PACIFIC ISLANDS FISHERIES SCIENCE CENTER

Fishery Statistics of the Western Pacific

Volume 27

Territory of American Samoa (2010)
Commonwealth of the Northern Mariana Islands (2010)
Territory of Guam (2010)
State of Hawaii (2010)

Compiled by

David C. Hamm, Michael M. C. Quach, Karen R. Brousseau and
Ashley S. Tomita

December 2012

Administrative Report H-12-05

About this report

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PREFACE

There is a strong demand for data and information concerning marine fisheries. To help meet this need in the central and western Pacific areas, the National Marine Fisheries Services (NMFS) Southwest Fisheries Science Center (SWFSC) Honolulu Laboratory initiated the Western Pacific Fisheries Information Network (WPacFIN) to assist Pacific island fisheries agencies improve their data collecting, data processing, and reporting capabilities.

In 1982, these agencies formed a Fisheries Data Coordinating Committee (FDCC) and an FDCC Technical Subcommittee to help guide, coordinate, and monitor all of their fisheries data-related activities. Significant progress has been made by all participating agencies, particularly in the areas of upgrading data collection and processing systems.

In a major step to improve and coordinate the data reporting and distribution systems of the agencies, the FDCC agreed in May 1985 to produce a combined document that would report each island's major fisheries statistics. Production of the document would be the responsibility of the FDCC Technical Subcommittee and would be coordinated by the WPacFIN Program Manager. Each agency would supply the data required to produce the tables and graphs for its respective section, and central WPacFIN staff would produce and distribute the document as part of the Administrative Report Series.

In April 2003, NMFS created a new Pacific Islands Region composed of the Pacific Islands Fisheries Science Center (PIFSC, formerly SWFSC's Honolulu Laboratory) and the Pacific Islands Regional Office (PIRO, formerly Southwest Regional Office's Pacific Islands Area Office). As such, this report is now affiliated with PIFSC rather than SWFSC.

This is the 27th volume in the series, "Fishery Statistics of the Western Pacific." It contains summaries of commercial landings for American Samoa, the Commonwealth of the Northern Mariana Islands, Guam, and Hawaii for the year 2010. As with previous volumes, it is divided into sections, with one for each of the major island areas. Each section contains reports about the monthly and annual landings by species and species groups for the commercial fleet.

INTRODUCTION

This report is compiled by fisheries agencies participating in the Western Pacific Fisheries Information Network (WPacFIN, formerly referenced as WPACFIN), a collaboration among fisheries agencies in Hawaii, Guam, the Commonwealth of the Northern Mariana Islands (CNMI), and American Samoa. WPacFIN's goal is to improve the availability and dissemination of fisheries information. Participating groups include the following:

American Samoa	Department of Marine and Wildlife Resources (DMWR)
	Pacific Islands Regional Office (PIRO) Fisheries Monitoring Field Office, American Samoa
Commonwealth of the Northern Mariana Islands (CNMI)	Division of Fish and Wildlife (DFW)
Guam	Division of Aquatic and Wildlife Resources (DAWR)
	Bureau of Statistics and Plans (BSAP; formerly Department of Commerce)
Hawaii	Hawaii Division of Aquatic Resources (HDAR)
	Pacific Islands Fisheries Science Center (PIFSC)
	Pacific Islands Regional Office (PIRO)
	Western Pacific Regional Fisheries Management Council (WPFMC)

WPacFIN and these groups collect, computerize, edit, and process data from the islands. WPacFIN staff at the Pacific Islands Fisheries Science Center then use these data to create the summaries and graphs found in this document.

Data from DMWR, DAWR, and DFW are supplied on portable computer media in established WPacFIN database formats. Data for Hawaii are provided by HDAR through telecommunications. Once data from all agencies are entered into the central WPacFIN computer and appropriate edit, adjustment, and verification procedures are completed, summary tables and charts are produced using software developed by WPacFIN staff and commercially available software.

PROGRESS

In 1981, when WPacFIN began assisting agencies in improving their data collecting and processing systems, only the State of Hawaii had computerized processing. By mid-1982, fisheries offices in American Samoa, Guam, and CNMI were using WPacFIN-supplied computers to process data. Since that time, these agencies have made significant improvements to their data collecting systems and have established sound, automated data processing systems. Most agencies can now provide preliminary fishery statistics to WPacFIN within 45 days of the collection date.

In particular, HDAR has significantly improved its procedures for editing, updating, and processing Hawaii's data; it has reduced the lag time in data processing from about 2.5 years to less than 3 months for most data**.** The biggest problems still facing HDAR in improving its data systems are reducing the delinquency of fisher reporting and implementing a validation system to ensure that the information reported by fishers is accurate. A Dealer Reporting System has been implemented to augment the Fishermen's Reporting System and has helped address this issue, and efforts are continuing to develop and implement other improvements to the Hawaii fisheries monitoring programs.

CAVEATS

Data collecting and processing systems vary greatly among Pacific Island fisheries agencies. Although much standardization has taken place and is a continuing effort, there remain unique aspects of each island's systems based on local needs and capabilities.

Interpretation of data from this report, especially for comparative purposes, requires recognition of several caveats. For example, Hawaii's commercial landings data are based on mandatory monthly reporting by fish dealers and licensed commercial fishers as well as NOAA Fisheries longline logbooks. In contrast, data for CNMI and Guam are based on voluntary reporting of major fish buyers using government-provided trip ticket invoices, adjusted to represent 100% coverage, and referenced as "estimated commercial landings." Finally, American Samoa's data are based on a complex integration of data from a boat-based creel survey and data expansion system for a portion of the fisheries, mandatory logbooks and a size-frequency sampling program for the longline fishery, and a mandatory trip ticket invoice reporting system for local sales. Each system has advantages and disadvantages, and the reader should be aware of them when comparing or interpreting data. In addition, WPacFIN staff and the island agencies are continually improving the data collecting and processing systems in each area. Because the improvements usually result in updates to the estimates of total and commercial landings, the data in this volume may not match exactly with data in previous volumes of this report series.

The reader should also be aware that species assemblages vary among island groups, as do cultural preferences and principal fishing techniques and gear. The population of the island group is relevant to the interpretation of the relative value and importance of the fisheries. Descriptions of data collecting and processing systems are included in each island's section.

DEFINITIONS OF SPECIES CATEGORIES

In addition to a description of the data collecting systems and monthly and annual reports, each section contains graphs of summary fishery statistics of particular interest or importance to participating WPacFIN agencies. Species categories have been defined for each island's fisheries. Because of differences in reporting systems and capabilities, species in each category vary among the islands but all categories are documented in each island's section. Overlap exists among some of the categories used for different graphs.

Note: Many of the species included in this report have been recategorized over the years. For example, the Magnuson Fishery Conservation and Management Act of 1976 was amended in 1992 to include tunas in the Pelagic Management Unit Species (PMUS) category. However, this FSWP volume will maintain the original species categorizations from previous volumes for comparative purposes. As such, tunas are kept in a separate category.

Categories used in the graphs include

1. Fisheries Categories – These are combinations of species of similar ecological types, specifically pelagic, bottomfish, reef fish, and "other." "Other" includes groups that generally traverse these categories, such as certain sharks and jacks, or are not typically included in these groups, such as mullet and milkfish.

2. Pelagic Management Unit Species (PMUS) – The Magnuson Fishery Conservation and Management Act of 1976 was amended in 1992 to place tunas under U.S. jurisdiction for management. The Fishery Management Plan for Pacific Pelagic Species was amended to reflect this change. However, this report series will continue to treat tunas as a separate category, and the PMUS category in this document includes only billfishes, wahoo, mahimahi, and oceanic sharks.

3. Bottom Fish Management Unit Species (BMUS) – Defined as the species of initial importance in the Fishery Management Plan for bottomfish and seamount fisheries, including the major deepwater snapper, grouper, emperor, and certain jacks.

4. Tunas – All the tuna species excluding wahoo. Historically this had been predominantly skipjack and yellowfin in all areas, but with the growth of longline fisheries in Hawaii and American Samoa, bigeye and albacore have become much more important or even predominant.

5. Other Tunas – The definition varies among the islands depending on the importance of each tuna species in the total landings.

6. Billfish – Combination of blue, striped, and black marlins, sailfish, spearfish, and swordfish species.

GRAPHS

Four types of graphs are provided with each island's data, as follows:

- The first is a chart of the major species and species groups, showing the estimated commercial catch for each month of the year.

- The second is a seasonality plot for the major species or species groups, showing the average weight landed during each month for all years for which there are data.

- The third is a time series plot of annual summary statistics to illustrate the variability among years.

- The fourth type of graph plots monthly landings of some of the major commercially important species and documents monthly fluctuations in landings of these species over the entire time series (all years for which there are data).

To access the most up-to-date data and charts, please visit http://www.pifsc.noaa.gov/wpacfin.

AMERICAN SAMOA 2010 FISHERIES STATISTICS

Compiled by

American Samoa

Department of Marine and Wildlife Resources

and the

Western Pacific Fisheries Information Network

December 2012

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AMERICAN SAMOA 2010 FISHERIES STATISTICS

INTRODUCTION

Location: 14°S latitude, 170°W longitude
Islands: Tutuila, Aunu`u, the Manu`a Islands (Ofu, Olosega, Ta`u), Rose Atoll (uninhabited), and Swains Island (sparsely populated)
Population: about 68,061 (the majority of the population lives on Tutuila); (*The World Factbook,* July 2012 est.)
Economy: tuna fishing and tuna processing plants, with canned tuna the primary export

American Samoa
Source: http://www.cia.gov/cia/publications/factbook/aq.html; *The World Factbook*

The American Samoa Department of Marine and Wildlife Resources (DMWR; formerly the Office of Marine Resources) is located near Pago Pago on Tutuila and has been collecting commercial fisheries data from the Tutuila fleet since the early 1970s. In 1983 it extended its coverage to the Manu`a Islands, and in 1985 DMWR modified its data collection programs to include recreational and subsistence fisheries data.

American Samoa's domestic fisheries have typically been small-boat, 1-day fisheries using primarily 28 to 32-foot long, outboard-engine-powered catamarans called *alias* (pronounced *ah-lee-ahs*). Traditionally, trolling and bottomfishing were the major methods of fishing, and a little spearfishing, netting, and vertical longlining were done occasionally. Beginning in about mid-1995 some of the traditional alias began converting to horizontal longlining. During 1996 horizontal longlining became the largest fishery in American Samoa based on total landed weight of the catch, even though only about one-third of the fleet had converted to this method. Over the next few years the fleet grew rapidly with the addition of new alias up to about 38 feet in length and, more significantly, with the addition of other larger monohull vessels that fished much longer trips. The primary target species is albacore tuna, but the fishery has also resulted in significant increases in landings of yellowfin tuna, wahoo, blue marlin, mahimahi and some other incidentally caught species.

During 2010 the various fisheries monitoring programs in American Samoa identified 49 active vessels - 46 homeported on Tutuila and 3 in the Manu`a Islands. Many of these vessels participated in more than one fishery, and 27 of the Tutuila boats (including 25 vessels which were over 50 feet in length) did at least some longlining. Of the 49 total boats, 22 participated in the troll and bottomfish fisheries and 6 were used in other forms of fishing activities. On average, the alia fleet on Tutuila consisted of 5-man crews, fished 10 hours, and caught about

211 pounds of fish; the Manu`a-based fleet typically had 3-man crews, fished about 6 hours and landed46 pounds of fish. Essentially all of the longlining was based out of Tutuila, where the majority of the catch was offloaded to the canneries.

SEPTEMBER 2009 TSUNAMI

On September 29, 2009 American Samoa experienced a severe tsunami that damaged Leone village, Pago Pago harbor and the boat docks along the Pago Pago harbor. According to American Samoa, Department of Marine and Wildlife Resources (DMWR) staff, the tsunami took a huge toll on the boat-based fishery—of 17 local alia boats that were actively fishing, only 3 survived the tsunami. The rest sustained damage either to the boats, outboard engines and/or lost fishing gear. By the fourth quarter of 2010, only 5 - 6 alia boats had resumed fishing and a few were making short trips to test their boat performance. One alia continues longlining, and the rest are either trolling, bottomfishing, and/or spearfishing.

Most DMWR vehicles were severely damaged by the tsunami. The surveys for the boat-based program were reduced to 2 or 3 days per week and only collected data during the day time. Because of coastal damage, debris, and pollution, little or no shore-based fishing occurred prior to the second quarter of 2010. The shore-based survey program likewise did not resume until the second quarter of 2010 as a result of reduced fishing activity and lack of vehicles to conduct the surveys. One cannery also closed after the tsunami because of damage to its facility and equipment.

The tsunami did not greatly impact fishing activity of the large longline fleet; however, several of the large longline vessels that were in port but had not been fishing for in a while were destroyed. According to longline logbook data, compared to the fourth quarter of 2009, reported longline activity showed an increase in both catch and effort—the number of vessels turning in logs increased nearly 14%, the overall catch per unit of effort (catch per 1000 hooks) increased by nearly 15% and the estimated commercial catch increased 22% in the fourth quarter of 2010.

DATA REVISIONS

Significant changes in the fisheries occurred in the mid-1990s with the development of the longline fishery and a nighttime, boat-based scuba spearfishing fishery. Because of the nature of these fisheries, biases began creeping into the effort-counting and interviewing processes of the DMWR surveys. By 1997 WPacFIN staff discovered the problems, and modifications to survey techniques were implemented by DMWR staff. It became clear by early 1998 that the algorithms used to expand the survey data and estimate for the total fishery also needed to be changed. The new data processing programs that better handle the more complex nature of today's fisheries in American Samoa have been completed and were used to reprocess the historical time series. This volume includes the results of this new improved algorithm, but additional data quality control procedures and algorithm enhancements are still being made that may cause small changes in subsequent reports.

DATA COLLECTING

The data collecting programs used by DMWR to monitor the changing fisheries of American Samoa have evolved considerably over the past 20 years. One common factor of all the programs has been that they relied heavily on personal contacts with fishers and on a significant amount of dockside monitoring and interviewing. From 1982 to 1985, DMWR obtained catch statistics by interviewing commercial fishermen at the end of their trips and kept records of as much commercial fishing activity as possible; this was referred to as the "Commercial Catch Monitoring System". This data collection method was accurate for trips where interviews were conducted. However, it was very labor intensive, did not cover all trips, and did not include the small but growing recreational and subsistence fisheries.

There are several major programs in place today. Data from these programs are used to develop the best available data for the complex, rapidly changing fisheries of American Samoa. These are

1. Vessel Classification Program – a vessel history and tracking system for all American Samoa vessels.
2. Boat-based Creel Survey Program (formerly the Offshore Creel Survey System) – access-point creel surveys on Tutuila and the Manu`a Islands, which are the mainstay of the monitoring program.
3. Commercial Purchase Program – a mandatory purchase receipt trip ticket system for fish businesses on Tutuila.
4. Federal Longline Logbook Program and Daily Effort Census Program for detailed tracking of the longline fishery.
5. Cannery Landings Program to document all landings at the two canneries made by domestic and foreign vessels.
6. Size frequency sampling program at the canneries.

Vessel Classification Program – Beginning in the early 1980s, this program was established to collect information on all vessels participating in any domestic fisheries. It provides the following information on American Samoa vessels:

- Boat Name
- Registration Number
- Propulsion
- Length
- Beam
- Number of Engines
- Type of Use
- Trailered
- Number of Crew
- Depth
- Engine Type
- Fuel Type
- Material
- Horsepower
- Port
- Methods of Fishing
- Federal Permit

Boat-based Creel Survey Program – In October 1985, a new creel survey sampling program was implemented on Tutuila to provide better coverage and statistics on all boat-based fisheries, including noncommercial information. Soon afterwards, similar monitoring programs were established in the Manu`a Islands, where the fishing fleets are centrally located and small enough for statistics to be collected for nearly every trip. The surveyors in the Manu`a Islands send their monitoring forms to DMWR in Tutuila for processing.

The details of the Tutuila boat-based fishery sampling program have changed over the years to accommodate changes in the fisheries; but it is still a systematic, random sampling program that stratifies sampling by type of day (either weekday or weekend/holiday) and by fishing method. For logistical and cultural reasons, Sundays are no longer sampled as effort is extremely low and not similar to other weekend/holiday-type days.

DMWR staff normally sample 2 weekdays and 1 weekend/holiday per week. During survey days, counts of total participation are collected, and as many returning vessels as possible are interviewed for catch, effort, and biological samples. Tutuila is divided into six sample areas, five of which are sampled. It is assumed that the nonsampled area is similar to the sampled areas in fishing activity and success rate. Furthermore, it is assumed that the fishers interviewed are representative of the entire fishing population and that they give accurate information.

Unless contrary information is available from dockside questioning of knowledgeable persons, a boat is assumed to be "out fishing" if its trailer is at a boat ramp or the boat is missing from its normal berthing area during the 18-hour survey day. The following participation information is recorded for all boats determined to be "out fishing."

It is expanded to estimate the total number of fishing trips in Tutuila:

- Sample Date
- Boat Name
- 3 Observation Times
- Type of Day
- Fishing Method
- Sample Area

The remaining data items listed below are collected on each boat for which an interview is successfully completed:

- Interview Time *
- Area Fished
- Home Island
- Total Hours Fished (trip length) *
- Number of Fishermen
- Number of Gear Used
- Total Trip Weight in Pounds *
- Species Caught *
- Number of Pieces for Each Species
- Disposition of Species *
- Weight in Pounds for Each Species *
- Condition of Species if Not Whole
- Length of Fish (converted to weight)
- Price per Pound for Each Species

It is not always possible to obtain information on all the items listed. However, the ones marked with an asterisk (*) are considered essential for data expansion purposes. Also, identification and weight of each species are often not obtainable; in this case a code for species groupings (e.g., miscellaneous bottomfish) is used. The interview data is later expanded to estimate the total catch per fishing trips and other catch-per-unit-of-effort (CPUE) measures in Tutuila. The catch-per-trip estimate is multiplied by the number of trips estimated for each stratum to obtain an estimate of the total catch for Tutuila. The Manu`a statistics are added to the expanded estimated data for Tutuila to arrive at a total estimate for American Samoa.

Commercial Purchase Program – For several decades the two canneries provided monthly summary statistics about their purchases of fish from all vessels, foreign and domestic. Then in September 1990, a Commercial Purchase Program was instituted in which all other businesses in Samoa that buy fish directly from fishermen were required by local law to submit a copy of their purchase receipts to DMWR. Receipt books are issued by DMWR to all fish markets, stores, hotels, and restaurants that resell fish, either whole or prepared. The following information is collected via these receipts:

- Invoice Date
- Invoice Number
- Buyer's Name
- Boat Name, Owner
- Area Fished
- Fishing Method
- Species Bought
- Number of Pieces for Each Species
- Weight in Pounds for Each Species *
- Price per Pound for Each Species

Federal Longline Logbook System and Daily Effort Census – In January 1996, in response to the developing longline fishery, a mandatory federal longline logbook system was implemented by NMFS. All longline fishermen are required to obtain a federal permit and to submit logs containing detailed data on each of their sets and the resulting catch. From 1996 to 1999, the logbooks submitted by the local longliners were edited by the NMFS fisheries monitoring agent in Samoa for any missing data and were then sent to PIFSC (formerly the Honolulu Laboratory) for further editing and data processing.

In July 1999, to improve monitoring of the fast-growing longline fishery, DMWR implemented a Daily Effort Census (DEC) for all federally permitted longline vessels. Six days a week, DMWR staffs make two visits a day to ports where longline vessels move. The staff document whether each vessel on the list is "in port" or "out fishing." The DEC data are used to track the activity of each vessel and to help ensure all fishing log sheets are submitted by fishers.

To further improve the quality and timeliness of the data, beginning in January 2000, logbook data collecting, editing, and processing have been conducted by DMWR in Samoa and downloaded to NMFS periodically. The following information is recorded for each "set" these longline fishermen make:

- Set Date
- Vessel
- Date of Departure
- Port of Departure
- Date of Arrival
- Port of Arrival
- Observer on Board
- Target Species
- Bait Used
- Mainline Length
- No. of Hooks
- No. of Hooks/Float
- No. of Lightsticks Used
- Bird Catch Mitigation Measures
- Wind Detection
- Wave Height
- Sea Surface Temperature
- Wind Speed
- Begin Set Time
- Begin Set Latitude and Longitude
- End Set Time
- End Set Latitude and Longitude
- Haul Date
- Begin Haul Date
- Begin Haul Latitude and Longitude
- End Haul Time
- End Haul Latitude and Longitude
- No. of Pelagic Species Kept
- No. of Pelagic Species Released
- No. of Sharks Finned
- No. of Sharks Kept
- No. of Sharks Released
- No. of Protected Species Released Alive
- No. of Protected Species Released Injured
- No. of Protected Species Released Dead

In addition, on a monthly basis, logbook data are compared with cannery unloading data for Samoa-based boats, to identify boats that unloaded at the canneries but did not turn in any or just a part of the required longline logs.

The longline logbooks do not provide information about the number of pounds caught or the disposition of fish caught by longline vessels, neither of which is covered by the boat-based creel survey either. Beginning in April 2001, to provide better estimates of the pounds per fish caught by the longline vessels, length data from South Pacific Regional Longline Port Sampling Forms were collected for Samoa-based longliners and converted to pounds. Disposition data were also entered in the comments section of these forms to provide sampled disposition data on the fish caught.

DATA PROCESSING

As the data collecting programs used by DMWR to monitor the fisheries in American Samoa have changed over the years, so have the data processing systems. Numerous versions of database and utility software and microcomputer systems have been used over the years to meet the growing demand for processing the collected data. Generally speaking, these changes, with significant emphasis on improving data quality and cross validation among systems, have made the data processing systems more robust, complex, and complete.

The following important principles have remained constant over time:

1. Keep data processing close to the source of data collecting.
2. Provide all of the needed software tools to ensure the quality of data.
3. Make systems user-friendly and functional for the local staff.
4. Maintain as many standards as possible throughout the time series of data collected.

Typically, when upgrades (such as changes in expansion and reporting algorithms for the creel survey data and commercial landings data) have been made to data processing systems, the entire time series of data would be reprocessed using the same algorithms so that trends in the fisheries would remain as intact as possible. To help the reader understand the origin of the data included in this report, a general description of these processes follows. Please note that it does not include the details on many minor changes that have occurred throughout the evolutionary history of these systems.

The data from 1982 to 1985 have been imported directly from the original Commercial Catch Monitoring System used prior to the implementation of the boat-based creel survey. Since 1986, the boat-based creel survey data expansion system has been the central system for estimating total commercial landings in American Samoa. In short, the survey data expansion process involves multiplying the average daily participation by the average catch per trip for each stratum. For the years 1986 to 1990, commercial sales portions of the expanded creel survey data from Tutuila and the Manu`a Islands were combined to produce estimated total commercial landings. Since 1990, with the implementation of the mandatory fish dealer receipt book system on Tutuila (Commercial Purchase Program), further adjustments have been made to these combined creel data by using receipt book data. These adjustments made significant improvements in overall totals as they helped adjust for sales not monitored through the boat-based survey (e.g., inshore and strictly nighttime commercial fishing). Species totals modified with these types of adjustments are flagged in reports with an asterisk. Finally, in the late 1990s when larger longline vessels began landing their catches directly at the canneries and thus out of the monitoring capabilities of the standard creel surveys, the longline logbook system and cannery size frequency sampling data entered the algorithm to fill the gap for this portion of the fishery. This data added the landings of these vessels to create a more complete picture of the estimated total commercial landings for the Territory.

One of the most significant recent improvements made in the data processing systems for DMWR has been in the area of cross-system data validation and quality control. By collecting similar data from several sources using different monitoring and reporting tools, the quality of reported data can be cross-referenced between systems to provide insight into the validity and completeness of each data set.

The charts that make up the rest of the report are for groups of species as well as for some of the dominant individual species. To access the most up-to-date data and charts, please visit the WPacFIN website, http://www.pifsc.noaa.gov/wpacfin. The top 10 commercial species for the year are emphasized, and they can change from year to year.

DATA REPORTING

After all editing, quality control, and data interpretation activities are completed, monthly and annual commercial landings data tables by species are generated. Each of the commercial landings data tables contain the common name, weight in pounds, value in dollars, the average price per pound of each species or species group, and whether the data was modified by Commercial Purchase System data (denoted by asterisks). The monthly data tables are based on monthly expansions of the Tutuila boat-based creel survey data with enhancements by monthly Longline Logbook, Commercial Purchase System, and Manu`a data as explained previously. Annual data tables are based on combined annual expansions of the creel data for the entire calendar year with similar annual enhancements from Longline Logbook, Commercial Purchase System, and Manu`a data. Since the monthly and annual data tables are based on separate monthly and annual expansion of the creel data, the annual data tables are not the exact sum of the 12 monthly data tables, but they fall within the standard error (Tables A-1 to A-13).

SPECIES CATEGORIES

The species and species groups that are used in the tables and graphs of American Samoa's data are defined in this section. Many of the species included in this report have been recategorized over the years. For example, the Magnuson Fishery Conservation and Management Act of 1976 was amended in 1992 to include tunas in the Pelagic Management Unit Species (PMUS) category. However, this report maintains the original species categorizations from previous FSWP reports for comparative purposes. As such, tunas are kept in a separate category.

I. Pelagic Management Unit Species (PMUS)

- Sharks (misc)
- Mahimahi
- Blue marlin
- Black marlin
- Striped marlin
- Sailfish
- Spearfish
- Swordfish
- Wahoo
- Pomfret
- Moonfish

II. Bottomfish Management Unit Species (BMUS)

- Black jack
- Blue-lined snapper
- Gray jobfish
- Pink snapper (opakapaka)
- Flower snapper (gindai)
- Goldflag jobfish
- Silverjaw jobfish (lehi)
- Longtail snapper (onaga)
- Ruby snapper (ehu)
- Ambon emperor
- Redgill emperor

III. Billfishes

- Swordfish
- Blue marlin
- Black marlin
- Striped marlin
- Sailfish
- Spearfish

IV. Tunas

- Skipjack tuna
- Dogtooth tuna
- Albacore tuna
- Yellowfin tuna
- Bigeye tuna
- Kawakawa

V. Other Tunas

- Dogtooth tuna
- Kawakawa

VI. Fisheries Categories

A. *Pelagic Fishes*

- Albacore tuna
- Barracudas (misc)
- Bigeye tuna
- Black marlin
- Blue marlin
- Dogtooth tuna
- Kawakawa
- Mackerel
- Mahimahi
- Moonfish
- Pomfret
- Rainbow runner
- Sailfish
- Sharks (misc)
- Skipjack tuna
- Spearfish
- Striped marlin
- Swordfish
- Wahoo
- Yellowfin tuna

B. *Bottomfishes*

- Ambon emperor
- Bigeye bream
- Bigeye trevally
- Black jack
- Black snapper
- Blue-lined snapper
- Bluefin trevally
- Brown jobfish
- Emperors
- Flower snapper (gindai)
- Goldflag jobfish
- Gray jobfish
- Greater amberjack
- Groupers
- Humpback snapper
- Jacks
- Longnose emperor
- Longspine grouper
- Longtail snapper (onaga)
- Onespot snapper
- Peacock grouper
- Pink snapper (opakapaka)
- Redgill emperor
- Ruby snapper (ehu)
- Silverjaw jobfish (lehi)
- Stone's snapper
- Trevallys
- Twinspot/red snapper
- White-edged lyretail

C. *Reef Fishes*

Flagtails
Goatfishes
Inshore groupers
Paeony bulleye
Parrotfishes
Rabbitfishes
Rudderfishes
Soldierfish (misc)
Squirrelfishes
Surgeonfishes/tangs
Terapon perch
Triggerfishes
Unicornfishes
Wrasses (misc)

D. *Other Fishes*

Crabs
Eels
Filefishes
Octopus
Spiny lobster
Spiny pufferfish

INTERPRETATION OF STATISTICS

When interpreting the data in the tables and graphs, keep in mind the caveats described earlier in this section. Remember also that the commercial landings summaries are not based on a census of all fishing activities, but on samples of those activities and on integration of data from several different data programs. One of the major factors in expanding the creel survey data into monthly and annual estimates is the use of proportionality constants to adjust for percent coverage of the surveys. The flexibility of the survey design allows for refinement of these constants as additional information is gained on fishing activities. If the constants are improved, the basic survey data can be expanded again to create better overall estimates. However, the variability and species composition would not be expected to change because these statistics are based on the actual survey information collected from fishers. The estimates of total landings are considered to be conservative because the catch from subsistence inshore fisheries are currently not included in this document.

Table A-1
American Samoa Annual 2010 Estimated Commercial Landings

Species	Pounds	Value ($)	Price/Lb ($)
Greater amberjack	337	861	2.55
Barracudas	425	1,122	2.64
Bigeye bream	261	576	2.21
Paeony bulleye	20	49	2.49
Crabs	23	59	2.60
Eels	192	577	3.00
Ambon emperor	360	947	2.63
Longnose emperor	806	2,066	2.56
Redgill emperor	1,599	4,157	2.60
Emperors	836	2,178	2.61
Filefishes	139	367	2.63
Flagtails	32	97	2.99
Goatfishes	12	31	2.57
Longspine grouper	105	289	2.75
Peacock grouper	224	590	2.63
Groupers	631	1,735	2.75
Inshore groupers	485	1,312	2.71
Black jack	728	1,837	2.52
Jacks	15	38	2.50
Brown jobfish	21	56	2.70
Goldflag jobfish	235	620	2.64
Gray jobfish	1,123	2,909	2.59
Silverjaw jobfish (lehi)	1,088	2,992	2.75
Spiny lobster	3,905	15,149	3.88
White-edged lyretail	302	795	2.63
Mackerel	10	25	2.51
Mahimahi	13,580	33,949	2.50
Black marlin	40	100	2.50
Blue marlin	75,550	132,211	1.75
Striped marlin	3,038	3,314	1.09
Octopus	158	404	2.56
Moonfish	194	484	2.50
Parrotfishes	9,243	26,605	2.88
Terapon perch	69	181	2.62
Pomfret	467	1,052	2.25
Spiny pufferfish	64	96	1.50
Rabbitfishes	12	30	2.57
Rainbow runner	172	474	2.75

Table A-1 (continued)
American Samoa Annual 2010 Estimated Commercial Landings

Species	Pounds	Value ($)	Price/Lb ($)
Humpback snapper	2,570	7,068	2.75
Longtail snapper (onaga)	846	2,348	2.78
Onespot snapper	82	216	2.64
Ruby snapper (ehu)	520	1,660	3.19
Stone's snapper	12	32	2.74
Twinspot/red snapper	101	252	2.50
Pink snapper (opakapaka)	343	890	2.60
Soldierfishes	75	195	2.60
Spearfish	2,244	2,581	1.15
Squirrelfishes	1,616	4,234	2.62
Surgeonfishes/tangs	8,666	23,063	2.66
Swordfish	17,564	30,887	1.76
Bigeye trevally	50	137	2.75
Bluefin trevally	30	105	3.50
Trevallys	56	150	2.70
Triggerfishes	11	28	2.50
Albacore tuna	8,653,117	8,653,117	1.00
Bigeye tuna	378,595	416,894	1.10
Dogtooth tuna	177	443	2.50
Kawakawa	323	485	1.50
Skipjack tuna	248,621	153,508	0.62
Yellowfin tuna	971,667	882,488	0.91
Unicornfishes	5,816	15,887	2.73
Wahoo	281,139	171,494	0.61
Wrasses	152	356	2.35
TOTAL	10,698,381	10,624,857	0.99

* Data replaced or modified by Actual Commercial Landings Data

Table A-2
American Samoa January 2010 Estimated Commercial Landings

Species	Pounds	Value ($)	Price/Lb ($)	
Barracudas	14	37	2.70	
Longnose emperor	58	156	2.68	
Redgill emperor	121	319	2.64	
Emperors	119	326	2.74	
Filefishes	23	60	2.65	
Longspine grouper	20	56	2.75	
Peacock grouper	32	84	2.66	
Inshore groupers	63	168	2.67	*
Gray jobfish	27	70	2.55	
Silverjaw jobfish (lehi)	39	107	2.78	
Spiny lobster	218	813	3.74	
Mahimahi	925	2,313	2.50	
Blue marlin	6,383	11,170	1.75	
Striped marlin	459	505	1.10	
Moonfish	18	45	2.50	
Parrotfishes	218	569	2.61	
Pomfret	29	64	2.25	
Sailfish	62	156	2.52	
Black snapper	21	57	2.68	
Blue-lined snapper	205	791	3.86	*
Humpback snapper	346	952	2.75	
Longtail snapper (onaga)	67	188	2.79	
Ruby snapper (ehu)	35	123	3.50	*
Spearfish	140	161	1.15	
Squirrelfishes	54	147	2.75	
Surgeonfishes/tangs	541	1,405	2.60	*
Swordfish	1,442	2,164	1.50	
Bigeye trevally	11	30	2.75	
Triggerfishes	11	28	2.50	
Albacore tuna	434,001	434,001	1.00	
Bigeye tuna	10,992	12,103	1.10	
Skipjack tuna	15,262	9,157	0.60	
Yellowfin tuna	31,910	28,719	0.90	
Unicornfishes	170	450	2.64	
Wahoo	34,398	21,301	0.62	
TOTAL	538,432	528,794	0.98	

* Data replaced or modified by Actual Commercial Landings Data

Table A-3
American Samoa February 2010 Estimated Commercial Landings

Species	Pounds	Value ($)	Price/Lb ($)	
Greater amberjack	15	38	2.50	
Barracudas	12	31	2.52	
Bigeye bream	152	330	2.17	
Eels	54	163	3.00	
Longnose emperor	79	198	2.50	
Redgill emperor	152	381	2.50	
Emperors	109	272	2.50	
Groupers	75	206	2.75	*
Black jack	12	29	2.50	
Silverjaw jobfish (lehi)	23	58	2.50	
Spiny lobster	77	286	3.73	
Mahimahi	506	1,265	2.50	
Blue marlin	9,104	15,931	1.75	
Striped marlin	1,109	1,219	1.10	
Moonfish	14	35	2.51	
Parrotfishes	326	898	2.75	
Pomfret	29	64	2.25	
Sailfish	745	1,876	2.52	
Blue-lined snapper	193	668	3.47	
Flower snapper (gindai)	14	34	2.50	
Humpback snapper	131	360	2.75	
Twinspot/red snapper	39	98	2.50	
Spearfish	393	452	1.15	
Squirrelfishes	114	285	2.50	*
Surgeonfishes/tangs	487	1,196	2.46	
Swordfish	1,018	1,527	1.50	
Albacore tuna	228,553	228,553	1.00	
Bigeye tuna	5,888	6,484	1.10	
Dogtooth tuna	20	50	2.50	
Kawakawa	16	23	1.50	
Skipjack tuna	10,520	6,546	0.62	
Yellowfin tuna	28,340	25,810	0.91	
Unicornfishes	345	926	2.69	
Wahoo	17,717	10,708	0.60	
TOTAL	306,379	307,000	1.00	

* Data replaced or modified by Actual Commercial Landings Data

Table A-4
American Samoa March 2010 Estimated Commercial Landings

Species	Pounds	Value ($)	Price/Lb ($)	
Bigeye bream	14	36	2.53	
Crabs	15	38	2.61	
Redgill emperor	122	322	2.65	
Emperors	49	130	2.65	
Filefishes	31	82	2.60	
Peacock grouper	37	96	2.60	
Inshore groupers	120	332	2.78	*
Gray jobfish	23	62	2.66	
Spiny lobster	953	3,561	3.74	
White-edged lyretail	61	161	2.65	
Mackerel	10	25	2.51	
Mahimahi	157	393	2.50	
Blue marlin	5,232	9,156	1.75	
Octopus	16	50	3.11	
Moonfish	2	5	2.45	
Parrotfishes	1,775	5,237	2.95	
Terapon perch	12	31	2.60	
Pomfret	16	36	2.25	
Rudderfishes	28	70	2.52	
Sailfish	900	810	0.90	*
Blue-lined snapper	56	212	3.77	
Flower snapper (gindai)	10	26	2.65	
Humpback snapper	130	357	2.75	
Longtail snapper (onaga)	10	28	2.65	
Onespot snapper	26	66	2.60	
Ruby snapper (ehu)	23	63	2.75	*
Twinspot/red snapper	13	33	2.51	
Spearfish	309	355	1.15	
Squirrelfishes	133	381	2.87	
Surgeonfishes/tangs	2,001	5,507	2.75	
Swordfish	1,188	1,782	1.50	
Albacore tuna	55,718	55,718	1.00	
Bigeye tuna	11,171	12,301	1.10	
Skipjack tuna	1,299	780	0.60	
Yellowfin tuna	14,836	13,353	0.90	
Unicornfishes	651	1,826	2.80	
Wahoo	7,088	4,318	0.61	
Wrasses	31	77	2.50	
TOTAL	104,265	117,814	1.13	

* Data replaced or modified by Actual Commercial Landings Data

Table A-5
American Samoa April 2010 Estimated Commercial Landings

Species	Pounds	Value ($)	Price/Lb ($)	
Bigeye bream	17	38	2.21	
Ambon emperor	18	46	2.63	
Redgill emperor	46	120	2.63	
Emperors	12	32	2.66	
Filefishes	26	69	2.64	
Flagtails	32	97	2.99	
Longspine grouper	12	33	2.75	
Peacock grouper	20	52	2.64	
Inshore groupers	60	166	2.75	*
Black jack	34	85	2.52	
Gray jobfish	14	25	1.75	*
Silverjaw jobfish (lehi)	40	111	2.76	
Spiny lobster	307	1,145	3.74	
White-edged lyretail	28	74	2.64	
Mahimahi	192	480	2.50	
Blue marlin	6,069	10,621	1.75	
Striped marlin	286	286	1.00	*
Moonfish	4	10	2.48	
Parrotfishes	898	2,626	2.92	*
Pomfret	22	50	2.26	
Rudderfishes	20	50	2.57	
Sailfish	186	469	2.52	
Blue-lined snapper	88	221	2.52	*
Flower snapper (gindai)	38	67	1.75	*
Humpback snapper	103	283	2.75	
Ruby snapper (ehu)	130	340	2.62	*
Pink snapper (opakapaka)	53	137	2.57	*
Spearfish	253	290	1.15	
Squirrelfishes	69	178	2.59	
Surgeonfishes/tangs	683	1,769	2.59	
Swordfish	933	1,400	1.50	
Albacore tuna	374,696	374,696	1.00	
Bigeye tuna	44,271	48,750	1.10	
Skipjack tuna	7,686	4,611	0.60	
Yellowfin tuna	65,767	59,191	0.90	
Unicornfishes	507	1,391	2.74	
Wahoo	11,710	7,129	0.61	
TOTAL	515,329	517,138	1.00	

* Data replaced or modified by Actual Commercial Landings Data

Table A-6
American Samoa May 2010 Estimated Commercial Landings

Species	Pounds	Value ($)	Price/Lb ($)	
Barracudas	6	16	2.63	
Eels	97	292	3.00	
Ambon emperor	17	43	2.63	
Redgill emperor	9	24	2.62	
Emperors	20	52	2.60	
Filefishes	59	155	2.63	
Groupers	38	104	2.75	*
Gray jobfish	12	32	2.59	
Spiny lobster	444	2,220	5.00	*
White-edged lyretail	19	50	2.63	
Mahimahi	628	1,571	2.50	
Blue marlin	8,894	15,565	1.75	
Striped marlin	115	126	1.10	
Octopus	100	250	2.50	*
Moonfish	10	25	2.49	
Parrotfishes	1,259	3,611	2.87	
Terapon perch	26	69	2.63	
Pomfret	35	79	2.25	
Rudderfishes	40	101	2.56	
Sailfish	310	782	2.52	
Blue-lined snapper	10	38	3.75	
Humpback snapper	27	73	2.75	
Spearfish	281	323	1.15	
Squirrelfishes	112	289	2.58	
Surgeonfishes/tangs	787	2,045	2.60	
Swordfish	1,696	4,376	2.58	*
Albacore tuna	1,171,631	1,171,631	1.00	
Bigeye tuna	47,696	52,521	1.10	
Skipjack tuna	15,935	9,561	0.60	
Yellowfin tuna	112,526	102,266	0.91	
Unicornfishes	1,054	2,883	2.74	
Wahoo	15,522	9,450	0.61	
Wrasses	12	28	2.24	
TOTAL	1,379,427	1,380,648	1.00	

* Data replaced or modified by Actual Commercial Landings Data

Table A-7
American Samoa June 2010 Estimated Commercial Landings

Species	Pounds	Value ($)	Price/Lb ($)	
Greater amberjack	31	80	2.56	
Barracudas	160	430	2.69	
Ambon emperor	178	468	2.63	
Redgill emperor	73	189	2.60	
Emperors	132	340	2.57	
Longspine grouper	11	29	2.75	
Peacock grouper	14	38	2.63	
Groupers	18	48	2.75	*
Inshore groupers	10	28	2.74	*
Black jack	64	162	2.53	
Gray jobfish	130	337	2.60	
Silverjaw jobfish (lehi)	105	290	2.75	
Spiny lobster	171	639	3.74	
White-edged lyretail	54	142	2.62	
Mahimahi	1,571	3,927	2.50	
Blue marlin	5,127	8,973	1.75	
Striped marlin	38	42	1.10	
Octopus	17	41	2.49	*
Moonfish	18	45	2.50	
Parrotfishes	646	1,851	2.87	
Pomfret	67	150	2.25	
Sailfish	860	774	0.90	*
Blue-lined snapper	104	392	3.77	
Humpback snapper	177	488	2.75	
Pink snapper (opakapaka)	65	170	2.60	
Soldierfishes	9	24	2.59	
Spearfish	56	65	1.15	
Squirrelfishes	68	175	2.59	
Surgeonfishes/tangs	569	1,471	2.58	
Swordfish	848	1,273	1.50	
Bigeye trevally	19	52	2.75	
Bluefin trevally	19	67	3.51	
Albacore tuna	1,005,369	1,005,369	1.00	
Bigeye tuna	44,013	48,465	1.10	
Dogtooth tuna	17	44	2.50	
Skipjack tuna	12,523	7,596	0.61	
Yellowfin tuna	112,411	102,712	0.91	
Unicornfishes	397	1,083	2.73	
Wahoo	21,645	13,178	0.61	
Wrasses	28	70	2.50	
TOTAL	1,207,832	1,201,714	0.99	

* Data replaced or modified by Actual Commercial Landings Data

Table A-8
American Samoa July 2010 Estimated Commercial Landings

Species	Pounds	Value ($)	Price/Lb ($)	
Greater amberjack	55	142	2.56	
Barracudas	5	14	2.60	
Ambon emperor	92	243	2.63	
Redgill emperor	34	89	2.60	
Emperors	64	167	2.60	
Goatfishes	12	31	2.57	
Peacock grouper	57	151	2.64	
Inshore groupers	132	344	2.60	*
Black jack	21	54	2.53	
Jacks	15	38	2.50	
Gray jobfish	68	177	2.60	
Silverjaw jobfish (lehi)	42	115	2.76	
Spiny lobster	503	1,878	3.74	
White-edged lyretail	23	60	2.63	
Mahimahi	3,247	8,116	2.50	
Blue marlin	3,244	5,677	1.75	
Striped marlin	38	42	1.10	
Moonfish	28	69	2.50	
Parrotfishes	920	2,637	2.87	
Terapon perch	31	81	2.63	
Pomfret	35	79	2.25	
Spiny pufferfish	29	44	1.50	
Rabbitfishes	12	30	2.57	
Rudderfishes	38	98	2.56	
Sailfish	62	156	2.52	
Blue-lined snapper	56	209	3.77	
Humpback snapper	100	274	2.75	
Ruby snapper (ehu)	24	96	4.00	*
Pink snapper (opakapaka)	11	27	2.61	
Soldierfishes	66	171	2.60	
Spearfish	84	97	1.15	
Squirrelfishes	48	124	2.59	
Surgeonfishes/tangs	910	2,359	2.59	
Swordfish	1,697	2,545	1.50	
Bluefin trevally	11	38	3.50	
Albacore tuna	1,440,444	1,440,444	1.00	
Bigeye tuna	41,741	45,964	1.10	
Kawakawa	12	17	1.50	
Skipjack tuna	52,418	31,624	0.60	
Yellowfin tuna	136,253	123,932	0.91	
Unicornfishes	895	2,431	2.72	
Wahoo	20,401	12,420	0.61	
TOTAL	1,703,976	1,683,301	0.99	

* Data replaced or modified by Actual Commercial Landings Data

Table A-9
American Samoa August 2010 Estimated Commercial Landings

Species	Pounds	Value ($)	Price/Lb ($)	
Barracudas	2	5	2.65	
Bigeye bream	11	25	2.21	
Ambon emperor	56	147	2.63	
Longnose emperor	11	28	2.55	
Redgill emperor	20	52	2.61	
Groupers	12	34	2.75	*
Inshore groupers	27	75	2.75	*
Gray jobfish	17	47	2.70	*
Silverjaw jobfish (lehi)	80	219	2.75	
Spiny lobster	314	1,173	3.74	
White-edged lyretail	12	31	2.63	
Mahimahi	3,508	8,771	2.50	
Blue marlin	7,743	13,551	1.75	
Striped marlin	77	84	1.10	
Moonfish	49	124	2.50	
Parrotfishes	493	1,414	2.87	
Pomfret	51	114	2.25	
Spiny pufferfish	14	21	1.50	
Sailfish	248	625	2.52	
Blue-lined snapper	43	162	3.77	
Humpback snapper	72	199	2.75	
Longtail snapper (onaga)	277	771	2.78	
Pink snapper (opakapaka)	19	50	2.60	
Spearfish	477	548	1.15	
Squirrelfishes	80	208	2.61	
Surgeonfishes/tangs	574	1,585	2.76	*
Swordfish	2,121	3,182	1.50	
Albacore tuna	818,879	818,879	1.00	
Bigeye tuna	73,451	80,881	1.10	
Dogtooth tuna	70	175	2.50	
Skipjack tuna	17,890	10,734	0.60	
Yellowfin tuna	144,159	130,537	0.91	
Unicornfishes	278	748	2.69	
Wahoo	31,379	19,104	0.61	
Wrasses	60	134	2.25	
TOTAL	1,102,575	1,094,435	0.99	

* Data replaced or modified by Actual Commercial Landings Data

Table A-10
American Samoa September 2010 Estimated Commercial Landings

Species	Pounds	Value ($)	Price/Lb ($)	
Greater amberjack	17	43	2.55	
Barracudas	33	87	2.60	
Bigeye bream	23	51	2.21	
Crabs	8	20	2.60	
Longnose emperor	91	232	2.56	
Emperors	66	172	2.60	
Groupers	61	168	2.75	*
Black jack	39	99	2.52	
Goldflag jobfish	12	31	2.63	
Silverjaw jobfish (lehi)	22	60	2.76	
Spiny lobster	428	1,598	3.74	
Mahimahi	1,588	3,971	2.50	
Blue marlin	2,825	4,944	1.75	
Striped marlin	191	210	1.10	
Moonfish	10	25	2.49	
Parrotfishes	645	1,849	2.87	
Pomfret	35	79	2.25	
Spiny pufferfish	21	31	1.50	
Sailfish	417	417	1.00	*
Blue-lined snapper	115	432	3.77	
Flower snapper (gindai)	25	65	2.56	
Humpback snapper	190	523	2.75	
Longtail snapper (onaga)	412	1,143	2.78	
Ruby snapper (ehu)	87	288	3.31	*
Pink snapper (opakapaka)	50	130	2.60	
Spearfish	28	32	1.15	
Squirrelfishes	113	290	2.58	
Surgeonfishes/tangs	716	1,980	2.77	*
Swordfish	1,612	2,418	1.50	
Bigeye trevally	20	55	2.75	
Albacore tuna	965,653	965,653	1.00	
Bigeye tuna	46,307	50,992	1.10	
Kawakawa	13	19	1.50	
Skipjack tuna	16,430	9,980	0.61	
Yellowfin tuna	92,014	83,904	0.91	
Unicornfishes	521	1,414	2.72	
Wahoo	25,881	15,774	0.61	
TOTAL	1,156,716	1,149,179	0.99	

* Data replaced or modified by Actual Commercial Landings Data

Table A-11
American Samoa October 2010 Estimated Commercial Landings

Species	Pounds	Value ($)	Price/Lb ($)	
Greater amberjack	11	28	2.55	
Barracudas	83	215	2.60	
Bigeye bream	13	29	2.21	
Eels	29	86	3.00	
Longnose emperor	77	198	2.56	
Redgill emperor	290	754	2.60	
Emperors	123	319	2.60	
Groupers	143	393	2.75	*
Black jack	171	433	2.53	
Gray jobfish	101	263	2.60	
Silverjaw jobfish (lehi)	140	385	2.75	
Spiny lobster	166	619	3.74	
White-edged lyretail	57	150	2.63	
Mahimahi	681	1,702	2.50	
Black marlin	40	100	2.50	*
Blue marlin	3,453	6,043	1.75	
Moonfish	22	54	2.50	
Parrotfishes	753	2,160	2.87	
Pomfret	41	93	2.25	
Rainbow runner	18	50	2.76	
Rudderfishes	23	60	2.56	
Sailfish	900	900	1.00	*
Sharks (unknown)	0	1	1.67	
Black snapper	97	259	2.68	
Blue-lined snapper	230	866	3.77	
Flower snapper (gindai)	19	53	2.74	*
Humpback snapper	363	999	2.75	
Longtail snapper (onaga)	19	51	2.77	
Onespot snapper	37	99	2.65	
Ruby snapper (ehu)	106	348	3.27	*
Twinspot/red snapper	15	37	2.50	
Spearfish	140	161	1.15	
Squirrelfishes	297	779	2.63	
Surgeonfishes/tangs	456	1,253	2.75	*
Swordfish	1,518	3,795	2.50	*
Trevallys	11	29	2.69	
Albacore tuna	793,063	793,063	1.00	
Bigeye tuna	24,731	27,233	1.10	
Skipjack tuna	25,619	15,906	0.62	
Yellowfin tuna	38,938	35,969	0.92	
Unicornfishes	210	571	2.72	
Wahoo	23,786	14,481	0.61	
Wrasses	21	48	2.25	
TOTAL	917,009	911,032	0.99	

* Data replaced or modified by Actual Commercial Landings Data

Table A-12
American Samoa November 2010 Estimated Commercial Landings

Species	Pounds	Value ($)	Price/Lb ($)	
Barracudas	80	210	2.63	
Bigeye bream	30	67	2.21	
Paeony bulleye	20	49	2.49	
Eels	12	37	2.99	
Longnose emperor	138	353	2.56	
Redgill emperor	247	642	2.60	
Emperors	130	337	2.60	
Groupers	38	104	2.75	*
Inshore groupers	73	200	2.75	*
Black jack	227	572	2.53	
Brown jobfish	21	56	2.70	
Goldflag jobfish	15	41	2.64	
Gray jobfish	222	576	2.60	
Silverjaw jobfish (lehi)	123	339	2.75	
Spiny lobster	224	837	3.74	
White-edged lyretail	35	91	2.63	
Mahimahi	384	960	2.50	
Blue marlin	8,371	14,650	1.75	
Striped marlin	268	294	1.10	
Octopus	25	63	2.50	*
Moonfish	14	35	2.51	
Parrotfishes	961	2,756	2.87	
Pomfret	70	157	2.25	
Rainbow runner	29	81	2.75	
Rudderfishes	9	23	2.57	
Sailfish	124	313	2.52	
Black snapper	79	211	2.68	
Blue-lined snapper	201	759	3.77	
Humpback snapper	354	974	2.75	
Longtail snapper (onaga)	37	101	2.78	
Onespot snapper	19	50	2.65	
Ruby snapper (ehu)	115	402	3.50	*
Stone's snapper	12	32	2.74	
Twinspot/red snapper	34	85	2.50	
Pink snapper (opakapaka)	26	67	2.60	
Spearfish	28	32	1.15	
Squirrelfishes	201	527	2.62	
Surgeonfishes/tangs	633	1,654	2.61	
Swordfish	2,036	3,054	1.50	
Trevallys	11	31	2.71	
Albacore tuna	880,644	880,644	1.00	
Bigeye tuna	11,733	12,920	1.10	
Dogtooth tuna	13	32	2.49	
Kawakawa	25	37	1.50	

Table A-12 (continued)
American Samoa November 2010 Estimated Commercial Landings

Species	Pounds	Value ($)	Price/Lb ($)
Skipjack tuna	43,730	26,768	0.61
Yellowfin tuna	121,231	110,083	0.91
Unicornfishes	600	1,647	2.75
Wahoo	36,340	22,140	0.61
TOTAL	1,109,988	1,086,090	0.98

* Data replaced or modified by Actual Commercial Landings Data

Table A-13
American Samoa December 2010 Estimated Commercial Landings

Species	Pounds	Value ($)	Price/Lb ($)	
Greater amberjack	208	531	2.56	
Barracudas	30	78	2.61	
Longnose emperor	352	901	2.56	
Redgill emperor	486	1,266	2.60	
Emperors	12	31	2.61	
Longspine grouper	62	170	2.75	
Peacock grouper	64	170	2.64	
Groupers	246	676	2.75	
Black jack	160	404	2.53	
Goldflag jobfish	208	548	2.64	
Gray jobfish	508	1,321	2.60	
Silverjaw jobfish (lehi)	476	1,309	2.75	
Spiny lobster	102	380	3.74	
White-edged lyretail	14	37	2.62	
Mahimahi	192	480	2.50	
Blue marlin	9,104	15,931	1.75	
Striped marlin	459	505	1.10	
Moonfish	6	15	2.51	
Parrotfishes	348	998	2.87	
Pomfret	38	86	2.25	
Rainbow runner	125	344	2.75	
Sailfish	496	1,251	2.52	
Blue-lined snapper	399	1,503	3.77	
Flower snapper (gindai)	21	54	2.55	
Humpback snapper	577	1,587	2.75	
Longtail snapper (onaga)	24	66	2.78	
Pink snapper (opakapaka)	119	310	2.60	
Spearfish	56	65	1.15	
Squirrelfishes	330	851	2.58	
Surgeonfishes/tangs	310	840	2.71	*
Swordfish	1,454	3,372	2.32	*
Trevallys	33	90	2.69	
Albacore tuna	484,466	484,466	1.00	
Bigeye tuna	16,600	18,279	1.10	
Dogtooth tuna	57	142	2.50	
Kawakawa	259	388	1.50	
Skipjack tuna	29,310	20,246	0.69	
Yellowfin tuna	73,281	66,013	0.90	
Unicornfishes	189	518	2.74	
Wahoo	35,275	21,493	0.61	
TOTAL	656,454	647,711	0.99	

* Data replaced or modified by Actual Commercial Landings Data

The following are summary charts of the major species and species groups by month:

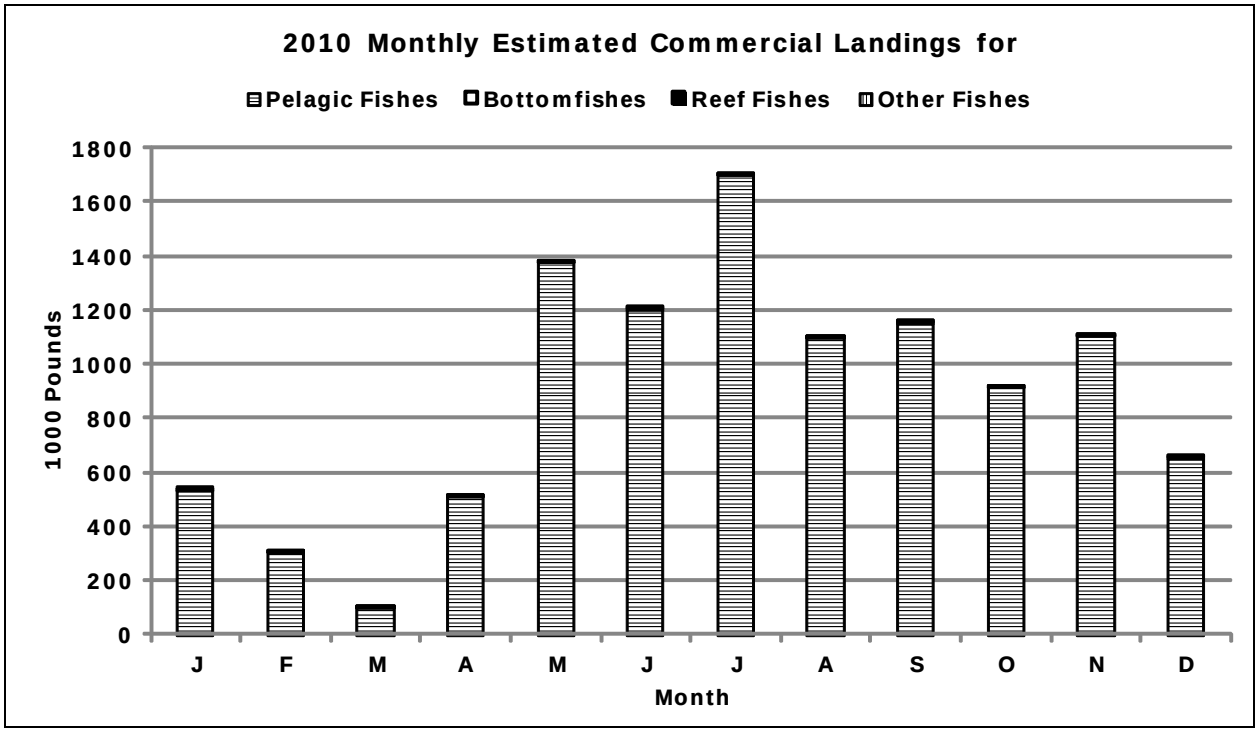

Figure A-1-1

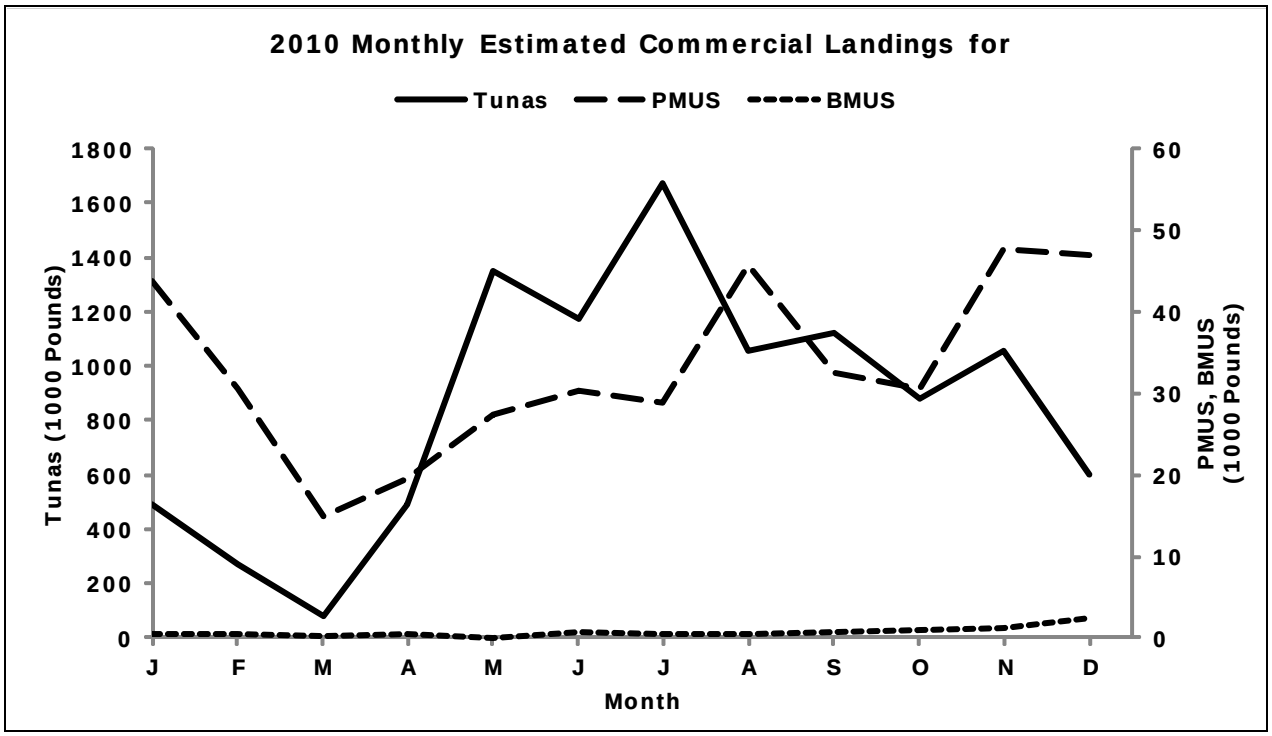

Figure A-1-2

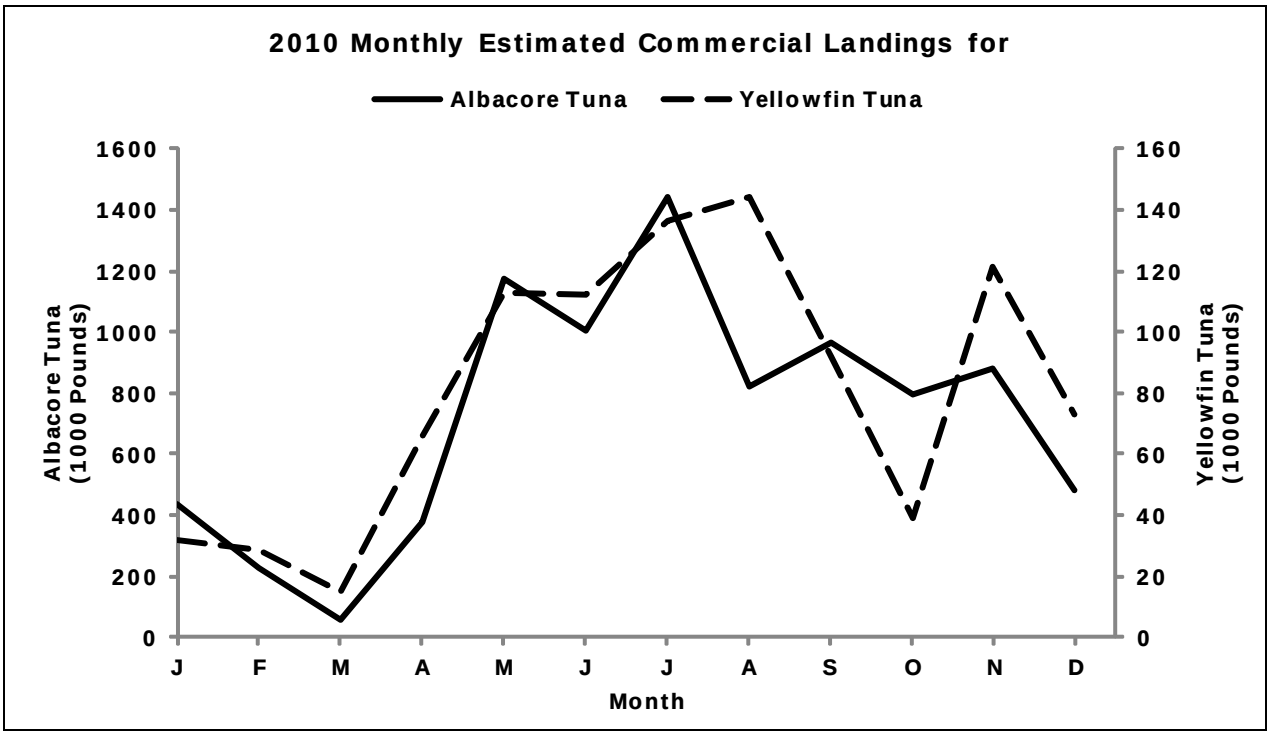

Figure A-1-3

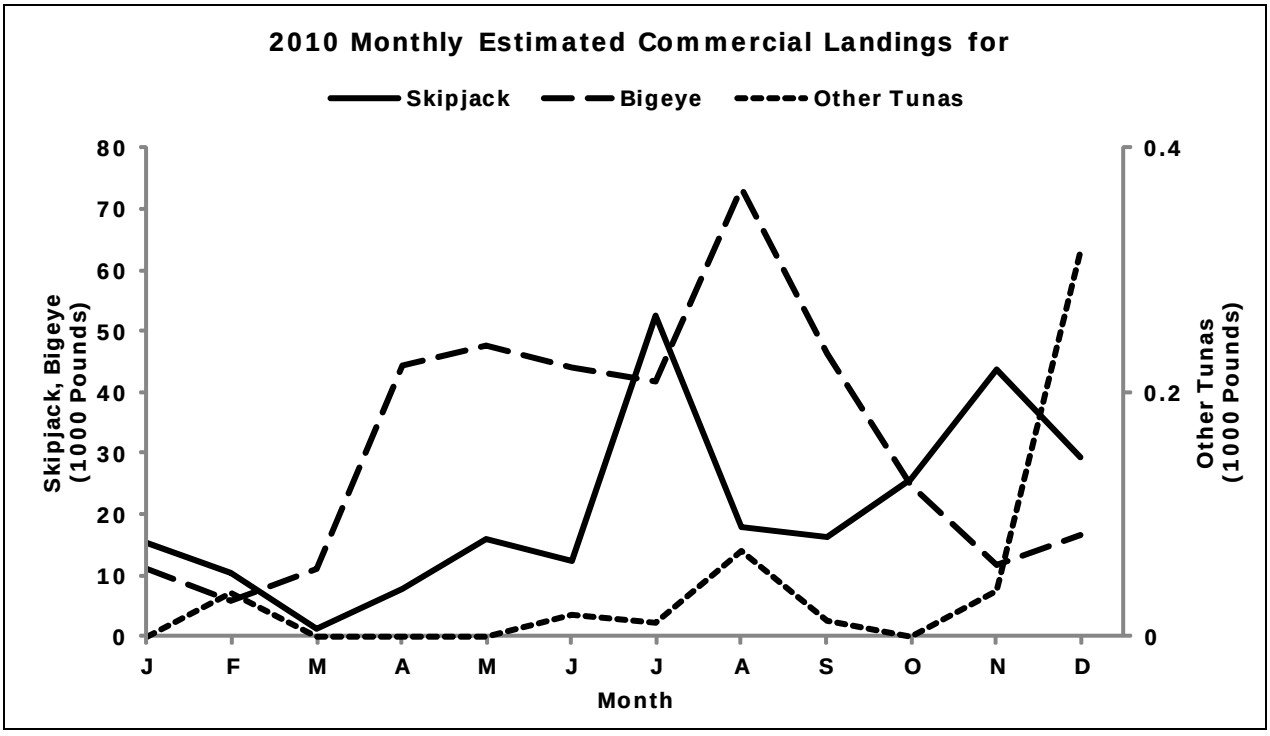

Figure A-1-4

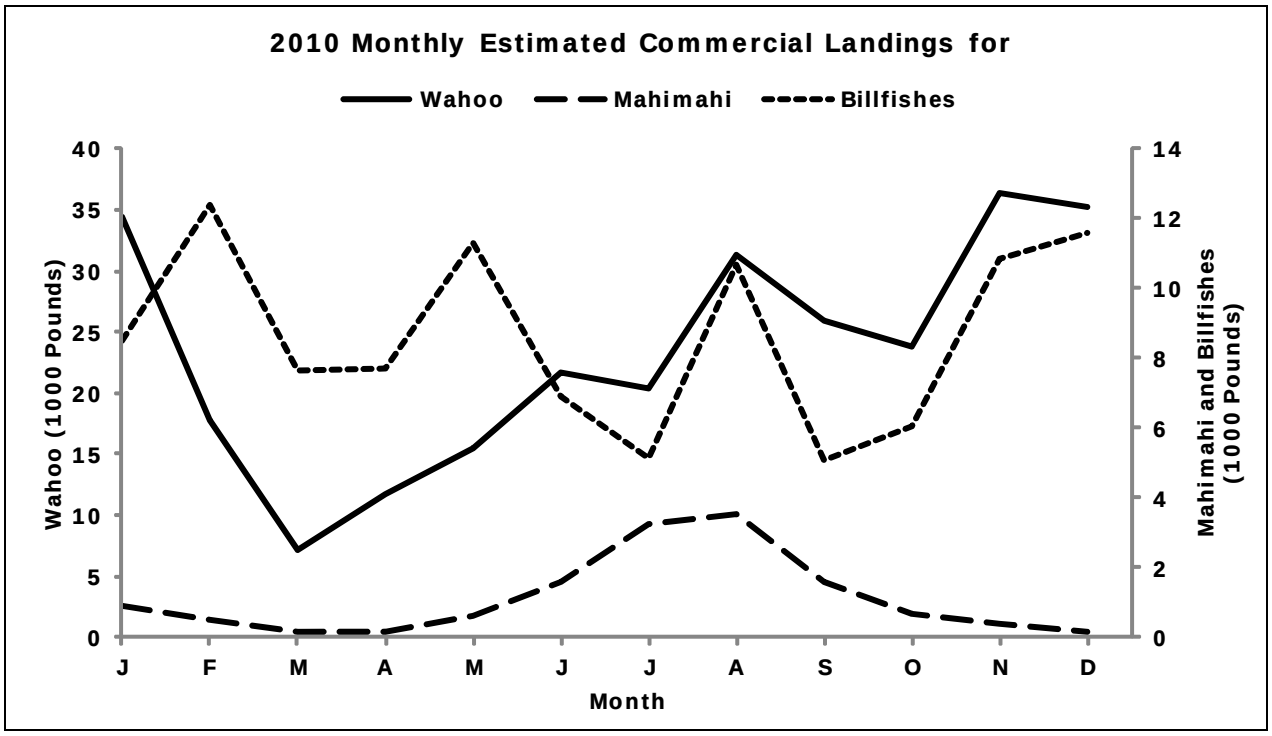
2010 Monthly Estimated Commercial Landings for
Wahoo
Mahimahi
Billfishes
Wahoo (1000 Pounds)
Mahimahi and Billfishes (1000 Pounds)
Month
J
F
M
A
M
J
J
A
S
O
N
D
0
5
10
15
20
25
30
35
40
0
2
4
6
8
10
12
14

Figure A-1-5

The following are seasonality plots for the major species or species groups, showing the average weight landed during each month for all years combined:

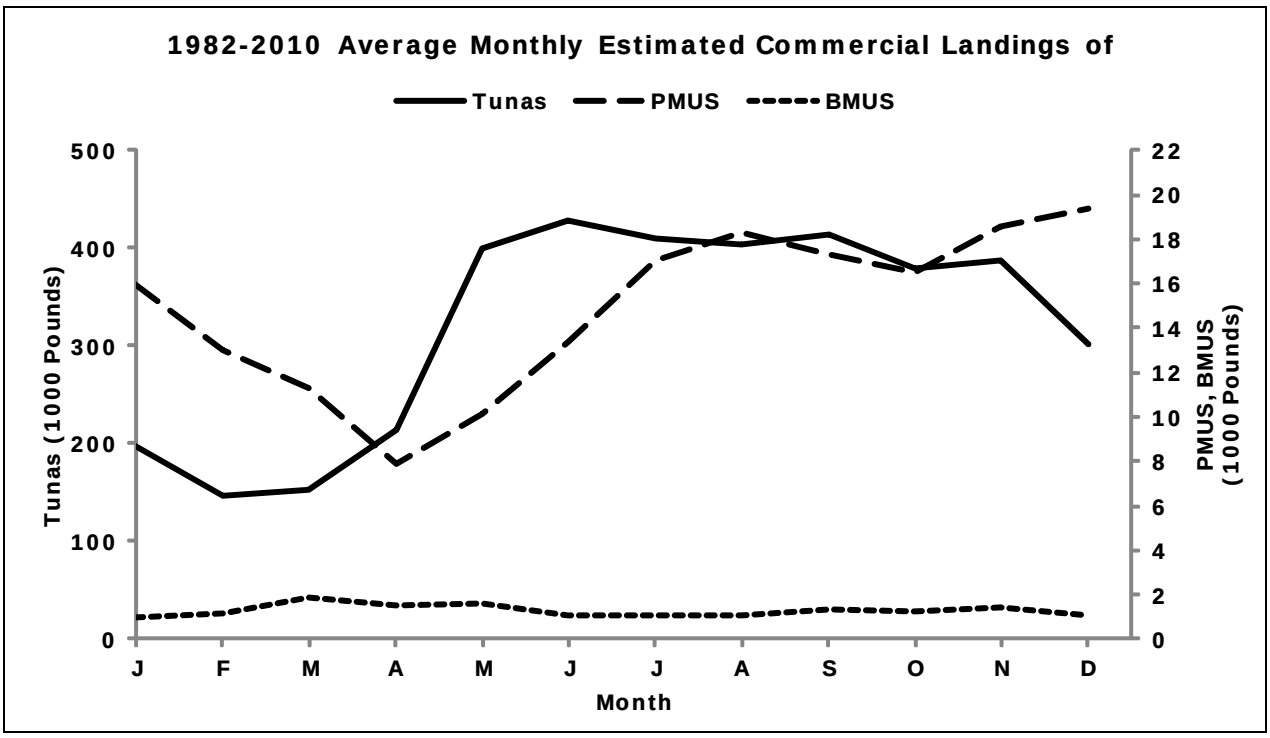

Figure A-2-1

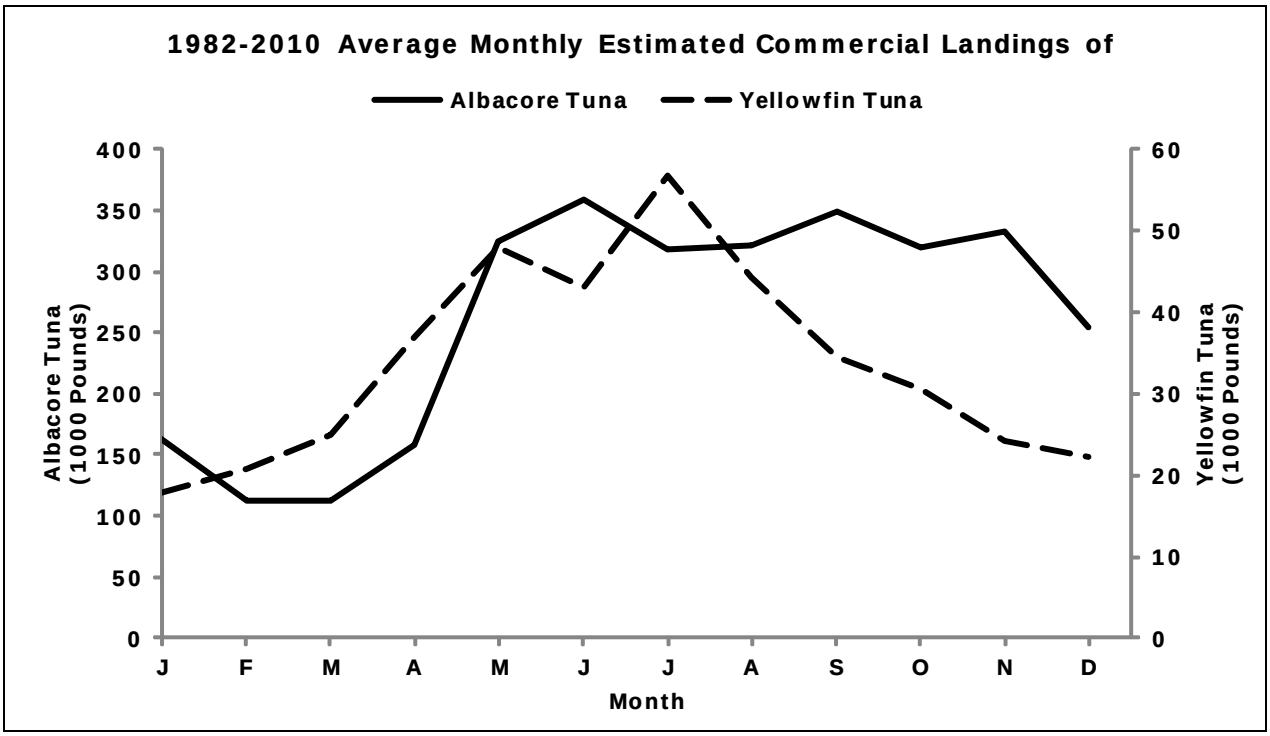

Figure A-2-2

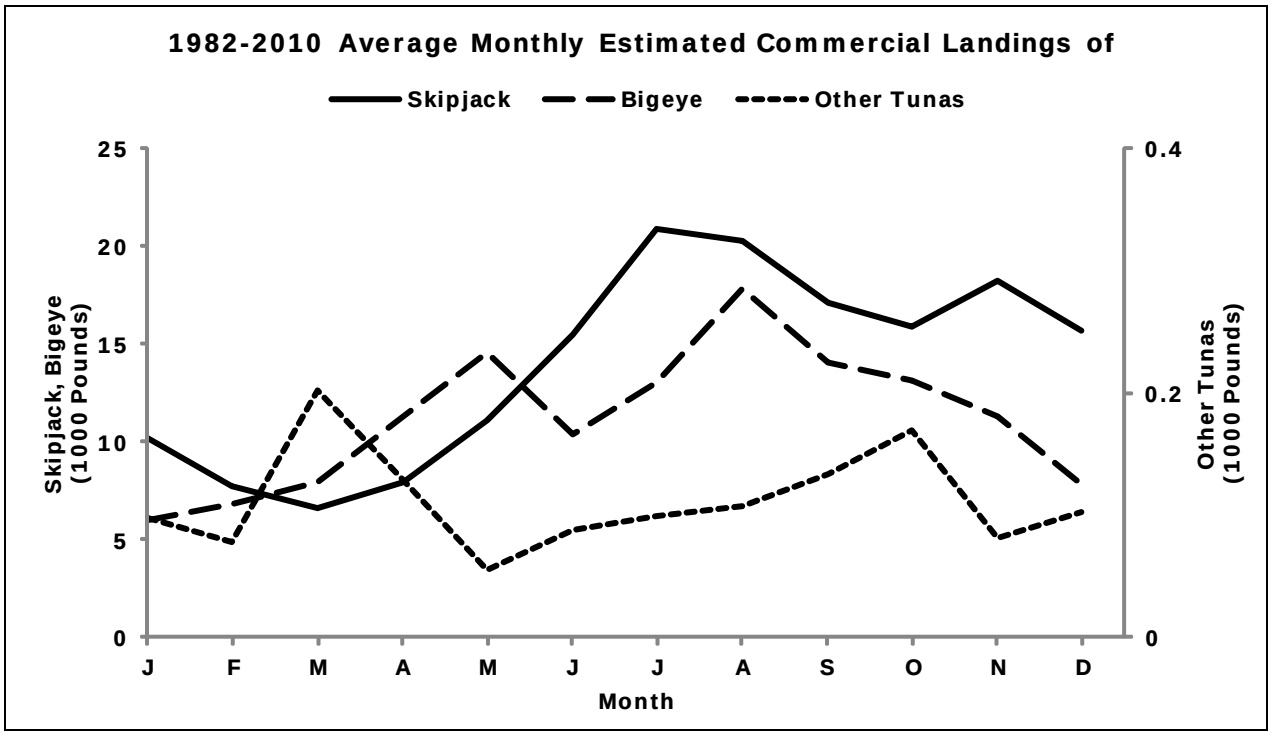

Figure A-2-3

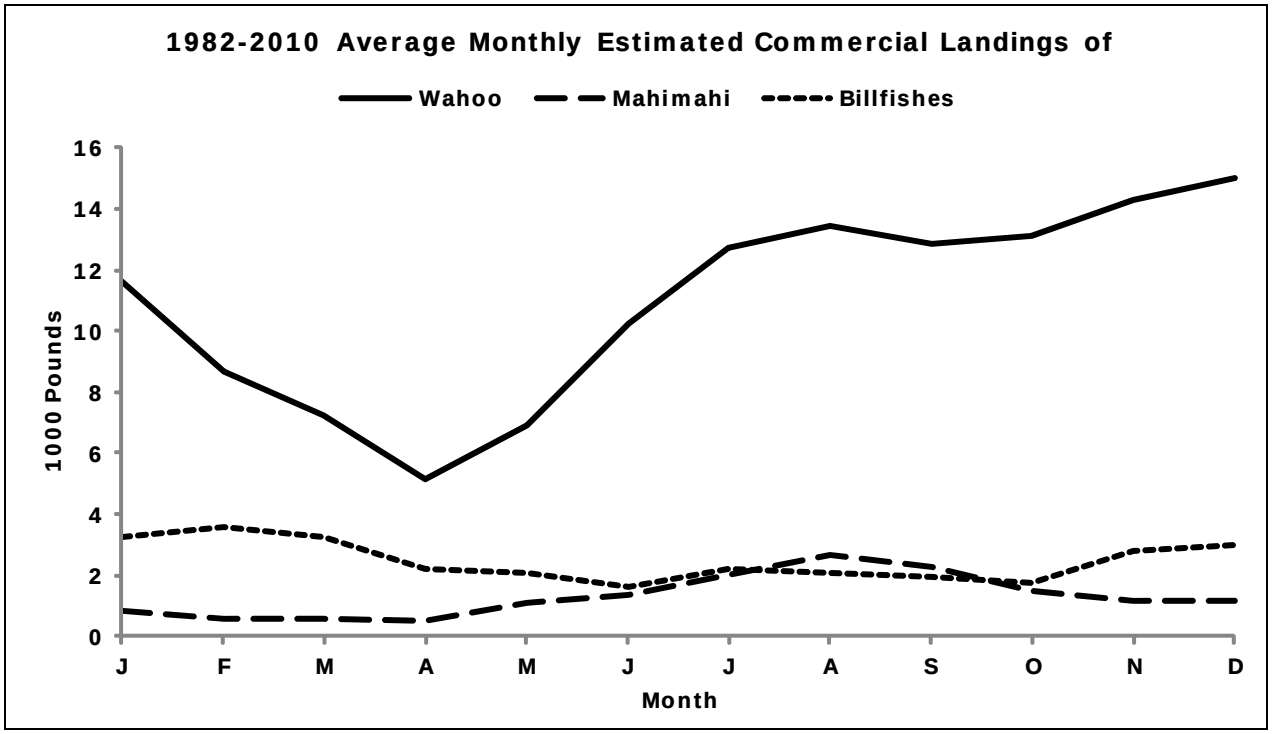

Figure A-2-4

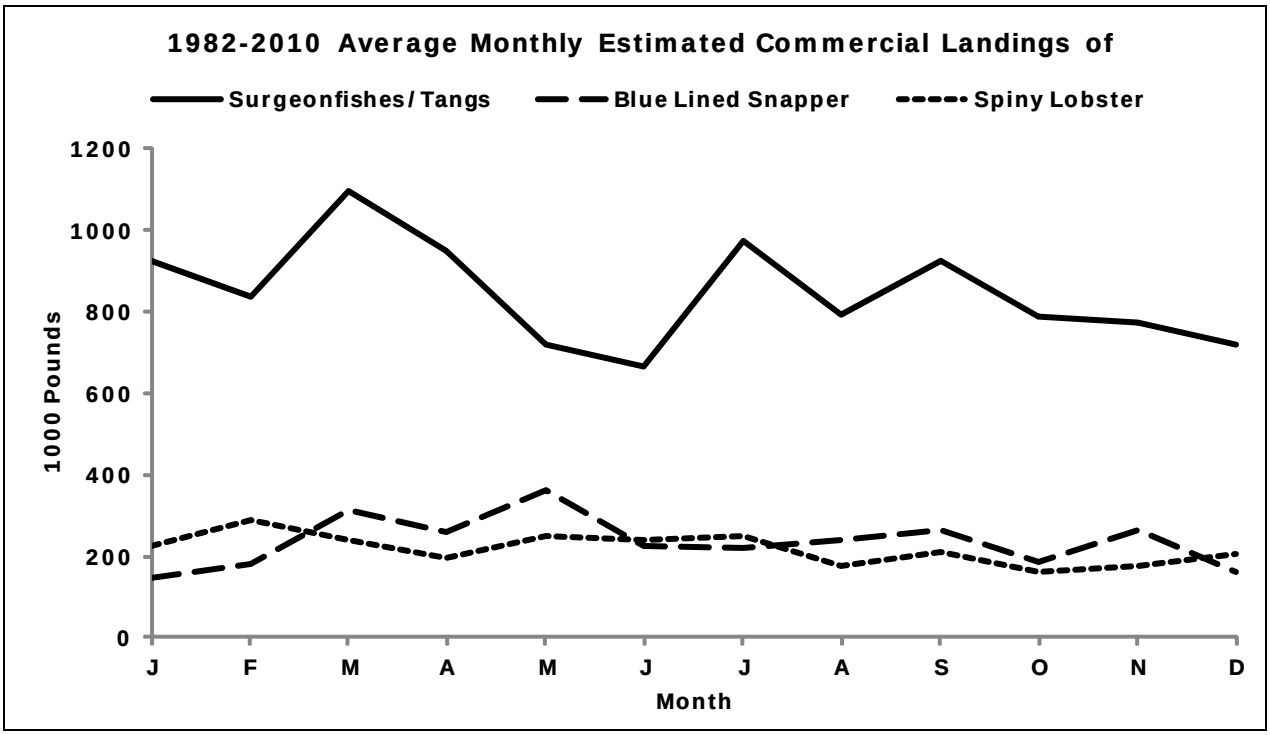
1982-2010 Average Monthly Estimated Commercial Landings of
Surgeonfishes/Tangs
Blue Lined Snapper
Spiny Lobster
1000 Pounds
1200
1000
800
600
400
200
0
J
F
M
A
M
J
J
A
S
O
N
D
Month

Figure A-2-5

The following graphs plot annual summary statistics to illustrate the variability among years:

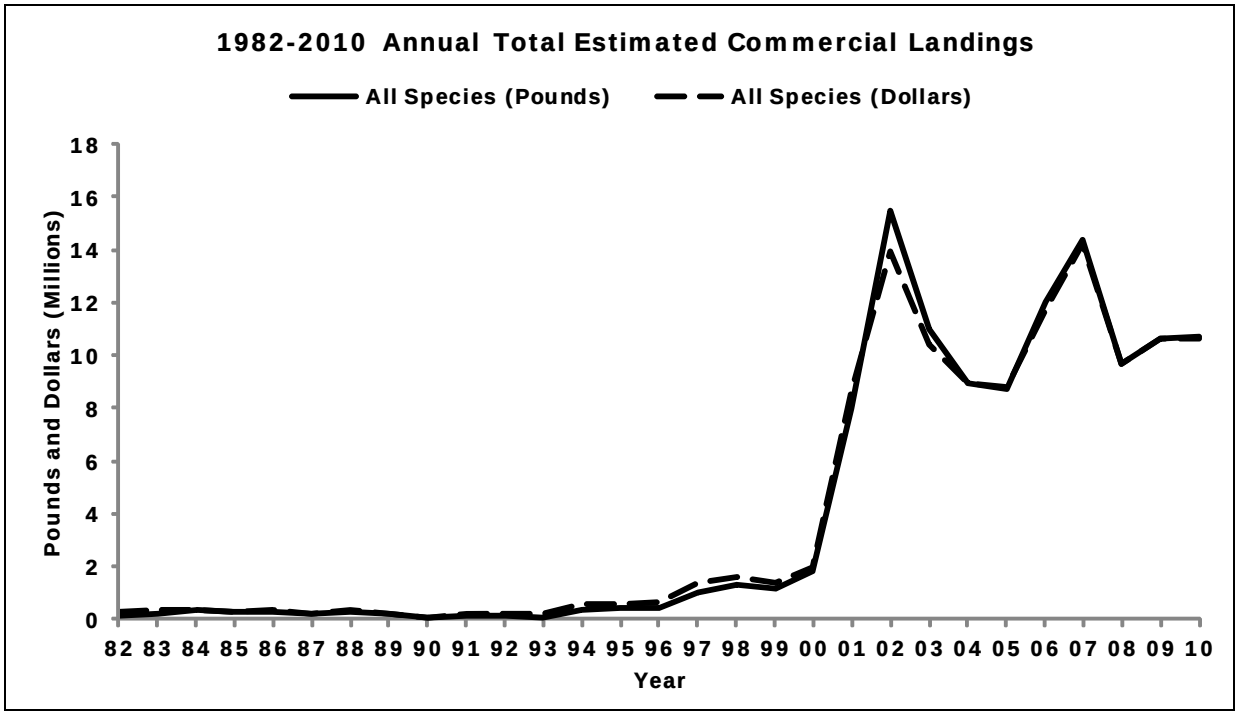

Figure A-3-1

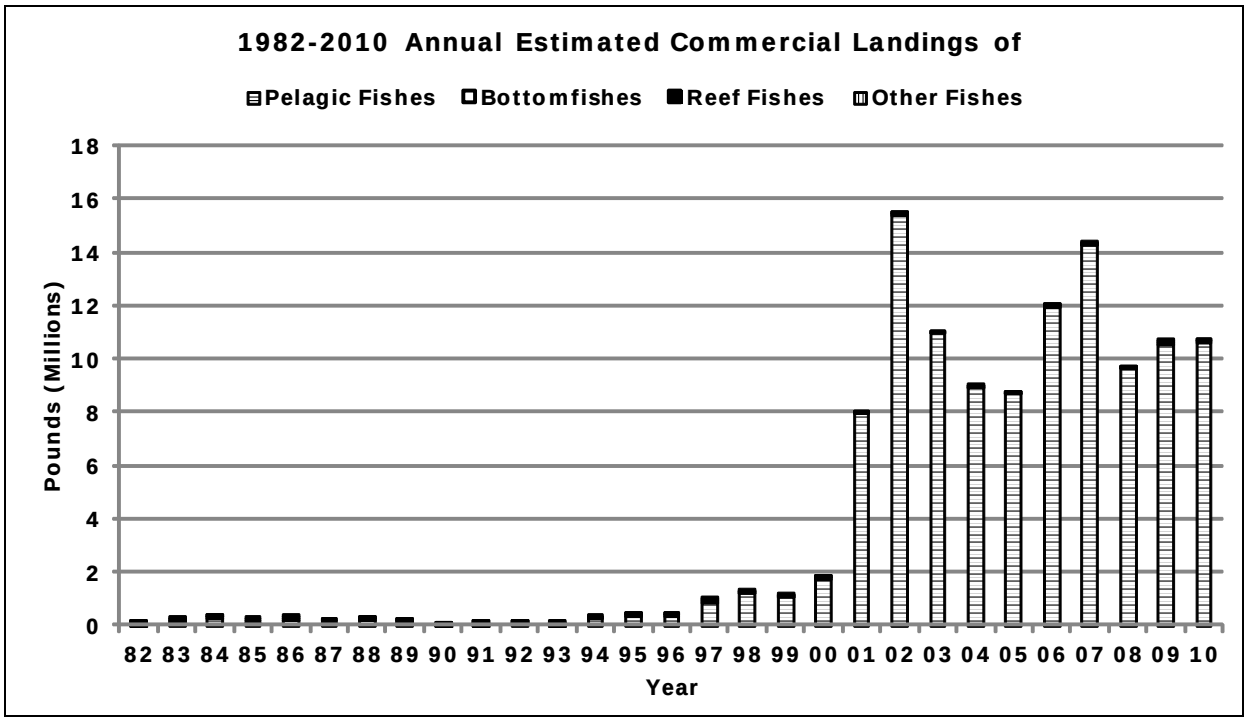

Figure A-3-2

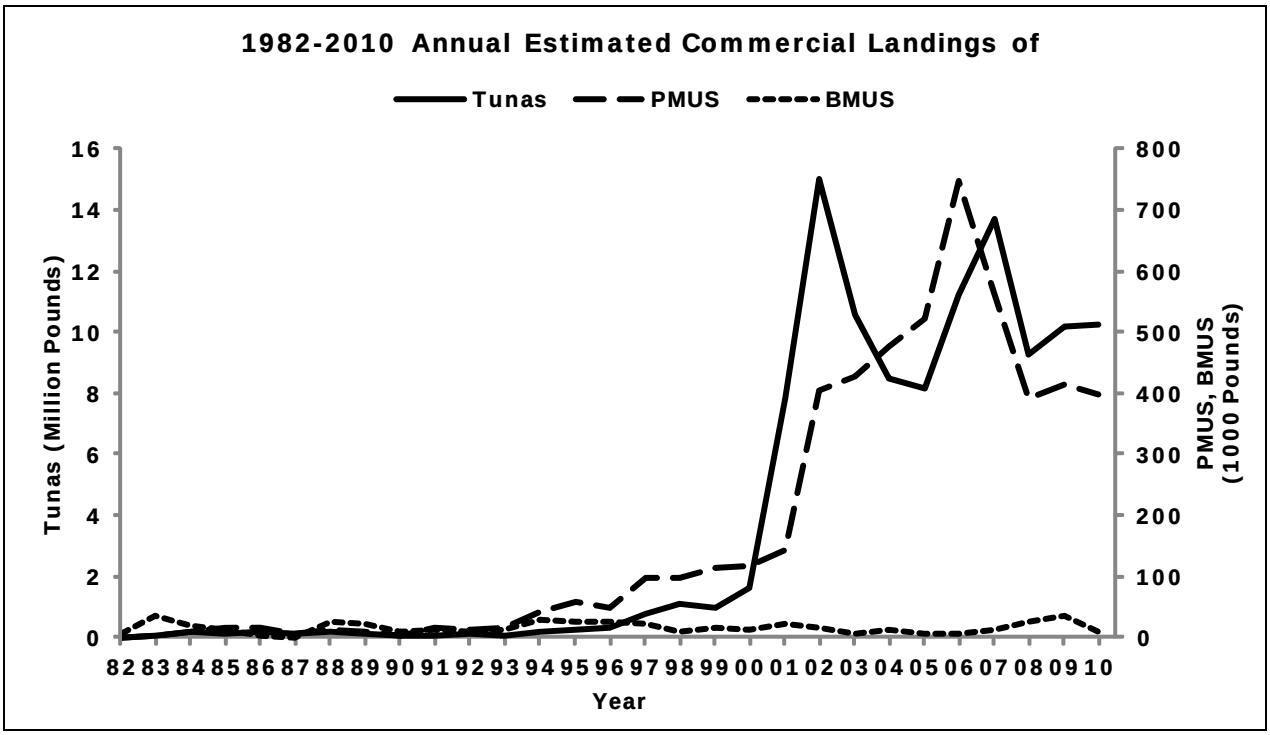

Figure A-3-3

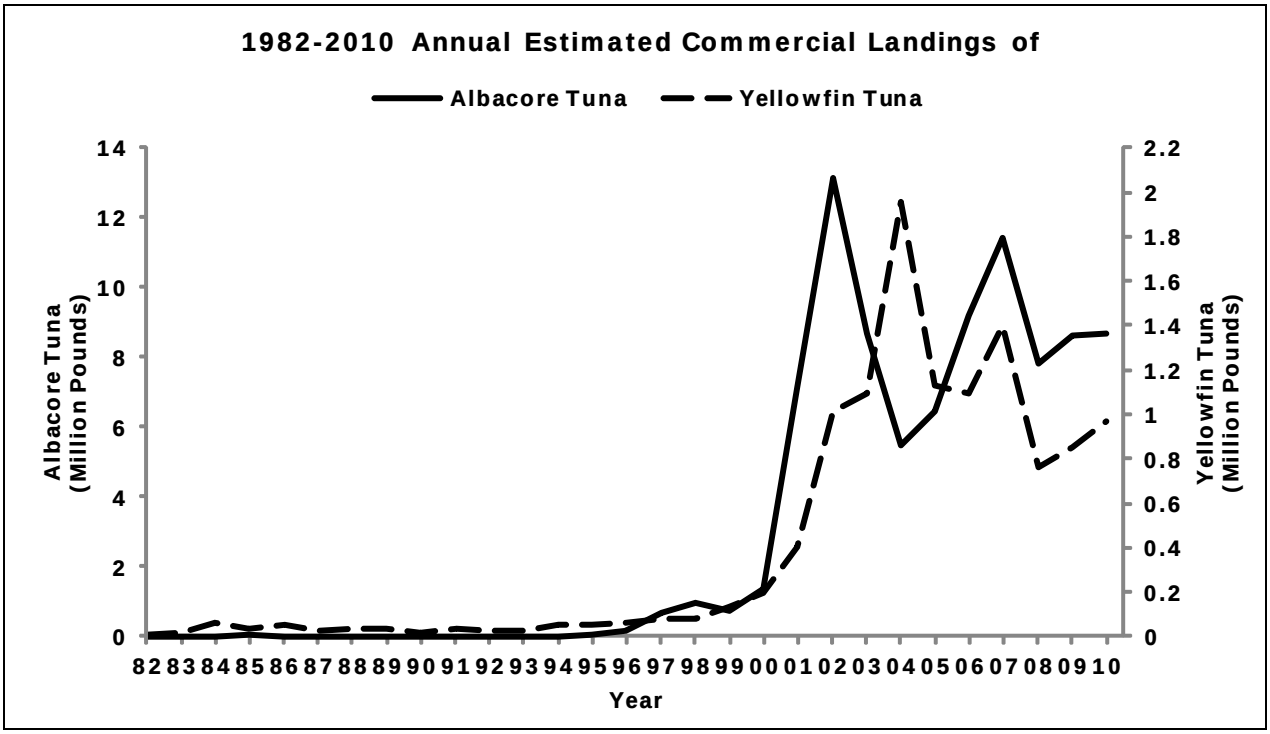

Figure A-3-4

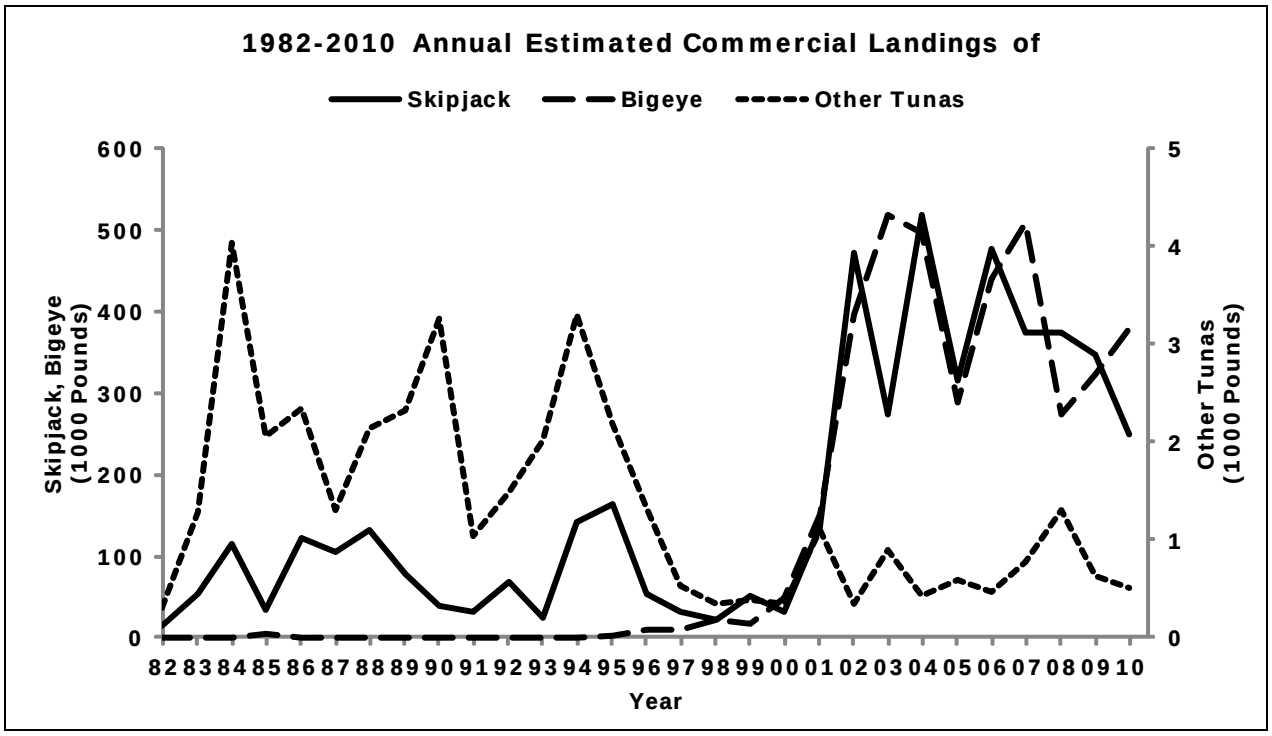

Figure A-3-5

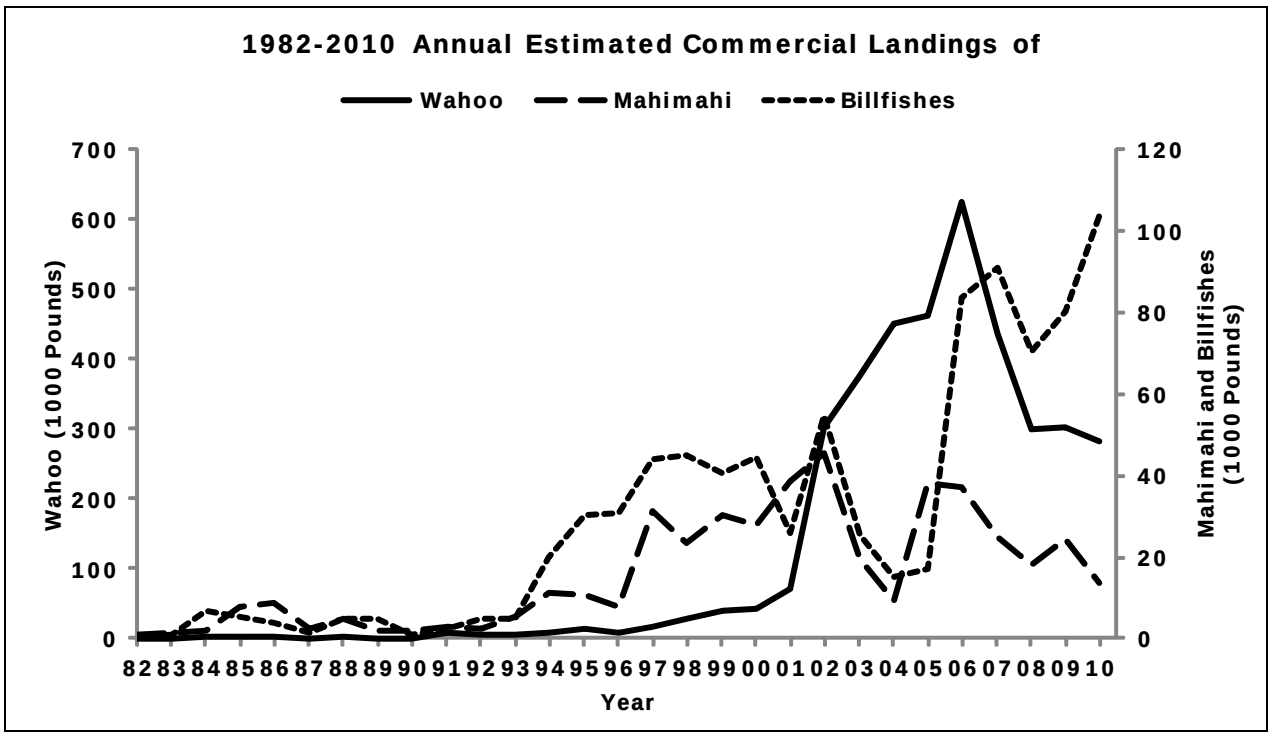

Figure A-3-6

The following graphs plot the monthly landings of some of the major commercially important species and document monthly fluctuations in landings over the time series:

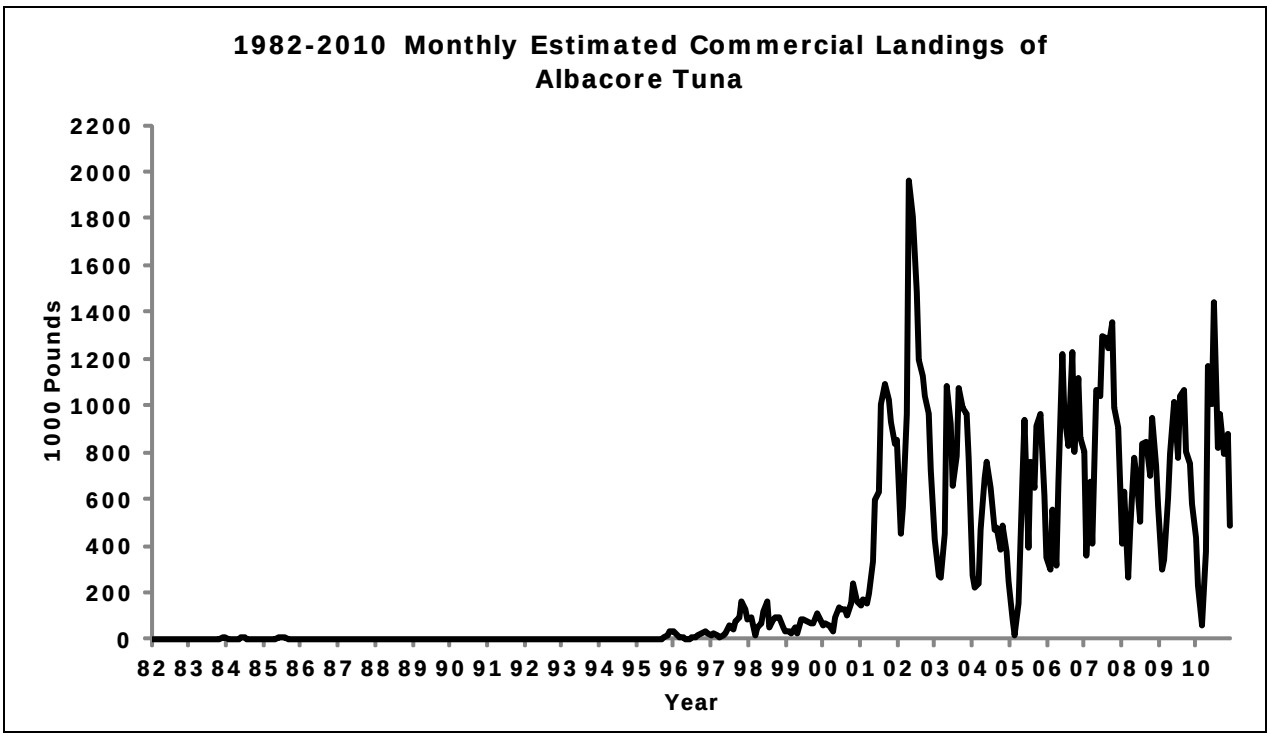

Figure A-4-1

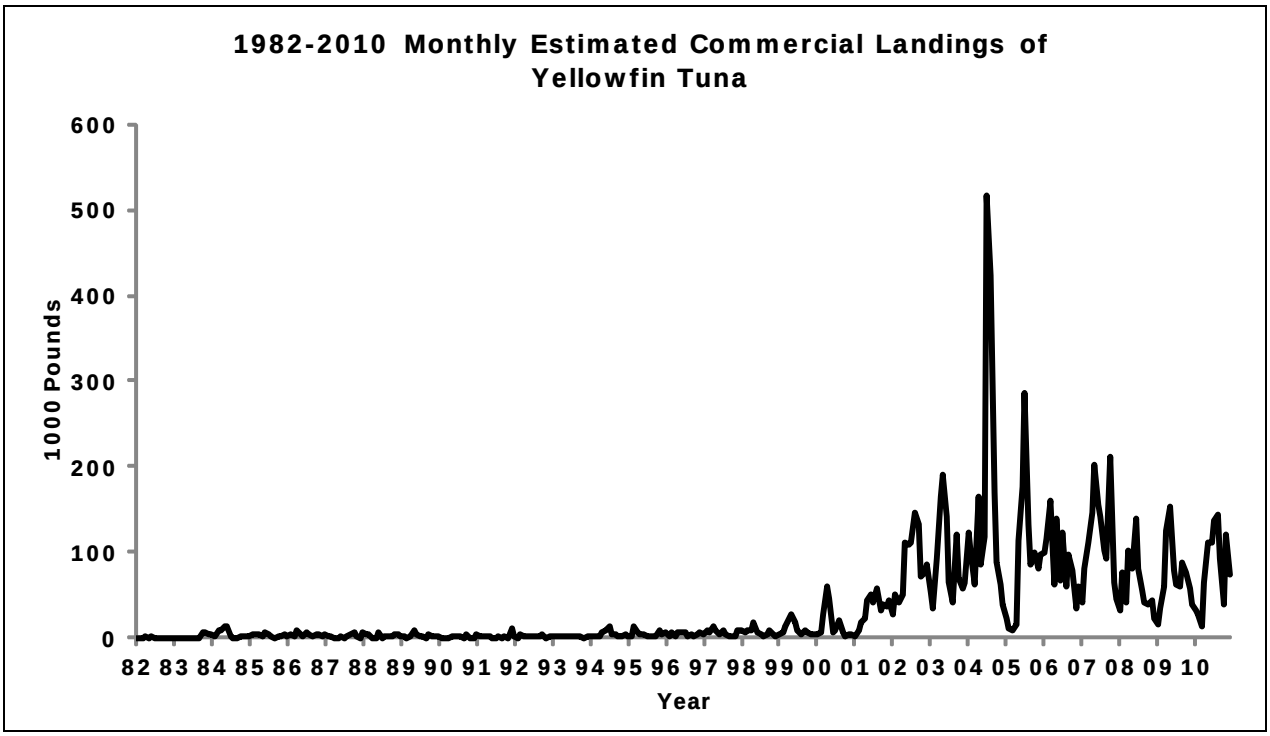

Figure A-4-2

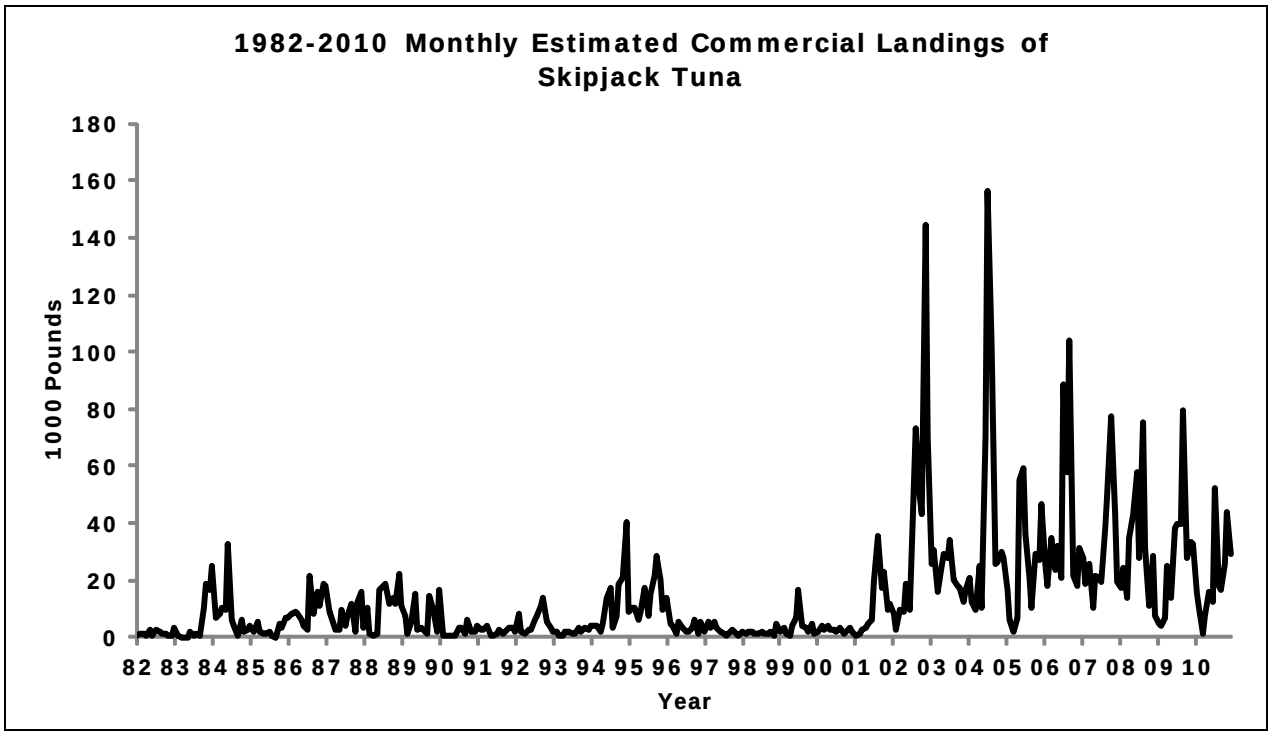

Figure A-4-3

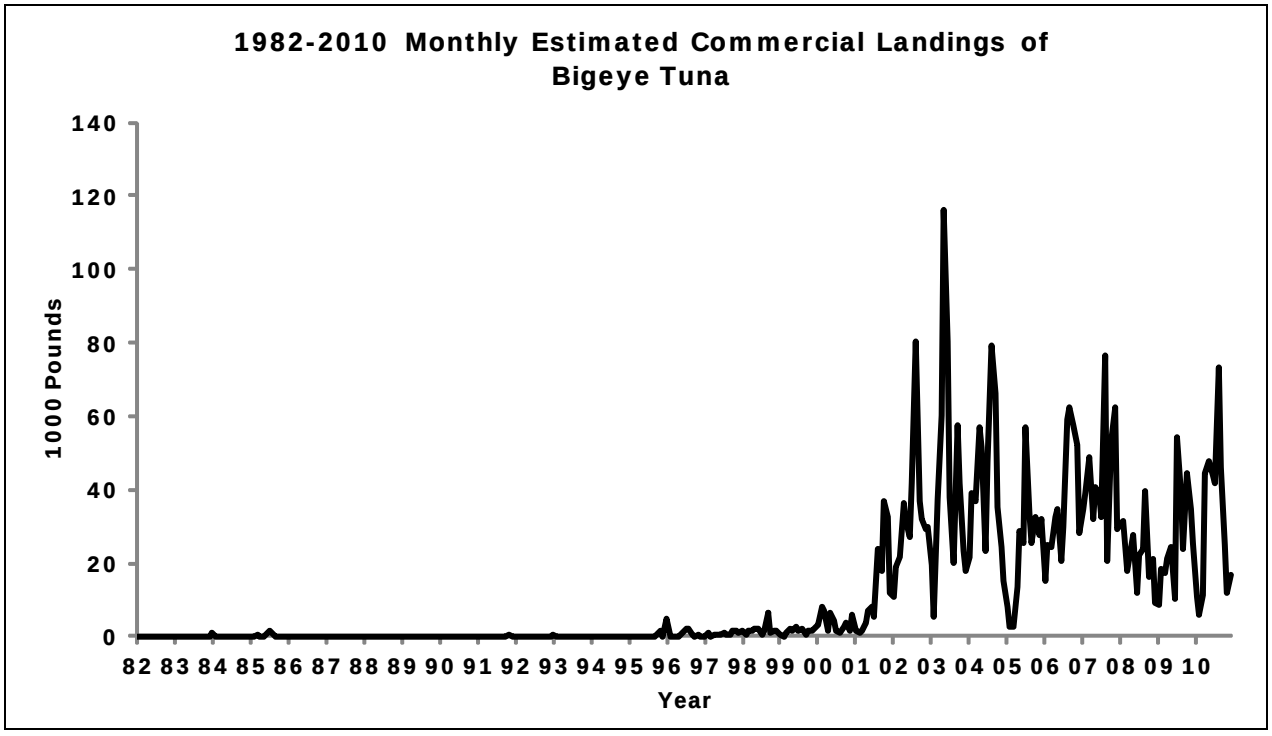

Figure A-4-4

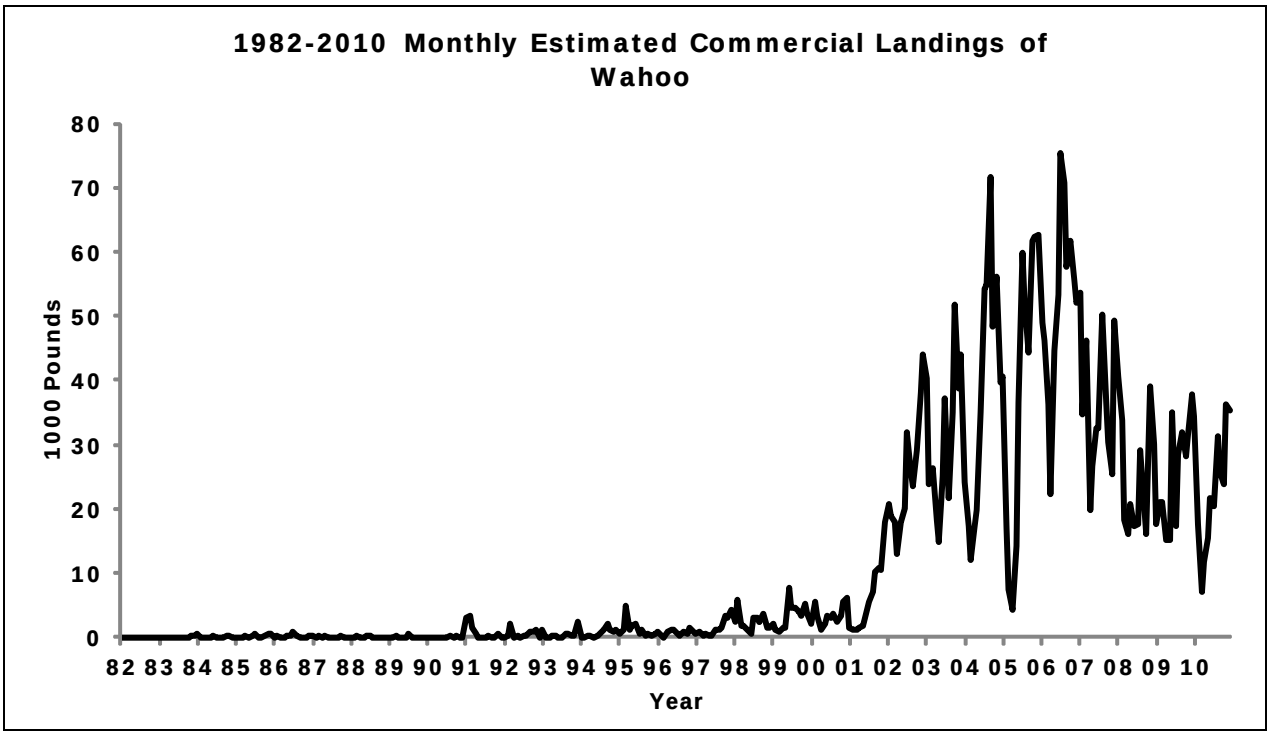

Figure A-4-5

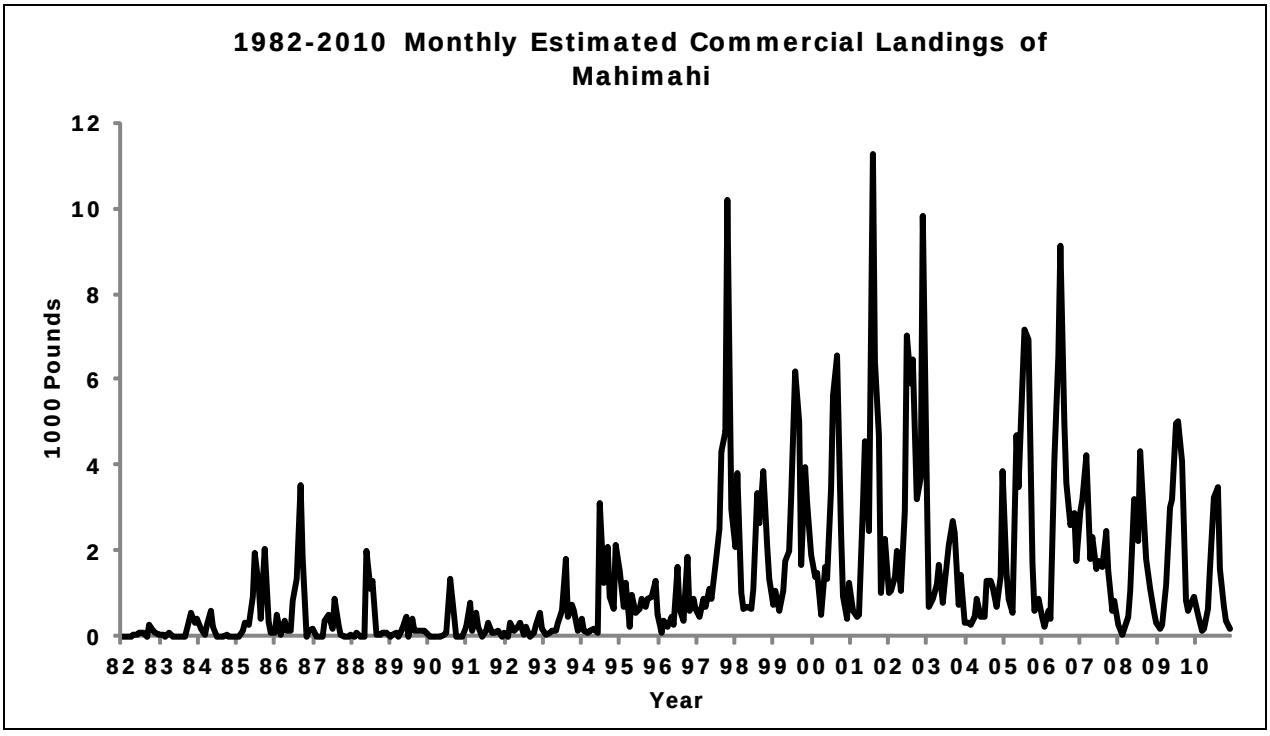

Figure A-4-6

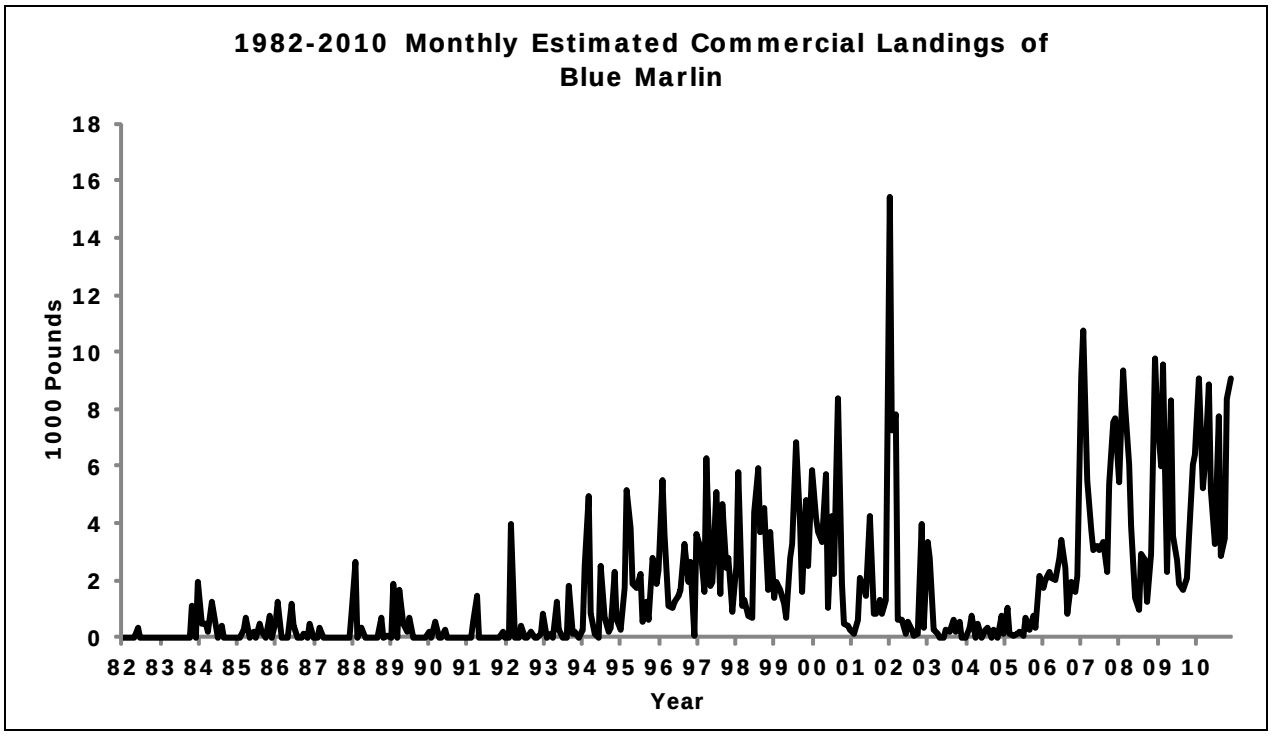

Figure A-4-7

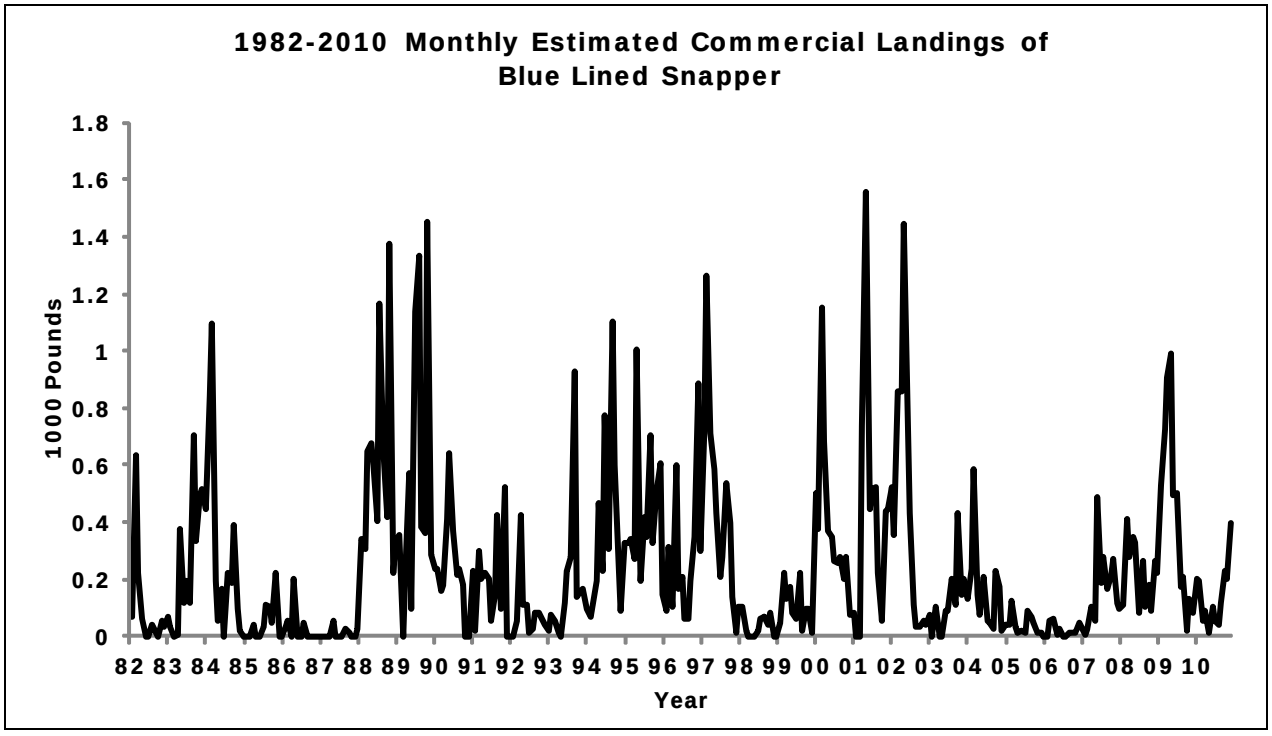

Figure A-4-8

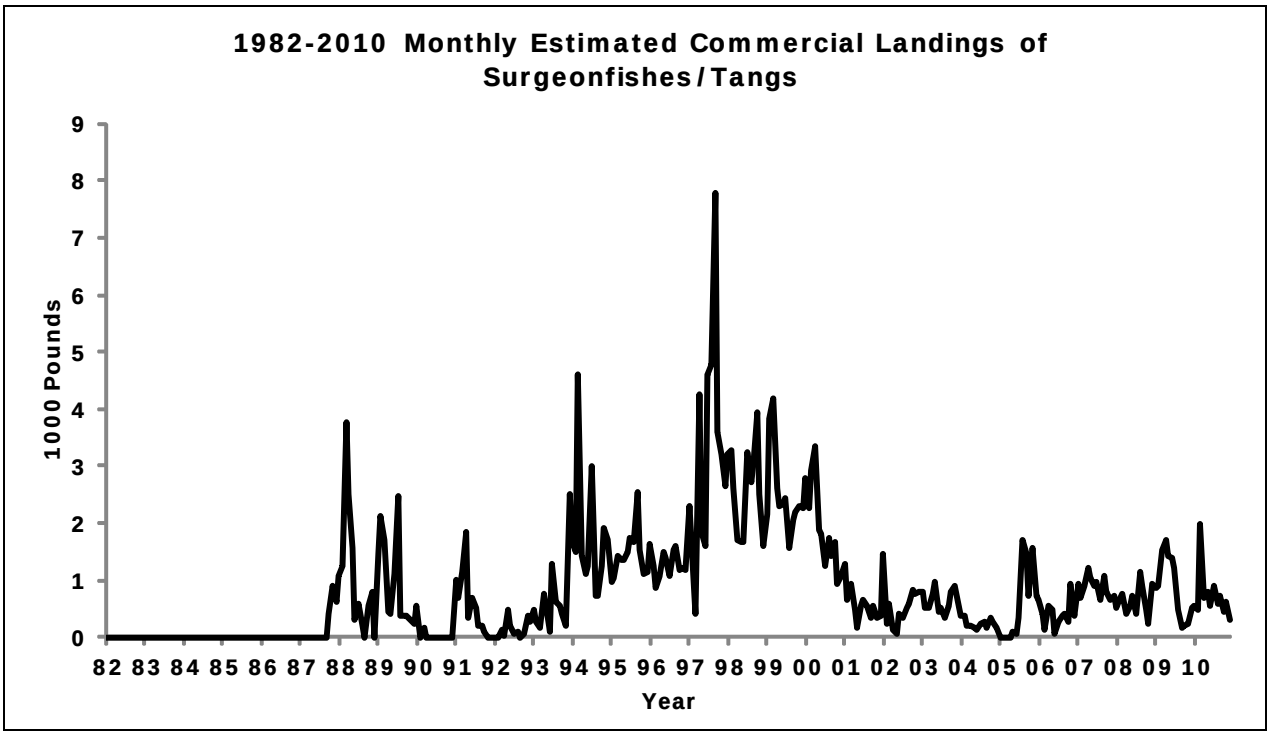

Figure A-4-9

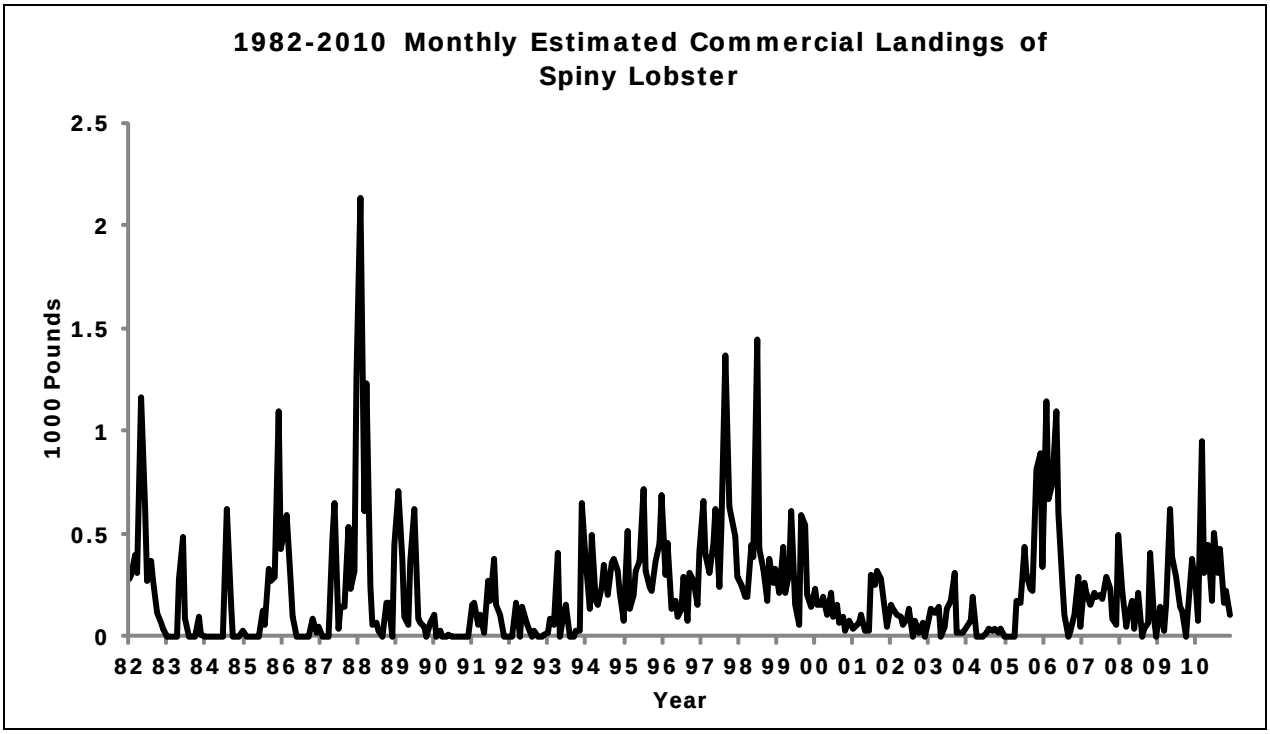

Figure A-4-10

COMMONWEALTH OF THE NORTHERN MARIANA ISLANDS 2010 FISHERY STATISTICS

Compiled by

Commonwealth of the Northern Mariana Islands

Division of Fish and Wildlife

and the

Western Pacific Fisheries Information Network

December 2012

CONTENTS

LIST OF CNMI 2010 SUMMARY TABLES

LIST OF CNMI FIGURES

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COMMONWEALTH OF THE NORTHERN MARIANA ISLANDS
2010 FISHERY STATISTICS

INTRODUCTION

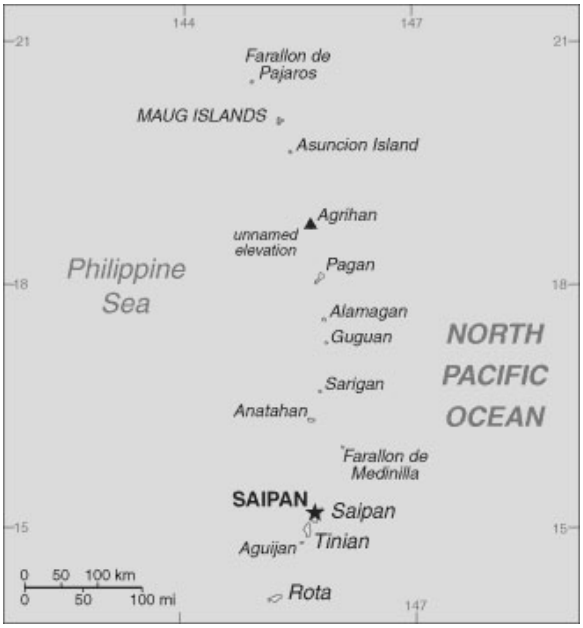
Location: 14º to 21ºN latitude, 145ºE longitude

Main Islands: Saipan, Rota, Tinian

Population: about 44,582 (*The World Factbook*, July 2012 est.)

Economy: tourism, agriculture, garment production

The chief domestic commercial fishery of the Commonwealth of the Northern Mariana Islands (CNMI) is a small boat, 1-day troll fishery, and most of the boats are 12- to 24-foot outboard-powered, runabout-type vessels. However, a few larger boats are used mainly for bottomfishing around the islands north of Saipan, and a small charter fleet also exists.



CNMI
Source: https://www.cia.gov/library/publications/the-world-factbook/maps/cq-map.gif>;
The World Factbook

Trolling is the most common fishing method, but bottomfishing and reef fishing are also popular. Reef fishes make up a significant portion of the total commercial catch and are an important component of the local diet. In recent years, several larger boats started fishing more intensively for bottomfishes around the islands north of Saipan. While the vast majority of the domestic catch is consumed locally, there have been some intermittent exports to Guam, Hawaii, and Japan.

In 1982 WPacFIN significantly improved data collecting and processing systems by providing computer hardware, software, and training. Since then numerous system upgrades and replacements have been implemented to keep up with changing technologies and the increasing demands for improved fisheries statistics.

DATA COLLECTING

The Division of Fish and Wildlife (DFW) has been collecting fishery statistics about the commercial fishing fleet of Saipan since the mid-1970s. With the assistance of the NMFS WPacFIN program, DFW also expanded its fisheries monitoring programs to include Rota and Tinian, the other two major inhabited islands in the CNMI.

DFW's principal method of collecting domestic commercial fisheries data is a dealer invoicing system, sometimes referred to as a trip ticket system. The DFW provides numbered two-part invoices to all purchasers of fresh fishery products (including hotels, restaurants, stores, fish markets, and roadside vendors). Dealers then complete an invoice each time they purchase fish directly from fishers; one copy goes to DFW and one copy goes to their records.

Some advantages of this data collection method are that it is relatively inexpensive to implement and maintain and is fairly easy to completely cover the commercial fisheries. DFW can also provide feedback to dealers and fishers to ensure data accuracy and continued cooperation.

There are some disadvantages: (1) dependency on non-DFW personnel to identify the catch and record the data; (2) restrictions on the types of data that can be collected; (3) required education and cooperation of all fish purchasers; and (4) limited recordings of fish actually sold to dealers. Therefore, a potentially important portion of the total landings is unrecorded.

Since 1982 DFW has tried to minimize these disadvantages in several ways: (1) maintain a close working relationship with dealers; (2) add new dealers to their list and educate them; and (3) implement a creel survey to help estimate total catch, including recreational and subsistence catch.

The current system collects data from dealers in Saipan, where DFW estimates more than 90% of all CNMI commercial landings are made. The DFW also estimates that the proportion of total commercial landings that have been recorded in the Saipan database since 1983 is about 90%. Previous volumes of FSWP reported only recorded landings, but in recent volumes the data have been adjusted to represent 100% coverage and are referenced as "Estimated Commercial Landings" in the tables and charts.

Information collected from the fishers includes the following:

- Date
- Buyer's Name (dealer)
- Seller's Name (fisherman)
- Species
- Weight (pounds)
- Price per Pound
- Value
- Invoice Number

These data elements are collected for all purchases of fishery products; however, species identification is frequently made only to a group level, especially for reef fish.

DATA PROCESSING

At the beginning of each month, a DFW employee visits each of the dealers on Saipan to collect the previous month's invoices, to resolve problems, and to answer any questions the dealers may have. The invoices are then returned to the office for an initial visual edit during the coding process and entered into the Commercial Purchase System database. After the records are entered, reports are generated to help verify that all the data were entered correctly. On a quarterly basis, copies of the database are sent to the Pacific Islands Fisheries Science

Center, where the data are transferred to the central computer for additional verification before generating summary reports. These reports and databases are then ready for use by qualified WPacFIN participants.

DATA REPORTING

After all editing, adjustment, and quality control activities have been completed, monthly and annual summary reports by species are generated. Each monthly report contains a subtotal for the sum of all species for that month. Annual reports contain the total landings for each species and the total recorded landings for all species for the calendar year.

Please note that commercial landings data have been adjusted to reflect total coverage and are referenced as "Estimated Commercial Landings" in the charts and tables. To access the most up-to-date data and charts, please visit the WPacFIN website, http://www.pifsc.noaa.gov/wpacfin.

SPECIES CATEGORIES

The species and species groups that are used in the tables and graphs of CNMI's data are defined in this section. Many of the species included in this report have been recategorized over the years. For example, the Magnuson Fishery Conservation and Management Act of 1976 was amended in 1992 to include tunas in the Pelagic Management Unit Species (PMUS) category. However, this report maintains the original species categorizations from previous FSWP reports for comparative purposes. As such, tunas are kept in a separate category.

Pelagic Management Unit Species (PMUS)

- Blue marlin
- Mahimahi
- Sailfish
- Sharks
- Spearfish
- Wahoo

I. Bottomfish Management Unit Species (BMUS)

- Alfonsin
- Amberjack
- Black jack
- Blacktip grouper
- Blue-lined snapper
- Ehu (red snapper)
- Giant trevally
- Gindai (flower snapper)
- Jobfish (uku)
- Kalikali (yellowtail)
- Lyretail grouper
- Onaga (red snapper)
- Opakapaka (pink snapper)
- Redgill emperor
- Silvermouth (deep lehi)
- Yelloweye opakapaka

II. Billfishes

- Black marlin
- Sailfish
- Spearfish

III. Tunas

Dogtooth tuna
Kawakawa (saba)
Skipjack tuna
Tunas (unknown)
Yellowfin tuna

IV. Other Tunas

Dogtooth tuna
Kawakawa (saba)
Tunas (unknown)

V. Fisheries Categories

A. *Pelagic Fishes*

Barracudas
Blue marlin
Dogtooth tuna
Kawakawa (saba)
Mahimahi
Pelagic fishes (unknown)
Rainbow runner
Sailfish
Sharks
Skipjack tuna
Spearfish
Tunas (unknown)
Wahoo
Yellowfin tuna

B. *Bottomfishes*

Alfonsin
Amberjack
Bigeye emperor
Bigeye trevally
Black jack
Blackspot emperor
Blacktip grouper
Blue-lined gindai
Blue-lined snapper
Bluefin trevally
Bottomfishes (unknown)
Brassy trevally
Ehu (red snapper)
Eight banded grouper
Emperors
Flagtail grouper
Flametail emperor
Giant coral trout
Giant trevally
Gindai (flower snapper)
Groupers
Highfin grouper
Honeycomb grouper
Kalikali (yellowtail)
Longnose emperor
Lyretail grouper
Marbled grouper
Onaga (red snapper)
Onespot snapper
Opakapaka (pink snapper)
Orange spotted trevally
Orangefin emperor
Peacock grouper
Pink grouper
Red snapper
Redgill emperor
Saddleback grouper
Sickle pomfret
Silvermouth (deep lehi)
Smalltooth jobfish
Stout emperor
Tomato grouper
White-edged lyretail grouper
Yellow banded grouper
Yellow spotted trevally
Yelloweye opakapaka

Humpback snapper
Jacks
Jobfish (uku)
Yellowlips emperor
Yellowstripe emperor

C. *Reef Fishes*

Bigeye/glasseye
Bluebanded surgeonfish
Bluespine unicornfish
Butterflyfish
Convict tang
Dash & dot goatfish
Fusiliers
Goatfishes
Highfin rudderfish brown
Highfin rudderfish silver
Humphead wrasse
Orangespine unicornfish
Parrotfishes
Rabbitfishes
Reef fishes (unknown)
Shallow snappers
Soldierfishes
Squirrelfishes
Surgeonfishes
Sweetlips
Triggerfishes
Tripletail wrasse
Two-barred goatfish
Unicornfishes
Wrasses
Yellowfin surgeonfish
Yellowstripe goatfish

D. *Other Fishes*

Bigeye scad
Clams/bivalves
Coconut crab
Crabs
Eels (freshwater)
Invertebrates
Kona crab
Lemu
Milkfish
Miscellaneous
Mullet
Octopus
Sea cucumbers
Seaweeds
Shrimp (freshwater)
Shrimp (saltwater)
Slipper lobster
Spiny lobster
Squid
Trochus
Turtle

Table B-1
CNMI Annual 2010 Estimated Commercial Landings

Species	Pounds	Value ($)	Price/Lb ($)
Bigeye scad	12,847	33,994	2.65
Jacks	792	2,114	2.67
Mullet	394	1,013	2.57
Black jack	594	1,606	2.70
Giant trevally	64	177	2.75
Orange spotted trevally	67	167	2.50
Bottomfishes (unknown)	428	1,069	2.50
Sickle pomfret	317	1,307	4.13
Ehu (red snapper)	2,916	11,503	3.94
Gindai (flower snapper)	459	1,883	4.10
Groupers	222	599	2.70
Kalikali (yellowtail)	1,146	3,385	2.95
Onaga (red snapper)	2,674	12,661	4.74
Opakapaka (pink snapper)	1,992	6,108	3.07
Jobfish (uku)	1,101	2,361	2.14
Silvermouth (deep lehi)	1,633	5,364	3.28
Amberjack	658	1,991	3.03
Blue-lined snapper	1,492	3,908	2.62
Reef fishes (unknown)	30,971	77,489	2.50
Rabbitfishes	3,251	9,594	2.95
Emperors	6,104	15,315	2.51
Squirrelfishes	416	1,063	2.55
Parrotfishes	16,220	48,933	3.02
Surgeonfishes	4,430	9,165	2.07
Orangespine unicornfish	1,123	2,809	2.50
Unicornfishes	984	2,452	2.49
Goatfishes	1,331	4,665	3.51
Bigeye emperor	53	133	2.50
Bluebanded surgeonfish	717	1,433	2.00
Bluespine unicornfish	462	1,212	2.62
Mahimahi	23,157	43,562	1.88
Blue marlin	73	147	2.00
Sailfish	544	817	1.50
Rainbow runner	679	1,449	2.13
Wahoo	2,887	5,693	1.97
Skipjack tuna	124,096	215,946	1.74
Dogtooth tuna	5,822	10,586	1.82
Yellowfin tuna	30,507	59,913	1.96
Kawakawa (saba)	268	428	1.60
Spiny lobster	659	3,208	4.87
Octopus	813	1,702	2.09
Squid	14	48	3.50
TOTAL	285,378	608,971	2.13

Table B-2
CNMI January 2010 Estimated Commercial Landings

Species	Pounds	Value ($)	Price/Lb ($)
Bigeye scad	1,642	4,147	2.53
Ehu (red snapper)	272	997	3.66
Kalikali (yellowtail)	44	122	2.75
Onaga (red snapper)	87	347	4.00
Opakapaka (pink snapper)	191	512	2.68
Jobfish (uku)	60	100	1.67
Silvermouth (deep lehi)	316	789	2.50
Amberjack	21	58	2.75
Blue-lined snapper	90	225	2.50
Reef fishes (unknown)	2,356	6,003	2.55
Rabbitfishes	330	1,039	3.15
Emperors	198	494	2.50
Parrotfishes	1,228	3,851	3.14
Surgeonfishes	151	302	2.00
Unicornfishes	58	144	2.50
Goatfishes	51	128	2.50
Bigeye emperor	53	133	2.50
Mahimahi	6,042	9,522	1.58
Wahoo	448	871	1.94
Skipjack tuna	15,782	26,145	1.66
Dogtooth tuna	1,811	2,742	1.51
Yellowfin tuna	4,381	8,640	1.97
Octopus	72	144	2.00
TOTAL	35,686	67,456	1.89

Table B-3
CNMI February 2010 Estimated Commercial Landings

Species	Pounds	Value ($)	Price/Lb ($)
Bigeye scad	240	609	2.54
Jacks	211	528	2.50
Mullet	31	78	2.50
Black jack	37	101	2.75
Bottomfishes (unknown)	193	483	2.50
Sickle pomfret	117	345	2.96
Ehu (red snapper)	1,116	4,249	3.81
Gindai (flower snapper)	64	244	3.79
Kalikali (yellowtail)	218	571	2.62
Onaga (red snapper)	513	2,519	4.91
Opakapaka (pink snapper)	313	858	2.74
Jobfish (uku)	327	639	1.96
Silvermouth (deep lehi)	68	190	2.81
Blue-lined snapper	399	997	2.50
Reef fishes (unknown)	1,871	4,678	2.50
Rabbitfishes	271	820	3.03
Emperors	1,962	4,906	2.50
Squirrelfishes	18	44	2.50
Parrotfishes	106	300	2.84
Surgeonfishes	168	336	2.00
Mahimahi	7,594	10,962	1.44
Rainbow runner	184	390	2.11
Wahoo	967	1,953	2.02
Skipjack tuna	13,477	20,765	1.54
Dogtooth tuna	1,314	2,034	1.55
Yellowfin tuna	6,339	12,600	1.99
Spiny lobster	6	32	5.00
Octopus	33	67	2.00
TOTAL	38,159	72,300	1.89

Table B-4
CNMI March 2010 Estimated Commercial Landings

Species	Pounds	Value ($)	Price/Lb ($)
Mullet	9	22	2.50
Black jack	102	307	3.00
Bottomfishes (unknown)	7	17	2.50
Sickle pomfret	76	264	3.50
Ehu (red snapper)	30	122	4.00
Onaga (red snapper)	213	1,038	4.86
Opakapaka (pink snapper)	167	465	2.79
Jobfish (uku)	100	218	2.18
Blue-lined snapper	133	336	2.52
Reef fishes (unknown)	1,887	4,695	2.49
Rabbitfishes	146	446	3.05
Emperors	1,021	2,692	2.64
Squirrelfishes	54	112	2.06
Parrotfishes	159	477	3.00
Surgeonfishes	96	206	2.15
Orangespine unicornfish	38	94	2.50
Unicornfishes	124	311	2.50
Goatfishes	64	168	2.60
Mahimahi	3,243	9,854	3.04
Wahoo	1,294	2,589	2.00
Skipjack tuna	15,554	28,016	1.80
Dogtooth tuna	98	191	1.95
Yellowfin tuna	3,612	7,224	2.00
Kawakawa (saba)	21	42	2.00
Octopus	114	229	2.00
TOTAL	28,364	60,134	2.12

Table B-5
CNMI April 2010 Estimated Commercial Landings

Species	Pounds	Value ($)	Price/Lb ($)
Bigeye scad	698	1,826	2.62
Jacks	60	150	2.50
Black jack	17	42	2.50
Ehu (red snapper)	16	62	4.00
Gindai (flower snapper)	59	236	4.00
Groupers	69	138	2.00
Kalikali (yellowtail)	83	208	2.50
Onaga (red snapper)	160	800	5.00
Opakapaka (pink snapper)	146	400	2.75
Jobfish (uku)	161	322	2.00
Silvermouth (deep lehi)	148	386	2.61
Amberjack	66	166	2.50
Blue-lined snapper	22	56	2.50
Reef fishes (unknown)	2,553	6,383	2.50
Rabbitfishes	63	180	2.84
Emperors	707	1,767	2.50
Squirrelfishes	36	89	2.50
Parrotfishes	773	2,293	2.97
Surgeonfishes	530	1,060	2.00
Unicornfishes	20	50	2.50
Goatfishes	31	78	2.50
Mahimahi	1,776	3,220	1.81
Blue marlin	73	147	2.00
Rainbow runner	37	73	2.00
Skipjack tuna	11,522	17,057	1.48
Dogtooth tuna	160	240	1.50
Yellowfin tuna	3,628	6,733	1.86
Octopus	273	546	2.00
TOTAL	23,886	44,707	1.87

Table B-6
CNMI May 2010 Estimated Commercial Landings

Species	Pounds	Value ($)	Price/Lb ($)
Bigeye scad	3,889	9,661	2.48
Jacks	100	250	2.50
Mullet	73	183	2.50
Black jack	58	144	2.50
Bottomfishes (unknown)	103	258	2.50
Ehu (red snapper)	239	890	3.72
Gindai (flower snapper)	113	434	3.83
Groupers	83	208	2.50
Kalikali (yellowtail)	229	572	2.50
Onaga (red snapper)	310	1,330	4.29
Opakapaka (pink snapper)	522	1,412	2.70
Jobfish (uku)	136	227	1.67
Silvermouth (deep lehi)	287	772	2.69
Amberjack	31	76	2.50
Blue-lined snapper	246	614	2.50
Reef fishes (unknown)	2,062	5,154	2.50
Rabbitfishes	338	930	2.75
Emperors	709	1,689	2.38
Squirrelfishes	110	275	2.50
Parrotfishes	1,429	4,263	2.98
Surgeonfishes	718	1,535	2.14
Orangespine unicornfish	192	481	2.50
Unicornfishes	268	663	2.47
Goatfishes	269	672	2.50
Mahimahi	1,739	3,372	1.94
Rainbow runner	84	169	2.00
Skipjack tuna	9,938	14,608	1.47
Dogtooth tuna	464	744	1.60
Yellowfin tuna	2,959	5,529	1.87
Spiny lobster	129	644	5.00
Octopus	19	38	2.00
TOTAL	27,846	57,799	2.08

Table B-7
CNMI June 2010 Estimated Commercial Landings

Species	Pounds	Value ($)	Price/Lb ($)
Bigeye scad	814	2,231	2.74
Jacks	8	19	2.50
Mullet	12	31	2.50
Black jack	80	200	2.50
Orange spotted trevally	18	44	2.50
Sickle pomfret	24	61	2.50
Ehu (red snapper)	529	1,991	3.76
Gindai (flower snapper)	136	542	4.00
Kalikali (yellowtail)	67	167	2.50
Onaga (red snapper)	658	2,972	4.52
Opakapaka (pink snapper)	249	676	2.72
Jobfish (uku)	87	130	1.50
Silvermouth (deep lehi)	122	324	2.65
Amberjack	70	175	2.50
Blue-lined snapper	22	56	2.50
Reef fishes (unknown)	2,912	7,250	2.49
Rabbitfishes	208	597	2.88
Emperors	210	526	2.50
Squirrelfishes	114	284	2.50
Parrotfishes	2,530	7,589	3.00
Surgeonfishes	536	1,116	2.08
Orangespine unicornfish	221	552	2.50
Unicornfishes	367	917	2.50
Goatfishes	149	372	2.50
Bluebanded surgeonfish	98	196	2.00
Mahimahi	397	783	1.97
Sailfish	178	267	1.50
Rainbow runner	60	120	2.00
Skipjack tuna	9,842	14,952	1.52
Dogtooth tuna	104	157	1.50
Yellowfin tuna	4,024	7,179	1.78
Spiny lobster	234	1,172	5.00
Octopus	44	97	2.20
TOTAL	25,122	53,745	2.14

Table B-8
CNMI July 2010 Estimated Commercial Landings

Species	Pounds	Value ($)	Price/Lb ($)
Bigeye scad	83	229	2.75
Mullet	67	167	2.50
Black jack	49	122	2.50
Ehu (red snapper)	147	528	3.60
Kalikali (yellowtail)	44	111	2.50
Opakapaka (pink snapper)	34	95	2.75
Reef fishes (unknown)	4,019	10,047	2.50
Rabbitfishes	226	682	3.02
Emperors	222	556	2.50
Parrotfishes	1,194	3,583	3.00
Surgeonfishes	770	1,553	2.02
Orangespine unicornfish	102	256	2.50
Goatfishes	27	67	2.50
Bluespine unicornfish	53	133	2.50
Mahimahi	89	178	2.00
Sailfish	33	50	1.50
Rainbow runner	33	70	2.10
Wahoo	24	43	1.75
Skipjack tuna	7,879	14,147	1.80
Dogtooth tuna	153	307	2.00
Yellowfin tuna	708	1,416	2.00
Spiny lobster	96	478	5.00
Octopus	27	53	2.00
TOTAL	16,080	34,869	2.17

Table B-9
CNMI August 2010 Estimated Commercial Landings

Species	Pounds	Value ($)	Price/Lb ($)
Bigeye scad	1,329	3,636	2.74
Jacks	58	144	2.50
Mullet	24	61	2.50
Black jack	77	193	2.50
Orange spotted trevally	49	122	2.50
Bottomfishes (unknown)	69	172	2.50
Ehu (red snapper)	266	998	3.76
Groupers	18	44	2.50
Kalikali (yellowtail)	49	122	2.50
Onaga (red snapper)	258	1,195	4.64
Opakapaka (pink snapper)	44	111	2.50
Silvermouth (deep lehi)	52	129	2.50
Blue-lined snapper	111	278	2.50
Reef fishes (unknown)	3,768	9,419	2.50
Rabbitfishes	613	1,793	2.92
Emperors	628	1,569	2.50
Parrotfishes	2,519	7,557	3.00
Surgeonfishes	684	1,392	2.04
Orangespine unicornfish	67	167	2.50
Unicornfishes	27	67	2.50
Goatfishes	89	222	2.50
Mahimahi	151	302	2.00
Sailfish	33	50	1.50
Rainbow runner	90	150	1.66
Skipjack tuna	9,047	17,604	1.95
Dogtooth tuna	253	507	2.00
Yellowfin tuna	850	1,700	2.00
Kawakawa (saba)	216	323	1.50
Spiny lobster	71	356	5.00
Octopus	79	159	2.00
TOTAL	21,588	50,541	2.34

Table B-10
CNMI September 2010 Estimated Commercial Landings

Species	Pounds	Value ($)	Price/Lb ($)
Bigeye scad	1,820	4,886	2.68
Jacks	95	238	2.50
Mullet	60	150	2.50
Black jack	40	100	2.50
Giant trevally	64	177	2.75
Ehu (red snapper)	80	287	3.58
Gindai (flower snapper)	77	268	3.50
Kalikali (yellowtail)	110	275	2.50
Onaga (red snapper)	242	1,027	4.25
Opakapaka (pink snapper)	81	220	2.71
Jobfish (uku)	33	67	2.00
Silvermouth (deep lehi)	109	272	2.50
Amberjack	29	72	2.50
Blue-lined snapper	200	500	2.50
Reef fishes (unknown)	3,365	8,412	2.50
Rabbitfishes	450	1,336	2.97
Emperors	82	206	2.50
Parrotfishes	2,435	7,304	3.00
Surgeonfishes	278	582	2.10
Orangespine unicornfish	138	344	2.50
Unicornfishes	120	300	2.50
Goatfishes	73	183	2.50
Bluebanded surgeonfish	155	310	2.00
Mahimahi	102	186	1.82
Sailfish	33	50	1.50
Wahoo	58	116	2.00
Skipjack tuna	9,734	18,785	1.93
Dogtooth tuna	164	329	2.00
Yellowfin tuna	1,156	2,311	2.00
Kawakawa (saba)	31	62	2.00
Spiny lobster	28	139	5.00
Octopus	21	42	2.00
TOTAL	21,463	49,534	2.31

Table B-11
CNMI October 2010 Estimated Commercial Landings

Species	Pounds	Value ($)	Price/Lb ($)
Bigeye scad	1,129	3,236	2.87
Mullet	38	94	2.50
Black jack	27	67	2.50
Bottomfishes (unknown)	56	139	2.50
Jobfish (uku)	22	44	2.00
Blue-lined snapper	36	89	2.50
Reef fishes (unknown)	2,890	7,224	2.50
Rabbitfishes	236	676	2.87
Emperors	364	911	2.50
Parrotfishes	2,123	6,368	3.00
Surgeonfishes	196	419	2.14
Orangespine unicornfish	93	233	2.50
Goatfishes	53	133	2.50
Bluebanded surgeonfish	272	544	2.00
Bluespine unicornfish	304	783	2.57
Mahimahi	98	196	2.00
Sailfish	33	50	1.50
Rainbow runner	100	200	2.00
Skipjack tuna	5,694	11,323	1.99
Dogtooth tuna	67	100	1.50
Yellowfin tuna	388	828	2.13
Spiny lobster	91	373	4.10
TOTAL	14,309	34,030	2.38

Table B-12
CNMI November 2010 Estimated Commercial Landings

Species	Pounds	Value ($)	Price/Lb ($)
Bigeye scad	1,036	3,075	2.97
Jacks	138	344	2.50
Mullet	27	67	2.50
Black jack	27	67	2.50
Reef fishes (unknown)	1,526	3,814	2.50
Rabbitfishes	209	580	2.78
Parrotfishes	933	2,798	3.00
Surgeonfishes	251	531	2.12
Orangespine unicornfish	157	379	2.42
Goatfishes	22	56	2.50
Bluebanded surgeonfish	96	191	2.00
Mahimahi	227	453	2.00
Wahoo	49	122	2.50
Skipjack tuna	7,631	13,921	1.82
Dogtooth tuna	133	267	2.00
Yellowfin tuna	462	924	2.00
Octopus	24	49	2.00
TOTAL	12,946	27,637	2.13

Table B-13
CNMI December 2010 Estimated Commercial Landings

Species	Pounds	Value ($)	Price/Lb ($)
Bigeye scad	167	458	2.75
Jacks	123	441	3.59
Mullet	53	160	3.00
Black jack	81	264	3.25
Sickle pomfret	100	636	6.36
Ehu (red snapper)	221	1,380	6.25
Gindai (flower snapper)	11	158	15.0
Groupers	52	209	4.00
Kalikali (yellowtail)	301	1,236	4.10
Onaga (red snapper)	233	1,434	6.15
Opakapaka (pink snapper)	244	1,358	5.56
Jobfish (uku)	176	613	3.49
Silvermouth (deep lehi)	533	2,501	4.69
Amberjack	441	1,444	3.27
Blue-lined snapper	233	758	3.25
Reef fishes (unknown)	1,764	4,410	2.50
Rabbitfishes	162	517	3.18
Squirrelfishes	84	258	3.05
Parrotfishes	792	2,550	3.22
Surgeonfishes	53	133	2.50
Orangespine unicornfish	116	304	2.63
Goatfishes	502	2,587	5.16
Bluebanded surgeonfish	97	193	2.00
Bluespine unicornfish	104	295	2.82
Mahimahi	1,699	4,534	2.67
Sailfish	233	350	1.50
Rainbow runner	90	276	3.07
Wahoo	47	0	0.00
Skipjack tuna	7,996	18,624	2.33
Dogtooth tuna	1,099	2,968	2.70
Yellowfin tuna	2,000	4,829	2.41
Spiny lobster	3	13	4.00
Octopus	106	278	2.64
Squid	14	48	3.50
TOTAL	19,930	56,217	2.82

The following are summary charts of the major species and species groups by month:

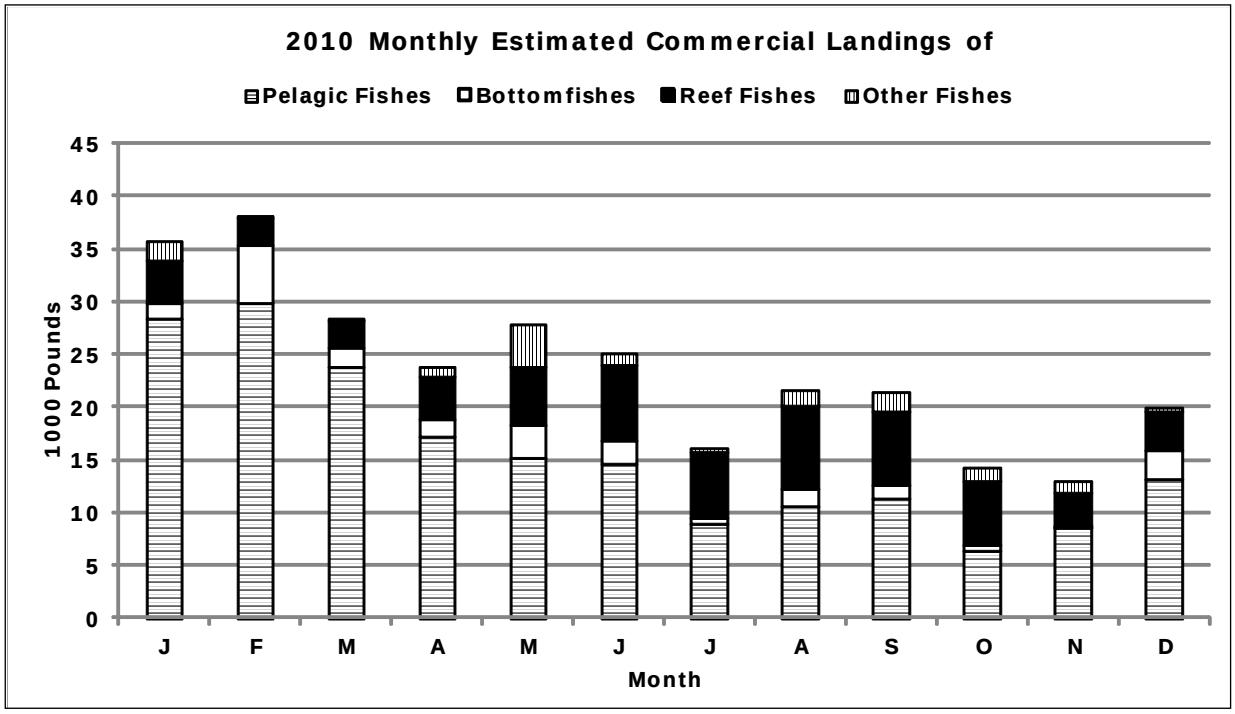


Figure B-1-1

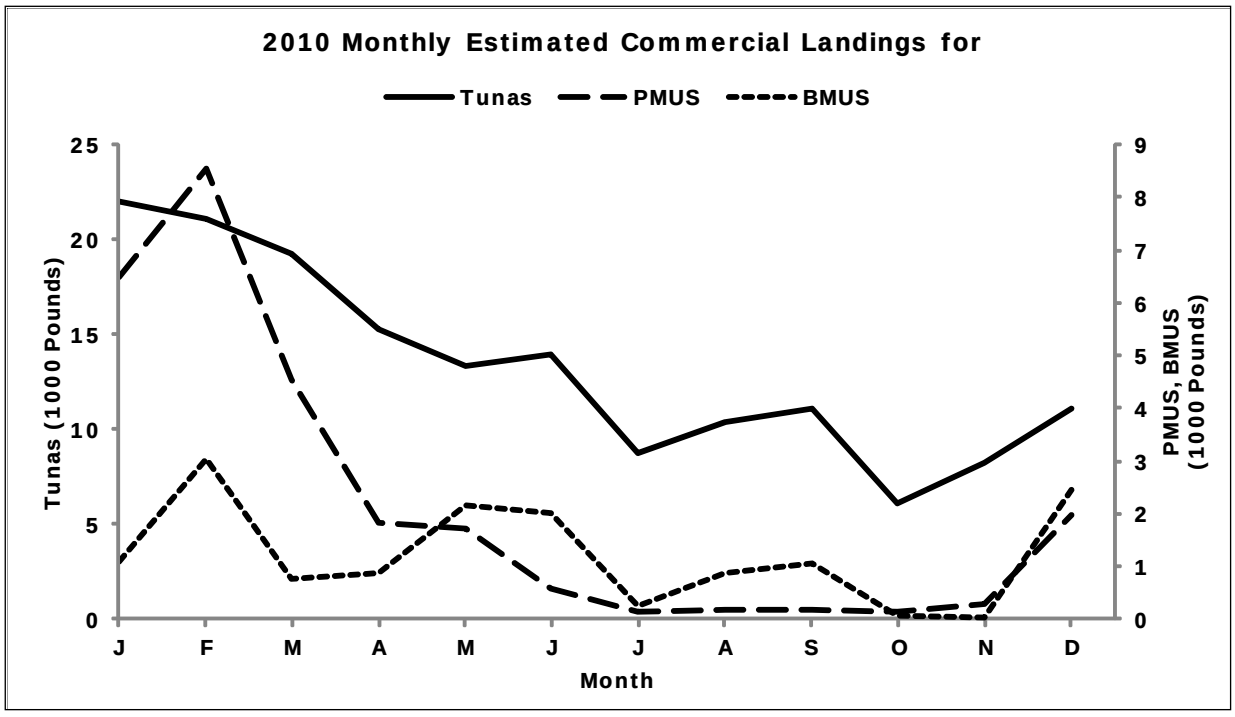


Figure B-1-2

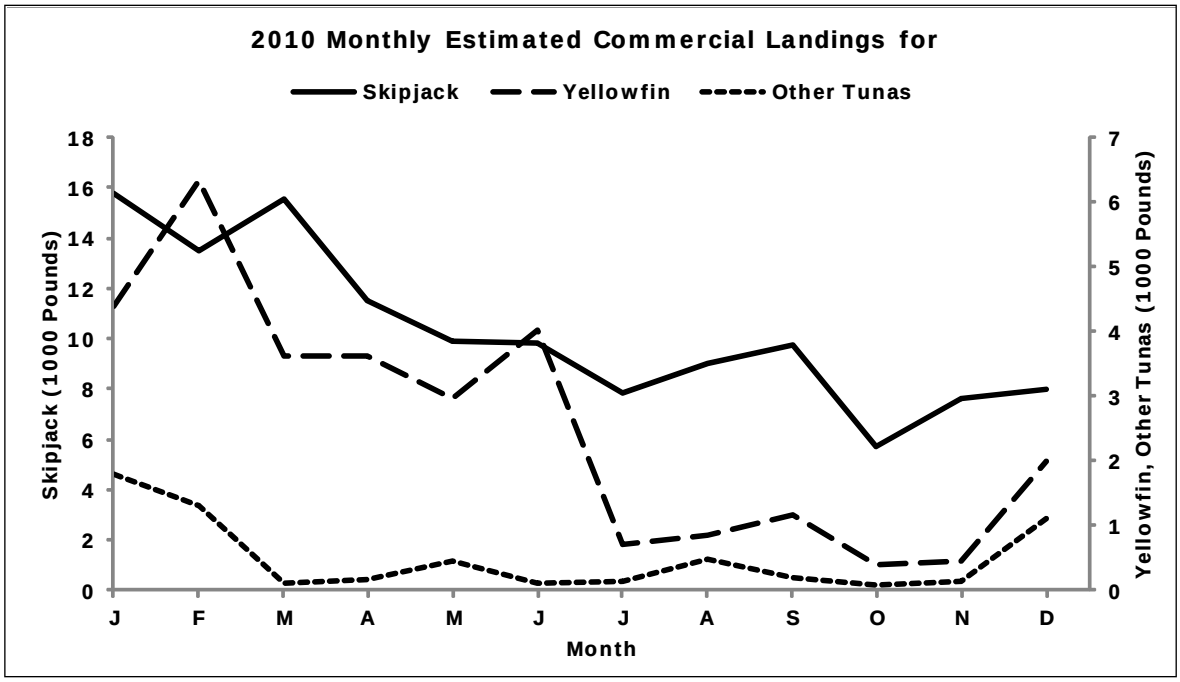


Figure B-1-3

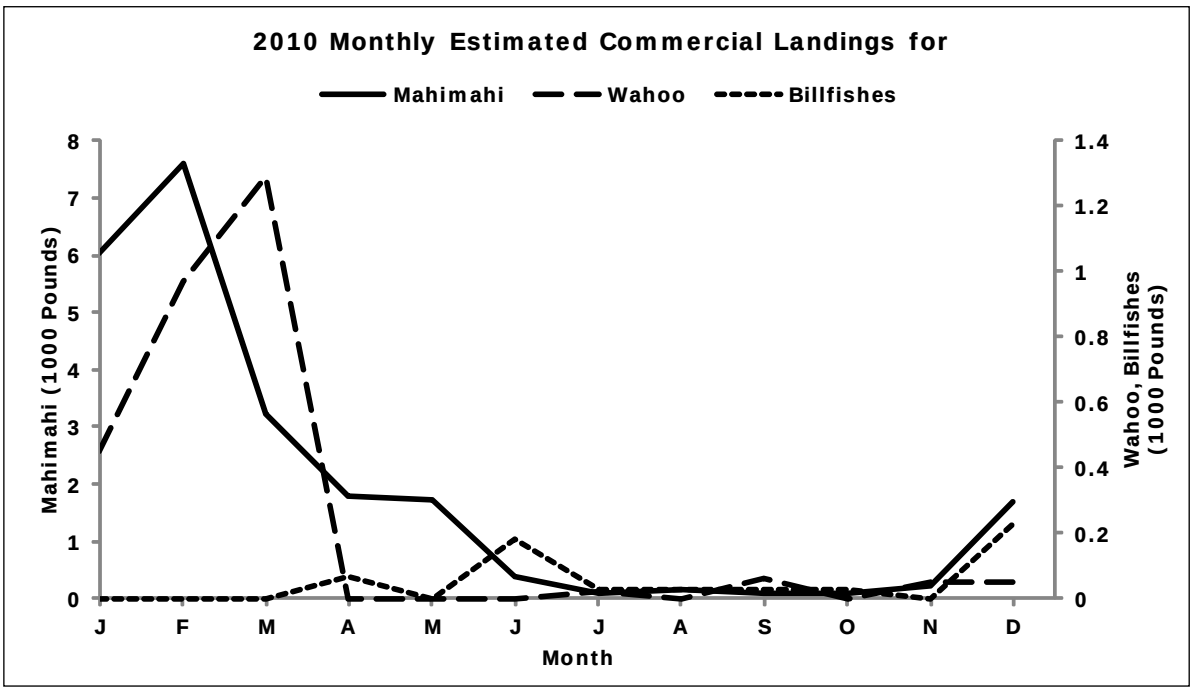


Figure B-1-4

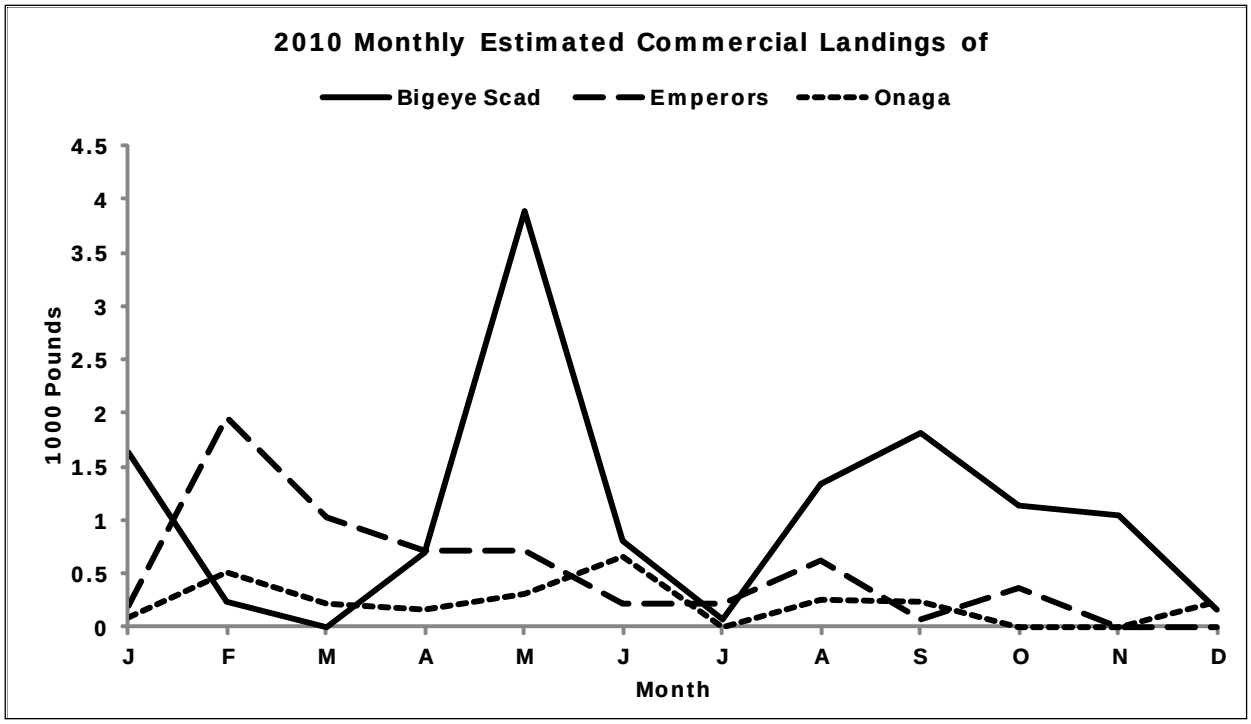

2010 Monthly Estimated Commercial Landings of
Bigeye Scad
Emperors
Onaga
1000 Pounds
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
J
F
M
A
M
J
J
A
S
O
N
D
Month

Figure B-1-5

The following are seasonality plots for the major species or species groups, showing the average weight landed during each month for all years combined:

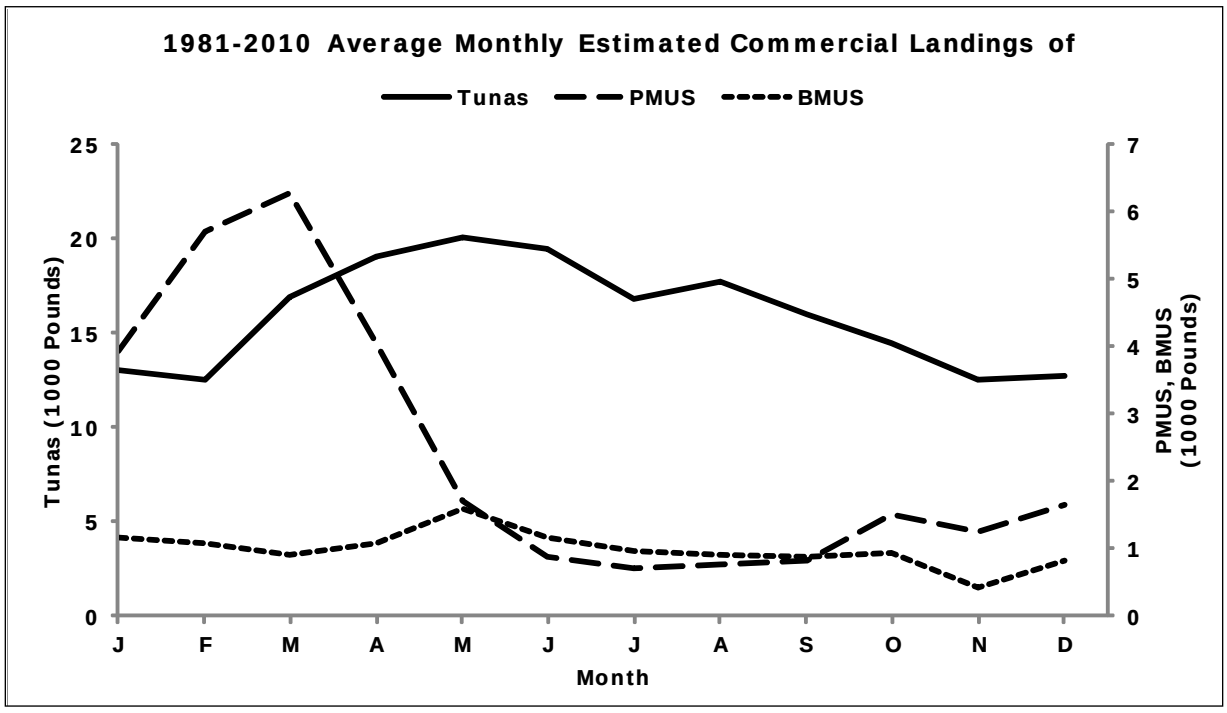


Figure B-2-1

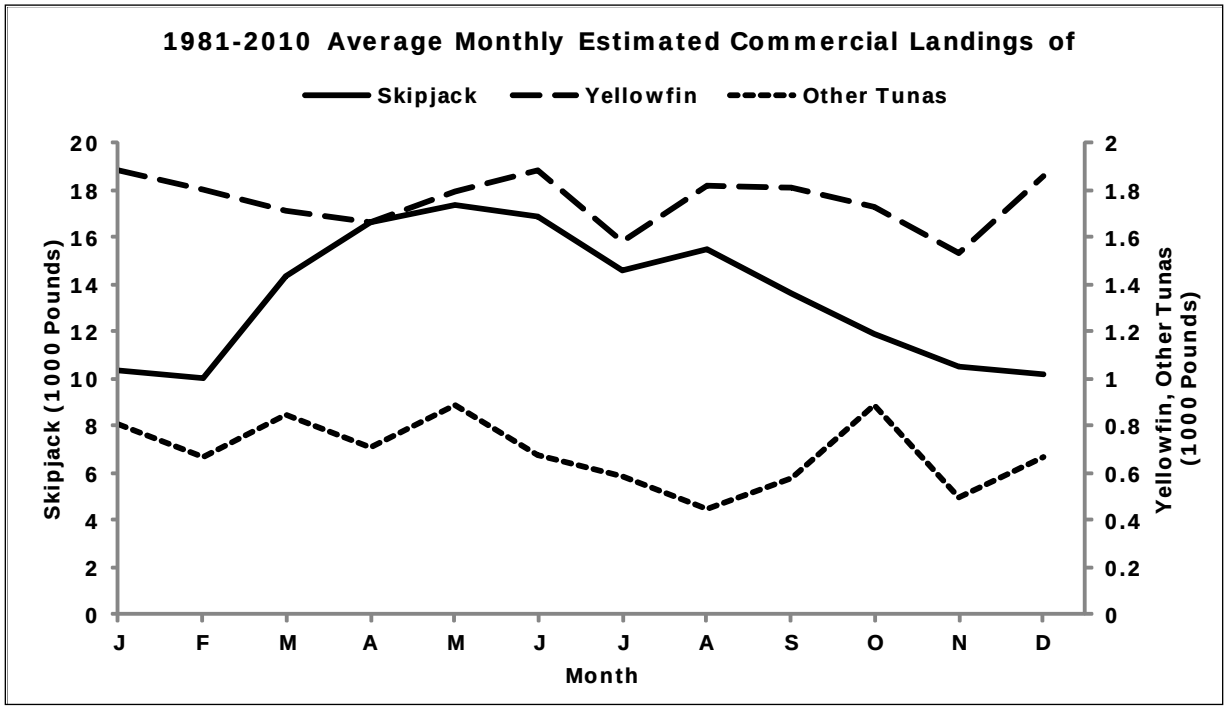


Figure B-2-2

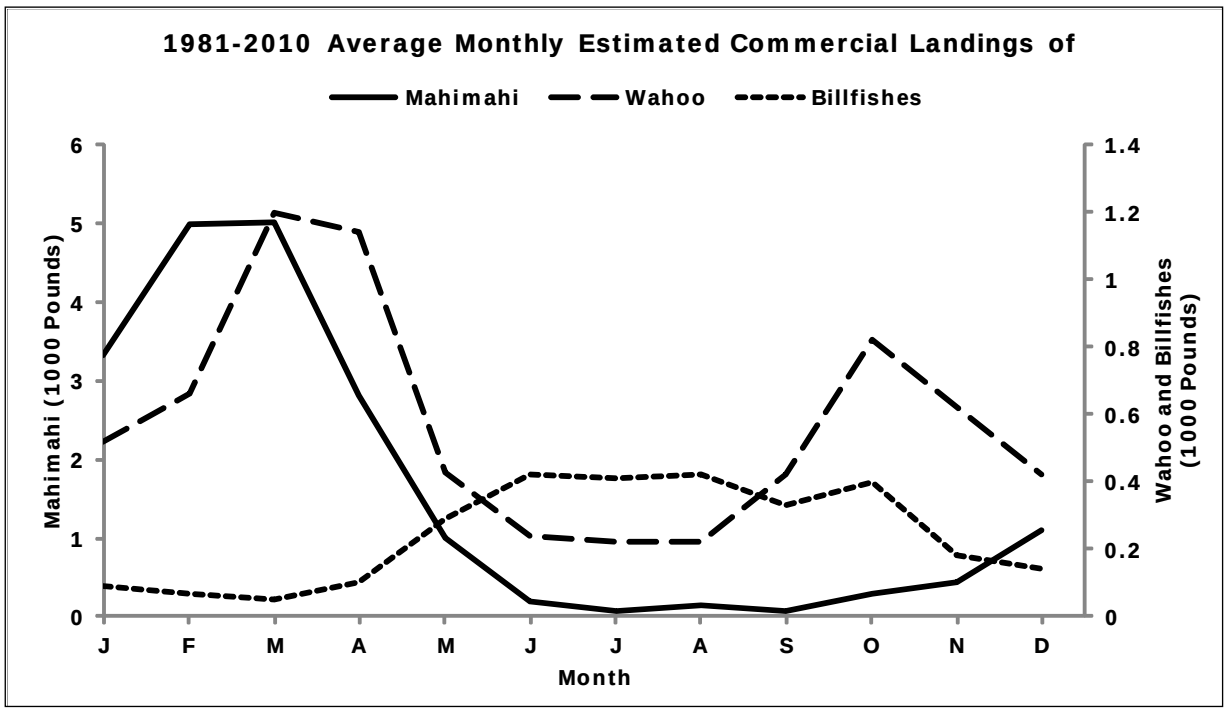


Figure B-2-3

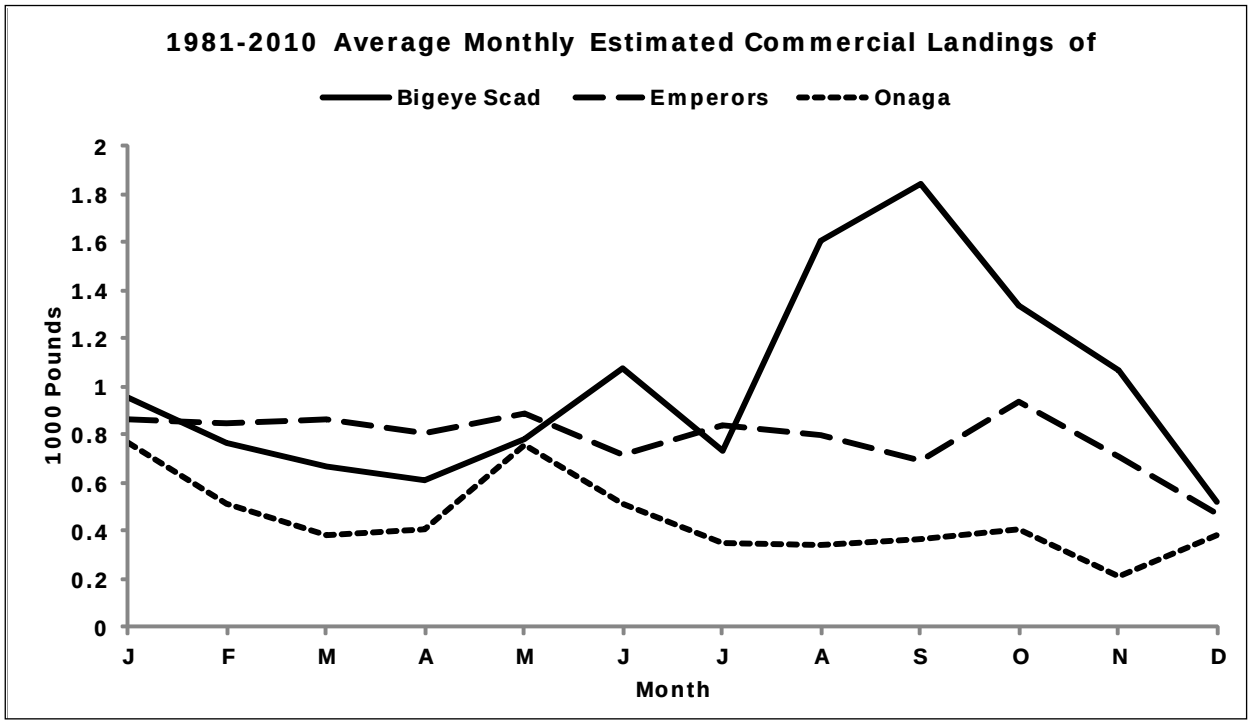


Figure B-2-4

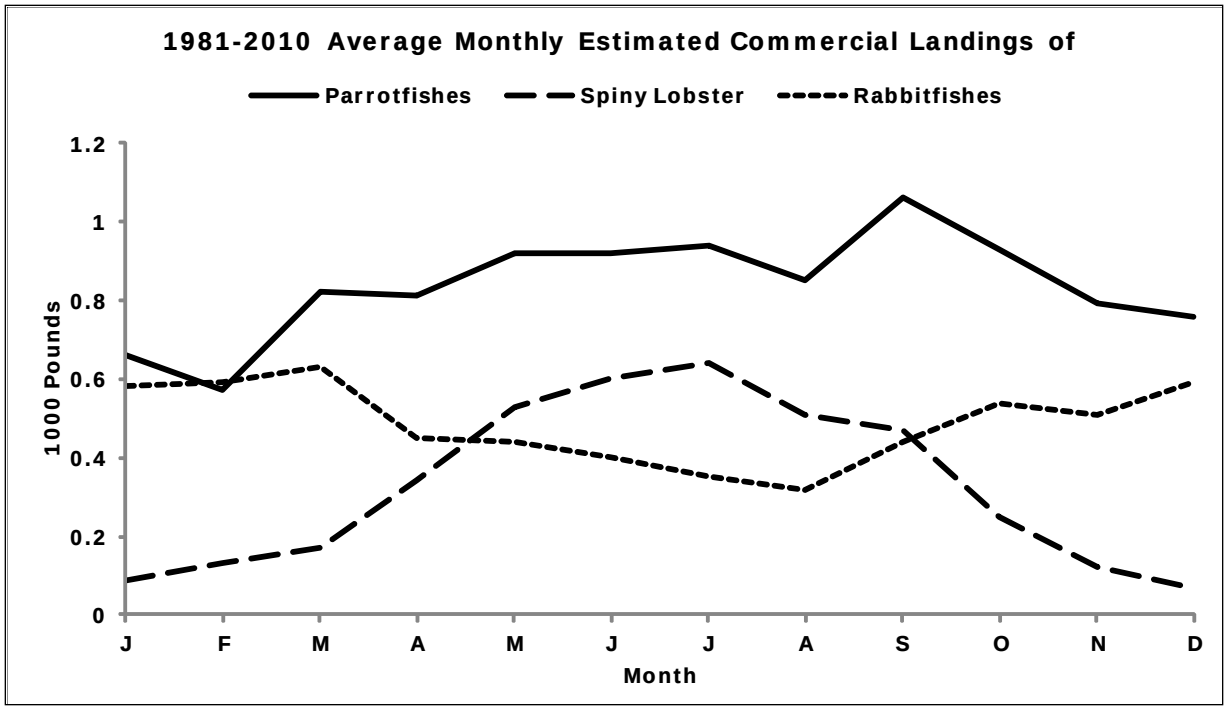

1981-2010 Average Monthly Estimated Commercial Landings of
Parrotfishes
Spiny Lobster
Rabbitfishes
1000 Pounds
1.2
1
0.8
0.6
0.4
0.2
0
J
F
M
A
M
J
J
A
S
O
N
D
Month

Figure B-2-5

The following graphs plot annual summary statistics to illustrate the variability among years:

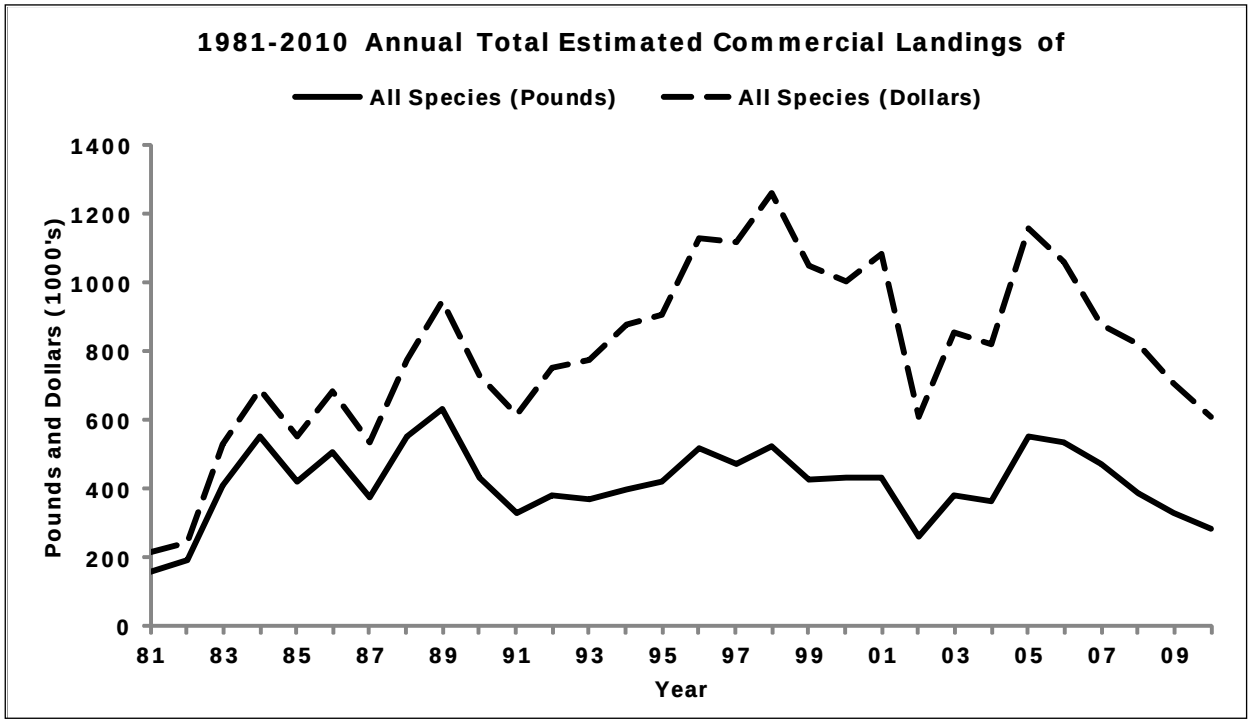


Figure B-3-1

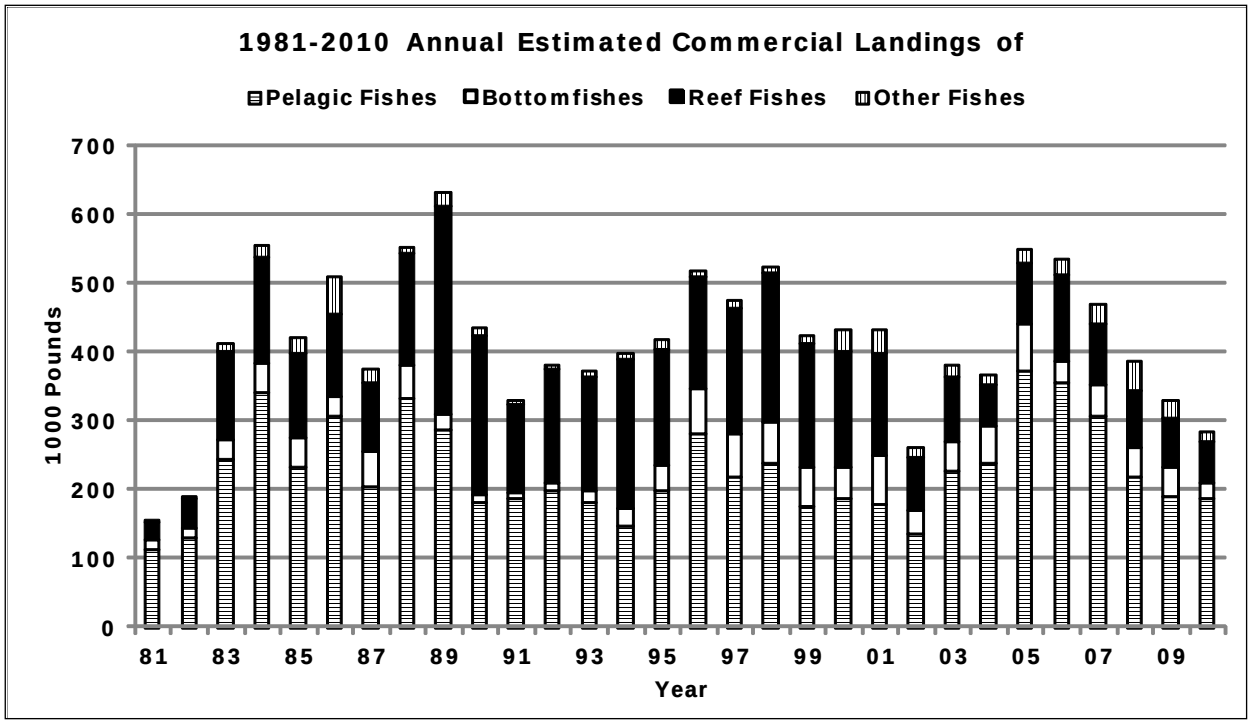


Figure B-3-2

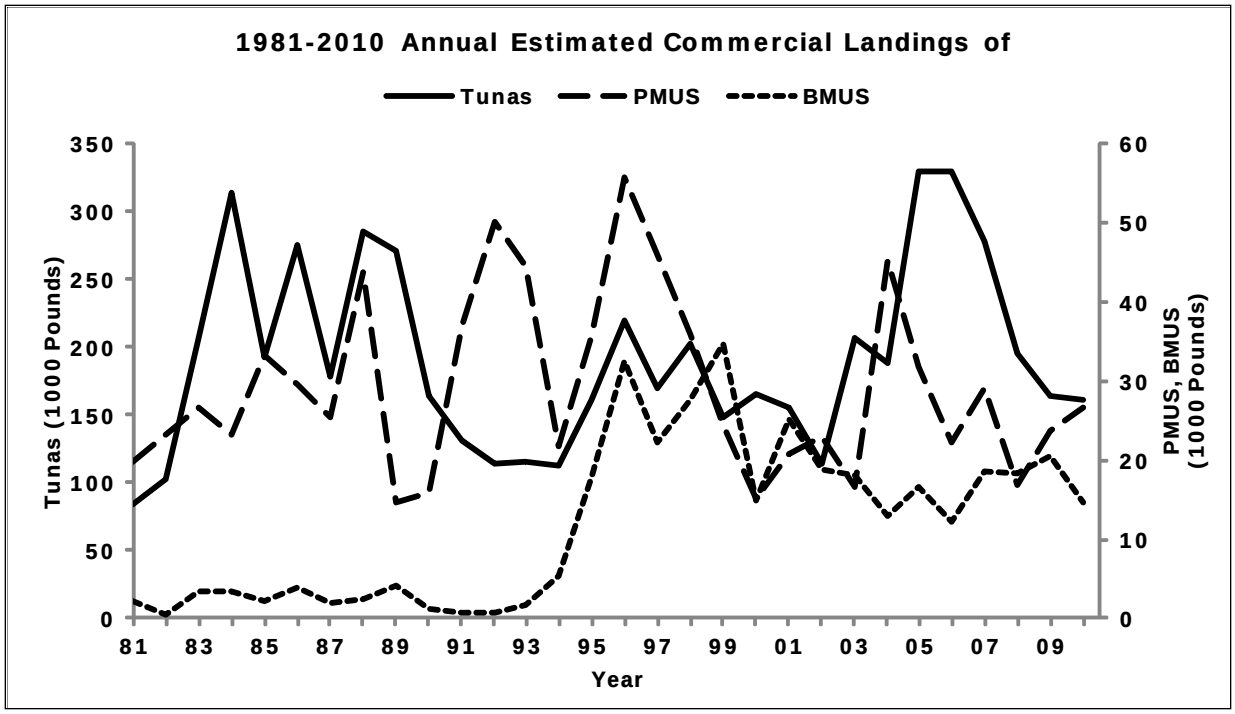


Figure B-3-3

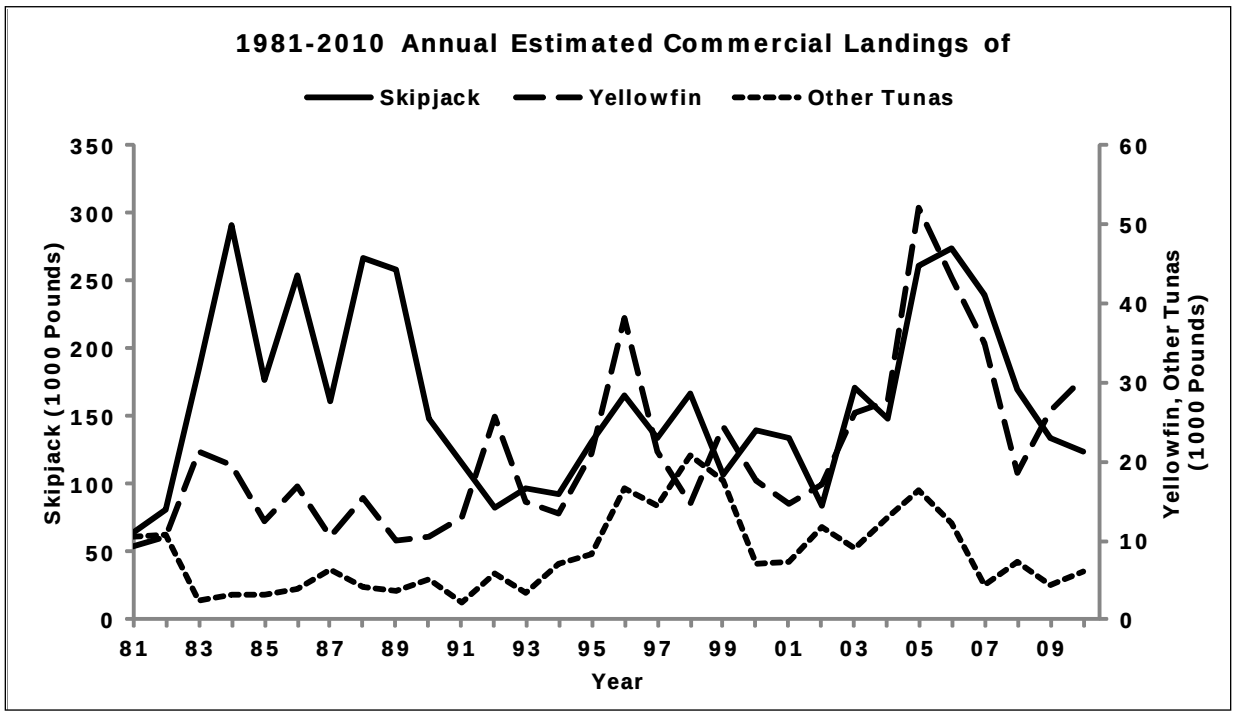


Figure B-3-4

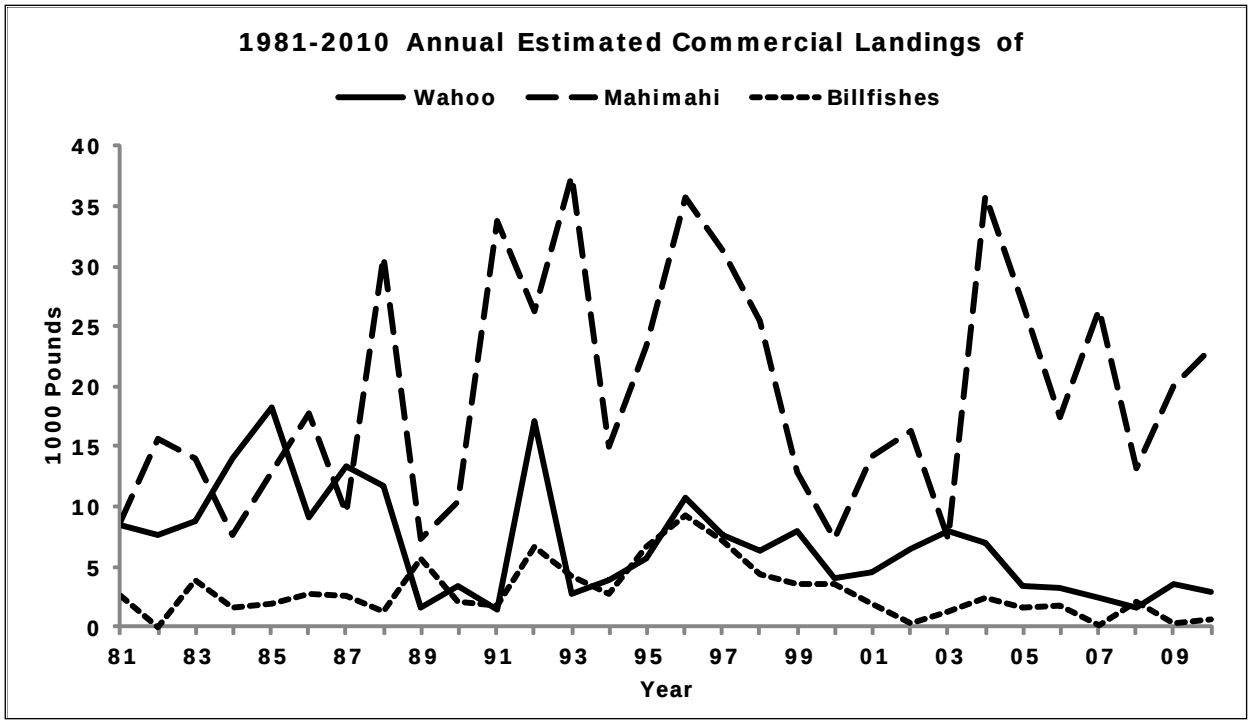


Figure B-3-5

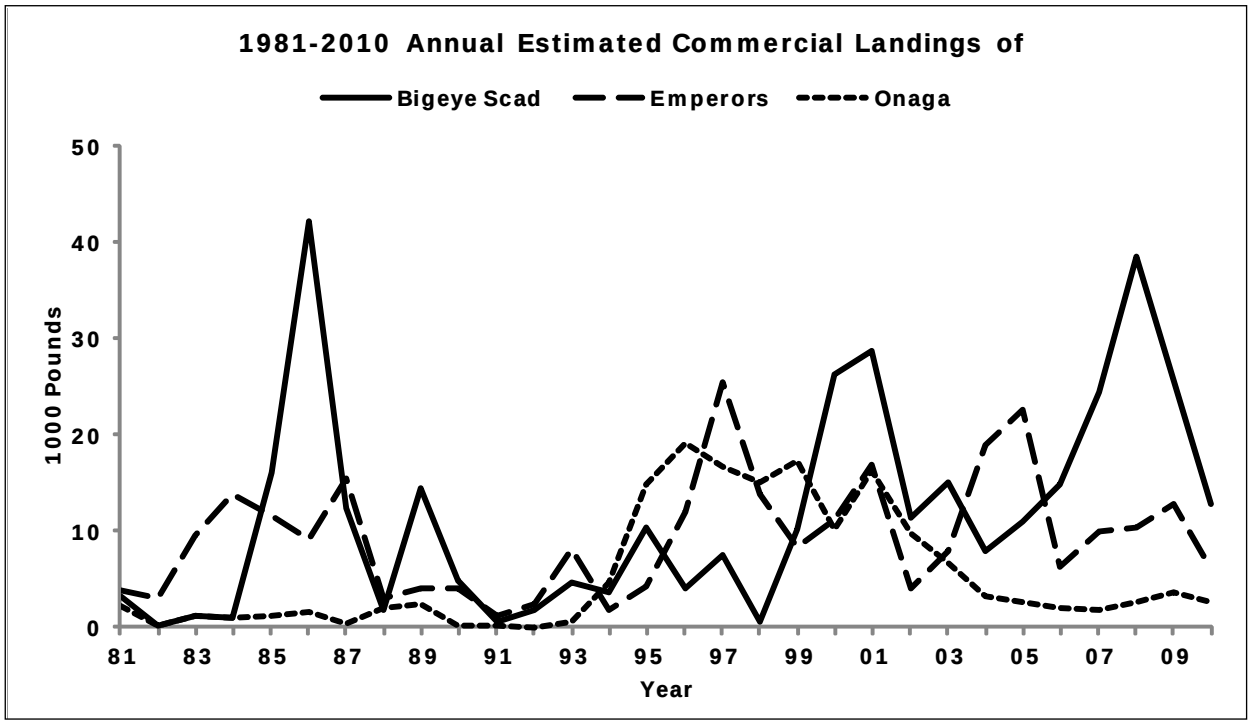


Figure B-3-6

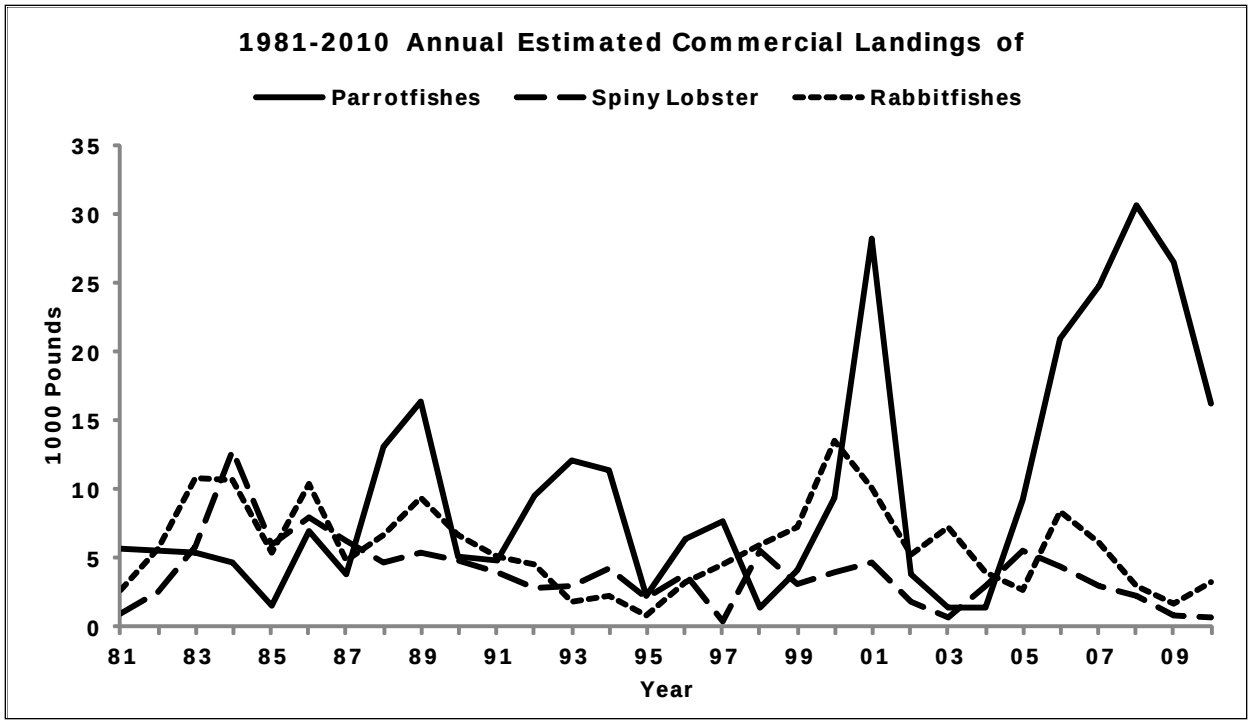

1981-2010 Annual Estimated Commercial Landings of
Parrotfishes
Spiny Lobster
Rabbitfishes
1000 Pounds
35
30
25
20
15
10
5
0
81
83
85
87
89
91
93
95
97
99
01
03
05
07
09
Year

Figure B-3-7

The following graphs plot the monthly landings of some of the major commercially important species and document monthly fluctuations in landings of these species over the time series:

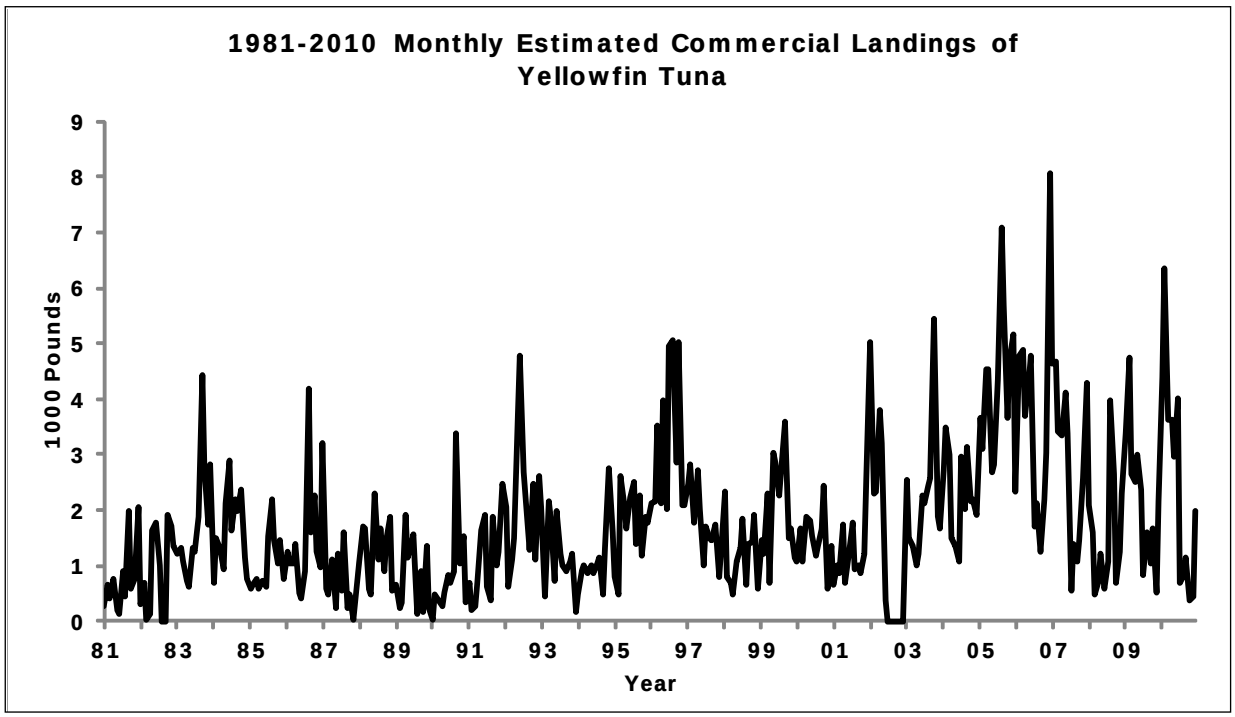


Figure B-4-1

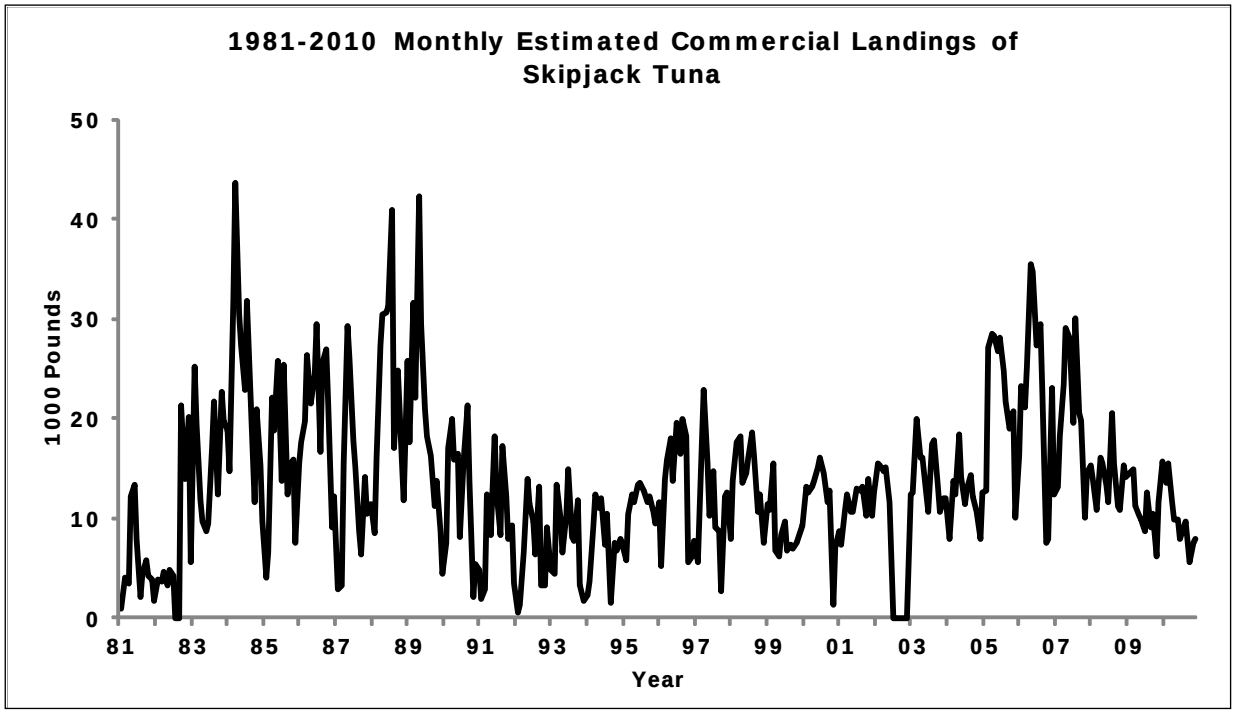


Figure B-4-2

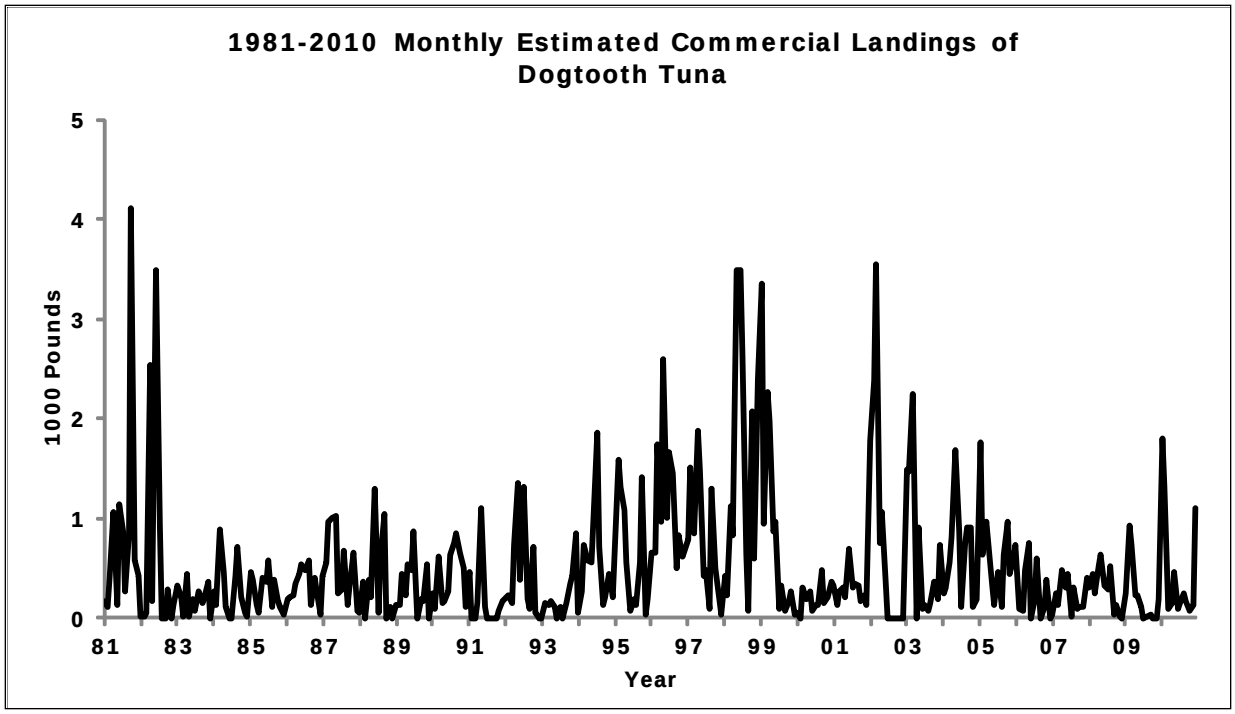


Figure B-4-3

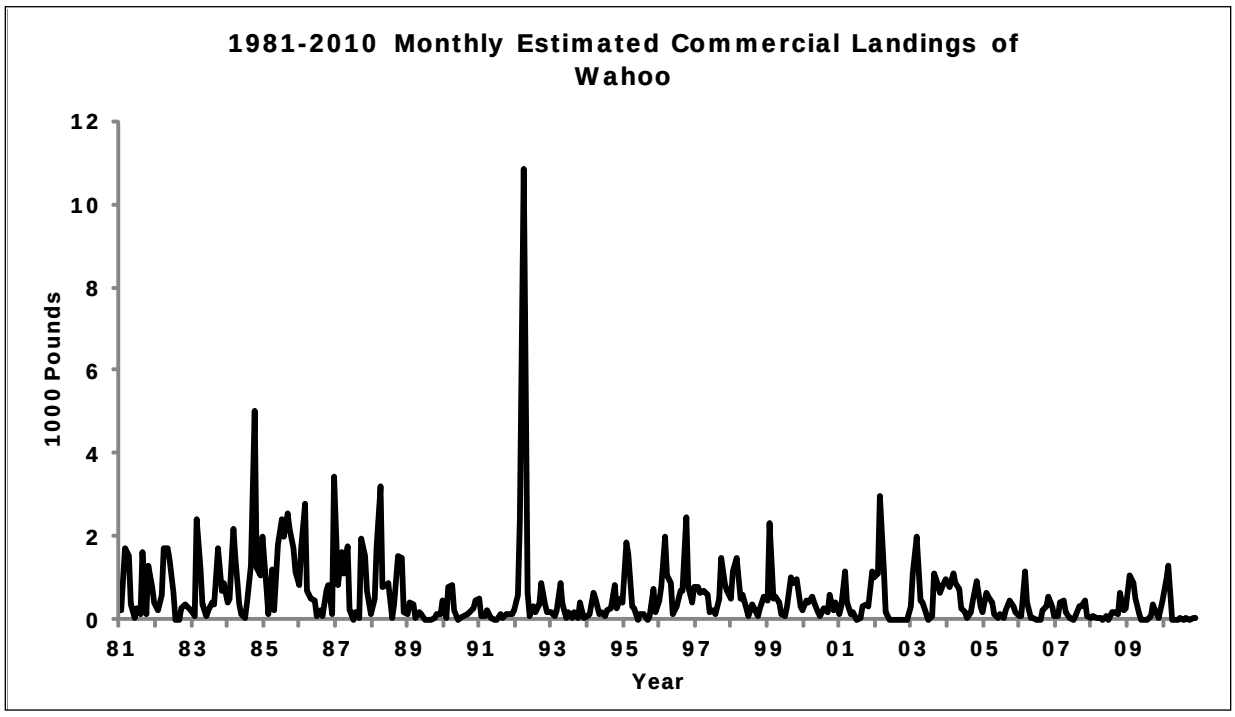


Figure B-4-4

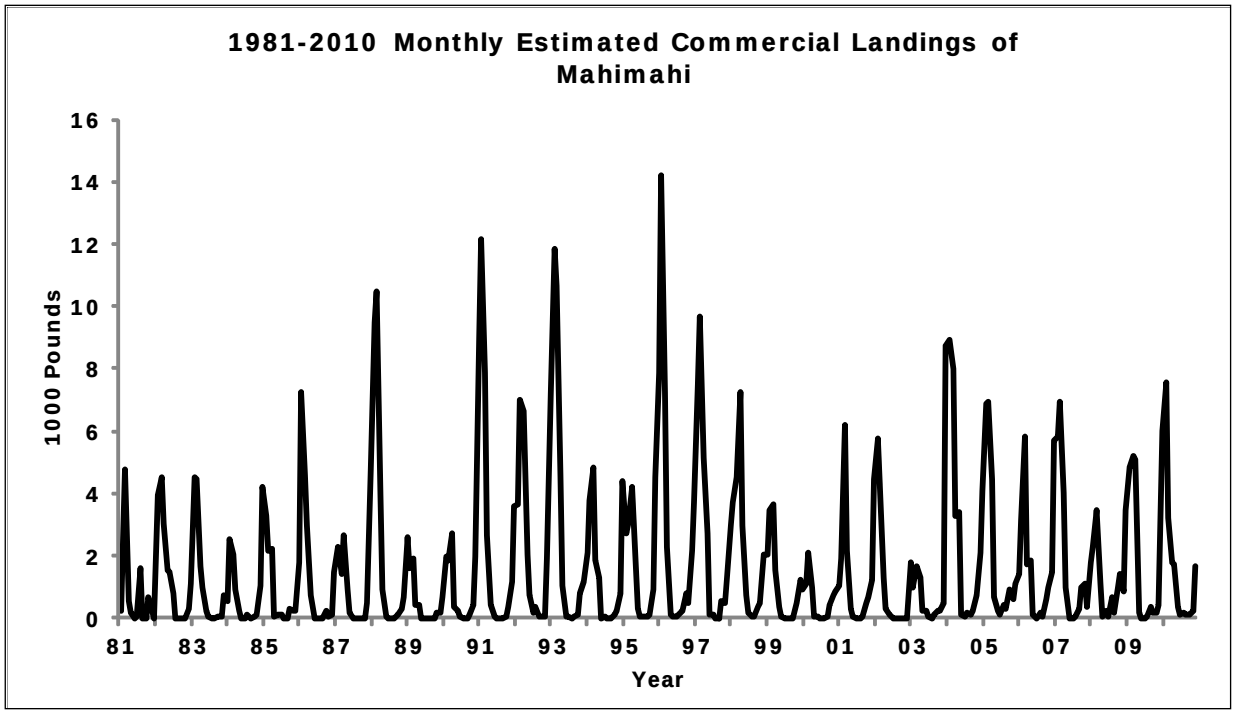


Figure B-4-5

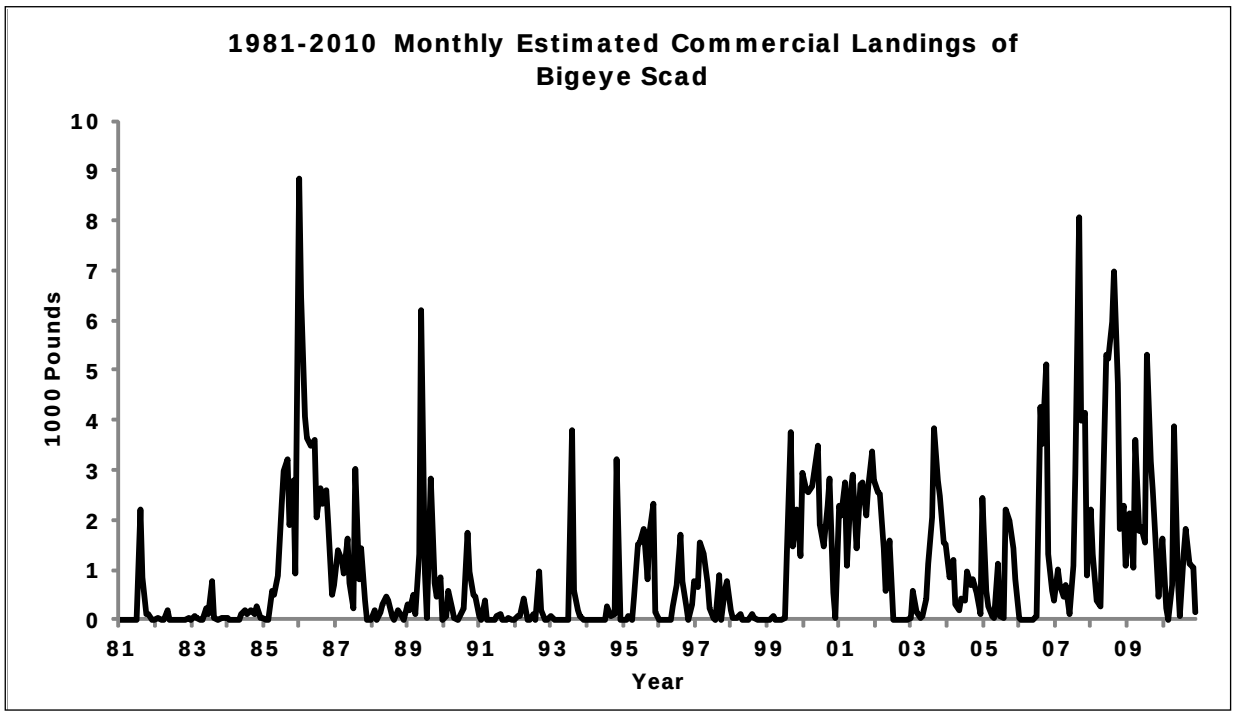


Figure B-4-6

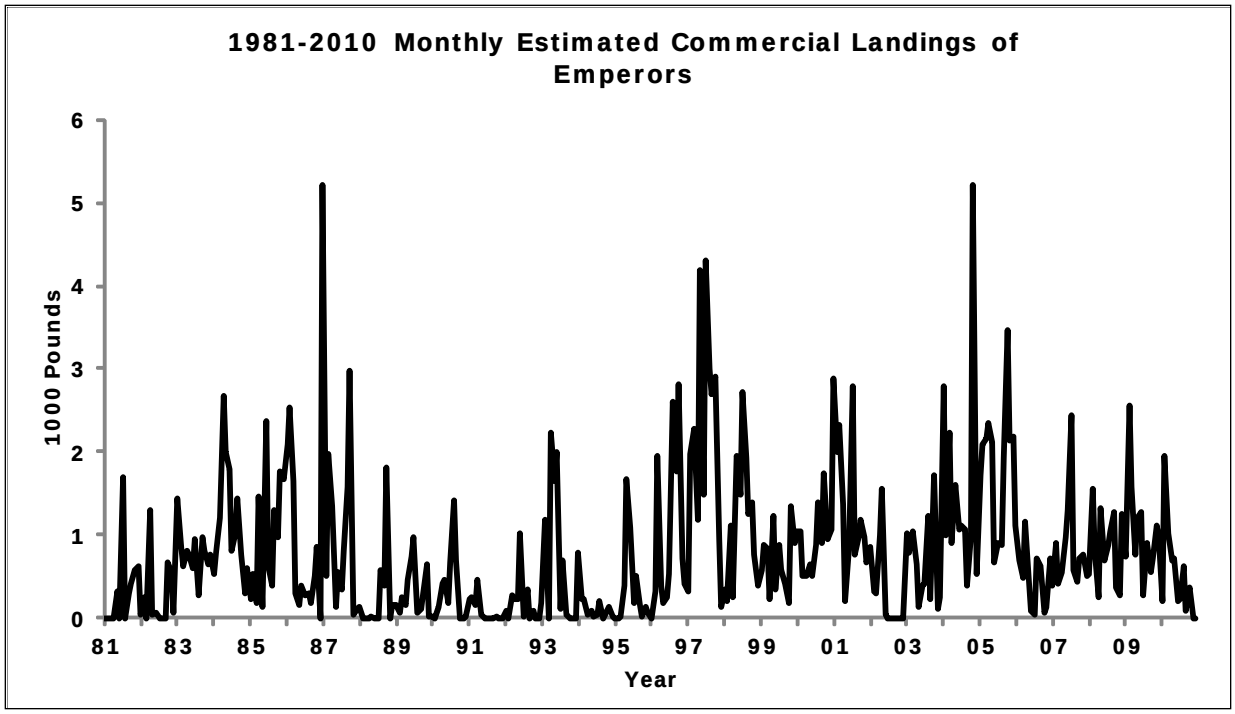


Figure B-4-7

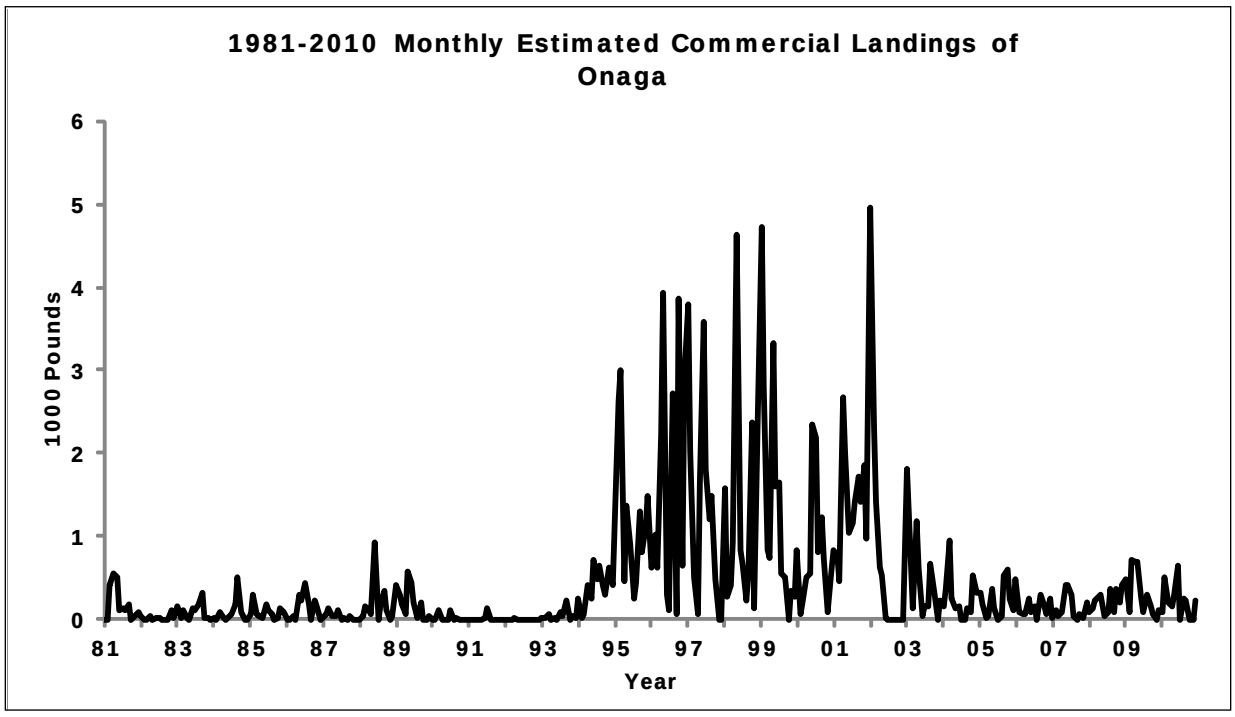


Figure B-4-8

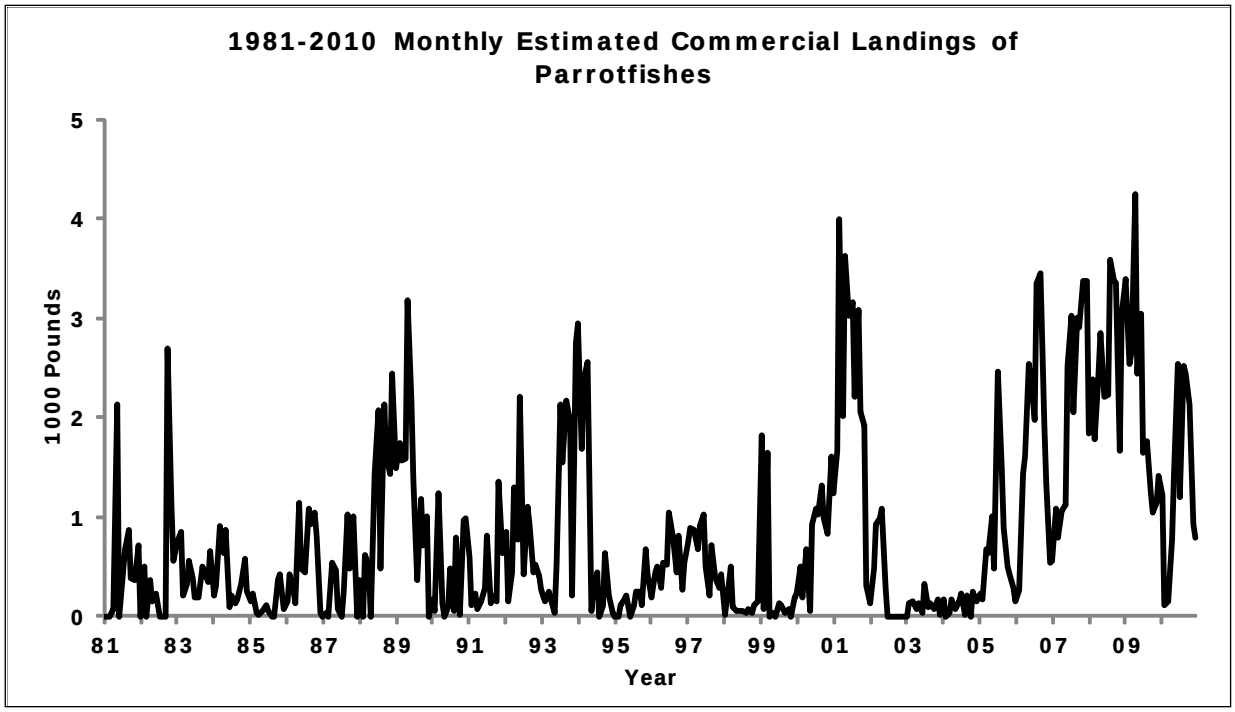


Figure B-4-9

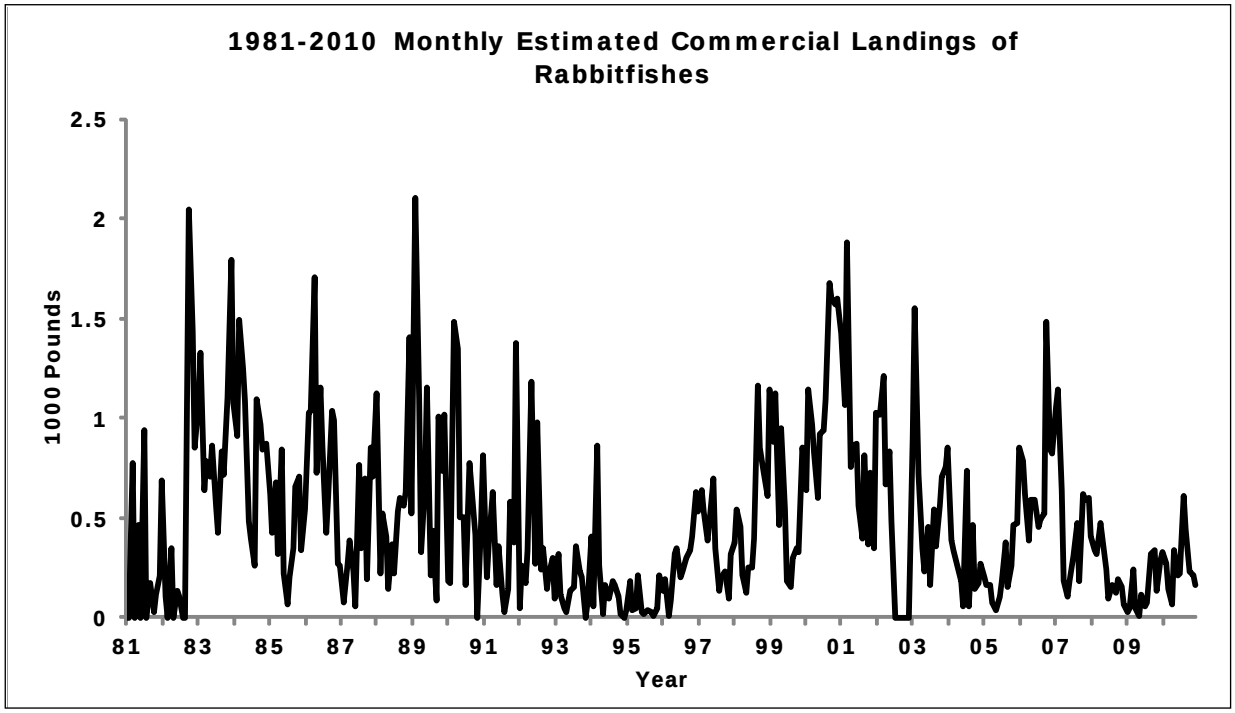


Figure B-4-10

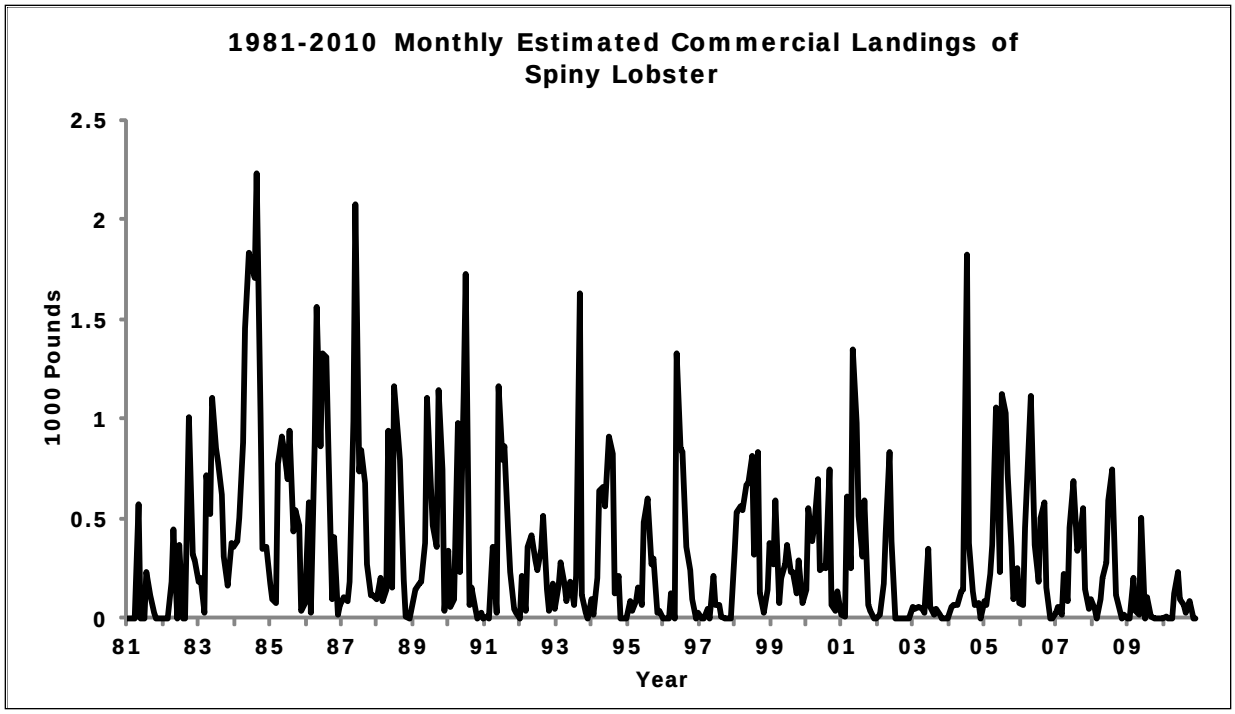

1981-2010 Monthly Estimated Commercial Landings of Spiny Lobster
1000 Pounds
2.5
2
1.5
1
0.5
0
81
83
85
87
89
91
93
95
97
99
01
03
05
07
09
Year

Figure B-4-11

GUAM 2010 FISHERY STATISTICS

Compiled by

Guam Division of Aquatic and Wildlife Resources

and the

Western Pacific Fishery Information Network

December 2012

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LIST OF CNMI 2010 SUMMARY TABLES

LIST OF CNMI FIGURES

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GUAM 2010 FISHERY STATISTICS

INTRODUCTION

The Territory of Guam is the southernmost, largest, and most populous island in the Mariana Archipelago.

Location: 13.4ºN latitude, 144.4ºE longitude

Population: about 185,674 (*The World Factbook*, July 2012 est.)

Economy: U.S. military and tourism

Guam:
Source: https://www.cia.gov/library/publications/the-world-factbook/maps/gq-map.gif;
The World Factbook

Fishing activities on Guam are divided into two basic categories: offshore and inshore fishing. Offshore fishing typically involves small boats (12 to 48 feet in length) going on 1- to 2-day trolling and bottomfishing trips. They usually originate from one of the three principal harbors located on the west coast and southern tip of the island. Inshore fishing is usually conducted without the use of a boat and consists mostly of nearshore casting, netting, and spearfishing.

There are three sources of fish in Guam's commercial market: (1) full-time commercial fishers; (2) part-time commercial fishers; and (3) subsistence or recreational "expense" fishers who frequently sell portions of their catch to help defray costs. Licenses are not required to sell fish in Guam, nor are there any reporting requirements for those selling fish.

DATA COLLECTING

In 1982, WPacFIN began working with staff of the Guam Division of Aquatic and Wildlife Resources (DAWR) and with local fish dealers to obtain information on commercial landings through voluntary use of trip ticket invoices provided by WPacFIN. The tables and graphs in this section are based on data that are summarized from receipts submitted by all participating dealers on Guam and then adjusted to create the estimated total commercial landings based on an estimated annual percent coverage factor.

In July 1979, the Guam Fishermen's Cooperative was established in Agana through government funding. It subsequently became the central distribution center for fresh local fish. Prior to 1979 there was no central place to sell fish, and fishers had to develop their own markets and peddle fish after each trip.

In 1982, WPacFIN began working with the co-op to improve their invoicing system and to obtain data on all fish purchases. A system was established whereby the co-op would use forms and coding schemes designed by WPacFIN and supply copies of all invoices to WPacFIN for computer data entry. In return, WPacFIN would provide the co-op with document quality control and computer-generated summary statistics. All purchase data back to July 1979 were also coded and computerized. Over time, other fish markets began to operate, and DAWR and WPacFIN staff worked with them to obtain data through the voluntary receipt book program.

Data collected on commercial receipt forms include

- Date
- Number of Fishermen
- Area Fished
- Number of Pieces Caught
- Price per Pound
- Fisherman Code
- Hours Fished
- Species Caught
- Pounds Caught

Although a proposed law has been introduced several times that would require reporting by dealers and possibly commercial fishers, it has never made it very far through the legislative process, and the commercial landings data collection system remains voluntary.

DATA PROCESSING

At first, the data were processed at the central WPacFIN office in Honolulu. Beginning in 1994, however, DAWR staff took over this task using a computer and software provided by WPacFIN. The processing system for the commercial landings data collected from the fish dealers is fairly straightforward. Dealers complete a purchase form every time they purchase fish from a fisherman. On this form, catches are divided into categories for weighing by species or species group (where possible, number of pieces is also recorded).

DATA REPORTING

After completing all editing, adjusting, and quality control activities for the commercial landings data, monthly and annual summary reports by species are generated. Numerous standard reports are available, but only the monthly and annual landings by species are provided in this document.

Each table contains information on the pounds, value, and the average price per pound for each species or species group. Each monthly report contains a subtotal for the sum of all species combined for that month. Annual reports contain the estimated total landings for each species and the estimated total recorded landings for all species for the calendar year. Graphs

of some of the important statistics are included with the estimated commercial landings summary reports.

Please note that the commercial landings data have been adjusted to reflect total coverage and are referenced as "Estimated Commercial Landings" in the charts and tables. To access the most up-to-date data and charts, please visit the WPacFIN web site, http://www.pifsc.noaa.gov/wpacfin.

SPECIES CATEGORIES

The species and species groups that are used in the tables and graphs of Guam's data are defined in this section. Many of the species included in this report have been recategorized over the years. For example, the Magnuson Fishery Conservation and Management Act of 1976 was amended in 1992 to include tunas in the Pelagic Management Unit Species (PMUS) category. However, this report maintains the original species categorizations from previous FSWP reports for comparative purposes. As such, tunas are kept in a separate category.

I. Pelagic Management Unit Species (PMUS)

- Mahimahi
- Marlins
- Sailfish
- Sharks
- Spearfish
- Swordfish
- Wahoo

II. Bottomfish Management Unit Species (BMUS)

- Alfonsin
- Amberjack
- Black jack
- Ehu (red snapper)
- Gindai (flower snapper)
- Groupers
- Jacks
- Kalikali (pink snapper)
- Lehi (silverjaw)
- Mafute (emperor)
- Onaga (red snapper)
- Opakapaka (pink snapper)
- Snappers
- Uku (gray snapper)

III. Billfishes

- Marlins
- Sailfish
- Spearfish
- Swordfish

IV. Tunas

- Dogtooth tuna
- Kawakawa
- Skipjack tuna
- Tunas (unknown)
- Yellowfin tuna

V. Other Tunas

Dogtooth tuna
Kawakawa
Tunas (unknown)

VI. Fisheries Categories

A. *Pelagic Fishes*

Barracudas
Dogtooth tuna
Kawakawa
Mahimahi
Marlins
Monchong
Pelagic fishes (unknown)
Rainbow runner
Sailfish
Sharks
Skipjack tuna
Spearfish
Swordfish
Tunas (unknown)
Wahoo
Yellowfin tuna

B. *Bottomfishes*

Alfonsin
Amberjack
Black jack
Bottomfishes (unknown)
Deep bottomfishes
Ehu (red snapper)
Gindai (flower snapper)
Groupers
Jacks
Kalikali (pink snapper)
Lehi (silverjaw)
Mafute (emperor)
Onaga (red snapper)
Opakapaka (pink snapper)
Tagafi (red snapper)
Uku (gray snapper)

C. *Reef Fishes*

Goatfishes
Humphead parrotfish
Napoleon wrasse
Parrotfishes
Rabbitfishes
Reef fishes (unknown)
Rudderfish (guilli)
Snappers
Squirrelfishes
Surgeonfishes
Sweetlips
Unicornfishes
Wrasses

D. *Other Fishes*

Bigeye scad (atulai)
Coconut crab
Crabs
Eels (freshwater)
Invertebrates
Kona crab
Lemu
Lobsters
Milkfish
Miscellaneous
Mullets
Octopus
Seaweeds
Shrimp (freshwater)
Shrimp (saltwater)
Squid
Turtles

Table C-1
Guam Annual 2010 Estimated Commercial Landings

Species	Pounds	Value ($)	Price/Lb ($)
Miscellaneous	426	1,260	2.96
Bigeye scad (atulai)	3,891	11,170	2.87
Black jack	319	746	2.34
Jacks	2,421	6,223	2.57
Mullets	133	370	2.79
Napoleon wrasse	1,727	4,919	2.85
Bottomfishes (unknown)	47	137	2.93
Deep bottomfishes	18	55	3.00
Ehu (red snapper)	739	2,832	3.83
Gindai (flower snapper)	311	1,243	4.00
Groupers	4,202	13,158	3.13
Kalikali (pink snapper)	450	1,721	3.82
Lehi (silverjaw)	223	830	3.72
Onaga (red snapper)	2,916	14,509	4.98
Opakapaka (pink snapper)	475	1,869	3.94
Uku (gray snapper)	331	910	2.75
Amberjack	127	347	2.73
Reef fishes (unknown)	41,516	126,207	3.04
Rudderfish (guilli)	316	948	3.00
Mafute (emperor)	1,217	3,802	3.12
Squirrelfishes	1,138	3,324	2.92
Parrotfishes	52,651	171,079	3.25
Snappers	79	222	2.81
Surgeonfishes	3,585	10,611	2.96
Unicornfishes	21,661	64,639	2.98
Goatfishes	23	106	4.58
Sweetlips	135	338	2.50
Barracudas	1,792	3,628	2.02
Mahimahi	132,515	289,714	2.19
Marlins	28,927	42,901	1.48
Spearfish	158	238	1.50
Sailfish	858	1,560	1.82
Rainbow runner	1,832	3,731	2.04
Monchong	134	305	2.28
Wahoo	28,683	62,993	2.20
Skipjack tuna	20,684	40,332	1.95
Dogtooth tuna	1,768	2,712	1.53
Yellowfin tuna	7,251	14,851	2.05
Lobsters	1,093	4,011	3.67
Octopus	3,133	9,400	3.00
TOTAL	369,906	919,949	2.49

Table C-2
Guam January 2010 Estimated Commercial Landings

Species	Pounds	Value ($)	Price/Lb ($)
Bigeye scad (atulai)	681	1,768	2.60
Jacks	12	35	3.00
Groupers	13	38	3.00
Uku (gray snapper)	4	13	3.00
Reef fishes (unknown)	4,177	12,513	3.00
Mafute (emperor)	5	15	3.00
Parrotfishes	3,805	12,368	3.25
Snappers	34	103	3.00
Surgeonfishes	121	363	3.00
Unicornfishes	2,424	7,273	3.00
Barracudas	71	152	2.15
Mahimahi	22,694	50,105	2.21
Marlins	337	634	1.88
Spearfish	32	48	1.50
Sailfish	79	119	1.50
Rainbow runner	38	78	2.08
Wahoo	1,412	3,176	2.25
Skipjack tuna	775	1,550	2.00
Dogtooth tuna	14	28	2.00
Yellowfin tuna	443	890	2.01
Lobsters	9	31	3.65
TOTAL	37,177	91,298	2.46

Table C-3
Guam February 2010 Estimated Commercial Landings

Species	Pounds	Value ($)	Price/Lb ($)
Miscellaneous	3	10	3.00
Bigeye scad (atulai)	230	601	2.61
Jacks	5	14	2.75
Napoleon wrasse	74	204	2.75
Bottomfishes (unknown)	34	103	3.00
Groupers	12	39	3.22
Onaga (red snapper)	238	1,188	5.00
Uku (gray snapper)	8	23	3.00
Reef fishes (unknown)	2,235	6,705	3.00
Rudderfish (guilli)	74	223	3.00
Mafute (emperor)	116	261	2.25
Parrotfishes	2,364	7,685	3.25
Surgeonfishes	428	1,283	3.00
Unicornfishes	1,601	4,803	3.00
Barracudas	239	478	2.00
Mahimahi	36,683	79,127	2.16
Spearfish	51	76	1.50
Rainbow runner	109	230	2.11
Monchong	23	51	2.25
Wahoo	4,104	9,172	2.23
Skipjack tuna	234	468	2.00
Dogtooth tuna	155	249	1.60
Yellowfin tuna	224	477	2.13
Lobsters	58	215	3.74
TOTAL	49,301	113,680	2.31

Table C-4
Guam March 2010 Estimated Commercial Landings

Species	Pounds	Value ($)	Price/Lb ($)
Miscellaneous	13	37	2.75
Jacks	109	292	2.67
Napoleon wrasse	234	683	2.92
Ehu (red snapper)	45	158	3.50
Onaga (red snapper)	23	117	5.00
Uku (gray snapper)	60	165	2.75
Reef fishes (unknown)	3,802	11,405	3.00
Rudderfish (guilli)	140	420	3.00
Mafute (emperor)	43	123	2.83
Squirrelfishes	120	300	2.50
Parrotfishes	2,727	8,862	3.25
Surgeonfishes	128	383	3.00
Unicornfishes	1,601	4,803	3.00
Sweetlips	58	144	2.50
Barracudas	245	491	2.00
Mahimahi	18,768	41,573	2.22
Marlins	229	424	1.85
Sailfish	118	206	1.75
Rainbow runner	57	113	2.00
Wahoo	4,523	10,083	2.23
Skipjack tuna	868	1,735	2.00
Dogtooth tuna	54	85	1.57
Yellowfin tuna	389	833	2.14
Octopus	112	335	3.00
TOTAL	34,465	83,767	2.43

Table C-5
Guam April 2010 Estimated Commercial Landings

Species	Pounds	Value ($)	Price/Lb ($)
Black jack	85	191	2.25
Jacks	343	905	2.64
Deep bottomfishes	18	55	3.00
Groupers	20	60	3.00
Lehi (silverjaw)	22	76	3.50
Onaga (red snapper)	79	396	5.00
Opakapaka (pink snapper)	4	15	4.00
Reef fishes (unknown)	3,203	9,608	3.00
Mafute (emperor)	23	62	2.65
Squirrelfishes	59	178	3.00
Parrotfishes	3,658	11,887	3.25
Surgeonfishes	239	718	3.00
Unicornfishes	2,896	8,342	2.88
Sweetlips	78	194	2.50
Barracudas	185	397	2.15
Mahimahi	21,159	46,464	2.20
Marlins	739	1,139	1.54
Sailfish	31	46	1.50
Rainbow runner	51	102	2.00
Wahoo	3,838	8,609	2.24
Skipjack tuna	4,325	8,229	1.90
Dogtooth tuna	295	483	1.64
Yellowfin tuna	939	2,014	2.15
Lobsters	28	106	3.75
TOTAL	42,316	100,274	2.37

Table C-6
Guam May 2010 Estimated Commercial Landings

Species	Pounds	Value ($)	Price/Lb ($)
Jacks	109	286	2.62
Napoleon wrasse	275	794	2.89
Ehu (red snapper)	67	267	4.00
Gindai (flower snapper)	13	51	4.00
Groupers	678	2,188	3.23
Kalikali (pink snapper)	22	88	4.00
Lehi (silverjaw)	11	43	4.00
Onaga (red snapper)	462	2,308	5.00
Opakapaka (pink snapper)	111	443	4.00
Uku (gray snapper)	24	65	2.71
Reef fishes (unknown)	3,280	9,840	3.00
Mafute (emperor)	234	1,036	4.42
Squirrelfishes	63	190	3.00
Parrotfishes	5,213	16,941	3.25
Snappers	16	40	2.50
Surgeonfishes	183	550	3.00
Unicornfishes	1,418	4,253	3.00
Barracudas	86	172	2.00
Mahimahi	9,799	21,805	2.23
Marlins	2,236	3,268	1.46
Sailfish	58	88	1.50
Rainbow runner	138	311	2.25
Wahoo	786	1,768	2.25
Skipjack tuna	4,337	8,432	1.94
Dogtooth tuna	164	260	1.58
Yellowfin tuna	591	1,256	2.13
Lobsters	113	409	3.61
Octopus	39	118	3.00
TOTAL	30,526	77,269	2.53

Table C-7
Guam June 2010 Estimated Commercial Landings

Species	Pounds	Value ($)	Price/Lb ($)
Miscellaneous	65	186	2.87
Black jack	50	100	2.00
Jacks	128	310	2.42
Napoleon wrasse	247	740	3.00
Ehu (red snapper)	256	1,007	3.93
Gindai (flower snapper)	118	470	4.00
Groupers	261	803	3.07
Kalikali (pink snapper)	53	190	3.62
Lehi (silverjaw)	98	379	3.85
Onaga (red snapper)	410	2,049	5.00
Opakapaka (pink snapper)	194	777	4.00
Uku (gray snapper)	15	43	2.85
Amberjack	43	115	2.66
Reef fishes (unknown)	5,152	15,819	3.07
Mafute (emperor)	103	308	3.00
Squirrelfishes	186	523	2.81
Parrotfishes	6,324	20,523	3.25
Snappers	20	55	2.75
Surgeonfishes	129	345	2.67
Unicornfishes	1,538	4,613	3.00
Barracudas	25	52	2.07
Mahimahi	729	1,641	2.25
Marlins	999	1,470	1.47
Spearfish	37	55	1.50
Rainbow runner	151	339	2.25
Monchong	38	94	2.50
Wahoo	544	1,224	2.25
Skipjack tuna	2,828	5,639	1.99
Dogtooth tuna	80	120	1.50
Yellowfin tuna	863	1,854	2.15
Lobsters	118	444	3.75
Octopus	178	533	3.00
TOTAL	21,978	62,817	2.86

Table C-8
Guam July 2010 Estimated Commercial Landings

Species	Pounds	Value ($)	Price/Lb ($)
Miscellaneous	58	173	3.00
Jacks	44	111	2.52
Napoleon wrasse	162	445	2.75
Ehu (red snapper)	211	773	3.66
Groupers	194	589	3.03
Lehi (silverjaw)	49	172	3.50
Onaga (red snapper)	664	3,321	5.00
Uku (gray snapper)	43	131	3.05
Reef fishes (unknown)	2,960	8,881	3.00
Mafute (emperor)	80	240	3.00
Squirrelfishes	92	275	3.00
Parrotfishes	5,730	18,623	3.25
Snappers	9	25	2.75
Surgeonfishes	428	1,193	2.79
Unicornfishes	782	2,345	3.00
Barracudas	54	108	2.00
Mahimahi	107	240	2.25
Marlins	4,488	7,358	1.64
Rainbow runner	111	222	2.00
Wahoo	113	255	2.25
Skipjack tuna	2,528	4,839	1.91
Dogtooth tuna	357	463	1.30
Yellowfin tuna	1,373	2,472	1.80
Lobsters	61	228	3.75
Octopus	494	1,483	3.00
TOTAL	21,191	54,963	2.59

Table C-9
Guam August 2010 Estimated Commercial Landings

Species	Pounds	Value ($)	Price/Lb ($)
Miscellaneous	56	168	3.00
Jacks	367	957	2.61
Napoleon wrasse	154	428	2.78
Ehu (red snapper)	29	117	4.00
Gindai (flower snapper)	19	77	4.00
Groupers	338	1,078	3.19
Kalikali (pink snapper)	60	240	4.00
Onaga (red snapper)	259	1,296	5.00
Opakapaka (pink snapper)	21	83	4.00
Uku (gray snapper)	19	56	2.92
Reef fishes (unknown)	4,143	12,841	3.10
Mafute (emperor)	190	570	3.00
Squirrelfishes	107	320	3.00
Parrotfishes	4,679	15,204	3.25
Surgeonfishes	341	1,014	2.97
Unicornfishes	2,276	6,828	3.00
Barracudas	97	198	2.05
Mahimahi	213	266	1.25
Marlins	8,520	12,525	1.47
Sailfish	277	620	2.24
Rainbow runner	358	715	2.00
Wahoo	710	1,581	2.23
Skipjack tuna	980	1,980	2.02
Dogtooth tuna	70	105	1.50
Yellowfin tuna	801	1,420	1.77
Lobsters	215	787	3.66
Octopus	431	1,293	3.00
TOTAL	25,728	62,764	2.44

Table C-10
Guam September 2010 Estimated Commercial Landings

Species	Pounds	Value ($)	Price/Lb ($)
Miscellaneous	13	40	3.00
Bigeye scad (atulai)	653	1,960	3.00
Black jack	13	34	2.70
Jacks	278	714	2.57
Mullets	22	65	3.00
Napoleon wrasse	150	413	2.75
Ehu (red snapper)	28	113	4.00
Gindai (flower snapper)	124	497	4.00
Groupers	672	2,159	3.21
Kalikali (pink snapper)	245	930	3.80
Lehi (silverjaw)	11	44	4.00
Onaga (red snapper)	388	1,938	5.00
Opakapaka (pink snapper)	77	307	4.00
Uku (gray snapper)	33	76	2.35
Amberjack	35	105	3.00
Reef fishes (unknown)	3,324	10,229	3.08
Mafute (emperor)	221	610	2.76
Squirrelfishes	73	220	3.00
Parrotfishes	3,883	12,621	3.25
Surgeonfishes	498	1,493	3.00
Unicornfishes	1,648	4,943	3.00
Goatfishes	18	92	5.00
Barracudas	46	92	2.00
Mahimahi	28	64	2.25
Marlins	5,098	7,438	1.46
Sailfish	33	62	1.85
Rainbow runner	187	374	2.00
Monchong	16	36	2.25
Wahoo	518	1,166	2.25
Skipjack tuna	459	929	2.02
Dogtooth tuna	98	148	1.50
Yellowfin tuna	407	830	2.04
Lobsters	210	772	3.68
Octopus	432	1,295	3.00
TOTAL	19,937	52,805	2.65

Table C-11
Guam October 2010 Estimated Commercial Landings

Species	Pounds	Value ($)	Price/Lb ($)
Miscellaneous	38	115	3.00
Bigeye scad (atulai)	1,683	5,048	3.00
Black jack	169	415	2.45
Jacks	674	1,624	2.41
Napoleon wrasse	334	947	2.83
Ehu (red snapper)	66	252	3.82
Gindai (flower snapper)	22	89	4.00
Groupers	650	2,085	3.21
Kalikali (pink snapper)	60	230	3.83
Onaga (red snapper)	109	546	5.00
Opakapaka (pink snapper)	3	10	4.00
Uku (gray snapper)	112	300	2.69
Reef fishes (unknown)	3,643	11,286	3.10
Mafute (emperor)	120	333	2.77
Squirrelfishes	34	107	3.12
Parrotfishes	4,497	14,614	3.25
Surgeonfishes	438	1,315	3.00
Unicornfishes	1,695	5,085	3.00
Barracudas	260	520	2.00
Mahimahi	382	855	2.24
Marlins	3,553	4,681	1.32
Rainbow runner	234	450	1.92
Wahoo	1,394	3,116	2.23
Skipjack tuna	1,022	1,965	1.92
Dogtooth tuna	138	222	1.62
Yellowfin tuna	590	1,383	2.34
Lobsters	104	387	3.73
Octopus	568	1,703	3.00
TOTAL	22,590	59,682	2.64

Table C-12
Guam November 2010 Estimated Commercial Landings

Species	Pounds	Value ($)	Price/Lb ($)
Miscellaneous	10	25	2.50
Bigeye scad (atulai)	366	1,098	3.00
Jacks	217	615	2.83
Mullets	111	305	2.75
Napoleon wrasse	97	266	2.75
Bottomfishes (unknown)	13	34	2.75
Ehu (red snapper)	8	30	4.00
Gindai (flower snapper)	4	17	4.00
Groupers	642	1,774	2.76
Onaga (red snapper)	113	563	5.00
Uku (gray snapper)	14	39	2.75
Amberjack	17	46	2.75
Reef fishes (unknown)	2,515	7,625	3.03
Rudderfish (guilli)	73	220	3.00
Mafute (emperor)	10	30	3.00
Squirrelfishes	62	185	3.00
Parrotfishes	4,448	14,457	3.25
Surgeonfishes	235	705	3.00
Unicornfishes	1,769	5,308	3.00
Goatfishes	5	15	3.00
Barracudas	215	429	2.00
Mahimahi	7,028	15,272	2.17
Marlins	1,098	1,724	1.57
Spearfish	39	59	1.50
Sailfish	78	145	1.85
Rainbow runner	277	556	2.01
Monchong	18	44	2.50
Wahoo	1,682	3,674	2.19
Skipjack tuna	959	1,918	2.00
Dogtooth tuna	174	282	1.62
Yellowfin tuna	268	576	2.15
Lobsters	102	364	3.57
Octopus	360	1,080	3.00
TOTAL	23,025	59,479	2.58

Table C-13
Guam December 2010 Estimated Commercial Landings

Species	Pounds	Value ($)	Price/Lb ($)
Miscellaneous	169	508	3.00
Bigeye scad (atulai)	278	696	2.50
Black jack	3	6	2.50
Jacks	135	360	2.67
Ehu (red snapper)	29	117	4.00
Gindai (flower snapper)	11	43	4.00
Groupers	722	2,345	3.25
Kalikali (pink snapper)	11	43	4.00
Lehi (silverjaw)	32	117	3.64
Onaga (red snapper)	172	790	4.60
Opakapaka (pink snapper)	66	234	3.54
Amberjack	32	81	2.53
Reef fishes (unknown)	3,084	9,454	3.07
Rudderfish (guilli)	28	85	3.00
Mafute (emperor)	72	215	3.00
Squirrelfishes	343	1,028	3.00
Parrotfishes	5,323	17,294	3.25
Surgeonfishes	418	1,251	3.00
Unicornfishes	2,016	6,047	3.00
Barracudas	269	539	2.00
Mahimahi	14,923	32,302	2.16
Marlins	1,632	2,239	1.37
Sailfish	183	275	1.50
Rainbow runner	123	240	1.96
Monchong	41	82	2.00
Wahoo	9,059	19,167	2.12
Skipjack tuna	1,371	2,649	1.93
Dogtooth tuna	169	267	1.58
Yellowfin tuna	364	848	2.33
Lobsters	75	267	3.54
Octopus	521	1,563	3.00
TOTAL	41,672	101,150	2.43

The following are summary charts of the major species and species groups by month:

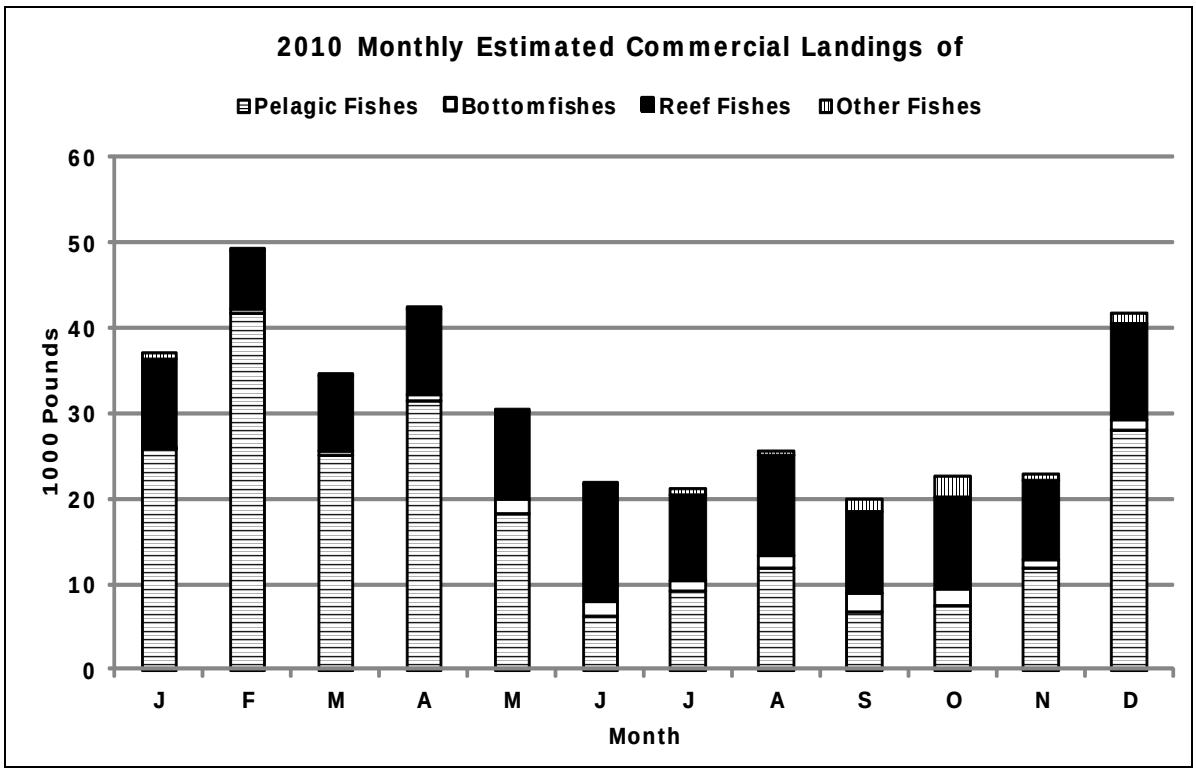

Figure C-1-1

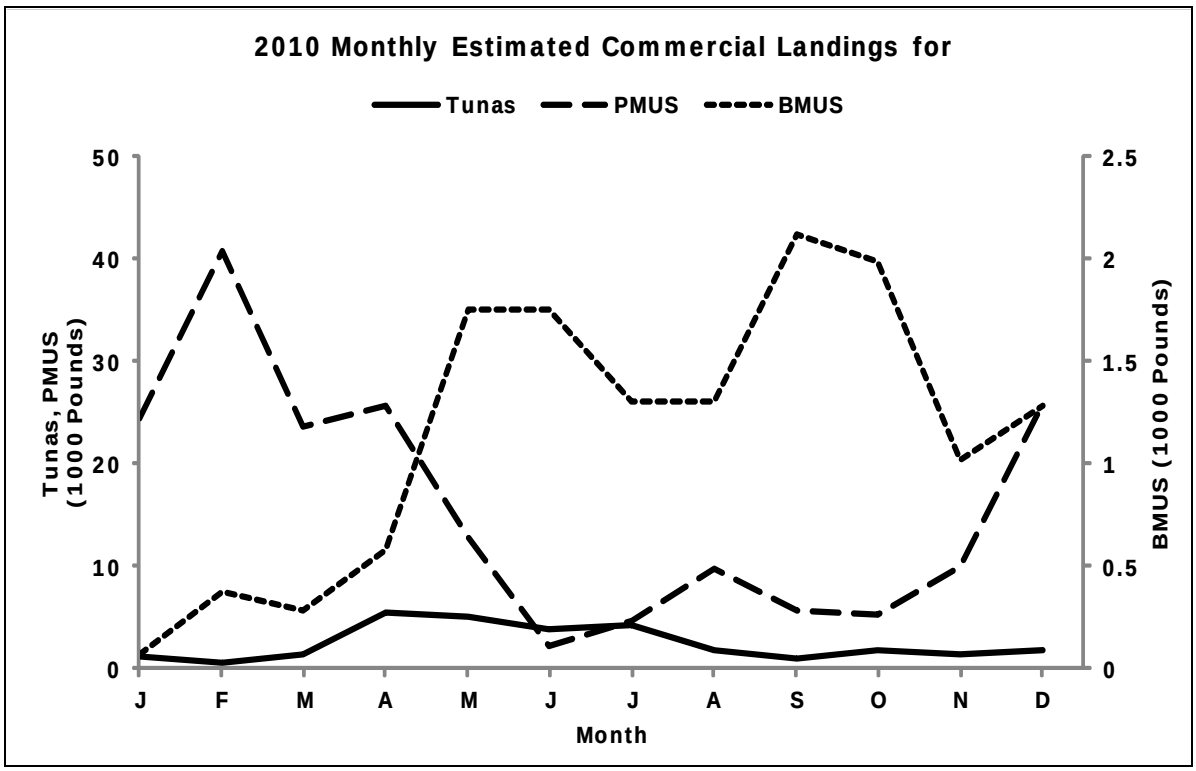

Figure C-1-2

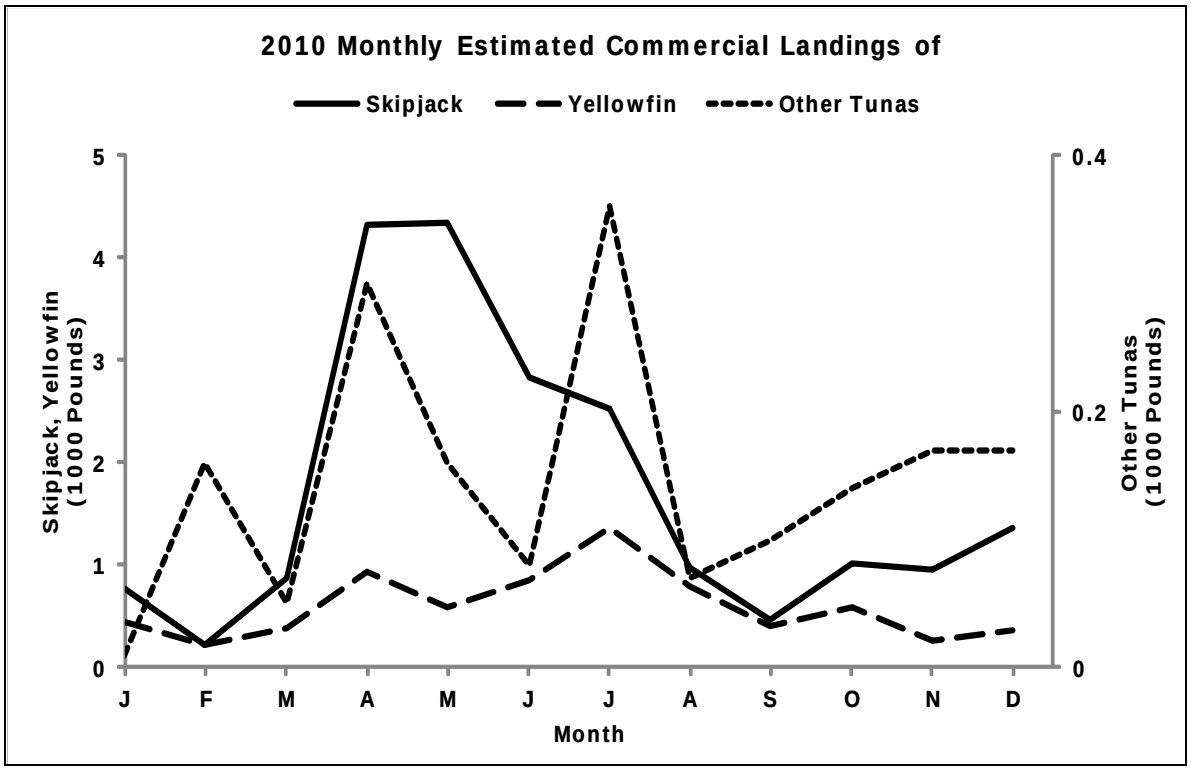

Figure C-1-3

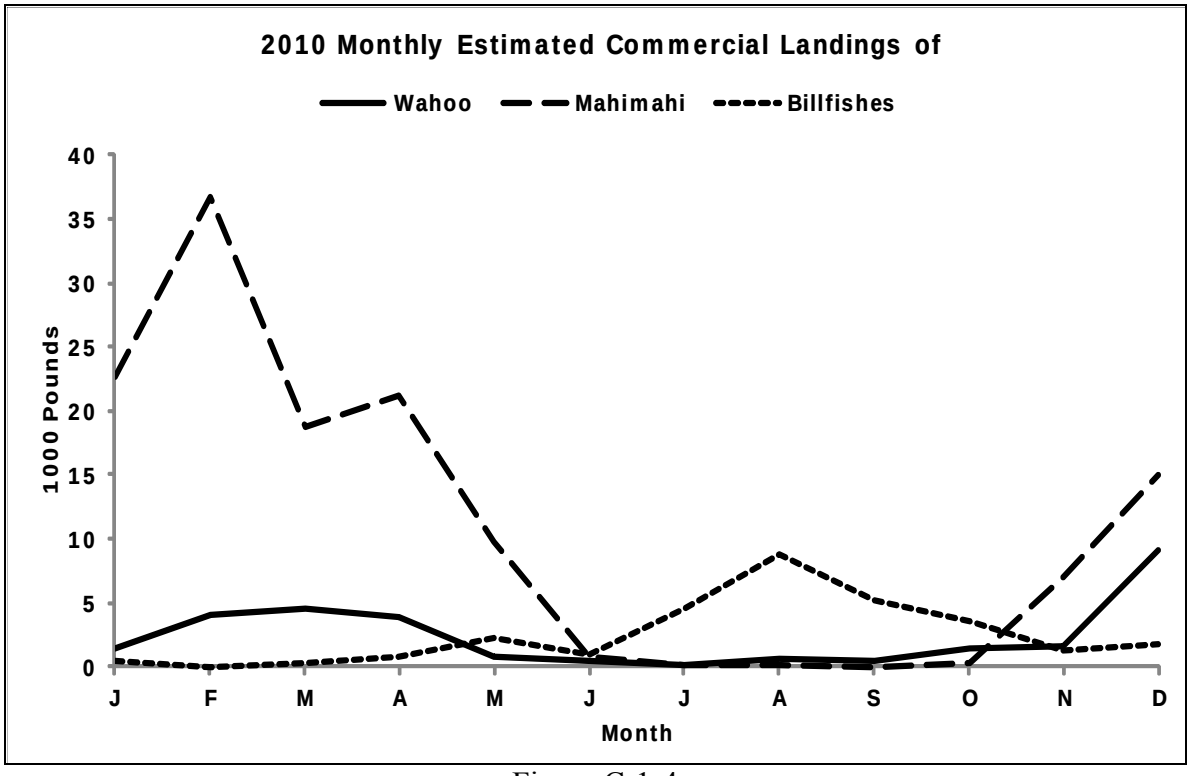

Figure C-1-4

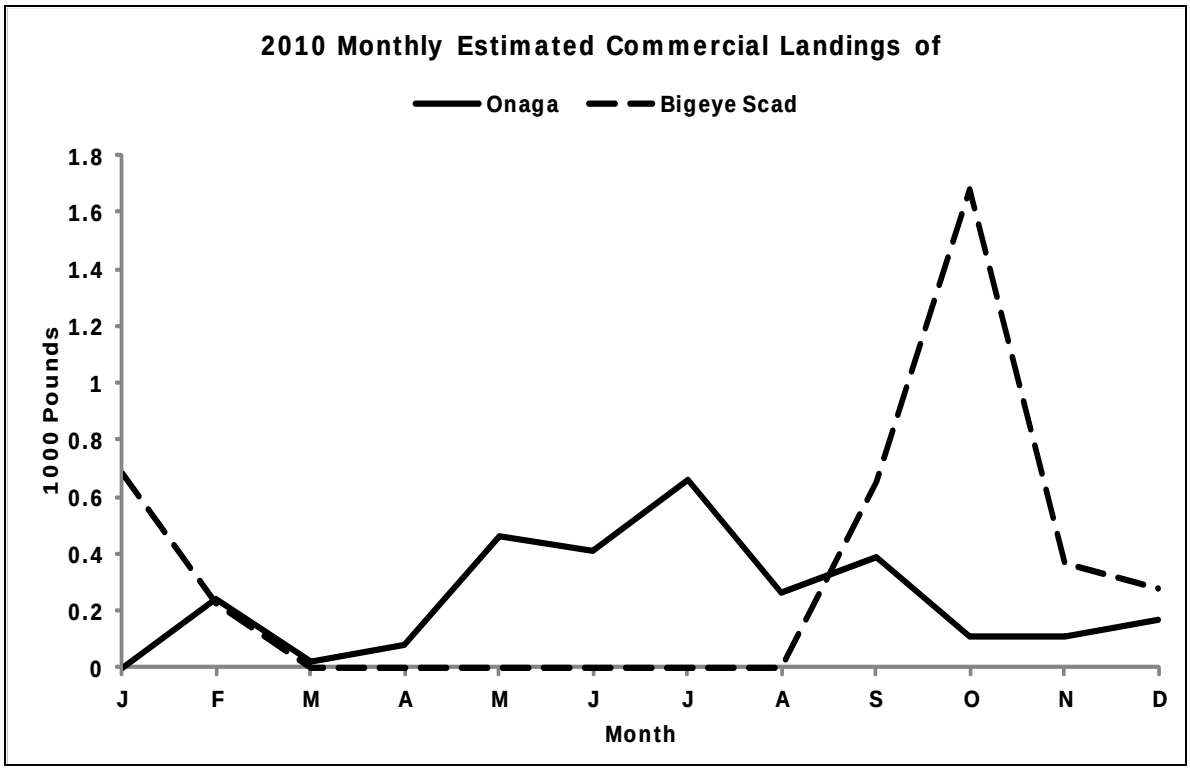
2010 Monthly Estimated Commercial Landings of
Onaga
Bigeye Scad
1000 Pounds
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
J
F
M
A
M
J
J
A
S
O
N
D
Month

Figure C-1-5

The following are seasonality plots for the major species or species groups, showing the average weight landed during each month for all years combined:

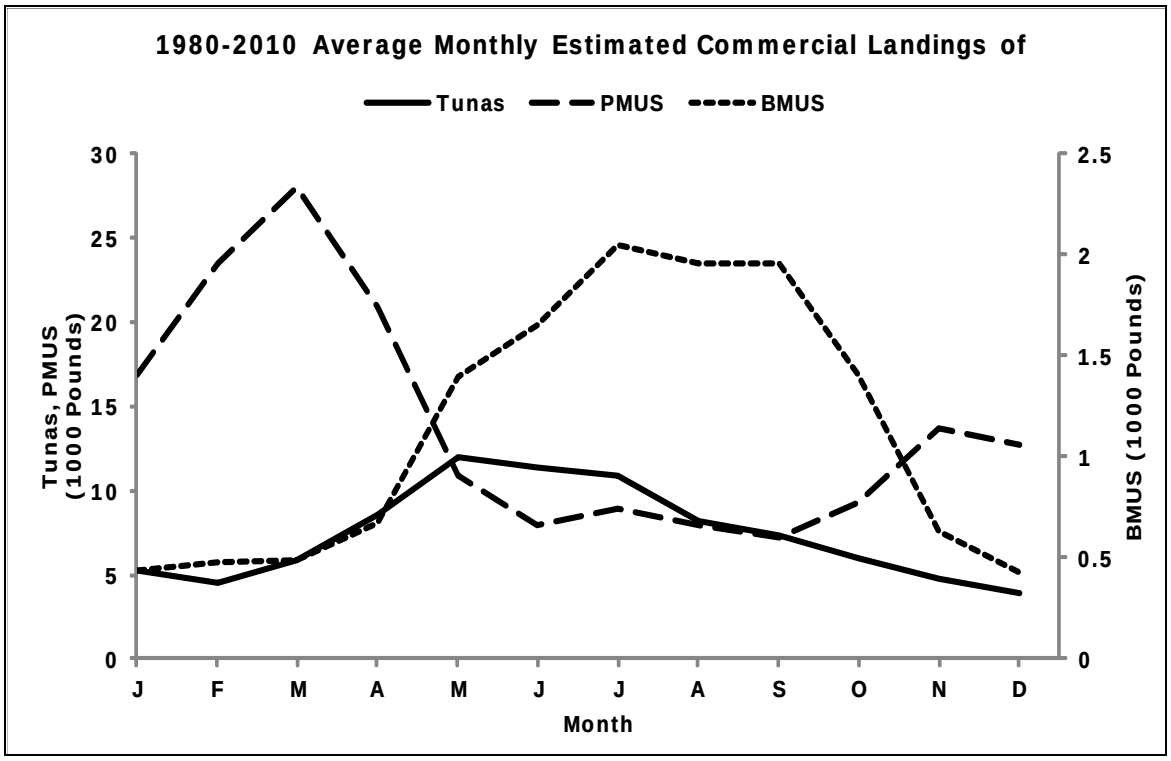

Figure C-2-1

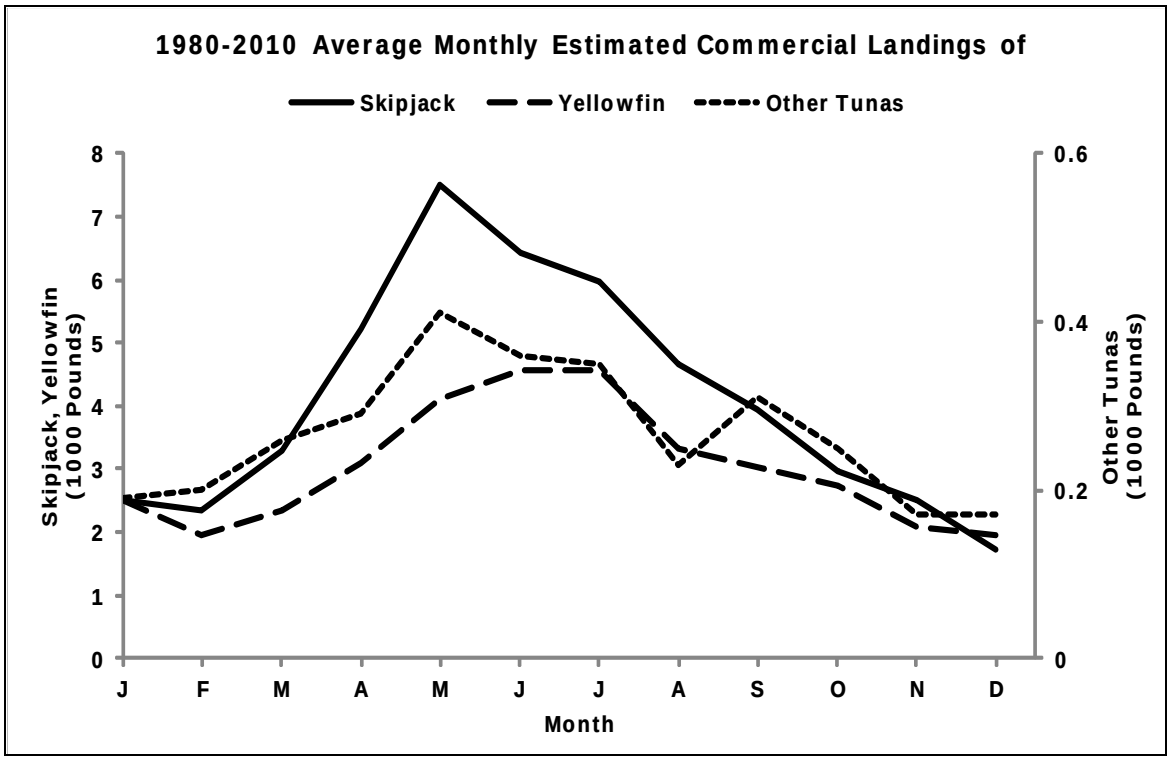

Figure C-2-2

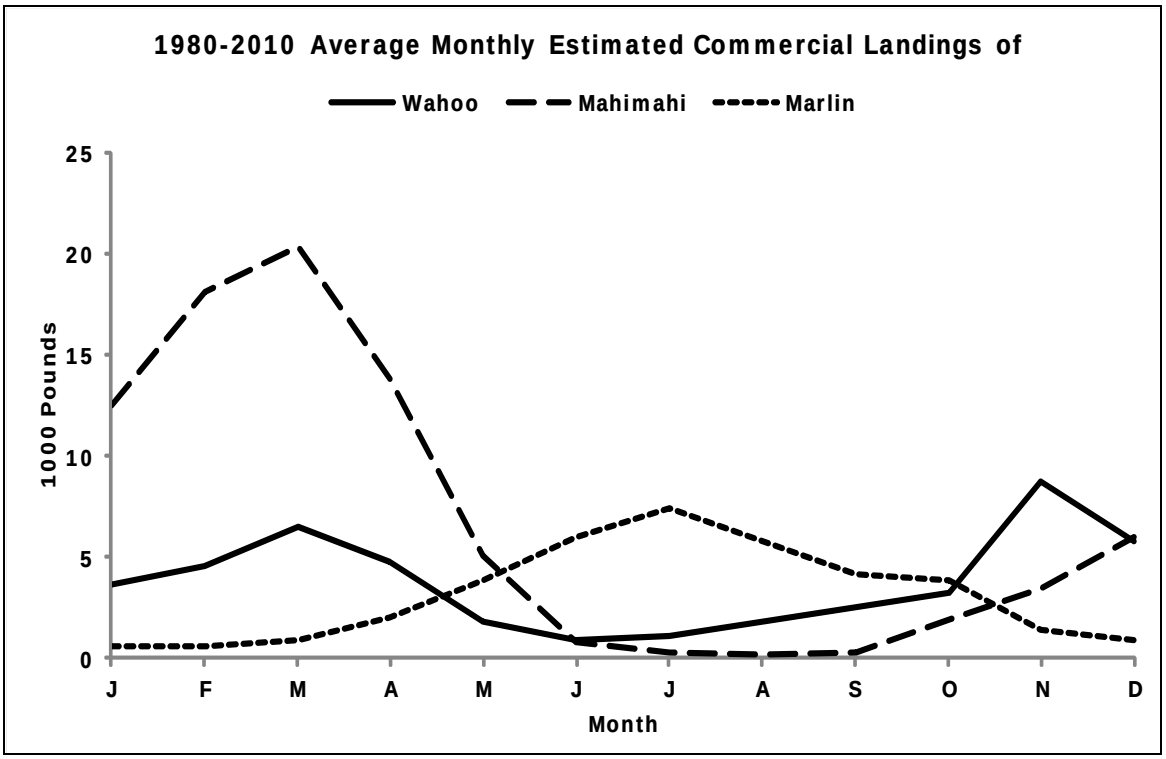

Figure C-2-3

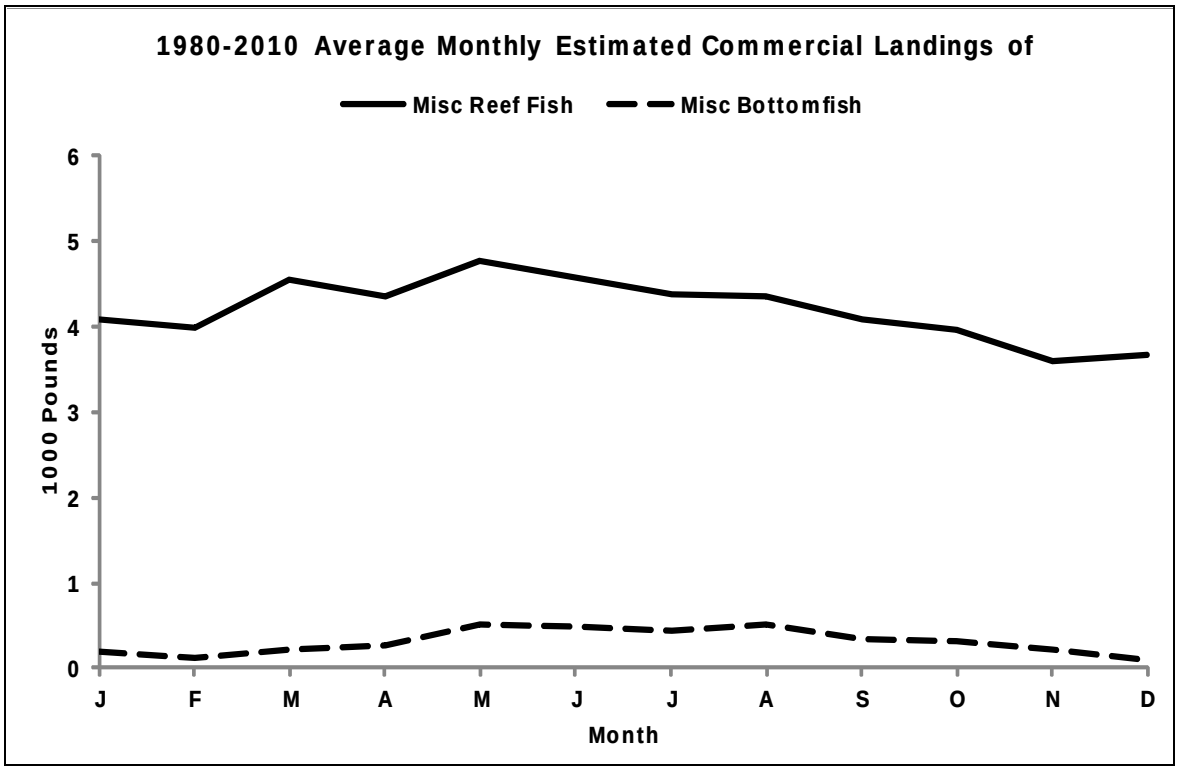

Figure C-2-4

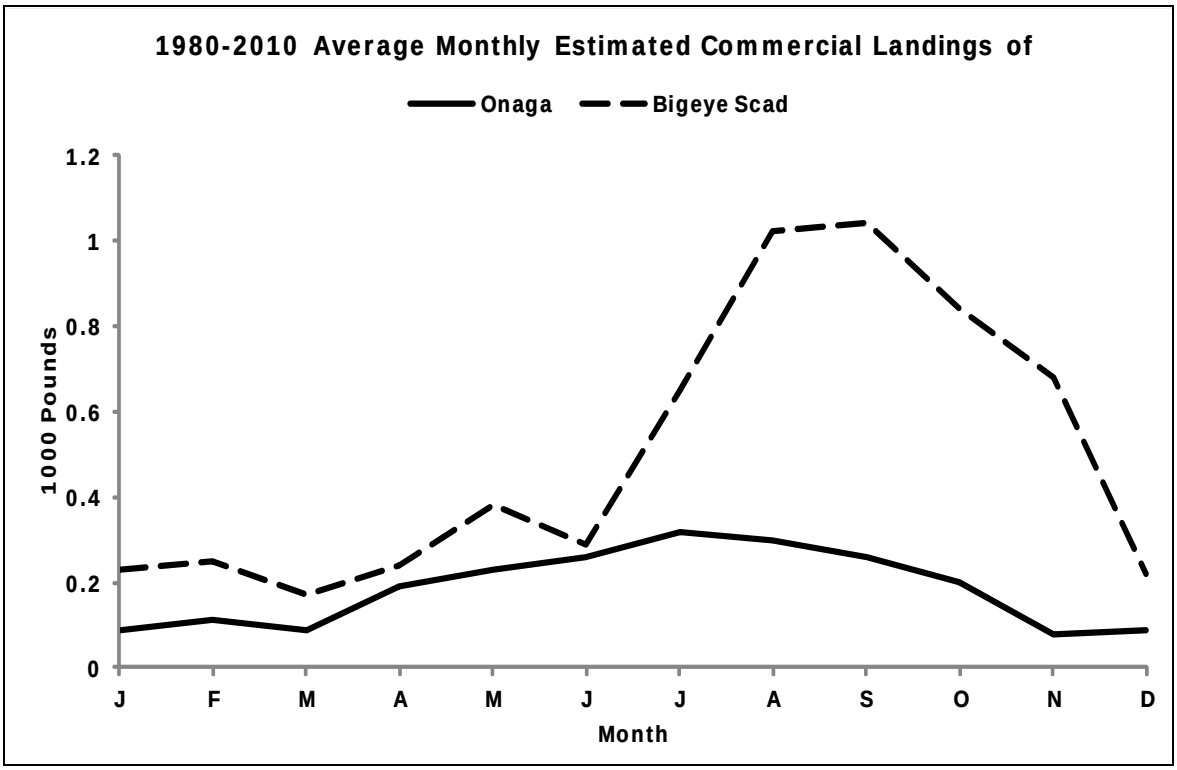
1980-2010 Average Monthly Estimated Commercial Landings of
Onaga
Bigeye Scad
1000 Pounds
1.2
1
0.8
0.6
0.4
0.2
0
J
F
M
A
M
J
J
A
S
O
N
D
Month

Figure C-2-5

The following graphs plot annual summary statistics to illustrate the variability among years:

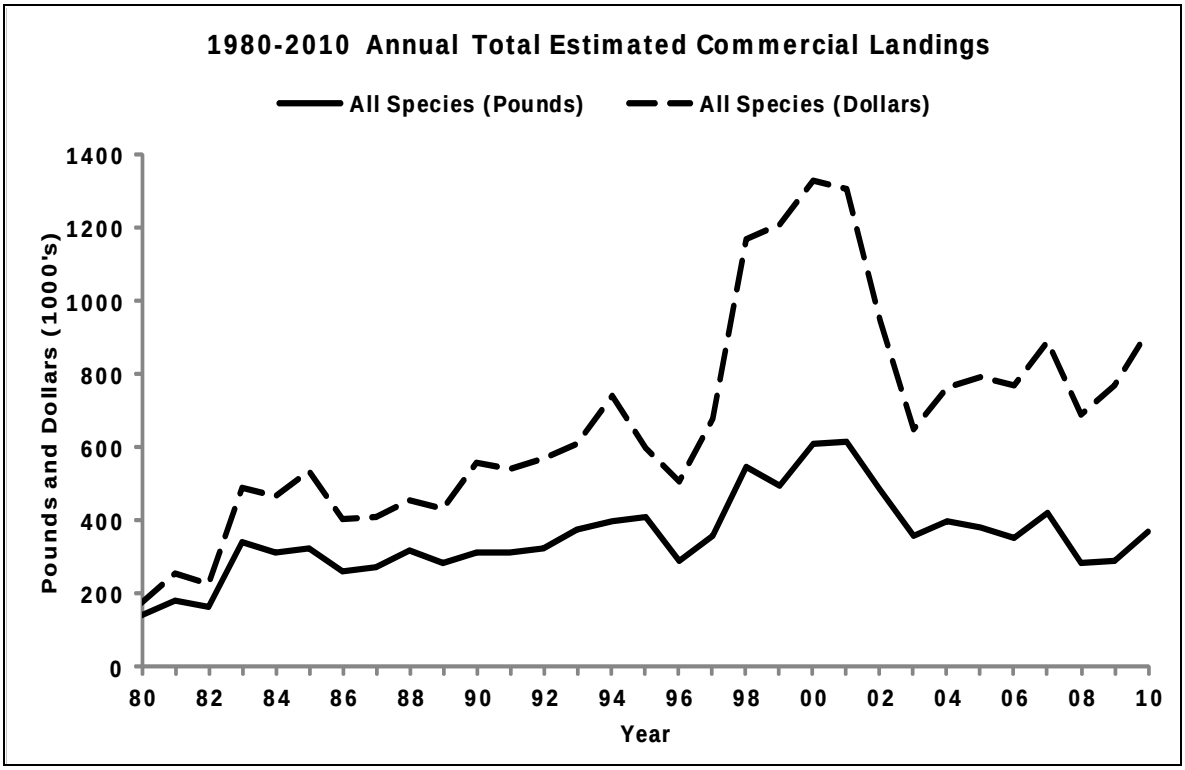

Figure C-3-1

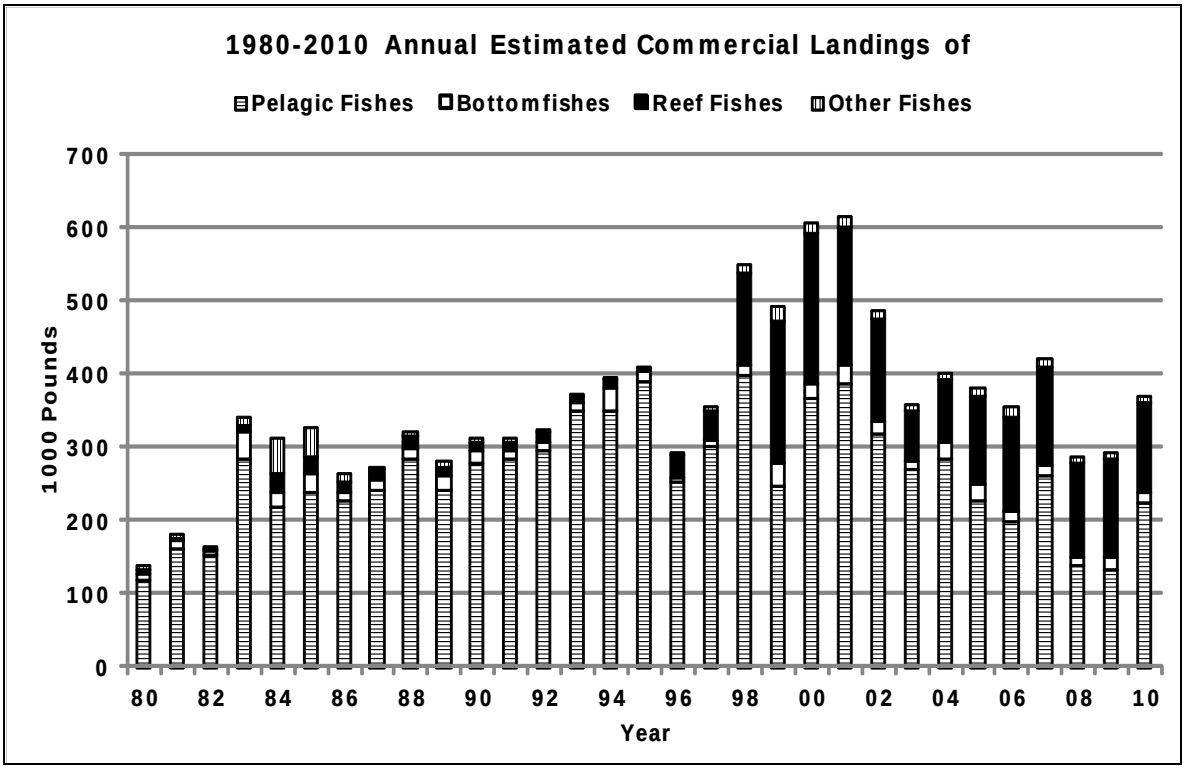

Figure C-3-2

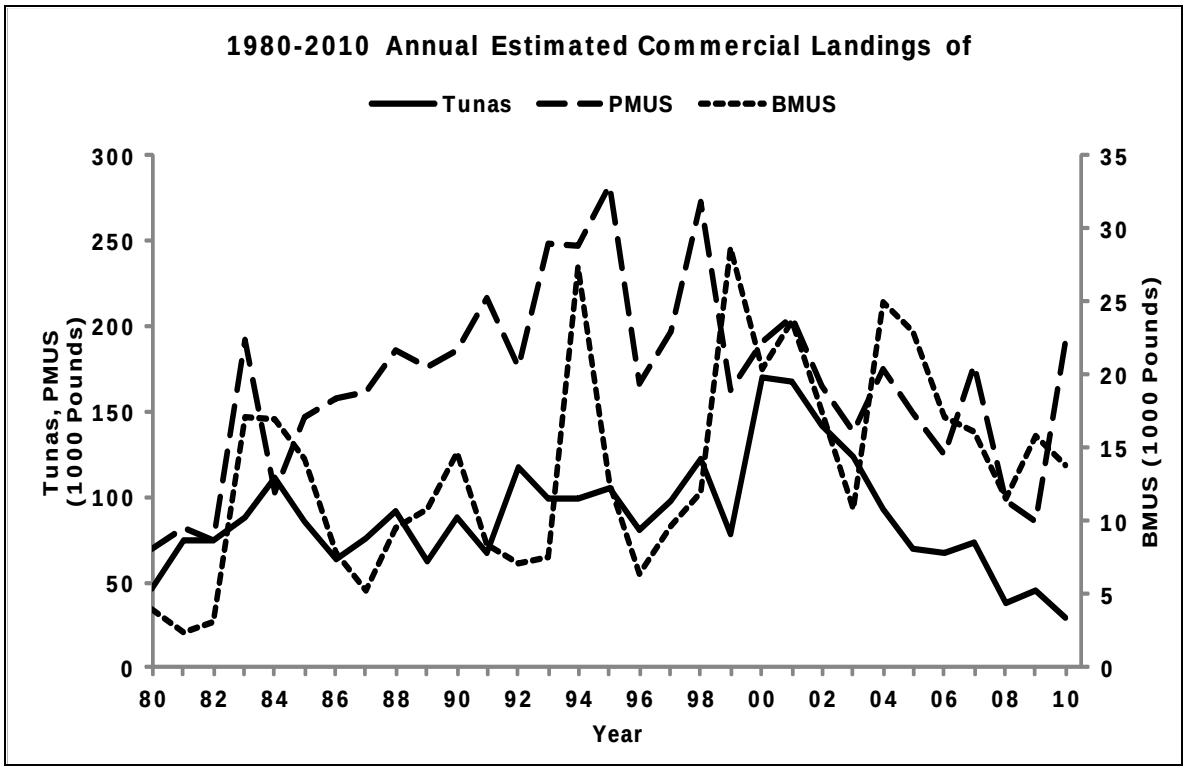

Figure C-3-3

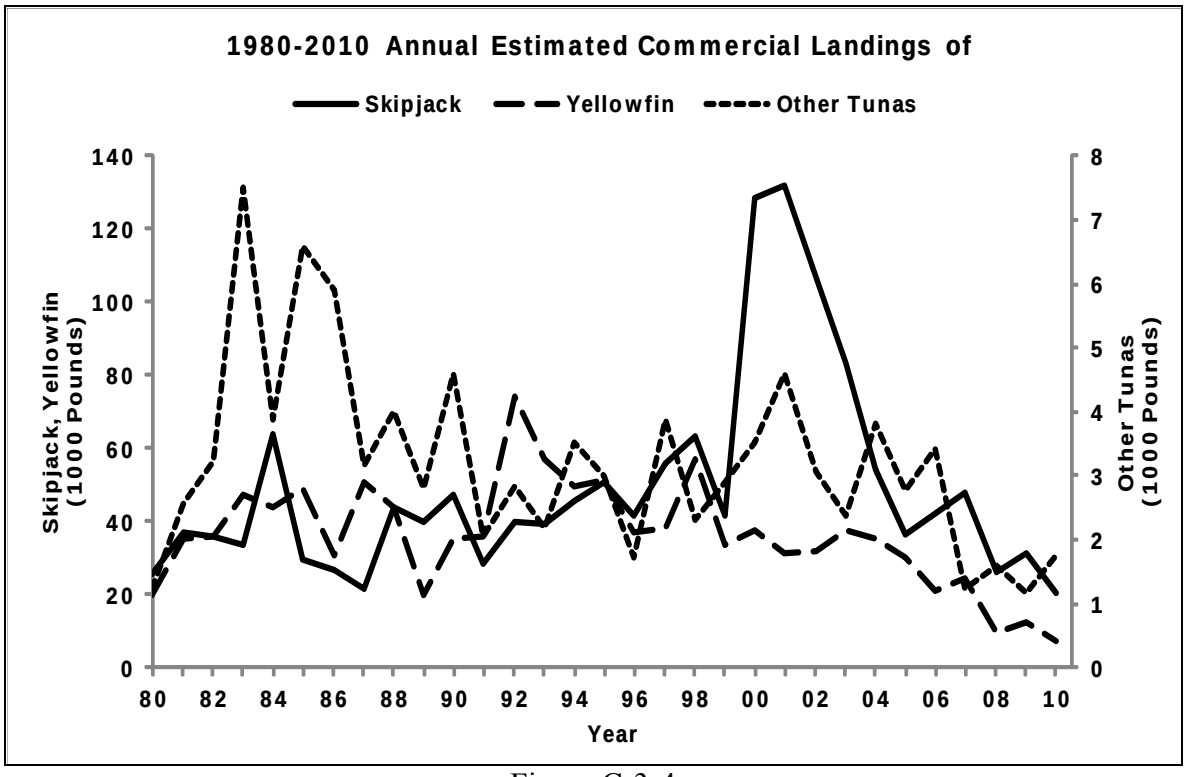

Figure C-3-4

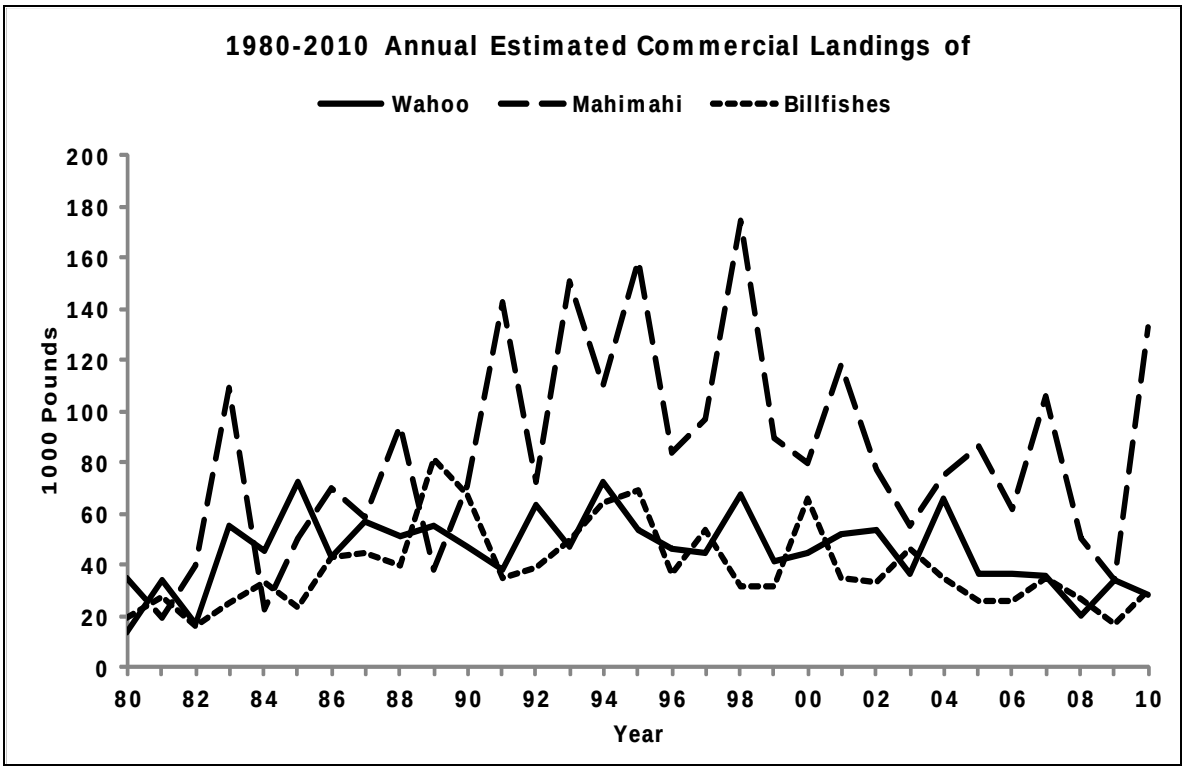

Figure C-3-5

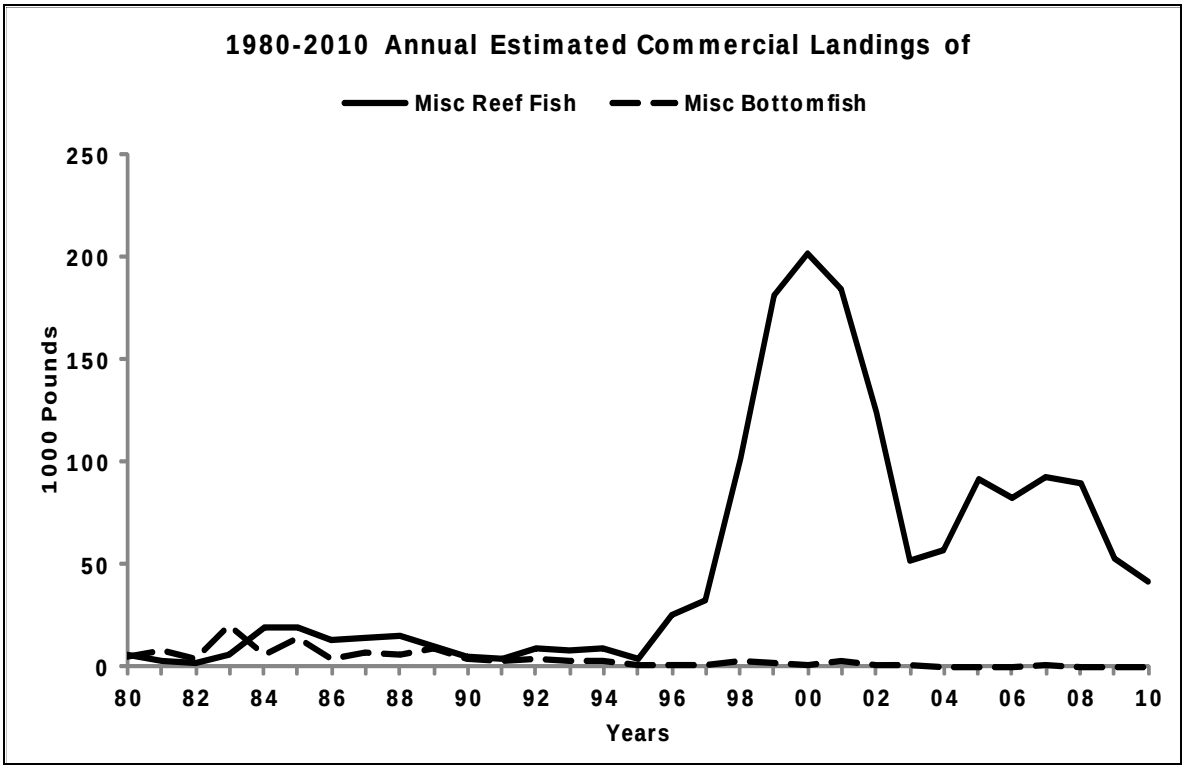

Figure C-3-6

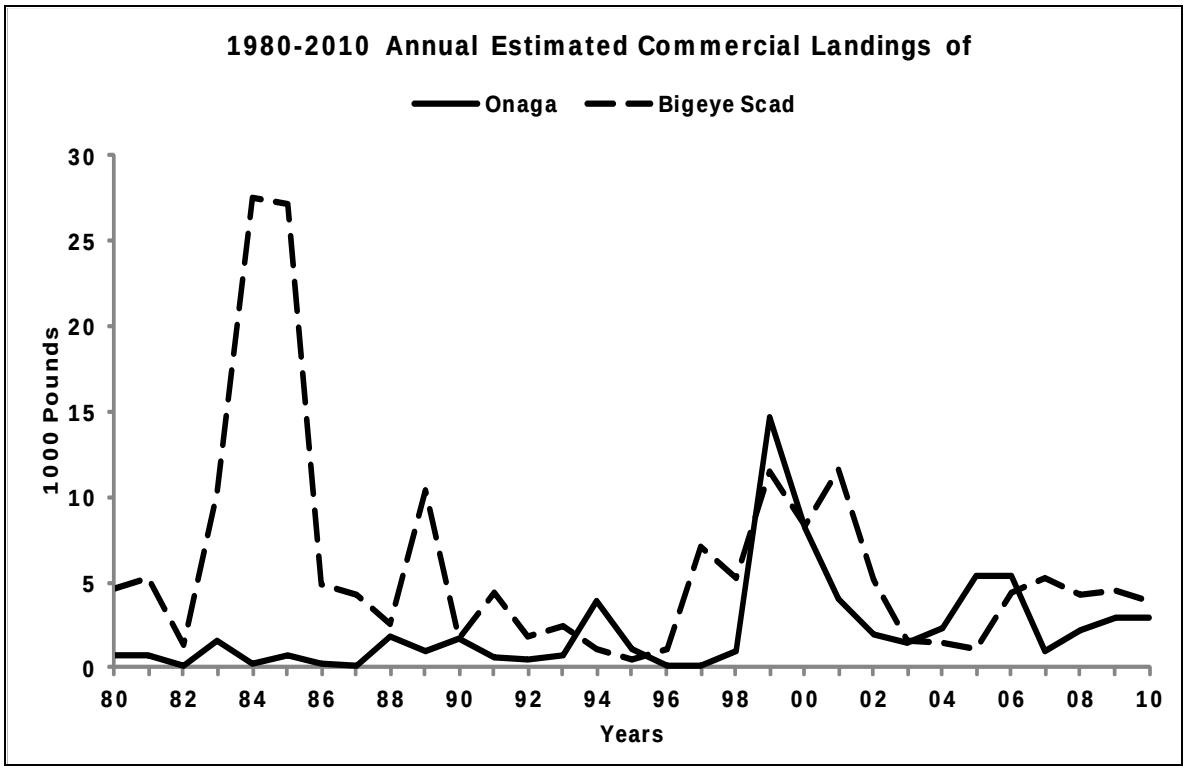
1980-2010 Annual Estimated Commercial Landings of
Onaga
Bigeye Scad
1000 Pounds
30
25
20
15
10
5
0
80
82
84
86
88
90
92
94
96
98
00
02
04
06
08
10
Years

Figure C-3-7

The following graphs plot monthly landings of some commercially important species and document monthly fluctuations over the time series:

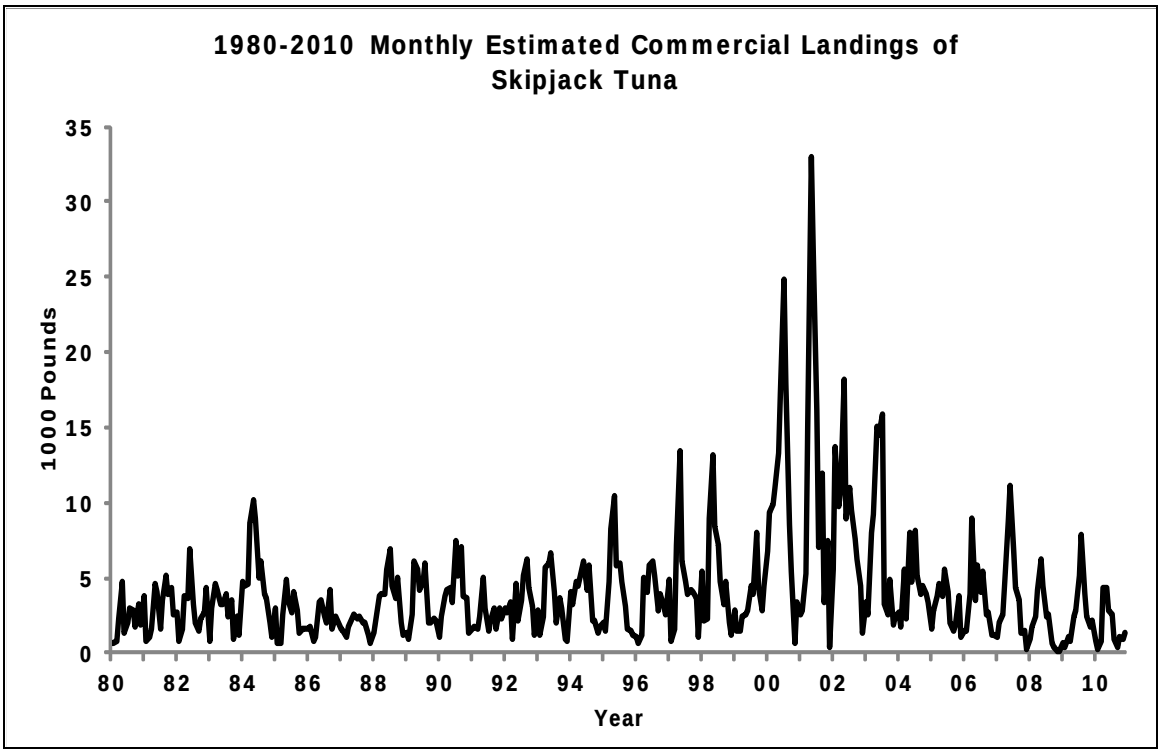

Figure C-4-1

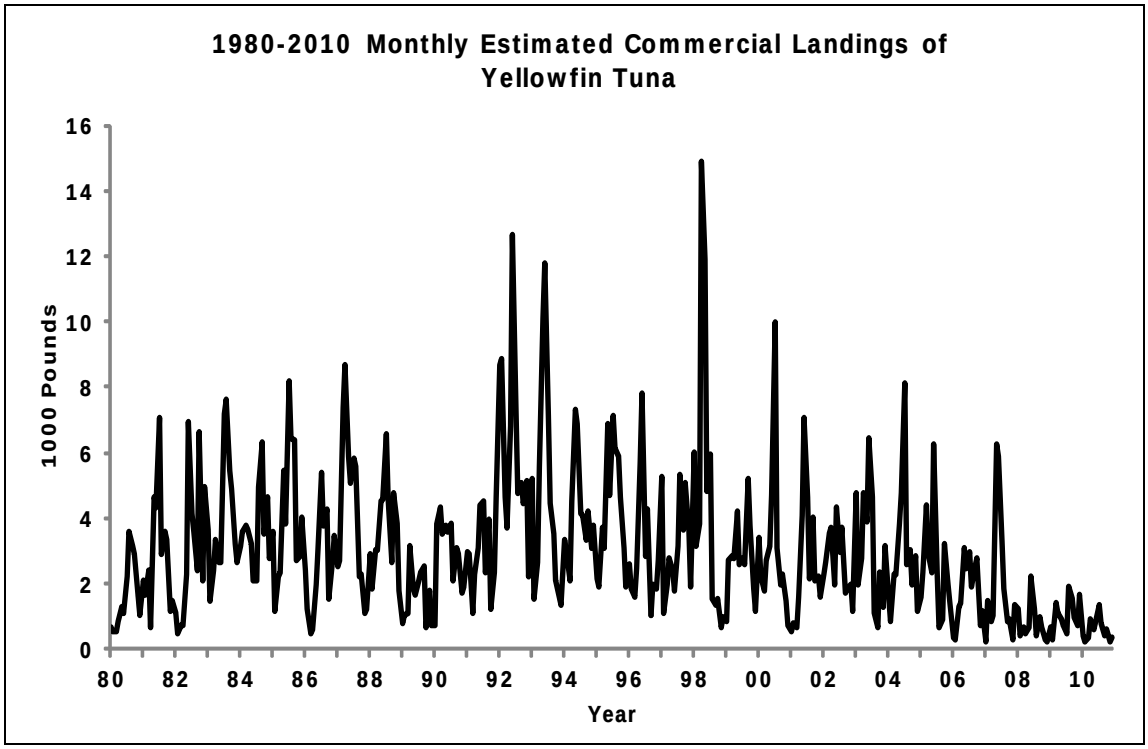

Figure C-4-2

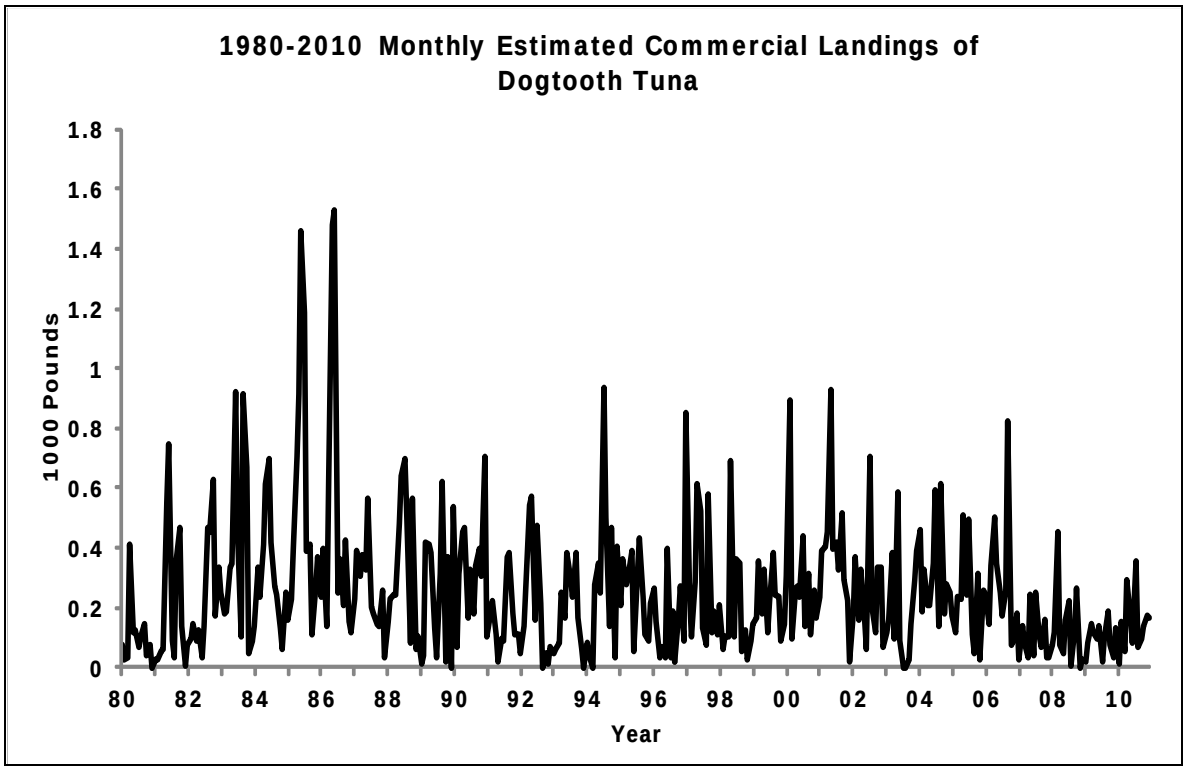

Figure C-4-3

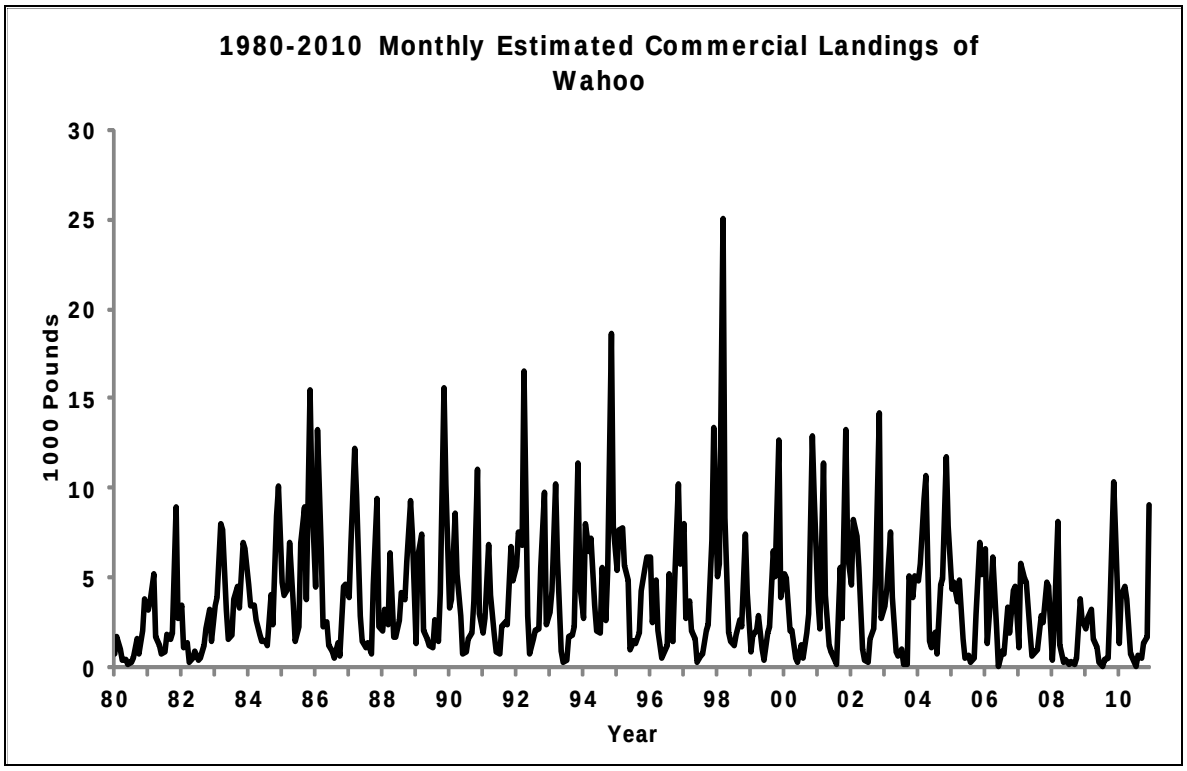

Figure C-4-4

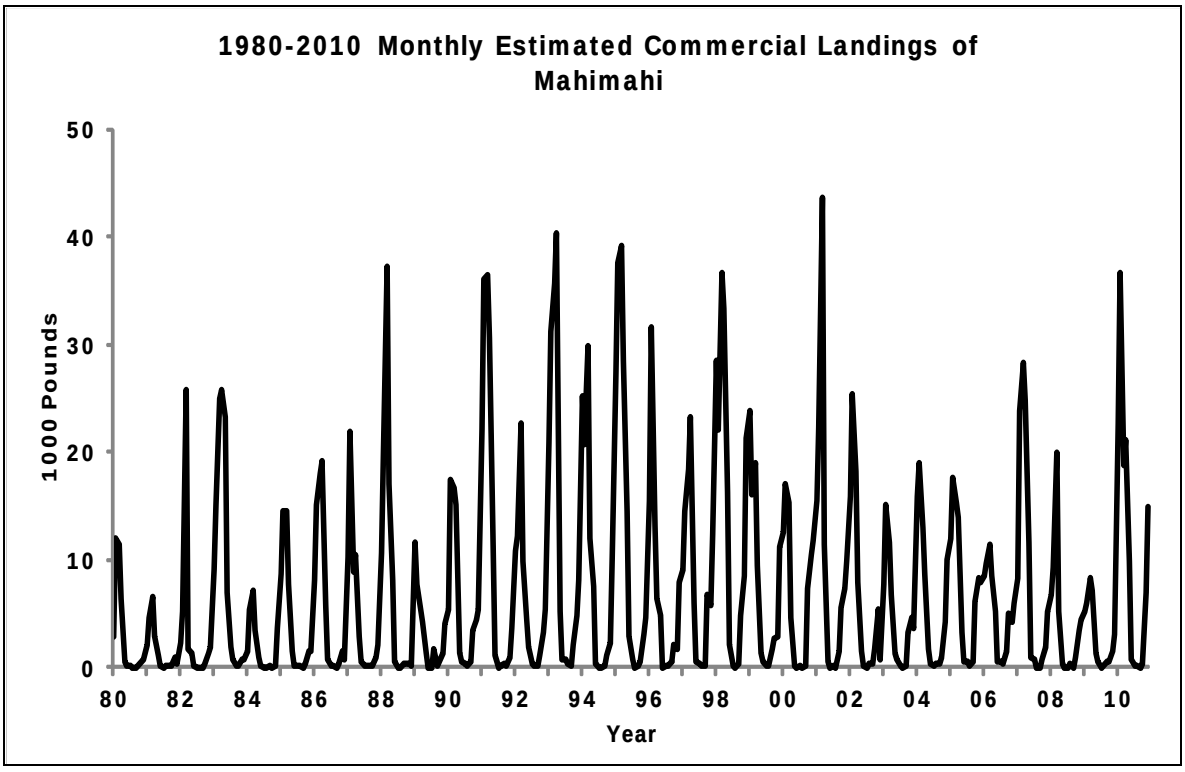

Figure C-4-5

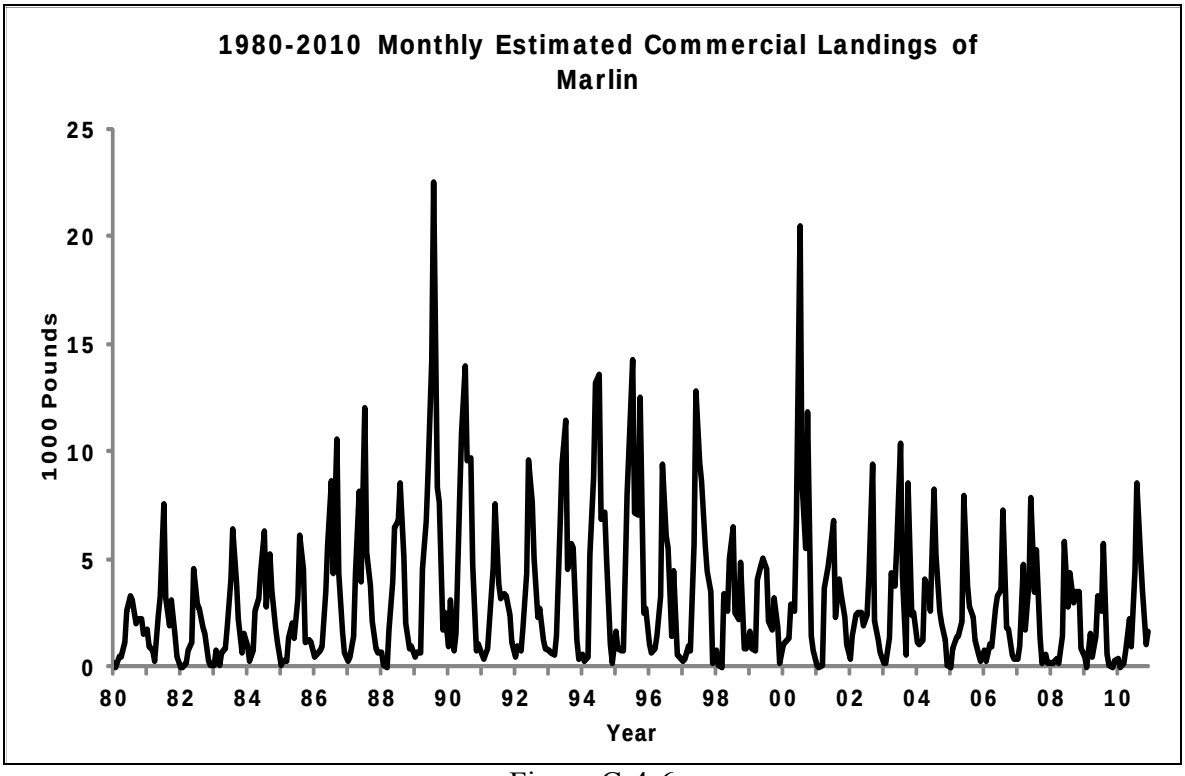

Figure C-4-6

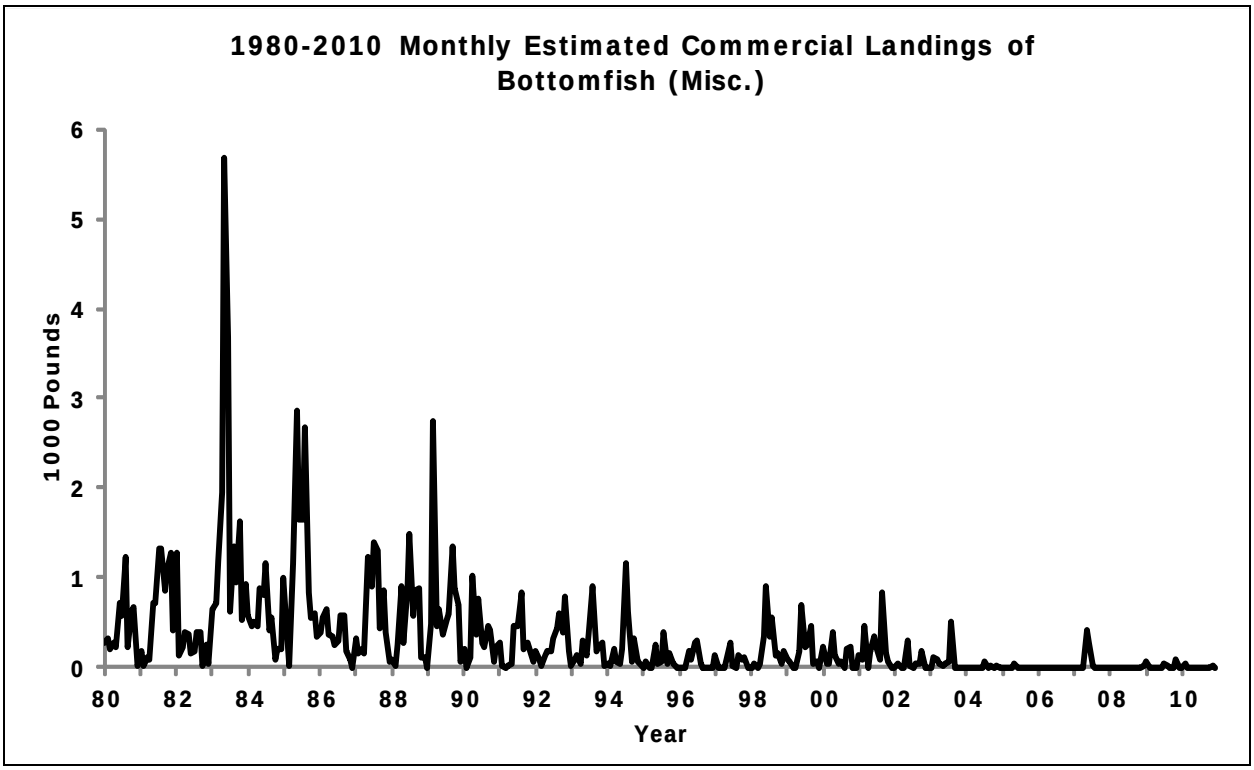

Figure C-4-7

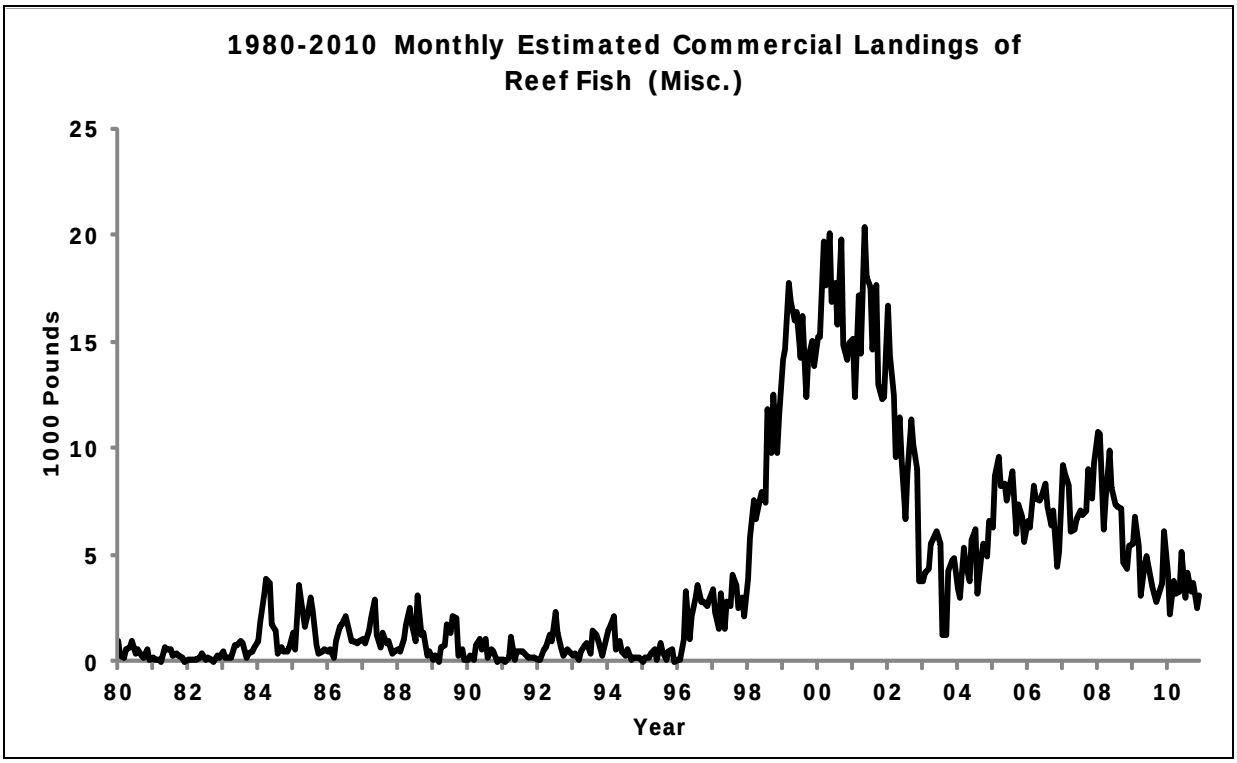

Figure C-4-8

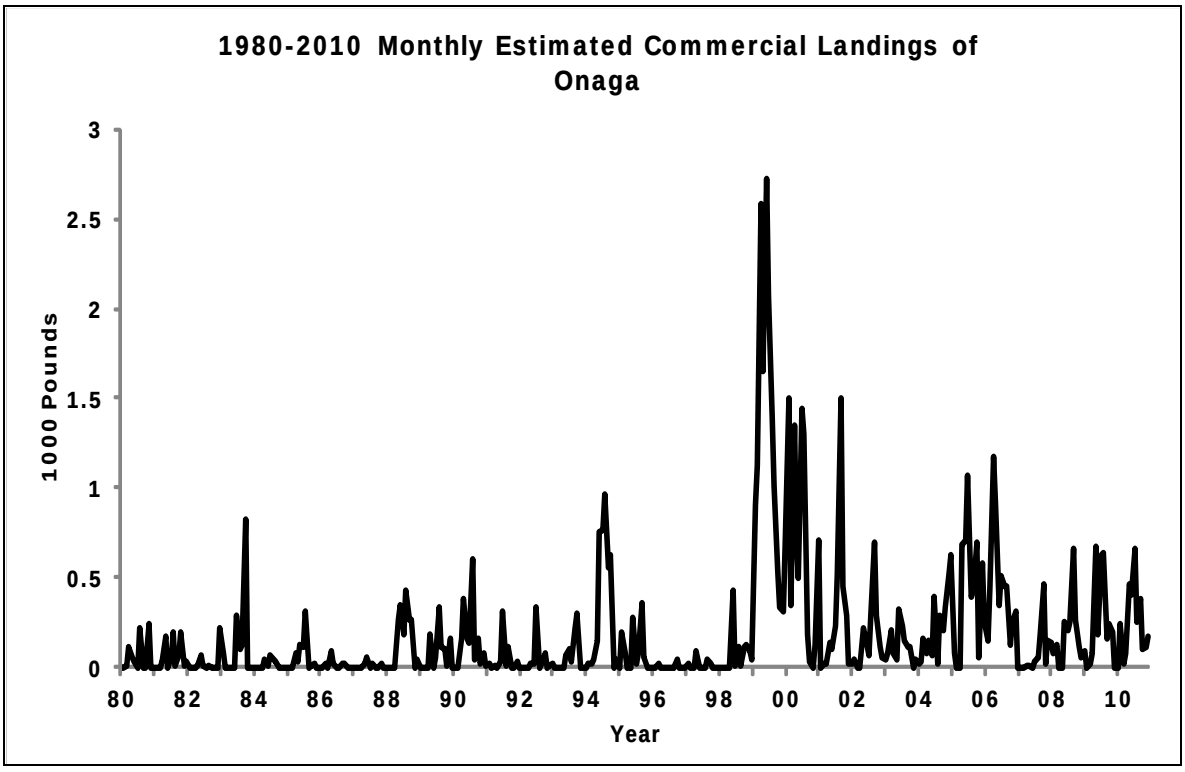

Figure C-4-9

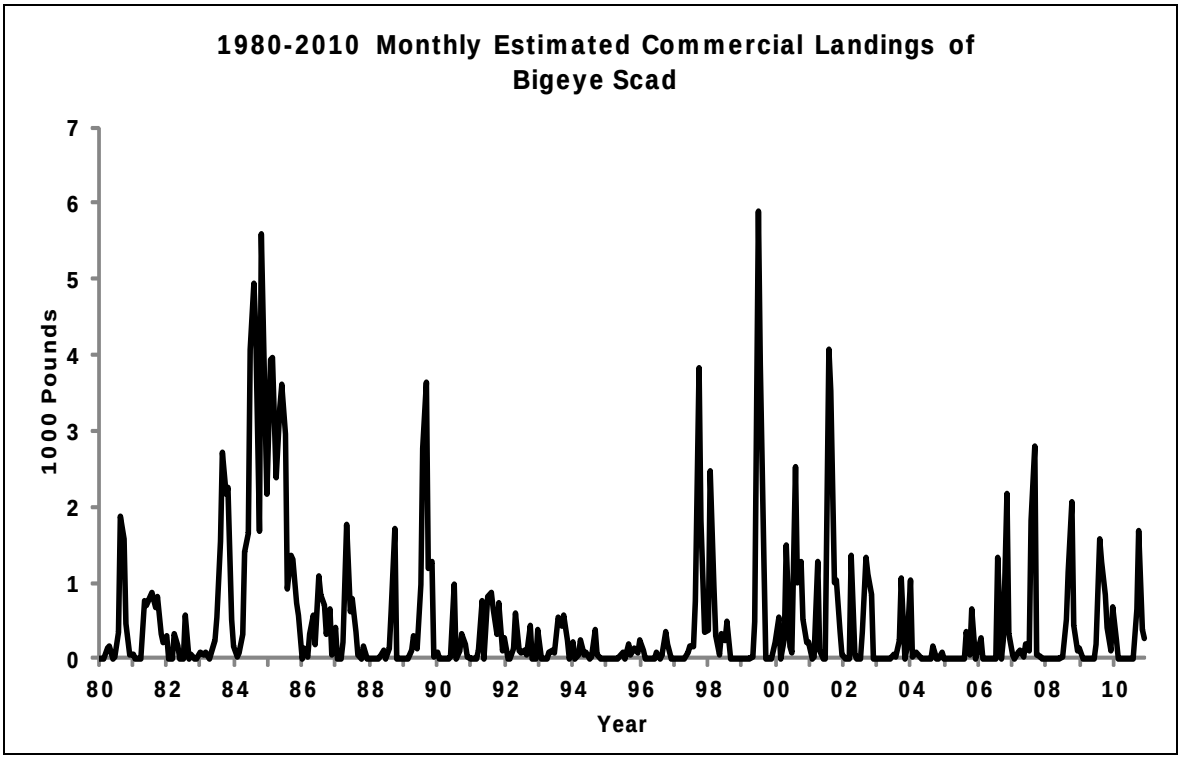

Figure C-4-10

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STATE OF HAWAII 2010 FISHERY STATISTICS

Compiled by

State of Hawaii

Division of Aquatic Resources

and the

Western Pacific Fishery Information Network

December 2012

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LIST OF HAWAII 2010 SUMMARY TABLES

LIST OF HAWAII FIGURES

LIST OF HAWAII FIGURES (continued)

STATE OF HAWAII 2010 FISHERY STATISTICS

INTRODUCTION

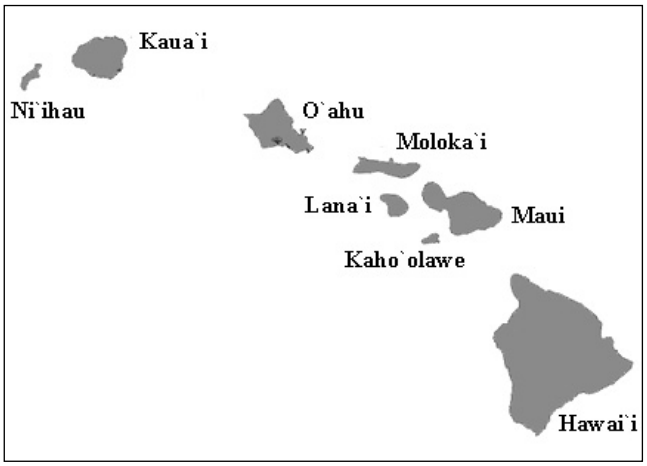
The Hawaiian Archipelago stretches northwestward over 1500 miles.

Location: 19° N latitude, 155° W longitude to about 28° N latitude and 178° W longitude

Islands: Hawaii, Maui, Lanai, Molokai, Oahu, Kauai, Kahoolawe, and Niihau (comprise over 99% of the total land area)

Population: 1,360,301 (*The State of Hawaii Data Book, 2010*)

Commercial Catch Breakdown (lbs): about 87% on Oahu, 2% on Hawaii (Big Island), and 11% on other islands or unknown



Hawaiian Islands: copied and modified from: http://satftp.soest.hawaii.edu/space/hawaii/maps/All_Islands_map.710x509.gif *SOEST Satlab Server*

The commercial fisheries of the State of Hawaii are quite diverse; they vary from shore-based algae (limu) harvesting by hand to large vessel-based fisheries such as the offshore pelagic longline fishery that operates on the high seas. There are several major fisheries in Hawaii. Tuna fishing using various methods, deepwater hook-and-line bottomfishing for groupers and snappers, various forms of net fishing that target nearshore pelagic and reef fish species, and trolling for such pelagic species as tuna, marlin, wahoo (ono), and mahimahi constitute the top producing fisheries.

Commercial fishing (i.e., selling catches or providing charter fishing services) in Hawaii requires purchasing an annually renewable commercial marine license (CML). In 2010 there were 4299 licensed commercial fishers. The summary catch data for 2010 were created from a combination of Hawaii Division of Aquatic Resources' (HDAR) fishers and dealer reports processed through the Dealer Reporting System and Fisherman Reporting System, as well as additional fishery reports (including federal longline logbooks).

In 2010 the main Hawaiian Islands (MHI) deepwater bottomfish fishery was managed through the implementation of a total allowable catch (TAC) of 254,050 pounds. The implementation of the TAC was a federally mandated management measure to end overfishing of specific deepwater bottomfish species within the MHI. The managed species are known as the "deep 7" and are made up of onaga, opakapaka, kalekale, hapuupuu, ehu, gindai, and lehi. The fishing season opened on September 1, 2010 and was closed March 12, 2011. For more

information about this fishery, please visit http://www.hawaiibottomfish.info. None of the other MHI commercial fisheries are constrained by TAC management measures.

DATA COLLECTING

Previously, data processed in the Reported Landings tables and charts presented in this section were collected from various Fishermen's Reporting System (FRS) forms. Beginning in October 2002, HDAR implemented several new FRS forms that no longer required sales information reporting as a trade-off for requiring improved catch, effort, and bycatch statistics. The FRS was modified to accommodate these new forms.

The Dealer Reporting System (DRS) was computerized in 2000 and is now a major source of sales data used to create the tables and charts. Data from the NOAA Fisheries Longline Logbook Program are integrated with DRS and FRS data to create the "best available" summaries presented in this report.

Dealers are required by state law to submit a Commercial Marine Dealer's Report for each month that they are in the business of purchasing marine life. Information collected includes

- Dealer Name
- Dealer Number
- Month and Year
- Date
- First and Last Name from Whom Fish was Bought
- Fisherman's Commercial Marine License Number
- Species Bought
- Pounds Bought
- Pieces Bought
- Amount Paid
- Condition

Likewise, all holders of a Commercial Marine License are required by state law to report on their fishing activity. The majority of commercial fishers use the Monthly Fishing Report, a replacement for the old General Fish Catch Report (C-3 Form**).** This form collects data on fishing catch and effort for each day, method, and area fished, and it is processed in the FRS. Information collected includes

- Fisherman's Name and Commercial License Number
- Boat's Name and Registration/USCG Number
- Month and Year Fished
- Day Fished
- Charter Trip (y/n)
- Buoy or Area Fished
- Fishing Method
- Hours Fished per Method/Area
- Number of Net Sets
- Number of Fishing Lines, Traps, or Net Length
- Port of Landing
- Species Name
- Number Landed
- Pounds Landed
- Number Lost
- Number Released

Other FRS data collection forms include the Net, Trap and Dive Activity Report, Tuna Handline Trip Report, Deep Sea Handline Trip Report, Aku Boat Report, NWHI Bottomfish Trip Sales Report, and NWHI Bottomfish Trip Daily Log. Commercial collectors of tropical marine fish are required to have an aquarium permit in addition to their commercial marine license, and they are required to report monthly on the C-6 Aquarium Fish Catch Report**.** Aquarium fish catches, however, are not included in this report's statistics.

This report assumes that the data submitted by fishers are complete and accurate. The HDAR continually attempts to improve the quality of data and decrease the time delays in receiving and processing the data.

DATA PROCESSING

When HDAR receives various data reporting forms, staff code and edit the data before keypunching. Forms that fail initial editing are returned for correction and resubmission, or minor problems may be cleared up over the telephone. Delinquency notices are sent to those who fall more than a few months behind in their reporting. Once the data are keypunched, HDAR staff use computer-generated reports to verify and correct errors in the database. When the database is considered to be reasonably complete and error free, it is ready for use in producing various summary catch reports.

DATA REPORTING

More than 150 marine species and species groups are recorded in HDAR's monthly landings reports, many of which are insignificant in the total catch. To help reduce this document's size and improve the usability of the tables, WPacFIN staff combined some of the less important species, reorganized the order of presentation, created a new species coding system, and translated all records in the database. The new coding system has 100 species and species groups based on flexible ecological and phylogenetic criteria. All of the commercially important pelagic and bottomfish species or unique species groups have individual codes and are reported separately.

The monthly and annual reports included in this document contain the common name, pounds caught, pounds sold, value rounded to the nearest dollar, and the average price per pound for each species. Pounds caught data is from the Longline Logbooks, Dealer Reports, and Fisherman Catch Reports; the pounds sold, value and price/pound data is from Dealer Reports. Each monthly report contains a subtotal for the sum of all species for that month.

Several types of graphs are also included. Please note that some of the charts in this volume are new or modified from earlier volumes. To access the most up-to-date data and charts, please visit the WPacFIN website, http://www.pifsc.noaa.gov/wpacfin.

SPECIES CATEGORIES

The species and species groups used in the tables and graphs are defined in this section. Many of the species included in this report have been recategorized over the years. For example, the Magnuson Fishery Conservation and Management Act of 1976 was amended in 1992 to include tunas in the Pelagic Management Unit Species (PMUS) category. However, this report maintains the original species categorizations from previous FSWP reports for comparative purposes. As such, tunas are kept in a separate category.

I. Pelagic Management Unit Species (PMUS)

- Billfishes (unknown)
- Black marlin
- Blue marlin
- Mahimahi
- Sailfish
- Sharks
- Shortnose spearfish
- Striped marlin
- Swordfish
- Wahoo

II. Bottomfish Management Unit Species (BMUS)

- Armorhead
- Butaguchi (pig-lipped ulua)
- Ehu (red snapper)
- Gindai (flower snapper)
- Gunkin (black) ulua
- Hapuupuu (hawaiian grouper)
- Kahala (amberjack)
- Kalekale
- Lehi (silverjaw)
- Onaga (red snapper)
- Opakapaka (pink snapper)
- Taape (blue lined snapper)
- Uku (gray snapper)
- White ulua
- Yellow-tail kali

III. Billfishes

- Billfishes (unknown)
- Black marlin
- Blue marlin
- Sailfish
- Shortnose spearfish
- Striped marlin
- Swordfish

IV. Tunas

- Albacore tuna
- Bigeye tuna
- Kawakawa
- Skipjack tuna
- Tunas (unknown)
- Yellowfin tuna

IV. Other Tunas

- Kawakawa
- Tunas (unknown)

VI. Fisheries Categories

A. *Pelagic Fishes*

Albacore tuna
Barracudas
Bigeye tuna
Billfishes (unknown)
Black marlin
Blue marlin
Japanese mackerel
Kawakawa
Mahimahi
Moonfish (opah)
Oilfish
Pelagic fishes (unknown)
Pomfret
Rainbow runner
Rays
Sailfish
Sharks
Shortnose spearfish
Skipjack tuna
Striped marlin
Swordfish
Tunas (unknown)
Wahoo
Yellowfin tuna

B. *Bottomfishes*

Armorhead
Blue spot grouper
Blue trevally
Butaguchi (pig-lipped ulua)
Dobe ulua
Ehu (red snapper)
Gindai (flower snapper)
Golden kalekale
Gunkin (black) ulua
Hapuupuu (hawaiian grouper)
Jacks
Kahala (amberjack)
Kalekale
Lehi (silverjaw)
Onaga (red snapper)
Opakapaka (pink snapper)
Papa ulua
Porgy
Sasa ulua
Snake mackerel
Snappers
Taape (blue lined snapper)
Uku (gray snapper)
White ulua
Yellow-tail kali

C. *Reef Fishes*

Bigeyes
Damselfishes
Filefishes
Flounders
Goatfishes
Gobies
Hawkfish
Mountain bass
Parrotfishes
Pufferfishes
Reef fishes (unknown)
Reef jacks
Rudderfish
Scorpionfishes
Squirrelfishes
Surgeonfishes/tangs
Tilapia
Trumpetfish
Wrasses

D. *Other Fishes*

Algae
Bigeye scad (akule)
Bonefish
Clams
Crabs
Eels
Flying fishes
Freshwater fishes
Herrings/sardines
Invertebrates
Leatherjacket
Limpets (saltwater)
Mackerel scad
Milkfish
Miscellaneous
Mullets
Needlefishes
Octopus
Sea turtles
Shrimp (freshwater)
Shrimp (saltwater)
Silversides
Slipper lobsters
Spiny lobsters
Squid
Ten pounder
Threadfin

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Table D-1
Hawaii Annual 2010 Reported Commercial Landings

Species	Caught	Sold	Value ($)	Price/Lb ($)
Miscellaneous	5,740	3,961	8,401	2.12
Sharks	300,256	223,621	112,291	0.50
Rays	50	0	0	0.00
Eels	2,116	720	890	1.24
Bigeye scad (akule)	557,182	269,666	756,339	2.80
Mackerel scad	297,801	201,942	529,425	2.62
Leatherjacket	278	256	509	1.99
Ten pounder	1,204	1,127	1,174	1.04
Bonefish	12,255	11,209	11,505	1.03
Herrings/sardines	486	486	972	2.00
Milkfish	2,031	1,825	2,372	1.30
Flying fishes	1	0	0	0.00
Needlefishes	594	385	634	1.65
Threadfin	630	507	3,386	6.68
Mullets	8,282	7,779	32,870	4.23
Pomfret	593,728	589,243	1,537,461	2.61
Oilfish	575,525	575,525	775,898	1.35
Jacks	2,805	1,224	3,035	2.48
Kahala (amberjack)	18,485	1,598	2,727	1.71
Sasa ulua	724	503	1,299	2.58
Butaguchi (pig-lipped ulua)	810	486	1,493	3.07
Dobe ulua	2,979	2,629	4,970	1.89
Papa ulua	7,572	6,674	23,559	3.53
White ulua	18,642	11,767	26,186	2.23
Gunkin (black) ulua	3,349	127	239	1.89
Blue trevally	9,049	3,809	8,657	2.27
Hapuupuu (hawaiian grouper)	8,108	6,521	34,690	5.32
Blue spot grouper	5,257	3,165	9,868	3.12
Kalekale	9,027	6,103	21,751	3.56
Snappers	7,237	5,120	19,040	3.72
Yellow-tail kali	27	24	55	2.27
Taape (blue lined snapper)	43,221	27,624	43,785	1.59
Ehu (red snapper)	27,407	19,438	109,201	5.62
Gindai (flower snapper)	3,120	1,919	8,765	4.57
Golden kalekale	257	40	152	3.82
Lehi (silverjaw)	12,215	9,258	38,068	4.11
Onaga (red snapper)	70,278	58,554	405,857	6.93
Opakapaka (pink snapper)	128,633	104,993	608,282	5.79
Uku (gray snapper)	124,140	109,162	428,179	3.92
Snake mackerel	14	0	0	0.00
Porgy	7,740	6,540	21,640	3.31
Reef fishes (unknown)	1,284	14	7	0.50
Reef jacks	32	14	61	4.28
Squirrelfishes	81,917	76,065	320,900	4.22
Trumpetfish	248	202	252	1.25
Scorpionfishes	3,634	1,951	9,501	4.87

Table D-1 (continued)
Hawaii Annual 2010 Reported Commercial Landings

Species	Caught	Sold	Value ($)	Price/Lb ($)
Mountain bass	2,508	2,063	8,200	3.98
Bigeyes	4,403	4,380	15,134	3.45
Goatfishes	75,216	61,838	280,234	4.53
Rudderfish	31,483	27,576	35,179	1.28
Damselfishes	2,943	2,826	9,181	3.25
Hawkfish	1,252	1,194	4,543	3.81
Tilapia	7,177	112	309	2.76
Wrasses	7,940	5,212	24,513	4.70
Parrotfishes	71,853	63,047	216,051	3.43
Surgeonfishes/tangs	130,944	112,583	202,740	1.80
Flounders	43	37	63	1.67
Filefishes	366	312	450	1.44
Pufferfishes	4	0	0	0.00
Pelagic fishes (unknown)	11,873	130	13	0.10
Moonfish (opah)	1,840,889	1,814,520	2,570,599	1.42
Rainbow runner	4,175	2,332	4,485	1.92
Mahimahi	1,689,518	1,508,741	3,282,187	2.18
Barracudas	30,807	27,537	26,939	0.98
Wahoo	753,955	599,285	1,742,199	2.91
Japanese mackerel	9	0	0	0.00
Tunas (unknown)	28,651	12,038	37,792	3.14
Skipjack tuna	663,375	298,535	549,336	1.84
Yellowfin tuna	2,738,746	2,401,633	6,989,970	2.91
Albacore tuna	970,970	912,637	1,296,818	1.42
Bigeye tuna	13,213,523	12,978,104	50,465,986	3.89
Kawakawa	9,063	2,345	5,276	2.25
Billfishes (unknown)	2,729	952	887	0.93
Swordfish	3,775,169	3,149,139	7,288,753	2.31
Blue marlin	967,466	876,605	1,121,185	1.28
Black marlin	5,599	0	0	0.00
Striped marlin	385,999	339,235	627,498	1.85
Shortnose spearfish	282,206	270,745	369,158	1.36
Sailfish	34,672	32,276	40,947	1.27
Spiny lobsters	12,222	9,419	116,492	12.4
Slipper lobsters	124	21	196	9.23
Crabs	46,391	11,727	51,644	4.40
Shrimp (saltwater)	3,286	238	975	4.09
Octopus	34,174	22,936	91,338	3.98
Squid	6,534	5,978	13,106	2.19
Limpets (saltwater)	26,525	12,102	70,878	5.86
Invertebrates	581	374	2,763	7.39
Algae	12,534	5,053	47,629	9.43
TOTAL	30,844,263	27,929,589	83,537,992	2.99

Table D-2
Hawaii January 2010 Reported Commercial Landings

Species	Caught	Sold	Value ($)	Price/Lb ($)
Miscellaneous	302	302	851	2.82
Sharks	24,602	21,578	8,217	0.38
Eels	60	35	35	1.00
Bigeye scad (akule)	15,897	12,421	40,871	3.29
Mackerel scad	24,944	19,719	43,600	2.21
Leatherjacket	12	12	22	1.81
Ten pounder	266	266	293	1.10
Bonefish	199	174	183	1.05
Milkfish	211	198	245	1.24
Needlefishes	78	56	95	1.70
Threadfin	43	26	189	7.30
Mullets	77	77	179	2.31
Pomfret	42,055	42,055	109,686	2.61
Oilfish	55,576	55,576	57,938	1.04
Jacks	283	37	64	1.74
Kahala (amberjack)	1,686	15	30	2.00
Sasa ulua	67	59	103	1.75
Butaguchi (pig-lipped ulua)	129	58	203	3.50
Dobe ulua	8	8	16	2.00
Papa ulua	482	163	571	3.50
White ulua	1,680	1,129	2,658	2.35
Gunkin (black) ulua	72	49	105	2.17
Blue trevally	943	431	947	2.20
Hapuupuu (hawaiian grouper)	994	782	3,919	5.01
Blue spot grouper	279	123	340	2.76
Kalekale	1,038	700	2,337	3.34
Snappers	187	137	432	3.17
Yellow-tail kali	9	9	22	2.51
Taape (blue lined snapper)	4,361	3,725	5,389	1.45
Ehu (red snapper)	4,342	3,347	16,900	5.05
Gindai (flower snapper)	362	299	1,355	4.54
Golden kalekale	20	2	4	2.00
Lehi (silverjaw)	1,711	1,378	5,748	4.17
Onaga (red snapper)	8,971	6,794	45,733	6.73
Opakapaka (pink snapper)	15,911	11,442	71,679	6.26
Uku (gray snapper)	14,010	14,010	34,753	2.48
Snake mackerel	14	0	0	0.00
Porgy	554	198	672	3.40
Reef fishes (unknown)	62	0	0	0.00
Squirrelfishes	6,216	5,612	23,170	4.13
Trumpetfish	23	9	10	1.09
Scorpionfishes	347	139	614	4.41
Mountain bass	184	117	487	4.15
Bigeyes	405	405	1,160	2.86
Goatfishes	5,988	5,065	20,172	3.98
Rudderfish	587	486	657	1.35

Table D-2 (continued)
Hawaii January 2010 Reported Commercial Landings

Species	Caught	Sold	Value ($)	Price/Lb ($)
Damselfishes	403	403	1,470	3.64
Hawkfish	107	107	417	3.89
Tilapia	92	85	255	3.00
Wrasses	791	429	1,958	4.57
Parrotfishes	3,918	3,270	11,195	3.42
Surgeonfishes/tangs	9,568	9,352	17,937	1.92
Filefishes	7	4	6	1.75
Pelagic fishes (unknown)	529	0	0	0.00
Moonfish (opah)	129,022	123,564	218,984	1.77
Rainbow runner	351	156	245	1.57
Mahimahi	49,643	35,950	98,019	2.73
Barracudas	599	397	607	1.53
Wahoo	22,900	16,965	65,486	3.86
Tunas (unknown)	10,958	22	44	2.06
Skipjack tuna	91,767	30,518	31,020	1.02
Yellowfin tuna	185,368	163,228	476,518	2.92
Albacore tuna	107,914	77,940	105,151	1.35
Bigeye tuna	929,599	874,173	3,249,870	3.72
Kawakawa	820	245	592	2.41
Billfishes (unknown)	407	0	0	0.00
Swordfish	455,905	392,207	840,412	2.14
Blue marlin	18,827	8,846	20,368	2.30
Black marlin	98	0	0	0.00
Striped marlin	19,521	17,903	53,150	2.97
Shortnose spearfish	25,600	23,423	35,406	1.51
Sailfish	509	81	162	2.00
Spiny lobsters	1,095	752	7,116	9.47
Slipper lobsters	13	0	0	0.00
Crabs	4,728	2,077	7,374	3.55
Octopus	1,097	748	2,923	3.91
Squid	0	0	0	0.00
Limpets (saltwater)	2,378	772	4,626	5.99
Algae	1,039	670	6,696	10.0
TOTAL	2,311,818	1,993,503	5,760,662	2.89

Table D-3
Hawaii February 2010 Reported Commercial Landings

Species	Caught	Sold	Value ($)	Price/Lb ($)
Miscellaneous	207	173	945	5.47
Sharks	27,648	23,760	14,705	0.62
Rays	32	0	0	0.00
Eels	152	47	47	1.00
Bigeye scad (akule)	72,191	32,202	90,046	2.80
Mackerel scad	28,399	21,587	58,240	2.70
Leatherjacket	11	5	11	2.21
Ten pounder	75	75	75	1.00
Bonefish	1,414	1,100	1,100	1.00
Herrings/sardines	486	486	972	2.00
Milkfish	45	39	51	1.30
Needlefishes	192	104	120	1.15
Threadfin	35	35	218	6.24
Mullets	71	71	152	2.14
Pomfret	52,386	52,386	152,617	2.91
Oilfish	65,155	65,155	68,762	1.06
Jacks	65	12	32	2.73
Kahala (amberjack)	1,346	50	64	1.27
Sasa ulua	85	85	252	2.96
Butaguchi (pig-lipped ulua)	10	10	38	4.00
Dobe ulua	2,339	2,339	4,391	1.88
Papa ulua	562	497	1,694	3.41
White ulua	1,506	702	1,787	2.55
Gunkin (black) ulua	2,665	0	0	0.00
Blue trevally	468	276	648	2.35
Hapuupuu (hawaiian grouper)	1,090	930	4,492	4.83
Blue spot grouper	336	115	430	3.74
Kalekale	685	531	1,968	3.71
Snappers	155	128	507	3.97
Yellow-tail kali	1	1	2	2.00
Taape (blue lined snapper)	2,006	1,552	2,439	1.57
Ehu (red snapper)	2,965	2,596	13,953	5.37
Gindai (flower snapper)	205	146	663	4.54
Golden kalekale	11	7	35	5.00
Lehi (silverjaw)	1,189	1,100	4,972	4.52
Onaga (red snapper)	6,957	6,367	47,473	7.46
Opakapaka (pink snapper)	13,375	10,834	68,871	6.36
Uku (gray snapper)	10,747	9,642	39,079	4.05
Porgy	852	789	3,039	3.85
Reef fishes (unknown)	107	0	0	0.00
Squirrelfishes	5,588	4,742	20,699	4.37
Trumpetfish	21	21	28	1.35
Scorpionfishes	360	150	945	6.29
Mountain bass	515	487	1,592	3.27
Bigeyes	312	312	1,108	3.56
Goatfishes	4,262	3,522	14,529	4.13

Table D-3 (continued)
Hawaii February 2010 Reported Commercial Landings

Species	Caught	Sold	Value ($)	Price/Lb ($)
Rudderfish	840	673	969	1.44
Damselfishes	343	343	1,270	3.71
Hawkfish	145	145	583	4.03
Tilapia	945	0	0	0.00
Wrasses	496	369	2,033	5.52
Parrotfishes	4,049	4,049	14,961	3.70
Surgeonfishes/tangs	9,328	7,783	15,775	2.03
Filefishes	20	20	36	1.81
Pelagic fishes (unknown)	913	130	13	0.10
Moonfish (opah)	88,000	88,000	213,844	2.43
Rainbow runner	242	179	347	1.93
Mahimahi	47,627	37,214	107,090	2.88
Barracudas	732	732	1,094	1.49
Wahoo	21,376	18,690	69,488	3.72
Japanese mackerel	2	0	0	0.00
Tunas (unknown)	294	116	301	2.60
Skipjack tuna	72,855	24,226	37,060	1.53
Yellowfin tuna	284,692	261,242	686,173	2.63
Albacore tuna	221,692	221,692	171,878	0.78
Bigeye tuna	1,133,188	1,132,817	3,568,717	3.15
Kawakawa	771	322	655	2.04
Swordfish	510,759	372,993	840,437	2.25
Blue marlin	49,328	34,470	62,282	1.81
Black marlin	550	0	0	0.00
Striped marlin	26,766	24,197	59,789	2.47
Shortnose spearfish	18,998	16,028	31,392	1.96
Sailfish	556	116	144	1.24
Spiny lobsters	2,171	1,719	22,761	13.2
Slipper lobsters	7	0	0	0.00
Crabs	3,147	1,324	5,522	4.17
Octopus	1,834	1,474	5,538	3.76
Squid	33	33	50	1.50
Limpets (saltwater)	2,404	840	5,220	6.21
Invertebrates	45	45	358	8.00
Algae	558	558	4,858	8.71
TOTAL	2,814,984	2,497,696	6,554,424	2.62

Table D-4
Hawaii March 2010 Reported Commercial Landings

Species	Caught	Sold	Value ($)	Price/Lb ($)
Miscellaneous	62	62	129	2.09
Sharks	35,311	26,118	12,288	0.47
Eels	187	9	9	1.00
Bigeye scad (akule)	12,889	10,448	34,159	3.27
Mackerel scad	26,988	19,949	55,691	2.79
Leatherjacket	10	10	19	1.91
Ten pounder	128	116	116	1.01
Bonefish	1,112	1,040	1,072	1.03
Milkfish	107	107	159	1.50
Needlefishes	68	41	82	2.00
Threadfin	27	27	191	7.20
Mullets	51	51	151	2.99
Pomfret	58,083	58,083	173,248	2.98
Oilfish	66,251	66,251	92,623	1.40
Jacks	77	25	86	3.51
Kahala (amberjack)	417	131	225	1.72
Sasa ulua	6	6	19	3.50
Butaguchi (pig-lipped ulua)	18	18	54	3.00
Dobe ulua	15	15	31	2.00
Papa ulua	668	494	1,867	3.78
White ulua	1,082	629	1,594	2.53
Gunkin (black) ulua	102	0	0	0.00
Blue trevally	770	68	182	2.69
Hapuupuu (hawaiian grouper)	127	100	613	6.13
Blue spot grouper	349	203	793	3.90
Kalekale	205	145	575	3.96
Snappers	119	81	316	3.90
Yellow-tail kali	1	1	5	4.00
Taape (blue lined snapper)	2,198	1,461	2,400	1.64
Ehu (red snapper)	1,719	1,491	10,466	7.02
Gindai (flower snapper)	91	61	345	5.70
Golden kalekale	6	6	23	3.97
Lehi (silverjaw)	127	113	496	4.40
Onaga (red snapper)	2,470	2,045	15,831	7.74
Opakapaka (pink snapper)	3,531	2,545	17,869	7.02
Uku (gray snapper)	3,854	3,199	13,935	4.36
Porgy	477	420	1,425	3.39
Reef fishes (unknown)	115	0	0	0.00
Squirrelfishes	2,404	2,308	9,608	4.16
Trumpetfish	20	20	20	1.00
Scorpionfishes	125	60	350	5.86
Mountain bass	159	149	706	4.75
Bigeyes	190	190	679	3.56
Goatfishes	6,969	6,500	27,430	4.22
Rudderfish	511	416	574	1.38
Damselfishes	259	259	935	3.60

Table D-4 (continued)
Hawaii March 2010 Reported Commercial Landings

Species	Caught	Sold	Value ($)	Price/Lb ($)
Hawkfish	107	107	413	3.87
Tilapia	1,462	27	54	2.00
Wrasses	427	232	1,090	4.69
Parrotfishes	3,231	2,930	10,055	3.43
Surgeonfishes/tangs	5,885	5,427	11,678	2.15
Filefishes	45	21	40	1.93
Moonfish (opah)	152,573	150,138	284,721	1.90
Rainbow runner	172	91	222	2.43
Mahimahi	87,343	76,432	252,656	3.31
Barracudas	617	617	1,068	1.73
Wahoo	22,339	17,951	77,366	4.31
Japanese mackerel	5	0	0	0.00
Tunas (unknown)	567	12	46	3.80
Skipjack tuna	29,772	11,728	24,477	2.09
Yellowfin tuna	165,931	153,444	485,555	3.16
Albacore tuna	103,476	97,472	143,925	1.48
Bigeye tuna	899,106	899,106	3,603,345	4.01
Kawakawa	261	75	187	2.49
Billfishes (unknown)	104	0	0	0.00
Swordfish	789,286	629,247	1,451,858	2.31
Blue marlin	51,944	38,660	69,351	1.79
Striped marlin	27,629	27,629	64,792	2.35
Shortnose spearfish	15,562	15,562	25,844	1.66
Sailfish	1,002	298	587	1.97
Spiny lobsters	782	445	4,984	11.2
Slipper lobsters	5	0	0	0.00
Crabs	2,965	685	3,488	5.09
Octopus	2,000	1,563	6,190	3.96
Limpets (saltwater)	1,799	922	4,895	5.31
Invertebrates	38	38	304	8.00
Algae	519	298	2,809	9.42
TOTAL	2,597,404	2,336,622	7,011,385	3.00

Table D-5
Hawaii April 2010 Reported Commercial Landings

Species	Caught	Sold	Value ($)	Price/Lb ($)
Miscellaneous	221	221	342	1.54
Sharks	19,936	13,316	7,811	0.59
Eels	112	9	9	1.00
Bigeye scad (akule)	19,149	11,070	37,224	3.36
Mackerel scad	21,361	12,915	35,116	2.72
Leatherjacket	35	33	68	2.08
Ten pounder	73	70	70	1.00
Bonefish	2,728	2,421	2,447	1.01
Milkfish	43	27	40	1.49
Needlefishes	43	37	58	1.58
Threadfin	39	36	269	7.47
Mullets	1,248	1,073	4,770	4.45
Pomfret	63,485	62,754	156,135	2.49
Oilfish	44,994	44,994	72,947	1.62
Jacks	259	138	477	3.46
Kahala (amberjack)	408	165	330	2.00
Sasa ulua	94	20	61	3.09
Butaguchi (pig-lipped ulua)	3	0	0	0.00
Dobe ulua	169	169	279	1.65
Papa ulua	446	446	1,353	3.04
White ulua	1,002	812	1,838	2.26
Gunkin (black) ulua	25	0	0	0.00
Blue trevally	412	135	454	3.37
Hapuupuu (hawaiian grouper)	78	49	295	6.01
Blue spot grouper	417	316	1,309	4.15
Kalekale	200	110	405	3.68
Snappers	195	176	601	3.42
Taape (blue lined snapper)	2,762	2,485	3,994	1.61
Ehu (red snapper)	1,107	781	6,840	8.76
Gindai (flower snapper)	60	29	150	5.10
Lehi (silverjaw)	54	10	42	4.00
Onaga (red snapper)	1,418	1,012	7,936	7.84
Opakapaka (pink snapper)	1,836	1,267	7,914	6.25
Uku (gray snapper)	3,518	2,687	11,478	4.27
Porgy	877	708	2,525	3.57
Reef fishes (unknown)	84	0	0	0.00
Reef jacks	8	8	34	4.50
Squirrelfishes	3,258	3,258	13,352	4.10
Trumpetfish	7	7	11	1.70
Scorpionfishes	122	63	396	6.33
Mountain bass	226	92	445	4.86
Bigeyes	361	352	1,478	4.19
Goatfishes	7,371	6,395	26,793	4.19
Rudderfish	5,461	3,936	5,076	1.29
Damselfishes	180	180	554	3.08
Hawkfish	69	69	294	4.25

Table D-5 (continued)
Hawaii April 2010 Reported Commercial Landings

Species	Caught	Sold	Value ($)	Price/Lb ($)
Tilapia	1,428	0	0	0.00
Wrasses	706	199	754	3.79
Parrotfishes	4,355	4,355	15,337	3.52
Surgeonfishes/tangs	7,304	6,708	12,874	1.92
Filefishes	77	77	119	1.54
Pelagic fishes (unknown)	673	0	0	0.00
Moonfish (opah)	84,401	79,052	151,236	1.91
Rainbow runner	168	24	48	2.00
Mahimahi	132,527	111,472	347,164	3.11
Barracudas	1,790	1,279	1,834	1.43
Wahoo	81,068	69,254	174,690	2.52
Japanese mackerel	2	0	0	0.00
Tunas (unknown)	1,753	168	364	2.17
Skipjack tuna	58,154	30,780	70,673	2.30
Yellowfin tuna	218,122	185,033	428,503	2.32
Albacore tuna	31,545	30,784	85,135	2.77
Bigeye tuna	1,120,795	1,092,461	3,805,963	3.48
Kawakawa	721	180	367	2.05
Billfishes (unknown)	221	0	0	0.00
Swordfish	603,507	603,507	1,087,492	1.80
Blue marlin	89,505	81,240	102,217	1.26
Black marlin	271	0	0	0.00
Striped marlin	23,341	21,379	47,948	2.24
Shortnose spearfish	15,536	14,593	26,759	1.83
Sailfish	1,612	1,612	1,800	1.12
Spiny lobsters	1,733	1,598	20,639	12.9
Slipper lobsters	10	0	0	0.00
Crabs	5,047	2,263	10,875	4.81
Shrimp (saltwater)	829	151	844	5.59
Octopus	2,172	1,496	5,775	3.86
Squid	353	298	743	2.50
Limpets (saltwater)	3,786	1,083	7,051	6.51
Invertebrates	63	63	501	8.00
Algae	1,179	403	4,035	10.0
TOTAL	2,700,706	2,516,358	6,825,758	2.71

Table D-6
Hawaii May 2010 Reported Commercial Landings

Species	Caught	Sold	Value ($)	Price/Lb ($)
Miscellaneous	624	285	896	3.14
Sharks	20,851	12,669	8,015	0.63
Eels	299	89	104	1.17
Bigeye scad (akule)	48,644	19,546	65,812	3.37
Mackerel scad	22,643	14,728	38,818	2.64
Leatherjacket	26	26	51	1.94
Ten pounder	128	128	129	1.00
Bonefish	1,522	1,522	1,682	1.11
Milkfish	113	45	56	1.25
Needlefishes	9	3	8	2.50
Threadfin	117	113	578	5.09
Mullets	1,616	1,502	5,942	3.95
Pomfret	78,279	77,897	138,670	1.78
Oilfish	46,188	46,188	73,361	1.59
Jacks	701	99	193	1.94
Kahala (amberjack)	218	10	20	2.00
Sasa ulua	70	46	107	2.33
Dobe ulua	15	0	0	0.00
Papa ulua	702	702	2,305	3.28
White ulua	1,344	1,084	2,686	2.48
Gunkin (black) ulua	159	0	0	0.00
Blue trevally	968	379	715	1.89
Blue spot grouper	495	291	750	2.58
Snappers	308	299	1,175	3.94
Taape (blue lined snapper)	2,119	1,424	2,458	1.73
Uku (gray snapper)	16,428	13,516	57,196	4.23
Porgy	852	671	2,181	3.25
Reef fishes (unknown)	217	0	0	0.00
Squirrelfishes	5,754	5,719	23,651	4.14
Trumpetfish	35	35	46	1.33
Scorpionfishes	255	154	517	3.36
Mountain bass	79	48	221	4.66
Bigeyes	369	369	1,021	2.77
Goatfishes	6,877	6,366	28,628	4.50
Rudderfish	6,587	6,567	8,190	1.25
Damselfishes	269	269	743	2.76
Hawkfish	140	140	591	4.23
Tilapia	1,575	0	0	0.00
Wrasses	730	522	2,463	4.72
Parrotfishes	7,063	6,261	21,574	3.45
Surgeonfishes/tangs	12,639	11,762	20,396	1.73
Filefishes	80	80	99	1.24
Moonfish (opah)	69,791	69,791	146,645	2.10
Rainbow runner	238	163	268	1.64
Mahimahi	76,321	57,927	188,707	3.26
Barracudas	2,509	2,082	2,989	1.44

Table D-6 (continued)
Hawaii May 2010 Reported Commercial Landings

Species	Caught	Sold	Value ($)	Price/Lb ($)
Wahoo	127,095	92,901	222,093	2.39
Tunas (unknown)	954	492	1,988	4.04
Skipjack tuna	48,155	17,925	33,512	1.87
Yellowfin tuna	191,056	157,140	412,174	2.62
Albacore tuna	78,343	71,187	109,064	1.53
Bigeye tuna	1,091,963	1,079,397	3,525,140	3.27
Kawakawa	602	204	456	2.24
Billfishes (unknown)	90	0	0	0.00
Swordfish	392,632	370,686	929,022	2.51
Blue marlin	107,510	105,369	125,175	1.19
Black marlin	1,030	0	0	0.00
Striped marlin	43,663	32,550	54,960	1.69
Shortnose spearfish	19,570	17,416	22,256	1.28
Sailfish	1,465	1,465	1,689	1.15
Crabs	3,612	343	2,076	6.06
Shrimp (saltwater)	917	87	131	1.50
Octopus	1,534	914	3,810	4.17
Squid	678	668	1,602	2.40
Limpets (saltwater)	2,754	1,040	5,824	5.60
Invertebrates	43	43	299	7.00
Algae	887	408	4,778	11.7
TOTAL	2,551,518	2,311,751	6,306,702	2.73

Table D-7
Hawaii June 2010 Reported Commercial Landings

Species	Caught	Sold	Value ($)	Price/Lb ($)
Miscellaneous	350	350	1,083	3.09
Sharks	22,504	18,378	10,517	0.57
Eels	197	59	59	1.00
Bigeye scad (akule)	105,269	54,054	133,869	2.48
Mackerel scad	15,274	7,236	20,104	2.78
Leatherjacket	53	45	90	1.99
Ten pounder	267	247	251	1.02
Bonefish	481	340	340	1.00
Milkfish	177	177	215	1.22
Needlefishes	2	2	3	2.00
Threadfin	1	1	4	5.00
Mullets	835	730	2,869	3.93
Pomfret	54,196	54,196	133,443	2.46
Oilfish	43,662	43,662	77,458	1.77
Jacks	455	153	343	2.25
Kahala (amberjack)	314	60	30	0.50
Sasa ulua	54	41	106	2.61
Dobe ulua	23	23	45	2.00
Papa ulua	744	711	2,810	3.95
White ulua	1,215	892	1,636	1.83
Gunkin (black) ulua	175	0	0	0.00
Blue trevally	771	472	752	1.59
Blue spot grouper	452	246	748	3.04
Snappers	906	906	3,567	3.94
Taape (blue lined snapper)	1,998	1,743	3,017	1.73
Uku (gray snapper)	13,622	12,052	48,722	4.04
Porgy	545	501	1,495	2.99
Reef fishes (unknown)	276	0	0	0.00
Reef jacks	17	0	0	0.00
Squirrelfishes	4,910	4,659	19,107	4.10
Trumpetfish	25	25	35	1.40
Scorpionfishes	154	75	258	3.43
Mountain bass	87	87	369	4.26
Bigeyes	207	207	706	3.41
Goatfishes	4,175	3,830	19,301	5.04
Rudderfish	2,297	2,023	2,246	1.11
Damselfishes	279	267	864	3.24
Hawkfish	102	102	361	3.53
Tilapia	1,675	0	0	0.00
Wrasses	833	562	2,789	4.96
Parrotfishes	7,048	6,084	21,132	3.47
Surgeonfishes/tangs	12,356	11,047	19,086	1.73
Flounders	5	5	8	1.52
Filefishes	51	49	71	1.45
Moonfish (opah)	149,133	149,133	218,237	1.46
Rainbow runner	292	209	377	1.80

Table D-7 (continued)
Hawaii June 2010 Reported Commercial Landings

Species	Caught	Sold	Value ($)	Price/Lb ($)
Mahimahi	71,515	63,988	171,320	2.68
Barracudas	6,844	6,844	4,628	0.68
Wahoo	121,503	95,064	243,838	2.57
Tunas (unknown)	2,828	45	100	2.24
Skipjack tuna	100,775	48,324	90,090	1.86
Yellowfin tuna	344,404	302,826	740,235	2.44
Albacore tuna	119,186	119,186	138,695	1.16
Bigeye tuna	975,676	975,676	3,309,571	3.39
Kawakawa	739	62	150	2.41
Swordfish	362,267	362,267	1,073,125	2.96
Blue marlin	126,773	126,773	134,102	1.06
Black marlin	1,515	0	0	0.00
Striped marlin	52,104	43,615	55,304	1.27
Shortnose spearfish	26,333	26,333	25,753	0.98
Sailfish	1,165	965	854	0.88
Crabs	2,703	152	765	5.02
Octopus	1,365	413	1,790	4.34
Squid	170	170	419	2.47
Limpets (saltwater)	2,220	320	1,879	5.87
Invertebrates	169	77	537	7.00
Algae	1,766	696	5,805	8.35
TOTAL	2,770,481	2,549,431	6,747,477	2.65

Table D-8
Hawaii July 2010 Reported Commercial Landings

Species	Caught	Sold	Value ($)	Price/Lb ($)
Miscellaneous	936	515	692	1.34
Sharks	15,463	14,150	10,373	0.73
Eels	395	86	86	1.00
Bigeye scad (akule)	79,184	46,922	117,418	2.50
Mackerel scad	17,117	11,910	32,029	2.69
Leatherjacket	10	7	16	2.29
Ten pounder	37	7	7	1.05
Bonefish	2,405	2,226	2,149	0.97
Milkfish	52	28	37	1.34
Flying fishes	1	0	0	0.00
Needlefishes	23	23	44	1.94
Mullets	91	20	56	2.88
Pomfret	45,947	45,021	135,797	3.02
Oilfish	36,800	36,800	58,388	1.59
Jacks	337	337	764	2.27
Kahala (amberjack)	232	27	42	1.55
Sasa ulua	69	38	95	2.50
Dobe ulua	8	8	16	2.00
Papa ulua	668	661	2,554	3.87
White ulua	2,961	1,395	3,213	2.30
Gunkin (black) ulua	59	45	90	2.00
Blue trevally	764	363	1,007	2.77
Blue spot grouper	476	265	821	3.10
Snappers	1,709	1,709	5,921	3.46
Taape (blue lined snapper)	4,436	2,627	4,323	1.65
Uku (gray snapper)	12,379	11,427	52,814	4.62
Porgy	784	758	2,346	3.09
Reef fishes (unknown)	130	9	5	0.50
Squirrelfishes	8,958	8,958	38,533	4.30
Trumpetfish	14	5	7	1.31
Scorpionfishes	187	151	505	3.35
Mountain bass	77	52	235	4.50
Bigeyes	363	363	1,193	3.29
Goatfishes	5,152	4,178	20,497	4.91
Rudderfish	3,130	3,130	4,081	1.30
Damselfishes	301	256	752	2.94
Hawkfish	124	124	421	3.39
Wrasses	780	694	3,058	4.40
Parrotfishes	8,127	7,231	25,172	3.48
Surgeonfishes/tangs	11,699	10,411	17,756	1.71
Flounders	2	2	3	1.85
Filefishes	24	24	27	1.12
Moonfish (opah)	125,356	124,582	200,820	1.61
Rainbow runner	574	264	472	1.79
Mahimahi	127,922	105,260	265,017	2.52
Barracudas	3,705	3,705	3,345	0.90

Table D-8 (continued)
Hawaii July 2010 Reported Commercial Landings

Species	Caught	Sold	Value ($)	Price/Lb ($)
Wahoo	130,738	101,893	262,045	2.57
Tunas (unknown)	145	32	69	2.14
Skipjack tuna	56,723	28,158	55,290	1.96
Yellowfin tuna	322,273	282,101	931,997	3.30
Albacore tuna	69,719	69,560	158,962	2.29
Bigeye tuna	845,602	828,390	3,851,509	4.65
Kawakawa	1,085	207	489	2.36
Swordfish	161,120	159,277	305,621	1.92
Blue marlin	115,516	99,693	124,269	1.25
Black marlin	500	0	0	0.00
Striped marlin	36,741	32,099	45,388	1.41
Shortnose spearfish	24,199	23,188	29,467	1.27
Sailfish	1,822	1,822	1,991	1.09
Crabs	2,865	193	943	4.89
Octopus	3,363	2,367	9,692	4.09
Squid	603	584	1,299	2.22
Limpets (saltwater)	2,771	1,504	8,818	5.86
Invertebrates	28	0	0	0.00
Algae	2,104	392	1,752	4.47
TOTAL	2,297,880	2,078,232	6,802,596	3.27

Table D-9
Hawaii August 2010 Reported Commercial Landings

Species	Caught	Sold	Value ($)	Price/Lb ($)
Miscellaneous	600	185	510	2.75
Sharks	34,880	27,487	11,001	0.40
Eels	220	133	182	1.37
Bigeye scad (akule)	46,119	21,264	62,731	2.95
Mackerel scad	16,719	9,109	25,757	2.83
Leatherjacket	53	53	104	1.97
Ten pounder	75	67	67	1.00
Bonefish	525	525	525	1.00
Milkfish	131	53	56	1.07
Needlefishes	40	23	43	1.91
Threadfin	32	9	52	5.51
Mullets	425	386	1,686	4.37
Pomfret	38,438	37,215	132,497	3.56
Oilfish	46,483	46,483	75,562	1.63
Jacks	358	208	564	2.72
Kahala (amberjack)	138	42	48	1.14
Sasa ulua	79	63	205	3.25
Dobe ulua	56	56	164	2.94
Papa ulua	502	502	1,997	3.98
White ulua	1,557	1,051	2,326	2.21
Blue trevally	731	327	943	2.89
Blue spot grouper	512	417	1,179	2.83
Snappers	406	377	1,461	3.87
Yellow-tail kali	2	0	0	0.00
Taape (blue lined snapper)	2,281	1,908	3,385	1.77
Onaga (red snapper)	45	0	0	0.00
Uku (gray snapper)	10,188	9,042	41,694	4.61
Porgy	595	551	1,644	2.99
Reef fishes (unknown)	31	0	0	0.00
Reef jacks	5	5	18	4.00
Squirrelfishes	5,701	5,701	24,396	4.28
Trumpetfish	20	7	9	1.38
Scorpionfishes	139	119	422	3.55
Mountain bass	260	216	873	4.05
Bigeyes	268	254	1,041	4.10
Goatfishes	4,610	4,610	22,588	4.90
Rudderfish	4,742	4,337	5,525	1.27
Damselfishes	188	147	418	2.85
Hawkfish	156	156	603	3.87
Wrasses	459	301	871	2.89
Parrotfishes	7,232	6,626	23,055	3.48
Surgeonfishes/tangs	13,824	13,783	23,861	1.73
Flounders	5	5	5	1.00
Filefishes	10	9	8	0.95
Moonfish (opah)	156,560	144,207	239,075	1.66
Rainbow runner	407	307	611	1.99

Table D-9 (continued)
Hawaii August 2010 Reported Commercial Landings

Species	Caught	Sold	Value ($)	Price/Lb ($)
Mahimahi	215,911	194,202	396,778	2.04
Barracudas	6,333	6,050	4,276	0.71
Wahoo	96,094	79,388	238,913	3.01
Tunas (unknown)	290	290	677	2.33
Skipjack tuna	67,625	41,598	86,796	2.09
Yellowfin tuna	345,834	311,177	941,678	3.03
Albacore tuna	106,234	106,234	152,458	1.44
Bigeye tuna	1,136,439	1,081,756	4,746,491	4.39
Kawakawa	963	426	809	1.90
Billfishes (unknown)	816	816	558	0.68
Swordfish	133,558	133,558	391,802	2.93
Blue marlin	139,859	127,881	146,383	1.14
Black marlin	197	0	0	0.00
Striped marlin	29,692	23,481	38,661	1.65
Shortnose spearfish	26,546	25,756	42,484	1.65
Sailfish	2,790	2,790	3,588	1.29
Crabs	1,574	302	1,772	5.88
Octopus	4,108	3,303	13,478	4.08
Squid	1,314	1,314	2,729	2.08
Limpets (saltwater)	2,055	1,432	8,239	5.75
Invertebrates	85	0	0	0.00
Algae	1,669	463	5,084	11.0
TOTAL	2,716,785	2,480,535	7,933,412	3.20

Table D-10
Hawaii September 2010 Reported Commercial Landings

Species	Caught	Sold	Value ($)	Price/Lb ($)
Miscellaneous	436	311	536	1.72
Sharks	20,807	16,449	5,764	0.35
Eels	190	116	147	1.27
Bigeye scad (akule)	38,784	9,713	30,903	3.18
Mackerel scad	27,818	19,502	52,118	2.67
Leatherjacket	25	22	41	1.85
Ten pounder	61	61	61	1.00
Bonefish	245	245	251	1.02
Milkfish	211	211	313	1.48
Needlefishes	7	7	15	2.00
Threadfin	150	139	1,098	7.88
Mullets	666	666	2,904	4.36
Pomfret	41,221	41,221	94,764	2.30
Oilfish	34,057	34,057	44,837	1.32
Jacks	93	93	243	2.61
Kahala (amberjack)	1,886	93	126	1.36
Sasa ulua	37	25	63	2.50
Butaguchi (pig-lipped ulua)	26	26	62	2.40
Dobe ulua	121	2	4	2.00
Papa ulua	480	480	1,542	3.21
White ulua	1,730	1,042	2,303	2.21
Gunkin (black) ulua	4	0	0	0.00
Blue trevally	679	306	790	2.58
Hapuupuu (hawaiian grouper)	1,775	1,511	7,914	5.24
Blue spot grouper	540	176	545	3.09
Kalekale	1,429	899	3,209	3.57
Snappers	1,784	310	1,161	3.75
Yellow-tail kali	4	4	9	2.27
Taape (blue lined snapper)	4,909	3,269	5,000	1.53
Ehu (red snapper)	4,853	3,519	18,765	5.33
Gindai (flower snapper)	584	325	1,427	4.39
Golden kalekale	96	0	0	0.00
Lehi (silverjaw)	1,328	1,118	3,929	3.51
Onaga (red snapper)	16,031	12,759	78,407	6.15
Opakapaka (pink snapper)	21,277	16,379	90,398	5.52
Uku (gray snapper)	12,957	9,380	35,603	3.80
Porgy	665	509	1,811	3.56
Reef fishes (unknown)	80	5	3	0.50
Reef jacks	1	0	2	4.00
Squirrelfishes	8,586	8,433	35,864	4.25
Trumpetfish	36	36	37	1.01
Scorpionfishes	466	271	1,242	4.59
Mountain bass	349	349	1,331	3.82
Bigeyes	356	356	1,313	3.69
Goatfishes	8,783	6,346	29,299	4.62
Rudderfish	4,660	4,268	5,383	1.26

Table D-10 (continued)
Hawaii September 2010 Reported Commercial Landings

Species	Caught	Sold	Value ($)	Price/Lb ($)
Damselfishes	118	118	313	2.66
Hawkfish	103	103	398	3.89
Wrasses	845	477	2,729	5.73
Parrotfishes	8,138	5,146	17,621	3.42
Surgeonfishes/tangs	12,095	10,116	16,736	1.65
Flounders	13	8	13	1.67
Filefishes	5	4	4	0.95
Moonfish (opah)	266,385	266,385	207,529	0.78
Rainbow runner	390	144	294	2.05
Mahimahi	273,722	259,886	370,600	1.43
Barracudas	2,548	2,350	2,513	1.07
Wahoo	50,866	40,721	142,083	3.49
Tunas (unknown)	116	116	343	2.95
Skipjack tuna	37,556	23,655	43,228	1.83
Yellowfin tuna	147,450	120,431	405,324	3.37
Albacore tuna	31,284	28,250	69,609	2.46
Bigeye tuna	1,202,117	1,202,117	5,030,634	4.18
Kawakawa	883	245	591	2.41
Billfishes (unknown)	11	11	17	1.50
Swordfish	14,446	14,172	45,680	3.22
Blue marlin	91,972	89,239	121,121	1.36
Black marlin	956	0	0	0.00
Striped marlin	27,648	20,798	35,058	1.69
Shortnose spearfish	24,441	24,441	25,317	1.04
Sailfish	5,365	5,365	7,775	1.45
Spiny lobsters	2,570	1,816	23,067	12.7
Slipper lobsters	45	0	0	0.00
Crabs	3,294	518	2,155	4.16
Shrimp (saltwater)	80	0	0	0.00
Octopus	3,728	2,322	9,199	3.96
Squid	2,691	2,551	5,259	2.06
Limpets (saltwater)	1,635	1,174	6,566	5.59
Invertebrates	2	0	0	0.00
Algae	1,095	140	1,000	7.14
TOTAL	2,475,893	2,317,827	7,154,312	3.09

Table D-11
Hawaii October 2010 Reported Commercial Landings

Species	Caught	Sold	Value ($)	Price/Lb ($)
Miscellaneous	1,142	1,142	1,170	1.02
Sharks	24,322	11,056	7,587	0.69
Eels	123	39	70	1.78
Bigeye scad (akule)	22,867	13,119	36,896	2.81
Mackerel scad	30,471	21,160	55,710	2.63
Leatherjacket	8	8	14	1.89
Ten pounder	10	10	10	1.00
Bonefish	967	958	968	1.01
Milkfish	666	666	859	1.29
Needlefishes	34	34	55	1.62
Threadfin	73	55	326	5.90
Mullets	1,270	1,270	5,335	4.20
Pomfret	45,551	44,328	103,636	2.34
Oilfish	42,636	42,636	47,412	1.11
Jacks	9	5	10	2.30
Kahala (amberjack)	2,619	261	481	1.85
Sasa ulua	33	13	36	2.77
Butaguchi (pig-lipped ulua)	65	17	33	2.00
Dobe ulua	37	0	0	0.00
Papa ulua	429	429	1,171	2.73
White ulua	1,638	1,171	1,977	1.69
Gunkin (black) ulua	20	11	11	1.00
Blue trevally	840	326	674	2.07
Hapuupuu (hawaiian grouper)	1,086	864	5,374	6.22
Blue spot grouper	590	321	935	2.91
Kalekale	1,479	1,039	3,437	3.31
Snappers	374	316	1,142	3.62
Yellow-tail kali	8	8	14	1.75
Taape (blue lined snapper)	5,414	2,543	3,944	1.55
Ehu (red snapper)	2,641	2,171	10,290	4.74
Gindai (flower snapper)	598	400	1,760	4.40
Golden kalekale	21	4	7	2.00
Lehi (silverjaw)	828	751	2,684	3.57
Onaga (red snapper)	8,702	8,566	52,695	6.15
Opakapaka (pink snapper)	19,592	17,480	92,812	5.31
Uku (gray snapper)	7,677	7,677	27,381	3.57
Porgy	697	664	2,024	3.05
Reef fishes (unknown)	119	0	0	0.00
Reef jacks	1	1	3	4.28
Squirrelfishes	11,151	9,994	40,572	4.06
Trumpetfish	11	11	14	1.24
Scorpionfishes	383	224	1,189	5.30
Mountain bass	129	102	423	4.16
Bigeyes	617	617	1,910	3.09
Goatfishes	7,521	4,682	23,745	5.07
Rudderfish	858	831	1,168	1.41

Table D-11 (continued)
Hawaii October 2010 Reported Commercial Landings

Species	Caught	Sold	Value ($)	Price/Lb ($)
Damselfishes	148	148	500	3.38
Hawkfish	124	86	278	3.23
Wrasses	716	544	2,661	4.89
Parrotfishes	8,438	7,210	24,194	3.36
Surgeonfishes/tangs	13,686	9,634	16,601	1.72
Flounders	12	12	24	1.97
Filefishes	17	17	22	1.32
Moonfish (opah)	203,358	203,358	206,817	1.02
Rainbow runner	407	207	473	2.28
Mahimahi	275,994	261,593	417,547	1.60
Barracudas	2,007	1,821	2,597	1.43
Wahoo	32,213	26,507	89,730	3.39
Tunas (unknown)	2,205	2,205	6,277	2.85
Skipjack tuna	37,679	18,414	33,308	1.81
Yellowfin tuna	123,090	105,005	296,704	2.83
Albacore tuna	27,132	24,636	49,935	2.03
Bigeye tuna	1,387,296	1,341,825	5,200,573	3.88
Kawakawa	427	164	399	2.44
Billfishes (unknown)	540	125	313	2.50
Swordfish	51,590	19,264	53,258	2.76
Blue marlin	92,234	90,912	96,956	1.07
Black marlin	384	0	0	0.00
Striped marlin	40,418	39,067	53,749	1.38
Shortnose spearfish	31,352	31,352	26,292	0.84
Sailfish	9,463	9,463	9,952	1.05
Spiny lobsters	1,532	1,077	13,355	12.4
Slipper lobsters	15	11	102	9.00
Crabs	4,333	1,278	5,033	3.94
Shrimp (saltwater)	810	0	0	0.00
Octopus	6,209	4,492	17,856	3.98
Squid	207	134	356	2.66
Limpets (saltwater)	1,775	1,663	9,801	5.90
Algae	765	303	2,428	8.03
TOTAL	2,602,896	2,400,504	7,176,057	2.99

Table D-12
Hawaii November 2010 Reported Commercial Landings

Species	Caught	Sold	Value ($)	Price/Lb ($)
Miscellaneous	385	385	1,203	3.13
Sharks	30,856	21,369	7,947	0.37
Eels	117	34	40	1.18
Bigeye scad (akule)	70,180	17,479	49,258	2.82
Mackerel scad	34,167	24,153	61,494	2.55
Leatherjacket	19	19	39	2.09
Ten pounder	28	28	30	1.08
Bonefish	335	335	385	1.15
Milkfish	133	133	170	1.27
Needlefishes	77	55	108	1.98
Threadfin	76	48	365	7.56
Mullets	1,891	1,891	8,725	4.61
Pomfret	31,843	31,843	97,064	3.05
Oilfish	41,636	41,636	52,712	1.27
Jacks	101	101	213	2.11
Kahala (amberjack)	2,898	239	450	1.89
Sasa ulua	44	23	74	3.20
Butaguchi (pig-lipped ulua)	126	126	378	2.99
Dobe ulua	179	3	6	2.00
Papa ulua	1,200	900	3,437	3.82
White ulua	1,493	1,063	2,322	2.18
Gunkin (black) ulua	22	22	33	1.50
Blue trevally	771	293	640	2.19
Hapuupuu (hawaiian grouper)	1,237	1,073	4,854	4.53
Blue spot grouper	307	214	660	3.08
Kalekale	1,419	660	2,316	3.51
Snappers	379	251	924	3.69
Yellow-tail kali	2	1	3	2.50
Taape (blue lined snapper)	7,798	3,034	4,485	1.48
Ehu (red snapper)	3,149	1,836	9,196	5.01
Gindai (flower snapper)	498	280	1,212	4.32
Golden kalekale	12	4	11	3.13
Lehi (silverjaw)	3,666	2,031	8,707	4.29
Onaga (red snapper)	8,332	6,160	42,652	6.92
Opakapaka (pink snapper)	17,491	15,096	82,728	5.48
Uku (gray snapper)	8,037	7,361	30,004	4.08
Porgy	390	320	982	3.07
Reef fishes (unknown)	56	0	0	0.00
Reef jacks	1	1	4	3.96
Squirrelfishes	9,700	7,877	32,766	4.16
Trumpetfish	12	12	14	1.18
Scorpionfishes	488	189	1,057	5.59
Mountain bass	236	227	958	4.21
Bigeyes	365	365	1,291	3.54
Goatfishes	8,627	6,086	26,552	4.36
Rudderfish	308	308	470	1.52

Table D-12 (continued)
Hawaii November 2010 Reported Commercial Landings

Species	Caught	Sold	Value ($)	Price/Lb ($)
Damselfishes	146	146	465	3.18
Hawkfish	42	21	56	2.69
Wrasses	595	475	2,470	5.20
Parrotfishes	5,353	4,985	16,434	3.30
Surgeonfishes/tangs	13,696	9,430	17,821	1.89
Filefishes	14	5	9	1.90
Pufferfishes	4	0	0	0.00
Pelagic fishes (unknown)	9,037	0	0	0.00
Moonfish (opah)	140,496	140,496	230,563	1.64
Rainbow runner	329	227	367	1.62
Mahimahi	175,700	161,898	425,047	2.63
Barracudas	2,119	1,356	1,469	1.08
Wahoo	21,012	18,393	72,773	3.96
Tunas (unknown)	6,854	6,854	22,726	3.32
Skipjack tuna	30,912	11,477	23,405	2.04
Yellowfin tuna	190,960	173,496	441,741	2.55
Albacore tuna	31,794	29,632	48,539	1.64
Bigeye tuna	1,320,741	1,299,383	4,817,706	3.71
Kawakawa	415	123	304	2.47
Billfishes (unknown)	540	0	0	0.00
Swordfish	15,306	15,049	56,744	3.77
Blue marlin	50,696	48,778	71,344	1.46
Striped marlin	38,836	36,878	65,489	1.78
Shortnose spearfish	25,679	24,690	36,923	1.50
Sailfish	7,711	7,711	11,372	1.47
Spiny lobsters	1,011	735	8,602	11.7
Slipper lobsters	24	10	94	9.50
Crabs	5,230	808	3,605	4.46
Octopus	4,500	2,317	9,100	3.93
Squid	351	91	366	4.04
Limpets (saltwater)	1,350	766	4,624	6.04
Invertebrates	109	109	764	7.00
Algae	335	216	2,442	11.3
TOTAL	2,392,981	2,192,116	6,932,303	3.16

Table D-13
Hawaii December 2010 Reported Commercial Landings

Species	Caught	Sold	Value ($)	Price/Lb ($)
Miscellaneous	478	31	45	1.45
Sharks	23,077	17,293	8,066	0.47
Rays	18	0	0	0.00
Eels	65	65	103	1.60
Bigeye scad (akule)	26,010	21,428	57,153	2.67
Mackerel scad	31,900	19,974	50,748	2.54
Leatherjacket	18	18	35	2.00
Ten pounder	58	54	68	1.25
Bonefish	324	324	403	1.25
Milkfish	143	143	171	1.20
Needlefishes	23	2	4	2.00
Threadfin	38	17	96	5.57
Mullets	43	43	102	2.39
Pomfret	42,244	42,244	109,904	2.60
Oilfish	52,088	52,088	53,899	1.03
Jacks	67	18	45	2.51
Kahala (amberjack)	6,324	506	882	1.74
Sasa ulua	85	85	179	2.12
Butaguchi (pig-lipped ulua)	434	232	724	3.13
Dobe ulua	10	7	17	2.50
Papa ulua	689	689	2,258	3.28
White ulua	1,434	797	1,847	2.32
Gunkin (black) ulua	46	0	0	0.00
Blue trevally	931	435	906	2.08
Hapuupuu (hawaiian grouper)	1,721	1,213	7,229	5.96
Blue spot grouper	505	478	1,360	2.85
Kalekale	2,572	2,018	7,504	3.72
Snappers	715	433	1,833	4.23
Taape (blue lined snapper)	2,941	1,853	2,952	1.59
Ehu (red snapper)	6,631	3,698	22,790	6.16
Gindai (flower snapper)	722	379	1,853	4.89
Golden kalekale	90	18	72	4.00
Lehi (silverjaw)	3,312	2,757	11,490	4.17
Onaga (red snapper)	17,351	14,850	115,130	7.75
Opakapaka (pink snapper)	35,620	29,949	176,012	5.88
Uku (gray snapper)	10,725	9,170	35,519	3.87
Porgy	452	452	1,497	3.31
Reef fishes (unknown)	7	0	0	0.00
Squirrelfishes	9,690	8,804	39,182	4.45
Trumpetfish	24	15	22	1.47
Scorpionfishes	608	357	2,006	5.62
Mountain bass	208	139	561	4.05
Bigeyes	591	591	2,233	3.78
Goatfishes	4,881	4,260	20,700	4.86
Rudderfish	1,502	601	840	1.40
Damselfishes	309	291	897	3.08

Table D-13 (continued)
Hawaii December 2010 Reported Commercial Landings

Species	Caught	Sold	Value ($)	Price/Lb ($)
Hawkfish	35	35	130	3.72
Wrasses	561	408	1,637	4.01
Parrotfishes	4,900	4,900	15,322	3.13
Surgeonfishes/tangs	8,865	7,131	12,219	1.71
Flounders	5	5	9	1.73
Filefishes	17	4	9	2.13
Pelagic fishes (unknown)	721	0	0	0.00
Moonfish (opah)	275,814	275,814	252,128	0.91
Rainbow runner	606	360	762	2.12
Mahimahi	155,294	142,919	242,243	1.70
Barracudas	1,004	304	519	1.71
Wahoo	26,751	21,560	83,693	3.88
Tunas (unknown)	1,687	1,687	4,858	2.88
Skipjack tuna	31,405	11,732	20,477	1.75
Yellowfin tuna	219,567	186,512	743,367	3.99
Albacore tuna	42,651	36,064	63,468	1.76
Bigeye tuna	1,171,003	1,171,003	5,756,467	4.92
Kawakawa	1,378	93	277	2.99
Swordfish	284,794	76,912	213,303	2.77
Blue marlin	33,302	24,745	47,617	1.92
Black marlin	98	0	0	0.00
Striped marlin	19,640	19,640	53,210	2.71
Shortnose spearfish	28,391	27,964	41,265	1.48
Sailfish	1,214	589	1,034	1.76
Spiny lobsters	1,327	1,278	15,968	12.5
Slipper lobsters	6	0	0	0.00
Crabs	6,895	1,785	8,036	4.50
Shrimp (saltwater)	650	0	0	0.00
Octopus	2,264	1,528	5,986	3.92
Squid	135	135	284	2.10
Limpets (saltwater)	1,599	586	3,334	5.69
Algae	619	508	5,942	11.7
TOTAL	2,610,919	2,255,015	8,332,904	3.70

The following are summary charts of the major species and species groups by month:

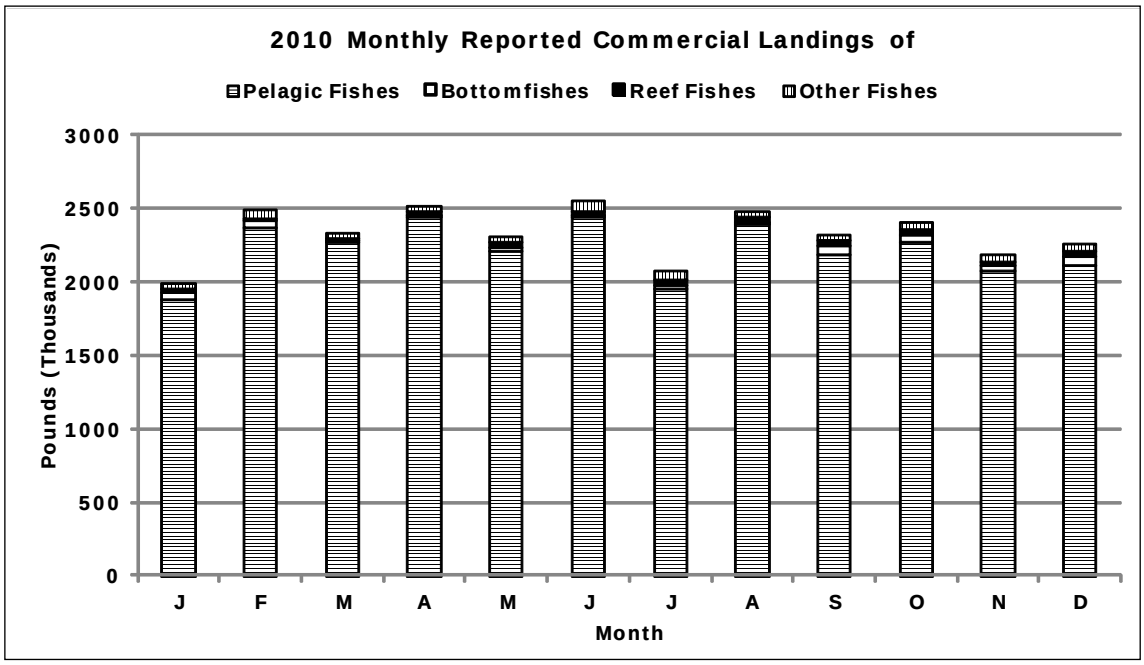

Figure D-1-1

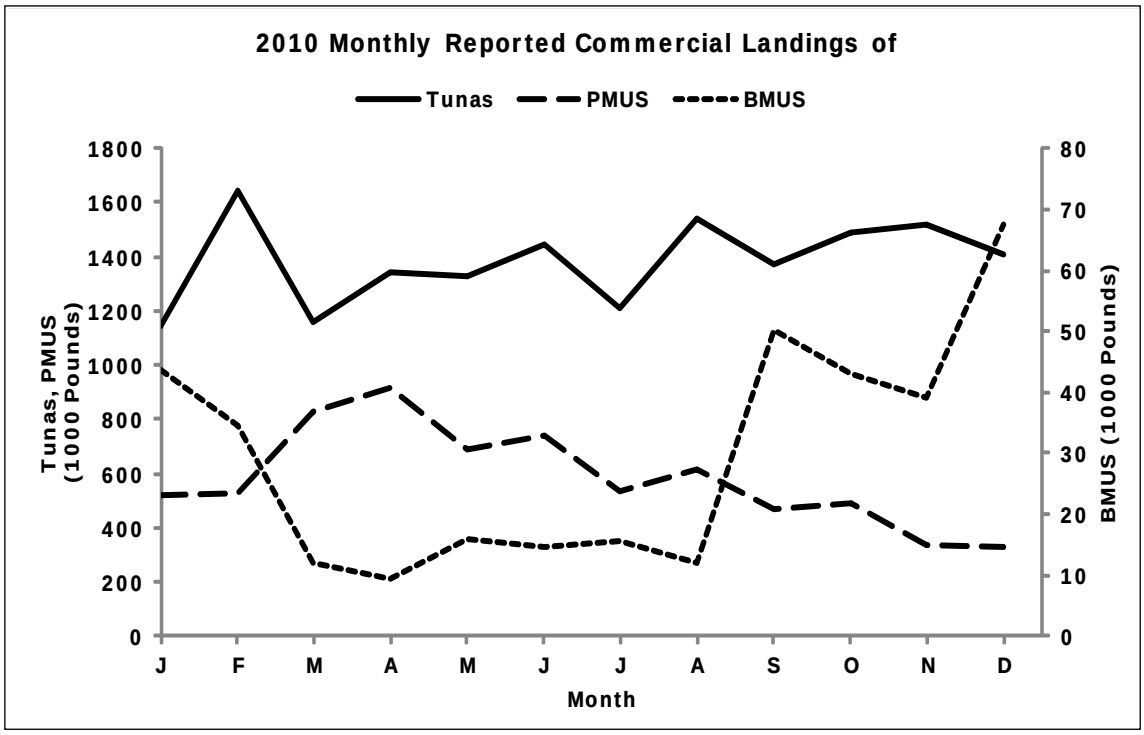

Figure D-1-2

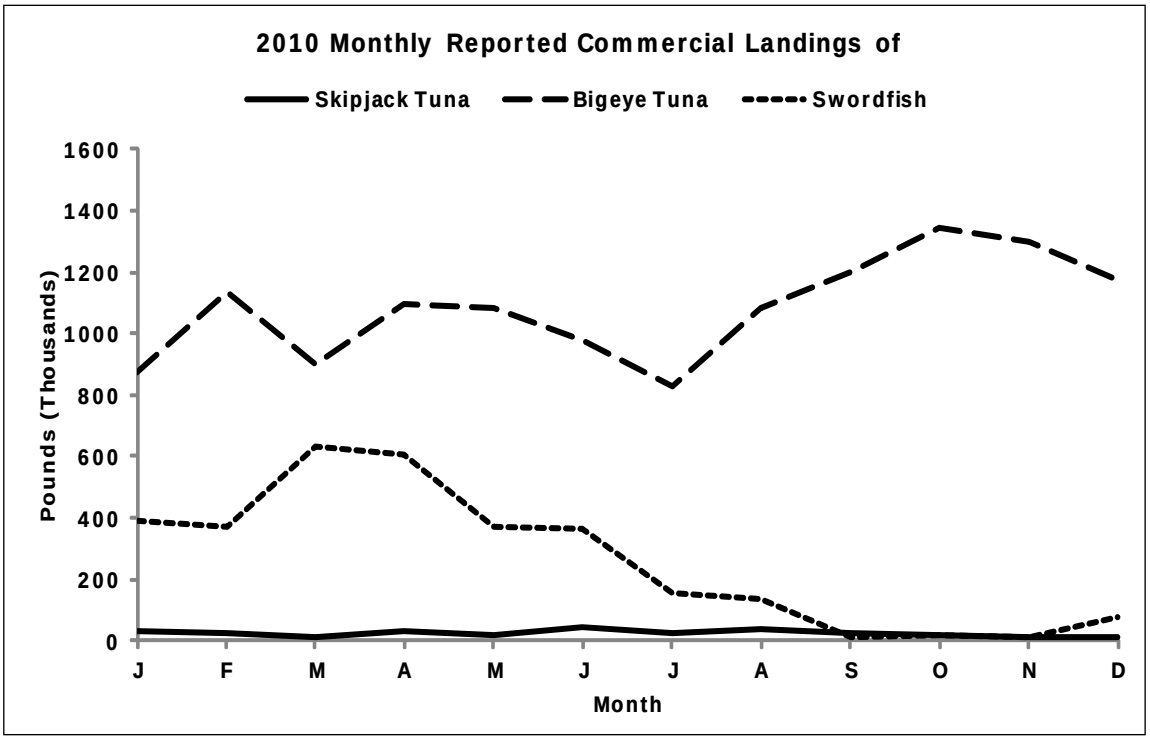

Figure D-1-3

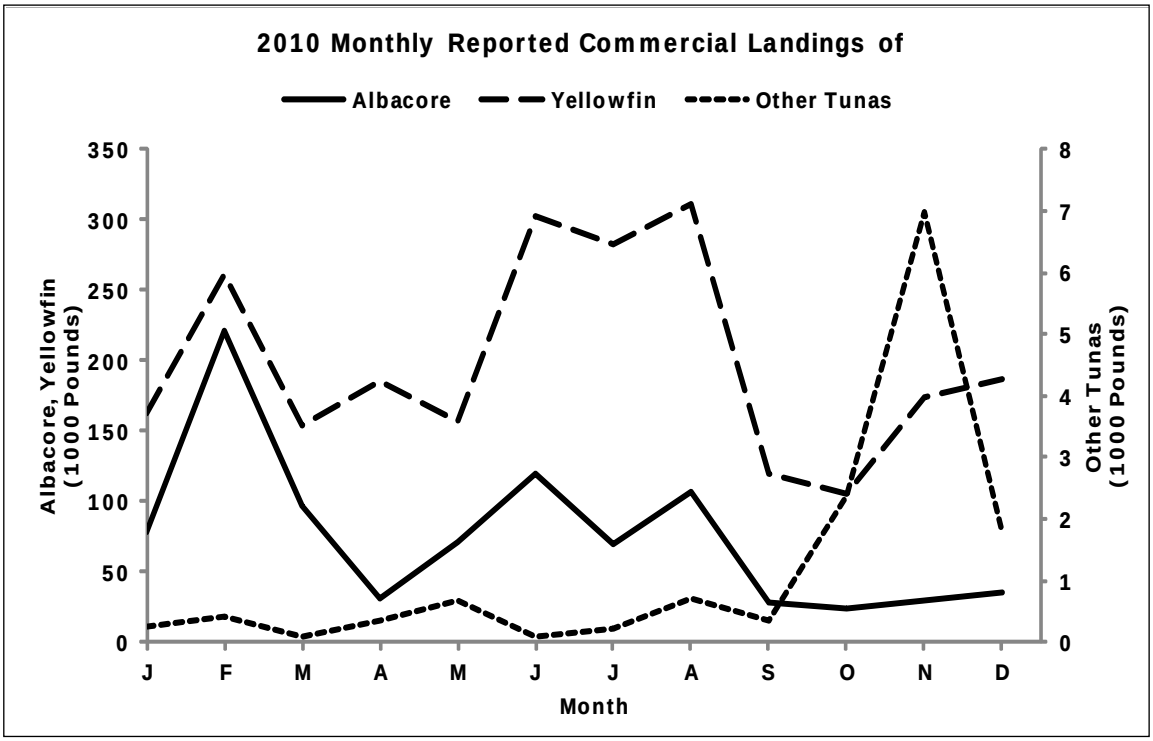

Figure D-1-4

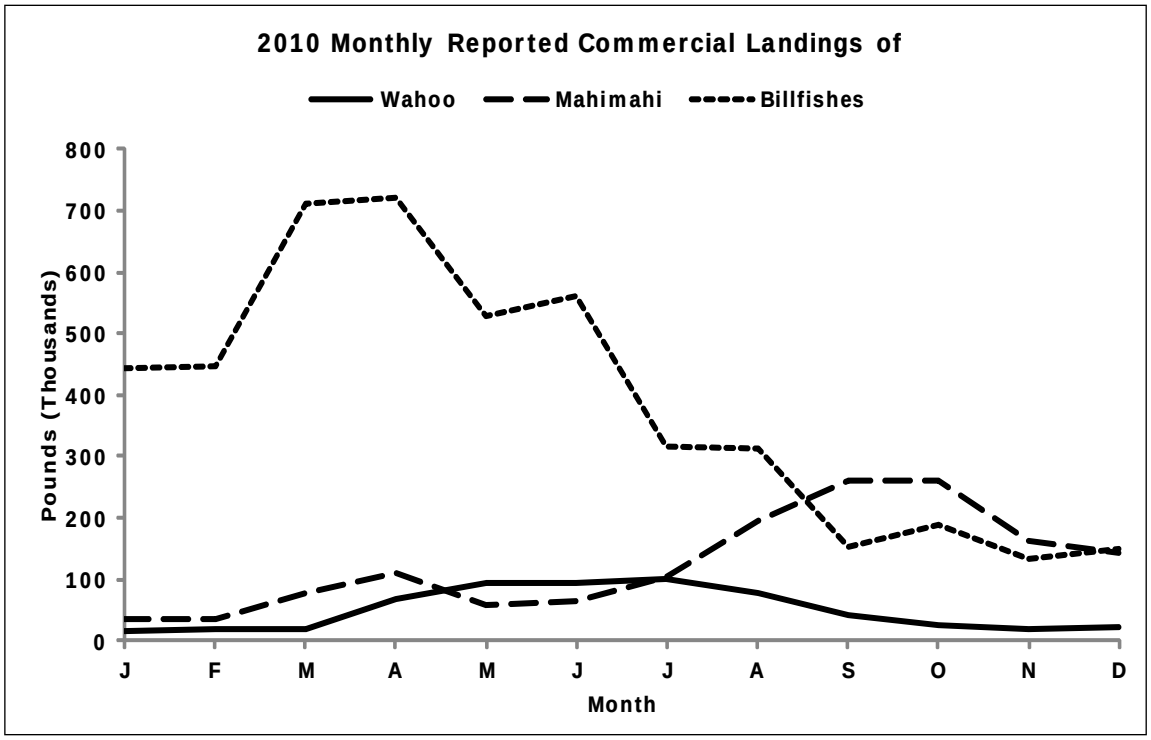
2010 Monthly Reported Commercial Landings of
Wahoo
Mahimahi
Billfishes
Pounds (Thousands)
800
700
600
500
400
300
200
100
0
J
F
M
A
M
J
J
A
S
O
N
D
Month

Figure D-1-5

The following are seasonality plots for the major species or species groups, showing the average weight landed during each month for all years combined:

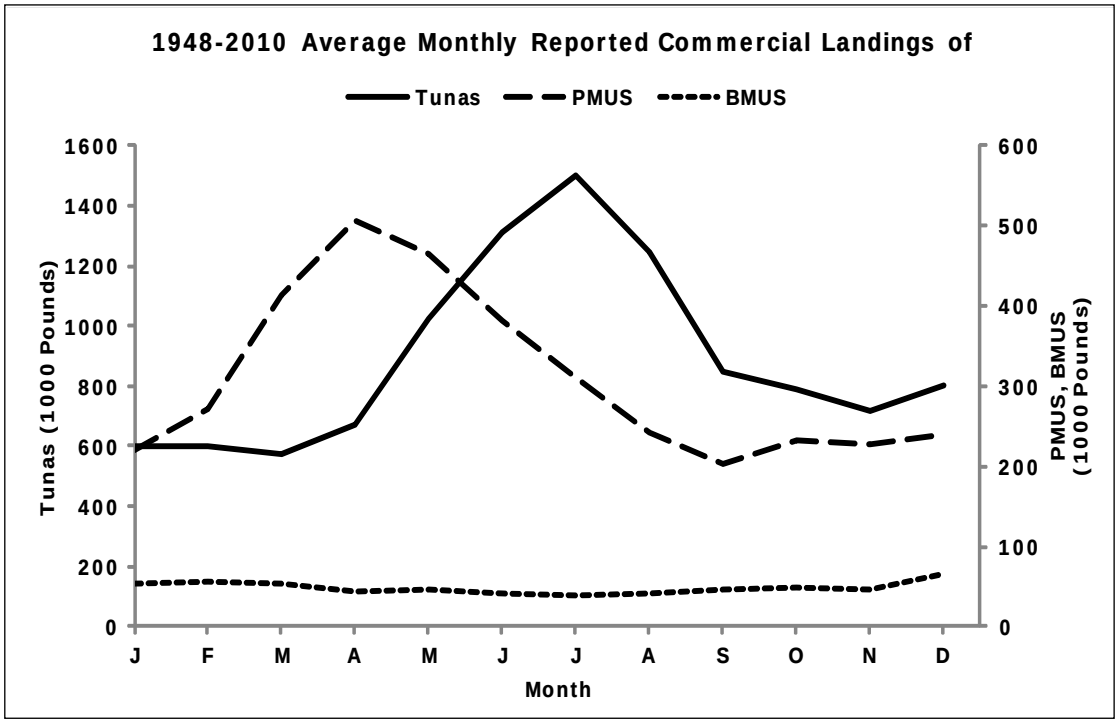

Figure D-2-1

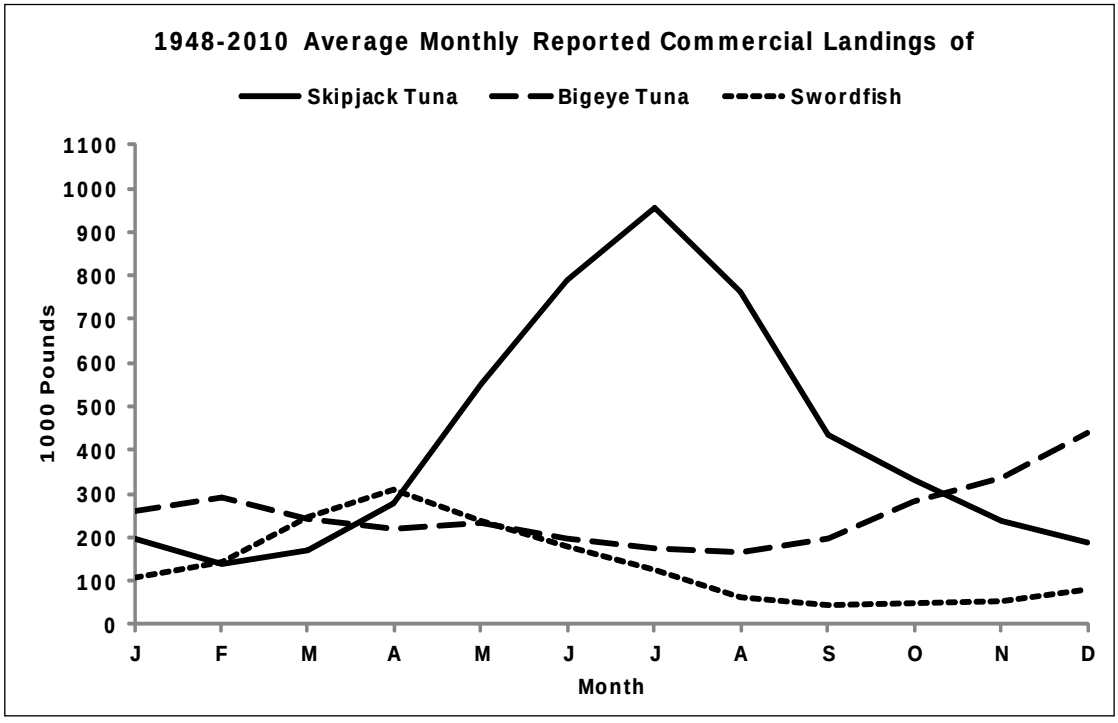

Figure D-2-2

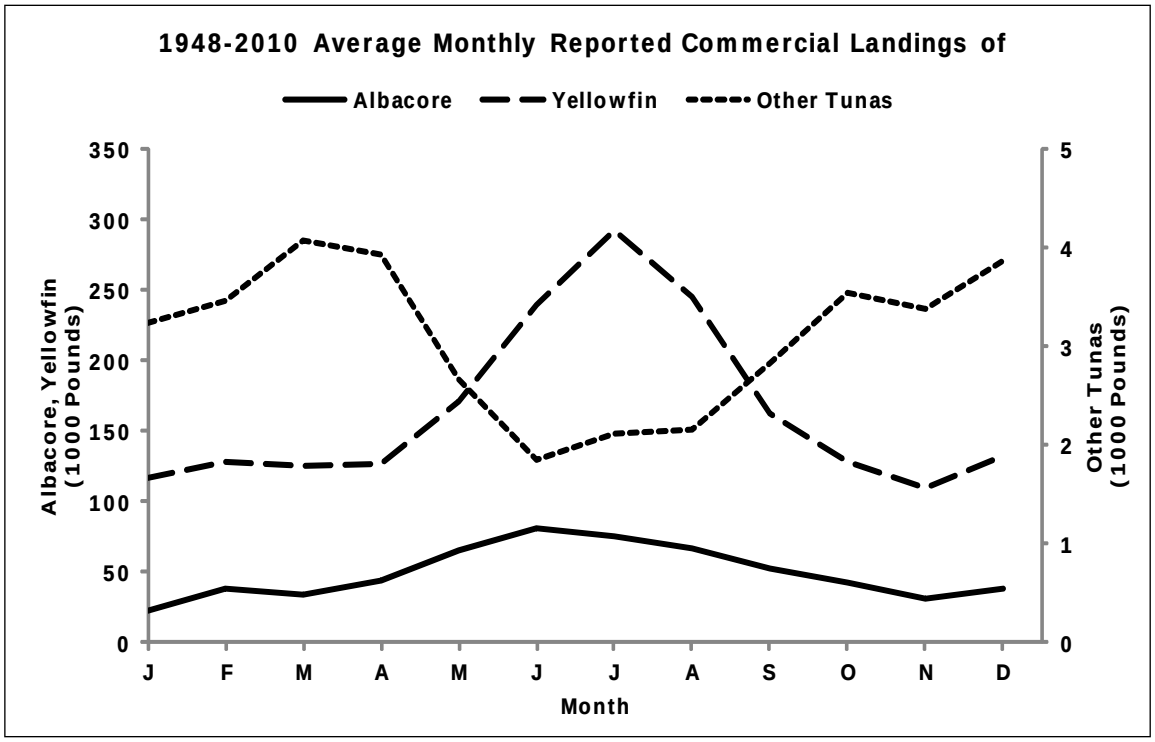

Figure D-2-3

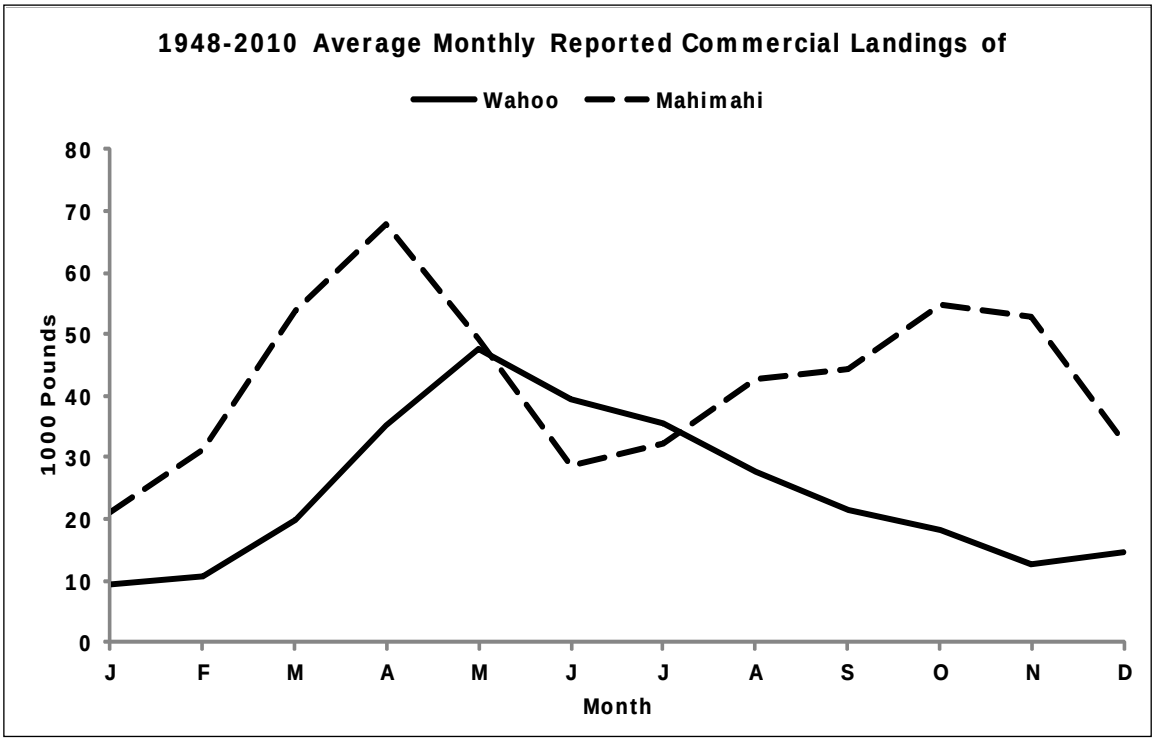

Figure D-2-4

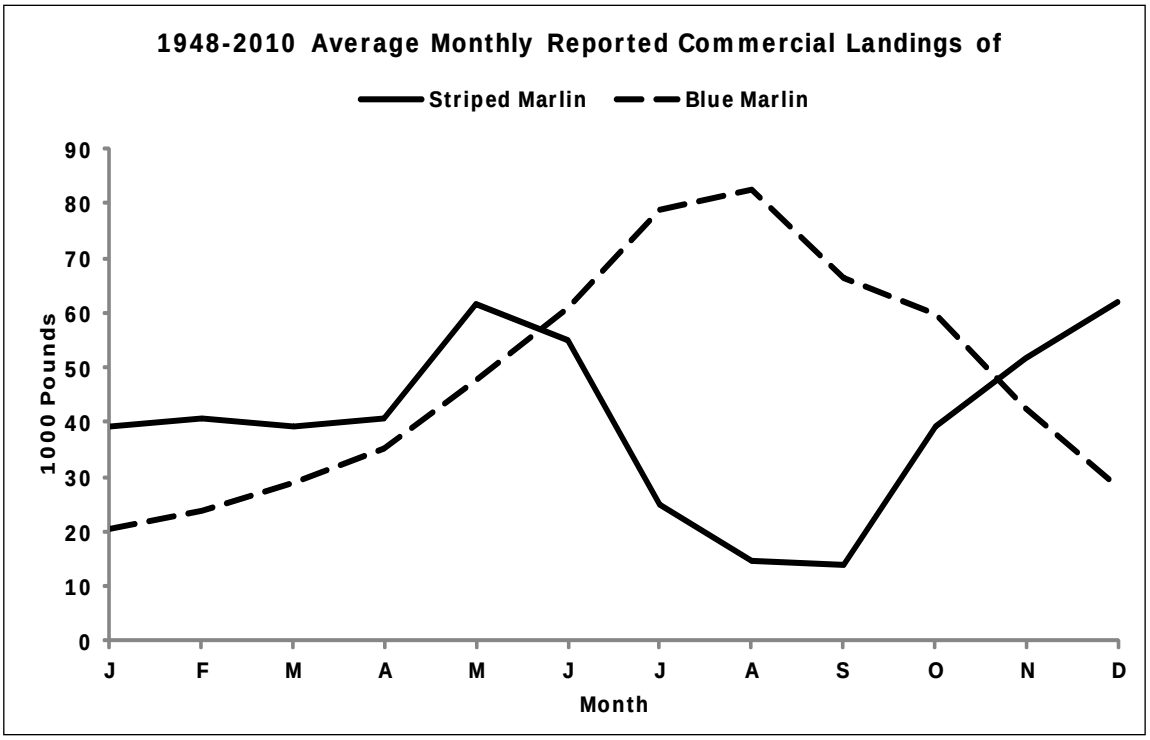

Figure D-2-5

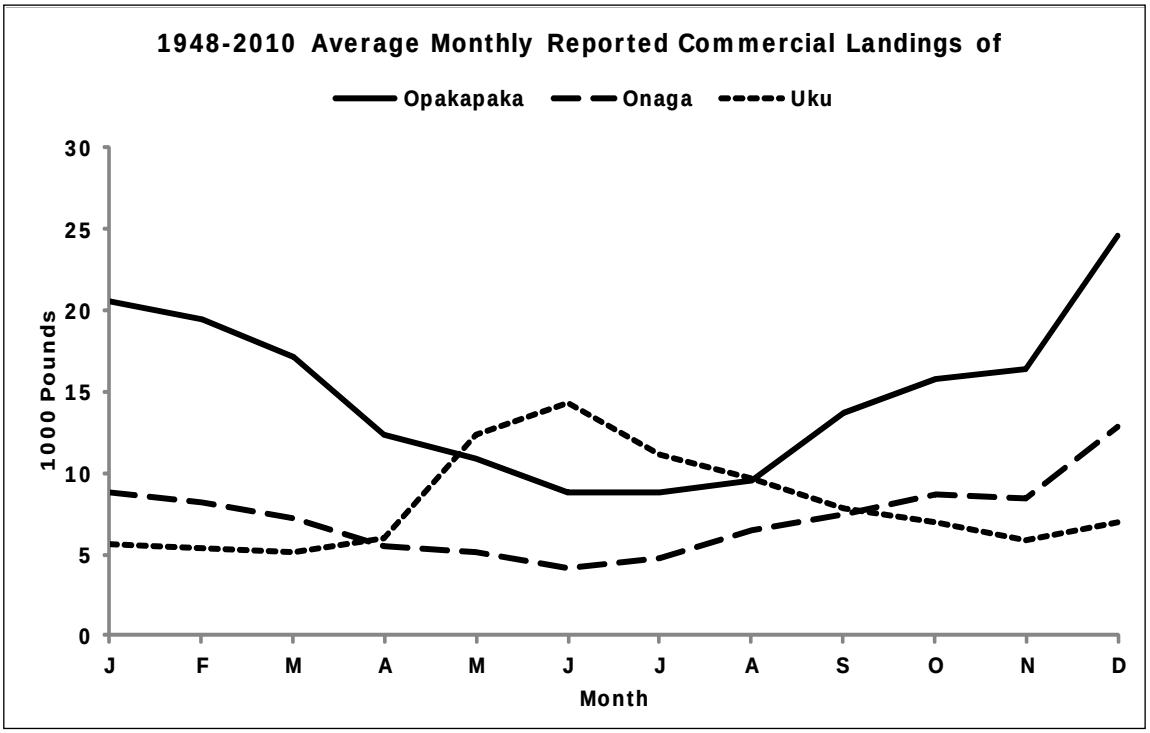

Figure D-2-6

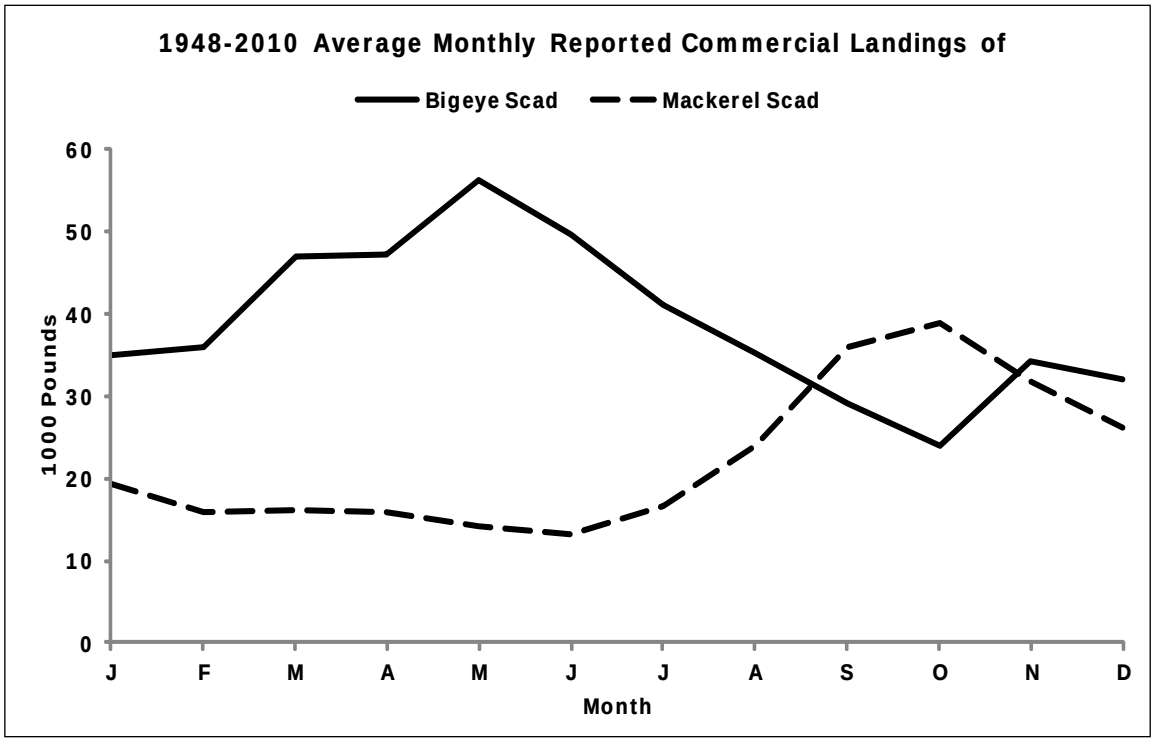

Figure D-2-7

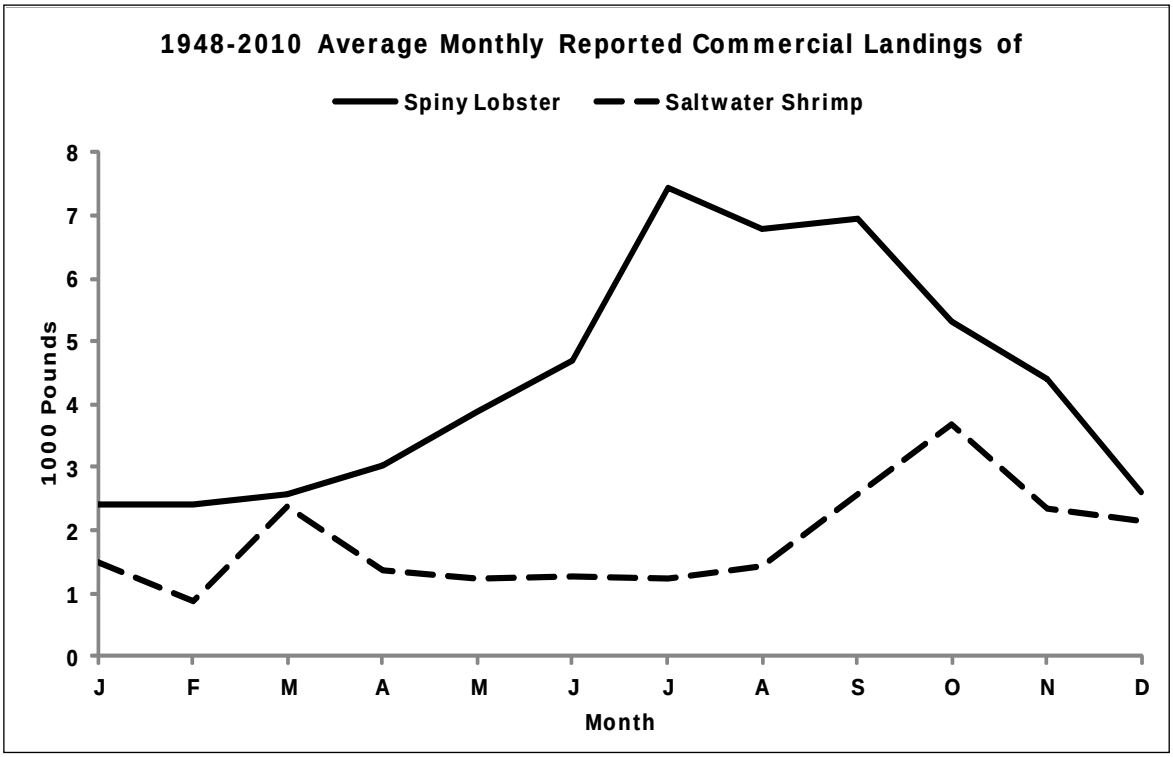

Figure D-2-8

The following graphs plot annual summary statistics to illustrate the variability among years:

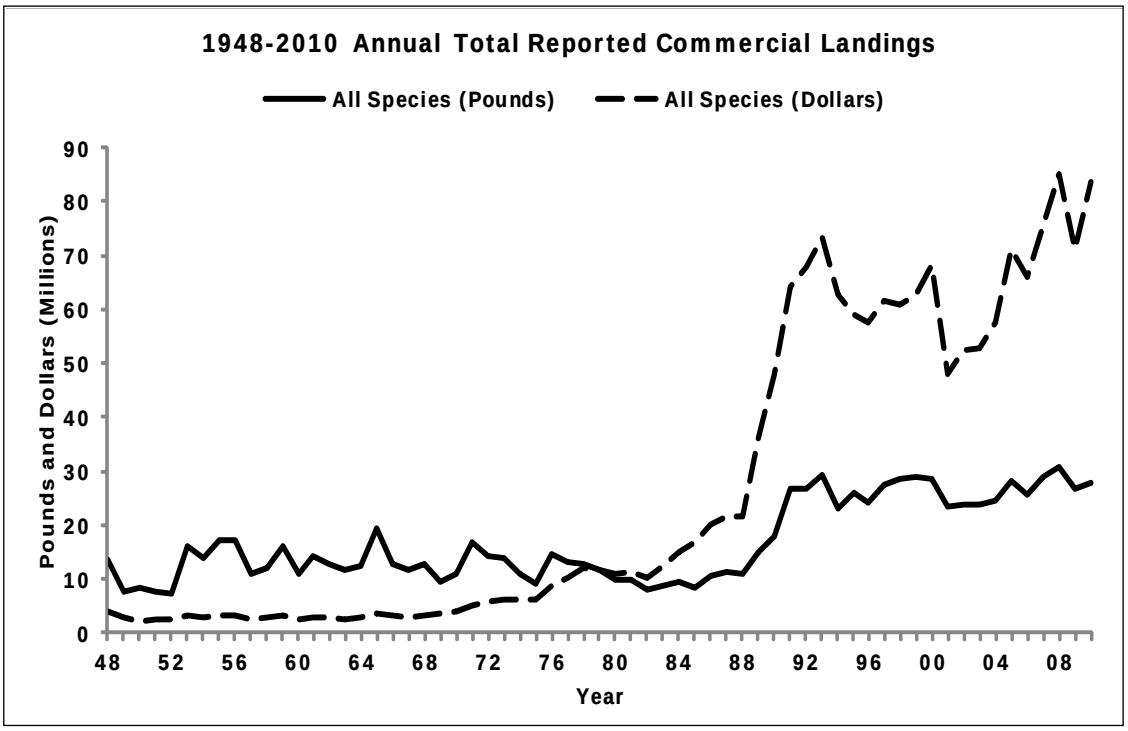

Figure D-3-1

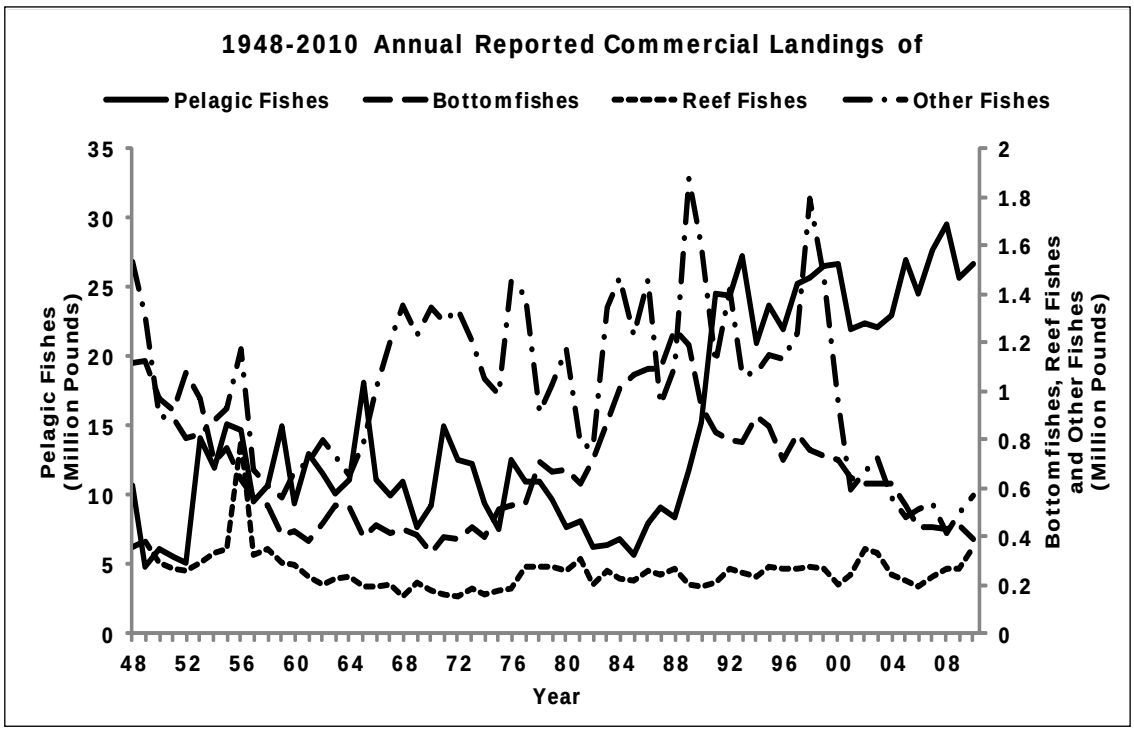

Figure D-3-2

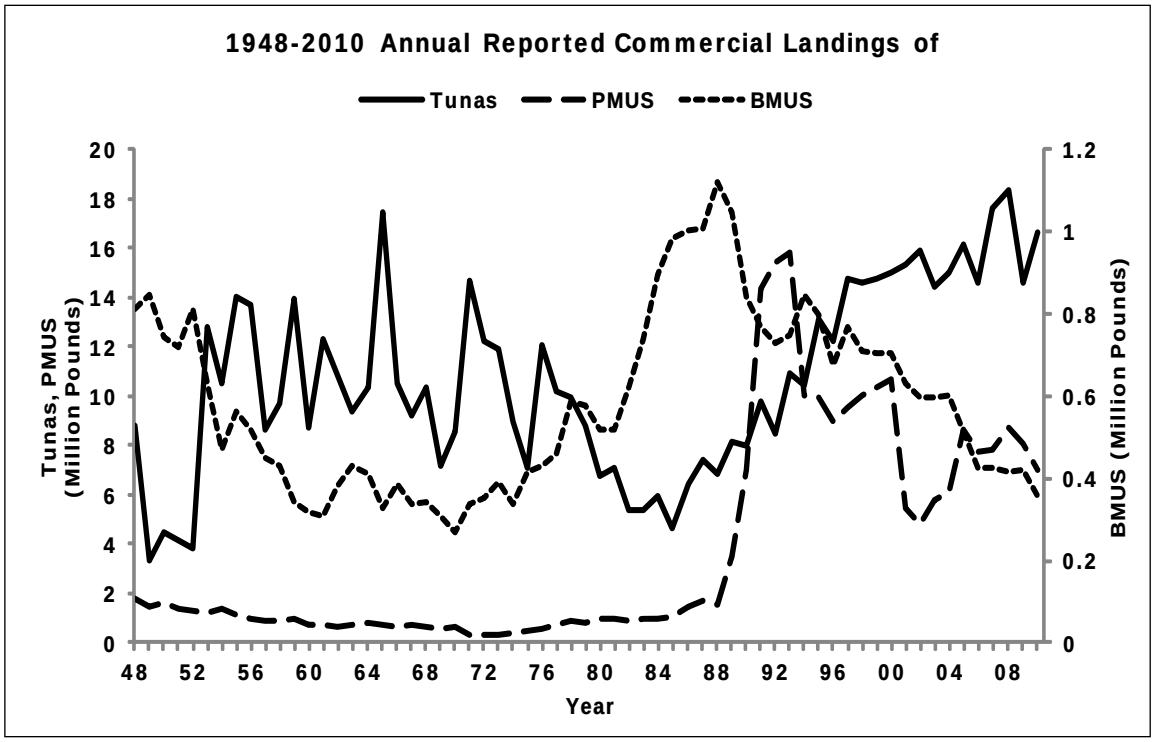

Figure D-3-3

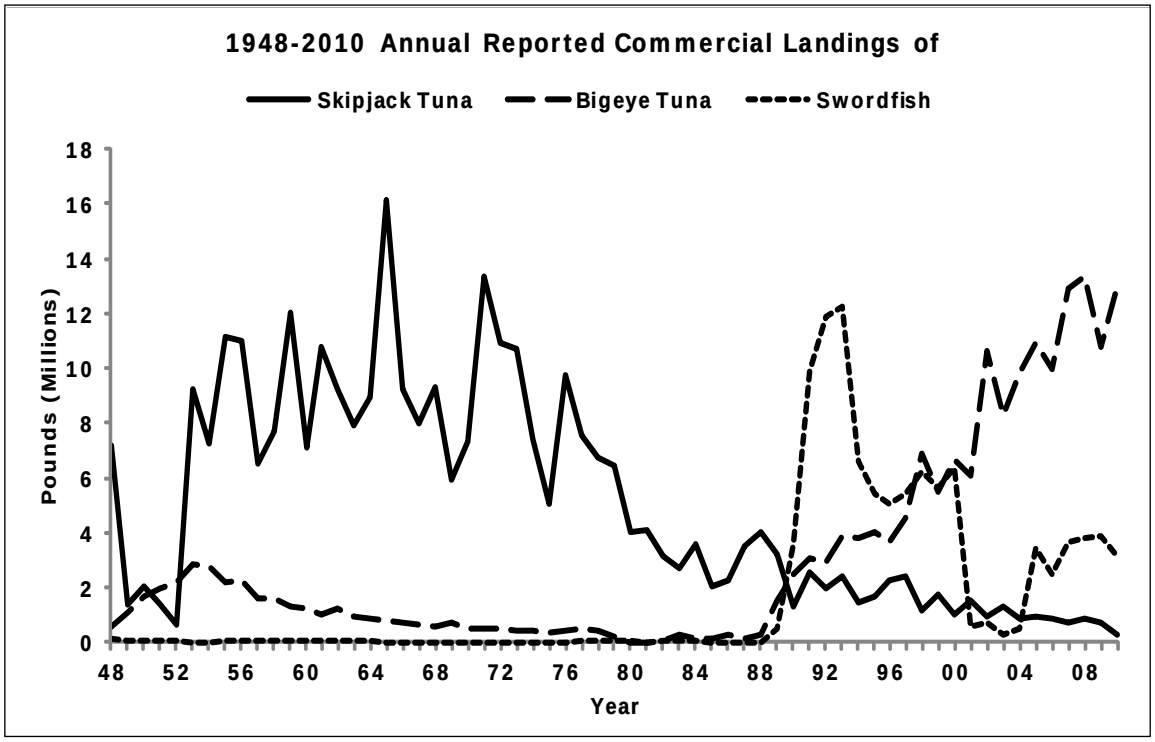

Figure D-3-4

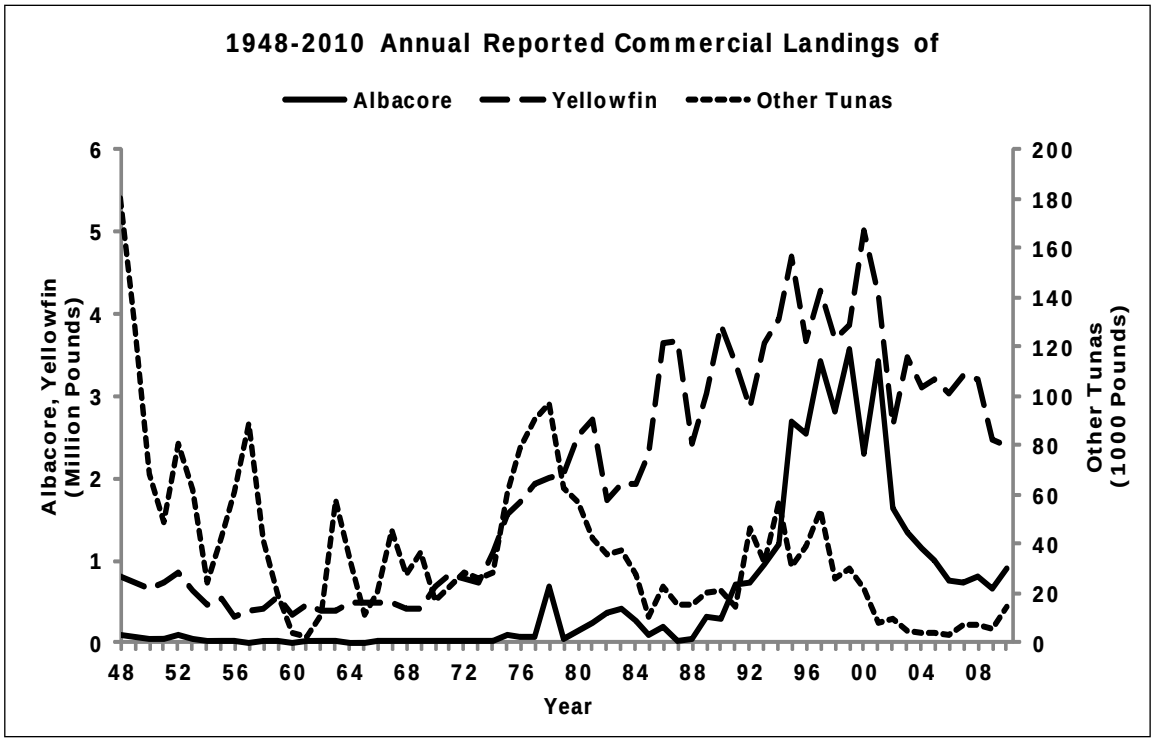

Figure D-3-5

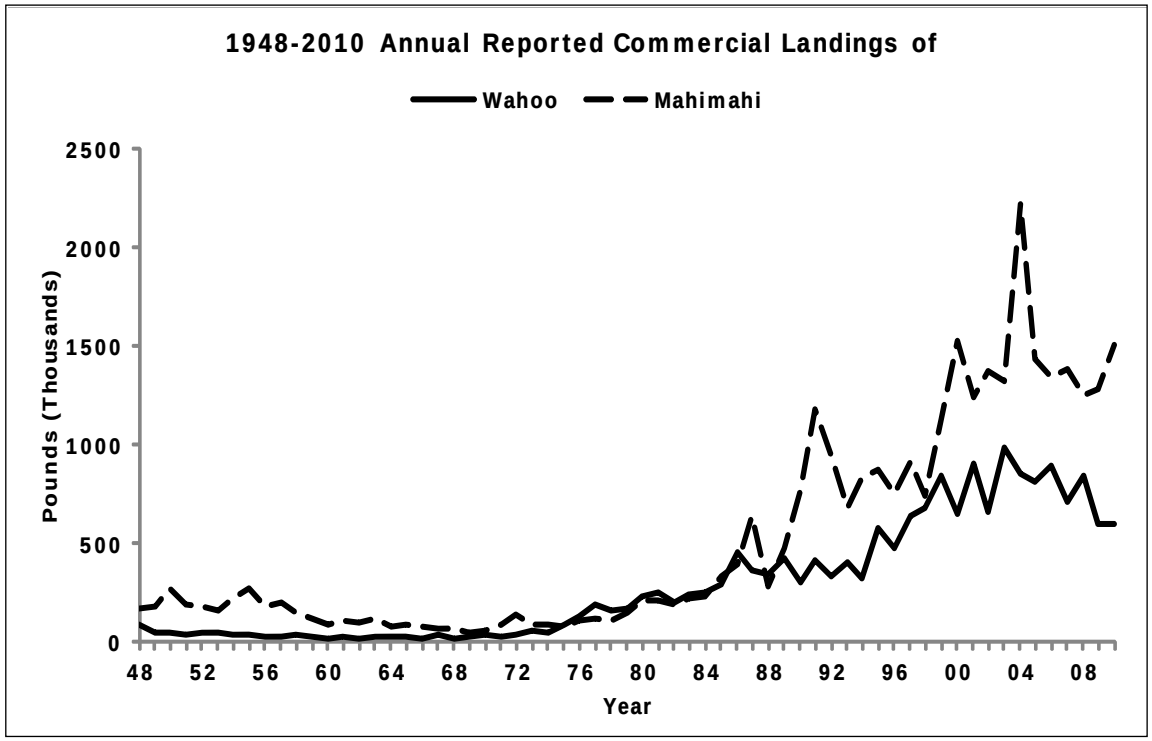

Figure D-3-6

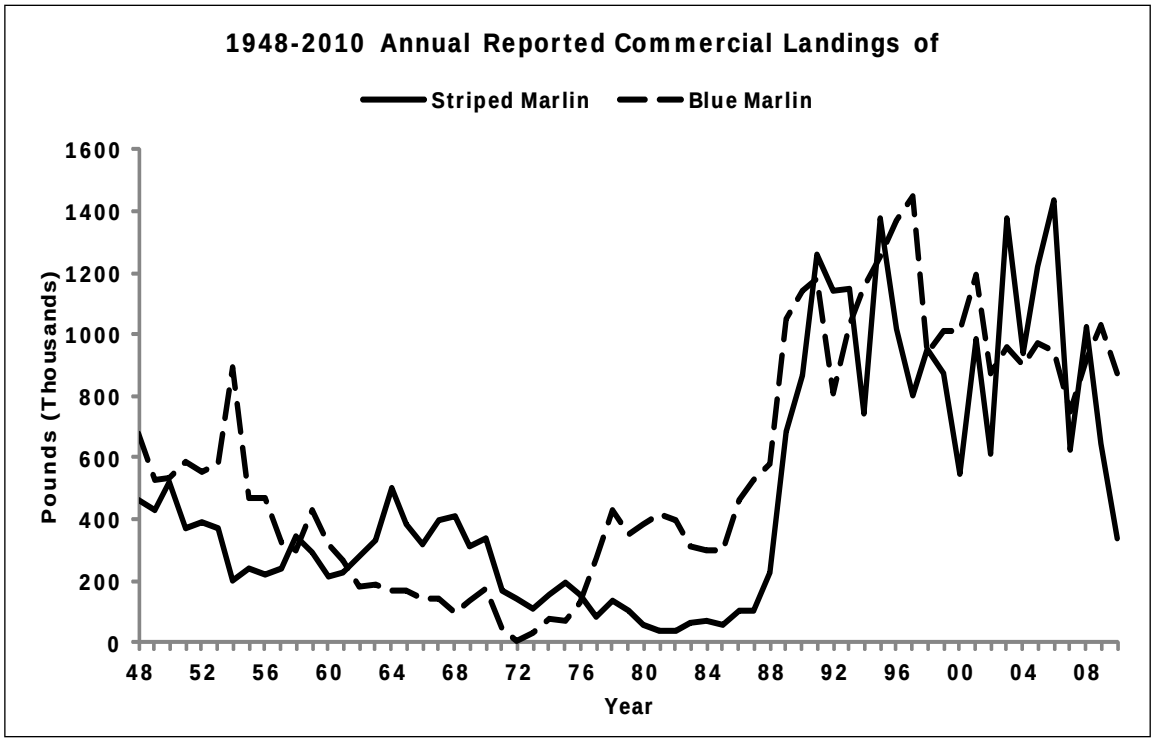

Figure D-3-7

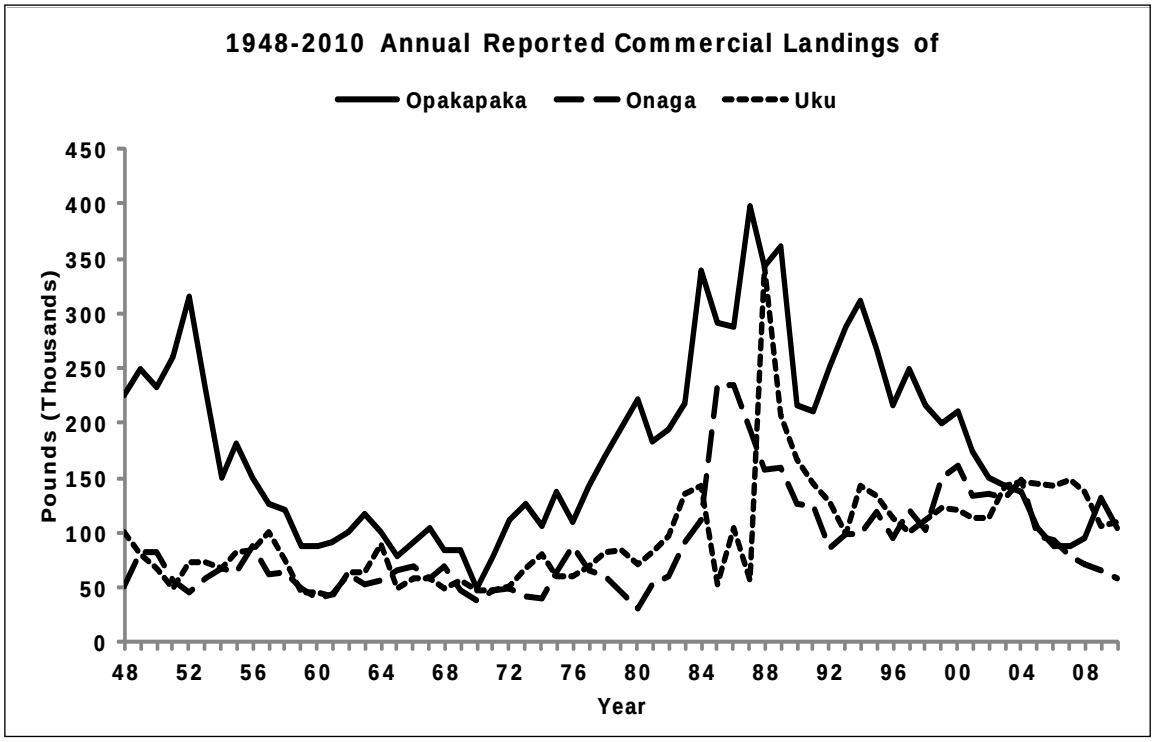

Figure D-3-8

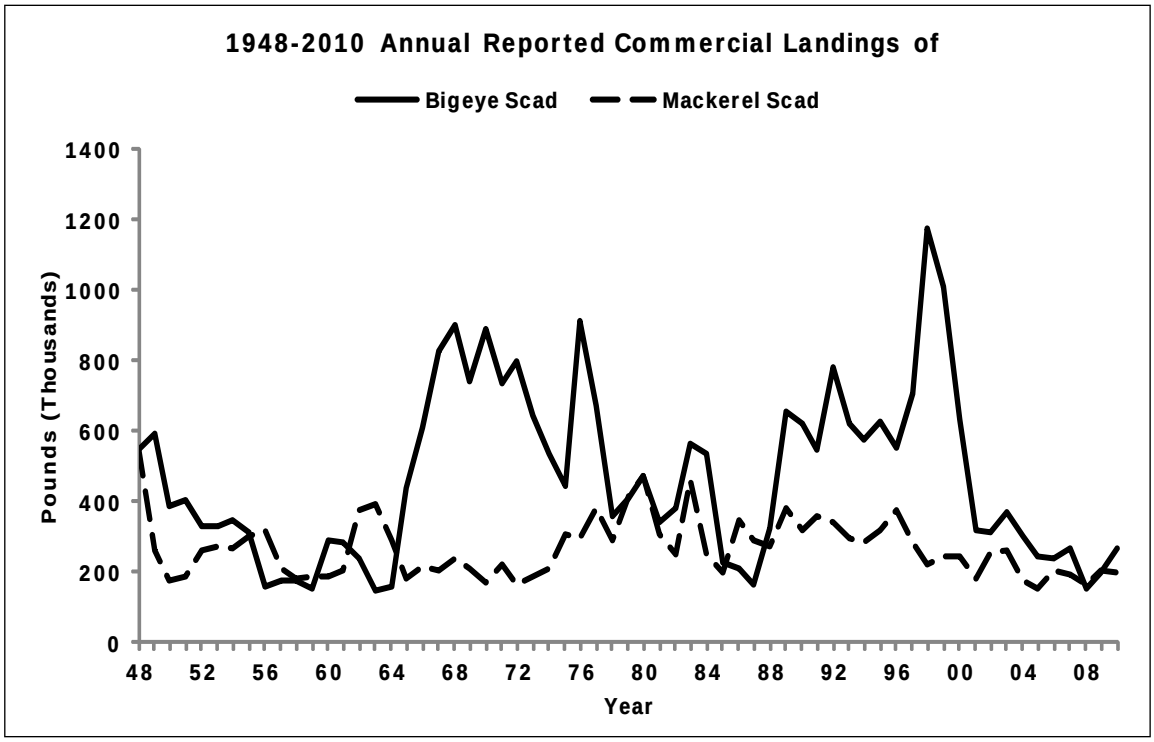

Figure D-3-9

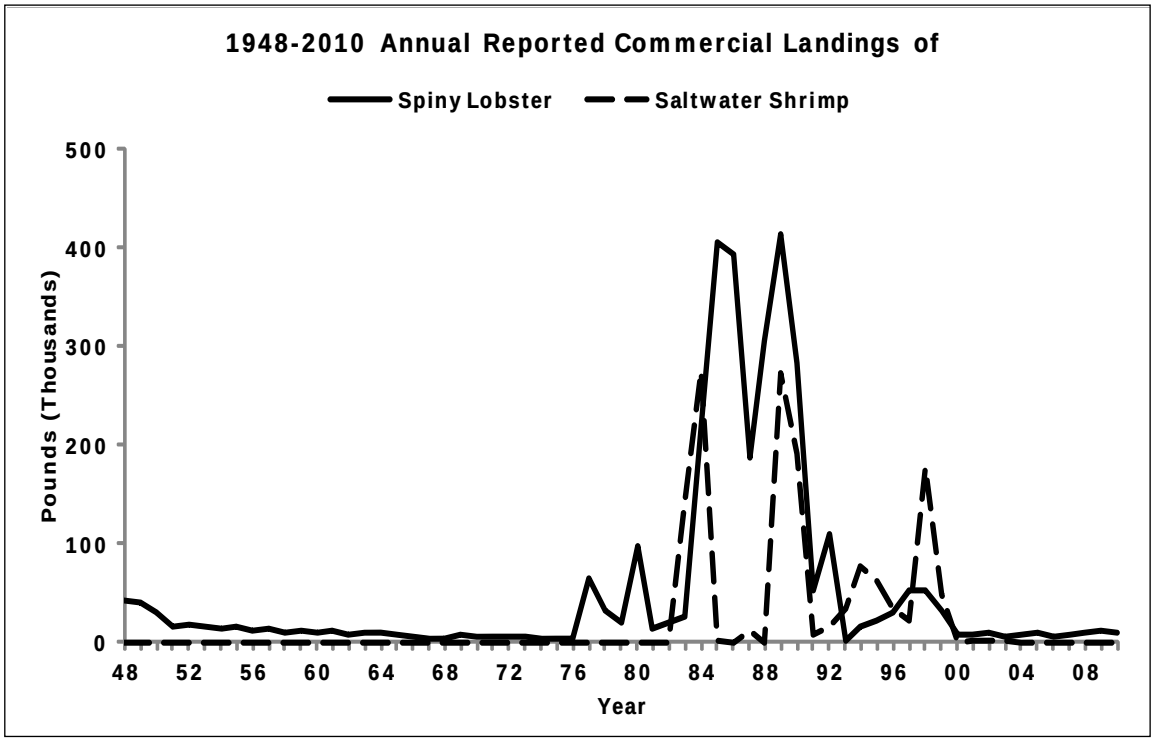

Figure D-3-10

The following graphs plot monthly landings of some commercially important species and document monthly fluctuations over the time series:

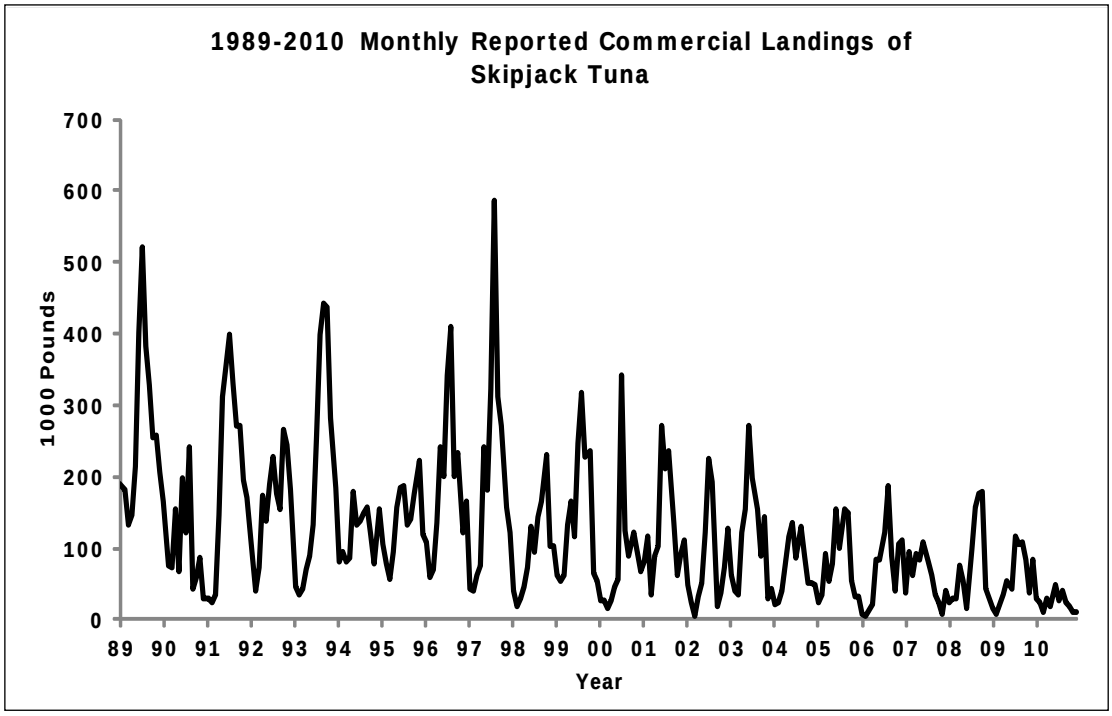

Figure D-4-1

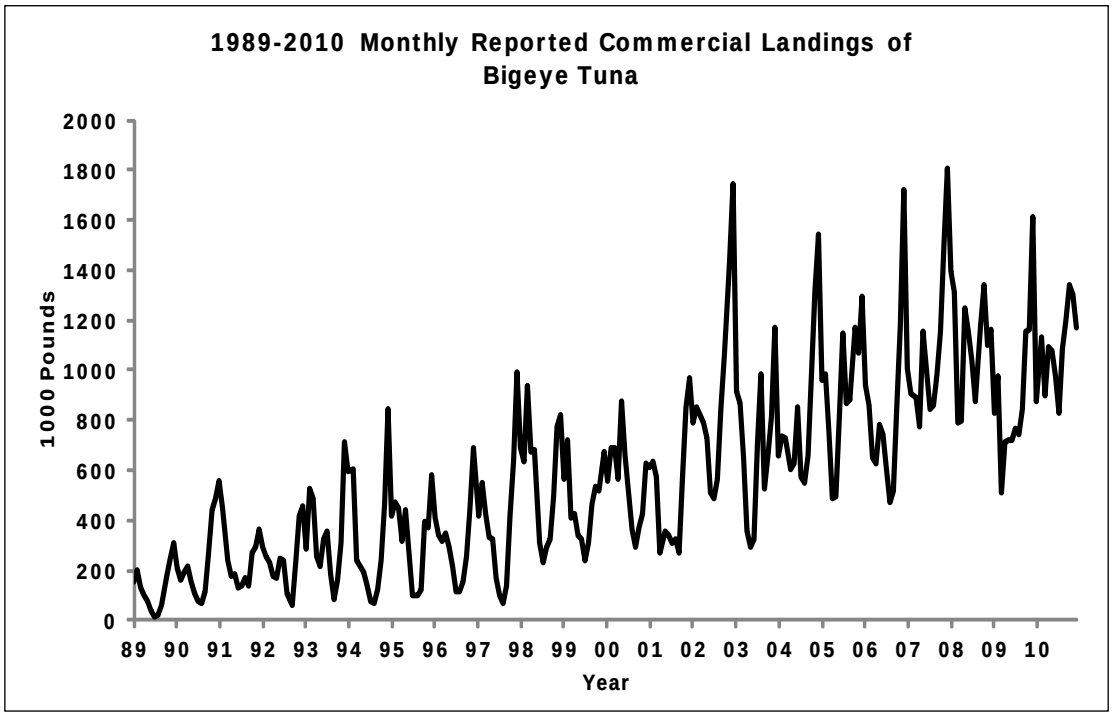

Figure D-4-2

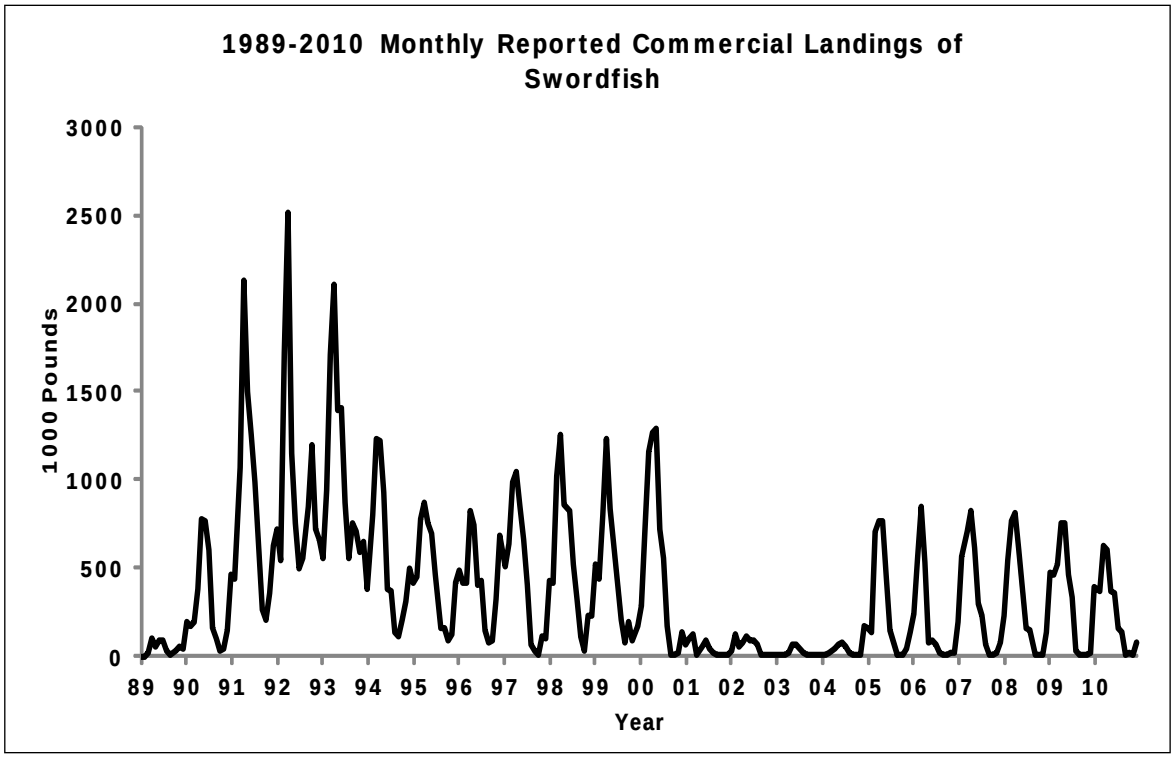

Figure D-4-3

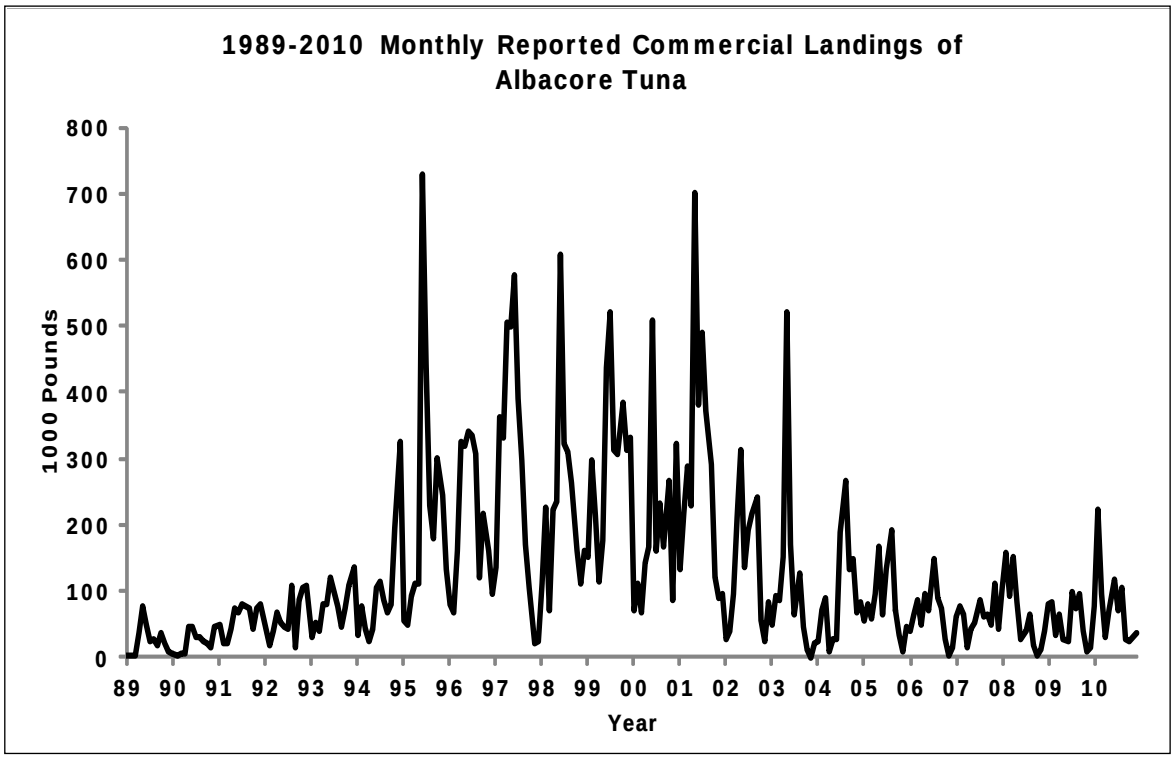

Figure D-4-4

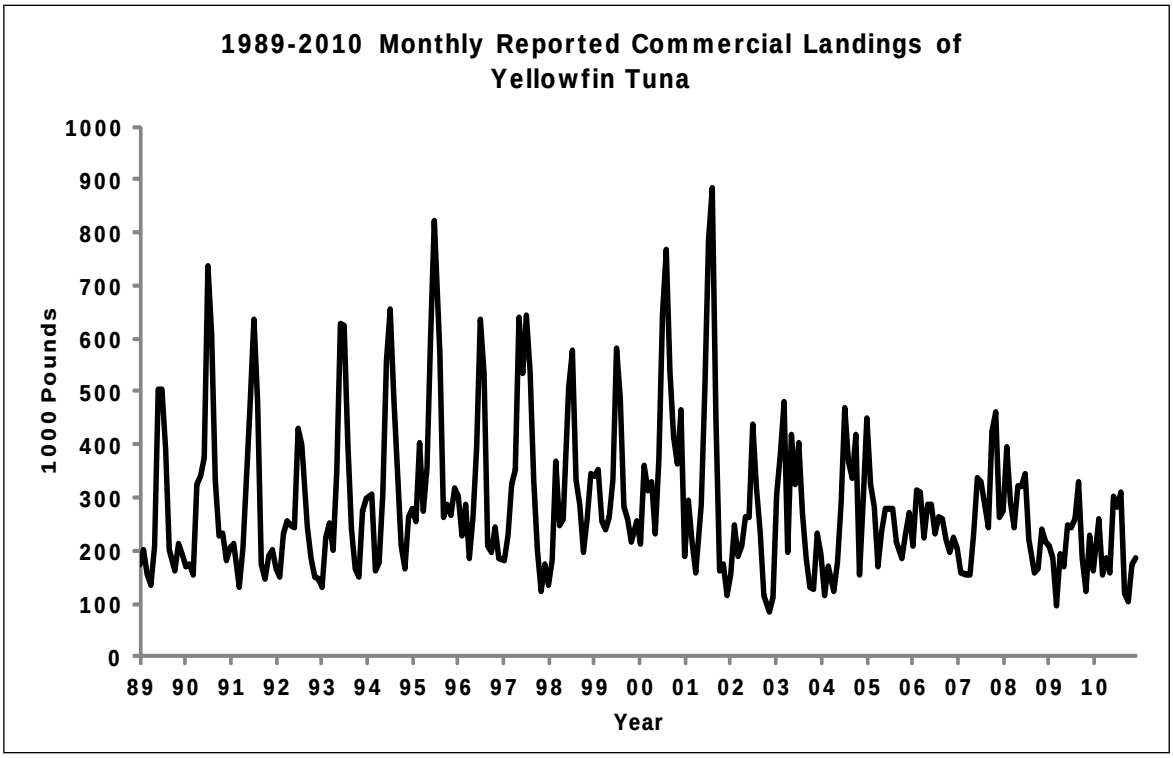

Figure D-4-5

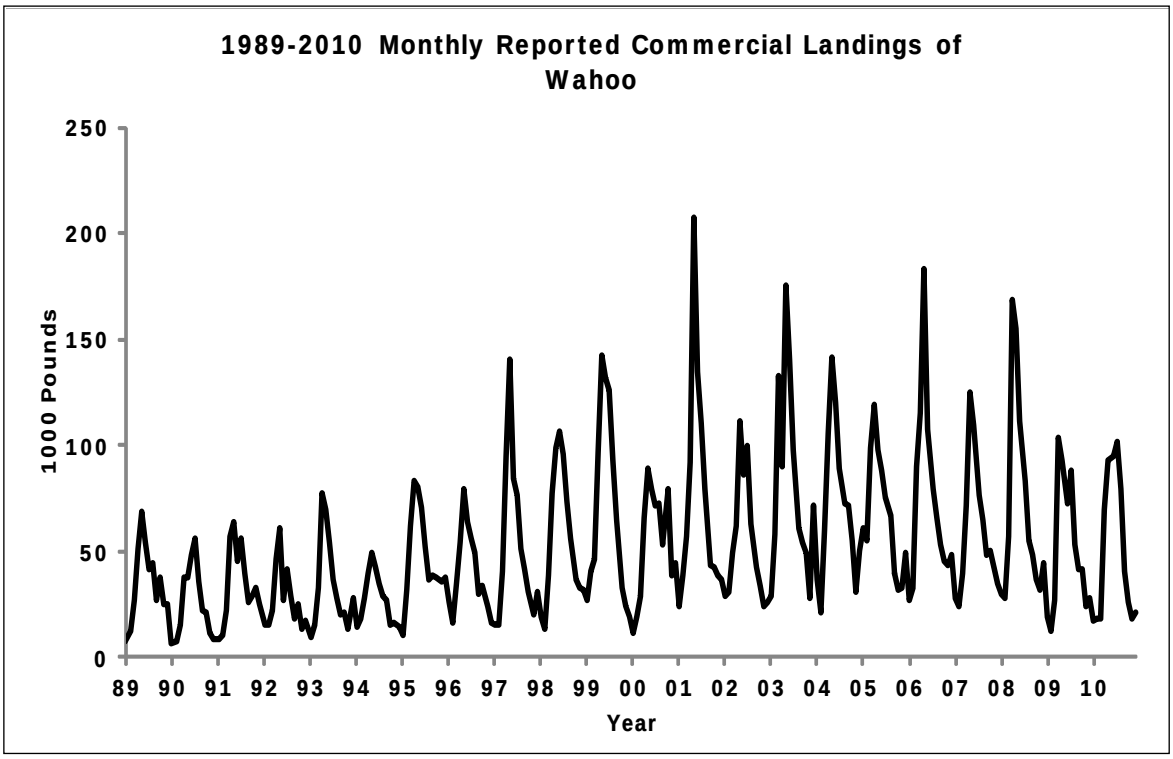

Figure D-4-6

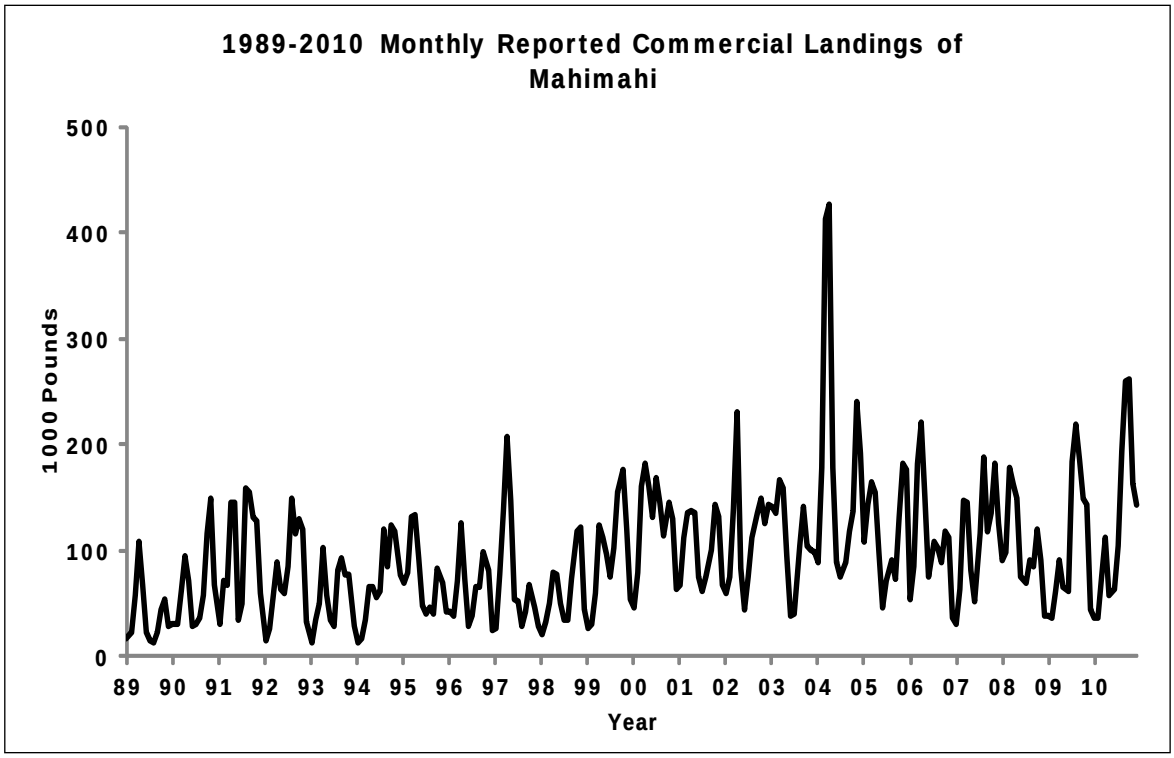

Figure D-4-7

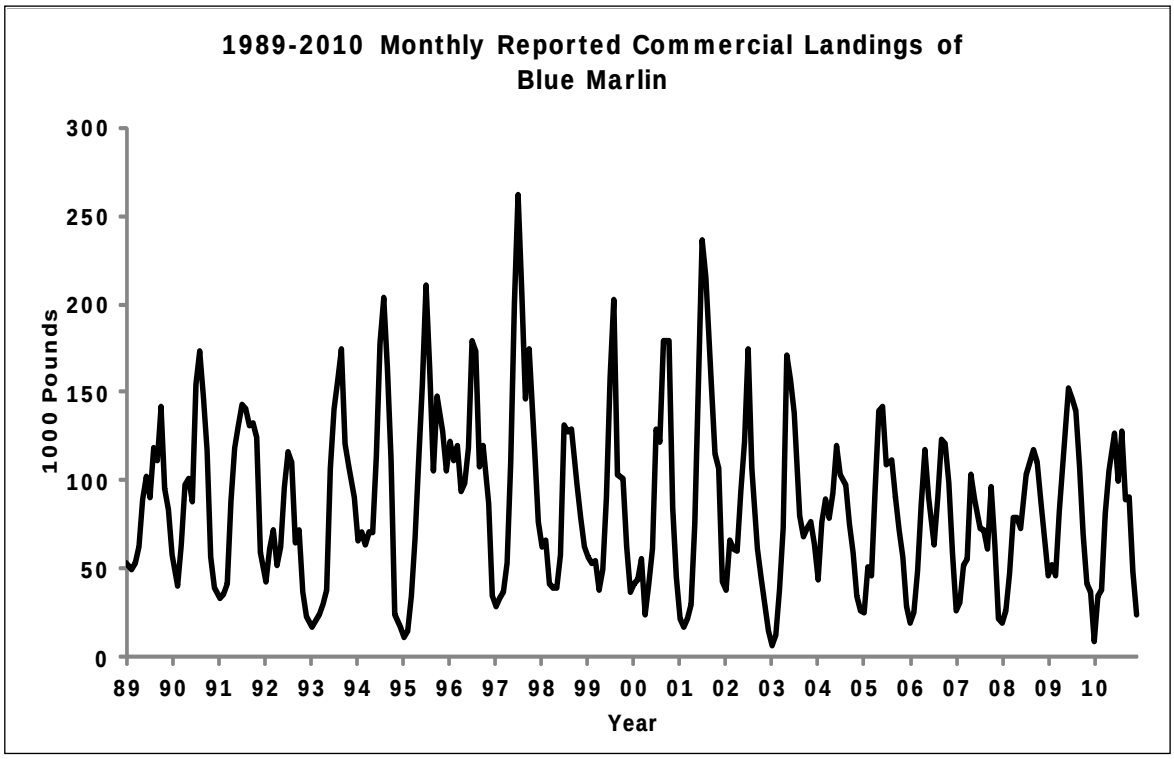

Figure D-4-8

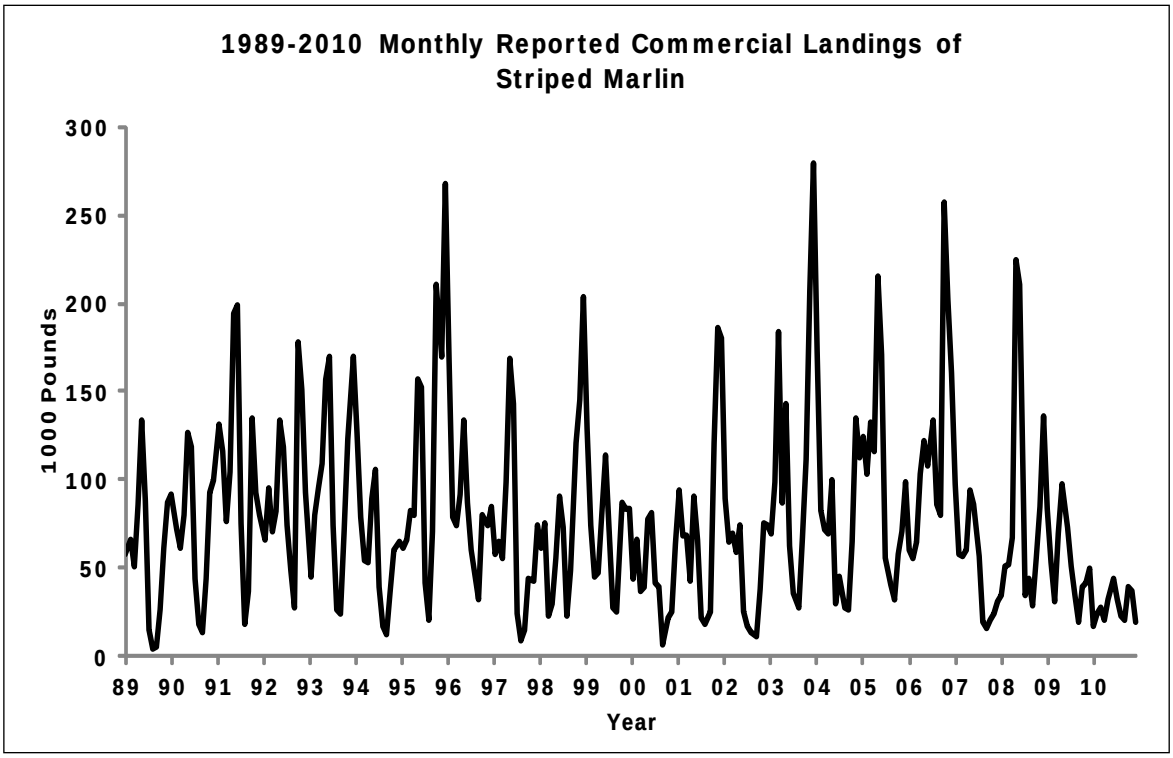

Figure D-4-9

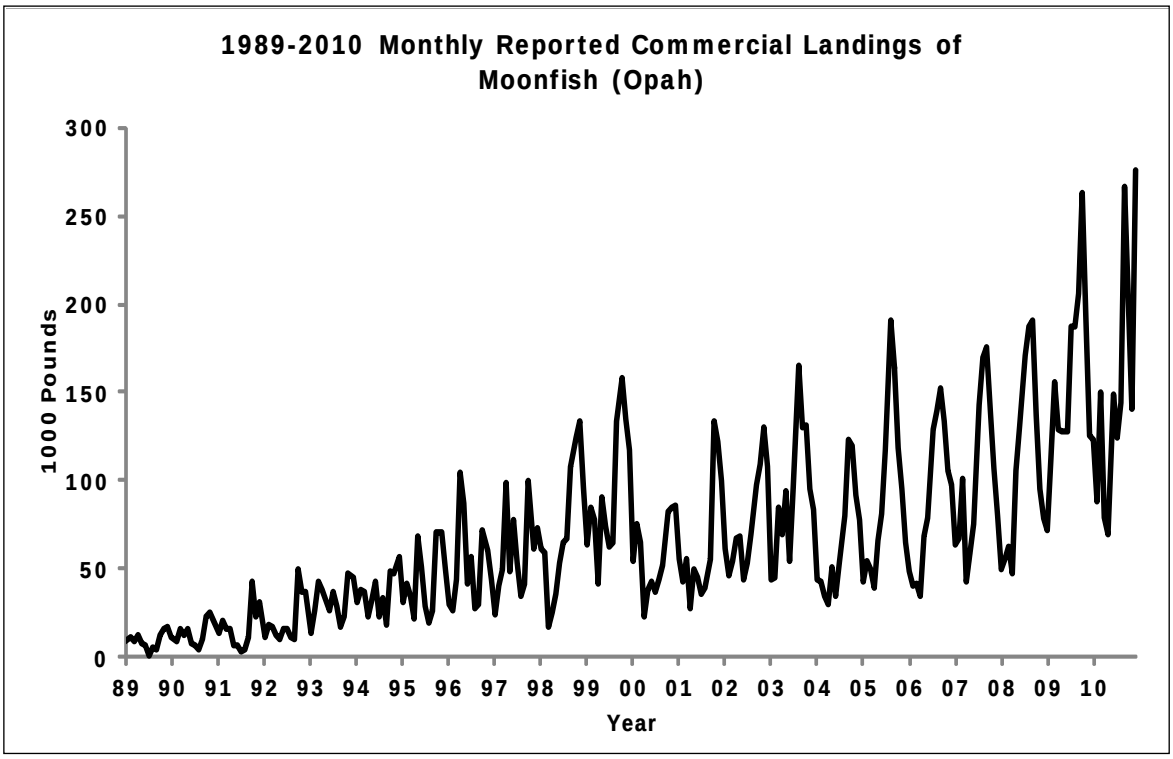

Figure D-4-10

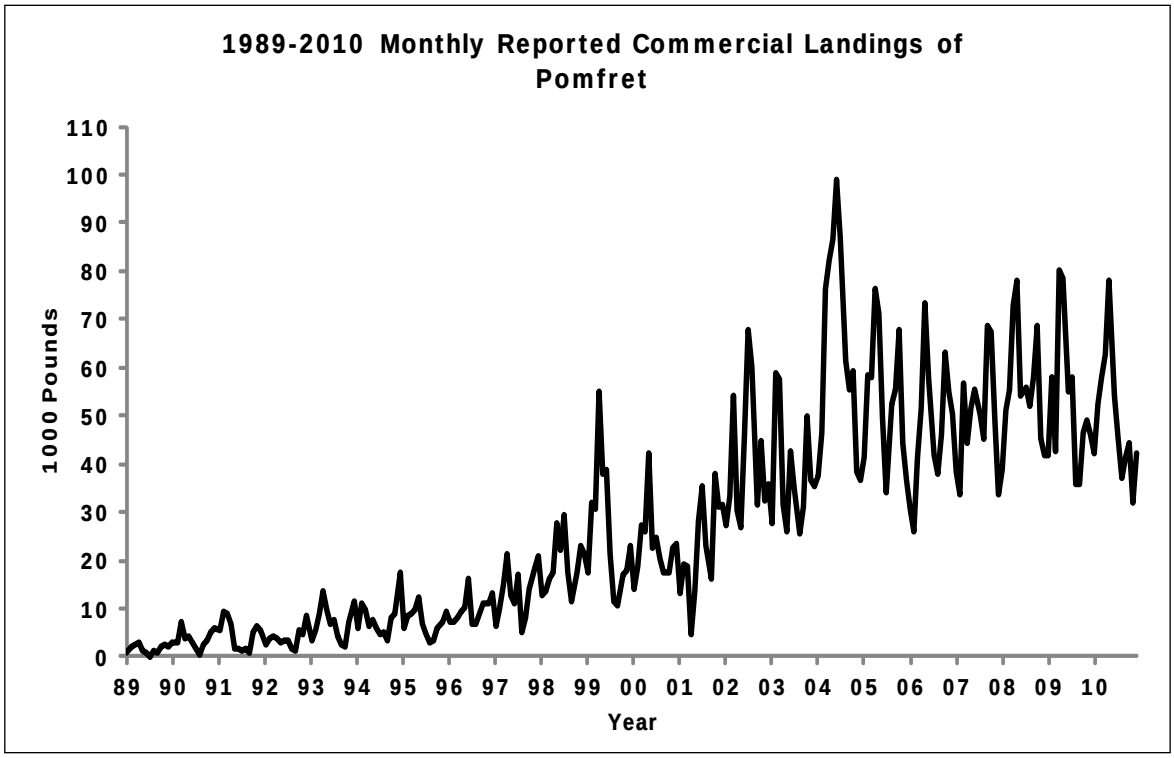

Figure D-4-11

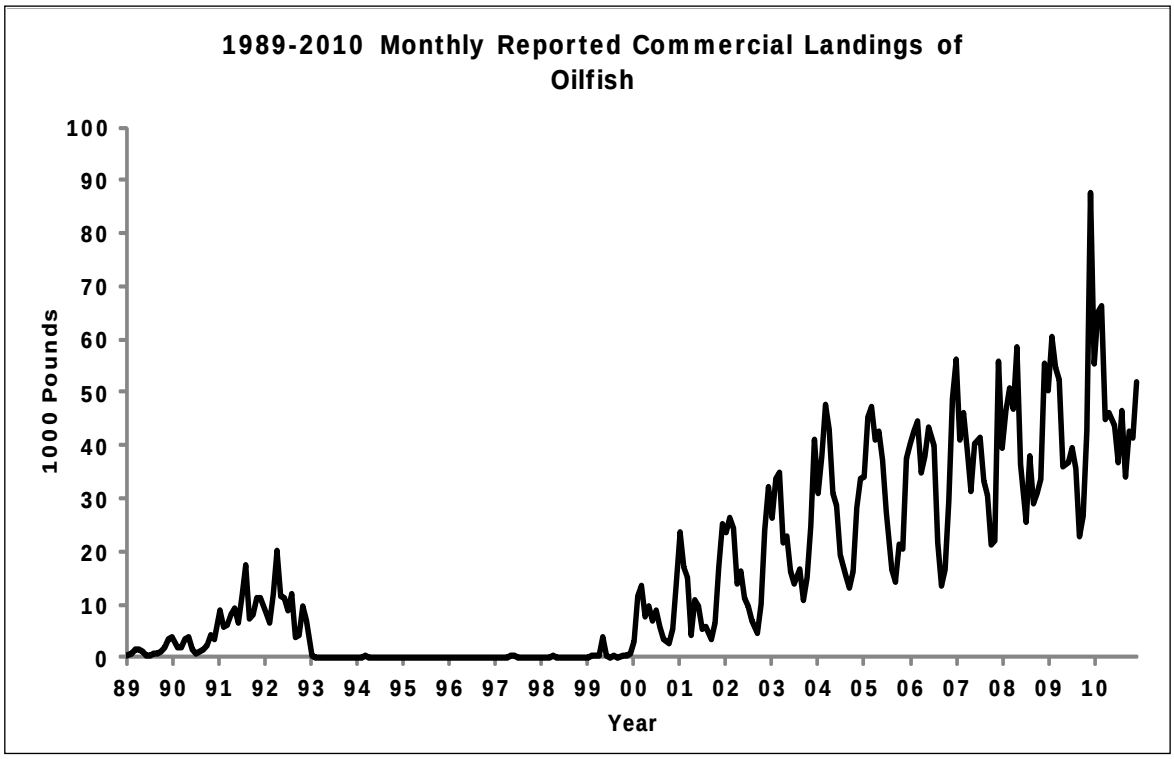

Figure D-4-12

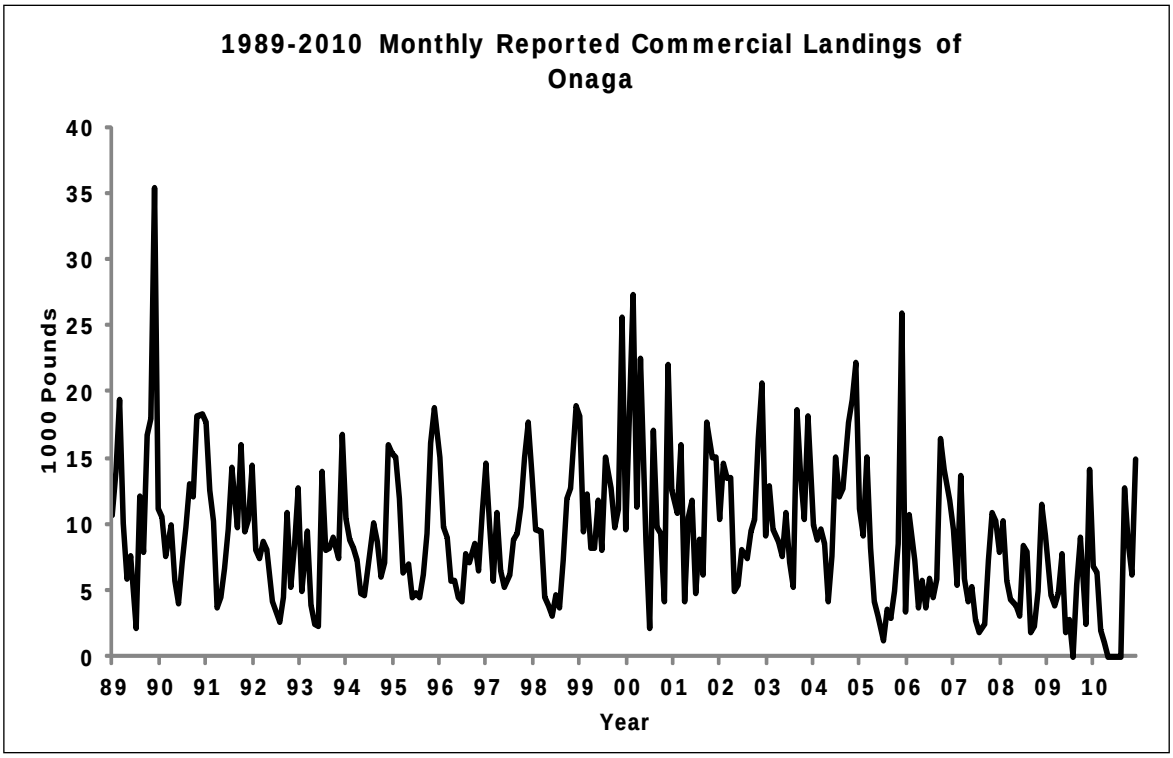

Figure D-4-13

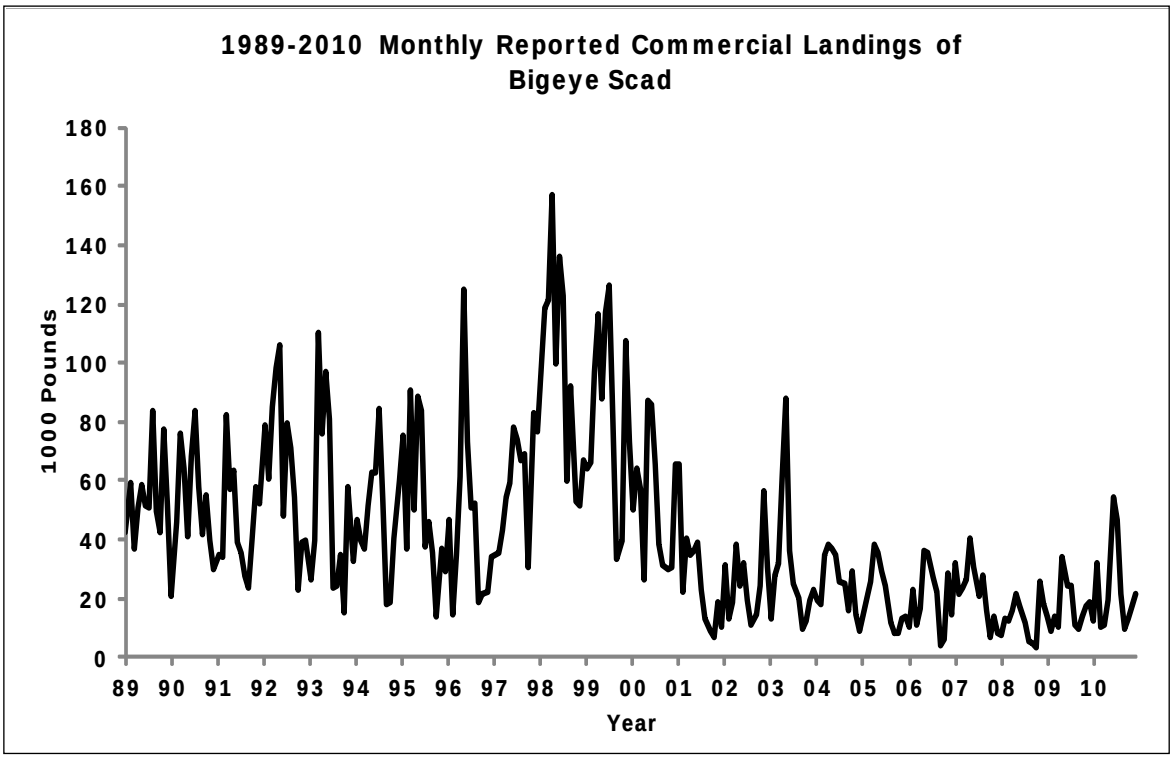

Figure D-4-14