volume. Macmillan Co., New York, 531 p. (Figs. 11.6 and 11.14)

Figure 1

Shelf Sediment Facies
Northeastern Gulf of Mexico

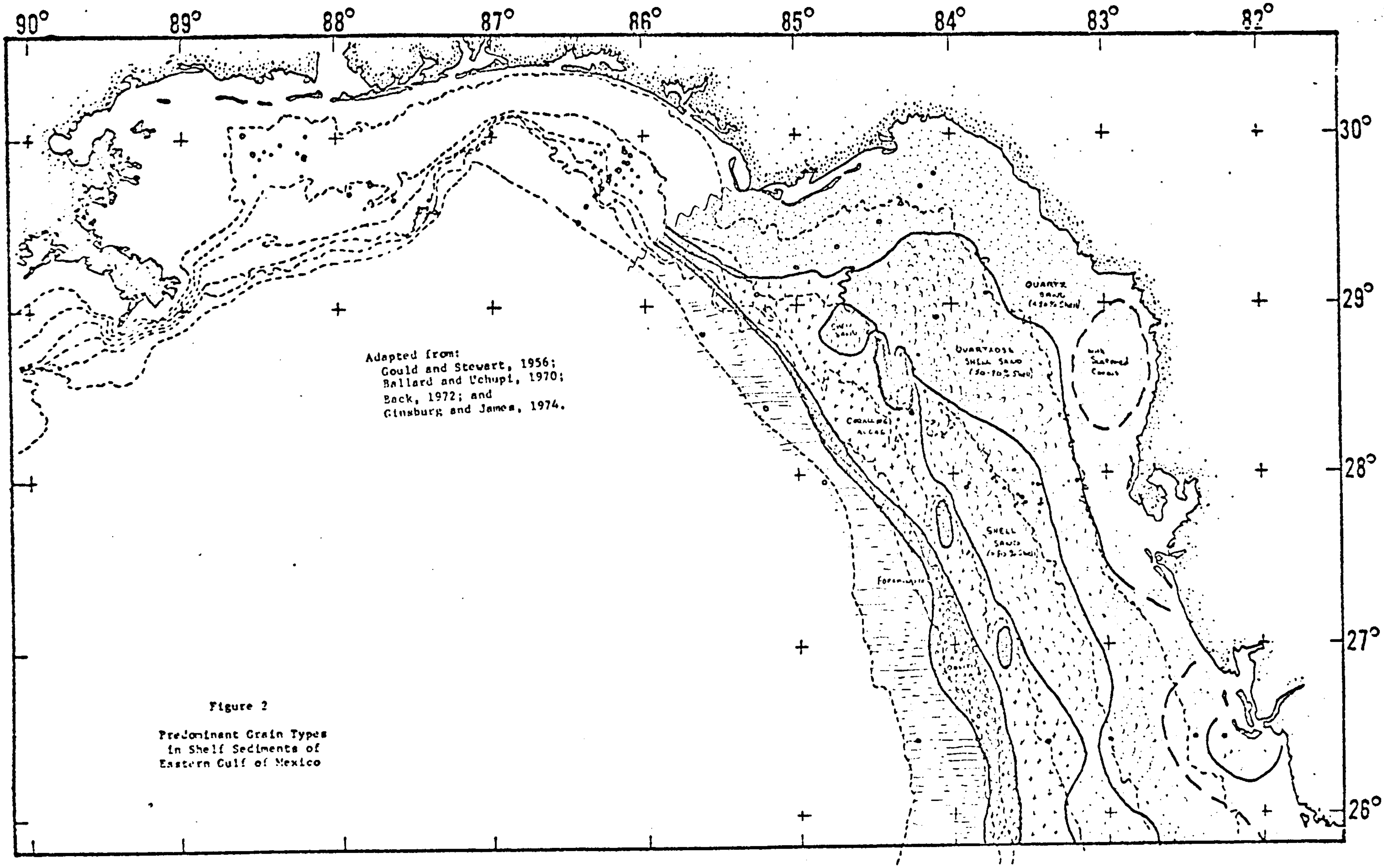


Figure 2

Predominant Grain Types in Shelf Sediments of Eastern Gulf of Mexico

METHODS

Sieved sediment samples from 1974 box coring stations (#1-65), 1975 box coring stations (#2101-2645) and eight 1975 dive stations (#047-A-40 to 251-A-1)were received from Dr. L. Doyle for carbonate fraction description and constituent composition analysis. Samples received are as follows:

Source	Sample Sequence	Excluding	Number of Samples
1974 box core	1A-65A	32, 43, 49, 51 54, 58, 59	58
1975 box core	2101-2145	2210, 2314, 2315	42
1975 dive	047-A-40 062-A-1 064-B-1 146-B-15 147-B-11 151-A-1 247-B-1 251-A-1	-	8
			Total 108

Each sample had been separated by dry sieving into the following six size fractions: >2000 μm, 2000-1000 μm, 1000-500 μm, 500-250 μm, 250-125 μm, and 125-62 μm. The less than 62 μm fraction was retained at Dr. Doyle's laboratory. Weight per cent determinations of the sample fractions were provided by Dr. Doyle for use in calculations of carbonate constituent results.

Loose Grain Analysis

For each size fraction of each sample, the following descriptions and analyses were made by examination under binocular microscope:

1) General color of sediment in each size fraction;
2) General characterization of sediment type (dominant constituents) in each size fraction;

3) Description of the major carbonate grain types in each size fraction including:

   a) surface texture (fresh, worn, corroded, encrusted, dull, frosted, pitted, smooth, shiny);

   b) degree of fragmentation (whole, chipped, fragmented);

   c) presence of sediment infilling of grains;

   d) color of grains if at variance with general color of sediment (blackened, tan, brown);

   e) consistency of unidentified and non-skeletal grains (friable, lithified);

   f) probable grain type classification of majority of unidentifiable grains (based on size, shape, color and surface texture relations with identifiable grains in that fraction);

   g) general description of non-carbonate portions of each size fraction.

4) Grain count of constituent types in each size fraction. Where sufficient number of grains were present, at least 300 carbonate grains were identified. Where less than 300 carbonate grains were present, the total number of grains were identified. Concurrent count of non-carbonate grains was made.

The following skeletal grain types were differentiated:

   a) Mollusc

   b) Benthic Foraminifera

   c) Pelagic Foraminifera

   d) <u>Halimeda</u>

   e) Echinoderm

f) Ostracod

g) Sponge Spicule (including opalline silica)

h) Alcyonarians

i) Bryozoan

j) Coralline Algae

k) Coral

l) Tubes

The following non-skeletal and other grain types were differentiated:

a) Pellets (whole, ovoid, friable aggregate grains of very probable fecal origin);

b) Intraclasts (rounded to angular, irregular, friable aggregates of finer carbonate and non-carbonate particles);

c) Carbonate Rock Fragments (well-lithified carbonate grain aggregates);

d) Blackened Carbonate Grains (unidentifiable skeletal or non-skeletal carbonate grains with blackish color).

Classified under the heading "unidentifiable carbonate" grains are those skeletal and non-skeletal grains that could not be given certain classification as to origin in loose grain analysis.

Other possible types (ooids, pteropods, diatoms, and radiolarians) were not observed in loose grain analysis.

Calculations from loose grain counts are explained in Figure 3 using sample 2423 as an example. Data are presented in Appendices I and II.

Thin Section Analysis

A number of samples contained over 20% grains that had to be classified as "unidentifiable carbonate" in loose grain analysis. Petrographic thin sections were first made of representative size fraction(s) from these samples and analyzed under petrographic microscope to assess the origin of these grains. The 500-250 μm fraction was generally used as representative. Grains were first impregnated in polyester resin under vacuum which was then cut into chips and thin sections. Before covering, a part of each thin section was stained with clayton yellow to differentiate high magnesian calcite (stains red) from other calcium carbonate.

Because of the valuable information being derived from these thin sections, thin sections are now being prepared of representative or critical size fractions from all sample stations. These will be reported on at a later time.

Coarse Fraction Analysis

The bags of sediment passed on to this laboratory from the benthic biology program contained all the non-living material retained on a 500 μm Nytex screen from the box core sample. As the regular constituent composition analysis generally contained too few grains (<300) in the greater than 1000 μm fractions, the 1000-2000, 2000-4000 and greater than 4000 fractions of these large samples were analyzed for loose grain constituent composition. Results are presented in Appendix III. As these samples are from different sample depths and commonly from different box cores than the regular analyses, no attempt has been made to integrate the two data. It does, however, provide a critical and statistically significant guide to substrate characterization.

① Grain Counts

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNDIFFERENTIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (F)
4000-2000	209	-	-	-	4	8	2	-	-	-	-	4	-	-	-	1	3	-	231	-	231			
2000-1000	269	-	-	-	11	37	2	-	-	-	-	7	-	-	-	-	2	-	330	4	334			
1000-500	235	6	-	-	25	48	3	-	-	-	-	8	-	-	-	3	1	-	329	43	372			
500-250	193	9	-	-	47	33	7	-	3	-	-	2	-	-	-	7	3	-	309	51	360			
250-125	137	34	3	-	61	26	30	2	4	-	-	1	-	-	-	22	-	-	320	83	403			
125-62.5	105	25	5	-	80	17	30	-	2	2	2	-	-	-	-	38	-	-	306	162	468			

② Percentage abundance of constituent (with respect to total carbonate in size fraction) Results For Each Sample Are in Appendix I.

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNDIFFERENTIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (F)
4000-2000	90.5	-	-	-	1.7	3.5	0.9	-	-	-	-	1.7	-	-	-	0.4	1.3	-				100	0	18.87
2000-1000	81.5	-	-	-	3.3	11.2	0.6	-	-	-	-	2.2	-	-	-	-	0.6	-				98.8	1.2	21.21
1000-500	71.5	1.8	-	-	7.6	14.6	0.9	-	-	-	-	2.4	-	-	-	0.9	0.3	-				88.4	11.6	21.92
500-250	62.4	2.9	-	-	15.2	[illegible]	2.3	-	1.0	-	-	0.6	-	-	-	2.3	1.0	-				85.8	14.2	12.69
250-125	42.8	10.6	0.9	-	19.1	8.1	9.4	0.6	1.3	-	-	0.3	-	-	-	6.9	-	-				79.4	20.6	5.47
125-62.5	34.3	8.2	1.4	-	26.1	5.6	9.8	-	0.7	0.7	0.7	-	-	-	-	12.4	-	-				65.4	34.6	2.96
Σ % > 62.5																								[illegible] < 62 μ

D = Percent of carbonate in size fraction (volume) = $\frac{A}{A+B} \times 100$

E = Percent of constituent in size fraction, as percent of carbonate (volume) = $\frac{C}{A} \times 100$

F = Weight percent that size fraction is of total sample. Data provided by L Doyle.

(3) CONSTITUENT ABUNDANCE IN EACH SIZE FRACTION, AS PERCENT OF TOTAL SAMPLE

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (I)
4000-2000	(I) 17.08		-	-	0.32	0.66	0.17	-	-	-	-	0.32	-	-	-	0.08	0.25	-				19.87	-	18.8[illegible]
2000-1000	(J) 17.08		-	-	0.69	2.49	0.13	-	-	-	-	0.46	-	-	-	-	0.13	-				(G) 20.36	0.25	(F) 2.2[illegible]
1000-500	(K) 13.76	0.35	-	-	1.47	2.33	0.17	-	-	-	-	0.47	-	-	-	0.17	0.06	-				18.33	2.54	21.92
500-250	(L) 6.20	0.32	-	-	1.66	1.34	0.25	-	0.11	-	-	0.07	-	-	-	0.25	0.11	-				[illegible]	1.90	[illegible]
250-125	(L) 1.16	0.46	0.04	-	0.83	0.35	0.41	0.03	0.06	-	-	0.01	-	-	-	0.30	-	-				4.34	1.13	5.4[illegible]
125-62.5	(M) 0.57	0.16	0.03	-	0.51	0.11	0.19	-	0.01	0.01	0.01	-	-	-	-	0.24	-	-				1.9[illegible]	1.02	2.9[illegible]
Σ % > 62.5																						(Q) 76.35	6.74	16.83

< 62 μ

(P) 83.12

(4) CONSTITUENT ABUNDANCE SUMMED OVER SAND FRACTION, EXPRESSED AS:

(RESULTS FOR EACH SAMPLE ARE IN APPENDIX II)

	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL
PERCENT OF TOTAL SAMPLE	(N) 57.45	1.29	0.27	-	6.43	7.66	1.32	0.03	0.18	0.01	0.01	1.33	-	-	-	1.04	0.55	-			76.42
PERCENT OF SAND FRACTION	(R) 69.12	1.55	0.28	-	6.59	9.22	1.59	0.04	0.22	0.01	0.01	1.60	-	-	-	1.25	0.66	-			91.83
PERCENT OF CARBONATE SAND FRACTION	(S) 75.22	1.69	0.09	-	7.17	10.03	1.73	0.04	0.27	0.01	0.01	1.74	-	-	-	1.36	0.72	-			100.0[illegible]

G = Percent carbonate in size fraction, as percent of total sample $= \frac{D \times F}{100}$

H = Percent of constituent in size fraction, as percent of total sample $= \frac{E \times G}{100}$

N = Percent of constituent in sand fraction, as percent of total sample $= H + I + J + K + L + M$

Q = Percent of carbonate in sand fraction as percent of total sample

P = Percent of sand fraction, as percent of whole sample

R = Percent of constituent in sand fraction, as percent of sand fraction $= N \times \frac{100}{P}$

S = Percent of constituent in sand fraction, as percent of carbonate sand fraction $N \times \frac{100}{Q} = \Sigma \% > 62.5$

RESULTS

The results of loose grain constituent composition analysis are presented in four aspects.

1. The upper part of the tables in Appendix I characterizes the carbonate sand and describes the constituent attributes for each size fraction.
2. The lower part of the tables in Appendix I documents for each size fraction (a) number of grain counts, (b) the percentage of carbonate and non-carbonate grains, (c) the percentage that each constituent type is of the total carbonate. Appendix III documents this for the coarse fraction analysis.
3. Appendix II is a tabulation of the percent abundance of a carbonate sand constituent with respect to (a) the carbonate sand fraction, (b) the sand fraction, and (c) the total sample. It should be noted that the calculations leading to those tabulated necessitated combining volume present (grain counts) and weight percent (abundance of size fraction) data. The data is nevertheless highly significant guide to overall abundance of analyzed constituents.
4. The series of eleven maps (Figures 4-14) displays the distribution of the overall abundance of the most important carbonate constituents (with respect to the carbonate sand fraction). In areas of close sample spacing, the complexity of the shelf is well documented. The authors have thus used great caution in correlating across unsampled areas. In a few cases, the selected contour boundaries correlated so well with maps by Ludwick (1962), Gould and Stewart (1956), Back (1972)

or the synthesis map of Ginsburg and James (1974) that correlations were considered possible. In other cases, correlations were possible because of the preliminary maps of substrate prepared by the geophysical group. These maps, while accurately relating areas of high and low constituent composition abundance, should be considered preliminary. The authors hope that an interchange of mapped data from other investigators will become available shortly so that we each can blend towards an interdisciplinary broad-based agreement on the distribution of interrelated mappable attributes.

Non-skeletal grain types show a less predictable size distribution. There are commonly less unidentified grains in the finer sand fractions. This is a sharp contrast to the trends of shallow water carbonate sediments in southeast Florida and the Bahamas. The abundance of unidentifiable grains in the coarser fractions appears to reflect more intense rock-boring organism activity into coarser sand grains.

The maps documenting distribution of the carbonate sediment attributes (see Appendix No. IX) summarize most accurately variations between samples and areas. From these maps, three important features stand out:

1) In the size fractions greater than 500 μm, there is large variation in grain type abundance between samples that reflect variations in substrate (rock vs. sediment), local abundance of skeletal producing organisms, local fecal pellet production or local intraclast formation. Grouping of these attributes commonly cut sharply across bathymetric contours.

2) In the size fractions less than 500 μm, variations between samples

commonly either decrease or display groupings that trend more parallel to the bathymetric contours. These distributions indicate that bottom wave and current energy has been important in redistributing the more transport-prone finer sediment fractions.

3) Weathering characteristics of a grain type display a quite different distribution pattern than the abundance of the associated attribute (see maps of Mollusc and Mollusc Weathering in 2000-1000 μm size fraction, Appendix IX).

AREA I

Carbonate constituents comprise nearly 100% of the coarser than 250 μm sand fractions in Area I (samples 55a to 65a). Terrigeneous material increases in the finer fractions so that the 125 to 62 μm fraction is reduced to 60-80% carbonate.

Sample 55a, from well seaward of the other sample sites, is unique from this area in having: (a) a large percentage of less than 62 μm sized grains, (b) an abundance of fecal pellet grains (over 30% in the 500-250 and 250-125 μm fractions), and (c) an abundance of pelagic foraminifera.

Other samples are dominated by molluscs and benthic foraminifera. Other skeletal grains display a wide variation and show few persistent trends from sample to sample and in different size fractions.

Samples from Area I contain several grain attributes that provide a striking contrast with samples from Area II. Most striking is the weathering of coarse skeletal grains. In Area I, for example, coarse mollusc grains are predominantly fresh (unworn), fresh and angularly fragmented, or fresh and physically worn in contrast with the biocorroded and encrusted nature of grains from Area II. Bryozoa, coralline algae, and alcyonarian spicules are in general less abundant in Area I; benthic foraminifera and intraclasts are more abundant in Area I. The percent of the carbonate sand fraction that is greater than 250 μm increases from Area I to Area II (except for samples 62a and 55a).

AREA II

Carbonate sands from Area II are dominated by molluscs, and the coarser skeletal fractions are characterized by moderate to intense biocorrosion and encrustation. Thirty to 97% of the carbonate sand fraction is coarser than 250 μm (except for sample 52a from the southeastern part of the area with 17%). Terrigeneous constituents are more abundant in the less than 250 μm fractions. They constitute less than 15% of these finer size fractions in the southern part of Area II (samples 44a, 45a, 47a, 48a, 52a) and from 20-50% in the northern part.

Coarse skeletal grains vary widely in abundance reflecting marked variations in substrate and skeletal producing benthic communities. Samples from the Middle Ground proper (42a, 46a, 47a, 48a) contain an abundance of bryozoan, echinoderm plate, alcyonarian spicules or sponge spicules and are low in blackened carbonate grains. Certain of these grain types are also abundant in adjacent areas, but blackened carbonate grains increase. Benthic and pelagic foraminifera display wide variation. Although this area is characterized in the literature (Ginsburg and James, 1974) as having sediment characterized by coralline algae, such fragments are only a very minor grain constituent throughout the area.

AREA III

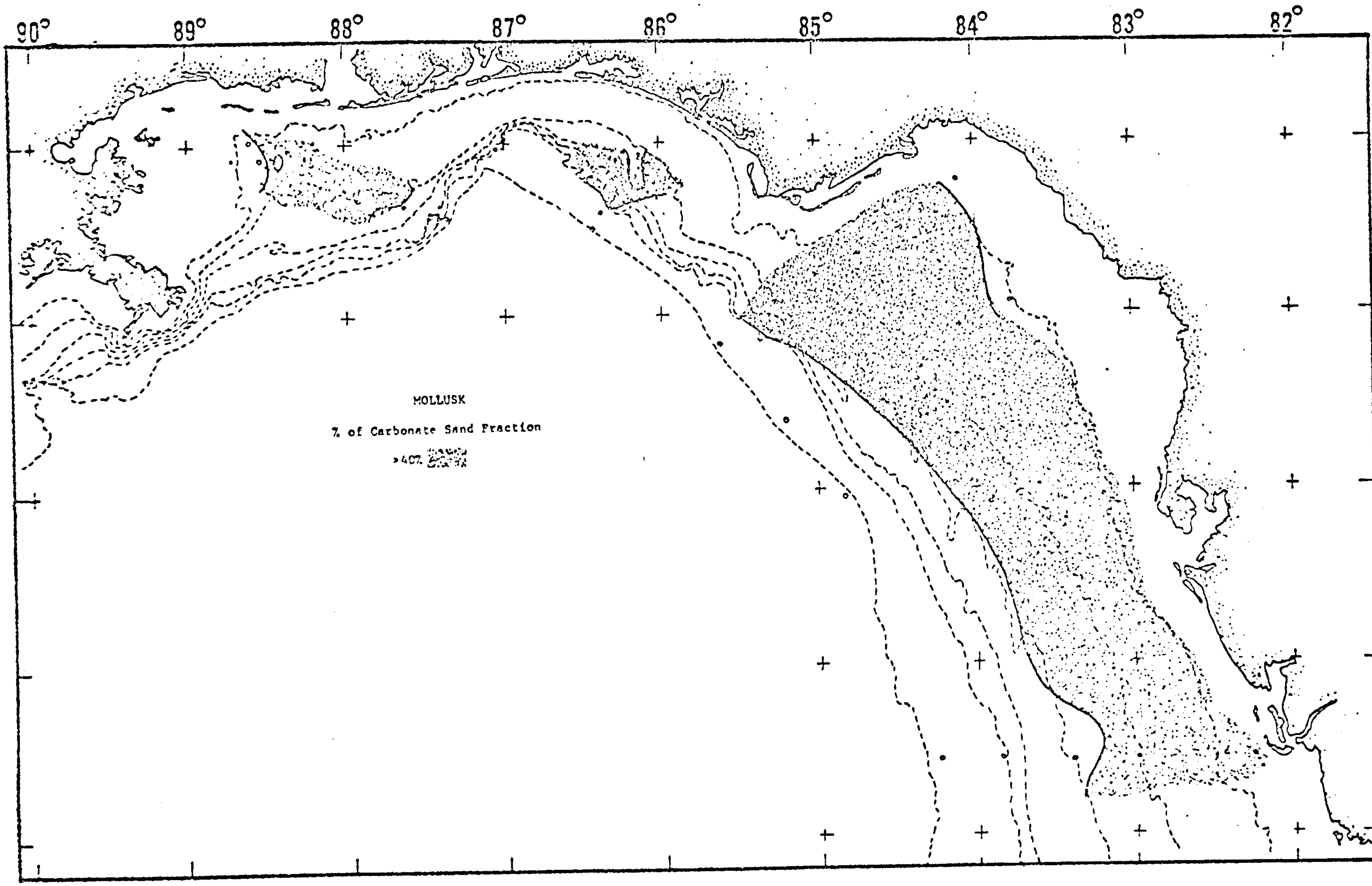
The most helpful way to understand the marked variations in sedimentary attributes within Area III is to thumb through the maps of sediment attribute distribution in Appendix IX. Four important trends stand out:

1) The abundance of carbonate constituents within each sand size fraction increases to the west. In the coarser fractions the zones trend across bathymetric contours. In finer sand fractions, zones skew and begin to reflect bathymetric contours.

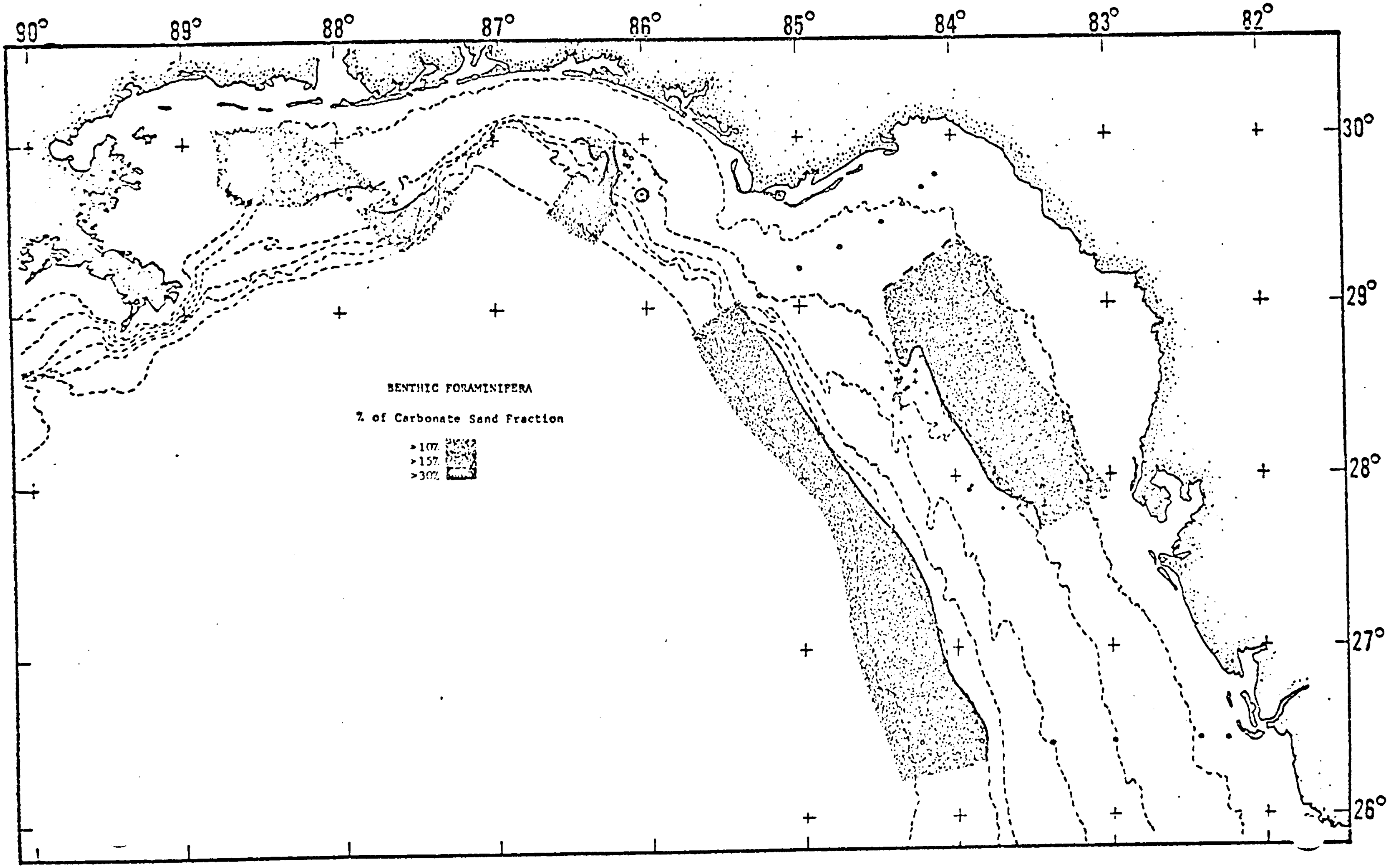
2) Groupings of coarse carbonate constituents trend transverse to bathymetric contours. Specific grouping shifts somewhat from attribute to attribute. Five stations repeatedly stand out as differing from others, samples 23-25 and 27 trending across the central part of Area III and the easternmost sample 41a are characterized by having a small percentage of the carbonate sand fraction greater than 250 µm, having an abundance of mollusc, (fresh and angularly fragmented), echinoid and pellet grains, and a paucity of bryozoan, coralline algae, and blackened carbonate grains. Stations 25a and 27a, sitting in a slight bathymetric re-entrant, are rich in pelagic foraminifera. Stations 34a-38a are characterized by an abundance of coralline algae grains.

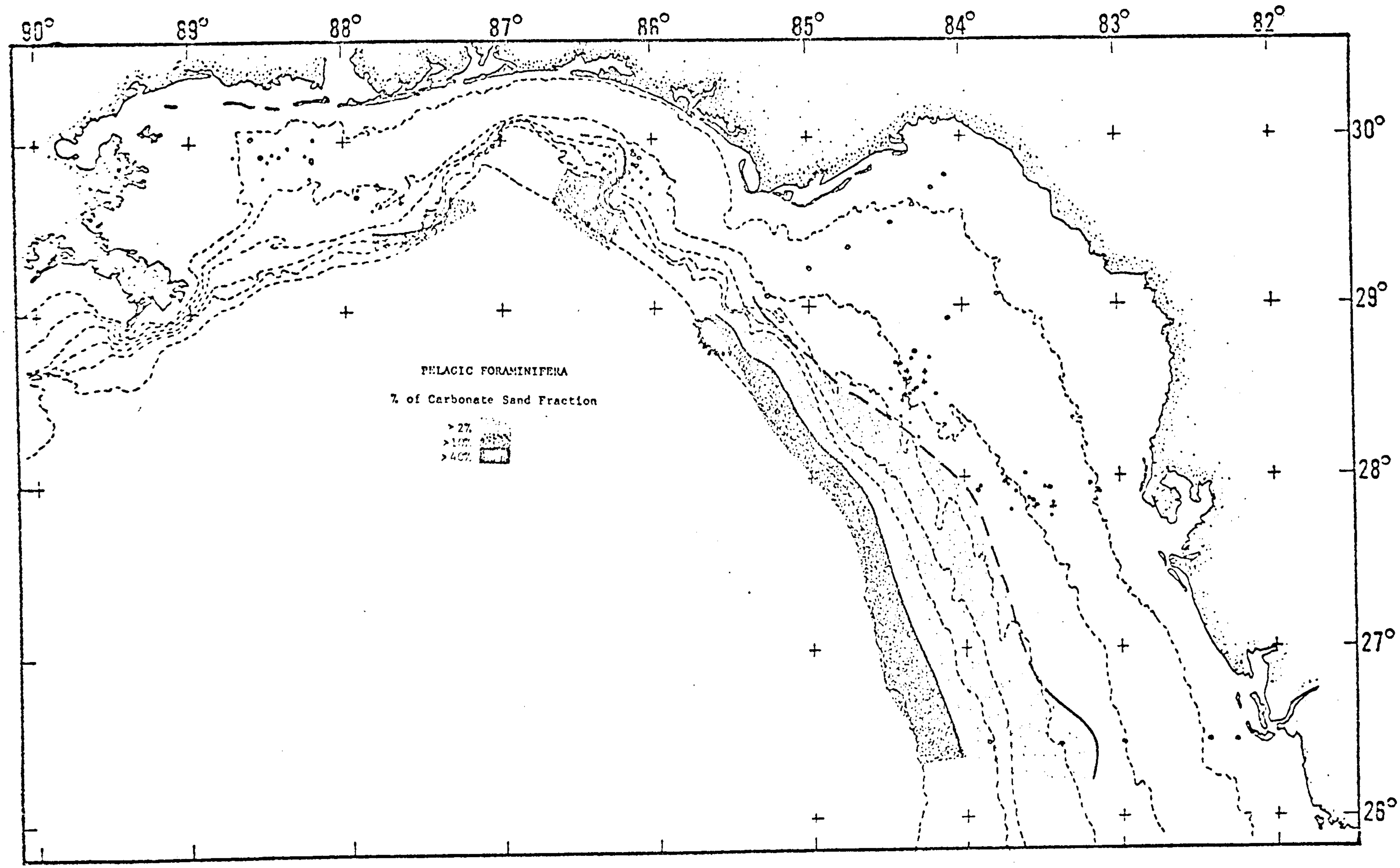
3) Groupings of attributes shift markedly in finer sand fractions to essentially parallel bathymetric contours. This is especially apparent in percent carbonate, mollusc, benthic foraminifera, and echinoderm.

4) Ostracods display a somewhat different distribution pattern, being present towards the west and absent towards the east.

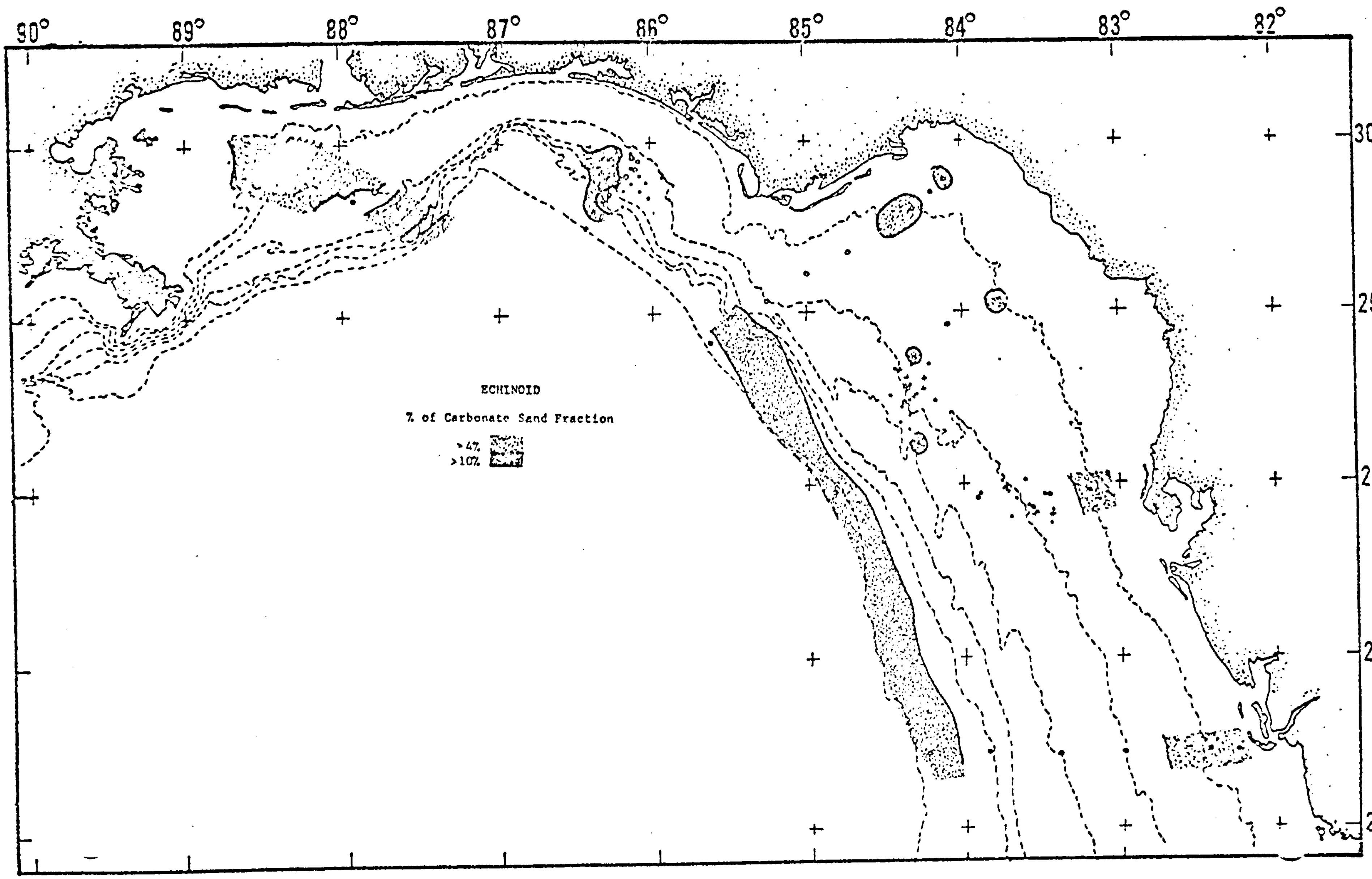


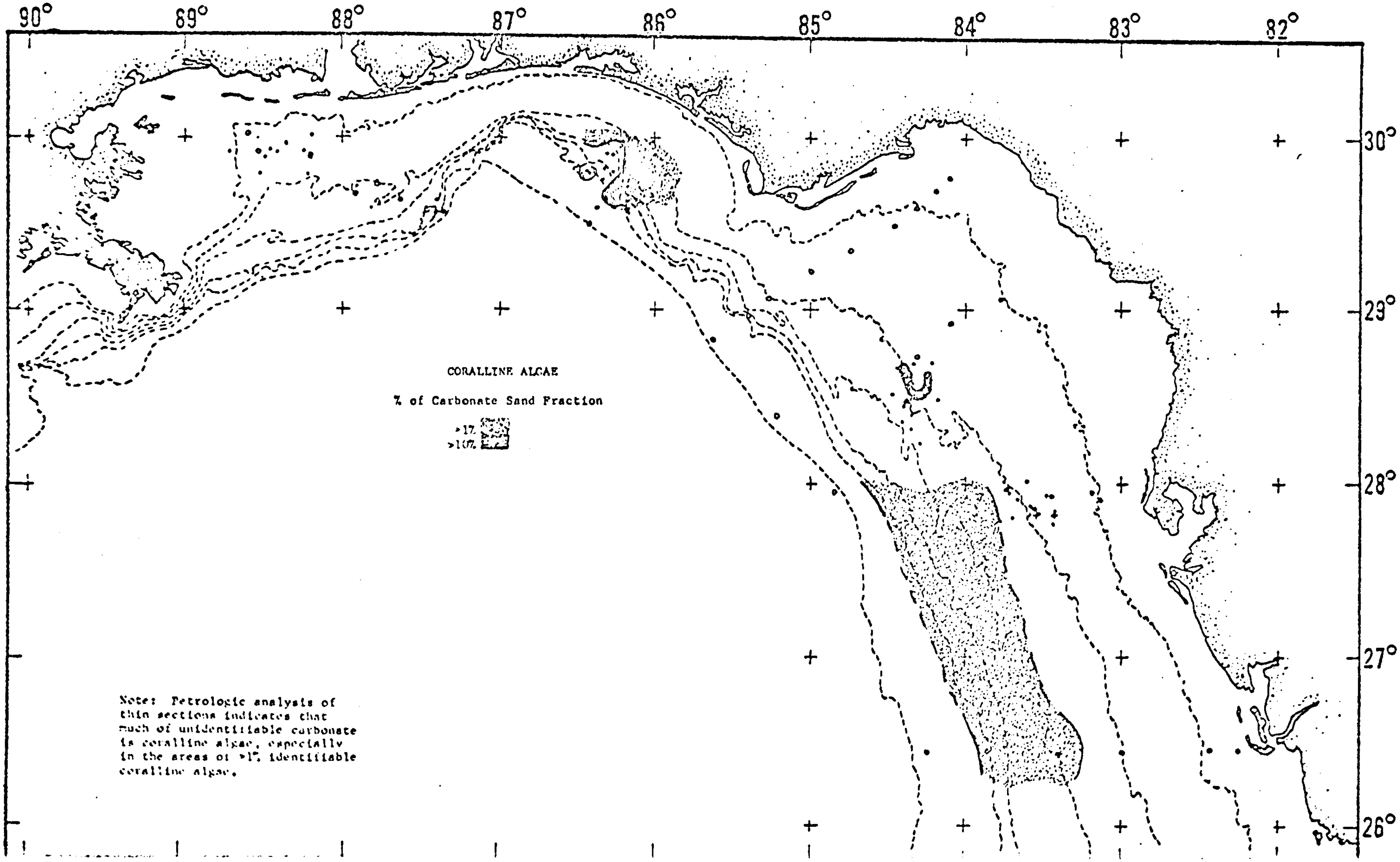
90°
89°
88°
87°
86°
85°
84°
83°
82°
30°
29°
28°
27°
26°
MOLLUSK
% of Carbonate Sand Fraction
>40%

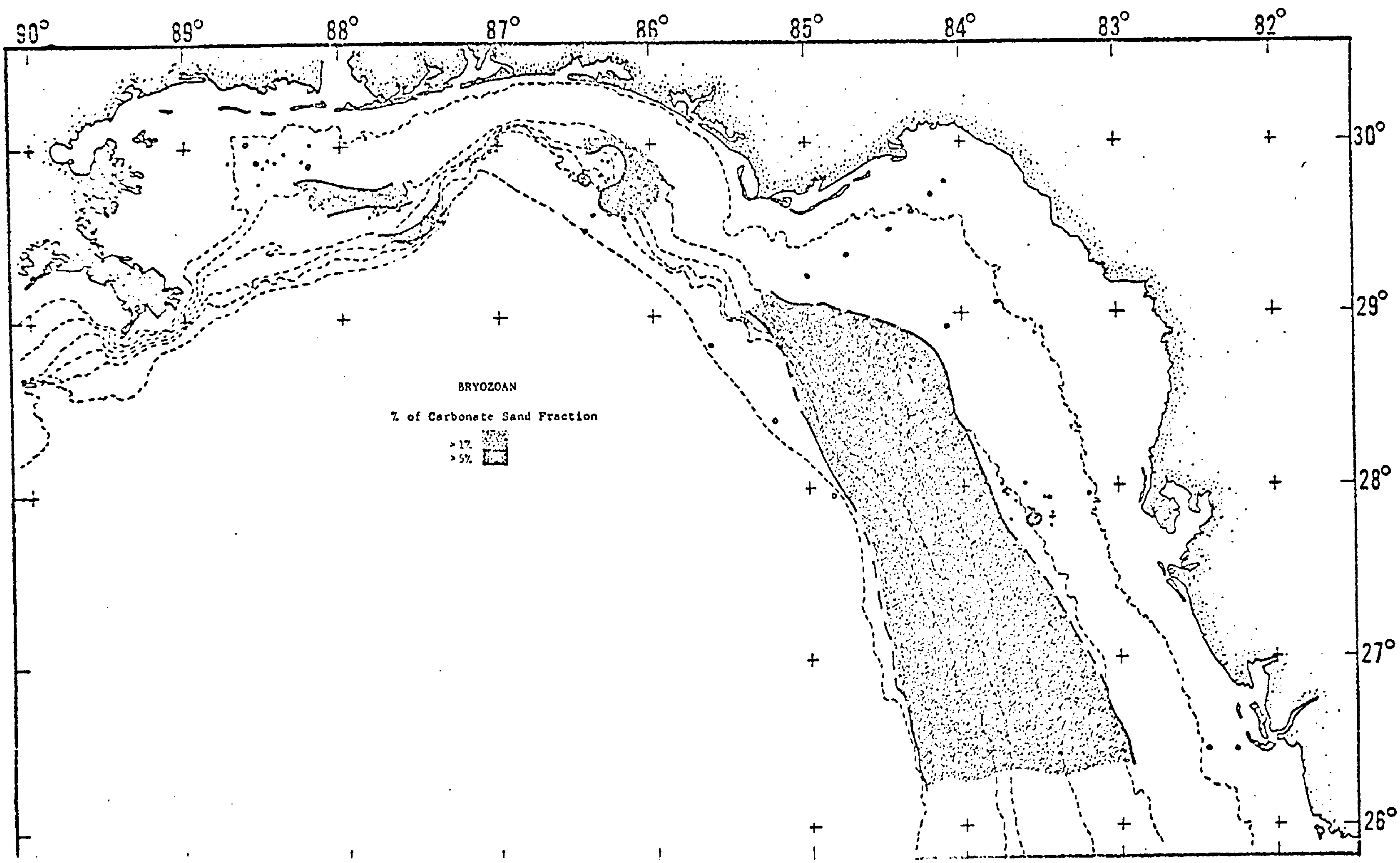

90°
89°
88°
87°
86°
85°
84°
83°
82°
30°
29°
28°
27°
26°
BENTHIC FORAMINIFERA
% of Carbonate Sand Fraction
>10%
>15%
>30%

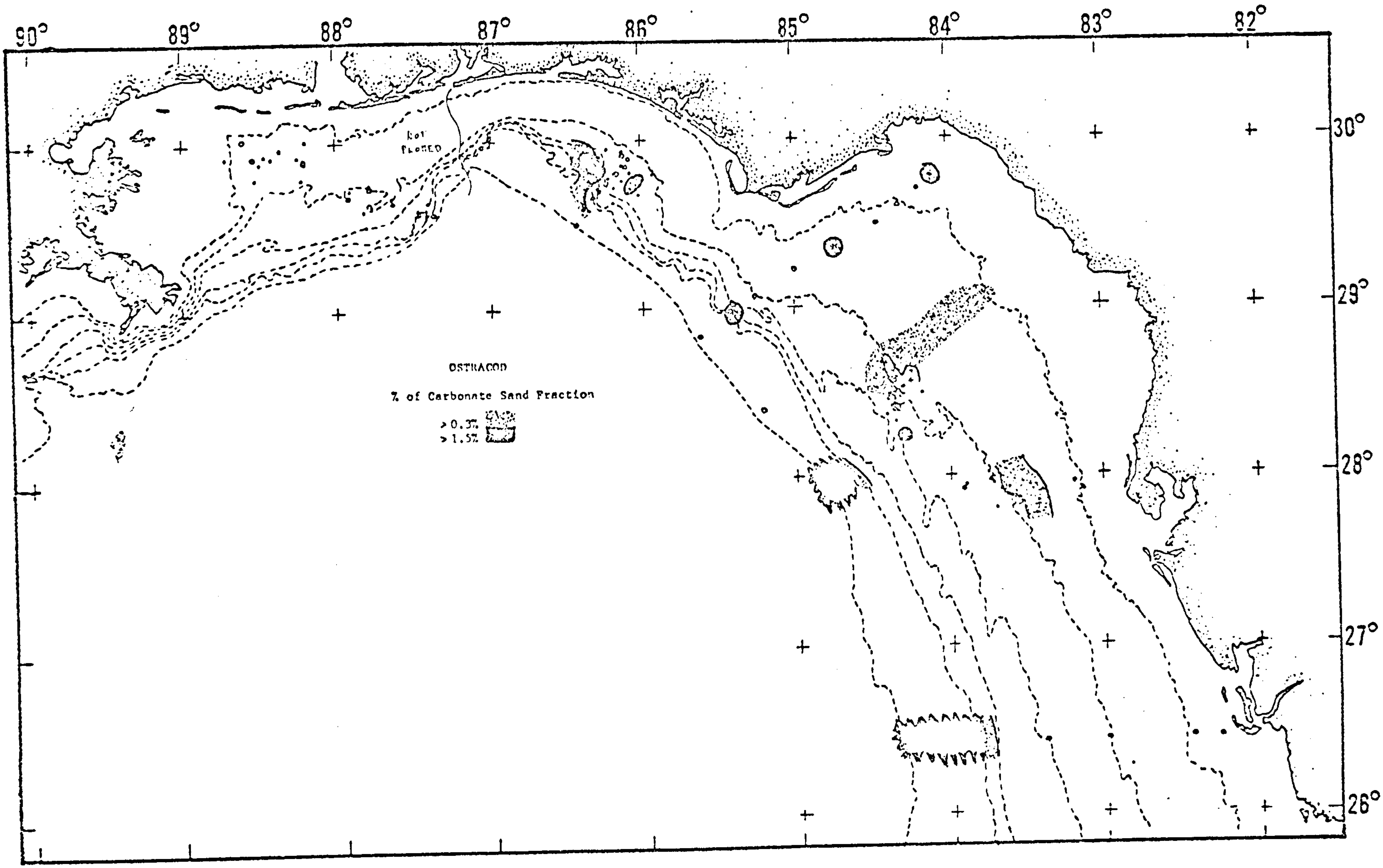


90°
89°
88°
87°
86°
85°
84°
83°
82°
30°
29°
28°
27°
26°
PELAGIC FORAMINIFERA
% of Carbonate Sand Fraction
> 2%
> 10%
> 40%

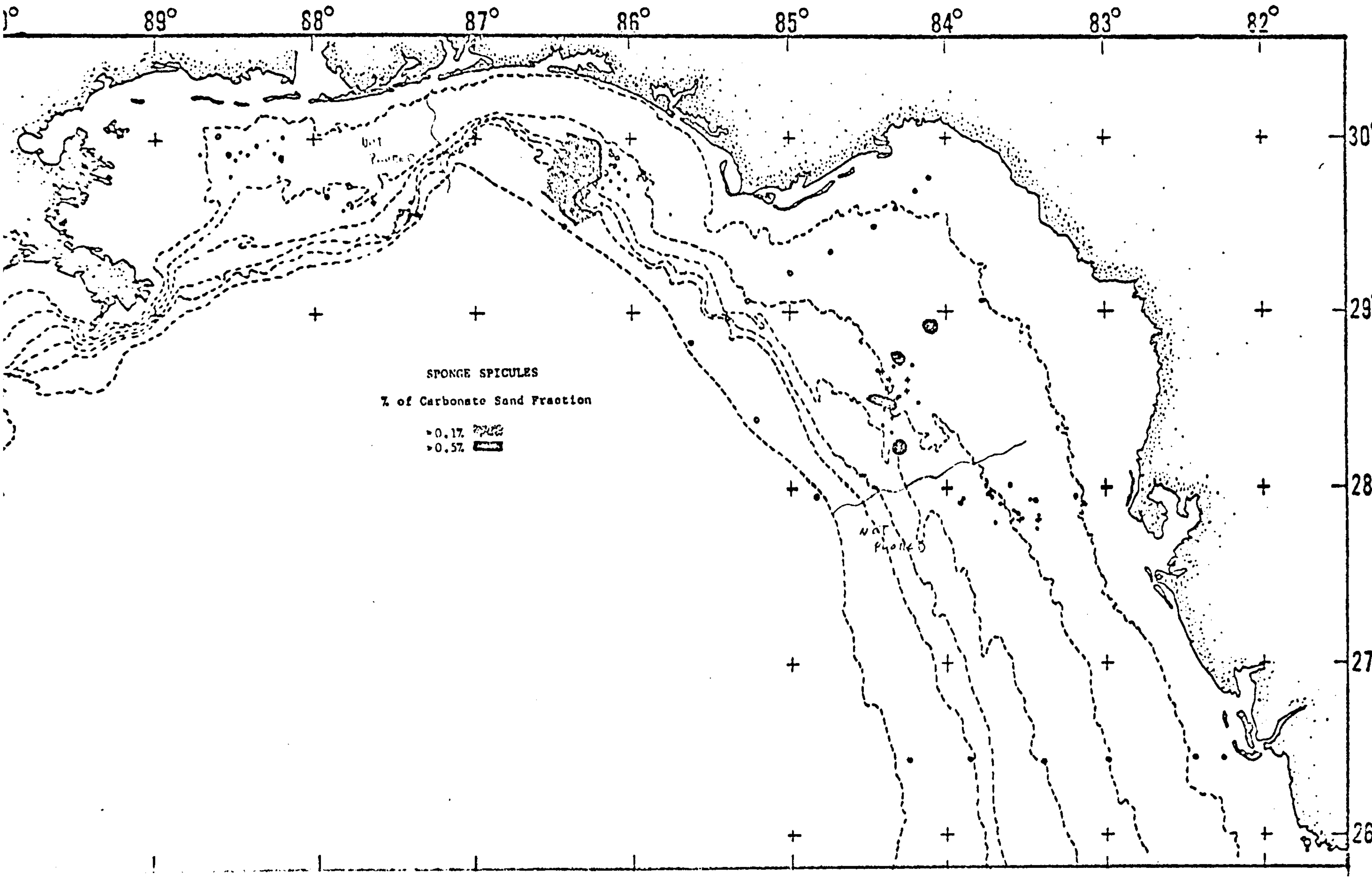

ECHINOID
% of Carbonate Sand Fraction
>4%
>10%
90°
89°
88°
87°
86°
85°
84°
83°
82°
30°
29°
28°
27°
26°

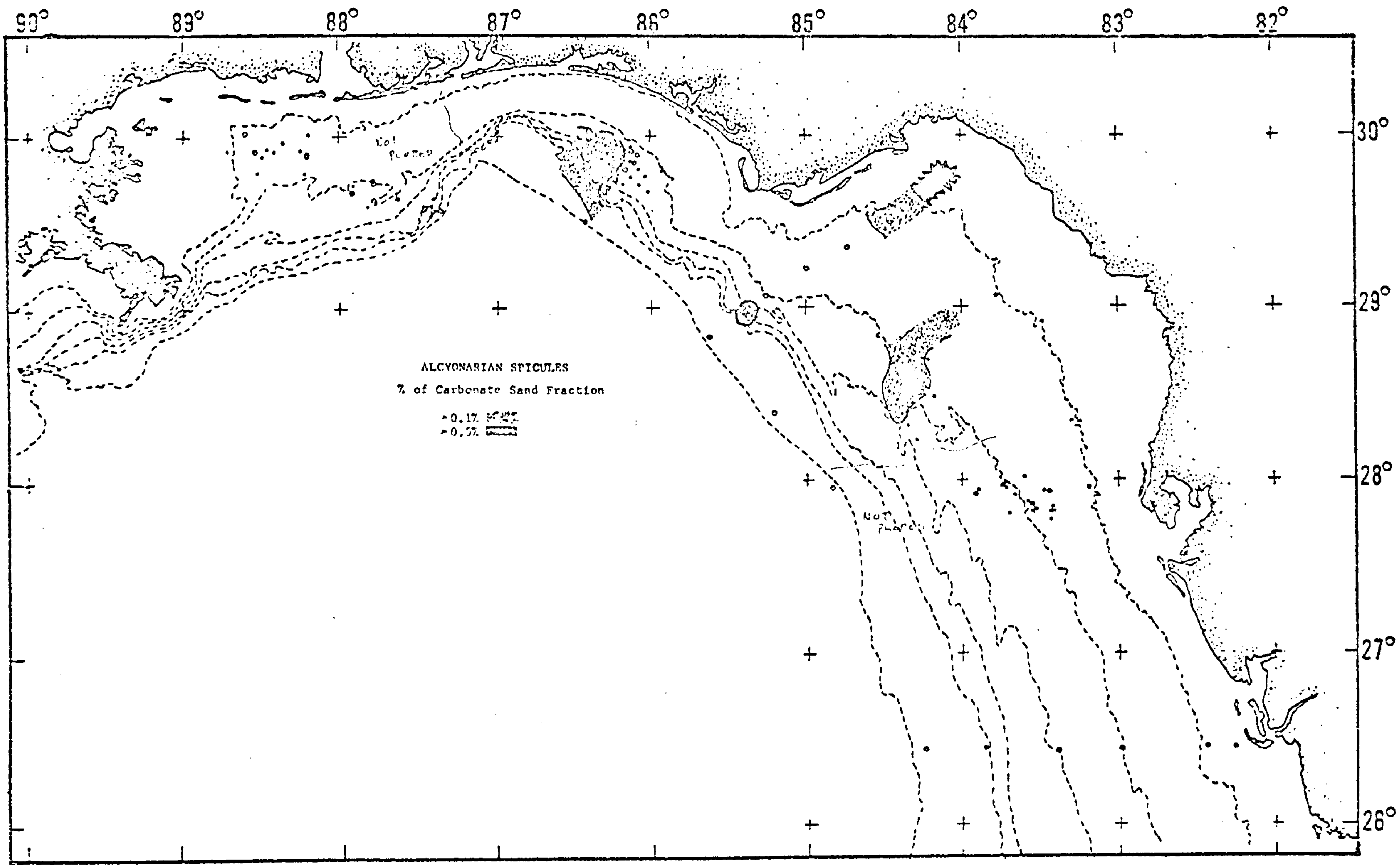

90°
89°
88°
87°
86°
85°
84°
83°
82°
30°
29°
28°
27°
26°
CORALLINE ALGAE
% of Carbonate Sand Fraction
>1%
>10%
Note: Petrologic analysis of thin sections indicates that much of unidentifiable carbonate is coralline algae, especially in the areas of >1% identifiable coralline algae.

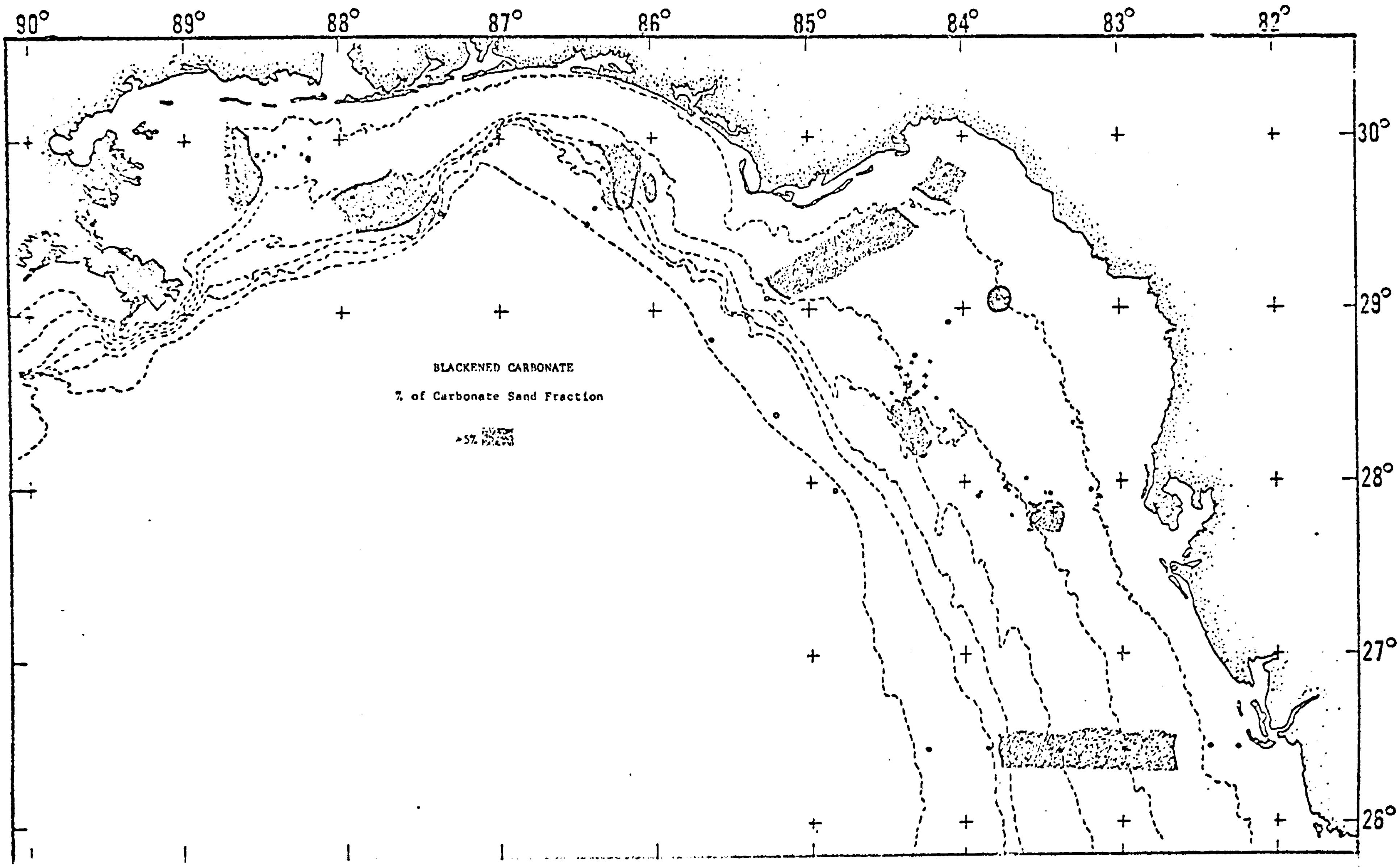

90°
89°
88°
87°
86°
85°
84°
83°
82°
30°
29°
28°
27°
26°
BRYOZOAN
% of Carbonate Sand Fraction
>1%
>5%

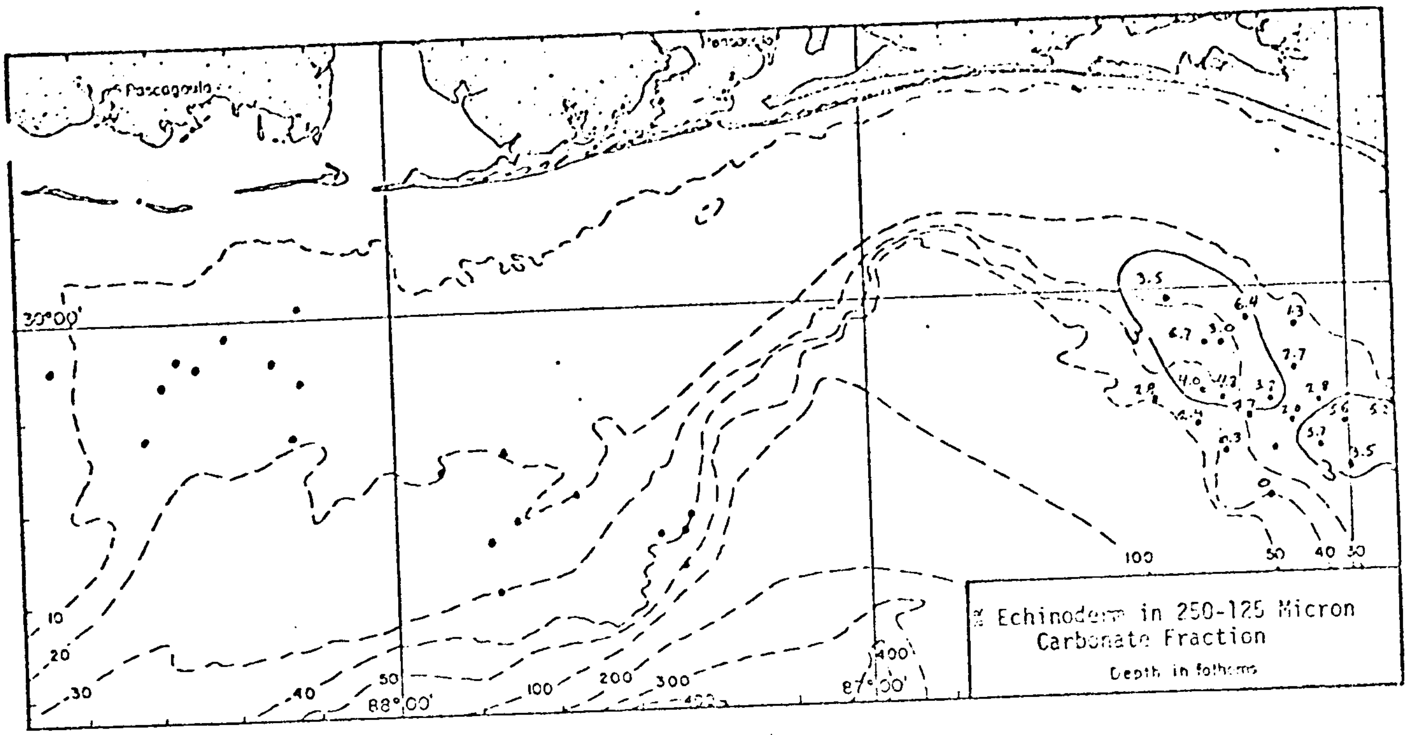


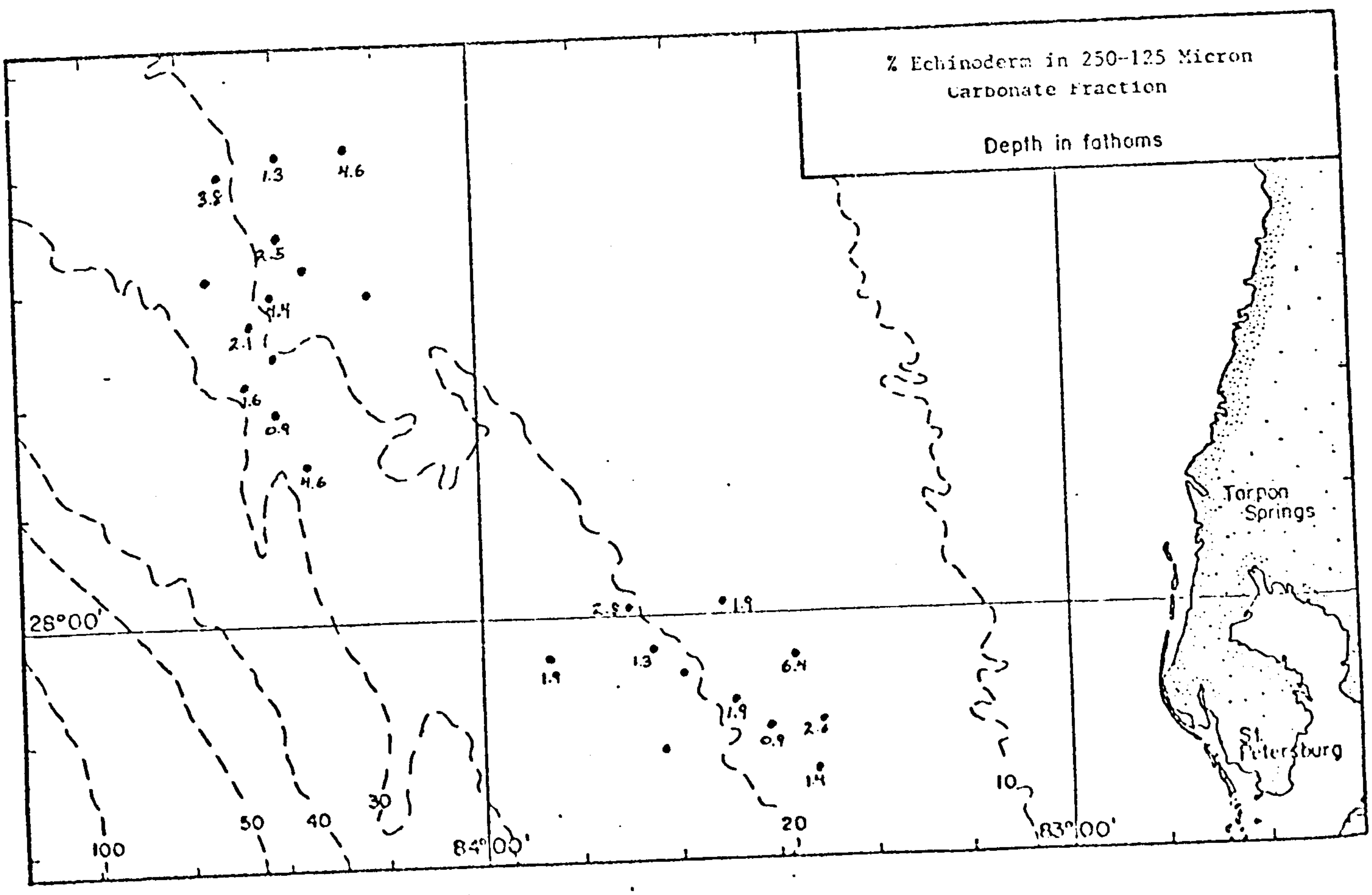
90°
89°
88°
87°
86°
85°
84°
83°
82°
30°
29°
28°
27°
26°
NOT FLOWED
OSTRACOD
% of Carbonate Sand Fraction
>0.3%
>1.5%

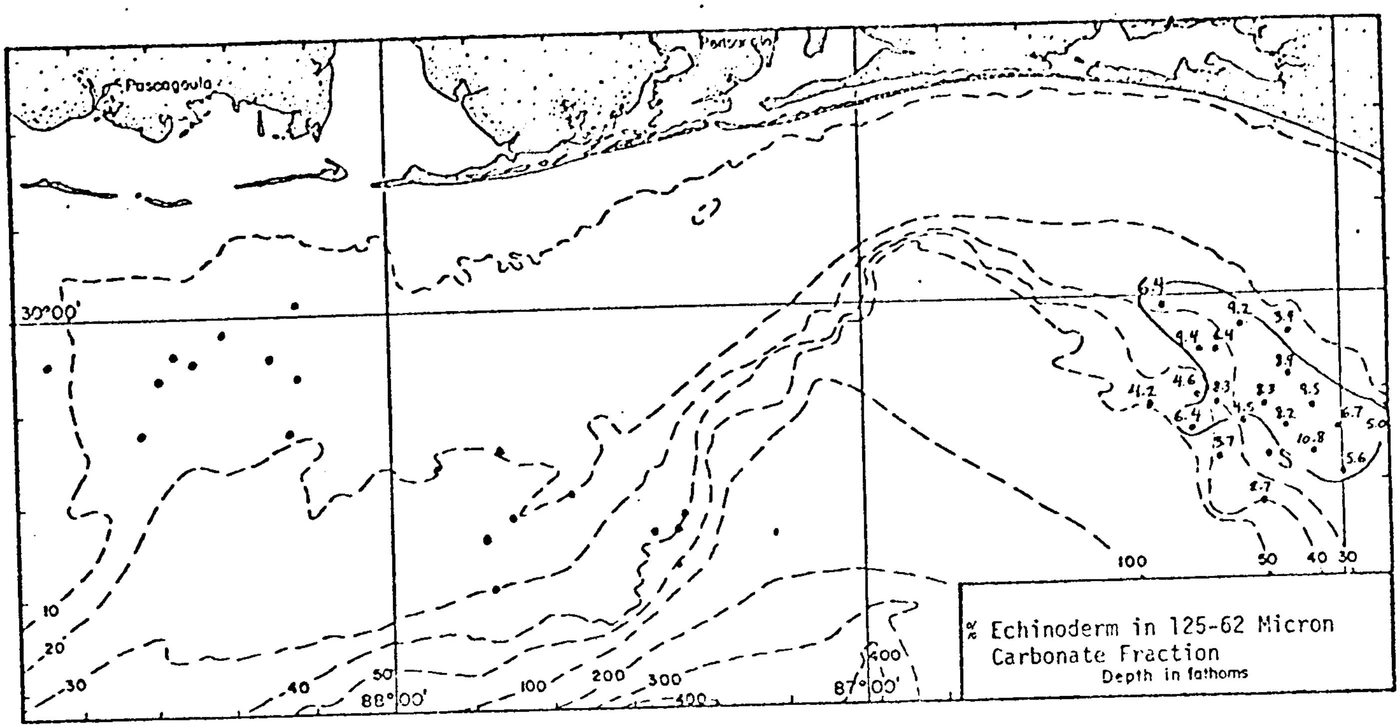

89°
88°
87°
86°
85°
84°
83°
82°
30°
29°
28°
27°
26°
SPONGE SPICULES
% of Carbonate Sand Fraction
>0.1%
>0.5%
NOT Probed

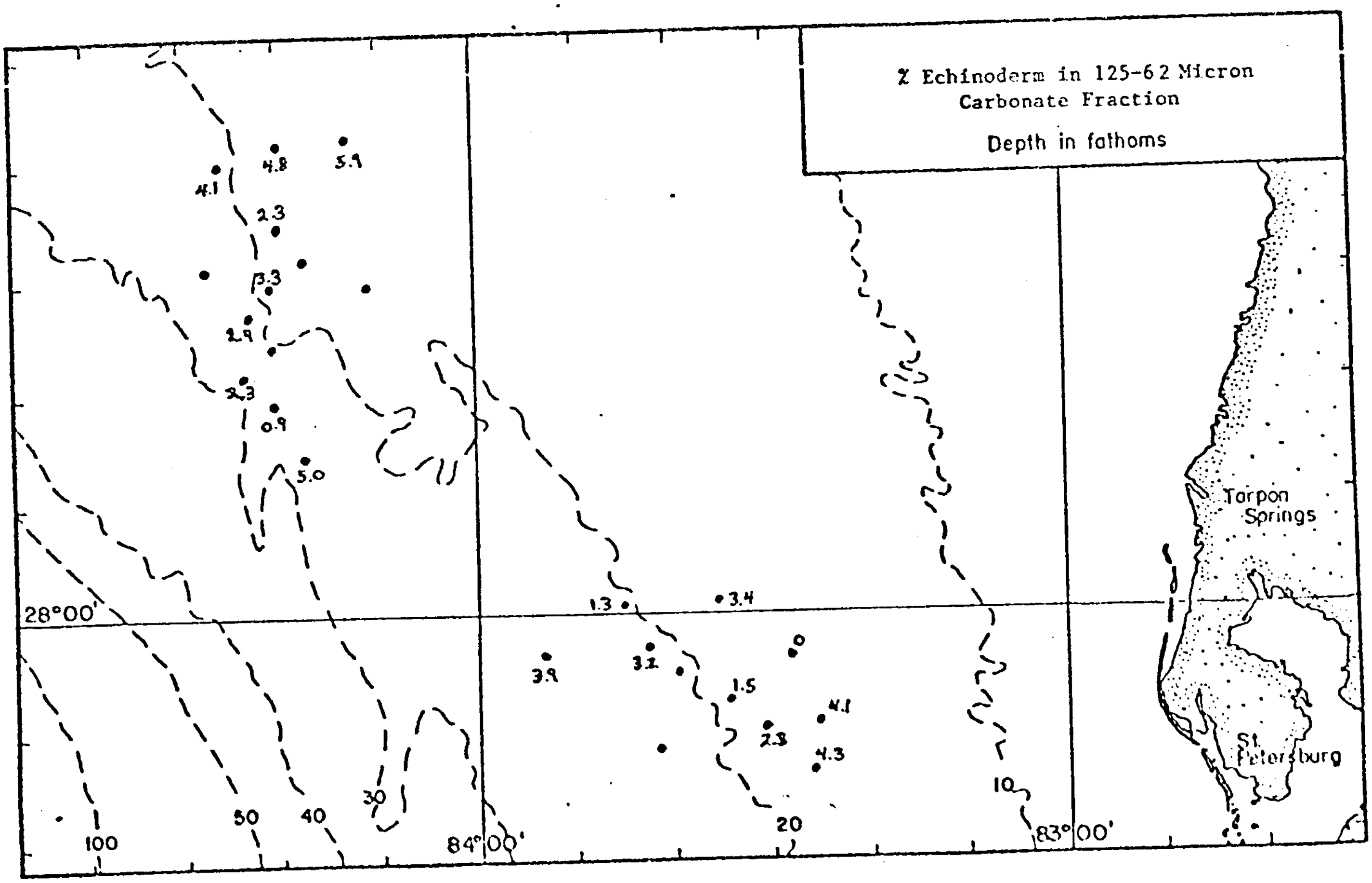

90°
89°
88°
87°
86°
85°
84°
83°
82°
30°
29°
28°
27°
26°
Not Plotted
ALCYONARIAN SPICULES
% of Carbonate Sand Fraction
>0.1%
>0.5%
Not Plotted

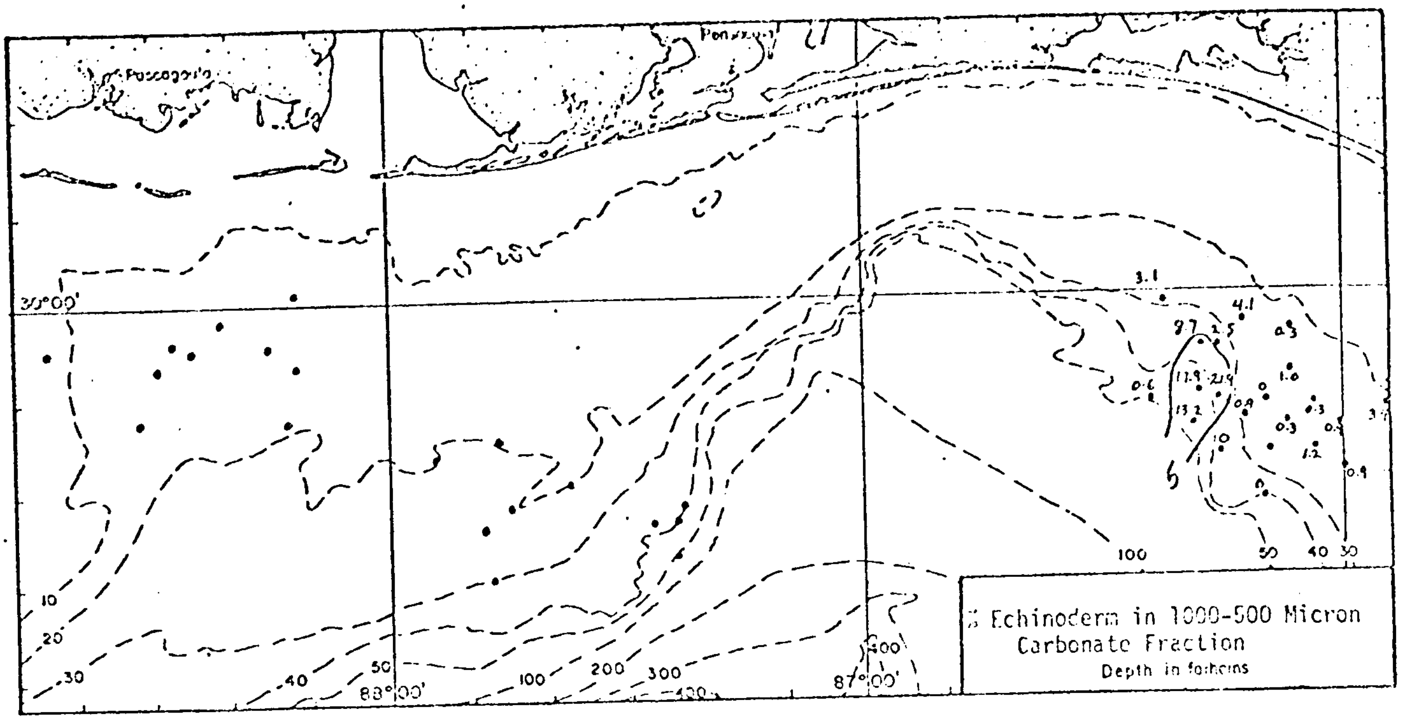

90°
89°
88°
87°
86°
85°
84°
83°
82°
30°
29°
28°
27°
26°
BLACKENED CARBONATE
% of Carbonate Sand Fraction
>5%

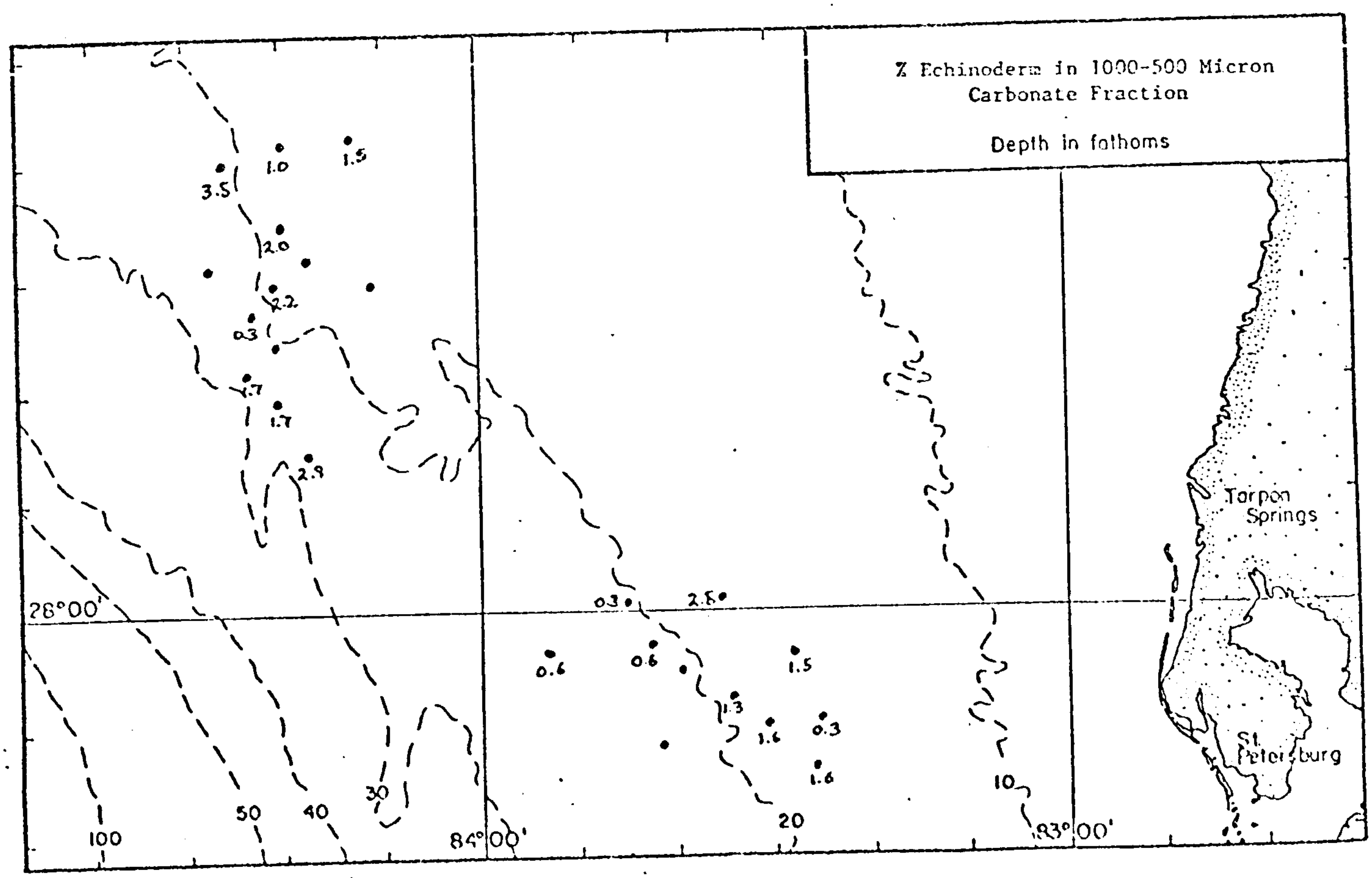

Pascagoula
30°00'
88°00'
87°00'
10
20
30
40
50
100
200
300
400
% Echinoderm in 250-125 Micron
Carbonate Fraction
Depth in fathoms

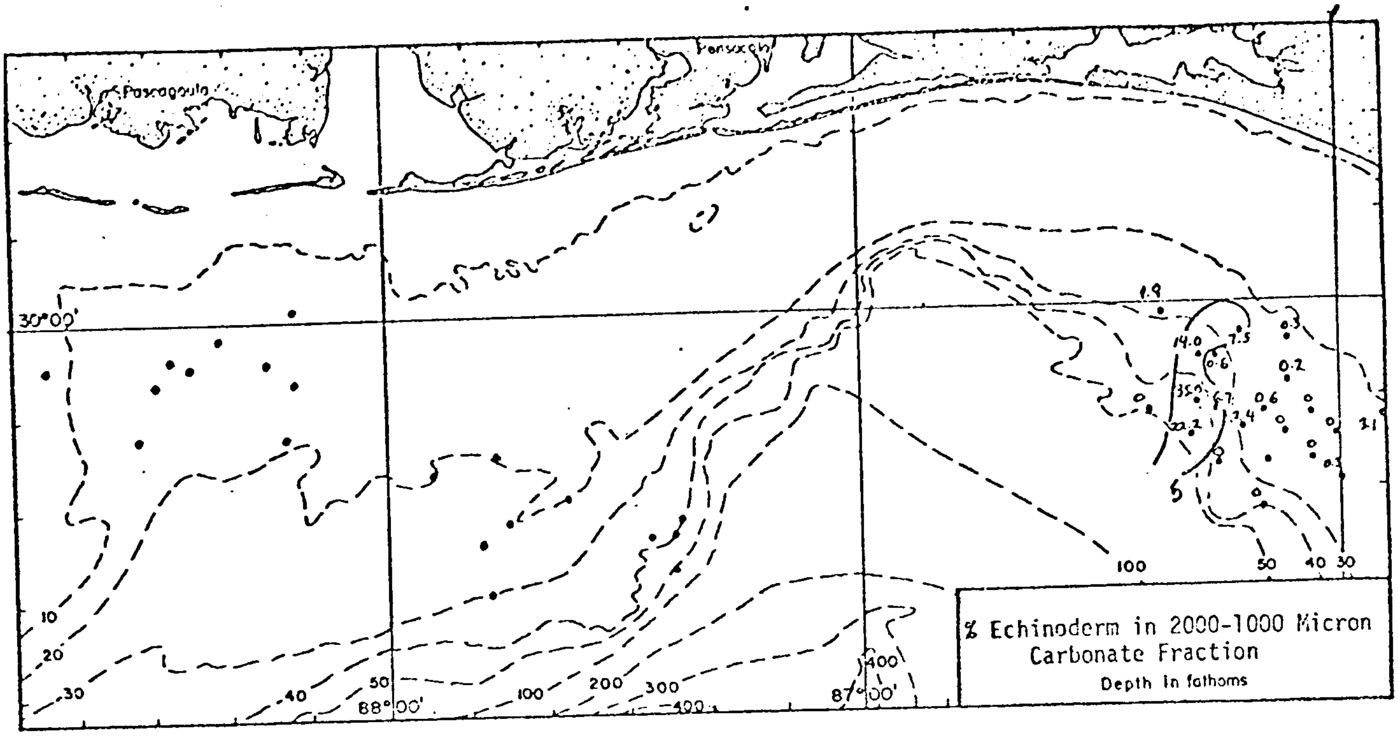

% Echinoderm in 250-125 Micron
Carbonate Fraction
Depth in fathoms
28°00'
84°00'
83°00'
100
50
40
30
20
10
Tarpon Springs
St. Petersburg

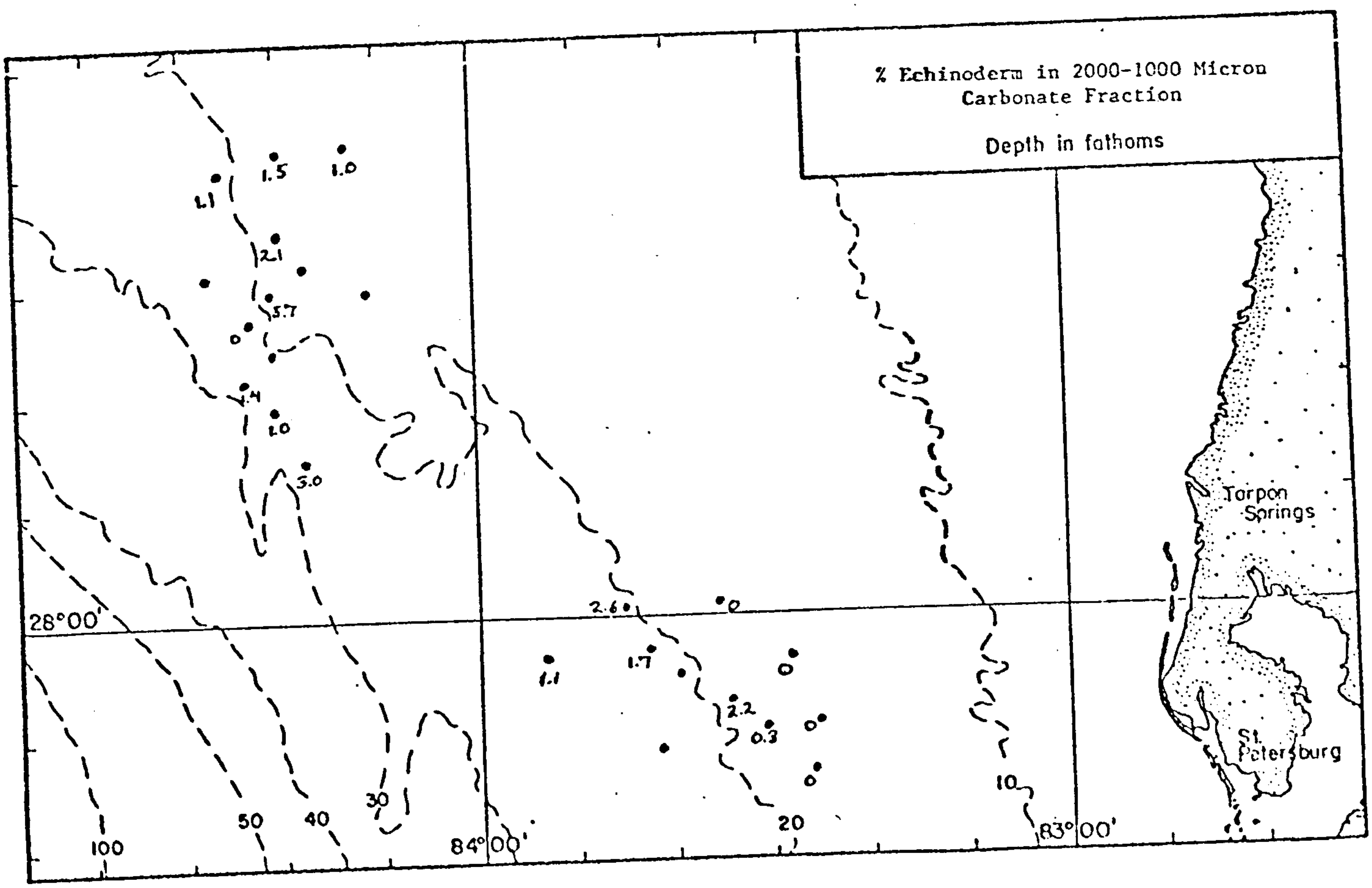

Pascagoula
30°00'
88°00'
87°00'
10
20
30
40
50
100
200
300
400
% Echinoderm in 125-62 Micron
Carbonate Fraction
Depth in fathoms

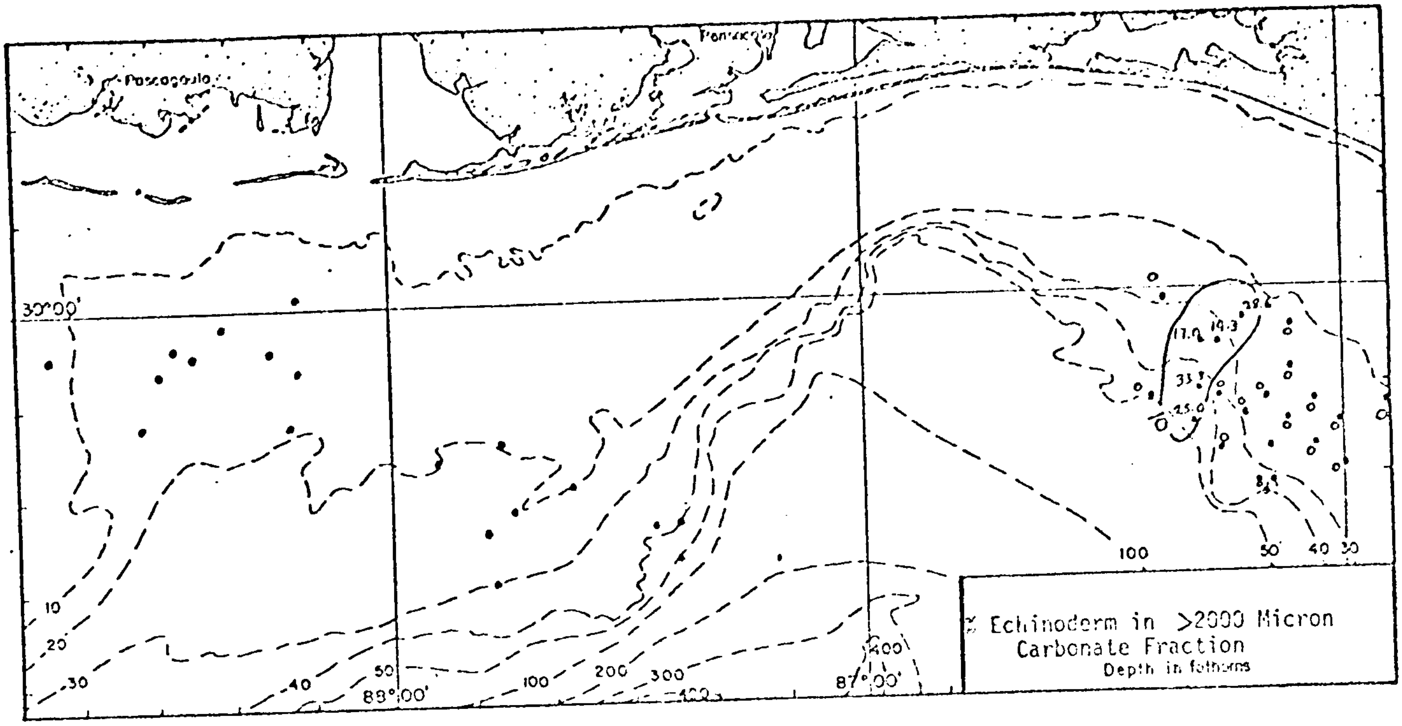

% Echinoderm in 125-62 Micron
Carbonate Fraction
Depth in fathoms
Tarpon
Springs
St.
Petersburg
28°00'
84°00'
83°00'
100
50
40
30
20
10

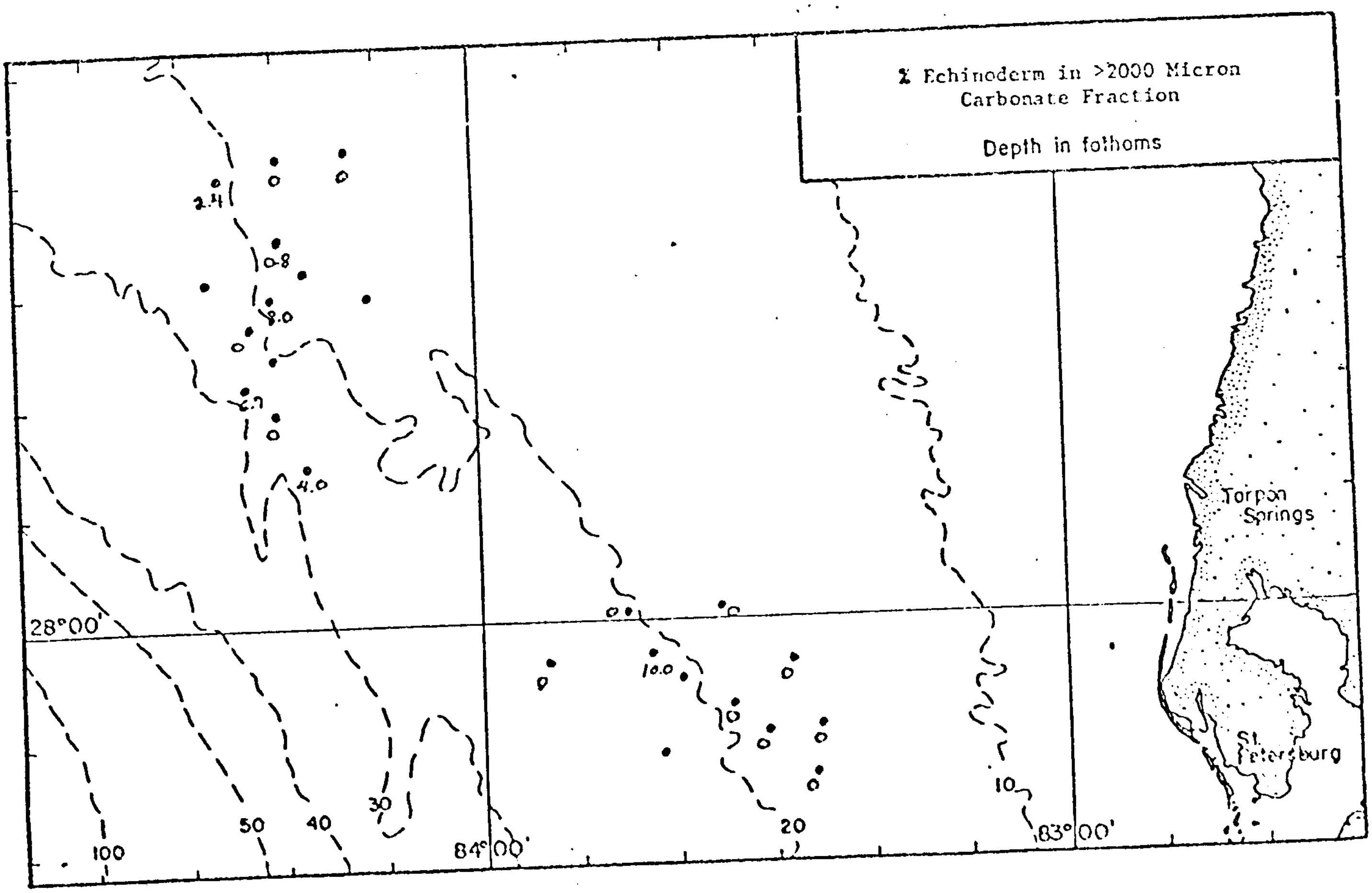

Pascagoula
Pensacola
30°00'
88°00'
87°00'
10
20
30
40
50
100
200
300
400
3.1
4.1
0.6
1.0
0.3
1.2
% Echinoderm in 1000-500 Micron
Carbonate Fraction
Depth in fathoms

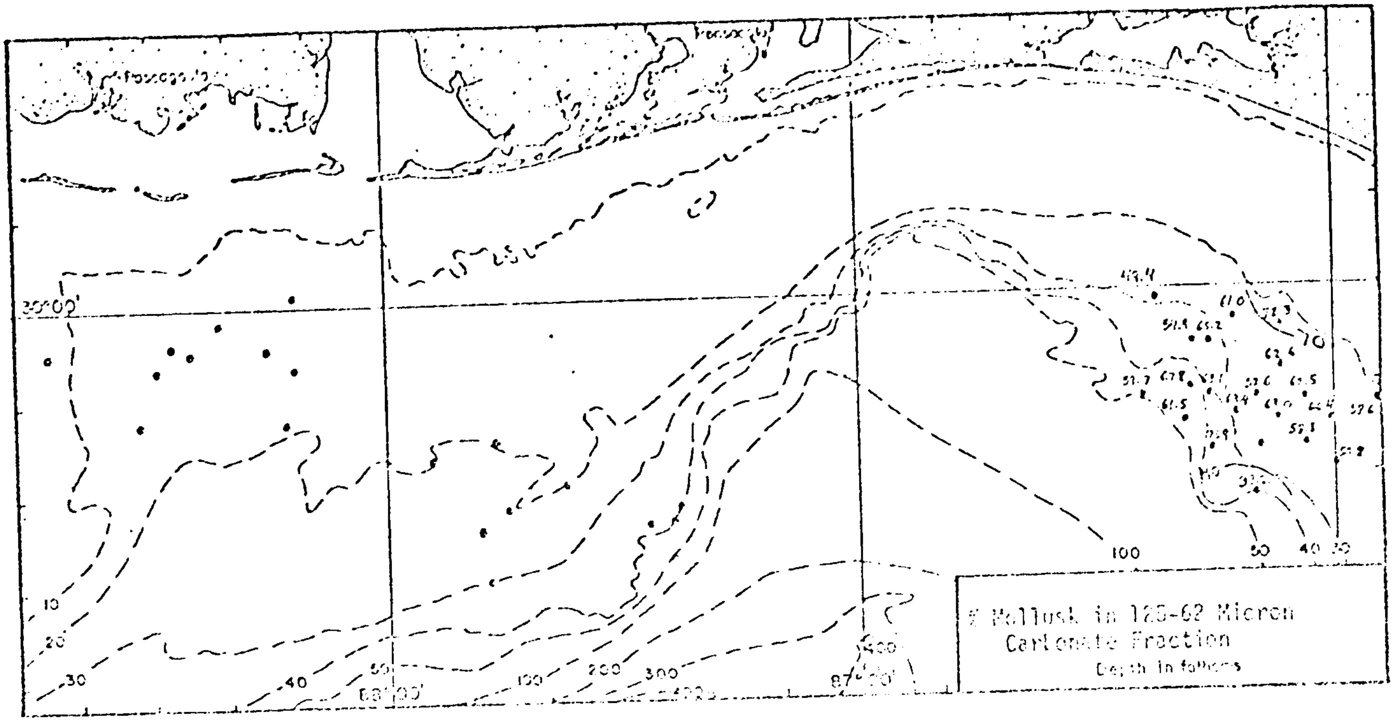

% Echinoderm in 1000-500 Micron
Carbonate Fraction
Depth in fathoms
1.0
1.5
3.5
2.0
2.2
0.3
1.7
1.7
2.9
28°00'
0.3
2.5
0.6
0.6
1.5
1.3
1.6
0.3
1.6
10
20
30
40
50
100
84°00'
83°00'
Tarpon
Springs
St.
Petersburg

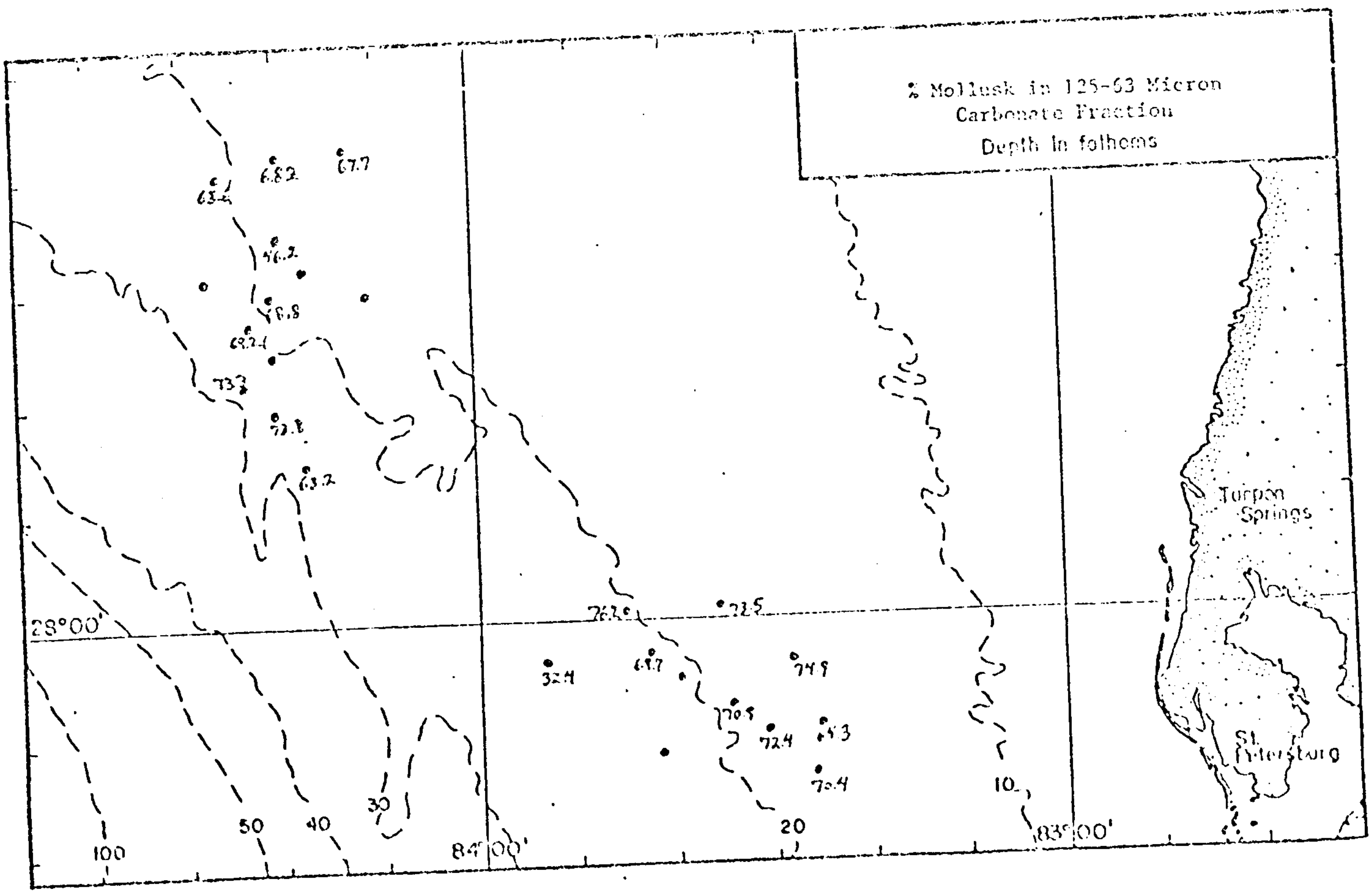

Pascagoula
Pensacola
30°00'
88°00'
87°00'
10
20
30
40
50
100
200
300
400
% Echinoderm in 2000-1000 Micron
Carbonate Fraction
Depth in fathoms

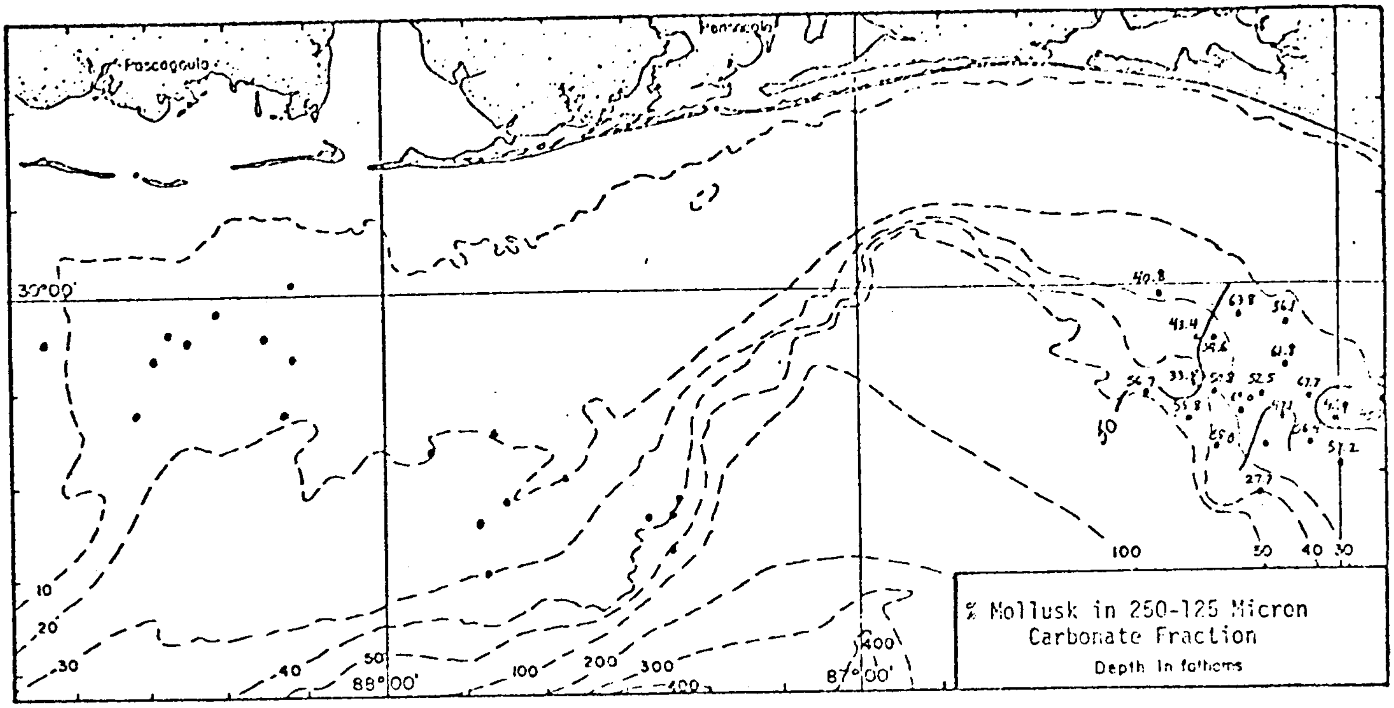

% Echinoderm in 2000-1000 Micron
Carbonate Fraction
Depth in fathoms
Torpon
Springs
St.
Petersburg
28°00'
84°00'
83°00'
100
50
40
30
20
10

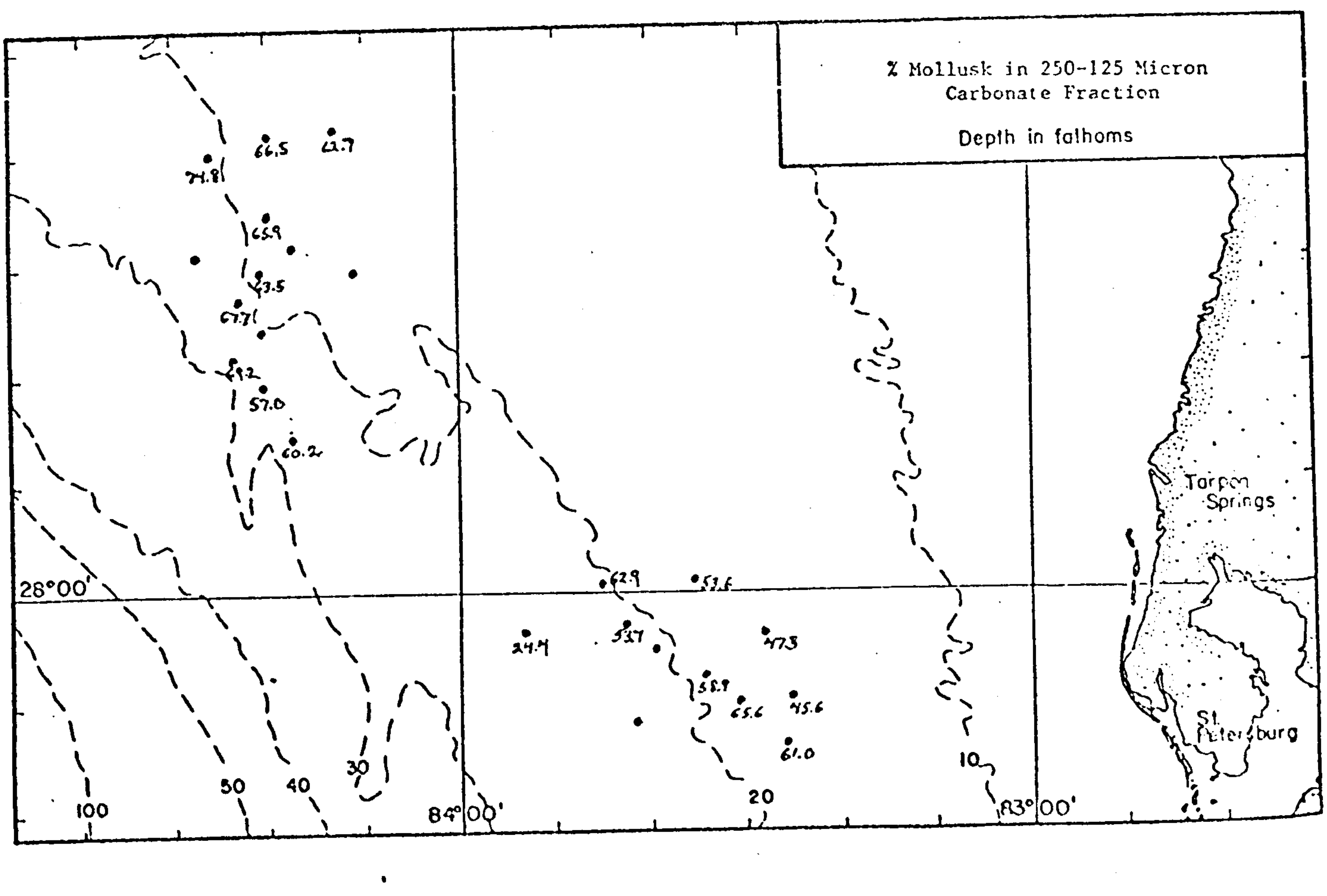

Pascagoula
Pensacola
30°00'
10
20
30
40
50
88°00'
100
200
300
400
87°00'
100
50
40
30
17.0
14.3
33.3
25.0
% Echinoderm in >2000 Micron Carbonate Fraction
Depth in fathoms

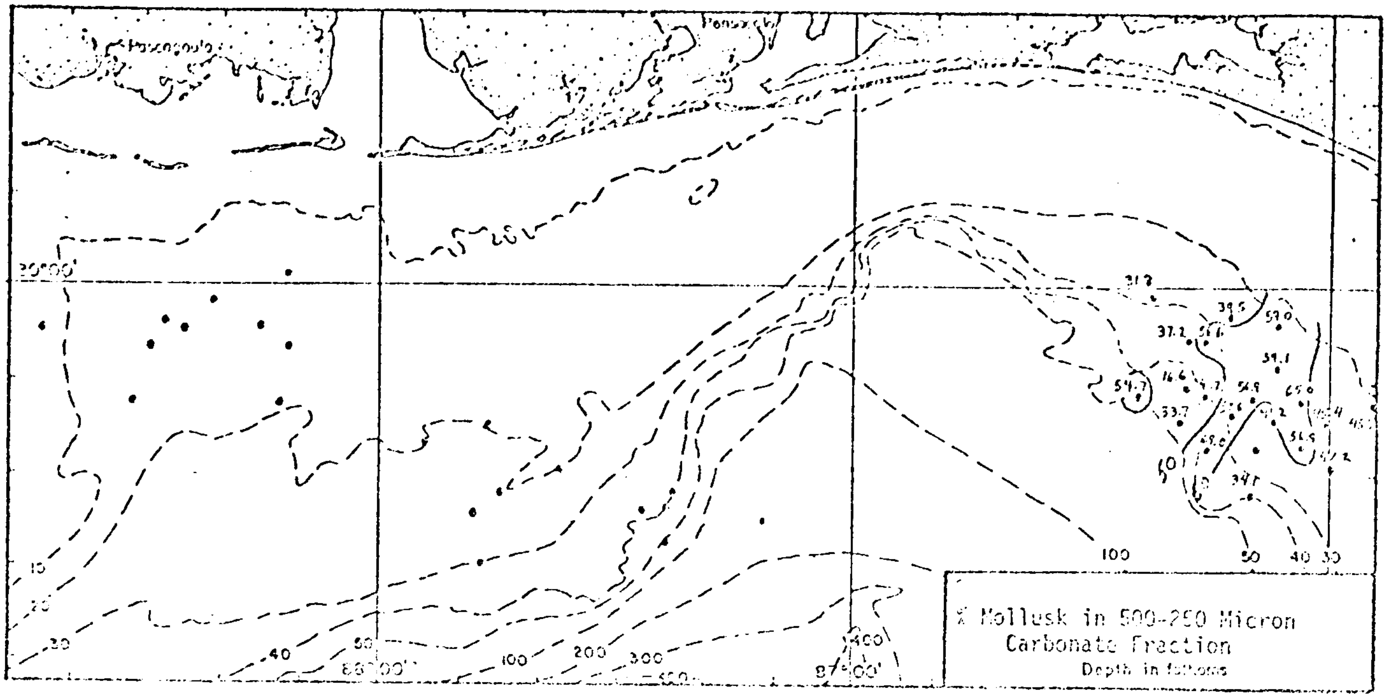

% Echinoderm in >2000 Micron Carbonate Fraction
Depth in fathoms
2.4
0.8
8.0
2.7
4.0
28°00'
10.0
Torpon Springs
St. Petersburg
100
50
40
30
84°00'
20
10
83°00'

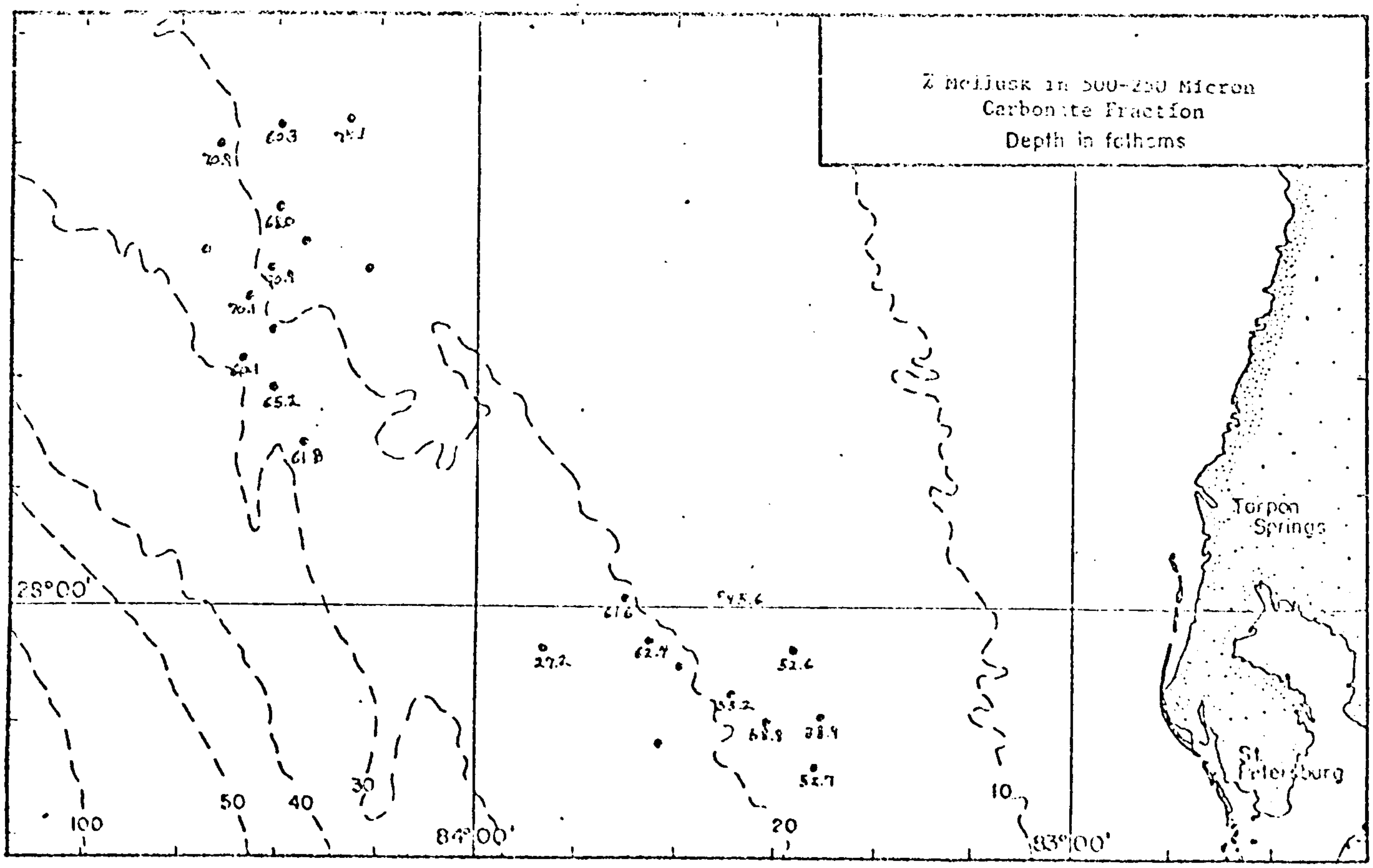

% Mollusk in 125-62 Micron
Carbonate Fraction
Depth in fathoms
30°00'
88°00'
10
20
30
40
50
100
200
300
400

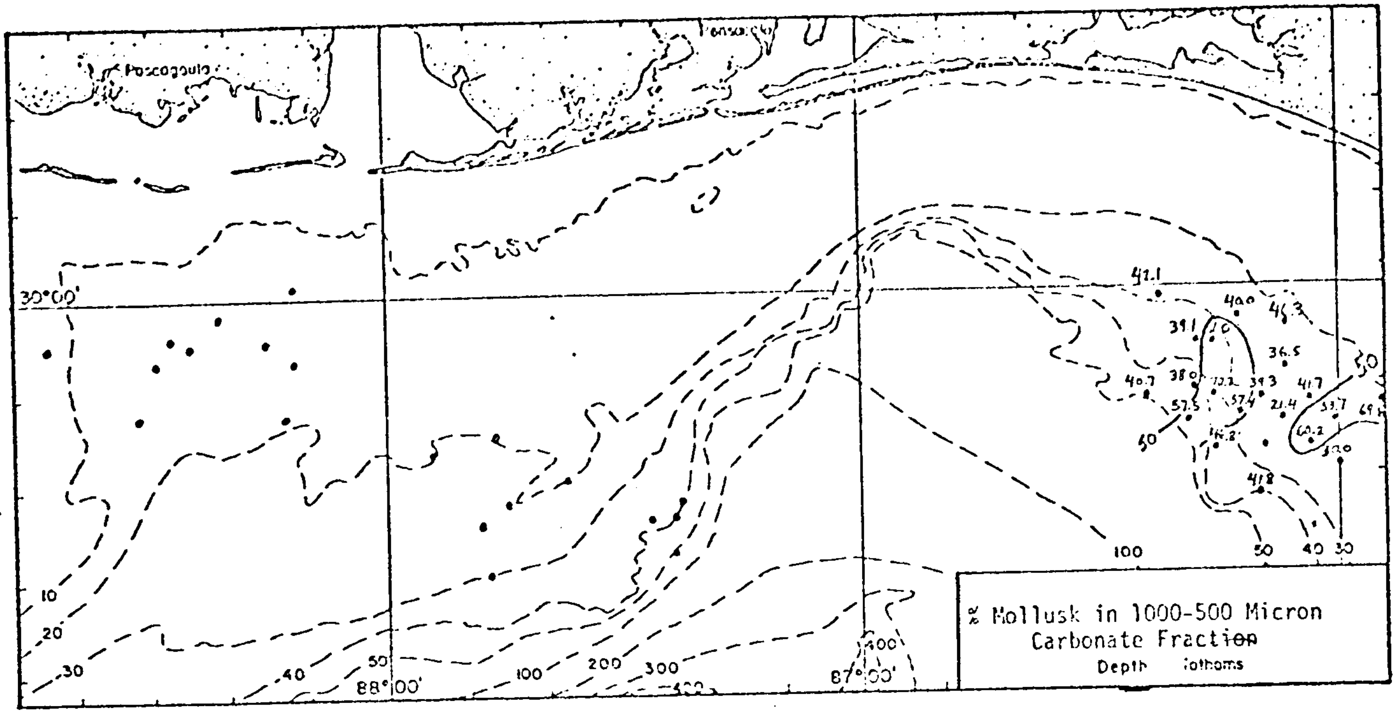

% Mollusk in 125-63 Micron
Carbonate Fraction
Depth in fathoms
Tarpon Springs
St. Petersburg
28°00'
84°00'
83°00'
100
50
40
30
20
10

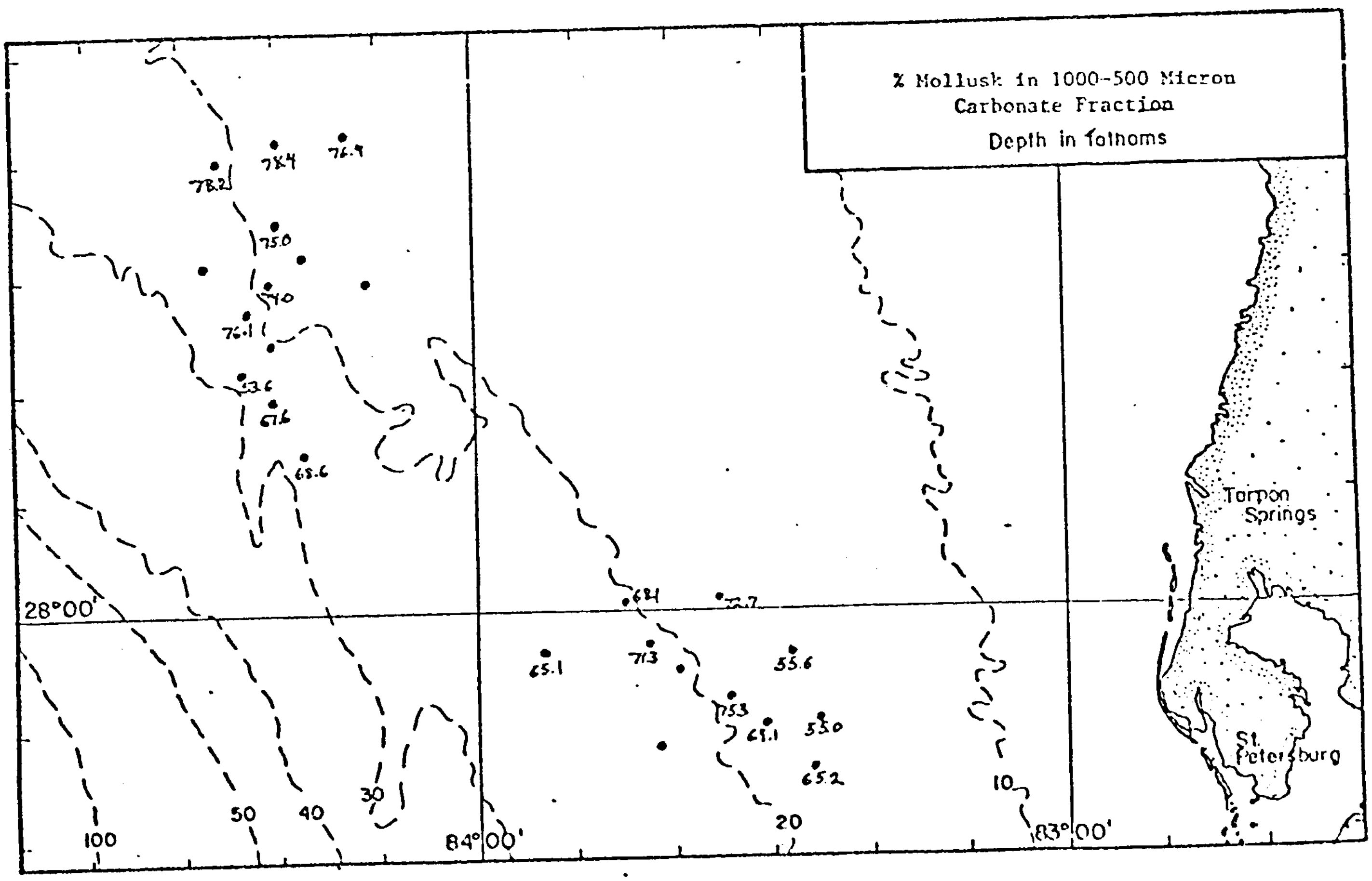

Pascagoula
Pensacola
30°00'
88°00'
87°00'
10
20
30
40
50
100
200
300
400
% Mollusk in 250-125 Micron Carbonate Fraction
Depth in fathoms

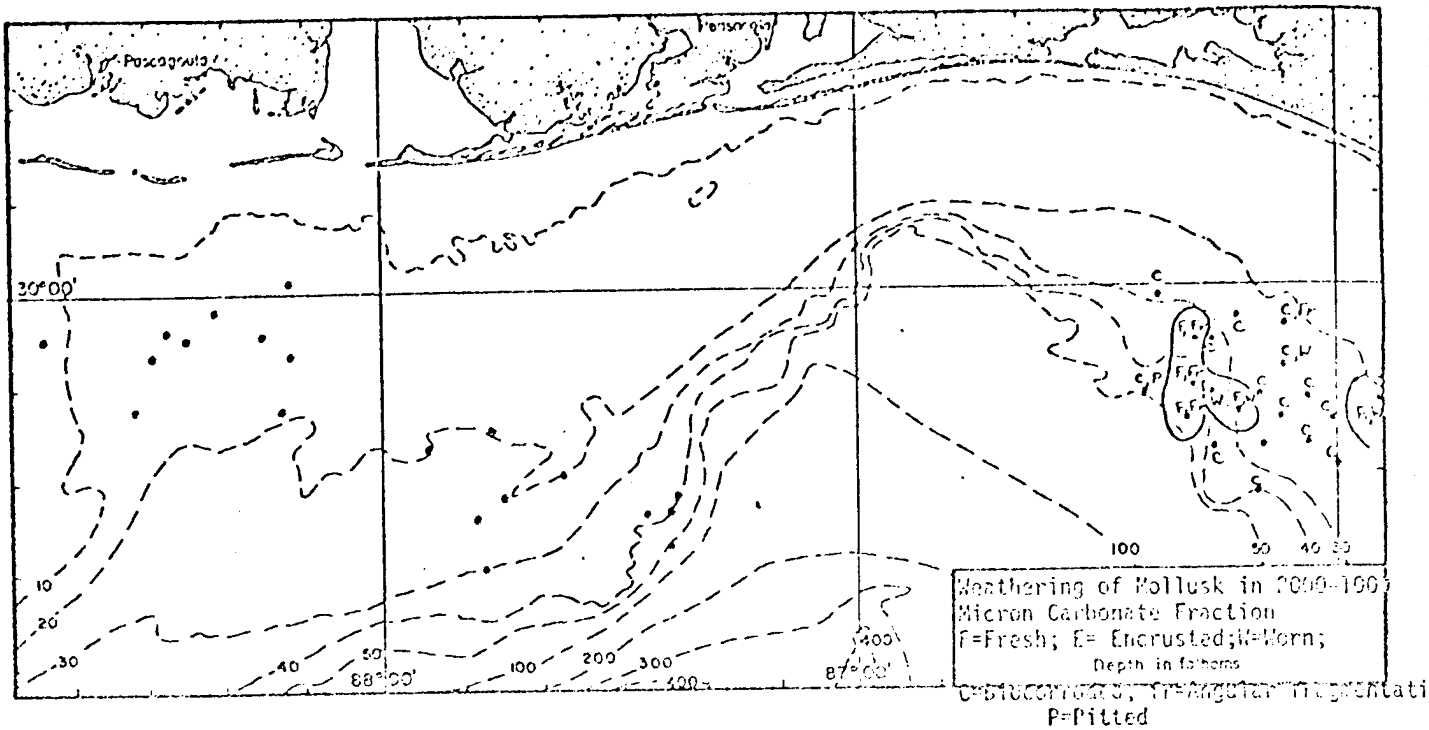

% Mollusk in 250-125 Micron Carbonate Fraction
Depth in fathoms
28°00'
84°00'
83°00'
Tarpon Springs
St. Petersburg
100
50
40
30
20
10

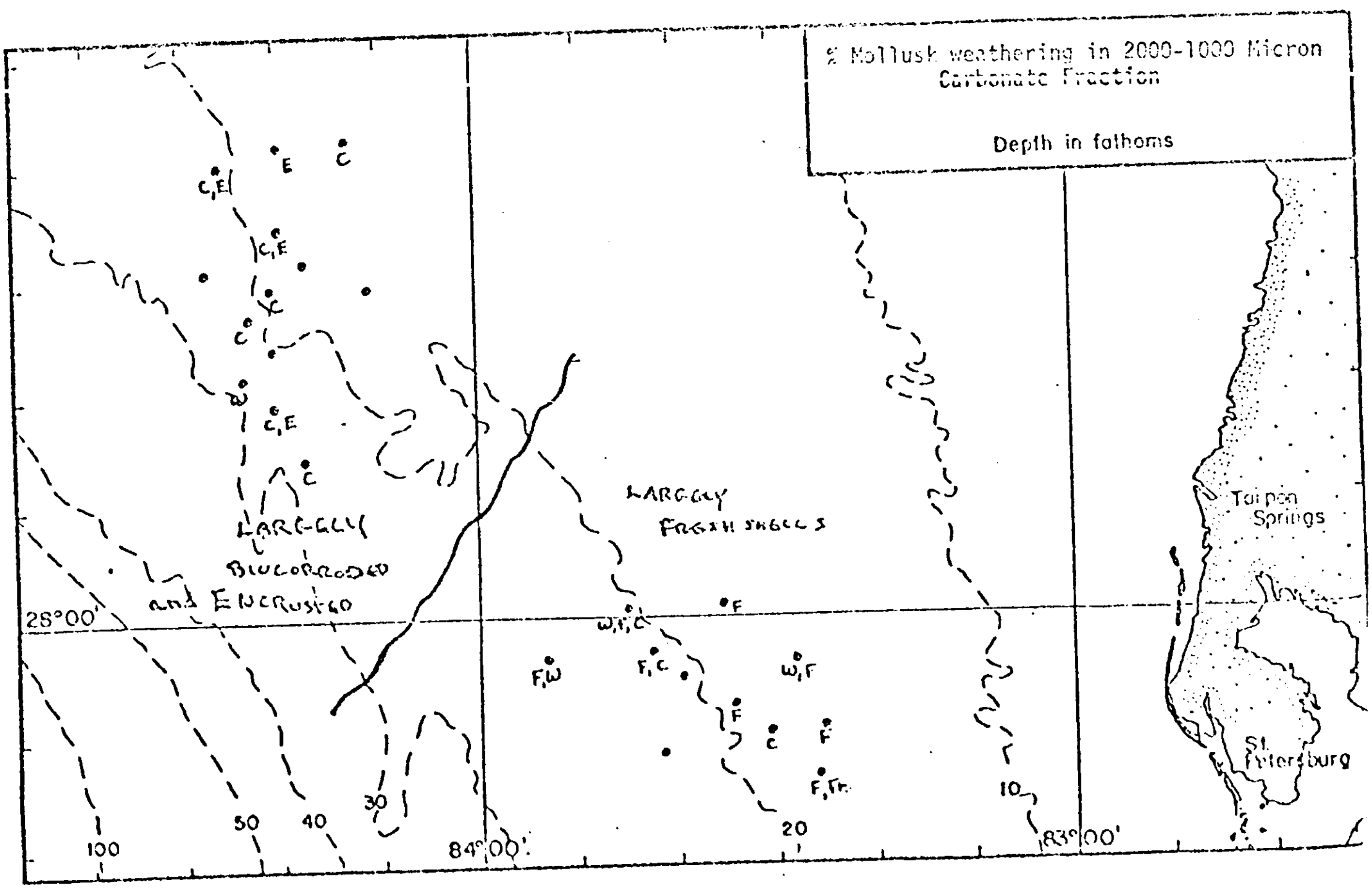

Pascagoula
Pensacola
30°00'
88°00'
87°00'
10
20
30
40
50
100
200
300
400
500
100
50
40
30
% Mollusk in 500-250 Micron
Carbonate Fraction
Depth in fathoms

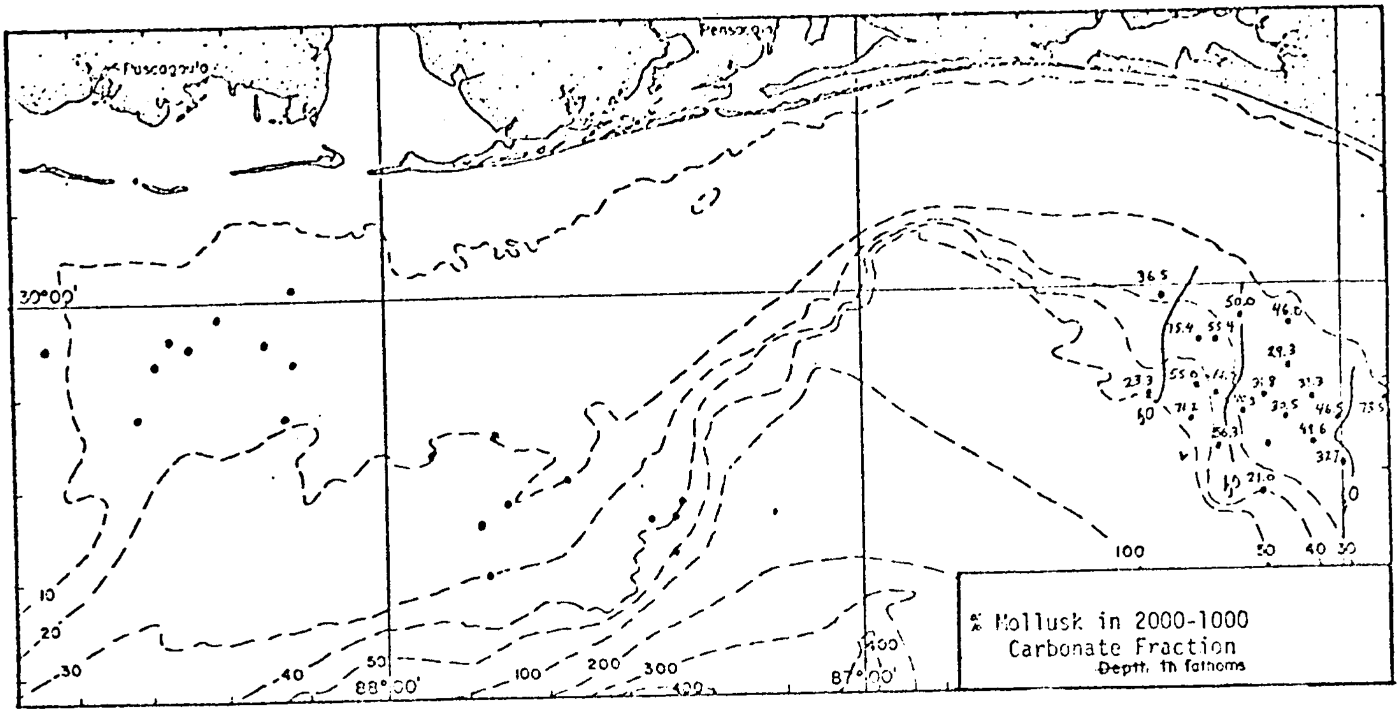

% Mollusk in 500-250 Micron
Carbonate Fraction
Depth in fathoms
65.2
61.8
52.6
28°00'
100
50
40
30
84°00'
20
10
83°00'
Torpon
Springs
St.
Petersburg

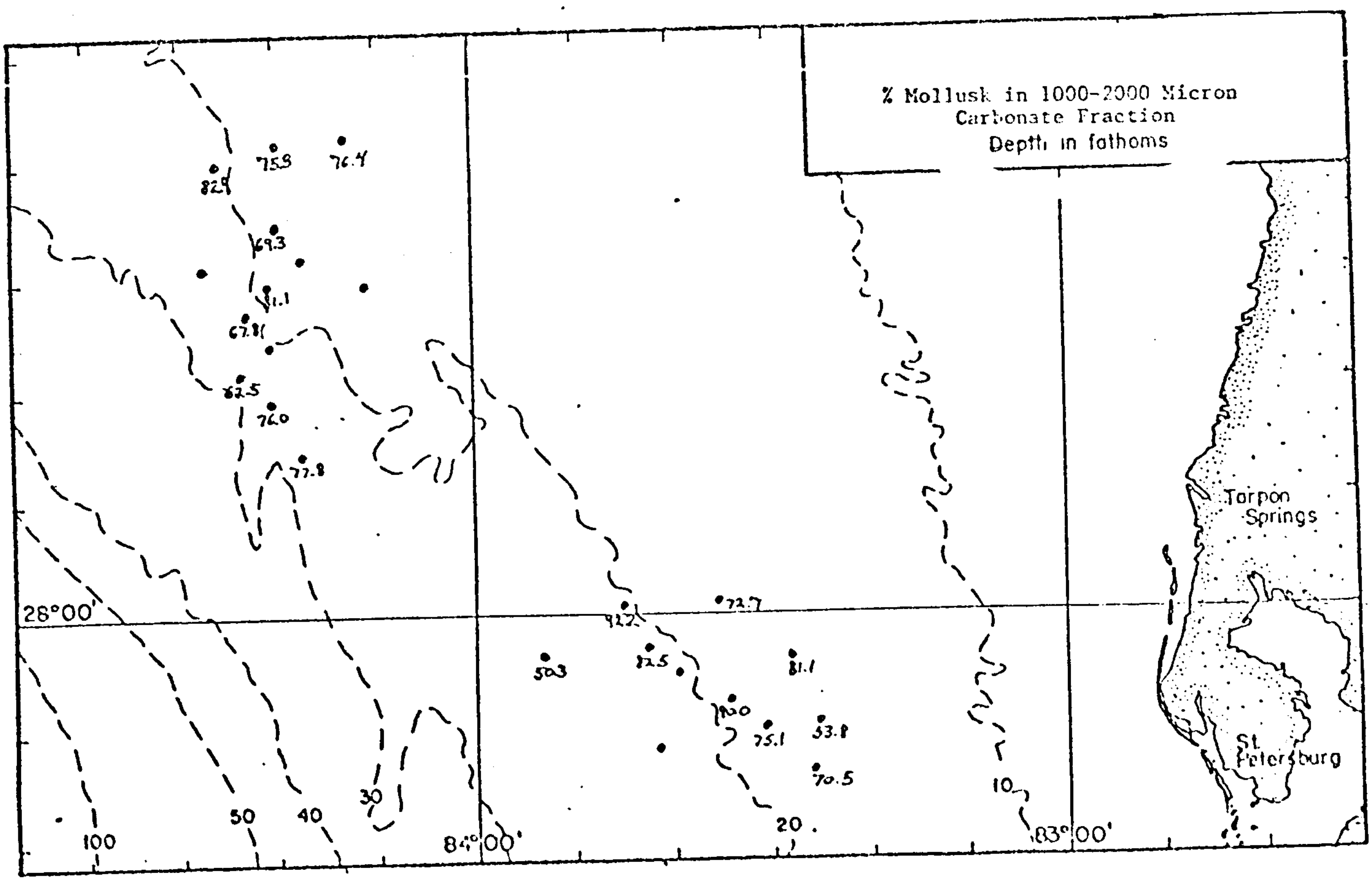

Pascagoula
Pensacola
30°00'
88°00'
87°00'
10
20
30
40
50
100
200
300
400
% Mollusk in 1000-500 Micron
Carbonate Fraction
Depth fathoms

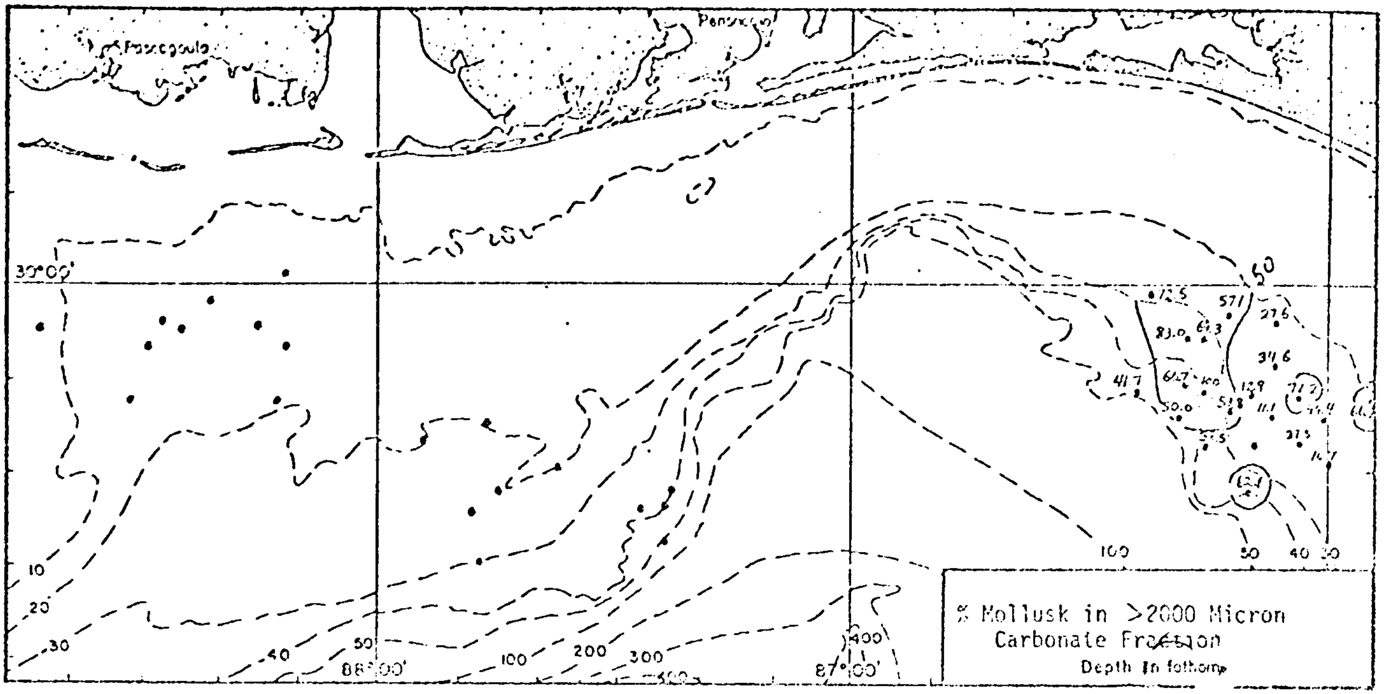

% Mollusk in 1000-500 Micron
Carbonate Fraction
Depth in fathoms
Tarpon
Springs
St.
Petersburg
28°00'
84°00'
83°00'
100
50
40
30
20
10

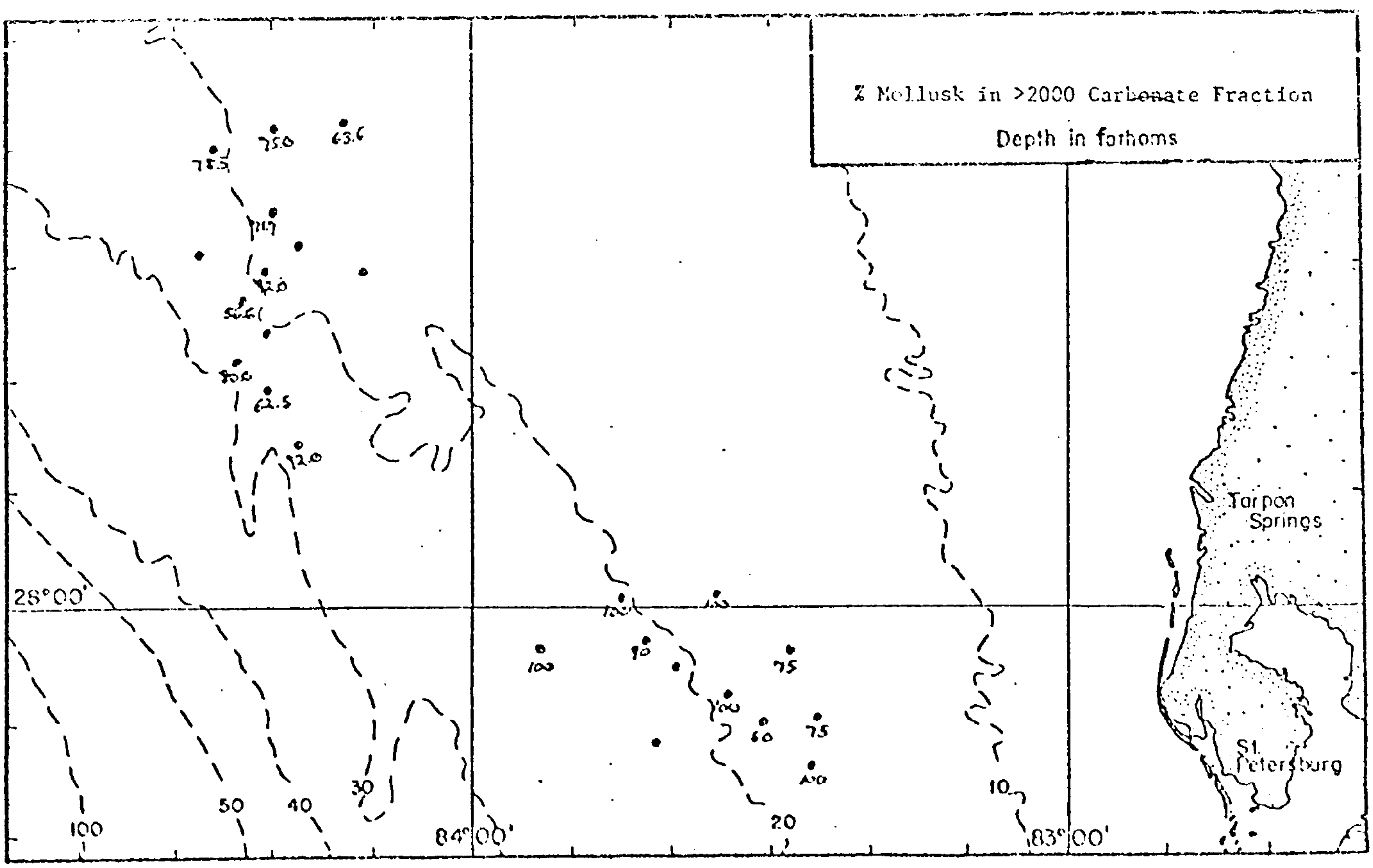

Weathering of Mollusk in 2000-1000
Micron Carbonate Fraction
F=Fresh; E= Encrusted;W=Worn;
Depth in fathoms
P=Pitted
Pascagoula
Pensacola
30°00'
88°00'
87°00'
10
20
30
40
50
100
200
300
400


% Mollusk weathering in 2000-1000 Micron
Carbonate Fraction
Depth in fathoms
LARGELY BIOCORRODED and ENCRUSTED
LARGELY FRESH SHELLS
Tarpon Springs
St. Petersburg
28°00'
84°00'
83°00'
100
50
40
30
20
10


Pascagoula
Pensacola
30°00'
88°00'
87°00'
10
20
30
40
50
100
200
300
400
% Mollusk in 2000-1000
Carbonate Fraction
Depth in fathoms


% Mollusk in 1000-2000 Micron
Carbonate Fraction
Depth in fathoms
28°00'
84°00'
83°00'
100
50
40
30
20
10
Tarpon
Springs
St
Petersburg


Pascagoula
Pensacola
30°00'
88°00'
87°00'
10
20
30
40
50
100
200
300
400
% Mollusk in >2000 Micron
Carbonate Fraction
Depth in fathoms


% Mollusk in >2000 Carbonate Fraction
Depth in fathoms
28°00'
84°00'
83°00'
100
50
40
30
20
10
Tarpon
Springs
St.
Petersburg

2101 F

		Anomia simplex			Tellina lineata			Chama congregata			Ventricolaria rugatina		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
…worn	Pl	2.0	1.4	3.4	2.0	—	2.0	2.0	—	2.0	1.0	—	1.0
	B												
	En												
…orn	Pl												
	B												
	En												

		Corbula krebsiana			Macrocallista maculata			Arcina serrata			Anasara bausmani		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
…worn	Pl	1.0	—	1.0	2.0	2.6	4.6	—	0.3	0.3	1.0	0.4	1.4
	B												
	En												
…orn	Pl				1.0	2.0	3.0	—	2.3	2.3	—	0.6	0.6
	B												
	En				1.0	1.1	2.1				1.0	1.0	2.0

		"Pectin"			Chione cancellata			Plicatula globosa			Dosinia elegans		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
…worn	Pl	—	0.4	0.4	5.0	2.1	7.1						
	B												
	En				—	0.5	0.5						
…orn	Pl				5.0	4.9	9.9				—	0.1	0.1
	B				—	1.9	1.9						
	En	1.0	0.5	1.5	12.0	1.9	13.9	5.0	—	5.0			

		INDETERMINANT		
		Whl	Frg	Σ
…worn	Pl	—	1.3	1.3
	B			
	En			
…orn	Pl	—	2.8	2.8
	B	—	2.0	2.0
	En	—	1.5	1.5

…worn	Pl
	B
	En
…orn	Pl
	B
	En

2102 B

		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
		Divaricella quadrisulcata			Abra aequalis			Anadara baughmani			Lucina nassula			Macrocallista maculata			Chama congregata			Corbula krebsiana			Tellina lineata		
worn	Pl	2.0	1.0	3.0				1.0	—	1.0	1.0	—	1.0	—	0.5	0.5	—	0.5	0.5	3.0	1.5	4.5	7.0	—	7.0
	B																								
	En				1.0	—	1.0																		
rn	Pl																			1.0	—	1.0	2.0	1.5	3.5
	B																								
	En																								

		Chione cancellata			Laevicardium mortoni			Chione pygmaea			Atrina			Dosinia elegans											
worn	Pl	2.0	0.3	2.3	—	1.3	1.3																		
	B																								
	En																								
rn	Pl	1.0	0.5	1.5	1.0	—	1.0							—	0.1	0.1									
	B																								
	En				1.0	—	1.0	1.0	—	1.0	—	0.3	0.3												

		INDETERMINANT																							
worn	Pl	—	0.5	0.5																					
	B																								
	En																								
rn	Pl	—	1.6	1.6																					
	B	—	0.6	0.6																					
	En	—	2.0	2.0																					

worn	Pl																								
	B																								
	En																								
rn	Pl																								
	B																								
	En																								

DISCUSSION

The general characteristics of bottom sediments put forth in the 1974 final report remain valid. Rather than reiterating them, the brief text of this report is included in Appendix IV along with maps of mollusc and echinoid distribution from the 1974 study. This discussion will focus on the general trends revealed from mapping the overall abundance of constituents (Figures 4-14).

The mapped distribution of constituents on the eastern Gulf of Mexico Shelf generally reflects the maps of Gould and Stewart (1956), the results of Back (1972), and the synthesis map of Ginsburg and James (1974). There are a number of important quantitative differences.

1. Gould and Stewart (1956) define a broad, elongate zone in which coralline algae is the predominant constituent. This generally correlates both with the >1% coralline algae abundance zone and with the >20% unidentifiable carbonate zone. Thin sections confirm that most of the unidentifiable carbonate is coralline algae in samples with significant identifiable coralline algae. Yet these samples can only contain 20-30% coralline algae at most and are in nearly all cases dominated by molluscan remains. Two possibilities may cause this discrepancy: a) these samples are biased against an adequate reflection of abundance of the >4000 μm fraction (which is dominantly coralline algae) or b) the sampling and recovery methods of Gould and Stewart cause bias towards the coarser for their samples.
2. Gould and Stewart define a broad zone of oolitic sand seaward of the coralline algae zone along the southern portion of the eastern Gulf shelf, narrowing north of 27°30' and terminating in the vicinity of 28°30' north. Although ovoid grains were recognized in loose grain

analysis from samples 2105 and 2533, they were classified as unidentifiable because of moderate surficial biological corrosion. Thin section examination of these samples verified that ooid are an important to dominant constituent in these samples. Most are only a thin oolitic coating on carbonate or non-carbonate nucleus. Sample 2105 is from just seaward of the mapped distribution of oolite suggested by Gould and Stewart. Sample 2533 which is from 29°43' is well north and west of the previously suggested occurrence of oolitic sands.

Earlier maps suggest an important boundary between carbonate dominated midshelf (to the south) and non-carbonate dominated mid-shelf (to northwest) occurs between Transects III and IV of the 1975 box coring study. Carbonate abundance data of Doyle and this study support this boundary. Associated with this is a sharp change in the abundance of certain carbonate constituents. Especially notable is the benthic foraminifera, increasing dramatically landward along Transect III, but nearly absent from Transect IV just to the north. Benthic foraminifera are so abundant in the shelf zone represented by Stations 2317 and 2318 that this would fall into the category of a molluscan-foraminiferal sediment (such as that defined for Florida Bay by Ginsburg and James (1974).

The densely sampled shelf area just west of Cape San Blas (Destin Dome area) contains a carbonate constituent distribution that reflects the complexity of the middle to outer shelf. In this area there is a low bathymetric ridge protruding across the shelf and separating two zones of fine sediment accumulation. A scan of the mapped attributes show an abundance of mollusc, pelagic foraminifera, echinoid, ostracod, sponge spicules, and alcyonarian spicule grains in a broad shelf indentation in the vicinity of 29°45' N and

86°30' W. Just to the east is a narrow zone of abundant benthic foraminifera, coralline algae, bryozoan, blackened carbonate and unidentifiable carbonate (mostly coralline algae). The mapped distribution of each of these firm bottom constituents varies somewhat producing a somewhat broader composite zone than is apparent from examining individual maps. Coralline algae abundance on this promontory is the highest observed. As constituent composition distribution cuts across bathymetric contours and does not correlate with previous sediment maps, no attempt has been made to correlate beyond sampling area.

Samples to the west of DeSoto Canyon occur along a rather narrow band from the shelf margin to near the Chandileur Islands. Contouring of this complex area has considered Ludwick's facies and grain-size distribution, bathymetric contours and MAFLA geophysical data. The reef and inner-reef facies of Ludwick contains no significant coralline algae but rather an abundance of bryozoan, benthic foraminifera, and unidentifiable grains. Landward the complex alternations of bathymetry and substrate cause variations in constituent abundance. Benthic foraminifera, echinoid, blackened carbonate and unidentifiable carbonate increase markedly on the inner third of the shelf here. Echinoids in the inner shelf here are very delicate, porous spines, a marked contrast to most other areas.

BIBLIOGRAPHY

Back, R. M., 1972. Recent depositional environments of the Florida Middle Ground (MS thesis). Florida State University, 224 p.

Ginsburg, R. N., and N. P. James, 1974. Holocene carbonate sediments of continental shelves, pp 137-156 in Burk, C. A., and C. L. Drake (Eds.), The Geology of Continental Margins. Springer-Verlag, New York, 1009 p.

Gould, H. R., and R. H. Stewart, 1956. Continental terrace sediments in the northeastern Gulf of Mexico. Soc. Econ. Paleontologists and Mineralogists, Spec. Publ. 3:2-19.

Ludwick, J. C., 1964. Sediments in Northeastern Gulf of Mexico, pp 204-238 in Miller, R. D. (Ed.), Papers in Marine Geology, Shepard Comm. Vol. The Macmillan Co., New York, 531 p.

Molluscan Lithotope Assemblages of MAFLA Shelf

by

Harold R. Wanless, John Park, and Brenda Bohlke

INTRODUCTION

The molluscan lithotope (shell death assemblage) contains both an integrated record of benthic community character and dynamics (through species assemblages) and basic information about the dominant substrate processes (through superimposed weathering characteristics). The analysis of the molluscan lithotope is considered a vital complement to the benthic station analysis and monitering program for three reasons.

First, the species assemblage of unweathered shells provides a broad data base that can be used to interpret the observed character of and changes in the molluscan biotope. It should provide preliminary insight into the presence and extent of temporal or spatial variation in the benthic molluscan community.

Second, the analysis of the weathering characteristics of the molluscan lithotope provide basic information on the substrate processes (stable substrate= unworn shells; feeding disruption of substance=angularly fragmented shells; mobile sand substrate=worn or polished shells, non-depositional substrate= biocorroded and encrusted shells; and substrate winnowing=worn and biocorroded shells).

Third, an integrated analysis of death assemblage and weathering characteristics provides information of community sequence, source of carbonate particles (relic vs. modern), particle transport, and influence of substrate process on community dynamics.

It was with these interests that the molluscan lithotope analysis was undertaken. Analysis was restricted to the >4000 μm fraction in an effort to analyze the least mobile portion of the sediments. This report is only an initial glimpse at the value that will come out of this immense amount of significant data.

METHODS

When the non-living material retained on a 500 μm mesh Nitex screen was received at the laboratory, each sample was usually transferred to separate containers. In one instance in which this procedure was not followed, sample 2528 was destroyed, caused by the disintegration of the cloth bag containing it.

The samples were wet sieved through sieves of 4000, 2000 and 1000 μm, dried in an oven, and each fraction weighed and stored in plastic freezer bags.

The molluscan death assemblage in the greater than 4000 μm fraction was analyzed in detail. Usually all of the material was analyzed. However, with some large samples, a sub-sample was analyzed. Identifications were based on Abbott, 1974: American Seashells, 2nd edition, aided by Warmke and Abbott (1962), Parker (1960), and some supplemental material. A reference collection was made representing each species encountered. 10.2 x 12.7 cm poloroid photomacrographs of selected species also aided the sorting and identification. Identifications of the specimens in the reference collection were confirmed, or in a few cases, corrected by Dr. Donald Moore and Mr. Jack Meeder.

Whole valves, half to whole valves, quarter to half valves and less than quarter valves were counted separately. The latter three of these categories were multiplied by factors of 1/2, 1/4 and 1/8, respectively, which yielded their equivalent valve in whole valves. These were then summed and entered on the data sheets as "fragments". "Whole" valves were entered separately, and the "whole" valves and "fragment" valves were also summed to give the total number of equivalent whole valves in the sample (Appendix V, VI).

Within each of the four categories listed above, the "worn" and "unworn" valves and fragments were separated and within each of these two categories, the material was further divided into categories of "plain", "encrusted", or "bored". Shells classified as "unworn" had no, or very little, surface weathering. Those listed as "worn" showed weather corrosion, including the loss of the gloss characteristic of many species. "Encrusted" shells were those with any obvious macroscopic encrusting organisms on their surfaces. Shells with holes characteristic of the sponge Clione spp were listed as "bored".

Evaluation of Methods

The procedure of sorting the sample into whole, half to whole, quarter to half, and eighth to quarter valves, etc., worked quite well. It yielded far more data than counting only whole valves, and was far more accurate than counting all the whole valves and fragments together. Obviously there is an inherent bias in favor of species larger than about 20 mm, since fragments smaller than 1/8 valve could be retained on the 4000 µm screen. On the other hand, there is a bias against species smaller than about 10 mm, since 1/8 valve fragments could pass through the screen. Therefore, whole valve size most accurately sampled was about 15 mm. However, the equivalent whole valve size was rarely greater than 20 mm, and the 1/8 valve fragments of shells smaller than 10 mm would not be recognizable to species in most cases. Therefore, the 4000 µm mesh screen was considered a good compromise for this method with these samples. 3000 µm could possibly have been a better choice.

Sorting shells into weathering categories proved to be difficult, since it involved a value judgment, and the various species have different weathering characteristics. It is suggested that future attempts use three weathering categories: "fresh", "dull", and "worn"; "fresh" meaning those which show no weathering at all and "worn" meaning any which are worn or corroded. "Dull" would then be used for those shells which have lost little, if any, material to weathering processes, but which have lost their gloss, are discolored, or are otherwise altered from their "fresh" appearance.

Separation of shells into "plain", "bored", or "encrusted" was straightforward. It would have been helpful if differentiation had been made between living or fresh encrustations and dead-worn encrustations. There is often a sharp demarcation in a sample between these two categories.

RESULTS

Table 1 shows the occurrence of bivalves death assemblages with respect to station depth. Bivalve species are arbitrarially grouped as "very wide range", "wide-range shallow-centered", "wide-range moderate-depth-centered", "wide-range deep-centered", "narrow-range shallow-centered", "narrow-range moderate-depth-centered", and "narrow-range deep-centered". Species within these groups are arranged according to the actual distribution exhibited by the death assemblage, from wide to narrow, rather than the expected range of the living bivalves. The stations are arranged by increasing depth, beginning at the left. This table is very valuable in presenting an overall view of the distribution of the bivalves, and also as an aid in guiding further studies. For example, variations in weathering characteristics and processes should be investigated among the species showing very wide ranges. In many cases, these might be expected to reflect limited areas of production and subsequent transport, or perhaps areas of contemporary production and others of relic accumulations. In many cases there are both recent and relic accumulations in the same sample showing different weathering characteristics. These may reflect slow cyclic depositional/erosional cycles or sea level changes or perhaps they might record the effects of hurricanes or other events. As another example, it might be expected that those species which show a wide, but discontinuous distribution by depth, might be reflecting variations in substrate or bottom process. These species may be useful indicators of the respective variables they reflect. Those species showing a very narrow range might be good indicators of both specific environmental parameters and depth.

Table II shows the occurrence of bivalves in the death assemblages of the stations by bottom type. The bivalve species are arranged according to their known bottom type distributions from the literature (Abbott 1974, Parker 1960, Stanley 1972). The order is somewhat arbitrary, from gravel to fine mud, with a separate category for attached or boring species. Stations are arranged according to their graphic means from the cumulative size distribution curve, ordered from coarse to fine (data provided by L. Doyle). Therefore, if the species known from the literature to be found only in gravel were indeed found only in gravel in this study and those known from mud were found in mud, etc., one would expect the observations on the table to be grouped around a line from the upper left-hand corner proceeding diagonally to the lower right-hand corner. In many cases, e.g., *Astarte nana*, *Limopsis* sp., *Callista eucymata*, *Chione intapurpea*, the species do show this pattern. In many others, the observations are tightly clustered around a different mean particle size than expected. This may simply mean that the substrate preferences of the species are not adequately known in the literature. However, many of the deviations from the expected distribution, especially the wide disperse distributions may be expected to reflect transport and/or both contemporary and relic populations. Especially those species exhibiting vague distributional patterns by depth in Table 1 and by substrate in Table II are prime suspects as indicators of transport and/or relic and modern populations.

TABLE I

Occurrence of Bivalve Death Assemblage

with Respect to Range and Depth

(4 pages)

Stations 2101 to 2645 ordered by increasing depth →

Occurrence* (wide to narrow within categories)	1	19	20	2	21	7	37	18	22	38	17	23	8	39	9	24	10	16	40	14	15	25	41	42	3	28	29	30	11	31	32	4	33	43	44	26	5	34	45	35	6	27	13	12	36
Very Wide Range:																																													
Pectin	x	x	x	x		x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x	x	x	x	x	x	x	x	x	x		x	x	x	x	x	x	x	x
Corbula krebsiana	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x					x	x		x		x			x	x	x	x		x		x	x		x
Anadara baughmani	x	x		x					x	x	x	x		x			x	x	x	x	x		x	x								x	x	x			x	x		x		x	x	x	x
Chama congregata	x	x	x	x		x			x		x	x	x		x		x			x		x		x	x		x		x			x												x	x
Plicatula gibbosa	x	x	x	x				x	x			x	x						x		x						x		x	x	x		x	x	x		x	x	x		x			x	
Atrina spp	x			x				x		x	x	x			x			x		x	x	x	x	x																	x			x	
Ventricolaria rugatina	x							x																									x	x	x		x	x	x			x	x		
Abra aequalis			x	x	x	x	x		x	x		x	x	x	x		x	x		x	x			x	x				x				x		x	x				x		x	x	x	x
Tellina spp		x	x																						x								x					x		x	x		x		
Anomia simplex	x		x			x	x		x	x	x	x	x	x	x		x	x	x	x	x		x	x	x					x		x		x	x						x				
Dosina elegans	x		x	x	x	x	x				x	x	x		x		x		x		x		x	x						x			x					x	x		x				
Tellina aequistriata			x	x		x			x		x				x			x	x	x				x								x		x						x			x		
Macrocallista maculata	x			x	x	x		x	x		x	x	x	x	x	x	x	x	x	x	x			x								x								x					
Gouldia cerina	x	x	x	x						x	x	x	x	x	x		x	x	x	x	x	x	x	x	x		x		x	x	x	x	x				x	x	x						
Solecurtus cumingianus						x				x	x	x		x	x			x					x		x							x								x			x	x	
Nuculana acuta							x				x	x		x					x	x												x	x	x		x					x	x	x	x	x
Nuculana crenulata							x																																x		x	x	x	x	x
Chione cancellata	x	x	x	x	x	x		x	x		x	x					x	x		x	x			x			x	x	x	x	x			x				x							
Pitar simpsoni		x	x					x	x	x	x	x		x	x	x		x	x	x	x	x		x						x	x	x	x	x	x		x	x							
Modiolus spp		x										x																										x							
Tellina lineata	x		x	x	x	x	x		x	x	x	x	x	x	x	x	x		x	x	x		x	x	x				x			x		x		x									
Corbula dietziana						x			x		x	x			x		x		x		x				x				x			x	x	x	x	x		x			x				
Poromya granulata								x																												x							x		
Chione pygmaea	x			x					x	x		x	x	x			x		x		x	x	x							x		x			x										
Laevicardium spp		x	x	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x		x	x		x	x	x		x	x								
Pandora arenosa						x	x					x	x		x			x	x	x	x		x	x								x								x					
Macoma tenta							x				x		x	x	x			x	x	x	x						x		x			x	x			x				x	x				
Plectodon granulatus								x										x			x		x							x										x		x			
Lucina radians	x	x	x					x	x													x		x										x											
Glycymerus spp											x	x				x		x	x	x	x	x		x	x		x			x						x	x	x	x		x		x	x	
Cyclocardia armilla												x															x		x	x			x							x	x	x			x
Semele bellastriata		x	x						x	x	x	x		x		x		x	x			x		x			x			x	x		x	x											
Tellina squamifera					x		x			x			x	x	x				x	x	x													x		x									
Divaricella quadrisulcata		x	x	x	x	x				x	x		x	x	x		x	x	x	x	x		x	x								x													
Trachycardium spp		x	x			x	x	x	x		x	x				x					x				x		x					x													

* "Shallow","moderate", and "deep" are arbitrary divisions, used only for convenience

	1	19	20	2	21	7	37	18	22	38	17	23	8	39	9	24	10	16	40	14	15	25	41	42	3	28	29	30	11	31	32	4	33	43	44	26	5	34	45	35	6	27	13	12	36

Wide Range - Shallow Centered:

	1	19	20	2	21	7	37	18	22	38	17	23	8	39	9	24	10	16	40	14	15	25	41	42	3	28	29	30	11	31	32	4	33	43	44	26	5	34	45	35	6	27	13	12	36
Parvilucina blanda			x											x						x	x			x					x			x													
Lucina nassula	x	x	x	x	x	x					x		x	x	x		x	x	x	x	x		x	x					x																
Arcinella cornuta	x			x						x	x	x		x		x			x		x							x																	
Chione intapurpea		x	x				x					x							x	x		x		x																					
Transennella spp		x	x					x								x				x		x		x																					
Linga amiatus			x				x		x	x	x	x		x							x			x																					
Macrocallista nimbosa			x																					x																					
Linga pensylvanica		x	x	x				x											x																										
Periglypta listeri	x						x	x								x																													

Wide Range - Moderate Depth Centered:

	1	19	20	2	21	7	37	18	22	38	17	23	8	39	9	24	10	16	40	14	15	25	41	42	3	28	29	30	11	31	32	4	33	43	44	26	5	34	45	35	6	27	13	12	36
Chione spp							x		x	x	x	x		x	x	x	x	x	x	x	x	x		x	x		x	x	x	x	x	x	x	x		x									
Arca zebra									x			x																																	
Americardia media													x				x								x		x		x	x				x											
Diplodonta nucleiformis							x								x									x			x																		
Eucrassatella speciosa									x			x									x								x																
Cardiomya glypta										x					x			x		x	x								x																
Lima pellucida											x							x									x			x															
Nuculana verrilliana							x			x		x							x				x	x																					
Mulinia (lateralis?)							x			x									x				x	x																					
Glans dominguensis																					x																	x							
Pteromerus perplana												x					x					x					x	x																	
Diplodonta punctata														x			x		x											x															

Wide Range - Deep Centered:

	1	19	20	2	21	7	37	18	22	38	17	23	8	39	9	24	10	16	40	14	15	25	41	42	3	28	29	30	11	31	32	4	33	43	44	26	5	34	45	35	6	27	13	12	36
Nemocardium peramabile																			x													x		x	x		x		x	x	x	x	x	x	x
Astarte nana																			x											x	x		x	x			x	x	x		x			x	x

Narrow Range - Shallow Centered:

	1	19	20	2	21	7	37	18	22	38	17	23	8	39	9	24	10	16	40	14	15	25	41	42	3	28	29	30	11	31	32	4	33	43	44	26	5	34	45	35	6	27	13	12	36
Cymatoica orientalis											x									x	x			x																					
Lima pectinata											x							x	•																										
Cyclinella tenuis											x		x		x																														
Noetia ponderosa	x																																												
Pinctada sp	x																																												
Pododesmus rudis	x																																												
Lima lockline										x																																			

	1 20 / 19 2	21 37 / 7 18	22 17 8 / 38 23	9 10 / 39 24	40 15 / 16 14	41 3 / 25 42	29 11 / 28 30	32 33 / 31 4	44 5 / 43 26	45 6 / 34 35	13 36 / 27 12
Narrow Range - Shallow Centered (Continued):											
Macoma sp			x								
Diplodonta sp			x								
Jouannetia quillingi			x								
Lima sp			x								
Narrow Range Moderate Centered:											
Barbatia tenera				x			x				
Nucula proxima			x	x		x					
Cuspidaria obesa					x		x				
Carditimera floridana				x		x					
Tellina cristata					x	x					
Anomalocardia aeberiana					x	x					
Ensis minor				x	x						
Semele purparascens							x x				
Lucina pectinata				x							
Anodontia alba				x							
Martesia sp					x						
Mercenaria sp					x						
Arca sp					x						
Barbatia dominguensis					x						
Pteria sp					x						
Strigilla carnaria						x					
Tagelus divisus						x					
Anadara notabilis							x				
Raeta undulata											
Narrow Range - Deep Centered:											
Limopsis spp								x x	x x xx	x x	x x x
Cardiomya costella								x	x		x
Linga leucomya							x	x	x		
Thyasira granulosa									x		x
Cardiomya striata									x		x
Yoldia solenoides										x	x
Nemocardium tinctum								x	x x		
Callista eucymata									x x x		
Hiatella azana								x			
Rupellaria sp								x			

	1 20 / 19 2	21 37 / 7 18	22 17 8 / 38 23	9 10 / 39 24	40 15 / 16 14	41 3 / 25 42	29 11 / 28 30	32 33 / 31 4	44 5 / 43 26	45 6 / 34 35	13 36 / 27 12
Narrow Range - Deep Centered (Continued):											
Limatula subauricula								x			
Solecurtus sanctaemarthae								x			
Acropsis adamsi									x		
Pleuromerus armilla										x	
Lucinoma pectinata										x	
Ventricordia fisheriana										x	
Nuculana solidifacta											x
Nuculana carpenteri											x
Lucinoma filiosa											x
Nuculana aegeensis											x
Thyasira flexusa											x
Nuculana tenuisulcata											x

TABLE II

Occurrence of Bivalve Death Assemblage

with Respect to Bottom Type

(3 pages)

Coarse ⟶ Fine | Grain size unknown

	29	34	30	31	33	28	45	11	44	43	25	18	4	22	23	40	5	32	3	26	24	2	6	20	42	19	16	41	7	39	21	1	17	27	12	37	9	38	35	36	8	13	10	14	15
Gravel - Coarse Sand Centered																																													
Chione spp	x		x	x	x			x		x	x		x	x	x	x		x	x	x	x				x		x			x			x			x	x	x					x	x	x
Pandora arenosa													x		x	x									x		x	x	x							x	x		x	x				x	x
Astarte nana		x		x	x		x			x						x	x	x					x												x					x					
Limopsis spp		x			x				x	x							x	x		x			x											x	x							x			
Modiolus sp		x													x											x																			
Trachycardium sp	x											x	x	x	x				x					x		x			x				x			x									x
Sand Centered																																													
Americardia media																			x																						x		x		
Anadara notabilis																			x																										
Callista eucymata									x	x							x																												
Carditamera floridana																									x																		x		
Chione intapurpea											x				x	x								x	x	x										x								x	
Chione pygmaea				x					x		x		x	x	x	x						x						x		x		x	x					x			x	x			x
Cyclocardia armilla	x			x	x			x							x																								x	x					
Diplodonta sp															x																														
Diplodonta nucleiformis	x																								x											x	x								
Divaricella quadrisulcata													x			x								x	x	x	x	x	x	x	x		x				x	x			x		x	x	x
Dosinia elegans		x		x	x		x								x							x		x	x			x		x	x	x				x	x				x		x		x
Glans dominguensis																					x																								
Glycymerus	x	x		x			x				x				x	x	x		x	x			x		x		x						x		x							x		x	x
Gouldia cerina	x	x		x	x		x	x			x		x		x	x	x	x	x			x		x	x	x	x	x		x		x	x				x	x			x		x	x	x
Linga pensylvanica												x				x						x		x		x																			
Macoma tenta	x				x			x					x			x				x			x				x			x			x			x	x		x		x			x	x
Macrocallista maculata												x	x	x	x	x					x	x			x		x		x		x	x	x				x	x	x		x		x	x	x
Macrocallista nimbosa																								x	x																				
Noetia ponderosa																																x													
Nuculana carpenteri																																									x				
Periglypta listeri												x									x											x				x									
Pitar simpsoni		x		x	x				x	x	x	x	x	x	x	x	x	x			x			x	x	x	x			x			x				x	x						x	x
Pteromerus perplana	x		x								x				x																												x		
Semele bellastriata	x			x	x					x	x			x	x	x		x			x			x	x	x	x			x			x					x							
Semele purpurascens	x							x																																					
Solecurtus cumingianus													x		x				x								x	x	x	x			x		x		x	x	x			x			
Solecurtus sanctaemarthae													x																																
Strigilla carnaria																									x																				
Tellina spp		x			x														x				x	x		x													x						

	29	34	30	31	33	28	45	11	44	43	25	18	4	22	23	40	5	32	3	26	24	2	6	20	42	19	16	41	7	39	21	1	17	27	12	37	9	38	35	36	8	13	10	14	15
Sand Centered (Continued)																																													
Tellina aquistriata										x			x	x		x						x		x	x		x		x				x				x		x			x		x	
Tellina cristata																x									x																				
Tellina lineata								x		x			x	x	x	x			x	x	x	x		x	x			x	x	x	x	x	x			x	x	x			x		x	x	x
Tellina squamifera										x						x				x										x	x					x	x	x			x			x	x
Thyasira flexusa																																			x										
Thyasira granulosa																				x														x											
Transenella spp		x					x		x	x	x	x								x	x			x	x	x																		x	
Ventricolaria rugitian		x			x		x		x	x	x	x					x		x															x								x			
Abra aequalis								x	x				x	x	x				x	x		x		x	x		x		x	x	x		x	x	x	x	x	x	x	x	x	x	x	x	x
Chione cancellata	x	x	x	x				x		x		x		x	x			x				x		x	x	x	x		x		x	x	x										x	x	x
Diplodonta punctata				x												x														x													x		
Mercenaria sp																x																													
Mulinia (lateralis?)																x									x			x								x		x							
Nuculana acuta					x					x			x		x	x				x			x							x			x	x	x	x				x		x		x	
Pectin	x	x	x	x	x		x	x	x	x	x	x	x	x	x	x		x	x	x	x	x	x	x	x	x	x	x	x	x		x	x	x	x		x	x	x	x	x	x	x	x	
Sandy Mud Centered																																													
Anadara baughmani		x			x					x			x	x	x	x	x					x			x	x	x	x		x		x	x	x	x			x	x	x		x	x	x	x
Anodontia alba																																											x		
Anomalocardia auber-iana																									x																			x	
Atrina spp											x	x	x		x							x	x		x		x	x				x	x		x		x	x						x	x
Eucrassatella speciosa								x						x	x										x								x											x	x
Laevicardium spp	x		x	x	x			x		x	x	x	x	x	x	x	x		x	x	x	x		x	x	x	x	x	x	x			x	x	x	x	x	x			x		x	x	x
Linga amiantus														x	x									x	x					x			x			x		x							x
Linga leucomya								x	x				x																																
Lucina radians										x	x	x		x										x	x	x						x													
Lucinema filosa pectinatus																																			x				x						
Nucula aegeensis																																			x										
Nucula crenulata							x																x											x	x	x				x		x			
Nucula proxima														x											x					x															
Nuculana solidifacta																																		x											
Nuculana verrilliana															x	x									x			x								x		x							
Plectodon granulatus				x								x															x	x						x					x						x
Pleuromerus armilla		x																																											
Poromya granulata												x								x															x							x			
Verticordia fisheriana																							x																						
Ensis minor																x					x																								
Macoma sp																																						x							
Nemocardium peramabile							x		x	x			x			x	x						x											x	x				x	x		x			

-60-

	29	34	30	31	33	28	45	11	44	43	25	18	4	22	23	40	5	32	3	26	24	2	6	20	42	19	16	41	7	39	21	1	17	27	12	37	9	38	35	36	8	13	10	14	15
Mud Centered																																													
Cardiomya costella										x			x																													x			
Cardiomya glypta								x																			x										x	x						x	x
Cardiomya striata																	x																	x											
Corbula dietziana		x			x			x	x	x			x	x	x	x			x	x			x						x				x				x						x		x
Corbula krebsiana	x	x	x	x					x		x	x	x	x	x	x	x			x	x	x		x			x		x	x	x	x	x	x		x	x	x	x	x	x	x	x	x	x
Cuspidaria obesa								x																																				x	
Cyclinella tenuis																																	x				x				x				
Lucina nassula								x								x						x		x	x	x	x	x	x	x	x	x	x				x				x		x	x	x
Lucina pectinata																					x																								
Nuculana tenuisulcata																																								x					
Parvilucina blanda								x					x											x	x					x														x	x
Raeta undulata								x																																					
Tagelus diviscus																									x																				
Yoldia solenoides																																							x						
Attached or Boring																																													
Anomia simplex				x					x	x			x	x	x	x			x					x	x		x	x	x	x		x	x			x	x	x		x	x		x	x	x
Arca sp																																													x
Arca zebra					x				x					x	x		x																												
Arcinella cornuta			x												x	x					x	x								x		x	x					x							x
Acropsis adamsi									x																																				
Barbatia domingensis																																													x
Barbatia tenera								x													x																								
Chama congregata	x							x			x		x	x	x			x	x			x		x	x	x			x			x	x		x		x			x	x		x	x	
Hiatella azana																		x																											
Jouannetia quillingi															x																														
Lima sp															x																														
Lima lockline																																						x							
Lima pectinata																											x						x												
Lima pellucida								x					x																	x														x	
Limatula subariculata													x																																
Martesia sp																x																													
Pinctada sp																										x																			
Plicatula gibbosa	x	x		x	x		x	x	x	x		x		x	x	x	x	x				x	x	x		x						x			x						x				x
Podedesmus rudis																										x																			
Pteria sp																																													x
Rupellaria sp																	x																												

DISCUSSION

The molluscan lithotope analysis and data assimilation program took much of the contract period to complete. This was partly because of late arrival of many samples and partly because of our decision to analyze both samples provided in most cases. With the data well in order, we hope to make time in the coming months to do some of the following:

a) Compare species distribution with other textural parameters;

b) Define assemblages and assemblage sequences;

c) Correlate species-weathering assemblages with substrate attributes;

d) Compare lithotope with biotope (after filtering out non-relatable species); and

e) Map critical species-weathering assemblages.

BIBLIOGRAPHY

Abbott, R. T., 1974. American Seashells, second edition. Van Nostrand Reinhold Co., New York, 663 p.

Parker, R. H. 1960. Ecology and distributional patterns of marine macro-invertebrates, northern Gulf of Mexico, pp. 302-337 in Shepard, F.P., et al. (Eds.), Recent Sediments, Northwest Gulf of Mexico. Amer. Assoc. Petroleum Geologists, 388 p.

Stanley, S. M., 1970. Relation of shell form to life habits of the bivalvia (mollusca). Geol. Soc. Amer. Mem. 125, 296 p.

APPENDIX I

Carbonate and Skeletal Constituent Composition

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 1A

DEPTH: 42'

LATITUDE: 29 55 00

LONGITUDE: 88 43 30

WHOLE SAMPLE DESCRIPTION:

SIZE FRACTION DESCRIPTIONS

4000-2000

MOLLUSC--yellowish gray, dull, mostly slightly worn fragments, one is bored, X-CARB.--dull, worn fragment.

2000-1000

YELLOWISH GRAY TO GREENISH GRAY, SHELLY CARBONATE SAND: MOLLUSC--mostly dull, slightly worn fragments, some with small borings; one dull, whole, slightly worn valve, INTRA--greenish gray, moderately-indurated aggregates, X-CARB.--dull, worn, bored fragments.

1000-500

VERY LIGHT GRAY, SHELLY CARBONATE SAND: MOLLUSC--fresh, angular fragments and dull, slightly worn fragments, some bored; some relatively fresh, whole snail shells, ECHINOID--dull, slightly worn plate fragments, INTRA--greenish gray, moderately-indurated aggregates, X-CARB.--dull, worn, fragments, some bored, QUARTZ--clear to slightly translucent, subangular, some quartz-blackened carbonate aggregates.

500-250

VERY LIGHT GRAY TO GREENISH GRAY, QUARTZITIC, SHELLY CARBONATE SAND: MOLLUSC--mostly dull, worn fragments, some slightly bored; fewer fresh, angular fragments, B. FORAM--fresh and whole,and whole, but worn; some chipped; some blackened, ECHINOID--fresh to slightly worn plate fragments, INTRA--greenish gray, friable aggregates, X-CARB.--dull, worn fragments, QUARTZ--clear to slightly translucent, mostly angular to subangular.

250-125

GREENISH GRAY, QUARTZITIC, FORAMINIFERAL CARBONATE SAND: MOLLUSC--mostly dull, worn fragments, B. FORAM--fresh and whole; whole but worn; many fragmented, INTRA--greenish gray, friable aggregates, X-CARB.--dull, worn fragments, QUARTZ--mostly clear, angular to subangular.

125-62.5

GREENISH GRAY, CARBONATE QUARTZ SAND: MOLLUSC--dull, worn fragments, B. FORAM--fresh and whole, INTRA--greenish gray, friable aggregates, B. CARB.--mostly worn, frosted fragments, X-CARB.--dull, worn fragments, QUARTZ--clear to slightly translucent, mostly angular to subangular.

GRAIN TYPES (%)[2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	80.0				20.0														5		5	100	0	0.11
2000-1000	80.0				10.0											10.0			20		20	100	0	0.08
1000-500	88.2	0.7			4.6		2.6									2.6	1.3		152	2	154	98.7	1.3	0.09
500-250	44.1	35.1	2.1		3.9	3.6	3.9		0.6							6.4	0.3		331	59	390	84.9	15.1	0.09
250-125	7.8	58.1			9.4	6.8	1.3	1.3								15.3			308	125	433	71.1	28.9	0.67
125-62.5	12.9	6.1	0.3		53.9	12.3	0.8				0.3					13.4			358	748	1106	32.4	67.6	1.04
Σ % > 62.5	17.23	12.02	0.23		45.58	10.66	0.91	0.23	tr		0.23					12.92	tr		1174	934	2108	55.7	44.3	87.88 < 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 2A

DEPTH: 78'

LATITUDE: 29 55 30
LONGITUDE: 88 33 30

WHOLE SAMPLE DESCRIPTION:

SIZE FRACTION DESCRIPTIONS

4000-2000
PINKISH GRAY, MOLLUSCAN SAND: MOLLUSC--worn, shiny, whole valves and fragments; dull, slightly worn and encrusted, whole valves and fragments; some valves are drilled.

500-250
YELLOWISH GRAY TO GREENISH GRAY, QUARTZITIC, SHELLY, FORAMINIFERAL CARBONATE SAND: MOLLUSC--mostly dull, worn, frosted fragments, B. FORAM--mostly fresh and whole; also whole, dull, worn, often chipped, ECHINOID--fresh, and dull and worn, plate and spine fragments, INTRA--friable aggregates, QUARTZ--clear to slightly translucent, mostly subangular to subrounded.

2000-1000
PINKISH GRAY, SHELLY CARBONATE SAND: MOLLUSC--fresh, angular fragments; worn, shiny fragments; and dull, slightly worn and encrusted fragments, some blackened, ECHINOID--dull, slightly worn plate fragments, CORALG.--dull, worn, bored fragments, WORM TUBE--fresh fragments, INTRA--moderately indurated aggregates, X-CARB.--frosted, worn to smoothed, fragments.

250-125
GREENISH GRAY, QUARTZITIC, SHELLY, FORAMINIFERAL CARBONATE SAND: MOLLUSC--worn, frosted fragments and fewer fresh, angular fragments, B. FORAM--fresh and whole, and whole, slightly worn and chipped; some fragments, ECHINOID--fresh to slightly worn, plate and spine fragments, INTRA--friable aggregates, X-CARB.--mostly worn, frosted fragments, QUARTZ--clear to slightly translucent, angular to subrounded.

1000-500
PINKISH GRAY TO YELLOWISH GRAY, QUARTZITIC, SHELLY CARBONATE SAND: MOLLUSC--mostly worn, shiny fragments and dull, slightly worn fragments, B. FORAM--dull, whole, slightly worn, ECHINOID--slightly worn plate fragments, INTRA--moderately indurated aggregates, X-CARB.--mostly dull, worn fragments, QUARTZ--clear to translucent, mostly subrounded.

125-62.5
GREENISH GRAY, FORAMINIFERAL, SHELLY, CARBONATE QUARTZ SAND: MOLLUSC--mostly worn, frosted fragments, B. FORAM--mostly fresh and whole, ECHINOID--fresh to slightly worn, plate and spine fragments, INTRA--friable aggregates, X-CARB.--worn, frosted fragments, QUARTZ--clear to slightly translucent, mostly angular to subangular.

GRAIN TYPES (%) [2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	100																		31		31	100	0	5.80
2000-1000	89.7				2.6		1.7						1.7			1.7	2.6		116		116	100	0	1.23
1000-500	81.9	2.1			5.1	0.7	8.5									1.0	0.7		293	25	318	92.1	7.9	0.42
500-250	39.3	45.7	1.1		0.8	0.3	8.3		0.5							4.0			372	146	518	71.8	28.2	0.61
250-125	10.5	70.9	2.3		3.1	0.9	8.3									4.0			351	13	364	96.4	3.6	1.46
125-62.5	26.7	23.8	0.6		12.2	3.8	6.3				0.3					26.3			319	349	668	47.8	52.2	10.64
Σ % > 62.5	62.05	16.85	0.49		4.94	1.39	3.69		tr		0.14					10.10	0.21		1482	533	2015	73.5	26.5	79.83

< 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 3A

DEPTH: 96'

LATITUDE: 29 53 30
LONGITUDE: 88 30 00

WHOLE SAMPLE DESCRIPTION:

SIZE FRACTION DESCRIPTIONS

4000-2000: MOLLUSC--pinkish gray; two whole valves, slightly worn and shiny; one slightly worn, shiny fragment; one dull, slightly worn, whole valve; one dull, worn,slightly bored fragment.

2000-1000: VERY LIGHT GRAY TO GREENISH GRAY, SHELLY,ECHINOIDAL CARBONATE SAND: MOLLUSC--dull, slightly worn fragments and fewer, slightly worn, shiny fragments, B. FORAM--dull, worn, slightly blackened, ECHINOID--fresh, to slightly worn, plate fragments.

1000-500: PINKISH GRAY TO GREENISH GRAY, QUARTZITIC,SHELLY, ECHINOIDAL CARBONATE SAND: MOLLUSC--dull, worn, frosted fragments, some slightly bored; fewer slightly worn, shiny fragments, B. FORAM--mostly whole, fresn to slightly worn, ECHINOID--fresh to slightly worn, plate fragments, QUARTZ--clear to slightly translucent, mostly subrounded.

500-250: GREENISH GRAY, QUARTZITIC, ECHINOIDAL, FORAMINIFERAL CARBONATE SAND: MOLLUSC--worn, frosted fragments, B. FORAM--mostly whole, fresh and worn, P. FORAM--mostly fresh and whole, ECHINOID--fresh to slightly worn, plate and spine fragments, QUARTZ--clear to slightly translucent, mostly subangular to subrounded.

250-125: LIGHT OLIVE GRAY, QUARTZITIC, FORAMINIFERAL CARBONATE SAND: MOLLUSC--worn, frosted fragments, B. FORAM--whole and fresh, and worn fragments; some agglutinated forms, ECHINOID--mostly fresh spine and plate fragments, INTRA--greenish gray, friable aggregates, QUARTZ--clear to slightly translucent, mostly angular to subrounded.

125-62.5: LIGHT OLIVE GRAY, SHELLY, CARBONATE QUARTZ SAND: MOLLUSC--mostly worn, frosted fragments; some fresh, angular fragments, B. FORAM--mostly whole, fresh to worn, ECHINOID--mostly fresh plate and spine fragments, INTRA--greenish gray, friable aggregates, X-CARB.--mostly worn, frosted fragments, QUARTZ--clear to slightly translucent, mostly very angular to subangular.

GRAIN TYPES (%) [2]

SIZE FRACTIONS (µ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	100																		5		5	100	0	0.13
2000-1000	48.3	1.7					50.0												60		60	100	0	0.24
1000-500	38.0	6.7	0.6		0.8		53.3									0.6			360	22	382	94.2	5.8	0.27
500-250	4.1	58.4	8.7		2.0		25.0		1.2							0.3		0.3	344	113	457	75.3	24.7	1.29
250-125	4.0	66.7	3.4		2.4	0.6	14.7		1.8							6.4			327	72	399	82.0	18.0	4.58
125-62.5	41.4	18.8	1.3		18.5	3.6	2.9	0.6	0.6		0.3					12.0			309	569	878	35.2	64.8	14.32
Σ % > 62.5	25.31	38.98	2.6		10.01	1.93	11.45	0.29	1.06		0.19					8.09		tr	1405	776	2181	64.4	35.6	79.14 < 62 µ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 4A

DEPTH: 90'

LATITUDE: 29 48 00

LONGITUDE: 88 31 30

WHOLE SAMPLE DESCRIPTION:

SIZE FRACTION DESCRIPTIONS

4000-2000
MOLLUSC--white, dull, worn, slightly bored fragment, ECHINOID--slightly worn, plate fragment.

2000-1000
WHITE TO LIGHT OLIVE GRAY, SHELLY ECHINOIDAL CARBONATE SAND: MOLLUSC--mostly shiny, slightly worn, whole valves, and fragments; one frosted, worn, slightly bored, blackened fragment, ECHINOID--fresh to slightly worn, plate fragments.

1000-500
VERY LIGHT GRAY TO LIGHT OLIVE GRAY, SHELLY, ECHINOIDAL CARBONATE SAND: MOLLUSC--mostly dull, slightly worn, frosted and/or slightly bored fragments; fewer fresh, angular fragments, B. FORAM--mostly whole, but dull and slightly worn, ECHINOID--fresh to slightly worn, plate and spine fragments, INTRA--olive gray, moderately indurated aggregates, QUARTZ--slightly translucent, subangular.

500-250
LIGHT OLIVE GRAY, ECHINOIDAL, FORAMINIFERAL CARBONATE SAND: MOLLUSC--mostly dull, worn, frosted fragments, B. FORAM--fresh and whole, and whole, but worn and often chipped, ECHINOID--mostly fresh plate and spine fragments, QUARTZ--clear to slightly translucent, mostly angular to subrounded.

250-125
LIGHT OLIVE GRAY, QUARTZITIC, ECHINOIDAL, FORAMINIFERAL CARBONATE SAND: MOLLUSC--mostly dull, worn, frosted fragments, B. FORAM--mostly whole, fresh and worn; some are chipped, ECHINOID--fresh plate and spine fragments, INTRA--greenish gray, friable aggregates, QUARTZ--clear to slightly translucent, mostly angular to subangular.

125-62.5
GREENISH GRAY, SHELLY, FORAMINIFERAL, CARBONATE QUARTZ SAND: MOLLUSC--mostly dull, frosted, worn fragments, B. FORAM--mostly whole, fresh to slightly worn, ECHINOID--fresh plate and spine fragments, INTRA--greenish gray, friable aggregates, X-CARB.--worn, frosted fragments, QUARTZ--clear to slightly translucent, mostly angular to subangular.

GRAIN TYPES (%)[2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	50.0						50.0												2		2	100	0	0.02
2000-1000	17.9						82.1												28		28	100	0	0.07
1000-500	26.5	7.9			2.6	1.1	60.3		0.5							1.1			189	1	190	99.5	0.5	0.09
500-250	4.0	62.0	2.6		0.3	0.9	29.0		0.9							0.3			348	15	363	95.9	4.1	0.23
250-125	5.4	73.1	1.3		1.0	1.0	16.0									2.2			312	51	363	86.0	14.0	1.30
125-62.5	18.2	21.2	1.2		31.6	7.8	11.3	0.3								8.4			335	567	902	37.1	62.9	10.86
Σ % > 62.5	15.32	32.97	1.44		23.06	5.77	14.95	tr	tr							6.49			1214	634	1848	65.7	34.3	37.41 < 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 5A

DEPTH: 102'

LATITUDE: 29 55 30

LONGITUDE: 88 25 00

WHOLE SAMPLE DESCRIPTION:

SIZE FRACTION DESCRIPTIONS

4000-2000

WHITE TO LIGHT OLIVE GRAY, MOLLUSCAN ECHINOIDAL PLATE SAND: MOLLUSC--dull, slightly worn fragments, ECHINOID--dull, slightly worn, plate fragments.

2000-1000

PINKISH GRAY TO LIGHT OLIVE GRAY, ECHINOIDAL, MOLLUSCAN SAND: MOLLUSC--shiny, slightly worn fragments and dull, worn fragments, some slightly bored; fewer fresh, angular fragments, ECHINOID--fresh to slightly worn, plate fragments, X-CARB.--dull, worn, bored fragment.

1000-500

PINKISH GRAY TO LIGHT OLIVE GRAY, ECHINOIDAL, MOLLUSCAN CARBONATE SAND: MOLLUSC--dull, slightly worn fragments, some slightly bored; some relatively fresh, angular fragments, B. FORAM--mostly whole, dull and slightly worn, ECHINOID--fresh to slightly worn, plate and spine fragments, BRYOZOA--dull, slightly worn fragments, QUARTZ--clear to translucent, angular to subangular.

500-250

PINKISH GRAY TO GREENISH GRAY, QUARTZITIC, SHELLY, FORAMINIFERAL CARBONATE SAND: MOLLUSC--mostly dull, slightly worn fragments; some fresh, angular fragments, B. FORAM--mostly fresh and whole,and whole, but worn and often chipped, P. FORAM--mostly whole, fresh to slightly dull, ECHINOID--mostly fresh plate and spine fragments, OSTRACODS--fresh to slightly worn, whole valves, INTRA--greenish gray, friable aggregates, QUARTZ--clear to translucent, mostly angular to subangular.

250-125

GREENISH GRAY, QUARTZITIC, FORAMINIFERAL CARBONATE SAND: MOLLUSC--mostly worn, frosted fragments, B. FORAM--mostly whole, and whole, but worn and often chipped, ECHINOID--mostly fresh plate and spine fragments, INTRA--olive gray, friable aggregates, OSTRACOD--relatively fresh, whole valves and fragments, QUARTZ--clear to translucent, mostly angular to subangular.

125-62.5

LIGHT OLIVE GRAY, SHELLY, CARBONATE QUARTZ SAND: MOLLUSC--worn, frosted fragments and fewer relatively fresh, angular fragments, B. FORAM--mostly whole, fresh and worn, ECHINOID--mostly fresh plate and spine fragments, INTRA--olive gray, friable aggregates, X-CARB.--worn, frosted fragments, QUARTZ--clear to slightly translucent, mostly very angular to subangular.

GRAIN TYPES (%)[2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	21.4						78.6												14		14	100	0	0.11
2000-1000	50.8				1.5		47.7												65		65	100	0	0.34
1000-500	51.4	4.4			0.8	0.3	42.0		0.3			0.8							362	6	36S	98.4	1.6	0.34
500-250	18.1	50.7	6.2		2.0	0.6	17.6	0.3	2.5							2.8			353	31	384	91.9	8.1	0.72
250-125	9.6	61.3	2.5		2.8		12.7		3.4							7.7			323	38	361	89.5	10.5	4.57
125-62.5	39.9	19.5	1.0		22.1	2.6	5.5				0.6					8.8			308	550	858	35.9	64.1	19.34
Σ % > 62.5	29.19	33.84	1.68		13.47	1.44	11.31	tr	1.28		0.32	tr				7.46			1425	625	2050	69.5	30.5	74.54

< 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 6A

DEPTH: 96'

LATITUDE: 29 58 30

LONGITUDE: 88 21 00

WHOLE SAMPLE DESCRIPTION:

SIZE FRACTION DESCRIPTIONS

4000-2000: YELLOWISH GRAY, ECHINOIDAL, MOLLUSCAN SAND: MOLLUSC--mostly shiny, slightly worn, whole or slightly chipped valves; some dull, slightly worn valves, one drilled; some relatively fresh fragments; ECHINOID--dull, very slightly worn, plate fragments.

2000-1000: YELLOWISH GRAY, SHELLY CARBONATE SAND: MOLLUSC--shiny, slightly worn whole and fragmented valves; fewer dull, slightly worn fragments; some dull, worn blackened fragments; some encrusted fragments, ECHINOID--dull, slightly worn, plate fragments, INTRA--light olive gray, slightly-indurated aggregates.

1000-500: YELLOWISH GRAY TO MEDIUM LIGHT GRAY, QUARTZITIC, SHELLY CARBONATE SAND: MOLLUSC--fresh to slightly worn fragments; dull, worn, often bored fragments; and fewer worn, blackened fragments, B. FORAM--fresh and whole, and whole, but dull, worn, often fragmented, ECHINOID--fresh to slightly worn plate fragments, INTRA--friable aggregates, QUARTZ--clear to slightly translucent, angular to rounded.

500-250: LIGHT OLIVE GRAY, QUARTZITIC, SHELLY CARBONATE SAND: MOLLUSC--fresh angular fragments, and dull, slightly worn fragments, some slightly bored; some blackened, B. FORAM--mostly whole, fresh to worn, ECHINOID--fresh to slightly worn, plate and spine fragments, INTRA--very friable aggregates, QUARTZ--clear to slightly translucent, mostly angular to subrounded.

250-125: GREENISH GRAY, FORAMINIFERAL, SHELLY, CARBONATE QUARTZ SAND: MOLLUSC--mostly fresh, angular fragments and dull, slightly worn fragments, B. FORAM--mostly whole, fresh to worn, ECHINOID--fresh to slightly worn, plate and spine fragments, INTRA--olive gray, friable aggregates, X-CARB.--dull, worn fragments, QUARTZ--clear to slightly translucent, mostly angular to subangular.

125-62.5: GREENISH GRAY, SHELLY, CARBONATE QUARTZ SAND: MOLLUSC--mostly dull, slightly worn fragments, B. FORAM--mostly whole, fresh to slightly worn, ECHINOID--relatively fresh plate and spine fragments, INTRA--olive gray, friable aggregates, X-CARB.--dull, worn fragments, QUARTZ--clear to slightly translucent, mostly angular to subangular.

GRAIN TYPES (%)[2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	66.4						13.6												22		22	100	0	1.40
2000-1000	87.3						9.9									2.8			71		71	100	0	1.03
1000-500	83.0	2.8					7.1		0.6							5.7	0.8		354	16	370	95.7	4.3	0.96
500-250	54.4	16.5	0.8		1.1	1.4	4.9	0.3	1.1							19.2	0.3		369	208	577	64.0	36.0	3.83
250-125	33.5	37.7	2.3		5.5	1.9	11.0		1.6	0.3						6.2			308	390	698	44.1	55.9	17.77
125-62.5	50.0	14.9	1.3		13.2	3.2	11.9		0.3	0.3						4.9			310	674	984	31.5	68.5	37.54
Σ % > 62.5	50.02	20.22	1.37		7.93	2.20	10.76	0.04	0.78	0.24						6.36	0.08		1434	1288	2722	52.7	47.3	37.38 < 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT. %) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 7A

DEPTH: 105'

LATITUDE: 29 56 00

LONGITUDE: 88 15 00

WHOLE SAMPLE DESCRIPTION:

SIZE FRACTION DESCRIPTIONS

4000-2000: PINKISH GRAY TO MEDIUM DARK GRAY, MOLLUSCAN SAND: MOLLUSC--shiny, fresh, whole and slightly broken valves; some dull, slightly worn, whole to slightly broken valves; two dull, worn, corroded, blackened fragments.

2000-1000: PINKISH GRAY TO MEDIUM DARK GRAY, SHELLY CARBONATE SAND: MOLLUSC--fresh, angular, shiny fragments; dull, slightly worn fragments; and dull, worn, bored and/or blackened fragments, ECHINOID--relatively fresh, slightly worn plate fragments.

1000-500: PINKISH GRAY TO MEDIUM GRAY, QUARTZITIC, SHELLY CARBONATE SAND: MOLLUSC--fresh, shiny, angular fragments and dull, worn fragments, many blackened, ECHINOID--fresh to slightly worn, plate fragments, B. FORAM--mostly whole, fresh to slightly worn, QUARTZ--mostly slightly translucent, subangular.

500-250: LIGHT OLIVE GRAY, QUARTZITIC, SHELLY CARBONATE SAND: MOLLUSC--fresh, angular fragments and dull, worn fragments, some blackened, B. FORAM--mostly whole, fresh to worn, P. FORAM--fresh and whole, ECHINOID--mostly fresh, plate and spine fragments, QUARTZ--clear to slightly translucent, mostly subangular to subrounded.

250-125: LIGHT OLIVE GRAY, QUARTZITIC, SHELLY CARBONATE SAND: MOLLUSC--mostly dull, worn fragments; some fresh, angular fragments, B. FORAM--mostly whole, fresh to worn, ECHINOID--fresh plate and spine fragments, INTRA--olive gray, friable aggregates, OSTRACOD--fresh and worn, whole and fragments; some are articulated, QUARTZ--clear to slightly translucent, mostly angular to subangular.

125-62.5: LIGHT OLIVE GRAY, SHELLY, CARBONATE QUARTZ SAND: MOLLUSC--mostly worn, frosted fragments, B. FORAM--mostly whole fresh to worn, ECHINOID--fresh plate and spine fragments, INTRA--olive gray to black, friable aggregates, X-CARB.--worn, frosted fragments, QUARTZ--clear to slightly translucent, mostly angular to subangular.

GRAIN TYPES (%)[2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	100																		13		13	100	0	0.55
2000-1000	95.8						4.2												72		72	100	0	0.71
1000-500	86.2	4.4			0.3	0.3	8.5										0.3		317	12	329	96.3	3.7	0.99
500-250	42.2	21.1	5.1		4.1	1.9	14.7		1.3							9.3	0.3		313	125	438	71.5	28.5	2.52
250-125	48.1	21.0	1.5		4.8	1.2	14.4		3.6							5.4			333	253	586	56.8	43.2	17.69
125-62.5	43.9	19.0	1.2		10.0	3.3	13.0	0.3	0.6	0.3						8.4			331	847	1178	28.1	71.9	48.03
Σ % > 62.5	49.27	18.50	1.45		6.89	2.18	13.03	0.14	1.67	0.15						6.68	0.04		1379	1237	2616	52.7	47.3	29.13 < 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 8A DEPTH: 78' LATITUDE: 30 01 30
LONGITUDE: 88 12 00

WHOLE SAMPLE DESCRIPTION:

SIZE FRACTION DESCRIPTIONS

4000-2000

MOLLUSC--mostly dull, worn fragments, many blackened; one slightly worn, shiny, whole valve, ECHINOID--dull, yellowish gray, plate fragments.

2000-1000

YELLOWISH GRAY TO MEDIUM DARK GRAY, SHELLY CARBONATE SAND: MOLLUSC--mostly dull, worn fragments, many blackened; fewer shiny, slightly worn fragments, B. FORAM--dull, worn, blackened fragment, ECHINOID--dull, slightly worn, plate fragments, BRYOZOA--dull, slightly worn, infilled fragments.

1000-500

YELLOWISH GRAY TO MEDIUM DARK GRAY, QUARTZITIC, SHELLY CARBONATE SAND: MOLLUSC--mostly dull, worn, fragments, often frosted and/or blackened; fewer fresh, angular fragments, ECHINOID--fresh and dull plate fragments, INTRA--friable aggregates, QUARTZ--clear to slightly translucent, mostly subangular to subrounded.

500-250

GREENISH GRAY, SHELLY, CARBONATE QUARTZ SAND: MOLLUSC--mostly dull, worn fragments, some blackened, B. FORAM--mostly whole, fresh and worn, ECHINOID--fresh, and dull, slightly worn, plate and spine fragments, INTRA--olive gray, friable aggregates, QUARTZ--clear to slightly translucent, mostly subangular to subrounded.

250-125

LIGHT OLIVE GRAY, SHELLY, CARBONATE QUARTZ SAND: MOLLUSC--mostly worn, frosted fragments, B. FORAM--mostly whole, fresh and worn, ECHINOID--mostly fresh plate and spine fragments, INTRA--friable aggregates, QUARTZ--clear to slightly translucent, mostly angular to subangular.

125-62.5

GREENISH GRAY, SHELLY, CARBONATE QUARTZ SAND: MOLLUSC--mostly worn frosted fragments, B. FORAM--mostly whole, fresh and worn, ECHINOID--mostly fresh plate and spine fragments, INTRA--friable aggregates, QUARTZ--clear to slightly translucent, mostly angular to subangular.

GRAIN TYPES (%)[2]

SIZE FRACTIONS (µ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	62.5						37.5												8		8	100	0	0.61
2000-1000	86.5	2.7					5.4					5.4							37		37	100	0	0.54
1000-500	87.7	0.5			0.5	0.3	9.5									1.2	0.3		399	126	525	76.0	24.0	1.38
500-250	80.9	4.9	0.3		2.3	2.3	7.2	0.3	0.3							1.5			346	1201	1547	22.4	77.6	6.50
250-125	43.8	17.4	1.9		6.0	4.7	19.6		0.6	0.6						5.4			317	2071	2388	13.3	86.7	59.25
125-62.5	46.8	16.6	0.9		15.0	7.6	8.3									4.8			314	2567	2881	10.9	89.1	21.56
Σ % > 62.5	54.00	13.32	1.30		6.19	4.17	15.84	0.07	0.43	0.36		0.22				4.10	tr		1421	5965	7386	19.2	80.8	10.02

< 62 µ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 9A DEPTH: 102' LATITUDE: 29 53 30

LONGITUDE: 88 12 30

WHOLE SAMPLE DESCRIPTION:

SIZE FRACTION DESCRIPTIONS

4000-2000: PINKISH GRAY TO MEDIUM DARK GRAY, SHELLY CARBONATE SAND: MOLLUSC--mostly dull, worn fragments, some blackened and/or bored; one is drilled; one is encrusted, ECHINOID--dull, plate fragment.

2000-1000: YELLOWISH GRAY TO MEDIUM DARK GRAY, SHELLY CARBONATE SAND: MOLLUSC--mostly dull, worn fragments, often bored and/or blackened; some fresh, shiny, angular fragments, ECHINOID--dull, slightly worn fragments, INTRA--olive gray, friable aggregates, BRYOZOA--dull, worn infilled fragment

1000-500: YELLOWISH GRAY TO MEDIUM DARK GRAY, SHELLY CARBONATE SAND: MOLLUSC--mostly worn, dull to frosted, fragments, many blackened; some are bored; fewer fresh, angular fragments, B. FORAM--mostly whole and worn, ECHINOID--fresh to slightly worn plate fragments, INTRA--olive gray, friable aggregates, QUARTZ--clear to slightly translucent, mostly subangular.

500-250: LIGHT OLIVE GRAY, SHELLY, CARBONATE QUARTZ SAND: MOLLUSC--mostly dull to frosted, worn fragments, many blackened; fewer fresh, angular fragments, B. FORAM--mostly whole, fresh and worn, ECHINOID--fresh to worn, plate and spine fragments, INTRA--olive gray, friable aggregates, QUARTZ--clear to slightly translucent, mostly subangular to subrounded.

250-125: LIGHT OLIVE GRAY, SHELLY, CARBONATE QUARTZ SAND: MOLLUSC--mostly worn, frosted fragments, B. FORAM--mostly whole, fresh and worn, ECHINOID--mostly fresh plate and spine fragments, INTRA--friable aggregates, QUARTZ--clear to slightly translucent, mostly very angular to angular.

125-62.5: LIGHT OLIVE GRAY, SHELLY, CARBONATE QUARTZ SAND: MOLLUSC--mostly worn, frosted fragments, B. FORAM--mostly whole, fresh and worn, ECHINOID--mostly fresh plate and spine fragments, INTRA--friable aggregates, X-CARB.--worn, frosted fragments, QUARTZ--clear to slightly translucent, mostly angular to subangular.

GRAIN TYPES (%)[2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	94.7						5.3												19		19	100	0	2.09
2000-1000	94.9						2.3					0.5				0.9	1.4		218		218	100	0	2.35
1000-500	85.2	4.0	0.3		0.5	0.3	5.9					1.1				1.9	0.8		372	9	381	97.6	2.4	3.85
500-250	72.2	9.0	0.3		4.7	3.8	4.7	0.6	0.6							3.8	0.3		316	495	811	39.0	61.0	13.75
250-125	33.1	24.7	3.6		6.8	6.2	15.6	0.3	0.6							9.1			308	791	1099	28.0	72.0	39.31
125-62.5	36.2	13.2	2.3		18.7	5.9	12.2			0.3	1.3					9.9			304	1214	1518	20.0	80.0	26.06
Σ % > 62.5	56.46	13.56	1.85		6.71	4.03	10.07	0.20	0.34	0.03	0.23	0.17				6.08	0.27		1537	2509	4046	38.0	62.0	12.24 < 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 10A DEPTH: 114' LATITUDE: 29 48 00

LONGITUDE: 88 13 00

WHOLE SAMPLE DESCRIPTION:

SIZE FRACTION DESCRIPTIONS

4000-2000: YELLOWISH GRAY, SHELLY CARBONATE SAND: MOLLUSC--mostly dull, worn fragments, some bored and/or encrusted; one valve has a worn beak, ECHINOID--dull, slightly worn plate fragments, BRYOZOA--dull, slightly worn fragments.

500-250: OLIVE GRAY, QUARTZITIC, SHELLY CARBONATE SAND: MOLLUSC--mostly worn, dull to frosted fragments, many blackened; some are bored; fewer fresh, angular fragments, B. FORAM--mostly whole, fresh to worn, ECHINOID--fresh to slightly worn plate fragments, QUARTZ--clear to slightly translucent, mostly subangular to subrounded.

2000-1000: YELLOWISH GRAY, SHELLY CARBONATE SAND: MOLLUSC--mostly dull, worn fragments, some bored and/or blackened, ECHINOID--dull, slightly worn, plate fragments, BRYOZOA--dull, worn, infilled fragments.

250-125: LIGHT OLIVE GRAY, FORAMINIFERAL, SHELLY, CARBONATE QUARTZ SAND: MOLLUSC--mostly dull, worn, frosted fragments, some blackened, B. FORAM--mostly whole, fresh and worn, P. FORAM--mostly fresh and whole, ECHINOID--fresh to slightly worn, plate and spine fragments, OSTRACOD--fresh to slightly worn, whole and fragmented valves, QUARTZ--clear to slightly translucent, mostly angular to subangular.

1000-500: YELLOWISH GRAY TO MEDIUM GRAY, SHELLY CARBONATE SAND: MOLLUSC--mostly worn, dull to frosted fragments, many blackened; some are bored; some whole valves with worn beaks, B. FORAM--mostly whole, fresh and worn, ECHINOID--fresh to slightly worn plate fragments, QUARTZ--clear to slightly translucent, mostly subangular.

125-62.5: LIGHT OLIVE GRAY, SHELLY, CARBONATE QUARTZ SAND: MOLLUSC--mostly worn, frosted fragments, B. FORAM--mostly whole, fresh and worn, ECHINOID--fresh plate and spine fragments, INTRA--friable aggregates, X-CARB.--worn, frosted fragments, QUARTZ--clear to slightly translucent, mostly angular to subangular.

GRAIN TYPES (%)[2]

SIZE FRACTIONS (µ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	86.2						6.9					6.9							29		29	100	0	2.19
2000-1000	93.8						3.1					3.1							130		130	100	0	1.71
1000-500	84.8	6.1	0.5		0.8	0.8	5.9					0.5			0.3	0.3			375	3	378	99.2	0.8	3.66
500-250	63.9	19.4	2.3		2.3	0.9	8.9					1.4			0.9				349	54	403	86.6	13.4	7.47
250-125	34.6	27.8	4.4		9.8	3.8	11.8	0.9	3.6			0.9			2.4				338	419	757	44.6	55.4	36.88
125-62.5	46.1	13.2	0.9		20.7	1.3	11.3		0.6	0.3					5.6				319	1063	1382	23.1	76.9	33.79
Σ % > 62.5	52.26	18.50	2.51		8.94	2.14	9.93	0.39	1.67	0.05		1.20			2.38	0.03			1540	1539	3079	50.0	50.0	[illegible]4.13

< 62 µ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 11A

DEPTH: 114'

LATITUDE: 29 43 30

LONGITUDE: 87 54 30

WHOLE SAMPLE DESCRIPTION:

SIZE FRACTION DESCRIPTIONS

4000-2000: MEDIUM GRAY, SHELLY CARBONATE SAND: MOLLUSC--dull, pitted fragments, mostly blackened, BRYOZOA--relatively fresh and whole.

2000-1000: DARK GRAY, MOLLUSCAN CARBONATE SAND: MOLLUSC--predominately blackened, pitted and worn, rounded fragments, BRYOZOA--slightly dull and whole.

1000-500: WHITE TO DARK GRAY, QUARTZITIC SHELLY CARBONATE SAND: MOLLUSC--many worn, shiny, blackened fragments and dull, pitted fragments; some fresh, angular fragments, B. FORAM--relatively fresh and whole, but with chipped edges, X-CARB.--worn, equant fragments, QUARTZ--clear to translucent, subangular to subrounded.

500-250: LIGHT OLIVE GRAY CARBONATE QUARTZ SAND: MOLLUSC--mostly relatively fresh, angular fragments; some worn to smoothed, shiny, blackened fragments, B. FORAM--mostly fresh and whole, some with chipped edges, X-CARB.--dull, frosted, worn fragments, QUARTZ--clear to translucent, subangular to subrounded.

250-125: LIGHT OLIVE GRAY, CARBONATE QUARTZ SAND: MOLLUSC--relatively fresh, angular fragments; fresh whole snail shells, B. FORAM--mostly fresh and whole, X-CARB.--worn, shiny or frosted fragments, QUARTZ--clear to translucent, subangular to subrounded.

125-62.5: LIGHT OLIVE GRAY, CARBONATE QUARTZ SAND: MOLLUSC--worn, frosted fragments, B. FORAM--mostly fresh and whole; some fragments, X-CARB.--worn, frosted fragments, B. CARB.--rounded polished fragments, INTRA--friable aggregates, QUARTZ--clear to translucent, subangular to subrounded.

GRAIN TYPES (%) [2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	39.4				5.3							5.3							19		19	100		4.11
2000-1000	95.9				0.7							3.4							146		146	100		4.84
1000-500	77.0	7.9			10.6	2.4	0.5					1.6							379	243	622	60.9	39.1	8.46
500-250	37.0	6.5	0.7		50.6	3.3	1.6					0.3							308	929	1237	24.9	75.1	51.03
250-125	24.1	5.6	0.6		63.3	3.7	1.2	0.6				0.3				0.6			321	1162	1483	21.6	78.4	27.57
125-62.5	23.9	5.9	0.3		39.8	20.4	5.9	0.9		0.3						2.6			339	1281	1620	20.9	79.1	1.09
Σ % > 62.5	65.98	4.79	0.39		33.60	2.45	0.91	0.12		tr		1.61				0.15			1512	3615	5127	29.5	70.5	2.30 < 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 12A

DEPTH: 120'

LATITUDE: 29 45 30

LONGITUDE: 87 46 30

WHOLE SAMPLE DESCRIPTION:

SIZE FRACTION DESCRIPTIONS

4000-2000: MEDIUM DARK GRAY, SHELLY CARBONATE SAND: MOLLUSC--worn to smoothed, or pitted and bored, fragments, many blackened; some are encrusted.

2000-1000: MEDIUM GRAY, QUARTZITIC, SHELLY CARBONATE SAND: MOLLUSC--dull, slightly worn to smoothed fragments, many blackened; fewer relatively fresh, angular fragments, BRYOZOA--dull, infilled, QUARTZ--mostly translucent, subrounded.

1000-500: OLIVE GRAY, SHELLY, CARBONATE QUARTZ SAND: MOLLUSC--dull, pitted and bored fragments or worn to smoothed, shiny fragments; many are blackened, X-CARB.--dull to frosted, worn fragments, QUARTZ--clear to translucent, subrounded

500-250: LIGHT OLIVE GRAY, CARBONATE QUARTZ SAND: MOLLUSC--dull to frosted fragments, B. FORAM--relatively fresh and whole; some are chipped, X-CARB.--dull to frosted, worn fragments, QUARTZ--clear to translucent, subangular to subrounded.

250-125: LIGHT OLIVE GRAY, CARBONATE QUARTZ SAND: MOLLUSC--dull to frosted fragments, B. FORAM--relatively fresh and whole, ECHINOID--relatively fresh plate fragments, X-CARB.--dull to frosted, worn fragments, QUARTZ--mostly clear, subangular to subrounded.

125-62.5: LIGHT OLIVE GRAY, CARBONATE QUARTZ SAND: MOLLUSC--dull to frosted, mostly angular fragments, ECHINOID--fresh plate fragments, INTRA--friable aggregates, QUARTZ--clear to translucent, subangular to subrounded.

GRAIN TYPES (%)[2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	95.0				2.0	3.0													61		61	100	0	17.50
2000-1000	92.0				1.0	2.0						5.0							361	25	386	93.5	6.5	9.03
1000-500	54.3	2.2			31.3	8.9	1.5		0.3			1.5							326	751	1077	30.3	69.7	16.29
500-250	32.1	6.2	0.9		42.1	14.6	2.2	0.6				0.3				0.9			321	2414	2735	11.7	88.3	48.29
250-125	16.6	3.8			54.3	12.1	3.5	1.3	0.7							7.7			313	2641	2954	10.6	89.4	4.98
125-62.5	11.4	1.7	0.3		44.3	23.0	4.4	0.6			0.6					13.7			343	1240	1583	21.7	78.3	0.21
Σ % > 62.5	78.12	1.29	0.14		12.59	5.47	0.59	0.11	0.05		tr	1.37				0.27			1725	7071	8796	19.6	80.4	3.63 < 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 13A

DEPTH: 114'

LATITUDE: 29 38 30

LONGITUDE: 87 45 00

WHOLE SAMPLE DESCRIPTION:

SIZE FRACTION DESCRIPTIONS

4000-2000: PINKISH GRAY, SHELLY CARBONATE SAND: MOLLUSC--three are slightly worn, angular fragments; one is a dull, pitted fragment.

2000-1000: PINKISH GRAY, SHELLY CARBONATE SAND: MOLLUSC--dull, pitted, worn fragments; fewer relatively fresh, angular fragments, PELLET--ellipsoidal and friable, B. FORAM--relatively fresh and whole, BRYOZOA--dull, slightly infilled.

1000-500: YELLOWISH GRAY, SHELLY, CARBONATE QUARTZ SAND: MOLLUSC--dull to frosted, worn fragments; fewer relatively fresh, angular fragments, INTRA--friable aggregates, X-CARB.--dull, frosted, worn fragments, QUARTZ--clear to slightly translucent, subrounded.

500-250: LIGHT OLIVE GRAY, CARBONATE QUARTZ SAND: MOLLUSC--dull to frosted, worn fragments, INTRA--friable aggregates, B. FORAM--relatively fresh, whole and fragments, X-CARB.--dull to frosted, worn fragments, QUARTZ--clear to translucent, subangular to subrounded.

250-125: LIGHT OLIVE GRAY, CARBONATE QUARTZ SAND: MOLLUSC--dull to frosted, worn fragments, B. FORAM--relatively fresh and whole, some chipped, ECHINOID--relatively fresh plate fragments, X-CARB.--dull to frosted, worn fragments, QUARTZ--clear to translucent, subangular to subrounded.

125-62.5: GREENISH GRAY, CARBONATE QUARTZ SAND: MOLLUSC--frosted, worn fragments, INTRA--friable aggregates, B. CARB.--mostly smoothed, shiny fragments, X-CARB.--dull to frosted, worn fragments, QUARTZ--clear to translucent, angular to subrounded.

GRAIN TYPES (%)[2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	100																		4		4	100	0	0.51
2000-1000	88.4	3.8						3.8				3.8							26		26	100	0	0.71
1000-500	83.8	3.1			6.3		0.6					0.6				5.6			160	195	355	45.1	54.9	1.52
500-250	14.0	7.1			61.8	4.3	5.0									7.8			322	3312	3634	8.9	91.1	28.14
250-125	8.5	8.8			61.4	10.7	5.3		0.6							4.7			319	4440	4759	6.7	93.3	65.49
125-62.5	8.0	1.2	0.3		25.9	58.1	2.8									3.7			324	1885	2209	14.7	85.3	1.82
Σ % > 62.5	27.12	6.84	tr		47.96	8.16	3.97	0.33	0.33			0.33				4.96			1155	9832	10,987	10.5	89.5	1.82 < 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 14A

DEPTH: 114'

LATITUDE: 29 36 00

LONGITUDE: 87 48 00

WHOLE SAMPLE DESCRIPTION:

SIZE FRACTION DESCRIPTIONS

4000-2000

MOLLUSC--dull, worn pitted fragments, one blackened, ECHINOID--relatively fresh plate fragment.

2000-1000

LIGHT OLIVE GRAY, SHELLY CARBONATE SAND: MOLLUSC--dull, worn, pitted fragments; fewer angular, blackened, bored fragments, WORM TUBE--dull, pitted fragments, QUARTZ--subrounded, translucent.

1000-500

LIGHT OLIVE GRAY, QUARTZITIC, SHELLY CARBONATE SAND: MOLLUSC--dull, worn, pitted and bored fragments, some blackened; fewer relatively fresh, angular, thin fragments, B. FORAM--whole, dull, chipped; some encrusted, X-CARB.--dull, worn fragments, QUARTZ--clear to translucent, subrounded.

500-250

LIGHT OLIVE GRAY, CARBONATE QUARTZ SAND: MOLLUSC--dull to frosted fragments, some pitted, B. FORAM--dull fragments, some with chipped edges, X-CARB.--dull, worn, frosted fragments, QUARTZ--clear to translucent, subangular to subrounded.

250-125

LIGHT OLIVE GRAY, CARBONATE QUARTZ SAND: MOLLUSC--dull, frosted fragments, B. FORAM--relatively fresh and whole, some with chipped edges, X-CARB.--dull to frosted, worn fragments, QUARTZ--clear to translucent, subangular to subrounded.

125-62.5

OLIVE GRAY CARBONATE QUARTZ SAND: MOLLUSC--frosted, worn fragments, B. CARB.--frosted, shiny fragments, ECHINOID--spine and plate fragments, some blackened, X-CARB.--worn, frosted fragments, QUARTZ--clear to translucent, subangular to subrounded.

GRAIN TYPES (%)[2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	75.0						25.0												4		4	100	0	0.91
2000-1000	93.0											2.3					4.7		43	2	45	95.6	4.4	1.11
1000-500	20.5	8.5			5.9	0.4	0.9					2.1				0.4	1.3		236	148	384	61.5	38.5	1.51
500-250	16.7	13.9	0.9		56.5	3.2	4.1		1.3			0.6				2.8			317	2668	2985	10.6	89.4	25.98
250-125	15.8	14.6	0.3		55.7	3.5	6.3		0.6							3.2			316	3202	3518	9.0	91.0	65.66
125-62.5	8.2	1.3	0.3		40.8	41.5	4.9		0.7		0.3					2.0			306	1742	2048	14.9	85.1	2.32
Σ % > 62.5	32.24	11.17	0.34		42.32	3.69	6.21		0.67		tr	0.50				2.35	0.50		1222	7762	8984	13.6	86.4	2.11 < 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 15A

DEPTH: 174'

LATITUDE: 29 30 30

LONGITUDE: 87 47 00

WHOLE SAMPLE DESCRIPTION:

SIZE FRACTION DESCRIPTIONS

4000-2000: ECHINOID--gray, dull, perforated fragment.

2000-1000: WHITE TO GRAY, SHELLY CARBONATE SAND: MOLLUSC--dull, angular fragments, some blackened, ECHINOID--relatively fresh fragment.

1000-500: YELLOWISH GRAY QUARTZITIC, SHELLY CARBONATE SAND: MOLLUSC--fresh, angular fragments and dull, pitted, blackened fragments, B. FORAM--relatively fresh and whole, QUARTZ--clear, subrounded, some quartz-blackened carbonate aggregates.

500-250: LIGHT OLIVE GRAY, CARBONATE QUARTZ SAND: MOLLUSC--fresh angular fragments, and dull, pitted, grayish fragments, B.FORAM--whole, slightly worn with chipped edges; some agglutinating forms, X-CARB--dull, frosted fragments, QUARTZ--clear to translucent, subangular to subrounded

250-125: LIGHT OLIVE GRAY, CARBONATE QUARTZ SAND: MOLLUSC--white, dull fragments, B. FORAM--relatively fresh and whole, ECHINOIDS--dull, broken spine and plate fragments, X-CARB.--dull to frosted, worn fragments, QUARTZ--clear, subangular to subrounded.

125-62.5: LIGHT OLIVE GRAY, CARBONATE QUARTZ SAND: MOLLUSC--fresh and worn, angular fragments, B. FORAM--relatively fresh and whole, X-CARB.--dull, worn fragments, QUARTZ--clear, angular to subrounded.

GRAIN TYPES (%)[2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000							100												1		1	100	0	0.13
2000-1000	90.0						10.0												10		10	100	0	0.25
1000-500	65.0	4.5	1.5		3.0	1.5						3.0				1.5			67	37	104	64.4	35.6	0.38
500-250	22.6	23.1	6.0		23.6	15.7	6.3		0.8			0.8				1.1			364	2029	2393	15.2	84.8	5.44
250-125	16.7	18.2	3.9		40.3	12.1	7.0	0.3	0.9							0.6			330	1677	2007	16.4	83.6	76.96
125-62.5	9.4	13.4	2.8		45.3	17.8	4.4		1.3		0.9	0.9				3.8			320	904	1224	26.1	73.9	3.42
Σ % > 62.5	19.13	18.03	4.01		36.73	12.51	7.41	0.24	0.85		0.06	0.24				0.79			1092	4647	5739	19.0	81.0	3.42 (< 62 μ)

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 16A

DEPTH: 120'

LATITUDE: 29 40 30

LONGITUDE: 87 37 00

WHOLE SAMPLE DESCRIPTION:

SIZE FRACTION DESCRIPTIONS

4000-2000

MOLLUSC--white, dull, pitted fragment.

2000-1000

PINKISH GRAY, QUARTZITIC, SHELLY CARBONATE SAND: MOLLUSC--mostly relatively fresh fragments; some dull, pitted fragments, ECHINOID--relatively fresh plate fragments, BRYOZOA--dull fragments, one infilled, INTRA--very friable aggregates.

1000-500

PINKISH GRAY, QUARTZITIC, SHELLY CARBONATE SAND: MOLLUSC--dull, pitted, worn fragments; some relatively fresh, angular fragments, B. FORAM--mostly relatively fresh fragments, X-CARB.--dull, pitted fragments, QUARTZ--clear to translucent, subangular to subrounded, some quartz-blackened carbonate aggregates.

500-250

YELLOWISH GRAY, SHELLY CARBONATE QUARTZ SAND: MOLLUSC--dull, frosted fragments, B. FORAM--relatively fresh and whole, some chipped, ECHINOID--relatively fresh plate fragments, X-CARB.--dull to frosted, worn fragments, QUARTZ--clear to slightly translucent, subangular to subrounded.

250-125

YELLOWISH GRAY, CARBONATE QUARTZ SAND: MOLLUSC--frosted, worn fragments, B. FORAM--relatively fresh and whole, ECHINOID--relatively fresh spine and plate fragments, X-CARB.--frosted, worn fragments, QUARTZ--clear to translucent, subangular to subrounded.

125-62.5

LIGHT OLIVE GRAY, CARBONATE QUARTZ SAND: MOLLUSC--frosted, worn fragments, B. CARB.--smoothed, polished fragments, X-CARB.--dull to frosted, worn fragments, QUARTZ--clear to slightly translucent, subangular to subrounded.

GRAIN TYPES (%)[2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	100																		1		1	100	0	0.33
2000-1000	63.2						10.5					10.5				15.8			19		19	100	0	0.25
1000-500	78.4	12.6			4.5		2.7					1.8							111	79	190	58.4	41.6	0.50
500-250	22.0	18.0	0.9		44.7	2.5	9.8		0.9			0.3				0.9			318	2743	3061	10.4	89.6	17.65
250-125	6.2	4.9	0.3		77.0	3.7	5.5		1.2							1.2			326	2865	3191	10.2	89.8	76.47
125-62.5	10.2	2.2	0.6		58.7	23.5	3.2		0.3		0.3					1.0			315	2339	2654	11.9	88.1	2.73
Σ % > 62.5	5.05	7.02	0.37		64.91	3.88	6.09		1.02		tr	0.28				1.38			1090	8026	9116	12.0	80.1	1.91 (< 62 μ)

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 17A DEPTH: 216' LATITUDE: 29 35 30
LONGITUDE: 87 27 00

WHOLE SAMPLE DESCRIPTION:

SIZE FRACTION DESCRIPTIONS

4000-2000
LIGHT OLIVE GRAY, CORRODED, SHELLY CARBONATE SAND: MOLLUSC--mostly dull, bored, encrusted fragments; one articulated pecten is drilled, X-CARB.--bored, encrusted fragments.

2000-1000
LIGHT OLIVE GRAY, CORRODED, FORAMINIFERAL, SHELLY CARBONATE SAND: MOLLUSC--dull, bored,encrusted fragments, B. FORAM--mostly whole, dull, worn; often chipped, BRYOZOA--dull fragments, X-CARB.--dull, worn, corroded fragments and smoothed, shiny, iron-stained fragments.

1000-500
OLIVE GRAY, CORRODED, FORAMINIFERAL, SHELLY CARBONATE SAND: MOLLUSC--dull fragments and worn, shiny, iron-stained fragments, B. FORAM--fresh and whole; whole but dull, worn and chipped; many blackened or iron-stained, BRYOZOA--dull, worn fragments, X-CARB.--dull, corroded fragments, and worn, smoothed, shiny, iron-stained fragments.

500-250
BROWNISH GRAY, CORRODED, QUARTZITIC, FORAMINIFERAL, SHELLY CARBONATE SAND: MOLLUSC--dull to frosted fragments, many pitted and bored; many blackened or iron-stained, B. FORAM--fresh and whole, and whole, worn and chipped, many iron-stained, X-CARB.--mostly worn, smoothed, iron-stained fragments, QUARTZ--clear to translucent, subangular to subrounded, some quartz-blackened carbonate aggregates.

250-125
BROWNISH GRAY, QUARTZITIC, SHELLY CARBONATE SAND: MOLLUSC--dull to frosted fragments, some pitted; many blackened or iron-stained, B. FORAM--relatively fresh and whole, some chipped, X-CARB.--worn, smoothed and polished fragments, most iron-stained; some dull, worn, frosted fragments, QUARTZ--clear to translucent, subangular to subrounded.

125-62.5
LIGHT OLIVE GRAY, SHELLY, CARBONATE QUARTZ SAND: MOLLUSC--dull to frosted fragments, many angular, B. FORAM--relatively fresh and whole, ECHINOID--fresh plate and spine fragments, INTRA--friable aggregates, X-CARB.--dull to frosted, worn fragments, QUARTZ--clear to translucent, subangular to subrounded.

GRAIN TYPES (%)[2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	50.0				38.5							11.5							26		26	100	0	11.31
2000-1000	42.6	22.0			20.5	0.6	0.6					10.4	2.4				0.9		463		463	100	0	21.47
1000-500	24.3	42.3			18.9	1.9	2.1		0.2			6.8	1.5				1.5		471	2	473	99.6	0.4	31.75
500-250	38.7	14.7	2.9		34.0	3.4	3.4		0.3		0.3	2.3							347	42	389	89.2	10.8	22.88
250-125	35.9	10.0	3.6		37.6	7.4	3.6		0.3	0.3		1.0				0.3			309	190	499	61.9	38.1	7.84
125-62.5	38.2	7.7	1.5		29.7	4.9	5.5	0.3	3.7	0.6	0.9	0.9				6.1			327	370	697	46.9	53.1	0.77
Σ % > 62.5	36.03	24.02	0.86		26.22	2.00	1.88	tr	0.16	0.01	0.07	6.89	1.10			0.03	0.73		1943	604	2547	76.3	23.7	3.73 < 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 18A

DEPTH: 270'

LATITUDE: 29 33 00

LONGITUDE: 87 24 00

WHOLE SAMPLE DESCRIPTION:

SIZE FRACTION DESCRIPTIONS

4000-2000: LIGHT OLIVE GRAY, CORRODED CARBONATE SAND: MOLLUSC--dull, pitted, bored, encrusted fragments, BRYOZOA--dull, often infilled, fragments, X-CARB.--dull, pitted, bored, encrusted fragments.

2000-1000: OLIVE GRAY, FORAMINIFERAL CARBONATE SAND: MOLLUSC--dull, pitted and bored fragments, B. FORAM--whole, dull, worn to smoothed, and chipped; many iron-stained, BRYOZOA--dull fragments, X-CARB.--dull, worn, smoothed and pitted fragments, some iron-stained, QUARTZ--translucent, subrounded.

1000-500: BROWNISH GRAY, CORRODED, FORAMINIFERAL, SHELLY CARBONATE SAND: MOLLUSC--dull to frosted fragments, pitted or bored; many iron-stained or blackened, B. FORAM--whole, dull, worn, pitted and chipped, many iron-stained, ECHINOID--relatively fresh plates, BRYOZOA--dull fragments, X-CARB.--dull, corroded fragments and worn, smoothed or polished fragments, many iron-stained.

500-250: OLIVE GRAY, FORAMINIFERAL, SHELLY CARBONATE SAND: MOLLUSC--dull to frosted, pitted fragments, many blackened; some smoothed and shiny fragments, iron-stained, P. FORAM--relatively fresh and whole, B. FORAM--fresh and whole, and whole, dull, worn, chipped and iron-stained, ECHINOID--fresh, spine and plate fragments, X-CARB.--dull, pitted fragments, and worn, shiny, iron-stained fragments, QUARTZ--clear to translucent, subrounded.

250-125: LIGHT OLIVE GRAY, QUARTZITIC, FORAMINIFERAL, SHELLY CARBONATE SAND: MOLLUSC--dull to frosted fragments, P. FORAM--fresh and whole, B. FORAM--fresh and whole; and whole, worn, chipped and iron-stained, ECHINOID--fresh spine and plate fragments, X-CARB.--dull to frosted, worn fragments, often iron-stained, QUARTZ--clear, subangular to subrounded.

125-62.5: LIGHT OLIVE GRAY, FORAMINIFERAL, QUARTZITIC, SHELLY CARBONATE SAND: MOLLUSC--slightly dull to frosted fragments, INTRA--friable aggregates, B. FORAM--fresh and whole, ECHINOID--fresh spine fragments, X-CARB.--dull to frosted, worn fragments, QUARTZ--clear to slightly translucent, subangular to subrounded.

GRAIN TYPES (%)[2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	15.0				75.0							7.5						2.5	40		40	100	0	8.01
2000-1000	7.8	24.4			56.6	0.9	1.2					5.7	0.9	0.6			1.9		320	1	321	99.7	0.3	23.20
1000-500	36.7	19.4	0.6		26.7	0.9	5.8					5.1	1.8			0.3	2.7		330		330	100	0	38.81
500-250	44.5	6.9	14.2		18.4	3.0	8.7		0.9			1.5				0.6	1.2		332	1	333	99.7	0.3	18.50
250-125	40.2	7.7	6.4		25.8	5.5	9.8	0.6	0.9			0.6				2.5			326	23	349	93.4	6.6	3.72
125-62.5	30.8	11.3	4.1		16.7	2.2	9.2	1.1	1.1	0.8	0.5	0.3				21.9			370	66	436	84.9	15.1	0.33
Σ % > 62.5	29.25	16.00	3.34		36.68	1.42	4.88	0.02	0.22	tr	tr	4.56	0.99	0.16		0.41	1.86	0.22	1718	91	1809	95.0	5.0	7.18 < 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 19A   DEPTH: 270'   LATITUDE: 29 27 00
LONGITUDE: 87 24 30

WHOLE SAMPLE DESCRIPTION:

SIZE FRACTION DESCRIPTIONS

4000-2000: LIGHT OLIVE GRAY, CORRODED CARBONATE SAND: MOLLUSC--mostly dull, pitted, encrusted, bored fragments, BRYOZOA--dull, slightly worn fragments, X-CARB.--dull, pitted, bored, encrusted fragments.

2000-1000: BROWNISH GRAY, CORRODED CARBONATE SAND: MOLLUSC--dull, pitted, bored fragments, B. FORAM--whole, worn to smoothed, some chipped, some iron-stained, X-CARB.--dull, pitted, bored fragments and smoothed, polished iron-stained fragments.

1000-500: BROWNISH GRAY, CORRODED CARBONATE SAND: MOLLUSC--dull or frosted, pitted fragments; some angular fragments, B. FORAM--relatively fresh and whole, and whole, dull, worn to smoothed, often chipped and/or iron-stained, X-CARB.--dull, frosted or pitted fragments and smoothed, polished iron-stained fragments.

500-250: OLIVE GRAY, SHELLY CARBONATE SAND: MOLLUSC--dull to frosted, pitted fragments; some smoothed fragments, iron-stained or blackened, B. FORAM--fresh and whole, and whole, worn to smoothed, chipped, iron-stained, P. FORAM--mostly fresh and whole; some whole, smoothed, polished, iron-stained, X-CARB.--dull to frosted, pitted fragments, and smoothed, polished, iron-stained fragments.

250-125: LIGHT OLIVE GRAY, SHELLY CARBONATE SAND: MOLLUSC--dull to frosted, pitted fragments; some worn to smoothed, iron-stained fragments, B. FORAM--fresh and whole, and whole, smoothed, chipped and iron-stained, P. FORAM--whole and fresh, ECHINOID--relatively fresh plate and spine fragments, X-CARB.--dull to frosted, pitted fragments, and some smoothed, iron-stained fragments, QUARTZ--clear, subangular to subrounded.

125-62.5: LIGHT OLIVE GRAY, QUARTZITIC, SHELLY CARBONATE AND: MOLLUSC--fresh to frosted, angular fragments, B. FORAM--fresh and whole, P. FORAM--fresh and whole, INTRA--friable aggregates, X-CARB.--dull to frosted fragments, QUARTZ--clear, subangular to subrounded.

GRAIN TYPES (%)[2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	13.3				73.3	4.5						8.9							45		45	100	0	9.25
2000-1000	5.2	9.3			72.1	5.9						2.5	2.9	0.3		0.3	1.5		323		323	100	0	23.23
1000-500	14.4	22.6	0.6		49.4	2.5	4.2					2.6	2.8				0.9		354		354	100	0	27.37
500-250	20.1	11.8	19.3		39.2	0.9	3.9		0.3			1.8				0.6	2.1		337	3	340	99.1	0.9	23.08
250-125	31.3	10.8	13.3		30.0	4.7	7.4		0.6							1.9			323	17	340	95.0	5.0	6.92
125-62.5	28.4	4.9	7.3		27.1	5.1	3.9	0.3	2.0	1.2	0.5					19.3			409	125	534	76.6	23.4	0.68
Σ % > 62.5	14.69	13.12	6.10		53.58	3.36	2.84	tr	0.13	0.01	tr	2.80	1.60	0.08		0.49	1.20		1791	145	1936	92.5	7.5	9.08 (< 62 μ)

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 20A

DEPTH: 280'

LATITUDE: 29 34 00

LONGITUDE: 87 17 30

WHOLE SAMPLE DESCRIPTION:

SIZE FRACTION DESCRIPTIONS

4000-2000: YELLOWISH GRAY TO MEDIUM GRAY, CORRODED CARBONATE SAND: MOLLUSC--dull, pitted and bored, worn fragments, X-CARB.--dull, pitted and bored, worn fragments, often encrusted.

2000-1000: MEDIUM GRAY, CORRODED CARBONATE SAND: MOLLUSC--dull, pitted and bored, worn fragments, some blackened, B. FORAM--worn, often smoothed and polished fragments; some whole, worn, chipped, blackened or iron-stained fragments, X-CARB.--dull, worn, pitted and bored fragments, QUARTZ--slightly translucent, subangular.

1000-500: MEDIUM GRAY, CORRODED, FORAMINIFERAL CARBONATE SAND: MOLLUSC--dull, pitted, bored fragments, some blackened, B. FORAM--mostly smoothed and polished fragments, many blackened, or iron-stained; some dull pitted, chipped fragments, CORALS.--dull, pitted fragments, X-CARB.--dull, worn, pitted and bored fragments, QUARTZ--clear to slightly translucent, subrounded.

500-250: GREENISH GRAY, CORRODED, QUARTZITIC FORAMINIFERAL SHELLY CARBONATE SAND: MOLLUSC--dull, pitted or frosted, worn fragments, often blackened or iron-stained, B. FORAM--mostly whole, worn and/or chipped; some whole, smoothed and polished, blackened or iron-stained, P. FORAM--fresh and whole, ECHINOID--fresh spine and plate fragments, X-CARB.--dull, pitted, worn fragments, QUARTZ--clear to slightly translucent, subangular to subrounded.

250-125: GREENISH GRAY, QUARTZITIC, SHELLY CARBONATE SAND: MOLLUSC--dull to frosted, worn fragments, some blackened and iron-stained, B. FORAM--fresh and whole, and whole, smoothed to polished, many blackened or iron-stained, P. FORAM--fresh and whole, X-CARB.--dull to frosted, worn fragments, QUARTZ--clear to translucent, subangular to subrounded.

125-62.5: GREENISH GRAY, QUARTZITIC, SHELLY CARBONATE SAND: MOLLUSC--dull to frosted, worn fragments, INTRA--friable aggregates, B. FORAM--fresh and whole, X-CARB.--dull to frosted, worn fragments, QUARTZ--clear to translucent, subangular to subrounded.

GRAIN TYPES (%)[2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	13.3				80.0							6.7							15		15	100	0	2.93
2000-1000	2.9	10.6			74.1	8.4	0.3					2.2	0.9			0.3	0.3		312	1	313	99.7	0.3	22.49
1000-500	5.8	17.9	0.3		63.0	5.6						1.5	5.3				0.6		341	9	350	97.4	2.6	31.64
500-250	26.6	10.8	13.6		34.6	4.3	7.1		0.3			0.3	0.3			0.9	1.2		324	43	367	88.3	11.7	29.69
250-125	38.4	8.5	6.0		31.1	9.4	3.8		0.6	0.3	0.3	0.3				1.3			318	41	359	88.6	11.4	6.84
125-62.5	37.8	6.0	5.1		23.9	4.2	2.2	0.6	0.6	0.6	0.8					18.2			352	63	415	84.3	15.2	0.53
Σ % > 62.5	13.84	12.68	4.55		55.59	5.99	2.44	tr	0.14	0.02	0.02	1.42	2.15			0.53	0.63		1662	157	1819	91.4	8.6	5.69 < 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 21-A

DEPTH: ____

LATITUDE: ____

LONGITUDE: ____

WHOLE SAMPLE DESCRIPTION: ____

SIZE FRACTION DESCRIPTIONS

4000-2000

500-250

2000-1000

250-125

1000-500

125-62.5

GRAIN TYPES (%)[2]

SIZE FRACTIONS (µ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNDISTINGUISHABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)	
4000-2000	72.5	1.6	-	-	3.1	1.6	-	-	-	-	-	8.1	8.1	-	-	-			62	-	62	100	0	8.09	
2000-1000	36.6	0.6	-	-	24.3	23.2	1.9	-	-	-	-	3.3	9.9	-	-	0.3			362	-	362	100	0	11.21	
1000-500	42.1	1.7	0.2	0.2	13.0	25.3	3.1	-	-	-	-	6.6	6.4	-	-	1.4			423	1	424	99.8	0.2	12.56	
500-250	31.8	8.9	9.2	-	18.5	20.4	3.5	0.3	0.9	-	-	6.2	-	-	-	0.3			368	2	370	99.5	0.5	11.91	
250-125	40.8	11.5	11.5	0.3	16.0	9.4	3.5	0.9	0.6	-	-	2.9	-	-	-	0.6			312	2	314	99.4	0.6	8.59	
125-62.5	49.4	15.5	1.6	-	17.1	5.3	6.4	-	1.1	0.3	2.4	0.9	-	-	-	0.3			375	115	490	76.5	23.5	14.87	
Σ % > 62.5	44.18	6.60	3.57	0.08	16.80	15.28	3.22	0.19	0.44	0.05	0.42	4.61	4.04			0.52			1902	120	2022	94.1	5.9	32.76	< 62 µ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 22-A DEPTH: ________ LATITUDE: ____________
LONGITUDE: ____________

WHOLE SAMPLE DESCRIPTION: ____

SIZE FRACTION DESCRIPTIONS

4000-2000		500-250
2000-1000		250-125
1000-500		125-62.5

GRAIN TYPES (%)[2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	41.7	-	-	-	50.0	-	-	-	-	-	-	-	8.3	-	-				36	-	36	100	0	7.57
2000-1000	23.3	20.8	-	-	43.5	4.0	-	-	-	-	-	2.0	6.4	-	-	-	-	-	347	-	347	100	0	19.56
1000-500	40.7	16.3	-	-	29.5	6.1	0.6	-	-	-	-	3.7	3.1	-	-	-	-	-	356	-	356	100	0	25.36
500-250	54.7	9.8	6.1	-	22.2	3.7	0.9	-	0.6	-	-	2.0	-	-	-	-	-	-	347	-	347	100	0	23.24
250-125	56.7	7.3	4.4	-	19.0	8.2	2.9	-	0.6	-	-	0.9	-	-	-	-	-	-	342	-	342	100	0	4.30
125-62.5	59.7	6.1	2.4	-	12.4	7.3	4.2	-	1.8	0.3	5.8	-	-	-	-	-	-	-	330	9	339	97.3	2.7	1.03
Σ % > 62.5	41.70	13.33	2.01		31.94	4.46	0.64		0.23	tr	0.07	2.26	3.30						1758	9	1757	99.5	0.5	18.87 < 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 23-A

DEPTH: ________

LATITUDE: ________

LONGITUDE: ________

WHOLE SAMPLE DESCRIPTION: ________

SIZE FRACTION DESCRIPTIONS

4000-2000

500-250

2000-1000

250-125

1000-500

125-62.5

GRAIN TYPES (%) [2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)	
4000-2000	83.0	-	-	-	-	-	17.0	-	-	-	-	-	-	-	-	-	-	-	6	-	6	100	0	0.19	
2000-1000	75.4	-	-	-	1.8	1.8	14.0	-	-	-	-	1.8	5.2	-	-	-	-	-	57	-	57	100	0	0.47	
1000-500	59.1	3.8	-	-	4.1	5.1	8.7	-	-	0.5	-	1.3	3.3	-	-	14.1	-	-	391	-	391	100	0	0.55	
500-250	37.2	8.4	12.6	-	5.8	0.8	6.1	1.0	3.0	0.3	-	-	-	-	-	24.8	-	-	395	4	399	99.0	1.0	1.26	
250-125	43.1	14.4	10.4	-	6.2	0.3	6.7	0.6	3.4	-	-	-	-	-	-	14.9	-	-	355	6	361	98.3	1.7	6.35	
125-62.5	55.0	11.1	1.1	-	12.3	4.0	9.5	0.6	1.7	0.3	-	-	-	-	-	4.3	-	-	349	112	461	75.7	24.3	37.90	
Σ % > 62.5	52.93	11.18	3.05		10.70	3.28	9.01	0.58	1.96	0.24		0.05	0.13			6.89			1554	122	1676	92.7	7.3	52.93	< 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 24-A

DEPTH:

LATITUDE:

LONGITUDE:

WHOLE SAMPLE DESCRIPTION:

SIZE FRACTION DESCRIPTIONS

4000-2000

500-250

2000-1000

250-125

1000-500

125-62.5

GRAIN TYPES (%)[2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	66.7	-	-	-	-	-	33.3	-	-	-	-	-	-	-	-	-	-	-	3	-	3	100	0	0.19
2000-1000	55.1	2.5	-	-	5.0	-	35.0	-	-	-	-	-	-	-	-	2.5	-	-	40	-	40	100	0	0.28
1000-500	38.0	3.7	0.2	-	2.8	1.8	17.9	-	-	-	-	0.7	-	-	-	34.9	-	-	435	1	436	99.8	0.2	0.33
500-250	16.9	4.1	6.7	-	2.6	0.9	2.3	3.5	0.9	-	-	0.3	-	-	-	62.1	-	-	343	2	345	99.4	0.6	0.80
250-125	33.4	7.4	12.1	-	4.3	0.3	4.0	0.6	0.9	0.3	-	-	-	-	-	36.3	-	-	323	5	328	98.5	1.5	4.06
125-62.5	67.8	8.4	1.2	-	4.9	2.6	4.6	3.5	2.6	1.2	0.9	-	-	-	-	2.3	-	-	344	31	375	91.7	8.3	21.21
Σ % > 62.5	60.16	7.89	3.07		4.62	2.15	5.18	2.91	2.23	0.96	0.72	tr				10.12			1488	39	1527	97.4	2.6	72.86 < 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 25-A

DEPTH: ________

LATITUDE: ____________

LONGITUDE: ____________

WHOLE SAMPLE DESCRIPTION: ____________

SIZE FRACTION DESCRIPTIONS

4000-2000

500-250

2000-1000

250-125

1000-500

125-62.5

GRAIN TYPES (%)[2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	50.0	-	-	-	25.0	-	25.0	-	-	-	-	-	-	-	-	-	-	-	4	-	4	100	0	0.30
2000-1000	71.2	-	-	-	-	-	22.2	-	-	-	-	2.2	-	-	-	4.4	-	-	45	-	45	100	0	0.22
1000-500	57.5	5.5	2.6	-	5.0	0.6	13.2	-	-	0.3	-	2.1	-	-	-	13.2	-	-	341	-	341	100	0	0.70
500-250	33.7	11.5	29.6	-	7.1	0.3	3.0	0.9	1.2	0.6	-	1.2	-	-	-	10.9	-	-	338	5	343	98.5	1.5	3.83
250-125	55.8	9.1	16.4	-	6.9	0.9	2.4	-	0.9	-	-	2.1	-	-	-	5.5	-	-	330	10	340	97.1	2.9	12.66
125-62.5	61.5	10.2	3.3	-	7.6	3.8	6.4	1.6	-	0.3	2.9	-	-	-	-	1.9	-	-	314	20	334	94.0	6.0	22.44
Σ % > 62.5	56.86	9.75	10.30		7.46	2.40	5.11	0.96	0.39	0.21	1.59	0.83				4.14			1372	35	1407	97.5	2.5	59.68 < 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 26-A

DEPTH: ________

LATITUDE: ________

LONGITUDE: ________

WHOLE SAMPLE DESCRIPTION: ________

SIZE FRACTION DESCRIPTIONS

4000-2000		500-250
2000-1000		250-125
1000-500		125-62.5

GRAIN TYPES (%)[2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	64.3	-	-	-	21.4	-	14.3	-	-	-	-	-	-	-	-	-	-	-	14	-	14	100	0	1.95
2000-1000	55.4	4.5	-	-	26.8	2.5	0.6	-	-	-	-	6.4	3.8	-	-	-	-	-	157	2	159	98.7	1.3	3.16
1000-500	51.0	7.7	-	-	24.0	7.4	2.5	-	-	-	-	4.9	2.5	-	-	-	-	-	325	41	366	88.8	11.2	9.81
500-250	56.6	10.3	3.6	-	13.6	10.0	3.4	-	-	-	-	2.5	-	-	-	-	-	-	359	98	457	76.8	21.4	19.63
250-125	59.6	12.5	3.3	-	8.8	12.5	3.0	0.3	-	-	-	-	-	-	-	-	-	-	329	131	460	71.5	28.5	20.11
125-62.5	65.2	10.6	1.5	-	11.2	3.9	6.4	-	0.3	-	0.9	-	-	-	-	-	-	-	330	259	589	56.0	44.0	20.03
Σ % > 62.5	58.43	9.83	2.19		14.56	8.21	4.00	0.07	0.05		0.18	1.86	0.62						1514	531	2045	74.0	26.0	25.26 < 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 27-6

DEPTH:

LATITUDE:

LONGITUDE:

WHOLE SAMPLE DESCRIPTION:

SIZE FRACTION DESCRIPTIONS

4000-2000			500-250
2000-1000			250-125
1000-500			125-62.5

GRAIN TYPES (%)[2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	2	100	0	0.22
2000-1000	65.7	-	-	-	6.6	-	6.7	-	-	-	-	20.0	-	-	-	-	-	-	15	-	15	100	0	0.11
1000-500	70.2	1.5	-	-	1.5	1.0	21.9	-	-	-	-	2.4	-	-	-	1.0	-	-	205	-	205	100	0	0.28
500-250	41.2	18.2	21.6	-	3.7	0.3	7.1	-	3.7	-	-	3.7	-	-	-	0.6	-	-	325	3	328	99.1	0.9	1.18
250-125	50.3	13.1	19.2	-	3.3	1.9	4.8	-	1.3	-	-	0.6	-	-	-	-	-	-	313	7	320	97.8	2.2	7.68
125-62.5	63.1	8.1	0.9	-	9.2	3.7	8.3	-	2.6	2.6	1.2	0.3	-	-	-	-	-	-	347	43	390	89.0	11.0	23.89
Σ % > 62.5	59.63	9.56	6.16		8.61	3.03	7.43		2.26	1.80	0.85	0.59				0.03			1207	53	1260	95.8	4.2	66.40 < 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 28-A

DEPTH:

LATITUDE:

LONGITUDE:

WHOLE SAMPLE DESCRIPTION:

SIZE FRACTION DESCRIPTIONS

4000-2000	500-250
2000-1000	250-125
1000-500	125-62.5

GRAIN TYPES (%)[2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	38.5	-	-	-	41.0	2.6	-	-	-	-	-	2.6	12.8	-	-	-	-	-	39	-	39	100	0	7.10
2000-1000	56.3	14.1	-	-	16.8	0.9	-	-	-	-	-	3.2	8.8	-	-	-	-	-	375	4	379	98.9	1.1	14.59
1000-500	46.8	28.7	-	0.3	16.5	-	-	-	-	-	-	5.8	1.9	-	-	-	-	-	310	6	316	98.1	1.9	35.17
500-250	69.0	8.9	1.5	-	15.2	1.8	1.8	-	-	-	-	1.5	-	-	-	0.3	-	-	335	59	394	85.0	15.0	36.20
250-125	58.0	2.7	0.3	-	25.3	12.9	0.3	-	-	-	-	-	-	-	-	-	-	-	302	78	380	79.5	20.5	3.15
125-62.5	75.9	2.5	0.9	-	12.4	4.0	3.7	-	-	0.6	-	-	-	-	-	-	-	-	323	86	490	79.0	21.0	0.32
Σ % > 62.5	55.70	16.48	0.53	0.11	18.28	1.33	0.64			tr		3.66	3.17			0.10		-	1684	233	1917	87.8	12.2	3.23 < 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 29-A DEPTH: LATITUDE:
LONGITUDE:

WHOLE SAMPLE DESCRIPTION:

SIZE FRACTION DESCRIPTIONS

4000-2000

500-250

2000-1000

250-125

1000-500

125-62.5

GRAIN TYPES (%)[2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	57.1	-	-	-	14.3	-	28.6	-	-	-	-	-	-	-	-	-	-	-	14	-	14	100	0	1.71
2000-1000	50.0	8.4	-	-	16.0	7.1	-	-	-	-	-	3.9	7.1	-	-	-	-	-	226	1	227	99.6	0.4	4.22
1000-500	40.0	11.4	0.6	-	19.6	16.1	4.1	-	-	-	-	3.8	4.1	-	-	0.3	-	-	342	14	356	96.1	3.9	7.78
500-250	39.5	8.8	14.3	-	15.6	14.5	3.7	-	-	-	-	2.8	-	-	-	0.3	-	-	352	24	376	93.6	6.4	8.50
250-125	63.8	11.9	4.8	-	7.4	4.2	6.4	-	0.9	-	-	0.3	-	-	-	0.3	-	-	312	16	328	95.2	4.8	25.58
125-62.5	61.0	12.8	1.2	-	9.5	4.5	9.2	-	-	0.6	1.2	-	-	-	-	-	-	-	336	167	503	66.8	33.2	33.75
Σ % > 62.5	56.42	11.27	3.91		11.08	6.87	7.40		0.32	0.21	0.40	1.07	0.89			0.16			1582	222	1804	87.7	12.3	18.46 < 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 30-A

DEPTH: ________

LATITUDE: ________

LONGITUDE: ________

WHOLE SAMPLE DESCRIPTION: ________

SIZE FRACTION DESCRIPTIONS

4000-2000

2000-1000

1000-500

500-250

250-125

125-62.5

GRAIN TYPES (%)[2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)	
4000-2000	53.8	-	-	-	15.4	-	-	-	-	-	-	23.1	7.7	-	-	-	-	-	13	-	13	100	0	2.36	
2000-1000	40.5	11.3	-	-	31.5	-	2.4	-	-	-	-	6.0	8.3	-	-	-	-	-	168	2	170	98.8	1.2	7.84	
1000-500	57.4	17.0	1.3	-	15.1	1.6	0.9	-	-	-	-	3.2	3.5	-	-	-	-	-	312	28	340	91.8	8.2	18.41	
500-250	57.6	9.1	6.7	-	12.4	3.6	6.7	-	0.6	0.3	-	3.0	-	-	-	-	-	-	330	45	375	88.0	12.0	44.40	
250-125	69.0	8.3	0.9	-	8.0	10.5	2.1	-	-	-	-	0.6	-	-	-	-	-	-	326	130	456	71.5	28.5	20.77	
125-62.5	63.4	4.8	0.3	-	8.2	13.4	4.5	-	0.3	-	4.8	-	-	-	-	0.3	-	-	356	82	438	81.3	18.7	1.74	
Σ % > 62.5	58.01	10.46	3.61		14.08	4.17	4.05		0.28	0.15	0.08	3.41	1.71			tr			1505	287	1792	84.0	16.0	4.10	< 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 31-A DEPTH: ______ LATITUDE: ______
LONGITUDE: ______

WHOLE SAMPLE DESCRIPTION: ______

SIZE FRACTION DESCRIPTIONS

4000-2000	500-250
2000-1000	250-125
1000-500	125-62.5

GRAIN TYPES (%)[2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	12.9	-	-	-	67.7	-	-	-	-	-	-	9.7	9.7	-	-	-	-	-	31	-	31	100	0	5.91
2000-1000	31.8	7.5	-	-	41.0	0.8	0.6	-	-	-	-	2.8	15.5	-	-	-	-	-	359	-	359	100	0	25.69
1000-500	39.1	20.5	-	-	26.8	6.0	-	-	-	-	-	1.0	6.0	-	-	-	-	-	317	4	321	98.7	1.3	39.00
500-250	56.9	13.2	1.6	-	16.4	9.7	1.3	0.6	-	-	-	0.3	-	-	-	-	-	-	318	57	375	84.8	15.2	19.64
250-125	52.5	10.3	2.3	-	13.2	17.9	3.2	-	-	0.3	-	-	-	-	-	0.3	-	-	341	184	525	65.0	35.0	3.63
125-62.5	58.6	12.6	2.0		11.0	6.6	8.3	-	-	0.3	-	-	-	-	-	0.6	-	-	301	149	450	67.0	33.0	1.35
Σ % > 62.5	39.14	13.75	0.38		31.10	5.12	0.58	0.11		0.01		1.91	7.88			0.02			1667	394	2061	81.0	19.0	4.49 < 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 33A

DEPTH:

LATITUDE:

LONGITUDE:

WHOLE SAMPLE DESCRIPTION:

SIZE FRACTION DESCRIPTIONS

4000-2000	
2000-1000	
1000-500	
500-250	
250-125	
125-62.5	

GRAIN TYPES (%)[2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	62.1	-	-	-	20.7	-	6.9	-	-	-	-	3.4	5.9	-	-	-	-	-	29	-	29	100	0	15.37
2000-1000	21.0	4.5	-	-	33.1	15.7	-	-	-	-	-	5.2	9.7	-	-	10.8	-	-	331	6	337	98.5	1.5	23.74
1000-500	41.8	6.0	-	-	21.2	11.3	-	-	-	-	-	2.4	3.0	-	-	14.3	-	-	335	12	347	96.5	3.5	28.37
500-250	34.1	10.2	2.4	-	15.0	13.5	0.6	-	0.3	-	-	0.6	0.3	-	-	23.0	-	-	334	25	359	93.0	7.0	20.57
250-125	27.7	6.6	0.9	-	9.6	14.5	-	-	-	-	-	-	-	-	-	40.7	-	-	332	37	369	90.0	10.0	5.12
125-62.5	39.2	5.6	-	-	9.3	12.3	2.7	-	-	0.2	2.5	-	-	-	-	28.2	-	-	408	75	483	84.5	15.5	1.30
Σ % > 62.5	37.52	5.50	0.55		22.14	11.16	1.32		0.07	tr	0.03	2.75	4.63			14.33			1819	155	1974	92.2	7.8	5.20 < 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 34-A

DEPTH:

LATITUDE:

LONGITUDE:

WHOLE SAMPLE DESCRIPTION:

SIZE FRACTION DESCRIPTIONS

4000-2000

500-250

2000-1000

250-125

1000-500

125-62.5

GRAIN TYPES (%)[2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	27.6	-	-	-	58.6	-	-	-	-	-	-	13.8	-	-	-	-	-	-	29	-	29	100	0	38.67
2000-1000	46.0	4.0	-	-	23.8	2.1	0.3	-	-	-	-	5.2	18.6	-	-	-	-	-	328	3	331	99.0	1.0	25.33
1000-500	46.3	13.7	-	-	16.8	2.2	0.3	-	-	-	-	3.8	15.6	-	-	1.3	-	-	315	38	353	89.0	11.0	20.74
500-250	59.0	4.0	1.2	-	19.9	10.4	3.2	-	-	-	-	-	-	-	-	2.3	-	-	346	300	646	53.6	46.4	10.22
250-125	56.1	7.2	0.6	-	22.0	5.0	1.3	-	-	-	-	-	-	-	-	7.8	-	-	319	427	746	42.8	57.2	2.81
125-62.5	72.3	3.1	-	-	12.3	3.1	3.4	0.3	-	-	0.6	-	-	-	-	4.9	-	-	325	92	417	78.0	22.0	0.15
Σ % > 62.5	39.65	4.31	0.08		37.18	1.70	0.37	tr			tr	8.25	8.47			0.53			1662	860	2522	66.0	34.0	1.93 < 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 33-A

DEPTH: ________

LATITUDE: ________

LONGITUDE: ________

WHOLE SAMPLE DESCRIPTION: ________

SIZE FRACTION DESCRIPTIONS

4000-2000

500-250

2000-1000

250-125

1000-500

125-62.5

GRAIN TYPES (%)[2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN
4000-2000	34.6	-	-	-	23.1	15.4	-	-	-	-	-	15.4
2000-1000	29.3	4.1	-	-	44.2	2.7	0.2	-	-	-	-	5.4
1000-500	36.5	8.6	-	-	30.3	3.6	1.0	-	-	-	-	3.6
500-250	59.1	8.8	0.6	0.3	17.2	8.8	3.1	-	0.6	-	-	0.9
250-125	61.8	3.7	0.3	-	20.3	10.0	2.7	-	0.6	0.3	-	0.3
125-62.5	62.6	4.6	0.3	-	17.5	5.5	8.9	-	0.3	-	0.3	-
Σ % > 62.5	38.41	6.92	0.10	0.05	31.76	4.72	1.11	-	0.10	tr	tr	4.00

SIZE FRACTIONS (μ)	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	11.5	-	-	-	-	-	26	-	26	100	0	2.99
2000-1000	14.1	-	-	-	-	-	410	9	419	97.9	2.1	23.39
1000-500	16.4	-	-	-	-	-	304	32	336	90.5	9.5	44.70
500-250	0.6	-	-	-	-	-	320	267	587	54.5	45.5	22.67
250-125	-	-	-	-	-	-	301	298	599	50.3	49.7	2.90
125-62.5	-	-	-	-	-	-	348	169	517	67.3	32.7	0.45
Σ % > 62.5	12.77						1709	775	2484	68.8	31.2	2.63 < 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 36-A DEPTH: LATITUDE:

LONGITUDE:

WHOLE SAMPLE DESCRIPTION:

SIZE FRACTION DESCRIPTIONS

4000-2000

500-250

2000-1000

250-125

1000-500

125-62.5

GRAIN TYPES (%)[2]

SIZE FRACTIONS (µ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)	
4000-2000	11.1	-	-	-	66.7	-	-	-	-	-	-	16.7	5.5	-	-	-	-	-	18	1	19	94.7	5.3	4.35	
2000-1000	30.5	8.3	-	-	24.8	6.3	-	-	-	-	-	5.7	24.4	-	-	-	-	-	315	47	362	87.0	13.0	17.88	
1000-500	21.4	8.7	-	-	25.3	29.0	0.3	-	-	-	-	0.6	14.4	-	-	0.3	-	-	355	145	500	71.0	29.0	42.83	
500-250	41.2	7.9	1.5	-	16.4	28.2	1.2	0.9	-	-	-	0.6	1.5	-	-	0.6	-	-	330	269	599	55.0	45.0	28.24	
250-125	47.1	10.6	1.1	-	10.9	28.3	2.0	-	-	-	-	-	-	-	-	-	-	-	350	242	592	59.0	41.0	3.18	
125-62.5	63.0	7.0	-	-	8.2	9.7	3.2	-	-	0.3	2.4	-	-	-	-	1.2	-	-	340	240	580	58.6	41.4	1.06	
Σ % > 62.5	28.47	7.93	0.38		25.10	21.68	0.54	0.20		tr	0.03	2.72	12.67			0.28			1708	944	2652	64.4	35.6	2.47	< 62 µ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 37-A

DEPTH: ________

LATITUDE: ________

LONGITUDE: ________

WHOLE SAMPLE DESCRIPTION: ________

SIZE FRACTION DESCRIPTIONS

4000-2000		500-250
2000-1000		250-125
1000-500		125-62.5

GRAIN TYPES (%)[2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	72.2	-	-	-	-	-	-	-	-	-	-	16.7	11.1	-	-	-	-	-	18	2	20	90.0	10.0	9.43
2000-1000	33.3	6.4	-	-	24.4	2.0	-	-	-	-	-	8.3	25.6	-	-	-	-	-	312	24	336	93.0	7.0	24.18
1000-500	41.7	15.7	-	-	21.9	3.4	0.3	-	-	-	-	1.3	15.7	-	-	-	-	-	319	64	383	83.3	16.7	30.91
500-250	65.0	8.5	0.9	-	14.6	5.7	2.8	-	0.6	-	-	1.6	-	-	-	0.3	-	-	316	221	537	59.0	41.0	23.06
250-125	67.7	8.8	1.5	-	11.6	5.2	2.8	-	-	0.3	0.6	-	-	-	-	1.5	-	-	328	471	799	41.0	59.0	6.91
125-62.5	62.5	8.6	0.3	-	10.2	6.8	9.5	0.3	-	-	0.9	-	-	-	-	0.9	-	-	325	288	613	53.0	47.0	1.40
Σ % > 62.5	48.14	9.40	0.22		18.31	3.10	0.83	tr	0.11	0.01	0.04	5.19	14.53			0.12			1618	1070	2688	60.0	40.0	3.83 < 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT. %) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 38-A

DEPTH:

LATITUDE:

LONGITUDE:

WHOLE SAMPLE DESCRIPTION:

SIZE FRACTION DESCRIPTIONS

4000-2000

500-250

2000-1000

250-125

1000-500

125-62.5

GRAIN TYPES (%)[2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	37.5	-	-	-	59.4	-	-	-	-	-	-	3.1	-	-	-	-	-	-	32	1	33	97.0	3.0	6.08
2000-1000	49.6	2.5	-	-	13.8	4.7	-	-	-	-	-	11.6	17.5	-	-	0.3	-	-	361	12	373	96.8	3.2	16.85
1000-500	60.1	9.9	-	-	13.3	3.5	1.2	-	-	-	-	3.7	7.7	-	-	0.6	-	-	323	61	384	84.0	16.0	22.49
500-250	56.9	12.3	4.0	-	10.2	6.5	7.1	0.6	1.2	-	-	1.2	-	-	-	-	-	-	325	169	494	65.8	34.2	20.46
250-125	56.4	14.2	4.1	-	8.2	5.4	5.7	1.3	0.3	-	-	1.9	-	-	-	2.5			317	135	452	70.0	30.0	12.86
125-62.5	58.8	8.6	0.3	-	7.7	7.7	10.8	0.3	0.6	0.3	3.1	0.6	-	-	-	1.2	-	-	325	152	477	68.0	32.0	10.45
Σ % > 62.5	54.60	8.25	1.32		15.47	4.70	3.48	0.31	0.32	0.03	0.31	4.45	6.09			0.67			1683	530	2213	76.0	24.0	10.64 < 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 39A

DEPTH: ______

LATITUDE: ______

LONGITUDE: ______

WHOLE SAMPLE DESCRIPTION: ______

SIZE FRACTION DESCRIPTIONS

4000-2000

500-250

2000-1000

250-125

1000-500

125-62.5

GRAIN TYPES (%) [2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	44.4	-	-	-	22.2	-	-	-	-	-	-	11.1	22.3	-	-	-	-	-	9	3	12	75.0	25.0	3.06
2000-1000	46.5	3.1	-	-	26.3	7.5	-	-	-	-	-	8.7	7.9	-	-	-	-	-	228	220	448	50.9	49.1	13.99
1000-500	53.7	7.7	-	-	24.8	4.2	0.9	-	-	-	-	5.4	3.3	-	-	-	-	-	335	429	764	43.8	56.2	38.04
500-250	45.4	8.8	1.3	-	25.4	16.3	2.5	-	-	-	-	0.3	-	-	-	-	-	-	319	722	1041	30.6	69.4	35.15
250-125	41.9	11.1	1.5	-	29.3	7.9	5.6	0.9	-	-	-	-	-	-	-	1.8	-	-	341	635	976	34.9	65.1	4.94
125-62.5	66.4	5.2	0.3	-	13.2	4.6	6.7	-	-	1.2	1.5	-	-	-	-	0.9	-	-	327	141	468	69.9	30.1	1.36
Σ % > 62.5	49.41	6.81	0.40		24.98	8.02	1.47	0.05		0.03	0.05	4.58	4.10			0.10			1559	2150	3709	42.0	58.0	3.32 < 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 40-A

DEPTH:

LATITUDE:

LONGITUDE:

WHOLE SAMPLE DESCRIPTION:

SIZE FRACTION DESCRIPTIONS

4000-2000

500-250

2000-1000

250-125

1000-500

125-62.5

GRAIN TYPES (%)[2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	16.7	-	-	-	66.7	16.5	-	-	-	-	-	-	-	-	-	-	-	-	6	1	7	85.7	14.3	14.88
2000-1000	37.7	2.2	-	-	39.6	2.6	0.3	-	-	-	-	7.3	10.3	-	-	-	-	-	273	105	378	72.2	27.8	18.93
1000-500	30.0	10.9	-	-	41.3	6.6	0.9	-	-	-	-	3.4	6.9	-	-	-	-	-	320	332	652	49.1	50.9	41.31
500-250	41.2	6.4	-	-	30.1	12.2	4.1	0.6	-	-	-	1.4	1.7	-	-	2.0	-	-	345	696	1041	33.1	66.9	18.21
250-125	57.2	6.7	-	-	21.7	8.3	3.5	0.3	-	-	0.3	-	-	-	-	2.0	-	-	313	904	1217	25.7	74.3	4.40
125-62.5	50.8	5.9	0.6	-	21.9	9.7	5.6	-	-	0.9	0.9	-	-	-	-	3.7	-	-	328	310	631	50.9	49.1	0.36
Σ % > 62.5	30.68	5.53	tr		45.15	8.64	0.98	0.07		tr	tr	3.29	5.39			0.28			1578	2348	3926	40.2	59.8	1.67

< 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 41-A

DEPTH: _______

LATITUDE: _______

LONGITUDE: _______

WHOLE SAMPLE DESCRIPTION: _______

SIZE FRACTION DESCRIPTIONS

4000-2000

2000-1000

1000-500

500-250

250-125

125-62.5

GRAIN TYPES (%)[2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)	
4000-2000	66.7	-	-	-	-	-	-	-	-	-	-	33.3	-	-	-	-	-	-	6	1	7	85.7	14.3	0.43	
2000-1000	73.5	6.3	-	-	10.9	-	3.1	-	-	-	-	3.1	3.1	-	-	-	-	-	64	2	66	97.0	3.0	0.72	
1000-500	69.8	7.8	-	0.2	12.6	1.9	3.4	-	0.7	-	-	2.2	0.7	-	-	0.7	-	-	412	284	696	59.2	40.3	2.08	
500-250	45.4	12.5	1.0	0.3	27.6	4.5	2.9	1.0	1.6	0.3	-	1.3	-	-	-	1.6	-	-	312	682	994	31.4	68.6	28.93	
250-125	45.8	12.7	0.7	-	27.1	1.6	5.2	5.9	1.0	-	-	-	-	-	-	-	-	-	306	948	1254	24.4	75.6	56.42	
125-62.5	58.6	8.9	-	-	20.7	3.4	5.0	3.4	-	-	-	-	-	-	-	-	-	-	358	351	709	50.5	49.5	5.81	
Σ % > 62.5	49.06	11.71	0.68	0.11	25.20	2.67	4.20	3.56	1.03	0.11		1.03	0.11			0.53			1458	2268	3726	39.1	60.9	5.53	< 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 42-A

DEPTH: ______

LATITUDE: ______

LONGITUDE: ______

WHOLE SAMPLE DESCRIPTION: ______

SIZE FRACTION DESCRIPTIONS

4000-2000

500-250

2000-1000

250-125

1000-500

125-62.5

GRAIN TYPES (%)[2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)	
4000-2000	76.5	-	-	2.4	-	-	2.4	-	-	-	-	11.9	-	4.8	-	-	-	-	42	-	42	100	0	9.68	
2000-1000	82.9	2.0	-	3.4	2.6	4.0	1.1	-	-	-	-	2.8	0.9	-	-	-	0.3	-	352	2	354	99.4	0.6	15.02	
1000-500	78.2	0.6	-	1.3	4.0	8.9	3.5	-	-	-	-	3.2	0.3	-	-	-	-	-	372	2	374	99.5	0.5	15.73	
500-250	70.9	6.6	1.2	0.3	6.0	5.7	3.3	-	1.2	0.3	-	3.0	0.3	-	-	1.2	-	-	332	11	343	96.8	3.2	11.19	
250-125	74.8	5.0	2.1	0.3	6.5	2.1	3.8	2.4	0.9	0.9	0.6	0.6	-	-	-	-	-	-	339	129	468	72.4	27.6	15.73	
125-62.5	68.6	6.1	1.3	0.3	6.7	2.5	4.1	-	0.9	4.5	3.8	0.6	-	-	-	0.6	-	-	314	43	357	88.0	12.0	9.53	
Σ % > 62.5	76.44	3.09	0.68	1.45	4.19	4.32	2.93	0.38	0.44	0.72	0.55	3.54	0.30	0.66		0.25	0.06		1751	187	1938	90.4	9.6	23.08	< 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 44-A

DEPTH: ________

LATITUDE: ________

LONGITUDE: ________

WHOLE SAMPLE DESCRIPTION: ________

SIZE FRACTION DESCRIPTIONS

4000-2000

500-250

2000-1000

250-125

1000-500

125-62.5

GRAIN TYPES (%)[2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	56.6	-	-	4.3	4.3	-	-	-	-	-	-	26.1	8.7	-	-	-	-	-	23	-	23	100	0	4.30
2000-1000	67.8	1.6	-	0.6	19.7	1.9	-	-	-	-	-	3.2	5.2	-	-	-	-	-	310	2	312	99.4	0.6	22.36
1000-500	76.1	3.9	-	0.7	9.7	4.9	0.3	-	-	-	-	3.2	0.6	-	-	0.6	-	-	309	-	309	100	0	37.92
500-250	70.1	4.4	0.3	1.3	7.0	15.7	0.6	-	-	-	-	0.3	-	-	-		0.3	-	318	11	329	96.7	3.3	28.03
250-125	67.7	1.8	0.3	0.9	8.5	16.3	2.1	-	-	0.3	0.6	0.6	-	-	-	0.9	-	-	331	99	430	77.0	23.0	3.44
125-62.5	69.2	3.3	0.3	0.6	11.4	7.5	2.9	-	-	2.3	0.9	-	-	-	-	1.6	-	-	307	31	338	90.8	9.2	0.34
Σ % > 62.5	71.28	3.27	0.10	1.00	11.01	7.39	0.36			0.02	0.02	3.32	1.86			0.28	0.09		1598	143	1741	92.0	8.0	3.27

< 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 45A

DEPTH:

LATITUDE:

LONGITUDE:

WHOLE SAMPLE DESCRIPTION:

SIZE FRACTION DESCRIPTIONS

4000-2000

500-250

2000-1000

250-125

1000-500

125-62.5

GRAIN TYPES (%)[2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	60.0	-	-	-	13.3	-	6.7	-	-	-	-	-	-	-	-	-	-	-	15	-	15	100	0	1.41
2000-1000	62.5	3.5	-	-	8.3	6.9	1.4	-	-	-	-	6.3	3.5	-	-	7.6	-	-	144	-	144	100	0	2.39
1000-500	53.6	5.2	0.6	0.3	14.2	13.4	1.7	-	0.3	-	-	2.9	2.6	-	-	5.2	-	-	344	8	352	97.7	2.3	5.21
500-250	60.1	11.2	5.1	1.6	11.2	5.1	1.9	2.6	-	0.3	-	-	-	-	-	0.9	-	-	313	16	329	95.1	4.9	19.00
250-125	69.2	7.5	0.9	0.6	7.8	10.6	1.6	0.3	0.9	-	-	-	-	-	-	0.6	-	-	320	83	403	79.4	20.6	51.58
125-62.5	73.3	4.3	1.2	0.6	9.0	7.2	2.3	-	0.6	0.3	0.9	-	-	-	-	0.3	-	-	345	81	426	81.0	19.0	7.04
Σ % > 62.5	66.21	7.73	1.89	0.80	9.29	8.86	1.81	0.81	0.57	0.09	0.07	0.41	0.28			1.18			1481	188	1669	88.7	11.3	3.37 < 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 46A

DEPTH: ________

LATITUDE: ________

LONGITUDE: ________

WHOLE SAMPLE DESCRIPTION: ________

SIZE FRACTION DESCRIPTIONS

4000-2000

500-250

2000-1000

250-125

1000-500

125-62.5

GRAIN TYPES (%)[2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)	
4000-2000	75.0	-	-	-	6.3	-	-	-	-	-	-	12.5	6.2	-	-	-	-	-	16	-	16	100	0	1.92	
2000-1000	75.3	9.3	-	0.5	8.4	1.5	-	-	-	-	-	3.0	2.0	-	-	0.7	-	-	203	-	203	100	0	4.79	
1000-500	78.4	10.3	-	0.3	5.5	1.9	1.0	-	-	-	-	1.9	-	-	-	0.3	-	-	310	-	310	100	0	8.20	
500-250	60.3	17.1	1.0	1.0	8.9	1.6	6.2	1.6	2.0	-	-	-	-	-	-	0.3	-	-	305	23	328	93.0	7.0	12.46	
250-125	66.5	11.6	-	0.6	9.7	-	1.3	8.8	0.9	0.3	-	-	-	-	-	0.3	-	-	318	347	665	47.8	52.2	49.52	
125-62.5	68.2	5.6	-	0.5	14.5	1.1	4.8	-	-	1.6	2.9	-	-	-	-	0.8	-	-	377	309	686	55.0	45.0	10.44	
Σ % > 62.5	68.18	11.34	0.21	0.61	9.18	0.86	2.49	4.06	0.79	0.29	0.30	0.96	0.36			0.37			1529	679	2208	69.2	30.8	12.57	< 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 47A DEPTH: ______ LATITUDE: ______

LONGITUDE: ______

WHOLE SAMPLE DESCRIPTION: ______

SIZE FRACTION DESCRIPTIONS

4000-2000

2000-1000

1000-500

500-250

250-125

125-62.5

GRAIN TYPES (%)[2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)	
4000-2000	71.7	-	-	1.5	14.5	-	0.8	-	-	-	-	8.4	-	-	-	-	3.1	-	131	-	131	100	0	12.06	
2000-1000	69.3	-	-	1.5	12.7	-	2.1	-	-	-	-	10.8	-	-	-	-	3.6	-	332	-	332	100	0	34.36	
1000-500	75.0	1.3	-	1.0	11.7	-	2.0	-	-	0.3	0.6	5.2	1.3	-	-	-	0.6	-	308	-	308	100	0	31.20	
500-250	68.0	4.1	-	0.3	8.8	-	4.7	-	0.3	0.9	5.6	2.6	3.5	-	-	0.6	0.6	-	341	-	341	100	0	15.31	
250-125	65.9	3.1	0.6	-	6.8	1.1	2.5	0.3	0.9	0.9	15.9	0.3	0.5	-	-	1.1	-	-	352	12	364	96.7	3.3	3.59	
125-62.5	46.2	4.9	0.5	-	11.6	-	2.3	-	0.9	11.3	18.2	-	-	-	-	4.0	-	-	346	5	351	98.6	1.4	0.53	
Σ % > 62.5	70.95	1.21	0.02	1.00	11.77	0.04	2.33	0.01	0.07	0.33	1.74	7.28	0.99			0.16	1.96		1810	17	1827	99.1	0.9	2.95	< 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 48A

DEPTH: ________

LATITUDE: ________

LONGITUDE: ________

WHOLE SAMPLE DESCRIPTION: ________

SIZE FRACTION DESCRIPTIONS

4000-2000

2000-1000

1000-500

500-250

250-125

125-62.5

GRAIN TYPES (%)[2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	92.0	-	-	-	-	-	8.0	-	-	-	-	-	-	-	-	-	-	-	12	-	12	100	0	1.71
2000-1000	81.[illegible]	-	-	-	2.8	3.8	5.7	-	-	-	-	6.6	-	-	-	-	-	-	106	1	107	99	1.0	2.18
1000-500	74.0	5.3	-	0.6	5.3	10.4	2.2	-	-	0.3	-	1.9	-	-	-	-	-	-	318	2	320	99.4	0.6	4.05
500-250	70.9	6.7	0.9	0.3	4.7	6.4	2.9	-	1.4	1.4	1.2	1.7	0.9	-	-	0.6	-	-	344	5	349	98.6	1.4	10.83
250-125	63.5	7.8	2.2	0.3	8.1	5.6	4.4	-	3.4	1.3	3.4	-	-	-	-	-	-	-	320	47	367	87.2	12.8	26.66
125-62.5	68.8	4.9	-	-	8.9	3.6	3.3	0.3	-	5.3	4.9	-	-	-	-	-	-	-	304	37	341	89.0	11.0	17.93
Σ % > 62.5	68.58	6.09	1.06	0.22	7.05	5.28	3.83	0.09	1.6[illegible]	2.27	2.94	0.69	0.17			0.10			1404	92	1496	93.9	6.1	36.56 < 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 50A

DEPTH:

LATITUDE:

LONGITUDE:

WHOLE SAMPLE DESCRIPTION:

SIZE FRACTION DESCRIPTIONS

4000-2000

500-250

2000-1000

250-125

1000-500

125-62.5

GRAIN TYPES (%)[2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	62.5	-	-	-	-	-	-	-	-	-	-	31.3	-	-	-	6.2	-	-	16	-	16	100	0	1.39
2000-1000	76.0	3.5	-	-	6.5	1.5	1.0	-	-	-	-	10.0	1.5	-	-	-	-	-	336	-	336	100	0	8.60
1000-500	67.6	9.2	-	0.3	9.2	3.7	1.7	-	-	-	-	[illegible]	2.0	-	-	-	-	-	350	-	350	100	0	24.72
500-250	65.2	8.7	0.6	0.6	8.7	9.1	3.4	-	-	-	-	3.7	-	-	-	-	-	-	322	20	342	94.0	6.0	28.70
250-125	57.0	6.1	0.6	3.2	8.8	22.8	0.9	-	0.3	0.3	-	-	-	-	-	-	-	-	342	138	480	71.0	29.0	25.73
125-62.5	73.8	4.0	0.3	2.0	6.6	10.3	0.9	-	0.9	0.9	0.3	-	-	-	-	-	-	-	348	153	501	69.0	31.0	3.41
Σ % > 62.5	65.41	7.43	0.34	1.04	8.44	9.61	1.96		0.10	0.10	0.01	4.68	0.77			0.11			1714	311	2025	85.0	15.0	7.33 < 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 52A

DEPTH:

LATITUDE:

LONGITUDE:

WHOLE SAMPLE DESCRIPTION:

SIZE FRACTION DESCRIPTIONS

4000-2000

2000-1000

1000-500

500-250

250-125

125-62.5

GRAIN TYPES (%)[2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	92.0	-	-	-	4.0	-	4.0	-	-	-	-	-	-	-	-	-	-	-	25	-	25	100	0	3.41
2000-1000	77.8	2.0	-	-	6.1	6.1	3.0	-	-	-	-	5.0	-	-	-	-	-	-	99	-	99	100	0	1.08
1000-500	68.6	4.5	-	1.3	3.9	15.8	2.9	-	-	0.3	-	1.8	0.9	-	-	-	-	-	380	2	382	99.5	0.5	1.46
500-250	61.8	7.0	4.5	1.4	9.0	9.0	3.4	-	2.8	-	-	1.1	-	-	-	-	-	-	356	4	360	99.9	0.1	2.87
250-125	60.2	13.3	5.5	1.9	7.8	2.9	4.6	-	2.3	0.6	-	0.9	-	-	-	-	-	-	308	7	315	97.8	2.2	15.31
125-62.5	63.2	9.7	1.3	0.3	10.6	4.3	5.0	-	3.3	2.3	-	-	-	-	-	-	-	-	301	13	314	95.9	4.1	28.72
Σ % > 62.5	64.60	9.64	2.55	0.62	9.00	4.23	4.64		2.61	1.40		0.49	0.02						1469	26	1495	98.3	1.7	47.16 < 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 53A

DEPTH:

LATITUDE:

LONGITUDE:

WHOLE SAMPLE DESCRIPTION:

SIZE FRACTION DESCRIPTIONS

4000-2000

500-250

2000-1000

250-125

1000-500

125-62.5

GRAIN TYPES (%)[2]

SIZE FRACTIONS (µ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	63.6	-	-	-	9.1	-	-	-	-	-	-	27.3	-	-	-	-	-	-	11	-	11	100	0	1.84
2000-1000	76.4	0.3	-	0.3	10.0	3.9	1.0	-	-	-	-	5.8	2.3	-	-	-	-	-	309	-	309	100	0	8.17
1000-500	76.9	4.6	-	-	8.7	2.8	1.5	-	-	-	-	4.5	0.6	-	-	-	-	-	325	-	325	100	0	21.95
500-250	74.1	10.0	-	0.6	8.7	4.8	1.2	-	0.6	-	-	-	-	-	-	-	-	-	312	2	314	99.4	0.6	36.26
250-125	62.7	11.8	0.6	1.2	7.0	10.9	4.6	0.3	0.6	-	-	-	-	-	-	0.3	-	-	328	56	384	85.4	14.6	12.56
125-62.5	67.7	10.7	0.3	0.3	8.9	5.3	5.9	-	-	0.6	0.3	-	-	-	-	-	-	-	356	112	468	76.1	23.9	4.49
Σ % > 62.5	73.12	7.63	0.09	0.46	8.62	4.88	1.86	0.04	0.34	0.02	0.01	2.50	0.39			0.04			1641	170	1811	90.6	9.4	14.61 < 62 µ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 55A

DEPTH:

LATITUDE:

LONGITUDE:

WHOLE SAMPLE DESCRIPTION:

SIZE FRACTION DESCRIPTIONS

4000-2000

2000-1000

1000-500

500-250

250-125

125-62.5

GRAIN TYPES (%)[2]

SIZE FRACTIONS (µ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	100.0	-	-	-	-	-	-	-	- -	-	-	-	-	-	-	-	-	-	5	-	5	100	0	0.98
2000-1000	50.3	4.3	-	2.1	35.3	2.7	1.1	-	-	-	-	0.5	3.2	-	-	0.5	-	-	187	-	187	100	0	5.52
1000-500	65.1	4.7	0.3	3.3	18.6	5.3	0.6	-	0.3	0.3	-	0.9	0.3	0.3	-	-	-	-	303	1	304	99.7	0.3	6.80
500-250	27.2	9.6	5.1	4.8	13.8	3.6	3.0	31.1	-	0.3	-	1.5	-	-	-	-	-	-	334	-	334	100	0	7.19
250-125	24.4	1.9	9.3	3.1	14.3	7.8	1.9	32.3	1.9	1.2	-	1.9	-	-	-	-	-	-	322	5	327	98.5	1.5	5.81
125-62.5	32.4	8.5	6.6	2.0	29.2	2.6	3.9	9.2	1.0	4.6	-	-	-	-	-	-	-	-	305	20	325	93.8	6.2	12.51
Σ % > 62.5	40.38	6.22	4.45	2.87	22.27	4.03	2.32	13.63	0.63	1.71		0.82	0.53	0.05		0.08			1456	26	1482	98.2	1.8	61.09 < 62 µ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 56A

DEPTH:

LATITUDE:

LONGITUDE:

WHOLE SAMPLE DESCRIPTION:

SIZE FRACTION DESCRIPTIONS

4000-2000

500-250

2000-1000

250-125

1000-500

125-62.5

GRAIN TYPES (%)[2]

SIZE FRACTIONS (µ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	4	100	0	0.13
2000-1000	92.2	-	-	-	-	2.6	2.6	-	-	-	-	2.6	-	-	-	-	-	-	39	-	39	100	0	1.02
1000-500	68.1	2.5	-	0.3	13.4	11.5	0.3	-	-	-	-	1.4	-	-	-	2.5	-	-	358	-	358	100	0	2.93
500-250	61.6	8.5	1.6	0.7	10.7	5.2	1.6	2.0	1.6	0.3	-	0.7	-	-	-	5.5	-	-	307	3	310	99.0	1.0	9.94
250-125	62.9	13.4	1.9	1.9	4.7	6.5	2.8	1.6	-	-	-	0.3	-	-	-	4.0	-	-	321	9	330	97.3	2.7	24.20
125-62.5	76.2	4.7	0.3	0.6	7.5	6.6	1.3	-	-	1.9	-	-	-	-	-	0.9	-	-	320	72	392	81.6	18.4	24.84
Σ % > 62.5	68.20	8.67	1.16	1.12	7.05	6.49	1.94	1.00	0.23	0.73		0.36				3.00			1349	84	1433	94.1	5.9	[illegible]7.20 < 62 µ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 57A

DEPTH:

LATITUDE:

LONGITUDE:

WHOLE SAMPLE DESCRIPTION:

SIZE FRACTION DESCRIPTIONS

4000-2000

500-250

2000-1000

250-125

1000-500

125-62.5

GRAIN TYPES (%)[2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	90.0	-	-	-	-	-	10.0	-	-	-	-	-	-	-	-	-	-	-	10	-	10	100	0	0.66
2000-1000	82.5	-	-	-	8.8	5.3	1.7	-	-	-	-	1.7	-	-	-	-	-	-	57	-	57	100	0	0.47
1000-500	71.3	1.7	-	0.6	12.3	7.5	0.6	-	-	-	-	0.3	-	-	-	5.7	-	-	348	-	348	100	0	2.25
500-250	62.4	7.6	0.9	1.6	16.9	2.8	0.9	2.3	0.9	-	-	-	-	-	-	3.2	-	-	316	-	316	100	0	10.14
250-125	53.7	18.1	2.2	0.9	16.3	3.7	1.3	1.6	-	-	-	0.3	-	-	-	1.9	-	-	320	1	321	99.7	0.3	32.30
125-62.5	69.7	5.7	1.6	0.9	9.8	6.3	3.2	-	-	2.2	0.6	-	-	-	-	-	-	-	317	77	394	80.5	19.5	22.72
Σ % > 62.5	60.86	12.00	1.70	0.98	14.17	4.39	1.86	1.23	0.14	0.63	0.17	0.10				1.67			1368	78	1446	94.6	5.4	30.99 < 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 60A DEPTH: ______ LATITUDE: ______
LONGITUDE: ______

WHOLE SAMPLE DESCRIPTION: ______

SIZE FRACTION DESCRIPTIONS

4000-2000

500-250

2000-1000

250-125

1000-500

125-62.5

GRAIN TYPES (%)[2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	3	100	0	0.34
2000-1000	72.7	9.1	-	-	-	9.1	-	-	-	-	-	-	-	-	-	9.1	-	-	11	-	11	100	0	0.11
1000-500	72.7	7.1	-	3.7	6.2	4.1	2.5	-	-	-	-	1.2	-	-	-	2.5	-	-	242	-	242	100	0	0.34
500-250	45.6	27.6	1.2	7.1	12.1	1.7	1.7	0.3	2.4	0.3	-	-	-	-	-	-	-	-	340	2	342	99.4	0.6	4.70
250-125	53.8	20.3	2.2	2.2	14.0	2.9	1.9	0.6	0.9	0.3	0.3	-	-	-	-	-	-	-	314	3	317	99.1	0.9	22.05
125-62.5	73.5	11.4	-	0.9	7.4	3.1	3.4	-	-	0.3	-	-	-	-	-	-	-	-	325	112	437	74.4	25.6	34.27
Σ % > 62.5	62.96	16.62	1.02	1.99	10.49	2.88	2.59	0.26	0.59	0.28	0.13	0.15				0.04			1235	117	1352	91.3	8.7	37.96 < 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 61A　　DEPTH: ______　　LATITUDE: ______

LONGITUDE: ______

WHOLE SAMPLE DESCRIPTION: ______

SIZE FRACTION DESCRIPTIONS

4000-2000

500-250

2000-1000

250-125

1000-500

125-62.5

GRAIN TYPES (%)[2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	100.0	-	-	-	-	-	-	-	-	-	-	--	-	-	-	-	-	-	8	-	8	100	0	0.76
2000-1000	90.0	-	-	-	4.4	2.2	2.2	-	-	-	-	2.2	-	-	-	-	-	-	45	1	46	97.8	2.2	0.66
1000-500	75.3	5.2	0.3	0.6	8.5	5.2	1.3	-	-	-	-	-	-	-	-	3.6	-	-	306	-	306	100	0	1.74
500-250	53.2	22.1	2.6	1.3	10.2	4.5	2.6	-	1.9	-	-	0.3	-	-	-	1.3	-	-	312	-	312	100	0	5.65
250-125	58.9	17.9	0.6	0.9	13.2	4.8	1.9	0.3	0.6	0.3	-	-	-	-	-	0.6	-	-	314	2	316	99.4	0.6	20.54
125-62.5	70.9	13.1	-	-	8.6	4.1	1.5	-	0.3	1.2	0.3	-	-	-	-	-	-	-	337	64	401	84.0	16.0	33.59
Σ % > 62.5	65.63	15.15	0.49	0.45	10.25	4.34	1.72	0.10	0.54	0.70	0.14	0.05				0.44			1332	67	1389	95.2	4.8	37.05

< 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 62A
DEPTH:
LATITUDE:
LONGITUDE:

WHOLE SAMPLE DESCRIPTION:

SIZE FRACTION DESCRIPTIONS

4000-2000

500-250

2000-1000

250-125

1000-500

125-62.5

GRAIN TYPES (%)[2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	60.0	-	-	-	30.0	-	-	-	-	-	-	10.0	-	-	-	-	-	-	10	-	10	100	0	1.48
2000-1000	75.1	-	-	0.3	11.9	7.7	0.3	-	-	-	-	3.0	1.1	-	-	-	-	-	362	-	362	100	0	9.61
1000-500	69.1	4.0	-	0.5	12.0	10.1	1.6	-	-	-	-	1.9	0.5	-	-	0.3	-	-	376	-	376	100	0	50.05
500-250	58.8	4.3	-	2.3	14.8	18.7	1.1	-	-	-	-	-	-	-	-	-	-	-	352	2	354	99.4	0.6	29.57
250-125	65.6	8.3	-	0.6	11.5	10.9	0.9	1.6	-	-	-	-	-	-	-	0.6	-	-	313	10	323	96.9	3.1	2.22
125-62.5	72.4	7.2	0.3	-	12.0	4.9	2.3	0.6	-	0.3	-	-	-	-	-	0.3	-	-	350	118	468	74.8	25.2	0.63
Σ % > 62.5	66.27	3.73	tr	1.10	13.15	12.40	1.27	0.04		tr		1.49	0.36			0.17			1763	130	1893	93.1	6.9	5.91

< 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 63A

DEPTH: ________

LATITUDE: ________

LONGITUDE: ________

WHOLE SAMPLE DESCRIPTION: ________

SIZE FRACTION DESCRIPTIONS

4000-2000

500-250

2000-1000

250-125

1000-500

125-62.5

GRAIN TYPES (%) [2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	75.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25.0	-	-	4	-	4	100	0	0.99
2000-1000	81.1	2.7	-	-	8.1	2.7	-	-	-	-	-	-	-	-	-	5.4	-	-	37	-	37	100	0	0.77
1000-500	56.6	6.9	0.3	1.3	15.8	14.8	1.5	-	-	-	-	1.8	-	-	-	2.0	-	-	392	-	392	100	0	2.10
500-250	52.6	14.7	0.6	2.4	11.8	6.8	2.9	0.6	4.4	0.3	0.3	-	-	-	-	2.6	-	-	340	2	342	99.4	0.6	4.20
250-125	47.3	20.9	2.3	0.6	15.4	1.6	6.4	0.6	3.9	-	-	-	-	-	-	1.0	-	-	311	5	316	98.4	1.6	10.39
125-62.5	74.9	11.3	0.3	0.6	8.7	1.2	-	0.3	0.3	1.2	1.2	-	-	-	-	-	-	-	321	71	392	81.9	18.1	27.19
Σ % > 62.5	64.76	13.38	0.86	0.79	10.83	2.57	1.97	0.39	1.63	0.69	0.69	0.10				1.33			1405	78	1483	94.7	5.3	53.93 < 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 64A

DEPTH: ________

LATITUDE: ________

LONGITUDE: ________

WHOLE SAMPLE DESCRIPTION: ________

SIZE FRACTION DESCRIPTIONS

4000-2000		500-250
2000-1000		250-125
1000-500		125-62.5

GRAIN TYPES (%)[2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	75.0	25.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	4	100	0	0.32
2000-1000	53.8	2.6	-	5.1	.5.1	30.8		-	-	-	-	2.6	-	-	-	-	-	-	39	-	39	100	0	0.64
1000-500	55.0	16.2	-	4.5	10.2	12.5	0.3		-	-	-	0.3	0.3	-	-	0.9	-	-	353	-	353	100	0	3.41
500-250	38.9	24.0	0.9	2.3	11.1	12.6	2.3	3.2	2.1	-	-	0.3	-	-	-	2.3	-	-	342	12	354	96.6	3.4	9.58
250-125	45.6	10.6	1.9	0.6	21.6	4.8	2.6	0.9	0.9	0.6	0.9	-	-	-	-	-	-	-	312	20	332	94.0	6.0	15.97
125-62.5	64.3	17.1	0.3	0.9	10.6	1.2	4.1	-	0.3	0.9	0.3	-	-	-	-	-	-	-	339	130	469	72.3	27.7	20.13
Σ % > 62.5	51.52	19.22	0.95	1.41	14.33	6.25	2.80	1.02	0.86	0.51	0.42	0.14	0.02			055			1389	162	1551	89.6	10.4	49.84 < 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 65A

DEPTH:

LATITUDE:

LONGITUDE:

WHOLE SAMPLE DESCRIPTION:

SIZE FRACTION DESCRIPTIONS

4000-2000

500-250

2000-1000

250-125

1000-500

125-62.5

GRAIN TYPES (%)[2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	100	0	0.11
2000-1000	70.5	5.9	-	-	11.8	11.8	-	-	-	-	-	-	-	-	-	-	-	-	17	-	17	100	0	0.23
1000-500	65.2	3.4	-	3.1	9.3	16.5	1.6	-	0.3	-	-	0.6	-	-	-	-	-	-	322	-	322	100	0	1.49
500-250	52.7	21.2	0.6	2.6	11.7	8.4	0.9	-?	1.9	-	- -	-	-	-	-	-	-	-	308	1	309	99.7	0.3	8.83
250-125	61.0	12.2	1.1	2.3	14.6	5.7	1.4	-	1.7	-	-	-	-	-	-	-	-	-	352	9	361	97.5	2.5	23.97
125-62.5	70.4	14.2	-	0.6	7.8	1.2	4.3	-	-	1.2	0.3	-	-	-	-	-	-	-	346	230	576	60.1	39.9	22.82
Σ % > 62.5	62.43	14.09	0.65	1.89	11.91	5.26	2.14		1.19	0.34	0.08	0.02							1346	240	1586	84.9	15.1	[illegible]2.31 < 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 2101A **DEPTH:** 37' **LATITUDE:** 26 25 00 **LONGITUDE:** 82 15 01

WHOLE SAMPLE DESCRIPTION:

SIZE FRACTION DESCRIPTIONS

4000-2000: YELLOWISH GRAY SHELLY CARBONATE SAND: MOLLUSC--mostly dull, worn, pitted and bored fragments; a few whole, slightly worn valves, ECHINOID--relatively fresh plate fragments, INTRA--friable aggregates.

2000-1000: YELLOWISH GRAY TO LIGHT GRAY INTRACLASTIC SHELLY CARBONATE SAND: MOLLUSC--mostly dull, worn, pitted and bored fragments, very few fresher, angular fragments, INTRA--very friable aggregates, ECHINOID--relatively fresh plate fragments, B. FORAM--dull, slightly worn fragments.

1000-500: LIGHT OLIVE GRAY INTRACLASTIC SHELLY CARBONATE SAND: MOLLUSC--mostly dull, pitted, worn fragments, INTRA--friable aggregates, ECHINOID--slightly worn plate fragments, X-CARB.--dull, worn, pitted fragments, QUARTZ--clear to slightly translucent, subrounded to rounded.

500-250: YELLOWISH GRAY, QUARTZITIC, INTRACLASTIC SHELLY CARBONATE SAND: MOLLUSC--dull, worn, pitted or frosted fragments; few relatively fresh, angular fragments, INTRA--friable aggregaes, PELLET--soft, ellipsoidal-shaped, ECHINOID--relatively fresh plate and spine fragments, X-CARB.--dull, worn fragments, QUARTZ--clear, subrounded.

250-125: YELLOWISH GRAY QUARTZITIC SHELLY CARBONATE SAND: MOLLUSC--dull, worn, pitted or frosted fragments, INTRA--friable aggregates, ECHINOID--relatively fresh plate and spine fragments, X-CARB.--dull, worn, pitted or frosted fragments, QUARTZ--mostly clear, subangular to subrounded.

125-62.5: YELLOWISH GRAY SHELLY CARBONATE QUARTZ SAND: MOLLUSC--dull frosted, worn fragments, ECHINOID--plate and spine fragments, X-CARB.--dull, frosted, worn fragments, QUARTZ--clear, subangular to subrounded.

GRAIN TYPES (%)[2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNDISTINGUISHABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	85.7						4.8									9.5			21		21	100	0	2.65
2000-1000	80.0	1.7				0.9	3.5									12.2	1.7		115		115	100	0	2.19
1000-500	63.7	0.9			7.5	0.6	4.5					0.6				21.9	0.3		333	11	344	96.8	3.2	3.78
500-250	55.7	1.6			5.4		5.1	5.4								26.8			314	43	357	88.0	12.0	9.53
250-125	70.3	1.5		0.3	12.6		6.6	1.2		0.6						6.9			333	319	652	51.1	48.9	54.16
125-62.5	66.0	2.9			23.5	0.9	4.8			0.6						1.3			315	502	817	38.6	61.4	18.76
Σ % > 62.5	66.68	1.60		0.15	11.41	0.23	5.23	1.50		0.41		0.04				10.75	0.10		1431	875	2306	56.89	43.11	8.85 < 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 3102A

DEPTH: 58'

LATITUDE: 26 25 00

LONGITUDE: 82 25 01

WHOLE SAMPLE DESCRIPTION:

SIZE FRACTION DESCRIPTIONS

4000-2000

MOLLUSC--yellowish gray, dull, pitted, encrusted fragment, ECHINOID--relatively fresh plate fragment.

2000-1000

YELLOWISH GRAY FORAMINIFERAL SHELLY CARBONATE SAND: MOLLUSC--mostly dull, pitted and bored, worn fragments; few fresher, angular fragments, B. FORAM--mostly whole, relatively fresh; some worn through to chambers; some fragments, INTRA--friable aggregates, BRYOZOA--dull, slightly worn, infilled with finer sediment, SOME QUARTZ--blackened carbonate aggregates.

1000-500

VERY LIGHT GRAY TO MEDIUM GRAY, FORAMINIFERAL QUARTZITIC SHELLY CARBONATE SAND: MOLLUSC--dull, pitted and bored, worn fragments; fewer relatively fresh, angular fragments, B. FORAM--whole and fragments, usually worn, exposing interior chambers, INTRA--friable aggregates, ECHINOID--relatively fresh spine and plate fragments, X-CARB.--dull, worn, pitted fragments, QUARTZ--clear to slightly translucent, subrounded to rounded, SOME QUARTZ--blackened carb. aggreg.

500-250

VERY LIGHT GRAY SHELLY CARBONATE QUARTZ SAND: MOLLUSC--dull, worn, pitted fragments, B. FORAM--worn, whole and fragments; few blackened, ECHINOID--relatively fresh plate and spine fragments, INTRA--friable aggregates, X-CARB.--dull, worn fragments, QUARTZ--clear to slightly translucent, angular to rounded, SOME QUARTZ--blackened carbonate aggregates.

250-125

VERY LIGHT GRAY SHELLY CARBONATE QUARTZ SAND: MOLLUSC--dull, worn fragments, some slightly pitted; some frosted, B. FORAM--fresh to dull, whole and fragments, ECHINOID--relatively fresh plate and spine fragments, X-CARB.--dull, worn fragments, QUARTZ--clear to slightly translucent, angular to subrounded.

125-62.5

YELLOWISH GRAY QUARTZITIC SHELLY CARBONATE SAND: MOLLUSC--dull to frosted, worn fragments, ECHINOID--relatively fresh plate and spine fragments, X-CARB.--dull to frosted, worn fragments, QUARTZ--mostly clear, angular to subrounded.

GRAIN TYPES (%)[2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNDIFFERENTIATED CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	50.0						50.0												2		2	100	0	tr
2000-1000	56.7	23.9			4.5		2.9					6.0				6.0			134	1	135	99.3	0.7	1.65
1000-500	48.5	22.7			15.8	3.2	3.5					0.3				3.2	3.0		340	189	529	64.3	35.7	4.48
500-250	47.5	11.4			20.3	4.1	8.2	1.9				0.3				6.3			316	1290	1606	19.7	80.3	32.38
250-125	57.7	6.8			18.1	2.3	11.9	0.3				0.3				2.6			310	935	1245	24.9	75.1	51.53
125-62.5	53.7	3.5			20.3	4.7	8.7				2.6					1.5			344	126	470	73.2	26.8	6.21
Σ % > 62.5	54.56	9.90			17.89	3.04	9.54	0.57			0.42	0.60				3.50	0.32		1446	2541	3987	29.38	70.62	3.69

< 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 2103A

DEPTH: 126'

LATITUDE: 26 24 59

LONGITUDE: 82 58 02

WHOLE SAMPLE DESCRIPTION:

SIZE FRACTION DESCRIPTIONS

4000-2000

YELLOWISH GRAY TO MEDIUM LIGHT GRAY CORRODED SHELLY CARBONATE SAND: MOLLUSC--dull, worn, pitted fragments, some blackened, BRYOZOAN--worn, infilled, X-CARB.--dull, worn, pitted fragments.

500-250

LIGHT OLIVE GRAY TO MEDIUM LIGHT GRAY QUARTZITIC SHELLY CARBONATE SAND: MOLLUSC--dull to frosted, worn and pitted fragments, some blackened, ECHINOID--relatively fresh plate fragments, B. CARB.--dull to frosted, worn, pitted fragments, X-CARB.--dull to frosted, worn fragments, QUARTZ--clear to slightly translucent, subangular to subrounded; few quartz-blackened carbonate aggregates.

2000-1000

YELLOWISH GRAY TO MEDIUM GRAY QUARTZITIC SHELLY CARBONATE SAND: MOLLUSC--dull, worn, pitted and bored fragments, some blackened, B. CARB.--dull, worn, pitted and bored fragments, X-CARB.--dull, worn, pitted and bored fragments, QUARTZ--clear to translucent, subangular to subrounded; some quartz-blackened carbonate aggregates.

250-125

YELLOWISH GRAY SHELLY CARBONATE QUARTZ SAND: MOLLUSC--mostly dull to frosted, worn fragments, B. FORAM--relatively fresh and whole; some chipped; some fragments, B. CARB.--dull to frosted, worn fragments, X-CARB.--dull to frosted, worn fragments, QUARTZ--mostly clear, angular to subrounded.

1000-500

YELLOWISH GRAY TO MEDIUM LIGHT GRAY QUARTZITIC SHELLY CARBONATE SAND: MOLLUSC--dull, worn, pitted fragments, some blackened, B. CARB.--dull worn, pitted fragments, X-CARB.--dull, worn, pitted fragments, QUARTZ --clear to slightly translucent, subangular to subrounded; some quartz-blackened carbonate aggregates.

125-62.5

YELLOWISH GRAY QUARTZITIC SHELLY CARBONATE SAND: MOLLUSC--dull to frosted, worn fragments, B. FORAM--relatively fresh and whole, INTRA--friable aggregates, PELLETS--friable, ECHINOID--relatively fresh plate and spine fragments, X-CARB.--dull to frosted, worn fragments, QUARTZ--clear to slightly translucent, angular to subrounded.

GRAIN TYPES (%) [2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	66.7				25.0							8.3							12		12	100	0	1.61
2000-1000	59.7	0.4			16.3	18.0	0.9					3.0	0.4			0.4	0.9		233	18	251	92.8	7.2	6.82
1000-500	48.0	1.6			23.2	24.8	0.9					0.9				0.3	0.3		315	34	349	90.3	9.7	24.84
500-250	43.3	4.9			26.3	18.6	3.7					2.9				0.3			323	99	422	76.5	23.5	42.51
250-125	41.7	5.9			39.1	6.8	2.6	1.9	1.0							1.0			307	422	729	42.1	57.9	19.64
125-62.5	35.7	6.4	0.3		37.9	2.1	5.2	4.5		0.3	0.6	0.3				6.7			330	112	442	74.7	25.3	0.54
Σ % > 62.5	46.52	3.49	tr		25.94	18.66	2.38	0.25	0.11	tr	tr	2.04	0.04			0.43	0.18		1520	685	2205	74.57	25.43	3.77

< 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 21044

DEPTH: 175'

LATITUDE: 26 24 59

LONGITUDE: 83 23 00

WHOLE SAMPLE DESCRIPTION:

SIZE FRACTION DESCRIPTIONS

4000-2000

YELLOWISH GRAY TO VERY LIGHT GRAY CARBONATE SAND: MOLLUSC--mostly dull, worn, pitted fragments; few relatively fresh, angular fragments, BRYOZOA--slightly worn and infilled, some encrusted, CORALG.--dull,pitted,branched fragments, some encrusted, *HALIMEDA*--dull plate fragments, X-CARB.--dull, worn fragments.

2000-1000

YELLOWISH GRAY CORRODED CARBONATE SAND: MOLLUSC--dull, worn, pitted fragments, some bored, BRYOZOA--dull, worn and often infilled, CORALG.--dull, worn, pitted and bored fragments,*HALIMEDA*--dull, worn fragments, X-CARB.--dull, worn, pitted and bored fragments.

1000-500

YELLOWISH GRAY SHELLY CARBONATE SAND: MOLLUSC--mostly dull and worn fragments, often pitted and bored, B. FORAM--relatively fresh to dull, mostly whole with chipped edges, CORALG.--dull, worn fragments, *HALIMEDA*--dull, worn fragments, some bored, B. CARB.--dull, worn fragments, often pitted, X-CARB.-- dull, worn fragments.

500-250

YELLOWISH GRAY SHELLY CARBONATE SAND: MOLLUSC--dull to frosted, worn fragments, B. FORAM--mostly relatively fresh and whole, some worn and chipped, *HALIMEDA*--dull, worn fragments, some bored, B. CARB.--dull to frosted, worn fragments, X-CARB.--dull to frosted, worn fragments.

250-125

YELLOWISH GRAY TO MEDIUM LIGHT GRAY SHELLY CARBONATE SAND: MOLLUSC--dull to frosted, worn fragments, B. FORAM--relatively fresh and whole; some fragments, *HALIMEDA*--dull, often worn, fragments, B. CARB.--dull to frosted, worn fragments, some smoothed and shiny, X-CARB.--dull to frosted, worn fragments, QUARTZ--clear, subangular to sub-rounded.

125-62.5

YELLOWISH GRAY TO LIGHT OLIVE GRAY SHELLY CARBONATE SAND: MOLLUSC--relatively fresh, angular, thin-shell fragments and worn, frosted fragments, B. FORAM--mostly fresh and whole, ECHINOID--relatively fresh plate and spine fragments, X-CARB.--worn, frosted fragments, QUARTZ--clear to slightly translucent, mostly subangular to sub-rounded.

GRAIN TYPES (%)[2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	20.6			5.9	35.3	2.9						14.7	20.6						34		34	100	0	3.02
2000-1000	16.3	1.5		4.0	52.6	3.1						6.8	14.5				1.2		325		325	100	0	13.43
1000-500	33.6	8.4		12.7	20.5	10.7	1.7	0.3				1.7	8.1				2.3		346		346	100	0	20.57
500-250	33.2	12.0	1.6	11.3	23.3	8.1	2.6	0.3				1.6					1.0		309		309	100	0	41.14
250-125	27.4	6.5	1.0	9.1	26.4	22.5	3.6		0.3		0.3	1.3				1.3	0.3		307	2	309	99.3	0.7	15.63
125-62.5	40.9	6.7	1.3		41.9	2.9	4.4			0.3						1.6			315	7	322	97.8	2.2	1.51
Σ % > 62.5	31.83	8.39	0.87	9.87	28.01	10.06	2.15	0.19	0.05	tr	0.05	2.69	4.46			0.23	1.15		1636	9	1645	99.85	0.15	4.45 < 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 2105A

DEPTH: 302'

LATITUDE: 26 24 59

LONGITUDE: 83 49 59

WHOLE SAMPLE DESCRIPTION:

SIZE FRACTION DESCRIPTIONS

4000-2000: VERY LIGHT GRAY CORRODED CARBONATE SAND: MOLLUSC--mostly dull, pitted and encrusted fragments; few fresh, angular, thin shell fragments, CORALG.--dull, worn, pitted and bored, encrusted fragments, BRYOZOA--slightly worn and infilled, X-CARB.--dull, bored and encrusted, irregular fragments.

2000-1000: YELLOWISH GRAY CORRODED SHELLY CARBONATE SAND: MOLLUSC--mostly dull, worn, pitted and bored fragments, B. FORAM--dull to shiny, worn to smoothed, mostly with chipped edges; many agglutinated forms, CORALG.--dull, worn, pitted and bored fragments, X-CARB.--dull, irregular to worn, pitted and bored fragments, and dull to shiny, worn, rounded fragments.

1000-500: YELLOWISH GRAY FORAMINIFERAL SHELLY CARBONATE SAND: MOLLUSC--mostly dull, worn, pitted fragments, B. FORAM--dull to shiny, worn to smooth, mostly whole with chipped edges; some fresh and whole, some agglutinated forms, CORALG.--dull, worn, pitted fragments, X-CARB.--dull, worn, pitted fragments and dull to shiny, worn to smoothed, rounded fragments.

500-250: YELLOWISH GRAY SHELLY FORAMINIFERAL CARBONATE SAND: MOLLUSC--dull to frosted, worn and pitted fragments, B. FORAM--dull to shiny, worn to smoothed; some chipped; some agglutinated forms, P. FORAM--relatively fresh and whole with some fragments, BRYOZOA--worn fragments, X-CARB.--mostly dull to shiny, often smoothed fragments; some dull to frosted, worn fragments, some pitted.

250-125: YELLOWISH GRAY SHELLY FORAMINIFERAL CARBONATE SAND: MOLLUSC--dull to frosted, worn fragments; some relatively fresh, thin, angular shell fragments, B. FORAM--relatively fresh and whole, P. FORAM--fresh, whole and fragments, X-CARB.--mostly worn, smoothed, shiny, rounded fragments.

125-62.5: YELLOWISH GRAY FORAMINIFERAL SHELLY CARBONATE SAND: MOLLUSC--dull to frosted, worn fragments and relatively fresh, angular, thin shell fragments, B. FORAM--fresh and whole, P. FORAM--fresh, whole and fragments, ECHINOID--fresh plate and spine fragments, X-CARB.--dull to frosted, worn fragments; some smoothed and shiny, QUARTZ--clear, subangular.

GRAIN TYPES (%)[2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	21.2				45.5							12.1	21.2						33		33	100	0	2.35
2000-1000	12.7	14.3			55.8		0.9					2.4	9.4			3.3	1.2		330		330	100	0	15.54
1000-500	23.6	14.5			53.2		2.0					2.0	2.9			1.5	0.3		344		344	100	0	33.79
500-250	16.8	15.6	17.7		44.8		0.6					4.5							334		334	100	0	25.56
250-125	25.7	12.2	24.2		32.1	0.3	2.5		0.9			1.8				0.3			327		327	100	0	12.10
125-62.5	38.6	9.7	11.4		29.6		5.8		2.6	1.0	1.3								309	3	311	99.0	1.0	4.90
Σ % > 62.5	20.91	13.80	8.53		47.22	0.04	1.65		0.25	0.05	0.06	2.87	3.11			1.12	0.31		1676	3	1679	99.95	0.05	5.06 < 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 2106A   DEPTH: 550'   LATITUDE: 26 24 58
LONGITUDE: 84 15 03

WHOLE SAMPLE DESCRIPTION:

SIZE FRACTION DESCRIPTIONS

4000-2000: LIGHT GRAY CORRODED CARBONATE SAND: MOLLUSC--dull, worn, bored fragments, BRYOZOA--dull, worn, CORALG.--dull, bored fragments, X-CARB.--dull, worn, bored fragments.

2000-1000: YELLOWISH GRAY TO LIGHT OLIVE GRAY CORRODED SHELLY CARBONATE SAND: MOLLUSC--mostly dull, worn, bored fragments; some relatively fresh, angular fragments, B. FORAM--dull to shiny, worn, often with chipped edges, BRYOZOA--dull, worn fragments, ECHINOID--relatively fresh plate fragments, X-CARB.--dull, worn, bored fragments.

1000-500: LIGHT OLIVE GRAY, FORAMINIFERAL, SHELLY CARBONATE SAND: MOLLUSC--mostly dull, worn, bored or frosted fragments, B. FORAM--relatively fresh and whole; dull to shiny, worn to smoothed, often chipped, P. FORAM--fresh to slightly dull, mostly whole, X-CARB.--dull, worn, frosted or bored fragments, QUARTZ--clear, subrounded.

500-250: YELLOWISH GRAY FORAMINIFERAL CARBONATE SAND: MOLLUSC--mostly dull, worn, frosted fragments, B. FORAM--relatively fresh and whole, some chipped, P. FORAM--relatively fresh, whole and fragments, ECHINOID--relatively fresh plate and spine fragments, X-CARB.--dull, worn, frosted fragments.

250-125: YELLOWISH GRAY FORAMINIFERAL SHELLY CARBONATE SAND: MOLLUSC--relatively angular fragments and dull, worn, frosted fragments; many whole snail shells, B. FORAM--relatively fresh and whole, some with chipped edges, P. FORAM--relatively fresh, whole and fragments, ECHINOID--fresh plate and spine fragments, X-CARB.--dull, worn, frosted fragments.

125-62.5: YELLOWISH GRAY SHELLY CARBONATE SAND: MOLLUSC--mostly relatively fresh, angular, thin shell fragments and whole snail shells, OSTRACOD--fresh, broken valve fragments, B. FORAM--mostly fresh and whole, P. FORAM--fresh, whole and fragments, ECHINOID--fresh, plate and spine fragments, X-CARB.--dull, worn, frosted fragments.

GRAIN TYPES (%)[2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	21.5				57.2							7.1	7.1				7.1		14		14	100	0	5.32
2000-1000	55.4	10.1			13.9	0.3	3.4					5.1	0.7	1.4		0.7	3.0		296		296	100	0	8.96
1000-500	34.5	16.0	7.3		26.9	1.8	5.7					4.8				1.8	1.2		331	1	332	99.7	0.3	9.05
500-250	14.4	18.0	47.5		9.9	0.6	5.7		0.3			2.7				0.9			333		333	100	0	18.56
250-125	37.3	10.7	25.4		16.0		7.2		2.5			0.9							319		319	100	0	27.61
125-62.5	50.8	5.3	9.9		16.4		5.6		10.8	0.6	0.6								323		323	100	0	17.35
Σ % > 62.5	35.71	11.02	20.96		18.84	0.35	5.56		3.02	0.12	0.12	2.33	0.51	0.15		0.44	0.87		1616	1	1617	99.97	0.03	12.99 < 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 2207A

DEPTH: 63'

LATITUDE: 27 56 59

LONGITUDE: 83 09 00

WHOLE SAMPLE DESCRIPTION:

SIZE FRACTION DESCRIPTIONS

4000-2000: VERY LIGHT GRAY SHELLY CARBONATE SAND: MOLLUSC--mostly dull, pitted fragments; some encrusted and bored, ECHINOID--dull plate fragments, BRYOZOA--dull, slightly worn fragments, infilled with finer quartz and carbonate sand.

2000-1000: VERY LIGHT GRAY FORAMINIFERAL SHELLY CARBONATE SAND: MOLLUSC--dull, frosted and pitted fragments, some bored; some blackened and encrusted; some worn beaks, B. FORAM--fresh to worn, whole and fragments, ECHINOID--relatively fresh plate fragments, INTRA--moderately indurated, platy aggregates.

1000-500: MEDIUM TO YELLOWISH GRAY FORAMINIFERAL SHELLY CARBONATE SAND: MOLLUSC--mostly dull, worn, frosted fragments, some blackened, B. FORAM--whole and fragments, both fresh and worn; some blackened, ECHINOID--relatively fresh plate fragments, X-CARB.--dull, worn frosted fragments.

500-250: VERY LIGHT GRAY TO LIGHT GRAY FORAMINIFERAL SHELLY CARBONATE SAND: MOLLUSC--mostly dull, worn, frosted fragments, some blackened, B. FORAM--whole and fragments, both fresh and worn; some slightly encrusted, ECHINOID--relatively fresh plate and spine fragments, X-CARB.--dull, worn, frosted fragments, QUARTZ--clear, subangular.

250-125: YELLOWISH GRAY QUARTZITIC FORAMINIFERAL SHELLY CARBONATE SAND: MOLLUSC--dull, frosted, worn fragments, B. FORAM--whole and fragments, both fresh and worn, ECHINOID--fresh plate and spine fragments, QUARTZ--clear, subangular to subrounded, X-CARB.--dull, worn, frosted fragments.

125-62.5: VERY LIGHT GRAY SHELLY CARBONATE QUARTZ SAND: MOLLUSC--dull, frosted fragments, B. FORAM--mostly fresh and whole, ECHINOID--mostly fresh plate and spine fragments, X-CARB.--dull, worn, frosted fragments, QUARTZ--clear, angular to subrounded.

GRAIN TYPES (%) [2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	60.0						20.0					20.0							10		10	100	0	0.24
2000-1000	46.7	38.3		0.8	0.8	0.8	6.7					1.3				4.2		0.4	240		240	100	0	1.25
1000-500	56.0	23.7		2.1	6.1	3.5	5.6					0.6				2.1	0.3		341	1	342	99.7	0.3	2.31
500-250	43.5	30.3		0.3	10.9	2.9	11.2		0.9										347	2	349	99.4	0.6	7.69
250-125	45.0	17.9		2.3	21.5	1.9	9.1	1.3		0.7	0.3								307	132	439	69.9	30.1	47.24
125-62.5	33.0	7.4	0.3	1.3	47.4	3.0	3.0			0.3	4.3								300	408	708	42.4	57.6	30.43
Σ % > 62.5	42.63	17.79	0.07	1.76	24.74	2.32	7.86	0.75	0.12	0.47	1.13	0.14				0.17	0.02	0.02	1545	543	2088	64.33	35.67	10.57 < 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 2208A

DEPTH: 107'

LATITUDE: 27 55 57

LONGITUDE: 83 27 32

WHOLE SAMPLE DESCRIPTION:

SIZE FRACTION DESCRIPTIONS

4000-2000

MOLLUSC--one is a relatively fresh, whole bivalve; one is a dull, slightly encrusted fragment.

2000-1000

YELLOWISH GRAY TO MEDIUM GRAY SHELLY CARBONATE SAND: MOLLUSC--mostly relatively fresh, whole bivalves and fresh, angular fragments; one whole snail, ECHINOID--relatively fresh plate fragments, B. CARB.--dull, pitted fragments, X-CARB.--dull, pitted or bored fragments.

1000-500

YELLOWISH TO MEDIUM GRAY SHELLY CARBONATE SAND: MOLLUSC--mostly dull, worn, pitted and frosted fragments; some relatively fresh, angular fragments; some dull, slightly worn, whole bivalves with worn beaks; some fresh, whole snails, B. CARB.--dull, pitted fragments, X-CARB.--dull, worn, pitted fragments, QUARTZ--clear to slightly translucent, subrounded to rounded.

500-250

YELLOWISH GRAY FORAMINIFERAL SHELLY CARBONATE SAND: MOLLUSC--relatively fresh, angular fragments and dull, frosted, pitted fragments; many fresh, whole snail shells, B. FORAM--mostly fresh and whole, often chipped; some agglutinated, ECHINOID--mostly relatively fresh fragments, X-CARB.--dull, frosted, worn fragments, QUARTZ--clear, angular to subrounded.

250-125

YELLOWISH GRAY SHELLY FORAMINIFERAL CARBONATE SAND: MOLLUSC--relatively fresh, angular fragments and dull, frosted fragments, B. FORAM--mostly fresh and whole; some chipped, ECHINOID--fresh plate and spine fragments, X-CARB.--dull, frosted fragments, QUARTZ--clear, angular to subangular.

125-62.5

YELLOWISH GRAY SHELLY CARBONATE SAND: MOLLUSC--mostly dull, frosted fragments, B. FORAM--relatively fresh and whole, ECHINOID--relatively fresh plate fragments, X-CARB.--dull, frosted, worn fragments, QUARTZ--clear, angular to subrounded.

GRAIN TYPES (%)[2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	NONIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	100																		2		2	100	0	1.83
2000-1000	53.8				7.7	30.8	7.7												26		26	100	0	0.29
1000-500	62.7	3.0			15.8	12.5	2.1					1.2				2.1	0.6		335	3	338	99.1	0.9	1.25
500-250	37.6	22.0	0.9	1.3	24.2	8.3	4.1		1.3								0.3		314	7	321	97.8	2.2	2.86
250-125	28.7	39.7	1.0	0.3	16.4	1.9	10.4		1.0		0.3						0.3		317	8	325	97.5	2.5	9.03
125-62.5	38.8	13.7	0.3	1.3	36.1	1.3	7.2				1.3								307	63	370	83.0	17.0	25.46
Σ % > 62.5	40.29	19.50	0.53	0.94	27.61	2.49	6.93		0.36		0.83	0.03				0.08	0.30		1301	81	1382	88.64	11.36	5.89

< 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 22084   DEPTH: 110'   LATITUDE: 27 52 30
LONGITUDE: 83 34 00

WHOLE SAMPLE DESCRIPTION:

SIZE FRACTION DESCRIPTIONS

4000-2000: MOLLUSC--relatively fresh bivalve fragments, BRYOZOA--slightly infilled and encrusted fragment, B. FORAM--fresh, slightly worn.

2000-1000: VERY LIGHT GRAY SHELLY CARBONATE SAND: MOLLUSC--slightly dull, whole and fragmented bivalves, some encrusted; some worn beaks, ECHINOID--fresh plate fragments, B. FORAM--slightly worn fragment, INTRA--lithified aggregate.

1000-500: VERY LIGHT GRAY SHELLY CARBONATE SAND: MOLLUSC--relatively fresh, angular bivalve fragments and dull, frosted fragments; some dull, whole bivalves, some with worn beaks, B. FORAM--dull, whole, often chipped, ECHINOID--fresh plate fragments, X-CARB.--dull, frosted fragments.

500-250: YELLOWISH GRAY FORAMINIFERAL SHELLY CARBONATE SAND: MOLLUSC--relatively fresh, angular fragments and dull, frosted fragments; many fresh, whole snail shells, B. FORAM--relatively fresh and whole, some chipped, ECHINOID--fresh plate fragments, X-CARB.--dull, frosted fragments, QUARTZ--clear, subangular to subrounded.

250-125: YELLOWISH GRAY FORAMINIFERAL SHELLY CARBONATE SAND: MOLLUSC--fresh, thin angular fragments and dull, frosted fragments; many fresh, whole snail shells, B. FORAM--relatively fresh and whole, some fragments, ECHINOID--fresh plate and spine fragments, X-CARB.--dull, frosted fragments, QUARTZ--clear, subangular.

125-62.5: YELLOWISH GRAY FORAMINIFERAL SHELLY CARBONATE SAND: MOLLUSC--mostly dull, frosted fragments; some fresh, whole snail shells, B. FORAM--mostly fresh and whole, ECHINOID--fresh plate and spine fragments, X-CARB.--dull, frosted fragments, QUARTZ--clear, subangular to subrounded.

GRAIN TYPES (%)[2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	71.4	14.3										14.3							7		7	100	0	0.53
2000-1000	71.5	2.0			2.0	6.1	14.4					2.0				2.0			49		49	100	0	0.76
1000-500	67.6	7.1	0.3		11.5	4.9	3.6		0.3			1.6				2.5		0.6	364		364	100	0	1.52
500-250	37.2	31.9	1.3	0.3	18.1	2.2	5.9		1.3							1.8			320	4	324	98.8	1.2	5.87
250-125	36.2	35.5	1.9	0.9	15.7	1.3	6.3		1.3	0.3		0.3				0.3			318	2	320	99.4	0.6	32.94
125-62.5	40.5	16.2	1.3	0.3	21.6	3.2	3.8		0.3	2.9	0.6	0.3							315	34	349	90.3	9.7	26.83
Σ % > 62.5	43.77	25.28	1.47	0.52	18.06	2.39	5.14		0.79	1.38	0.27	0.45				0.43		0.02	1375	40	1413	95.19	4.81	31.54 < 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 2211A

DEPTH: 143'

LATITUDE: 27 56 29

LONGITUDE: 83 53 02

WHOLE SAMPLE DESCRIPTION:

SIZE FRACTION DESCRIPTIONS

4000-2000: YELLOWISH GRAY, CORRODED, CARBONATE SAND: MOLLUSC--mostly dull, worn bored fragments; few fresh, angular fragments; many encrusted, CORALG.--dull, worn, bored, often encrusted, branched fragments, X-CARB.--dull, worn, bored and encrusted, mostly irregular fragments.

2000-1000: LIGHT GRAY, CORRODED, SHELLY CARBONATE SAND: MOLLUSC--mostly dull, worn, bored fragments, often encrusted, CORALG.--dull, worn, bored, branched fragments, often encrusted, BRYOZOA--dull, worn, some blackened, X-CARB.--dull, worn, bored, often irregular, fragments.

1000-500: LIGHT GRAY TO YELLOWISH GRAY SHELLY CARBONATE SAND: MOLLUSC--mostly dull worn, frosted, pitted and bored fragments, CORALG.--dull, worn, pitted and bored fragments, B. FORAM--fresh to worn, whole and chipped, X-CARB.--dull, worn, frosted, pitted and bored fragments.

500-250: YELLOWISH GRAY SHELLY CARBONATE SAND: MOLLUSC--mostly dull, worn, frosted fragments; some fresh, whole snail shells, B. FORAM--mostly fresh and whole, some with chipped edges; some agglutinated forms, ECHINOID--fresh and worn, plate and spine fragments, BRYOZOA--dull, worn fragments, X-CARB.--dull, worn, frosted fragments.

250-125: YELLOWISH GRAY SHELLY CARBONATE SAND: MOLLUSC--mostly dull, frosted fragments and fresh, whole snail shells, B. FORAM--mostly fresh and whole, ECHINOID--relatively fresh plate and spine fragments, X-CARB.--dull, frosted, worn fragments, QUARTZ--clear, angular to subrounded.

125-62.5: YELLOWISH GRAY SHELLY CARBONATE SAND: MOLLUSC--dull, frosted fragments and fresh, whole snail shells, B. FORAM--fresh and whole, ECHINOID--relatively fresh plate and spine fragments, INTRA--friable aggregates, X-CARB.--dull, frosted, worn fragments, QUARTZ--clear, angular to subrounded.

GRAIN TYPES (%)[2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNDETERMINATE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	24.1				50.0	1.8						5.6	13.0	1.8			3.7		54		54	100	0	14.91
2000-1000	46.4	0.3		1.1	37.4	1.6						3.3	9.6				0.3		366		366	100	0	23.10
1000-500	64.2	4.3		2.2	17.1	0.6	2.5					1.5	6.4				1.2		327		327	100	0	28.94
500-250	58.2	8.1	1.2	0.6	17.8	3.6	6.9		0.3			3.0				0.3			332		332	100	0	15.69
250-125	47.5	12.7	1.5	1.2	22.2	5.9	5.6		0.3	0.3		0.9				1.9			324	16	340	95.3	4.7	2.61
125-62.5	44.8	11.4	2.6		22.9	2.6	7.5			2.9		0.7				4.6			306	15	321	95.3	4.7	1.25
Σ % > 62.5	50.68	3.54	0.30	1.17	28.53	1.77	2.35		0.07	0.05		2.92	6.97	0.31		0.17	1.12		1709	31	1740	99.69	0.31	13.03

< 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 2212A

DEPTH: 622'

LATITUDE: 27 57 03

LONGITUDE: 84 48 02

WHOLE SAMPLE DESCRIPTION:

SIZE FRACTION DESCRIPTIONS

4000-2000

MOLLUSC--gray, dull fragment, slightly encrusted by bryozoa, X-CARB.--light gray, dull, slightly bored fragments.

2000-1000

LIGHT GRAY, CORRODED SHELLY CARBONATE SAND: MOLLUSC--mostly dull, worn and bored fragments; some frosted and relatively fresh fragments, BRYOZOA--dull, worn fragments, slightly infilled, X-CARB.--dull, worn, bored fragments.

1000-500

YELLOWISH GRAY TO LIGHT GRAY, SHELLY FORAMINIFERAL CARBONATE SAND: MOLLUSC--dull, worn, frosted or bored fragments; some relatively fresh fragments, B. FORAM--fresh and dull, whole and fragments, P. FORAM--relatively fresh and whole, ECHINOID--fresh to slightly dull plate fragments, X-CARB.--dull, worn fragments.

500-250

YELLOWISH GRAY, FORAMINIFERAL CARBONATE SAND: MOLLUSC--dull, worn, frosted fragments, some bored, B. FORAM--fresh to dull, mostly whole; some chipped, P. FORAM--relatively fresh and whole, ECHINOID--fresh and dull plate fragments, X-CARB.--dull, worn fragments, often bored, QUARTZ--slightly translucent, subangular.

250-125

YELLOWISH GRAY SHELLY, FORAMINIFERAL CARBONATE SAND: MOLLUSC--mostly dull, frosted fragments; some fresh, whole snail shells, B. FORAM--fresh and whole, some slightly chipped, P. FORAM--fresh, whole and fragments, ECHINOID--relatively fresh plate fragments, X-CARB.--dull, worn, frosted fragments, some irregularly-shaped.

125-62.5

YELLOWISH GRAY, FORAMINIFERAL, SHELLY CARBONATE SAND: MOLLUSC--dull, frosted fragments; fresh angular fragments; and fresh, whole snail shells, B. FORAM--relatively fresh and whole, some chipped, P. FORAM--fresh, mostly whole, OSTRACOD--mostly relatively fresh fragments, ECHINOID--fresh plate and spine fragments, QUARTZ--clear, angular to subrounded.

GRAIN TYPES (%)[2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	33.3				66.7														3		3	100	0	1.46
2000-1000	61.0	3.4			18.6							8.5	1.7			3.4	3.4		59		59	100	0	1.36
1000-500	32.8	21.3	16.6		17.7	3.0	4.7					3.0				0.6	0.3		338		338	100	0	2.43
500-250	9.8	19.3	51.6		13.3	0.9	3.3		0.3			1.2					0.3		337	1	338	99.7	0.3	8.46
250-125	19.5	14.8	43.6		15.2	1.0	4.9		0.7			0.3							303		303	100	0	22.47
125-62.5	31.6	8.5	22.3		18.2	2.8	6.6		10.0										319	2	321	99.4	0.6	20.23
Σ % > 62.5	24.31	12.37	33.82		17.50	1.65	5.01		3.91			0.64	0.04			0.11	0.16		1359	3	1362	99.73	0.27	43.58 < 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 2313A

DEPTH: 580'

LATITUDE: 28 24 04

LONGITUDE: 84 14 53

WHOLE SAMPLE DESCRIPTION:

SIZE FRACTION DESCRIPTIONS

4000-2000

PINKISH GRAY, MOLLUSCAN CARBONATE SAND: MOLLUSC--relatively fresh angular fragments; one dull, worn, bored, slightly encrusted fragment, BRYOZOA--dull, slightly infilled fragments.

2000-1000

YELLOWISH GRAY TO LIGHT GRAY, MOLLUSCAN CARBONATE SAND: MOLLUSC--mostly dull, frosted fragments, often slightly bored; some encrusted fragments, ECHINOID--mostly fresh plate fragments, BRYOZOA--dull, mostly infilled, X-CARB.--worn, rounded ellipsoidal fragments.

1000-500

YELLOWISH GRAY, MOLLUSCAN, FORAMINIFERAL CARBONATE SAND: MOLLUSC--fresh, angular fragments, and dull, worn, frosted fragments, often bored, B. FORAM--fresh to slightly dull, mostly whole; some have chipped edges, P. FORAM--relatively fresh and whole, ECHINOID--relatively fresh plate fragments, X-CARB.--dull, worn fragments, some frosted.

500-250

YELLOWISH GRAY, FORAMINIFERAL CARBONATE SAND: MOLLUSC--mostly dull, frosted fragments, B. FORAM--fresh to dull, whole and chipped, P. FORAM--fresh, whole and fragments, ECHINOID--fresh plate fragments, X-CARB.--dull, worn fragments.

250-125

YELLOWISH GRAY, SHELLY, FORAMINIFERAL CARBONATE SAND: MOLLUSC--mostly dull, frosted fragments and relatively fresh, angular fragments, B. FORAM--relatively fresh and whole; some have chipped edges, P. FORAM--fresh, whole and many fragments, ECHINOID--fresh plate and spine fragments, X-CARB.--dull, frosted, worn fragments.

125-62.5

YELLOWISH GRAY, SHELLY, FORAMINIFERAL CARBONATE SAND: MOLLUSC--dull, frosted fragments and fresh, angular fragments, B. FORAM--relatively fresh, whole and chipped, P. FORAM--fresh, whole and fragments, ECHINOID--fresh plate and spine fragments, X-CARB.--dull, frosted fragments, QUARTZ--clear to translucent, rounded.

GRAIN TYPES (%)[2]

SIZE FRACTIONS (µ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	55.6											44.4							9		9	100	0	0.54
2000-1000	67.6	4.4			10.3		10.3					7.4							68		68	100	0	0.88
1000-500	32.7	26.4	19.3		10.5		7.1					2.3				1.4	0.3		352		352	100	0	1.70
500-250	11.6	18.2	53.0		8.6		6.8		0.9			0.3							336		336	100	0	8.08
250-125	34.9	7.7	30.9		18.2	0.6	6.2		1.5										324		324	100	0	16.71
125-62.5	25.4	6.1	41.2		18.3	2.3	5.1		1.3		0.3								311	2	313	99.4	0.6	13.59
Σ % > 62.5	28.10	9.95	37.04		15.64	0.99	6.01		1.21		0.10	0.89				0.05	0.02		1400	2	1402	99.81	0.19	58.23

< 62 µ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 2316A

DEPTH: 117'

LATITUDE: 28 42 01

LONGITUDE: 84 20 01

WHOLE SAMPLE DESCRIPTION:

SIZE FRACTION DESCRIPTIONS

4000-2000: MOLLUSC--two dull, encrusted fragments; two fresh angular fragments; one fresh, whole valve, BRYOZOA--dull, slightly infilled and encrusted.

2000-1000: YELLOWISH GRAY, SHELLY CARBONATE SAND: MOLLUSC--mostly dull, worn, frosted, often bored, fragments; some relatively fresh, angular fragments; some fresh to dull, whole valves, some with worn beaks, B. FORAM--dull, worn fragments, BRYOZOA--dull, slightly worn, and often infilled, X-CARB.--dull, worn, frosted fragments, SOME QUARTZ--blackened carbonate aggregates.

1000-500: YELLOWISH GRAY TO MEDIUM LIGHT GRAY, SHELLY CARBONATE SAND: MOLLUSC--mostly dull, frosted fragments; fresh and dull, whole valves, some with worn beaks; some fresh to worn, whole snail shells, B. FORAM--fresh and worn, whole and fragments, BRYOZOA--dull, worn fragments, often infilled, X-CARB.--dull, worn, frosted fragments, SOME QUARTZ--blackened carbonate aggregates.

500-250: YELLOWISH GRAY, FORAMINIFERAL, SHELLY CARBONATE SAND: MOLLUSC--dull, frosted fragments and fresh to worn, whole and fragmented snail shells, B. FORAM--fresh to worn, whole and fragments, P. FORAM--fresh and whole, X-CARB.--dull, worn, frosted fragments, QUARTZ--clear, angular to subangular.

250-125: YELLOWISH GRAY, FORAMINIFERAL, SHELLY CARBONATE SAND: MOLLUSC--mostly dull, frosted fragments; some fresh to worn, whole snail shells, B. FORAM--fresh to worn, whole and fragments, ECHINOID--relatively fresh plate and spine fragments, X-CARB.--dull, worn, frosted fragments, QUARTZ--mostly clear, angular to subrounded.

125-62.5: YELLOWISH GRAY, SHELLY CARBONATE SAND: MOLLUSC--mostly dull, frosted fragments; some fresh, whole snail shells, B. FORAM--relatively fresh and whole, ECHINOID--relatively fresh plate and spine fragments, X-CARB.--dull, frosted fragments, QUARTZ--clear, subangular to subrounded.

GRAIN TYPES (%)[2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	71.4											28.6							7		7	100	0	0.52
2000-1000	72.3	4.9		0.4	5.3	2.9	1.2					8.2	2.4				2.4		245		245	100	0	3.26
1000-500	56.2	12.1	0.3		15.2	5.6	2.2					5.3	1.2			0.3	1.6		322		322	100	0	5.60
500-250	39.4	23.9	3.1	0.3	22.4	2.2	1.5	0.6	1.5			1.5				0.3	3.1		323	23	345	93.4	6.6	12.17
250-125	45.4	17.2	0.9	1.8	21.9		7.1	0.6	1.8	1.5		1.2					0.6		337	366	703	47.9	52.1	58.77
125-62.5	42.8	10.9	1.0		32.8	1.6	8.0			1.0	1.6					0.3			311	247	558	55.7	44.3	7.48
Σ % > 62.5	47.01	16.68	1.24	1.17	20.82	1.36	5.01	0.45	1.28	0.87	0.13	2.30	0.20			0.11	1.30		1545	636	2181	60.44	39.56	11.85 < 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 2317A　　DEPTH: 97'　　LATITUDE: 26 56 02
LONGITUDE: 84 06 04

WHOLE SAMPLE DESCRIPTION:

SIZE FRACTION DESCRIPTIONS

4000-2000: MOLLUSC--slightly dull and encrusted, whole pelecypod valves; one valve has chipped edge.

500-250: LIGHT GRAY TO YELLOWISH GRAY, FORAMINIFERAL, SHELLY CARBONATE SAND: MOLLUSC--mostly dull, frosted fragments and fresh to dull, mostly whole snail shells; some [illegible] fragments, B. FORAM--fresh to worn, whole and fragmented, ECHINOID--fresh plate and spine fragments, X-CARB.--dull, frosted fragments, QUARTZ--mostly clear, subangular to subrounded.

2000-1000: VERY LIGHT GRAY TO LIGHT GRAY, SHELLY CARBONATE SAND: MOLLUSC--dull, worn, bored fragments and relatively fresh, angular fragments and whole pelecypod valves, some with worn beaks, BRYOZOA--dull, slightly infilled, B. FORAM--fresh, slightly fragmented, X-CARB.--dull, worn, irregularly-shaped fragments.

250-125: YELLOWISH GRAY, FORAMINIFERAL, SHELLY CARBONATE SAND: MOLLUSC--dull, frosted fragments and fresh to dull, whole snail shells, B. FORAM--fresh to worn, mostly whole, ECHINOID--fresh plate and spine fragments, X-CARB.--dull, frosted fragments, QUARTZ--clear, subangular to subrounded.

1000-500: LIGHT GRAY, SHELLY CARBONATE SAND: MOLLUSC--dull, frosted, worn fragments, often bored; relatively fresh, angular fragments; and whole snail shells and pelecypod valves, B. FORAM--fresh and worn, whole and fragments, ECHINOID--relatively fresh plate and spine fragments, X-CARB.--dull, frosted fragments, QUARTZ--clear to slightly translucent, subangular

125-62.5: YELLOWISH GRAY, SHELLY CARBONATE SAND: MOLLUSC--dull, frosted fragments; fresh angular fragments; and fresh, whole snail shells, B. FORAM--mostly fresh and whole, ECHINOID--fresh plate and spine fragments, X-CARB.--dull, frosted fragments, QUARTZ--clear, angular to subangular.

GRAIN TYPES (%)[2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	100																		2		2	100	0	0.25
2000-1000	72.6	2.4			10.7	2.4	3.6					5.9				1.2	1.2		84		84	100	0	1.00
1000-500	67.4	7.9	0.3		14.0	2.1	4.4					2.4				0.9	0.6		328	2	330	99.4	0.6	2.92
500-250	43.0	23.7	1.9	0.6	15.3	2.5	8.1		0.6			2.8				0.6	0.9		321	4	325	98.8	1.2	5.83
250-125	37.8	21.1	0.3	0.9	21.7	3.7	12.1	0.3	0.3		0.6	0.6				0.6			323	2	325	99.4	0.6	25.00
125-62.5	48.5	12.0	0.3		24.1	3.7	9.3		0.6	1.2	0.3								324	30	354	91.5	8.5	35.05
Σ % > 62.5	45.11	16.23	0.43	0.40	21.72	3.50	10.01	0.11	0.43	0.55	0.39	0.65				0.34	0.11		1382	38	1420	95.57	4.43	[illegible]6.85 < 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 2318A DEPTH: 67' LATITUDE: 29 04 59 LONGITUDE: 83 45 01

WHOLE SAMPLE DESCRIPTION:

SIZE FRACTION DESCRIPTIONS

4000-2000: MOLLUSC--dull, worn, slightly bored fragments, BRYOZOA--dull and slightly worn, B. FORAM--dull and chipped, X-CARB.--dull, worn, bored fragments, QUARTZ--translucent, subrounded.

2000-1000: LIGHT GRAY, SHELLY CARBONATE QUARTZ SAND: MOLLUSC--mostly dull, worn, frosted, bored fragments; some fresh to dull, whole valves, some with worn beaks, B. FORAM--fresh, whole and fragments, ECHINOID--relatively fresh plate fragments, X-CARB.--dull, worn, bored fragments, QUARTZ--mostly translucent, subangular to subrounded, SOME QUARTZ--blackened carbonate aggregates.

1000-500: YELLOWISH GRAY, CARBONATE QUARTZ SAND: MOLLUSC--mostly dull, worn, pitted and bored fragments, B. FORAM--fresh, whole and fragments, X-CARB.--dull, worn, pitted and bored fragments, QUARTZ--clear to slightly translucent, angular to subrounded, SOME QUARTZ--blackened carbonate aggregates.

500-250: VERY LIGHT GRAY, SHELLY, FORAMINIFERAL, CARBONATE QUARTZ SAND: MOLLUSC--dull, frosted, worn fragments; some fresh, whole gastropods, B. FORAM--mostly fresh, whole and worn; some fragments, X-CARB.--dull, frosted fragments, QUARTZ--clear, subangular to subrounded.

250-125: VERY LIGHT GRAY, SHELLY, FORAMINIFERAL, CARBONATE QUARTZ SAND: MOLLUSC--dull, frosted, worn fragments, B. FORAM--fresh, whole and fragments, ECHINOID--fresh plate fragments, X-CARB.--dull, worn, frosted fragments, QUARTZ--clear, mostly angular to subangular.

125-62.5: YELLOWISH GRAY, SHELLY, CARBONATE QUARTZ SAND: MOLLUSC--dull, frosted, worn fragments, B. FORAM--fresh, whole and fragments, X-CARB.--dull, frosted, worn fragments, QUARTZ--clear, mostly subangular to subrounded.

GRAIN TYPES (%)[2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	33.3	16.7			33.3							16.7							6	2	8	75.0	25.0	0.27
2000-1000	41.9	23.4			21.0	8.1	4.0					1.6							124	194	318	39.0	61.0	3.62
1000-500	38.3	24.1			29.4	6.3	0.9					0.6					0.3		303	1531	1834	16.5	83.5	37.46
500-250	35.7	29.5			25.8	7.2	0.9		0.9										322	1447	1769	18.2	81.8	44.87
250-125	31.6	22.8			37.8	4.4	2.2		0.3		0.6					0.3			320	1440	1760	18.2	81.8	11.70
125-62.5	26.2	8.3	0.3		52.0	11.3	1.3				0.6								302	728	1030	29.3	70.7	0.22
Σ % > 62.5	36.54	26.64	tr		23.29	6.55	1.32		0.44		0.06	0.60				0.06	0.11		1377	5342	6719	18.49	81.51	1.68 < 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 2419A

DEPTH: 34'

LATITUDE: 29 46 58

LONGITUDE: 84 05 01

WHOLE SAMPLE DESCRIPTION:

SIZE FRACTION DESCRIPTIONS

4000-2000

MOLLUSC--one dull, worn, bored fragment, and one shiny, slightly worn, angular fragment, ECHINOID--relatively fresh fragments, slightly encrusted, X-CARB.--dull, worn, bored fragment.

2000-1000

MEDIUM LIGHT GRAY TO YELLOWISH GRAY, QUARTZITIC, SHELLY CARBONATE SAND: MOLLUSC--dull, worn, slightly bored fragments and relatively fresh to slightly dull, angular fragments, ECHINOID--fresh plate fragments, X-CARB.--dull, worn, bored fragments, QUARTZ--slightly to completely translucent, mostly subrounded.

1000-500

LIGHT GRAY TO YELLOWISH GRAY, QUARTZITIC, SHELLY CARBONATE SAND: MOLLUSC--dull, worn, bored fragments and fewer relatively fresh, angular fragments; some relatively fresh whole valves, B. FORAM--fresh, whole and fragmented, B. CARB.--dull, worn fragments, often bored, QUARTZ--mostly slightly translucent, subangular to subrounded; SOME QUARTZ--blackened carbonate aggregates.

500-250

YELLOWISH GRAY CARBONATE QUARTZ SAND: MOLLUSC--mostly dull, worn, frosted fragments, B. FORAM--mostly worn fragments, ECHINOID--fresh plate and spine fragments, X-CARB.--dull, worn fragments, often frosted, QUARTZ--mostly clear, angular to subrounded.

250-125

VERY LIGHT GRAY, CARBONATE QUARTZ SAND: MOLLUSC--mostly dull, frosted, worn fragments, B. FORAM--fresh to worn, whole and fragments, ECHINOID--fresh to worn, plate and spine fragments, ALCYONARIAN--mostly dull, slightly worn, spicules; some blackened, X-CARB.--dull, worn fragments, QUARTZ--mostly clear, angular to subrounded.

125-62.5

YELLOWISH GRAY, CARBONATE QUARTZ SAND: MOLLUSC--mostly dull, worn, frosted fragments, B. FORAM--fresh and whole, ALCYONARIAN--fresh, and dull and worn, spicules, ECHINOID--relatively fresh plate fragments, X-CARB.--dull, worn fragments, QUARTZ--mostly clear, angular to subangular.

GRAIN TYPES (%)[2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	50.0				25.0		25.0												4		4	100	0	0.13
2000-1000	55.8	2.3			18.6	14.0	9.3												43	10	53	81.1	18.9	0.53
1000-500	49.1	3.4	0.3		32.4	14.3	0.5												377	298	675	55.9	44.1	2.84
500-250	37.4	10.2			43.7	5.1	1.8		0.3		0.3	0.6					0.6		334	484	818	40.8	59.2	22.47
250-125	38.3	9.8		0.3	39.0	4.2	4.9		0.3		2.9	0.3							308	506	814	37.8	62.2	64.59
125-62.5	29.2	4.5			55.4	3.2	3.5				4.2								312	450	762	40.9	59.1	6.81
Σ % > 62.5	38.10	9.14	tr	0.19	40.73	4.85	4.02		0.30		2.23	0.34					0.16		1378	1748	3126	39.57	60.43	2.45 < 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 2420A

DEPTH: 45'

LATITUDE: 29 41 53

LONGITUDE: 84 11 01

WHOLE SAMPLE DESCRIPTION:

SIZE FRACTION DESCRIPTIONS

4000-2000

MOLLUSC--two slightly dull, whole valves; one encrusted fragment.

2000-1000

VERY LIGHT GRAY TO MEDIUM LIGHT GRAY, QUARTZITIC SHELLY CARBONATE SAND: MOLLUSC--dull worn, bored fragments; some relatively fresh angular fragments, B. FORAM--fresh and whole, and whole but worn, X-CARB.--dull, worn, bored fragments, QUARTZ--slightly translucent, subrounded.

1000-500

MEDIUM LIGHT GRAY, QUARTZITIC, SHELLY CARBONATE SAND: MOLLUSC--mostly dull, worn, frosted and bored fragments, B. FORAM--fresh and worn, whole and fragments, B. CARB.--worn, frosted and bored fragments, X-CARB.--dull, worn, frosted and bored fragments, QUARTZ--clear to slightly translucent, subangular to subrounded.

500-250

LIGHT GRAY, QUARTZITIC, SHELLY CARBONATE SAND: MOLLUSC--mostly dull, worn, frosted fragments, B. FORAM--fresh to worn, whole and fragments, ALCYONARIAN--mostly worn; some blackened spicules, ECHINOIDS--fresh plate and spine fragments, X-CARB.--dull, worn, frosted fragments, QUARTZ--clear, angular to subangular.

250-125

YELLOWISH GRAY, QUARTZITIC, SHELLY CARBONATE SAND: MOLLUSC--mostly dull, worn, frosted fragments, B. FORAM--fresh to worn, whole and fragments, ALCYONARIAN--mostly worn, often blackened spicules, ECHINOID--relatively fresh plate and spine fragments, X-CARB.--dull, worn, frosted fragments, QUARTZ--clear, angular to subrounded.

125-62.5

YELLOWISH GRAY, SHELLY CARBONATE QUARTZ SAND: MOLLUSC--dull, worn, frosted fragments, B. FORAM--fresh and whole, ECHINOID--fresh plate and spine fragments, ALCYONARIAN--mostly worn, spicules, some slightly blackened, X-CARB.--dull, worn, frosted fragments, QUARTZ--clear, subangular to subrounded.

GRAIN TYPES (%)[2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	100																		3		3	100.0	0	0.19
2000-1000	63.3	6.1			18.4	12.2													49	4	53	92.5	7.5	0.81
1000-500	55.7	4.0			24.6	14.8	0.3					0.3					0.3		305	64	369	82.7	17.3	6.86
500-250	50.9	2.1			34.2	9.5	1.2		0.3		1.2	0.6							328	116	444	73.9	26.1	40.21
250-125	49.3	3.6		0.3	34.9	6.3	2.6				3.0								304	199	503	60.4	39.6	41.27
125-62.5	42.6	4.6	0.6		44.8	1.5	3.1		0.3		2.5								326	589	915	35.6	64.4	8.17
Σ % > 62.5	50.62	3.01	0.03	0.11	33.89	8.35	1.75		0.16		1.84	0.31					0.03		1315	972	2287	65.81	34.19	2.49 < 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 2421A

DEPTH: 62'

LATITUDE: 29 36 58

LONGITUDE: 84 17 01

WHOLE SAMPLE DESCRIPTION:

SIZE FRACTION DESCRIPTIONS

4000-2000

MOLLUSC--fresh, angular, white fragment.

2000-1000

LIGHT GRAY TO YELLOWISH GRAY, SHELLY CARBONATE SAND: MOLLUSC--mostly fresh to slightly dull, angular fragments; some worn, dull, bored fragments, ECHINOID--fresh plate fragments, BRYOZOA--dull, slightly infilled, INTRA--friable aggregates, X-CARB.--dull, worn fragments, QUARTZ--slightly translucent, subangular and subrounded.

1000-500

LIGHT GRAY, QUARTZITIC, SHELLY CARBONATE SAND: MOLLUSC--mostly dull worn, frosted and/or bored fragments, B. FORAM--whole and dull, ECHINOID--fresh, and worn, plate fragments, INTRA--friable aggregates, X-CARB.--dull, worn fragments, QUARTZ--clear to slightly translucent, subangular to subrounded.

500-250

LIGHT GRAY, SHELLY, CARBONATE QUARTZ SAND: MOLLUSC--mostly dull, worn, frosted fragments, some blackened, B. FORAM--whole and fresh; and whole, worn and chipped, PELLET--greenish, friable and ellipsoidal, INTRA--greenish, friable aggregates, X-CARB.--dull, worn, often frosted, fragments, QUARTZ--mostly clear, subangular to subrounded.

250-125

LIGHT OLIVE GRAY, QUARTZITIC, SHELLY CARBONATE SAND: MOLLUSC--mostly dull, worn, frosted fragments, some blackened, B. FORAM--fresh to slightly worn, whole, ECHINOID--fresh and worn plate fragments, some blackened, X-CARB.--dull, worn, frosted fragments, QUARTZ--clear, mostly angular to subangular.

125-62.5

YELLOWISH GRAY, QUARTZITIC, SHELLY CARBONATE SAND: MOLLUSC--dull, worn, frosted fragments, B. FORAM--mostly fresh and whole, ECHINOID--fresh and worn plate and spine fragments, X-CARB.--dull, worn, frosted fragments, QUARTZ--clear, angular to subrounded.

GRAIN TYPES (%)[2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIED CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	100.0																		1		1	100	0	0.07
2000-1000	78.6				7.1		7.1					2.4				4.8			42	2	44	95.4	4.5	0.55
1000-500	64.7	1.8			20.9	8.4	2.1									2.1			326	165	491	66.4	33.6	2.08
500-250	55.7	2.5			26.7	8.2	1.6	3.1								2.2			318	359	677	47.0	53.0	7.97
250-125	44.8	3.8		0.6	39.2	2.1	6.5	1.2	0.3	0.3	0.3					0.9			339	233	572	59.3	40.7	37.98
125-62.5	51.5	3.9			36.6	3.2	3.9			0.3	0.6								309	217	526	58.7	41.3	40.96
Σ % > 62.5	49.59	3.65		0.27	36.24	3.19	4.84	0.75	0.13	0.27	0.40	0.02				0.65			1335	976	2311	58.35	41.65	10.33 (< 62 μ)

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 2432A

DEPTH: 79'

LATITUDE: 29 30 00

LONGITUDE: 84 27 01

WHOLE SAMPLE DESCRIPTION:

SIZE FRACTION DESCRIPTIONS

4000-2000

LIGHT GRAY, CORRODED, SHELLY CARBONATE SAND: MOLLUSC--dull, worn, often bored and slightly encrusted fragments, BRYOZOA--dull, worn fragments, CORAL--dull, worn, slightly encrusted fragments, ECHINOID--relatively fresh plate fragment, X-CARB.--dull, encrusted, irregularly-shaped fragments.

2000-1000

YELLOWISH GRAY TO MEDIUM LIGHT GRAY, CORRODED, QUARTZITIC SHELLY CARBONATE SAND: MOLLUSC--dull, worn, frosted and bored fragments; some dull, whole and fragmented gastropods, BRYOZOA--dull, worn, slightly encrusted fragments, WORM TUBE--serpulid fragments, dull and worn, CORAL--dull, encrusted fragments, X-CARB.--dull, worn fragments, QUARTZ--translucent, subangular to subrounded.

1000-500

LIGHT GRAY, QUARTZITIC, SHELLY CARBONATE SAND: MOLLUSC--dull, worn, frosted and bored fragments; some fresh to worn, whole and fragmented gastropods, BRYOZOA--dull, worn fragments, ECHINOID--fresh to worn, plate and spine fragments, X-CARB.--dull, worn fragments, QUARTZ--clear to translucent, subangular to subrounded.

500-250

LIGHT OLIVE GRAY, SHELLY, CARBONATE QUARTZ SAND: MOLLUSC--mostly dull, worn, frosted fragments, B. FORAM--fresh and worn, whole and fragments, ECHINOID--mostly fresh plate and spine fragments, BRYOZOA--dull, worn fragments, X-CARB.--dull, worn fragments, QUARTZ--clear to translucent, subangular to subrounded; many encrusted, SOME QUARTZ--blackened carbonate aggregates.

250-125

LIGHT OLIVE GRAY, SHELLY, CARBONATE QUARTZ SAND: MOLLUSC--mostly dull, worn, frosted fragments; some fresh, whole snail shells, B. FORAM--mostly fresh and whole, ECHINOID--fresh plate and spine fragments, INTRA--olive gray, friable aggregates, X-CARB.--dull, worn fragments, QUARTZ--clear to slightly translucent, angular to subangular, some encrusted.

125-62.5

LIGHT OLIVE GRAY, QUARTZITIC, SHELLY CARBONATE SAND: MOLLUSC--mostly dull, worn, frosted fragments, B. FORAM--mostly fresh and whole, ECHINOID--fresh plate and spine fragments, INTRA--olive gray, friable aggregates, X-CARB.--dull, worn fragments, QUARTZ--mostly clear, angular to subrounded.

GRAIN TYPES (%)[2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNDISTINGUISHABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	72.3				6.4	6.4	2.1					8.5		4.3					47		47	100	0	9.21
2000-1000	59.8				17.0	7.7	0.3					9.3		1.9			4.0		324	66	390	83.1	16.9	13.39
1000-500	57.5	1.3			18.5	13.0	3.6					5.2		0.3		0.3	0.3		307	201	508	60.4	39.6	21.44
500-250	37.7	11.3	0.7		23.5	9.0	13.2	0.7			0.7	2.5				0.7			310	431	741	41.8	58.2	25.22
250-125	32.3	11.2			24.0	3.5	9.6	2.2			0.6	1.0				9.6			313	620	933	33.5	66.5	15.52
125-62.5	39.0	7.3			27.3	5.0	8.5				0.9	0.6				11.4			341	204	545	62.6	37.4	2.91
Σ % > 62.5	53.96	4.07	0.14		17.92	8.55	5.37	0.35			0.24	4.94		1.28		1.61	0.96		1642	1522	3164	57.99	42.01	12.13 < 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 24234 DEPTH: 100' LATITUDE: 29 20 00

LONGITUDE: 84 44 02

WHOLE SAMPLE DESCRIPTION:

SIZE FRACTION DESCRIPTIONS

4000-2000

YELLOWISH GRAY TO MEDIUM GRAY CORRODED SHELLY CARBONATE SAND: MOLLUSC--mostly dull, worn, bored and encrusted fragments, many blackened; some bivalves drilled, BRYOZOA--dull, worn and encrusted, ECHINOID--dull, worn plate and spine fragment, INTRA--coarse carbonate fragments cemented with finer sediment.

2000-1000

YELLOWISH GRAY TO MEDIUM GRAY SHELLY CARBONATE SAND: MOLLUSC--dull, worn, bored fragments, many blackened and/or encrusted, BRYOZOA--dull, worn and encrusted, B. CARB.--dull, worn, often bored and encrusted, X-CARB.--dull, worn, bored fragments, QUARTZ--translucent, subangular to subrounded.

1000-500

MEDIUM DARK GRAY QUARTZITIC SHELLY CARBONATE SAND: MOLLUSC--dull, worn, frosted and/or bored fragments, many blackened, BRYOZOA--dull, worn, often infilled, B. CARB.--dull, worn fragments, many frosted, X-CARB.--dull, worn fragments, QUARTZ--clear to translucent, subangular to subrounded; some encrusted.

500-250

MEDIUM GRAY QUARTZITIC SHELLY CARBONATE SAND: MOLLUSC--dull, worn, frosted and/or bored fragments, many blackened, B. FORAM--fresh to worn, mostly whole, INTRA--friable aggregates, X-CARB.--dull, worn fragments, QUARTZ--clear to slightly translucent, subangular to subrounded.

250-125

LIGHT OLIVE GRAY QUARTZITIC SHELLY CARBONATE SAND: MOLLUSC--mostly dull, worn, frosted fragments and fresh to worn snail shells, whole and fragmented, B. FORAM--fresh to worn, mostly whole, ECHINOID--mostly fresh spine and plate fragments, INTRA--friable aggregates, X-CARB.--dull,worn fragments, QUARTZ--clear to slightly translucent subangular to subrounded.

125-62.5

LIGHT OLIVE GRAY QUARTZITIC SHELLY CARBONATE SAND: MOLLUSC--mostly dull, worn, frosted fragments, B. FORAM--fresh to slightly worn, whole and chipped, ECHINOID--relatively fresh plate and spine fragments, INTRA--friable aggregates, X-CARB.--dull, worn, frosted fragments, QUARTZ--mostly clear, subangular to subrounded.

GRAIN TYPES (%)[2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	90.5				1.7	3.5	0.9					1.7				0.4	1.3		251		251	100	0	18.87
2000-1000	81.5				3.3	11.8	0.6					2.2					0.6		330	4	334	98.8	1.2	11.21
1000-500	71.5	1.8			7.6	14.6	0.9					2.4				0.9	0.3		329	43	372	88.4	11.6	21.92
500-250	62.4	2.9			15.2	12.3	2.3		1.0			0.6				2.3	1.0		309	51	360	85.8	14.2	12.69
250-125	42.2	10.6	0.9		13.1	8.1	9.4	0.6	1.3			0.3				6.9			320	83	403	79.4	20.6	5.47
125-62.5	34.3	8.1	1.6		26.1	5.6	9.8		0.7	0.7	0.7					12.4			306	162	468	65.4	34.6	2.96
Σ % > 62.5	75.22	1.69	0.09		7.17	10.03	1.73	0.04	0.29	0.01	0.01	1.74				1.36	0.72		1825	343	2168	91.89	8.11	15.83 < 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 2424A

DEPTH: 107'

LATITUDE: 29 13 00

LONGITUDE: 84 59 59

WHOLE SAMPLE DESCRIPTION:

SIZE FRACTION DESCRIPTIONS

4000-2000

MOLLUSC--dull, slightly worn fragments, one with worn beak; one is slightly encrusted.

2000-1000

YELLOWISH GRAY, QUARTZITIC, SHELLY CARBONATE SAND: MOLLUSC--dull, worn, bored fragments and relatively fresh, angular fragments; one fresh,whole gastropod; one bivalve has worn beak, BRYOZOA--dull, worn, encrusted, X-CARB.--dull, encrusted fragments, QUARTZ--translucent, subrounded; some encrusted.

1000-500

LIGHT GRAY, SHELLY, CARBONATE QUARTZ SAND: MOLLUSC--mostly dull, frosted and/or bored fragments, B. FORAM--fresh to worn, whole and fragments, ECHINOID--dull plate and spine fragments, X-CARB.--dull, worn fragments, QUARTZ--clear to slightly translucent, subangular to subrounded, SOME QUARTZ--blackened carbonate aggregates.

500-250

YELLOWISH GRAY, SHELLY CARBONATE SAND: MOLLUSC--dull, pitted and frosted fragments, some blackened, B. FORAM--fresh and worn, whole and fragments, ECHINOID--relatively fresh plate and spine fragments, X-CARB.--dull, worn fragments, QUARTZ--clear to slightly translucent, mostly subangular to subrounded, SOME QUARTZ--blackened carbonate aggregates.

250-125

YELLOWISH GRAY, SHELLY, CARBONATE QUARTZ SAND: MOLLUSC--dull, frosted worn fragments, some blackened, B. FORAM--mostly fresh and whole; some fragments, ECHINOID--fresh plate and spine fragments, PELLET--friable, X-CARB.--dull, worn fragments, QUARTZ--mostly clear, angular to subrounded.

125-62.5

YELLOWISH GRAY, CARBONATE QUARTZ SAND: MOLLUSC--mostly dull, worn, frosted fragments, B. FORAM--fresh, whole, ECHINOID--fresh plate and spine fragments, INTRA--friable aggregates, X-CARB.--dull, frosted, worn fragments, QUARTZ--mostly clear, angular to subrounded.

GRAIN TYPES (%)[2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	100																		2		2	100	0	0.05
2000-1000	82.5			2.5	10.0							5.0							40	7	47	85.1	14.9	0.69
1000-500	73.0	8.6			9.0	2.4	2.7					0.9				2.7	0.7		452	1452	1904	23.7	76.3	4.53
500-250	53.9	8.7			24.0	4.7	2.8		0.6							0.3			321	2049	2370	13.5	86.5	57.00
250-125	40.6	5.4	0.6		34.9	11.1	4.2	1.6	0.3							1.3			315	2241	2556	12.3	87.7	32.13
125-62.5	26.3	3.8	1.9		31.8	21.6	6.7	2.2	0.3	0.3	0.3					4.8			315	1305	1620	19.4	80.6	0.81
Σ % > 62.5	55.51	7.24	0.15	0.07	25.42	6.28	3.18	0.44	0.44	tr	tr	0.30				0.81	0.07		1445	7054	8499	14.21	85.79	4.56 < 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 2525A

DEPTH: 117'

LATITUDE: 29 04 58

LONGITUDE: 35 15 03

WHOLE SAMPLE DESCRIPTION:

SIZE FRACTION DESCRIPTIONS

4000-2000

YELLOWISH GRAY, CORRODED, QUARTZITIC, SHELLY CARBONATE SAND: MOLLUSC--dull, worn, bored and encrusted fragments, BRYOZOA--slightly worn, infilled, *HALIMEDA*--slightly worn plate fragment, CORALG.--dull, encrusted, branched fragment, QUARTZ--translucent, subrounded.

2000-1000

YELLOWISH GRAY TO LIGHT OLIVE GRAY, SHELLY, CARBONATE QUARTZ SAND: MOLLUSC--mostly dull, worn, bored fragments, many encrusted, BRYOZOA--worn, infilled, ECHINOID--dull, worn plate fragments, X-CARB.--dull, worn, bored fragments, QUARTZ--clear to translucent, subangular to subrounded, SOME QUARTZ--blackened carbonate aggregates.

1000-500

LIGHT OLIVE GRAY, SHELLY, CARBONATE QUARTZ SAND: MOLLUSC--mostly dull, pitted, frosted or bored fragments, B. FORAM--fresh and whole, and dull, worn fragments, BRYOZOA--dull, worn fragments, ECHINOID--dull, worn fragments, X-CARB.--dull, worn, pitted or frosted fragments, QUARTZ--clear to translucent, subangular to subrounded; some encrusted, SOME QUARTZ--blackened carbonate aggregates.

500-250

LIGHT OLIVE GRAY, SHELLY, CARBONATE QUARTZ SAND: MOLLUSC--mostly dull, worn, pitted or frosted fragments, B. FORAM--mostly fresh, whole and fragmented, X-CARB.--dull, worn, frosted fragments, QUARTZ--clear to slightly translucent, angular to subrounded.

250-125

YELLOWISH GRAY, CARBONATE QUARTZ SAND: MOLLUSC--mostly dull, frosted, worn fragments; some fresh, whole snail shells, B. FORAM--relatively fresh and whole, BRYOZOA--dull, worn, fragments, ECHINOID--relatively fresh plate and spine fragments, X-CARB.--dull, frosted, worn fragments, QUARTZ--clear to slightly translucent, angular to subangular.

125-62.5

YELLOWISH GRAY, CARBONATE QUARTZ SAND: MOLLUSC--mostly worn, frosted fragments; some fresh, whole snail shells, B. FORAM--mostly fresh and whole, ECHINOID--fresh plate and spine fragment, B. CARB.--worn, frosted fragments, X-CARB.--dull, worn fragments, QUARTZ--clear to slightly translucent, angular to rounded.

GRAIN TYPES (%)[2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	79.1			4.2								12.5	4.2						24	9	33	72.7	27.3	2.01
2000-1000	74.0	0.7			11.9		3.3					6.7	1.5				1.9		269	1155	1424	18.9	31.1	12.47
1000-500	69.2	3.8			16.7	1.9	2.9					2.9					2.6		312	2568	2880	10.8	89.2	33.09
500-250	54.5	17.7	0.9		21.1	0.9	2.5					1.2					1.2		323	2554	2877	11.2	88.8	39.95
250-125	34.9	11.8	2.2		34.6	4.1	5.1		1.3		0.3	4.8				0.9			315	3130	3445	9.1	90.9	10.46
125-62.5	29.6	5.1	1.6		38.3	13.0	5.5			0.6						1.3			311	2013	2324	13.4	86.6	0.46
Σ % > 62.5	63.40	8.24	0.47	0.47	16.86	1.24	2.64		0.07	tr	0.02	4.20	0.77			0.78	1.40		1554	11429	12983	13.07	86.93	1.95

< 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 2426A

DEPTH: 272'

LATITUDE: 28 57 57

LONGITUDE: 85 23 01

WHOLE SAMPLE DESCRIPTION:

SIZE FRACTION DESCRIPTIONS

4000-2000

2000-1000
YELLOWISH GRAY TO MEDIUM DARK GRAY, SHELLY CARBONATE SAND: MOLLUSC--fresh angular fragments and dull, worn, bored fragments, B. FORAM--dull, worn, chipped, slightly blackened, INTRA--olive gray, friable aggregates, BRYOZOA--dull, worn, slightly infilled fragments, ECHINOID--fresh plate fragments, QUARTZ--slightly translucent, subrounded.

1000-500
LIGHT OLIVE GRAY TO MEDIUM GRAY, QUARTZITIC SHELLY CARBONATE SAND: MOLLUSC--mostly dull, worn, frosted and/or bored frag. B. FORAM--mostly whole, but dull, worn, smoothed, often blackened, BRYOZOA--dull, worn frag., ECHINOID--fresh, and dull, worn, often blackened, plate and spine frag., B. CARB.--dull, worn frosted frag.; some smoothed, shiny frag., X-CARB.--dull, worn, frosted or bored frag., QUARTZ--clear to translucent, mostly angular to subangular; some iron-stained.

500-250
LIGHT OLIVE GRAY, QUARTZITIC, SHELLY CARBONATE SAND: MOLLUSC--mostly worn, frosted fragments, B. FORAM--fresh and whole, and worn, chipped, often blackened or iron-stained, P. FORAM--fresh, mostly whole, ECHINOID--fresh plate fragments, X-CARB.--worn, frosted fragments, QUARTZ--clear to translucent, very angular to subangular; some slightly iron-stained.

250-125
LIGHT OLIVE GRAY, SHELLY, CARBONATE QUARTZ SAND: MOLLUSC--mostly worn, frosted fragments, B. FORAM--fresh and whole; some worn fragments, ECHINOID--fresh plate and spine fragments, X-CARB.--worn, frosted or smoothed fragments, QUARTZ--clear to translucent, mostly very angular to subangular.

125-62.5
YELLOWISH GRAY, QUARTZITIC, SHELLY CARBONATE SAND: MOLLUSC--fresh, whole snail shells and worn, frosted fragments, B. FORAM--mostly fresh and whole, ECHINOID--fresh plate and spine fragments, X-CARB.--worn, frosted fragments, QUARTZ--mostly clear, angular to subangular.

GRAIN TYPES (%)[2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000																								
2000-1000	70.0	1.7				13.3	1.7					3.3				10.0			60	1	61	98.4	1.6	0.53
1000-500	49.1	6.8	0.6		15.7	21.6	2.8					2.2				0.9	0.3		324	37	361	89.8	10.2	2.88
500-250	48.0	12.6	4.4		20.8	6.6	5.4		0.6			1.3					0.3		317	190	507	62.5	37.5	63.98
250-125	51.7	5.1	2.2		26.7	8.9	3.2				0.3	0.6				1.0	0.3		315	372	687	45.9	54.1	26.45
125-62.5	50.3	8.9	0.6		28.4	1.9	7.1			1.9	0.6					0.3			324	72	396	81.8	18.2	1.13
Σ % > 62.5	49.10	10.56	3.67		21.77	7.78	4.81		0.41	0.04	0.09	1.19				0.34	0.30		1340	672	2012	59.14	40.86	4.94 < 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 2427A

DEPTH: 574'

LATITUDE: 28 49 59

LONGITUDE: 86 37 06

WHOLE SAMPLE DESCRIPTION:

SIZE FRACTION DESCRIPTIONS

4000-2000: YELLOWISH GRAY CARBONATE SAND: MOLLUSC--dull, slightly worn, angular fragments, ECHINOID--slightly dull plate fragment.

2000-1000: YELLOWISH GRAY, SHELLY CARBONATE SAND: MOLLUSC--mostly dull, worn fragments, some bored, B. FORAM--mostly agglutinated forms, whole and fragments, mostly worn, BRYOZOA--dull, worn fragments, ECHINOID--dull, angular plate, X-CARB.--dull, worn fragments.

1000-500: YELLOWISH GRAY, SHELLY FORAMINIFERAL CARBONATE SAND: MOLLUSC--mostly dull, slightly worn, angular fragments, B. FORAM--fresh and dull, whole and fragmented, P. FORAM--mostly whole, fresh to dull, X-CARB.--dull, worn fragments, QUARTZ--clear, subangular to subrounded.

500-250: LIGHT OLIVE GRAY, FORAMINIFERAL CARBONATE SAND: MOLLUSC--dull, worn fragments, B. FORAM--fresh and dull, whole and fragments, P. FORAM--fresh and dull, whole and fragments, X-CARB.--dull, worn fragments, QUARTZ--clear, subangular to subrounded.

250-125: LIGHT OLIVE GRAY, SHELLY, FORAMINIFERAL CARBONATE SAND: MOLLUSC--fresh and worn fragments, B. FORAM--fresh to dull, whole and fragments, P. FORAM--fresh to dull, whole and fragments, ECHINOID--fresh plate and spine fragments, X-CARB.--dull, worn fragments.

125-62.5: LIGHT OLIVE GRAY, SHELLY, FORAMINIFERAL CARBONATE SAND: MOLLUSC--mostly relatively fresh, angular fragments, B. FORAM--mostly fresh and whole, P. FORAM--fresh and dull, whole and fragments, ECHINOID--fresh plate and spine fragments, X-CARB.--dull, worn fragments, QUARTZ--clear, subangular to subrounded.

GRAIN TYPES (%)[2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	92.3						7.7												12		12	100	0	0.27
2000-1000	52.5	27.5			12.5		2.5					5.0							40		40	100	0	0.75
1000-500	15.2	27.7	33.5		20.4	0.3	0.6					1.2				1.2			345	2	345	99.4	0.6	1.63
500-250	4.4	21.3	59.4		12.8	0.6	0.9		0.3			0.3							320	1	321	99.7	0.3	7.59
250-125	12.2	12.2	52.4		16.8	2.1	3.1	0.6				0.6							328		328	100	0	13.75
125-62.5	[illegible]	[illegible]	17.7		13.3	1.8	2.8												324	1	325	99.7	0.3	14.33
Σ % > 62.5	15.31	[illegible].73	53.53		14.65	1.57	2.48	0.21	0.05			0.42				0.05			1367	4	1371	99.82	0.18	61.65 < 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 2528A

DEPTH: 123'

LATITUDE: 29 54 59

LONGITUDE: 86 05 00

WHOLE SAMPLE DESCRIPTION:

SIZE FRACTION DESCRIPTIONS

4000-2000

YELLOWISH GRAY TO MEDIUM LIGHT GRAY CORRODED SHELLY CARBONATE SAND: MOLLUSC--mostly dull, worn, bored fragments, BRYOZOA--dull and worn, CORALG.--dull, worn, branched fragments, INTRA--moderately indurated aggregates, X-CARB.--dull, worn, irregular fragments, QUARTZ--translucent, subrounded.

2000-1000

YELLOWISH GRAY TO MEDIUM LIGHT GRAY CORRODED QUARTZITIC SHELLY CARBONATE SAND: MOLLUSC--mostly dull, worn, bored fragments, B. FORAM--dull, worn, whole and chipped, CORALG.--dull, worn, branched fragments, INTRA--moderately indurated aggregates, BRYOZOA--dull and worn, X-CARB.--dull, worn fragments, QUARTZ--slightly translucent, subangular to subrounded.

1000-500

YELLOWISH GRAY TO MEDIUM LIGHT GRAY QUARTZITIC SHELLY CARBONATE SAND: MOLLUSC--mostly dull, worn, frosted or bored fragments, B. FORAM--dull, worn, whole or chipped, CORALG.--dull, worn, branched fragments, X-CARB.--dull, worn fragments, QUARTZ--clear to slightly translucent, subangular to subrounded, SOME QUARTZ--blackened carbonate aggregates.

500-250

LIGHT OLIVE GRAY SHELLY CARBONATE QUARTZ SAND: MOLLUSC--mostly dull, worn, frosted fragments, B. FORAM--fresh and whole, and dull, worn fragments, INTRA--friable aggregates, ECHINOID--fresh plate and spine fragments, X-CARB.--dull, worn fragments, QUARTZ--clear to slightly translucent, subangular to subrounded.

250-125

LIGHT OLIVE GRAY SHELLY CARBONATE QUARTZ SAND: MOLLUSC--worn, frosted fragments and fresh, whole snail shells, B. FORAM--fresh and whole, worn and fragmented, ECHINOID--fresh plate and spine fragments, P. FORAM--fresh, whole and fragments, X-CARB.--dull, worn fragments, QUARTZ--clear to slightly translucent, angular to subrounded.

125-62.5

LIGHT OLIVE GRAY QUARTZITIC SHELLY CARBONATE SAND: MOLLUSC--worn, frosted fragments and fresh, whole snail shells, B. FORAM--mostly fresh and whole, ECHINOID--fresh plate and spine fragments, INTRA--friable aggregates, X-CARB.--worn, frosted fragments, QUARTZ--clear to slightly translucent, angular to subrounded.

GRAIN TYPES (%) [2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	51.4				15.9	1.5					6.8	5.3	1.7		15.1	2.3			132	3	135	97.8	2.2	12.14
2000-1000	61.6	1.7			19.3	0.8	0.8				4.1	5.7	0.3		4.3	1.4			249	31	380	91.8	8.2	29.51
1000-500	62.4	4.8			16.3	3.2	0.6				2.2	3.5			2.2	4.8			313	99	412	76.0	24.0	29.73
500-250	55.7	10.5	2.2		21.3	4.2	1.6		1.0		0.3				1.9	1.3			314	398	712	44.1	55.9	15.99
250-125	37.8	13.5	3.2	0.3	33.0	3.5	4.8		0.7						1.6	1.6			312	574	886	35.2	64.8	5.55
125-62.5	27.8	11.2	1.2		45.6	2.5	6.5			0.9	0.6				3.1	0.6			321	217	538	59.7	40.3	1.70
Σ % > 62.5	53.47	3.70	0.32	0.01	18.73	2.24	0.88		0.11	0.01	3.42	4.14	0.39		5.09	2.60			1741	1322	3063	75.63	24.37	5.33 < 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 2529A

DEPTH: 124'

LATITUDE: 29 55 59

LONGITUDE: 96 06 [illegible]

WHOLE SAMPLE DESCRIPTION:

SIZE FRACTION DESCRIPTIONS

4000-2000

YELLOWISH GRAY TO LIGHT GRAY CORRODED SHELLY CARBONATE SAND: MOLLUSC--mostly dull, worn fragments, often bored, CORALG.--dull, worn branched fragments, many grayish, INTRA--moderately indurated aggregates, X-CARB.--dull, worn and/or bored fragments, often irregularly-shaped.

2000-1000

VERY LIGHT GRAY SHELLY CARBONATE SAND: MOLLUSC--mostly dull, worn fragments, often bored, B. FORAM--whole, but worn with chipped edges, CORALG.--dull, worn, branched fragments, many grayish, BRYOZOA--dull, and worn, X-CARB.--dull, worn fragments, often irregularly-shaped, QUARTZ--translucent, subangular to subrounded; some quartz-blackened carbonate aggregates.

1000-500

LIGHT OLIVE GRAY QUARTZITIC SHELLY CARBONATE SAND: MOLLUSC--mostly dull, worn, frosted or bored fragments, B. FORAM--fresh and whole, and whole, worn, often with chipped edges, CORALG.--dull, worn fragments, some branched, X-CARB.--dull, worn, frosted or bored fragments,many irregularly-shaped, QUARTZ--clear to translucent, subangular to subrounded; some are iron-stained; some quartz-blackened carbonate aggregates.

500-250

LIGHT OLIVE GRAY SHELLY CARBONATE QUARTZ SAND: MOLLUSC--mostly dull, frosted fragments, B. FORAM--whole and fresh; some dull, worn fragments, X-CARB.--dull, worn and frosted fragments, QUARTZ--clear to slightly translucent, angular to subrounded.

250-125

YELLOWISH GRAY SHELLY CARBONATE QUARTZ SAND: MOLLUSC--mostly worn, frosted fragments, B. FORAM--mostly relatively fresh and whole, ECHINOID--fresh plate and spine fragments, INTRA--friable aggregates, X-CARB.--worn, frosted fragments, QUARTZ--clear to slightly translucent, angular to subangular.

125-62.5

YELLOWISH GRAY SHELLY CARBONATE QUARTZ SAND: MOLLUSC--mostly worn, frosted fragments, B. FORAM.--fresh and whole, ECHINOID--fresh plate and spine fragments, X-CARB--worn, frosted fragments, QUARTZ--clear to very slightly translucent, angular to subrounded.

GRAIN TYPES (%)[2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	31.6				49.5	1.0						2.1	13.7			2.1			95		95	100	0	19.52
2000-1000	24.4	2.8			50.0	2.3						3.4	16.2				0.9		352	4	356	98.9	1.1	37.61
1000-500	45.8	13.1			24.2	1.4						1.2	13.7				0.6		343	28	371	92.4	7.6	24.07
500-250	49.7	6.6	0.6		33.5	6.6	1.0					1.0					1.0		304	436	740	41.1	58.9	13.25
250-125	43.9	9.0	1.0		34.2	5.0	3.3					0.3				3.0	0.3		301	1344	1645	18.3	81.7	3.85
125-62.5	38.7	7.3	1.0		41.9	2.9	4.8		0.3	0.6	0.3					2.2			315	371	686	45.9	54.1	0.26
Σ % > 62.5	33.45	5.14	0.05		41.95	2.08	0.12		tr	tr	tr	2.33	13.73			0.50	0.60		1710	2183	3893	86.47	13.53	1.35 < 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 2530A

DEPTH: 136'

LATITUDE: 29 50 59

LONGITUDE: 86 05 30

WHOLE SAMPLE DESCRIPTION:

SIZE FRACTION DESCRIPTIONS

4000-2000

YELLOWISH GRAY TO MEDIUM LIGHT GRAY, CORRODED CARBONATE SAND: MOLLUSC--dull, worn, bored fragments, CORALG.--dull, worn, bored, branched fragments; many slightly blackened, X-CARB.--dull, bored fragments, irregularly-shaped.

2000-1000

YELLOWISH GRAY TO MEDIUM LIGHT GRAY, CORRODED, QUARTZITIC CARBONATE SAND: MOLLUSC--dull, worn, bored fragments, B. FORAM--fresh and whole, and worn, chipped and blackened, CORALG.--dull, worn fragments, often bored and blackened, BRYOZOA--dull, worn, X-CARB.--dull, worn or bored, irregularly-shaped fragments, QUARTZ--slightly clear to translucent, mostly subrounded.

1000-500

YELLOWISH GRAY TO MEDIUM LIGHT GRAY, QUARTZITIC, SHELLY CARBONATE SAND: MOLLUSC--dull, frosted or bored, worn fragments, B. FORAM--fresh and whole, and whole, worn and chipped, some blackened, CORALG.--dull, worn fragments, often blackened, BRYOZOA--dull, worn fragments, X-CARB.--dull, worn fragments, QUARTZ--clear to translucent, subrounded, SOME QUARTZ--blackened carbonate aggregates.

500-250

LIGHT OLIVE GRAY, QUARTZITIC, SHELLY CARBONATE SAND: MOLLUSC--mostly dull, frosted fragments, B. FORAM--fresh and whole, and dull, worn fragments, some blackened, BRYOZOA--worn fragments, P. FORAM--fresh, whole and fragments, X-CARB.--dull, worn, frosted fragments, QUARTZ--clear to slightly translucent, subangular to subrounded, SOME QUARTZ--blackened carbonate aggregates.

250-125

YELLOWISH GRAY, SHELLY, CARBONATE QUARTZ SAND: MOLLUSC--mostly frosted, worn fragments; some fresh, whole snail shells, B. FORAM--mostly fresh and whole, ECHINOID--fresh plate and spine fragments, X-CARB.--frosted, worn fragments, QUARTZ--mostly clear, angular to subrounded.

125-62.5

YELLOWISH GRAY, QUARTZITIC, SHELLY CARBONATE SAND: MOLLUSC--mostly frosted fragments and fresh whole snail shells, B. FORAM--fresh and whole, ECHINOID--fresh plate and spine fragments, X-CARB.--frosted, worn fragments, QUARTZ--clear, angular to subrounded.

GRAIN TYPES (%)[2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN
4000-2000	25.6				28.2	23.1						
2000-1000	19.4	4.9			28.1	22.7	1.0					4.2
1000-500	34.6	7.6			20.7	17.7	0.9					2.4
500-250	43.4	6.7	2.4		23.3	15.2	1.5		0.6			3.2
250-125	36.6	9.2	1.9		36.6	9.9	3.7					1.2
125-62.5	33.2	7.7			47.7	3.4	4.3			0.6	1.2	
Σ % > 62.5	29.63	5.19	0.29		24.98	19.79	0.88		0.07	tr	0.01	2.39

SIZE FRACTIONS (μ)	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	20.5				2.6		39		39	100	0	19.71
2000-1000	19.1				0.6		309	16	325	95.1	4.9	23.88
1000-500	14.1			0.3	1.5		333	35	368	90.5	9.5	37.53
500-250	0.6			0.3	2.3		341	175	516	66.1	33.9	14.80
250-125				0.6	0.3		325	313	638	50.9	49.1	1.88
125-62.5				1.9			325	181	506	64.2	35.8	0.65
Σ % > 62.5	15.11			0.16	1.58		1672	720	2392	88.92	11.08	1.47 < 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 2531A

DEPTH: 147'

LATITUDE: 29 47 59

LONGITUDE: 86 09 30

WHOLE SAMPLE DESCRIPTION:

SIZE FRACTION DESCRIPTIONS

4000-2000: YELLOWISH GRAY TO MEDIUM LIGHT GRAY, CORRODED SHELLY CARBONATE SAND: MOLLUSC--dull, worn, encrusted and bored fragments, CORALG.--dull, encrusted and bored, branched fragments, BRYOZOA--dull; some slightly encrusted and infilled, X-CARB.--dull, bored and encrusted, often irregulary-shaped fragments.

2000-1000: YELLOWISH GRAY TO LIGHT OLIVE GRAY, CORRODED, SHELLY CARBONATE SAND: MOLLUSC--mostly dull, worn, bored fragments, B. FORAM--mostly dull, worn to smoothed, often chipped, CORALG.--dull, worn, branched fragments, often slightly blackened and/or bored, X-CARB.--dull, worn fragments, often bored and irregularly-shaped, QUARTZ--translucent, subrounded.

1000-500: LIGHT OLIVE GRAY, SHELLY CARBONATE SAND: MOLLUSC--worn, frosted and/or bored fragments, B. FORAM--fresh and whole; and whole, worn to smoothed, often blackened and with chipped edges, CORALG.--mostly worn, slightly bored fragments, some slightly blackened, X-CARB.--dull, worn, frosted and/or bored fragments, often irregularly-shaped.

500-250: LIGHT OLIVE GRAY, QUARTZITIC, SHELLY CARBONATE SAND: MOLLUSC--mostly worn, frosted fragments, some bored and blackened, B. FORAM--fresh and whole; and worn to smoothed, often chipped and blackened; some agglutinated forms, BRYOZOA--dull fragments, ECHINOID--mostly fresh plate and spine fragments, X-CARB.--worn, frosted fragments, some irregularly-shaped, QUARTZ--clear to slightly translucent, subangular to subrounded, SOME QUARTZ--blackened carb. aggregates.

250-125: LIGHT OLIVE GRAY, QUARTZITIC, SHELLY CARBONATE SAND: MOLLUSC--mostly worn, frosted fragments; some relatively fresh, whole snail shells, B. FORAM--fresh and whole; also whole, but worn, chipped, blackened or iron-stained, B. CARB.--mostly worn, often smoothed and frosted fragments, ECHINOID--fresh plate and spine fragments, X-CARB.--worn frosted fragments, QUARTZ--clear, angular to subrounded.

125-62.5: YELLOWISH GRAY, QUARTZITIC, SHELLY CARBONATE SAND: MOLLUSC--mostly worn, frosted fragments; some fresh, whole snail shells, B. FORAM--fresh and whole, ECHINOID--fresh plate and spine fragments, X-CARB.--worn, frosted fragments, QUARTZ--clear, mostly angular to subangular.

GRAIN TYPES (%)[2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	27.7				47.7	3.1						6.2	12.3	1.5		1.5			65		65	100	0	6.03
2000-1000	25.1	5.3			44.0	3.2	0.3					1.1	19.2			1.8			339	1	340	99.7	0.3	34.82
1000-500	31.0	11.9			34.6	5.8	1.4					1.1	11.4			2.8			361		361	100	0	35.98
500-250	45.6	10.8	0.3		29.4	6.6	2.2		0.3			3.2				1.6			316	58	374	59.5	40.5	16.47
250-125	30.0	9.1	1.6		29.7	23.9	4.5					0.6			0.6				310	211	521	59.5	40.5	2.[illegible]
125-62.5	36.3	9.2	1.6		41.1	2.9	7.2			0.7	0.7				0.3				306	127	433	70.7	29.3	0.82
Σ % > 62.5	30.79	8.45	0.07		38.19	5.02	1.16		0.04	tr	tr	1.74	12.43	0.10	0.01	2.09			1697	397	2094	96.11	3.89	2.22 < 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 2532A

DEPTH: 172'

LATITUDE: 29 45 58

LONGITUDE: 86 12 28

WHOLE SAMPLE DESCRIPTION:

SIZE FRACTION DESCRIPTIONS

4000-2000: YELLOWISH GRAY TO LIGHT GRAY, CORRODED, SHELLY CARBONATE SAND: MOLLUSC--mostly worn, bored fragments, CORALG.--worn, bored fragments, B. FORAM--worn, blackened fragment, CORAL--worn, bored, encrusted fragment, X-CARB.--dull, worn, bored fragments, many irregularly-shaped.

2000-1000: MEDIUM LIGHT GRAY, CORRODED, SHELLY CARBONATE SAND: MOLLUSC--mostly worn, bored fragments, some slightly blackened, B. FORAM--mostly worn to smoothed, bored or chipped, often blackened, CORALG.--worn fragments, many bored, BRYOZOA--dull, worn fragments, often infilled, X-CARB.--dull, worn, bored fragments, often irregularly-shaped, QUARTZ--slightly clear to translucent, subangular to subrounded.

1000-500: LIGHT OLIVE GRAY, QUARTZITIC, SHELLY CARBONATE SAND: MOLLUSC--mostly dull, frosted fragments, some bored, B. FORAM--fresh and whole; and whole, worn to smoothed, some chipped and/or blackened, CORALG.--dull, worn fragments, often blackened, BRYOZOA--dull fragments, X-CARB.--worn, frosted fragments, often irregularly-shaped, QUARTZ--clear to slightly translucent, subangular to subrounded.

500-250: LIGHT OLIVE GRAY, QUARTZITIC, SHELLY CARBONATE SAND: MOLLUSC--mostly worn, frosted fragments; some fresh, angular fragments, B. FORAM--fresh and whole; and whole, worn and chipped, blackened or iron-stained, P. FORAM--mostly fresh and whole, ECHINOID--relatively fresh plate and spine fragments, BRYOZOA--mostly slightly worn fragments, X-CARB.--worn, frosted fragments, some irregularly-shaped, QUARTZ--clear to slightly translucent, subangular to subrounded.

250-125: LIGHT OLIVE GRAY, QUARTZITIC, SHELLY CARBONATE SAND: MOLLUSC--mostly worn, frosted fragments, B. FORAM--mostly fresh and whole, BRYOZOA--slightly worn, some slightly infilled, P. FORAM--relatively fresh, whole and fragments, ECHINOID--fresh plate and spine fragments, QUARTZ--mostly clear, angular to subangular.

125-62.5: YELLOWISH GRAY, QUARTZITIC, SHELLY CARBONATE SAND: MOLLUSC--mostly worn, frosted fragments. B. FORAM--fresh and whole, P. FORAM--relatively fresh,whole and fragments, ECHINOID--fresh plate and spine fragments, QUARTZ--clear, angular to subrounded.

GRAIN TYPES (%)[2]

SIZE FRACTIONS (µ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	51.6	3.0			24.2	6.1							12.1	3.0					33		33	100	0	3.19
2000-1000	17.6	9.4			45.0	10.0	0.3					3.7	12.5				1.5		329	2	331	99.4	0.6	13.62
1000-500	35.8	19.9	2.6		17.9	5.9	1.3					3.6	6.2				6.8		307	15	322	95.3	4.7	20.79
500-250	51.4	9.7	7.9		16.7	2.4	4.9		0.3			2.4					4.3		329	39	368	89.4	10.6	33.51
250-125	38.9	7.9	3.5		29.8	10.8	3.2			0.3	0.6	4.1					0.9		316	58	374	84.5	15.5	17.97
125-62.5	38.7	7.6	3.6		31.4	4.8	9.7		0.6	1.5	0.9					1.2			331	92	423	78.3	21.7	2.84
Σ % > 62.5	39.65	11.42	4.17		24.58	6.17	2.95		0.12	0.10	0.13	3.04	3.98	0.12		0.04	3.54		1645	206	1851	91.28	8.72	7.88 < 62 µ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 2533A

DEPTH: 223'

LATITUDE: 29 42 59

LONGITUDE: 86 15 29

WHOLE SAMPLE DESCRIPTION:

SIZE FRACTION DESCRIPTIONS

4000-2000: YELLOWISH GRAY CORRODED CARBONATE SAND: MOLLUSC--mostly dull, worn, bored and encrusted fragments, BRYOZOAN--dull, encrusted, CORALG.--worn, slightly blackened fragment, X-CARB.--dull, bored and encrusted fragments, often irregularly-shaped.

2000-1000: YELLOWISH GRAY CORRODED SHELLY CARBONATE SAND: MOLLUSC--dull, worn, bored fragments, B. FORAM--fresh and whole, and worn, smoothed and chipped, often frosted, CORALG.--worn fragments, often bored. CORAL--worn, bored fragments, BRYOZOA--dull, worn, often infilled, X-CARB.--dull, worn, bored fragments, irregularly-shaped.

1000-500: YELLOWISH GRAY CORRODED SHELLY CARBONATE SAND: MOLLUSC--mostly dull, bored, worn fragments, B. FORAM--fresh and whole, and worn smoothed and/or chipped, BRYOZOA--dull, worn fragments, ECHINOID--dull, worn plate and spine fragments, X-CARB.--dull, worn, bored or frosted fragments, QUARTZ--clear to translucent, subangular to subrounded; some are iron-stained.

500-250: LIGHT OLIVE GRAY QUARTZITIC SHELLY CARBONATE SAND: MOLLUSC--mostly worn, frosted fragments, some iron-stained, B. FORAM--fresh and whole, and worn, smoothed and/or chipped; many blackened or red stained, ECHINOID--dull, worn fragments, X-CARB.--dull, frosted or bored fragments; some smoothed and shiny, QUARTZ--clear to translucent, angular to subrounded; some are iron-stained; some quartz-blackened carbonate aggregates.

250-125: LIGHT OLIVE GRAY QUARTZITIC SHELLY CARBONATE SAND: MOLLUSC--worn, frosted fragments; few whole, fresh snail shells, B. FORAM--mostly worn, smoothed, blackened or iron-stained, B. CARB.--mostly worn, smoothed, shiny fragments, X-CARB.--mostly worn, smoothed, shiny fragments, often iron-stained, INTRA--greenish gray friable aggregates, QUARTZ--clear to slightly translucent, angular to subrounded.

125-62.5: YELLOWISH GRAY QUARTZITIC SHELLY CARBONATE SAND: MOLLUSC--mostly worn, frosted fragments; some relatively fresh, whole snail shells, B. FORAM--mostly relatively fresh and whole, P. FORAM--fresh, whole and fragments, INTRA--greenish friable aggregates, X-CARB.--worn, frosted fragments, QUARTZ--clear, angular to subrounded.

GRAIN TYPES (%)[2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	53.4				40.0							3.3	3.3						30		30	100	0	16.64
2000-1000	43.8	8.3			29.2	0.3	0.6					3.4	6.7	1.2			6.5		325		325	100	0	12.44
1000-500	52.4	15.6			23.3		3.0					3.6	0.9				1.2		334	5	339	98.5	1.5	37.99
500-250	47.3	14.7	1.8		28.4	1.5	2.4		0.6			1.2					2.1		328	29	357	91.9	8.1	27.78
250-125	16.8	2.8	2.2		62.4	13.4	0.9					0.3				1.2			322	58	380	84.7	15.3	1.83
125-62.5	34.9	10.7	5.1		28.9	2.1	3.0		0.3		1.5					12.5			335	17	352	95.2	4.8	0.17
Σ % > 62.5	49.43	11.39	0.54		29.12	0.67	1.93		0.16		tr	2.81	1.84	0.16		0.04	1.91		1674	109	1783	96.80	3.20	2.74 (< 62 μ)

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 25344

DEPTH: 245'

LATITUDE: 29 39 59

LONGITUDE: 96 16 59

WHOLE SAMPLE DESCRIPTION:

SIZE FRACTION DESCRIPTIONS

4000-2000: YELLOWISH GRAY CORRODED SHELLY CARBONATE SAND: MOLLUSC--mostly dull, worn, bored, and encrusted fragments, CORALG.--dull, worn fragments, ECHINOID--dull plate fragment, X-CARB.--dull, worn, bored and/or encrusted fragments, often irregularly-shaped.

2000-1000: YELLOWISH GRAY TO LIGHT OLIVE GRAY CORRODED SHELLY CARBONATE SAND: MOLLUSC--mostly dull, worn, bored fragments, B. FORAM--fresh and whole, and dull, worn, chipped, bored, often blackened, CORALG.--dull, worn fragments, often bored, BRYOZOA--dull, worn, often infilled, X-CARB.--dull, worn, bored fragments, often irregularly-shaped, QUARTZ--translucent, frosted, subrounded, many with faint iron stain.

1000-500: LIGHT OLIVE GRAY CORRODED SHELLY CARBONATE SAND: MOLLUSC--mostly dull, worn, bored fragments, B. FORAM--fresh and whole, and whole but dull, worn to smoothed, often chipped and bored, often blackened, CORALG.--mostly dull, worn, bored fragments, ECHINOID--dull, worn plate and spine fragments, X-CARB.--dull, worn, bored fragments often irregularly-shaped, QUARTZ--slightly clear to translucent, subangular to subrounded, some with faint iron stain.

500-250: LIGHT OLIVE GRAY QUARTZITIC SHELLY CARBONATE SAND: MOLLUSC--mostly worn, frosted or bored fragments, B. FORAM--fresh and whole, and worn, smoothed and shiny, often blackened or iron-stained, ECHINOID--dull, worn plate and spine fragments, X-CARB.--frosted or worn, smoothed and shiny fragments, QUARTZ--clear, mostly subangular to subrounded.

250-125: YELLOWISH GRAY QUARTZITIC SHELLY CARBONATE SAND: MOLLUSC--mostly frosted fragments and whole fresh snail shells, B. FORAM--relatively fresh, whole and fragmented, P. FORAM--fresh, whole, INTRA--greenish gray, friable aggregates, ECHINOID--fresh plate and spine fragments, X-CARB.--frosted to smoothed fragments, some iron-stained, QUARTZ--clear, subangular to subrounded.

125-62.5: YELLOWISH GRAY QUARTZITIC SHELLY CARBONATE SAND: MOLLUSC--worn, frosted fragments and fresh, whole snail shells, B. FORAM--mostly fresh and whole; some slightly corroded, INTRA--greenish gray, friable aggregates, P. FORAM--fresh, whole and fragments, X-CARB.--worn, frosted fragments, QUARTZ--mostly clear, angular to subrounded.

GRAIN TYPES (%)[2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	31.9			1.4	62.4		1.4					2.9							69		69	100	0	11.48
2000-1000	32.4	18.2			34.0	0.3	0.9					4.4	7.6				1.6		315	1	316	99.7	0.3	38.75
1000-500	54.7	13.2			20.5		2.4					1.5	4.3				3.4		327	2	329	99.4	0.6	34.69
500-250	42.7	10.9	0.9		40.8	1.3	1.3		0.3			0.9				0.3	0.6		314	23	337	93.2	6.8	9.45
250-125	40.5	12.3	3.1		30.7	1.8	4.3				0.3					7.0			326	9	335	97.3	2.7	0.31
125-62.5	37.7	6.5	3.9		40.9	1.2	2.7			0.3	0.6	0.3				5.9			337	23	360	93.6	6.4	0.08
Σ % > 62.5	41.55	13.66	0.10	0.17	33.14	0.26	1.56		0.03	tr	tr	2.45	5.07			0.05	1.96		1688	58	1746	98.96	1.04	4.92

< 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 2535A   DEPTH: 385'   LATITUDE: 29 35 59
LONGITUDE: 86 19 59

WHOLE SAMPLE DESCRIPTION:

SIZE FRACTION DESCRIPTIONS

4000-2000
MOLLUSC--dull,worn,frosted, slightly bored and encrusted fragment.

2000-1000
VERY LIGHT GRAY SHELLY CARBONATE SAND: MOLLUSC--relatively fresh, angular fragments, ECHINOID--fresh plate fragments, B. FORAM--whole slightly worn, agglutinated forms.

1000-500
YELLOWISH GRAY SHELLY FORAMINIFERAL CARBONATE SAND: MOLLUSC--mostly fresh, angular fragments, B. FORAM.--fresh and whole, and dull, worn,often chipped; many agglutinated foram fragments, P. FORAM--fresh to slightly dull, mostly whole, ECHINOID--mostly fresh plate fragments, X-CARB.--worn and/or irregularly-shaped fragments, QUARTZ--clear, subangular

500-250
YELLOWISH GRAY SHELLY FORAMINIFERAL CARBONATE SAND: MOLLUSC--mostly relatively fresh,angular fragments and dull, frosted, worn fragments, B. FORAM.--fresh to slightly dull, worn and fragmented, P. FORAM--relatively fresh, whole and fragments, ECHINOID--fresh plate and spine fragments, X-CARB.--worn and/or irregularly-shaped fragments.

250-125
LIGHT OLIVE GRAY SHELLY FORAMINIFERAL CARBONATE SAND: MOLLUSC--mostly worn, frosted fragments, B. FORAM--relatively fresh,whole and fragmented, P. FORAM--fresh to slightly worn, whole and fragments, ECHINOID--relatively fresh plate and spine fragments, X-CARB.--worn, frosted fragments, QUARTZ--clear, angular to subangular.

125-62.5
LIGHT OLIVE GRAY SHELLY FORAMINIFERAL SAND: MOLLUSC--mostly worn, frosted fragments; fewer fresh, whole snail shells. B. FORAM--fresh to slightly worn, mostly whole, P. FORAM--fresh to slightly worn, whole and fragments, ECHINOID--fresh plate and spine fragments, X-CARB.--worn, frosted fragments, QUARTZ--clear, very angular to subrounded.

GRAIN TYPES (%)[2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	100																		1		1	100	0	0.09
2000-1000	59.3	14.8				3.7	22.2												27		27	100	0	0.35
1000-500	32.8	31.5	17.3		2.3	0.3	15.3									0.5			574	4	578	99.3	0.7	0.79
500-250	28.5	21.6	30.1		5.7	0.6	11.6		1.9										319		319	100	0	2.10
250-125	15.8	21.8	41.8		11.7	1.9	4.8		1.9		0.3								316	2	318	99.4	0.6	6.13
125-62.5	22.9	13.9	22.3		28.8	5.9	5.6		0.3	0.6	0.6								323	23	346	93.4	6.6	13.13
Σ % > 62.5	22.77	17.46	27.90		20.23	3.46	6.51		0.92	0.32	0.42					0.02			1560	29	1589	95.93	4.07	77.41 < 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: [illegible] DEPTH: 622'

LATITUDE: 29 30 01
LONGITUDE: 36 25 01

WHOLE SAMPLE DESCRIPTION:

SIZE FRACTION DESCRIPTIONS

4000-2000
MOLLUSC--yellowish gray, dull, angular fragments, one slightly encrusted with fine sediment.

2000-1000
YELLOWISH GRAY SHELLY CARBONATE SAND: MOLLUSC--fresh, angular fragments and dull, slightly bored, angular fragments, B. FORAM--worn, agglutinated; whole and fragments, ECHINOID--fresh to dull plate fragments.

1000-500
LIGHT OLIVE GRAY SHELLY FORAMINIFERAL CARBONATE SAND: MOLLUSC--fresh, angular fragments and some dull, bored fragments, B. FORAM--fresh to slightly dull, whole and fragmented, P. FORAM--fresh to slightly dull, mostly whole, ECHINOID--fresh to dull plate fragments, X-CARB.--dull, worn fragments, often irregularly-shaped, QUARTZ--slightly translucent, rounded

500-250
LIGHT OLIVE GRAY SHELLY FORAMINIFERAL CARBONATE SAND: MOLLUSC--relatively fresh, angular fragments, and frosted, slightly bored fragments, B. FORAM--fresh and worn, whole and fragmented, P. FORAM--fresh and worn, whole and fragments, ECHINOID--slightly dull plate fragments, X-CARB.--worn, frosted fragments and irregularly-shaped fragments.

250-125
LIGHT OLIVE GRAY SHELLY FORAMINIFERAL CARBONATE SAND: MOLLUSC--fresh, angular fragments and dull frosted fragments, B. FORAM--fresh to dull, whole and fragments, P. FORAM--fresh to slightly dull, whole and fragments; some blackened, ECHINOID--fresh to slightly dull, plate and spine fragments, X-CARB.--dull, worn fragments and irregularly-shaped fragments.

125-62.5
LIGHT OLIVE GRAY SHELLY FORAMINIFERAL CARBONATE SAND: MOLLUSC--fresh, angular fragments, and dull, frosted fragments, B. FORAM--mostly fresh and whole, P. FORAM--fresh to slightly worn, whole and fragments, ECHINOID--fresh plate and spine fragments, QUARTZ--clear, angular.

GRAIN TYPES (%)[2]

SIZE FRACTIONS (µ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNDIFFERENTIATED CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	100																		2		2	100	0	0.31
2000-1000	65.1	27.9					7.0												43		43	100	0	0.72
1000-500	34.9	41.5	15.0		2.3		5.7					0.3					0.3		347	1	348	99.7	0.3	1.23
500-250	12.9	30.8	45.9		4.3	1.8	4.0										0.3		325		325	100	0	[illegible]
250-125	17.3	18.2	47.6		10.7	4.2	1.3									0.7			307		307	100	0	[illegible]
125-62.5	17.8	12.1	52.7		10.6	1.2	5.6												338	1	339	99.7	0.3	8.43
Σ % > 62.5	20.72	19.51	45.07		8.44	2.09	3.93					0.02				0.19	0.05		1362	2	1364	99.85	0.15	[illegible] < 62 µ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 2637A

DEPTH: 64'

LATITUDE: 30 02 02

LONGITUDE: 86 37 02

WHOLE SAMPLE DESCRIPTION:

SIZE FRACTION DESCRIPTIONS

4000-2000

MOLLUSC--very light gray, relatively fresh, angular fragment, slightly encrusted with finer sediment, INTRA--olive gray, slightly indurated aggregate.

2000-1000

VERY LIGHT GRAY TO OLIVE GRAY INTRACLASTIC SHELLY CARBONATE SAND: MOLLUSC--mostly relatively fresh, angular fragments; one blackened fragment, INTRA--olive gray, slightly indurated to friable aggregates.

1000-500

VERY LIGHT GRAY TO OLIVE GRAY SHELLY CARBONATE SAND: MOLLUSC--mostly relatively fresh, angular fragments, B. FORAM--whole, fresh and dull, worn, ECHINOID--fresh to slightly dull plate fragments, INTRA--olive gray, friable aggregates, QUARTZ--clear, subangular to rounded.

500-250

LIGHT OLIVE GRAY SHELLY FORAMINIFERAL CARBONATE QUARTZ SAND: MOLLUSC--fresh to slightly frosted fragments. B. FORAM--mostly fresh and whole; some worn and chipped, P. FORAM--fresh and whole, ECHINOID--fresh plate and spine fragments, INTRA--olive gray, friable aggregates, X-CARB.--dull, worn fragments, QUARTZ--mostly clear, angular to subrounded.

250-125

LIGHT OLIVE GRAY, QUARTZITIC SHELLY FORAMINIFERAL CARBONATE SAND: MOLLUSC--fresh angular fragments and worn frosted fragments, B. FORAM--mostly fresh and whole, some worn and smoothed; few fragments, P. FORAM--fresh, whole and fragments, ECHINOID--relatively fresh plate and spine fragments, INTRA--olive gray, friable aggregates. X-CARB.--worn, frosted fragments, QUARTZ--clear to slightly translucent, very angular to subrounded.

125-62.5

LIGHT OLIVE GRAY SHELLY CARBONATE QUARTZ SAND: MOLLUSC--mostly worn, frosted fragments, B. FORAM--whole, fresh to worn, ECHINOID--fresh plate and spine fragments, X-CARB.--mostly worn, frosted fragments, QUARTZ--clear, mostly very angular to subangular.

GRAIN TYPES (%)[2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	CRYPTOCRYSTALLINE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	50.0															50.0			2		2	100	0	0.24
2000-1000	64.3															35.7			14		14	100	0	0.24
1000-500	74.0	1.7	1.2		0.6	0.6	12.1									8.6	1.2		173	9	182	95.1	4.9	0.31
500-250	14.0	47.6	5.1		4.4	2.5	14.6		1.3							10.2	0.3		315	554	869	36.2	63.8	1.65
250-125	5.9	62.4	2.0		11.8	1.0	11.1		0.3		0.3					5.2			306	186	492	62.2	37.8	3.97
125-62.5	18.8	21.8	1.6		41.6	7.1	8.1			0.3						0.7			308	618	926	33.3	66.7	30.05
Σ % > 62.5	18.71	26.97	1.73		32.37	5.42	8.74		0.14	0.22	0.07					3.54	0.07		1118	1367	2485	37.99	62.01	63.11

< 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 2639A DEPTH: 106' LATITUDE: 29 53 28
LONGITUDE: 9? 12 24

WHOLE SAMPLE DESCRIPTION:

SIZE FRACTION DESCRIPTIONS

4000-2000: YELLOWISH GRAY TO MEDIUM DARK GRAY SHELLY CARBONATE SAND: MOLLUSC--relatively fresh, angular fragments and dull, worn, bored and encrusted fragments, many blackened, BRYOZOA--dull, worn, infilled fragment, ECHINOID--dull, worn plate fragment.

2000-1000: YELLOWISH GRAY TO DARK GRAY SHELLY CARBONATE SAND: MOLLUSC--mostly dull, worn bored fragments, many blackened; some fresh, angular fragments, ECHINOID--dull, worn plate fragments, BRYOZOA--dull, worn fragments, X-CARB.--dull, worn, bored fragments.

1000-500: YELLOWISH TO DARK GRAY QUARTZITIC SHELLY CARBONATE SAND: MOLLUSC--mostly worn, frosted and/or bored fragments, many blackened; fewer relatively fresh, angular fragments, B. FORAM--whole, but mostly dull, worn, often chipped and slightly blackened, ECHINOID--fresh and slightly worn plate and spine fragments, X-CARB.--dull, worn fragments, QUARTZ--mostly clear and subangular.

500-250: GREENISH GRAY QUARTZITIC SHELLY CARBONATE SAND: MOLLUSC--fresh, angular fragments and dull, worn, frosted and/or bored fragments, many blackened, B. FORAM--fresh and whole; and whole, worn, often chipped, ECHINOID--fresh to slightly worn plate and spine fragments, INTRA--greenish gray, friable aggregates, QUARTZ--mostly clear, angular to subrounded.

250-125: GREENISH GRAY SHELLY FORAMINIFERAL CARBONATE QUARTZ SAND: MOLLUSC--mostly worn, frosted fragments, B. FORAM--mostly fresh and whole, ECHINOID--mostly fresh plate and spine fragments, INTRA--greenish gray, friable aggregates, X-CARB.--worn, frosted fragments, QUARTZ--clear to slightly translucent, mostly angular to subangular.

125-62.5: GREENISH GRAY CARBONATE QUARTZ SAND: MOLLUSC--mostly worn, frosted fragments; some fresh, angular fragments, B. FORAM--mostly fresh and whole, ECHINOID--fresh plate and spine fragments, X-CARB.--worn, frosted fragments, QUARTZ--clear, mostly angular to subangular.

GRAIN TYPES (%)[2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNDIFFERENTIATE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	95.6						2.2					2.2							45		45	100	0	6.16
2000-1000	95.8				0.9	0.3	1.2					1.2					0.6		328		328	100	0	4.04
1000-500	84.9	4.1			2.2	3.2	4.1					0.6				0.9			316	14	330	95.8	4.2	4.65
500-250	66.9	14.5	1.3		2.8	3.5	7.6		0.9							2.5			317	184	501	63.3	36.7	9.83
250-125	27.3	24.9	2.5		23.9	4.7	9.9		1.5							5.3			322	583	905	35.6	64.4	31.44
125-62.5	27.7	9.5	0.3		45.0	11.4	4.2				0.3					1.6			307	979	1286	23.9	76.1	30.23
Σ % > 62.5	57.92	11.60	0.97		15.85	4.38	5.72		0.59		0.05	0.56				2.31	0.05		1635	1760	3395	45.50	54.50	13.56 < 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 2640A

DEPTH: 115'

LATITUDE: 29 43 31

LONGITUDE: 87 54 32

WHOLE SAMPLE DESCRIPTION:

SIZE FRACTION DESCRIPTIONS

4000-2000: YELLOWISH GRAY TO DARK GRAY CORRODED SHELLY CARBONATE SAND: MOLLUSC--mostly dull, worn, bored fragments, most blackened, BRYOZOA--dull, worn; some blackened, ECHINOID--slightly worn plate fragments, B. CARB.--bored, irregularly-shaped fragments.

2000-1000: YELLOWISH GRAY TO DARK GRAY CORRODED QUARTZITIC SHELLY CARBONATE SAND: MOLLUSC--mostly dull, worn, frosted and/or bored fragments, many blackened; few fresh, angular fragments, BRYOZOA--dull, slightly worn fragments, ECHINOID--fresh plate fragments, X-CARB.--dull, worn, bored fragments, irregularly-shaped, QUARTZ--clear to translucent, subangular to subrounded, some with faint iron stain.

1000-500: GREENISH GRAY TO MEDIUM DARK GRAY CORRODED QUARTZITIC SHELLY CARBONATE SAND: MOLLUSC--mostly dull, worn, frosted and/or bored fragments, many blackened; some fresh angular fragments and fresh whole snail shells, B. FORAM--mostly whole, but worn to smoothed, often chipped and blackened, BRYOZOA--dull, slightly worn, X-CARB.--dull, worn, bored fragments, QUARTZ--clear to translucent, subangular to subrounded, many iron-stained.

500-250: GREENISH GRAY CARBONATE QUARTZ SAND: MOLLUSC--mostly dull, worn, frosted and/or bored fragments, many blackened, B. FORAM--fresh and whole, and dull, worn fragments, ECHINOID--fresh plate and spine fragments, X-CARB.--worn, frosted fragments, QUARTZ--clear to slightly translucent, mostly angular to subangular.

250-125: GREENISH GRAY CARBONATE QUARTZ SAND: MOLLUSC--mostly worn, frosted fragments, B. FORAM--mostly fresh and whole, ECHINOID--fresh plate and spine fragments, INTRA--greenish gray, friable aggregates, X-CARB.--worn, frosted fragments, QUARTZ--clear to slightly translucent, mostly very angular to subangular..

125-62.5: YELLOWISH GRAY CARBONATE QUARTZ SAND: MOLLUSC--mostly worn, frosted fragments, B. FORAM--fresh and whole, INTRA--greenish gray, friable aggregates, B. CARB.--worn, frosted fragments, X-CARB.--worn, frosted fragments, QUARTZ--clear to slightly translucent, mostly angular to subangular.

GRAIN TYPES (%) [2]

SIZE FRACTIONS (µ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNDIFFERENTIATED CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	85.9					2.8	4.2					7.1							71		71	100	0	5.31
2000-1000	84.6	1.0			2.9	6.4	1.0					3.5				0.3	0.3		313	15	328	95.4	4.6	5.79
1000-500	80.7	7.2			3.5	5.6	1.3					1.6							305	280	585	52.1	47.9	15.59
500-250	57.5	8.8			25.3	5.8	2.3		0.3										308	1692	2000	15.4	84.6	57.66
250-125	43.1	19.4	0.6		24.7	6.6	2.8		0.6							2.2			320	3620	3940	8.1	91.9	13.08
125-62.5	23.4	8.6	1.0		30.4	26.1	1.3	0.3		0.6						3.3			305	2149	2452	12.4	87.6	0.53
Σ % > 62.5	73.72	5.66	0.03		16.28	5.38	2.14	tr	0.14	tr		2.41				0.17	0.07		1620	7756	9376	29.56	70.44	1.93 < 62 µ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 26414

DEPTH: 118'

LATITUDE: 29 45 35

LONGITUDE: 87 46 41

WHOLE SAMPLE DESCRIPTION:

SIZE FRACTION DESCRIPTIONS

4000-2000

MOLLUSC--three are fresh, angular fragments; one is worn and blackened.

2000-1000

YELLOWISH GRAY TO DARK GRAY SHELLY CARBONATE SAND: MOLLUSC--fresh, angular fragments, and dull, worn fragments, some bored and encrusted; some blackened fragments, INTRA--greenish gray, friable aggregate, BRYOZOA--slightly worn fragment, X-CARB.--dull, worn, bored fragment.

1000-500

YELLOWISH GRAY TO MEDIUM DARK GRAY QUARTZITIC SHELLY CARBONATE SAND: MOLLUSC--mostly dull, worn, frosted and/or bored fragments, many blackened, a few fresh fragments; whole snail shells, B. FORAM--whole, fresh and worn, BRYOZOA--dull, slightly worn fragments, ECHINOID--relatively fresh plate fragments, INTRA--greenish gray, friable aggregates, QUARTZ--clear to translucent, mostly angular to subangular.

500-250

GREENISH GRAY SHELLY CARBONATE QUARTZ SAND: MOLLUSC--dull, worn, frosted and/or bored fragments, some blackened, B. FORAM--mostly whole, fresh to slightly worn; some worn fragments, P. FORAM--fresh, whole and fragments, ECHINOID--fresh plate and spine fragments, INTRA--greenish gray, friable aggregates, X-CARB.--dull worn, frosted fragments QUARTZ--clear to slightly translucent, mostly very angular to subangular

250-125

GREENISH GRAY CARBONATE QUARTZ SAND: MOLLUSC--mostly worn, frosted fragments; some fresh, whole snail shells, B. FORAM--mostly fresh and whole, ECHINOID--fresh plate and spine fragments, INTRA--greenish gray, friable aggregates, X-CARB.--worn, frosted fragments, QUARTZ--clear to slightly translucent, mostly very angular to subangular.

125-62.5

GREENISH GRAY CARBONATE QUARTZ SAND: MOLLUSC--mostly worn, frosted fragments; some fresh, whole snail shells, B. FORAM--mostly fresh and whole, ECHINOID--fresh plate and spine fragments, INTRA--greenish gray, friable aggregates, X-CARB.--worn, frosted fragments, QUARTZ--clear to slightly translucent, angular to subangular.

GRAIN TYPES (%)[2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNDETERMINATE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	100																		4		4	100	0	1.65
2000-1000	91.6				2.8							2.8				2.8			36		36	100	0	0.44
1000-500	89.4	3.8			1.9	1.0	1.0					1.9				1.0			210	134	344	61.0	39.0	0.72
500-250	51.1	18.8	2.5		12.2	6.9	5.0		1.3							2.2			319	1648	1967	16.2	83.8	10.58
250-125	32.1	25.4	1.3		26.3	6.7	6.0									2.2			315	3429	3744	8.4	91.6	76.27
125-62.5	27.3	12.6	2.4		36.2	12.0	3.1	0.6		0.6	0.3					4.9			326	1817	2143	15.2	84.8	6.39
Σ % > 62.5	43.53	18.02	1.21		19.57	5.77	4.31	0.09	0.17	0.09	0.01	0.17				2.07			1210	7028	8238	12.10	87.90	3.80 < 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 2642A

DEPTH: 118'

LATITUDE: 29 40 28

LONGITUDE: 87 37 01

WHOLE SAMPLE DESCRIPTION:

SIZE FRACTION DESCRIPTIONS

4000-2000: MEDIUM LIGHT GRAY TO YELLOWISH GRAY SHELLY CARBONATE SAND: MOLLUSC--fresh, angular fragments; dull, slightly worn fragments; few dull, worn bored fragments; few blackened, BRYOZOA--relatively fresh, whole.

2000-1000: YELLOWISH GRAY SHELLY CARBONATE SAND: MOLLUSC--many fresh, angular fragments; many dull, worn,frosted fragments; few dull, worn,bored fragments; some blackened fragments, BRYOZOA--fresh to moderately worn fragments, INTRA--moderately indurated aggregates, ECHINOID--slightly worn plate fragments, QUARTZ--slightly translucent, sub-rounded.

1000-500: YELLOWISH GRAY SHELLY CARBONATE QUARTZ SAND: MOLLUSC--fresh angular fragments; dull worn frosted and/or bored fragments; some blackened; some fresh whole snail shells, B. FORAM--fresh to slightly worn, whole; some chipped; some fresh to worn fragments, BRYOZOA--fresh to slightly worn fragments, ECHINOID--fresh to slightly worn plate fragments, QUARTZ--clear to slightly translucent, subangular to subrounded.

500-250: YELLOWISH GRAY CARBONATE QUARTZ SAND: MOLLUSC--mostly worn, frosted and/or bored fragments, some blackened; some fresh,angular fragments, B. FORAM--fresh and whole, and worn fragments, ECHINOID--fresh plate fragments, X-CARB.--mostly worn frosted fragments, QUARTZ--clear to slightly translucent, mostly angular to subangular.

250-125: YELLOWISH GRAY CARBONATE QUARTZ SAND: MOLLUSC--mostly worn, frosted fragments, B. FORAM--fresh and whole, ECHINOID--fresh plate fragments, INTRA--greenish gray, friable aggregates, X-CARB.--worn, frosted fragments, QUARTZ--clear to slightly translucent, mostly very angular to subangular.

125-62.5: YELLOWISH GRAY CARBONATE QUARTZ SAND: MOLLUSC--mostly worn, frosted fragments, B. FORAM--fresh and whole, P. FORAM--fresh, whole and fragments, INTRA--greensih gray, friable aggregates, B. CARB.--worn, frosted fragments, X-CARB.--worn, frosted fragments, QUARTZ--clear to slightly translucent, mostly angular to subangular.

GRAIN TYPES (%)[2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	INDETERMINATE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	92.6											7.4							27		27	100	0	6.77
2000-1000	87.8						1.1					10.6				0.5			188	1	189	99.5	0.5	2.57
1000-500	88.3	3.2			1.1	0.2	3.0		0.4			3.6				0.2			527	530	1057	49.9	50.1	2.42
500-250	48.4	16.7	1.6		25.7	2.2	2.6		1.6			0.6				0.6			312	3577	3889	8.0	92.0	37.43
250-125	31.1	12.4	1.9		41.6	6.5	2.8		1.2							2.5			322	3825	4147	7.8	92.2	48.19
125-62.5	22.7	12.2	3.8		37.7	18.2	1.9				0.3					3.5			313	1765	2078	15.1	84.9	0.79
Σ % > 62.5	70.30	5.86	0.69		13.73	1.90	1.49		0.57		tr	4.77				0.69			1689	9698	11387	17.73	82.27	1.78 (< 62 μ)

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 2643A

DEPTH: 235'

LATITUDE: 29 36 24

LONGITUDE: 87 27 07

WHOLE SAMPLE DESCRIPTION:

SIZE FRACTION DESCRIPTIONS

4000-2000: OLIVE GRAY CORRODED CARBONATE SAND: MOLLUSC--mostly dull, worn, bored and encrusted fragments; one relatively fresh fragment with drill hole, CORALG--dull, bored, encrusted branched fragments, B. CARB.--dull, worn, encrusted and bored fragments, X-CARB.--dull, worn, bored, encrusted, often irregularly-shaped fragments.

2000-1000: OLIVE GRAY CORRODED CARBONATE SAND: MOLLUSC--mostly dull, worn, bored and encrusted fragments; many are blackened or iron-stained. B. FORAM--mostly whole, but worn, bored and chipped, blackened and iron-stained, CORALG.--dull, fragments, most encrusted and bored, CORAL--dull, worn fragments, BRYOZOA--dull, worn, often infilled; some blackened, X-CARB.--dull, worn, encrusted and bored fragments, most iron-stained.

1000-500: OLIVE GRAY CORRODED QUARTZITIC SHELLY CARBONATE SAND: MOLLUSC--mostly dull, worn frosted or bored fragments, some slightly blackened or iron-stained, B. FORAM--mostly whole, but dull and worn or smoothed and shiny, often blackened or iron-stained, X-CARB.--dull, worn and bored fragments, and worn, smoothed and shiny fragments, most iron-stained, QUARTZ--clear to translucent, subangular; some are iron-stained.

500-250: GREENISH TO OLIVE GRAY QUARTZITIC SHELLY CARBONATE SAND: MOLLUSC--mostly dull, worn, frosted or bored fragments; many blackened or iron-stained, B. FORAM--mostly worn and dull, and smoothed and shiny, whole and fragments, blackened and iron-stained; few fresh and whole, ECHINOID--dull, worn, plate and spine fragments, X-CARB.--mostly dull, worn, frosted fragments or smoothed and shiny; many iron-stained, QUARTZ--clear to translucent, mostly subangular to subrounded.

250-125: LIGHT OLIVE GRAY TO OLIVE GRAY QUARTZITIC SHELLY CARBONATE SAND: MOLLUSC--mostly worn, frosted fragments, B. FORAM--fresh to slightly worn, mostly whole, P. FORAM--fresh, whole and fragments, ECHINOID--mostly fresh plate and spine fragments, X-CARB.--mostly worn, smoothed, shiny fragments, many iron-stained; also worn, frosted fragments, QUARTZ--clear, mostly subangular to subrounded.

125-62.5: LIGHT OLIVE GRAY QUARTZITIC SHELLY CARBONATE SAND: MOLLUSC--mostly worn, frosted fragments, B. FORAM--fresh and whole, P. FORAM--fresh and whole; few are blackened, ECHINOID--fresh to worn, plate and spine fragments, X-CARB.--mostly worn, frosted fragments, QUARTZ--mostly clear, subangular to subrounded.

GRAIN TYPES (%)[2]

SIZE FRACTIONS (µ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIED CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	10.4				58.6	24.1						1.7	5.2						58		58	100	0	10.98
2000-1000	11.2	7.2			64.6	10.6	0.3					2.6	2.9	0.6					348		348	100	0	19.00
1000-500	16.4	11.5	0.3		58.8	9.0	0.3					0.3	1.9				1.5		323	12	335	96.4	3.6	20.62
500-250	35.4	10.5	0.9		37.3	7.5	6.3				0.3	0.9	0.3			0.3	0.3		333	10	343	97.1	2.9	32.77
250-125	22.5	5.1	4.2		50.7	12.8	3.5					0.3				0.6	0.3		312	35	347	89.9	10.1	7.78
125-62.5	37.2	8.5	5.2		26.8	8.3	4.9				0.6					7.9			328	124	452	72.6	27.4	0.95
Σ % > 62.5	21.86	8.30	0.76		51.46	10.95	2.68				0.11	1.18	1.79	0.12		0.21	0.47		1702	181	1883	97.02	2.98	7.91 < 62 µ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 2644A

DEPTH: 242'

LATITUDE: 29 36 10

LONGITUDE: 87 23 32

WHOLE SAMPLE DESCRIPTION:

SIZE FRACTION DESCRIPTIONS

4000-2000: YELLOWISH GRAY, CORRODED CARBONATE SAND: MOLLUSC--dull, worn, bored fragments, BRYOZOA--dull, worn, encrusted, X-CARB.--dull, worn, bored, irregularly-shaped fragments, some encrusted.

2000-1000: LIGHT OLIVE GRAY, CORRODED, FORAMINIFERAL CARBONATE SAND: MOLLUSC--dull, worn, bored fragments, B. FORAM--mostly whole, but worn to smoothed, often chipped; some blackened and iron-stained, BRYOZOA--dull, worn fragments, CORALG.--dull, worn, bored fragments, often encrusted, X-CARB.--dull, bored and encrusted fragments, often irregularly-shaped.

1000-500: LIGHT OLIVE GRAY, CORRODED, FORAMINIFERAL SHELLY CARBONATE SAND: MOLLUSC--mostly dull, worn, frosted fragments, some blackened or iron-stained, B. FORAM--mostly whole, worn to smoothed, often chipped; many blackened or iron-stained, ECHINOID--dull, worn plate fragments, X-CARB.--dull, worn to smoothed fragments, often frosted or shiny; many iron-stained; some bored, irregularly-shaped fragments, QUARTZ--translucent, frosted, rounded.

500-250: LIGHT OLIVE GRAY, CORRODED, SHELLY CARBONATE SAND: MOLLUSC--mostly dull, worn, frosted fragments, B. FORAM--whole, fresh and worn (some smoothed); some shiny or chipped; some iron-stained, P. FORAM--mostly fresh and whole, ECHINIOD--dull, worn plate and spine fragments, X-CARB.--mostly worn, frosted or smoothed, often shiny fragments; many iron-stained.

250-125: LIGHT OLIVE GRAY, SHELLY CARBONATE SAND: MOLLUSC--worn, frosted fragments, some iron-stained, B. FORAM--fresh and whole, and whole, but worn to smoothed, blackened and iron-stained, P. FORAM--mostly fresh and whole, X-CARB.--worn, frosted to shiny fragments, many iron-stained, QUARTZ--mostly clear, subangular to subrounded.

125-62.5: LIGHT OLIVE GRAY, QUARTZITIC, INTRACLASTIC, SHELLY CARBONATE SAND: MOLLUSC--worn, frosted fragments and fresh, whole snail shells, B. FORAM--fresh and whole, P. FORAM--mostly fresh and whole, ECHINOID--fresh plate and spine fragments, INTRA--greenish gray, friable aggregates, X-CARB.--worn, frosted fragments, QUARTZ--clear, mostly angular to subangular.

GRAIN TYPES (%)[2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	9.3				78.1							6.3					6.3		32		32	100	0	3.33
2000-1000	14.9	26.0			58.8	1.5	0.6					1.9	2.5	0.3			1.5		323		323	100	0	10.45
1000-500	26.0	23.2	1.6		43.4	3.2	1.0					0.3	0.3				1.0		315	1	316	99.7	0.3	42.83
500-250	25.4	13.0	9.9	0.3	43.7	1.2	3.7					0.3				0.6	1.9		323		323	100	0	28.69
250-125	17.2	8.9	5.0		58.3	6.6	1.7					0.3				1.7	0.3		302	17	319	94.7	5.3	[illegible]
125-62.5	23.2	7.2	3.8		43.3	2.5	2.8				0.3					16.9			319	31	350	91.1	8.9	6.40
Σ % > 62.5	22.72	19.61	3.72	0.09	46.57	2.23	1.70				tr	0.85	0.65	0.06		0.28	1.54		1614	49	1663	99.69	0.31	1.88 < 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 2645A

DEPTH: 350'

LATITUDE: 29 35 00

LONGITUDE: 87 10 59

WHOLE SAMPLE DESCRIPTION:

SIZE FRACTION DESCRIPTIONS

4000-2000: YELLOWISH GRAY CORRODED CARBONATE SAND: MOLLUSC--mostly dull, worn, bored and encrusted fragments, ECHINOID--dull, worn spine fragments, BRYOZOA--dull, worn fragment, CORALG.--dull, worn, bored and encrusted, branched fragments, X-CARB.--dull, worn, bored, encrusted fragments, many irregularly-shaped.

2000-1000: YELLOWISH GRAY CORRODED CARBONATE SAND: MOLLUSC--mostly dull, worn, bored fragments; some fresh and angular fragments, B. FORAM--fresh and whole, and whole, but worn, dull and frosted, often chipped; some are blackened, CORALG.--mostly dull, worn, branched fragments; fewer fresher fragments, X-CARB.--dull, worn, bored fragments, many irregularly-shaped.

1000-500: LIGHT OLIVE GRAY CORRODED SHELLY CARBONATE SAND: MOLLUSC--mostly dull, worn, frosted and/or bored fragments, B. FORAM--fresh and whole, and whole, but worn, with chipped edges, CORALG.--dull, worn fragments, often bored; some fresh fragments, X-CARB.--dull, worn, frosted and/or bored fragments, many irregularly-shaped.

500-250: LIGHT OLIVE GRAY SHELLY CARBONATE SAND: MOLLUSC--mostly worn, frosted fragments, B. FORAM--mostly whole, fresh and worn; some fragments; many blackened or iron-stained, P. FORAM--mostly whole and fresh, ECHINOID--mostly fresh plate and spine fragments, X-CARB. --mostly worn, frosted fragments, some irregularly-shaped, QUARTZ--translucent, subrounded.

250-125: LIGHT OLIVE GRAY QUARTZITIC SHELLY CARBONATE SAND: MOLLUSC--mostly dull, worn, frosted fragments; some fresh, whole snail shells, B. FORAM--fresh to slightly worn, mostly whole, P. FORAM--mostly fresh, whole and fragments, ECHINOID--fresh to slightly worn, spine and plate fragments, X-CARB.--mostly worn, frosted fragments, QUARTZ--mostly clear, subangular to subrounded.

125-62.5: LIGHT OLIVE GRAY QUARTZITIC SHELLY CARBONATE SAND: MOLLUSC--mostly worn, frosted fragments, B. FORAM--mostly fresh and whole, P. FORAM--fresh, whole and fragments, INTRA--greenish gray, friable aggregates, X-CARB.--mostly worn, frosted fragments, QUARTZ--clear, subangular to subrounded.

GRAIN TYPES (%)[2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN
4000-2000	15.3				66.0		1.7					1.7
2000-1000	13.3	24.9			47.8	1.6	0.3					0.5
1000-500	31.9	9.1	0.6		44.1	1.5	1.2					0.6
500-250	38.0	2.7	3.2		40.1	1.7	4.1					1.5
250-125	31.5	6.6	8.3		42.1	4.0	5.0	0.6			0.6	
125-62.5	35.5	5.3	6.2		38.3	5.9	1.9				1.3	
Σ % > 62.5	35.23	13.99	1.10		46.26	1.56	1.61	0.01			0.02	0.81

SIZE FRACTIONS (μ)	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	15.3						59		59	100	0	7.30
2000-1000	10.6				1.0		385		385	100	0	32.43
1000-500	8.2				2.3		342		342	100	0	29.72
500-250	0.9			0.3	1.5		344	1	345	99.7	0.3	18.93
250-125				1.3			302	7	309	97.7	2.3	2.00
125-62.5				5.6			321	19	340	94.4	5.6	0.66
Σ % > 62.5	7.87			0.13	1.41		1753	27	1780	99.84	0.16	3.72 < 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: [illegible]

DEPTH: ______

LATITUDE: 28 34 00

LONGITUDE: 84 20 25

WHOLE SAMPLE DESCRIPTION: ______

SIZE FRACTION DESCRIPTIONS

4000-2000: WHITE SHELLY CARBONATE SAND: MOLLUSC--dull, pitted fragments, some encrusted; one relatively fresh limpet; one broken barnacle; few whole articulated bivalves, CORAL--dull and worn, BRYOZOA--dull fragments, X-CARB.--dull, worn, rounded or boring-riddled fragments.

2000-1000: YELLOWISH GRAY, SHELLY CARBONATE SAND: MOLLUSC--dull, worn, pitted and perforated fragments, some encrusted, BRYOZOA--dull fragments, WORM TUBE--serpulid fragments, ECHINOID--dull plate and spine fragments, X-CARB.--dull, worn, bored and rounded fragments.

1000-500: PINKISH GRAY, SHELLY CARBONATE SAND: MOLLUSC--dull, worn, pitted and bored fragments; some relatively fresh, angular fragments, BRYOZOA--dull fragments, WORM TUBE--serpulid fragments, X-CARB.--dull, worn and smoothed or boring-riddled fragments.

500-250: YELLOWISH GRAY, SHELLY CARBONATE SAND: MOLLUSC--worn, dull, pitted, frosted fragments, BRYOZOA--dull, fragments, CORALG.--worn, smoothed, elongate branched fragments, WORM TUBE--serpulid fragments, ALCYONARIAN--relatively fresh spicules, some worn or smoothed, pitted, X-CARB.--dull to frosted, smoothed and irregularly-shaped fragments.

250-125: GREENISH GRAY, QUARTZITIC SHELLY CARBONATE SAND: MOLLUSC--dull to frosted, worn fragments, ALCYONARIAN--predominantly worn spicules, ECHINOID--fresh to slightly worn plate and spine fragments, B. FORAM--mostly fresh and whole, X-CARB.--dull to frosted, worn equant fragments, QUARTZ--clear, subrounded.

125-62.5: GREENISH GRAY, QUARTZITIC SPICULIFEROUS SHELLY CARBONATE SAND: MOLLUSC--dull to frosted, worn fragments, ALCYONARIAN--whole spicules, most relatively fresh; some worn fragments, SPONGE--elongate, nearly whole spicules and smaller spicule fragments, X-CARB.--dull to frosted, worn, smoothed equant fragments, QUARTZ--clear, subrounded.

GRAIN TYPES (%)[2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	81.7				12.6							2.2		3.2					95		95	100	0	7.04
2000-1000	61.7	0.6			22.8		1.2					8.3	0.9				4.5		337		337	100	0	17.37
1000-500	66.1	1.8			19.3		2.1					6.1	0.9				3.7		327		327	100	0	46.95
500-250	59.8	1.8	0.8		21.5		2.6		0.5	0.3	2.6	4.9	3.1				2.1		386		386	100	0	20.85
250-125	54.1	3.7			27.7	0.3	3.7	0.3	1.4	1.4	4.8	1.7	0.3				0.6		353	25	378	93.9	6.1	4.38
125-62.5	37.6	2.1			33.1	0.3	2.7	0.3		7.2	16.1	0.3				0.3			372	51	423	87.9	12.1	0.51
Σ % > 62.5	64.45	1.54	0.14		20.36	0.01	1.96	0.01	0.17	0.15	0.84	5.72	1.28	0.24		tr	3.09		1868	74	1942	96.2	3.8	2.86 < 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 62-A-1 DEPTH: LATITUDE: 27 49 53

LONGITUDE: 83 31 04

WHOLE SAMPLE DESCRIPTION:

SIZE FRACTION DESCRIPTIONS

4000-2000: YELLOWISH GRAY, SHELLY CARBONATE SAND: MOLLUSC--dull pitted fragments; two are dull, whole, disarticulated valves, *HALIMEDA*--dull plate fragments, CORALG.--relatively fresh and branched.

2000-1000: LIGHT OLIVE GRAY, SHELLY CARBONATE SAND: MOLLUSC--dull, pitted and bored fragments; some dull, whole disarticulated valves, BRYOZOA--dull fragments, often infilled, *HALIMEDA*--relatively fresh plate fragments, X-CARB.--dull, pitted, corroded, perforated fragments.

1000-500: LIGHT OLIVE GRAY, SHELLY CARBONATE SAND: MOLLUSC--dull, pitted and bored fragments, BRYOZOA--dull, often infilled, B. FORAM--dull, pitted, often chipped, X-CARB.--dull, pitted or bored, corroded fragments.

500-250: LIGHT OLIVE GRAY, SHELLY CARBONATE SAND: MOLLUSC--dull, pitted worn fragments, B. FORAM--mostly whole, fresh or dull and chipped, *HALIMEDA*--dull, worn plate fragments, X-CARB.--dull, pitted fragments, QUARTZ--clear, subrounded.

250-125: LIGHT OLIVE GRAY, SHELLY CARBONATE SAND: MOLLUSC--dull to frosted, worn and pitted fragments, B. FORAM--relatively fresh and whole; some dull and worn, chipped, X-CARB.--dull to frosted, worn fragments, QUARTZ--clear, subrounded.

125-62.5: LIGHT OLIVE GRAY, QUARTZITIC SHELLY CARBONATE SAND: MOLLUSC--dull to frosted fragments; some angular, thin fragments, B. FORAM--relatively fresh and whole, X-CARB.--dull to frosted, worn fragments, QUARTZ--clear, subrounded.

GRAIN TYPES (%)[2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	62.7			18.7	6.3								6.3						16		16	100	0	0.27
2000-1000	25.2	0.3		2.0	58.8	8.5	0.3					3.3	0.3				1.3		306		306	100	0	5.07
1000-500	35.7	2.2		0.6	45.3	13.7						2.2					0.3		314		314	100	0	31.18
500-250	48.3	4.4		3.5	34.4	3.2	2.4					2.7	0.3				0.3		340	1	341	99.7	0.3	38.87
250-125	45.9	12.2		1.5	31.3	7.0	1.5					0.6							329	4	333	98.8	1.2	8.41
125-62.5	51.3	11.3		0.3	30.0	3.7	1.9			0.6	0.3					0.6			320	81	401	79.8	20.2	0.92
Σ % > 62.5	42.33	4.15		2.16	36.47	7.77	1.29			tr	tr	2.30	0.19			tr	0.33		1625	36	1711	95.0	5.0	[illegible]4.93 < 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 64-B-1

DEPTH: _______

LATITUDE: 27 53 05

LONGITUDE: 83 24 58

WHOLE SAMPLE DESCRIPTION: _______

SIZE FRACTION DESCRIPTIONS

4000-2000

YELLOWISH GRAY TO MEDIUM GRAY, CORRODED SHELLY CARBONATE SAND: MOLLUSC--mostly dull, pitted, bored, worn fragments, some blackened, X-CARB.--dull, pitted, bored fragments.

2000-1000

MEDIUM LIGHT GRAY, CORRODED, SHELLY CARBONATE SAND: MOLLUSC--dull, pitted and bored fragments, worn, rounded, often blackened or iron-stained, B. FORAM--worn, chipped, blackened, and iron-stained, BRYOZOA--worn fragments, often infilled, X-CARB.--dull, pitted, corroded, worn fragments, many iron-stained, SOME QUARTZ--blackened carbonate aggregates.

1000-500

MEDIUM LIGHT GRAY, CORRODED, SHELLY CARBONATE SAND: MOLLUSC--dull, worn, pitted fragments, often blackened, B. FORAM--mostly worn, corroded fragments, some slightly blackened, X-CARB.--dull, worn, pitted fragments, some iron-stained, SOME QUARTZ--blackened carbonate aggregates.

500-250

MEDIUM GRAY, CORRODED, SHELLY CARBONATE SAND: MOLLUSC--dull to frosted, worn, pitted fragments, some blackened, B. FORAM--mostly worn, often smoothed, chipped fragments, some blackened, X-CARB.--dull to frosted, worn, pitted fragments, QUARTZ--clear, subangular to subrounded.

250-125

YELLOWISH GRAY, FORAMINIFERAL SHELLY CARBONATE SAND: MOLLUSC--dull to frosted, worn fragments, B. FORAM--mostly relatively fresh and whole; some whole, worn, smoothed or chipped; some fragments; some agglutinated forms, ECHINOID--relatively fresh, mostly plate fragments, X-CARB.--dull to frosted, worn fragments, QUARTZ--clear, subangular to subrounded.

125-62.5

YELLOWISH GRAY, SHELLY, CARBONATE QUARTZ SAND: MOLLUSC--dull, frosted fragments, B. FORAM--relatively fresh and whole, ECHINOID--relatively fresh plate and spine fragments, X-CARB.--dull to frosted, worn fragments, QUARTZ--clear, subangular to subrounded.

GRAIN TYPES (%) (2)

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	67.8				16.9	10.2						5.1							59		59	100	0	6.81
2000-1000	39.2	4.3		0.3	36.9	15.3	0.3					3.0					0.7		301		301	100	0	13.79
1000-500	46.2	9.9		0.3	25.5	16.2						1.9							314		314	100	0	48.21
500-250	42.2	17.0			24.5	11.6	3.3					0.6					0.6		306	4	310	98.7	1.3	24.68
250-125	33.8	24.0	0.3	1.2	28.4	3.9	6.6		0.6			0.9				0.3			334	33	367	91.0	9.0	3.83
125-62.5	39.2	13.0	0.3		37.9	2.3	5.0	0.3		0.3	0.7	0.7				0.3			301	259	560	53.8	46.2	0.64
Σ % > 62.5	45.22	10.74	0.01	0.25	26.46	14.08	1.13	tr	0.02	tr	tr	1.91				0.01	0.17		1615	296	1911	84.5	15.5	2.63 < 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: [illegible]

DEPTH:

LATITUDE: 28 40 55

LONGITUDE: 94 23 14

WHOLE SAMPLE DESCRIPTION:

SIZE FRACTION DESCRIPTIONS

4000-2000

YELLOWISH GRAY, SHELLY CARBONATE SAND: MOLLUSC--mostly dull, worn, pitted and bored fragments, often encrusted; some relatively fresh, angular fragments, X-CARB.--dull, pitted, worn fragments, bored and often irregularly-shaped.

2000-1000

PINKISH GRAY, CORRODED, SHELLY CARBONATE SAND: MOLLUSC--mostly dull, pitted, bored worn fragments; fewer relatively fresh, angular fragments, BRYOZOA--whole and worn, CORALG.--worn, rod-shaped fragments, WORM TUBE--serpulid fragments, X-CARB.--dull, worn, pitted and bored, fragments, often irregularly-shaped, SOME QUARTZ--blackened carbonate aggregates.

1000-500

YELLOWISH GRAY, CORRODED, SHELLY CARBONATE SAND: MOLLUSC--mostly dull, worn, pitted, bored fragments; few relatively fresh, angular fragments, WORM TUBE--serpulid fragments, X-CARB.--dull, pitted, bored, worn fragments, often irregularly-shaped.

500-250

YELLOWISH GRAY SHELLY CARBONATE SAND: MOLLUSC--dull to frosted, pitted and bored, worn fragments; some relatively fresh angular fragments, ALCYONARIAN--dull, worn whole spicules, CORALG.--dull, worn rod-shaped fragments, X-CARB.--dull to frosted, worn, pitted fragments, QUARTZ--clear, subangular to subrounded.

250-125

YELLOWISH GRAY, QUARTZITIC, SPICULIFEROUS SHELLY CARBONATE SAND: MOLLUSC--dull, pitted to frosted, worn fragments; few fresh angular fragments, ALCYONARIAN--dull, slightly worn, whole spicules, ECHINOID--slightly worn spine and plate fragments, X-CARB.--dull to frosted, worn fragments, QUARTZ--clear, subangular to subrounded.

125-62.5

YELLOWISH GRAY, QUARTZITIC, SHELLY, SPICULIFEROUS CARBONATE SAND: MOLLUSC--frosted, worn fragments, ALCYONARIAN--relatively fresh to slightly worn, whole spicules: some fragments, SPONGE--clear, rod-shaped, spicule fragments, X-CARB.--frosted, worn fragments, QUARTZ--clear, subangular to subrounded.

GRAIN TYPES (%)[2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	INDETERMINATE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	80.0				13.5	0.5						1.1	2.2				2.7		185		185	100	0	15.91
2000-1000	56.6			0.3	26.9	1.3	0.9					3.4	3.4				7.2		320		320	100	0	21.54
1000-500	59.4	1.4		0.6	24.5	0.6	1.4				0.3	1.7	1.4				8.7		355		355	100	0	31.76
500-250	52.8	1.6	0.6	0.6	30.4	0.9	1.6		0.3	0.3	3.1	2.2	3.4				2.2		322	3	325	99.1	0.9	19.40
250-125	42.2	2.3	0.3	1.0	29.1	1.3	4.3				14.7	1.6	1.3			0.3	1.6		306	78	384	79.7	20.3	8.40
125-62.5	32.3	0.3			28.1		1.2		0.3	4.9	32.0	0.6	0.3						328	25	353	92.9	7.1	1.00
Σ % > 62.5	58.95	0.96	0.15	0.47	24.99	0.85	1.32		0.06	0.12	2.11	2.08	2.36			0.02	5.55		1816	106	1922	94.5	5.5	3.94 (< 62 μ)

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 147-B-11 DEPTH: LATITUDE: 28 36 47

LONGITUDE: 84 20 27

WHOLE SAMPLE DESCRIPTION:

SIZE FRACTION DESCRIPTIONS

4000-2000

PINKISH GRAY, CORRODED SHELLY CARBONATE SAND: MOLLUSC--dull, pitted worn fragments, and relatively fresh, angular fragments; some encrusted, BRYOZOA--dull, infilled fragments, X-CARB.--dull, pitted, worn fragments.

2000-1000

PINKISH GRAY, CORRODED SHELLY CARBONATE SAND: MOLLUSC--dull, pitted, bored, worn fragments; some relatively fresh, angular fragments, BRYOZOA--dull fragments, some infilled, WORM TUBE--serpulid fragments, ECHINOID--worn spine and plate fragments, X-CARB.--dull, pitted, bored, worn fragments, often irregularly-shaped.

1000-500

YELLOWISH GRAY SHELLY CARBONATE SAND: MOLLUSC--mostly dull, pitted, worn fragments; some relatively fresh, angular fragments, BRYOZOA--dull, slightly worn fragments, WORM TUBE--serpulid fragments, X-CARB.--dull, pitted and bored, worn fragments, often irregularly-shaped.

500-250

YELLOWISH GRAY SHELLY CARBONATE SAND: MOLLUSC--mostly dull to frosted, pitted fragments, CORALG.--dull fragments, ALCYONARIAN--dull, mostly slightly worn, whole spicules, ECHINOID--relatively fresh plate and spine fragments, X-CARB.--dull to frosted, pitted, worn fragments, QUARTZ--clear, subangular to subrounded; some quartz-blackened carbonate aggregates.

250-125

YELLOWISH GRAY, QUARTZITIC, SPICULIFEROUS, SHELLY CARBONATE SAND: MOLLUSC--dull to frosted, worn fragments, ALCYONARIAN--dull, slightly worn, whole spicules, ECHINOID--relatively fresh plate and spine fragments, X-CARB.--dull, frosted, worn fragments, QUARTZ--clear, subangular to subrounded.

125-62.5

YELLOWISH GRAY, QUARTZITIC, SPICULIFEROUS, SHELLY CARBONATE SAND: MOLLUSC--dull to frosted, worn fragments, ALCYONARIAN--dull, often worn, whole spicules, SPONGE--clear spicule fragments, X-CARB.--dull to frosted, worn fragments, QUARTZ--clear, subangular to subrounded.

GRAIN TYPES (%)[2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	56.4				12.8							23.1				2.6	5.1		39		39	100	0	11.61
2000-1000	61.1	0.5		0.9	23.7	0.2	2.3					5.2	0.5				4.9	0.7	443		443	100	0	9.69
1000-500	57.5	1.3		1.0	21.5	1.3	1.0					7.4	3.5				5.5		311		311	100	0	22.17
500-250	47.4	3.4		3.1	24.1	0.9	5.3			0.6	4.0	3.1	6.2				1.9		323	3	326	99.1	0.9	35.51
250-125	42.5	2.2		0.8	23.7	1.1	3.3			0.8	21.2	1.1	2.2				1.1		367	77	444	82.7	17.3	16.31
125-62.5	35.1	0.9			27.4	1.5	1.8	0.6		7.1	24.7					0.9			336	58	394	85.3	14.7	1.06
Σ % > 62.5	51.51	1.99		1.67	22.02	0.85	2.97	0.01		0.41	4.82	6.61	3.55			0.33	3.33	0.08	1819	138	1957	92.9	7.1	3.45 (< 62 μ)

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 151-A-1 DEPTH: ______ LATITUDE: 28 32 07

LONGITUDE: 84 15 25

WHOLE SAMPLE DESCRIPTION: ______

SIZE FRACTION DESCRIPTIONS

4000-2000: WHITE SHELLY CARBONATE SAND: MOLLUSC--dull, pitted, worn, fragments; some encrusted, BRYOZOA--dull, worn fragments, X-CARB.--dull, worn, pitted and bored fragments.

2000-1000: YELLOWISH GRAY, SHELLY CARBONATE SAND: MOLLUSC--dull to frosted, pitted and bored, worn fragments, HALIMEDA--dull, worn plate fragments, ECHINOID--relatively fresh plate and spine fragments, BRYOZOA--dull fragments, X-CARB.--dull, worn, pitted, irregularly-shaped fragments.

1000-500: YELLOWISH GRAY, SHELLY CARBONATE SAND: MOLLUSC--dull, pitted, worn fragments; some dull, whole small shells, BRYOZOA--dull, fragments, HALIMEDA--dull, worn, pitted plate fragments, ECHINOID--mostly relatively fresh spine fragments, X-CARB.--dull, worn fragments.

500-250: YELLOWISH GRAY, SHELLY CARBONATE SAND: MOLLUSC--dull to frosted, pitted fragments, HALIMEDA--dull, worn plate fragments, BRYOZOA--dull fragments, ALCYONARIAN--dull, slightly worn, whole spicules, CORALG.--dull, slightly worn fragments, X-CARB.--dull to frosted, worn fragments.

250-125: YELLOWISH GRAY, QUARTZITIC SHELLY CARBONATE SAND: MOLLUSC--dull to frosted, pitted, worn fragments, BRYOZOA--dull fragments, ALCYONARIAN --dull, slightly worn, whole spicules, X-CARB.--dull to frosted, worn fragments, QUARTZ--clear, subangular to subrounded.

125-62.5: YELLOWISH GRAY, QUARTZITIC SHELLY CARBONATE SAND: MOLLUSC--dull, frosted, worn fragments, ALCYONARIAN--dull, slightly worn, whole spiclues, some fragments, SPONGE--clear, spicule fragments, X-CARB.--dull to frosted, worn fragments, QUARTZ--clear, subangular to subrounded.

GRAIN TYPES (%)[2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	85.5				8.1							4.8					1.6		62		62	100	0	9.59
2000-1000	59.6	0.5		4.0	22.2		1.9					7.1		0.8	0.5		3.4		379		379	100	0	18.66
1000-500	41.4	2.6		7.8	25.9		2.6				0.3	11.0	0.3		0.3		7.8		382		382	100	0	26.49
500-250	40.5	1.8	0.3	7.1	27.5	0.3	2.1		0.6	0.3	5.9	6.2	4.1				3.3		338		338	100	0	24.02
250-125	46.6	1.3	1.0	1.6	36.0	0.6	2.3			1.6	3.9	4.2	0.3			0.6			311	14	325	95.7	4.3	10.62
125-62.5	34.3	1.8		0.6	40.3		2.1			5.7	13.4					1.8			335	15	350	95.7	4.3	2.58
Σ % > 62.5	49.91	1.52	0.19	5.14	35.22	0.14	2.08		0.15	0.41	2.43	7.23	1.20	0.16	0.19	0.12	3.99		1807	29	1836	98.4	1.6	8.04 < 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 247-3-1

DEPTH:

LATITUDE: 28 36 16

LONGITUDE: 84 15 40

WHOLE SAMPLE DESCRIPTION:

SIZE FRACTION DESCRIPTIONS

4000-2000: PINKISH GRAY, SHELLY CARBONATE SAND: MOLLUSC--dull, pitted and bored, worn fragments; fewer relatively fresh, angular fragments, BRYOZOA--dull fragments, X-CARB.--dull, pitted and bored, worn fragments, often irregularly-shaped.

2000-1000: PINKISH GRAY SHELLY CARBONATE SAND: MOLLUSC--dull, pitted, worn fragments; few relatively fresh, angular fragments, WORM TUBE--serpulid fragments, BRYOZOA--dull fragments, X-CARB.--dull, pitted and bored, worn fragments, often irregularly-shaped.

1000-500: YELLOWISH GRAY SHELLY CARBONATE SAND: MOLLUSC--dull and pitted, and frosted, worn fragments; some relatively fresh angular fragments, BRYOZOA--dull, fragments, WORM TUBE--serpulid fragments, X-CARB.--dull to frosted, worn, pitted fragments.

500-250: YELLOWISH GRAY SHELLY CARBONATE SAND: MOLLUSC--mostly frosted, worn fragments; some dull, pitted fragments, ALCYONARIAN--slightly worn, whole spicules, B. FORAM--relatively fresh and whole; some dull, whole and chipped; some fragments, X-CARB.--dull to frosted, worn fragments.

250-125: YELLOWISH GRAY, SPICULIFEROUS SHELLY CARBONATE SAND: MOLLUSC--frosted worn fragments; fewer fresh, angular fragments, ALCYONARIAN--dull, slightly worn, whole spicules, X-CARB.--dull to frosted, worn fragments, QUARTZ--clear, subangular to subrounded.

125-62.5: YELLOWISH GRAY, QUARTZITIC, SPICULIFEROUS SHELLY CARBONATE SAND: MOLLUSC--dull to frosted, worn fragments, ALCYONARIAN--dull, slightly worn, whole spicules, SPONGE--clear, long, rod-shaped spicule fragments, ECHINOID--relatively fresh plate and spine fragments X-CARB.--dull to frosted, worn fragments, QUARTZ--clear, subangular to subrounded.

GRAIN TYPES (%)[2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	CRYPTOCRYSTALLINE CARBONATE	DIAGENETIC CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	61.2				22.5		1.2					7.5	3.8				3.8		80		80	100	0	9.41
2000-1000	51.3			0.6	30.4		1.3					7.9	0.3				7.9	0.3	316		316	100	0	16.55
1000-500	60.7	2.0		1.0	18.5	0.3	1.3			0.6		6.2	1.0				8.4		308		308	100	0	28.23
500-250	58.2	4.3		2.4	23.7		2.4		0.3	0.3	4.6	2.8	2.4				0.6		327		327	100	0	34.61
250-125	55.5	1.2	6.6	1.2	33.5		3.2			0.3	21.5	2.0	0.9			0.3			343	1	344	99.7	0.3	5.79
125-62.5	37.2	1.5	0.3		42.5	0.3	5.3	0.3		5.3	7.0	0.3							341	29	370	92.2	7.8	0.64
Σ % > 62.5	53.64	2.28	0.03	1.35	26.08	0.03	1.82	tr	0.11	0.34	3.01	5.10	1.65			0.02	4.47	0.05	1715	30	1745	98.3	1.7	4.81 (< 62 μ)

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

CARBONATE AND SKELETAL SAND CONSTITUENT COMPOSITION

SAMPLE: 251-A-1

DEPTH:

LATITUDE: 28 32 41

LONGITUDE: 84 16 03

WHOLE SAMPLE DESCRIPTION:

SIZE FRACTION DESCRIPTIONS

4000-2000: VERY LIGHT GRAY, DULL, SHELLY CARBONATE SAND: MOLLUSC--dull, pitted, bored fragments, often encrusted, X-CARB.--dull, bored, irregularly-shaped fragments.

2000-1000: YELLOWISH GRAY, DULL, SHELLY CARBONATE SAND: MOLLUSC--mostly dull, worn, fragments, often pitted, bored and encrusted, BRYOZOA--dull, worn fragments, WORM TUBE--serpulid fragments, X-CARB.--dull, worn, bored, irregularly-shaped fragments.

1000-500: YELLOWISH GRAY, DULL, SHELLY CARBONATE SAND: MOLLUSC--dull, pitted fragments, HALIMEDA--dull plate fragments, B. FORAM--relatively fresh and whole, many with chipped edges, CORALG.--dull, worn, rod-shaped fragments, X-CARB.--dull, pitted, irregularly-shaped fragments.

500-250: YELLOWISH GRAY, DULL, SHELLY CARBONATE SAND: MOLLUSC--dull to frosted, pitted fragments, CORALG.--dull, worn, rod-shaped fragments, BRYOZOA--dull fragments, X-CARB.--dull to frosted, worn and irregularly-shaped fragments.

250-125: YELLOWISH GRAY, SHELLY CARBONATE SAND: MOLLUSC--dull to frosted fragments, ALCYONARIAN--dull, slightly worn, whole spicules, ECHINOID--relatively fresh spine and plate fragments, X-CARB.--dull to frosted, worn fragments, QUARTZ--clear, subrounded.

125-62.5: YELLOWISH GRAY, SHELLY CARBONATE SAND: MOLLUSC--dull to frosted, worn fragments, ALCYONARIAN--dull, slightly worn, whole spicules, SPONGE--long and short spicule fragments, X-CARB.--dull to frosted, worn fragments, QUARTZ--clear, subangular to subrounded.

GRAIN TYPES (%) [2]

SIZE FRACTIONS (μ)	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNDIFFERENTIATED CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS	WT. % (1)
4000-2000	77.1				16.0		2.3					0.8		0.8			3.0		151		151	100	0	16.61
2000-1000	61.3			0.9	23.5		1.5					5.6		0.9			6.3		336		336	100	0	33.62
1000-500	61.4	2.9		4.4	23.4		1.5					2.4	2.0				2.0		342		342	100	0	25.32
500-250	48.1	2.2	0.3	4.7	19.3		1.9		0.3		3.2	5.4	12.7				1.0		316		316	100	0	15.44
250-125	40.7	2.3	0.3	3.4	28.6		4.3		0.3	0.6	11.5	5.4	2.0				0.6		349	3	352	99.1	0.9	4.98
125-62.5	32.3	2.2			38.6	0.3	1.9		0.3	4.8	16.3	1.0	1.0			1.3			313	16	329	95.1	4.9	0.51
Σ % > 62.5	60.78	1.23	0.07	2.39	21.83	tr	1.86		0.07	0.03	1.17	3.85	2.67	0.45		0.01	3.58		1787	19	1806	98.9	1.1	3.17 < 62 μ

(1) SIEVE SIZE DISTRIBUTION DATA (WT.%) PROVIDED BY L. DOYLE

(2) PERCENT OF TOTAL CARBONATE

APPENDIX II

Summary of

Carbonate Sand Constituent Composition

CONSTITUENT PERCENTAGE IN CARBONATE SAND FRACTION

GRAIN TYPES (%)

	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	% CARBONATE	% TERRIGENOUS
2101A	68.08	1.60	-	0.15	11.41	0.23	5.73	1.50	-	0.41	-	0.04	-	-	-	10.75	0.10	-	51.79	8.85
2102A	54.56	9.90	-	-	17.89	3.04	9.54	0.57	-	-	0.42	0.60	-	-	-	3.50	0.32	-	28.28	3.69
2103A	46.52	3.49	tr	-	25.94	11.86	2.38	0.25	0.11	tr	tr	2.04	0.04	-	-	0.43	0.18	-	71.56	3.70
2104A	31.83	8.39	0.87	9.87	28.01	10.06	2.15	0.19	0.05	tr	0.05	2.69	4.46	-	-	0.23	1.15	-	95.15	4.45
2105A	20.91	13.86	8.53	-	47.22	0.04	1.65	-	0.25	0.05	0.06	2.87	3.11	0.31	-	1.12	0.31	-	94.59	5.06
2106A	35.71	11.02	20.96	-	18.84	0.35	5.56	-	3.02	0.12	0.12	2.33	0.51	0.15	-	0.44	0.87	-	86.82	12.99
2207A	42.63	17.79	0.07	1.76	24.74	2.32	7.86	0.75	0.12	0.47	1.13	0.14	-	-	-	0.17	0.02	-	89.15	10.57
2208A	40.29	19.50	0.50	0.94	27.61	2.49	6.95	-	0.36	-	0.83	0.03	-	-	-	0.08	0.30	-	36.11	58.89
2209A	43.77	25.28	1.47	0.52	18.08	2.39	5.14	-	0.79	1.38	0.27	0.45	-	-	-	0.43	-	-	55.64	41.54
2210A																				
2211A	50.68	3.54	0.30	1.17	28.58	1.77	2.35	-	0.07	0.05	-	2.92	6.97	0.31	-	0.17	1.12	-	86.32	13.03
2212A	24.31	12.87	33.82	-	17.50	1.65	5.01	-	3.91	-	-	0.64	0.04	-	-	0.11	0.16	-	52.26	43.58
2313A	28.10	9.95	37.04	-	15.64	0.99	6.01	-	1.21	-	0.10	0.89	-	-	-	0.05	0.02	-	41.50	58.29
2314A																				
2315A																				
2316A	47.01	16.61	1.24	1.17	20.82	1.36	5.01	0.45	1.26	0.87	0.13	2.30	0.26	-	-	1.30	0.11		87.81	11.85
2317A	45.11	16.23	0.43	0.40	21.72	3.50	10.01	0.11	0.43	0.55	0.39	0.65	-	-	-	0.34	0.11	-	59.92	26.83
2318A	36.54	26.64	tr	-	28.29	6.55	1.32	-	0.44	-	0.06	0.50	-	-	-	0.11	0.06		98.14	1.68
2319A	38.10	9.14	0.01	0.18	40.73	4.85	4.02	-	0.30	-	2.23	0.34	-	-	-	-	0.16	-	88.53	2.45
2420A	50.62	3.01	0.03	0.11	33.80	8.35	1.75	-	0.16	-	1.84	0.31	-	-	-	-	0.03	-	64.17	2.49
2421A	49.59	3.65	-	0.27	36.24	3.19	4.84	0.75	0.13	0.27	0.40	0.02	-	-	-	0.65	-	-	52.29	10.33
2422A	53.96	4.07	0.14	-	17.92	8.55	5.37	0.35	-	-	0.24	4.95	-	1.28	-	1.61	0.96	-	50.85	12.12
2423A	75.22	1.69	0.09	-	7.17	10.03	1.73	0.04	0.29	0.01	0.01	1.74	-	-	-	1.36	0.72	-	76.38	16.83
2424A	55.51	7.24	0.15	0.07	25.42	6.28	3.18	0.44	0.44	tr	tr	0.30	-	-	-	0.81	0.02	-	13.53	4.56
2425A	63.40	8.24	0.47	0.47	16.86	1.24	2.64	-	0.07	tr	0.02	4.20	0.77	-	-	0.78	1.40	-	12.87	1.95
2426A	49.10	10.56	3.67	-	21.77	2.78	4.81	-	0.41	0.04	0.09	1.19	-	-	-	0.34	0.30	-	94.87	4.94
2427A	15.31	11.73	53.53	-	14.65	1.57	2.48	0.21	0.05	-	-	0.42	-	-	-	0.05	-	-	38.28	61.65
2528A	58.47	3.70	0.32	0.01	18.73	2.24	0.88	-	0.11	0.01	-	3.42	4.14	0.39	-	5.09	2.60	-	71.56	5.33
2529A	33.45	5.14	0.05	-	41.95	2.08	0.12	-	tr	tr	tr	2.33	13.78	-	-	0.50	0.60	-	85.24	1.35
2530A	29.63	5.19	0.29	-	24.96	19.79	0.86	-	0.07	tr	0.01	2.39	15.11	-	-	0.16	1.58	-	87.54	1.47
2531A	30.79	8.45	0.07	-	38.14	5.02	1.16	-	0.04	tr	tr	1.74	12.43	0.10	-	0.01	2.09	-	93.61	2.22
2532A	39.65	11.42	4.17	-	24.58	6.17	2.95	-	0.12	0.10	0.13	3.04	3.98	0.12	-	0.04	3.54	-	83.90	7.88
2533A	49.43	11.39	0.54	-	29.12	0.67	1.93	-	0.16	-	tr	2.81	1.84	0.16	-	0.04	1.91	-	93.72	2.74

GRAIN TYPES (%)

Sample	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	% CARBONATE	% TERRIGENOUS
2534A	41.55	13.66	0.10	0.17	33.14	0.26	1.56	-	0.03	tr	tr	2.45	5.07	-	-	0.05	1.96		93.77	4.92
2535A	22.77	17.46	27.90	-	20.23	3.46	6.51	-	0.92	0.32	0.42	-	-	-	-	tr	-		21.67	77.41
2536A	20.72	19.51	45.07	-	8.44	2.09	3.93	-	-	-	-	0.02	-	-	-	0.19	0.05		20.63	81.24
2637A	18.71	28.97	1.73	-	32.37	5.42	8.74	-	0.14	0.22	0.07	-	-	-	-	3.54	0.07		13.85	63.10
2638A	10.55	40.48	1.10	-	6.61	2.47	6.55	-	0.02	-	0.07	0.01	-	-	-	32.20	0.07		15.00	78.01
2639A	57.92	11.60	0.97	-	15.85	4.38	5.72	-	0.59	-	0.05	0.56	-	-	-	2.31	0.05		39.50	13.56
2640A	73.72	5.66	0.03	-	10.28	5.38	2.14	0.01	0.14	-	-	2.41	-	-	-	0.17	0.07		28.96	1.93
2641A	48.53	18.02	1.21	-	19.57	5.77	4.31	0.09	0.17	0.09	0.01	0.17	-	-	-	2.07	-		11.62	3.80
2642A	70.30	5.86	0.69	-	13.73	1.90	1.49	-	0.57	-	tr	4.77	-	-	-	0.69	-		17.41	1.78
2643A	21.86	8.30	0.76	-	51.46	10.95	2.68	-	-	-	0.11	1.18	1.79	0.12	-	0.21	0.47		89.33	7.91
2644A	22.72	19.61	3.72	0.09	46.57	2.23	1.70	-	-	-	tr	0.85	0.65	0.06	-	0.28	1.54		97.79	1.88
2645A	25.23	13.99	1.10	-	46.26	1.56	1.61	0.01	-	-	0.02	0.81	7.87	-	-	0.13	1.41		91.09	8.72
047-A-40	64.45	1.54	0.18	-	20.36	0.01	1.96	0.01	0.17	0.15	0.84	5.12	1.28	0.24	-	tr	3.09		96.77	2.86
62-A-1	42.33	4.15	-	2.16	39.47	7.77	1.29	-	-	tr	tr	2.30	0.19	-	-	tr	0.33		84.29	14.99
64-B-1	45.22	10.74	0.01	0.25	26.46	14.08	1.13	tr	0.02	tr	tr	1.91	-	-	-	0.01	0.17		96.59	2.63
146-B-15	58.96	0.96	0.15	0.47	24.99	0.85	1.32	-	0.06	0.12	2.11	2.08	2.36	-	-	0.02	5.55		94.08	3.94
147-B-11	51.51	1.99	-	1.62	22.02	0.85	2.97	0.01	-	0.41	4.82	6.51	3.55	-	-	0.33	3.33		93.05	3.45
151-A-1	49.91	1.52	0.19	5.14	25.22	0.15	2.00	-	0.15	0.41	2.43	7.23	1.20	0.16	0.19	0.12	3.99		91.30	8.04
247-B-1	53.64	2.25	0.03	1.35	26.08	0.08	1.82	tr	0.11	0.34	3.01	5.10	1.65	-	-	0.02	4.47		95.07	4.81
251-A-1	60.78	1.23	0.07	2.39	21.83	tr	1.85	-	0.07	0.05	1.17	3.85	2.67	0.45	-	3.58	0.01		96.62	3.17
1A	17.23	12.02	0.23	-	45.58	10.66	0.91	0.23	tr	-	0.23	-	-	-	-	12.92	tr		4.41	87.88
2A	52.05	16.85	0.49	-	4.94	1.39	3.69	-	tr	-	0.14	-	0.14	-	-	10.10	0.21		14.36	79.83
3A	25.31	38.98	2.69	-	10.01	1.93	11.45	0.29	1.06	-	0.19	-	-	-	-	8.09	tr		10.39	79.14
4A	15.32	32.97	1.44	-	23.06	5.77	14.95	-	tr	tr	-	-	-	-	-	6.49	-		5.55	87.41
5A	29.19	33.84	1.68	-	13.47	1.44	11.31	tr	1.28	-	0.32	tr	-	-	-	7.46	-		12.47	74.54
6A	50.02	20.22	1.37	-	7.93	2.20	10.76	0.04	0.78	0.24	-	-	-	-	-	6.36	0.08		25.47	37.38
7A	49.27	18.50	1.45	-	6.89	2.18	13.03	0.14	1.67	0.15	-	-	-	-	-	6.68	0.04		27.57	29.13
8A	54.00	13.32	1.30	-	6.19	4.17	15.84	0.07	0.43	0.36	-	0.22	-	-	-	4.10	tr		13.89	10.02
9A	56.46	13.56	1.85	-	6.71	4.03	10.07	0.20	0.34	0.03	0.23	0.17	-	-	-	6.08	0.27		29.79	12.24
10A	52.26	18.50	2.51	-	8.94	2.14	9.93	0.39	1.67	0.05	-	1.20	-	-	-	2.38	0.03		38.26	14.13
11A	55.98	4.79	0.39	-	33.60	2.45	0.91	0.12	-	tr	-	1.61	-	-	-	0.15	-		33.00	2.30
12A	78.12	1.29	0.14	-	12.59	5.47	0.59	0.11	0.05	-	tr	1.37	-	-	-	0.27	-		37.11	3.63

GRAIN TYPES (%)

	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	% CARBONATE	% TERRIGENOUS
13A	27.12	6.84	tr	-	47.96	8.16	3.97	0.33	0.33	-	-	0.33	-	-	-	4.96	-		9.07	1.82
14A	32.24	11.17	0.34	-	42.32	3.69	6.21	-	0.67	-	tr	0.50	-	-	-	2.35	0.50		11.91	2.11
15A	19.13	18.03	4.01	-	36.73	12.51	7.41	0.24	0.85	-	0.06	0.24	-	-	-	0.79	-		16.48	3.42
16A	15.05	7.02	0.37	-	64.91	3.88	6.09	-	1.02	-	tr	0.28	-	-	-	1.38	-		10.83	1.91
17A	36.03	24.02	0.86	-	26.22	2.00	1.88	tr	0.16	0.01	0.07	6.89	1.10	-	-	0.03	0.73		90.02	3.73
18A	29.25	16.00	3.34	-	36.68	1.42	4.88	0.02	0.22	tr	tr	4.56	0.99	0.15	-	0.41	1.86	0.22	92.14	7.18
19A	14.69	13.12	6.10	-	53.58	3.36	2.84	tr	0.13	0.01	tr	2.80	1.60	0.08	-	0.49	1.20		89.81	9.08
20A	13.84	12.68	4.55	-	55.59	5.99	2.44	tr	0.14	0.02	0.02	1.42	2.15	-	-	0.53	0.63		88.90	5.69
21A	44.18	6.60	3.57	0.08	16.80	15.28	3.22	0.19	0.44	0.05	0.42	4.61	4.04	-	-	0.52	-		63.60	32.76
22A	41.70	13.39	2.01	-	31.94	4.46	0.64	-	0.23	tr	0.07	2.26	3.30	-	-	-	-		81.03	18.87
23A	52.93	11.18	3.05	-	10.70	3.28	9.01	0.58	1.96	0.24	-	0.05	0.13	-	-	6.89	-		37.75	52.93
24A	60.16	7.89	3.07	-	4.62	2.15	5.18	2.91	2.23	0.96	0.72	tr	-	-	-	10.12	-		25.10	72.86
25A	56.86	9.75	10.30	-	7.46	2.40	5.11	0.96	0.39	0.21	1.59	0.83	-	-	-	4.14	-		38.37	59.68
26A	58.43	9.83	2.19	-	14.56	8.21	4.00	0.07	0.05	-	0.18	1.86	0.62	-	-	-	-		54.81	25.26
27A	59.63	9.56	6.16	-	8.61	3.08	7.43	2.26	1.80	0.85	0.59	-	-	-	-	0.03	-		30.55	66.40
28A	55.70	16.48	0.53	0.11	18.28	1.33	0.64	-	-	tr	-	3.66	3.17	-	-	0.10	-		89.55	3.23
29A	56.42	11.27	3.91	-	11.08	6.87	7.40	-	0.32	0.21	0.40	1.07	0.89	-	-	0.16	-		68.25	18.46
30A	58.01	10.46	3.61	-	14.08	4.17	4.05	-	0.28	0.15	0.08	3.41	1.71	-	-	tr	-		82.34	4.10
31A	39.14	13.75	0.38	-	31.10	5.12	0.58	0.11	-	0.01	-	1.91	7.88	-	-	0.02	-		90.00	4.48
32A																				
33A	37.52	5.50	0.55	-	22.14	11.16	1.32	-	0.07	tr	0.03	2.75	4.63	-	-	14.33	-		90.97	5.20
34A	39.05	4.31	0.08	-	37.18	1.76	0.37	tr	-	-	tr	8.25	8.47	-	-	0.53	-		89.01	1.93
35A	38.41	6.92	0.10	0.05	31.76	4.72	1.10	-	0.10	tr	tr	4.06	12.77	-	-	-	-		80.46	2.63
36A	28.47	7.93	0.38	-	25.10	21.68	0.54	0.20	-	tr	0.03	2.72	12.67	-	-	0.28	-		68.11	2.47
37A	48.14	9.40	0.22	-	18.31	3.10	0.83	tr	0.11	0.01	0.04	5.19	14.53	-	-	0.12	-		73.91	3.83
38A	54.60	8.25	1.32	-	15.47	4.70	3.48	0.31	0.32	0.03	0.31	4.45	6.09	-	-	0.67	-		70.66	18.52
39A	49.41	6.81	0.40	-	24.98	8.02	1.47	0.05	-	0.03	0.05	4.58	4.11	-	-	0.10	-		39.51	3.32
40A	30.68	5.53	tr	-	45.15	8.64	0.96	0.07	-	tr	tr	3.29	5.39	-	-	0.28	-		54.04	1.67
41A	49.06	11.71	0.68	0.11	25.20	2.67	4.20	3.56	1.03	0.11	-	1.03	0.11	-	-	0.53	-		28.08	5.53
42A	76.44	3.09	0.68	1.45	4.19	4.32	2.93	0.38	0.44	0.72	0.55	3.54	0.30	0.66	-	0.25	0.06		70.91	23.08
43A																				
44A	71.28	3.27	0.10	1.00	11.01	7.39	0.36	-	-	0.02	0.02	3.32	1.86	-	-	0.28	0.09		94.52	3.27
45A	66.21	7.73	1.89	0.80	9.29	8.86	1.81	0.81	0.57	0.09	0.07	0.41	0.28	-	-	1.18	-		73.61	13.37
46A	68.18	11.34	0.21	0.61	9.18	0.86	2.49	4.06	0.79	0.29	0.30	0.96	0.36	-	-	0.37	-		55.91	12.57

GRAIN TYPES (%)

	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	% CARBONATE	% TERRIGENOUS
47A	70.99	1.21	0.02	1.09	11.77	0.04	2.33	0.01	0.07	0.33	1.74	7.28	9.99	-	-	0.16	1.96		96.91	2.95
48A	68.58	6.09	1.06	0.22	7.05	5.28	3.83	0.09	1.63	2.27	2.94	0.69	0.17	-	-	0.10	-		57.79	36.56
49A																				
50A	65.41	7.43	0.34	1.04	8.44	9.61	1.96	-	0.10	0.10	0.01	4.68	0.77	-	-	0.11	-		82.31	7.33
51A																				
52A	64.60	9.64	2.55	0.82	9.00	4.23	4.64	-	2.61	1.40	-	0.49	0.02	-	-	-	-		51.32	47.16
53A	73.12	7.63	0.09	0.46	8.62	4.88	1.86	0.04	0.34	0.02	0.01	2.50	0.39	-	-	0.04	-		82.16	14.61
54A																				
55A	40.38	6.22	4.45	2.87	22.27	4.03	2.32	13.63	0.63	1.71	-	0.82	0.53	0.05	-	0.08	-		37.92	61.08
56A	68.20	8.67	1.16	1.12	7.05	6.49	1.94	1.00	0.28	0.73	-	0.36	-	-	-	3.00	-		57.74	37.20
57A	60.86	12.00	1.70	0.98	14.17	4.39	1.86	1.23	0.14	0.63	0.17	0.19	-	-	-	1.67	-		64.01	30.99
58A																				
59A																				
60A	62.96	16.62	1.02	1.99	10.49	2.88	2.59	0.26	0.59	0.28	0.13	0.15	-	-	-	0.04	-		52.82	37.96
61A	65.63	15.15	0.49	0.45	10.25	4.34	1.72	0.10	0.54	0.70	0.14	0.05	-	-	-	0.44	-		57.43	37.06
62A	66.27	3.73	tr	1.10	13.15	12.40	1.27	0.04	-	tr	-	1.49	0.38	-	-	0.17	-		93.15	5.91
63A	64.76	13.38	0.86	0.79	10.83	2.57	1.97	0.39	1.63	0.69	0.69	0.10	-	-	-	1.33	-		40.51	53.92
64A	51.52	19.22	0.95	1.41	14.33	6.25	2.80	1.02	0.86	0.51	0.42	0.14	-	-	-	0.55	-		43.18	49.84
65A	62.43	14.09	0.65	1.89	11.41	5.26	2.14	-	1.19	0.34	0.08	0.02	-	-	-	-	-		47.71	42.31

CONSTITUENT PERCENTAGE IN SAND FRACTION

GRAIN TYPES (%)

	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	% CARBONATE	% TERRIGENOUS
2101A	38.68	0.91	-	0.09	6.48	0.12	3.26	0.86	-	0.23	-	0.02	-	-	-	6.11	0.05	-	57.09	8.85
2102A	16.03	9.90	-	-	5.26	0.89	2.70	0.17	-	-	0.12	0.18	-	-	-	1.03	0.09	-	29.38	3.69
2103A	34.69	2.61	tr	-	19.34	13.91	1.77	0.19	0.08	tr	tr	1.52	0.03	-	-	0.32	0.14	-	74.60	3.71
2104A	31.79	8.37	0.87	9.85	27.97	10.04	2.15	0.19	0.05	tr	0.05	2.69	4.45	-	-	0.23	1.14	-	99.84	4.45
2105A	20.90	13.85	8.53	-	47.19	0.04	1.65	-	0.25	0.05	0.06	2.87	3.11	-	-	1.12	0.31	-	99.93	5.06
2106A	35.69	11.02	20.96	-	18.84	0.35	5.56	-	3.02	0.12	0.12	2.33	0.51	0.15	-	0.45	0.87	-	99.50	12.99
2207A	27.43	11.44	0.04	1.13	15.92	1.49	5.06	0.48	0.08	0.30	0.73	0.09	-	-	-	0.11	0.01	-	64.32	10.57
2208A	35.71	17.28	0.44	0.83	24.47	2.21	6.41	-	0.32	-	0.74	0.02	-	-	-	0.07	0.27	-	88.77	58.89
2209A	41.68	24.07	1.40	0.50	17.21	2.28	4.89	-	0.75	1.32	0.26	0.43	-	-	-	0.41	-	0.02	95.22	41.54
2210A																				
2211A	50.50	3.52	0.30	1.17	28.48	1.77	2.34	-	0.07	0.05	-	2.92	6.94	0.31	-	0.17	1.12	-	99.68	13.03
2212A	24.25	12.83	33.73	-	17.46	1.65	5.00	-	3.90	-	-	0.64	0.04	-	-	0.11	0.16	-	99.77	43.58
2313A	28.05	9.93	36.95	-	15.61	0.99	6.00	-	1.21	-	0.10	0.89	-	-	-	0.05	0.02	-	99.82	58.29
2314A																				
2315A																				
2316A	28.41	10.08	0.75	0.71	12.58	0.82	3.03	0.27	0.77	0.53	0.08	1.39	0.16	-	-	0.07	0.79	-	60.44	11.85
2317A	43.12	15.51	0.41	0.38	20.76	3.35	9.57	0.11	0.41	0.53	0.37	0.63	-	-	-	0.33	0.11	-	95.57	26.83
2318A	6.77	4.84	tr	-	5.24	1.21	0.24	-	0.08	-	0.01	0.09	-	-	-	0.02	0.02	-	18.52	1.68
2419A	15.05	3.61	tr	0.07	16.10	1.92	1.59	-	0.10	-	0.88	0.13	-	-	-	-	0.06	-	39.51	2.45
2420A	33.31	1.98	0.02	0.07	22.24	5.50	1.15	-	0.10	-	1.21	0.21	-	-	-	-	0.02	-	65.81	2.49
2421A	28.95	2.13	-	0.16	21.16	1.86	2.82	0.43	0.08	0.16	0.23	0.01	-	-	-	0.38	-	-	58.37	10.33
2422A	31.29	2.36	0.08	-	10.39	4.96	3.11	0.21	-	-	0.14	2.86	-	0.74	-	0.93	0.56	-	57.63	12.12
2423A	69.12	1.55	0.08	-	6.59	9.22	1.59	0.04	0.22	0.01	0.01	1.60	-	-	-	1.25	0.66	-	91.93	16.83
2424A	7.89	1.03	0.02	0.01	3.61	0.89	0.45	0.06	0.06	tr	tr	0.04	-	-	-	0.12	0.01	-	14.19	4.56
2425A	8.29	1.08	0.06	0.06	2.20	0.16	0.35	-	0.01	tr	tr	0.55	0.10	-	-	0.01	0.18	-	13.05	1.95
2426A	29.04	6.24	2.17	-	12.88	4.60	2.84	-	0.24	0.02	0.05	0.71	-	-	-	0.20	0.18	-	59.17	4.94
2427A	15.28	11.71	53.43	-	14.63	1.56	2.48	0.21	0.05	-	-	0.42	-	-	-	0.05	-	-	99.82	61.65
2528A	44.22	2.80	0.24	0.01	14.16	1.60	0.67	-	0.08	0.01	-	2.59	3.13	0.30	-	3.85	1.97	-	75.63	5.33
2529A	28.92	4.44	0.04	-	36.27	1.80	0.10	-	tr	tr	tr	2.02	11.92	-	-	0.44	0.52	-	86.47	1.35
2530A	26.35	4.61	0.25	-	22.19	17.59	0.76	-	0.06	tr	0.01	2.12	13.44	-	-	0.14	1.40	-	88.92	1.47
2531A	29.59	8.12	0.07	-	36.65	4.83	1.06	-	0.04	tr	tr	1.67	11.95	0.09	-	0.01	2.01	-	96.09	2.22
2532A	36.21	10.43	3.81	-	22.45	5.64	2.70	-	0.11	0.09	0.12	2.77	3.63	0.11	-	0.03	3.23	-	91.33	7.88
2533A	47.84	11.02	0.53	-	28.19	0.65	1.87	-	0.15	-	tr	2.72	1.78	0.15	-	0.04	1.85	-	96.79	2.74
2534A	41.10	13.52	0.09	0.17	32.79	0.25	1.54	-	0.03	tr	tr	2.43	5.01	-	-	0.05	1.94	-	98.96	4.92

GRAIN TYPES (%)

	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	% CARBONATE	% TERRIGENOUS
2535A	21.82	16.73	26.74	-	19.39	3.32	6.24	-	0.89	0.31	0.40	-	-	-	-	0.02	-	-	95.84	77.41
2536A	20.67	19.46	44.97	-	8.42	2.08	3.92	-	-	-	-	tr	-	-	-	0.19	0.05	-	99.76	81.24
2637A	7.10	11.00	0.66	-	12.29	2.06	3.32	-	0.05	0.08	0.03	-	-	-	-	1.34	0.03	-	37.96	63.10
2638A	7.20	27.61	0.68	-	4.51	1.69	4.46	-	0.02	-	0.05	0.01	-	-	-	21.96	0.05	-	68.21	78.01
2639A	26.36	5.28	0.44	-	7.21	1.99	2.61	-	0.27	-	0.02	0.25	-	-	-	1.05	0.02	-	45.50	13.56
2640A	21.81	1.67	0.01	-	3.04	1.59	0.63	0.01	0.04	tr	-	0.71	-	-	-	0.05	0.02	-	29.57	1.93
2641A	5.86	2.18	0.15	-	2.36	0.70	0.52	0.01	0.02	0.01	tr	0.02	-	-	-	0.25	-	-	12.08	3.80
2642A	12.47	1.04	0.12	-	2.43	0.34	0.26	-	0.10	-	tr	0.85	-	-	-	0.12	-	-	17.73	1.78
2643A	21.21	8.06	0.74	-	49.93	10.62	2.60	-	-	-	0.11	1.14	1.74	0.12	-	0.21	0.46	-	96.94	7.91
2644A	22.65	19.55	3.71	0.09	46.43	2.22	1.69	-	-	-	tr	0.85	0.65	0.06	-	0.28	1.54	-	99.72	1.88
2645A	25.19	13.96	1.10	-	46.17	1.56	1.61	0.01	-	-	0.02	0.81	7.86	-	-	1.40	0.13	-	99.82	8.72
047-A-40	64.22	1.53	0.18	-	20.29	0.01	1.96	0.01	0.17	0.15	0.83	5.79	1.28	0.24	-	tr	3.08	-	99.66	2.86
62-A-1	42.12	4.13	-	2.15	39.28	7.73	1.29	-	-	tr	tr	2.29	0.19	-	-	tr	0.33	-	99.51	14.99
64-B-1	44.73	10.63	0.01	0.24	26.18	13.93	1.12	tr	0.02	tr	tr	1.89	-	-	-	0.01	0.16	-	98.92	2.63
146-B-15	57.76	0.94	0.15	0.46	24.48	0.83	1.29	-	0.06	0.11	2.07	2.04	2.31	-	-	0.02	5.44	-	97.96	3.94
147-B-11	49.75	1.92	-	1.57	21.27	0.82	2.86	0.01	-	0.39	4.66	6.29	3.42	0.07	-	0.32	3.22	0.07	99.58	3.45
151-A-1	49.61	1.51	0.19	5.11	25.07	0.14	1.99	-	0.15	0.40	2.42	7.18	1.19	0.16	0.19	0.12	3.96	-	99.39	8.04
247-B-1	53.61	2.25	0.03	1.35	26.06	0.08	1.82	tr	0.11	0.34	3.01	5.10	1.65	-	-	0.02	4.47	0.05	99.94	4.81
251-A-1	60.74	1.23	0.07	2.39	21.81	tr	1.85	-	0.07	0.05	1.17	3.85	2.67	0.44	-	0.01	3.58	-	99.93	3.17
1A	6.29	4.39	0.08	-	16.64	3.89	0.33	0.08	tr	-	0.23	-	-	-	-	4.72	tr	-	36.50	87.88
2A	44.20	12.00	0.35	-	3.52	0.99	2.63	-	tr	-	0.10	-	0.10	-	-	17.19	0.15	-	71.23	79.81
3A	12.63	19.44	1.34	-	4.99	0.96	5.71	0.14	0.53	-	0.10	-	-	-	-	4.03	-	tr	49.87	79.14
4A	6.76	14.56	0.64	-	10.18	2.55	6.60	tr	tr	-	-	-	-	-	-	2.86	-	-	44.21	87.41
5A	14.32	16.60	0.83	-	6.61	0.71	5.55	tr	0.63	-	0.16	tr	-	-	-	3.66	-	-	49.06	74.54
6A	20.37	8.24	0.56	-	3.23	0.90	4.38	0.02	0.32	0.10	-	-	-	-	-	2.59	0.32	-	41.03	37.38
7A	19.25	7.23	0.57	-	2.69	0.85	5.09	0.06	0.65	0.06	-	-	-	-	-	2.61	0.01	-	39.07	29.13
8A	8.35	2.06	0.20	-	0.96	0.65	2.45	0.01	0.07	0.06	-	0.03	-	-	-	0.63	tr	-	15.42	10.02
9A	19.24	4.62	0.63	-	2.29	1.37	3.43	0.07	0.11	0.01	0.08	0.06	-	-	-	2.07	0.09	-	34.07	12.24
10A	23.34	8.26	1.12	-	3.99	0.96	4.43	0.18	0.75	0.02	-	0.54	-	-	-	1.06	0.01	-	44.66	14.13
11A	19.03	1.63	0.13	-	11.42	0.83	0.31	0.04	-	tr	-	0.55	-	-	-	0.05	-	-	33.99	2.30
12A	30.10	0.50	0.05	-	4.85	2.11	0.23	0.04	0.02	-	tr	0.53	-	-	-	0.10	-	-	38.53	3.63
13A	2.51	0.63	tr	-	4.43	0.75	0.37	0.03	0.03	-	-	0.03	-	-	-	0.46	-	-	9.24	1.82
14A	3.94	1.36	0.04	-	5.17	0.45	0.76	-	0.08	-	tr	0.06	-	-	-	0.29	0.06	-	12.21	2.11
15A	3.26	3.08	0.68	-	6.26	2.13	1.26	0.04	0.15	-	0.01	0.04	-	-	-	0.14	-	-	17.05	3.42

GRAIN TYPES (%)

	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	% CARBONATE	% TERRIGENOUS
16A	1.66	0.78	0.04	-	7.18	0.67	-	0.11	-	tr	0.03	-	-	-	-	0.15	-	-	11.05	1.91
17A	33.71	22.52	0.80	-	24.58	1.87	1.76	tr	0.15	0.01	0.06	6.46	1.03	-	-	0.03	0.69	-	93.73	3.73
18A	29.11	15.92	3.33	-	36.51	1.42	4.86	0.02	0.22	tr	tr	4.54	0.98	0.15	-	0.41	1.85	0.22	99.54	7.18
19A	14.57	13.01	6.05	-	53.15	3.34	2.82	tr	0.13	0.01	tr	2.78	1.59	0.08	-	0.47	1.19	-	99.19	9.08
20A	13.07	11.97	4.30	-	52.51	5.66	2.31	tr	0.13	0.02	0.02	1.34	2.03	-	-	0.50	0.59	-	94.45	5.69
21A	41.80	6.25	3.38	0.07	15.90	14.46	3.05	0.18	0.42	0.05	0.40	4.36	3.82	-	-	0.49	-	-	94.63	32.76
22A	41.69	13.39	2.01	-	31.93	4.45	0.64	-	0.23	tr	0.07	2.26	3.29	-	-	-	-	-	99.96	18.87
23A	42.44	8.96	2.44	-	8.58	2.63	7.22	0.47	1.57	0.19	-	0.04	0.11	-	-	5.52	-	-	80.17	52.93
24A	56.09	7.36	2.86	-	4.31	2.01	4.83	2.71	2.08	0.89	0.67	-	-	-	-	9.44	-	-	93.25	72.86
25A	54.32	9.32	9.84	-	7.12	2.29	4.48	0.92	0.37	0.20	1.52	0.80	-	-	-	3.96	-	-	95.54	59.68
26A	42.88	7.22	1.61	-	10.68	6.02	2.93	0.05	0.04	-	0.13	1.37	0.46	-	-	-	-	-	79.41	25.26
27A	54.59	8.75	5.64	-	7.88	2.82	6.80	-	2.07	1.65	0.78	0.54	-	-	-	0.03	-	-	91.55	66.40
28A	51.66	15.29	0.49	0.10	16.96	1.23	0.59	-	-	tr	-	3.40	2.94	-	-	0.09	-	-	92.75	3.23
29A	47.23	9.43	3.27	-	9.27	5.75	6.19	-	0.27	0.17	0.33	0.90	0.75	-	-	0.14	-	-	83.70	18.46
30A	49.99	9.01	3.11	-	12.13	3.54	3.49	-	0.24	0.13	0.07	2.94	1.48	-	-	tr	-	-	86.18	4.10
31A	36.99	12.99	0.36	-	29.40	4.84	0.55	0.11	-	0.01	-	1.81	7.45	-	-	0.02	-	-	94.53	4.48
32A																				
33A	36.13	5.29	0.53	-	21.32	10.74	1.27	-	0.06	tr	0.03	2.65	4.46	-	-	13.80	-	-	96.28	5.20
34A	35.49	3.92	0.07	-	33.79	1.60	0.34	tr	-	-	tr	7.50	7.70	-	-	0.48	-	-	90.89	1.93
35A	31.82	5.74	0.08	0.04	26.31	3.91	0.92	-	0.08	tr	tr	3.37	10.58	-	-	-	-	-	82.85	2.63
36A	19.88	5.54	0.26	-	17.53	15.14	0.38	0.14	-	tr	0.02	1.90	8.85	-	-	0.19	-	-	69.84	2.47
37A	37.11	7.25	0.17	-	14.11	2.39	0.64	tr	0.08	0.01	0.03	4.00	11.20	-	-	0.09	-	-	77.08	3.83
38A	43.25	6.54	1.04	-	12.26	3.72	2.76	0.25	0.26	0.02	0.26	3.52	4.82	-	-	0.53	-	-	79.23	10.64
39A	20.22	2.79	0.17	-	10.22	3.28	0.60	0.02	-	0.01	0.02	1.87	1.66	-	-	0.04	-	-	40.90	3.32
40A	16.90	3.05	tr	-	24.88	4.76	0.53	0.04	-	tr	tr	1.81	2.97	-	-	0.15	-	-	55.05	1.67
41A	14.60	3.49	0.20	0.03	7.50	0.79	1.25	1.06	0.31	0.03	-	0.31	0.03	-	-	0.16	-	-	29.76	5.53
42A	70.54	2.85	0.62	1.34	3.86	3.98	2.70	0.35	0.40	0.66	0.51	3.26	0.27	0.61	-	0.23	0.05	-	92.14	23.08
43A																				
44A	69.89	3.21	0.09	0.99	10.80	7.25	0.35	-	-	0.02	0.02	3.26	1.83	-	-	0.27	0.08	-	98.06	3.27
45A	56.26	6.57	1.60	0.68	7.90	7.53	1.54	0.68	0.48	0.08	0.06	0.35	0.24	-	-	1.00	-	-	84.97	13.37
46A	43.65	7.26	0.14	0.39	5.87	0.55	1.59	2.60	0.50	0.18	0.19	0.62	0.23	-	-	0.24	-	-	64.01	12.57
47A	70.90	1.21	0.02	1.09	11.76	0.04	2.33	0.01	0.07	0.33	1.74	7.28	0.94	-	-	0.15	1.96	-	98.86	2.95
48A	62.52	5.56	0.96	0.21	6.42	4.81	3.49	0.08	1.48	2.07	2.68	0.63	0.16	-	-	0.09	-	-	91.17	36.56
49A																				

GRAIN TYPES (%)

	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	% CARBONATE	% TERRIGENOUS
50A	58.18	6.11	0.30	0.93	7.51	8.55	1.74	-	0.09	0.09	0.01	4.06	0.68	-	-	0.10	-	-	88.98	7.33
51A																				
52A	62.74	9.37	2.48	0.79	8.74	4.11	4.50	-	2.54	1.36	-	0.47	0.02	-	-	-	-	-	97.12	47.16
53A	70.43	7.35	0.08	0.45	8.30	4.70	1.79	0.04	0.33	0.02	0.01	2.40	0.38	-	-	0.04	-	-	96.32	14.61
54A																				
55A	39.47	6.08	4.36	2.81	21.77	3.94	2.27	13.32	0.62	1.67	-	0.80	0.52	0.05	-	0.08	-	-	97.76	61.08
56A	62.46	7.94	1.06	1.03	6.45	5.95	1.78	0.92	0.25	0.67	-	0.33	-	-	-	2.74	-	-	91.58	37.20
57A	56.86	11.21	1.59	0.92	13.23	4.10	1.74	1.15	0.13	0.58	0.16	0.18	-	-	-	1.56	-	-	93.41	30.99
58A																				
59A																				
60A	53.80	14.20	0.87	1.70	8.96	2.46	2.22	0.23	0.50	0.24	0.11	0.13	-	-	-	0.03	-	-	85.45	37.96
61A	59.89	13.82	0.44	0.41	9.36	3.96	1.57	0.10	0.49	0.64	0.13	0.05	-	-	-	0.40	-	-	91.26	37.06
62A	65.97	3.71	tr	1.10	13.09	12.34	1.26	0.04	-	tr	-	1.49	0.37	-	-	0.17	-	-	99.54	5.91
63A	57.51	11.88	0.77	0.70	9.62	2.28	1.75	0.35	1.45	0.61	0.61	0.09	-	-	-	1.18	-	-	88.80	53.92
64A	44.46	16.58	0.82	1.22	12.37	5.39	2.42	0.88	0.74	0.44	0.36	0.12	0.02	-	-	0.48	-	-	86.30	49.84
65A	51.84	11.70	0.54	1.57	9.89	4.37	1.78	-	0.99	0.28	0.07	0.02	-	-	-	-	-	-	83.05	42.31

CONSTITUENT PERCENTAGE OF WHOLE SAMPLE

GRAIN TYPES (%)

	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	% CARBONATE	% TERRIGENOUS
2101A	35.26	0.83	-	0.08	5.91	0.11	2.97	0.78	-	0.21	-	0.02	-	-	-	5.57	0.05	-	51.79	8.85
2102A	15.43	2.80	-	-	5.06	0.86	2.60	0.16	-	-	0.12	0.17	-	-	-	0.99	0.09	-	28.28	3.69
2103A	33.29	2.50	tr	-	18.56	13.35	1.70	0.18	0.08	tr	tr	1.46	0.03	-	-	0.31	0.13	-	71.56	3.77
2104A	30.29	7.98	0.83	9.39	26.65	9.57	2.05	0.18	0.05	tr	0.05	2.56	4.24	-	-	0.22	1.09	-	95.15	4.45
2105A	19.78	13.11	8.07	-	44.66	0.04	1.56	-	0.24	0.05	0.06	2.72	2.94	-	-	1.06	0.29	-	94.59	5.06
2106A	31.00	9.57	18.20	-	16.36	0.30	4.83	-	2.62	0.10	0.10	2.02	0.44	0.13	-	0.39	0.76	-	86.82	12.99
2207A	24.45	10.20	0.04	1.01	14.19	1.33	4.51	0.43	0.07	0.27	0.65	0.08	-	0.01	-	0.10	0.01	-	57.35	10.57
2208A	14.55	7.04	0.18	0.34	9.97	0.90	2.51	-	0.13	-	0.30	0.01	-	-	-	0.03	0.11	-	36.11	58.89
2209A	24.36	14.07	0.82	0.29	10.06	1.33	2.86	-	0.44	0.77	0.15	0.25	-	-	-	0.23	-	0.01	55.64	41.54
2210A																				
2211A	43.23	3.05	0.26	1.01	24.66	1.53	2.03	-	0.06	0.04	-	2.52	6.01	0.27	-	0.15	0.97	-	86.32	13.03
2212A	13.68	7.24	9.03	-	9.85	0.93	2.82	-	2.20	-	-	0.36	0.02	-	-	0.06	0.09	-	56.26	43.58
2313A	11.64	4.12	15.34	-	6.48	0.41	2.49	-	0.50	-	0.04	0.37	-	-	-	0.02	0.01	-	41.42	58.29
2314A																				
2315A																				
2316A	24.95	8.85	0.66	0.62	11.05	0.72	2.66	0.24	0.68	0.46	0.07	1.22	0.16	-	-	0.06	0.69	-	53.07	11.85
2317A	31.55	11.35	0.30	0.28	15.19	2.45	7.00	0.08	0.30	0.39	0.27	0.46	-	-	-	0.24	0.08	-	69.92	26.83
2318A	6.64	4.75	tr	-	5.14	1.19	0.24	-	0.08	-	0.01	0.09	-	-	-	0.02	0.02	-	18.15	1.68
2419A	14.68	3.52	tr	0.07	15.71	1.87	1.55	-	0.10	-	0.86	0.13	-	-	-	-	0.06	-	38.53	2.45
2420A	32.48	1.93	0.02	0.07	21.67	5.36	1.12	-	0.10	-	1.18	0.20	-	-	-	-	0.02	-	64.17	2.49
2421A	25.94	1.91	-	0.14	18.96	1.67	2.53	0.39	0.07	0.14	0.21	0.01	-	-	-	-	0.34	-	52.29	10.33
2422A	27.44	2.07	0.07	-	9.11	4.35	2.73	0.18	-	-	0.12	2.51	-	0.65	-	0.82	0.49	-	50.85	12.12
2423A	57.45	1.29	0.07	-	5.48	7.66	1.32	0.03	0.18	0.01	0.01	1.33	-	-	-	1.04	0.55	-	76.38	16.83
2424A	7.51	0.98	0.02	0.01	3.44	0.85	0.43	0.06	0.06	tr	tr	0.04	-	-	-	0.11	0.01	-	13.53	4.56
2425A	8.16	1.06	0.06	0.06	2.17	0.16	0.34	-	0.01	tr	tr	0.54	0.10	-	-	0.01	0.18	-	12.87	1.95
2426A	27.58	5.93	2.06	-	12.23	4.37	2.70	-	0.23	0.02	0.05	0.67	-	-	-	0.19	0.17	-	56.17	4.94
2427A	5.86	4.49	20.49	-	5.61	0.60	0.95	0.08	0.02	-	-	0.16	-	-	-	0.02	-	-	38.28	61.65
2528A	41.84	2.65	0.23	0.01	13.40	1.51	0.63	-	0.08	0.01	-	2.45	2.96	0.28	-	3.64	1.86	-	71.56	5.33
2529A	28.51	4.38	0.04	-	35.76	1.77	0.10	-	tr	tr	tr	1.99	11.75	-	-	0.43	0.51	-	85.24	1.35
2530A	25.94	4.54	0.25	-	21.85	17.32	0.75	-	0.06	tr	0.01	2.09	13.23	-	-	0.14	1.38	-	87.54	1.47
2531A	28.82	7.91	0.07	-	35.70	4.70	1.03	-	0.04	tr	tr	1.63	11.64	0.09	-	0.01	1.96	-	93.61	2.22
2532A	33.28	9.59	3.50	-	20.63	5.18	2.48	-	0.10	0.08	0.11	2.55	3.34	0.10	-	0.03	2.97	-	83.90	7.88
2533A	46.32	10.67	0.51	-	27.29	0.63	1.81	-	0.15	-	tr	2.63	1.72	0.15	-	0.04	1.79	-	93.72	2.74
2534A	38.95	12.81	0.09	0.16	31.07	0.24	1.46	-	0.03	-	-	2.30	4.75	-	-	0.05	1.84	-	93.77	4.92

GRAIN TYPES (%)

	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	% CARBONATE	% TERRIGENOUS
2535A	4.93	3.78	6.04	-	4.38	0.75	1.41	-	0.20	0.07	0.09	-	-	-	-	-	-	-	21.67	77.41
2536A	4.27	4.02	9.29	-	1.74	0.43	0.81	-	-	-	-	tr	-	-	-	0.04	0.01	-	20.63	81.24
2637A	2.59	4.01	0.24	-	4.48	0.75	1.21	-	0.02	0.03	0.01	-	-	-	-	0.49	0.01	-	13.85	63.10
2638A	1.58	6.06	0.15	-	0.99	0.37	0.98	-	tr	-	0.01	tr	-	-	-	4.82	0.01	-	15.00	78.01
2639A	22.77	4.56	0.38	-	6.23	1.72	2.25	-	0.23	-	0.02	0.22	-	-	-	0.91	0.02	-	39.30	13.56
2640A	21.37	1.64	0.01	-	2.98	1.56	0.62	tr	0.04	-	-	0.70	-	-	-	0.05	0.02	-	28.96	1.93
2641A	5.63	2.09	0.14	-	2.27	0.67	0.50	0.01	0.02	0.01	tr	0.02	-	-	-	-	0.24	-	11.62	3.80
2642A	12.24	1.02	0.12	-	2.39	0.33	0.26	-	0.10	-	-	0.83	-	-	-	-	0.12	-	17.41	1.78
2643A	19.53	7.42	0.68	-	45.97	9.78	2.39	-	-	-	0.10	1.05	1.60	0.11	-	0.19	0.42	-	89.33	7.91
2644A	22.22	19.18	3.64	0.09	45.54	2.18	1.66	-	-	-	tr	0.83	0.69	0.06	-	0.27	1.51	-	97.79	1.88
2645A	22.98	12.74	1.00	-	42.13	1.42	1.47	0.01	-	-	0.02	0.74	7.17	-	-	0.12	1.28	-	91.09	8.72
047-A-40	62.36	1.49	0.17	-	19.70	0.01	1.90	0.01	0.16	0.15	0.81	5.54	1.24	0.23	-	tr	2.99	-	96.77	2.86
62-A-1	35.68	3.50	-	1.82	33.27	6.55	1.09	-	-	tr	tr	1.94	0.16	-	-	tr	0.28	-	84.29	0.41
64-B-1	43.64	10.37	0.01	0.23	25.54	13.59	1.09	tr	0.02	tr	tr	1.84	-	-	-	0.01	0.16	-	96.59	2.63
146-B-15	55.47	0.90	0.14	0.44	23.51	0.80	1.24	-	0.06	0.11	1.99	1.96	2.22	-	-	0.02	5.22	-	94.08	3.94
147-B-11	47.94	1.85	-	1.51	20.49	0.79	2.76	0.01	-	0.38	4.49	6.06	3.30	-	-	0.31	3.10	0.07	93.05	3.45
151-A-1	45.57	1.39	0.17	4.69	23.03	0.13	1.83	-	0.14	0.37	2.22	6.60	1.09	0.15	0.17	0.11	3.64	-	91.30	8.04
247-B-1	51.00	2.14	0.03	1.28	24.79	0.08	1.73	tr	0.10	0.32	2.86	4.85	1.57	-	-	0.02	4.25	0.05	95.07	4.81
251-A-1	58.72	1.19	0.07	2.31	21.09	tr	1.79	-	0.07	0.05	1.13	3.72	2.58	0.43	-	0.01	3.46	-	96.62	3.17
1A	0.76	0.53	0.01	-	2.01	0.47	0.04	0.01	tr	-	0.01	-	-	-	-	0.52	tr	-	4.41	87.88
2A	8.91	2.42	0.07	-	0.71	0.20	0.53	-	tr	-	0.02	-	0.02	-	-	1.45	0.03	-	14.36	79.83
3A	2.63	4.05	0.28	-	1.04	0.20	1.19	0.03	0.11	-	0.02	-	-	-	-	0.84	-	tr	10.39	79.14
4A	0.85	1.83	0.08	-	1.28	0.32	0.83	tr	tr	-	-	-	-	-	-	0.36	-	-	5.55	87.41
5A	3.64	4.22	0.21	-	1.68	0.18	1.41	tr	0.16	-	0.04	tr	-	-	-	0.93	-	-	12.47	74.54
6A	12.74	5.15	0.35	-	2.02	0.56	2.74	0.01	0.20	0.06	-	-	-	-	-	1.62	0.02	-	25.47	37.38
7A	13.58	5.10	0.40	-	1.90	0.60	3.59	0.04	0.46	0.04	-	-	-	-	-	1.84	0.01	-	27.57	29.13
8A	7.50	1.85	0.18	-	0.86	0.58	2.20	0.01	0.06	0.05	-	0.03	-	-	-	0.57	tr	-	13.89	10.02
9A	16.82	4.04	0.55	-	2.00	1.20	3.00	0.06	0.10	0.01	0.07	0.05	-	-	-	1.81	0.08	-	87.43	12.24
10A	20.00	7.08	0.96	-	3.42	0.82	3.80	0.15	0.64	0.02	-	0.46	-	-	-	0.91	0.01	-	38.27	14.13
11A	18.48	1.58	0.13	-	11.09	0.81	0.30	0.04	-	tr	-	0.53	-	-	-	0.05	-	-	33.00	2.30
12A	28.99	0.48	0.05	-	4.67	2.03	0.22	0.04	0.02	-	tr	0.51	-	-	-	0.10	-	-	37.11	3.63
13A	2.46	0.62	tr	-	4.35	0.74	0.36	0.03	0.03	-	-	0.03	-	-	-	0.45	-	-	9.07	1.82
14A	3.84	1.33	0.04	-	5.04	0.44	0.74	-	0.08	-	tr	0.06	-	-	-	0.28	0.06	-	11.91	2.11
15A	3.15	2.97	0.66	-	6.05	2.06	1.22	0.04	0.14	-	0.01	0.04	-	-	-	0.13	-	-	16.47	3.42

GRAIN TYPES (%)

	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	% CARBONATE	% TERRIGENOUS
16A	1.63	0.76	0.04	-	7.03	0.42	0.66	-	0.11	-	tr	0.03	-	-	-	0.15	-	-	10.83	1.91
17A	32.43	21.62	0.77	-	23.60	1.80	1.69	tr	0.14	0.01	0.06	6.20	0.99	-	-	0.33	0.66	-	90.02	3.73
18A	26.95	14.74	3.08	-	33.80	1.31	4.50	0.02	0.20	tr	tr	4.20	0.91	0.14	-	0.38	1.71	-	92.14	7.18
19A	13.19	11.78	5.48	-	48.12	3.02	3.02	2.55	tr	0.01	tr	2.52	1.44	0.02	-	0.43	1.08	-	89.81	9.08
20A	12.30	11.27	4.05	-	49.42	5.33	2.17	tr	0.12	0.02	0.02	1.26	1.91	-	-	0.47	0.56	-	88.90	5.69
21A	28.10	4.20	2.27	0.05	10.69	9.72	2.05	0.12	0.28	0.03	0.27	2.93	2.57	-	-	0.33	-	-	63.60	30.76
22A	33.79	10.85	1.63	-	25.88	3.61	0.52	-	0.19	tr	0.06	1.83	2.67	-	-	-	-	-	81.03	18.87
23A	19.98	4.22	1.15	-	4.04	1.24	3.40	0.22	0.74	0.09	-	0.02	0.05	-	-	2.60	-	-	37.75	52.93
24A	15.10	1.98	0.77	-	1.16	0.54	1.30	1.30	0.73	0.56	0.18	tr	-	-	-	2.54	-	-	25.10	72.86
25A	21.81	3.74	3.95	-	2.86	0.92	1.96	0.37	0.15	0.08	0.61	0.32	-	-	-	1.59	-	-	38.37	59.68
26A	32.03	5.39	1.20	-	7.98	4.50	2.19	0.04	0.03	-	0.10	1.02	0.34	-	-	-	-	-	54.81	25.26
27A	18.21	2.92	1.88	-	2.63	0.94	2.27	-	0.69	0.55	0.26	0.18	-	-	-	-	0.01	-	30.55	66.40
28A	49.87	14.76	0.47	0.10	16.37	1.19	0.57	-	-	tr	-	3.28	2.84	-	-	-	0.09	-	89.55	3.23
29A	38.51	7.69	2.67	-	7.56	4.69	5.05	-	0.22	0.14	0.27	0.73	0.61	-	-	-	0.11	-	68.25	18.46
30A	47.75	8.61	2.97	-	11.59	3.43	3.33	-	0.23	0.12	0.07	2.81	1.41	-	-	tr	-	-	82.34	4.10
31A	35.22	12.37	0.34	-	27.99	4.61	0.52	0.10	-	0.01	-	1.72	7.09	-	-	0.02	-	-	90.00	4.48
32A																				
33A	34.13	5.00	0.50	-	20.14	10.15	1.20	-	0.60	tr	0.03	2.50	4.21	-	-	13.04	-	-	90.97	5.20
34A	34.75	3.84	0.07	-	33.09	1.57	0.33	tr	-	-	tr	7.34	7.54	-	-	0.47	-	-	89.01	1.93
35A	30.90	5.57	0.08	0.04	25.55	3.80	0.89	-	0.08	tr	tr	3.27	10.27	-	-	-	-	-	80.46	2.63
36A	19.39	5.40	0.25	-	17.10	14.77	0.37	0.14	-	tr	0.02	1.85	8.63	-	-	0.19	-	-	68.11	2.47
37A	35.58	6.95	0.16	-	13.53	2.29	0.61	tr	0.08	0.01	0.03	3.84	10.74	-	-	0.09	-	-	73.91	3.83
38A	38.57	5.83	0.93	-	10.93	3.32	2.46	0.22	0.23	0.02	0.22	3.14	4.30	-	-	0.47	-	-	70.66	10.64
39A	19.52	2.69	0.16	-	9.87	3.17	0.58	0.02	-	0.01	0.02	1.81	1.62	-	-	0.04	-	-	39.51	3.32
40A	16.58	2.99	tr	-	24.40	4.67	0.52	0.04	-	tr	tr	1.78	2.91	-	-	0.15	-	-	54.04	1.67
41A	13.78	3.29	0.19	0.03	7.08	0.75	1.18	1.00	0.29	0.03	-	0.29	0.03	-	-	0.15	-	-	28.08	5.53
42A	54.20	2.19	0.48	1.03	2.97	3.06	2.08	0.27	0.31	0.51	0.39	2.51	0.21	0.47	-	0.18	0.04	-	70.91	23.08
43A																				
44A	67.37	3.09	0.09	0.95	10.41	6.99	0.34	-	-	0.02	0.02	3.14	1.76	-	-	0.26	0.08	-	94.52	3.27
45A	48.74	5.69	1.39	0.59	6.84	6.52	1.33	0.59	0.42	0.07	0.05	0.30	0.21	-	-	0.87	-	-	73.61	13.02
46A	38.12	6.34	0.12	0.34	5.13	0.48	1.39	2.27	0.44	0.16	0.17	0.54	0.20	-	-	0.21	-	-	55.91	12.57
47A	68.80	1.17	0.02	1.06	11.41	0.04	2.26	0.01	0.07	0.32	1.69	7.06	0.96	-	-	0.15	1.90	-	96.91	2.95
48A	39.61	2.52	0.61	0.13	4.07	3.05	2.21	0.05	0.94	1.31	1.70	0.40	0.10	-	-	0.06	-	-	57.79	36.56
49A																				

GRAIN TYPES (%)

	MOLLUSC	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	PELLET	OSTRACOD	SPONGE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	% CARBONATE	% TERRIGENOUS
50A	53.85	6.12	0.28	0.86	6.95	7.91	1.61	-	0.08	0.08	0.01	3.85	0.63	-	-	0.09	-	-	82.31	7.33
51A																				
52A	33.16	4.95	1.31	0.42	4.62	2.17	2.38	-	1.34	0.72	-	0.25	0.01	-	-	-	-	-	51.33	47.16
53A	60.06	6.27	0.07	0.38	7.08	4.01	1.53	0.03	0.28	0.02	0.01	2.05	0.32	-	-	0.03	-	-	82.16	14.61
54A																				
55A	15.32	2.36	1.69	1.09	8.45	1.53	0.88	5.17	0.24	0.65	-	0.31	0.20	0.02	-	0.03	-	-	37.94	61.08
56A	39.39	5.01	0.67	0.65	4.07	3.75	1.12	0.58	0.16	0.42	-	0.21	-	-	-	1.73	-	-	57.74	37.20
57A	38.95	7.68	1.09	0.63	9.07	2.81	1.19	0.79	0.09	0.40	0.11	0.12	-	-	-	1.07	-	-	64.00	30.99
58A																				
59A																				
60A	33.26	8.78	0.54	1.05	5.54	1.52	1.37	0.14	0.31	0.15	0.07	0.08	-	-	-	0.02	-	-	52.82	37.96
61A	37.69	8.70	0.28	0.26	5.89	2.49	0.99	0.06	0.31	0.40	0.08	0.03	-	-	-	0.25	-	-	57.43	37.06
62A	61.72	3.47	tr	1.03	12.25	11.55	1.18	0.04	-	tr	1.39	0.35	-	-	-	0.16	-	-	93.15	5.91
63A	26.24	5.42	0.35	0.32	4.39	1.04	0.80	0.16	0.66	0.28	0.28	0.04	-	-	-	0.54	-	-	40.51	53.92
64A	22.25	8.30	0.41	0.61	6.19	2.70	1.21	0.44	0.37	0.22	0.18	0.06	0.01	-	-	0.24	-	-	50.05	49.84
65A	29.78	6.72	0.31	0.90	5.68	2.51	1.02	-	0.57	0.16	0.04	0.01	-	-	-	-	-	-	47.71	42.31

APPENDIX III

Carbonate Constituent Composition

in Coarse Fractions

GRAIN TYPES (%)

Sample	Size Fraction (mm)	Mollusc Pelecypod/Gastropod	Benthonic Foraminifera	Pelagic Foraminifera	Halimeda	Unidentifiable Carbonate	Blackened Carbonate	Echinoid	Other	Rock Frag	Barnacle	Alcyonarian	Bryozoan	Coralline Algae	Coral	Millepora	Intraclast	Worm Tube	Crustacean	Number of Carbonate	Number of Terrigenous	Total	% Carbonate	% Terrigenous
2101C+E	>4	93.3/3.6	-	-	-		-	2.0	-	0.1	0.7	-	0.1	-	-	-	-		-	686	-	686	100	0
	2-4	95.1	-	-	-	0.9	-	4.0	-	-	-	-	-	-	-	-	-	-	-	323	-	323	100	0
	1-2	92.8	-	-	-	1.6	0.6	4.1	-	-	-	-	0.3	-	-	-	0.3	0.3	-	319	-	319	100	0
2102B+G	>4	55.2/3.9	3.4	-	-	-	-	20.7	0.6 Bone	2.1	1.2	-	7.4	-	0.9	-	-	-	2.5	324	-	324	100	0
	2-4	47.1	26.9	-	-	0.6	-	16.7	-	-	-	-	3.6	-	0.3	-	4.2	0.6	-	335	-	335	100	0
	1-2	44.3	36.1	-	-	3.6	0.3	10.3	-	-	-	-	2.4	-	-	-	2.4	0.6	-	330	2	332	99.4	0.6
2103B+H	>4	29.3/11.0	0.3	-	3.7	-	-	1.8	-	51.1	-	-	0.8	0.5	0.2	-	-	-	0.9	655	-	655	100	0
	2-4	59.0	1.7	-	1.7	17.7	14.0	1.0	-	-	-	-	4.3	0.6	-	-	-	-	-	300	-	300	100	0
	1-2	54.2	1.3	-	1.0	23.1	14.6	1.6	-	-	-	-	1.9	0.7	-	-	1.3	0.3	-	308	27	335	91.9	8.1
2104B+H	>4	24.6/7.7	0.9	-	1.2	-	-	3.1	-	7.3	0.1	-	4.6	48.3	0.6	-	-	0.7	0.9	905	-	905	100	0
	2-4	24.0	-	-	5.9	12.2	0.6	0.6	-	-	-	-	5.6	51.0	-	-	-	-	-	304	-	304	100	0
	1-2	25.9	1.6	-	9.9	22.1	1.9	0.6	-	-	-	-	6.7	31.0	-	-	-	0.3	-	313	-	313	100	0
2105A+D	>4	22.2/5.5	-	-	-	-	-	0.6	-	-	-	-	0.9	59.2	0.1	-	0.7	0.1	0.6	668	-	668	100	0
	2-4	25.1	1.8	-	0.3	45.6	-	0.6	-	-	-	-	3.3	23.0	-	-	-	0.3	-	331	-	331	100	0
	1-2	24.3	10.6	-	-	51.1	0.3	0.6	-	-	-	-	2.8	9.7	-	-	-	0.6	-	321	-	321	100	0
2106A+C	>4	30.3/5.1	-	-	-	-	-	4.7	0.3 Brach	57.0	0.3	-	0.3	-	1.5	-	-	0.1	0.8	749	-	749	100	0
	2-4	42.4	7.9	-	-	41.6	-	1.4	-	-	-	-	4.5	0.8	0.6	-	-	0.8	0	356	-	356	100	0
	1-2	57.9	15.2	-	-	15.6	0.3	1.2	-	-	-	-	6.1	3.4	-	-	-	0.3	-	328	-	328	100	0
2207 D+I	>4	46.4/1.9	2.8	-	0.3	-	-	30.6	-	1.1	0.6	-	5.0	1.1	-	-	-	9.7	0.6	360	-	360	100	0
	2-4	54.4	29.9	-	0.9	0.3	0.3	7.4	-	-	-	-	1.4	-	0.6	-	4.5	0.3	-	351	-	351	100	0
	1-2	46.0	41.6	-	1.3	2.5	0.3	5.7	-	-	-	-	1.0	0.3	0.3	-	0.6	0.3	-	315	-	315	100	0
2208 B+C	>4	66.0/2.1	-	-	0.5		-	14.1	-	1.1	0.3	-	4.5	0.3	3.2	-	-	4.0	4.0	376	-	376	100	0
	2-4	79.1	0.6	-	0.9	3.8	3.2	2.9	-	-	-	-	3.8	-	0.9	-	4.1	0.3	0.6	344	-	344	100	0
	1-2	62.3	5.3	-	2.2	-	13.9	14.8	-	-	-	0.3	-	-	-	-	0.9	-	0.3	324	-	324	100	0
2209B+D	>4	87.9/1.0	-	-	-	-	-	6.7	0.1 Scaph	-	0.2	-	1.1	-	-	-	-	-	3.0	922	-	922	100	0
	2-4	91.1	-	-	-	0.3	0.6	2.2	-	-	-	-	0.6	-	-	-	4.0	0.6	0.6	327	-	327	100	0
	1-2	84.8	0.3	-	-	1.3	-	5.2	-	-	-	-	1.3	-	-	-	6.2	0.3	0.6	309	-	309	100	0

GRAIN TYPES (%)

Sample	Size Fraction (mm)	Mollusc (Pelecypod/Gastropod)	Benthonic Foraminifera	Pelagic Foraminifera	Halimeda	Unidentifiable Carbonate	Blackened Carbonate	Echinoid	Other	Rock Fragment	Barnacle	Alcyonarian	Bryozoan	Coralline Algae	Coral	Millepora	Intraclast	Worm Tube	Crustacean	Number of Carbonate	Number of Terrigenous	Total	% Carbonate	% Terrigenous
2211B+D	>4	40.7/9.4	-	-	1.0	-	-	1.4	-	26.2	7.0	-	2.8	10.2	1.0	-	-	0.1	0.2	885	-	885	100	0
	2-4	53.9	-	-	0.9	23.8	2.1	-	-	-	-	-	2.1	15.1	0.9	-	-	1.2	-	332	-	332	100	0
	1-2	46.7	0.6	-	1.2	27.9	1.2	0.3	-	-	-	-	1.8	18.2	-	-	-	2.1	-	330	-	330	100	0
2212B+G	>4	76.4/13.8	-	-	-	-	-	6.6	-	1.4	-	-	0.4	-	1.0	-	-	-	0.4	1206	-	1206	100	0
	2-4	85.7	6.8	-	-	1.5	0.3	3.6	-	-	-	-	1.5	-	-	-	0.3	0.3	-	337	-	337	100	0
	1-2	68.0	21.4	-	-	2.0	2.0	3.7	-	-	-	-	2.6	-	-	-	-	0.3	-	350	-	350	100	0
2313A+B	>4	61.4/15.7	-	-	-	-	-	16.2	-	0.2	-	-	3.5	-	1.9	-	-	-	1.2	1028	-	1028	100	0
	2-4	74.8	8.2	-	-	2.6	-	8.2	-	-	-	-	5.6	-	-	-	-	-	0.6	305	-	305	100	0
	1-2	69.2	15.4	-	-	2.6	-	6.4	-	-	-	-	6.4	-	-	-	-	-	-	312	-	312	100	0
2316A	>4	70.7/5.1	0.4	-	1.5	-	-	4.6	-	8.2	2.1	-	3.4	2.3	-	-	-	0.2	1.5	525	-	525	100	0
	2-4	77.8	2.4	-	-	5.1	1.5	1.2	-	-	-	-	8.1	3.0	-	-	-	0.6	0.3	334	-	334	100	0
	1-2	72.8	4.6	-	-	10.1	3.5	2.0	-	-	-	-	3.2	2.6	-	-	-	1.2	-	346	-	346	100	0
2317A+B	>4	66.2/4.7	-	-	-	-	-	5.0	-	15.2	0.5	-	5.5	0.7	0.2	-	-	0.1	1.9	1137	-	1137	100	0
	2-4	70.5	2.0	-	-	4.7	6.5	6.5	-	-	-	-	6.5	-	1.2	-	1.5	0.3	0.3	340	-	340	100	0
	1-2	67.9	7.5	-	-	11.8	4.9	3.6	-	-	-	-	2.6	-	-	-	0.3	0.7	0.7	305	-	305	100	0
2318A+B	>4	76.3/-	6.4	-	-	-	-	9.0	-	3.2	0.6	-	2.6	-	-	-	-	-	1.9	156	-	156	100	0
	2-4	54.7	23.7	-	-	2.4	15.9	0.3	-	-	-	-	3.0	-	-	-	-	-	-	333	100	433	76.9	23.1
	1-2	55.7	19.4	-	-	14.4	7.2	1.8	-	-	-	-	1.5	-	-	-	-	-	-	334	619	953	35.0	65.0
2419A+B	>4	57.8/14.2	1.0	-	-	-	-	6.9	-	17.2	0.5	-	1.0	-	1.5	-	-	-	-	204	-	204	100	0
	2-4	61.4	16.1	-	-	9.5	11.0	1.4	-	-	-	-	0.6	-	-	-	-	-	-	347	13	360	96.4	3.6
	1-2	57.6	13.1	-	-	17.1	7.0	3.4	-	-	-	-	1.5	-	-	-	-	0.3	-	327	61	388	84.3	15.7
2420A+B	>4	55.0/9.7	2.2	-	-	-	-	8.0	-	4.1	0.6	-	3.6	12.4	2.3	-	0.6	0.9	-	701	44	745	94.1	5.9
	2-4	70.1	15.1	-	-	3.1	5.2	2.5	-	-	-	-	3.1	0.3	-	-	0.6	-	-	324	-	324	100	0
	1-2	75.6	6.0	-	-	9.2	6.0	1.4	-	-	-	-	0.6	-	-	-	0.6	0.3	0.3	349	11	360	96.9	3.1
2421A+B	>4	74.7/-	0.6	-	-	-	-	20.7	-	-	-	-	0.6	-	0.6	-	2.9	-	-	174	-	174	100	0
	2-4	78.7	3.0	-	-	0.5	0.8	13.0	-	-	-	-	1.6	-	-	-	2.4	-	-	371	2	373	99.5	0.5
	1-2	76.2	1.3	-	-	10.3	3.4	4.1	-	-	-	-	2.5	-	-	-	1.3	0.9	-	320	26	346	92.5	7.5

GRAIN TYPES (%)

	SIZE FRACTION (MM)	MOLLUSC Pelecypod Gastropod	BENTHONIC FORAMINIFERA	PELAGIC FORAMINIFERA	HALIMEDA	UNIDENTIFIABLE CARBONATE	BLACKENED CARBONATE	ECHINOID	OTHER	ROCK FRAGMENT	BARNACLE	ALCYONARIAN	BRYOZOAN	CORALLINE ALGAE	CORAL	MILLEPORA	INTRACLAST	WORM TUBE	CRUSTACEAN	NUMBER OF CARBONATE	NUMBER OF TERRIGENOUS	TOTAL	% CARBONATE	% TERRIGENOUS
2422A+B	>4	63.7/4.7	0.1	-	-	-	-	2.0	-	15.8	0.8	-	7.9	-	4.4	-	-	0.3	0.4	1674	-	1674	100	0
	2-4	78.3	-	-	-	5.3	5.8	2.9	-	-	-	-	5.5	-	1.3	0.3	0.3	-	0.3	379	3	382	99.2	0.8
	1-2	82.2	0.6	-	-	4.8	2.5	3.1	-	-	-	-	6.2	-	-	-	-	0.6	-	355	29	384	92.4	7.6
2423A+B	>4	77.7/5.4	-	-	-	-	-	0.3	-	10.6	3.0	-	1.7	-	0.2	-	-	-	1.7	2168	-	2168	100	0
	2-4	91.7	-	-	-	4.0	2.5	0.3	-	-	-	-	1.2	-	-	-	-	0.3	-	329	1	330	99.7	0.3
	1-2	88.6	-	-	-	3.2	5.8	0.9	-	-	-	-	0.9	-	-	-	-	0.6	-	344	11	355	96.9	3.1
2424A+B	>4	76.1/1.4	-	-	-	-	-	5.6	-	2.3	7.5	-	4.2	1.4	-	-	-	-	1.4	213	-	213	100	0
	2-4	88.9	0.3	-	0.3	2.9	-	2.0	-	-	-	-	4.1	0.6	-	-	0.3	0.3	0.3	343	2	345	99.4	0.6
	1-2	84.9	2.4	-	-	3.6	2.7	1.8	-	-	-	-	4.3	-	-	-	-	0.3	-	331	39	370	89.5	10.5
2425C	>4	69.6/1.4	-	-	3.1	-	-	0.5	-	0.7	11.3	-	3.3	9.7	-	-	-	-	0.5	424	-	424	100	0
	2-4	71.5	-	-	-	6.2	2.2	0.8	-	-	-	-	15.4	3.1	-	-	-	0.8	-	358	289	647	55.3	44.7
	1-2	79.6	0.6	-	-	12.2	1.2	1.7	-	-	-	-	4.4	0.3	-	-	-	-	-	343	1468	1811	18.9	81.1
2426A+B	>4	43.8/6.4	-	-	-	-	-	8.8	0.2 Fish Scale	15.9	0.2	-	1.2	0.5	9.5	-	-	-	13.5	422	-	422	100	0
	2-4	72.1	-	-	-	4.1	12.5	6.7	-	-	-	-	2.6	1.7	0.3	-	-	-	-	344	-	344	100	0
	1-2	63.1	5.3	-	-	4.1	13.4	5.3	-	-	-	-	6.0	2.5	-	-	-	0.3	-	320	5	325	98.5	1.5
2427B	>4	68.7/9.2	-	-	-	-	-	18.3	-	0.2	-	-	2.3	-	0.2	-	-	-	1.1	563	-	563	100	0
	2-4	71.7	14.5	-	-	1.2	-	9.0	-	-	-	-	3.3	-	-	-	-	0.3	-	332	-	332	100	0
	1-2	67.2	23.8	1.2	-	1.7	-	2.3	-	-	-	-	3.5	-	-	-	-	0.3	-	344	1	345	99.7	0.3
2529A	>4	37.4/2.4	-	-	-	-	-	0.4	-	-	4.4	-	0.7	44.0	0.4	-	-	tr	0.4	546	55	601	90.8	9.2
	2-4	41.0	-	-	-	37.1	1.3	-	-	-	-	-	4.6	15.0	-	-	-	1.0	-	307	-	307	100	0
	1-2	48.8	3.8	-	-	30.4	0.3	0.6	-	-	-	-	1.5	14.3	-	-	-	0.3	-	342	1	343	99.7	0.3
2530A	>4	11.0/3.7	-	-	-	-	-	-	-	-	1.8	-	-	82.2	0.6	-	-	-	0.6	163	-	163	100	0
	2-4	25.1	0.3	-	-	33.9	7.5	-	-	-	-	-	3.4	29.5	0.3	-	-	-	-	319	-	319	100	0
	1-2	27.5	4.2	-	-	29.9	6.2	0.9	-	-	-	-	5.0	25.1	-	-	-	1.2	-	338	3	341	99.1	0.9

GRAIN TYPES (%)

Sample	Size Fraction (mm)	Mollusc Pelecypod / Gastropod	Benthonic Foraminifera	Pelagic Foraminifera	Halimeda	Unidentifiable Carbonate	Blackened Carbonate	Echinoid	Other	Rock Fragment	Barnacle	Alcyonarian	Bryozoan	Coralline Algae	Coral	Millepora	Intraclast	Worm Tube	Crustacean	Number of Carbonate	Number of Terrigenous	Total	% Carbonate	% Terrigenous
2531B+G	>4	11.0/3.1	-	-	-	-	-	0.5	-	-	1.5	-	1.1	82.0	0.6	-	-	-	0.1	2013	-	2013	100	0
	2-4	25.2	-	-	-	36.1	3.8	0.3	-	-	-	-	4.5	27.5	1.3	-	-	1.3	-	313	1	314	99.7	0.3
	1-2	31.4	7.1	-	-	20.2	3.5	0.3	-	-	-	-	1.9	35.0	-	-	-	0.6	-	312	1	313	99.7	0.3
2532I	>4																							
	2-4	22.0	0.3	-	-	46.1	1.6	-	-	-	-	-	5.9	23.5	-	-	-	0.3	0.3	323	-	323	100	0
	1-2	24.0	3.8	-	-	27.5	1.3	0.3	-	-	-	-	2.9	40.2	-	-	-	-	-	313	5	318	98.4	[illegible]
2533A+D	>4	27.3/3.5	-	-	-	-	-	0.3	-	66.1*	0.8	-	1.1	0.8*	0.2	-	-	-	-	1465	-	1465	100	0
	2-4	32.2	0.3	-	-	55.9	-	0.3	-	-	-	-	5.2	5.2	0.3	-	-	0.6	-	308	1	309	99.7	0.3
	1-2	54.6	5.0	-	-	27.0	-	1.2	-	-	-	-	2.4	6.8	0.6	-	-	2.4	-	337	-	337	100	0
2534E+H	>4	30.0/3.2	-	-	0.1	-	-	0.3	-	48.7*	0.2	-	0.9	14.4*	0.2	-	-	1.8	0.2	1233	71	1304	94.6	5.4
	2-4	23.1	-	-	-	42.6	0.3	0.5	0	0	0	0	1.9	30.8	0	0	0	0.8	0	373	2	375	99.5	0.5
	1-2	44.7	17.1	-	-	23.5	-	0.9	-	-	-	-	0.9	10.9	-	-	-	2.0	-	340	0	340	100	0
2535C+G	>4	48.9/6.7	-	-	-	-	-	42.5	-	-	-	-	0.2	-	-	-	-	-	1.7	464	-	464	100	0
	2-4	56.3	1.1	-	-	1.1	-	40.1	-	-	-	-	0.8	0.3	-	-	-	0.3	-	369	-	369	100	0
	1-2	52.8	21.7	0.3	-	-	-	24.9	-	-	-	-	-	0.3	-	-	-	-	-	318	-	318	100	0
2536A+H	>4	63.9/10.	-	-	-	-	-	23.3	0.5 Bone	-	-	-	0.5	-	1.8	-	-	-	-	391	-	391	100	0
	2-4	78.6	9.4	-	-	1.2	-	8.7	-	-	-	-	2.1	-	-	-	-	-	-	332	-	332	100	0
	1-2	59.0	35.8	0.3	-	0.3	-	3.4	-	-	-	-	0.6	-	-	-	-	0.6		327	1	328	99.7	0.3
2637B+G	>4	81.1/2.3	-	-	-	-	-	8.1	-	-	0.3	-	-	-	-	-	-	-	0.8	397	-	397	100	0
	2-4	89.5	-	-	-	-	-	9.3	-	-	-	-	0.3	-	-	-	0.9	-	-	334	-	334	100	0
	1-2	78.5	1.3	-	-	-	-	19.2	-	-	-	-	0.7	-	-	-	0.3	-	-	312	1	313	99.7	0.3
2638A+D	>4	67.5/7.9	-	-	-	-	-	22.5	0.3 Bone	0.3	0.7	-	0.7	-	-	-	-	-	-	302	-	302	100	0
	2-4	80.0	-	-	-	-	-	15.8	0.6 Pellet	-	-	-	0.6	-	-	-	3.0	-	-	330	-	330	100	0
	1-2	74.2	-	-	-	-	0.3	24.3	-	-	-	-	-	-	-	-	0.6	0.6	-	333	-	333	100	0
2639B+C	>4	88.2/2.3	-	-	-	-	-	3.4	0.2 Wood	0.8	0.3	0.4 Scaphopod	0.4	0.1	-	-	-	-	0.3	1250	-	1250	100	0
	2-4	96.8	0.3	-	-	-	0.3	1.3	-	-	-	-	1.0	-	-	-	-	-	0.3	313	-	313	100	0
	1-2	90.0	0.6	-	-	-	1.3	7.2	-	-	-	-	0.9	-	-	-	-	-	-	320	-	320	100	0

*Encrusted Rock Fragments

GRAIN TYPES (%)

Sample	Size Fraction (mm)	Mollusc (Pelecypod/Gastropod)	Benthonic Foraminifera	Pelagic Foraminifera	Halimeda	Unidentifiable Carbonate	Blackened Carbonate	Echinoid	Other	Rock Fragment	Barnacle	Alcyonarian	Bryozoan	Coralline Algae	Coral	Millepora	Intraclast	Worm Tube	Crustacean	Number of Carbonate	Number of Terrigenous	Total	% Carbonate	% Terrigenous
2640G+H	>4	90.3/5.0	-	-	-	-	-	2.4	-	-	0.3	-	0.4	0.8	0.1	-	-	-	0.7	1341	-	1341	100	0
	2-4	97.0	-	-	-	0.3	-	0.6	-	-	-	-	2.1	-	-	-	-	-	-	328	-	328	100	0
	1-2	92.9	-	-	-	1.6	0.9	1.2	-	-	-	-	2.2	0.6	0.3	-	-	0.3	-	323	7	330	97.9	2.1
2641E+H	>4	85.6/4.8	-	-	-	-	-	7.7	-	-	1.0	-	-	-	-	-	-	-	1.0	104	-	104	100	0
	2-4	96.4	-	-	-	0.9	-	1.8	-	-	-	-	0.6	-	-	-	-	0.3	-	334	-	334	100	0
	1-2	94.0	1.0	-	-	0.6	0.3	2.8	-	-	-	-	1.0	-	-	-	-	-	0.3	317	-	317	100	0
2642G+H	>4	80.8/12.6	-	-	-	-	-	4.4	-	-	0.4	-	0.8	-	-	-	-	-	1.0	1057	-	1057	100	0
	2-4	94.7	-	-	-	0.3	-	3.1	-	-	-	-	1.9	-	-	-	-	-	-	322	-	322	100	0
	1-2	89.5	0.9	-	-	0.6	-	3.0	-	-	-	-	5.4	0.6	-	-	-	-	-	334	2	336	99.4	0.6
2643D	>4	50.5/8.3	-	-	-	-	-	2.1	-	-	-	-	4.9	31.8	1.5	-	-	0.6	0.2	471	-	471	100	0
	2-4	16.3	-	-	-	48.0	12.8	0.6	-	-	-	-	4.4	16.6	-	-	-	1.3	-	319	-	319	100	0
	1-2	10.3	11.6	-	-	50.0	7.4	0.3	-	-	-	-	2.9	16.5	0.3	-	-	0.7	-	310	1	311	99.7	0.3
2644B	>4	71.0/4.1	-	-	-		-	0.2	-	71.6*	-	-	4.6	*	1.5	-	-	0.2	0.2	458	-	458	100	0
	2-4	19.6	0.9	-	-	59.2	-	-	-	-	-	-	5.2	12.0	0.6	-	-	2.5	-	326	-	326	100	0
	1-2	22.3	23.5	-	-	41.7	3.1	0.3	-	-	-	-	1.0	7.8	-	-	-	0.3	-	319	-	319	100	0
2645B	>4	17.4/6.3	-	-	-	-	-	0.6	-	-	-	-	0.4	74.5	0.4	-	-	-	0.4	478	-	478	100	0
	2-4	18.5	-	-	-	27.3	0.3	0.3	-	-	-	-	2.5	49.5	0.3	-	-	1.3	-	319	-	319	100	0
	1-2	27.4	34.0	-	-	14.9	-	0.9	-	-	-	-	1.8	20.7	-	-	-	0.3	-	329	-	329	100	0

*Encrusted Rock Fragments

APPENDIX IV

Excerpt from 1974 Final Report

CHARACTERIZATION OF CARBONATE SAND* FRACTION

FROM MAFLA AREAS I, II, AND III.

by -

Harold R. Wanless and Jeff Dravis

General Characteristics

Bottom sediments in MAFLA Study Areas I, II, and III are dominated by carbonate in the sand fractions (>62 micron material). Where non-carbonate material is present in significant amounts, it increases in abundance in the finer sand fractions (see carbonate : non-carbonate block composition diagrams, Appendix VII).

Mollusk and shell fragments are the predominant grain type in all size fractions (>2000, 2000-1000, 1000-500, 500-250, 250-125, and 125-62 microns) in nearly all samples (see carbonate sand constituent block composition diagrams, Appendix VI). All other grain types show large variations in abundances either between areas or within areas.

Skeletal grain types tend to predominate in that size fraction associated with the size of the unbroken grain or the physically stable fragment and decrease in abundance in finer sand fractions. That is, the mollusk shell grains decrease in abundance from the coarser to finer sand sizes (from whole to fragmental). Bryozoan fragments, *Halimeda* plates, and echinoid plates and spines show a similar distribution. Ostracod tests, sponge spicules and alcyonarian spicules occur only in the finer fractions.

---

* Included in this study are skeletal and non-skeletal calcium carbonate grains and also opalline silica sponge spicules, friable grain aggregates (fecal pellets and intraformational conglomerate - intraclasts) and limestone rock fragments.

Non-skeletal grain types show a less predictable size distribution. There are commonly less unidentified grains in the finer sand fractions. This is a sharp contrast to the trends of shallow water carbonate sediments in southeast Florida and the Bahamas. The abundance of unidentifiable grains in the coarser fractions appears to reflect more intense rock-boring organism activity into coarser sand grains.

The maps documenting distribution of the carbonate sediment attributes (see Appendix No. IX) summarize most accurately variations between samples and areas. From these maps, three important features stand out:

1) In the size fractions greater than 500μ, there is large variation in grain type abundance between samples that reflect variations in substrate (rock vs. sediment) local abundance of skeletal producing organisms, local fecal pellet production or local intraclast formation. Grouping of these attributes commonly cut sharply across bathymetric contours.

2) In the size fractions less than 500 microns, variations between samples commonly either decrease or display groupings that trend more parallel to the bathymetric contours. These distributions indicate that bottom wave and current energy has been important in redistributing the more transport prone finer sediment fractions.

3) Weathering characteristics of a grain type displays a quite different distribution pattern than the abundance of the associated attribute (see maps of Mollusk and Mollusk Weathering in 2000-1000 micron size fraction, Appendix IX).

Weathering reflects substrate character, degree of grain exposure, time that grains spend at the surface, transport character, accumulating : relic lag surface.

AREA I

Carbonate constituents comprise nearly 100 per cent of the coarser than 250 micron sand fractions in Area I (samples 55a to 65a). Terrigeneous material increases in the finer fractions so that the 125 to 62 micron fraction is reduced to 60 to 80 per cent carbonate.

Sample 55a, from well seaward of the other sample sites, is unique from this area in having: (a) a large percentage of less than 62 micron sized grains, (b) an abundance of fecal pellet grains (over 30 per cent in the 500-250 and 250-125 micron fractions), and (c) an abundance of pelagic foraminifera.

Other samples are dominated by mollusks and benthic foraminifera. Other skeletal grains display a wide variation and show few persistent trends from sample to sample and in different size fractions.

Samples from Area I contain several grain attributes that provide a striking contrast with samples from Area II. Most striking is the weathering of coarse skeletal grains. In Area I, for example, coarse mollusk grains are predominantly fresh (unworn), fresh and angularly fragmented, or fresh and physically worn in contrast with the biocorroded and encrusted nature of grains from Area II. Bryozoa , coralline algae, and alcyonarian spicules are in general less abundant in Area I; benthic foraminifera and intraclasts are more abundant in Area I. The per cent of the carbonate sand fraction that is greater than 250 microns increases from Area I to Area II (except for samples 62a and 55a).

AREA II

Carbonate sands from Area II are dominated by mollusks, and the coarser skeletal fractions are characterized by moderate to intense biocorrosion and encrustation. Thirty to 97 per cent of the carbonate sand fraction is coarser than 250 microns (except for sample 52a from the southeastern part of the area with 17 per cent). Terrigeneous constituents are more abundant in the less than 250 micron fractions. They constitute less than 15 per cent of these finer size fractions in the southern part of Area II (samples 44a, 45a, 47a, 48a, 52a) and from 20 to 50 per cent in the northern part.

Coarse skeletal grains vary widely in abundance reflecting marked variations in substrate and skeletal producing benthic communities. Samples from the middle ground proper (42a, 46a, 47a, 48a) contain an abundance of bryozoan, echinoderm plate, alcyonarian spicules or sponge spicules and are low in blackened carbonate grains. Certain of these grain types are also abundant in adjacent areas, but blackened carbonate grains increase. Benthic and pelagic foraminifera display wide variation. Although this area is characterized in the literature (Ginsburg and James, 1974) as having sediment characterized by coralline algae, such fragments are only a very minor grain constituent throughout the area.

AREA III

The most helpful way to understand the marked variations in sedimentary attributes within Area III is to thumb through the maps of sediment attribute distribution in Appendix IX. Four important trends stand out:

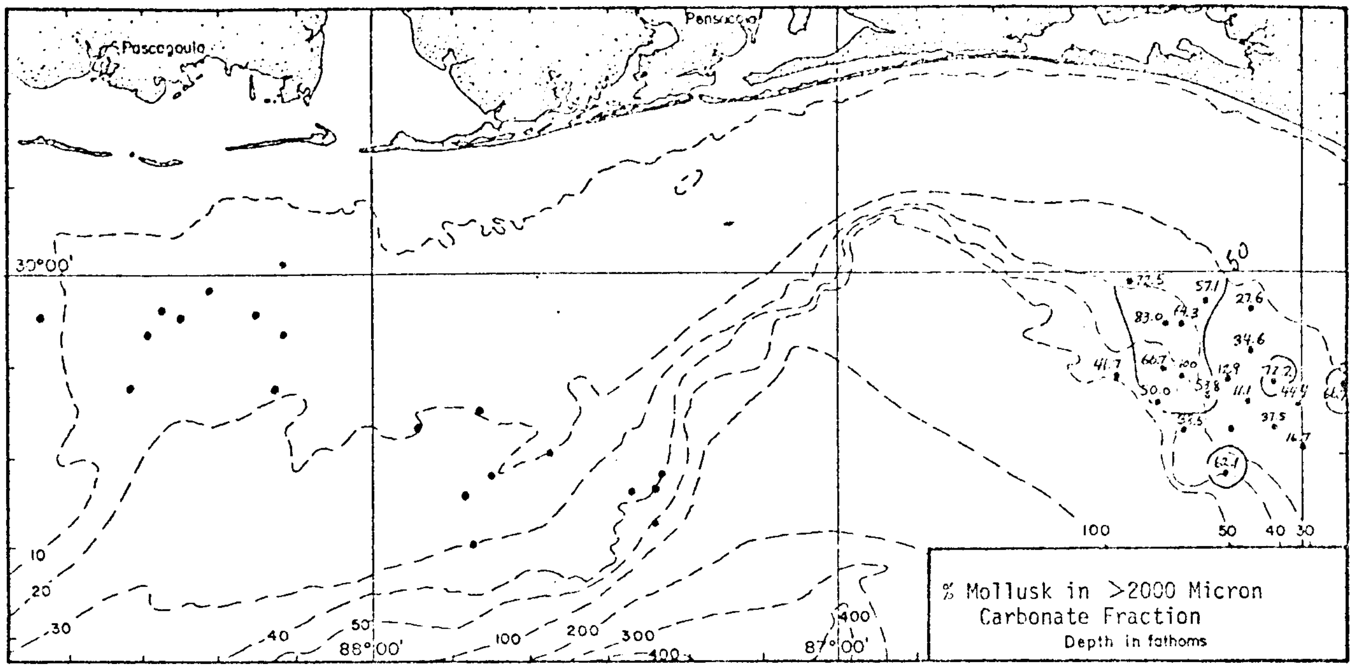
1) The abundance of carbonate constituents within each sand size fraction <u>increases to the west</u>. In the coarser fractions the

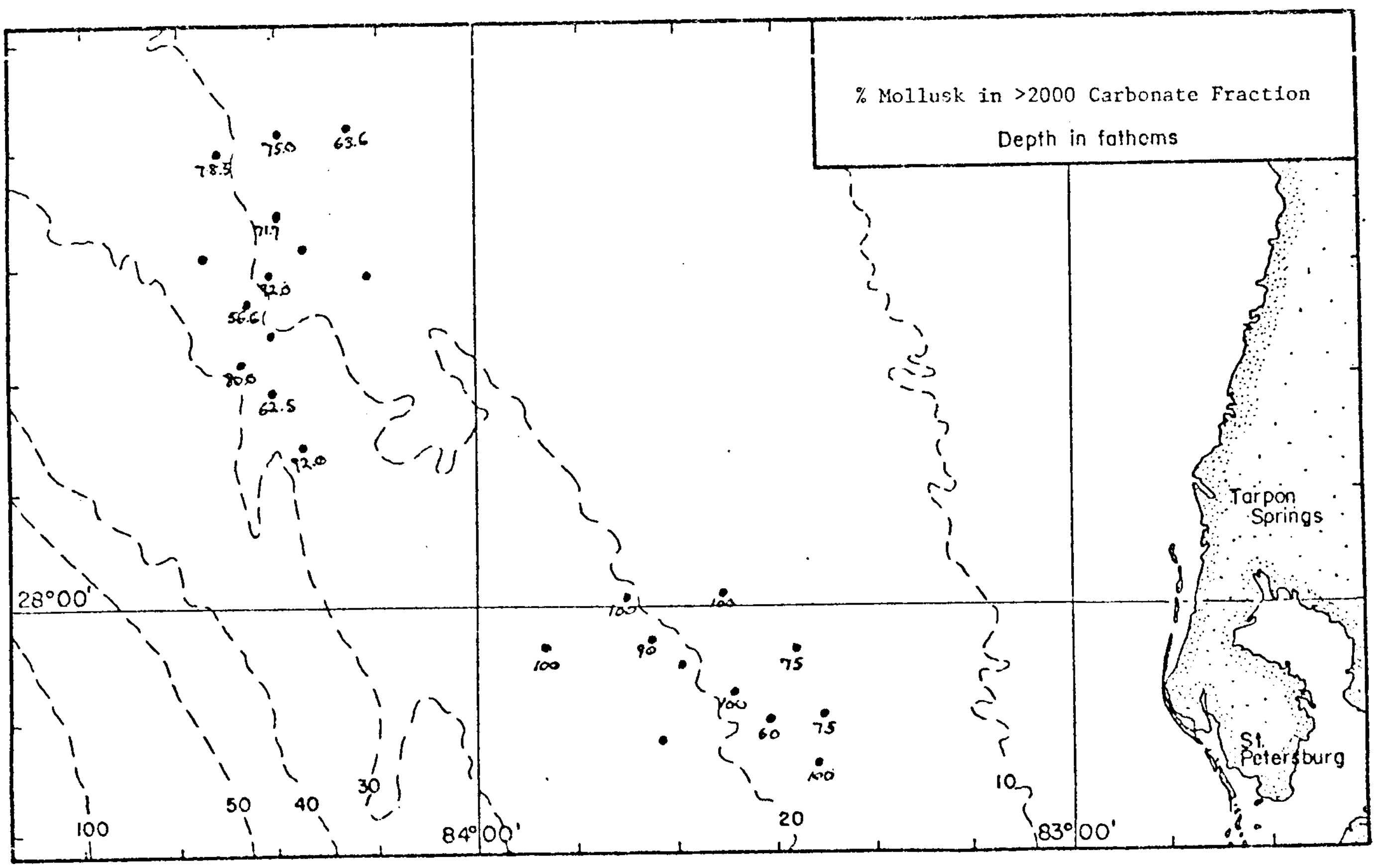
zones trend across bathymetric contours. In finer sand fractions, zones skew and begin to reflect bathymetric contours.

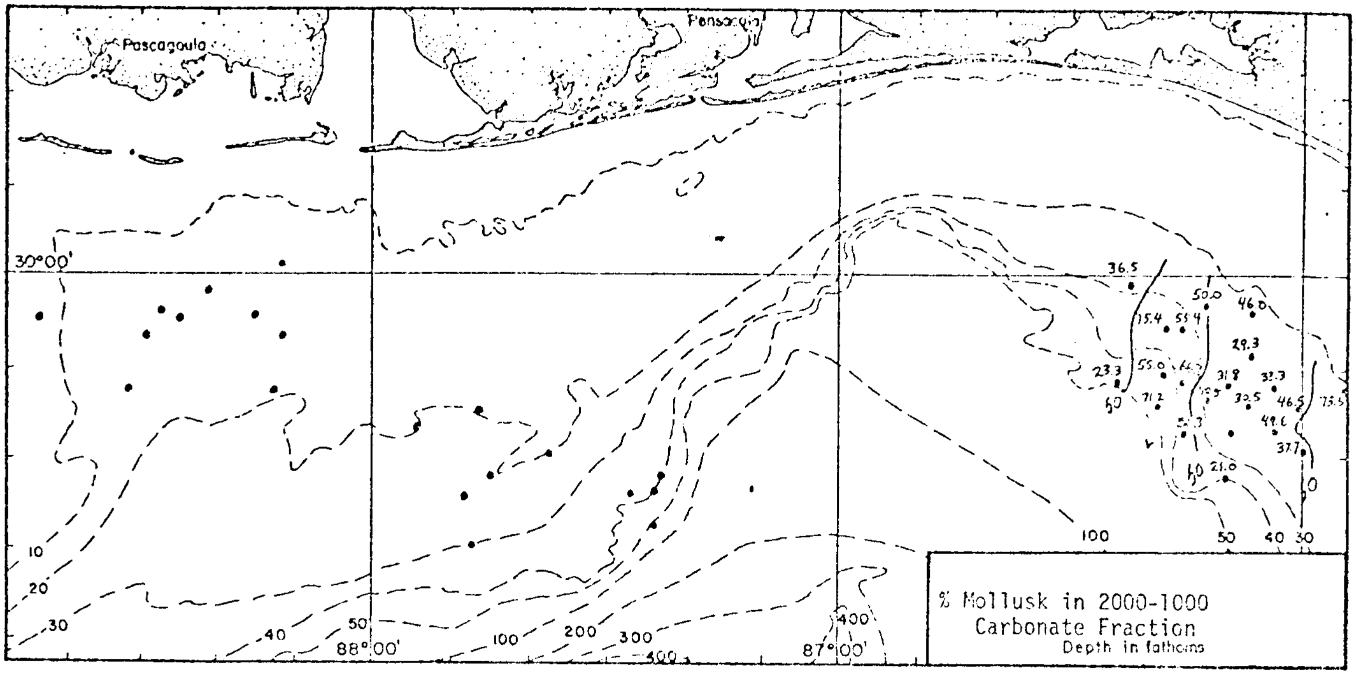
2) Groupings of coarse carbonate constituents trend transverse to bathymetric contours. Specific grouping shifts somewhat from attribute to attribute. Five stations repeatedly stand out as differing from others, samples 23-25 and 27 trending across the central part of Area III and the easternmost sample 41a are characterized by having a small percentage of the carbonate sand fraction greater than 250 microns, having an abundance of mollusk, (fresh and angularly fragmented), echinoid and pellet grains, and a paucity of bryozoan, coralline algae, and blackened carbonate grains. Stations 25a and 27a, sitting in a slight bathymetric re-entrant, are rich in pelagic foraminifera. Stations 34a - 38a are characterized by an abundance of coralline algae grains.

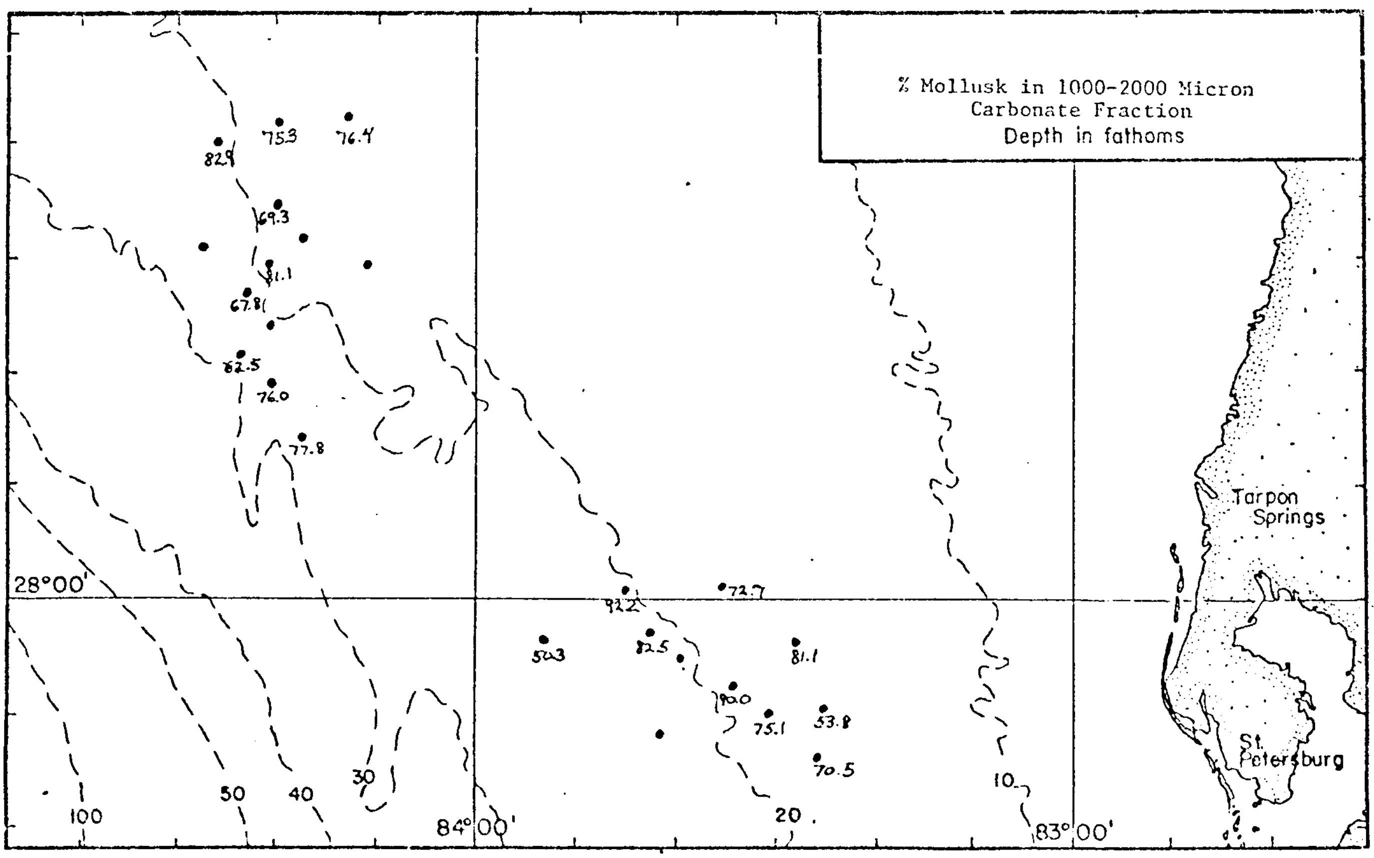
3) Groupings of attributes shift markedly in finer sand fractions to essentially parallel bathymetric contours. This is especially apparent in % carbonate, mollusk, benthic foraminifera, and echinoderm.

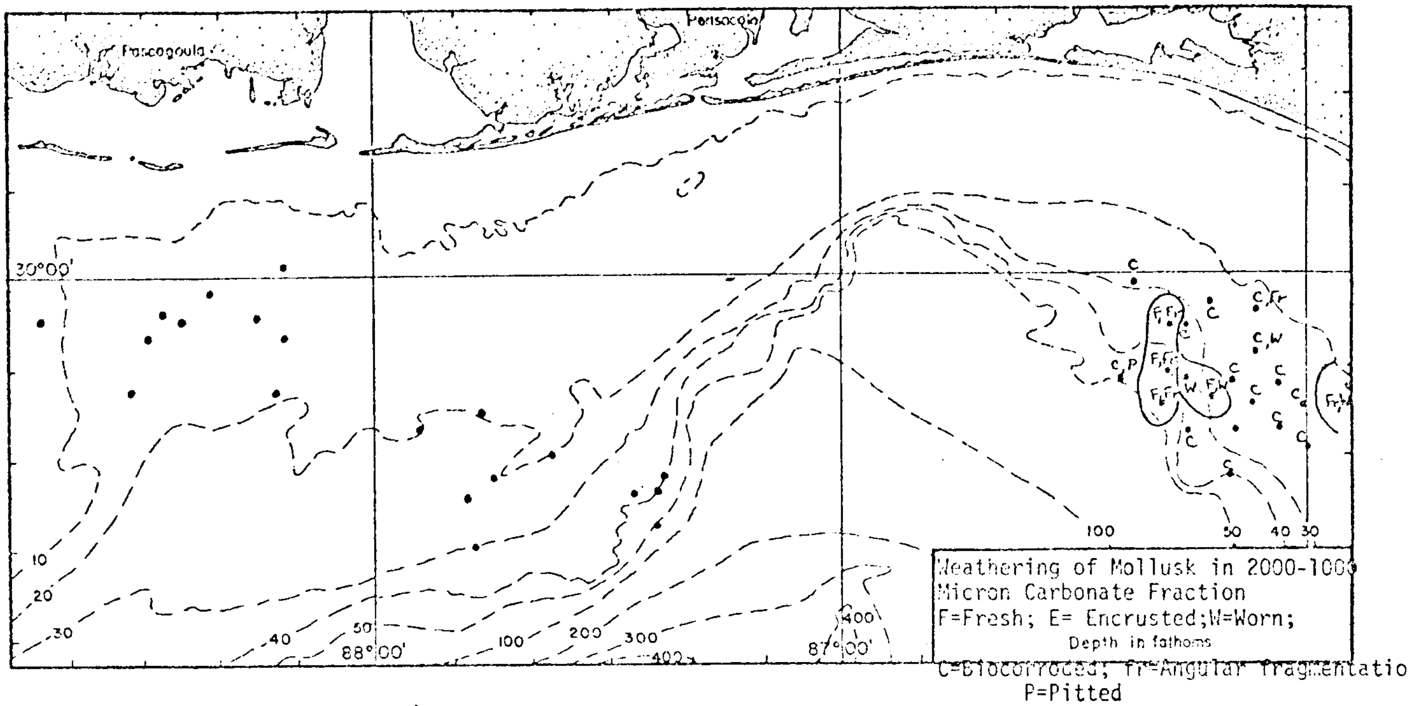
4) Ostracods display a somewhat different distribution pattern, being present towards the west and absent towards the east.

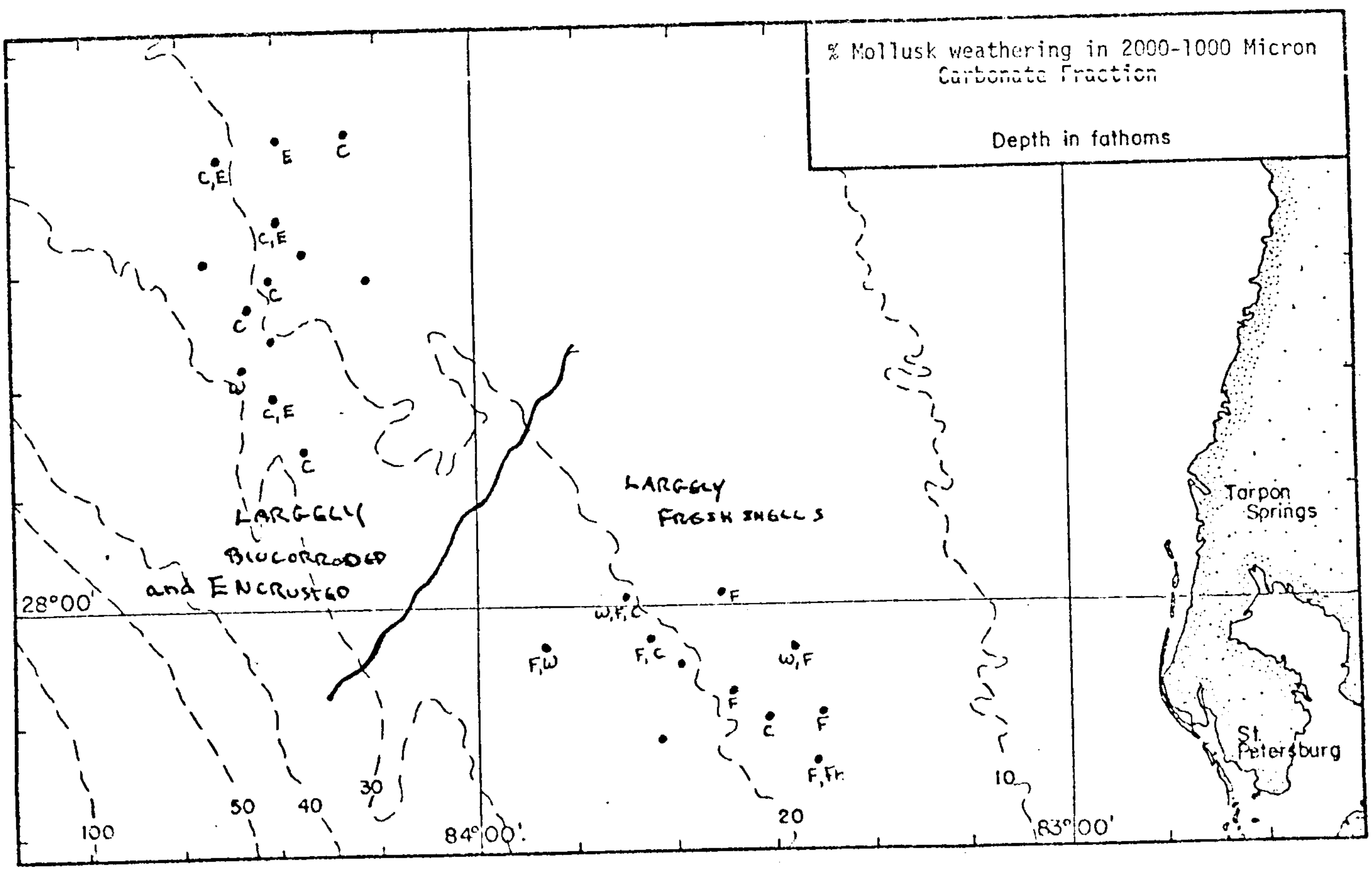

Pascagoula
Pensacola
30°00'
88°00'
87°00'
10
20
30
40
50
100
200
300
400
% Mollusk in >2000 Micron Carbonate Fraction
Depth in fathoms

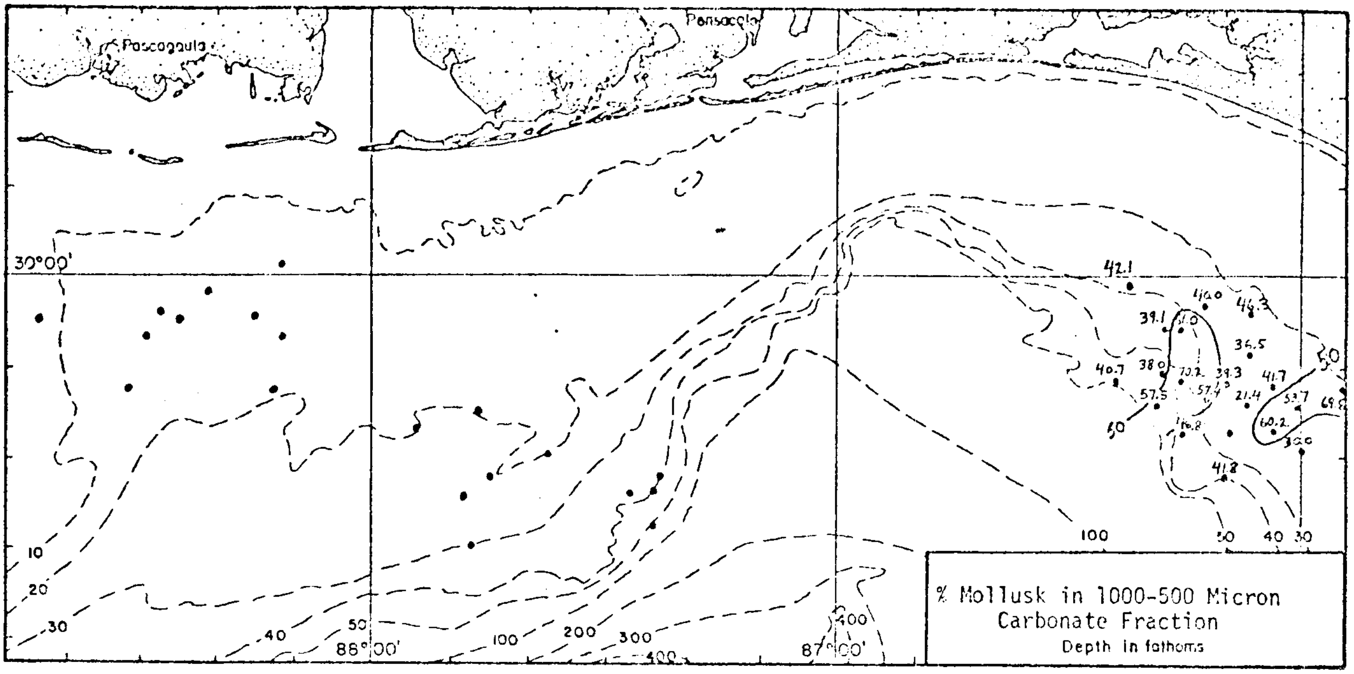

% Mollusk in >2000 Carbonate Fraction
Depth in fathoms
Tarpon Springs
St. Petersburg
28°00'
84°00'
83°00'
100
50
40
30
20
10


Pascagoula
Pensacola
30°00'
88°00'
87°00'
10
20
30
40
50
100
200
300
400
% Mollusk in 2000-1000
Carbonate Fraction
Depth in fathoms

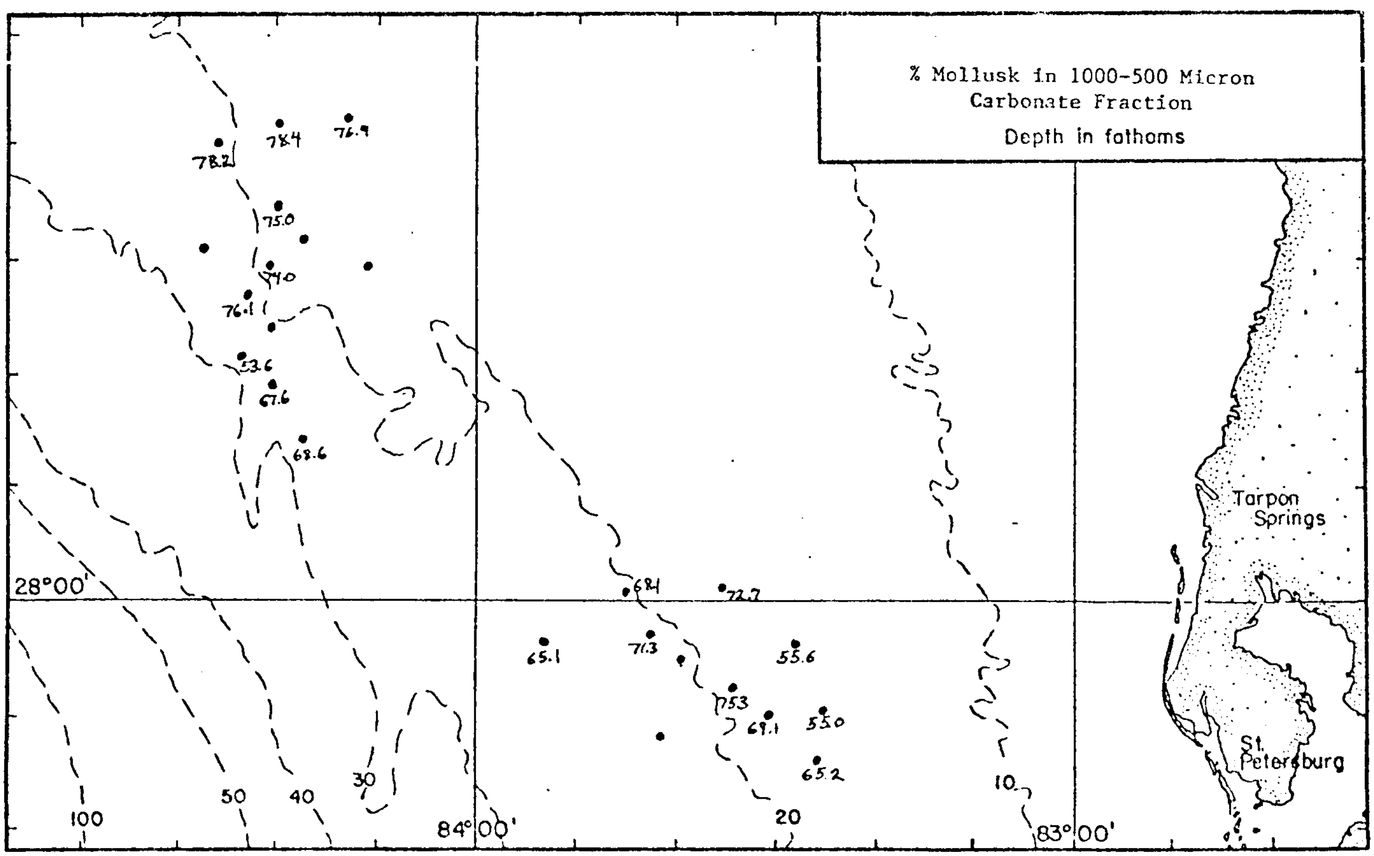

% Mollusk in 1000-2000 Micron
Carbonate Fraction
Depth in fathoms
Tarpon
Springs
St.
Petersburg
28°00'
84°00'
83°00'
100
50
40
30
20
10
75.3
76.4
82.9
69.3
81.1
67.8
82.5
76.0
77.8
92.2
72.7
50.3
82.5
81.1
90.0
75.1
53.8
70.5


Pascagoula
Pensacola
30°00'
88°00'
87°00'
10
20
30
40
50
100
200
300
400
Weathering of Mollusk in 2000-1000 Micron Carbonate Fraction
F=Fresh; E= Encrusted;W=Worn;
Depth in fathoms
C=Biocorroded; Fr=Angular fragmentation
P=Pitted

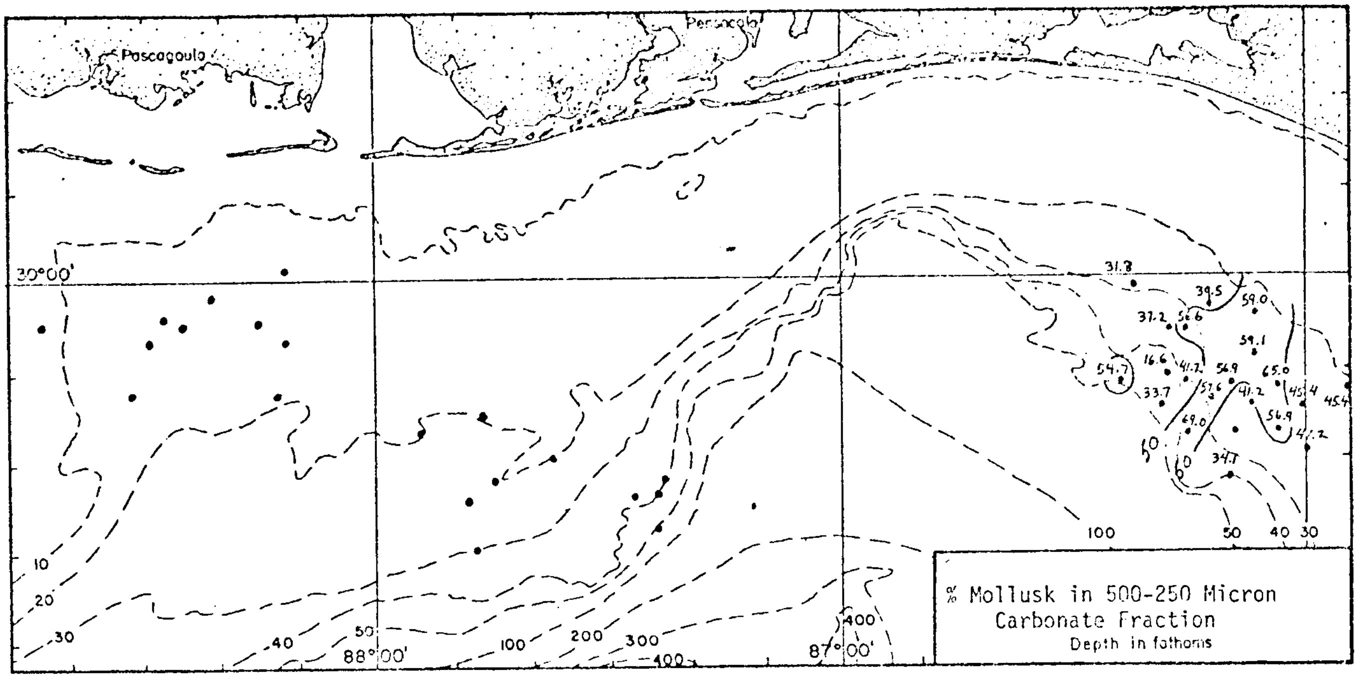

% Mollusk weathering in 2000-1000 Micron Carbonate Fraction
Depth in fathoms
LARGELY BIOCORRODED and ENCRUSTED
LARGELY FRESH SHELLS
28°00'
84°00'
83°00'
Tarpon Springs
St. Petersburg
10
20
30
40
50
100

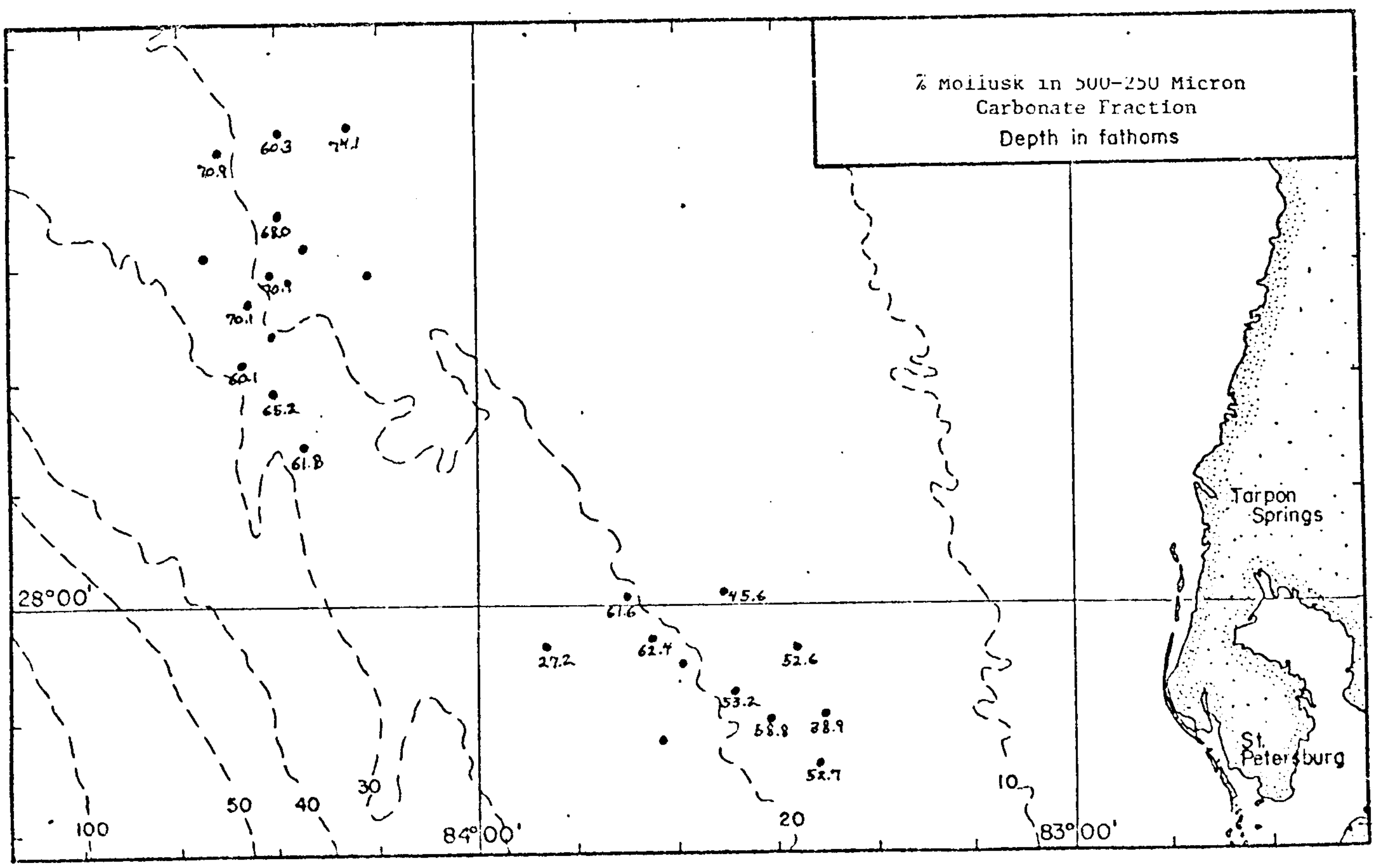


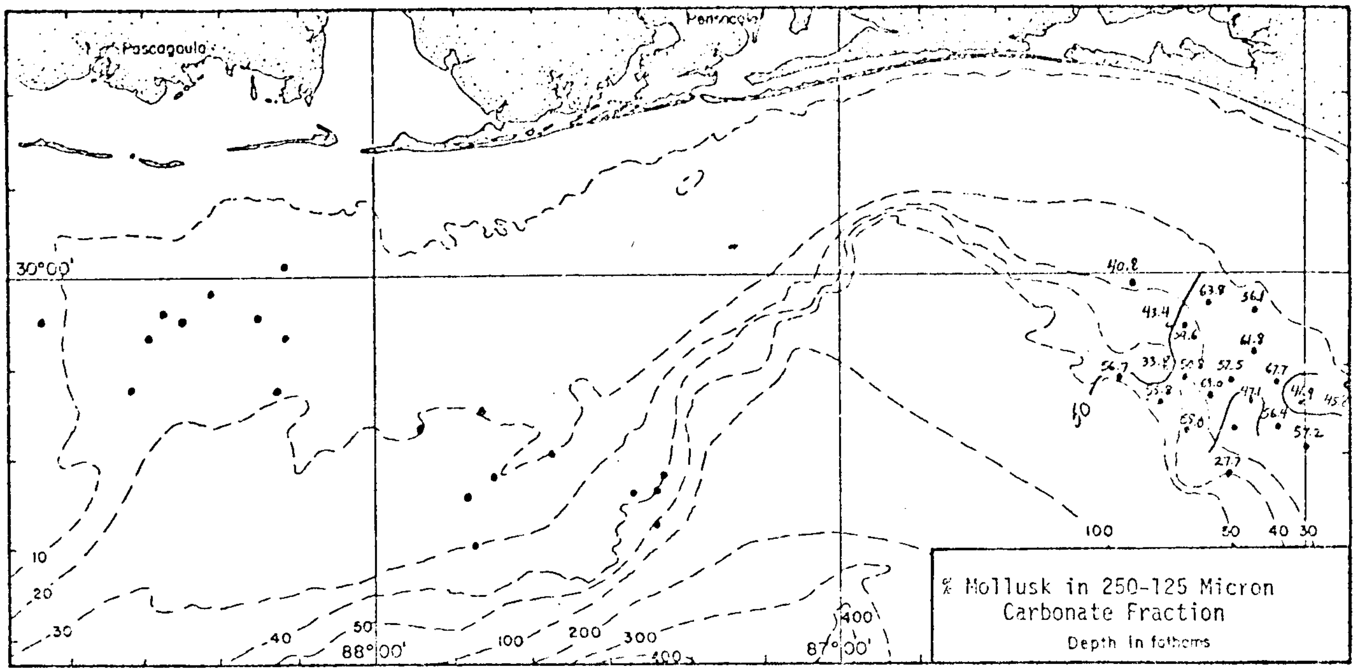
% Mollusk in 1000-500 Micron Carbonate Fraction
Depth in fathoms

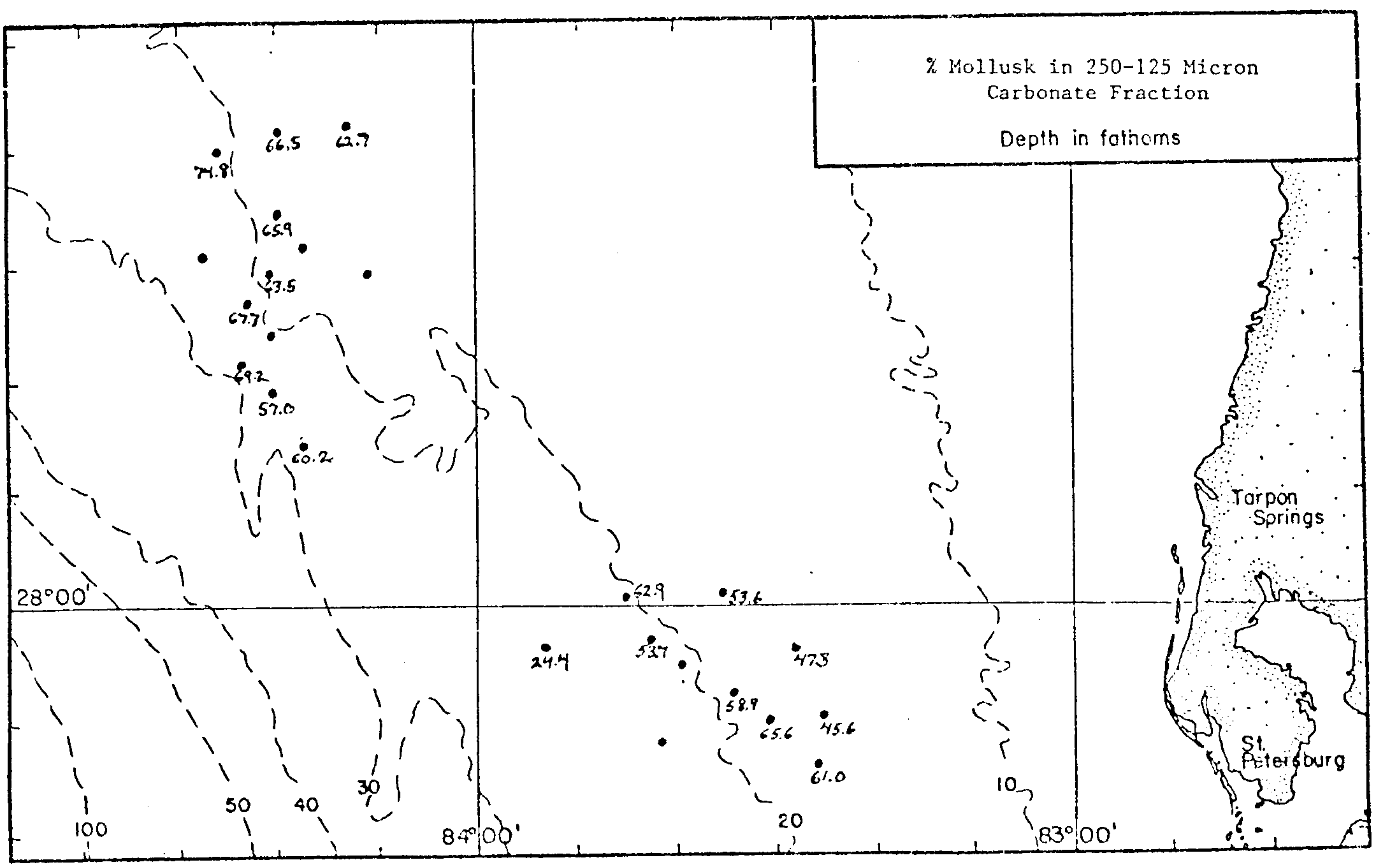


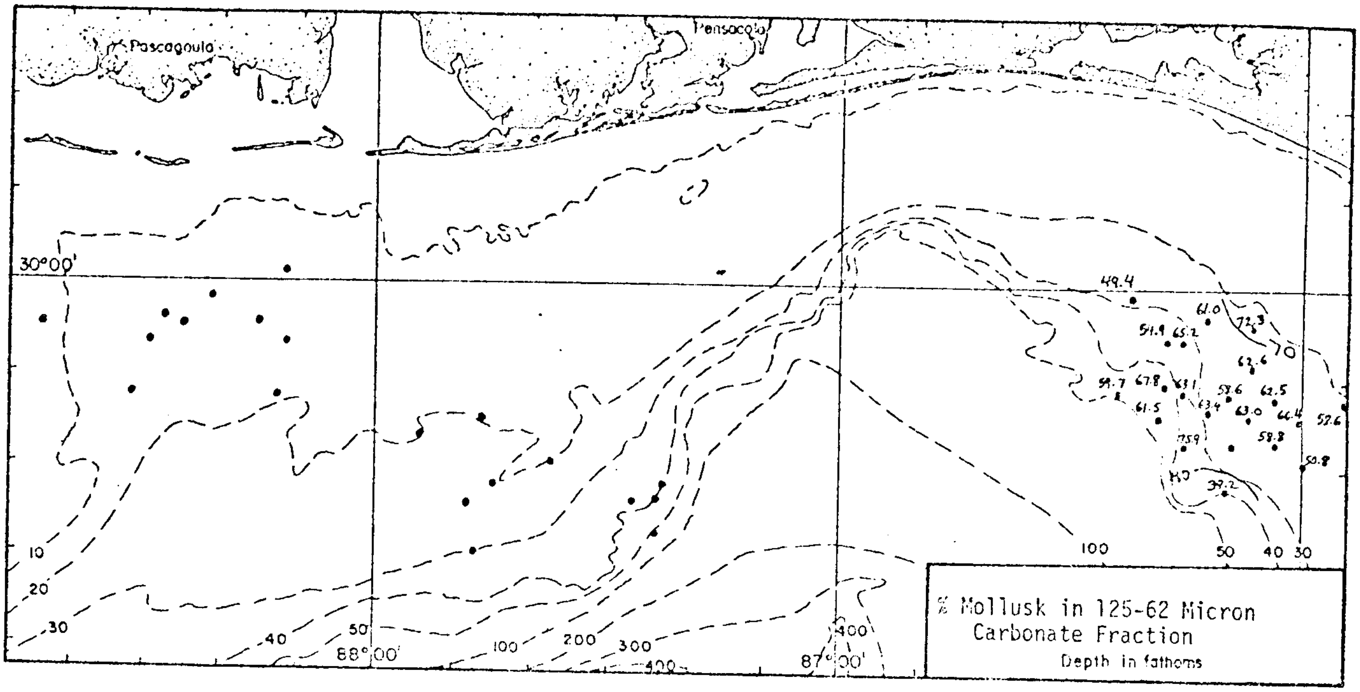
% Mollusk in 1000-500 Micron Carbonate Fraction
Depth in fathoms

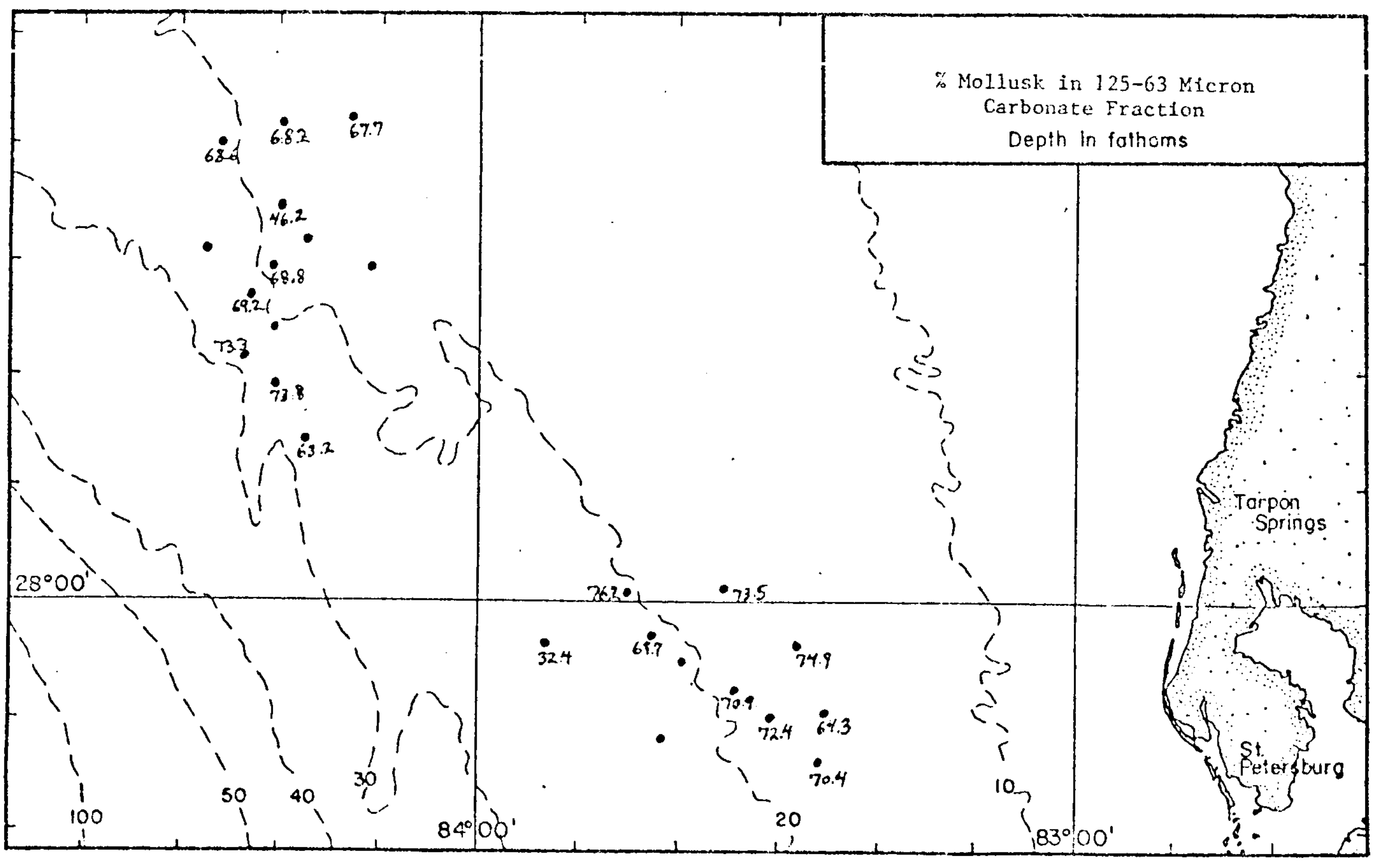

Pascagoula
Pensacola
30°00'
88°00'
87°00'
% Mollusk in 500-250 Micron
Carbonate Fraction
Depth in fathoms

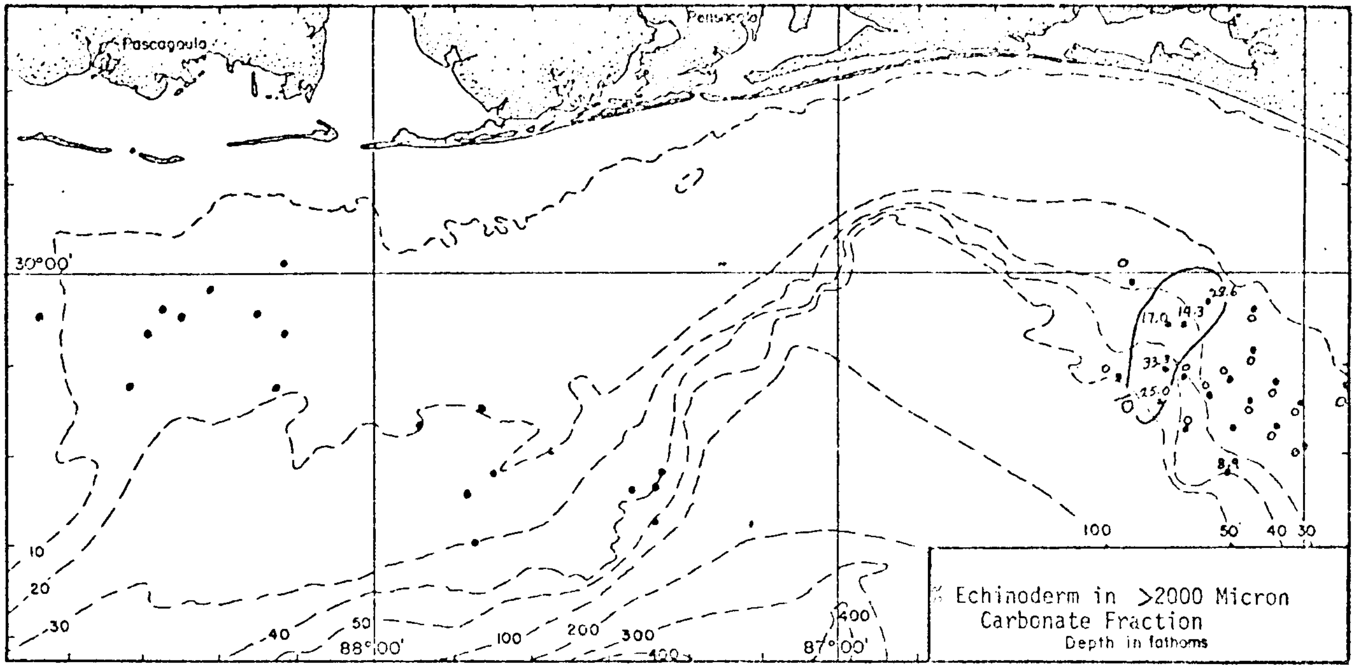

% Mollusk in 500-250 Micron
Carbonate Fraction
Depth in fathoms
Tarpon Springs
St. Petersburg
28°00'
84°00'
83°00'

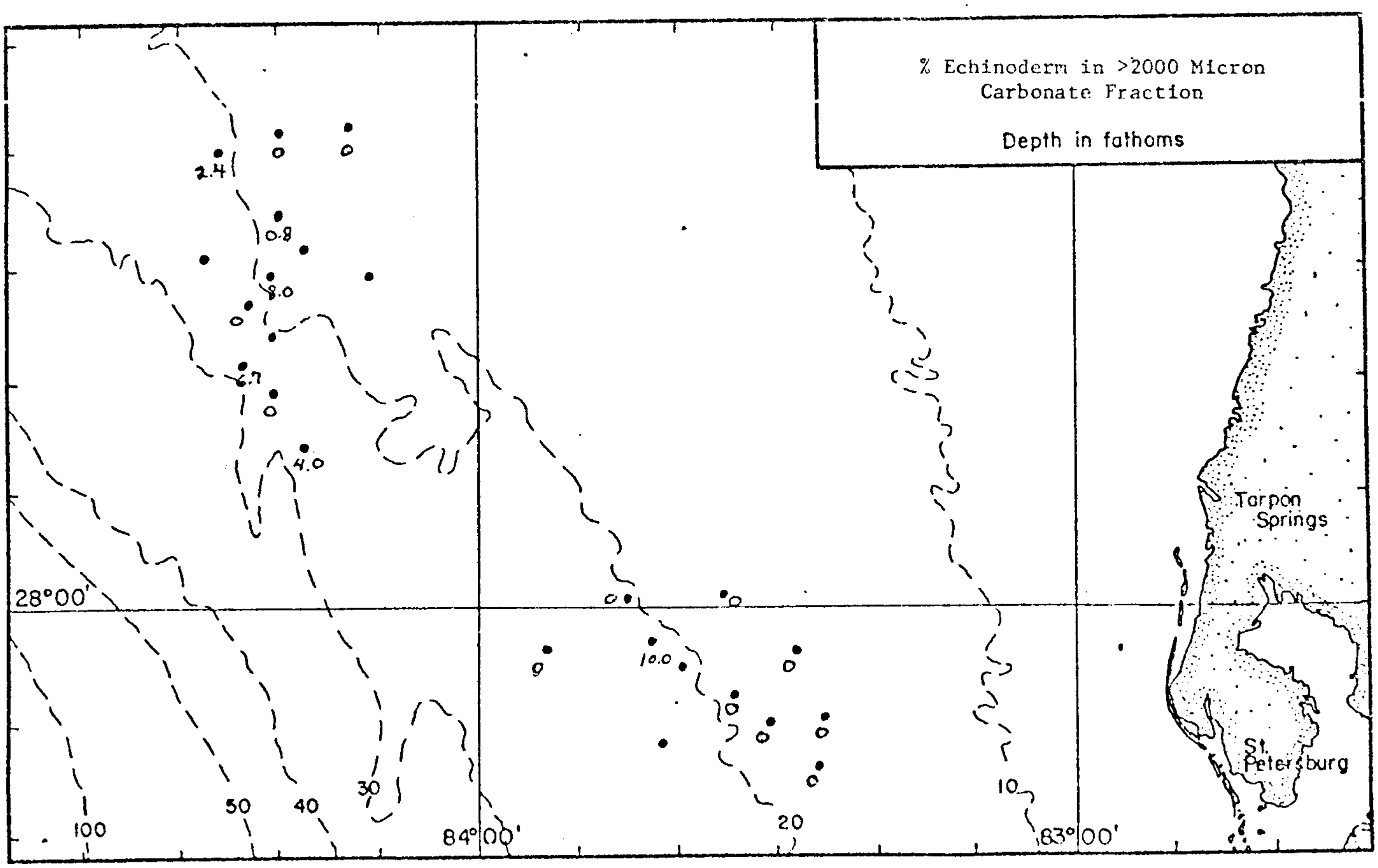

Pascagoula
Pensacola
30°00'
88°00'
87°00'
10
20
30
40
50
100
200
300
400
% Mollusk in 250-125 Micron
Carbonate Fraction
Depth in fathoms

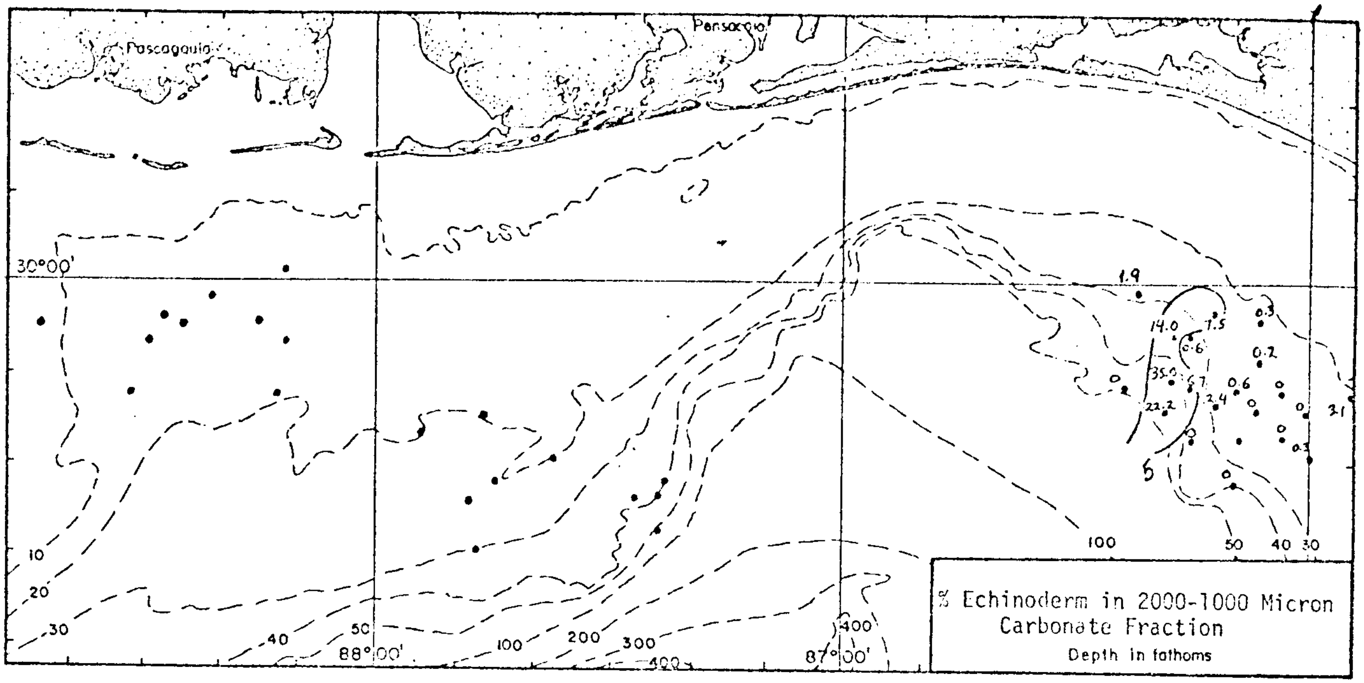

% Mollusk in 250-125 Micron
Carbonate Fraction
Depth in fathoms
66.5
71.8
65.9
67.7
57.0
60.2
52.9
53.6
24.4
53.7
47.3
58.9
65.6
45.6
61.0
Tarpon
Springs
St.
Petersburg
28°00'
84°00'
83°00'
100
50
40
30
20
10

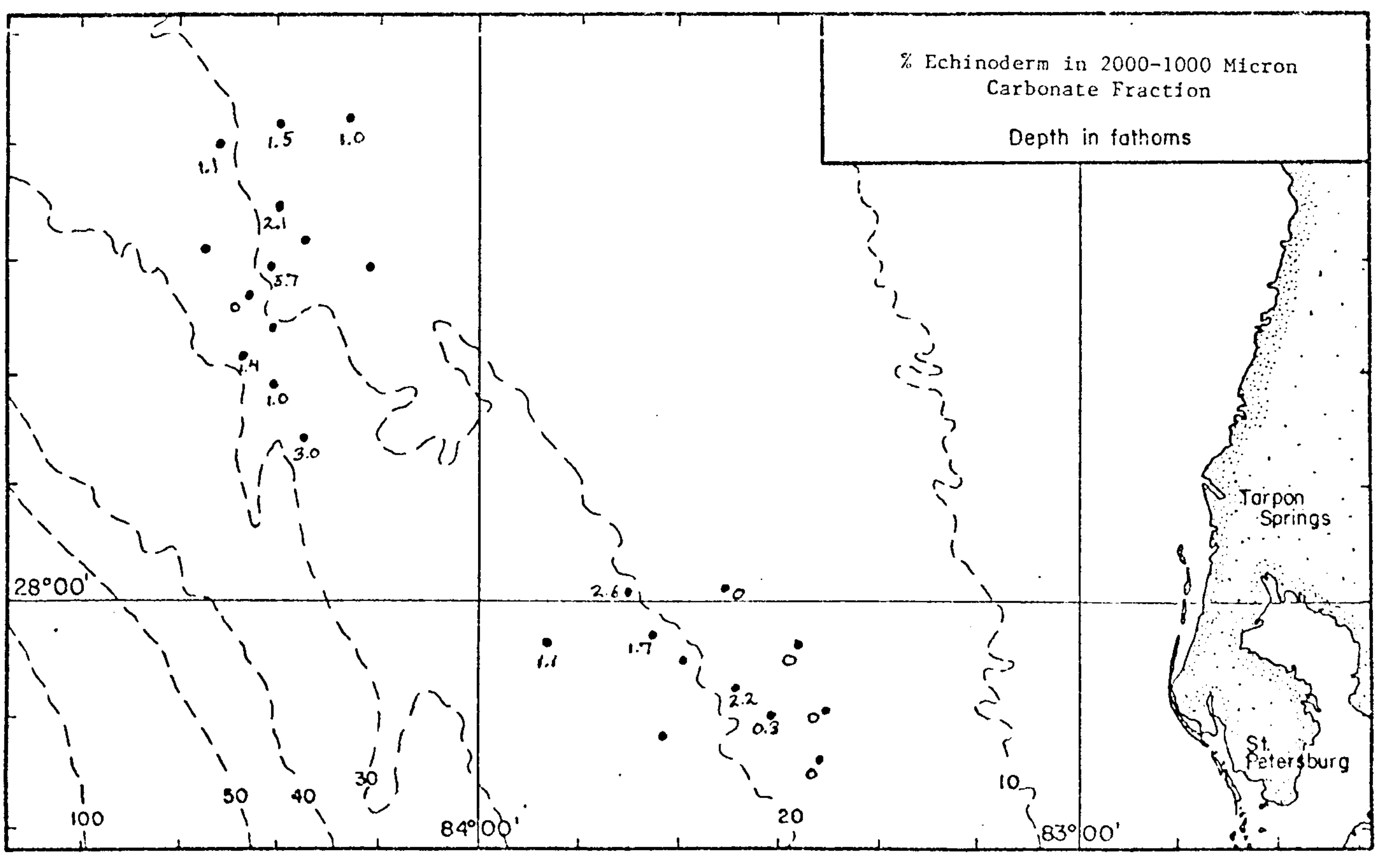

Pascagoula
Pensacola
30°00'
88°00'
87°00'
10
20
30
40
50
100
200
300
400
% Mollusk in 125-62 Micron Carbonate Fraction
Depth in fathoms

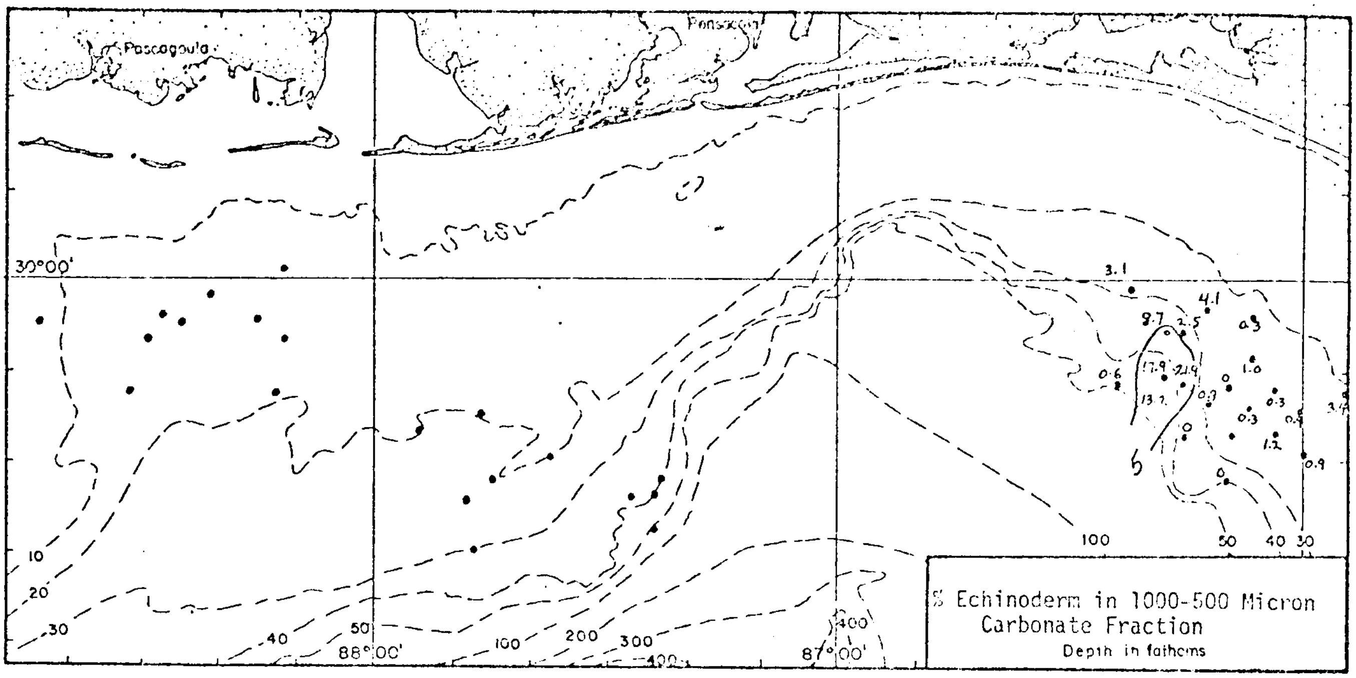

% Mollusk in 125-63 Micron Carbonate Fraction
Depth in fathoms
Tarpon Springs
St. Petersburg
28°00'
84°00'
83°00'
100
50
40
30
20
10

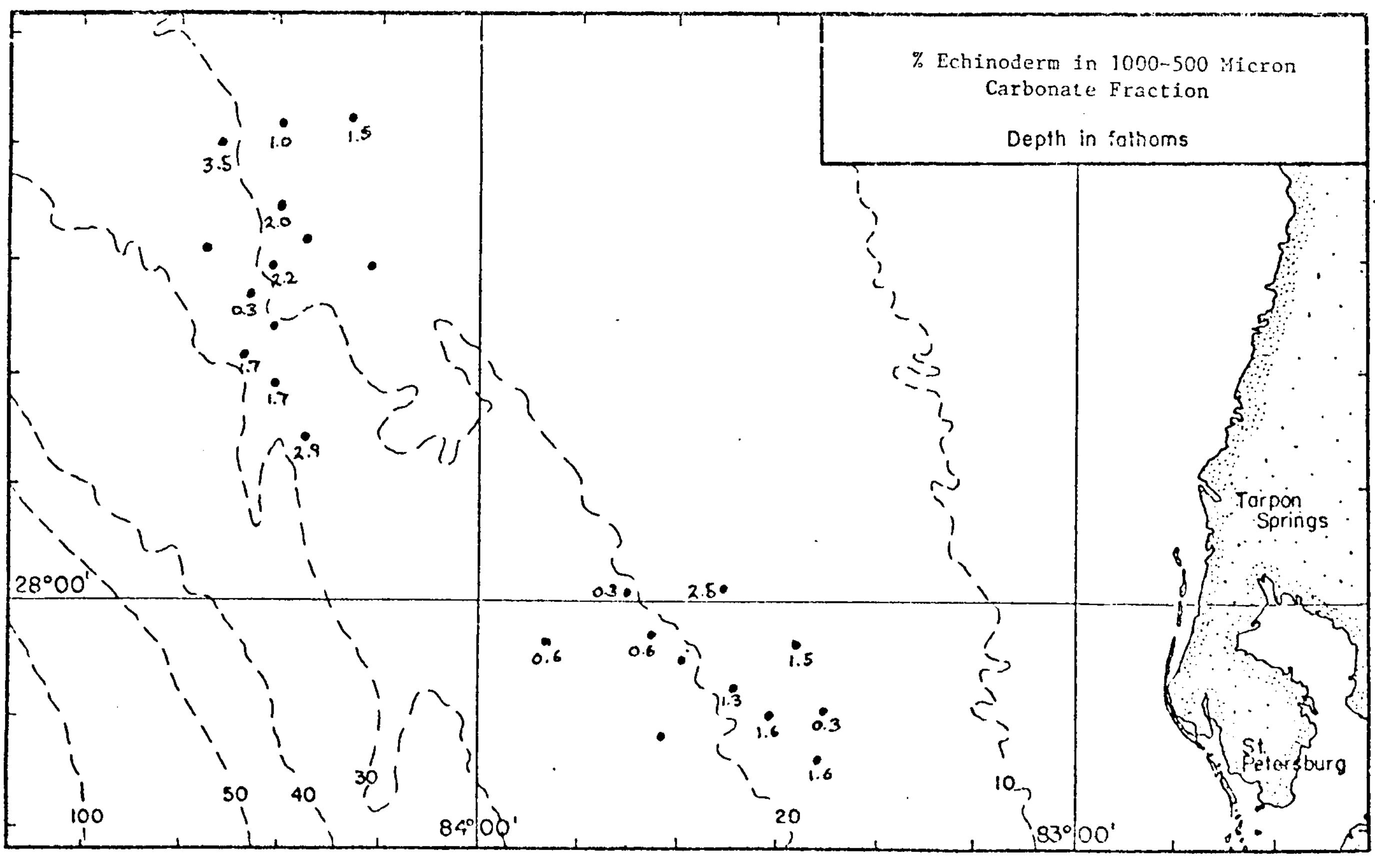

Pascagoula
Pensacola
30°00'
88°00'
87°00'
10
20
30
40
50
100
200
300
400
% Echinoderm in >2000 Micron Carbonate Fraction
Depth in fathoms

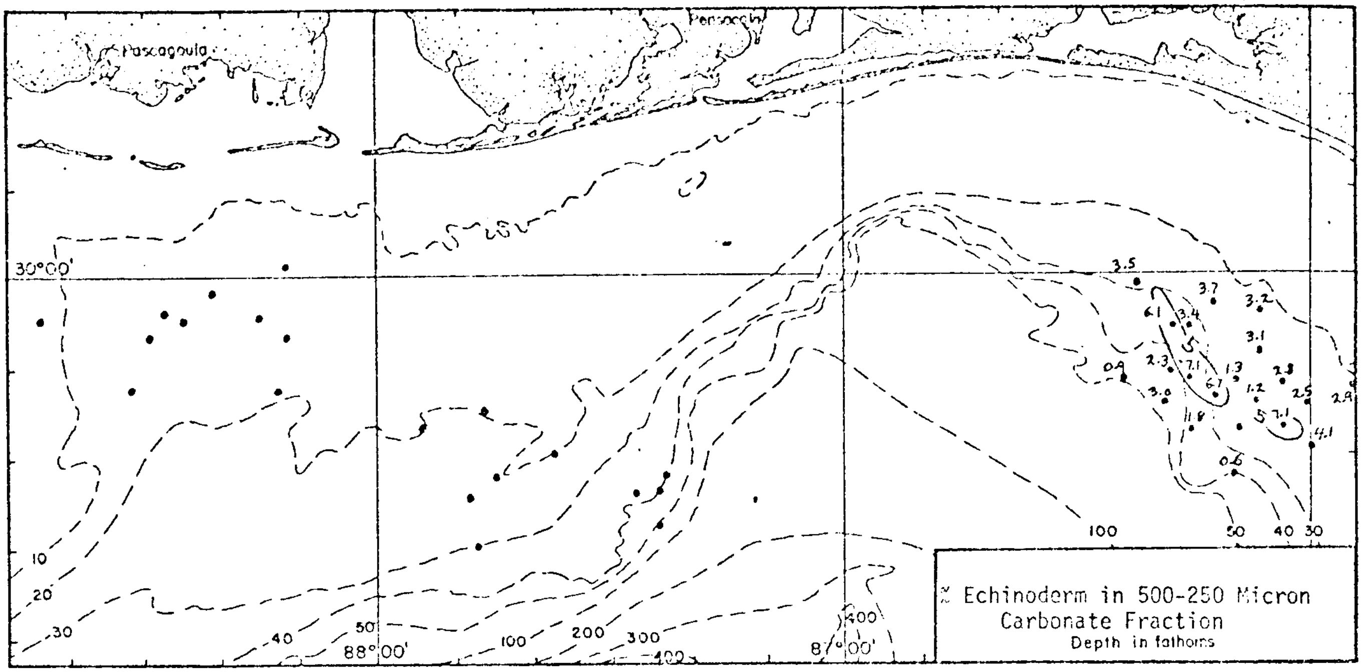

% Echinoderm in >2000 Micron Carbonate Fraction
Depth in fathoms
28°00'
84°00'
83°00'
100
50
40
30
20
10
Tarpon Springs
St. Petersburg


Pascagoula
Pensacola
30°00'
88°00'
87°00'
10
20
30
40
50
100
200
300
400
% Echinoderm in 2000-1000 Micron Carbonate Fraction
Depth in fathoms

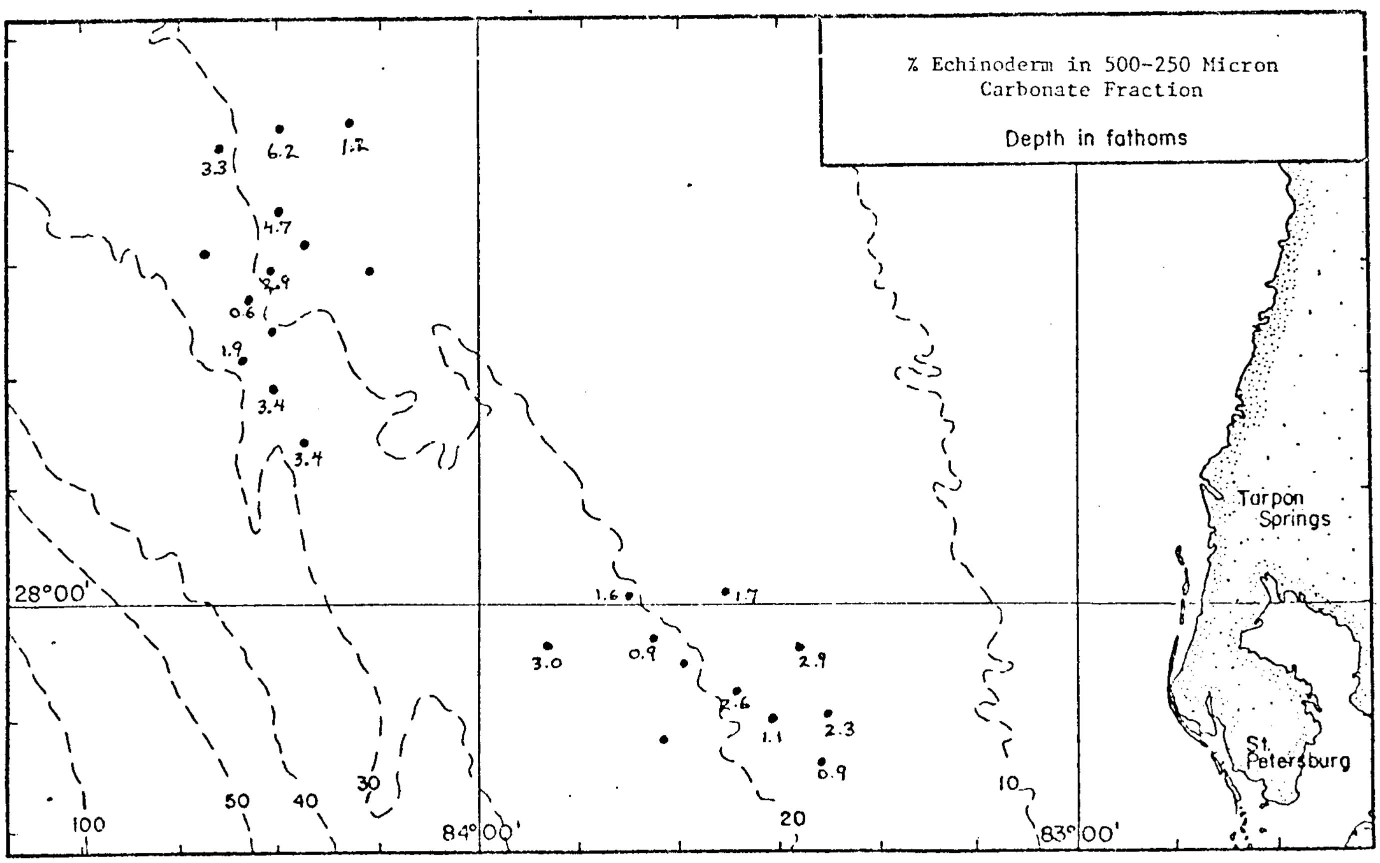

% Echinoderm in 2000-1000 Micron Carbonate Fraction
Depth in fathoms
Tarpon Springs
St. Petersburg
28°00'
84°00'
83°00'
100
50
40
30
20
10


Pascagoula
Pensacola
30°00'
88°00'
87°00'
10
20
30
40
50
100
200
300
400
% Echinoderm in 1000-500 Micron Carbonate Fraction
Depth in fathoms

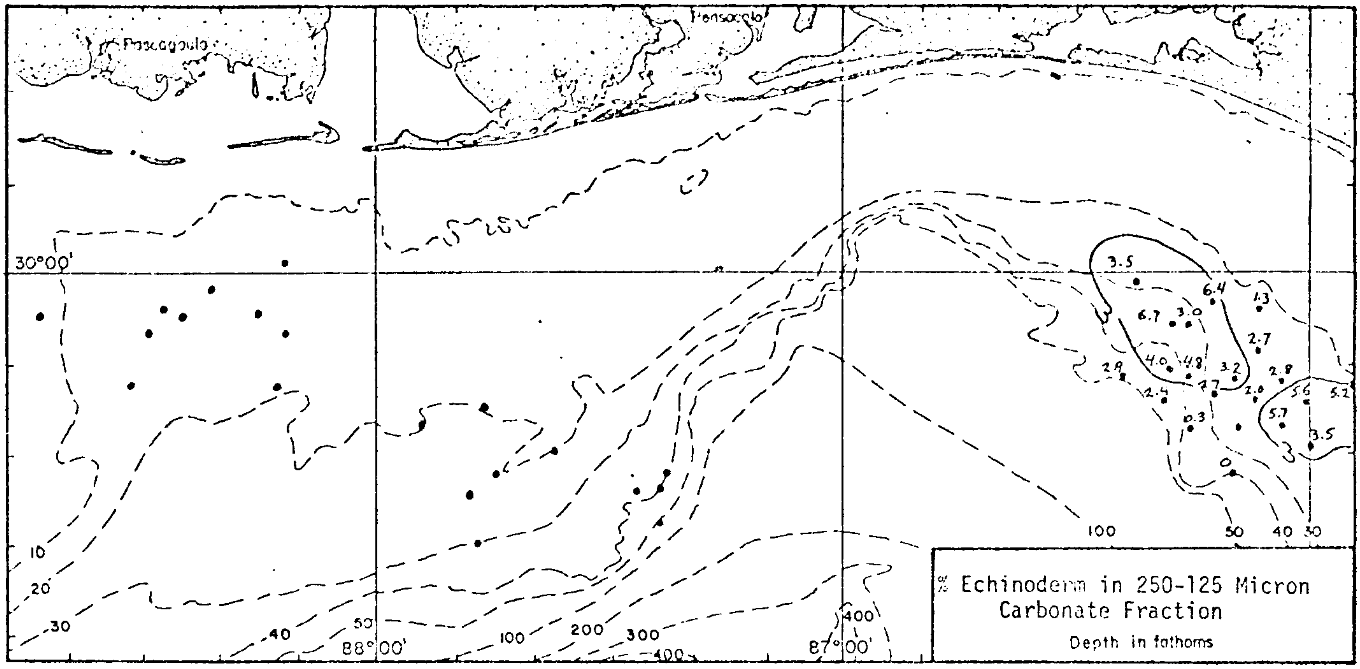

% Echinoderm in 1000-500 Micron Carbonate Fraction
Depth in fathoms
28°00'
84°00'
83°00'
100
50
40
30
20
10
Tarpon Springs
St. Petersburg



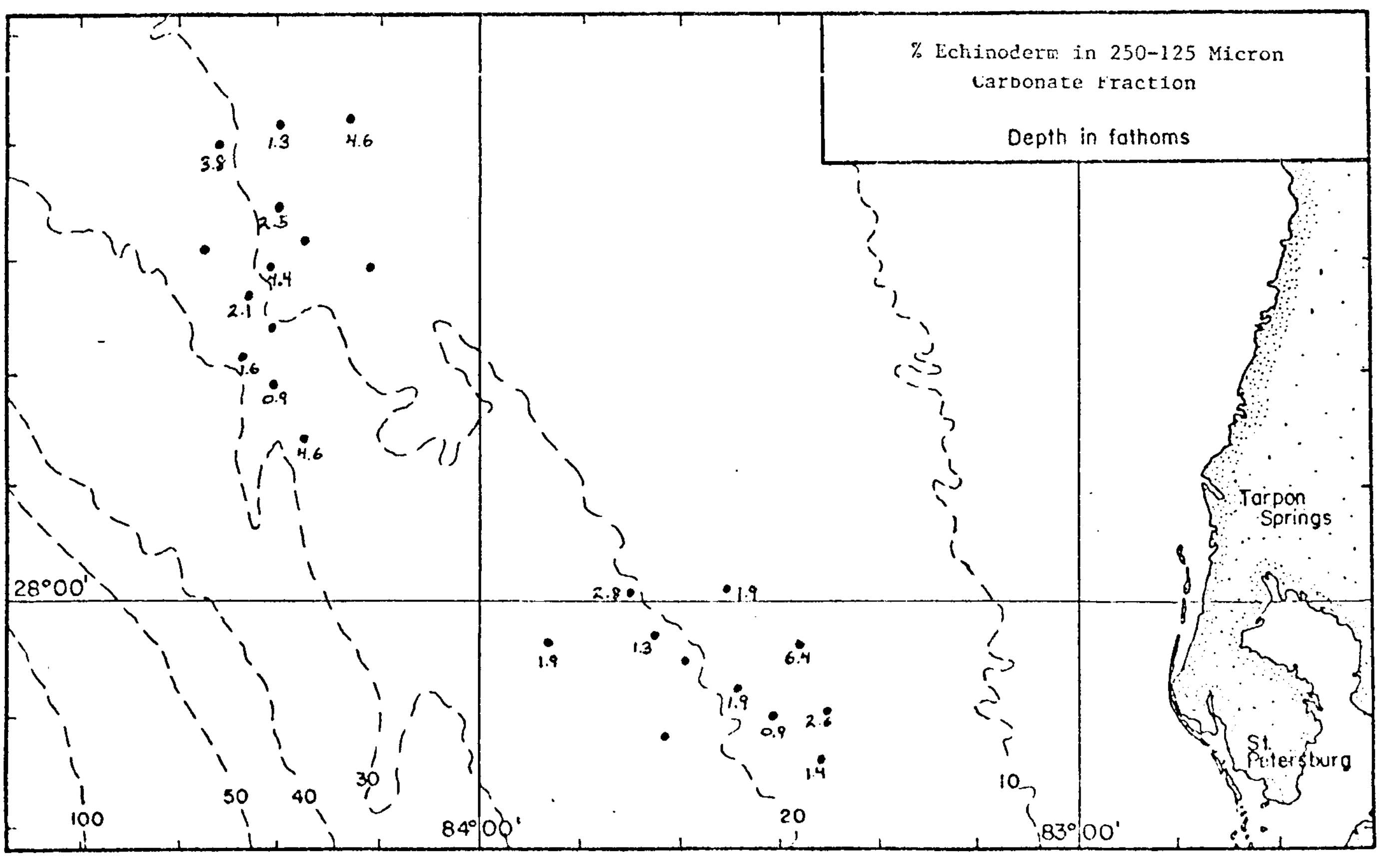
Pascagoula
Pensacola
30°00'
88°00'
87°00'
10
20
30
40
50
100
200
300
400
3.5
3.7
3.2
6.1
3.4
3.1
2.3
7.1
1.3
2.8
0.9
3.0
1.2
2.5
2.9
1.9
7.1
4.1
0.6
% Echinoderm in 500-250 Micron
Carbonate Fraction
Depth in fathoms



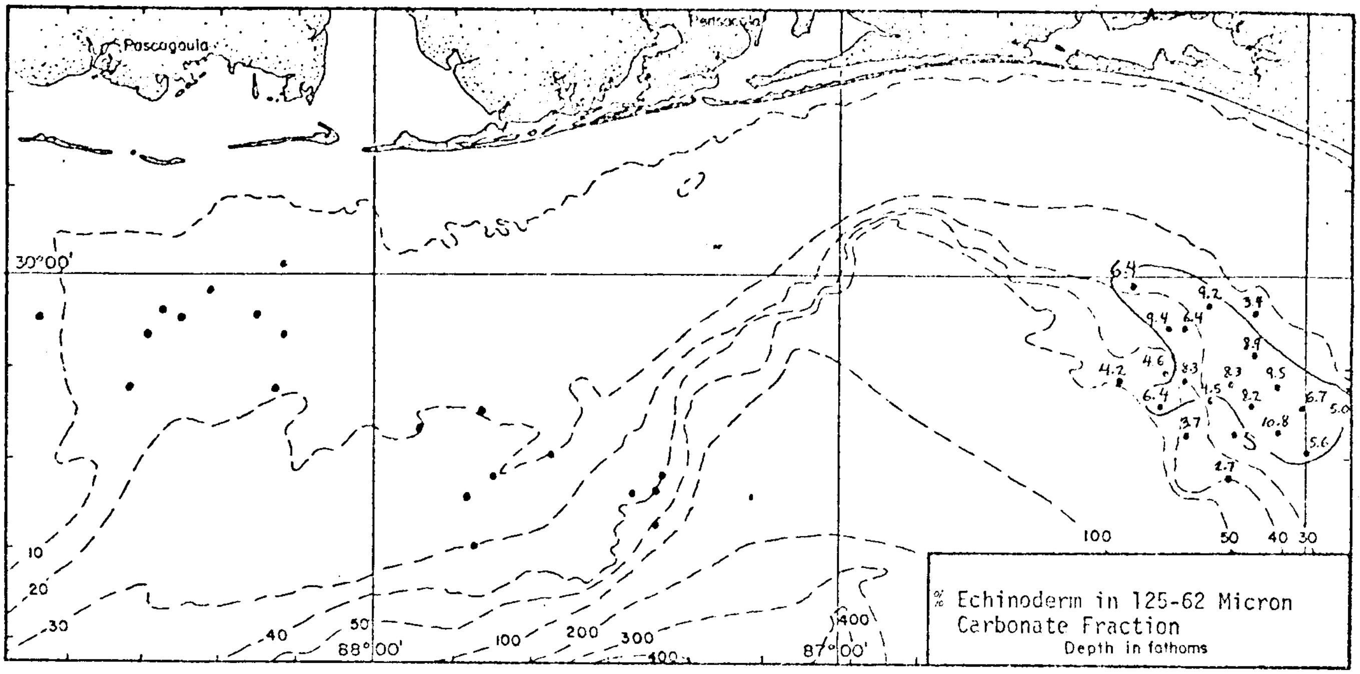
% Echinoderm in 500-250 Micron
Carbonate Fraction
Depth in fathoms
3.3
6.2
1.2
4.7
2.9
0.6
1.9
3.4
3.4
28°00'
1.6
1.7
3.0
0.9
2.9
2.6
1.1
2.3
0.9
Tarpon
Springs
St.
Petersburg
100
50
40
30
20
10
84°00'
83°00'

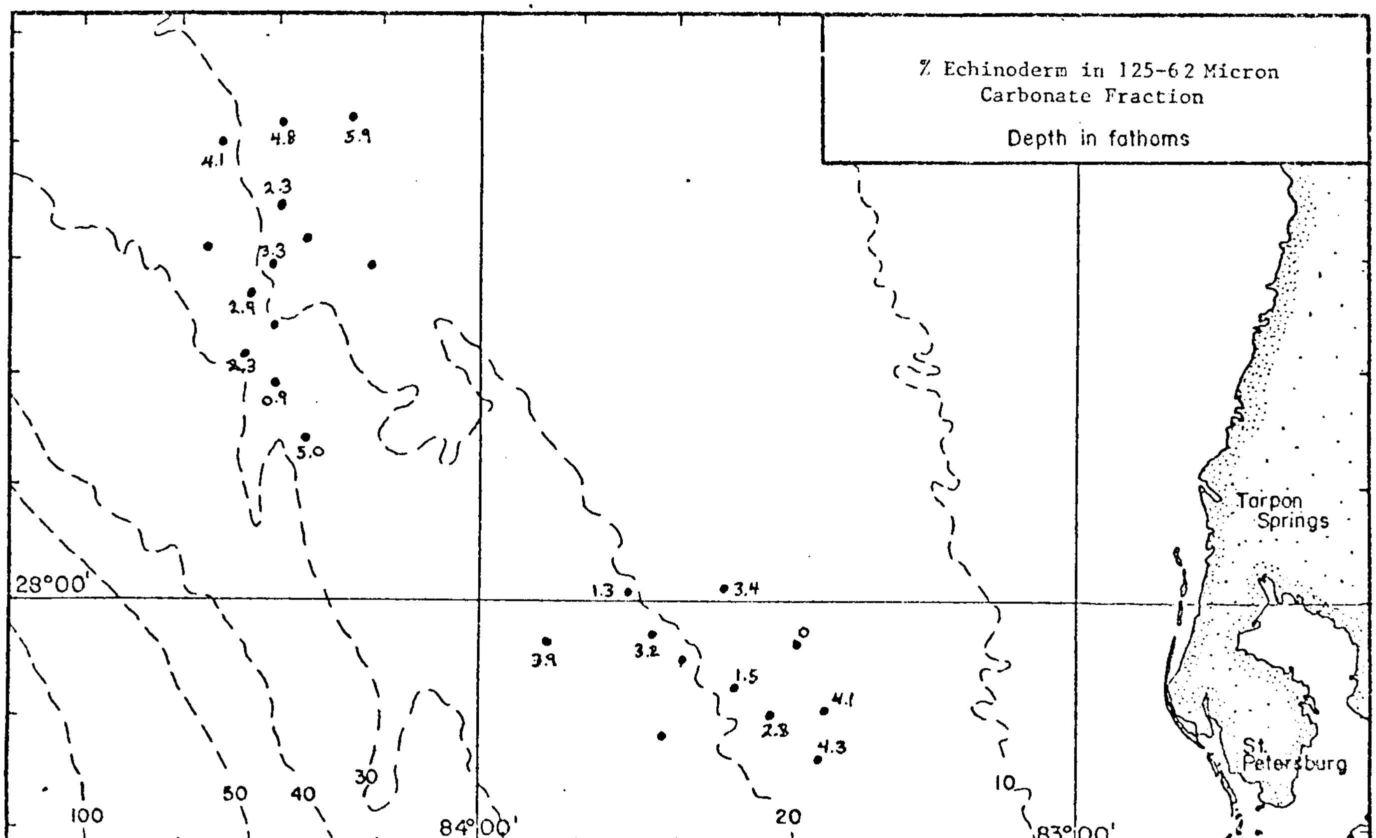


% Echinoderm in 250-125 Micron Carbonate Fraction
Depth in fathoms



% Echinoderm in 250-125 Micron Carbonate Fraction
Depth in fathoms


Pascagoula
Pensacola
30°00'
88°00'
87°00'
10
20
30
40
50
100
200
300
400
% Echinoderm in 125-62 Micron Carbonate Fraction
Depth in fathoms


% Echinoderm in 125-62 Micron Carbonate Fraction
Depth in fathoms
Tarpon Springs
St. Petersburg
28°00'
84°00'
83°00'
100
50
40
30
20
10

APPENDIX V

Molluscan Lithotope Analysis

2101 C

		Dosina elegans Whl	Frg	Σ	Gouldia cerina Whl	Frg	Σ	Ventricolaria rugatina Whl	Frg	Σ	Arcinella cornuta Whl	Frg	Σ	Periglypta listeri Whl	Frg	Σ	Anomia simplex Whl	Frg	Σ	Atrina serrata Whl	Frg	Σ	Anadara baughmani Whl	Frg	Σ
nworn	Pl	1.0	0.3	1.3	1.0	–	1.0	1.0	–	1.0	–	0.1	0.1	–	0.1	0.1	10.0	1.9	11.9	–	2.8	2.8	6.0	0.8	6.8
	B																1.0	–	1.0						
	En																1.0	–	1.0				2.0	–	2.0
/orn	Pl																–	0.5	0.5				2.0	1.8	3.8
	B																			–	0.3	0.3			
	En																–	1.9	1.9	–	0.4	0.4	1.0	–	1.0

		Macrocallista maculata Whl	Frg	Σ	Chione cancellata Whl	Frg	Σ	Plicatula gibbosa Whl	Frg	Σ	Lucina nassula Whl	Frg	Σ	Chione pygmaea Whl	Frg	Σ	Noetia ponderosa Whl	Frg	Σ	Lucina radians Whl	Frg	Σ	Whl	Frg	Σ
nworn	Pl	3.0	2.5	5.5	3.0	3.6	6.6	7.0	–	7.0															
	B							1.0	–	1.0															
	En				2.0	–	2.0																		
/orn	Pl	5.0	3.1	8.1	8.0	6.8	14.8	6.0	1.3	7.3	2.0	–	2.0	1.0	–	1.0									
	B				4.0	3.0	7.0	1.0	1.8	2.8															
	En	–	1.0	1.0	1.0	4.3	5.3	4.0	–	4.0							1.0	–	1.0	–	0.5	0.5			

		INDETERMINANT Whl	Frg	Σ	INDETERMINANT CANCELLATE Whl	Frg	Σ	IND. SMOOTH OR GROWTH LINE Whl	Frg	Σ	INDETERMINANT CONCENTRIC Whl	Frg	Σ	INDETERMINANT Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
nworn	Pl	–	0.1	0.1	–	1.1	1.1	–	0.6	0.6	–	0.1	0.1	–	0.9	0.9									
	B																								
	En																								
/orn	Pl	–	5.4	5.4																					
	B	1.0	7.6	8.6																					
	En	–	2.3	2.3										–	0.6	0.6									

nworn	Pl																								
	B																								
	En																								
'orn	Pl																								
	B																								
	En																								

2101 F

		Anomia simplex			Tellina lineata			Chama congregata			Ventricolaria rugatina			Corbula krebsiana			Macrocallista maculata			Atrina serrata			Anadara baughmani		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
Unworn	Pl	2.0	1.4	3.4	2.0	–	2.0	2.0	–	2.0	1.0	–	1.0	1.0	–	1.0	2.0	2.8	4.8	–	0.3	0.3	1.0	0.4	1.4
	B																								
	En																								
Worn	Pl																1.0	2.0	3.0	–	2.3	2.3	–	0.8	0.8
	B																								
	En																1.0	1.1	2.1				1.0	1.0	2.0

		"Pectin"			Chione cancellata			Plicatula gibbosa			Dosina elegans														
Unworn	Pl	–	0.4	0.4	5.0	2.1	7.1																		
	B																								
	En				–	0.5	0.5																		
Worn	Pl				5.0	4.9	9.9				–	0.1	0.1												
	B				–	1.9	1.9																		
	En	1.0	0.5	1.5	12.0	1.9	13.9	5.0	–	5.0															

		INDETERMINANT																							
Jnworn	Pl	–	1.3	1.3																					
	B																								
	En																								
Worn	Pl	–	2.8	2.8																					
	B	–	2.0	2.0																					
	En	–	1.5	1.5																					

Jnworn	Pl																								
	B																								
	En																								
Worn	Pl																								
	B																								
	En																								

2102 B

		Divaricella quadrisulcata			Abra aequalis			Anadara baughmani			Lucina nassula		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
nworn	Pl	2.0	1.0	3.0				1.0	—	1.0	1.0	—	1.0
	B												
	En				1.0	—	1.0						
/orn	Pl												
	B												
	En												

		Macrocallista maculata			Chama congregata			Corbula krebsiana			Tellina lineata		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
nworn	Pl	—	0.5	0.5	—	0.5	0.5	3.0	1.5	4.5	7.0	—	7.0
	B												
	En												
/orn	Pl							1.0	—	1.0	2.0	1.5	3.5
	B												
	En												

		Chione cancellata			Laevicardium mortoni			Chione pygmaea			Atrina			Dosina elegans		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
nworn	Pl	2.0	0.3	2.3	—	1.3	1.3									
	B															
	En															
'orn	Pl	1.0	0.5	1.5	1.0	—	1.0							—	0.1	0.1
	B															
	En				1.0	—	1.0	1.0	—	1.0	—	0.3	0.3			

		INDETERMINANT		
		Whl	Frg	Σ
nworn	Pl	—	0.5	0.5
	B			
	En			
orn	Pl	—	1.6	1.6
	B	—	0.8	0.8
	En	—	2.0	2.0

2102 G

		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
		Lucina nassula			Tellina lineata			Gouldia cerina			Divaricella quadrisulcata			Plicatula gibbosa			Linga pensylvanica			Arcinella cornuta			Laevicardium mortoni		
nworn	Pl	4.0	—	4.0	2.0	0.8	2.8	2.0	—	2.0	2.0	—	2.0	1.0	—	1.0	—	0.9	0.9	—	0.3	0.3	1.0	0.3	1.3
	B																								
	En																								
/orn	Pl																						—	0.5	0.5
	B																								
	En																								

		Corbula krebsiana			Chione cancellata			Tellina aequistriata																	
nworn	Pl	1.0	0.5	1.5	—	0.5	0.5																		
	B																								
	En																								
/orn	Pl	3.0	—	3.0	1.0	0.8	1.8	—	0.5	0.5															
	B				—	0.5	0.5																		
	En																								

		Indeterminant			Ind. - cancentric			Ind. - smooth or growth lines			Ind. - cancellate														
nworn	Pl	—	0.9	0.9	—	0.5	0.5	—	1.6	1.6															
	B																								
	En																								
/orn	Pl	—	3.0	3.0				—	0.3	0.3	—	0.3	0.3												
	B	—	0.8	0.8																					
	En	—	0.4	0.4																					

nworn	Pl																								
	B																								
	En																								
/orn	Pl																								
	B																								
	En																								

2103 B

		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
		Chama congregata			Tellina lineata			Solecurtus cumingianus			Laevicardium mortoni			Trachycardium			"Pectin"			Chione latillirata			Gouldia cerina		
nworn	Pl	1.0	—	1.0	1.0	—	1.0	1.0	—	1.0	—	0.1	0.1	—	0.1	0.1	1.0	0.7	1.7	1.0	—	1.0			
	B																								
	En																								
'orn	Pl																1.0	0.5	1.5	—	0.1	0.1	2.0	—	2.0
	B																—	0.1	0.1	1.0	—	1.0			
	En																—	0.5	0.5				1.0	—	1.0

		Corbula dietziana			Americardia media			Anadara notabilis			Tellina														
nworn	Pl																								
	B																								
	En																								
'orn	Pl	2.0	—	2.0							—	0.5	0.5												
	B							—	0.5	0.5															
	En	1.0	—	1.0	2.0	—	2.0																		

		Indeterminant			Ind. — smooth or growth lines			Ind. — radial			Ind. concentric														
nworn	Pl				—	0.9	0.9	—	0.1	0.1															
	B																								
	En																								
'orn	Pl	1.0	7.5	8.5	—	0.4	0.4	—	1.0	1.0	—	0.4	0.4												
	B	—	1.5	1.5																					
	En	—	2.1	2.1				—	0.6	0.6															

nworn	Pl																								
	B																								
	En																								
'orn	Pl																								
	B																								
	En																								

2103 H

		Abra aequalis			Corbula dietziana			Chione latilirata			Anomia simplex			"Pectin"			Ventricolaria rugatina			Chama congregata			Glycymerus		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
nworn	Pl	1.0	0.5	1.5	1.0	–	1.0				–	0.5	0.5	–	0.5	0.5	–	0.3	0.3						
	B																								
	En							1.0	–	1.0															
'orn	Pl													–	0.5	0.5									
	B																								
	En													2.0	0.4	2.4	–	0.5	0.5	1.0	–	1.0	–	1.0	1.0

		Indeterminant																							
nworn	Pl																								
	B																								
	En																								
orn	Pl	–	1.6	1.6																					
	B	–	0.5	0.5																					
	En	–	1.6	1.6																					

nworn	Pl																								
	B																								
	En																								
orn	Pl																								
	B																								
	En																								

nworn	Pl																								
	B																								
	En																								
orn	Pl																								
	B																								
	En																								

2104 B

		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
		Anomia simplex			*Parvilucina blanda*			*Pandora arenosa*			*Limatula subauriculata*			*Macoma tenta*			*Pitar simpsoni*			*Atrina*			*Corbula dietziana*		
Unworn	Pl	1.0	2.8	3.8	3.0	–	3.0	1.0	1.5	2.5	1.0	1.5	2.5	2.0	0.5	2.5	2.0	–	2.0	–	2.0	2.0	2.0	–	2.0
	B																								
	En																								
Worn	Pl																								
	B																								
	En																								

		Chama congregata			*Abra aequalis*			*Chione pygmaea*			*Gouldia cerina*			*Cardiomya costellata*			*Nuculana acuta*			*Solecurtus cumingianus*			*Divaricella quadrisulcata*		
Unworn	Pl	2.0	–	2.0	1.0	0.5	1.5	1.0	–	1.0	1.0	–	1.0	1.0	–	1.0	1.0	–	1.0	–	0.8	0.8	–	0.5	0.5
	B																								
	En																								
Worn	Pl																								
	B																								
	En																								

		Macrocallista maculata			"Pectin"			*Chione latilirata*			*Laevicardium mortoni*			*Tellina aequistriata*			*Tellina lineata*			*Trachycardium*					
Unworn	Pl	–	0.3	0.3	4.0	2.9	6.9	2.0	1.5	3.5	–	2.5	2.5	–	0.1	0.1	4.0	1.4	5.4	–	0.3	0.3			
	B																								
	En				–	1.3	1.3							–	1.0	1.0	–	0.1	0.1						
Worn	Pl	–	0.3	0.3	–	0.1	0.1				–	0.1	0.1	–	0.1	0.1	–	0.8	0.8	1.0	–	1.0			
	B																								
	En				1.0	0.8	1.8	1.0	0.3	1.3							–	0.4	0.6						

		Indeterminant																							
Unworn	Pl	–	0.9	0.9																					
	B																								
	En																								
Worn	Pl	–	2.0	2.0																					
	B	–	0.5	0.5																					
	En	–	2.0	2.0																					

2104 H

		Tellina lineata			*Solecurtis sanctae-marthae*			*Lima pellucida*			*Anadara baughmani*			*Corbula krebsiana*			*Nemocardium peramabile*			*Linga leucomya*			"*Pectin*"		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
Unworn	Pl	2.0	–	2.0	1.0	0.3	1.3	1.0	-	1.0				1.0	–	1.0	–	0.3	0.3	—	0.5	0.5			
	B																								
	En										1.0	-	1.0										—	0.5	0.5
Worn	Pl																								
	B																								
	En																								

					Macoma tenta			*Laevicardium mortoni*			*Chione latilirata*			*Pitar simpsoni*			*Abra aequalis*								
Unworn	Pl				1.0	–	1.0	–	1.7	1.7	1.0	–	1.0	1.0	–	1.0									
	B																								
	En																								
Worn	Pl				1.0	–	1.0	–	1.3	1.3	1.0	–	1.0	1.0	–	1.0									
	B																								
	En				3.0	–	3.0										1.0	–	1.0						

		Indeterminant			Ind. - smooth or growth line			Ind. concentric			Ind. - radial														
Unworn	Pl				–	0.8	0.8																		
	B																								
	En				–	0.1	0.1																		
Worn	Pl	–	0.4	0.4							–	0.1	0.1												
	B	—	0.1	0.1	–	0.1	0.1																		
	En	–	1.5	1.5	–	0.1	0.1		0.5	0.5															

Unworn	Pl																								
	B																								
	En																								
Worn	Pl																								
	B																								
	En																								

2105 A

		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
		Nemocardium peramabile			Arca zebra			Laevicardium mortoni			Corbula krebsiana			Callista eucymata			Ventricolaria rugatina			Plicatula gibbosa			Pitar simpsoni		
Unworn	Pl	2.0	0.8	2.8	1.0	–	1.0	–	0.3	0.3	2.0	–	2.0	1.0	–	1.0	–	0.3	0.3						
	B																								
	En																								
Worn	Pl										1.0	–	1.0												
	B																								
	En	2.0	0.5	2.5										1.0	–	1.0	–	0.5	0.5	6.0	–	6.0	1.0	0.5	1.5

		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
		Anadara baughmani			Astarte nana			Gouldia cerina			Glycymerus			Limopsis sulcata			Plicata gibbosa								
Unworn	Pl										2.0	–	2.0	2.0	–	2.0									
	B																								
	En																								
Worn	Pl	1.0	0.5	1.5				1.0	–	1.0															
	B																								
	En				1.0	–	1.0				20.0	–	20.0	8.0	0.5	8.5	6.0	–	6.0						

		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
		Indeterminant																							
Unworn	Pl	–	0.1	0.1																					
	B																								
	En	–	0.1	0.1																					
Worn	Pl	–	0.9	0.9																					
	B																								
	En	–	6.3	6.3																					

Unworn	Pl																								
	B																								
	En																								
Worn	Pl																								
	B																								
	En																								

2105 D

		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
		Nemocardium peramobile			Limopsis sulcata			Glycymerys pectinata			Astarte nana			Cardiomya striata											
nworn	Pl							1.0	–	1.0															
	B																								
	En	1.0	0.5	1.5	1.0	–	1.0																		
orn	Pl																								
	B																								
	En				1.0	–	1.0	10.0	–	10.0	1.0	–	1.0	1.0	–	1.0									

		Indeterminant																							
nworn	Pl																								
	B																								
	En																								
orn	Pl																								
	B																								
	En	3.0	0.8	3.8																					

nworn	Pl																								
	B																								
	En																								
orn	Pl																								
	B																								
	En																								

nworn	Pl																								
	B																								
	En																								
orn	Pl																								
	B																								
	En																								

2106 A

		Nucula crenulata			Macoma tenta			Anomia simplex			Plicatula gibbosa			Atrina			"Pectin"			Limopsis sulcata			Glycymerus pectinata		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
nworn	Pl	3.0	—	3.0	2.0	0.5	2.5	2.0	—	2.0	1.0	—	1.0	—	0.1	0.1	8.0	1.5	9.5	2.0	—	2.0	2.0	—	2.0
	B																								
	En																1.0	—	1.0				1.0	—	1.0
/orn	Pl																—	0.4	0.4				2.0	—	2.0
	B																								
	En																			5.0	—	5.0	11.0	—	11.0

		Astarte nana			Vericordia fishervana			Aequipecten phrygium			Nucula acuta			Cyclocardia armilla			Corbula dietziana								
nworn	Pl																								
	B																								
	En																								
/orn	Pl																								
	B																								
	En	2.0	—	2.0	1.0	0.5	1.5	1.0	0.5	1.5	1.0	—	1.0	1.0	—	1.0	1.0	-	1.0						

		Indeterminant			Ind. - radial			Ind. - concentric																	
nworn	Pl																								
	B																								
	En																								
/orn	Pl	—	6.3	6.3	—	0.8	0.8	—	0.3	0.3															
	B																								
	En	—	6.0	6.0	—	1.0	1.0																		

nworn	Pl																								
	B																								
	En																								
/orn	Pl																								
	B																								
	En																								

2106 C

		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
		Nemocardium peramabile			Anomia simplex			"Pectin"			Glycymerus subtilis			Limopsis sulcata			Tellina			Atrina			Dosina elegans		
nworn	Pl				1.0	–	1.0	-	0.8	0.8															
	B																								
	En	1.0	-	1.0													1.0	0.5	1.5						
'orn	Pl																								
	B																								
	En				–	0.5	0.5	-	2.3	2.3	6.0	-	6.0	4.0	–	4.0				–	0.1	0.1	-	0.1	0.1

		Indeterminant																							
nworn	Pl																								
	B																								
	En																								
'orn	Pl																								
	B																								
	En	–	2.8	2.8																					

nworn	Pl																								
	B																								
	En																								
'orn	Pl																								
	B																								
	En																								

nworn	Pl																								
	B																								
	En																								
'orn	Pl																								
	B																								
	En																								

2207 D

		Tellina lineata			Divaricella quadrisulcata			Macrocallista maculata			Laevicardium mortoni		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
Unworn	Pl	11.0	1.0	12.0	10.0	–	10.0	3.0	0.5	3.5	3.0	2.4	5.4
	B												
	En												
Worn	Pl												
	B												
	En												

		Tellina aequistriata			Lucina nassula			Dosinia elegans			Solecurtus cumingianus		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
Unworn	Pl	3.0	–	3.0	1.0	–	1.0	1.0	0.3	1.3	1.0	–	1.0
	B												
	En				1.0	–	1.0						
Worn	Pl												
	B												
	En												

		Trachycardium			Abra aequalis			Corbula dietziana			Chione cancellata			"Pectin"		
Unworn	Pl	1.0	–	1.0	10.0	–	10.0	3.0	0.5	3.5	1.0	–	1.0			
	B															
	En															
Worn	Pl				2.0	–	2.0	3.0	2.5	5.5	2.0	–	2.0			
	B															
	En							2.0	–	2.0	2.0	1.0	3.0	–	0.8	0.8

		Indeterminant			Ind radial		
Unworn	Pl	–	0.6	0.6	–	0.1	0.1
	B						
	En						
Worn	Pl	–	0.6	0.6	–	0.1	0.1
	B	–	0.7	0.7			
	En	–	1.9	1.9			

Unworn	Pl	
	B	
	En	
Worn	Pl	
	B	
	En	

2207 I

		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
		Divaricella quadrisulcata			Lucina nassula			Macrocallista maculata			Laevicardium mortoni			Chione cancellata			Chama congregata			Pandora arenosa			Anomia simplex		
Inworn	Pl	11.0	–	11.0	2.0	–	2.0	2.0	–	2.0	1.0	1.0	2.0	1.0	0.5	1.5	1.0	–	1.0	1.0	–	1.0	–	0.5	0.5
	B																								
	En				1.0	0.5	1.5																		
Vorn	Pl																								
	B																								
	En																								

		Corbula krebsiana			Tellina lineata																				
Inworn	Pl	4.0	0.5	4.5	5.0	–	5.0																		
	B																								
	En																								
Vorn	Pl	1.0	–	1.0																					
	B																								
	En	4.0	–	4.0	–	1.0	1.0																		

		Indeterminant																							
nworn	Pl																								
	B																								
	En																								
Vorn	Pl																								
	B																								
	En	–	1.0	1.0																					

Inworn	Pl																								
	B																								
	En																								
Vorn	Pl																								
	B																								
	En																								

2208 B

		Corbula krebsiana			Abra aequalis			Lucina nassula			"Pectin"			Tellina lineata			Cyclinella tenuis			Mysella gibbosa			Macoma tenta		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
Inworn	Pl	50.0	3.0	53.0	25.0	1.5	26.5	8.0	—	8.0	4.0	0.5	4.5	2.0	0.7	2.7	1.0	1.5	2.5	1.0	1.0	2.0	—	1.3	1.3
	B																								
	En																								
Vorn	Pl																								
	B																								
	En																								

		Divaricella quadrisulcata			Chione pygmaea			Americardia media			Laevicardium mortoni			Dosinia elegans			Anomia simplex			Atrina			Macrocallista maculata		
Inworn	Pl	1.0	—	1.0	1.0	-	1.0	1.0	—	1.0	—	1.0	1.0	—	0.5	0.5	—	0.5	0.5	—	0.1	0.1	—	0.1	0.1
	B																								
	En																			—	0.1	0.1			
Vorn	Pl																			—					
	B																								
	En																								

		Gouldia cerina		
nworn	Pl			
	B			
	En			
Vorn	Pl	1.0	—	1.0
	B			
	En			

		Indeterminant		
Inworn	Pl	—	0.5	0.5
	B			
	En			
Vorn	Pl	—	1.3	1.3
	B	—	0.5	0.5
	En	—	1.5	1.5

2208 C

		Corbula krebsiana			Abra aequalis			Cyclinella tenuis			Anomia simplex		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
Unworn	Pl	159.0	6.0	165.0	54.0	2.0	56.0	3.0	0.5	3.5	2.0	–	2.0
	B												
	En												
Worn	Pl												
	B												
	En												

		Chama congregata			Macoma tenta			Gouldia cerina			Americardia media		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
Unworn	Pl	1.0	1.0	2.0	1.0	0.8	1.8	1.0	0.5	1.5	1.0	–	1.0
	B												
	En												
Worn	Pl												
	B												
	En												

		Divaricella quadrisulcata			Macrocallista maculata			Tellina squamifera			Pandora arenosa		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
Unworn	Pl	1.0	–	1.0	1.0	–	1.0	1.0	–	1.0	–	0.5	0.5
	B												
	En												
Worn	Pl												
	B												
	En												

		"Pectin"			Tellina lineata			Lucina nassula			Laevicardium		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
Unworn	Pl	17.0	2.1	19.1	7.0	0.8	7.8	5.0	0.5	5.5	1.0	2.8	3.8
	B												
	En										–	0.1	0.1
Worn	Pl				13.0	2.6	15.6				–	0.3	0.3
	B												
	En	–	1.6	1.6				3.0	–	3.0			

		Indeterminate		
		Whl	Frg	Σ
Unworn	Pl			
	B			
	En			
Worn	Pl	–	0.4	0.4
	B			
	En			

2209 B

		Corbula krebsiana			Abra aequalis			Tellina aequistriata			Tellina lineata			Lucina nassula			Laevicardium mortoni			Macoma tenta			Macrocallista maculata		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
Inworn	Pl	161.0	10.5	171.5	93.0	4.1	97.1	25.0	5.1	30.1	15.0	1.5	16.5	12.0	—	12.0	8.0	3.8	11.8	4.0	—	4.0	2.0	—	2.0
	B																								
	En																								
Vorn	Pl																								
	B																								
	En																								

		Cardiomya glypta			Dosinia elegans			Anomia simplex			Divaricella quadrisulcata			Chione latilirata			Solecurtis cumingianus			Pitar simpsoni			Cyclinella tenuis		
Inworn	Pl	2.0	—	2.0	1.0	1.0	2.0	1.0	1.0	2.0	1.0	—	1.0	1.0	—	1.0	1.0	—	1.0	1.0	—	1.0	—	0.5	0.5
	B																								
	En																								
Vorn	Pl																								
	B																								
	En																								

		"Pectin"			Corbula dietziana																				
Inworn	Pl	11.0	6.0	17.0																					
	B																								
	En																								
Vorn	Pl	-	0.3	0.3	1.0	—	1.0																		
	B																								
	En																								

		Indeterminant																							
Inworn	Pl	—	6.4	6.4																					
	B																								
	En																								
Vorn	Pl																								
	B																								
	En																								

2209 D

		Abra aequalis			Corbula krebsiana			Tellina lineata			Laevicardium mortoni			"Pectin"			Atrina			Cyclinella tenuis			Diplodonta nucleiformis		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
Unworn	Pl	72.0	5.0	77.0	67.0	4.0	71.0	29.0	3.4	32.4	1.0	6.1	7.1	4.0	2.8	6.8	—	3.4	3.4	2.0	1.1	3.1	3.0	–	3.0
	B																								
	En																								
Worn	Pl				5.0	–	5.0																		
	B																								
	En																								

		Anomia simplex			Chama congregata			Lucina nassula			Tellina aequistriata			Dosinia elegans			Tellina squamifera			Pitar simpsoni			Macoma tenta		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
Unworn	Pl	2.0	0.5	2.5	2.0	–	2.0	2.0	–	2.0	2.0	—	2.0	1.0	0.1	1.1	1.0	—	1.0	1.0	—	1.0	—	1.0	1.0
	B																								
	En																								
Worn	Pl																								
	B																								
	En																								

		Macrocallista maculata			Gouldia cerina			Pandora arenosa		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
Unworn	Pl	1.0	—	1.0	1.0	—	1.0	–	0.5	0.5
	B									
	En									
Worn	Pl							1.0	—	1.0
	B									
	En									

		Indeterminant		
		Whl	Frg	Σ
Unworn	Pl	—	1.1	1.1
	B			
	En			
Worn	Pl		0.1	0.1
	B		0.5	0.5
	En			

2210 I

		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
		Arca aequalis			Lucina nassula			Anomia simplex			Diplodontia punctata			Anodontia alba			Anadara brughmani			Divaricella quadrisulcata			Tellina lineata		
Inworn	Pl	10.0	1.5	11.5	10.0	0.5	10.5	2.0	–	2.0	2.0		2.0	1.0	0.8	1.8	1.0	–	1.0	1.0	—	1.0	8.0	1.8	9.8
	B																								
	En	2.0	–	2.0	1.0	–	1.0							1.0	–	1.0									
Worn	Pl																						–	1.0	1.0
	B																								
	En																								

		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
		Macrocallista maculata			Chione grus			Chione latilirata			Gouldia cerina			Chione cancellata			Laevicardium			"Pectin"			Corbula krebsiana		
Inworn	Pl	–	1.3	1.3				2.0		2.0	1.0	–	1.0	1.0	0.4	1.4	3.0	1.0	4.0	–	1.0	1.0	19.0	1.5	20.5
	B																								
	En	1.0	—	1.0	1.0	–	1.0																		
Worn	Pl	–	0.3	0.3				2.0	0.4	2.4	2.0	–	2.0	1.0	2.3	3.3	2.0	0.8	2.8	–	0.9	0.9	12.0	4.5	16.5
	B																								
	En				–	0.9	0.9							–	0.4	0.4				3.0	2.5	5.5	11.0	2.0	13.0

		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
		Dosinia elegans			Chama congregata			Carditamera floridana			Americardia media			Corbula dietziana			Pteromerus perplana								
Inworn	Pl	–	0.8	0.8																					
	B																								
	En																								
Worn	Pl	–	0.1	0.1	8.0	–	8.0	2.0	—	2.0				1.0	–	1.0	1.0	–	1.0						
	B																								
	En										1.0	–	1.0												

		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
		Indeterminant			Ind-radial			Ind. concentric																	
Inworn	Pl	–	1.5	1.5	–	0.5	0.5																		
	B																								
	En																								
Worn	Pl	–	16.0	16.0	–	0.3	0.3	–	0.5	0.5															
	B	–	2.4	2.4	–	0.4	0.4																		
	En	–	8.8	8.8	–	0.8	0.8	–	0.5	0.5															

2211 B

		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
		Americardia media			Laevicardium			Chione cancellata			"Pectin"			Gouldia cerina			Chama congregata			Corbula dietziana			Plicatula gibbosa		
Unworn	Pl	1.0	—	1.0	—	0.5	0.5	2.0	–	2.0	1.0	0.5	1.5												
	B																								
	En																								
Worn	Pl																								
	B																								
	En							2.0	—	2.0	1.0	1.0	2.0	3.0	0.3	3.3	3.0	—	3.0	3.0	—	3.0	3.0	—	3.0

		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
		Eucrassatella speciosa			Parvilucina blanda			Chione latilirata																	
Unworn	Pl																								
	B																								
	En																								
Worn	Pl	1.0	—	1.0																					
	B																								
	En				—	0.5	0.5	—	0.1	0.1															

		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
		Indeterminant																							
Unworn	Pl																								
	B																								
	En																								
Worn	Pl	—	0.5	0.5																					
	B	-	0.6	0.6																					
	En	—	9.8	9.8																					

		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
Unworn	Pl																								
	B																								
	En																								
Worn	Pl																								
	B																								
	En																								

2211 D

		Tellina similis			*"Pedin"*			*Cardiomya glypta*			*Semele purpurascens*			*Macoma tenta*			*Lucina nassula*			*Lima pellucida*			*Cuspidaria obesa*		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
Inworn	Pl	4.0	1.8	5.8	3.0	1.3	4.3	2.0	—	2.0	1.0	—	1.0	1.0	—	1.0	1.0	—	1.0	1.0	—	1.0	1.0	—	1.0
	B																								
	En				4.0	1.0	5.0																		
Worn	Pl																								
	B																								
	En																								

		Raeta undulata			*Abra aequalis*			?			*Gouldia cerina*			*Chione cancellata*			*Laevicardium mortoni*			*Americardia media*			*Linga leucomya*		
Inworn	Pl	—	0.8	0.8	18.0	—	18.0	1.0	—	1.0	2.0	—	2.0												
	B																								
	En																								
Worn	Pl				3.0	—	3.0	2.0	0.6	2.6	1.0	—	1.0	1.0	0.5	1.5	—	1.1	1.1				1.0	—	1.0
	B																								
	En										1.0	—	1.0	1.0	—	1.0	1.0	—	1.0	2.0	—	2.0			

		Corbula dietziana			*Cyclocardia armilla*			*Barbatia tenera*		
Inworn	Pl									
	B									
	En									
Worn	Pl	2.0	—	2.0	1.0	—	1.0	1.0	—	1.0
	B									
	En									

		Indeterminant			Indeterminant smooth/growth			Indeterminant-radial			Indeterminant-Concentric		
Inworn	Pl				—	3.5	3.5	—	0.5	0.5	—	0.3	0.3
	B												
	En												
Worn	Pl	—	2.3	2.3				—	1.1	1.1	—	0.1	0.1
	B	—	2.1	2.1				—	0.3	0.3	—	0.3	0.3
	En	—	11.0	11.0				—	0.9	0.9	—	0.3	0.3

2212 B

		Nemocardium peramabile			Plicatula gibbosa			Nucula crenulata			Nuculana acuta		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
Unworn	Pl	10.0	10.1	20.1	1.0	0.5	1.5	4.0	1.0	5.0	12.0	1.5	13.5
	B												
	En	1.0	0.6	1.6							1.0	—	1.0
Worn	Pl							2.0	0.5	2.5	7.0	1.0	8.0
	B												
	En										2.0	—	2.0

		Limopsis cristata			"Pectin"			Astarte nana			Limopsis sulcata		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
Unworn	Pl	60.0	—	60.0	—	0.8	0.8	1.0	—	1.0	6.0	0.3	6.3
	B												
	En	2.0	—	2.0	—	0.8	0.8				4.0	—	4.0
Worn	Pl	52.0	11.0	63.0	—	1.9	1.9				22.0	6.5	28.5
	B												
	En	11.0	—	11.0	—	1.0	1.0	4.0	0.5	4.5	14.0	4.5	18.5

		Glycymerus subtilis			Atrina		
Unworn	Pl	1.0	—	1.0			
	B						
	En						
Worn	Pl	4.0	—	4.0	—	0.3	0.3
	B	—	0.5	0.5			
	En	6.0	—	6.0			

Unworn	Pl
	B
	En
Worn	Pl
	B
	En

Unworn	Pl
	B
	En
Worn	Pl
	B
	En

2212 G

		Lucinoma filosa			Poromya granulata			Abra aequalis			Thysira flexusa			Solecurtus cumingianus			Nemocardium peramabile			Nucula acuta			Limopsis sulcata		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
nworn	Pl	–	0.5	0.5	1.0	–	1.0	1.0	–	1.0	1.0	–	1.0				16.0	8.3	24.3	24.0	1.8	25.8	85.0	5.0	90.0
	B																								
	En	1.0	–	1.0										–	0.5	0.5	1.0	0.9	1.9	2.0	–	2.0	5.0	–	5.0
/orn	Pl																–	0.3	0.3	–	0.8	0.8	85.0	7.0	92.0
	B																								
	En																			2.0	–	2.0	14.0	8.5	22.5

		Glycymerus pectinata			Nucula aegeenis			"Pectin"			Chama congregata			Astarte nana			Anadara baughmani								
nworn	Pl																								
	B																								
	En																								
/orn	Pl	4.0	0.5	4.5	5.0	2.0	7.0	–	4.6	4.6				3.0	–	3.0									
	B																								
	En	4.0	–	4.0				–	1.3	1.3	5.0	–	5.0	3.0	0.5	3.5	–	0.5	0.5						

		Indeterminant			Indeterminant smooth/growth line			Indeterminant Radial																	
nworn	Pl				–	0.3	0.3																		
	B																								
	En																								
/orn	Pl	–	1.6	1.6	–	0.5	0.5																		
	B	–	0.6	0.6																					
	En	–	3.8	3.8	–	0.6	0.6	–	0.8	0.8															

nworn	Pl																								
	B																								
	En																								
/orn	Pl																								
	B																								
	En																								

2313 A

		Nemocardium peramabile			Nucula crenulata			Cardiomya costella			Solecurtus cumingianus.		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
nworn	Pl	9.0	11.4	20.4	5.0	2.6	7.6	–	0.5	0.5	–	0.5	0.5
	B												
	En												
/orn	Pl												
	B												
	En												

		Nuculana acuta			Anadara baughmani			"Pectin"			Limopsis cristata		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
nworn	Pl	27.0	–	27.0	2.0	0.3	2.3	–	0.8	0.8	1.0	–	1.0
	B												
	En												
/orn	Pl	5.0	2.8	7.8	1.0	0.5	1.5	–	3.0	3.0	3.0	1.0	4.0
	B												
	En										1.0	–	1.0

		Limopsis sulcata			Abra aequalis			Ventricolaria rugatina			Corbula krebsiana		
nworn	Pl	1.0	–	1.0									
	B												
	En												
/orn	Pl	10.0	3.5	13.5	2.0	–	2.0	1.0	0.3	1.3	–	1.0	1.0
	B							–	0.3	0.3			
	En							–	0.4	0.4			

		Tellina aequistriata			Glycymeris								
nworn	Pl												
	B												
	En												
/orn	Pl				–	0.5	0.5						
	B												
	En	–	0.5	0.5	–	0.1	0.1						

		Indeterminiant											
nworn	Pl												
	B												
	En												
/orn	Pl	–	6.0	6.0									
	B	–	0.6	0.6									
	En	–	0.3	0.3									

nworn	Pl												
	B												
	En												
/orn	Pl												
	B												
	En												

2313 B

		Nemocardium peramabile Whl	Frg	Σ	*Nucula crenulata* Whl	Frg	Σ	*Abra aequalis* Whl	Frg	Σ	*Ventricolaria rugatina* Whl	Frg	Σ
nworn	Pl	15.0	10.0	25.0	11.0	4.5	15.5	6.0	—	6.0	3.0	—	3.0
	B												
	En												
Vorn	Pl												
	B												
	En												

		Poromya granulata Whl	Frg	Σ	*Nuculana carpenteri* Whl	Frg	Σ	*Nuculana acuta* Whl	Frg	Σ	*Limopsis sulcata* Whl	Frg	Σ
nworn	Pl	1.0	1.0	2.0	1.0	—	1.0	37.0	1.5	38.5	14.0	1.3	15.3
	B												
	En												
Vorn	Pl							9.0	3.0	12.0	10.0	4.5	14.5
	B												
	En										4.0	—	4.0

		"Pectin" Whl	Frg	Σ	*Anadara baughmani* Whl	Frg	Σ
nworn	Pl	2.0	0.5	2.5	3.0	0.5	3.5
	B						
	En	1.0	—	1.0			
Vorn	Pl	–	3.1	3.1	2.0	0.5	2.5
	B						
	En	–	1.3	1.3	2.0	0.5	2.5

		Indeterminant Whl	Frg	Σ
nworn	Pl	–	0.6	0.6
	B			
	En			
Vorn	Pl	–	7.1	7.1
	B			
	En	–	2.1	2.1

Inworn	Pl			
	B			
	En			
Yorn	Pl			
	B			
	En			

2314 I

		Tellina lineata			Pandora arenosa			"Pectin"			Pitar simpsoni			Laevicardium mortoni			Atrina			Gouldia cerina			Parvilucina blanda		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
Unworn	Pl	146.0	45.5	191.5	82.0	—	82.0	34.0	16.8	50.8	42.0	2.5	44.5	15.0	29.5	44.5	—	35.5	35.5	26.0	0.5	26.5	24.0	2.5	26.5
	B																								
	En										1.0	—	1.0												
Worn	Pl																								
	B																								
	En																								

		Anomia simplex			Macoma tenta			Chione latilirata			Linga nassula			Chama congregata			Tellina squamifera			Anadara baughmani			Cardiomya glypta		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
Unworn	Pl	18.0	—	18.0	14.0	3.5	17.5	14.0	3.0	17.0	14.0	1.9	15.9	11.0	1.0	12.0	7.0	1.0	8.0	3.0	1.3	4.3	3.0	—	3.0
	B																								
	En				1.0	—	1.0																		
Worn	Pl																								
	B																								
	En																								

		Anomalocardia auberiana			Lima pellucida			Chione intapurpurea			Cuspidaria obesa			Glycymeris pectinata			Corbula krebsiana			Abra aequalis			Diplodonta / Divaricella quadrisulcata		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
Unworn	Pl	2.0	—	2.0	1.0	0.1	1.1	1.0	—	1.0	1.0	—	1.0	1.0	—	1.0	353.0	29.0	382.0	132.0	12.1	144.1	29.0	2.3	31.3
	B																								
	En																3.0	1.3	4.3						
Worn	Pl																—	1.4	1.4	2.0	2.5	4.5	—	0.1	0.1
	B																								
	En																			4.0	—	4.0			

		Macrocallista maculata			Tellina aequistriata			Nuculana acuta			Cymatoica orientus			Transenella			Chione cancellata						Indeterminant		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
Unworn	Pl	12.0	1.1	13.1	6.0	2.0	8.0	6.0	1.0	7.0	3.0	0.5	3.5	10.0	1.0	11.0	—	0.1	0.1				—	9.6	9.6
	B																								
	En																								
Worn	Pl	1.0	—	1.0	—	0.3	0.3	1.0	—	1.0				8.0	0.5	8.5	1.0	1.0	2.0				—	23.4	23.4
	B																						—	0.4	0.4
	En										—	0.5	0.5										—	0.4	0.4

2315 I

		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
		Unione latilirata			Macrocallista			Pandora arenosa			Tellina squamifera			Atrina			Anomia simplex			Cymatoica orientes			Glans dominguensis		
Unworn	Pl	13.0	1.8	14.8	3.0	2.8	5.8	3.0	1.0	4.0	3.0	0.3	3.3	—	2.4	2.4	2.0	—	2.0	1.0	0.3	1.3	1.0	—	1.0
	B																								
	En	2.0	—	2.0	1.0	—	1.0																		
Worn	Pl																								
	B																								
	En																								
		Semele bellastriata			Corbula dietziana			Eucrassatella speciosa			Anadara baughmani			Tellina lineata			Lucina nassula			Corbula krebsiana			Arcinella cornuta		
Unworn	Pl	1.0	—	1.0	1.0	—	1.0	—	0.1	0.1	2.0	0.1	2.1	10.0	5.4	15.4	39.0	2.0	41.0	86.0	2.1	88.1	7.0	—	7.0
	B																								
	En																								
Worn	Pl										—	0.1	0.1	7.0	2.6	9.6	2.0	0.5	2.5	26.0	2.0	28.0	2.0	—	2.0
	B																								
	En																4.0	—	4.0	18.0	—	18.0			
		"Pectin"			Gouldia cerina			Cardiomya glypta			Chione cancellata			Divaricella quadrisulcata			Tellina lineata			Abra aequalis			Pitar simpsoni		
Unworn	Pl	17.0	1.1	18.1	5.0	1.0	6.0	2.0	—	2.0	1.0	—	1.0	8.0	1.5	9.5	3.0	0.9	4.9	22.0	1.5	23.5	9.0	1.5	10.5
	B																								
	En																								
Worn	Pl	3.0	2.6	5.6	2.0	—	2.0	1.0	—	1.0	—	0.5	0.5	4.0	1.0	5.0	—	0.3	0.3	13.0	1.5	14.5	7.0	—	7.0
	B																								
	En	1.0	0.1	1.1													1.0	—	1.0						
		Trachycardium			Dosinia elegans			Macoma tenta			Laevicardium mortoni			Parvilucina blanda			Chione pygmaea			Linga amiantus			Plectodon granulatus		
Unworn	Pl	—	0.3	0.3	1.0	—	1.0	1.0	—	1.0	—	1.8	1.8												
	B																								
	En																								
Worn	Pl	—	0.3	0.3	1.0	0.3	1.3	2.0	—	2.0	2.0	2.1	4.1	2.0	—	2.0				1.0	—	1.0	1.0	—	1.0
	B																								
	En																1.0	0.5	1.5						

2315 I (CONTINUED)

		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
		Glycymerus																							
Inworn	Pl																								
	B																								
	En																								
Vorn	Pl	1.0	—	1.0																					
	B																								
	En																								
		indeterminant radial			Indeterminant concentric			Ind. — smooth or growth lines																	
Inworn	Pl	–	2.0	2.0	–	0.1	0.1	–	2.6	2.6															
	B																								
	En																								
Vorn	Pl	–	0.1	0.1	–	0.1	0.1	–	2.6	2.6															
	B							—	1.3	1.3															
	En				–	0.4	0.4																		
nworn	Pl																								
	B																								
	En																								
Vorn	Pl																								
	B																								
	En																								
Inworn	Pl																								
	B																								
	En																								
Yorn	Pl																								
	B																								
	En																								

2315 II

		"Pecten"			Eucrassotella speciosa			Barbatia dominguensis			Crassostrea virginica			Gouldia cerina			Arca			Pteria					
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
iworn	Pl																								
	B	–	0.3	0.3																					
	En																								
orn	Pl				2.0	–	2.0							–	0.5	0.5									
	B																								
	En				1.0	–	1.0	1.0	0.5	1.5	1.0	–	1.0				–	0.5	0.5	–	0.3	0.3			

		Indeterminant																							
iworn	Pl	–	0.1	0.1																					
	B																								
	En	1.0	0.9	1.9																					
orn	Pl																								
	B																								
	En	1.0	0.8	1.8																					

iworn	Pl																								
	B																								
	En																								
orn	Pl																								
	B																								
	En																								

iworn	Pl																								
	B																								
	En																								
orn	Pl																								
	B																								
	En																								

2316 A

		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
		Abra aequalis			Lucina nassula			Anomia simplex			Pitar simpsoni			Solecurtus cumingianus			Pandora arenosa			Cardiomya glypta			Macoma tenta		
nworn	Pl	9.0	2.0	11.0	4.0	0.9	4.9	2.0	0.5	2.5	2.0	1.0	3.0	2.0	-	2.0	—	2.0	2.0	1.0	—	1.0	1.0	—	1.0
	B																								
	En																								
orn	Pl																								
	B																								
	En										2.0	-	2.0												

		Macrocallista maculata			Atrina			Tellina aequistriata			"Pectin"			Tellina lineata			Corbula krebsiana			Gouldia cerina			Divaricella quadrisulcata		
nworn	Pl	—	0.5	0.5	—	4.4	4.4	3.0	0.3	3.3	25.0	12.1	37.1	8.0	1.0	9.0	13.0	—	13.0	1.0	—	1.0	1.0	—	1.0
	B																								
	En										—	0.5	0.5												
orn	Pl				—	0.3	0.3	—	0.1	0.1	5.0	3.6	8.6	2.0	1.5	3.5	6.0	1.5	7.5	1.0	—	1.0	1.0	0.3	1.3
	B																								
	En										—	0.4	0.4				2.0	1.5	3.5						

		Semele bellestriata			Chione latilirata			Anadara baughmani			Chione cancellata			Glycymerus			Plectodon granulata			Lima pectinata			Laevicardium mortoni		
nworn	Pl	—	1.1	1.1	—	0.3	0.3	—	0.1	0.1													3.0	2.8	5.8
	B																								
	En																						—	0.3	0.3
orn	Pl	2.0	—	2.0	2.0	—	2.0	—	0.1	0.1	1.0	1.3	2.3	1.0	—	1.0	1.0	—	1.0						
	B																								
	En	—	0.3	0.3				2.0	—	2.0										1.0	—	1.0	—	0.6	0.6

		Indeterminant			Ind. - Radial			Ind. - Concentric			Ind. - Smooth - Growth Line														
nworn	Pl				—	0.1	0.1				—	1.5	1.5												
	B																								
	En																								
orn	Pl	—	- 2.0	- 2.0	-	0.4	0.4				—	0.3	0.3												
	B				-	0.4	0.4																		
	En	—	2.5	2.5	-	0.6	0.6	—	0.4	0.4															

2317 A

		Corbula krebsiana			Tellina lineata			Abra aequalis			"Pectin"		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
Unworn	Pl	25.0	2.0	27.0	20.0	4.0	24.0	10.0	2.5	12.5	5.0	5.4	10.4
	B												
	En										1.0	0.3	1.3
Worn	Pl												
	B												
	En										–	0.4	0.4

		Lucina nassula			Divaricella quadrisulcata			Macoma tenta			Macrocallista maculata		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
Unworn	Pl	8.0	–	8.0	5.0	0.3	5.3	4.0	0.5	4.5	3.0	1.3	4.3
	B												
	En												
Worn	Pl												
	B												
	En												

		Laevicardium mortoni			Chama congregata			Nuculana acuta			Cymatoica orientus		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
Unworn	Pl	1.0	1.9	2.9	2.0	0.6	2.6	2.0	–	2.0	2.0	–	2.0
	B												
	En												
Worn	Pl				4.0	0.5	4.5						
	B												
	En												

		Anomia simplex			Tellina aequistriata			Glycymerus subtilis			Solecurtus cumingianus		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
Unworn	Pl	–	1.5	1.5	1.0	–	1.0	1.0	–	1.0	–	0.8	0.8
	B												
	En												
Worn	Pl												
	B												
	En												

		Atrina			Semele bellastriata			Dosinia elegans			Cyclinella tenuis		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
Unworn	Pl	–	0.6	0.6	–	0.5	0.5	–	0.5	0.5	–	0.3	0.3
	B												
	En												
Worn	Pl												
	B												
	En												

		Pitar simpsoni			Gouldia cerina		
		Whl	Frg	Σ	Whl	Frg	Σ
Unworn	Pl	2.0	–	2.0			
	B						
	En						
Worn	Pl	–	0.5	0.5	1.0	0.3	1.3
	B						
	En						

		Indeterminant		
		Whl	Frg	Σ
Unworn	Pl	–	0.6	0.6
	B			
	En			
Worn	Pl	–	3.5	3.5
	B	–	0.5	0.5
	En	–	1.4	1.4

2317 B

		Lucina nassula			Gouldia cerina			Anomia simplex			Macoma tenta			Chione cancellata			Tellina aequistriata			Atrina			Lima pectinata		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
Unworn	Pl	6.0	1.3	7.3	5.0	—	5.0	3.0	1.0	4.0	3.0	—	3.0				1.0	0.3	1.3	—	1.3	1.3	1.0	—	1.0
	B																								
	En													1.0	0.5	1.5									
Worn	Pl																								
	B																								
	En																								

		Glycymerus pectinata			Cyclinella tenuis			"Pectin"			Laevicardium mortoni			Abra aequalis			Tellina lineata			Corbula krebsiana			Semele bellestriata		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
Unworn	Pl	1.0	–	1.0	—	0.5	0.5	30.0	8.0	38.0	4.0	0.5	4.5	17.0	1.3	18.3	16.0	1.3	17.3	92.0	6.0	98.0	1.0	—	1.0
	B																								
	En																								
Worn	Pl							—	1.9	1.9	—	0.5	0.5	2.0	—	2.0	2.0	0.5	2.5	26.0	2.0	28.0			
	B																								
	En							—	2.5	2.5													—	0.3	0.3

		Macrocallista maculata			Divaricella quadrisulcata			Arcinella cornuta			Pitar simpsoni			Corbula dietziana			Chama congregata			Tradiycardium			Chione latilirata		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
Unworn	Pl	3.0	0.6	3.6	7.0	—	7.0	5.0	0.1	5.1	2.0	0.3	2.3	1.0	—	1.0									
	B																								
	En																								
Worn	Pl	2.0	0.4	2.4	5.0	—	5.0				3.0	1.8	4.8	2.0	0.5	2.5	6.0	—	6.0	1.0	0.1	1.1			
	B																								
	En							3.0	0.5	3.5	—	0.8	0.8										—	0.8	0.8

		Anodara baughmani						Indeterminant			Indeterminant-smooth			Indeterminant-concentric											
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
Unworn	Pl										—	2.8	2.8	—	0.1	0.1									
	B																								
	En													—	0.1	0.1									
Worn	Pl	—	0.1	0.1				—	1.9	1.9				—	1.3	1.3									
	B							—	0.6	0.6															
	En							—	3.6	3.6															

2318 A

		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
		Pitar simpsoni			*Corbula krebsiana*			*Laevicardium mortoni*			*Trachycardium*			*Lucina radians*			*Transenella*			*Chione cancellata*					
Inworn	Pl	1.0	—	1.0	1.0	—	1.0	—	0.4	0.4	—	0.3	0.3	1.0	—	1.0									
	B																								
	En																								
Worn	Pl													2.0	—	2.0	1.0	—	1.0	—	0.5	0.5			
	B																								
	En																								

		Indeterminant			*Indeterminant-smooth-growth*			*Indeterminant growth line*																	
Inworn	Pl				—	0.5	0.5	—	0.3	0.3															
	B																								
	En																								
Worn	Pl	—	0.4	0.4																					
	B																								
	En																								

nworn	Pl																								
	B																								
	En																								
Worn	Pl																								
	B																								
	En																								

nworn	Pl																								
	B																								
	En																								
Worn	Pl																								
	B																								
	En																								

2318 B

		Laevicardium mortoni			Peromya granulata			Plicatula gibbosa			Macrocallista maculata			Chione cancellata			Linga			"Pectin"			Pitar simpsoni		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
Unworn	Pl	1.0	0.5	1.5	1.0	0.5	1.5	1.0	—	1.0	—	0.3	0.3	1.0	0.8	1.8	1.0	0.3	1.3	—	0.1	0.1			
	B																								
	En																								
Worn	Pl													—	0.4	0.4	1.0	—	1.0	—	0.4	0.4	1.0	0.5	1.5
	B																								
	En																								

		Tellina martinicensis			Plectodon granulatus			Ventricolaria rugatina			Linga pensylvanica			Atrina											
Unworn	Pl																								
	B																								
	En																								
Worn	Pl	1.0	—	1.0				1.0	—	1.0	—	0.5	0.5	—	0.1	0.1									
	B																								
	En				1.0	—	1.0																		

		Indeterminant																							
Unworn	Pl	—	0.5	0.5																					
	B																								
	En																								
Worn	Pl	—	3.1	3.1																					
	B	—	0.6	0.6																					
	En	—	3.4	3.4																					

Unworn	Pl																								
	B																								
	En																								
Worn	Pl																								
	B																								
	En																								

2419 A

		Semele bellestriata			Lucina nassula			Laevicardium fiski			"Pectin"			Pododesmus rudis			Trachycardium			Chione cancellata			Lucina radians		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
Unworn	Pl	3.0	—	3.0	2.0	1.0	3.0	1.0	1.0	2.0	1.0	—	1.0	1.0	0.5	1.5	2.0	1.3	3.3	5.0	2.0	7.0			
	B																								
	En																								
Worn	Pl																—	0.1	0.1	—	3.3	3.3	3.0	—	3.0
	B																			—	1.6	1.6			
	En																								

		Pinctada			Pitar simpsoni			Modiolus M. squamosus			Transenella			Linga pensylvanica			Anadara baughmani								
Unworn	Pl																								
	B																								
	En																								
Worn	Pl	—	2.5	2.5	2.0	—	2.0	1.0	—	1.0	1.0	—	1.0	—	0.3	0.3	—	0.1	0.1						
	B																								
	En																								

		Indeterminant			Ind.— growth line			Indeterminant-radial			Indeterminant concentric														
Unworn	Pl				—	1.1	1.1	—	0.4	0.9															
	B																								
	En																								
Worn	Pl	—	4.0	4.0							—	0.5	0.5												
	B	—	3.5	3.5				—	0.4	0.4															
	En																								

Unworn	Pl																								
	B																								
	En																								
Worn	Pl																								
	B																								
	En																								

2419 B

		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
		Trachycardium			Divaricella quadrisulcata			Lucina nassula			Plicatula gibbosa			Chama congregata			Semele bellestriata			Chione intapurpea			Chione cancellata		
nworn	Pl	2.0	1.3	3.3	3.0	—	3.0	2.0	—	2.0	2.0	—	2.0	1.0	—	1.0	—	0.5	0.5	—	0.3	0.3	2.0	1.0	3.0
	B																								
	En																								
Vorn	Pl																						—	1.5	1.5
	B																						-	0.8	0.8
	En																								

		Pitar simpsoni			Tellina			Laevicardium mortoni			Pinctada			Lucina pensylvanica			"Pectin"								
nworn	Pl	1.0	–	1.0																					
	B																								
	En																								
Vorn	Pl	1.0	–	1.0	3.0	0.5	3.5	2.0	1.5	3.5	—	0.8	0.8	–	0.5	0.5	–	0.5	0.5						
	B																								
	En																								

		Indeterminant			Indeterminant-radial			Indeterminant-concentric			Indeterminant-cancellate														
nworn	Pl				—	0.4	0.4	—	0.3	0.3															
	B																								
	En																								
Vorn	Pl	—	0.5	0.5	—	0.5	0.5	—	0.5	0.5	—	0.8	0.8												
	B	—	3.0	3.0																					
	En	—	1.4	1.4																					

nworn	Pl																								
	B																								
	En																								
Vorn	Pl																								
	B																								
	En																								

2420 A

		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
		Lucina nassula			Laevicardium mortoni			Divaricella quadrisulcata			Tellina lineata			Chama congregata			Dosinia elegans			Corbula krebsiana			"Pectin"		
Inworn	Pl	5.0	1.5	6.5	2.0	0.4	2.4	2.0	—	2.0	2.0	—	2.0	—	1.5	1.5	1.0	—	1.0	1.0	—	1.0	1.0	—	1.0
	B																								
	En																								
Yorn	Pl																								
	B																								
	En																								

		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
		Chione cancellata			Lucina pensylvanica			Pitar simpsoni																	
Inworn	Pl	2.0	0.6	2.6																					
	B																								
	En																								
Yorn	Pl				1.0	1.0	2.0	1.0	—	1.0															
	B	—	0.4	0.4																					
	En																								

		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
		Indeterminant			Indeterminant-radial			Indeterminant concentric																	
nworn	Pl	—	0.6	0.6	—	0.3	0.3	—	0.4	0.4															
	B																								
	En																								
Yorn	Pl	—	1.9	1.9				—	0.1	0.1															
	B	—	0.2	0.2																					
	En	—	0.5	0.5																					

		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
Inworn	Pl																								
	B																								
	En																								
Yorn	Pl																								
	B																								
	En																								

2420 B

		Laevicardium mortoni			Pitar simpsoni			Abra aequalis			Semele bellestriata			Macrocallista maculata			Gouldia cerina			Anomia simplex			Linga amiatus		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
Unworn	Pl	3.0	1.8	4.8	3.0	—	3.0	2.0	—	2.0	1.0	0.5	1.5	1.0	0.3	1.3	1.0	—	1.0	1.0	—	1.0	1.0	—	1.0
	B																								
	En																								
Worn	Pl																								
	B																								
	En																								

		Linga pensylvanica			Chama congregata			Lucina radians			Tellina aequistriata			Chione intapurpea			Lucina nassula			Chione cancellata			Parvilucina		
Unworn	Pl	1.0	—	1.0	4.0	0.8	4.8	2.0	0.8	2.8	3.0	—	3.0	1.0	1.6	2.6	7.0	1.0	8.0	4.0	1.6	5.6	1.0	—	1.0
	B																								
	En																								
Worn	Pl				—	0.5	0.5	—	0.4	0.4	1.0	—	1.0	—	1.0	1.0	4.0	—	4.0	1.0	3.1	4.1	1.0	—	1.0
	B																								
	En																								

		Divaricella quadrisulcata			Dosina			Plicata gibbosa			"Pectin"			Tellina			Transenella			Trachycardium					
Unworn	Pl	3.0	—	3.0	—	0.1	0.1	1.0	0.5	1.5															
	B																								
	En																								
Worn	Pl	3.0	2.0	5.0	—	0.3	0.3	3.0	1.5	4.5	—	1.3	1.3	—	0.8	0.8	—	0.5	0.5	—	0.5	0.5			
	B																								
	En																								

		Indeterminant			Ind. - smooth or growth line			Indeterminant cancellate			Indeterminant radial			Indeterminant concentric			Indeterminant Blackened								
Unworn	Pl	—	0.4	0.4	—	2.1	2.1	—	0.1	0.1	—	0.1	0.1												
	B																								
	En							—	0.3	0.3															
Worn	Pl	—	2.8	2.8	—	1.4	1.4	—	0.1	0.1	—	0.6	0.6	—	0.8	0.8	—	0.6	0.6						
	B	—	1.5	1.5	—	0.1	0.1				—	1.0	1.0				—	0.8	0.8						
	En	—	5.9	5.9	—	1.3	1.3	—	0.5	0.5	—	0.1	0.1	—	0.5	0.5									

2421 A

		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
		Corbula krebsiana			Lucina nassula			Dosina elegans			Tellina squamifera			Tellina lineata			Chione cancellata								
nworn	Pl	57.0	—	57.0	3.0	0.3	3.3	2.0	0.1	2.1	1.0	—	1.0	—	0.5	0.5	—	0.1	0.1						
	B																								
	En																								
/orn	Pl																								
	B																								
	En																								

		Indeterminant																							
nworn	Pl																								
	B																								
	En																								
/orn	Pl	—	0.5	0.5																					
	B																								
	En																								

nworn	Pl																								
	B																								
	En																								
/orn	Pl																								
	B																								
	En																								

nworn	Pl																								
	B																								
	En																								
/orn	Pl																								
	B																								
	En																								

2421 B

		Corbula krebsiana Whl	Frg	Σ	Lucina nassula Whl	Frg	Σ	Dosinia elegans Whl	Frg	Σ	Tellina versicolor Whl	Frg	Σ
Unworn	Pl	30.0	1.0	31.0	4.0	—	4.0	2.0	—	2.0	2.0	—	2.0
	B												
	En												
Worn	Pl												
	B												
	En												

		Abra aequalis Whl	Frg	Σ	Macrocallista maculata Whl	Frg	Σ	"Pecten" Whl	Frg	Σ	Divaricella quadrisulcata Whl	Frg	Σ
Unworn	Pl	2.0	—	2.0	1.0	—	1.0	—	0.1	0.1	1.0	—	1.0
	B												
	En												
Worn	Pl										1.0	—	1.0
	B												
	En												

		Chione cancellata Whl	Frg	Σ
Unworn	Pl			
	B			
	En			
Worn	Pl	—	0.1	0.1
	B			
	En			

		Indeterminant Whl	Frg	Σ
Unworn	Pl			
	B			
	En			
Worn	Pl	—	0.6	0.6
	B			
	En	—	0.9	0.9

		Whl	Frg	Σ
Unworn	Pl			
	B			
	En			
Worn	Pl			
	B			
	En			

2422 A

		Corbula krebsiana			"Pectin"			Chama congregata			Abra aequalis			Plicatula gibbosa			Anomia simplex			Macrocallista maculata			Arca zebra		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
nworn	Pl	99.0	6.5	105.5	8.0	4.5	12.5	12.0	—	12.0	9.0	—	9.0	—	6.8	6.8	4.0	0.5	4.5	1.0	0.8	1.8	—	1.1	1.1
	B																								
	En																								
orn	Pl																								
	B																								
	En																								

		Semele bellestriata			Tellina aequistriata			Laevicardium mortoni			Anadara baughmani			Chione pygmaea			Corbula dietziana			Chione cancellata			Linga amiantus		
nworn	Pl	1.0	—	1.0	1.0	—	1.0	1.0	1.4	2.4	3.0	0.3	3.3	1.0	1.0	2.0									
	B																								
	En																								
orn	Pl							1.0	0.5	1.5	3.0	—	3.0	2.0	1.5	3.5	9.0	0.5	9.5	1.0	3.4	4.4	1.0	—	1.0
	B																1.0	-	1.0	2.0	1.6	3.6			
	En																								

		Eucrassatella speciosa																							
nworn	Pl																								
	B																								
	En																								
orn	Pl	1.0	—	1.0																					
	B																								
	En																								

		Indeterminant			Ind. - smooth or growth line			Indeterminant cancellate			Indeterminant radial			Indeterminant-concentric											
nworn	Pl	—	0.6	0.6	—	1.5	1.5	-	0.1	0.1	—	1.6	1.6												
	B																								
	En																								
orn	Pl	—	19.3	19.3	—	2.4	2.4	-	0.3	0.3	—	4.3	4.3	—	0.3	0.3									
	B	—	9.3	9.3							—	0.3	0.3												
	En	—	1.3	1.3																					

2422 B

		Corbula krebsiana			*"Pectin"*			*Chama congregata*			*Chione pygmaea*		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
Unworn	Pl	16.0	3.0	19.0	11.0	6.1	17.1	5.0	0.6	5.6	5.0	0.5	5.5
	B												
	En												
Worn	Pl												
	B												
	En												

		Semele bellestriata			*Laevicardium mortoni*			*Tellina aequistriata*			*Linga amiatus*		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
Unworn	Pl	3.0	1.5	4.5	1.0	3.0	4.0	2.0	0.5	2.5	2.0	—	2.0
	B												
	En												
Worn	Pl												
	B												
	En												

		Macrocallista maculata			*Tellina lineata*			*Lucina radians*			*Plicatula gibbosa*		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
Unworn	Pl	1.0	0.4	1.4	—	1.0	1.0	—	0.5	0.5	8.0	0.5	8.5
	B												
	En												
Worn	Pl										2.0	—	2.0
	B												
	En												

		Pitar simpsoni			*Chione cancellata*			*Corbula dietziana*			*Arca zebra*		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
Unworn	Pl	2.0	—	2.0	1.0	0.5	1.5						
	B												
	En				—	0.5	0.5						
Worn	Pl	2.0	—	2.0	—	3.1	3.1	4.0	0.8	4.8	—	1.5	1.5
	B				—	2.3	2.3						
	En												

		Chione latilirata			*Trachycardium*		
		Whl	Frg	Σ	Whl	Frg	Σ
Unworn	Pl						
	B						
	En						
Worn	Pl	—	0.8	0.8	—	0.3	0.3
	B						
	En						

		Indeterminant			Indeterminant concentric			Indeterminant growth lines			Indeterminant radial			Indeterminant cancellate		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
Unworn	Pl	—	1.9	1.9	—	0.3	0.3	—	0.8	0.8	—	0.1	0.1			
	B															
	En															
Worn	Pl		13.4	13.4	—	0.4	0.4	—	5.6	5.6	—	2.9	2.9	—	0.1	0.1
	B		6.5	6.5	—	0.5	0.5	—	0.3	0.3	—	0.5	0.5	—	0.4	0.4
	En		0.6	0.6	—	0.4	0.4				—	1.3	1.3	—	0.5	0.5

2423 A

		Anomia simplex			Semele bellestriata			Jovannetia guillingi			Arca zebra			Chione intapurpea			Nucula proxima			Modiolus squamosus			Solecurtus cumingianus		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
Inworn	Pl	3.0	–	3.0	1.0	1.6	2.6	–	2.0	2.0	1.0	–	1.0	1.0	–	1.0	1.0	–	1.0	–	0.8	0.8	–	0.6	0.6
	B																								
	En																								
Vorn	Pl																								
	B																								
	En																								

		Chione latilirata						Abra aequalis			Laevicardium mortoni			Gouldia cerina			"Pectin"			Semele bellestriata			Dosina elegans		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
nworn	Pl	–	0.1	0.1				3.0	–	3.0	1.0	2.0	3.0	8.0	0.5	8.5	3.0	4.8	7.8	–	1.3	1.3	–	0.4	0.4
	B																								
	En	2.0	–	2.0										1.0	–	1.0	–	1.8	1.8	–	1.0	1.0			
Vorn	Pl	–	0.1	0.1				1.0	–	1.0	–	1.6	1.6	8.0	1.5	9.5	–	8.6	8.6	1.0	0.9	1.9	–	0.5	0.5
	B																–	2.8	2.8	–	0.1	0.1	–	0.1	0.1
	En	1.0	1.4	2.4				1.0	–	1.0	–	0.6	0.6	12.0	5.0	17.0	5.0	14.4	19.4	–	2.4	2.4	–	0.8	0.8

		Corbula krebsiana			Tellina lineata			Macrocallista maculata			Linga amiatus			Anadara baughmani			Chione pygmaea			Chama congregata			Plicatula gibbosa		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
nworn	Pl	10.0	–	10.0	3.0	–	3.0	–	0.3	0.3	1.0	–	1.0	5.0	0.5	5.5	2.0	–	2.0	–	0.4	0.4	–	1.1	1.1
	B																								
	En										1.0	–	1.0												
/orn	Pl	16.0	1.5	17.5				–	0.5	0.5	2.0	–	2.0	4.0	7.5	11.5	5.0	2.5	7.5				–	0.1	0.1
	B													–	0.3	0.3									
	En	17.0	1.8	18.8	–	0.5	0.5	–	0.3	0.3	6.0	–	6.0	4.0	7.0	11.0	6.0	2.0	8.0	3.0	0.9	3.9	3.0	1.3	4.3

		Chione cancellata			Glycymerus			Corbula dietziana			Nuculana verrilliana			Diplodonta			Pteromerus perplana			Arcinella cornuta			Cyclocardia armilla		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
nworn	Pl													2.0	–	2.0									
	B																								
	En																								
/orn	Pl	–	2.0	2.0	1.0	–	1.0				1.0	0.5	1.5				1.0	–	1.0	–	0.8	0.8	–	0.8	0.8
	B	–	1.5	1.5																–	0.5	0.5			
	En	–	1.0	1.0	2.0	–	2.0	2.0	0.5	2.5	1.0	–	1.0												

2423 A (CONTINUED)

		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
		Pandora arenosa			Eucrassatella speciosa																				
Unworn	Pl																								
	B																								
	En																								
Worn	Pl	–	0.5	0.5	–	0.8	0.8																		
	B																								
	En																								
		Indeterminant																							
Unworn	Pl	–	1.0	1.0																					
	B																								
	En																								
Worn	Pl	–	15.4	15.4																					
	B	–	5.0	5.0																					
	En	–	9.5	9.5																					
Unworn	Pl																								
	B																								
	En																								
Worn	Pl																								
	B																								
	En																								
Unworn	Pl																								
	B																								
	En																								
Worn	Pl																								
	B																								
	En																								

2423 B

		Pandora arenosa			Lima			Tellina lineata			Atrina			Trachycardium			Chione pygmaea			Chione latilirata			Chione cancellata		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
nworn	Pl	—	0.5	0.5	—	0.5	0.5	—	0.5	0.5	—	0.4	0.4	—	0.1	0.1	4.0	0.5	4.5	—	0.5	0.5	—	0.6	0.6
	B																								
	En																								
orn	Pl																4.0	1.0	5.0	—	0.1	0.1	—	0.3	0.3
	B																								
	En																2.0	2.3	4.3				—	0.6	0.6

		Glycymerus pectinata			Pitar simpsoni			Corbula dietziana			Corbula krebsiana			Laevicardium mortoni			Macrocallista maculata			"Pectin"			Anadara baughmani		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
nworn	Pl	2.0	—	2.0	—	0.5	0.5	1.0	—	1.0	2.0	1.0	3.0	—	0.3	0.3	—	0.3	0.3	1.0	1.6	2.6	1.0	0.1	1.1
	B																								
	En																			—	0.1	0.1			
orn	Pl	1.0	—	1.0	—	0.5	0.5	—	1.0	1.0	5.0	0.5	5.5	—	0.5	0.5				—	0.8	0.9	7.0	3.8	10.8
	B																								
	En				—	1.0	1.0				6.0	1.0	7.0	—	0.1	0.1	—	0.5	0.5	—	3.8	3.8	—	0.4	0.4

		Semele bellastriata			Gouldia cerina			Linga amiantus			Nucula acuta			Chama congregata			Anomia simplex								
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
nworn	Pl	—	0.5	0.5	—	0.8	0.8																		
	B																								
	En																								
orn	Pl	2.0	1.0	3.0	6.0	0.5	6.5	4.0	—	4.0	4.0	1.0	5.0	1.0	0.3	1.3	1.0	—	1.0						
	B																								
	En	1.0	0.7	1.7	6.0	1.5	7.5	5.0	—	5.0															

		Indeterminant			Ind.- radial			Ind. concentric																	
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
nworn	Pl	—	0.6	0.6	—	0.4	0.4	—	0.6	0.6															
	B																								
	En																								
orn	Pl	—	30.1	30.1	—	20.7	20.7	—	1.9	1.9															
	B	—	9.6	9.6																					
	En	—	8.4	8.4	—	5.6	5.6	—	0.6	0.6															

2424 A

		Ensis minor			Chione latilirata			Periglypta listeri			Tellina lineata			Macrocallista maculata			"Pectin"			Corbula krebsiana			Loevicardium mortoni		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
Unworn	Pl	1.0	1.4	2.4	1.0	0.8	1.8	1.0	0.1	1.1	1.0	0.1	1.1	—	0.8	0.8	7.0	2.3	9.3	7.0	0.5	7.5	1.0	—	1.0
	B																								
	En																								
Worn	Pl																								
	B																								
	En																—	1.3	1.3	2.0	—	2.0	—	0.1	0.1

		Transenella			Lucina Pectinata																				
Unworn	Pl																								
	B																								
	En																								
Worn	Pl				—	0.1	0.1																		
	B																								
	En	2.0	—	2.0																					

		Indeterminant			Indeterminant radial			Indeterminant concentric																	
Unworn	Pl																								
	B																								
	En																								
Worn	Pl	—	0.5	0.5																					
	B																								
	En	—	1.6	1.6	—	0.3	0.3	—	0.1	0.1															

Unworn	Pl																								
	B																								
	En																								
Worn	Pl																								
	B																								
	En																								

2424 B

		Semele bellestriata			*Arcinella cornuta*			"*Pectin*"			*Corbula krebsiana*		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
Unworn	Pl	1.0	—	1.0	1.0	—	1.0	3.0	1.5	4.5	9.0	0.5	9.5
	B												
	En												
Worn	Pl										1.0	—	1.0
	B							—	0.1	0.1			
	En							—	0.3	0.3	—	1.5	1.5

		Transenella			*Pitar simpsoni*			*Enis minor*			*Glycymerys pectinata*		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
Unworn	Pl	1.0	0.5	1.5	1.0	—	1.0	—	0.8	0.8	—	0.5	0.5
	B												
	En												
Worn	Pl												
	B												
	En	1.0	—	1.0	3.0	—	3.0	—	0.1	0.1	1.0	—	1.0

		Barbatia tenera			*Periglypta listeri*								
Unworn	Pl												
	B												
	En												
Worn	Pl				—	0.3	0.3						
	B												
	En	1.0	—	1.0									

Unworn	Pl												
	B												
	En												
Worn	Pl												
	B												
	En												

		Indeterminant											
Unworn	Pl	—	0.3	0.3									
	B												
	En												
Worn	Pl	—	1.3	1.3									
	B												
	En	—	2.6	2.6									

Unworn	Pl												
	B												
	En												
Worn	Pl												
	B												
	En												

Unworn	Pl												
	B												
	En												
Worn	Pl												
	B												
	En												

Unworn	Pl												
	B												
	En												
Worn	Pl												
	B												
	En												

2425 C

		Chama congregata			Ventricolaria rugatina			Chione intapurpea			Glycymerus americana			Laevicardium mortoni			Gouldia cerina			"Pectin"			Pteromus pecplana		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
Unworn	Pl	2.0	–	2.0	1.0	–	1.0	1.0	–	1.0	–	0.3	0.3	2.0	–	2.0	3.0	–	3.0	4.0	1.1	5.1	1.0	–	1.0
	B																								
	En													1.0	1.0	2.0	–	0.3	0.3						
Worn	Pl																			–	1.0	1.0			
	B																								
	En													–	0.1	0.1				–	0.5	0.5	2.0	–	2.0

		Chione latilirata			Glycymerus pectinata			Chione			Transenella			Pitar simpsoni			Chione pygmaea			Lucina radians			Semele bellestriata		
Unworn	Pl	1.0	0.3	1.3	1.0	–	1.0																		
	B																								
	En																								
Worn	Pl	2.0	0.1	2.1	2.0	1.0	3.0	2.0	–	2.0				1.0	–	1.0				1.0	–	1.0	1.0	0.1	1.1
	B																								
	En	–	1.0	1.0							2.0	–	2.0	–	0.5	0.5	1.0	–	1.0						

		Corbula krebsiana			Atrina		
Unworn	Pl						
	B						
	En						
Worn	Pl						
	B						
	En	–	0.5	0.5	–	0.1	0.1

		Indeterminant			Indeterminant cancellate			Indeterminant radial		
Unworn	Pl				–	0.4	0.4	–	0.1	0.1
	B									
	En									
Worn	Pl									
	B	–	4.5	4.5				–	0.3	0.3
	En	–	16.6	16.6	–	0.9	0.9	–	6.1	6.1

2426 A

		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
		Limopsis sulcata			Tellina lineata			Tellina squamifera			Poromya granulata.			Nuculana acuta			Laevicardium mortoni			Chione latilirata			"Pectin"		
Unworn	Pl	6.0	0.5	6.5	4.0	2.0	6.0	1.0	1.0	2.0	1.0	—	1.0	1.0	—	1.0	—	0.8	0.8	—	0.5	0.5	—	0.1	0.1
	B																								
	En																—	0.1	0.1						
Worn	Pl																								
	B																								
	En																								

		Indeterminant			Indeterminant Concentric			Indeterminant growth line			Indeterminant cancellate														
Unworn	Pl																								
	B																								
	En																								
Worn	Pl	—	0.8	0.8	—	1.3	1.3	—	0.8	0.8	—	0.1	0.1												
	B																								
	En	—	0.4	0.4	—	0.3	0.3																		

Unworn	Pl																								
	B																								
	En																								
Worn	Pl																								
	B																								
	En																								

Unworn	Pl																								
	B																								
	En																								
Worn	Pl																								
	B																								
	En																								

2426 B

		Limopsis sulcata			Macoma tenta			Tellina squamifera			Abra aequalis			Laevicardium mortoni			Nuculana acuta			"Pectin"			Tellina lineata		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
Unworn	Pl	30.0	3.0	33.0	9.0	0.5	9.5	5.0	2.1	7.1	3.0	—	3.0	1.0	1.8	2.8	2.0	0.3	2.3	1.0	1.0	2.0	1.0	0.9	1.9
	B																								
	En																			1.0	—	1.0			
Worn	Pl																								
	B																								
	En																								

		Chione latilirata			Transenella			Poromya granulata			Glycymerus pectinata			Corbula krebsiana			Thysira granulosa			Corbula dietziana					
Unworn	Pl	1.0	0.1	1.1	1.0	—	1.0	1.0	—	1.0	1.0	—	1.0	1.0	—	1.0	1.0	—	1.0						
	B																								
	En																								
Worn	Pl																			1.0	—	1.0			
	B																								
	En																								

		Indeterminant			Ind. - smooth or growth line			Indeterminant concentric			Indeterminant radial														
Unworn	Pl	—	0.4	0.4	—	1.9	1.9	—	1.1	1.1															
	B																								
	En																								
Worn	Pl							—	0.1	0.1	—	0.4	0.4												
	B	—	0.3	0.3				—	0.1	0.1	—	0.1	0.1												
	En	—	2.1	2.1				—	0.3	0.3															

Unworn	Pl																								
	B																								
	En																								
Worn	Pl																								
	B																								
	En																								

2427 B

		Nuculana acuta			Abra aequalis			Nemocardium peramabile			"Pectin"			Cyclocardia armilla			Cardiomya striata			Corbula krebsiana			Thyasira granulosa		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
Unworn	Pl	85.0	10.3	95.3	8.0	3.3	11.3	2.0	8.8	10.8	—	2.3	2.3	2.0	—	2.0	—	1.3	1.3	1.0	—	1.0	1.0	—	1.0
	B																								
	En																								
Worn	Pl																								
	B																								
	En																								

		Nuculana solidifacta			Anadara baughmani			Nucula crenulata			Limopsis sulcata			Vermicularia rugatina			Plectodon granulatus								
Unworn	Pl	—	0.5	0.5	8.0	1.0	9.0	2.0	—	2.0	2.0	—	2.0												
	B																								
	En																								
Worn	Pl				—	2.8	2.8	—	1.0	1.0	13.0	2.5	15.5	1.0	—	1.0	—	0.5	0.5						
	B										8.0	2.0	10.0												
	En										5.0	—	5.0												

		Indeterminant			concentric			smooth or growth line			radial			cancellate											
Unworn	Pl	—	0.4	0.4	—	1.0	1.0	—	0.8	0.8	—	0.4	0.4												
	B																								
	En																								
Worn	Pl	—	2.8	2.8	—	0.8	0.8	—	2.6	2.6	—	2.5	2.5	—	0.3	0.3									
	B	—	0.8	0.8				—	0.3	0.3	—	0.5	0.5												
	En																								

Unworn	Pl																								
	B																								
	En																								
Worn	Pl																								
	B																								
	En																								

2529 A

		"Pectin"			Corbula krebsiana			Semele bellestriata			Chione cancellata.			Trachycardium			Glycymerus pectinata			Laevicardium mortoni			Chione latilirata		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
Unworn	Pl	—	0.1	0.1																					
	B																								
	En																								
Worn	Pl	—	0.4	0.4	1.0	—	1.0	1.0	—	1.0	1.0	—	1.0												
	B																								
	En	2.0	1.5	3.5	2.0	0.5	2.5	1.0	0.3	1.3	1.0	—	1.0	1.0	—	1.0	1.0	—	1.0	—	0.5	0.5	—	0.1	0.1

		Indeterminant																							
Unworn	Pl	—	0.1	0.1																					
	B																								
	En																								
Worn	Pl	—	3.0	3.0																					
	B																								
	En	—	2.6	2.6																					

Unworn	Pl																								
	B																								
	En																								
Worn	Pl																								
	B																								
	En																								

Unworn	Pl																								
	B																								
	En																								
Worn	Pl																								
	B																								
	En																								

2529 E

		Glycymerus			Diplodontia nucleiformis			Corbula krebsiana			Semele purpurascens			Chione cancellata			Laevicardium			Chione latilirata			Plicatula gibbosa		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
Unworn	Pl				1.0	–	1.0	13.0	–	13.0	1.0	0.6	1.6	2.0	–	2.0	–	0.5	0.5				1.0	–	1.0
	B																								
	En	1.0	0.3	1.3				3.0	–	3.0										1.0	–	1.0			
Worn	Pl													2.0	–	2.0									
	B																								
	En	–	1.0	1.0				11.0	1.0	12.0	–	0.3	0.3	6.0	1.5	7.5	1.0	0.4	1.4	5.0	0.5	5.5	8.0	–	8.0

		"Pectin"			Gouldia cerina			Semele bellestriata			Americardia media			Chama congregata			Macoma tenta			Pteromeris perplana			Cyclocardia armilla		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
Unworn	Pl	–	0.4	0.4																					
	B																								
	En	–	0.5	0.5																					
Worn	Pl																1.0	–	1.0						
	B	2.0	1.0	3.0							1.0	–	1.0												
	En	13.0	9.8	22.8	4.0	–	4.0	1.0	1.6	2.6	1.0	–	1.0	1.0	–	1.0				1.0	–	1.0	–	0.5	0.5

		Indeterminant		
		Whl	Frg	Σ
Unworn	Pl			
	B			
	En			
Worn	Pl			
	B			
	En	–	5.5	5.5

Unworn	Pl			
	B			
	En			
Worn	Pl			
	B			
	En			

2530 A

		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
		Chione cancellata			"Pectin"			Chione latilirata			Arcinella cornuta			Corbula krebsiana			Pteromerus perplana								
Unworn	Pl	1.0	—	1.0																					
	B																								
	En																								
Worn	Pl				—	0.3	0.3																		
	B																								
	En				1.0	0.3	1.3	1.0	—	1.0	1.0	—	1.0	1.0	—	1.0	1.0	—	1.0						

		Indeterminant																							
Unworn	Pl																								
	B																								
	En																								
Worn	Pl																								
	B																								
	En	—	1.0	1.0																					

Unworn	Pl																								
	B																								
	En																								
Worn	Pl																								
	B																								
	En																								

Unworn	Pl																								
	B																								
	En																								
Worn	Pl																								
	B																								
	En																								

2531 B

		Diplodontia punctata			Anomia simplex			Dosinia elegans			Laevicardium		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
Unworn	Pl	6.0	1.0	7.0	1.0	—	1.0	—	0.1	0.1	2.0	—	2.0
	B												
	En							—	0.1	0.1			
Worn	Pl												
	B												
	En										—	0.8	0.8

		Cyclocardia armilla			Gouldia cerina			Plicatula gibbosa			"Pectin"		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
Unworn	Pl	1.0	--	1.0	1.0	—	1.0	2.0	—	2.0	—	0.8	0.8
	B												
	En	1.0	—	1.0	2.0	—	2.0	1.0	—	1.0		0.8	0.8
Worn	Pl	1.0	—	1.0	2.0	—	2.0				—	0.5	0.5
	B										2.0	1.3	3.3
	En				4.0	1.5	5.5	8.0	0.5	8.5	1.0	3.5	4.5

		Astarte nana			Chione latilirata			Semele bellastriata			Corbula krebsiana		
Unworn	Pl	1.0	—	1.0									
	B												
	En												
Worn	Pl												
	B												
	En	3.0	-	3.0	2.0	1.5	3.5	1.0	0.8	1.8	1.0	—	1.0

		Indeterminant		
Unworn	Pl	—	0.1	0.1
	B			
	En			
Worn	Pl	—	0.3	0.3
	B	—	0.9	0.9
	En	—	6.9	6.9

2531 G

		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
		Plicatula gibbosa			*Astarte nana*			*Cyclocardia armilla*			*Glycymeris pectinata.*			"Pectin"			*Chione cancellata*			*Pitar simpsoni*			*Corbula kreisiana*		
Unworn	Pl	1.0	—	1.0				1.0	—	1.0	1.0	—	1.0												
	B																								
	En				—	0.5	0.5																		
Worn	Pl																						1.0	—	1.0
	B																								
	En				1.0	—	1.0	2.0	—	2.0	5.0	0.5	5.5	2.0	2.5	4.5	4.0	0.3	4.3	1.0	2.5	3.5	1.0	0.3	1.3

		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
		Plectodon granulatus			*Americardia*			*Chione arus*			*Chione latilirata*														
Unworn	Pl																								
	B																								
	En																								
Worn	Pl																								
	B																								
	En	1.0	—	1.0	1.0	—	1.0	1.0	—	1.0	—	0.1	0.1												

		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
		Indeterminant																							
Unworn	Pl	—	0.6	0.6																					
	B																								
	En																								
Worn	Pl																								
	B	—	0.8	0.8																					
	En	—	4.8	4.8																					

Unworn	Pl																								
	B																								
	En																								
Worn	Pl																								
	B																								
	En																								

2532 I

		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
		Astarte nana			Rupellaria			Chione latilirata			Nemocardium tinctum			Xenophora			Chione cancellata			Semele bellestriata			"Pecten"		
Unworn	Pl	1.0	0.5	1.5	1.0	—	1.0	—	0.8	0.8	—	0.5	0.5	—	0.3	0.3							—	0.1	0.1
	B																			1.0	—	1.0			
	En																—	0.1	0.1				—	0.1	0.1
Worn	Pl																			1.0	—	1.0			
	B																							0.3	0.3
	En																							0.3	0.3

		Plicatula gibbosa			Pitar simpsoni			Gouldia cerina																	
Unworn	Pl																								
	B																								
	En																								
Worn	Pl	3.0	—	3.0	1.0	—	1.0																		
	B																								
	En							1.0	—	1.0															

		Indeterminant																							
Unworn	Pl	—	0.5	0.5																					
	B																								
	En																								
Worn	Pl	—	0.3	0.3																					
	B	—	0.5	0.5																					
	En																								

Unworn	Pl																								
	B																								
	En																								
Worn	Pl																								
	B																								
	En																								

2532 II

		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
		Limopsis sulcata			"Pectin"			Astarte nana			Plicatula gibbosa			Chione latilirata			Hia[illegible] azana			Pitar simpsoni					
Jnworn	Pl	1.0	—	1.0	—	0.4	0.4																		
	B				—	0.4	0.4																		
	En				3.0	0.6	3.6	1.0	—	1.0	2.0	—	2.0												
Worn	Pl							1.0		1.0							1.0	—	1.0	1.0	—	1.0			
	B				—	0.6	0.6				—	0.3	0.3												
	En				—	0.6	0.6				2.0	0.5	2.5	2.0	—	2.0									

		Indeterminant																							
Jnworn	Pl	—	0.3	0.3																					
	B	—	0.3	0.3																					
	En																								
Worn	Pl																								
	B	—	1.0	1.0																					
	En	7.0	2.5	9.5																					

Jnworn	Pl																								
	B																								
	En																								
Worn	Pl																								
	B																								
	En																								

Jnworn	Pl																								
	B																								
	En																								
Worn	Pl																								
	B																								
	En																								

2533 A

		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
		Gouldia cerina			Nuculana acuta			Pitar simpsoni			Plicatula gibbosa.			Tellin			Limopsis sulcata			"Pectin"			Astarte nana		
Unworn	Pl	2.0	—	2.0	1.0	—	1.0	4.0	—	4.0	9.0	—	9.0	—	0.5	0.5	5.0	—	5.0						
	B																								
	En	7.0	—	7.0							4.0		4.0				2.0	—	2.0						
Worn	Pl										5.0	—	5.0	1.0	—	1.0									
	B																								
	En							2.0	1.3	3.3	14.0	—	14.0				17.0	2.1	19.1	3.0	1.3	4.3	3.0	0.5	3.5

		Cyclocardia armilla			Arca zebra			Corbula dietziana			Ventricolaria rugatina			Laevicardium mortoni											
Unworn	Pl																								
	B																								
	En																								
Worn	Pl																								
	B																								
	En	2.0	—	2.0	1.0	—	1.0	1.0	—	1.0	—	0.9	0.9	—	0.3	0.3									

		Indeterminant																							
Unworn	Pl	–	0.8	0.8																					
	B																								
	En																								
Worn	Pl	–	2.8	2.8																					
	B	–	1.8	1.8																					
	En	–	13.9	13.9																					

Unworn	Pl																								
	B																								
	En																								
Worn	Pl																								
	B																								
	En																								

2533 D

		Corbula dietziana			*Ventricolaria rugatina*			*Anadara baughmani*			*Pitar simpsoni*			*Limopsis sulcata*			*Gouldia cerina*			*Plicatula gibbosa*			*"Pectin"*		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
Unworn	Pl	1.0	—	1.0	1.0	—	1.0	1.0	—	1.0	2.0	—	2.0	2.0	—	2.0	—	0.5	0.5	5.0	—	5.0	—	0.4	0.4
	B																1.0	—	1.0						
	En	3.0	—	3.0	1.0	—	1.0				3.0	—	3.0	5.0	0.8	5.8				5.0	—	5.0	—	0.8	0.8
Worn	Pl																								
	B																						1.0	0.5	1.5
	En										—	0.5	0.5	4.0	0.3	4.3	—	1.0	1.0	8.0	1.5	9.5	—	5.0	5.0

		Semele bellastriata			*Cyclocardia armilla*			*Macoma tenta*			*Dosinia*			*Chione latilirata*											
Unworn	Pl																								
	B																								
	En																								
Worn	Pl										—	0.1	0.1	—	0.1	0.1									
	B																								
	En	—	1.0	1.0	1.0	—	1.0	—	0.5	0.5	—	0.1	0.1												

		Indeterminant																							
Unworn	Pl																								
	B																								
	En																								
Worn	Pl																								
	B																								
	En	1.0	9.0	10.0																					

Unworn	Pl																								
	B																								
	En																								
Worn	Pl																								
	B																								
	En																								

2534 E

		Dosina elegans			"Pectin"			Anadara baughmani			Plicatula gibbosa		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
Unworn	Pl	—	0.5	0.5	—	0.1	0.1				9.0	0.1	9.1
	B												
	En							1.0	—	1.0			
Worn	Pl										8.0	1.3	9.3
	B												
	En							1.0	—	1.0	12.0	2.5	14.5

		Limopsis sulcata			Pitar simpsoni			Ventricolaria rugatina			Astarte nana		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
Unworn	Pl	3.0	—	3.0	1.0	0.3	1.3						
	B												
	En												
Worn	Pl												
	B												
	En	-	11.6	11.6	4.0	1.5	5.5	2.0	0.3	2.3	1.0	—	1.0

		Chione cancellata		
		Whl	Frg	Σ
Unworn	Pl			
	B			
	En			
Worn	Pl			
	B			
	En	—	0.5	0.5

		Indeterminant		
		Whl	Frg	Σ
Unworn	Pl			
	B			
	En			
Worn	Pl	—	1.0	1.0
	B	—	0.6	0.6
	En	—	7.6	7.6

2534 H

		Dosina elegans			*Glycymerus subtilis*			*Corbula dietziana*			*Glans dominguensis*		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
Unworn	Pl	7.0	—	7.0	2.0	—	2.0	1.0	—	1.0			
	B												
	En										1.0	—	1.0
Worn	Pl												
	B												
	En												

		Tellina			*Modiolus americansus*			*Ventricolaria rugatina*			*Pitar simpsoni*		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
Unworn	Pl	—	0.5	0.5	—	0.5	0.5				1.0	0.5	1.5
	B											0.5	0.5
	En							1.0	—	1.0	3.0	—	3.0
Worn	Pl										1.0	0.8	1.8
	B												
	En							—	0.3	0.3			

		Pleuromeris armilla			*Astarte nana*			*Plicatula gibbosa*			"*Pectin*"		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
Unworn	Pl							24.0	2.0	26.0			
	B												
	En	1.0	—	1.0	2.0	—	2.0				—	0.5	0.5
Worn	Pl				—	0.5	0.5	19.0	4.1	23.1			
	B							1.0	2.0	3.0	—	0.3	0.3
	En	1.0	—	1.0		2.0	2.0	5.0	2.8	7.8	—	0.4	0.4

		Limopsis sulcata			*Gouldia cerina*			*Limopsis sultana*			*Pitar simpsoni*		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
Unworn	Pl	4.0	—	4.0	—	0.3	0.3						
	B												
	En												
Worn	Pl				2.0	—	2.0				—	0.5	0.5
	B	1.0	—	1.0									
	En	10.0	2.0	12.0	2.0	—	2.0	2.0	0.5	2.5	1.0	1.0	2.0

		Corbula			*Transenella*		
		Whl	Frg	Σ	Whl	Frg	Σ
Unworn	Pl						
	B						
	En						
Worn	Pl	1.0	—	1.0	1.0	—	1.0
	B						
	En						

		Indeterminant		
		Whl	Frg	Σ
Unworn	Pl	1.0	—	1.0
	B			
	En			
Worn	Pl	—	1.3	1.3
	B			
	En	—	12.5	12.5

2535 C

		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
		Anadara baughmani			Abra aequalis			Nemocardium peramabile			Macoma tenta		
nworn	Pl	10.0	0.6	10.6	9.0	0.5	9.5	4.0	2.8	6.8	4.0	—	4.0
	B												
	En												
/orn	Pl												
	B												
	En												

		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
		"Pectin"			Pandora arenosa			Solecurtus cumingianus			Yoldia solenoides		
nworn	Pl	1.0	0.6	1.6	1.0	0.5	1.5	—	0.5	0.5	1.0	2.3	3.3
	B												
	En												
/orn	Pl										—	3.1	3.1
	B												
	En												

		Corbula krebsiana											
nworn	Pl	2.0	—	2.0									
	B												
	En												
/orn	Pl	—	0.5	0.5									
	B												
	En												

nworn	Pl												
	B												
	En												
/orn	Pl												
	B												
	En												

nworn	Pl												
	B												
	En												
/orn	Pl												
	B												
	En												

2535 G

		Cyclocardia armilla			Anadara baughmani			Nemocardium peramabile			Abra aequalis			Yoldia solenoides			Solecurtus cumingianus			Lucinoma pectinata			Pandora arenosa		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
Unworn	Pl	45.0	4.3	49.3	9.0	1.7	10.7	5.0	3.3	8.3	1.0	0.5	1.5	1.0	0.5	1.5	1.0	0.3	1.3	1.0	—	1.0	—	1.0	1.0
	B																								
	En	—	0.3	0.3																					
Worn	Pl																								
	B																								
	En																								

		Plectodon granulatus			"Pectin"			Macrocallista maculata			Tellina			Corbula krebsiana			Tellina aequistriata								
Unworn	Pl	—	0.5	0.5	—	0.4	0.4	—	0.1	0.1	—	0.1	0.1	1.0	1.0	2.0									
	B																								
	En																								
Worn	Pl													3.0	1.5	4.5	—	0.3	0.3						
	B																								
	En																—	0.5	0.5						

		Indeterminate																							
Unworn	Pl	—	1.5	1.5																					
	B																								
	En																								
Worn	Pl	—	0.4	0.4																					
	B	—	0.1	0.1																					
	En																								

Unworn	Pl																								
	B																								
	En																								
Worn	Pl																								
	B																								
	En																								

2536 A

		Nemocardium peramabile			Anadara baughmani			Cyclocardia armilla			"Pectin"			Chama congregata			Yoldia solenoides			Corbula krebsiana			Nuculana tenuisulcata		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
Unworn	Pl	2.0	6.8	8.8	1.0	1.4	2.4	1.0	1.3	2.3	—	1.9	1.9	1.0	—	1.0	1.0	—	1.0	1.0	—	1.0	—	0.5	0.5
	B																								
	En																								
Worn	Pl																								
	B																								
	En																								

		Nuculana acuta		
		Whl	Frg	Σ
Unworn	Pl	36.0	2.4	38.4
	B			
	En			
Worn	Pl	2.0	—	2.0
	B			
	En			

		Indeterminant		
		Whl	Frg	Σ
Unworn	Pl	—	3.6	3.6
	B			
	En			
Worn	Pl			
	B	—	0.4	0.4
	En			

Unworn	Pl			
	B			
	En			
Worn	Pl			
	B			
	En			

2536 H

		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
		Nemocardium peramabile			Anadara baughmani			Yoldia solenoides			"Pectin"			Abra aequalis			Astarte nana			Cyclocardia armilla			Nucula crenulata		
Unworn	Pl	9.0	7.5	16.5	5.0	1.6	6.6	1.0	2.3	3.3	1.0	1.5	2.5	1.0	—	1.0				1.0	—	1.0	1.0	—	1.0
	B																								
	En																1.0	—	1.0						
Worn	Pl																								
	B																								
	En																								

		Nuculana acuta			Corbula krebsiana																				
Unworn	Pl	22.0	6.3	28.3																					
	B																								
	En																								
Worn	Pl	3.0	—	3.0	1.0	—	1.0																		
	B																								
	En																								

		Indeterminant																							
Unworn	Pl																								
	B																								
	En																								
Worn	Pl	—	1.5	1.5																					
	B																								
	En																								

Unworn	Pl																								
	B																								
	En																								
Worn	Pl																								
	B																								
	En																								

2637 B

		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
		Tellina lineata			Abra aequalis			Nuculana verrilliana			Corbula krebsiana.			Chione latilirata			Linga amiatus			Macoma tenta			Tellina squamifera		
nworn	Pl	17.0	8.5	25.5	15.0	6.6	21.6	10.0	0.5	10.5	3.0	—	3.0	1.0	2.0	3.0	2.0	—	2.0	1.0	—	1.0	1.0	—	1.0
	B																								
	En																								
/orn	Pl																								
	B																								
	En																								

		Anomia simplex			Pandora arenosa			Dosina elegans			Trachycardium			Chione intapurpea											
nworn	Pl	1.0	—	1.0	—	1.0	1.0	1.0	—	1.0	—	0.5	0.5	—	0.1	0.1									
	B																								
	En																								
/orn	Pl																								
	B																								
	En																								

		Indeterminant																							
nworn	Pl	—	4.4	4.4																					
	B																								
	En																								
/orn	Pl																								
	B																								
	En																								

nworn	Pl																								
	B																								
	En																								
/orn	Pl																								
	B																								
	En																								

2637 G

		Diplodontia nucleiformis			Tellina lineata			Chione paphia			Dosinia elegans			Nucula crenulata			Laevicardium fiski			Anomia simplex			Polymesoda maritima		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
Unworn	Pl	28.0	9.4	37.4	21.0	14.9	35.9	7.0	1.5	8.5	2.0	0.4	2.4	2.0	—	2.0	1.0	0.3	1.3	1.0	—	1.0	1.0	—	1.0
	B																								
	En																								
Worn	Pl																								
	B																								
	En																								

		Pandora arenosa			Corbula krebsiana			Periglypta listeri			Nuculana acuta														
Unworn	Pl	—	0.5	0.5	—	0.5	0.5	—	0.3	0.3															
	B																								
	En																								
Worn	Pl										4.0	1.0	5.0												
	B																								
	En																								

		Indeterminant																							
Unworn	Pl	—	1.6	1.6																					
	B																								
	En																								
Worn	Pl																								
	B																								
	En																								

Unworn	Pl																								
	B																								
	En																								
Worn	Pl																								
	B																								
	En																								

2638 A

		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
		Abra aequalis			*Tellina lineata*			*Nuculana verilliana*			*Chione latilirata*			*Tellina squamifera*			*Anomia simplex*			*Cardiomya alupta*			*Laevicardium*		
Unworn	Pl	32.0	20.5	52.5	14.0	6.3	20.3	14.0	2.5	16.5	4.0	3.3	7.3	2.0	0.8	2.8	1.0	–	1.0	1.0	–	1.0			
	B																								
	En																								
Worn	Pl																						1.0	0.5	1.5
	B																								
	En																								

		Indeterminant																							
Unworn	Pl	–	5.8	5.8																					
	B																								
	En																								
Worn	Pl																								
	B																								
	En																								

Unworn	Pl																								
	B																								
	En																								
Worn	Pl																								
	B																								
	En																								

Unworn	Pl																								
	B																								
	En																								
Worn	Pl																								
	B																								
	En																								

2638 D

		Abra aequalis Whl	Frg	Σ	Tellina lineata Whl	Frg	Σ	Nuculana verrilliana Whl	Frg	Σ	Chione cancellata Whl	Frg	Σ	Anomia simplex Whl	Frg	Σ	Tellina squamifera Whl	Frg	Σ	Macoma brevifrons Whl	Frg	Σ	Semele bellastriata Whl	Frg	Σ
nworn	Pl	20.0	19.0	39.0	19.0	5.3	24.3	17.0	3.8	20.8	9.0	8.8	17.8	6.0	4.8	10.8	7.0	1.5	8.5	—	7.9	7.9	1.0	0.4	1.4
	B																								
	En										—	0.5	0.5				—	0.3	0.3						
/orn	Pl																								
	B																								
	En																								

		Solecurtus cumingianus Whl	Frg	Σ	Lima lockini Whl	Frg	Σ	Arcinella cornuta Whl	Frg	Σ	Divaricella quadrisulcata Whl	Frg	Σ	Atrina Whl	Frg	Σ	Laevicardium fiski Whl	Frg	Σ	Pitar simpsoni Whl	Frg	Σ	Linga amiantus Whl	Frg	Σ
nworn	Pl	1.0	0.1	1.1	1.0	—	1.0	1.0	—	1.0	1.0	—	1.0	—	0.5	0.5	1.0	1.5	2.5	1.0	—	1.0	1.0	—	1.0
	B																								
	En																								
/orn	Pl																1.0	—	1.0	1.0	—	1.0	1.0	—	1.0
	B																								
	En																								

		Gouldia cerina Whl	Frg	Σ	Anadara baughmani Whl	Frg	Σ	"Pectin Whl	Frg	Σ	Chione pygmaea Whl	Frg	Σ	Mulinia lateralis Whl	Frg	Σ	Corbula krebsiana Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
nworn	Pl	1.0	—	1.0	1.0	0.3	1.3	—	0.4	0.4															
	B																								
	En							—	0.3	0.3															
/orn	Pl	6.0	1.0	7.0	2.0	2.8	4.8	1.0	1.8	2.8	1.0	2.5	3.5	2.0	—	2.0	1.0	—	1.0						
	B																								
	En							—	0.5	0.5															

		Indeterminant Whl	Frg	Σ
nworn	Pl	—	2.5	2.5
	B			
	En	—	0.1	0.1
/orn	Pl	—	5.1	5.1
	B	—	0.4	0.4
	En	—	0.6	0.6

2639 B

		Anomia simplex			Chione paphia			Tellina lineata			Nuculana acuta			Pandora arenosa			Pitar simpsoni			Abra aequalis			Lucina nassula		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
Jnworn	Pl	22.0	16.1	38.1	10.0	6.3	16.3	9.0	6.1	15.1	11.0	0.5	11.5	2.0	1.5	3.5	2.0	1.3	3.3	1.0	2.0	3.0	2.0	—	2.0
	B																								
	En	2.0	1.1	3.1	—	0.4	0.4																		
Vorn	Pl																								
	B																								
	En																								

		Macoma tenta			Macrocallista maculata			Lima pellucida			Arcinella cornuta			Divaricella quadrisulcata			Diplodontia punctata			Nucula proxima			Tellina squamifera		
Jnworn	Pl	1.0	0.5	1.5	1.0	0.5	1.5	1.0	—	1.0	1.0	—	1.0	1.0	—	1.0	1.0	—	1.0	1.0	—	1.0	13.0	2.1	15.1
	B																								
	En																								
Vorn	Pl																								
	B																								
	En																						--	0.3	0.3

		Laevicardium fiski			Semele bellestriata			Solecurtus cumingianus			Corbula krebsiana			Gouldia cerina			Anadara baughmani			"Pectin"					
Inworn	Pl	7.0	10.6	17.6	1.0	0.5	1.5	1.0	—	1.0	3.0	—	3.0	6.0	0.5	6.5	1.0	2.4	3.4	—	3.4	3.4			
	B																								
	En																—	0.5	0.5						
Worn	Pl	1.0	—	1.0	—	0.8	0.8	—	0.5	0.5	2.0	—	2.0	35.0	4.0	39.0	8.0	14.2	22.2	8.0	7.9	15.9			
	B																								
	En													3.0	1.5	4.5	1.0	1.1	2.1	4.0	6.8	10.8			

		Chione pygmaea			Linga amiatus						Indeterminant														
Jnworn	Pl										—	5.5	5.5												
	B																								
	En										—	0.3	0.3												
Worn	Pl	11.0	1.5	12.5	1.0	—	1.0				—	19.2	19.2												
	B										—	5.6	5.6												
	En										—	4.1	4.1												

2640 G

		Anomia simplex			Tellina cristata			Tellina lineata			Tellina aequistriata			Macoma tenta			Linga pensylvanica			Glycymerus			Corbula krebsiana		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
Unworn	Pl	15.0	4.6	19.6	3.0	—	3.0	2.0	0.5	2.5	2.0	0.3	2.3	1.0	0.5	1.5	—	0.5	0.5				1.0	—	1.0
	B																								
	En	9.0	1.5	10.5	1.0	—	1.0	—	0.5	0.5	2.0	0.8	2.8				1.0	—	1.0	1.0	—	1.0			
Worn	Pl																								
	B																								
	En																								

		Enis minor			Dosina elegans			Chione intapurpea			Gouldia cerina			Laevicardium			"Pectin"			Semele belliestriata			Corbula dietziana		
Unworn	Pl	—	0.5	0.5				—	1.0	1.0	8.0	—	8.0	3.0	4.5	7.5	11.0	4.8	15.8	—	0.8	0.8			
	B																								
	En				—	0.3	0.3				1.0	—	1.0	2.0	1.0	3.0	2.0	2.9	4.9	—	0.5	0.5	—	0.3	0.3
Worn	Pl										2.0	1.0	3.0	—	4.0	4.0	6.0	5.0	11.0	—	0.5	0.5			
	B													1.0	—	1.0	1.0	1.8	2.8						
	En							—	0.1	0.1	2.0	—	2.0	1.0	2.3	3.3	1.0	5.1	6.1				6.0	—	6.0

		Anadara baughmani			Nuculana verrilliana			Pitar simpsoni			Divaricella quadrisulcata			Astarte nana			Lucina nassula			Macrocallista maculata			Arcinella cornuta		
Unworn	Pl																								
	B																								
	En																								
Worn	Pl	1.0	4.1	5.1	3.0	0.5	3.5	2.0	—	2.0	1.0	1.0	2.0	2.0	—	2.0	2.0	—	2.0				1.0	—	1.0
	B																								
	En	4.0	2.5	6.5																1.0	0.8	1.8			

		Nuculana acuta			Pandora arenosa			Plicatula gibbosa			Corbula dietziana			Nemocardium peramabile			Chione pygmea			Indeterminant					
Unworn	Pl																			—	2.8	2.8			
	B																								
	En																—	0.3	0.3	—	0.6	0.6			
Worn	Pl	1.0	—	1.0	—	1.0	1.0							—	0.3	0.3				—	11.9	11.9			
	B																			—	9.8	9.8			
	En							1.0	—	1.0	—	0.5	0.5				6.0	—	6.0	—	19.9	19.9			

2640 H

		Gouldia cerina			Divaricella quadrisulcata			Tellina lineata			Macoma tenta			Lucina nassula			Tellina aequistriata			Diplodonta punctata			Nuculana verrilliana		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
Unworn	Pl	4.0	1.0	5.0	5.0	—	5.0	3.0	—	3.0	1.0	—	1.0	1.0	0.5	1.5	1.0	—	1.0	—	1.0	1.0	1.0	—	1.0
	B																								
	En	1.0		1.0																					
Worn	Pl																								
	B																								
	En																								

		Martesia			Anomia simplex			Laevicardium fiski			Chione pygmaea			Chione latilirata			"Pectin"			Tellina squamifera			Mulinia		
Unworn	Pl	—	0.5	0.5	19.0	3.8	22.8	6.0	5.6	11.6	1.0	—	1.0				3.0	1.5	4.5	2.0	0.5	2.5	1.0	—	1.0
	B													1.0	—	1.0									
	En										1.0	0.1	1.1				3.0	0.5	3.5						
Worn	Pl							—	2.5	2.5							5.0	3.6	8.6				1.0	—	1.0
	B																1.0	0.5	1.5						
	En				—	0.5	0.5	—	1.9	1.9	—	0.5	0.5	—	0.5	0.5	5.0	3.4	8.4	2.0	0.5	2.5			

		Anadara baughmani			Chione grus			Pitar simpsoni			Plicatula gibbosa			Corbula krebsiana			Mercenaria								
Unworn	Pl	—	0.5	0.5																					
	B																								
	En																								
Worn	Pl				2.0	1.1	3.1	3.0	0.5	3.5				1.0	—	1.0									
	B				—	0.3	0.3										—	0.5	0.5						
	En	4.0	0.5	4.5	—	0.5	0.5				1.0	—	1.0												

		Indeterminant																							
Unworn	Pl	—	1.5	1.5																					
	B																								
	En																								
Worn	Pl	—	15.6	15.6																					
	B	—	5.8	5.8																					
	En	—	16.9	16.9																					

2641 E

		Laevicardium fiski			Divaricella quadrisulcata			Diplodon granulatus			Anomia simplex		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
Unworn	Pl	1.0	2.5	3.5	2.0	—	2.0	1.0	—	1.0	1.0	—	1.0
	B												
	En												
Worn	Pl												
	B												
	En												

		Atrina			"Pectin"			Nuculana verrilliana			Chione pygmaea		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
Unworn	Pl	—	0.1	0.1	1.0	1.0	2.0						
	B												
	En												
Worn	Pl				6.0	0.5	6.5	1.0	—	1.0	1.0	—	1.0
	B												
	En												

		Anadara baughmani		
Unworn	Pl			
	B			
	En			
Worn	Pl	1.0	—	1.0
	B			
	En			

		Indeterminant		
Unworn	Pl	—	0.3	0.3
	B			
	En			
Worn	Pl	—	1.7	1.7
	B			
	En	—	0.5	0.5

2641 H

		Divaricella quadrisulcata			*Lucina nassula*			*Solecurtus cumingianus*			*Chione pygmaea*			*Pandora arenosa*			*Dosinia elegans*			*Tellina lineata*			*Laevicardium fiski*		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
Unworn	Pl	1.0	—	1.0				1.0	—	1.0	—	0.5	0.5	—	0.5	0.5				—	0.3	0.3	1.0	0.5	1.5
	B																								
	En																—	0.3	0.3						
Worn	Pl				1.0	-	1.0																1.0	—	1.0
	B																								
	En																						—	0.3	0.3

		"Pectin"			*Mulinia lateralis*			*Gouldia cerina*																	
Unworn	Pl	1.0	—	1.0																					
	B																								
	En	1.0	—	1.0																					
Worn	Pl	4.0	0.4	4.4	2.0	—	2.0	1.0	—	1.0															
	B																								
	En																								

		Indeterminant																							
Unworn	Pl																								
	B																								
	En																								
Worn	Pl	—	0.9	0.9																					
	B	—	0.1	0.1																					
	En	—	0.5	0.5																					

Unworn	Pl																								
	B																								
	En																								
Worn	Pl																								
	B																								
	En																								

2642 G

		Transenella			Mulinia lateralis			Pitar simpsoni			Lucina radians			Anomia simplex			Tellina cristata			Chama congregata			Semele bellestriata		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
	Pl							2.0	–	2.0	1.0	0.9	1.9	–	1.8	1.8	1.0	0.5	1.5	1.0	–	1.0	1.0	–	1.0
nworn	B																								
	En																								
	Pl	4.0	–	4.0	3.0	-	3.0																		
'orn	B																								
	En																								

		Glycymerus americana			Carditamera floridana			Atrina			Dosinia elegans			Abra aequalis			Linga pensylvanica			Tellina lineata			Tellina aequistriata		
	Pl	–	0.5	0.5	–	0.4	0.4	–	0.3	0.3	–	0.5	0.5	2.0	–	2.0	1.0	–	1.0	1.0	–	1.0	1.0	–	1.0
nworn	B																								
	En																								
	Pl													–	0.5	0.5	–	0.3	0.3	–	0.3	0.3	–	0.3	0.3
'orn	B																								
	En										–	0.1	0.1												

		Laevicardium			Macrocallista maculata			Tagelus divisus			Lucina nassula			Chione intapurpea			Chione cancellata			"Pectin"			Anadara baughmani		
	Pl	1.0	5.4	6.4	1.0	1.5	2.5	1.0	1.0	2.0	1.0	0.3	1.3	–	0.3	0.3	–	0.8	0.8	1.0	1.5	2.5			
nworn	B																								
	En																								
	Pl	–	1.8	1.8	1.0	0.3	1.3	–	1.0	1.0				–	0.5	0.5	–	1.6	1.6	1.0	4.8	5.8	–	1.3	1.3
'orn	B																–	1.0	1.0						
	En							–	1.0	1.0	2.0	–	2.0				–	0.8	0.8	–	1.1	1.1	2.0	0.3	2.3

		Gouldia cerina			Macrocallista nimbosa			Cymatoica orientus			Linga blanda			Anomalocardia auberiana			Divaricella quadrisulcata						Indeterminant		
	Pl																						–	1.0	1.0
nworn	B																								
	En																								
	Pl	2.0	–	2.0	2.0	–	2.0	1.0	–	1.0	1.0	–	1.0	1.0	–	1.0	–	0.3	0.3				–	9.4	9.4
'orn	B																						–	0.6	0.6
	En																						–	2.6	2.6

2642 H

		Anomia simplex			Semele bellestriata			Diplodontia nucleiformis			Tellina lineata			Lucina nassula			Nucula proxima			Pandora arenosa			Gouldia cerina		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
Jnworn	Pl	8.0	2.8	10.8	1.0	1.5	2.5	2.0	—	2.0	2.0	—	2.0	1.0	0.5	1.5	1.0	0.5	1.5	1.0	—	1.0	1.0	—	1.0
	B																								
	En																								
Worn	Pl																								
	B																								
	En																								

		Laevicardium fiski			Tagelus divisus			Anadara baughmani			Chione intapurpea			Dosina elegans			"Pectin"			Pitar simpsoni			Lucina radians		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
Jnworn	Pl	6.0	5.4	11.4	1.0	1.5	2.5	1.0	1.3	2.3	4.0	2.0	6.0	—	0.3	0.3	4.0	4.8	8.8	1.0	—	1.0	2.0	—	2.0
	B																								
	En	—	0.5	0.5													—	0.1	0.1						
Worn	Pl				—	0.8	0.8	1.0	—	1.0	2.0	0.3	2.3	—	0.1	0.1	1.0	6.4	7.4	1.0	—	1.0	2.0	—	2.0
	B																—	0.1	0.1						
	En	2.0	1.0	3.0							1.0	0.4	1.4	—	0.4	0.4	—	2.1	2.1						

		Tellina aequistriata			Chione latilirata			Chione cancellata			Mulinia lateralis			Transenella			Divaricella quadrisulcata			Lucina nassula			Macrocallista maculata		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
Jnworn	Pl	1.0	1.0	2.0	1.0	0.3	1.3	2.0	1.9	3.9	2.0	1.3	3.3	4.0	1.0	5.0	1.0	0.5	1.5	1.0	—	1.0	—	0.3	0.3
	B																								
	En																								
Worn	Pl	—	1.3	1.3	1.0	—	1.0	—	2.8	2.8	5.0	—	5.0	10.0	—	10.0	—	0.5	0.5	6.0	0.5	6.5	6.0	1.3	7.3
	B																								
	En	1.0	—	1.0				1.0	—	1.0							2.0	—	2.0	—	0.5	0.5			

		Carditomera floridana			Cymatoica orientus			Strigilla carnaria			Atrina			Nuculana verrilliana			Linga amiatus			Glycymerus americana			Indeterminant		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
Jnworn	Pl																1.0	—	1.0	—	0.5	0.5	—	3.3	3.3
	B																								
	En																								
Worn	Pl	1.0	0.1	1.1				1.0	—	1.0	—	0.9	0.9	—	0.5	0.5							—	17.4	17.4
	B																						—	2.4	2.4
	En				1.0	—	1.0																—	7.5	7.5

2643 D

		Limopsis sulcata			*Tellina lineata*			*Nuculana acuta*			*Ventricolaria rugatina*		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
Unworn	Pl	3.0	0.5	3.5	3.0	—	3.0	2.0	—	2.0			
	B												
	En	3.0	—	3.0							2.0	—	2.0
Worn	Pl												
	B												
	En												

		Transenella			*Plicatula gibbosa*			*Cardiomya costella*			*Tellina squamifera*		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
Unworn	Pl	2.0	—	2.0				1.0	—	1.0	1.0	—	1.0
	B												
	En				1.0	—	1.0						
Worn	Pl												
	B												
	En												

		Anomia simplex			*Semele bellestriata*			*Corbula dietziana*			*Laevicardium fiski*		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
Unworn	Pl	—	0.8	0.8	—	0.5	0.5	—	0.5	0.5	—	0.5	0.5
	B												
	En				—	0.3	0.3						
Worn	Pl												
	B												
	En												

		"Pecten"			*Plicatula gibbosa*			*Lucina radians*			*Tellina aequistriata*		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
Unworn	Pl	1.0	0.3	1.3	5.0	—	5.0				—	0.3	0.3
	B				1.0	—	1.0				—	0.5	0.5
	En	—	1.1	1.1				—	0.3	0.3			
Worn	Pl	1.0	0.3	1.3	1.0	—	1.0						
	B	1.0	1.1	2.1	1.0	—	1.0						
	En	—	1.6	1.6	—	0.5	0.5	—	0.3	0.3	1.0	—	1.0

		Prior simpsoni			*Anadara baughmani*			*Americardia media*			*Chione cancellata*			*Chione latilirata*		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
Unworn	Pl															
	B															
	En															
Worn	Pl	2.0	—	2.0												
	B										—	0.5	0.5			
	En	1.0	—	1.0	1.0	—	1.0	1.0	—	1.0				—	0.5	0.5

		Indeterminant		
		Whl	Frg	Σ
Unworn	Pl	—	0.8	0.8
	B			
	En	—	0.3	0.3
Worn	Pl	—	1.5	1.5
	B	—	1.3	1.3
	En	4.0	4.5	8.5

2643 K

		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
		Limopsis sulcata			Corbula dietziana			Tellina lineata			Nemocardium tinctum (?)			Callista eucymata			Pitar simpsoni			Plicatula gibbosa			"Pectin"		
Unworn	Pl	2.0	—	2.0	2.0	—	2.0	2.0	—	2.0	—	1.3	1.3							1.0	0.5	1.5	2.0	0.1	2.1
	B	1.0	—	1.0																2.0		2.0	—	0.1	0.1
	En	1.0	—	1.0										1.0	—	1.0	1.0	—	1.0				—	1.0	1.0
Worn	Pl																			1.0	—	1.0	—	1.9	1.9
	B																			1.0	—	1.0	—	1.1	1.1
	En																—	0.5	0.5				—	0.9	0.9

		Astarte nana			Nemocardium peramabile			Chione latilirata																	
Unworn	Pl																								
	B																								
	En																								
Worn	Pl	—	1.0	1.0	1.0		1.0	—	0.3	0.3															
	B							—	0.5	0.5															
	En	1.0		1.0																					

		Indeterminant																							
Unworn	Pl	—	0.3	0.3																					
	B	—	0.3	0.3																					
	En	—	0.5	0.5																					
Worn	Pl	—	1.2	1.2																					
	B	—	0.6	0.6																					
	En	4.0	5.9	9.9																					

Unworn	Pl																								
	B																								
	En																								
Worn	Pl																								
	B																								
	En																								

2644 B

		Arcopsis adamsi Whl	Frg	Σ	Anga leucomya Whl	Frg	Σ	Nemocardium tinctum (?) Whl	Frg	Σ	Corbula dietziana Whl	Frg	Σ	Abra aequalis Whl	Frg	Σ	Chione pygmaea Whl	Frg	Σ	Pitar simpsoni Whl	Frg	Σ	Limopsis sultana Whl	Frg	Σ
nworn	Pl	1.0	—	1.0	1.0	—	1.0	—	1.0	1.0													3.0	0.3	3.3
	B																								
	En	2.0	—	2.0							1.0	—	1.0	1.0	—	1.0	1.0	—	1.0	3.0	1.0	4.0	6.0	0.5	6.5
Vorn	Pl																								
	B																						1.0	—	1.0
	En																			1.0	0.5	1.5	4.0	0.5	4.5

		Plicatula gibbosa Whl	Frg	Σ	"Pecten" Whl	Frg	Σ	Nemocardium peramabile Whl	Frg	Σ	Ventricolaria Whl	Frg	Σ
nworn	Pl	16.0	—	16.0	—	0.5	0.5						
	B	1.0	—	1.0									
	En	2.0	—	2.0									
Vorn	Pl	3.0	0.5	3.5	—	0.3	0.3	—	0.1	0.1			
	B	8.0	0.5	8.5	—	0.1	0.1						
	En	10.0	—	10.0	—	0.3	0.3	—	0.3	0.3	—	0.3	0.3

		Indeterminant Whl	Frg	Σ
nworn	Pl	—	0.3	0.3
	B			
	En			
Vorn	Pl			
	B		0.4	0.4
	En	2.0	1.5	3.5

2644 C

		Transennella			Atrina			Ventricolaria rugatina			Plicatula gibbosa			Limopsis sulcata			"Pectin"			Arca zebra			Anomia simplex		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
Unworn	Pl	–	0.5	0.5	–	0.1	0.1	1.0	–	1.0	4.0		4.0												
	B																								
	En	3.0	0.3	3.3																					
Worn	Pl										4.0	–	4.0												
	B																								
	En	–	1.5	1.5				–	0.8	0.8				6.0	–	6.0	1.0	1.8	2.6	2.0	–	2.0	1.0	–	1.0

		Corbula krebsiana			Arcopsis adamsi			Callista eucymata																	
Unworn	Pl																								
	B																								
	En																								
Worn	Pl																								
	B																								
	En	1.0	–	1.0	1.0	–	1.0	1.0	–	1.0															

		Indeterminant																							
Unworn	Pl	–	0.1	0.1																					
	B																								
	En	–	0.1	0.1																					
Worn	Pl																								
	B																								
	En	–	1.3	1.3																					

Unworn	Pl																								
	B																								
	En																								
Worn	Pl																								
	B																								
	En																								

2645 B

		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
		Nucula crenulata			Astarte nana			Gouldia cerina			Plicatula gibbosa			Glycymerus subtilis			"Pectin"			Nemocardium peramabile			Transenella		
Unworn	Pl	1.0	–	1.0	1.0	–	1.0	1.0	–	1.0	4.0	0.3	4.3	3.0	–	3.0									
	B																								
	En	1.0	–	1.0							–	0.5	0.5												
Worn	Pl																								
	B																								
	En										4.0	1.8	5.8	13.0	2.0	15.0	1.0	3.4	4.4	2.0	0.5	2.5	2.0	–	2.0

		Ventricolaria rugatina			Dosina elegans																				
Unworn	Pl																								
	B																								
	En																								
Worn	Pl																								
	B																								
	En	–	0.5	0.5	–	0.1	0.1																		

		Indeterminant																							
Unworn	Pl																								
	B																								
	En																								
Worn	Pl																								
	B	–	0.3	0.3																					
	En	–	2.5	2.5																					

Unworn	Pl																								
	B																								
	En																								
Worn	Pl																								
	B																								
	En																								

APPENDIX VI

Summary of Molluscan Lithotope Data

		2101C			2101E			2102B			2102G			2103B			2103H			2104B			2104H		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
Unworn	Pl	22.0	14.9	46.9	16.0	8.7	24.7	16.0	5.6	21.6	13.0	6.3	19.3	5.0	1.9	6.9	2.0	1.8	3.8	29.0	20.0	49.0	8.3	3.9	12.2
	B	2.0	–	2.0				–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	En	5.0	–	5.0	–	0.5	0.5	1.0	–	1.0	–	–	–	–	–	–	1.0	–	1.0	–	2.4	2.4	1.0	0.9	1.9
Worn	Pl	24.0	18.9	42.9	6.0	12.9	18.9	5.0	3.7	8.7	4.0	5.3	9.3	6.0	10.4	16.4	–	2.1	2.1	1.0	3.4	4.4	3.0	1.7	4.7
	B	6.0	12.7	18.7	–	3.9	3.9	–	0.8	0.8	–	1.3	1.3	1.0	2.1	3.1	–	0.5	0.5	–	0.5	0.5	–	0.2	0.2
	En	7.0	11.0	18.0	20.0	6.0	26.0	2.0	2.3	4.3	–	0.4	0.4	4.0	3.2	7.2	3.0	3.5	6.5	2.0	3.5	5.5	4.0	2.1	6.1

		2105A			2105D			2106A			2106C			2207D			2207I			2208B			2208C		
Unworn	Pl	10.0	1.5	11.5	1.0	–	1.0	20.0	2.1	22.1	1.0	0.8	1.8	48.0	5.4	55.4	25.0	2.5	30.5	94.0	12.2	106.2	255.0	17.5	272.5
	B	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	En	–	0.1	0.1	2.0	0.5	2.5	2.0	–	2.0	2.0	0.5	2.5	1.0	–	1.0	1.0	0.5	1.5	–	0.1	0.1	–	0.1	0.1
Worn	Pl	3.0	1.4	4.4	3.0	0.8	3.8	2.0	7.8	9.8	–	–	–	7.0	3.2	10.2	1.0	–	1.0	1.0	1.3	2.3	13.0	3.3	16.3
	B	–	–	–	–	–	–	–	–	–	–	–	–	–	0.7	0.7	–	–	–	–	0.5	0.5	–	–	–
	En	45.0	7.3	52.3	16.0	0.8	16.8	23.0	8.0	31.0	10.0	5.8	15.8	4.0	3.7	7.7	4.0	2.0	6.0	–	1.5	1.5	3.0	1.6	4.6

		2209B			2209D			2210I			2210II			2211B			2211D			2212B			2212G		
Unworn	Pl	359.0	37.9	372.9	191.0	29.0	220.0	61.0	12.6	73.6	No Sample			4.0	1.0	5.0	35.0	8.2	43.2				128.0	15.9	143.9
	B	–	–	–	–	–	–	–	–	–				–	–	–	–	–	–				–	–	–
	En	–	–	–	–	–	–	6.0	–	6.0				–	–	–	4.0	1.0	5.0				9.0	1.4	10.4
Worn	Pl	1.0	0.3	1.3	6.0	0.1	6.1	31.0	27.1	58.1				1.0	0.5	1.5	12.0	5.7	17.7				97.0	17.3	114.3
	B	–	–	–	–	0.5	0.5	–	2.8	2.8				–	0.6	0.6	–	2.7	2.7				–	0.6	0.6
	En	–	–	–	–	–	–	15.0	15.9	30.9				15.0	11.7	26.7	5.0	12.2	17.2				28.0	16.0	44.0

		2313A			2313B			2314I			2314II			2315I			2315II			2316A			2316B		
Unworn	Pl	45.0	16.1	61.1	93.0	19.9	112.9	1010.0	203.3	1213.3	Not Analyzed			241.0	32.6	273.6	–	0.1	0.1	75.0	30.7	105.7	Not Analyzed		
	B	–	–	–	–	–	–	–	–	–				–	–	–	–	0.3	0.3	–	–	–			
	En	–	–	–	1.0	–	1.0	5.0	1.3	6.3				3.0	–	3.0	1.0	0.9	1.9	–	0.8	0.8			
Worn	Pl	22.0	18.6	40.6	21.0	18.2	38.2	13.0	29.2	42.2				77.0	16.6	93.6	2.0	0.5	2.5	22.0	11.4	33.4			
	B	–	0.9	0.9	–	–	–	–	0.4	0.4				–	1.3	1.3	–	–	–	–	0.4	0.4			
	En	1.0	1.3	2.3	6.0	3.9	9.9	4.0	0.9	4.9				25.0	0.9	25.9	4.0	2.1	6.1	7.0	6.3	13.3			

		2317A			2317B			2318A			2318B			2419A			2419B			2420A			2420B		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
	Pl	91.0	23.3	114.3	198.0	25.4	223.4	3.0	1.5	4.5	5.0	3.0	8.0	15.0	7.8	22.8	13.0	3.8	16.8	16.0	5.3	21.3	40.0	11.7	51.7
nworn	B	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	En	1.0	0.3	1.3	1.0	0.6	1.6	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.3	0.3
	Pl	5.0	4.8	9.8	49.0	11.0	60.0	3.0	0.9	3.9	4.0	5.0	9.0	7.0	10.8	17.8	6.0	13.6	19.6	2.0	3.0	5.0	13.0	18.2	31.2
orn	B	–	0.5	0.5	–	0.6	0.6	–	–	–	–	0.6	0.6	–	5.5	5.5	–	3.8	3.8	–	0.6	0.6		3.4	3.4
	En	–	1.8	1.8	3.0	8.5	11.5	–	–	–	1.0	3.4	4.4	–	–	–	–	1.4	1.4	–	0.5	0.5		8.3	8.3

		2421A			2421B			2422A			2422B			2423A			2423B			2424A			2424B		
	Pl	63.0	1.0	64.0	42.0	1.1	43.1	14.0	26.7	166.7	57.0	21.2	78.2	45.0	16.4	61.4	11.0	10.3	21.3	19.0	6.0	25.0	16.0	4.1	20.1
nworn	B	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	En	–	–	–	–	–	–	–	–	–	–	0.5	0.5	4.0	2.8	6.8	–	0.1	0.1	–	–	–	–	–	–
	Pl	–	0.5	0.5	1.0	0.7	1.7	18.0	32.5	50.5	8.0	28.9	36.9	40.0	46.1	86.1	35.0	64.0	99.0	–	0.6	0.6	1.0	1.6	2.6
orn	B	–	–	–	–	–	–	3.0	9.2	7.6	–	10.5	10.5	–	10.3	10.3	–	9.6	9.6	–	–	–	–	0.1	0.1
	En	–	–	–	–	0.9	0.9	–	1.3	1.3	–	2.8	2.8	63.0	49.4	112.4	20.0	26.5	46.5	4.0	3.4	7.4	6.0	4.5	10.5

		2425C			2425D			2426A			2426B			2427A			2427B			2528			2528		
	Pl	16.0	2.2	18.2	Not Analyzed			13.0	4.9	17.9	58.0	13.1	71.1	Not Analyzed			111.0	30.1	141.1	Sample Destroyed			- - - - -		
nworn	B	–	–	–				–	–	–	–	–	–				–	–	–						
	En	1.0	1.3	2.3				–	0.1	0.1	1.0	–	1.0				– –	–	–						
	Pl	9.0	2.2	11.2				–	3.0	3.0	1.0	0.5	1.5				14.0	15.8	29.8						
orn	B	–	4.8	4.8				–	–	–	–	0.5	0.5				8.0	3.6	11.6						
	En	5.0	26.3	31.3				–	0.7	0.7	–	2.4	2.4				5.0	–	5.0						

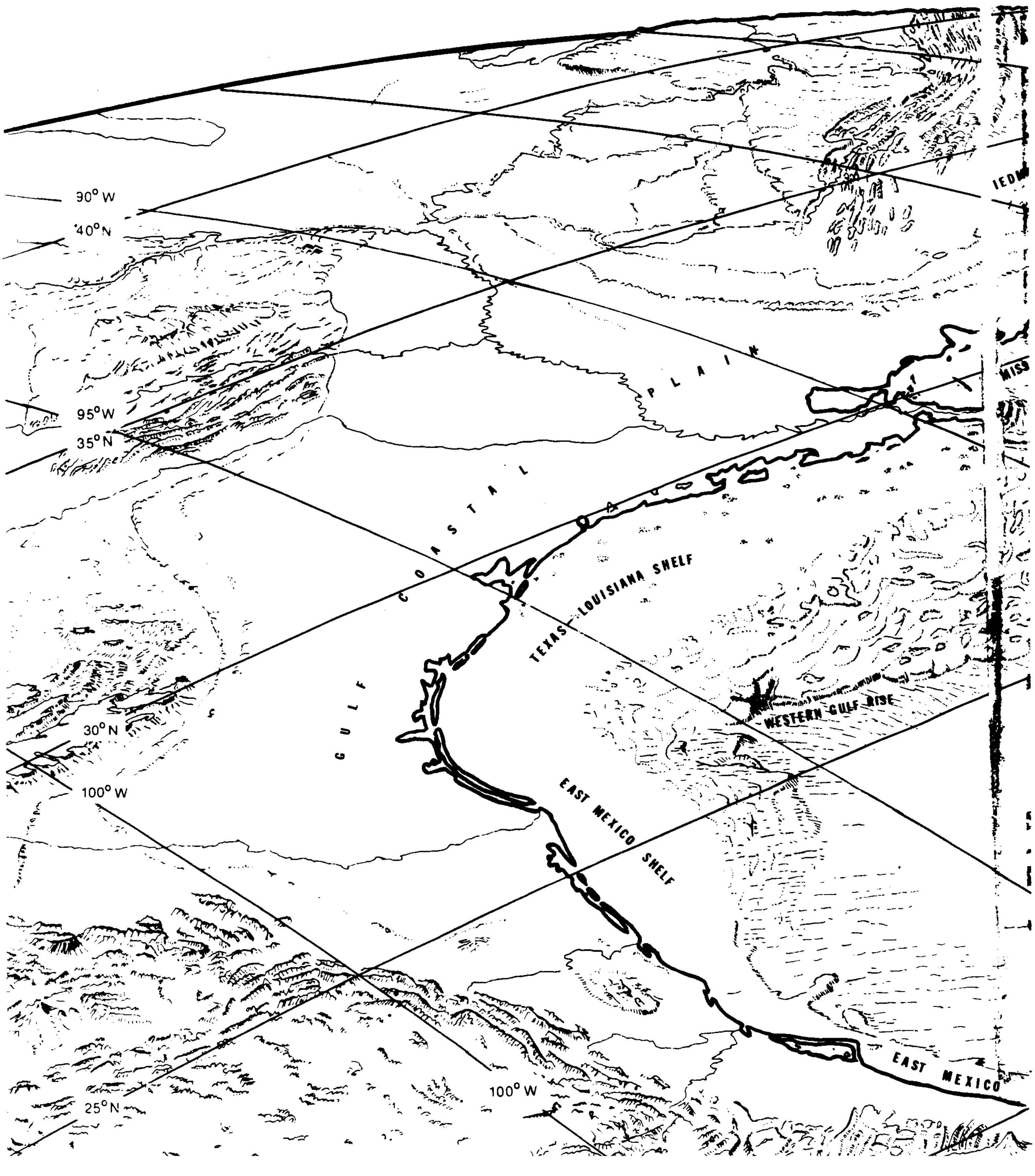
		2529A			2529			2530A			2530H			2531B			2531G			2532I			2532II		
	Pl	–	0.2	0.2	18.0	1.5	20.8	1.0	–	1.0				14.0	2.0	16.0	3.0	0.6	3.6	2.0	2.7	4.7	1.0	0.7	1.7
nworn	B	–	–	–	–	–	–	–	–	–				–	–	–	–	–	–	1.0	–	1.0	–	0.7	0.7
	En	–	–	–	5.0	0.8	5.8	–	–	–				4.0	0.9	4.9	–	0.5	0.5	–	0.2	0.2	6.0	0.6	6.6
	Pl	3.0	3.4	6.4	3.0	–	3.0	–	0.3	0.3				3.0	0.8	6.8	1.0	–	1.0	5.0	0.3	5.3	3.0	–	3.0
orn	B	–	–	–	3.0	1.0	4.0	–	–	–				2.0	2.2	4.2	–	0.8	0.8	–	0.8	0.8	–	1.9	1.9
	En	8.0	5.5	13.5	52.0	22.1	74.1	5.0	1.3	6.3				20.0	15.5	35.5	19.0	11.0	30.0	1.0	0.3	1.3	11.0	3.6	[illegible]

		2533A			2533D			2534E			2534H			2535C			2535G			2536A			2536H		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
Unworn	Pl	21.0	1.3	22.3	12.0	0.9	12.9	13.0	1.0	14.0	40.0	3.8	43.8	32.0	7.8	39.8	—	1.5	1.5	43.0	17.9	60.9	41.6	20.2	61.2
	B	—	—	—	1.0	—	1.0	—	—	—	—	0.5	0.5	—	—	—	—	—	—	—	—	—	—	—	—
	En	13.0	—	13.0	17.0	1.6	18.6	1.0	—	1.0	8.0	0.5	8.5	—	—	—	—	—	—	—	—	—	1.0	—	1.0
Worn	Pl	6.0	2.8	8.8	—	0.2	0.2	8.0	2.3	10.3	24.0	7.2	31.2	—	3.6	3.6	—	0.4	0.4	2.0	—	2.0	4.0	1.5	5.5
	B	—	1.8	1.8	1.0	0.5	1.5	—	0.6	0.6	2.0	2.3	4.3	—	—	—	—	0.1	0.1	—	0.4	0.4	—	—	—
	En	43.0	20.3	63.3	14.0	18.9	32.9	20.0	24.0	44.0	21.0	21.5	42.5	—	—	—	—	—	—	—	—	—	—	—	—

		2637B			2637G			2638A			2638D			2639B			2639C			2640G			2640H		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
Unworn	Pl	52.0	23.6	75.6	63.0	29.4	92.4	68.0	39.2	107.2	88.0	56.8	144.8	99.0	58.8	157.8	Not Analyzed			46.0	20.8	66.8	48.0	16.4	64.4
	B	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				—	—	—	1.0	—	1.0
	En	—	—	—	—	—	—	—	—	—	—	1.2	1.2	2.0	2.3	4.3				19.0	8.1	27.1	5.0	0.6	5.6
Worn	Pl	—	—	—	4.0	1.0	5.0	1.0	0.5	1.5	16.0	13.2	29.2	66.0	48.1	114.1				21.0	29.3	50.3	12.0	23.3	35.3
	B	—	—	—	—	—	—				—	0.4	0.4	—	5.6	5.6				2.0	11.6	13.6	1.0	7.1	8.1
	En	—	—	—	—	—	—				—	1.1	1.1	8.0	13.8	21.8				16.0	31.2	47.2	12.0	25.2	38.2

		2641E			2641H			2642G			2642H			2643D			2643K			2644B			2644C		
		Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ	Whl	Frg	Σ
Unworn	Pl	6.0	3.9	9.9	4.0	1.8	5.8	16.0	16.7	32.7	49.6	30.7	79.7	18.0	4.2	22.2	9.0	2.2	11.2	21.0	2.1	23.1	5.0	0.7	5.7
	B	—	—	—	—	—	—	—	—	—	—	—	—	1.0	0.5	1.5	3.0	0.4	3.4	1.0	—	1.0	—	—	—
	En	—	—	—	1.0	0.3	1.3	—	—	—	—	0.6	0.6	6.0	2.0	8.6	3.0	1.5	4.5	16.0	1.5	17.5	3.0	0.4	3.4
Worn	Pl	9.0	2.2	11.2	9.0	1.3	10.3	16.0	22.4	38.4	37.0	33.2	70.2	4.0	1.8	5.8	2.0	4.4	6.4	3.0	1.3	4.3	4.0	—	4.0
	B	—	—	—	—	0.1	0.1	—	1.6	1.6	—	2.5	2.5	2.0	2.9	4.9	1.0	8.2	3.2	9.0	1.3	10.3	—	—	—
	En	—	0.5	0.5	—	0.8	0.8	4.0	5.9	9.9	7.0	11.9	18.9	8.0	7.4	15.4	5.0	7.3	12.3	17.0	3.4	20.4	13.0	5.4	18.4

		2645B			2645H																				
Unworn	Pl	10.0	0.3	10.3	Not Analyzed																				
	B	—	—	—																					
	En	1.0	0.5	1.5																					
Worn	Pl	—	—	—																					
	B	—	0.3	0.3																					
	En	22.0	10.8	32.8																					



90° W
40° N
95° W
35° N
30° N
100° W
25° N
100° W
G U L F C O A S T A L P L A I N
TEXAS LOUISIANA SHELF
WESTERN GULF RISE
EAST MEXICO SHELF
EAST MEXICO
MISS