

PACIFIC ISLANDS FISHERIES SCIENCE CENTER



Fishery Statistics of the Western Pacific

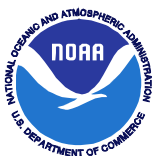
Volume 26

Territory of American Samoa (2009)
Commonwealth of the Northern Mariana Islands (2009)
Territory of Guam (2009)
State of Hawaii (2009)

Compiled by

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

December 2011



Administrative Report H-11-09

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Pacific Islands Fisheries Science Center Administrative Reports are issued to promptly disseminate scientific and technical information to marine resource managers, scientists, and the general public. Their contents cover a range of topics, including biological and economic research, stock assessment, trends in fisheries, and other subjects. Administrative Reports typically have not been reviewed outside the Center. As such, they are considered informal publications. The material presented in Administrative Reports may later be published in the formal scientific literature after more rigorous verification, editing, and peer review.

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PREFACE

Increasingly, there is a 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 26th 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 2009. 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

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 date of collection.

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 2009 FISHERY STATISTICS

Compiled by

American Samoa

Department of Marine and Wildlife Resources

and the

Western Pacific Fisheries Information Network

December 2011

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AMERICAN SAMOA 2009 FISHERY 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)

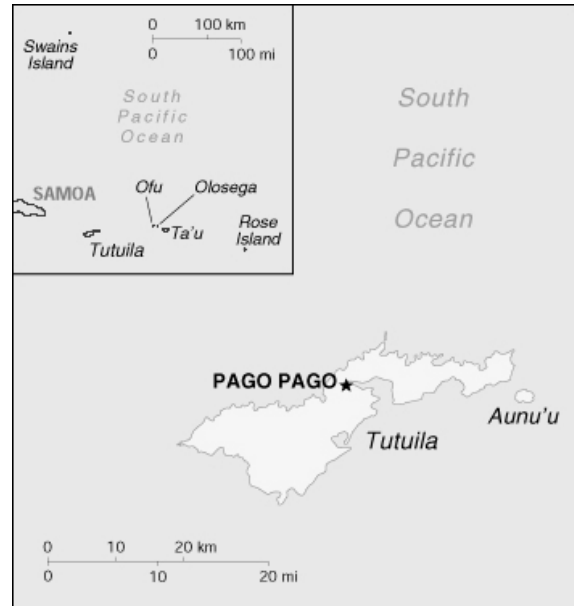
Population: about 65,628 (the majority of the population lives on Tutuila); (*The World Factbook*, July 2009 est.)

Economy: tuna fishing and tuna processing plants, with canned tuna the primary export

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 2009, the various fisheries monitoring programs in American Samoa identified 51 active vessels—46 homeported on Tutuila and 5 in the Manu'a Islands. Many of these vessels participated in more than one fishery, and 26 of the Tutuila boats (including 25 vessels which were over 50 feet in length) did at least some longlining. Of the 51 total boats, 10 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 4-man crews, fished 14 hours, and caught about



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

180 pounds of fish; the Manu`a-based fleet typically had 3-man crews, fished about 5 hours and landed 41 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 and the boat docks along one side of the Pago Pago harbor. According to DMWR staff, the tsunami took a huge toll on the boat-based fishery—of 17 local boats that were actively fishing, about 3 survived the tsunami. The rest sustained damage either to the boats and outboard engines or lost everything including fishing gear. By December, only 3 local boats were able to resume fishing activities, 1 longlining and 2 bottomfishing. Because of coastal damage, debris, and pollution, little or no shoreline fishing occurred prior to the end of 2009.

Most DMWR vehicles were severely damaged by the tsunami. The surveys for the boat-based program were reduced to 2 to 3 days per week and only collected data during the day time. The shore-based survey program did not resume for the rest of the year based on the lack of fishing activities and the unavailability of vehicles. One cannery also closed after the tsunami because of damage to the facility and equipment.

There was no damage to the large vessel longline fleet; however, according to the longline logbook data, reported longline catch showed a decrease in both longline effort and catch, and the number of vessels turning in logs in this quarter decreased by 8%, from 24 vessels to 22, compared to the same quarter of 2008. The total estimated commercial catch was less than 119,000 pounds (or 4.4%) for the same quarter in the previous year.

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

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 Manus 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:

A.6

- 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. 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>. 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 (unknown)	Spearfish
Mahimahi	Swordfish
Blue marlin	Wahoo
Black marlin	Pomfret
Striped marlin	Moonfish
Sailfish	

II. Bottomfish Management Unit Species (BMUS)

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

III. Billfishes

Swordfish	Striped marlin
Blue marlin	Sailfish
Black marlin	Spearfish

IV. Tunas

Skipjack tuna	Yellowfin tuna
Dogtooth tuna	Bigeye tuna
Albacore tuna	

V. Other Tunas

Dogtooth tuna

VI. Fisheries Categories

A. *Pelagic Fishes*

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

B. *Bottomfishes*

Amberjack	Longspine grouper
Ambon emperor	Longtail snapper (onaga)
Bigeye bream	Monchong
Bigeye scad	Onespot snapper
Bigeye trevally	Peacock grouper
Black jack	Pink snapper (opakapaka)
Black snapper	Redgill emperor
Blue lined snapper	Ruby snapper (ehu)
Bluefin trevally	Rufous snapper
Emperors	Silverjaw jobfish (lehi)
Flower snapper (gindai)	Smalltooth grouper
Giant grouper	Spotted grouper
Goldflag jobfish	Squartail grouper
Gray jobfish	Stone's snapper
Greater amberjack	Trevallys
Groupers	White-edged lyretail
Honeycomb grouper	Yellow-edged lyretail
Humpback snapper	Yelloweye opakapaka
Jacks	Yellowspot grouper
Longnose emperor	

C. *Reef Fishes*

Butterflyfishes	Soldierfish (misc)
Inshore groupers	Squirrelfishes
Inshore snappers	Surgeonfishes/tangs
Mulletts	Sweepers
Paeony bulleye	Sweetlips
Parrotfishes	Terapon perch
Porcupinefish	Triggerfishes
Rudderfishes	Unicornfishes
Sergeant major	Wrasses

D. *Other Fishes*

Crabs	Pollock
Filefishes	Spiny lobster
Moray eels	Spiny pufferfish
Octopus	Tilapia

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 2009 Estimated Commercial Landings

Species	Pounds	Value (\$)	Price/Lb (\$)
Pollock	40	59	1.48
Amberjack	194	513	2.65
Greater amberjack	844	2,299	2.72
Barracudas	3,264	8,674	2.66
Bigeye bream	111	292	2.62
Paeony bulleye	29	78	2.65
Butterflyfishes	12	30	2.49
Crabs	95	251	2.65
Moray eels	10	27	2.64
Ambon emperor	4,143	10,863	2.62
Longnose emperor	3,396	9,056	2.67
Redgill emperor	6,730	16,839	2.50
Emperors	4,589	11,351	2.47
Filefishes	343	908	2.65
Giant grouper	792	2,099	2.65
Honeycomb grouper	138	331	2.40
Longspine grouper	180	478	2.66
Peacock grouper	413	1,073	2.60
Smalltooth grouper	51	141	2.75
Spotted grouper	169	447	2.65
Squartail grouper	33	83	2.50
Yellowspot grouper	87	233	2.68
Groupers	249	619	2.48
Inshore groupers	618	1,563	2.53
Black jack	1,639	4,351	2.66
Jacks	54	136	2.52
Goldflag jobfish	387	1,149	2.97
Gray jobfish	4,956	12,823	2.59
Silverjaw jobfish (lehi)	3,712	10,515	2.83
Spiny lobster	2,401	11,263	4.69
Yellow-edged lyretail	1,123	2,979	2.65
White-edged lyretail	261	697	2.67
Mackerel	379	452	1.19
Mahimahi	24,554	58,938	2.40
Black marlin	647	605	0.94
Blue marlin	55,556	52,779	0.95
Striped marlin	1,786	1,964	1.10
Monchong	33	67	2.00
Mullets	34	101	2.95
Octopus	60	178	2.96
Oilfish	4,549	4,549	1.00
Moonfish	4,863	7,294	1.50
Yelloweye opakapaka	1,418	3,901	2.75
Parrotfishes	5,283	13,797	2.61

Table A-1 (continued)
American Samoa Annual 2009 Estimated Commercial Landings

Species	Pounds	Value (\$)	Price/Lb (\$)
Terapon perch	116	316	2.73
Pomfret	1,019	2,293	2.25
Porcupinefish	28	62	2.20
Spiny pufferfish	119	287	2.40
Rainbow runner	249	660	2.65
Rudderfishes	15	38	2.61
Sailfish	2,015	5,055	2.51
Bigeye scad	66	219	3.33
Sergeant major	52	137	2.65
Sharks (unknown)	1,175	700	0.60
Black snapper	801	2,130	2.66
Blue lined snapper	4,988	13,072	2.62
Flower snapper (gindai)	136	338	2.49
Humpback snapper	12,077	30,443	2.52
Longtail snapper (onaga)	2,960	7,780	2.63
Onespot snapper	72	187	2.59
Ruby snapper (ehu)	1,449	4,044	2.79
Rufous snapper	24	63	2.65
Stone's snapper	516	1,399	2.71
Pink snapper (opakapaka)	543	1,358	2.50
Inshore snappers	108	290	2.68
Soldierfishes	221	577	2.61
Spearfish	953	1,096	1.15
Squirrelfishes	1,673	4,248	2.54
Surgeonfishes/tangs	10,675	27,334	2.56
Sweepers	731	1,999	2.73
Sweetlips	14	37	2.64
Swordfish	19,019	41,370	2.18
Tilapia	120	194	1.61
Bigeye trevally	709	1,905	2.69
Bluefin trevally	189	663	3.51
Trevallys	500	1,382	2.77
Triggerfishes	32	77	2.40
Albacore tuna	8,641,054	8,653,770	1.00
Bigeye tuna	322,746	381,481	1.18
Dogtooth tuna	637	1,690	2.65
Skipjack tuna	346,171	211,662	0.61
Yellowfin tuna	854,901	801,061	0.94
Unicornfishes	3,306	8,302	2.51
Wahoo	301,120	182,068	0.60
Wrasses	29	75	2.60
TOTAL	10,673,552	10,648,700	1.00

Table A-2
American Samoa January 2009 Estimated Commercial Landings

Species	Pounds	Value (\$)	Price/Lb (\$)	
Greater amberjack	10	27	2.71	
Barracudas	82	219	2.68	
Ambon emperor	31	82	2.63	
Longnose emperor	111	296	2.66	
Redgill emperor	476	1,190	2.50	
Emperors	352	894	2.54	
Peacock grouper	10	27	2.60	
Inshore groupers	78	200	2.58	*
Black jack	49	130	2.65	
Goldflag jobfish	113	333	2.94	
Gray jobfish	116	303	2.62	
Silverjaw jobfish (lehi)	100	284	2.84	
Yellow-edged lyretail	27	72	2.64	
Mahimahi	319	758	2.38	
Black marlin	647	605	0.94	*
Blue marlin	7,984	7,585	0.95	
Striped marlin	31	34	1.10	
Mullets	34	101	2.95	*
Moonfish	228	342	1.50	
Yelloweye opakapaka	343	944	2.75	
Parrotfishes	261	647	2.48	*
Pomfret	43	98	2.25	
Rainbow runner	26	70	2.65	
Sharks (unknown)	39	28	0.71	
Blue lined snapper	225	616	2.73	
Flower snapper (gindai)	24	59	2.49	*
Humpback snapper	1,027	2,664	2.59	
Longtail snapper (onaga)	444	1,208	2.72	
Ruby snapper (ehu)	231	650	2.81	*
Pink snapper (opakapaka)	30	75	2.50	*
Inshore snappers	52	139	2.67	
Spearfish	7	8	1.15	
Squirrelfishes	134	349	2.61	*
Surgeonfishes/tangs	875	2,269	2.59	*
Swordfish	1,315	2,432	1.85	
Albacore tuna	574,248	574,972	1.00	
Bigeye tuna	8,897	10,609	1.19	
Dogtooth tuna	46	122	2.65	
Skipjack tuna	4,871	3,382	0.69	
Yellowfin tuna	17,016	16,361	0.96	
Unicornfishes	50	100	2.00	*
Wahoo	17,637	10,629	0.60	
TOTAL	638,637	641,908	1.01	

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Table A-3
American Samoa February 2009 Estimated Commercial Landings

Species	Pounds	Value (\$)	Price/Lb (\$)	
Greater amberjack	213	575	2.70	
Barracudas	379	1,017	2.68	
Bigeye bream	20	53	2.61	
Longnose emperor	129	354	2.75	
Redgill emperor	846	2,115	2.50	
Emperors	987	2,468	2.50	
Filefishes	23	62	2.65	
Giant grouper	792	2,099	2.65	
Peacock grouper	12	31	2.59	
Yellowspot grouper	27	74	2.75	
Inshore groupers	145	367	2.54	*
Black jack	284	754	2.65	
Goldflag jobfish	82	276	3.38	
Gray jobfish	479	1,254	2.62	
Silverjaw jobfish (lehi)	465	1,530	3.29	
Spiny lobster	144	676	4.70	
Yellow-edged lyretail	209	566	2.70	
Mahimahi	175	438	2.50	*
Blue marlin	6,008	5,708	0.95	
Striped marlin	231	254	1.10	
Oilfish	28	28	1.00	
Moonfish	304	456	1.50	
Yelloweye opakapaka	56	150	2.65	
Parrotfishes	258	661	2.56	
Pomfret	130	293	2.25	
Spiny pufferfish	15	35	2.41	
Rainbow runner	14	38	2.67	
Sailfish	240	564	2.35	*
Sharks (unknown)	37	69	1.90	
Black snapper	180	478	2.66	
Blue lined snapper	529	1,397	2.64	
Humpback snapper	909	2,361	2.60	
Longtail snapper (onaga)	954	2,447	2.56	
Ruby snapper (ehu)	295	792	2.68	*
Stone's snapper	273	763	2.79	
Inshore snappers	19	52	2.75	
Squirrelfishes	254	645	2.54	*
Surgeonfishes/tangs	915	2,369	2.59	*
Sweepers	107	284	2.65	
Swordfish	701	2,454	3.50	
Bigeye trevally	59	158	2.68	
Trevallys	291	799	2.75	
Albacore tuna	298,849	299,334	1.00	
Bigeye tuna	18,311	21,637	1.18	

Table A-3 (continued)
American Samoa February 2009 Estimated Commercial Landings

Species	Pounds	Value (\$)	Price/Lb (\$)
Dogtooth tuna	108	286	2.65
Skipjack tuna	4,035	2,436	0.60
Yellowfin tuna	35,308	33,032	0.94
Unicornfishes	185	469	2.53
Wahoo	21,097	12,746	0.60
Wrasses	29	75	2.60
TOTAL	396,138	407,979	1.03

* Data replaced or modified by Actual Commercial Landings Data

Table A-4
American Samoa March 2009 Estimated Commercial Landings

Species	Pounds	Value (\$)	Price/Lb (\$)	
Amberjack	182	482	2.65	
Greater amberjack	105	297	2.83	
Barracudas	121	329	2.72	
Ambon emperor	773	2,033	2.63	
Longnose emperor	372	1,000	2.69	
Redgill emperor	809	2,024	2.50	
Emperors	473	1,170	2.47	
Honeycomb grouper	56	136	2.40	
Peacock grouper	11	28	2.64	
Yellowspot grouper	23	62	2.65	
Inshore groupers	165	420	2.55	*
Black jack	971	2,588	2.66	
Goldflag jobfish	137	396	2.88	
Gray jobfish	797	1,994	2.50	
Silverjaw jobfish (lehi)	1,561	4,329	2.77	
Spiny lobster	25	119	4.75	*
Yellow-edged lyretail	219	590	2.70	
Mackerel	45	61	1.38	
Mahimahi	255	614	2.41	
Blue marlin	9,548	9,070	0.95	
Striped marlin	200	220	1.10	
Monchong	33	67	2.00	
Moonfish	874	1,311	1.50	
Yelloweye opakapaka	304	835	2.75	
Parrotfishes	293	756	2.58	*
Pomfret	22	49	2.25	
Sailfish	113	367	3.25	*
Sharks (unknown)	0	0	2.00	
Black snapper	25	66	2.66	
Blue lined snapper	723	1,817	2.51	
Flower snapper (gindai)	66	164	2.49	
Humpback snapper	1,412	3,548	2.51	
Longtail snapper (onaga)	293	735	2.51	
Ruby snapper (ehu)	493	1,359	2.76	*
Pink snapper (opakapaka)	293	732	2.50	
Inshore snappers	11	30	2.67	
Spearfish	20	23	1.15	
Squirrelfishes	319	805	2.52	*
Surgeonfishes/tangs	1,544	3,957	2.56	*
Sweepers	591	1,628	2.75	
Swordfish	701	1,423	2.03	
Tilapia	40	46	1.15	*
Bigeye trevally	341	914	2.68	
Bluefin trevally	19	68	3.51	

Table A-4 (continued)
American Samoa March 2009 Estimated Commercial Landings

Species	Pounds	Value (\$)	Price/Lb (\$)
Trevallys	107	314	2.94
Triggerfishes	32	77	2.40
Albacore tuna	339,841	340,834	1.00
Bigeye tuna	17,475	20,650	1.18
Dogtooth tuna	40	106	2.65
Skipjack tuna	7,171	4,778	0.67
Yellowfin tuna	60,316	56,768	0.94
Unicornfishes	70	174	2.50
Wahoo	21,114	12,733	0.60
TOTAL	471,542	485,095	1.03

* Data replaced or modified by Actual Commercial Landings Data

Table A-5
American Samoa April 2009 Estimated Commercial Landings

Species	Pounds	Value (\$)	Price/Lb (\$)	
Greater amberjack	84	226	2.69	
Barracudas	265	701	2.65	
Bigeye bream	20	50	2.54	
Crabs	13	34	2.65	
Ambon emperor	1,361	3,501	2.57	
Longnose emperor	331	860	2.60	
Redgill emperor	1,617	4,043	2.50	
Emperors	378	945	2.50	
Filefishes	26	69	2.65	
Honeycomb grouper	29	71	2.40	
Peacock grouper	20	51	2.54	
Spotted grouper	49	131	2.65	
Groupers	147	368	2.50	*
Black jack	129	343	2.66	
Goldflag jobfish	20	51	2.51	
Gray jobfish	449	1,174	2.62	
Silverjaw jobfish (lehi)	373	975	2.61	
Spiny lobster	155	731	4.71	
Yellow-edged lyretail	203	533	2.63	
Mackerel	187	252	1.34	
Mahimahi	1,190	2,974	2.50	
Blue marlin	2,305	2,189	0.95	
Striped marlin	323	356	1.10	
Octopus	25	88	3.50	*
Oilfish	195	195	1.00	
Moonfish	266	399	1.50	
Yelloweye opakapaka	119	323	2.73	
Parrotfishes	651	1,961	3.01	*
Terapon perch	13	37	2.73	
Pomfret	80	179	2.25	
Rainbow runner	53	140	2.65	
Sailfish	148	374	2.52	
Bigeye scad	23	73	3.23	
Sharks (unknown)	75	45	0.60	
Blue lined snapper	908	2,269	2.50	
Flower snapper (gindai)	22	56	2.50	
Humpback snapper	1,949	4,873	2.50	
Longtail snapper (onaga)	118	313	2.64	
Onespot snapper	46	122	2.66	
Ruby snapper (ehu)	54	150	2.79	
Rufous snapper	24	63	2.65	
Stone's snapper	35	94	2.65	
Pink snapper (opakapaka)	116	290	2.50	
Inshore snappers	16	41	2.65	

Table A-5 (continued)
American Samoa April 2009 Estimated Commercial Landings

Species	Pounds	Value (\$)	Price/Lb (\$)	
Soldierfishes	14	36	2.59	
Spearfish	138	159	1.15	
Squirrelfishes	175	439	2.50	*
Surgeonfishes/tangs	1,690	4,287	2.54	*
Sweepers	33	86	2.65	
Swordfish	1,139	2,427	2.13	
Bigeye trevally	25	62	2.51	
Bluefin trevally	40	139	3.51	
Trevallys	83	219	2.65	
Albacore tuna	601,491	603,262	1.00	
Bigeye tuna	21,336	25,212	1.18	
Dogtooth tuna	96	254	2.65	
Skipjack tuna	25,134	15,407	0.61	
Yellowfin tuna	125,804	116,853	0.93	
Unicornfishes	295	741	2.51	
Wahoo	15,169	9,184	0.61	
TOTAL	807,269	811,477	1.01	

* Data replaced or modified by Actual Commercial Landings Data

Table A-6
American Samoa May 2009 Estimated Commercial Landings

Species	Pounds	Value (\$)	Price/Lb (\$)	
Greater amberjack	251	688	2.74	
Barracudas	1,014	2,698	2.66	
Paeony bulleye	29	78	2.65	
Crabs	48	127	2.65	
Moray eels	10	27	2.64	
Ambon emperor	902	2,371	2.63	
Longnose emperor	932	2,439	2.62	
Redgill emperor	1,089	2,721	2.50	
Emperors	1,235	2,985	2.42	
Filefishes	104	276	2.65	
Honeycomb grouper	1	1	2.20	
Longspine grouper	20	52	2.65	
Peacock grouper	228	588	2.58	
Spotted grouper	80	210	2.65	
Groupers	17	40	2.44	*
Inshore groupers	42	101	2.41	*
Black jack	73	187	2.58	
Jacks	44	110	2.52	
Gray jobfish	1,671	4,374	2.62	
Silverjaw jobfish (lehi)	522	1,474	2.83	
Spiny lobster	616	2,936	4.76	
Yellow-edged lyretail	169	438	2.59	
Mackerel	134	126	0.94	
Mahimahi	3,019	6,641	2.20	
Blue marlin	8,313	7,897	0.95	
Striped marlin	200	220	1.10	
Oilfish	516	516	1.00	
Moonfish	266	399	1.50	
Yelloweye opakapaka	495	1,281	2.59	
Parrotfishes	1,023	2,659	2.60	
Terapon perch	30	82	2.73	
Pomfret	137	309	2.25	
Porcupinefish	28	62	2.20	
Rainbow runner	93	246	2.65	
Rudderfishes	15	38	2.61	
Sailfish	386	907	2.35	
Bigeye scad	43	146	3.39	
Sharks (unknown)	235	118	0.50	
Black snapper	318	842	2.65	
Blue lined snapper	988	2,495	2.52	
Humpback snapper	2,561	6,348	2.48	
Longtail snapper (onaga)	267	660	2.47	
Onespot snapper	13	33	2.44	
Ruby snapper (ehu)	186	550	2.95	*

Table A-6 (continued)
American Samoa May 2009 Estimated Commercial Landings

Species	Pounds	Value (\$)	Price/Lb (\$)
Stone's snapper	124	329	2.65
Inshore snappers	11	28	2.65
Soldierfishes	143	372	2.59
Spearfish	401	461	1.15
Squirrelfishes	142	364	2.57
Surgeonfishes/tangs	1,442	3,718	2.58
Sweetlips	14	37	2.64
Swordfish	964	1,899	1.97
Bluefin trevally	119	418	3.51
Trevallys	20	50	2.54
Albacore tuna	789,455	792,057	1.00
Bigeye tuna	24,361	28,787	1.18
Dogtooth tuna	96	253	2.65
Skipjack tuna	13,881	9,650	0.70
Yellowfin tuna	152,515	144,183	0.95
Unicornfishes	875	2,197	2.51
Wahoo	15,226	9,184	0.60
TOTAL	1,028,148	1,051,483	1.02

* Data replaced or modified by Actual Commercial Landings Data

Table A-7
American Samoa June 2009 Estimated Commercial Landings

Species	Pounds	Value (\$)	Price/Lb (\$)	
Pollock	40	59	1.48	*
Greater amberjack	93	247	2.65	
Barracudas	280	735	2.62	
Crabs	22	58	2.65	
Longnose emperor	512	1,357	2.65	
Redgill emperor	354	886	2.50	
Emperors	549	1,373	2.50	
Filefishes	61	162	2.65	
Honeycomb grouper	11	25	2.39	
Peacock grouper	26	70	2.65	
Squairetail grouper	33	83	2.50	
Yellowspot grouper	37	97	2.65	
Inshore groupers	83	206	2.50	*
Black jack	74	197	2.65	
Jacks	10	26	2.53	
Gray jobfish	430	1,125	2.62	
Silverjaw jobfish (lehi)	213	554	2.60	
Spiny lobster	385	1,800	4.67	
Yellow-edged lyretail	89	233	2.62	
Mackerel	14	13	0.94	
Mahimahi	3,197	7,673	2.40	
Blue marlin	3,539	3,362	0.95	
Striped marlin	185	203	1.10	
Octopus	14	40	2.96	
Oilfish	363	363	1.00	
Moonfish	228	342	1.50	
Yelloweye opakapaka	91	240	2.65	
Parrotfishes	861	2,232	2.59	
Terapon perch	40	109	2.73	
Pomfret	87	195	2.25	
Spiny pufferfish	90	216	2.40	
Rainbow runner	34	91	2.65	
Sailfish	445	1,122	2.52	
Sharks (unknown)	101	50	0.50	
Black snapper	162	428	2.64	
Blue lined snapper	498	1,189	2.39	
Humpback snapper	1,015	2,469	2.43	
Longtail snapper (onaga)	310	939	3.03	
Onespot snapper	13	32	2.50	
Ruby snapper (ehu)	110	330	3.00	*
Stone's snapper	83	213	2.56	
Soldierfishes	47	123	2.64	
Spearfish	210	242	1.15	
Squirrelfishes	154	382	2.48	

Table A-7 (continued)
American Samoa June 2009 Estimated Commercial Landings

Species	Pounds	Value (\$)	Price/Lb (\$)	
Surgeonfishes/tangs	1,383	3,497	2.53	*
Swordfish	1,928	4,107	2.13	
Bigeye trevally	76	200	2.65	
Bluefin trevally	11	38	3.52	
Albacore tuna	1,017,099	1,018,769	1.00	
Bigeye tuna	10,071	11,901	1.18	
Dogtooth tuna	63	167	2.65	
Skipjack tuna	38,574	23,284	0.60	
Yellowfin tuna	79,243	75,695	0.96	
Unicornfishes	692	1,772	2.56	
Wahoo	35,180	21,307	0.61	
TOTAL	1,199,512	1,192,630	0.99	

* Data replaced or modified by Actual Commercial Landings Data

Table A-8
American Samoa July 2009 Estimated Commercial Landings

Species	Pounds	Value (\$)	Price/Lb (\$)	
Amberjack	12	32	2.65	
Greater amberjack	88	238	2.71	
Barracudas	331	901	2.72	
Butterflyfishes	12	30	2.49	
Crabs	12	32	2.66	
Ambon emperor	379	1,010	2.66	
Longnose emperor	38	101	2.65	
Redgill emperor	606	1,516	2.50	
Emperors	310	757	2.44	
Filefishes	34	91	2.65	
Honeycomb grouper	15	36	2.40	*
Longspine grouper	118	313	2.65	
Peacock grouper	12	30	2.62	
Spotted grouper	40	106	2.66	
Groupers	18	41	2.29	*
Inshore groupers	37	90	2.47	*
Goldflag jobfish	23	62	2.67	
Gray jobfish	322	772	2.40	
Silverjaw jobfish (lehi)	218	619	2.84	
Spiny lobster	292	1,321	4.52	
Yellow-edged lyretail	206	547	2.65	
White-edged lyretail	51	135	2.65	
Mahimahi	4,997	11,401	2.28	
Blue marlin	2,716	2,580	0.95	
Striped marlin	139	152	1.10	
Oilfish	879	879	1.00	
Moonfish	494	741	1.50	
Yelloweye opakapaka	11	128	12.1	
Parrotfishes	502	1,298	2.59	
Terapon perch	18	50	2.73	
Pomfret	80	179	2.25	
Spiny pufferfish	14	35	2.41	
Rainbow runner	28	73	2.65	
Sailfish	238	598	2.52	
Sergeant major	52	137	2.65	
Sharks (unknown)	109	62	0.57	
Black snapper	27	73	2.70	
Blue lined snapper	504	1,120	2.22	
Flower snapper (gindai)	24	60	2.48	*
Humpback snapper	1,392	3,462	2.49	
Longtail snapper (onaga)	323	808	2.50	
Ruby snapper (ehu)	57	151	2.65	*
Pink snapper (opakapaka)	93	233	2.50	
Soldierfishes	17	46	2.67	

Table A-8 (continued)
American Samoa July 2009 Estimated Commercial Landings

Species	Pounds	Value (\$)	Price/Lb (\$)	
Spearfish	118	136	1.15	
Squirrelfishes	135	344	2.55	*
Surgeonfishes/tangs	1,223	3,175	2.60	*
Swordfish	1,578	4,812	3.05	
Bigeye trevally	21	55	2.66	
Albacore tuna	772,298	773,279	1.00	
Bigeye tuna	54,135	63,971	1.18	
Dogtooth tuna	41	110	2.69	
Skipjack tuna	39,532	23,924	0.61	
Yellowfin tuna	62,758	59,167	0.94	
Unicornfishes	453	1,140	2.51	
Wahoo	17,281	10,490	0.61	
TOTAL	965,460	973,651	1.01	

* Data replaced or modified by Actual Commercial Landings Data

Table A-9
American Samoa August 2009 Estimated Commercial Landings

Species	Pounds	Value (\$)	Price/Lb (\$)
Barracudas	239	639	2.68
Ambon emperor	305	820	2.69
Longnose emperor	571	1,562	2.73
Redgill emperor	366	915	2.50
Emperors	84	206	2.46
Longspine grouper	9	25	2.65
Smalltooth grouper	33	90	2.75
Groupers	26	64	2.50
Gray jobfish	222	588	2.65
Silverjaw jobfish (lehi)	83	250	2.99
Spiny lobster	144	703	4.88
White-edged lyretail	74	201	2.71
Mahimahi	5,009	12,538	2.50
Blue marlin	1,893	1,798	0.95
Striped marlin	31	34	1.10
Oilfish	307	307	1.00
Moonfish	266	399	1.50
Parrotfishes	323	810	2.51
Pomfret	43	98	2.25
Rainbow runner	1	2	3.00
Sailfish	59	150	2.52
Sharks (unknown)	202	101	0.50
Black snapper	38	104	2.72
Blue lined snapper	172	581	3.38
Humpback snapper	673	1,674	2.49
Longtail snapper (onaga)	80	211	2.64
Spearfish	20	23	1.15
Squirrelfishes	82	201	2.45
Surgeonfishes/tangs	480	1,200	2.50
Swordfish	1,315	1,841	1.40
Tilapia	40	88	2.19
Bigeye trevally	121	330	2.74
Albacore tuna	1,040,377	1,041,585	1.00
Bigeye tuna	39,233	46,361	1.18
Dogtooth tuna	50	133	2.65
Skipjack tuna	39,405	23,975	0.61
Yellowfin tuna	60,148	57,015	0.95
Unicornfishes	121	295	2.43
Wahoo	28,655	17,304	0.60
TOTAL	1,221,298	1,215,216	1.00

* Data replaced or modified by Actual Commercial Landings Data

Table A-10
American Samoa September 2009 Estimated Commercial Landings

Species	Pounds	Value (\$)	Price/Lb (\$)	
Barracudas	319	827	2.59	
Bigeye bream	35	92	2.65	
Ambon emperor	279	746	2.67	
Longnose emperor	320	875	2.73	
Redgill emperor	293	733	2.50	
Emperors	107	263	2.46	
Honeycomb grouper	15	37	2.41	
Longspine grouper	16	42	2.65	
Peacock grouper	19	50	2.65	
Smalltooth grouper	19	51	2.75	
Groupers	29	73	2.49	*
Gray jobfish	282	741	2.63	
Silverjaw jobfish (lehi)	69	199	2.88	
Spiny lobster	126	576	4.58	
White-edged lyretail	76	202	2.68	
Mahimahi	4,094	10,236	2.50	
Blue marlin	1,646	1,564	0.95	
Striped marlin	46	51	1.10	
Octopus	22	50	2.33	*
Oilfish	1,172	1,172	1.00	
Moonfish	570	855	1.50	
Parrotfishes	178	452	2.54	
Pomfret	87	195	2.25	
Sharks (unknown)	226	136	0.60	
Black snapper	29	78	2.70	
Blue lined snapper	206	748	3.63	
Humpback snapper	519	1,296	2.50	
Longtail snapper (onaga)	69	182	2.64	
Pink snapper (opakapaka)	11	29	2.50	
Spearfish	7	8	1.15	
Squirrelfishes	66	170	2.60	
Surgeonfishes/tangs	177	462	2.61	*
Swordfish	2,016	4,294	2.13	
Bigeye trevally	68	186	2.74	
Albacore tuna	1,065,379	1,065,965	1.00	
Bigeye tuna	23,802	28,127	1.18	
Dogtooth tuna	26	69	2.65	
Skipjack tuna	79,624	48,070	0.60	
Yellowfin tuna	88,275	81,469	0.92	
Unicornfishes	101	250	2.48	
Wahoo	31,922	19,286	0.60	
TOTAL	1,302,340	1,270,904	0.98	

Table A-11
American Samoa October 2009 Estimated Commercial Landings

Species	Pounds	Value (\$)	Price/Lb (\$)	
Barracudas	4	11	2.68	
Mahimahi	833	1,999	2.40	
Blue marlin	2,058	1,955	0.95	
Striped marlin	15	17	1.10	
Oilfish	1,033	1,033	1.00	
Moonfish	418	627	1.50	
Parrotfishes	56	153	2.75	*
Pomfret	72	163	2.25	
Sailfish	59	150	2.52	
Sharks (unknown)	151	90	0.60	
Blue lined snapper	20	50	2.50	*
Humpback snapper	70	175	2.50	*
Ruby snapper (ehu)	23	63	2.75	*
Spearfish	7	8	1.15	
Squirrelfishes	31	86	2.75	*
Surgeonfishes/tangs	206	565	2.75	*
Swordfish	2,016	4,294	2.13	
Albacore tuna	807,072	807,072	1.00	
Bigeye tuna	44,741	52,870	1.18	
Skipjack tuna	28,065	16,940	0.60	
Yellowfin tuna	75,615	68,876	0.91	
Unicornfishes	10	29	2.74	*
Wahoo	28,348	17,160	0.61	
TOTAL	990,921	974,382	0.98	

* Data replaced or modified by Actual Commercial Landings Data

Table A-12
American Samoa November 2009 Estimated Commercial Landings

Species	Pounds	Value (\$)	Price/Lb (\$)	
Barracudas	209	536	2.56	
Bigeye bream	37	97	2.64	
Ambon emperor	113	300	2.65	
Longnose emperor	24	62	2.66	
Redgill emperor	140	350	2.50	
Emperors	77	188	2.44	
Filefishes	24	63	2.65	
Honeycomb grouper	11	27	2.40	
Peacock grouper	25	66	2.64	
Groupers	13	33	2.60	*
Inshore groupers	20	48	2.40	*
Black jack	46	121	2.65	
Gray jobfish	170	445	2.62	
Silverjaw jobfish (lehi)	56	156	2.77	
Spiny lobster	134	635	4.73	
White-edged lyretail	47	123	2.64	
Mahimahi	617	1,542	2.50	
Blue marlin	3,457	3,284	0.95	
Striped marlin	154	169	1.10	
Oilfish	14	14	1.00	
Moonfish	684	1,026	1.50	
Parrotfishes	215	534	2.48	
Pomfret	152	342	2.25	
Sailfish	238	598	2.52	
Black snapper	11	28	2.67	
Blue lined snapper	129	470	3.65	
Humpback snapper	277	773	2.79	
Longtail snapper (onaga)	43	113	2.64	
Spearfish	7	8	1.15	
Squirrelfishes	99	249	2.51	*
Surgeonfishes/tangs	231	596	2.58	*
Swordfish	2,805	5,974	2.13	
Albacore tuna	752,604	753,295	1.00	
Bigeye tuna	34,710	41,017	1.18	
Dogtooth tuna	49	131	2.66	
Skipjack tuna	33,417	20,222	0.61	
Yellowfin tuna	58,107	53,771	0.93	
Unicornfishes	124	306	2.47	
Wahoo	31,560	19,124	0.61	
TOTAL	920,846	906,833	0.98	

* Data replaced or modified by Actual Commercial Landings Data

Table A-13
American Samoa December 2009 Estimated Commercial Landings

Species	Pounds	Value (\$)	Price/Lb (\$)
Barracudas	22	60	2.68
Longnose emperor	56	150	2.68
Redgill emperor	133	347	2.60
Emperors	38	101	2.69
Filefishes	70	186	2.65
Longspine grouper	17	46	2.75
Peacock grouper	50	132	2.63
Inshore groupers	50	130	2.60
Black jack	12	32	2.64
Goldflag jobfish	11	31	2.83
Gray jobfish	20	52	2.59
Silverjaw jobfish (lehi)	51	144	2.81
Spiny lobster	379	1,766	4.66
White-edged lyretail	14	36	2.61
Mahimahi	850	2,125	2.50
Blue marlin	6,091	5,786	0.95
Striped marlin	231	254	1.10
Oilfish	42	42	1.00
Moonfish	266	399	1.50
Parrotfishes	661	1,634	2.47
Terapon perch	14	38	2.74
Pomfret	87	195	2.25
Sailfish	89	224	2.52
Black snapper	13	33	2.67
Blue lined snapper	86	321	3.71
Humpback snapper	276	801	2.90
Longtail snapper (onaga)	59	164	2.78
Spearfish	20	23	1.15
Squirrelfishes	83	214	2.59
Surgeonfishes/tangs	511	1,240	2.43
Swordfish	2,542	5,414	2.13
Tilapia	40	60	1.50
Albacore tuna	582,341	583,348	1.00
Bigeye tuna	25,675	30,339	1.18
Dogtooth tuna	22	59	2.65
Skipjack tuna	32,463	19,595	0.60
Yellowfin tuna	39,796	37,869	0.95
Unicornfishes	330	830	2.52
Wahoo	37,932	22,921	0.60
TOTAL	731,441	717,141	0.98

* Data replaced or modified by Actual Commercial Landings Data

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

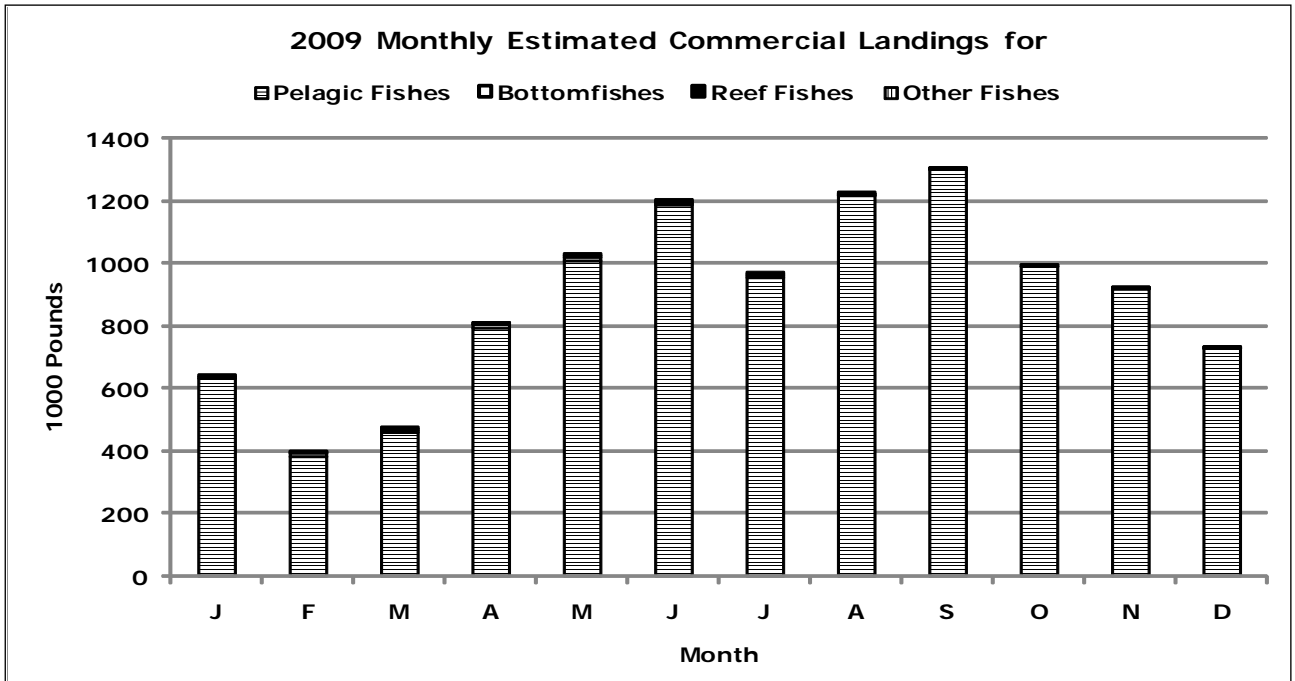


Figure A-1-1

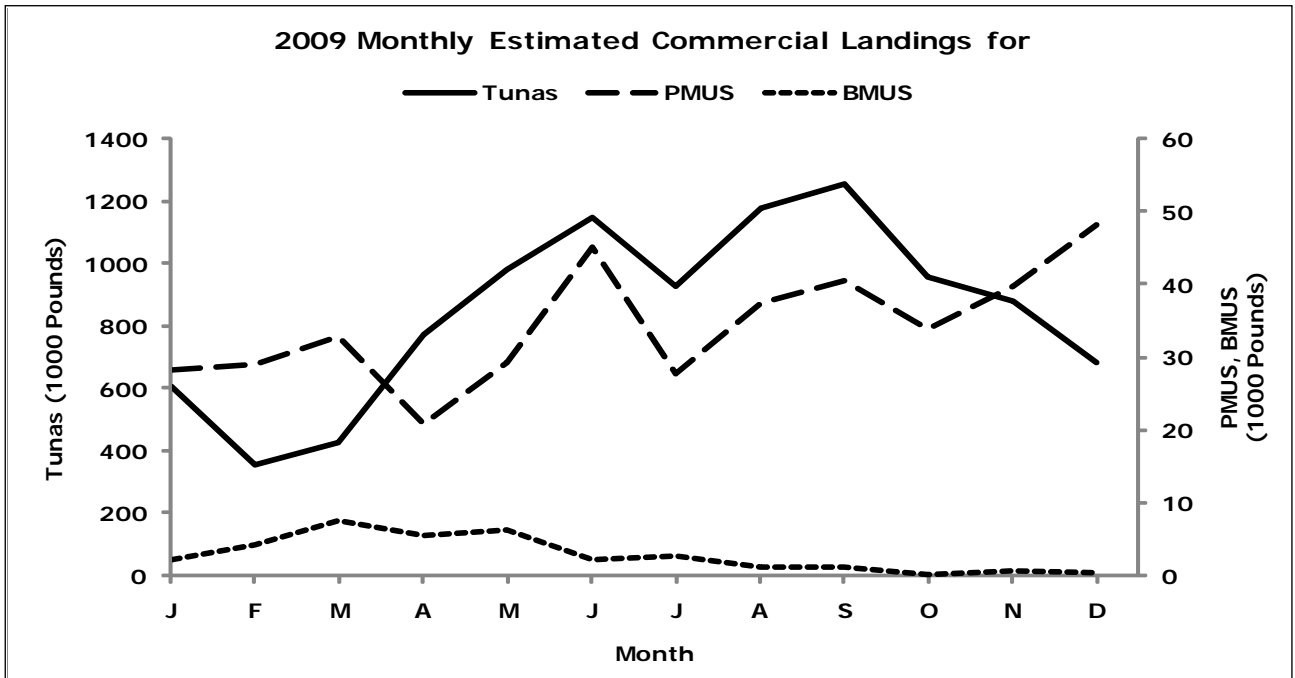


Figure A-1-2

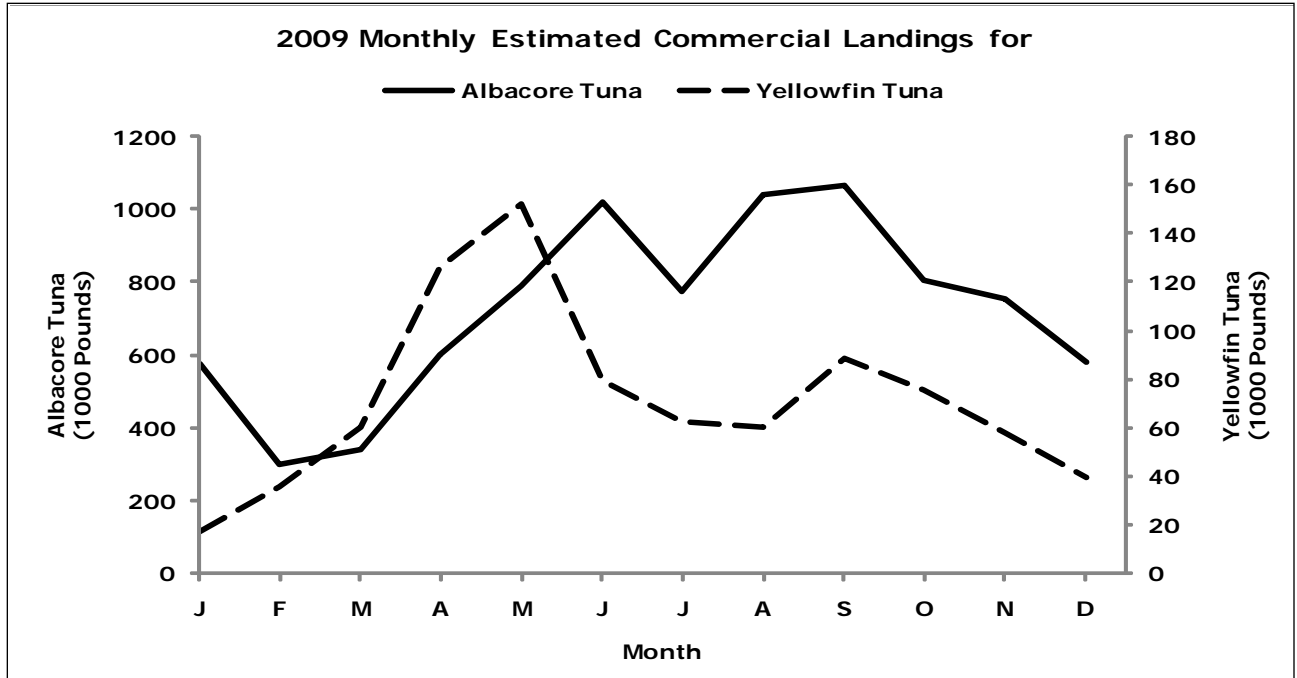


Figure A-1-3

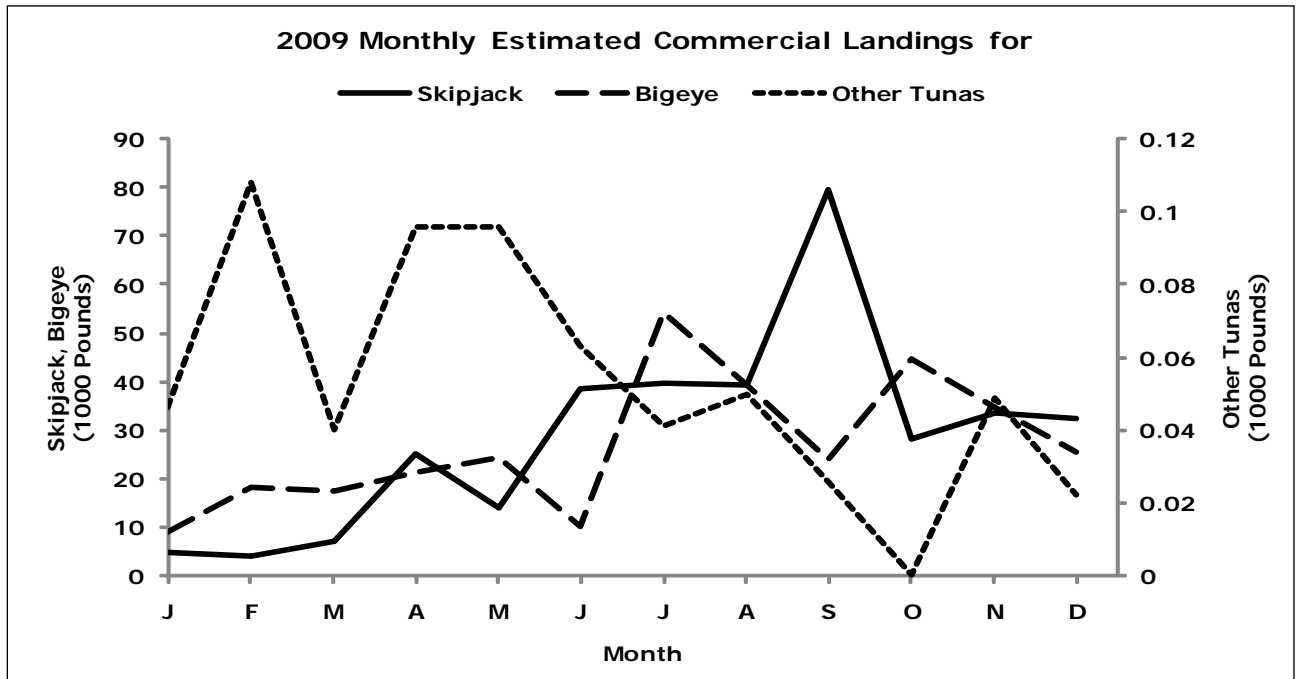


Figure A-1-4

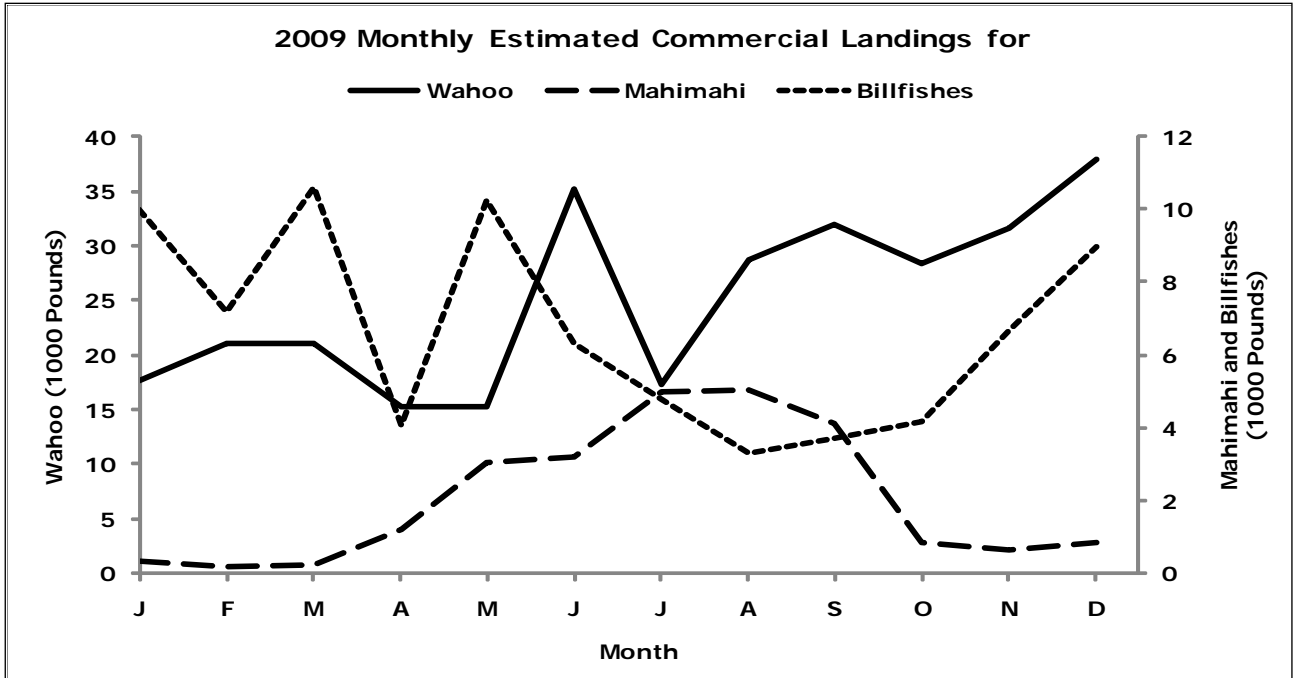


Figure A-1-5

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

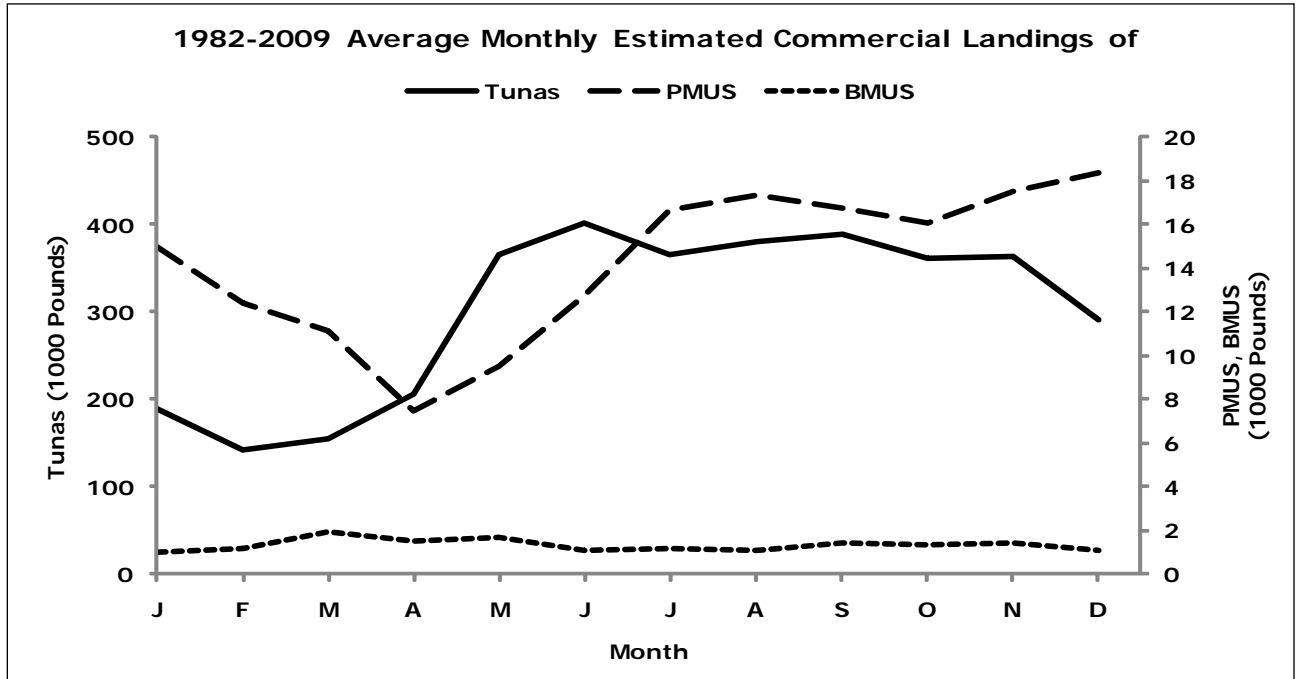


Figure A-2-1

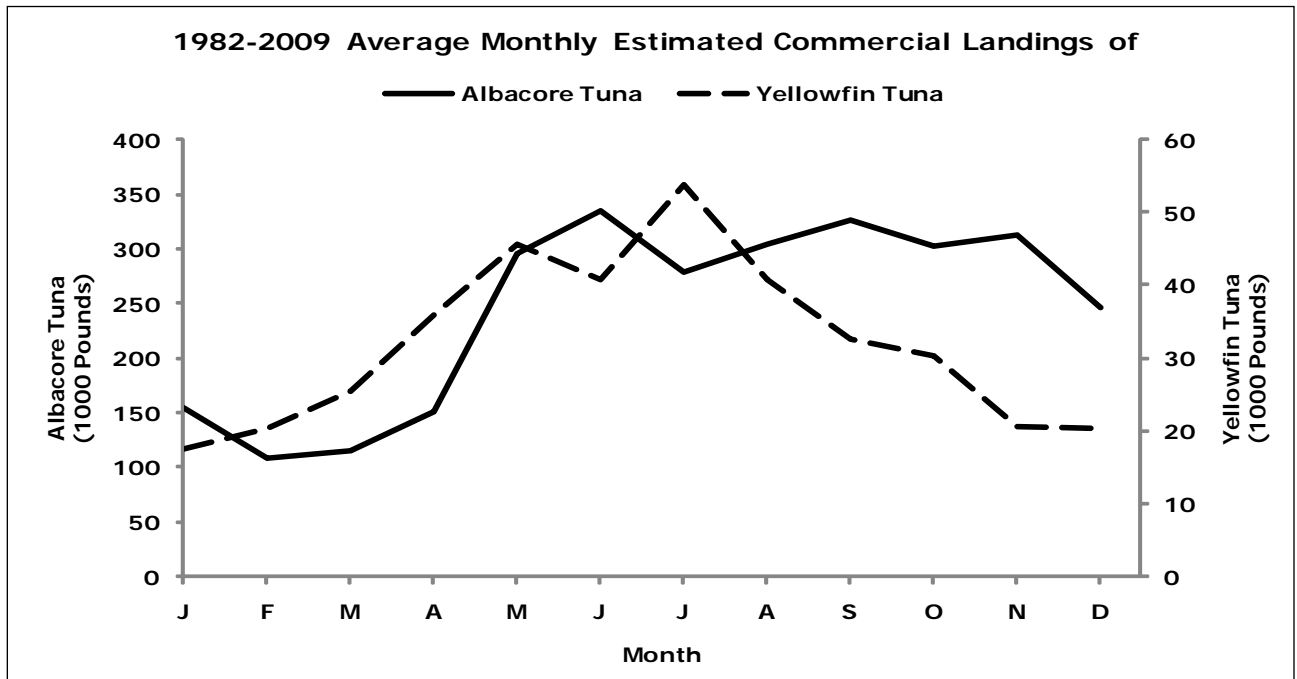


Figure A-2-2

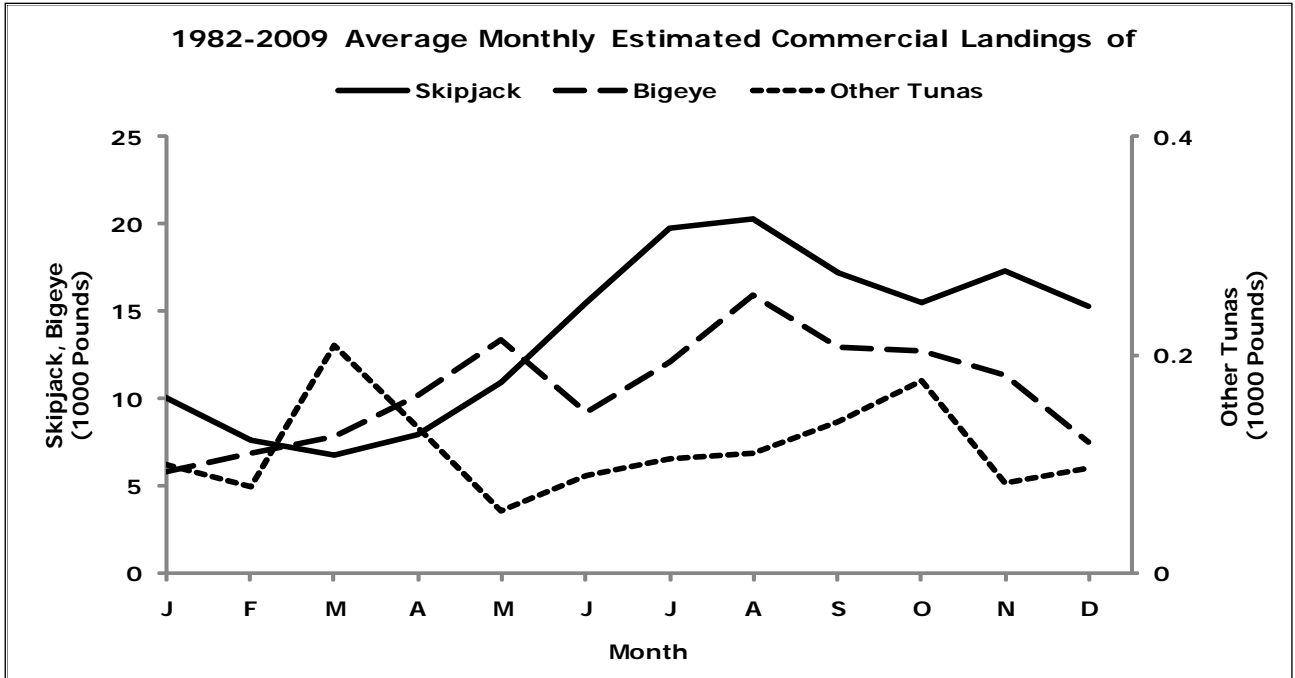


Figure A-2-3

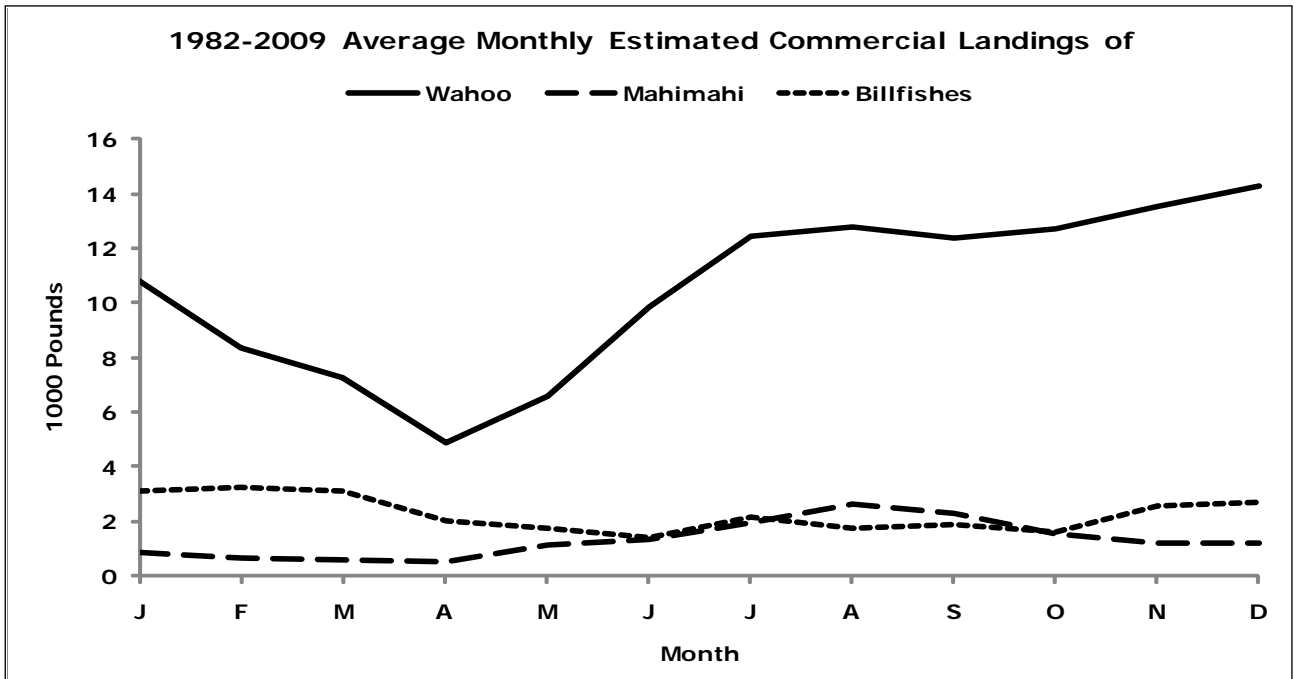


Figure A-2-4

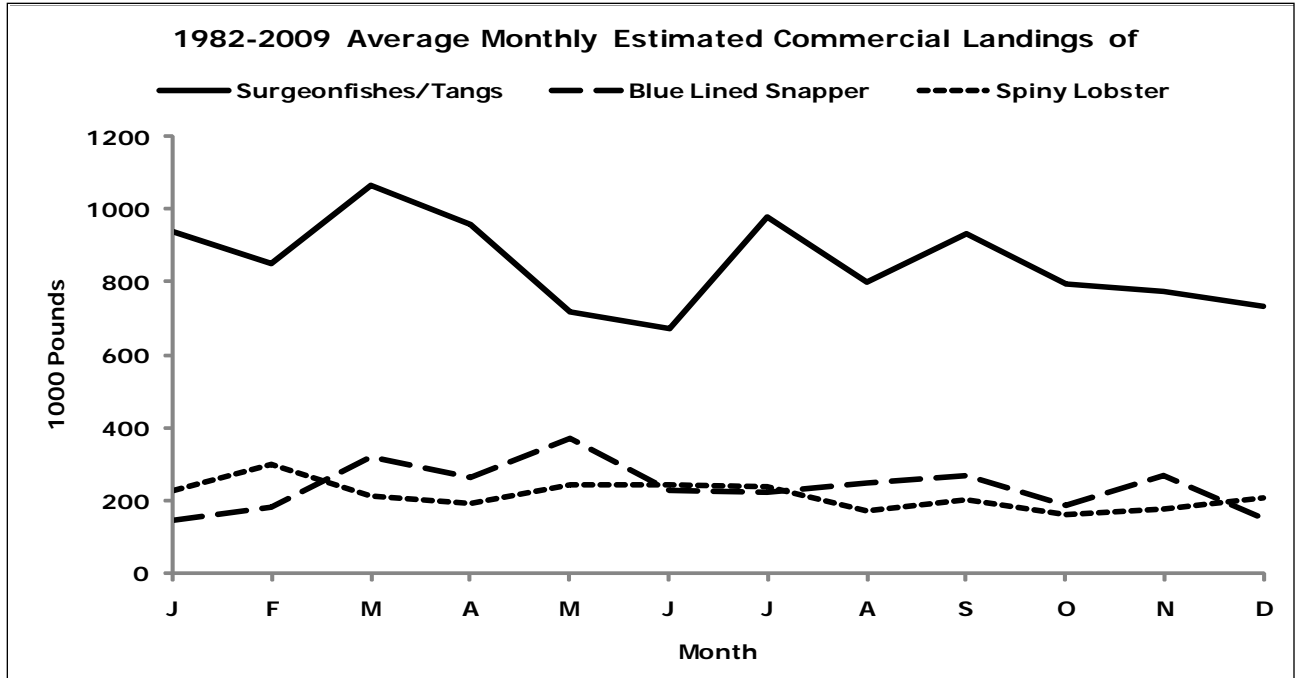


Figure A-2-5

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

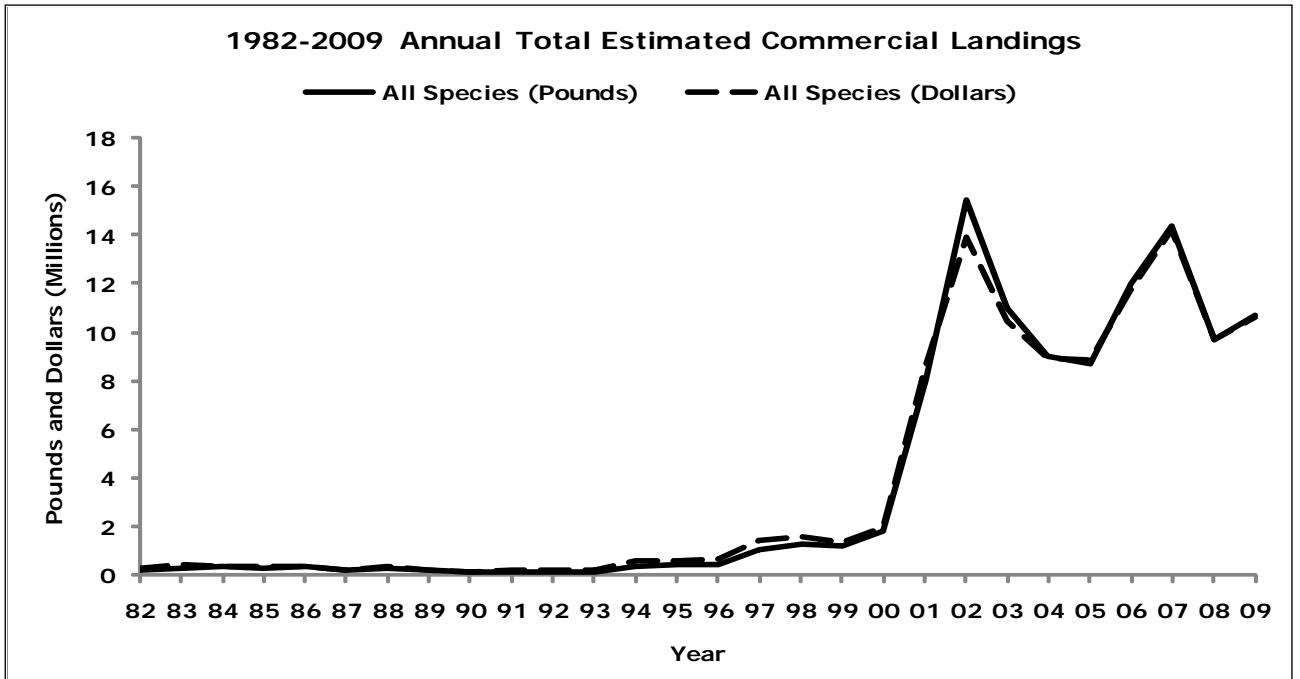


Figure A-3-1

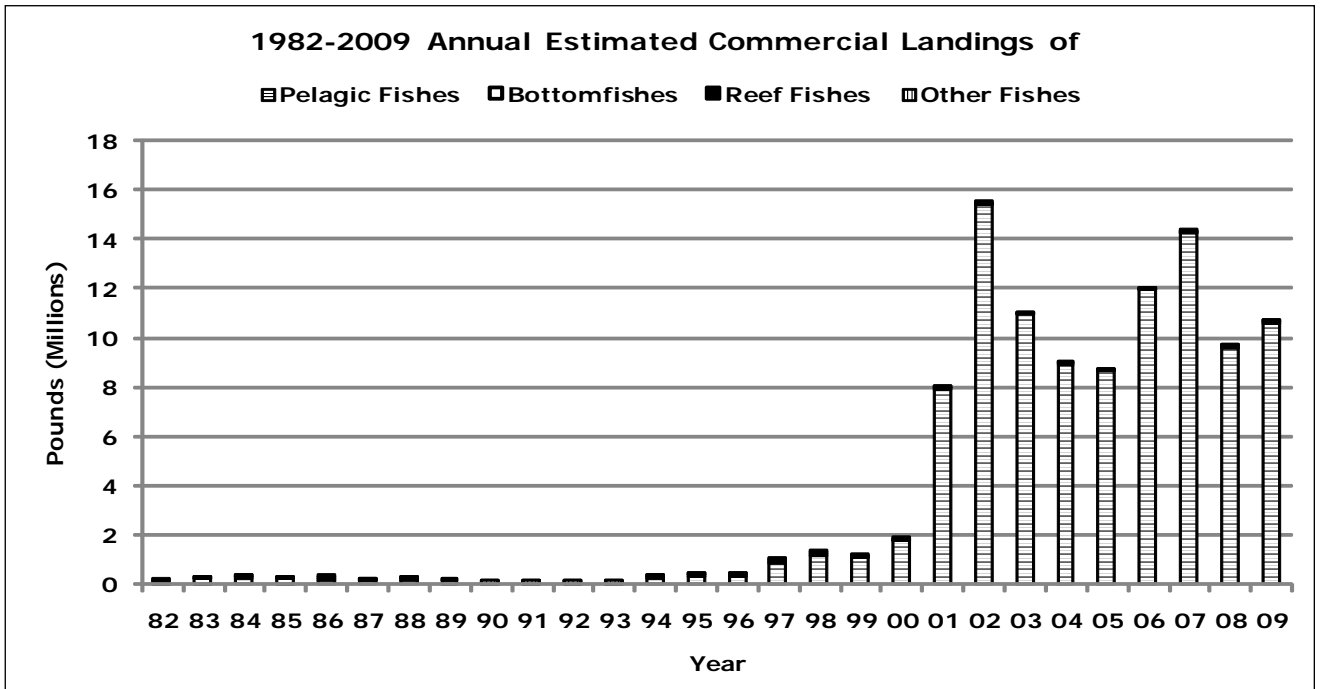


Figure A-3-2

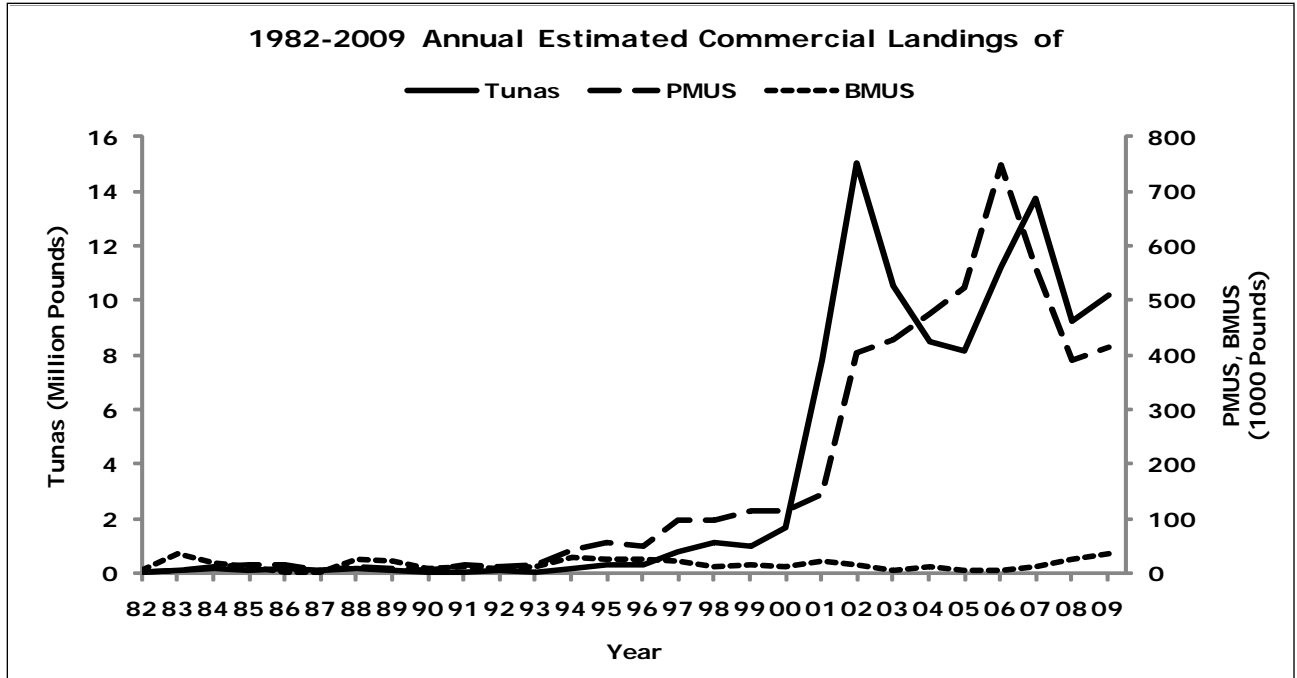


Figure A-3-3

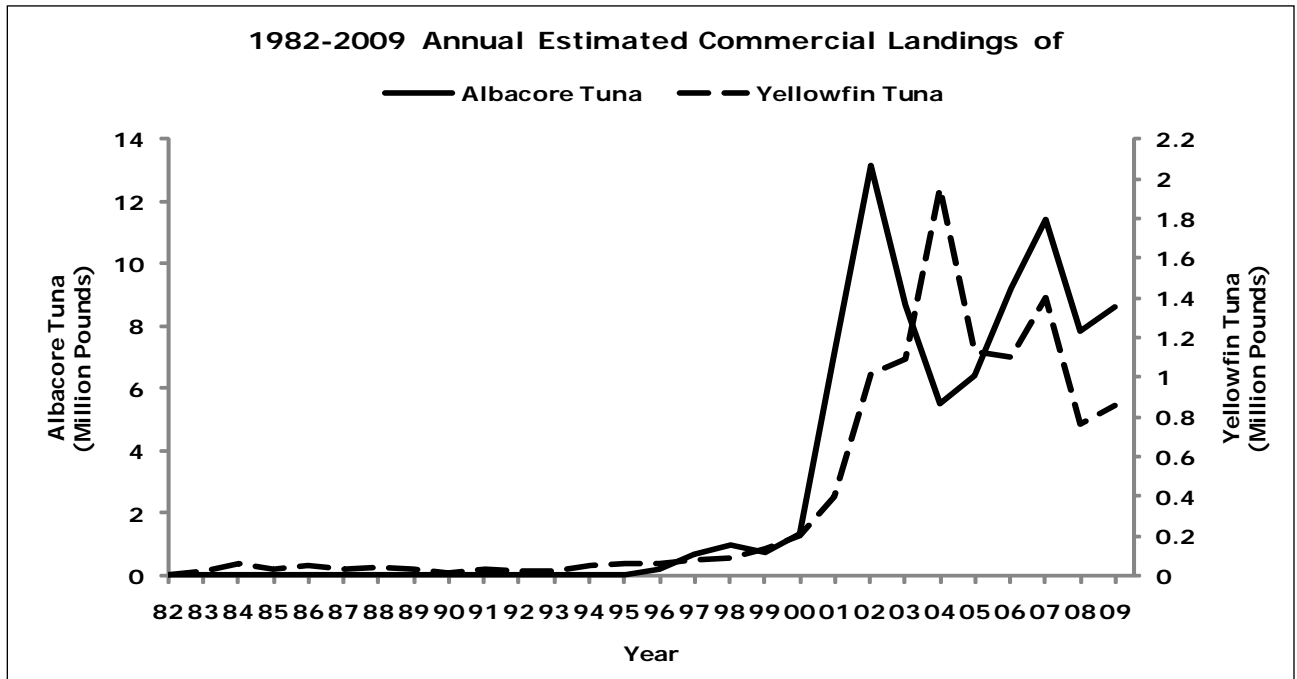


Figure A-3-4

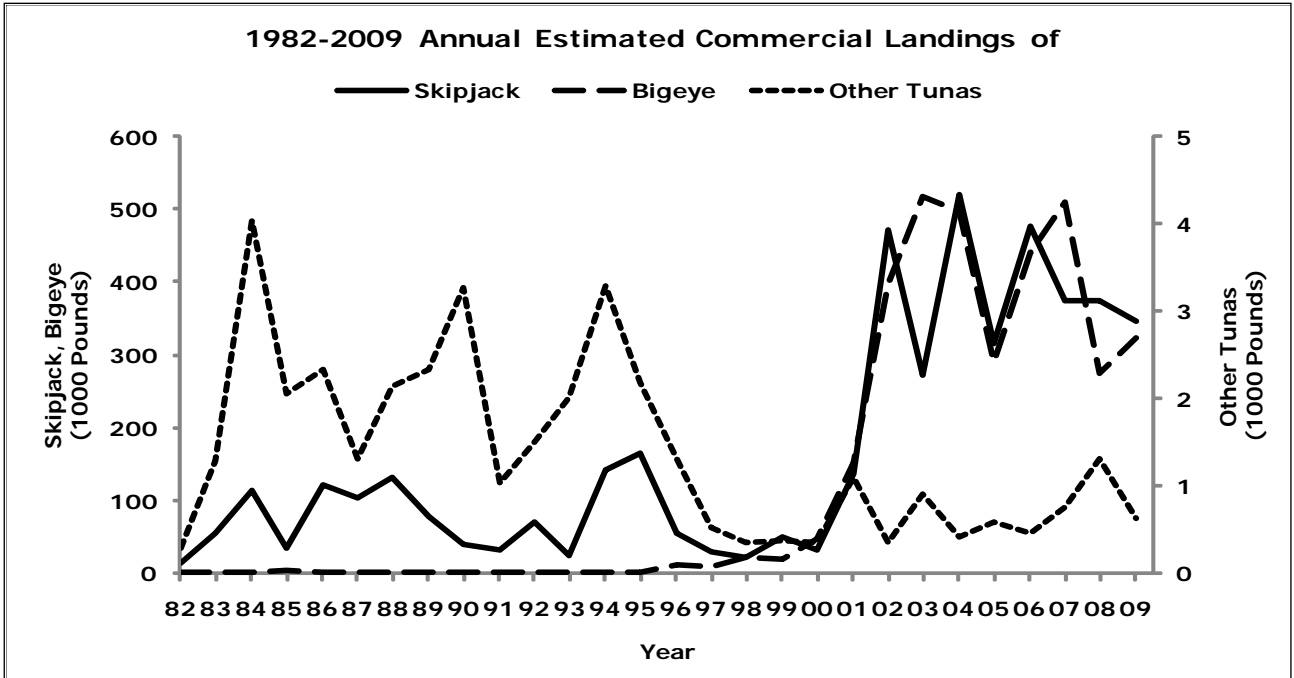


Figure A-3-5

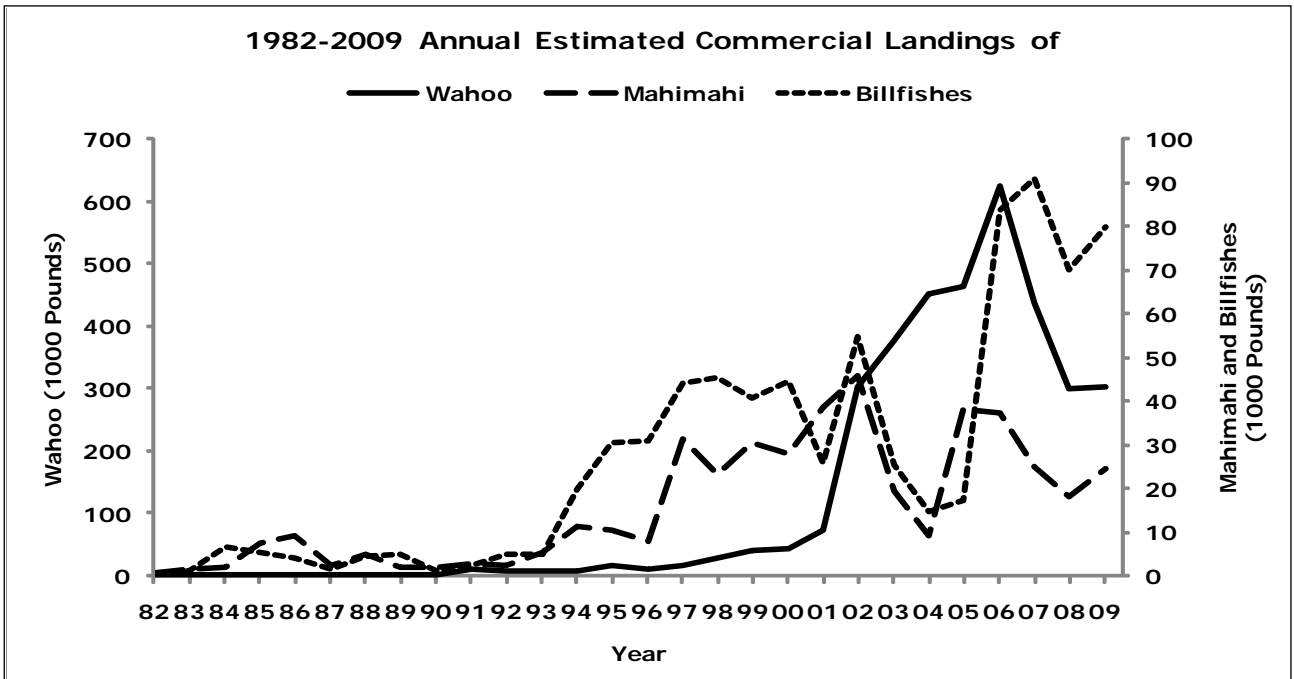


Figure A-3-6

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:

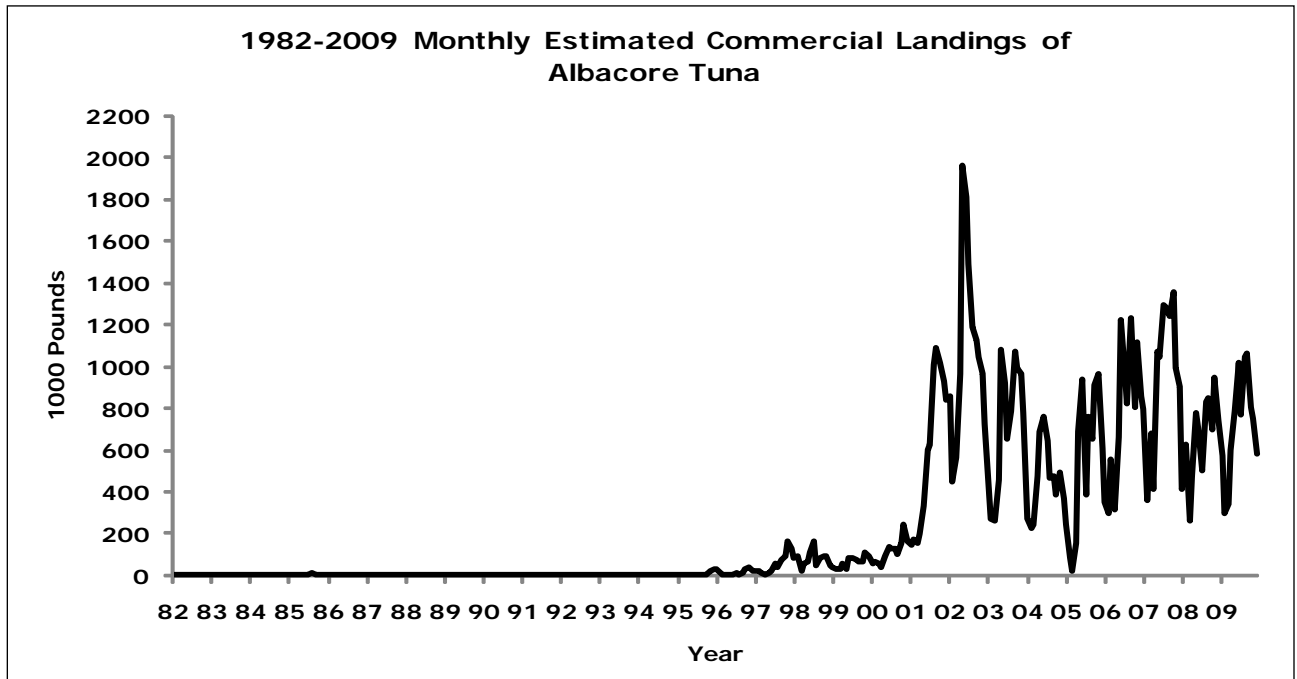


Figure A-4-1

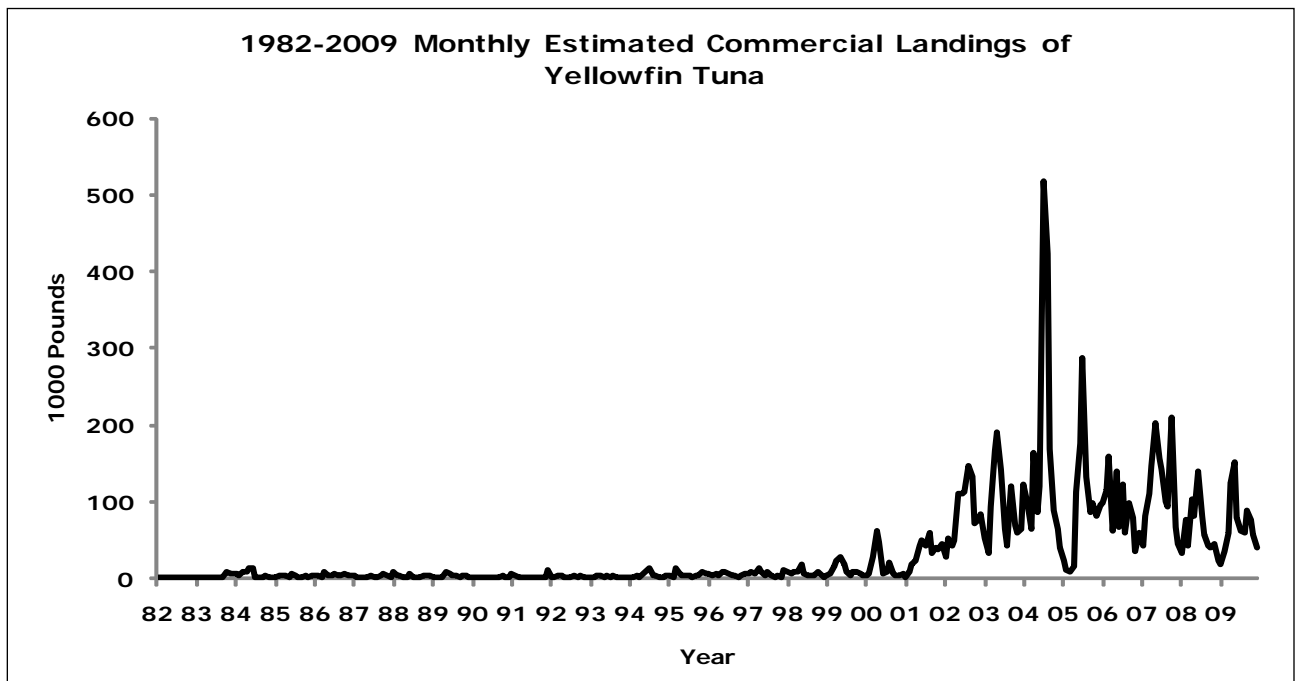


Figure A-4-2

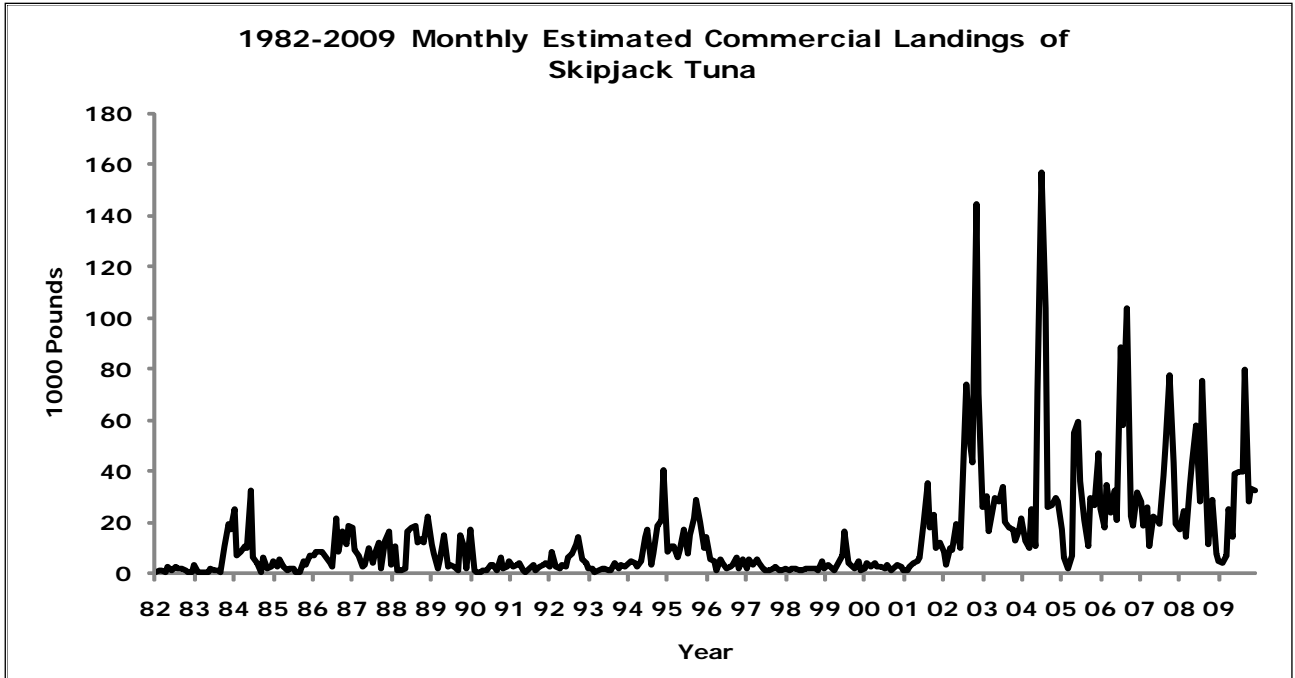


Figure A-4-3

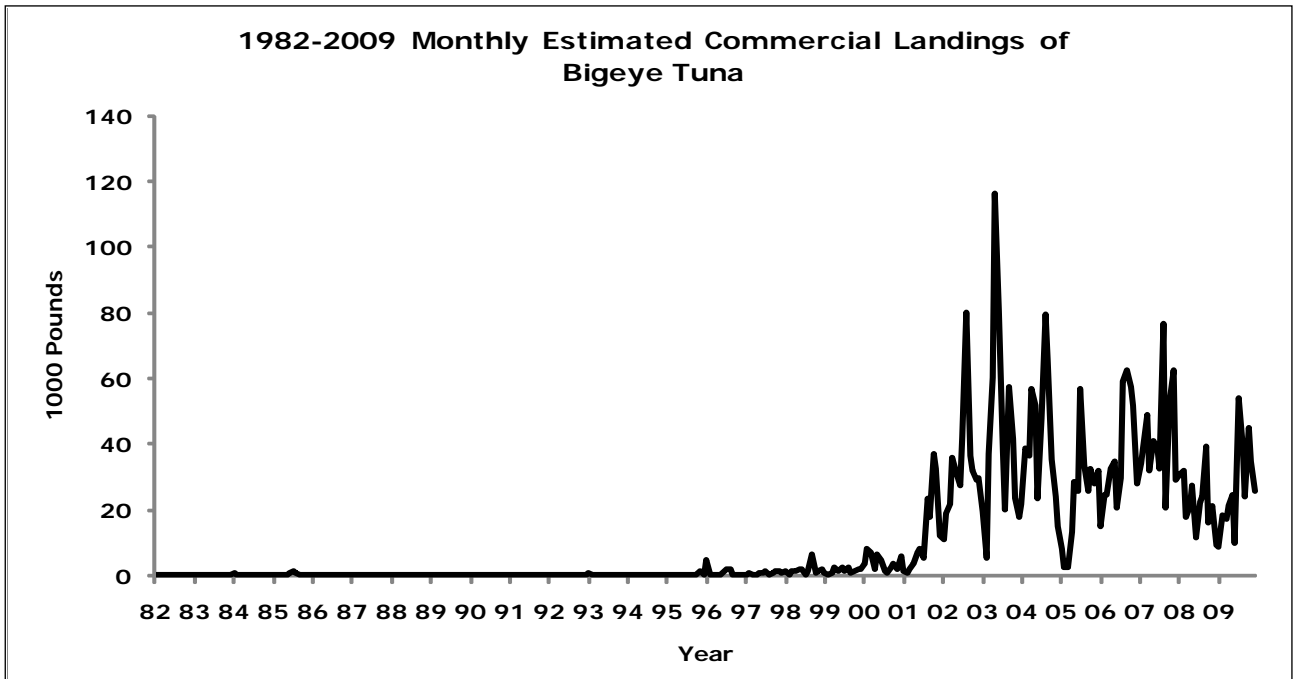


Figure A-4-4

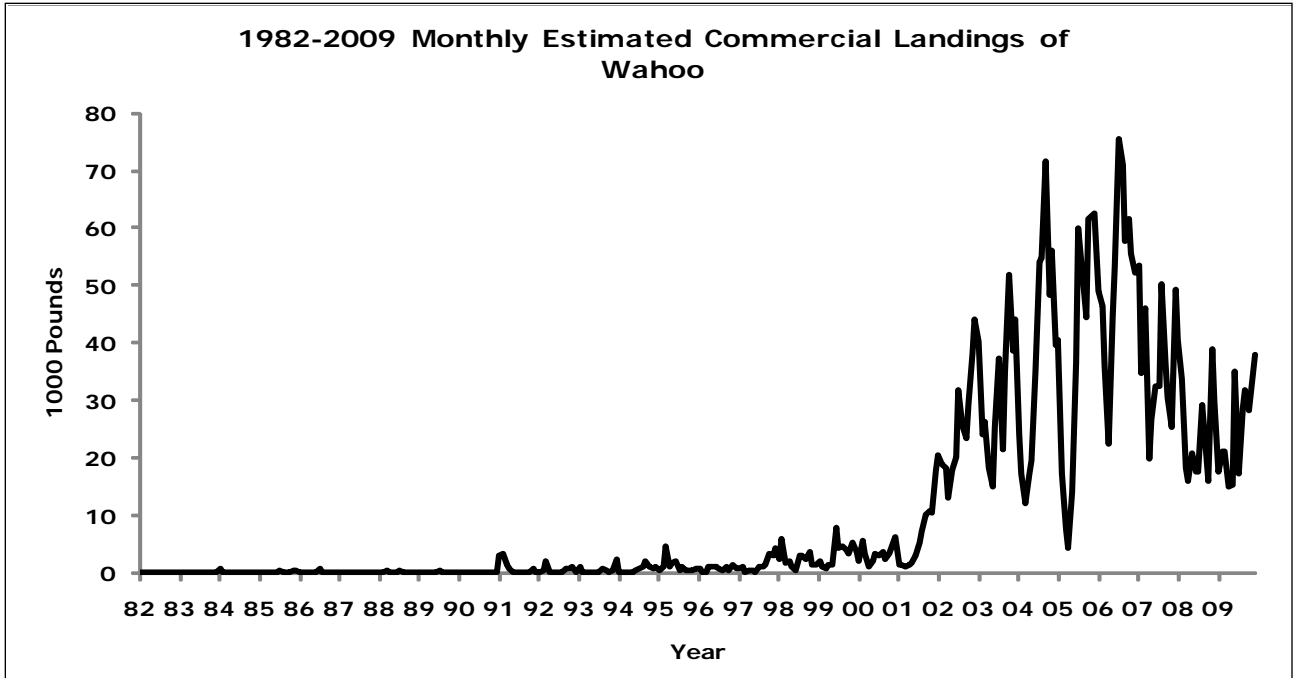


Figure A-4-5

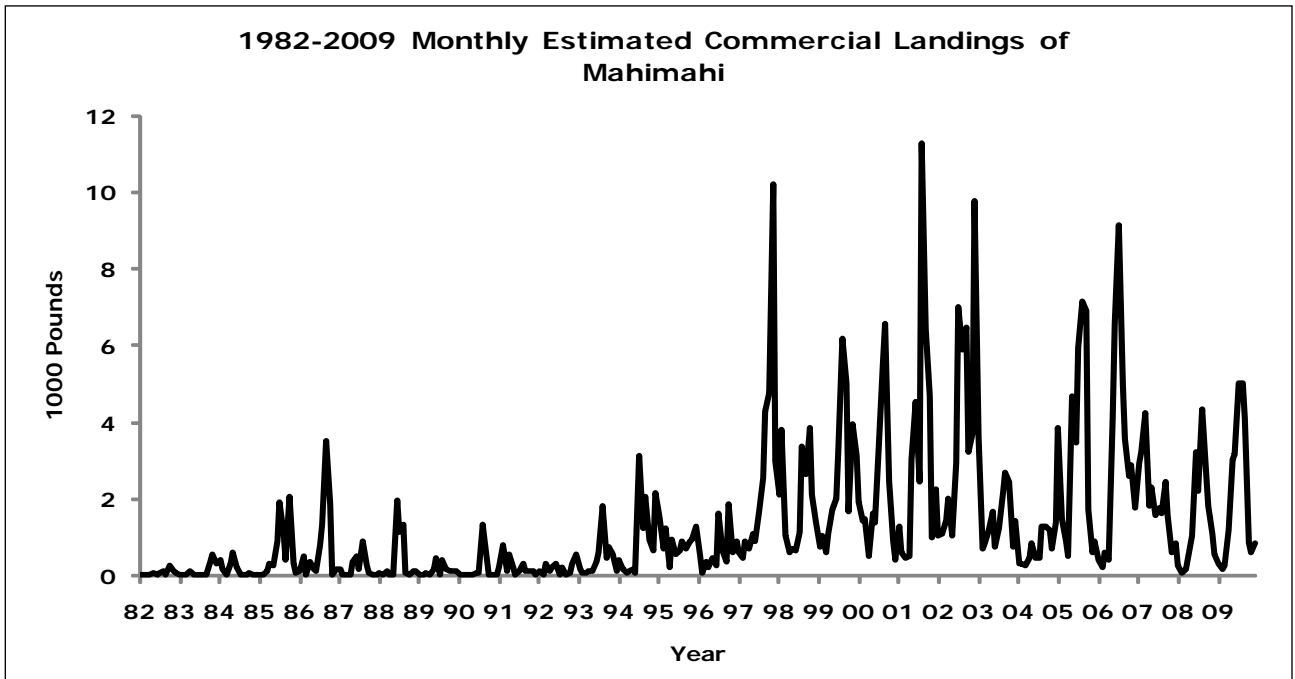


Figure A-4-6

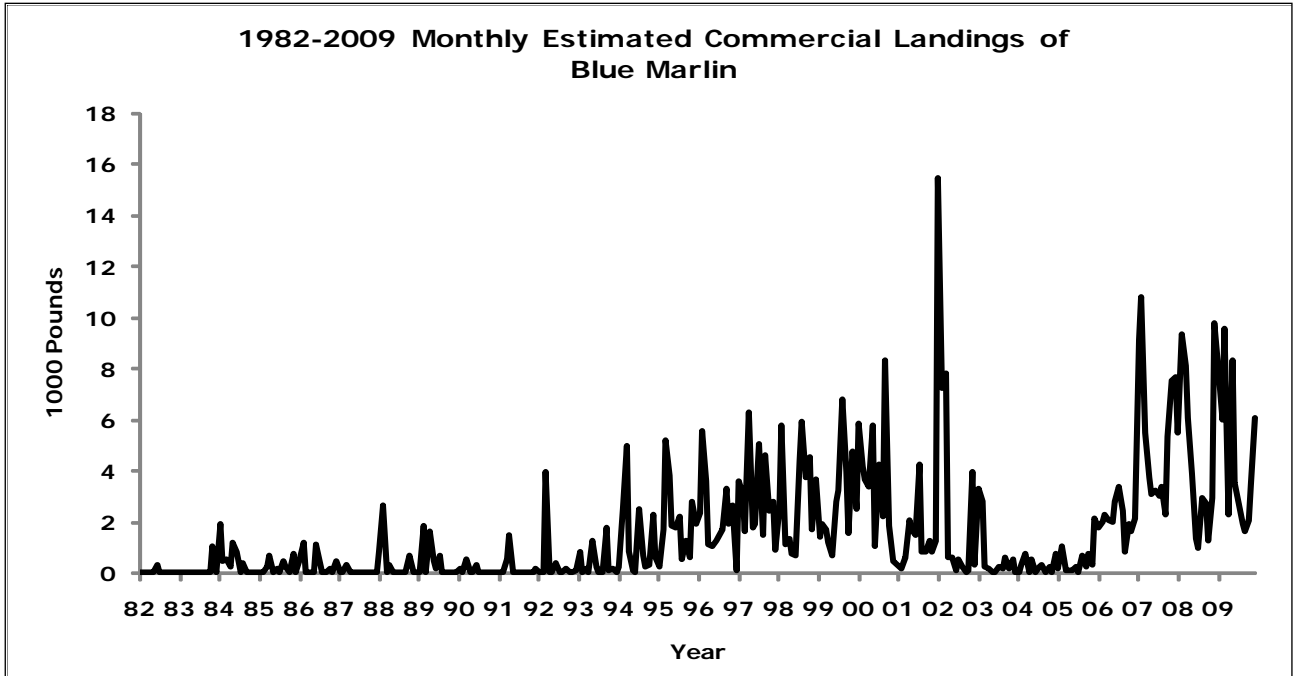


Figure A-4-7

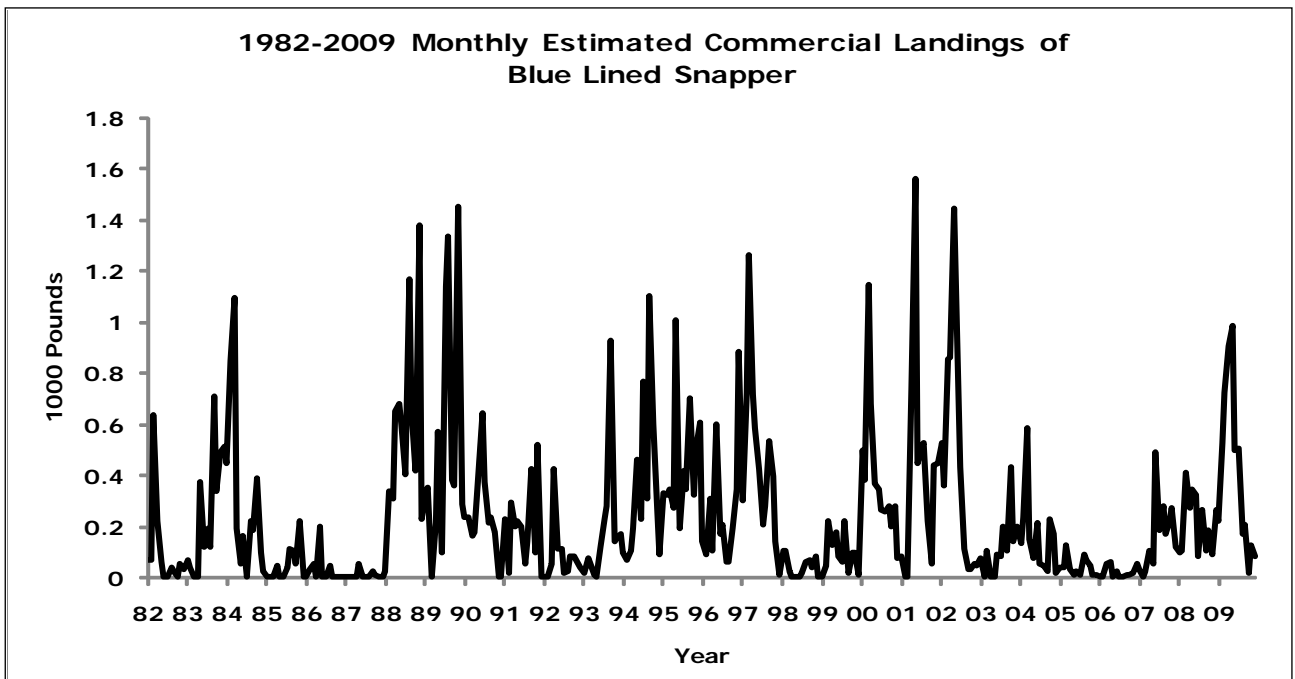


Figure A-4-8

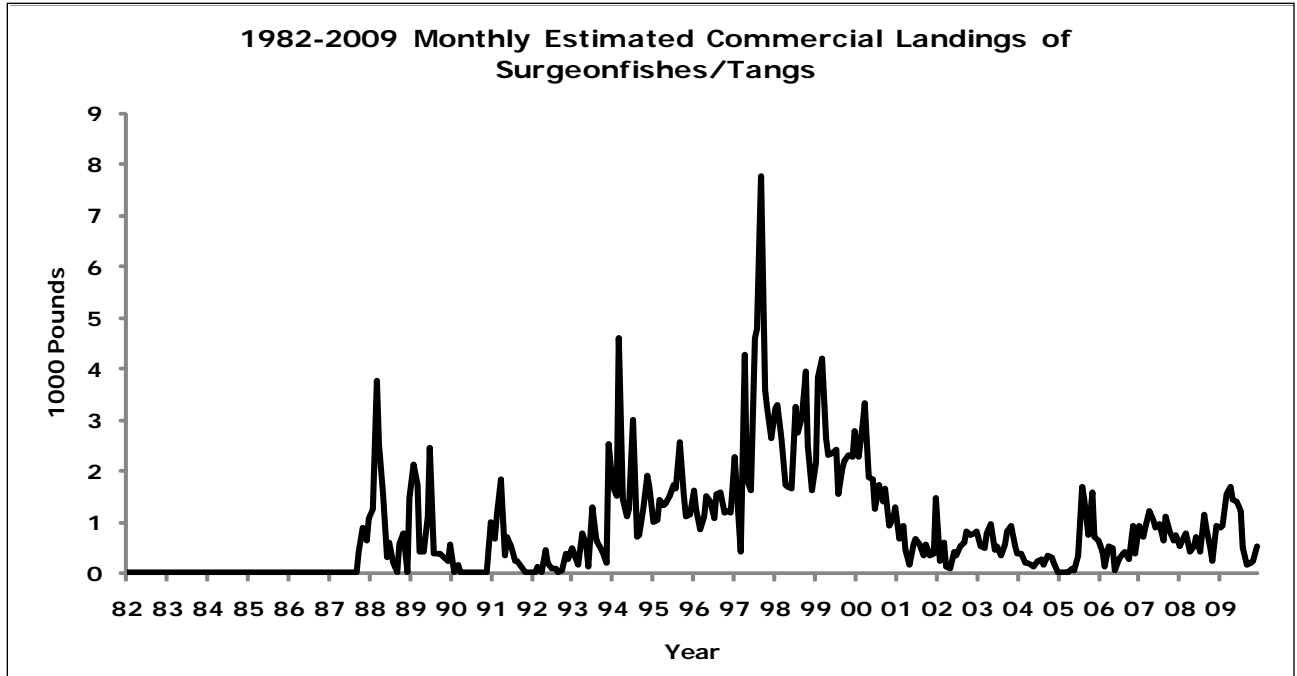


Figure A-4-9

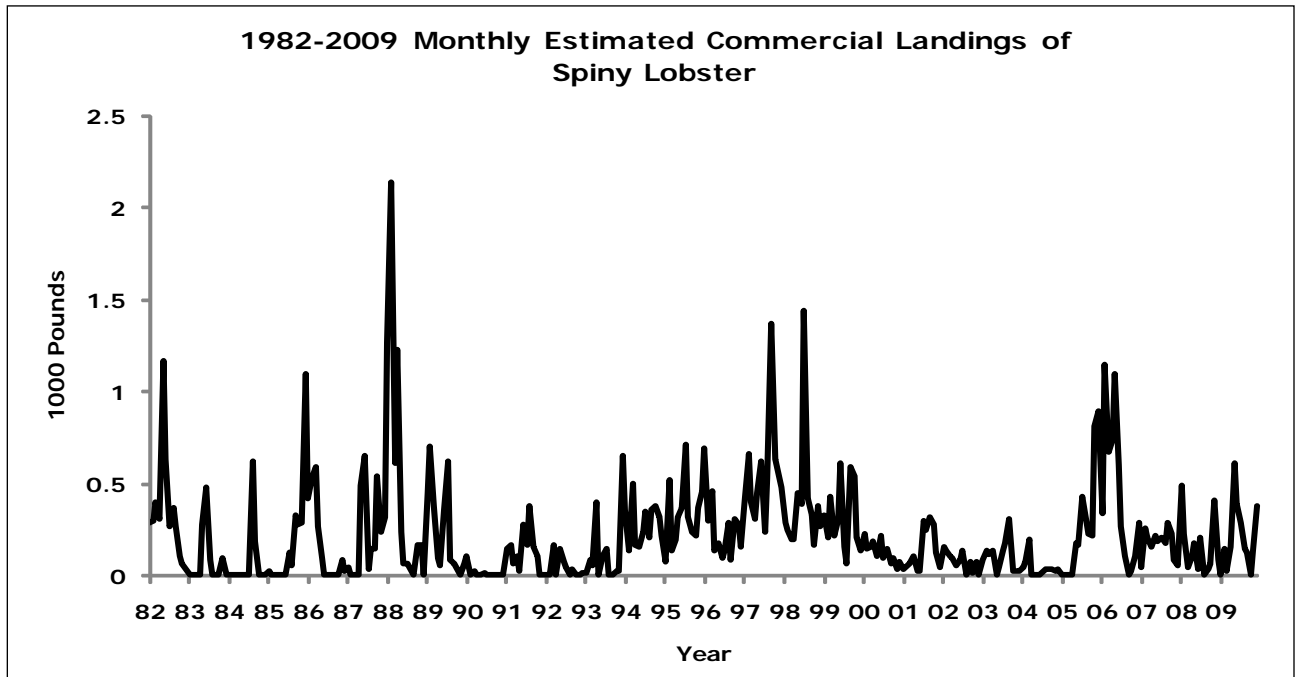


Figure A-4-10

**COMMONWEALTH OF THE
NORTHERN MARIANA ISLANDS
2009 FISHERY STATISTICS**

Compiled by
Division of Fish and Wildlife
and the
Western Pacific Fisheries Information Network

December 2011

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COMMONWEALTH OF THE NORTHERN MARIANA ISLANDS 2009 FISHERY STATISTICS

INTRODUCTION

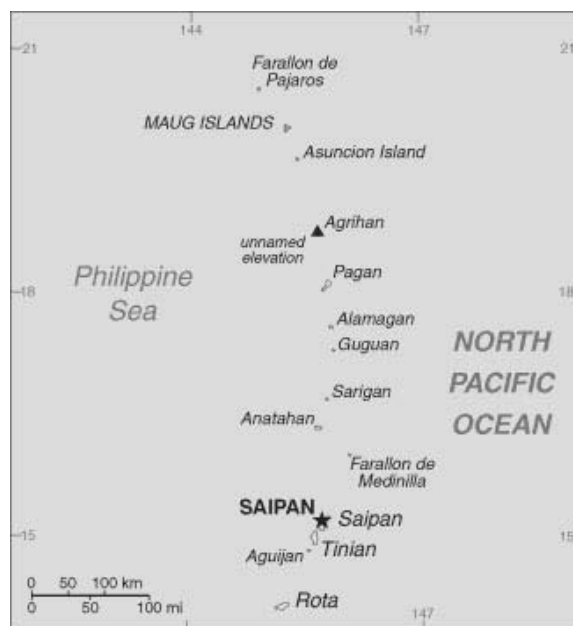
Location: 14° to 21°N latitude, 145°E longitude

Main Islands: Saipan, Rota, Tinian

Population: about 51,484 (*The World Factbook*, July 2009 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.

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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

B.3

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. Also, 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 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	Sharks
Mahimahi	Spearfish
Sailfish	Wahoo

I. Bottomfish Management Unit Species (BMUS)

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

II. Billfishes

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

C. *Reef Fishes*

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

D. *Other Fishes*

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

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Table B-1
CNMI Annual 2009 Estimated Commercial Landings

Species	Pounds	Value (\$)	Price/Lb (\$)
Bigeye scad	25,765	64,366	2.50
Jacks	2,294	5,637	2.46
Black jack	130	326	2.51
Giant trevally	55	136	2.50
Bottomfishes (unknown)	4,802	12,082	2.52
Sickle pomfret	511	1,201	2.35
Ehu (red snapper)	2,784	10,018	3.60
Gindai (flower snapper)	2,492	9,062	3.64
Groupers	768	2,240	2.92
Kalikali (yellowtail)	2,441	6,015	2.46
Onaga (red snapper)	3,634	15,519	4.27
Opakapaka (pink snapper)	4,257	11,556	2.71
Jobfish (uku)	1,780	3,708	2.08
Silvermouth (deep lehi)	1,042	2,945	2.83
Amberjack	326	868	2.66
Blue lined snapper	1,478	3,670	2.48
Reef fishes (unknown)	38,528	98,236	2.55
Wrasses	365	873	2.39
Rabbitfishes	1,687	5,095	3.02
Emperors	12,768	32,034	2.51
Squirrelfishes	215	536	2.50
Parrotfishes	26,547	82,435	3.11
Surgeonfishes	2,432	5,226	2.15
Orangespine unicornfish	313	782	2.50
Unicornfishes	1,296	3,333	2.57
Goatfishes	830	2,077	2.50
Bigeye emperor	125	314	2.50
Pelagic fishes (unknown)	125	251	2.00
Barracudas	24	35	1.50
Mahimahi	20,030	35,743	1.78
Blue marlin	82	123	1.50
Sailfish	162	243	1.50
Rainbow runner	1,827	3,612	1.98
Wahoo	3,500	6,999	2.00
Skipjack tuna	133,794	217,460	1.63
Dogtooth tuna	2,758	4,599	1.67
Yellowfin tuna	26,463	52,061	1.97
Kawakawa (saba)	1,521	2,311	1.52
Spiny lobster	881	4,385	4.98
Slipper lobster	165	827	5.00
Octopus	503	1,032	2.05
Squid	8	16	2.00
TOTAL	331,506	709,985	2.14

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Table B-2
CNMI January 2009 Estimated Commercial Landings

Species	Pounds	Value (\$)	Price/Lb (\$)
Bigeye scad	1,088	2,711	2.49
Jacks	325	811	2.50
Black jack	33	82	2.50
Bottomfishes (unknown)	1,021	2,598	2.54
Ehu (red snapper)	200	725	3.62
Gindai (flower snapper)	193	700	3.62
Groupers	50	163	3.25
Kalikali (yellowtail)	252	636	2.52
Onaga (red snapper)	490	2,238	4.57
Opakapaka (pink snapper)	360	995	2.76
Jobfish (uku)	205	488	2.38
Amberjack	31	93	3.00
Blue lined snapper	31	52	1.68
Reef fishes (unknown)	4,166	10,950	2.63
Rabbitfishes	30	95	3.15
Emperors	753	1,882	2.50
Parrotfishes	3,394	10,826	3.19
Surgeonfishes	290	580	2.00
Mahimahi	3,465	6,900	1.99
Sailfish	60	90	1.50
Rainbow runner	191	382	2.00
Wahoo	278	556	2.00
Skipjack tuna	14,197	24,584	1.73
Dogtooth tuna	257	444	1.72
Yellowfin tuna	3,382	6,525	1.93
Kawakawa (saba)	394	588	1.49
Slipper lobster	17	86	5.00
Octopus	91	183	2.00
TOTAL	35,244	76,960	2.18

Table B-3
CNMI February 2009 Estimated Commercial Landings

Species	Pounds	Value (\$)	Price/Lb (\$)
Bigeye scad	2,112	5,297	2.51
Jacks	15	39	2.50
Bottomfishes (unknown)	1,244	3,124	2.51
Sickle pomfret	171	418	2.45
Ehu (red snapper)	156	547	3.50
Gindai (flower snapper)	91	317	3.50
Groupers	195	627	3.21
Kalikali (yellowtail)	10	28	2.75
Onaga (red snapper)	82	377	4.61
Opakapaka (pink snapper)	496	1,363	2.75
Jobfish (uku)	507	1,025	2.02
Silvermouth (deep lehi)	15	51	3.50
Blue lined snapper	85	214	2.50
Reef fishes (unknown)	3,417	8,997	2.63
Wrasses	151	356	2.36
Rabbitfishes	46	149	3.22
Emperors	2,566	6,428	2.50
Parrotfishes	2,540	8,171	3.22
Surgeonfishes	6	13	2.00
Orangespine unicornfish	92	230	2.50
Unicornfishes	269	673	2.50
Goatfishes	164	409	2.50
Mahimahi	4,823	8,869	1.84
Rainbow runner	265	507	1.91
Wahoo	1,081	2,162	2.00
Skipjack tuna	14,449	24,976	1.73
Dogtooth tuna	937	1,485	1.58
Yellowfin tuna	4,746	9,426	1.99
Kawakawa (saba)	294	504	1.71
Octopus	21	43	2.00
Squid	8	16	2.00
TOTAL	41,056	86,838	2.12

Table B-4
CNMI March 2009 Estimated Commercial Landings

Species	Pounds	Value (\$)	Price/Lb (\$)
Bigeye scad	1,041	2,615	2.51
Jacks	354	885	2.50
Black jack	21	58	2.75
Bottomfishes (unknown)	271	686	2.53
Sickle pomfret	166	381	2.29
Ehu (red snapper)	193	697	3.62
Gindai (flower snapper)	225	809	3.59
Groupers	12	35	3.00
Kalikali (yellowtail)	349	909	2.60
Onaga (red snapper)	708	3,260	4.60
Opakapaka (pink snapper)	1,042	2,909	2.79
Jobfish (uku)	217	456	2.10
Silvermouth (deep lehi)	315	917	2.92
Amberjack	154	420	2.74
Blue lined snapper	74	184	2.50
Reef fishes (unknown)	4,290	11,036	2.57
Rabbitfishes	243	645	2.66
Emperors	1,578	4,075	2.58
Parrotfishes	2,647	8,290	3.13
Surgeonfishes	367	807	2.20
Unicornfishes	235	586	2.50
Goatfishes	115	286	2.50
Pelagic fishes (unknown)	125	251	2.00
Mahimahi	5,219	8,854	1.70
Rainbow runner	85	170	2.00
Wahoo	870	1,740	2.00
Skipjack tuna	14,901	23,721	1.59
Dogtooth tuna	735	1,316	1.79
Yellowfin tuna	2,660	5,321	2.00
Kawakawa (saba)	145	218	1.50
Spiny lobster	203	1,034	5.09
Slipper lobster	32	159	5.00
Octopus	8	16	2.00
TOTAL	39,600	83,747	2.11

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Table B-5
CNMI April 2009 Estimated Commercial Landings

Species	Pounds	Value (\$)	Price/Lb (\$)
Bigeye scad	3,602	8,973	2.49
Jacks	709	1,767	2.49
Giant trevally	55	136	2.50
Bottomfishes (unknown)	128	322	2.51
Sickle pomfret	129	313	2.42
Ehu (red snapper)	706	2,512	3.56
Gindai (flower snapper)	720	2,689	3.73
Groupers	113	320	2.84
Kalikali (yellowtail)	830	2,072	2.50
Onaga (red snapper)	691	2,920	4.22
Opakapaka (pink snapper)	854	2,294	2.69
Jobfish (uku)	272	544	2.00
Silvermouth (deep lehi)	256	715	2.79
Amberjack	34	84	2.50
Blue lined snapper	304	759	2.50
Reef fishes (unknown)	5,700	14,762	2.59
Wrasses	157	347	2.21
Rabbitfishes	47	134	2.86
Emperors	774	1,959	2.53
Squirrelfishes	48	120	2.50
Parrotfishes	4,252	13,515	3.18
Surgeonfishes	185	401	2.16
Orangespine unicornfish	4	9	2.50
Unicornfishes	15	39	2.50
Goatfishes	202	506	2.50
Barracudas	24	35	1.50
Mahimahi	5,103	8,415	1.65
Sailfish	102	153	1.50
Rainbow runner	176	352	2.00
Wahoo	529	1,058	2.00
Skipjack tuna	11,286	16,998	1.51
Dogtooth tuna	240	347	1.44
Yellowfin tuna	2,512	4,805	1.91
Kawakawa (saba)	73	73	1.00
Spiny lobster	41	210	5.15
Slipper lobster	80	400	5.00
Octopus	12	33	2.83
TOTAL	40,964	91,092	2.22

Table B-6
CNMI May 2009 Estimated Commercial Landings

Species	Pounds	Value (\$)	Price/Lb (\$)
Bigeye scad	1,776	4,441	2.50
Jacks	307	703	2.29
Bottomfishes (unknown)	115	296	2.57
Sickle pomfret	45	89	2.00
Ehu (red snapper)	292	1,151	3.94
Gindai (flower snapper)	522	1,888	3.62
Groupers	166	426	2.56
Kalikali (yellowtail)	413	1,024	2.48
Onaga (red snapper)	697	2,787	4.00
Opakapaka (pink snapper)	383	979	2.56
Jobfish (uku)	145	305	2.09
Silvermouth (deep lehi)	375	1,014	2.70
Amberjack	55	139	2.50
Blue lined snapper	284	709	2.50
Reef fishes (unknown)	2,935	7,518	2.56
Rabbitfishes	8	21	2.56
Emperors	1,205	3,014	2.50
Parrotfishes	2,434	7,652	3.14
Surgeonfishes	227	454	2.00
Orangespine unicornfish	26	66	2.50
Unicornfishes	12	31	2.50
Mahimahi	174	364	2.09
Rainbow runner	72	144	2.00
Wahoo	130	259	2.00
Skipjack tuna	10,326	14,813	1.43
Dogtooth tuna	235	352	1.50
Yellowfin tuna	3,000	5,877	1.96
Kawakawa (saba)	122	201	1.65
Spiny lobster	21	88	4.22
Slipper lobster	27	136	5.00
TOTAL	26,530	56,940	2.15

B.13

Table B-7
CNMI June 2009 Estimated Commercial Landings

Species	Pounds	Value (\$)	Price/Lb (\$)
Bigeye scad	1,864	4,685	2.51
Jacks	81	153	1.89
Black jack	24	59	2.50
Bottomfishes (unknown)	435	1,089	2.50
Ehu (red snapper)	398	1,413	3.55
Gindai (flower snapper)	367	1,316	3.59
Groupers	71	204	2.87
Kalikali (yellowtail)	151	377	2.50
Onaga (red snapper)	243	948	3.90
Opakapaka (pink snapper)	214	563	2.63
Jobfish (uku)	51	103	2.00
Silvermouth (deep lehi)	27	95	3.50
Blue lined snapper	134	335	2.50
Reef fishes (unknown)	4,144	10,332	2.49
Rabbitfishes	114	354	3.10
Emperors	1,279	3,145	2.46
Parrotfishes	3,036	9,111	3.00
Surgeonfishes	164	328	2.00
Unicornfishes	64	159	2.50
Bigeye emperor	48	120	2.50
Mahimahi	7	15	2.00
Rainbow runner	220	433	1.97
Skipjack tuna	9,790	14,046	1.43
Dogtooth tuna	120	204	1.70
Yellowfin tuna	2,376	4,752	2.00
Kawakawa (saba)	99	148	1.50
Spiny lobster	506	2,504	4.94
Slipper lobster	9	45	5.00
TOTAL	26,035	57,035	2.19

Table B-8
CNMI July 2009 Estimated Commercial Landings

Species	Pounds	Value (\$)	Price/Lb (\$)
Bigeye scad	1,540	4,217	2.74
Jacks	83	207	2.50
Bottomfishes (unknown)	589	1,473	2.50
Ehu (red snapper)	131	481	3.67
Gindai (flower snapper)	64	233	3.66
Groupers	10	29	2.75
Kalikali (yellowtail)	106	265	2.50
Onaga (red snapper)	90	360	4.00
Opakapaka (pink snapper)	155	389	2.50
Silvermouth (deep lehi)	28	78	2.75
Blue lined snapper	164	410	2.50
Reef fishes (unknown)	2,780	6,950	2.50
Rabbitfishes	53	171	3.20
Emperors	274	684	2.50
Parrotfishes	1,647	4,940	3.00
Surgeonfishes	129	258	2.00
Orangespine unicornfish	1	3	2.00
Rainbow runner	7	15	2.00
Skipjack tuna	8,792	15,450	1.76
Yellowfin tuna	827	1,655	2.00
Octopus	128	268	2.09
TOTAL	17,600	38,533	2.19

Table B-9
CNMI August 2009 Estimated Commercial Landings

Species	Pounds	Value (\$)	Price/Lb (\$)
Bigeye scad	5,315	13,648	2.57
Jacks	2	6	2.50
Black jack	9	18	2.00
Bottomfishes (unknown)	429	1,073	2.50
Ehu (red snapper)	196	690	3.52
Gindai (flower snapper)	46	165	3.56
Groupers	105	310	2.96
Kalikali (yellowtail)	15	39	2.50
Onaga (red snapper)	292	1,167	4.00
Jobfish (uku)	38	76	2.00
Reef fishes (unknown)	1,826	4,383	2.40
Rabbitfishes	72	180	2.51
Emperors	915	2,286	2.50
Squirrelfishes	109	273	2.50
Parrotfishes	1,760	5,275	3.00
Surgeonfishes	250	624	2.50
Orangespine unicornfish	37	93	2.50
Unicornfishes	200	611	3.06
Goatfishes	76	191	2.50
Mahimahi	75	149	2.00
Rainbow runner	55	98	1.77
Skipjack tuna	12,506	16,858	1.35
Dogtooth tuna	15	22	1.50
Yellowfin tuna	1,592	3,184	2.00
Kawakawa (saba)	225	327	1.45
Spiny lobster	103	514	5.00
Octopus	72	144	2.00
TOTAL	26,337	52,403	1.99

Table B-10
CNMI September 2009 Estimated Commercial Landings

Species	Pounds	Value (\$)	Price/Lb (\$)
Bigeye scad	3,160	7,458	2.36
Jacks	177	464	2.62
Bottomfishes (unknown)	229	573	2.50
Ehu (red snapper)	131	458	3.50
Gindai (flower snapper)	20	70	3.50
Groupers	5	14	2.50
Kalikali (yellowtail)	137	223	1.63
Onaga (red snapper)	165	691	4.20
Opakapaka (pink snapper)	10	28	2.75
Jobfish (uku)	57	139	2.42
Silvermouth (deep lehi)	9	32	3.50
Blue lined snapper	33	82	2.50
Reef fishes (unknown)	1,637	4,091	2.50
Rabbitfishes	316	956	3.02
Emperors	565	1,414	2.50
Squirrelfishes	55	136	2.50
Parrotfishes	1,232	3,695	3.00
Surgeonfishes	320	732	2.29
Orangespine unicornfish	87	218	2.50
Unicornfishes	310	756	2.44
Goatfishes	133	332	2.50
Mahimahi	369	737	2.00
Wahoo	100	200	2.00
Skipjack tuna	9,109	15,499	1.70
Dogtooth tuna	36	64	1.75
Yellowfin tuna	1,028	2,056	2.00
Kawakawa (saba)	83	125	1.50
Spiny lobster	7	36	5.00
Octopus	15	31	2.00
TOTAL	19,536	41,308	2.11

Table B-11
CNMI October 2009 Estimated Commercial Landings

Species	Pounds	Value (\$)	Price/Lb (\$)
Bigeye scad	2,598	6,151	2.37
Jacks	39	98	2.50
Bottomfishes (unknown)	25	64	2.50
Ehu (red snapper)	168	589	3.50
Gindai (flower snapper)	131	460	3.51
Groupers	27	82	3.00
Kalikali (yellowtail)	129	323	2.50
Onaga (red snapper)	59	259	4.38
Opakapaka (pink snapper)	345	940	2.73
Jobfish (uku)	89	178	2.00
Silvermouth (deep lehi)	17	43	2.50
Amberjack	53	132	2.50
Reef fishes (unknown)	2,928	7,319	2.50
Wrasses	56	169	3.00
Rabbitfishes	334	1,049	3.14
Emperors	731	1,827	2.50
Squirrelfishes	3	7	2.50
Parrotfishes	1,052	3,046	2.90
Surgeonfishes	126	287	2.27
Orangespine unicornfish	65	164	2.50
Unicornfishes	184	459	2.50
Goatfishes	106	266	2.50
Mahimahi	196	393	2.00
Rainbow runner	160	320	2.00
Wahoo	368	736	2.00
Skipjack tuna	10,507	16,880	1.61
Yellowfin tuna	1,660	3,295	1.99
Octopus	82	169	2.06
TOTAL	22,240	45,704	2.06

Table B-12
CNMI November 2009 Estimated Commercial Landings

Species	Pounds	Value (\$)	Price/Lb (\$)
Bigeye scad	1,188	2,970	2.50
Jacks	21	52	2.50
Bottomfishes (unknown)	103	257	2.50
Ehu (red snapper)	32	111	3.50
Gindai (flower snapper)	24	83	3.50
Groupers	13	32	2.50
Kalikali (yellowtail)	30	75	2.50
Opakapaka (pink snapper)	90	248	2.75
Jobfish (uku)	38	76	2.00
Blue lined snapper	56	141	2.50
Reef fishes (unknown)	2,020	5,055	2.50
Rabbitfishes	133	430	3.24
Emperors	1,123	2,807	2.50
Parrotfishes	1,147	3,485	3.04
Surgeonfishes	151	302	2.00
Bigeye emperor	77	193	2.50
Mahimahi	175	318	1.82
Rainbow runner	550	1,101	2.00
Wahoo	120	240	2.00
Skipjack tuna	6,249	11,858	1.90
Yellowfin tuna	516	959	1.86
Kawakawa (saba)	85	128	1.50
Octopus	11	22	2.00
TOTAL	13,951	30,943	2.22

Table B-13
CNMI December 2009 Estimated Commercial Landings

Species	Pounds	Value (\$)	Price/Lb (\$)
Bigeye scad	480	1,200	2.50
Jacks	181	452	2.50
Black jack	44	109	2.50
Bottomfishes (unknown)	212	530	2.50
Ehu (red snapper)	180	644	3.58
Gindai (flower snapper)	90	332	3.69
Kalikali (yellowtail)	18	45	2.50
Onaga (red snapper)	116	511	4.39
Opakapaka (pink snapper)	309	850	2.75
Jobfish (uku)	159	318	2.00
Blue lined snapper	314	784	2.50
Reef fishes (unknown)	2,685	6,842	2.55
Rabbitfishes	290	911	3.14
Emperors	1,005	2,514	2.50
Parrotfishes	1,407	4,429	3.15
Surgeonfishes	215	441	2.05
Unicornfishes	7	18	2.50
Goatfishes	35	86	2.50
Mahimahi	425	730	1.72
Blue marlin	82	123	1.50
Rainbow runner	45	91	2.00
Wahoo	24	47	2.00
Skipjack tuna	11,682	21,776	1.86
Dogtooth tuna	183	365	2.00
Yellowfin tuna	2,163	4,207	1.95
Octopus	62	124	2.00
TOTAL	22,413	48,480	2.16

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

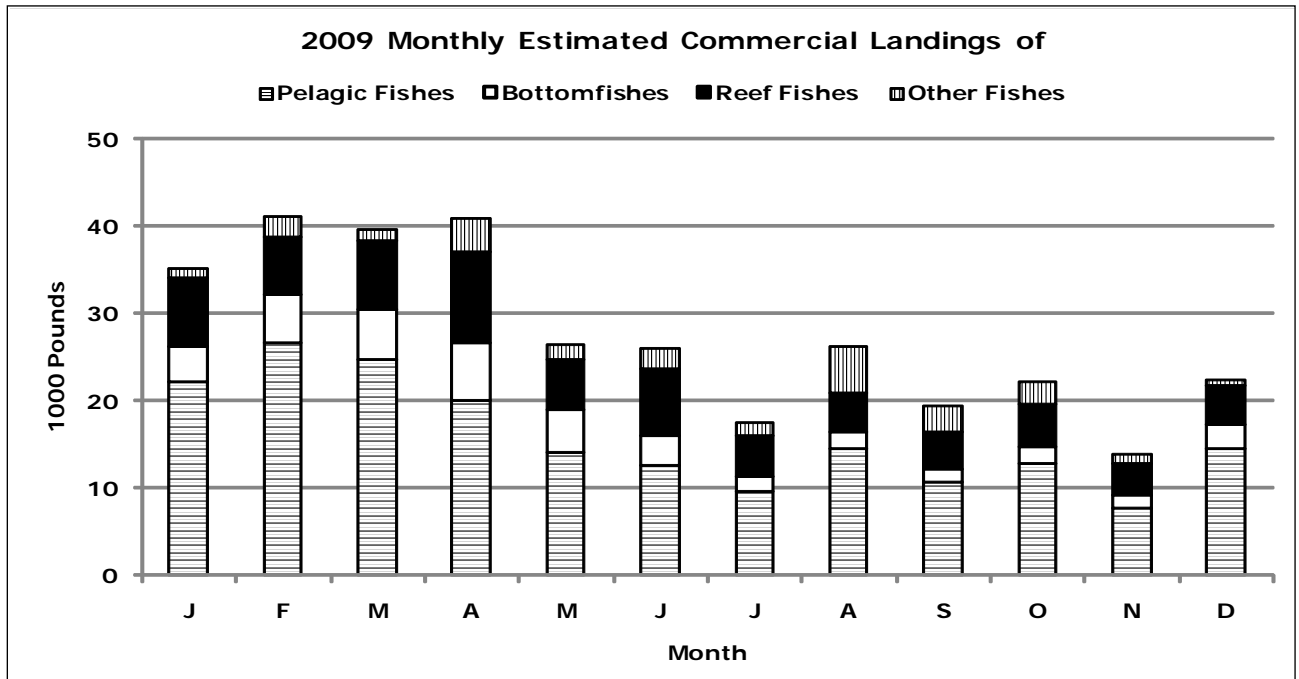


Figure B-1-1

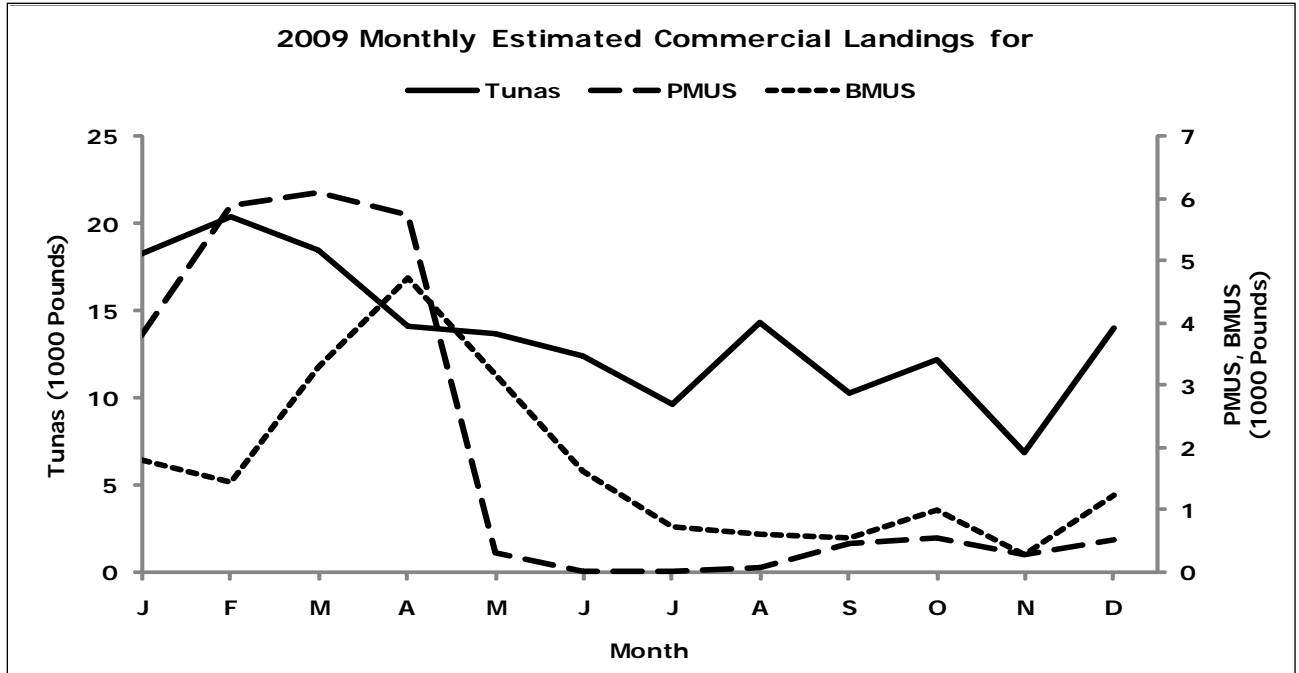


Figure B-1-2

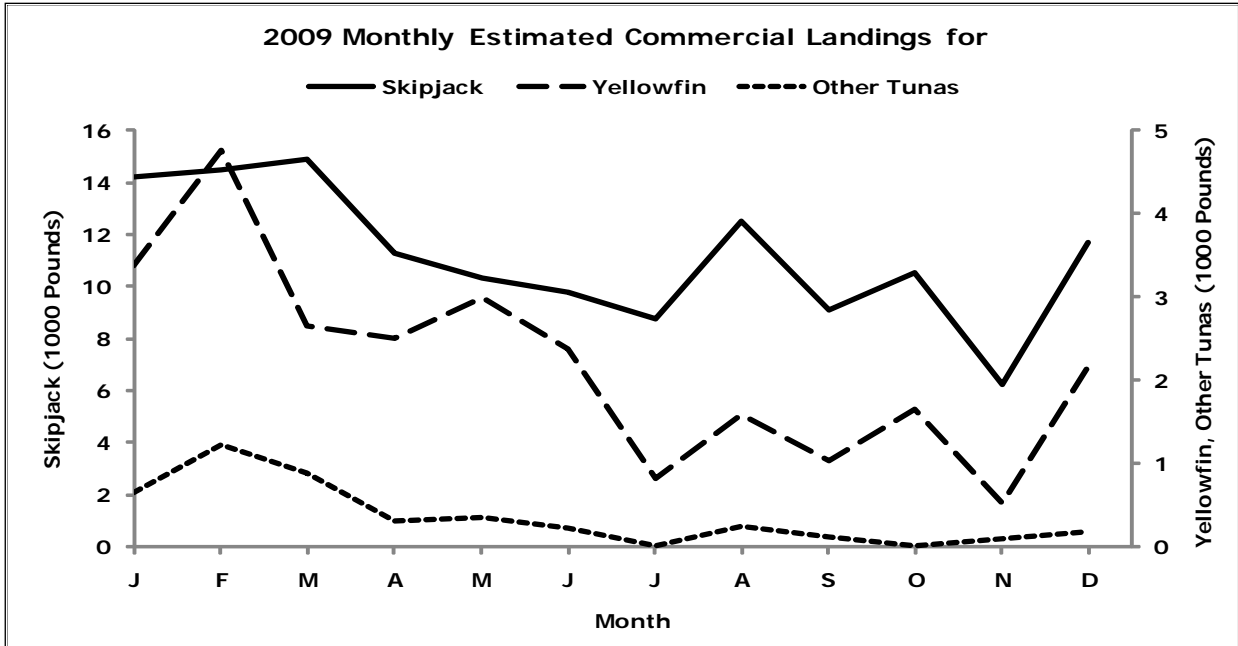


Figure B-1-3

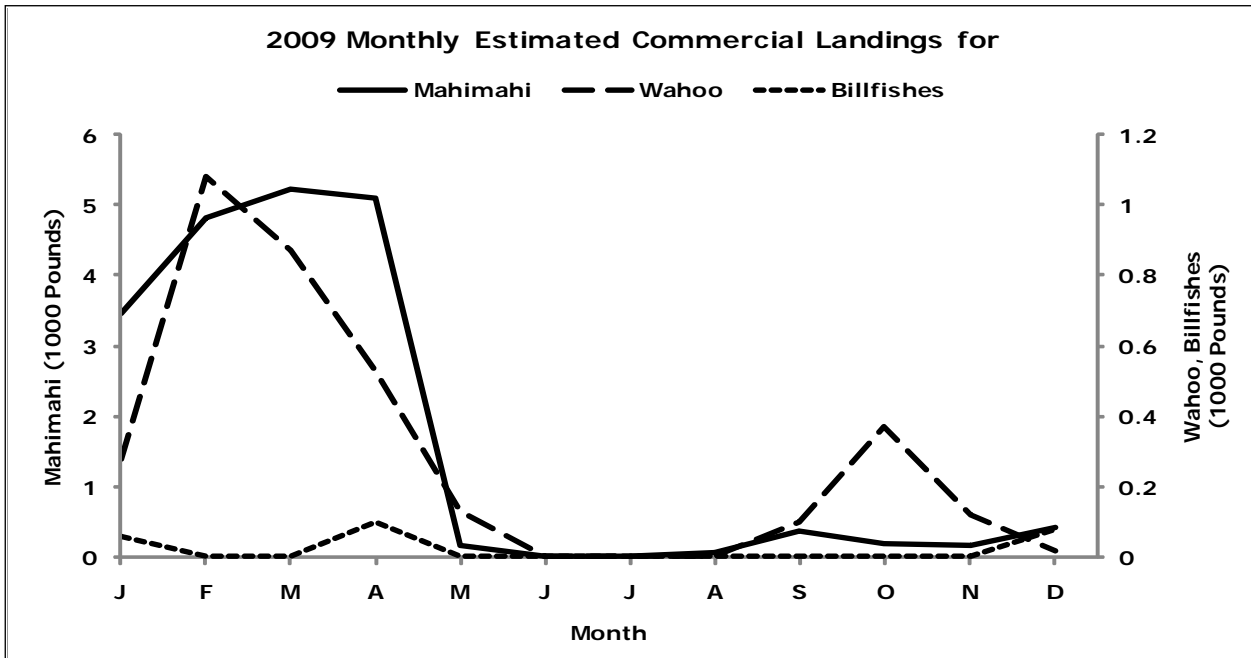


Figure B-1-4

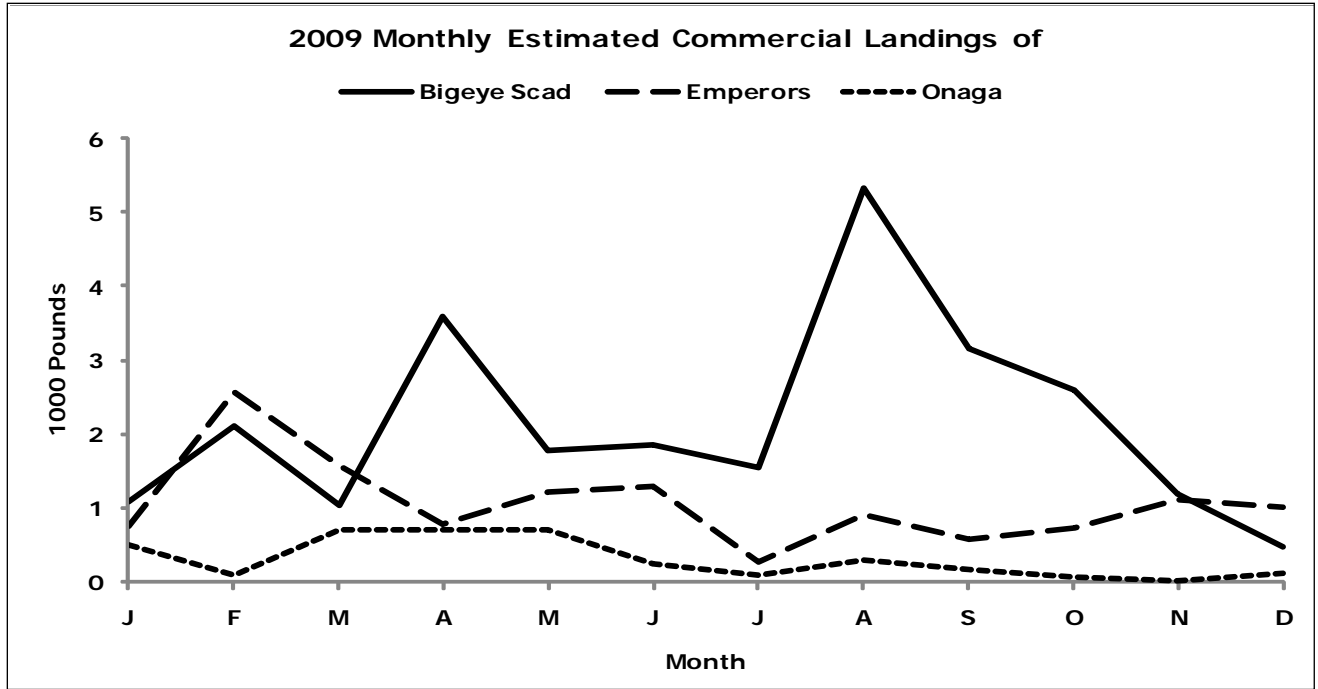


Figure B-1-5

B.23

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

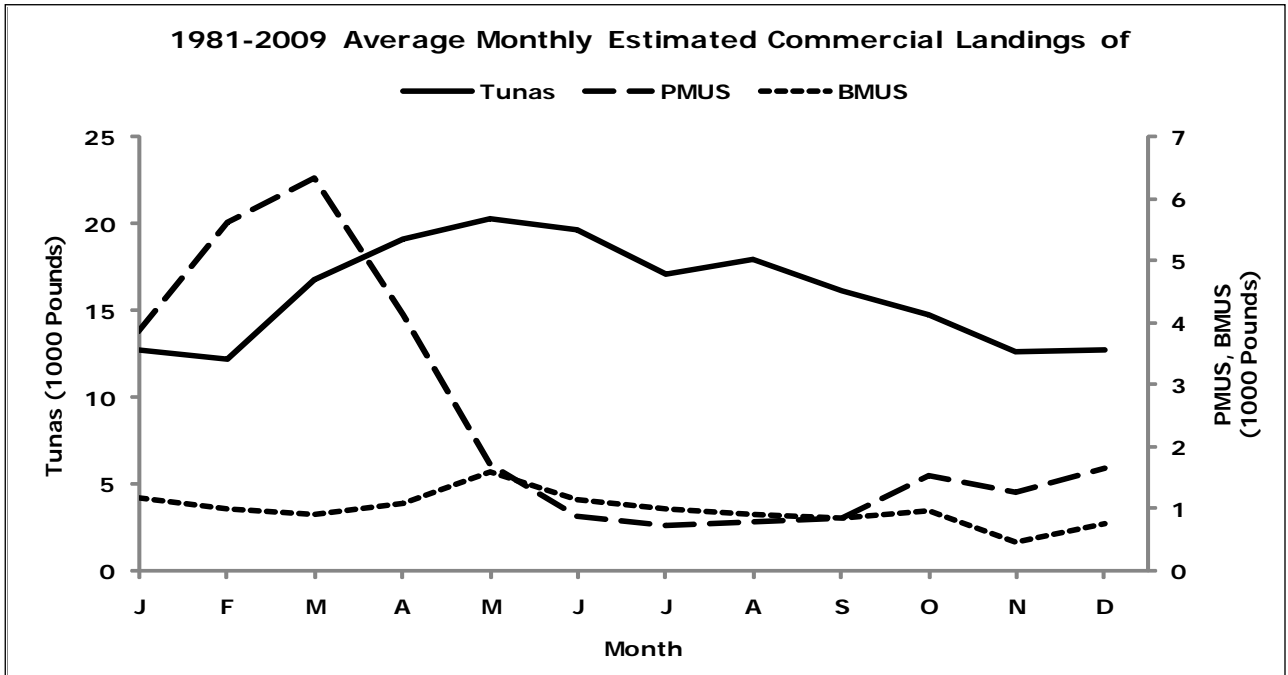


Figure B-2-1

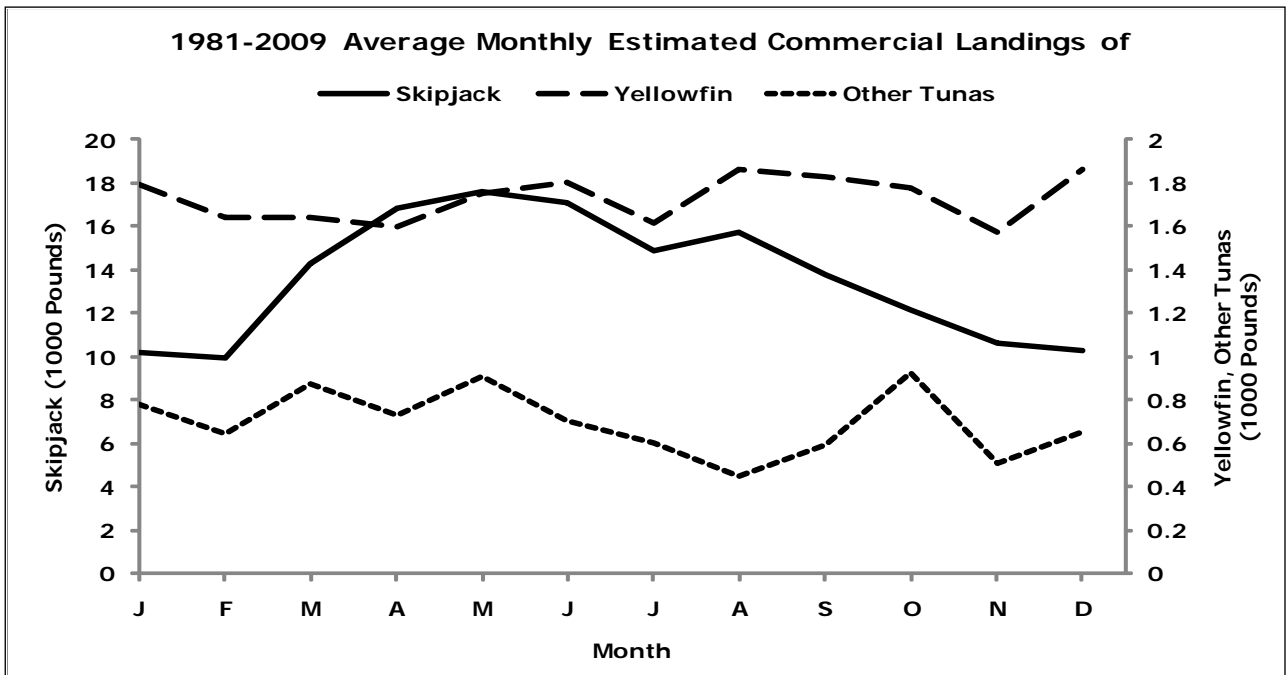


Figure B-2-2

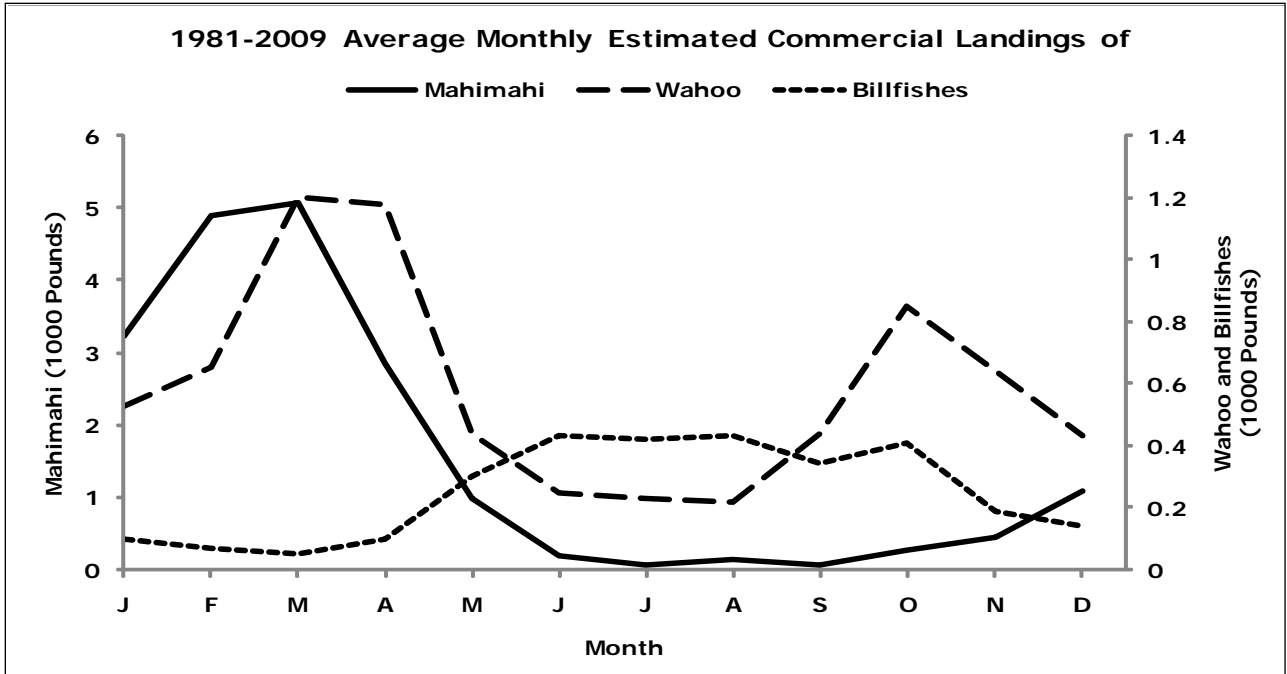


Figure B-2-3

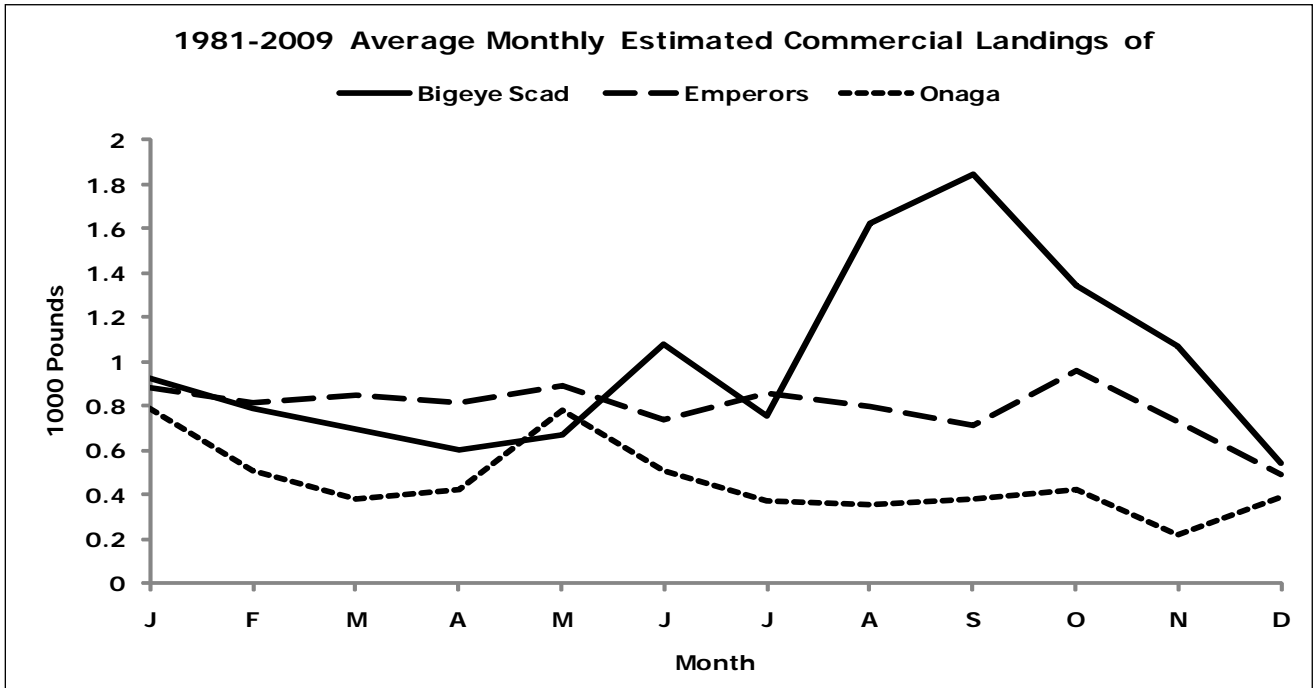


Figure B-2-4

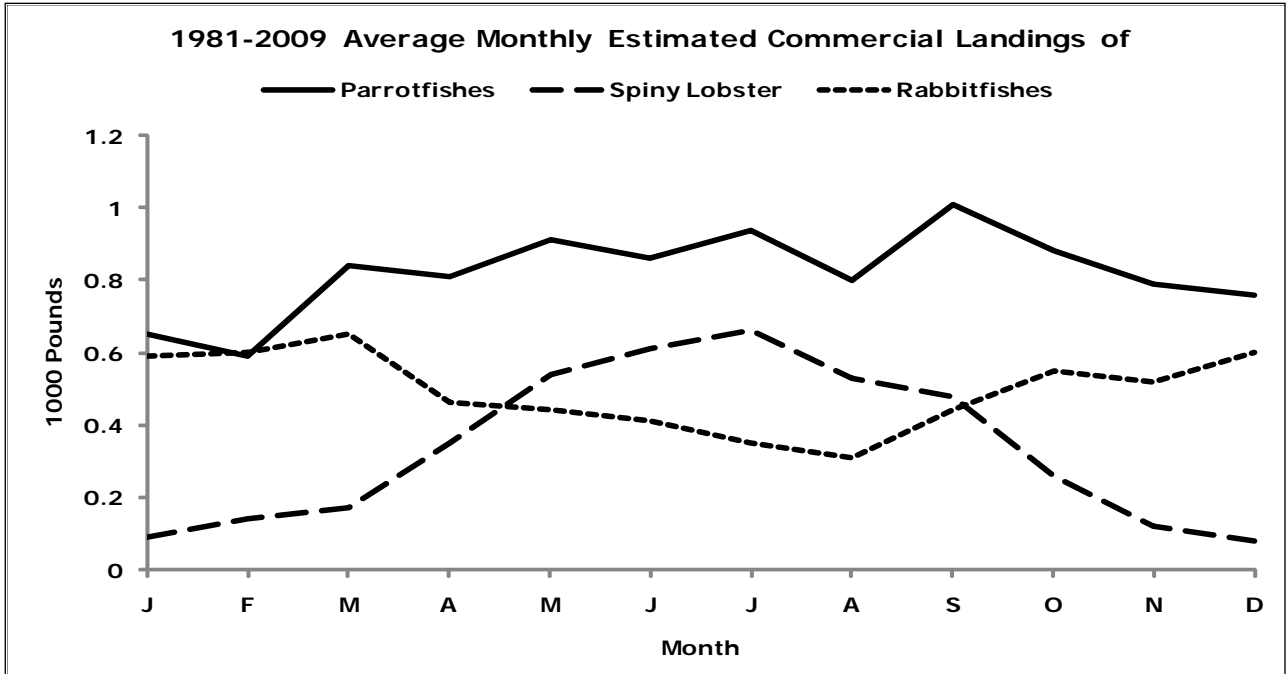


Figure B-2-5

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

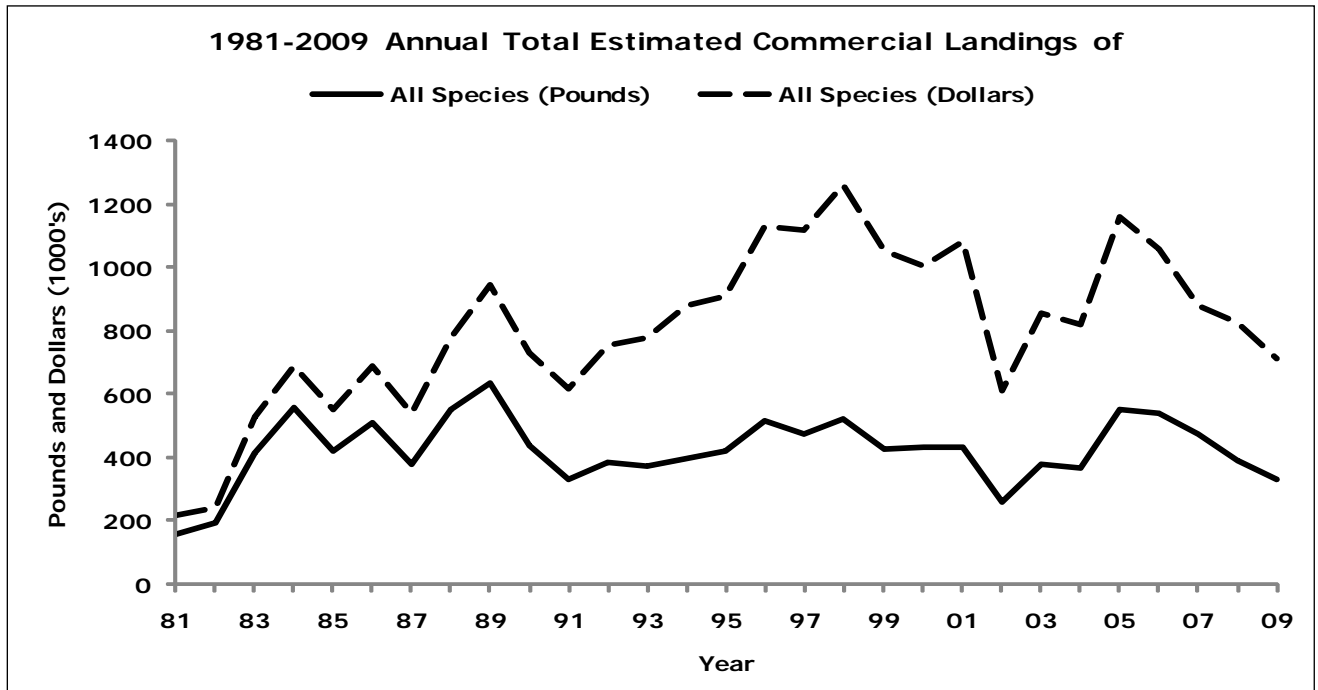


Figure B-3-1

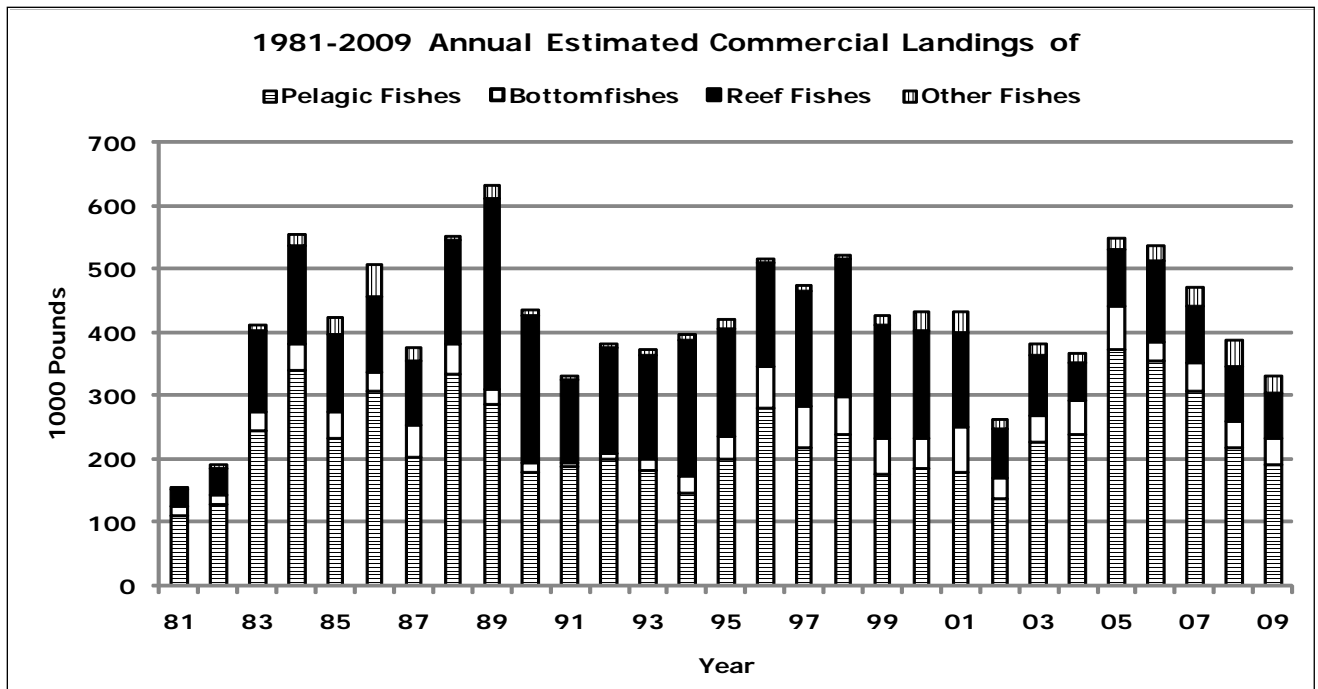


Figure B-3-2

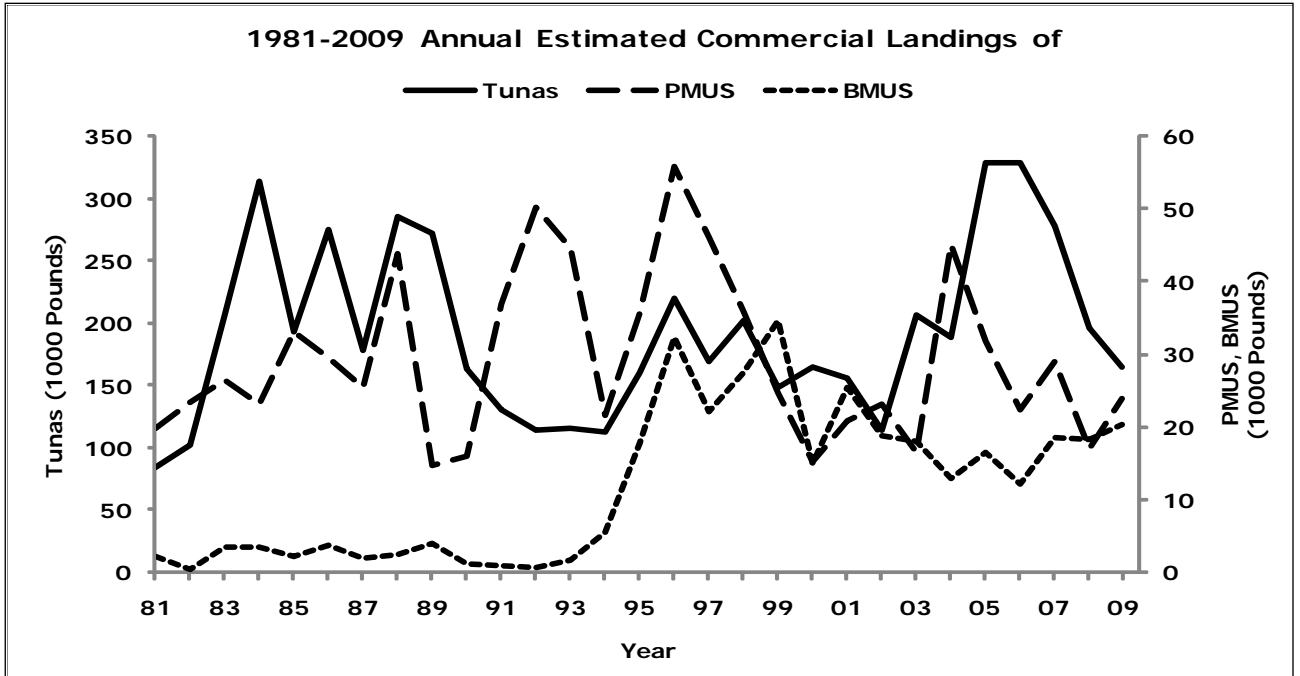


Figure B-3-3

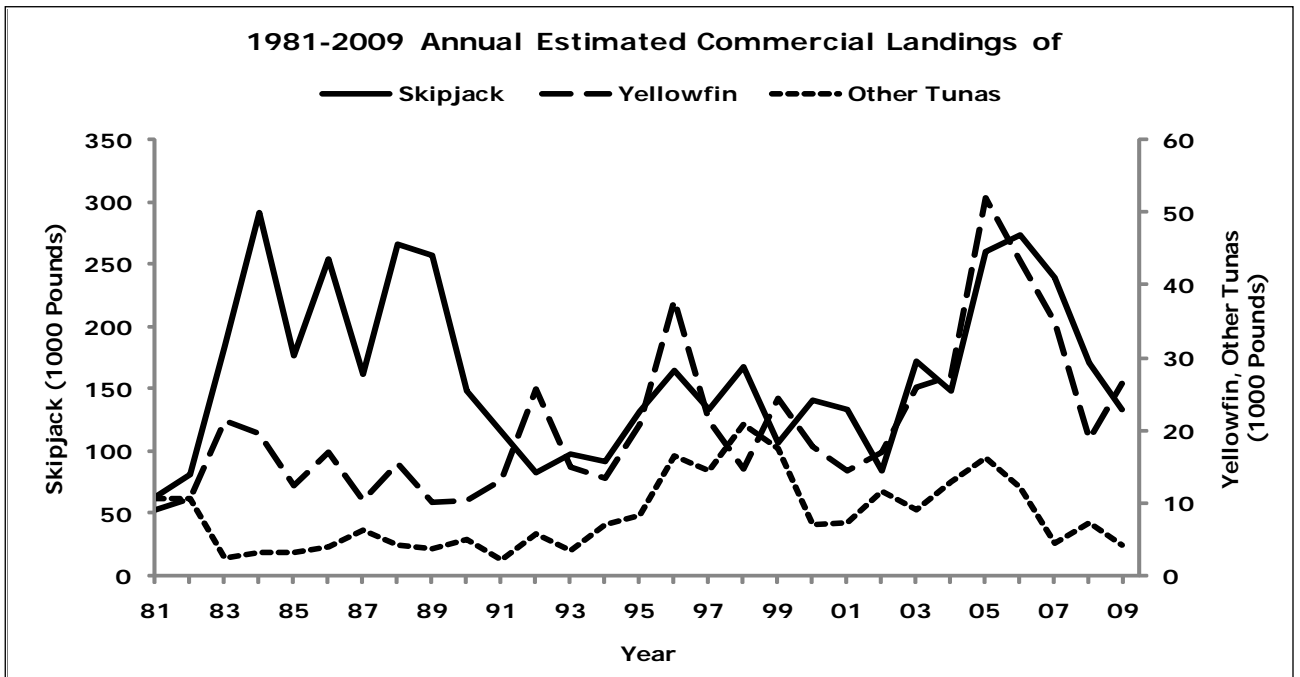


Figure B-3-4

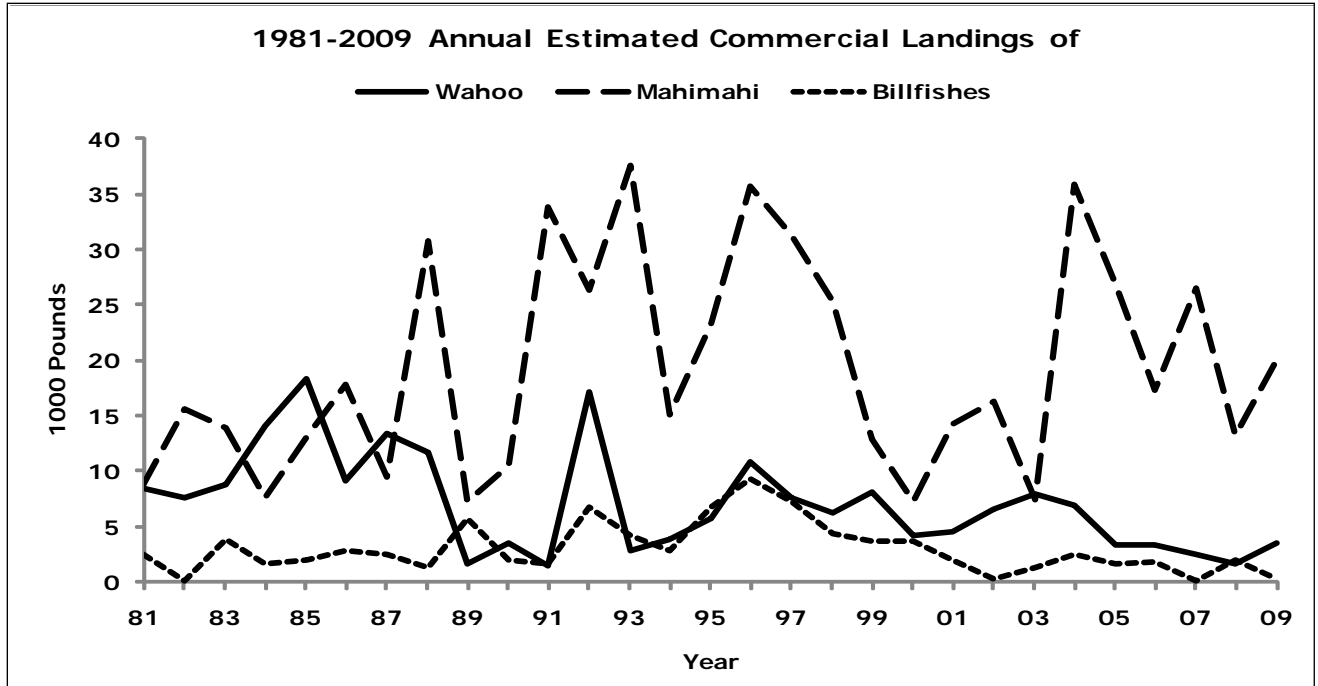


Figure B-3-5

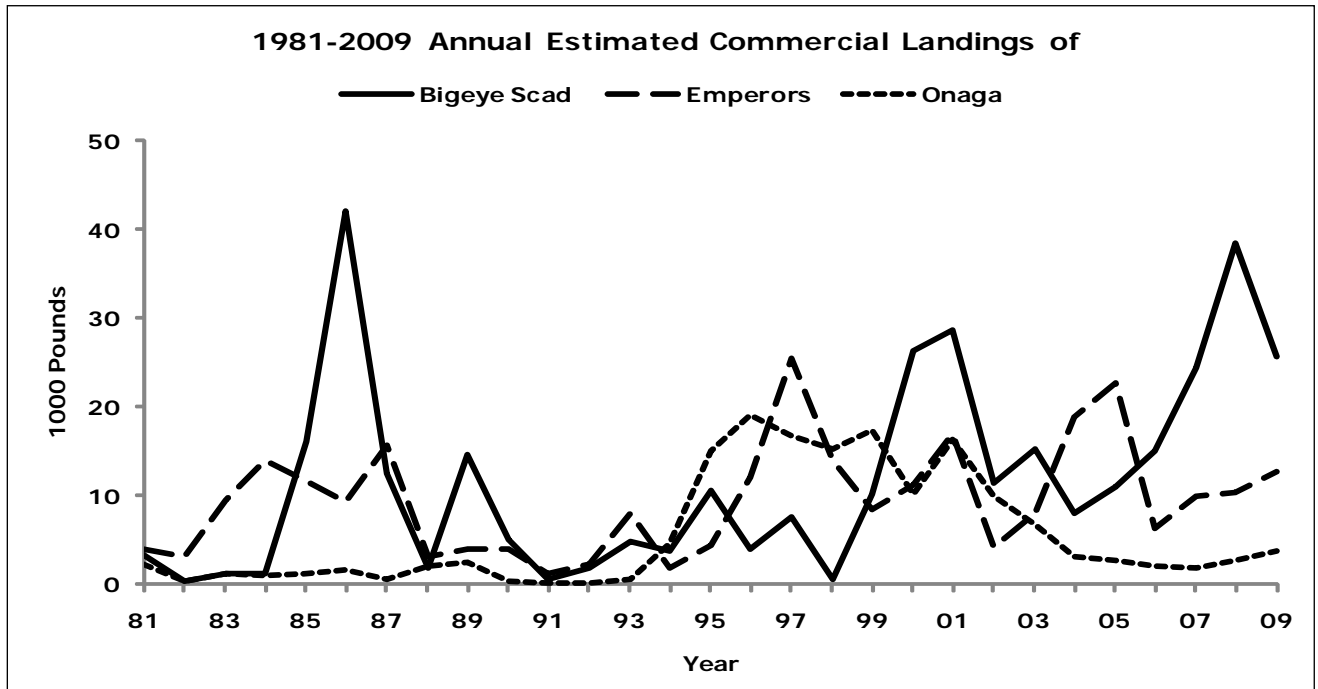


Figure B-3-6

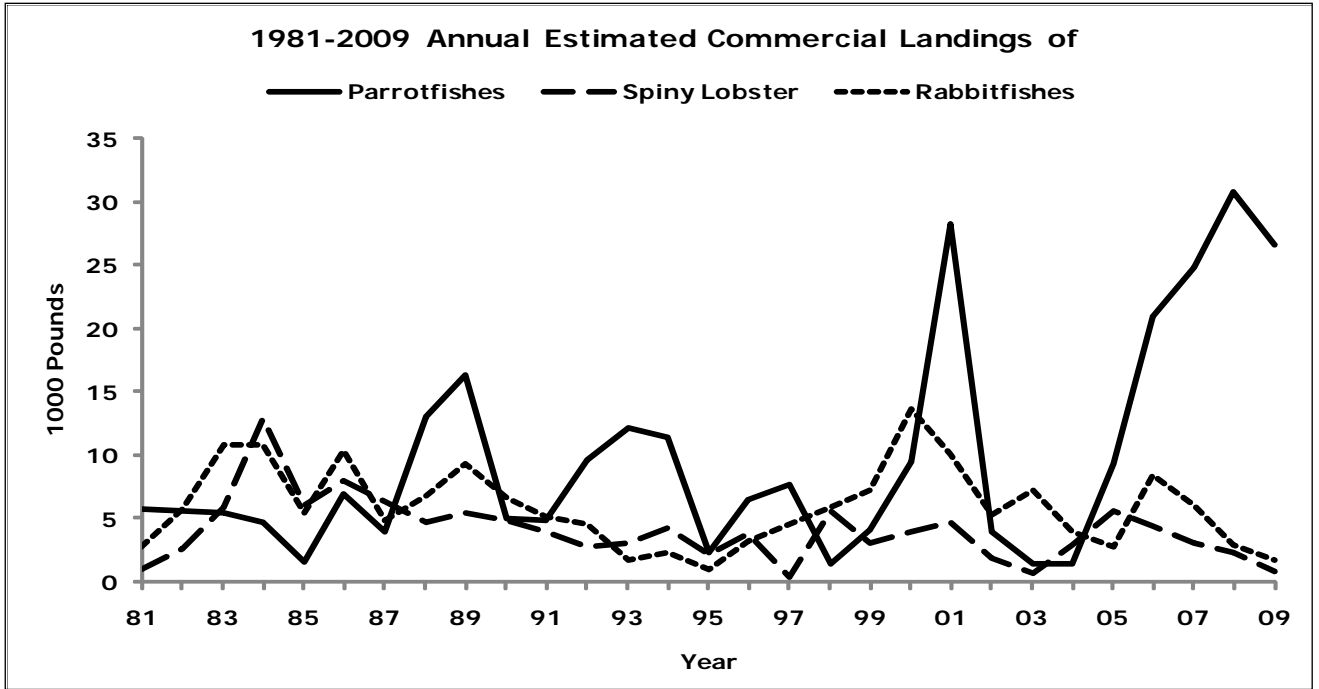


Figure B-3-7

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:

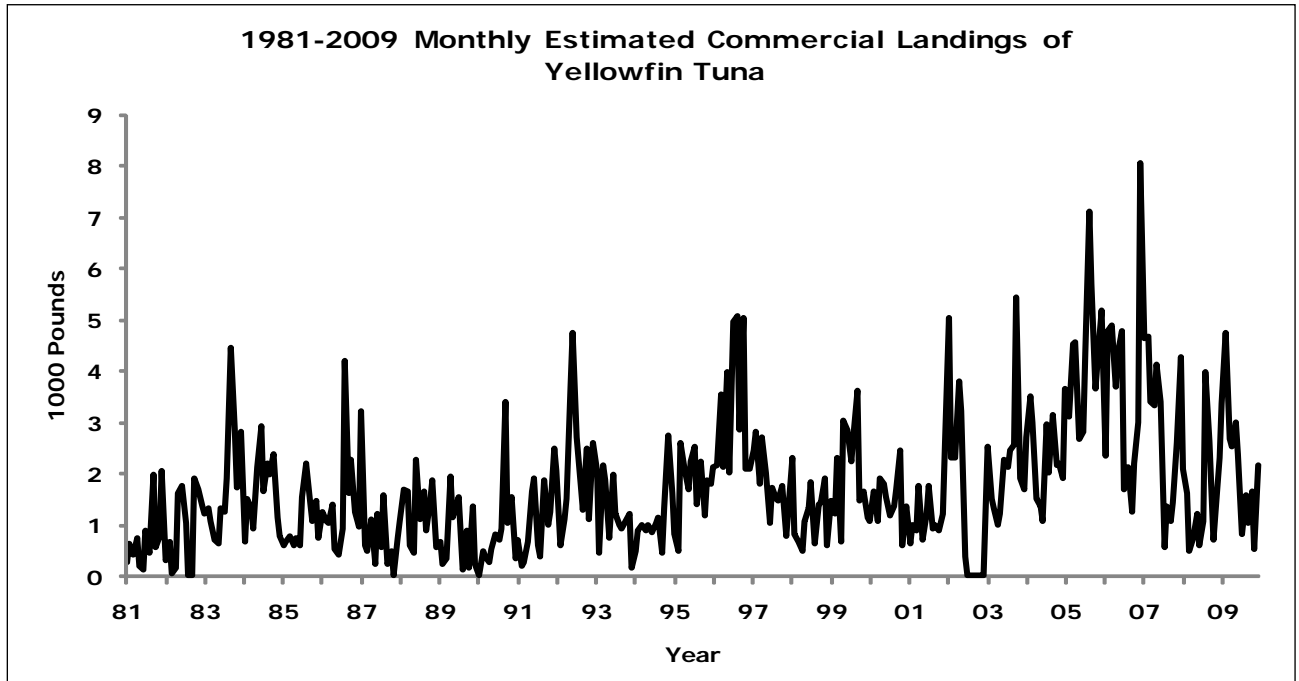


Figure B-4-1

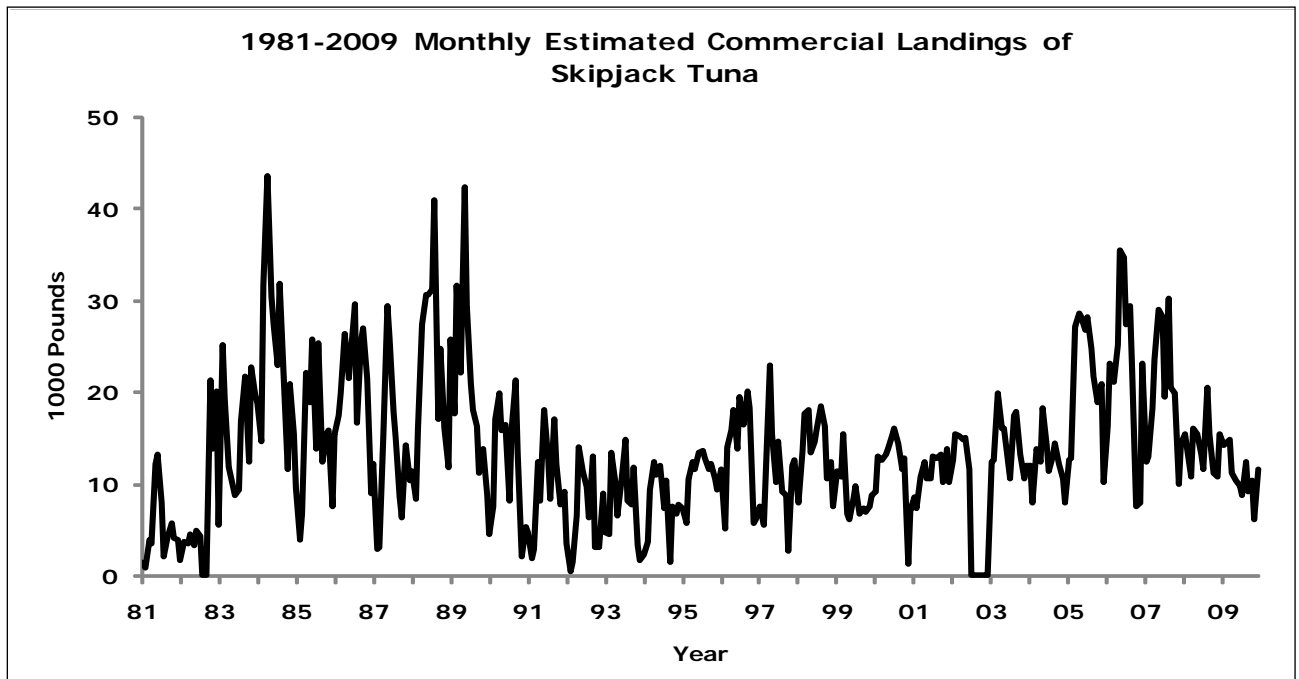


Figure B-4-2

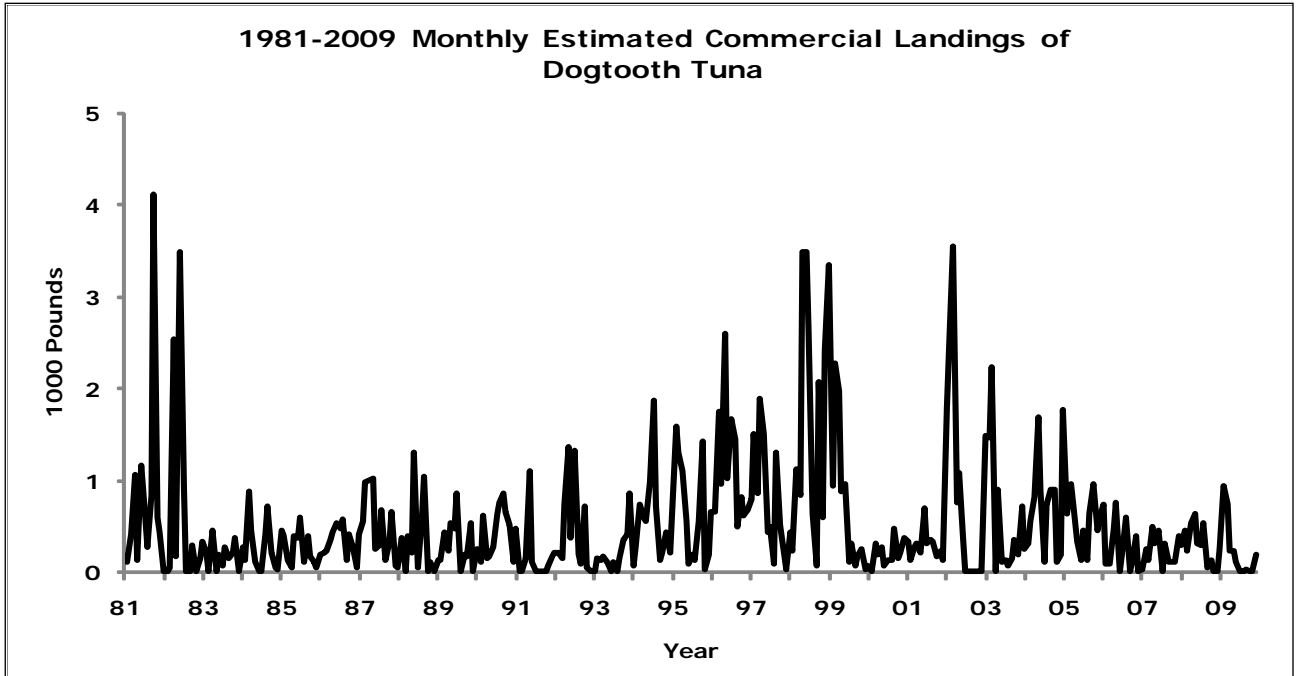


Figure B-4-3

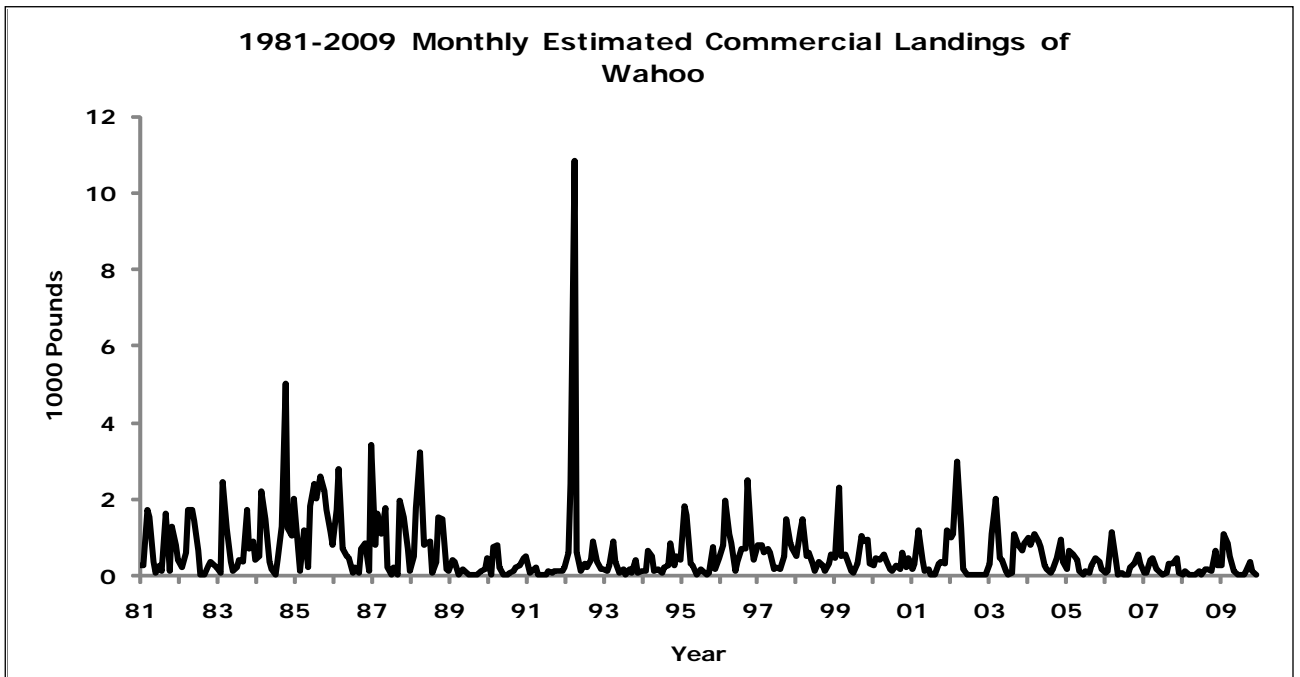


Figure B-4-4

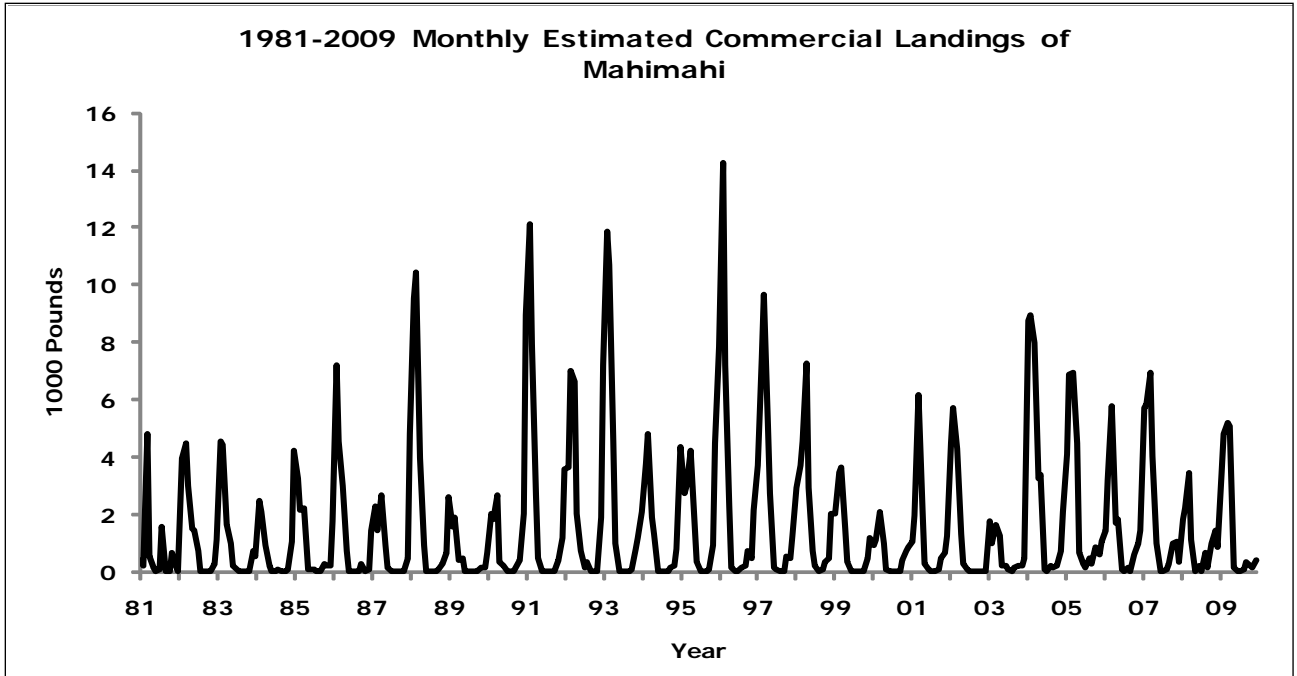


Figure B-4-5

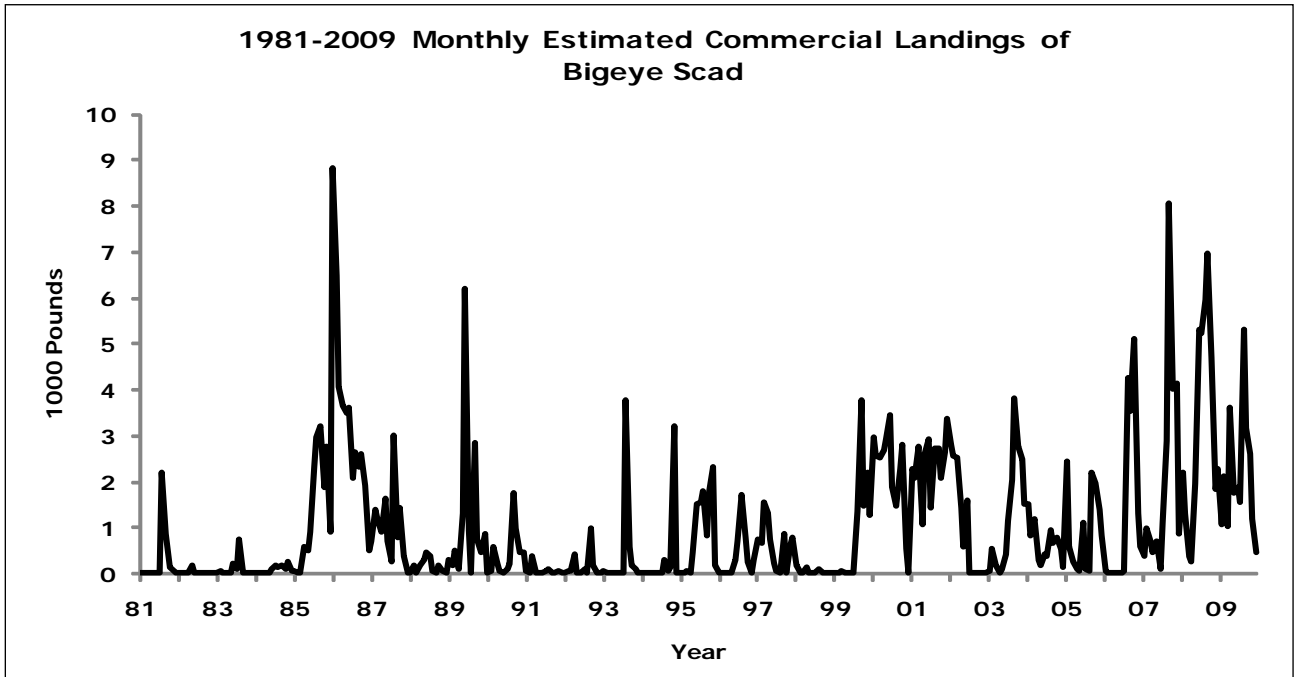


Figure B-4-6

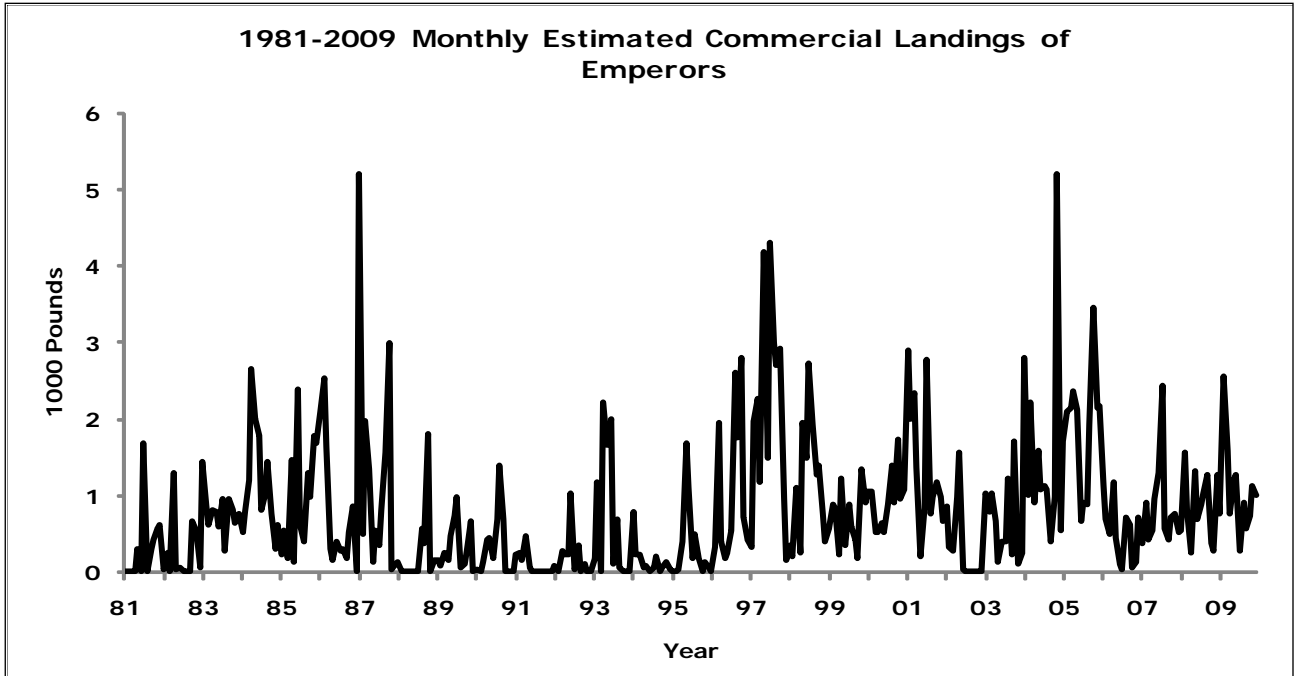


Figure B-4-7

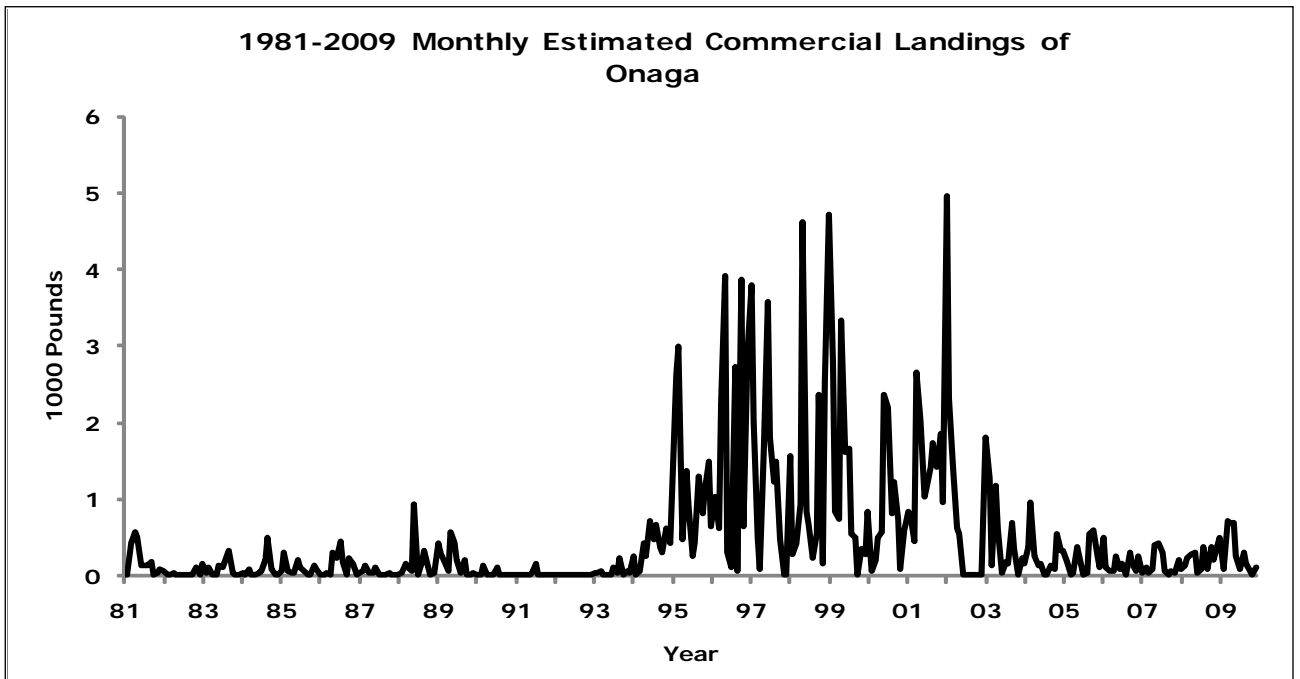


Figure B-4-8

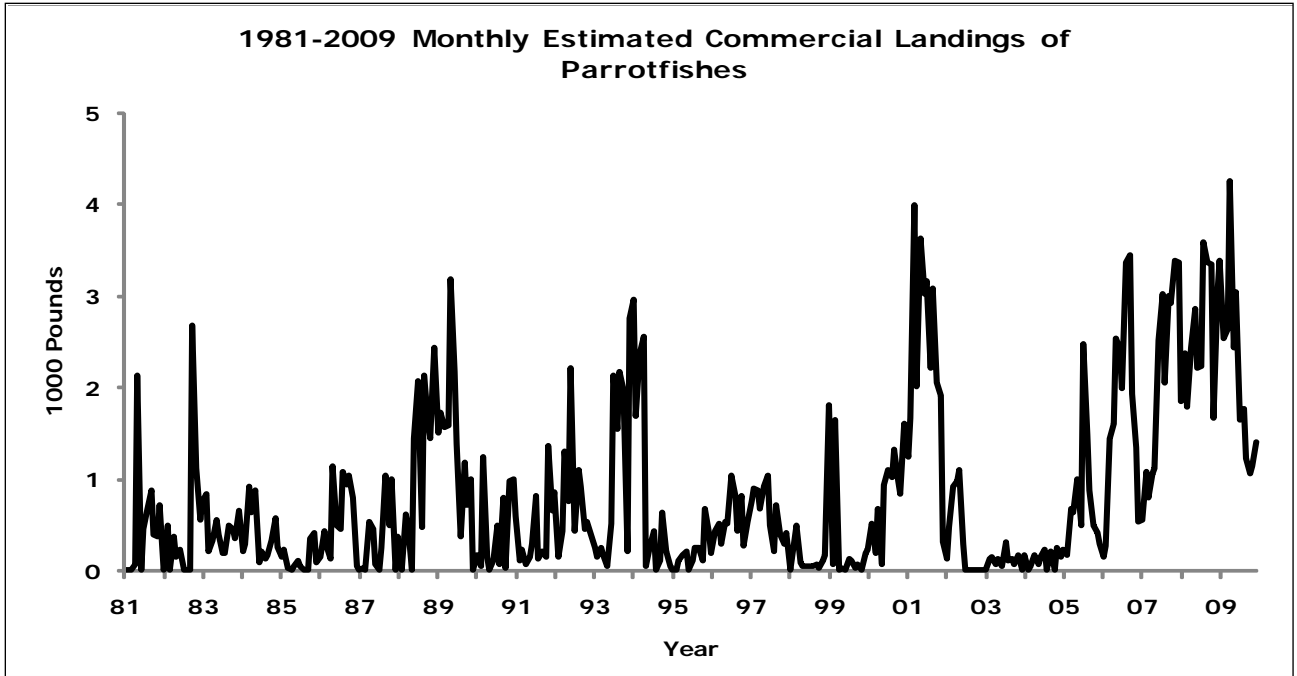


Figure B-4-9

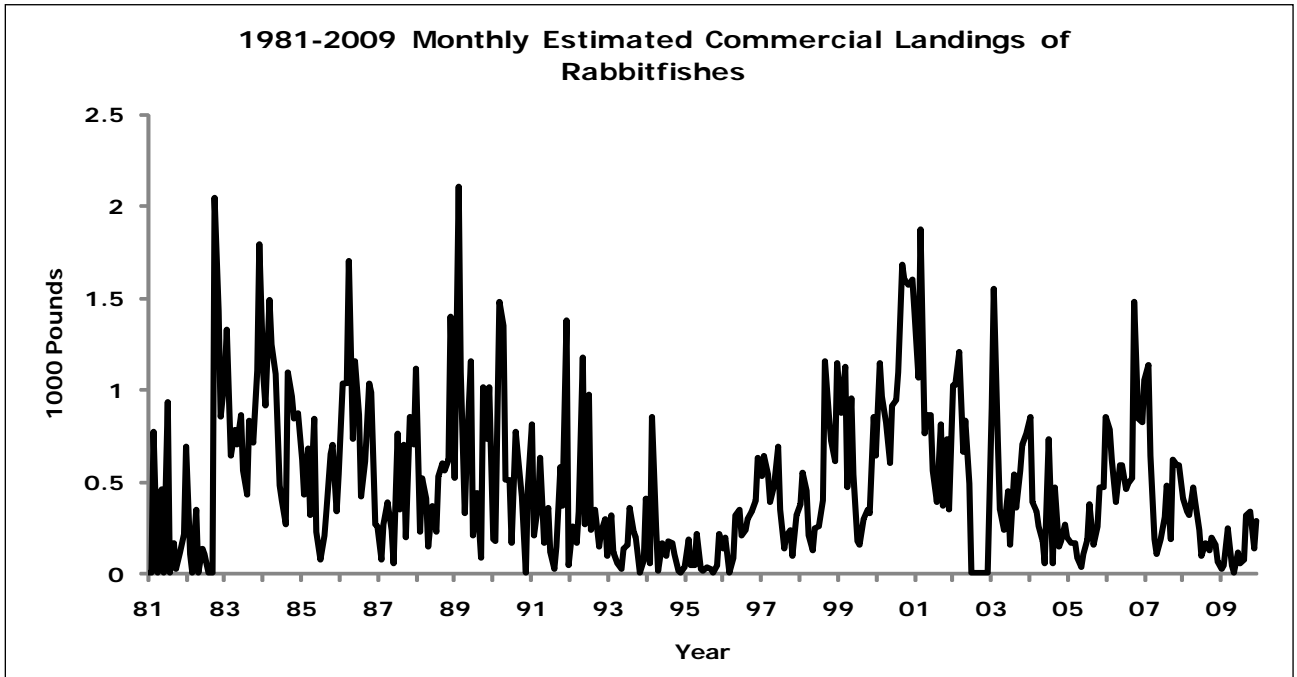


Figure B-4-10

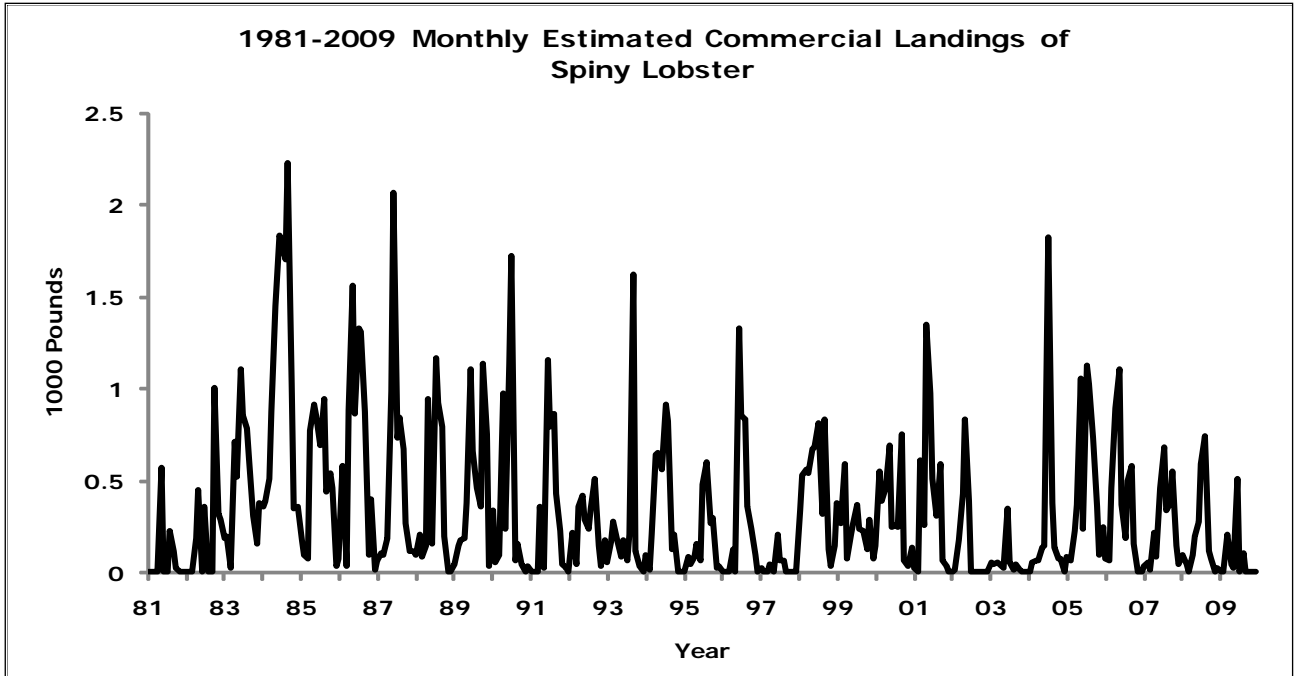


Figure B-4-11

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GUAM 2009 FISHERY STATISTICS

Compiled by
Guam Division of Aquatic and Wildlife Resources
and the
Western Pacific Fishery Information Network

December 2011

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GUAM 2009 FISHERY STATISTICS

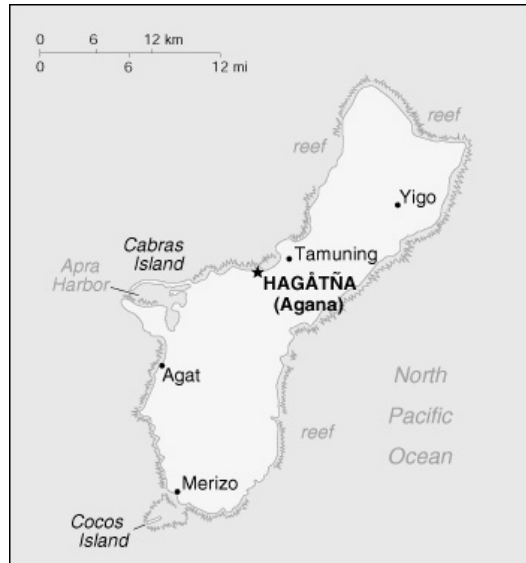
INTRODUCTION

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

Location: 13.4°N latitude, 144.4°E longitude

Population: about 178,430 (*The World Factbook*, July 2009 est.)

Economy: U.S. military and tourism



Guam:

Source: <https://www.cia.gov/library/publications/the-world-factbook/maps/gg-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.

C.2

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. Also, 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 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.

Pelagic Management Unit Species (PMUS)

Mahimahi	Spearfish
Marlins	Swordfish
Sailfish	Wahoo
Sharks	

I. Bottomfish Management Unit Species (BMUS)

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

II. Billfishes

Marlins	Spearfish
Sailfish	Swordfish

III. Tunas

Dogtooth tuna	Tunas (unknown)
Kawakawa	Yellowfin tuna
Skipjack tuna	

IV. Other Tunas

Dogtooth tuna	Tunas (unknown)
Kawakawa	

V. Fisheries Categories

A. *Pelagic Fishes*

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

B. *Bottomfishes*

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

C. *Reef Fishes*

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

D. *Other Fishes*

Bigeye scad (atulai)

Coconut crab

Crabs

Eels (freshwater)

Invertebrates

Kona crab

Lemu

Lobsters

Milkfish

Miscellaneous

Mulletts

Octopus

Seaweeds

Shrimp (freshwater)

Shrimp (saltwater)

Squid

Turtles

C.6

Table C-1
Guam Annual 2009 Estimated Commercial Landings

Species	Pounds	Value (\$)	Price/Lb (\$)
Miscellaneous	466	2,231	4.79
Bigeye scad (atulai)	4,166	11,185	2.68
Black jack	100	256	2.55
Jacks	1,365	4,214	3.09
Napoleon wrasse	3,162	8,919	2.82
Humphead parrotfish	83	187	2.25
Bottomfishes (unknown)	212	668	3.16
Deep bottomfishes	28	43	1.50
Ehu (red snapper)	505	1,929	3.82
Gindai (flower snapper)	615	2,461	4.00
Groupers	2,091	6,035	2.89
Kalikali (pink snapper)	2,168	6,955	3.21
Lehi (silverjaw)	1,202	4,533	3.77
Onaga (red snapper)	2,689	13,378	4.98
Opakapaka (pink snapper)	1,460	5,812	3.98
Uku (gray snapper)	350	956	2.73
Tagafi (red snapper)	21	42	2.00
Amberjack	273	720	2.63
Reef fishes (unknown)	49,205	147,876	3.01
Rabbitfishes	108	375	3.48
Rudderfish (guilli)	132	397	3.00
Mafute (emperor)	1,455	4,336	2.98
Squirrelfishes	495	1,474	2.98
Parrotfishes	45,465	147,748	3.25
Snappers	374	1,106	2.96
Surgeonfishes	5,424	14,595	2.69
Unicornfishes	19,843	58,480	2.95
Sweetlips	110	279	2.54
Barracudas	1,671	3,520	2.11
Mahimahi	31,746	69,966	2.20
Marlins	15,212	20,432	1.34
Spearfish	179	277	1.54
Sailfish	728	1,101	1.51
Rainbow runner	1,175	2,767	2.36
Monchong	252	620	2.46
Wahoo	31,304	70,132	2.24
Skipjack tuna	28,943	56,877	1.97
Dogtooth tuna	1,073	1,678	1.56
Yellowfin tuna	11,448	25,196	2.20
Kawakawa	2	5	2.00
Lobsters	1,144	4,232	3.70
Octopus	2,479	7,475	3.02
TOTAL	270,923	711,463	2.63

Table C-2
Guam January 2009 Estimated Commercial Landings

Species	Pounds	Value (\$)	Price/Lb (\$)
Miscellaneous	1	3	2.50
Bigeye scad (atulai)	117	351	3.00
Jacks	51	127	2.50
Bottomfishes (unknown)	62	203	3.26
Gindai (flower snapper)	71	283	4.00
Groupers	8	31	4.00
Kalikali (pink snapper)	9	28	3.00
Lehi (silverjaw)	281	1,123	4.00
Onaga (red snapper)	83	393	4.73
Opakapaka (pink snapper)	108	434	4.00
Uku (gray snapper)	13	36	2.75
Amberjack	96	248	2.58
Reef fishes (unknown)	5,123	15,369	3.00
Rudderfish (guilli)	95	286	3.00
Mafute (emperor)	62	187	3.00
Squirrelfishes	71	204	2.88
Parrotfishes	3,059	9,943	3.25
Snappers	12	35	3.00
Surgeonfishes	138	415	3.00
Unicornfishes	1,097	3,291	3.00
Barracudas	142	285	2.00
Mahimahi	4,805	10,243	2.13
Marlins	439	786	1.79
Rainbow runner	35	95	2.73
Wahoo	2,055	4,542	2.21
Skipjack tuna	637	1,274	2.00
Dogtooth tuna	15	31	2.00
Yellowfin tuna	645	1,358	2.11
Kawakawa	2	5	2.00
Lobsters	27	103	3.75
Octopus	72	215	3.00
TOTAL	19,432	51,922	2.67

Table C-3
Guam February 2009 Estimated Commercial Landings

Species	Pounds	Value (\$)	Price/Lb (\$)
Jacks	5	15	2.75
Napoleon wrasse	143	429	3.00
Ehu (red snapper)	3	12	4.00
Gindai (flower snapper)	7	28	4.00
Groupers	4	12	3.00
Kalikali (pink snapper)	28	114	4.00
Lehi (silverjaw)	9	37	4.00
Opakapaka (pink snapper)	3	12	4.00
Uku (gray snapper)	29	78	2.67
Reef fishes (unknown)	6,246	18,738	3.00
Mafute (emperor)	4	12	3.00
Parrotfishes	1,710	5,558	3.25
Snappers	5	14	3.00
Surgeonfishes	74	222	3.00
Unicornfishes	905	2,714	3.00
Sweetlips	24	60	2.50
Barracudas	117	234	2.00
Mahimahi	5,563	12,323	2.22
Sailfish	129	183	1.42
Rainbow runner	325	726	2.24
Wahoo	2,606	5,971	2.29
Skipjack tuna	413	826	2.00
Dogtooth tuna	78	121	1.55
Yellowfin tuna	278	590	2.12
TOTAL	18,708	49,027	2.62

Table C-4
Guam March 2009 Estimated Commercial Landings

Species	Pounds	Value (\$)	Price/Lb (\$)
Black jack	58	150	2.56
Jacks	28	71	2.50
Napoleon wrasse	35	106	3.00
Bottomfishes (unknown)	8	31	4.00
Deep bottomfishes	28	43	1.50
Ehu (red snapper)	3	12	4.00
Groupers	40	120	3.00
Kalikali (pink snapper)	55	194	3.50
Lehi (silverjaw)	450	1,595	3.55
Onaga (red snapper)	18	92	5.00
Opakapaka (pink snapper)	147	588	4.00
Uku (gray snapper)	42	111	2.67
Amberjack	23	66	2.87
Reef fishes (unknown)	4,988	14,965	3.00
Mafute (emperor)	324	972	3.00
Squirrelfishes	62	187	3.00
Parrotfishes	2,306	7,495	3.25
Snappers	8	19	2.50
Surgeonfishes	192	538	2.81
Unicornfishes	1,295	3,855	2.98
Sweetlips	21	62	3.00
Barracudas	185	369	2.00
Mahimahi	7,709	17,188	2.23
Marlins	1,413	1,469	1.04
Sailfish	165	248	1.50
Rainbow runner	61	122	2.00
Wahoo	3,048	6,886	2.26
Skipjack tuna	947	1,894	2.00
Dogtooth tuna	134	201	1.50
Yellowfin tuna	1,285	2,895	2.25
Lobsters	3	12	3.75
Octopus	77	231	3.00
TOTAL	25,161	62,786	2.50

Table C-5
Guam April 2009 Estimated Commercial Landings

Species	Pounds	Value (\$)	Price/Lb (\$)
Miscellaneous	312	1,769	5.68
Jacks	216	1,225	5.67
Napoleon wrasse	166	476	2.87
Ehu (red snapper)	57	199	3.50
Gindai (flower snapper)	6	25	4.00
Groupers	368	1,173	3.19
Lehi (silverjaw)	145	545	3.75
Onaga (red snapper)	77	385	5.00
Amberjack	66	165	2.50
Reef fishes (unknown)	2,828	8,485	3.00
Rudderfish (guilli)	18	55	3.00
Mafute (emperor)	184	546	2.97
Squirrelfishes	282	883	3.13
Parrotfishes	2,951	9,590	3.25
Snappers	4	12	3.00
Surgeonfishes	343	962	2.80
Unicornfishes	1,181	3,519	2.98
Barracudas	157	314	2.00
Mahimahi	6,534	14,732	2.25
Marlins	467	864	1.85
Spearfish	25	37	1.50
Sailfish	95	143	1.50
Rainbow runner	45	95	2.13
Wahoo	1,544	3,493	2.26
Skipjack tuna	748	1,497	2.00
Dogtooth tuna	112	175	1.57
Yellowfin tuna	1,001	2,303	2.30
Lobsters	25	92	3.75
Octopus	25	74	3.00
TOTAL	19,981	53,833	2.69

Table C-6
Guam May 2009 Estimated Commercial Landings

Species	Pounds	Value (\$)	Price/Lb (\$)
Black jack	33	83	2.50
Jacks	232	583	2.52
Napoleon wrasse	276	771	2.79
Ehu (red snapper)	46	184	4.00
Gindai (flower snapper)	26	105	4.00
Groupers	511	1,410	2.76
Kalikali (pink snapper)	219	767	3.50
Lehi (silverjaw)	8	31	4.00
Onaga (red snapper)	626	3,131	5.00
Opakapaka (pink snapper)	212	846	4.00
Uku (gray snapper)	74	200	2.70
Amberjack	5	16	3.00
Reef fishes (unknown)	4,177	12,617	3.02
Mafute (emperor)	115	346	3.00
Squirrelfishes	80	200	2.50
Parrotfishes	4,957	16,110	3.25
Snappers	18	46	2.50
Surgeonfishes	246	639	2.60
Unicornfishes	3,288	9,846	2.99
Barracudas	47	94	2.00
Mahimahi	1,253	2,677	2.14
Marlins	1,323	2,384	1.80
Sailfish	52	97	1.85
Rainbow runner	34	68	2.00
Wahoo	1,012	2,268	2.24
Skipjack tuna	2,192	4,370	1.99
Dogtooth tuna	91	136	1.50
Yellowfin tuna	864	1,874	2.17
Lobsters	161	603	3.75
Octopus	197	591	3.00
TOTAL	22,374	63,094	2.82

Table C-7
Guam June 2009 Estimated Commercial Landings

Species	Pounds	Value (\$)	Price/Lb (\$)
Jacks	51	134	2.62
Napoleon wrasse	795	2,277	2.87
Humphead parrotfish	83	187	2.25
Ehu (red snapper)	122	464	3.80
Gindai (flower snapper)	168	671	4.00
Groupers	260	731	2.81
Kalikali (pink snapper)	589	1,929	3.27
Lehi (silverjaw)	43	162	3.73
Onaga (red snapper)	171	809	4.74
Opakapaka (pink snapper)	202	793	3.92
Uku (gray snapper)	36	96	2.65
Reef fishes (unknown)	4,518	13,582	3.01
Rabbitfishes	20	140	7.00
Rudderfish (guilli)	18	55	3.00
Mafute (emperor)	61	182	3.00
Parrotfishes	5,633	18,308	3.25
Snappers	15	38	2.50
Surgeonfishes	875	2,325	2.66
Unicornfishes	2,588	7,330	2.83
Sweetlips	40	100	2.50
Barracudas	81	162	2.00
Mahimahi	443	834	1.88
Marlins	3,064	4,457	1.45
Rainbow runner	59	133	2.25
Monchong	8	19	2.50
Wahoo	312	688	2.21
Skipjack tuna	2,599	5,198	2.00
Dogtooth tuna	126	170	1.35
Yellowfin tuna	658	1,422	2.16
Lobsters	122	459	3.75
Octopus	506	1,543	3.05
TOTAL	24,268	65,399	2.69

Table C-8
Guam July 2009 Estimated Commercial Landings

Species	Pounds	Value (\$)	Price/Lb (\$)
Bigeye scad (atulai)	173	519	3.00
Jacks	225	603	2.67
Napoleon wrasse	656	1,804	2.75
Bottomfishes (unknown)	42	125	3.00
Ehu (red snapper)	98	355	3.61
Gindai (flower snapper)	174	695	4.00
Groupers	252	737	2.92
Kalikali (pink snapper)	796	2,437	3.06
Lehi (silverjaw)	45	168	3.77
Onaga (red snapper)	574	2,869	5.00
Opakapaka (pink snapper)	170	669	3.94
Uku (gray snapper)	125	343	2.75
Reef fishes (unknown)	3,627	10,877	3.00
Rabbitfishes	31	92	3.00
Mafute (emperor)	274	807	2.95
Parrotfishes	4,671	15,175	3.25
Snappers	45	129	2.84
Surgeonfishes	1,038	2,663	2.56
Unicornfishes	2,165	6,356	2.94
Barracudas	12	25	2.00
Mahimahi	32	73	2.25
Marlins	2,385	3,098	1.30
Rainbow runner	78	175	2.25
Wahoo	104	234	2.25
Skipjack tuna	4,690	9,212	1.96
Dogtooth tuna	22	27	1.25
Yellowfin tuna	431	880	2.04
Lobsters	218	762	3.49
Octopus	858	2,574	3.00
TOTAL	24,010	64,481	2.69

Table C-9
Guam August 2009 Estimated Commercial Landings

Species	Pounds	Value (\$)	Price/Lb (\$)
Miscellaneous	38	115	3.00
Bigeye scad (atulai)	1,448	3,573	2.47
Jacks	250	628	2.51
Napoleon wrasse	423	1,202	2.84
Bottomfishes (unknown)	9	37	4.00
Ehu (red snapper)	72	288	4.00
Gindai (flower snapper)	54	216	4.00
Groupers	18	57	3.09
Kalikali (pink snapper)	262	790	3.01
Lehi (silverjaw)	152	597	3.92
Onaga (red snapper)	585	2,927	5.00
Opakapaka (pink snapper)	341	1,363	4.00
Uku (gray snapper)	18	51	2.89
Amberjack	7	21	3.00
Reef fishes (unknown)	3,232	9,783	3.03
Rabbitfishes	57	142	2.50
Mafute (emperor)	228	683	3.00
Parrotfishes	3,759	12,218	3.25
Snappers	56	183	3.24
Surgeonfishes	734	1,937	2.64
Unicornfishes	2,750	8,138	2.96
Barracudas	145	326	2.24
Mahimahi	136	315	2.31
Marlins	5,238	5,906	1.13
Sailfish	74	111	1.50
Rainbow runner	10	23	2.25
Monchong	52	118	2.25
Wahoo	419	945	2.25
Skipjack tuna	7,201	14,089	1.96
Dogtooth tuna	93	186	2.00
Yellowfin tuna	1,744	3,671	2.11
Lobsters	83	309	3.73
Octopus	395	1,198	3.04
TOTAL	30,086	72,144	2.40

Table C-10
Guam September 2009 Estimated Commercial Landings

Species	Pounds	Value (\$)	Price/Lb (\$)
Bigeye scad (atulai)	1,179	3,388	2.87
Jacks	101	302	3.00
Napoleon wrasse	77	212	2.75
Ehu (red snapper)	69	275	4.00
Gindai (flower snapper)	84	337	4.00
Groupers	235	537	2.29
Kalikali (pink snapper)	188	638	3.39
Lehi (silverjaw)	3	12	4.00
Onaga (red snapper)	146	729	5.00
Opakapaka (pink snapper)	131	522	4.00
Uku (gray snapper)	14	42	3.00
Amberjack	32	92	2.91
Reef fishes (unknown)	2,603	7,810	3.00
Mafute (emperor)	97	291	3.00
Parrotfishes	3,595	11,707	3.26
Snappers	208	624	3.00
Surgeonfishes	784	2,139	2.73
Unicornfishes	2,221	6,416	2.89
Sweetlips	25	57	2.25
Barracudas	125	281	2.24
Mahimahi	452	947	2.09
Marlins	540	937	1.74
Rainbow runner	46	104	2.25
Monchong	56	140	2.50
Wahoo	548	1,224	2.24
Skipjack tuna	3,630	6,955	1.92
Dogtooth tuna	174	174	1.00
Yellowfin tuna	1,431	3,186	2.23
Lobsters	94	353	3.75
Octopus	42	127	3.00
TOTAL	18,930	50,558	2.67

Table C-11
Guam October 2009 Estimated Commercial Landings

Species	Pounds	Value (\$)	Price/Lb (\$)
Bigeye scad (atulai)	777	2,043	2.63
Jacks	34	87	2.57
Napoleon wrasse	218	601	2.75
Ehu (red snapper)	35	138	4.00
Gindai (flower snapper)	20	80	4.00
Groupers	235	741	3.16
Kalikali (pink snapper)	17	51	3.00
Onaga (red snapper)	228	1,138	5.00
Opakapaka (pink snapper)	38	151	4.00
Reef fishes (unknown)	2,855	8,539	2.99
Mafute (emperor)	36	106	2.93
Parrotfishes	4,014	13,045	3.25
Snappers	2	6	2.50
Surgeonfishes	531	1,487	2.80
Unicornfishes	1,238	3,666	2.96
Barracudas	206	461	2.24
Mahimahi	496	1,094	2.21
Marlins	65	113	1.75
Spearfish	124	186	1.50
Sailfish	25	38	1.50
Rainbow runner	34	76	2.25
Monchong	77	197	2.56
Wahoo	3,265	7,329	2.25
Skipjack tuna	2,238	4,411	1.97
Dogtooth tuna	73	146	2.00
Yellowfin tuna	912	2,005	2.20
Lobsters	97	365	3.75
Octopus	223	669	3.00
TOTAL	18,111	48,969	2.70

Table C-12
Guam November 2009 Estimated Commercial Landings

Species	Pounds	Value (\$)	Price/Lb (\$)
Miscellaneous	115	344	3.00
Bigeye scad (atulai)	384	1,090	2.84
Jacks	125	312	2.50
Napoleon wrasse	35	95	2.75
Bottomfishes (unknown)	91	272	3.00
Groupers	144	437	3.04
Onaga (red snapper)	181	904	5.00
Opakapaka (pink snapper)	2	9	4.00
Tagafi (red snapper)	21	42	2.00
Reef fishes (unknown)	3,408	10,250	3.01
Mafute (emperor)	25	69	2.73
Parrotfishes	2,794	9,080	3.25
Surgeonfishes	333	862	2.59
Unicornfishes	476	1,428	3.00
Barracudas	260	556	2.14
Mahimahi	1,419	3,076	2.17
Sailfish	33	50	1.50
Rainbow runner	158	355	2.24
Monchong	58	146	2.50
Wahoo	9,553	21,205	2.22
Skipjack tuna	1,637	3,253	1.99
Dogtooth tuna	31	62	2.00
Yellowfin tuna	672	1,461	2.17
Lobsters	80	300	3.75
Octopus	22	65	3.00
TOTAL	22,056	55,722	2.53

Table C-13
Guam December 2009 Estimated Commercial Landings

Species	Pounds	Value (\$)	Price/Lb (\$)
Bigeye scad (atulai)	88	221	2.50
Black jack	9	23	2.73
Jacks	46	127	2.75
Napoleon wrasse	338	946	2.80
Gindai (flower snapper)	6	23	4.00
Groupers	17	51	3.00
Kalikali (pink snapper)	2	7	3.00
Lehi (silverjaw)	65	262	4.00
Opakapaka (pink snapper)	106	425	4.00
Amberjack	44	112	2.54
Reef fishes (unknown)	5,598	16,858	3.01
Mafute (emperor)	45	136	3.00
Parrotfishes	6,016	19,521	3.24
Surgeonfishes	135	406	3.00
Unicornfishes	641	1,922	3.00
Barracudas	193	415	2.15
Mahimahi	2,903	6,464	2.23
Marlins	278	418	1.50
Spearfish	31	54	1.75
Sailfish	154	231	1.50
Rainbow runner	291	796	2.74
Wahoo	6,838	15,347	2.24
Skipjack tuna	2,012	3,900	1.94
Dogtooth tuna	125	250	2.00
Yellowfin tuna	1,527	3,552	2.33
Lobsters	233	874	3.75
Octopus	63	189	3.00
TOTAL	27,806	73,529	2.64

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

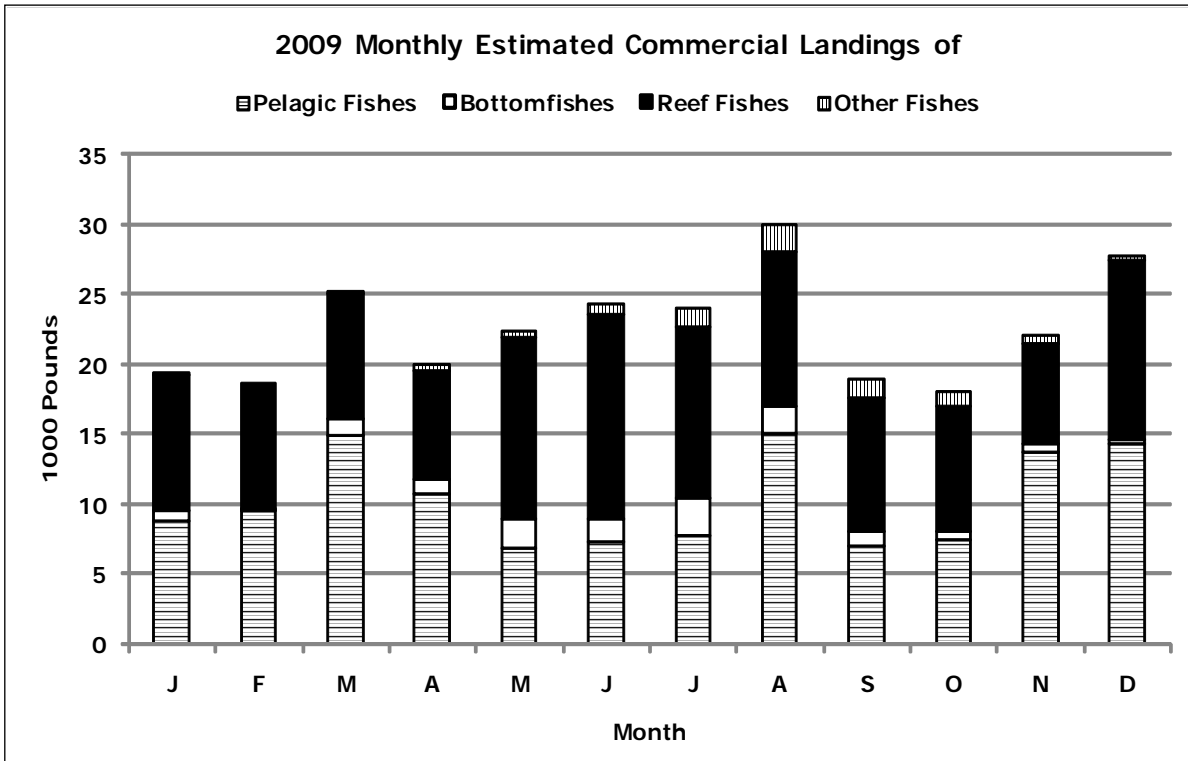


Figure C-1-1

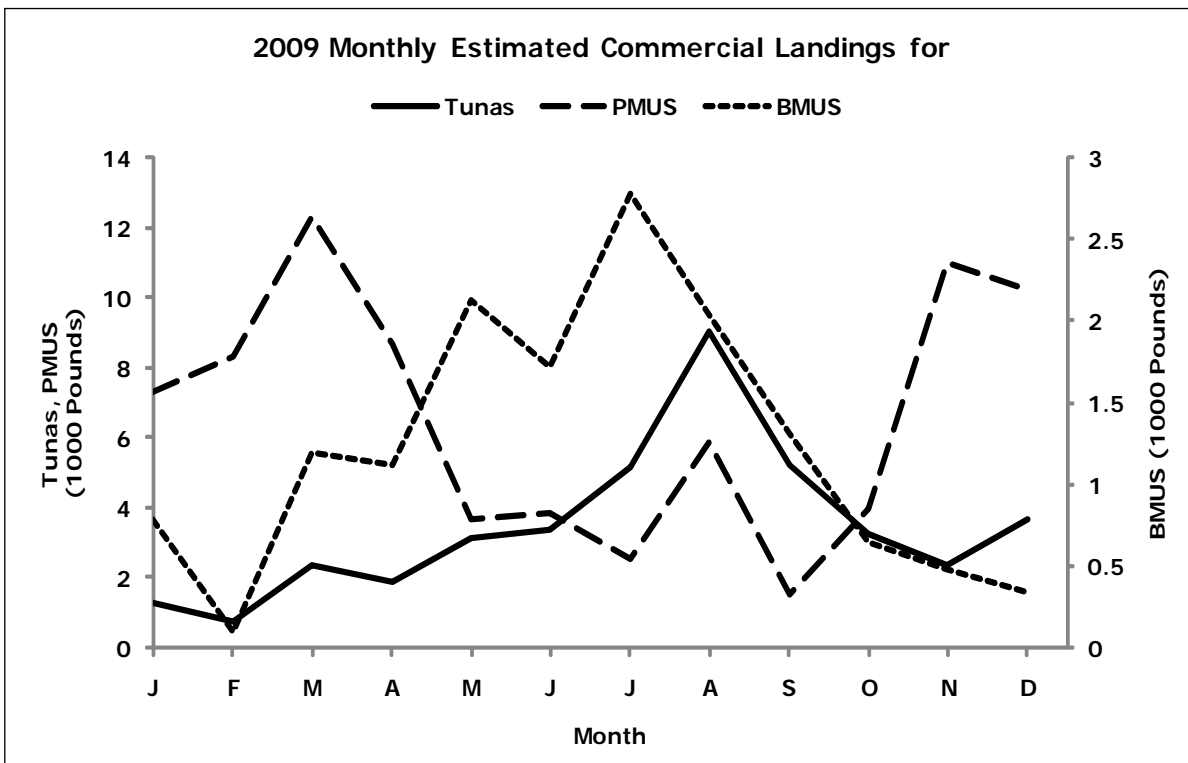


Figure C-1-2

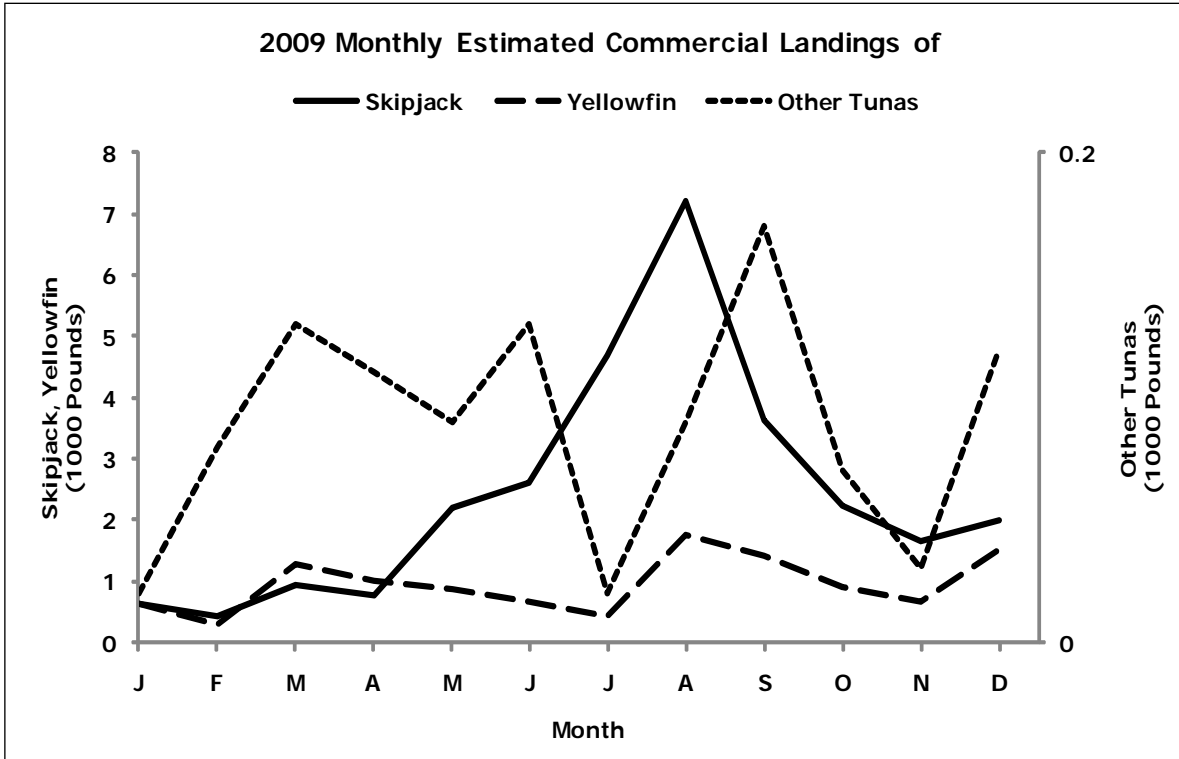


Figure C-1-3

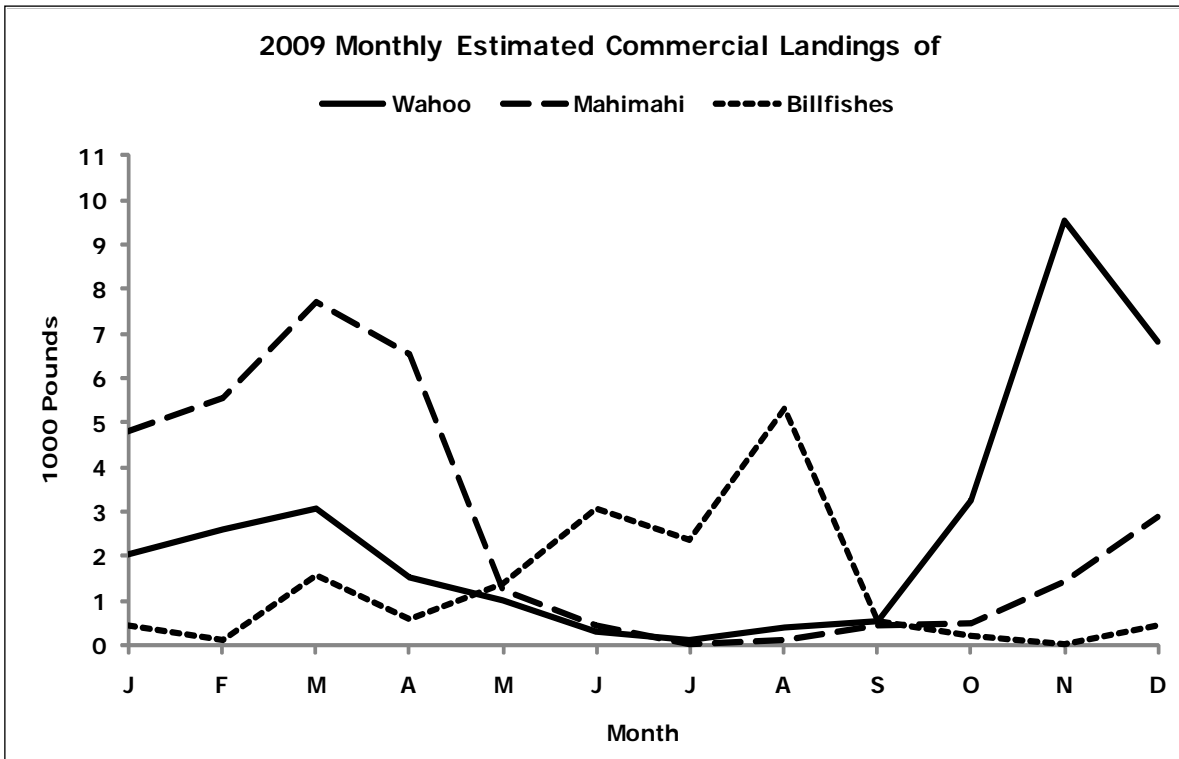


Figure C-1-4

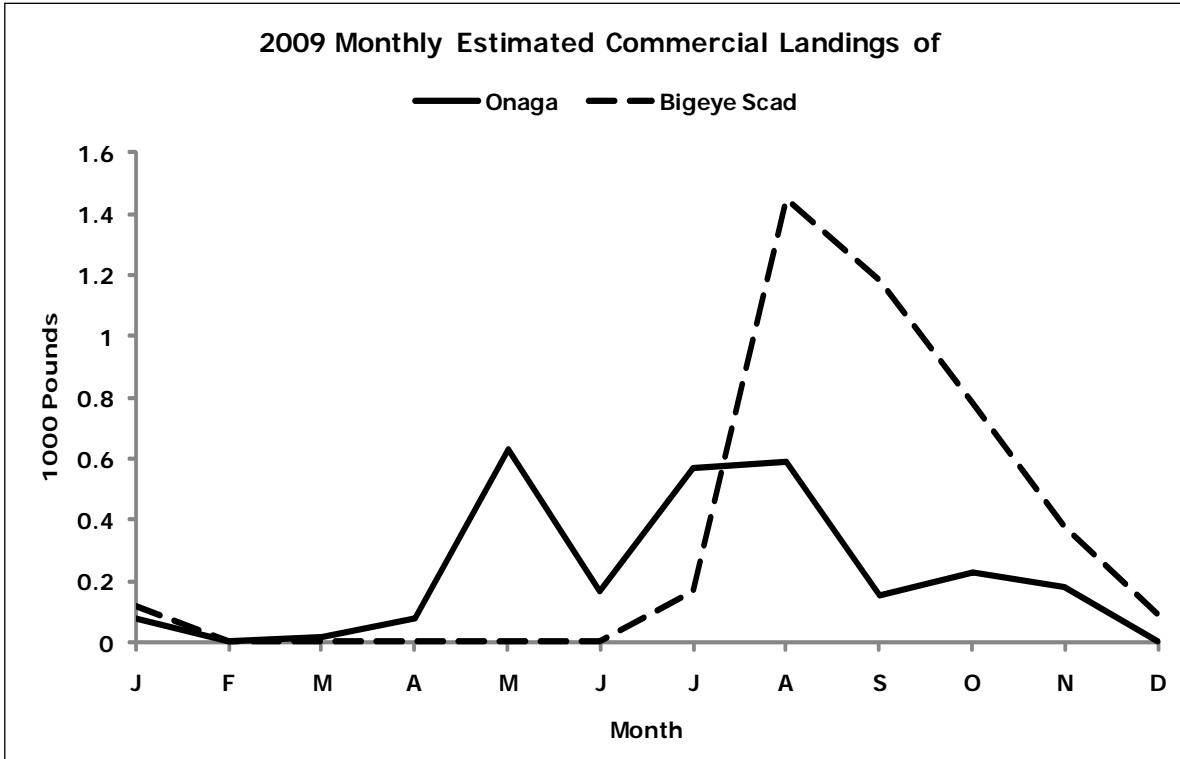


Figure C-1-5

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

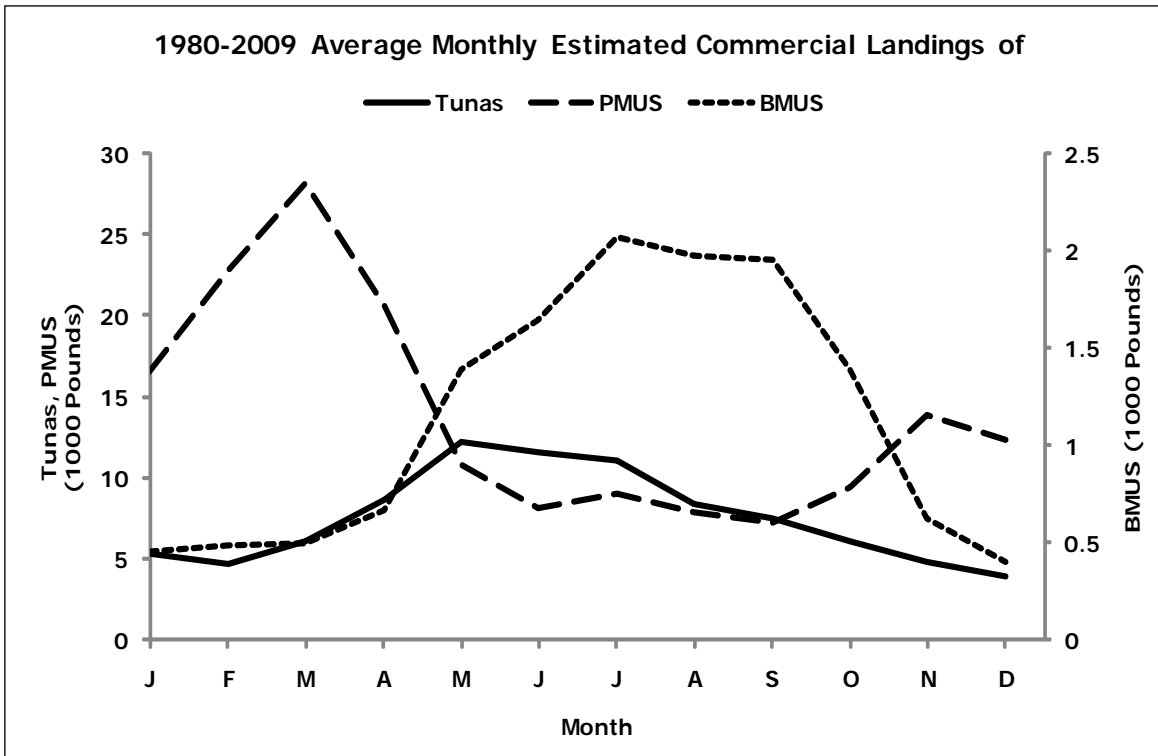


Figure C-2-1

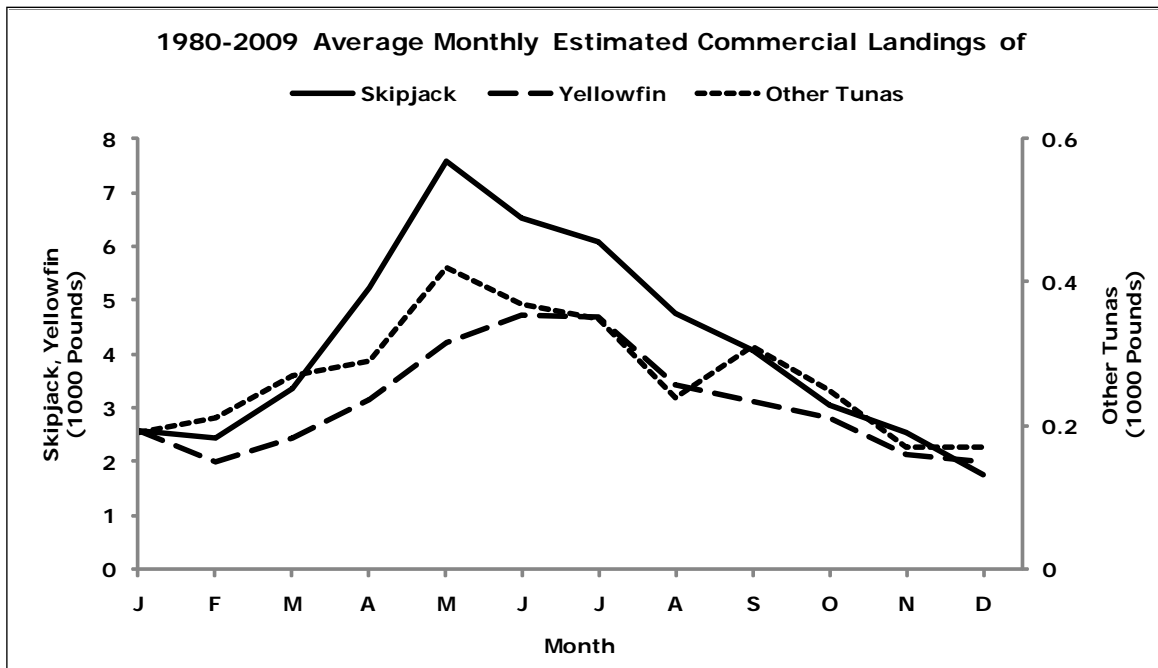


Figure C-2-2

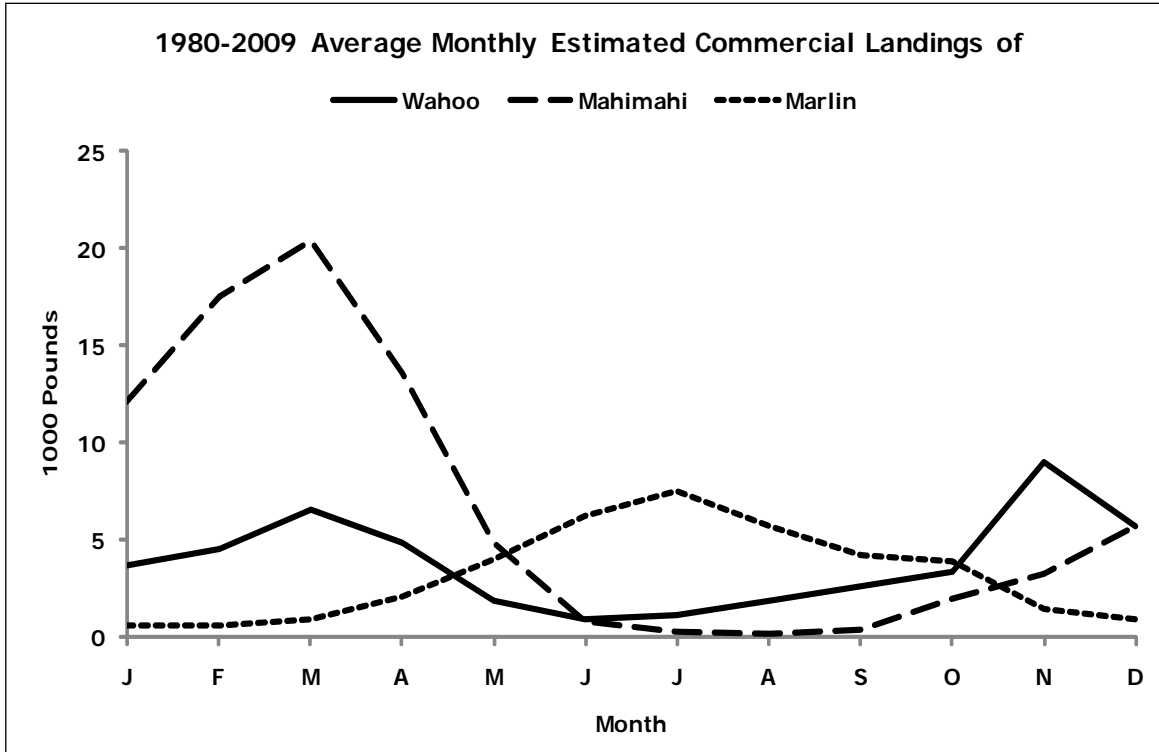


Figure C-2-3

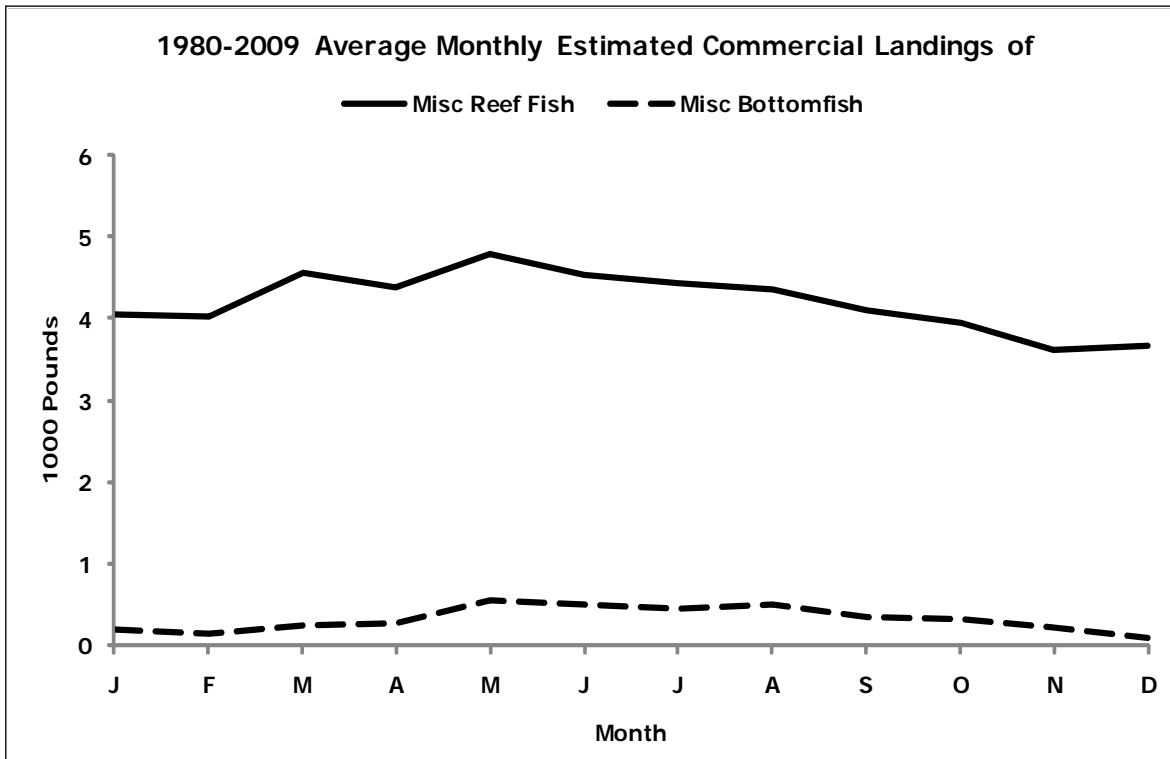


Figure C-2-4

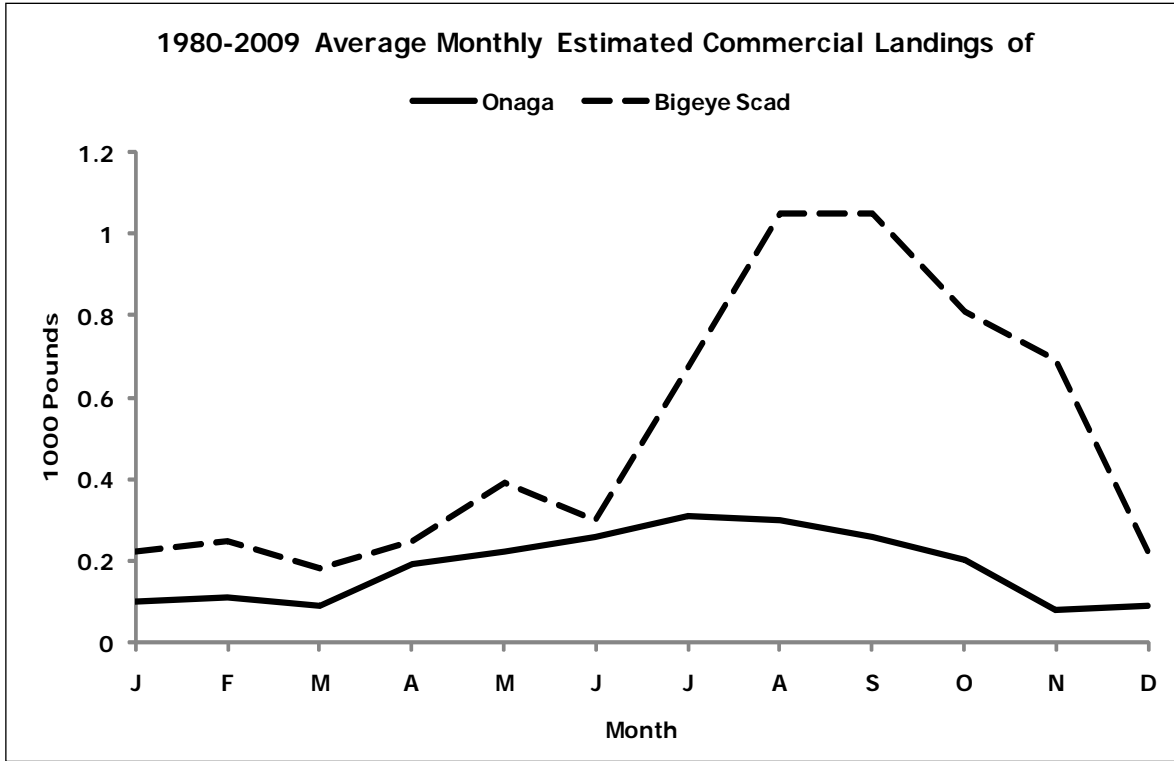


Figure C-2-5

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

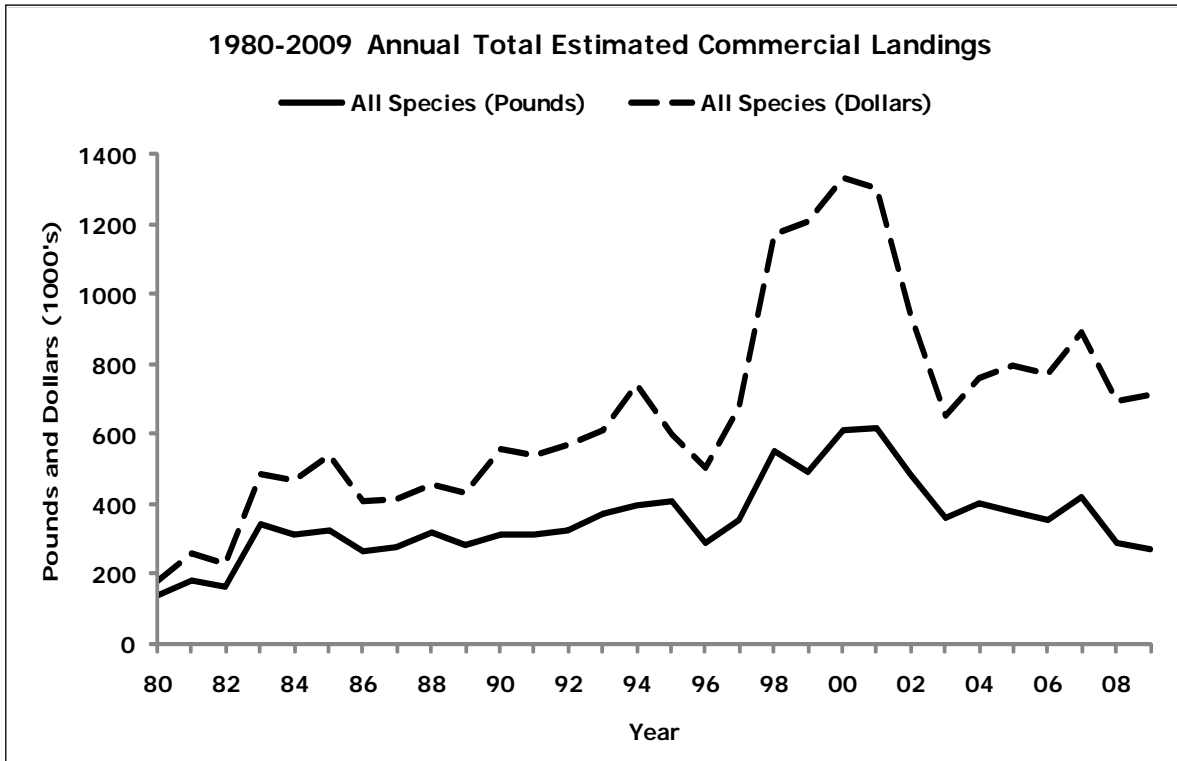


Figure C-3-1

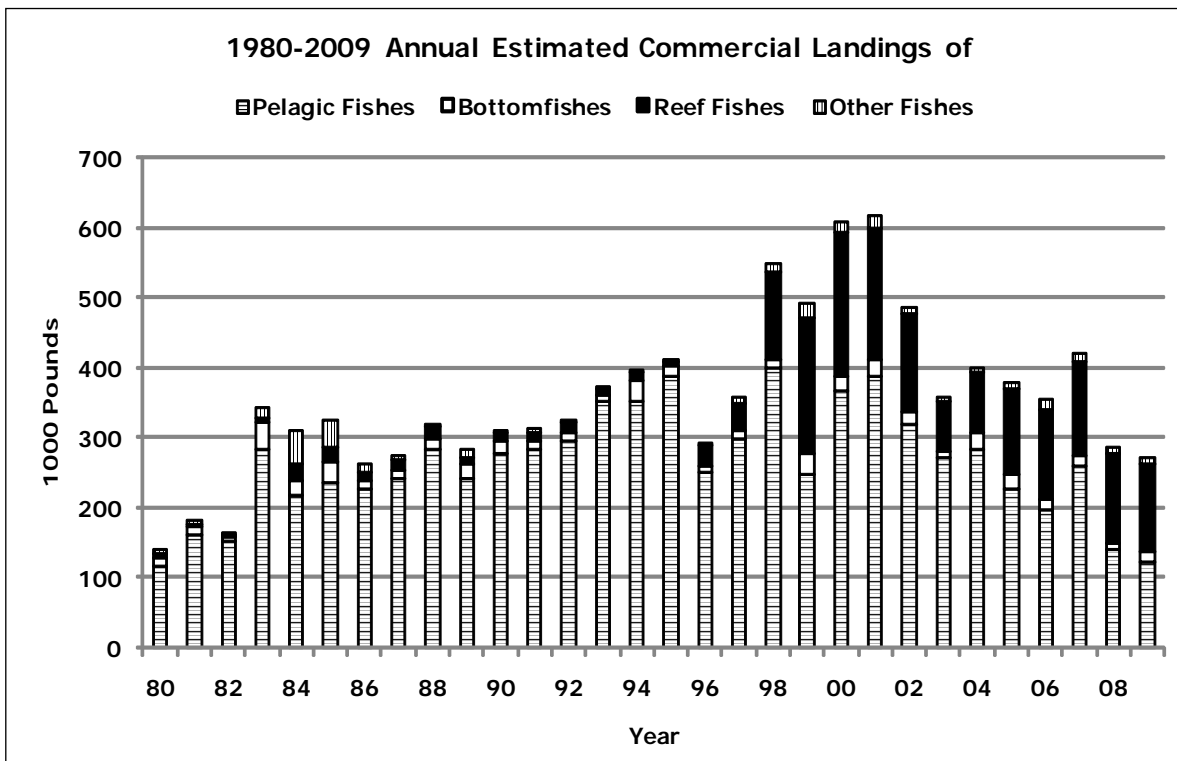


Figure C-3-2

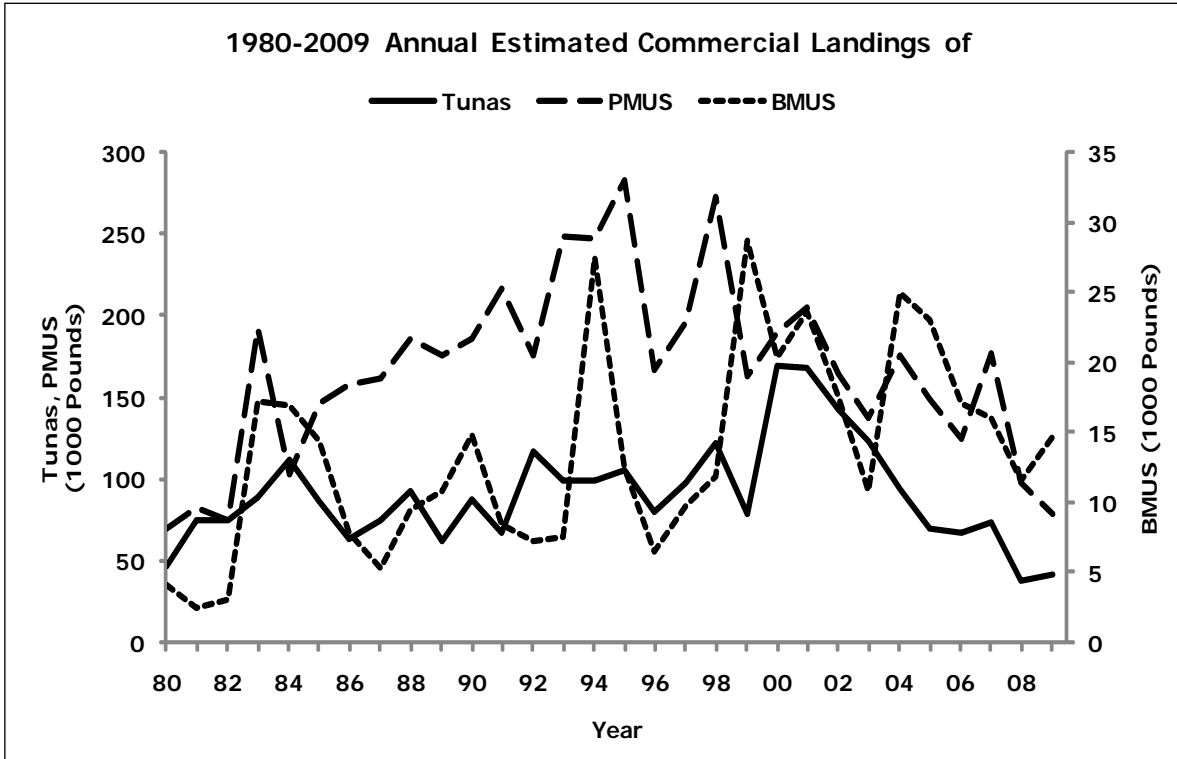


Figure C-3-3

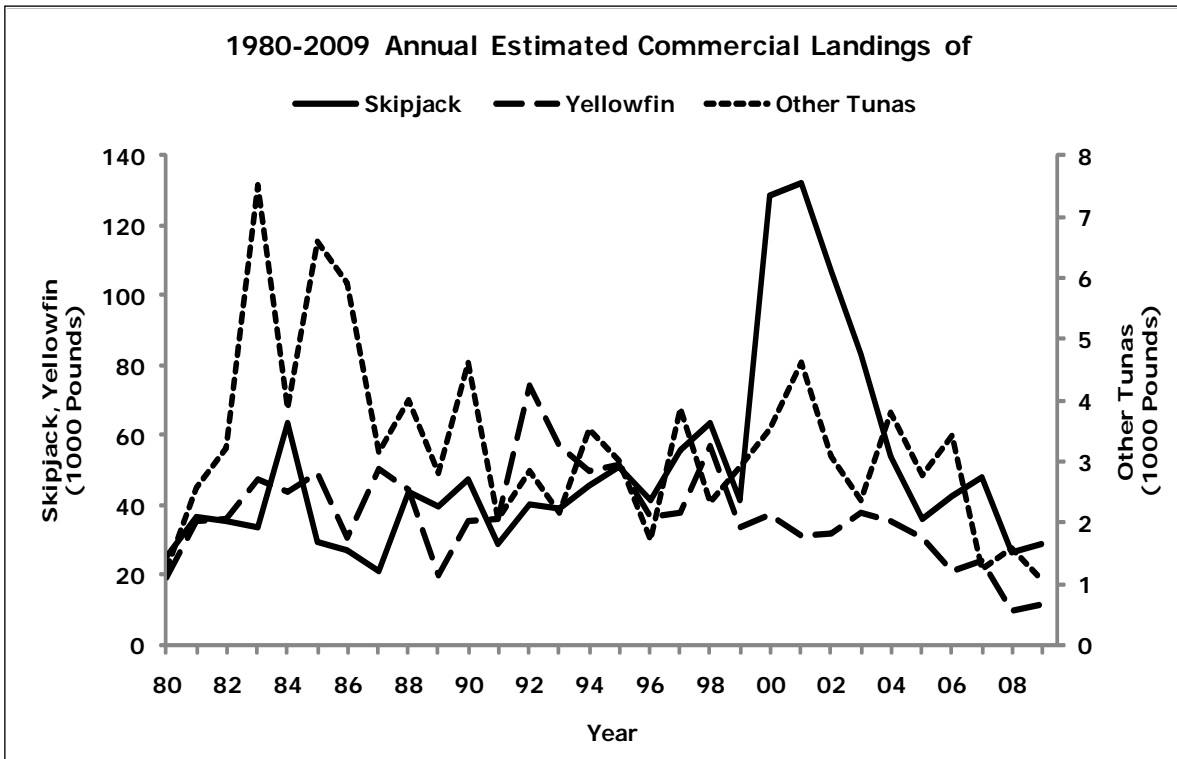


Figure C-3-4

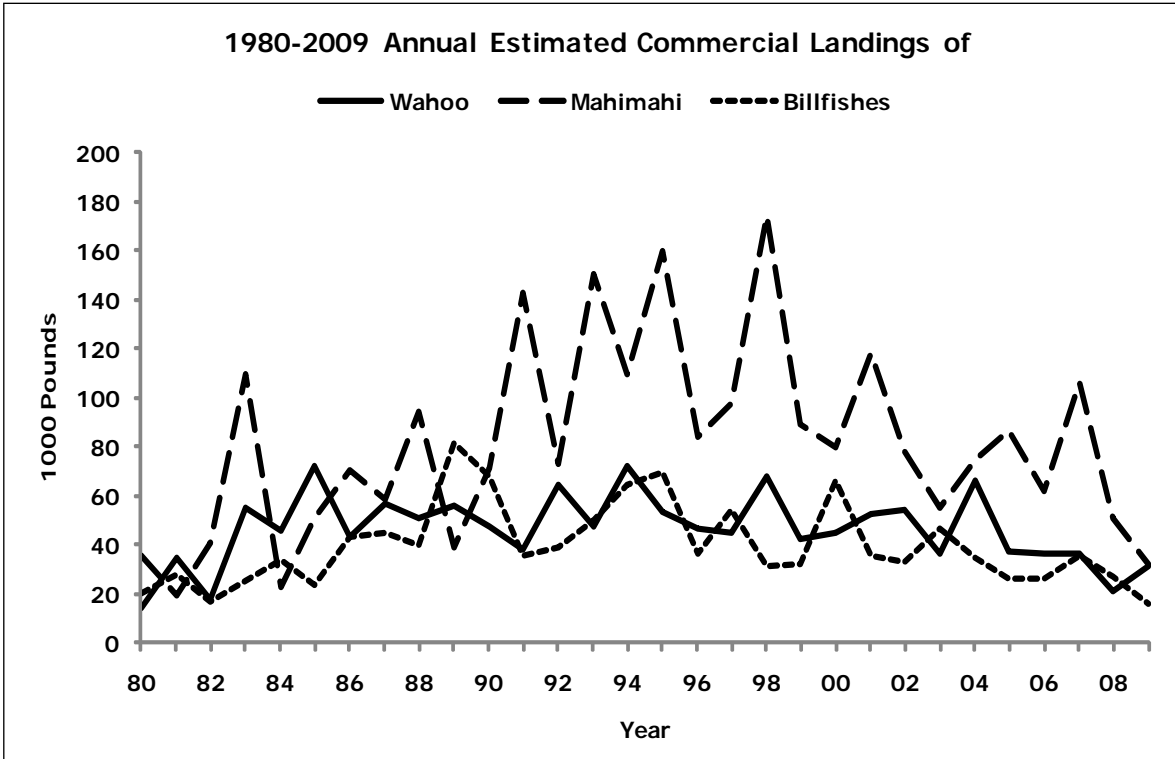


Figure C-3-5

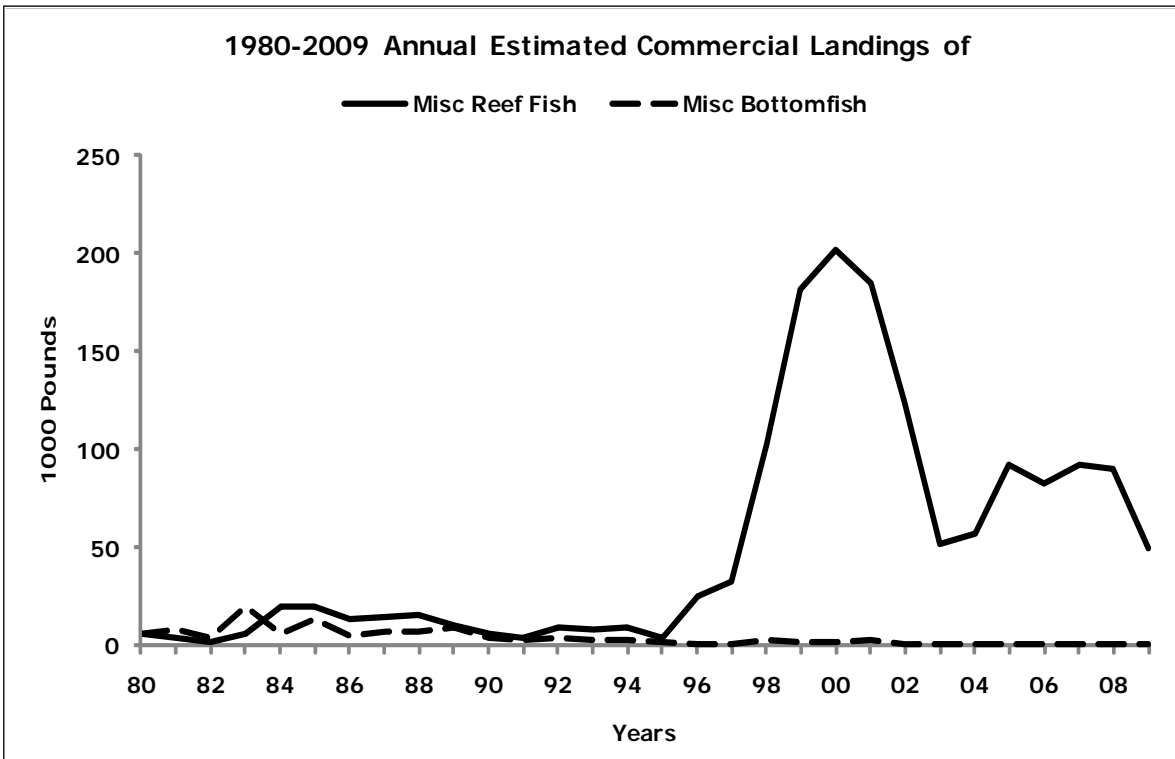


Figure C-3-6

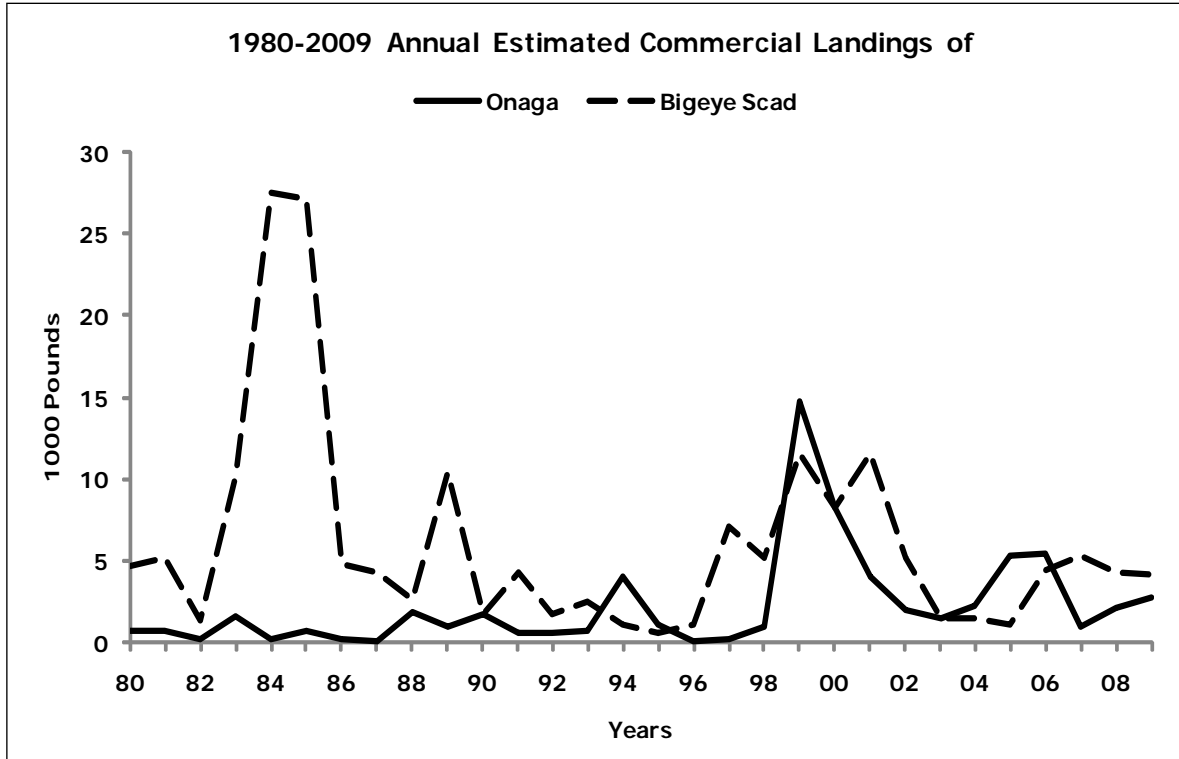


Figure C-3-7

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

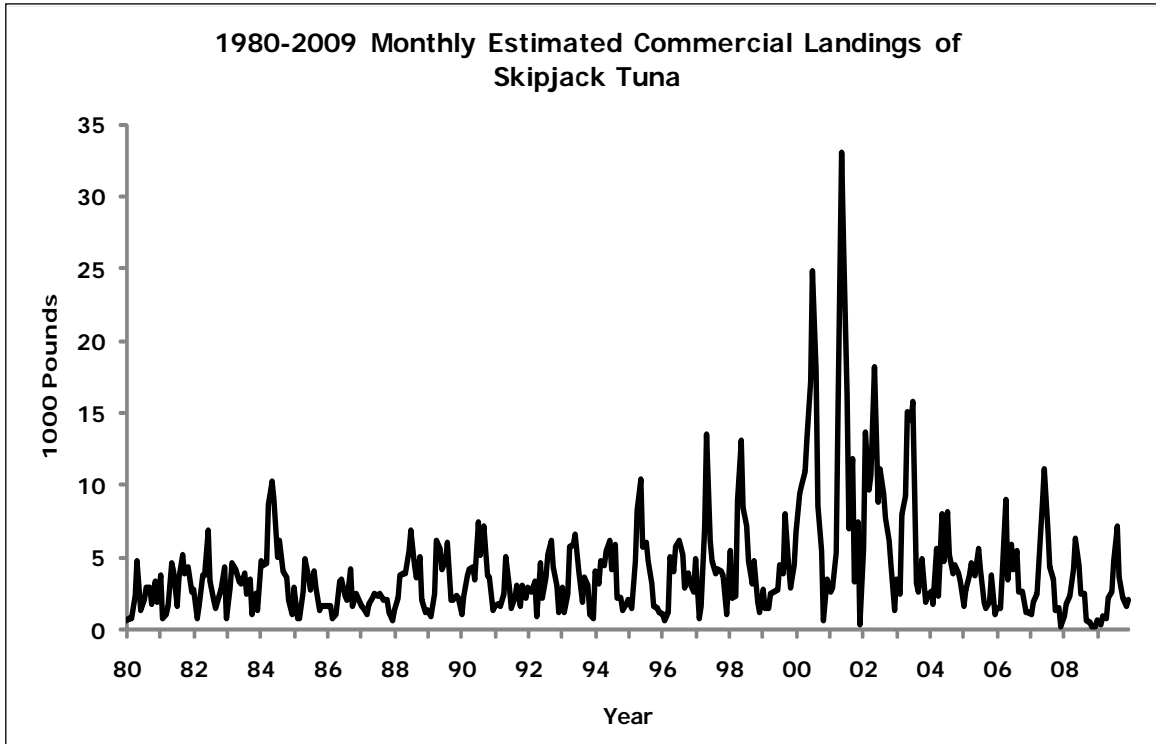


Figure C-4-1

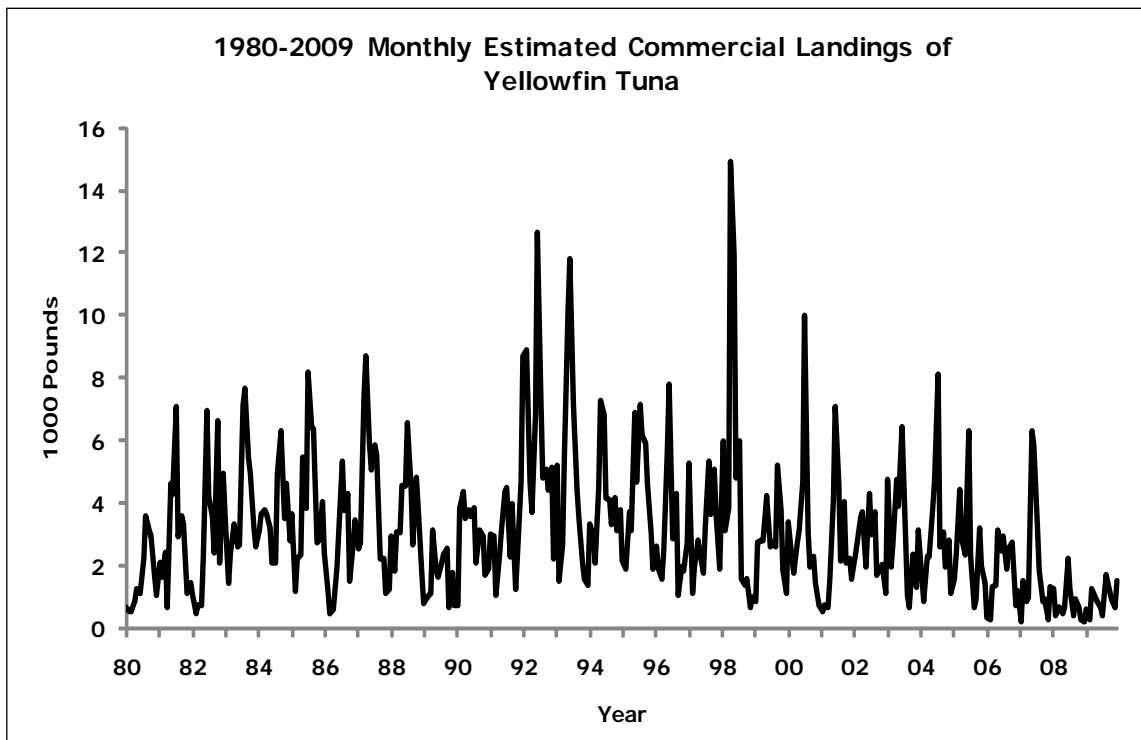


Figure C-4-2

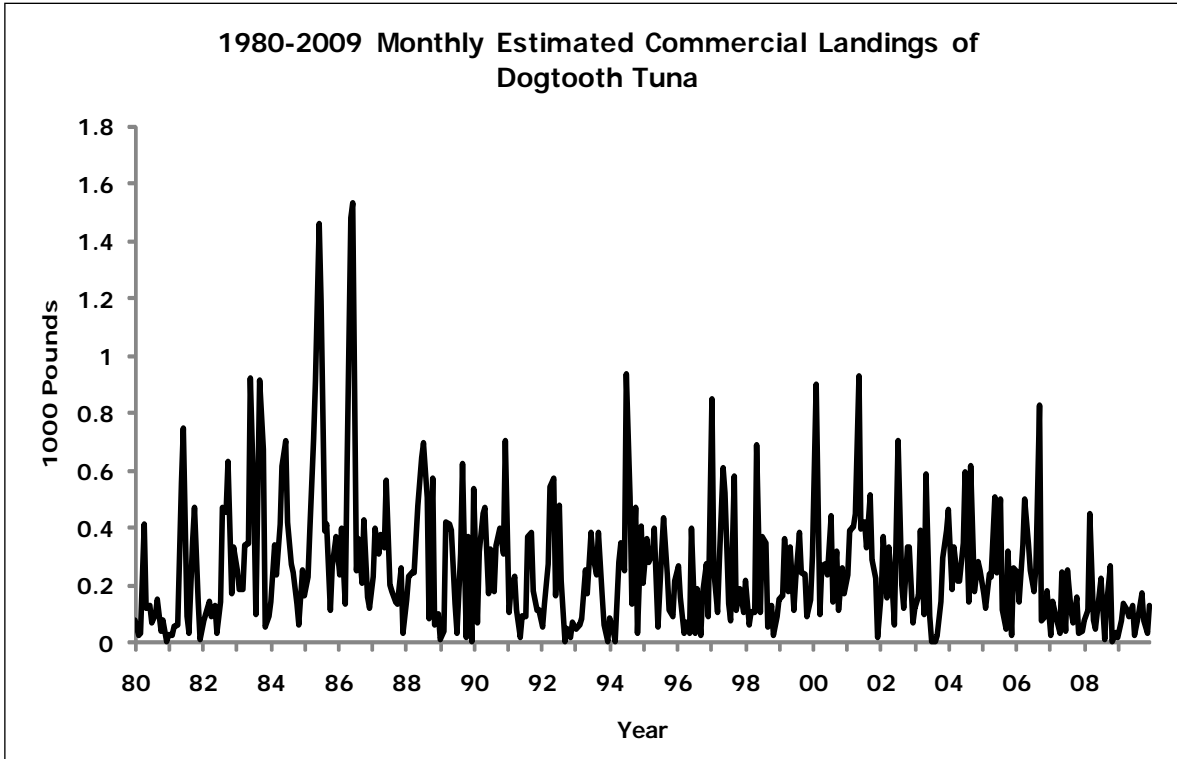


Figure C-4-3

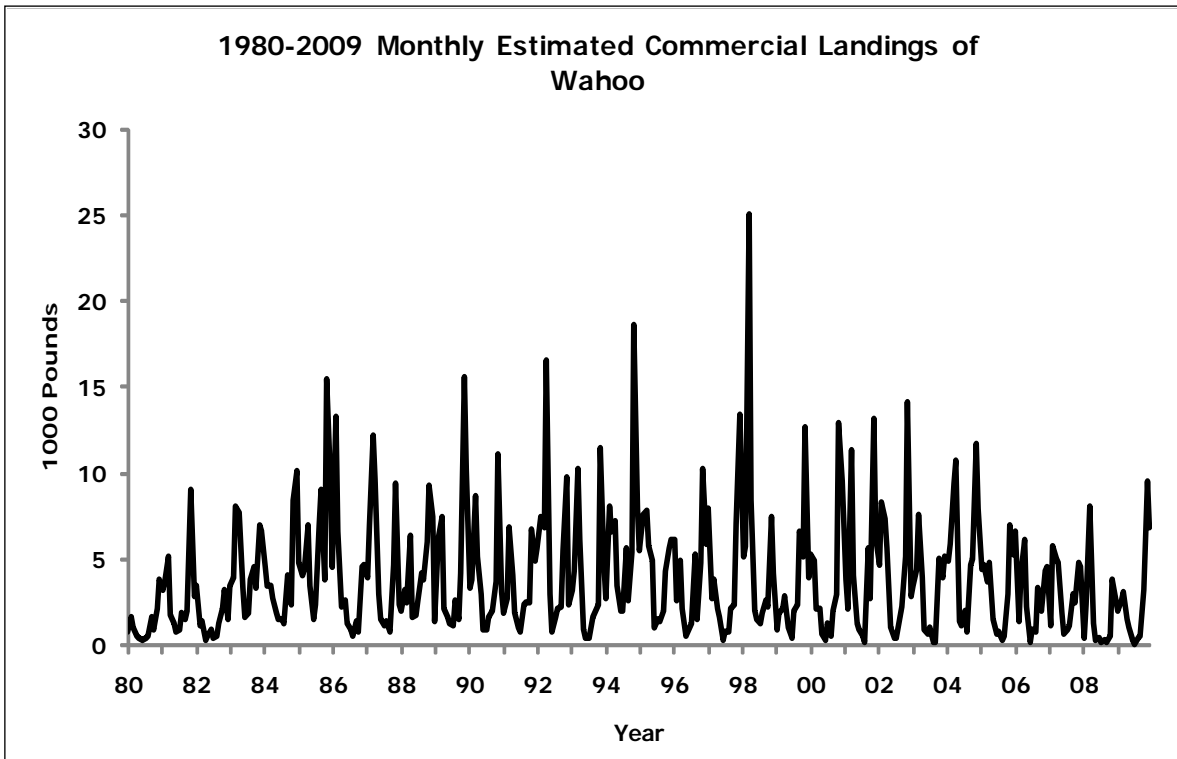


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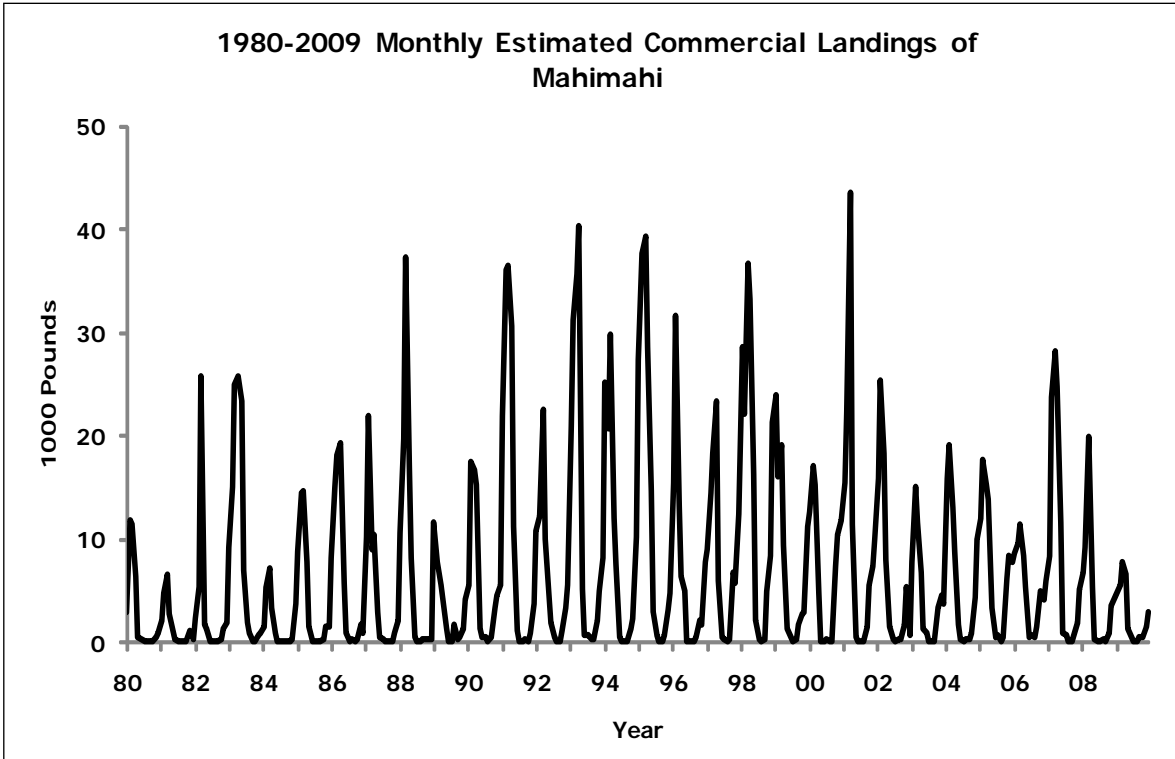


Figure C-4-5

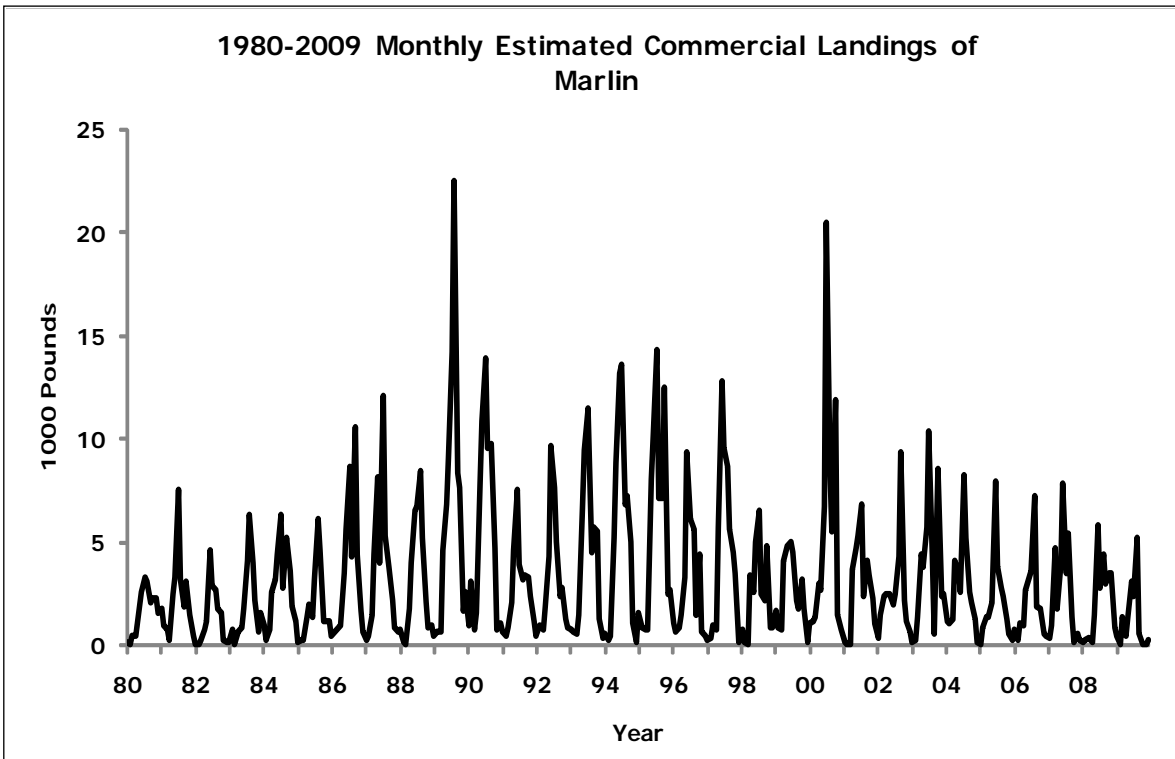


Figure C-4-6

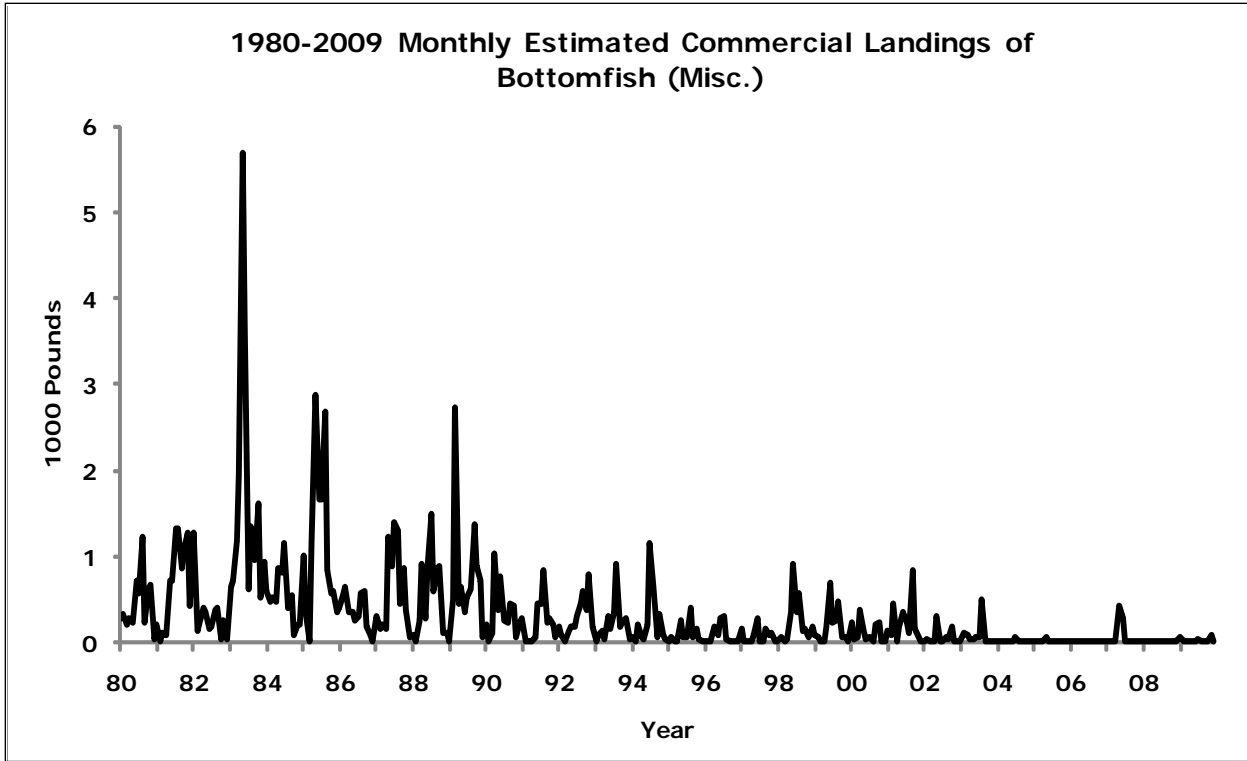


Figure C-4-7

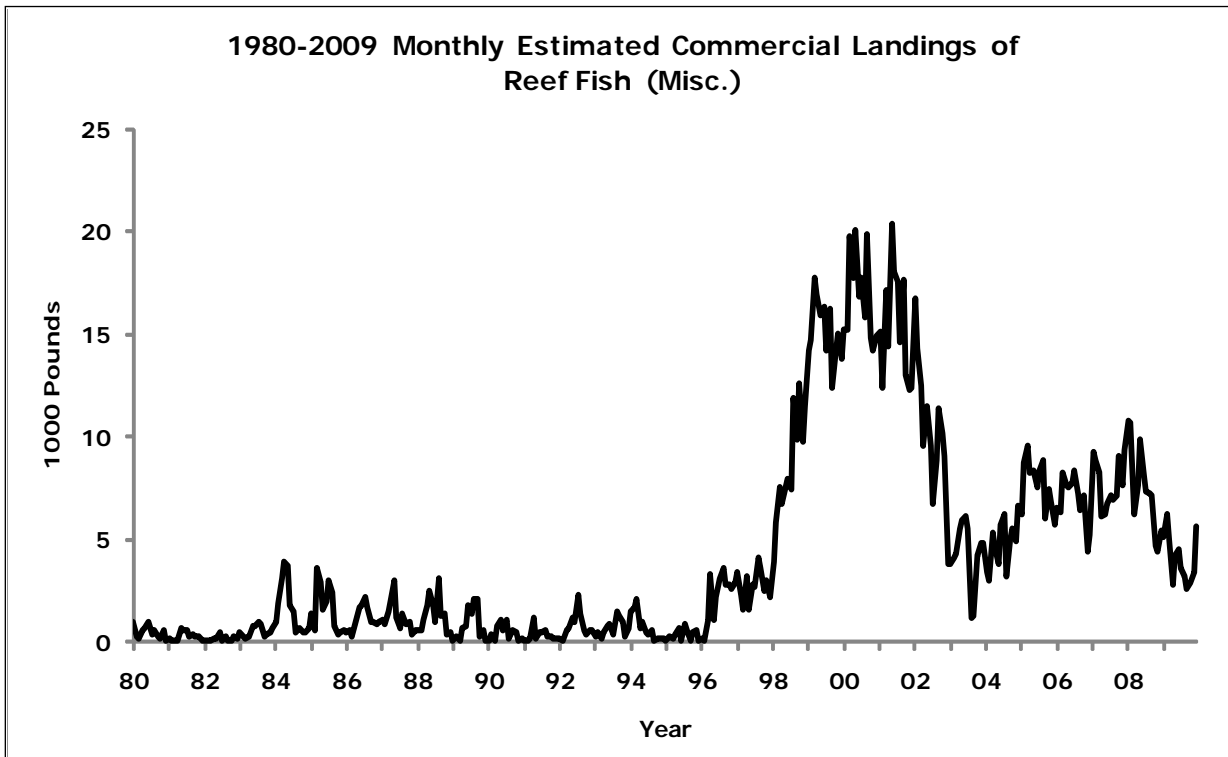


Figure C-4-8

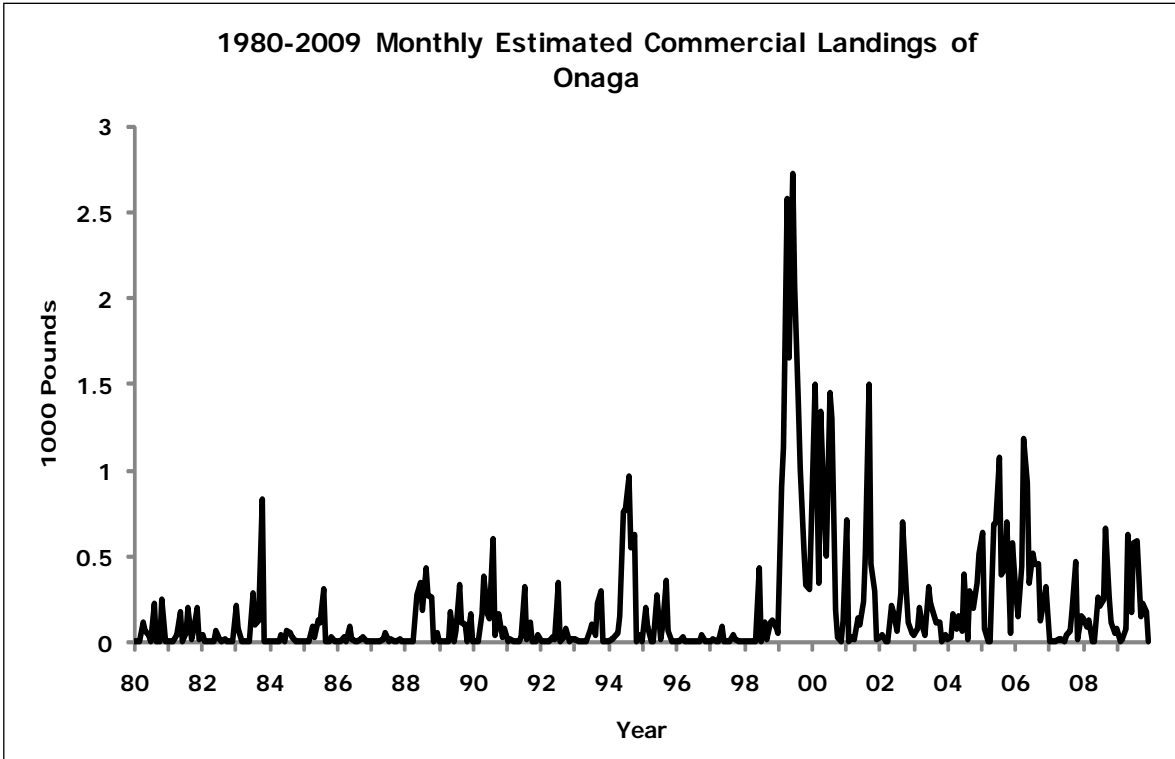


Figure C-4-9

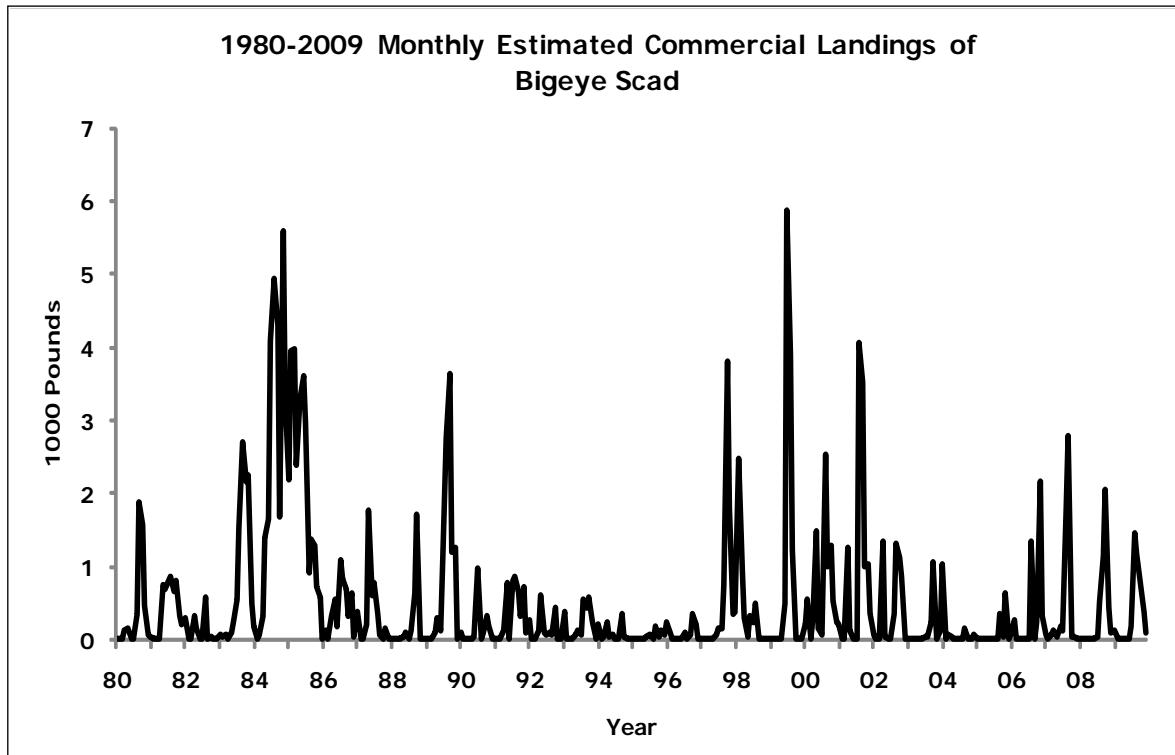


Figure C-4-10

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STATE OF HAWAII 2009 FISHERY STATISTICS

Compiled by
Division of Aquatic Resources
and the
Western Pacific Fishery Information Network

December 2011

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STATE OF HAWAII 2009 FISHERY STATISTICS

INTRODUCTION

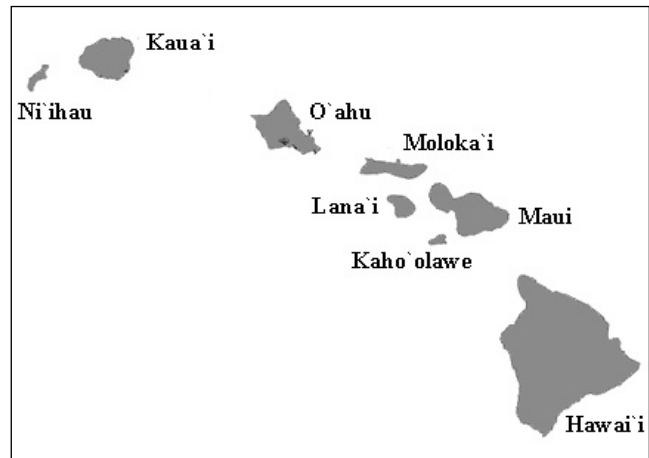
The Hawaiian Archipelago stretches northwestward over 1500 miles.

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: 1,287,500 (*The State of Hawaii Data Book, 2009 Update*)

Commercial Catch Breakdown (lbs):
about 87% on Oahu, 5% on Hawaii (Big Island), 2% on Kona, and 6% unknown or on other islands



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 2009 there were 4299 licensed commercial fishers. The summary catch data for 2009 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 2009 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 comprised of onaga, opakapaka, kalekale, hapuupuu, ehu, gindai, and lehi. The fishing season opened on September 1, 2009 and was closed April 20, 2010. 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

D.3

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. More up-to-date tables and charts are available at the WPacFIN website at <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)	Sharks
Black marlin	Shortnose spearfish
Blue marlin	Striped marlin
Mahimahi	Swordfish
Sailfish	Wahoo

II. Bottomfish Management Unit Species (BMUS)

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

III. Billfishes

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

IV. Tunas

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

V. Other Tunas

Kawakawa	Tunas (unknown)
----------	-----------------

VI. Fisheries Categories

A. *Pelagic Fishes*

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

B. *Bottomfishes*

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

C. *Reef Fishes*

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

D. *Other Fishes*

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

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Table D-1
Hawaii Annual 2009 Reported Commercial Landings

Species	Caught	Sold	Value (\$)	Price/Lb (\$)
Miscellaneous	2,596	2,596	3,649	1.41
Sharks	406,266	296,218	139,230	0.47
Rays	44	44	154	3.50
Eels	1,986	1,588	1,634	1.03
Bigeye scad (akule)	302,390	201,949	647,483	3.21
Mackerel scad	315,556	205,914	557,688	2.71
Leatherjacket	292	214	374	1.75
Ten pounder	1,938	1,645	1,663	1.01
Bonefish	8,646	7,376	8,306	1.13
Herrings/sardines	2,203	1,913	3,343	1.75
Milkfish	1,261	899	1,146	1.27
Flying fishes	8	7	12	1.83
Needlefishes	1,027	253	486	1.93
Threadfin	562	439	3,158	7.19
Mulletts	8,627	7,499	30,709	4.10
Pomfret	634,395	626,619	1,377,919	2.20
Oilfish	545,164	544,590	704,424	1.29
Jacks	1,265	946	2,511	2.65
Kahala (amberjack)	13,711	518	721	1.39
Sasa ulua	814	377	1,005	2.66
Butaguchi (pig-lipped ulua)	6,324	4,841	9,802	2.02
Dobe ulua	5,198	4,081	5,681	1.39
Papa ulua	6,255	4,051	12,724	3.14
White ulua	14,518	8,646	18,698	2.16
Gunkin (black) ulua	705	293	544	1.86
Blue trevally	7,855	4,354	9,680	2.22
Hapuupuu (hawaiian grouper)	24,730	19,786	92,257	4.66
Blue spot grouper	3,245	2,157	6,371	2.95
Kalekale	13,080	8,873	29,598	3.34
Snappers	4,033	3,631	13,684	3.77
Yellow-tail kali	67	39	101	2.62
Taape (blue lined snapper)	40,459	35,718	57,200	1.60
Ehu (red snapper)	32,444	22,134	121,467	5.49
Gindai (flower snapper)	5,347	3,636	14,762	4.06
Golden kalekale	219	14	32	2.30
Lehi (silverjaw)	14,425	12,200	47,597	3.90
Onaga (red snapper)	82,674	65,709	460,478	7.01
Opakapaka (pink snapper)	164,968	132,276	746,645	5.64
Uku (gray snapper)	127,089	107,022	369,224	3.45
Snake mackerel	35	21	21	1.00
Porgy	4,892	3,817	13,565	3.55
Reef fishes (unknown)	2,019	133	117	0.88
Reef jacks	238	231	870	3.77
Squirrelfishes	53,993	50,354	209,155	4.15
Trumpetfish	75	23	29	1.27
Scorpionfishes	3,509	2,125	11,104	5.22

Table D-1 (continued)
Hawaii Annual 2009 Reported Commercial Landings

Species	Caught	Sold	Value (\$)	Price/Lb (\$)
Mountain bass	4,176	3,556	12,828	3.61
Bigeyes	2,887	2,521	8,847	3.51
Goatfishes	54,555	47,282	214,619	4.54
Rudderfish	18,376	17,622	26,524	1.51
Damselfishes	2,453	2,378	7,183	3.02
Hawkfish	1,020	1,011	3,430	3.39
Tilapia	7,573	702	2,243	3.20
Wrasses	7,682	5,398	15,908	2.95
Parrotfishes	52,153	48,179	174,987	3.63
Surgeonfishes/tangs	89,190	83,991	164,033	1.95
Flounders	63	47	78	1.68
Filefishes	1,332	1,291	1,387	1.07
Pufferfishes	21	0	0	0.00
Pelagic fishes (unknown)	449	138	14	0.10
Moonfish (opah)	1,917,619	1,883,325	2,406,271	1.28
Rainbow runner	3,339	2,384	4,459	1.87
Mahimahi	1,465,097	1,281,667	2,836,999	2.21
Barracudas	23,698	20,124	17,362	0.86
Wahoo	750,783	603,071	1,665,855	2.76
Tunas (unknown)	13,330	603	1,296	2.15
Skipjack tuna	1,097,197	710,341	1,011,036	1.42
Yellowfin tuna	2,795,795	2,475,933	6,239,573	2.52
Albacore tuna	733,189	649,683	1,070,337	1.65
Bigeye tuna	10,958,620	10,746,011	39,331,215	3.66
Kawakawa	10,771	5,319	12,032	2.26
Billfishes (unknown)	1,458	75	150	2.00
Swordfish	4,327,661	3,881,216	7,334,547	1.89
Blue marlin	1,168,653	1,032,430	1,192,167	1.15
Black marlin	5,118	691	1,746	2.53
Striped marlin	654,476	643,688	945,872	1.47
Shortnose spearfish	272,421	259,378	272,371	1.05
Sailfish	30,505	22,438	20,508	0.91
Spiny lobsters	14,437	11,533	141,389	12.3
Slipper lobsters	106	0	0	0.00
Crabs	48,342	10,434	46,399	4.45
Shrimp (saltwater)	1,223	235	393	1.68
Octopus	30,455	20,983	81,445	3.88
Squid	3,905	3,137	5,648	1.80
Limpets (saltwater)	22,623	11,629	78,440	6.75
Clams	6	0	0	0.00
Invertebrates	177	121	494	4.09
Algae	11,511	7,288	54,635	7.50
TOTAL	29,471,587	26,895,618	71,141,744	2.65

Table D-2
Hawaii January 2009 Reported Commercial Landings

Species	Caught	Sold	Value (\$)	Price/Lb (\$)
Miscellaneous	78	78	161	2.07
Sharks	34,650	20,725	7,053	0.34
Bigeye scad (akule)	14,156	14,156	40,179	2.84
Mackerel scad	31,173	21,503	58,264	2.71
Leatherjacket	13	13	19	1.46
Ten pounder	3	3	3	1.01
Bonefish	436	436	1,148	2.64
Needlefishes	58	58	114	1.96
Threadfin	13	7	45	6.37
Mulletts	9	9	25	2.68
Pomfret	41,610	41,610	112,033	2.69
Oilfish	50,795	50,222	34,929	0.70
Jacks	28	28	61	2.22
Kahala (amberjack)	1,839	201	224	1.11
Sasa ulua	16	9	22	2.50
Butaguchi (pig-lipped ulua)	948	843	1,556	1.85
Dobe ulua	61	61	121	2.00
Papa ulua	828	253	751	2.97
White ulua	842	303	677	2.24
Blue trevally	325	113	267	2.35
Hapuupuu (hawaiian grouper)	2,043	1,091	5,950	5.45
Blue spot grouper	251	251	508	2.03
Kalekale	1,962	1,263	4,437	3.51
Snappers	86	78	246	3.15
Yellow-tail kali	12	3	8	2.73
Taape (blue lined snapper)	1,690	1,563	2,476	1.58
Ehu (red snapper)	3,050	1,854	10,027	5.41
Gindai (flower snapper)	496	164	739	4.50
Golden kalekale	19	0	0	0.00
Lehi (silverjaw)	4,115	3,491	12,486	3.58
Onaga (red snapper)	13,662	9,190	61,092	6.65
Opakapaka (pink snapper)	28,887	20,895	115,262	5.52
Uku (gray snapper)	8,333	6,576	24,458	3.72
Porgy	225	225	703	3.13
Reef fishes (unknown)	44	0	0	0.00
Squirrelfishes	2,367	2,367	10,606	4.48
Trumpetfish	9	0	0	0.00
Scorpionfishes	262	117	584	5.01
Mountain bass	42	23	86	3.73
Bigeyes	136	136	473	3.47
Goatfishes	2,228	2,228	10,034	4.50
Rudderfish	3,225	3,225	4,238	1.31
Damselfishes	65	65	201	3.11
Hawkfish	41	41	150	3.67
Tilapia	1,283	103	419	4.07
Wrasses	547	377	1,581	4.20

Table D-2 (continued)
Hawaii January 2009 Reported Commercial Landings

Species	Caught	Sold	Value (\$)	Price/Lb (\$)
Parrotfishes	2,671	2,671	9,499	3.56
Surgeonfishes/tangs	6,113	5,835	11,514	1.97
Flounders	10	0	0	0.00
Filefishes	16	16	27	1.72
Pelagic fishes (unknown)	112	112	11	0.10
Moonfish (opah)	72,184	72,184	170,549	2.36
Rainbow runner	270	195	438	2.25
Mahimahi	46,037	38,483	134,958	3.51
Barracudas	984	767	898	1.17
Wahoo	22,129	19,171	81,241	4.24
Tunas (unknown)	199	58	161	2.80
Skipjack tuna	36,220	16,331	32,021	1.96
Yellowfin tuna	225,791	209,577	579,856	2.77
Albacore tuna	110,151	81,129	160,713	1.98
Bigeye tuna	829,385	829,385	3,143,728	3.79
Kawakawa	344	175	434	2.48
Swordfish	586,774	479,840	748,651	1.56
Blue marlin	59,772	46,989	60,211	1.28
Black marlin	98	0	0	0.00
Striped marlin	83,471	83,471	96,526	1.16
Shortnose spearfish	35,728	32,815	20,639	0.63
Sailfish	3,297	121	113	0.94
Spiny lobsters	1,395	1,343	15,977	11.9
Slipper lobsters	31	0	0	0.00
Crabs	3,346	475	2,105	4.43
Shrimp (saltwater)	70	34	95	2.84
Octopus	2,292	1,068	4,224	3.96
Squid	2	0	0	0.00
Limpets (saltwater)	1,403	596	4,943	8.29
Clams	6	0	0	0.00
Invertebrates	10	0	0	0.00
Algae	621	446	3,637	8.16
TOTAL	2,383,892	2,129,237	5,807,586	2.73

Table D-3
Hawaii February 2009 Reported Commercial Landings

Species	Caught	Sold	Value (\$)	Price/Lb (\$)
Miscellaneous	77	77	114	1.48
Sharks	35,197	29,612	10,257	0.35
Eels	20	20	20	1.00
Bigeye scad (akule)	10,538	8,814	27,300	3.10
Mackerel scad	22,661	17,052	48,756	2.86
Leatherjacket	3	1	2	2.00
Ten pounder	17	0	0	0.00
Bonefish	48	48	59	1.25
Herrings/sardines	72	72	180	2.50
Needlefishes	17	13	48	3.56
Threadfin	7	7	41	6.27
Mulletts	66	66	189	2.86
Pomfret	58,687	57,974	130,913	2.26
Oilfish	60,372	60,372	48,194	0.80
Jacks	35	13	29	2.30
Kahala (amberjack)	875	0	0	0.00
Sasa ulua	50	0	0	0.00
Butaguchi (pig-lipped ulua)	102	102	229	2.25
Dobe ulua	55	55	149	2.71
Papa ulua	573	390	1,225	3.15
White ulua	600	386	859	2.23
Gunkin (black) ulua	15	0	0	0.00
Blue trevally	333	59	156	2.65
Hapuupuu (hawaiian grouper)	1,859	724	3,670	5.07
Blue spot grouper	54	21	55	2.64
Kalekale	441	290	1,147	3.96
Snappers	32	28	104	3.77
Yellow-tail kali	11	11	27	2.57
Taape (blue lined snapper)	1,383	1,072	1,424	1.33
Ehu (red snapper)	1,431	1,283	6,692	5.22
Gindai (flower snapper)	217	129	491	3.82
Golden kalekale	1	0	0	0.00
Lehi (silverjaw)	1,252	1,245	5,294	4.25
Onaga (red snapper)	4,662	4,662	34,847	7.47
Opakapaka (pink snapper)	10,618	9,748	57,817	5.93
Uku (gray snapper)	4,466	4,466	17,778	3.98
Porgy	356	356	1,330	3.73
Reef fishes (unknown)	88	43	22	0.50
Squirrelfishes	1,342	1,342	5,881	4.38
Trumpetfish	5	0	0	0.00
Scorpionfishes	141	82	425	5.20
Mountain bass	127	127	572	4.50
Bigeyes	172	162	687	4.23
Goatfishes	1,352	1,352	6,332	4.68
Rudderfish	590	590	913	1.55
Damselfishes	79	77	222	2.90

Table D-3 (continued)
Hawaii February 2009 Reported Commercial Landings

Species	Caught	Sold	Value (\$)	Price/Lb (\$)
Hawkfish	14	14	49	3.42
Wrasses	498	282	1,605	5.68
Parrotfishes	2,183	2,183	7,826	3.58
Surgeonfishes/tangs	7,466	6,474	12,532	1.94
Filefishes	64	64	109	1.70
Pelagic fishes (unknown)	48	0	0	0.00
Moonfish (opah)	113,144	112,368	180,819	1.61
Rainbow runner	357	298	609	2.04
Mahimahi	43,239	36,217	115,213	3.18
Barracudas	1,014	410	609	1.48
Wahoo	15,677	12,517	53,788	4.30
Tunas (unknown)	504	154	315	2.05
Skipjack tuna	21,186	8,046	17,203	2.14
Yellowfin tuna	213,726	187,404	477,354	2.55
Albacore tuna	95,575	82,841	134,530	1.62
Bigeye tuna	1,018,682	975,923	3,344,786	3.43
Kawakawa	159	108	222	2.06
Billfishes (unknown)	180	0	0	0.00
Swordfish	516,469	466,551	1,101,427	2.36
Blue marlin	62,828	52,459	85,837	1.64
Striped marlin	53,428	53,428	105,649	1.98
Shortnose spearfish	23,605	21,782	28,989	1.33
Sailfish	1,378	63	63	1.00
Spiny lobsters	1,464	1,214	13,976	11.5
Crabs	2,502	541	2,283	4.22
Shrimp (saltwater)	315	80	104	1.31
Octopus	2,478	1,474	5,882	3.99
Squid	63	33	67	2.00
Limpets (saltwater)	1,847	782	5,980	7.64
Invertebrates	10	0	0	0.00
Algae	793	497	4,520	9.10
TOTAL	2,421,992	2,227,147	6,116,794	2.75

Table D-4
Hawaii March 2009 Reported Commercial Landings

Species	Caught	Sold	Value (\$)	Price/Lb (\$)
Miscellaneous	29	29	91	3.10
Sharks	47,597	31,551	26,257	0.83
Rays	8	8	28	3.50
Eels	85	72	72	1.00
Bigeye scad (akule)	40,382	13,852	45,790	3.31
Mackerel scad	24,485	15,811	50,339	3.18
Leatherjacket	2	2	2	1.00
Ten pounder	235	235	235	1.00
Bonfish	36	0	0	0.00
Herrings/sardines	561	561	842	1.50
Milkfish	275	0	0	0.00
Needlefishes	3	3	6	2.10
Threadfin	41	41	327	8.00
Mullets	117	62	178	2.87
Pomfret	45,655	42,418	127,848	3.01
Oilfish	54,533	54,533	84,388	1.55
Jacks	38	4	11	2.50
Kahala (amberjack)	962	10	5	0.50
Sasa ulua	156	96	240	2.50
Butaguchi (pig-lipped ulua)	349	346	830	2.40
Papa ulua	422	338	1,156	3.42
White ulua	936	414	947	2.29
Gunkin (black) ulua	105	0	0	0.00
Blue trevally	137	101	283	2.82
Hapuupuu (hawaiian grouper)	5,668	5,668	21,764	3.84
Blue spot grouper	142	56	217	3.86
Kalekale	1,028	788	2,652	3.37
Snappers	346	346	1,539	4.45
Yellow-tail kali	5	5	20	3.71
Taape (blue lined snapper)	1,284	712	1,186	1.67
Ehu (red snapper)	2,658	1,749	9,960	5.70
Gindai (flower snapper)	481	481	1,547	3.22
Golden kalekale	12	0	0	0.00
Lehi (silverjaw)	1,529	1,418	6,250	4.41
Onaga (red snapper)	4,960	3,851	26,947	7.00
Opakapaka (pink snapper)	14,733	12,105	66,695	5.51
Uku (gray snapper)	2,930	2,689	11,892	4.42
Snake mackerel	9	0	0	0.00
Porgy	307	281	1,096	3.90
Reef fishes (unknown)	132	18	22	1.23
Squirrelfishes	2,165	2,144	9,202	4.29
Trumpetfish	8	0	0	0.00
Scorpionfishes	152	87	498	5.69
Mountain bass	141	116	486	4.20
Bigeyes	165	74	225	3.05
Goatfishes	2,640	2,027	9,145	4.51

Table D-4 (continued)
Hawaii March 2009 Reported Commercial Landings

Species	Caught	Sold	Value (\$)	Price/Lb (\$)
Rudderfish	1,125	1,125	1,774	1.58
Damselfishes	92	92	304	3.32
Hawkfish	29	29	123	4.27
Wrasses	314	101	297	2.95
Parrotfishes	3,979	3,963	14,897	3.76
Surgeonfishes/tangs	6,677	6,677	13,992	2.10
Filefishes	84	70	120	1.72
Moonfish (opah)	161,391	155,323	252,764	1.63
Rainbow runner	173	118	227	1.93
Mahimahi	75,773	61,408	214,676	3.50
Barracudas	1,687	1,527	1,789	1.17
Wahoo	30,832	26,636	112,861	4.24
Tunas (unknown)	290	24	59	2.42
Skipjack tuna	34,230	20,803	46,545	2.24
Yellowfin tuna	109,391	97,789	322,579	3.30
Albacore tuna	42,278	34,731	81,319	2.34
Bigeye tuna	529,554	507,778	2,366,404	4.66
Kawakawa	870	697	1,858	2.67
Swordfish	610,303	524,106	1,294,725	2.47
Blue marlin	51,741	46,186	87,244	1.89
Striped marlin	31,239	31,239	78,375	2.51
Shortnose spearfish	19,845	18,407	35,089	1.91
Sailfish	222	0	0	0.00
Spiny lobsters	801	639	7,821	12.2
Slipper lobsters	29	0	0	0.00
Crabs	1,807	235	1,161	4.95
Shrimp (saltwater)	285	31	46	1.50
Octopus	1,776	1,090	4,264	3.91
Squid	4	0	0	0.00
Limpets (saltwater)	2,760	1,318	9,945	7.55
Invertebrates	44	34	134	4.00
Algae	609	565	6,367	11.3
TOTAL	1,978,867	1,737,836	5,468,977	3.15

Table D-5
Hawaii April 2009 Reported Commercial Landings

Species	Caught	Sold	Value (\$)	Price/Lb (\$)
Miscellaneous	431	431	343	0.80
Sharks	40,025	27,260	14,472	0.53
Rays	36	36	126	3.50
Eels	341	334	334	1.00
Bigeye scad (akule)	16,511	10,739	37,624	3.50
Mackerel scad	20,114	12,111	34,331	2.83
Leatherjacket	20	8	15	2.00
Ten pounder	14	14	14	1.00
Bonfish	102	65	69	1.06
Herrings/sardines	604	604	1,106	1.83
Milkfish	73	62	135	2.17
Needlefishes	25	13	15	1.15
Threadfin	45	19	140	7.29
Mulletts	2,587	2,382	9,888	4.15
Pomfret	79,960	79,960	111,964	1.40
Oilfish	52,275	52,275	69,217	1.32
Jacks	102	96	281	2.93
Kahala (amberjack)	1,379	59	109	1.85
Sasa ulua	83	53	133	2.52
Butaguchi (pig-lipped ulua)	1,349	1,169	1,871	1.60
Dobe ulua	8	0	0	0.00
Papa ulua	425	314	981	3.13
White ulua	1,254	505	1,027	2.03
Gunkin (black) ulua	78	0	0	0.00
Blue trevally	362	134	318	2.37
Hapuupuu (hawaiian grouper)	2,546	1,186	5,578	4.70
Blue spot grouper	293	93	326	3.49
Kalekale	1,207	532	1,969	3.70
Snappers	682	682	2,870	4.21
Taape (blue lined snapper)	3,470	2,978	5,280	1.77
Ehu (red snapper)	3,764	2,239	12,711	5.68
Gindai (flower snapper)	717	374	1,740	4.66
Golden kalekale	17	0	0	0.00
Lehi (silverjaw)	2,150	1,943	7,834	4.03
Onaga (red snapper)	6,049	4,770	34,130	7.16
Opakapaka (pink snapper)	16,139	13,084	73,263	5.60
Uku (gray snapper)	6,803	5,009	18,922	3.78
Snake mackerel	3	0	0	0.00
Porgy	142	101	311	3.07
Reef fishes (unknown)	42	12	7	0.63
Reef jacks	6	6	21	3.75
Squirrelfishes	2,956	2,956	12,323	4.17
Trumpetfish	3	0	0	0.00
Scorpionfishes	289	167	821	4.92
Mountain bass	197	133	568	4.27
Bigeyes	459	278	999	3.60

Table D-5 (continued)
Hawaii April 2009 Reported Commercial Landings

Species	Caught	Sold	Value (\$)	Price/Lb (\$)
Goatfishes	4,770	4,385	23,483	5.36
Rudderfish	628	628	1,295	2.06
Damselfishes	211	211	565	2.68
Hawkfish	53	53	126	2.39
Tilapia	140	130	390	3.00
Wrasses	577	429	926	2.16
Parrotfishes	5,742	5,742	19,151	3.34
Surgeonfishes/tangs	6,152	6,152	12,072	1.96
Filefishes	169	169	233	1.38
Pelagic fishes (unknown)	48	0	0	0.00
Moonfish (opah)	128,522	128,522	175,673	1.37
Rainbow runner	403	403	754	1.87
Mahimahi	110,555	90,727	277,159	3.05
Barracudas	3,776	2,645	1,999	0.76
Wahoo	123,312	103,031	233,051	2.26
Tunas (unknown)	3,017	0	0	0.00
Skipjack tuna	81,453	33,730	56,533	1.68
Yellowfin tuna	225,785	194,080	455,729	2.35
Albacore tuna	66,967	65,750	107,004	1.63
Bigeye tuna	753,855	710,217	2,622,897	3.69
Kawakawa	1,112	517	1,268	2.45
Billfishes (unknown)	180	0	0	0.00
Swordfish	937,422	751,468	1,423,369	1.89
Blue marlin	97,606	81,975	86,934	1.06
Black marlin	279	270	201	0.75
Striped marlin	69,036	68,931	91,302	1.32
Shortnose spearfish	24,466	23,485	24,317	1.04
Sailfish	1,350	341	240	0.71
Spiny lobsters	2,190	2,132	27,607	12.9
Slipper lobsters	23	0	0	0.00
Crabs	4,103	1,847	8,574	4.64
Shrimp (saltwater)	460	58	98	1.69
Octopus	2,533	1,066	4,250	3.99
Squid	573	500	941	1.88
Limpets (saltwater)	2,643	1,277	9,037	7.07
Invertebrates	20	0	0	0.00
Algae	508	349	18,085	51.8
TOTAL	2,926,769	2,506,397	6,149,449	2.45

Table D-6
Hawaii May 2009 Reported Commercial Landings

Species	Caught	Sold	Value (\$)	Price/Lb (\$)
Miscellaneous	439	439	433	0.99
Sharks	25,984	22,842	13,751	0.60
Eels	257	257	239	0.93
Bigeye scad (akule)	56,280	34,354	107,782	3.14
Mackerel scad	20,717	11,525	30,432	2.64
Leatherjacket	15	6	11	1.70
Ten pounder	32	32	32	1.00
Bonfish	2,180	2,141	2,216	1.04
Herrings/sardines	618	618	1,099	1.78
Milkfish	126	126	130	1.03
Flying fishes	6	6	9	1.62
Needlefishes	4	4	6	1.50
Threadfin	47	37	295	7.91
Mulletts	1,232	1,091	4,749	4.35
Pomfret	78,376	78,376	100,392	1.28
Oilfish	35,863	35,863	68,717	1.92
Jacks	146	146	462	3.16
Kahala (amberjack)	1,480	42	66	1.59
Sasa ulua	52	27	67	2.50
Butaguchi (pig-lipped ulua)	613	613	1,104	1.80
Dobe ulua	4,959	3,888	5,218	1.34
Papa ulua	969	575	1,600	2.78
White ulua	2,136	644	1,422	2.21
Gunkin (black) ulua	237	181	297	1.64
Blue trevally	508	190	432	2.27
Hapuupuu (hawaiian grouper)	2,434	2,434	11,095	4.56
Blue spot grouper	353	225	427	1.90
Kalekale	1,650	1,288	3,811	2.96
Snappers	431	431	1,651	3.83
Yellow-tail kali	1	1	3	2.50
Taape (blue lined snapper)	7,264	6,292	10,294	1.64
Ehu (red snapper)	5,648	3,390	17,271	5.09
Gindai (flower snapper)	902	751	2,825	3.76
Golden kalekale	20	0	0	0.00
Lehi (silverjaw)	1,870	1,394	5,527	3.97
Onaga (red snapper)	10,446	7,688	51,244	6.67
Opakapaka (pink snapper)	14,311	11,854	62,612	5.28
Uku (gray snapper)	17,676	13,506	39,095	2.89
Porgy	510	510	1,849	3.62
Reef fishes (unknown)	342	0	0	0.00
Reef jacks	5	0	0	0.00
Squirrelfishes	6,548	6,548	26,917	4.11
Trumpetfish	3	0	0	0.00
Scorpionfishes	442	336	1,603	4.76
Mountain bass	243	215	886	4.12
Bigeyes	521	516	1,777	3.45

Table D-6 (continued)
Hawaii May 2009 Reported Commercial Landings

Species	Caught	Sold	Value (\$)	Price/Lb (\$)
Goatfishes	6,748	6,748	31,699	4.70
Rudderfish	2,724	2,531	3,961	1.56
Damselfishes	247	247	729	2.95
Hawkfish	135	135	435	3.22
Tilapia	95	91	273	3.00
Wrasses	1,034	686	2,123	3.10
Parrotfishes	8,108	7,658	29,804	3.89
Surgeonfishes/tangs	11,433	11,283	23,008	2.04
Filefishes	182	182	311	1.72
Moonfish (opah)	137,864	127,394	162,288	1.27
Rainbow runner	425	425	710	1.67
Mahimahi	86,203	65,458	178,151	2.72
Barracudas	3,551	3,551	1,936	0.55
Wahoo	127,870	92,716	203,298	2.19
Tunas (unknown)	609	16	22	1.40
Skipjack tuna	92,291	54,434	83,047	1.53
Yellowfin tuna	199,044	168,602	408,675	2.42
Albacore tuna	26,658	26,230	54,644	2.08
Bigeye tuna	720,395	720,395	2,980,657	4.14
Kawakawa	2,061	1,356	2,669	1.97
Billfishes (unknown)	90	0	0	0.00
Swordfish	751,565	751,565	1,199,223	1.60
Blue marlin	120,222	109,683	100,522	0.92
Black marlin	764	275	137	0.50
Striped marlin	96,162	96,162	85,273	0.89
Shortnose spearfish	23,140	23,140	15,081	0.65
Sailfish	1,678	820	303	0.37
Crabs	1,596	242	1,459	6.03
Shrimp (saltwater)	93	33	50	1.50
Octopus	1,432	1,269	5,084	4.01
Squid	184	164	245	1.50
Limpets (saltwater)	3,036	1,053	6,594	6.26
Algae	1,959	1,959	4,008	2.05
TOTAL	2,734,487	2,527,899	6,166,266	2.44

Table D-7
Hawaii June 2009 Reported Commercial Landings

Species	Caught	Sold	Value (\$)	Price/Lb (\$)
Miscellaneous	285	285	323	1.13
Sharks	25,624	19,873	8,629	0.43
Eels	156	137	137	1.00
Bigeye scad (akule)	29,448	24,563	77,568	3.16
Mackerel scad	19,756	11,286	31,073	2.75
Leatherjacket	9	8	13	1.62
Ten pounder	238	233	233	1.00
Bonfish	263	225	225	1.00
Milkfish	54	54	59	1.10
Flying fishes	1	0	0	0.00
Needlefishes	2	0	0	0.00
Mulletts	309	211	947	4.50
Pomfret	55,098	55,098	117,840	2.14
Oilfish	36,983	36,983	63,686	1.72
Jacks	235	235	363	1.54
Kahala (amberjack)	177	8	10	1.25
Sasa ulua	8	0	0	0.00
Butaguchi (pig-lipped ulua)	59	59	142	2.40
Dobe ulua	9	0	0	0.00
Papa ulua	576	217	643	2.96
White ulua	1,193	1,193	2,690	2.26
Blue trevally	909	406	869	2.14
Hapuupuu (hawaiian grouper)	919	919	4,631	5.04
Blue spot grouper	261	149	603	4.05
Kalekale	542	542	1,608	2.97
Snappers	323	298	1,212	4.07
Yellow-tail kali	5	5	14	2.75
Taape (blue lined snapper)	3,551	3,243	5,576	1.72
Ehu (red snapper)	1,364	1,364	7,695	5.64
Gindai (flower snapper)	263	263	946	3.60
Golden kalekale	4	0	0	0.00
Lehi (silverjaw)	473	365	1,219	3.34
Onaga (red snapper)	2,859	1,869	14,038	7.51
Opakapaka (pink snapper)	6,268	4,232	24,521	5.79
Uku (gray snapper)	18,068	18,068	51,290	2.84
Porgy	364	351	1,245	3.55
Reef fishes (unknown)	280	14	7	0.50
Squirrelfishes	2,805	2,325	9,771	4.20
Trumpetfish	7	3	4	1.07
Scorpionfishes	208	192	910	4.74
Mountain bass	200	192	759	3.96
Bigeyes	171	104	294	2.83
Goatfishes	3,841	3,659	15,708	4.29
Rudderfish	868	868	1,547	1.78
Damselfishes	127	127	357	2.82
Hawkfish	92	92	342	3.73

Table D-7 (continued)
Hawaii June 2009 Reported Commercial Landings

Species	Caught	Sold	Value (\$)	Price/Lb (\$)
Tilapia	1,555	0	0	0.00
Wrasses	525	401	1,276	3.18
Parrotfishes	5,021	5,021	18,588	3.70
Surgeonfishes/tangs	5,107	5,107	9,825	1.92
Flounders	2	2	5	3.25
Filefishes	133	133	131	0.99
Moonfish (opah)	130,979	128,244	177,416	1.38
Rainbow runner	266	165	195	1.18
Mahimahi	73,902	62,174	141,446	2.28
Barracudas	3,235	2,222	1,872	0.84
Wahoo	92,482	72,405	181,819	2.51
Tunas (unknown)	1,233	4	14	3.50
Skipjack tuna	87,972	44,356	66,841	1.51
Yellowfin tuna	326,898	246,150	613,196	2.49
Albacore tuna	25,457	23,576	50,804	2.15
Bigeye tuna	721,046	720,298	2,602,280	3.61
Kawakawa	1,774	735	1,757	2.39
Swordfish	462,492	462,492	837,929	1.81
Blue marlin	167,997	152,865	129,893	0.85
Black marlin	801	0	0	0.00
Striped marlin	76,577	73,533	74,610	1.01
Shortnose spearfish	23,942	20,805	16,468	0.79
Sailfish	3,724	3,724	1,995	0.54
Crabs	2,574	89	612	6.87
Octopus	1,509	801	3,305	4.12
Squid	60	15	47	3.18
Limpets (saltwater)	1,119	757	4,568	6.04
Algae	866	756	1,782	2.36
TOTAL	2,434,499	2,217,141	5,388,421	2.43

Table D-8
Hawaii July 2009 Reported Commercial Landings

Species	Caught	Sold	Value (\$)	Price/Lb (\$)
Miscellaneous	300	300	359	1.20
Sharks	29,144	27,486	14,403	0.52
Eels	261	176	178	1.01
Bigeye scad (akule)	31,931	24,063	75,485	3.14
Mackerel scad	23,089	16,365	44,092	2.69
Leatherjacket	4	1	1	1.25
Bonefish	1,742	1,536	1,547	1.01
Milkfish	301	300	362	1.21
Flying fishes	1	1	3	3.00
Needlefishes	17	14	20	1.44
Threadfin	2	2	14	6.00
Mulletts	493	408	1,813	4.45
Pomfret	58,047	58,047	131,558	2.27
Oilfish	39,341	39,341	73,992	1.88
Jacks	37	37	117	3.20
Kahala (amberjack)	125	5	5	1.00
Sasa ulua	14	8	21	2.50
Butaguchi (pig-lipped ulua)	317	0	0	0.00
Dobe ulua	10	6	25	4.08
Papa ulua	310	310	870	2.81
White ulua	1,248	895	2,059	2.30
Gunkin (black) ulua	40	0	0	0.00
Blue trevally	1,451	922	2,119	2.30
Hapuupuu (hawaiian grouper)	1,570	792	3,499	4.42
Blue spot grouper	360	223	705	3.17
Kalekale	162	107	347	3.24
Snappers	282	282	981	3.48
Taape (blue lined snapper)	3,314	2,915	5,117	1.76
Ehu (red snapper)	451	345	1,860	5.39
Gindai (flower snapper)	121	15	73	5.06
Golden kalekale	9	0	0	0.00
Lehi (silverjaw)	122	0	0	0.00
Onaga (red snapper)	2,756	2,756	15,826	5.74
Opakapaka (pink snapper)	3,140	2,146	12,559	5.85
Uku (gray snapper)	14,145	13,053	47,884	3.67
Porgy	729	597	2,163	3.62
Reef fishes (unknown)	385	1	1	0.50
Squirrelfishes	3,245	3,141	13,411	4.27
Scorpionfishes	181	103	377	3.67
Mountain bass	113	69	282	4.12
Bigeyes	82	82	315	3.84
Goatfishes	3,323	2,978	12,981	4.36
Rudderfish	2,714	2,551	3,585	1.41
Damselfishes	273	200	473	2.37
Hawkfish	109	109	391	3.57
Tilapia	1,703	0	0	0.00

Table D-8 (continued)
Hawaii July 2009 Reported Commercial Landings

Species	Caught	Sold	Value (\$)	Price/Lb (\$)
Wrasses	630	330	560	1.70
Parrotfishes	4,075	3,590	13,894	3.87
Surgeonfishes/tangs	6,727	6,564	12,504	1.90
Flounders	13	7	11	1.50
Filefishes	106	91	87	0.95
Moonfish (opah)	186,793	186,793	214,056	1.15
Rainbow runner	192	101	203	2.01
Mahimahi	199,106	183,485	356,122	1.94
Barracudas	2,591	2,591	1,441	0.56
Wahoo	104,073	88,614	216,403	2.44
Tunas (unknown)	936	39	54	1.41
Skipjack tuna	164,407	115,622	144,050	1.25
Yellowfin tuna	277,648	243,566	671,376	2.76
Albacore tuna	106,810	98,928	146,589	1.48
Bigeye tuna	766,246	766,246	3,202,993	4.18
Kawakawa	900	269	495	1.84
Billfishes (unknown)	111	75	150	2.00
Swordfish	342,211	342,211	435,253	1.27
Blue marlin	157,897	146,598	135,643	0.93
Black marlin	413	0	0	0.00
Striped marlin	51,091	51,091	59,544	1.17
Shortnose spearfish	24,531	24,531	17,389	0.71
Sailfish	5,461	5,461	3,288	0.60
Crabs	3,518	136	619	4.57
Octopus	2,505	1,897	7,378	3.89
Squid	391	391	680	1.74
Limpets (saltwater)	1,388	686	5,019	7.32
Invertebrates	21	21	82	4.00
Algae	3,539	1,343	6,444	4.80
TOTAL	2,641,841	2,473,960	6,124,198	2.48

Table D-9
Hawaii August 2009 Reported Commercial Landings

Species	Caught	Sold	Value (\$)	Price/Lb (\$)
Miscellaneous	65	65	60	0.93
Sharks	24,062	17,993	15,692	0.87
Eels	235	92	114	1.24
Bigeye scad (akule)	15,761	11,196	38,868	3.47
Mackerel scad	24,576	17,737	47,291	2.67
Leatherjacket	8	1	1	1.25
Ten pounder	983	773	773	1.00
Bonfish	703	259	273	1.05
Milkfish	10	10	10	1.00
Needlefishes	23	6	11	1.93
Threadfin	4	4	26	6.00
Mulletts	524	449	1,952	4.35
Pomfret	37,914	35,996	120,562	3.35
Oilfish	35,633	35,633	74,527	2.09
Jacks	29	27	109	4.00
Kahala (amberjack)	90	0	0	0.00
Sasa ulua	35	25	78	3.10
Butaguchi (pig-lipped ulua)	312	312	738	2.37
Papa ulua	129	106	370	3.49
White ulua	851	651	1,311	2.01
Gunkin (black) ulua	52	0	0	0.00
Blue trevally	859	518	1,370	2.64
Hapuupuu (hawaiian grouper)	624	624	3,269	5.24
Blue spot grouper	486	406	1,314	3.23
Kalekale	56	56	224	4.00
Snappers	298	238	937	3.94
Taape (blue lined snapper)	2,153	1,743	2,537	1.46
Ehu (red snapper)	80	39	207	5.32
Gindai (flower snapper)	118	75	310	4.13
Golden kalekale	8	0	0	0.00
Onaga (red snapper)	103	0	0	0.00
Opakapaka (pink snapper)	287	287	2,083	7.26
Uku (gray snapper)	12,190	6,327	31,295	4.95
Porgy	349	188	596	3.17
Reef fishes (unknown)	309	4	18	3.98
Squirrelfishes	3,518	2,804	11,670	4.16
Trumpetfish	2	0	0	0.00
Scorpionfishes	97	94	313	3.32
Mountain bass	74	61	234	3.83
Bigeyes	81	81	223	2.77
Goatfishes	4,158	4,158	18,455	4.44
Rudderfish	3,131	3,071	4,322	1.41
Damselfishes	231	231	681	2.95
Hawkfish	143	143	464	3.24
Tilapia	1,681	223	696	3.12
Wrasses	553	241	505	2.10

Table D-9 (continued)
Hawaii August 2009 Reported Commercial Landings

Species	Caught	Sold	Value (\$)	Price/Lb (\$)
Parrotfishes	3,978	3,569	12,653	3.55
Surgeonfishes/tangs	8,767	8,767	15,519	1.77
Flounders	3	3	3	1.25
Filefishes	72	61	45	0.74
Pufferfishes	15	0	0	0.00
Pelagic fishes (unknown)	48	0	0	0.00
Moonfish (opah)	196,890	187,160	256,709	1.37
Rainbow runner	228	101	236	2.33
Mahimahi	252,630	219,392	423,442	1.93
Barracudas	3,425	3,425	2,652	0.77
Wahoo	70,809	53,116	176,719	3.33
Tunas (unknown)	910	0	0	0.00
Skipjack tuna	132,315	105,812	152,507	1.44
Yellowfin tuna	299,034	261,388	661,842	2.53
Albacore tuna	78,860	73,266	107,177	1.46
Bigeye tuna	771,645	742,228	3,091,430	4.17
Kawakawa	615	166	286	1.73
Billfishes (unknown)	421	0	0	0.00
Swordfish	40,101	38,466	119,629	3.11
Blue marlin	156,591	139,792	165,296	1.18
Black marlin	2,238	76	912	12.0
Striped marlin	40,479	34,478	52,642	1.53
Shortnose spearfish	16,163	15,626	22,571	1.44
Sailfish	3,881	3,881	3,790	0.98
Crabs	5,960	229	921	4.03
Octopus	3,318	2,605	10,313	3.96
Squid	910	464	760	1.64
Limpets (saltwater)	1,341	667	4,456	6.69
Algae	1,025	342	2,522	7.38
TOTAL	2,266,255	2,038,025	5,669,523	2.78

Table D-10
Hawaii September 2009 Reported Commercial Landings

Species	Caught	Sold	Value (\$)	Price/Lb (\$)
Miscellaneous	273	273	267	0.98
Sharks	33,046	25,797	10,109	0.39
Eels	322	314	345	1.10
Bigeye scad (akule)	14,212	10,008	35,280	3.53
Mackerel scad	37,157	25,415	67,196	2.64
Leatherjacket	12	0	0	0.50
Ten pounder	68	7	7	1.00
Bonfish	177	93	161	1.73
Herrings/sardines	0	0	1	1.50
Milkfish	45	15	22	1.45
Needlefishes	27	20	36	1.84
Threadfin	103	98	743	7.57
Mullets	1,063	869	3,179	3.66
Pomfret	35,714	35,714	88,565	2.48
Oilfish	22,731	22,731	53,232	2.34
Jacks	184	184	537	2.91
Kahala (amberjack)	910	32	57	1.80
Sasa ulua	89	89	236	2.66
Butaguchi (pig-lipped ulua)	256	256	647	2.53
Dobe ulua	28	23	56	2.42
Papa ulua	158	111	451	4.05
White ulua	1,367	861	2,161	2.51
Gunkin (black) ulua	29	29	52	1.80
Blue trevally	984	623	1,374	2.21
Hapuupuu (hawaiian grouper)	1,012	990	5,244	5.30
Blue spot grouper	370	239	828	3.47
Kalekale	853	640	2,030	3.17
Snappers	206	162	594	3.67
Yellow-tail kali	10	1	3	3.00
Taape (blue lined snapper)	2,182	1,730	2,016	1.17
Ehu (red snapper)	1,723	1,312	7,714	5.88
Gindai (flower snapper)	346	299	1,198	4.01
Golden kalekale	21	0	0	0.00
Lehi (silverjaw)	811	722	3,061	4.24
Onaga (red snapper)	6,159	5,386	34,982	6.50
Opakapaka (pink snapper)	10,844	8,397	48,567	5.78
Uku (gray snapper)	10,517	10,517	34,709	3.30
Porgy	365	187	599	3.21
Reef fishes (unknown)	68	0	0	0.00
Squirrelfishes	5,088	5,088	21,679	4.26
Trumpetfish	11	0	0	0.00
Scorpionfishes	286	178	1,026	5.77
Mountain bass	160	102	416	4.10
Bigeyes	249	249	877	3.52
Goatfishes	6,180	3,185	14,979	4.70
Rudderfish	566	566	993	1.76

Table D-10 (continued)
Hawaii September 2009 Reported Commercial Landings

Species	Caught	Sold	Value (\$)	Price/Lb (\$)
Damselfishes	230	230	663	2.88
Hawkfish	132	132	414	3.13
Tilapia	925	0	0	0.00
Wrasses	541	347	1,069	3.09
Parrotfishes	4,760	4,657	16,588	3.56
Surgeonfishes/tangs	6,888	6,869	13,506	1.97
Filefishes	99	99	84	0.85
Moonfish (opah)	206,225	206,225	178,457	0.87
Rainbow runner	156	75	148	1.98
Mahimahi	202,115	186,673	312,013	1.67
Barracudas	1,299	1,150	1,430	1.24
Wahoo	51,375	41,396	120,216	2.90
Tunas (unknown)	241	4	9	2.20
Skipjack tuna	131,806	107,324	148,362	1.38
Yellowfin tuna	343,244	329,551	653,653	1.98
Albacore tuna	107,604	96,404	118,707	1.23
Bigeye tuna	844,365	844,365	2,815,276	3.33
Kawakawa	537	207	379	1.84
Billfishes (unknown)	296	0	0	0.00
Swordfish	13,577	13,577	35,623	2.62
Blue marlin	114,350	108,016	136,640	1.27
Black marlin	328	71	496	7.03
Striped marlin	19,873	19,873	41,398	2.08
Shortnose spearfish	14,344	13,504	17,761	1.32
Sailfish	4,195	4,195	5,037	1.20
Spiny lobsters	2,933	2,136	27,918	13.1
Slipper lobsters	7	0	0	0.00
Crabs	6,485	1,988	8,107	4.08
Octopus	2,664	2,151	7,971	3.71
Squid	1,202	1,083	1,960	1.81
Limpets (saltwater)	937	759	6,895	9.09
Invertebrates	5	0	0	0.00
Algae	572	409	1,893	4.63
TOTAL	2,281,284	2,156,975	5,118,899	2.37

Table D-11
Hawaii October 2009 Reported Commercial Landings

Species	Caught	Sold	Value (\$)	Price/Lb (\$)
Miscellaneous	172	172	376	2.19
Sharks	23,586	16,868	8,204	0.49
Eels	177	110	113	1.03
Bigeye scad (akule)	19,833	14,232	49,115	3.45
Mackerel scad	38,242	24,387	59,653	2.45
Leatherjacket	107	81	149	1.84
Ten pounder	129	129	144	1.12
Bonfish	2,473	2,186	2,197	1.01
Milkfish	142	135	167	1.24
Needlefishes	585	29	47	1.63
Threadfin	124	86	654	7.60
Mulletts	770	715	3,096	4.33
Pomfret	46,984	46,483	98,283	2.11
Oilfish	26,660	26,660	68,000	2.55
Jacks	225	24	60	2.50
Kahala (amberjack)	1,567	73	130	1.78
Sasa ulua	205	3	7	2.50
Butaguchi (pig-lipped ulua)	899	120	505	4.21
Dobe ulua	20	0	0	0.00
Papa ulua	680	680	2,072	3.05
White ulua	1,925	1,207	2,568	2.13
Gunkin (black) ulua	94	28	83	2.96
Blue trevally	982	397	877	2.21
Hapuupuu (hawaiian grouper)	2,798	2,456	11,630	4.74
Blue spot grouper	244	127	413	3.25
Kalekale	1,285	844	2,985	3.54
Snappers	582	438	1,679	3.83
Yellow-tail kali	3	0	0	0.00
Taape (blue lined snapper)	7,301	7,301	10,939	1.50
Ehu (red snapper)	3,082	2,206	11,486	5.21
Gindai (flower snapper)	597	414	1,822	4.40
Golden kalekale	54	2	4	1.80
Lehi (silverjaw)	622	494	1,893	3.84
Onaga (red snapper)	10,640	9,006	57,911	6.43
Opakapaka (pink snapper)	22,961	18,708	99,333	5.31
Uku (gray snapper)	13,595	8,901	31,676	3.56
Snake mackerel	2	0	0	0.00
Porgy	725	617	2,247	3.64
Reef fishes (unknown)	181	41	41	1.00
Reef jacks	4	4	14	4.00
Squirrelfishes	11,532	9,619	39,659	4.12
Trumpetfish	8	4	6	1.56
Scorpionfishes	414	220	1,363	6.19
Mountain bass	264	215	999	4.64
Bigeyes	402	402	1,490	3.71
Goatfishes	7,299	6,592	32,171	4.88

Table D-11 (continued)
Hawaii October 2009 Reported Commercial Landings

Species	Caught	Sold	Value (\$)	Price/Lb (\$)
Rudderfish	2,094	2,094	3,099	1.48
Damselfishes	277	277	829	2.99
Hawkfish	107	107	329	3.07
Tilapia	191	155	465	3.00
Wrasses	1,382	1,382	3,607	2.61
Parrotfishes	4,073	3,477	12,294	3.54
Surgeonfishes/tangs	9,408	8,315	15,863	1.91
Flounders	35	35	59	1.67
Filefishes	158	158	95	0.60
Moonfish (opah)	264,927	262,853	227,873	0.87
Rainbow runner	257	132	235	1.78
Mahimahi	160,400	148,615	285,307	1.92
Barracudas	754	462	938	2.03
Wahoo	52,301	41,247	123,940	3.00
Tunas (unknown)	3,393	47	86	1.83
Skipjack tuna	111,835	82,949	98,164	1.18
Yellowfin tuna	190,167	183,813	399,427	2.17
Albacore tuna	43,874	40,431	50,959	1.26
Bigeye tuna	1,156,943	1,156,943	3,316,065	2.87
Kawakawa	880	308	688	2.23
Swordfish	15,848	15,576	40,326	2.59
Blue marlin	79,854	69,505	87,495	1.26
Striped marlin	39,400	39,180	69,780	1.78
Shortnose spearfish	15,329	14,859	21,410	1.44
Sailfish	3,206	3,206	4,761	1.49
Spiny lobsters	1,854	1,293	14,423	11.2
Slipper lobsters	7	0	0	0.00
Crabs	6,637	2,040	8,132	3.99
Octopus	5,888	4,303	16,528	3.84
Squid	334	309	498	1.61
Limpets (saltwater)	1,640	1,204	6,963	5.78
Invertebrates	35	33	132	4.00
Algae	138	138	843	6.13
TOTAL	2,424,797	2,288,860	5,417,870	2.37

Table D-12
Hawaii November 2009 Reported Commercial Landings

Species	Caught	Sold	Value (\$)	Price/Lb (\$)
Miscellaneous	109	109	724	6.67
Sharks	38,368	24,181	6,884	0.28
Eels	82	27	27	1.00
Bigeye scad (akule)	20,385	17,302	53,939	3.12
Mackerel scad	31,408	19,872	53,487	2.69
Leatherjacket	40	40	74	1.86
Ten pounder	139	139	139	1.00
Bonfish	353	260	283	1.09
Herrings/sardines	58	58	116	2.00
Milkfish	77	38	56	1.50
Needlefishes	191	55	106	1.93
Threadfin	97	57	391	6.90
Mulletts	1,382	1,165	4,521	3.88
Pomfret	50,359	48,952	101,117	2.07
Oilfish	42,552	42,552	34,847	0.82
Jacks	84	84	276	3.29
Kahala (amberjack)	405	22	44	2.00
Sasa ulua	55	28	85	2.99
Butaguchi (pig-lipped ulua)	716	716	1,128	1.58
Dobe ulua	49	49	112	2.30
Papa ulua	414	307	1,067	3.47
White ulua	584	284	650	2.29
Blue trevally	246	235	431	1.83
Hapuupuu (hawaiian grouper)	747	747	4,518	6.04
Blue spot grouper	269	261	632	2.42
Kalekale	362	282	942	3.34
Snappers	410	403	1,036	2.57
Taape (blue lined snapper)	1,995	1,733	3,126	1.80
Ehu (red snapper)	846	702	4,037	5.75
Gindai (flower snapper)	95	64	269	4.21
Lehi (silverjaw)	169	159	547	3.45
Onaga (red snapper)	2,798	2,482	19,119	7.70
Opakapaka (pink snapper)	4,206	4,206	25,392	6.04
Uku (gray snapper)	6,187	6,187	17,015	2.75
Porgy	536	120	415	3.46
Reef fishes (unknown)	75	0	0	0.00
Reef jacks	203	203	758	3.74
Squirrelfishes	4,227	4,227	17,486	4.14
Trumpetfish	8	8	12	1.44
Scorpionfishes	67	34	216	6.44
Mountain bass	230	134	709	5.28
Bigeyes	104	104	357	3.44
Goatfishes	2,066	1,367	6,054	4.43
Rudderfish	212	50	85	1.72
Damselfishes	205	205	622	3.04
Hawkfish	76	67	250	3.71

Table D-12 (continued)
Hawaii November 2009 Reported Commercial Landings

Species	Caught	Sold	Value (\$)	Price/Lb (\$)
Wrasses	329	228	449	1.97
Parrotfishes	2,835	1,359	5,082	3.74
Surgeonfishes/tangs	6,298	3,792	7,431	1.96
Filefishes	32	32	18	0.57
Moonfish (opah)	194,110	191,669	216,261	1.13
Rainbow runner	280	172	427	2.48
Mahimahi	160,595	143,846	281,201	1.95
Barracudas	503	494	756	1.53
Wahoo	27,033	23,923	70,590	2.95
Tunas (unknown)	1,106	0	0	0.00
Skipjack tuna	60,698	38,133	54,276	1.42
Yellowfin tuna	143,783	125,050	330,621	2.64
Albacore tuna	11,607	10,535	23,931	2.27
Bigeye tuna	1,238,462	1,164,190	3,730,254	3.20
Kawakawa	728	558	1,413	2.53
Billfishes (unknown)	180	0	0	0.00
Swordfish	15,781	15,781	46,898	2.97
Blue marlin	52,787	41,558	57,598	1.39
Striped marlin	43,500	42,082	77,411	1.84
Shortnose spearfish	15,360	14,456	20,161	1.39
Sailfish	477	477	796	1.67
Spiny lobsters	992	545	5,732	10.5
Slipper lobsters	6	0	0	0.00
Crabs	2,725	460	2,755	5.99
Octopus	2,287	1,852	6,963	3.76
Squid	181	180	450	2.50
Limpets (saltwater)	1,663	1,351	7,938	5.88
Invertebrates	14	14	61	4.50
Algae	266	126	715	5.70
TOTAL	2,198,860	2,003,137	5,314,290	2.65

Table D-13
Hawaii December 2009 Reported Commercial Landings

Species	Caught	Sold	Value (\$)	Price/Lb (\$)
Miscellaneous	340	340	398	1.17
Sharks	48,985	32,029	3,520	0.11
Eels	50	50	55	1.10
Bigeye scad (akule)	32,954	18,670	58,553	3.14
Mackerel scad	22,179	12,851	32,774	2.55
Leatherjacket	59	54	87	1.62
Ten pounder	82	82	85	1.03
Bonfish	134	128	128	1.00
Herrings/sardines	290	0	0	0.00
Milkfish	161	161	205	1.28
Needlefishes	76	38	77	2.05
Threadfin	81	81	482	5.97
Mulletts	75	73	171	2.34
Pomfret	45,992	45,992	136,843	2.98
Oilfish	87,427	87,427	30,696	0.35
Jacks	124	69	206	2.99
Kahala (amberjack)	3,902	67	72	1.06
Sasa ulua	51	40	117	2.95
Butaguchi (pig-lipped ulua)	405	306	1,053	3.44
Papa ulua	772	450	1,538	3.42
White ulua	1,582	1,303	2,328	1.79
Gunkin (black) ulua	55	55	111	2.05
Blue trevally	762	656	1,186	1.81
Hapuupuu (hawaiian grouper)	2,511	2,155	11,409	5.29
Blue spot grouper	162	107	343	3.21
Kalekale	3,532	2,241	7,446	3.32
Snappers	355	246	834	3.39
Yellow-tail kali	20	13	26	2.08
Taape (blue lined snapper)	4,874	4,436	7,228	1.63
Ehu (red snapper)	8,348	5,653	31,805	5.63
Gindai (flower snapper)	995	609	2,802	4.60
Golden kalekale	54	12	29	2.38
Lehi (silverjaw)	1,313	972	3,486	3.59
Onaga (red snapper)	17,581	14,049	110,343	7.85
Opakapaka (pink snapper)	32,575	26,615	158,540	5.96
Uku (gray snapper)	12,179	11,725	43,212	3.69
Snake mackerel	21	21	21	1.00
Porgy	284	284	1,013	3.57
Reef fishes (unknown)	74	0	0	0.00
Reef jacks	22	20	78	4.00
Squirrelfishes	8,202	7,795	30,550	3.92
Trumpetfish	11	7	7	0.99
Scorpionfishes	969	516	2,969	5.75
Mountain bass	2,383	2,169	6,831	3.15
Bigeyes	345	334	1,131	3.38
Goatfishes	9,949	8,604	33,577	3.90

Table D-13 (continued)
Hawaii December 2009 Reported Commercial Landings

Species	Caught	Sold	Value (\$)	Price/Lb (\$)
Rudderfish	501	325	711	2.19
Damselfishes	418	418	1,538	3.68
Hawkfish	89	89	357	4.03
Wrasses	754	596	1,911	3.21
Parrotfishes	4,729	4,289	14,711	3.43
Surgeonfishes/tangs	8,155	8,155	16,269	2.00
Filefishes	219	218	125	0.57
Pufferfishes	6	0	0	0.00
Pelagic fishes (unknown)	192	26	3	0.10
Moonfish (opah)	124,590	124,590	193,406	1.55
Rainbow runner	333	199	277	1.39
Mahimahi	54,540	45,188	117,314	2.60
Barracudas	880	880	1,041	1.18
Wahoo	32,891	28,299	91,927	3.25
Tunas (unknown)	892	258	576	2.23
Skipjack tuna	142,784	82,801	111,486	1.35
Yellowfin tuna	241,286	228,962	665,264	2.91
Albacore tuna	17,349	15,864	33,960	2.14
Bigeye tuna	1,608,044	1,608,044	6,114,445	3.80
Kawakawa	791	225	564	2.51
Swordfish	35,119	19,583	51,495	2.63
Blue marlin	47,009	36,805	58,853	1.60
Black marlin	197	0	0	0.00
Striped marlin	50,220	50,220	113,361	2.26
Shortnose spearfish	35,969	35,969	32,497	0.90
Sailfish	1,636	151	121	0.80
Spiny lobsters	2,808	2,232	27,935	12.5
Slipper lobsters	4	0	0	0.00
Crabs	7,088	2,153	9,672	4.49
Octopus	1,775	1,407	5,283	3.75
Squid	3	0	0	0.00
Limpets (saltwater)	2,847	1,180	6,102	5.17
Invertebrates	20	20	85	4.21
Algae	616	359	3,819	10.6
TOTAL	2,778,044	2,589,005	8,399,471	3.24

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

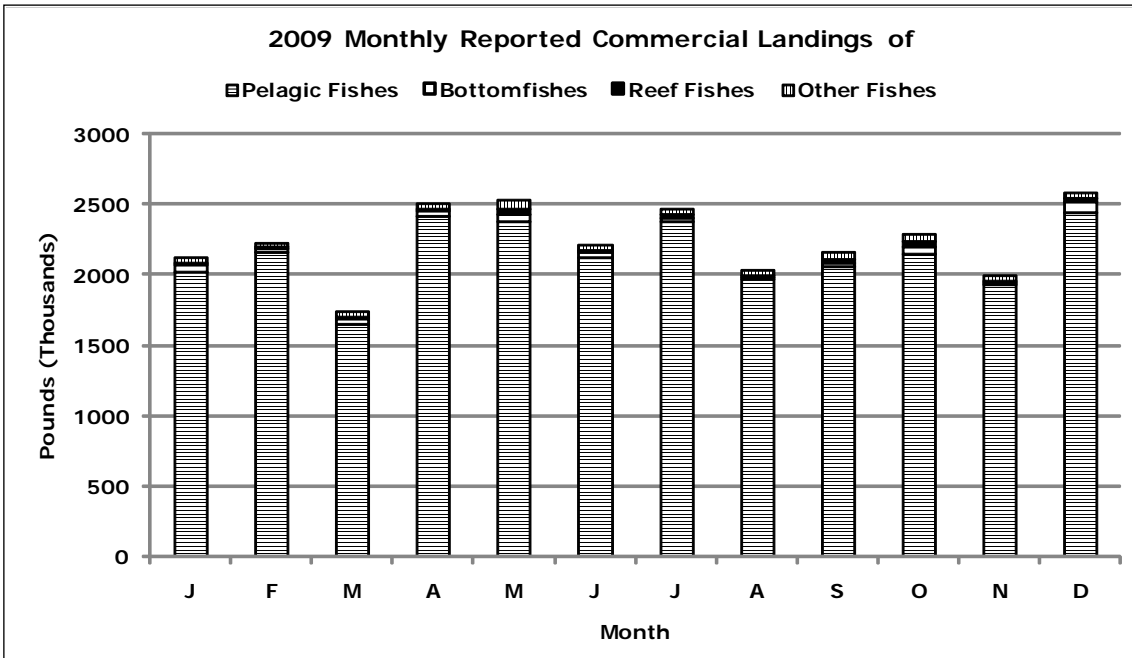


Figure D-1-1

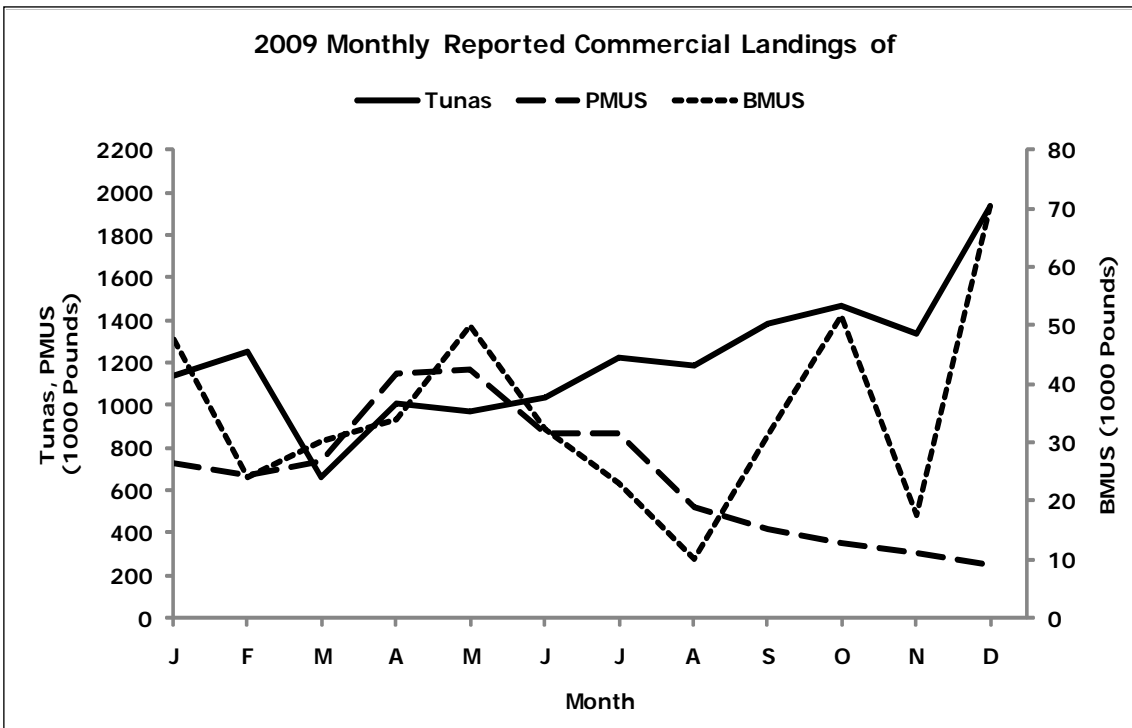


Figure D-1-2

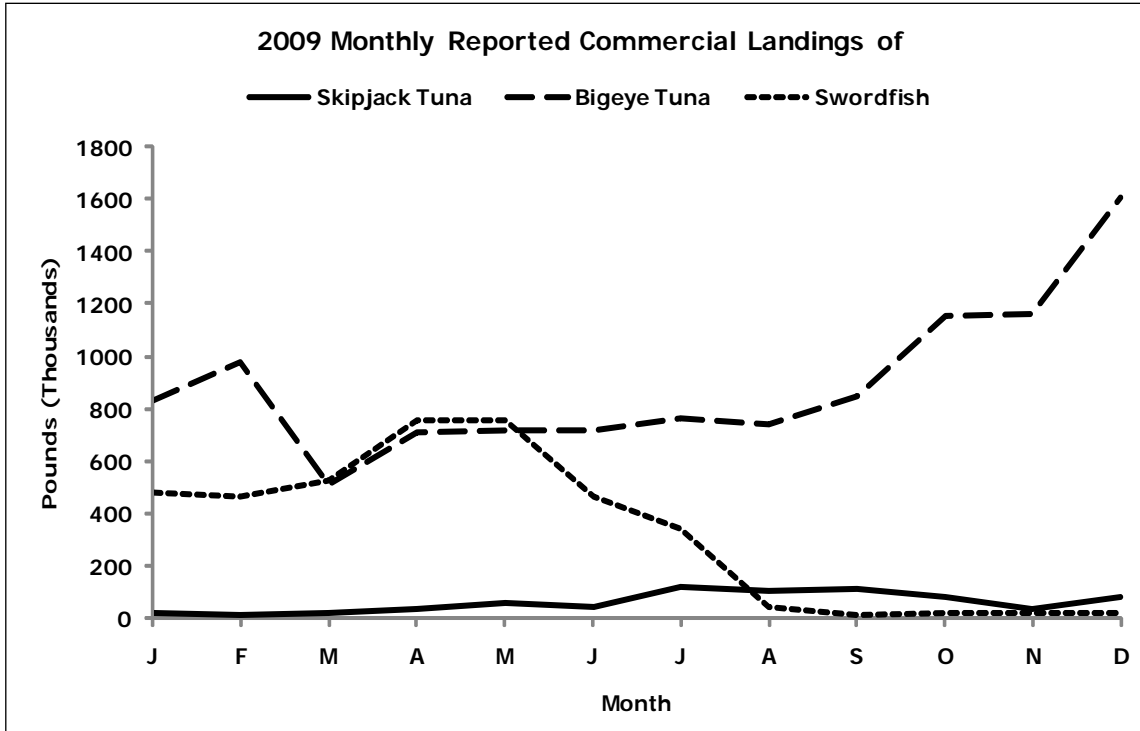


Figure D-1-3

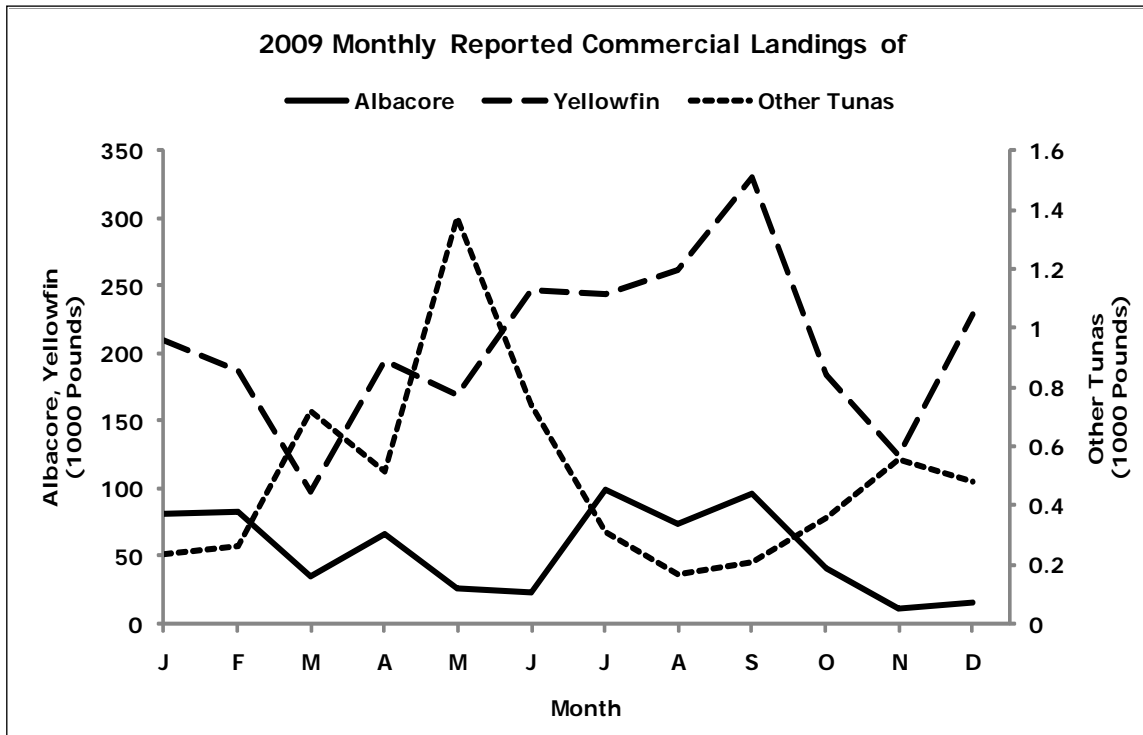


Figure D-1-4

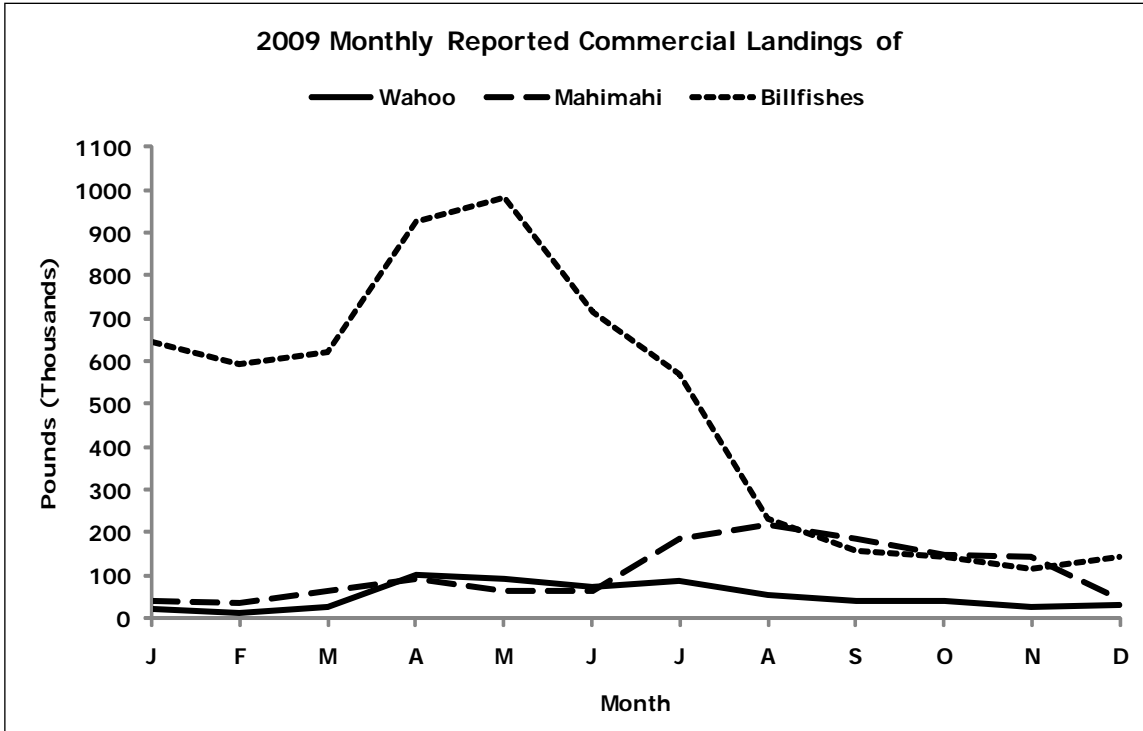


Figure D-1-5

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

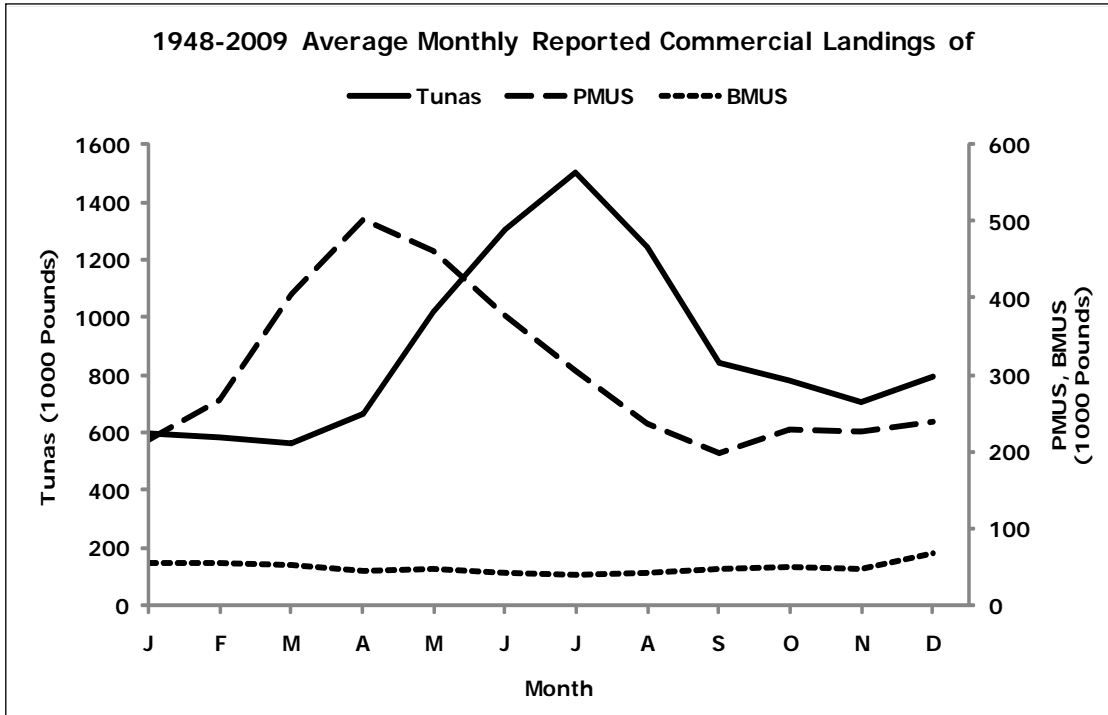


Figure D-2-1

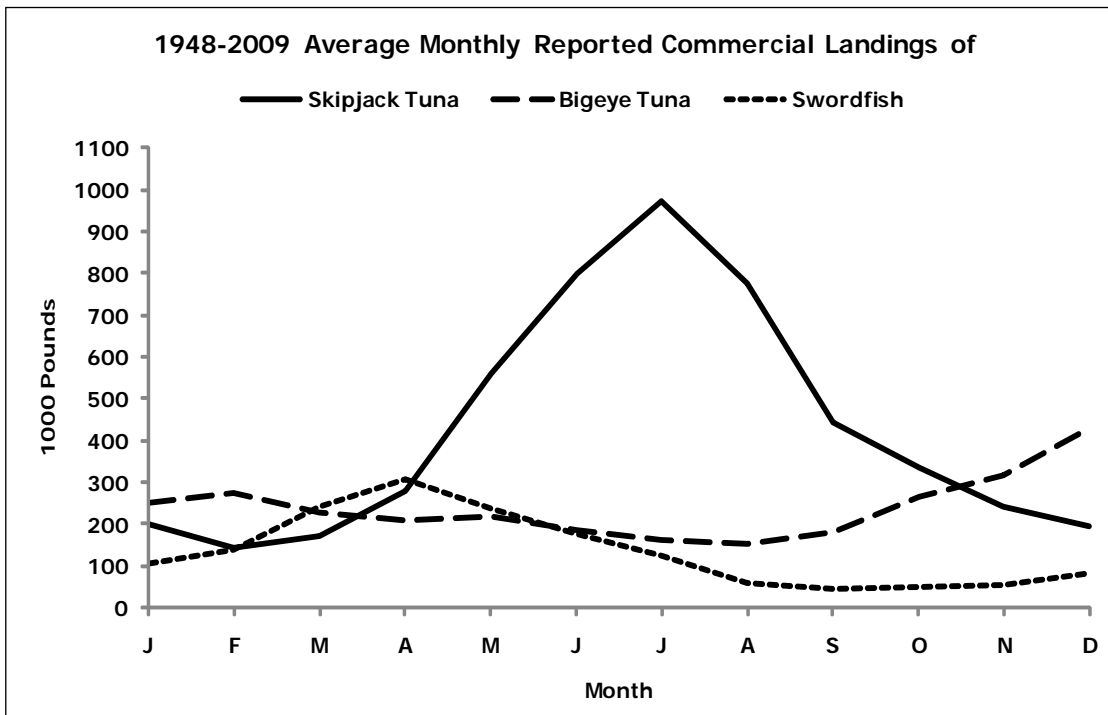


Figure D-2-2

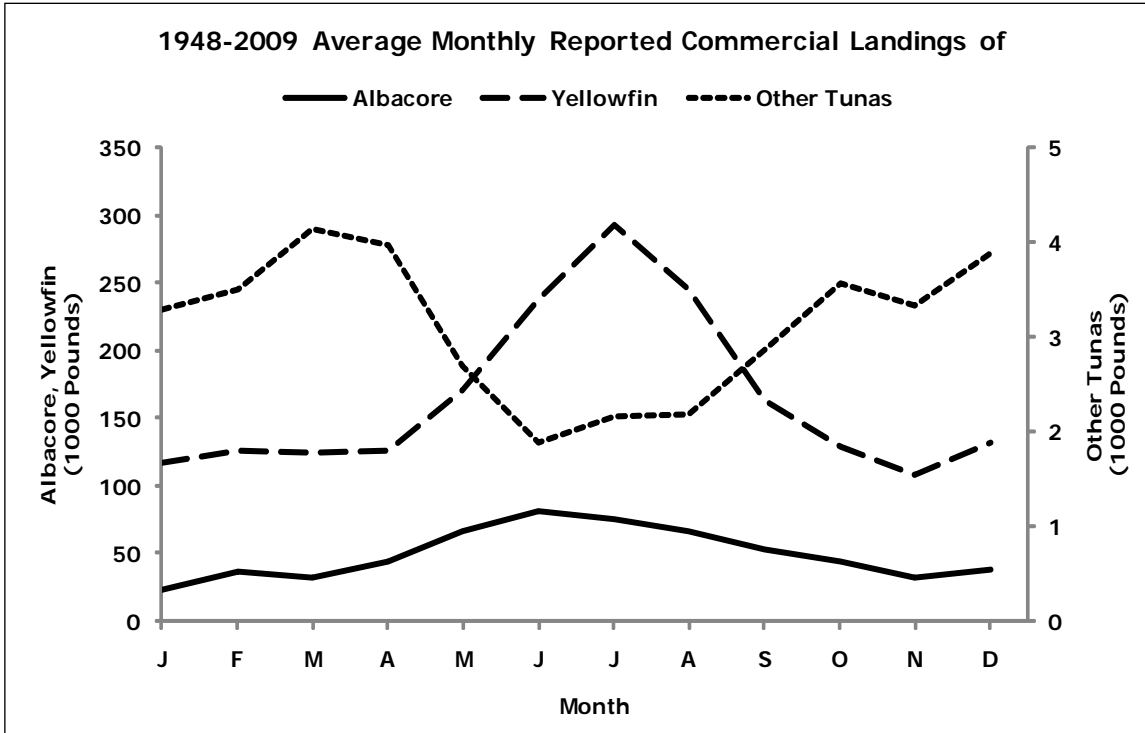


Figure D-2-3

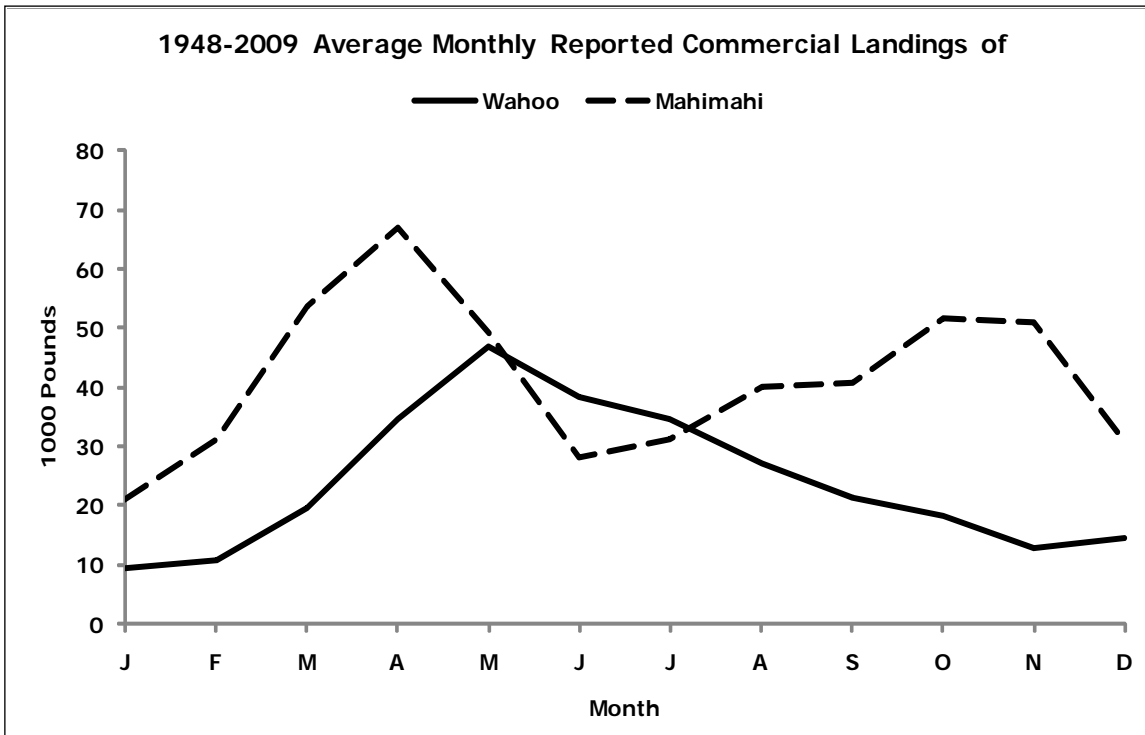


Figure D-2-4

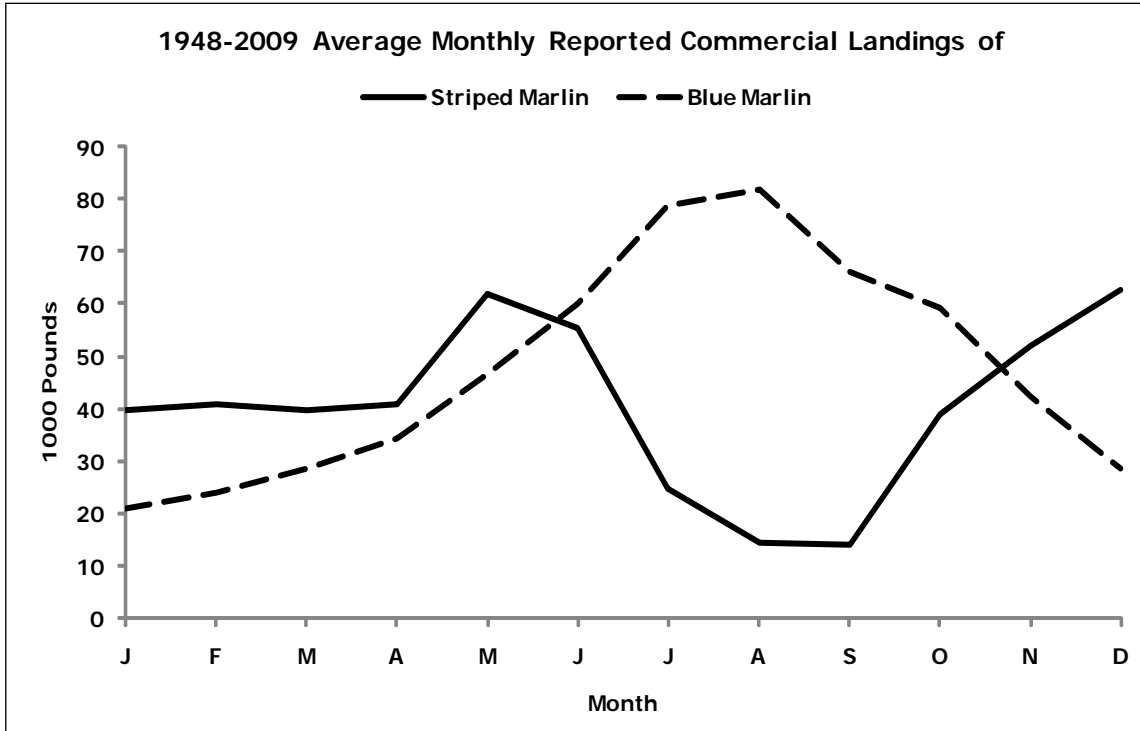


Figure D-2-5

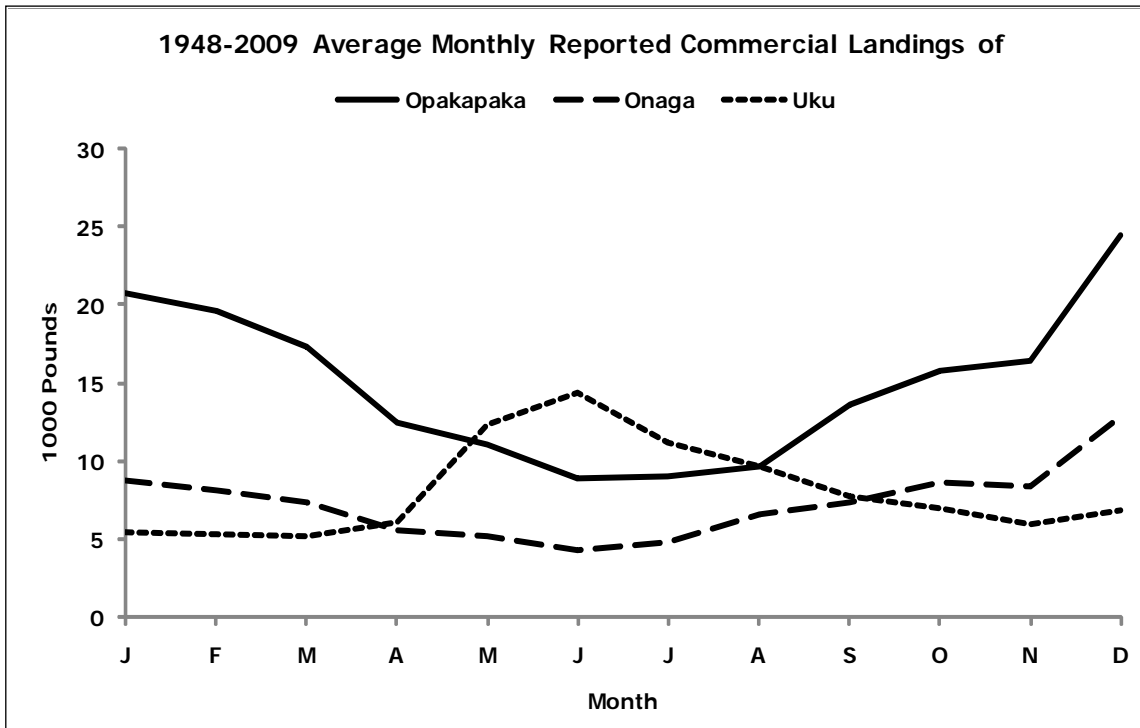


Figure D-2-6

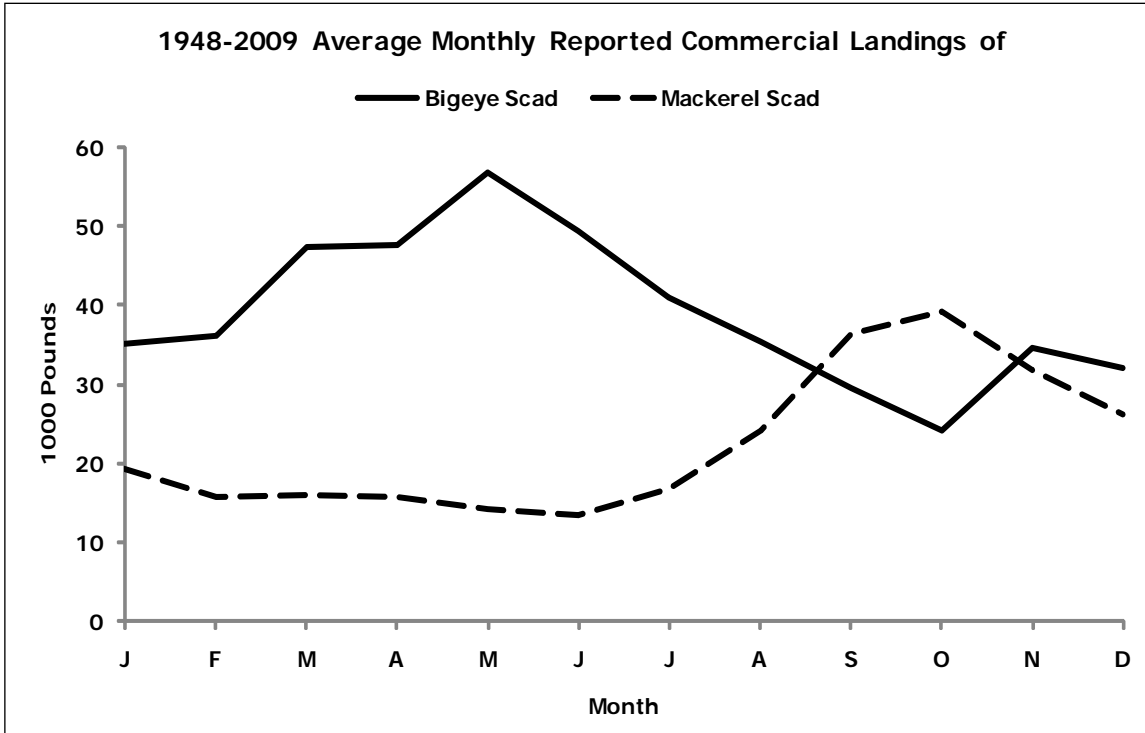


Figure D-2-7

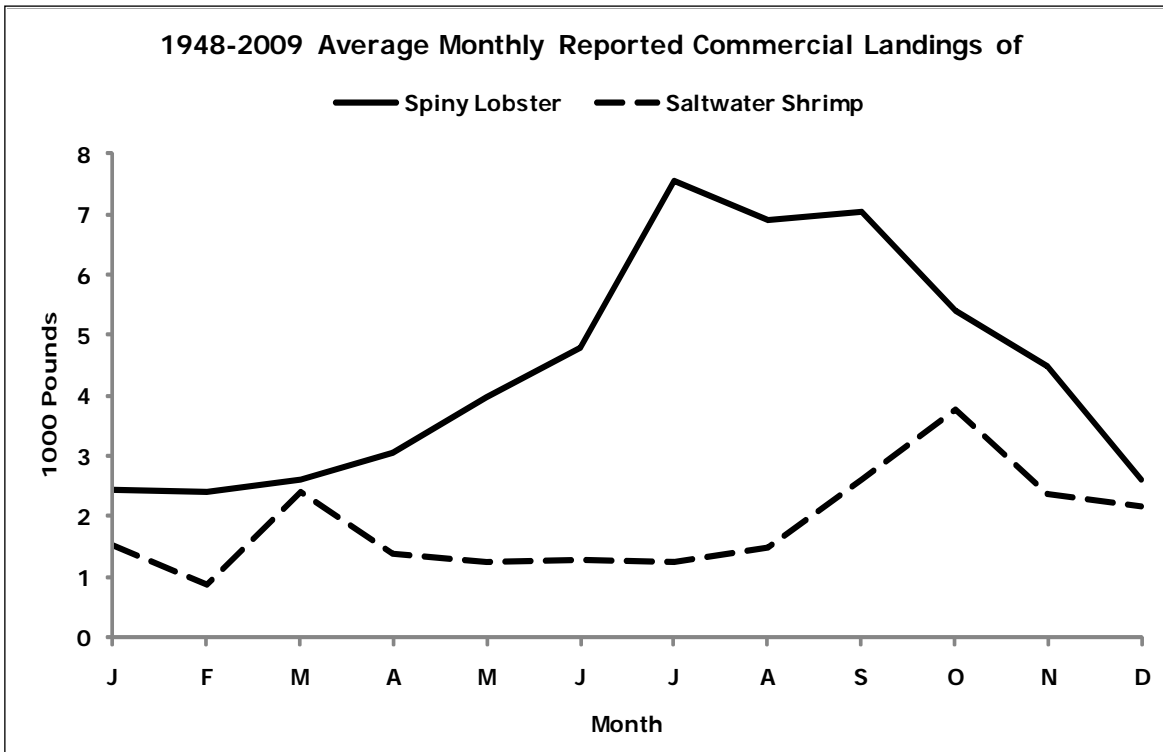


Figure D-2-8

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

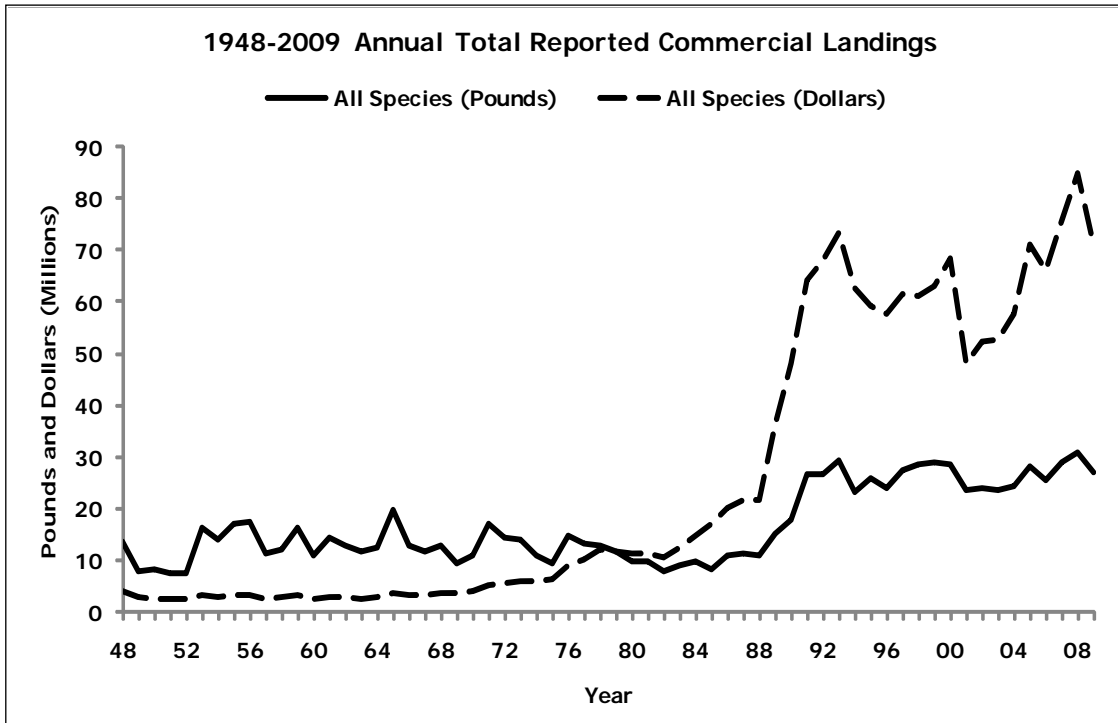


Figure D-3-1

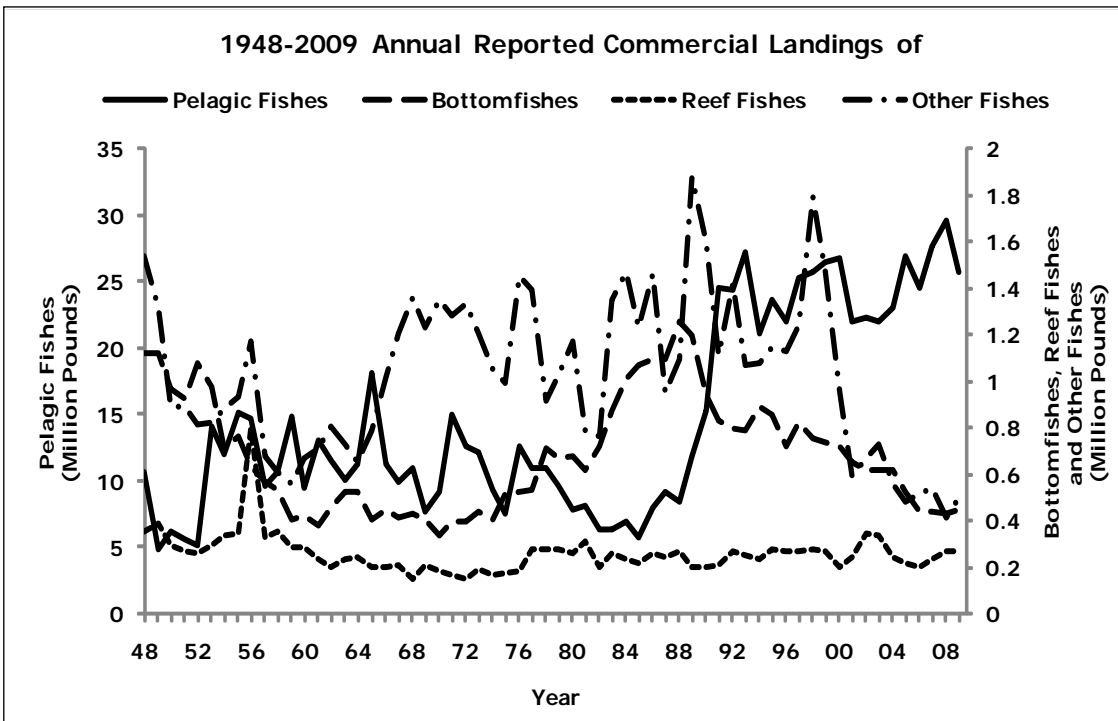


Figure D-3-2

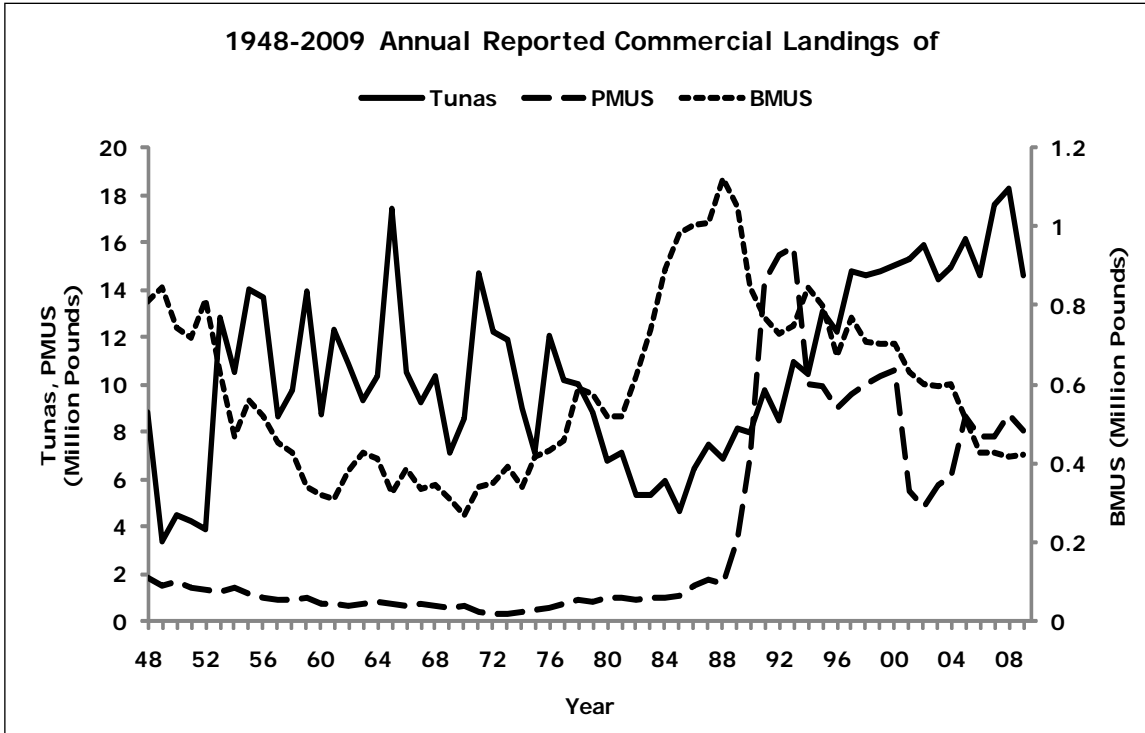


Figure D-3-3

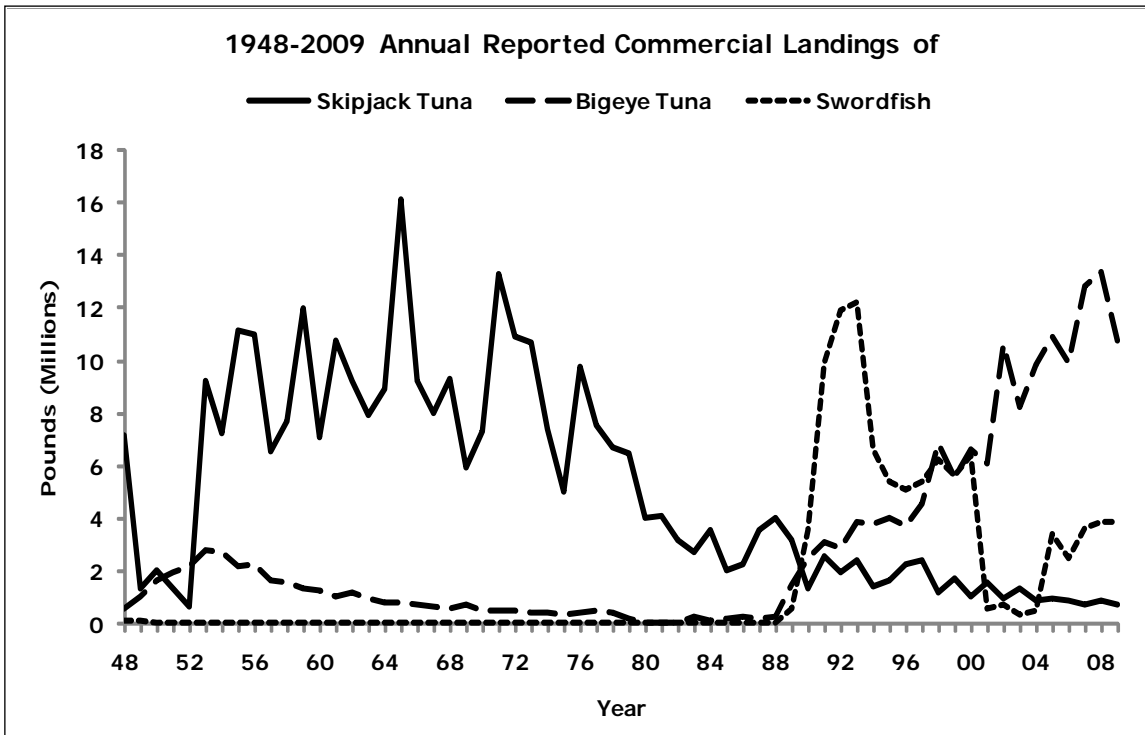


Figure D-3-4

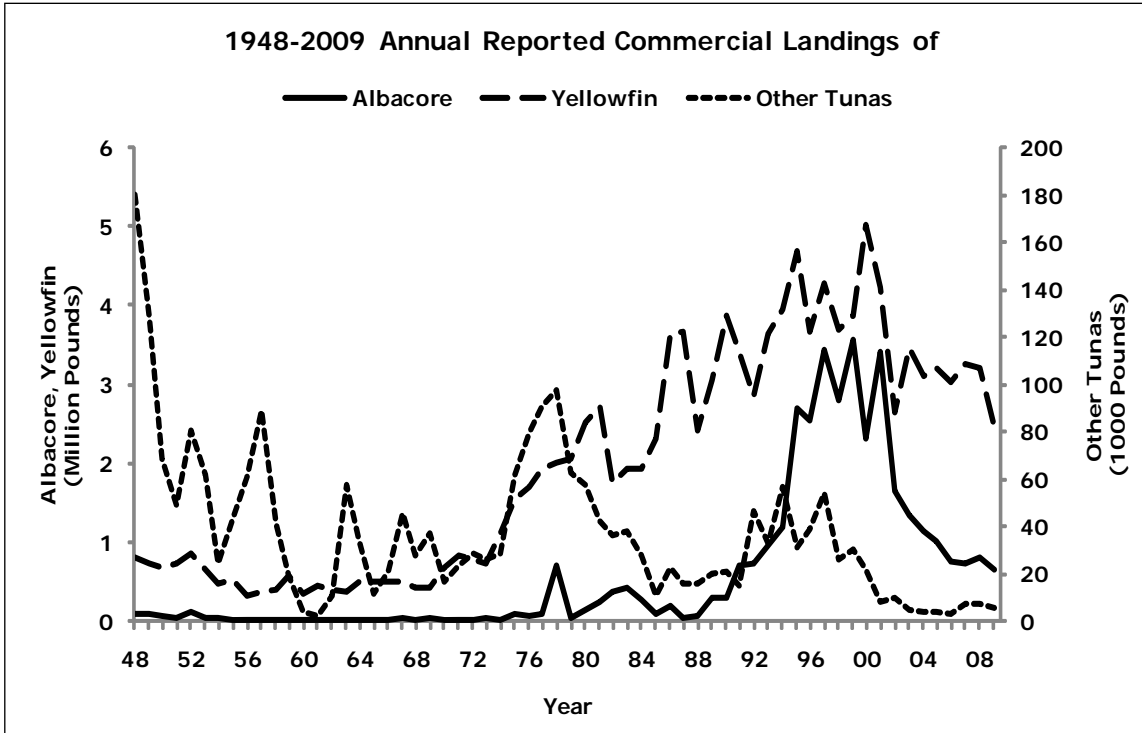


Figure D-3-5

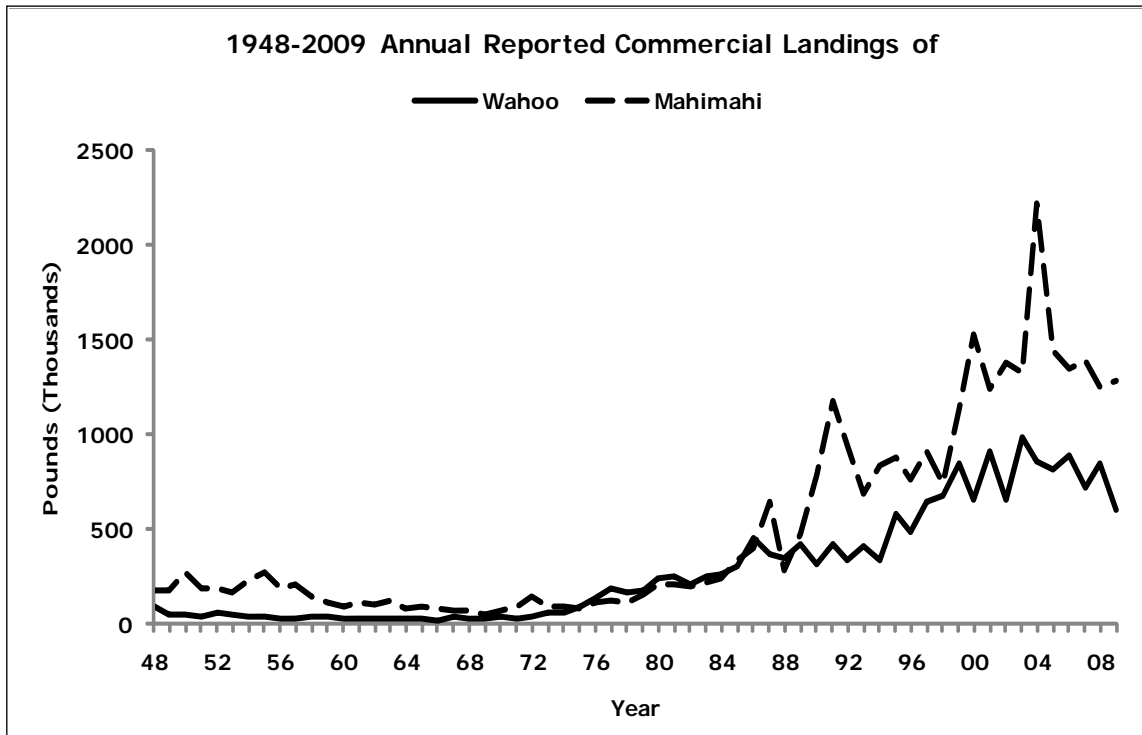


Figure D-3-6

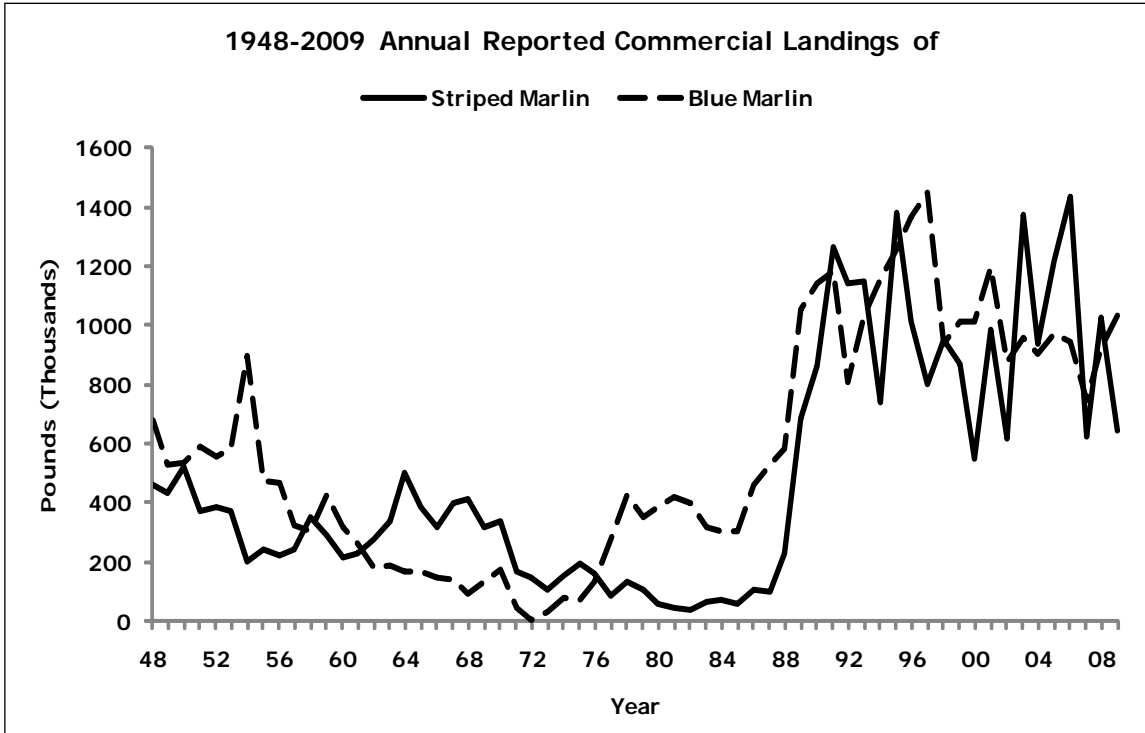


Figure D-3-7

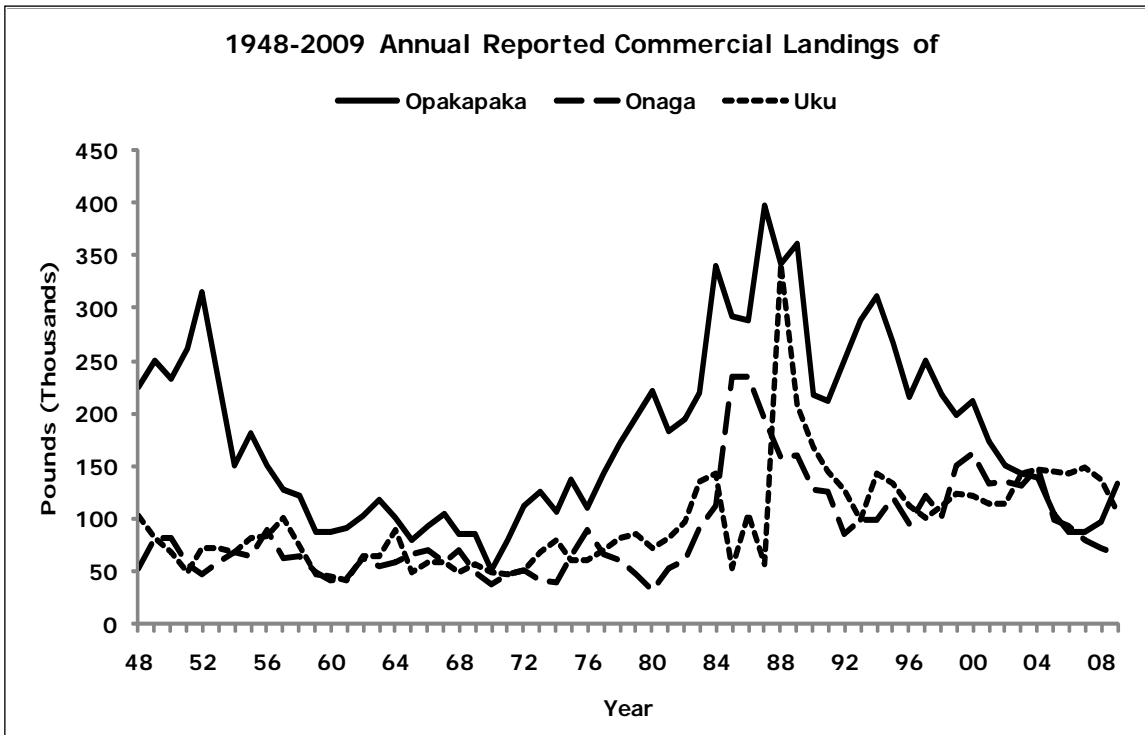


Figure D-3-8

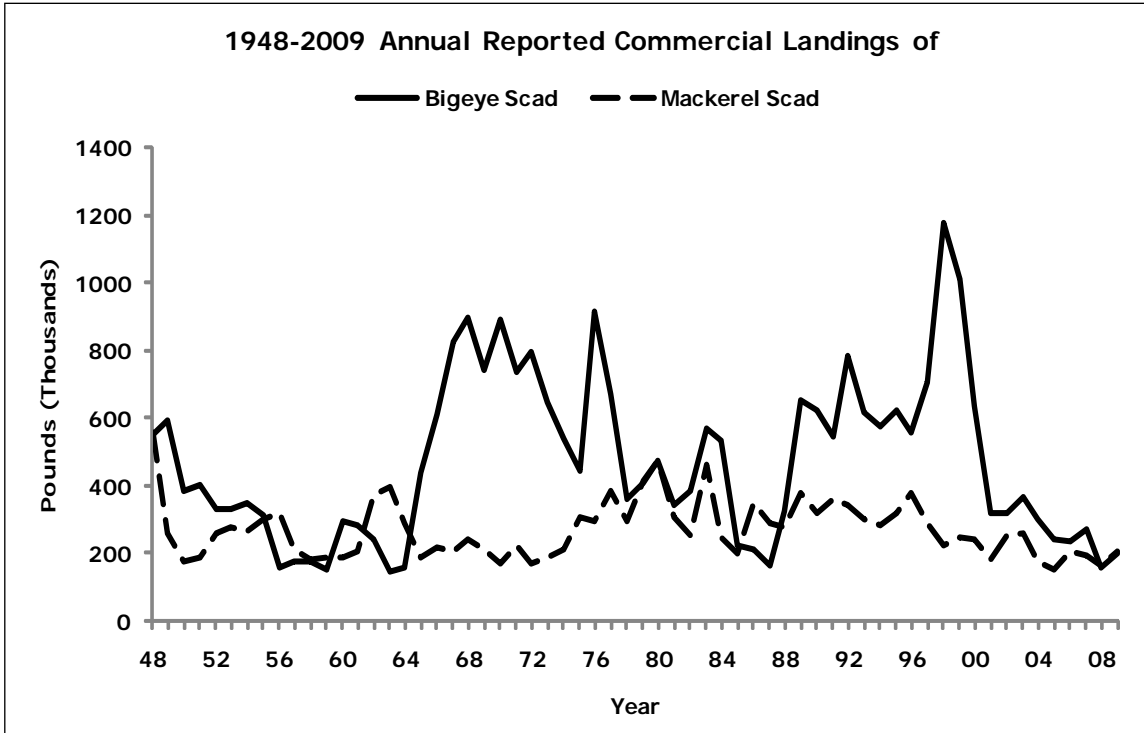


Figure D-3-9

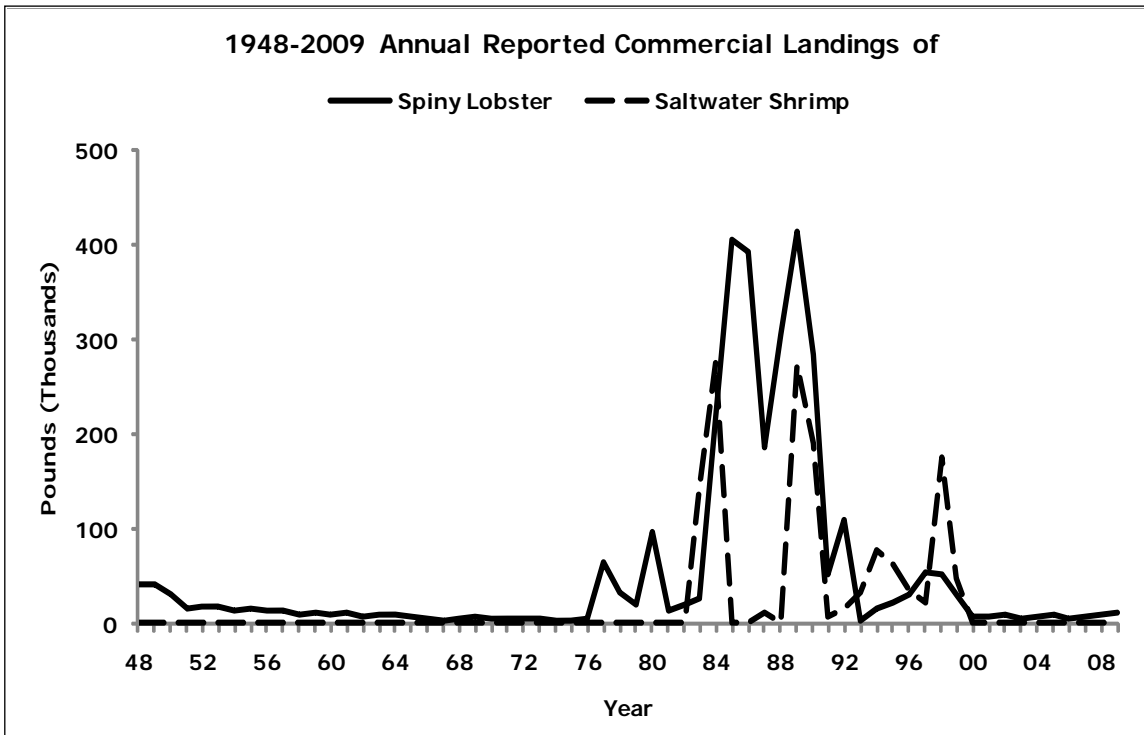


Figure D-3-10

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

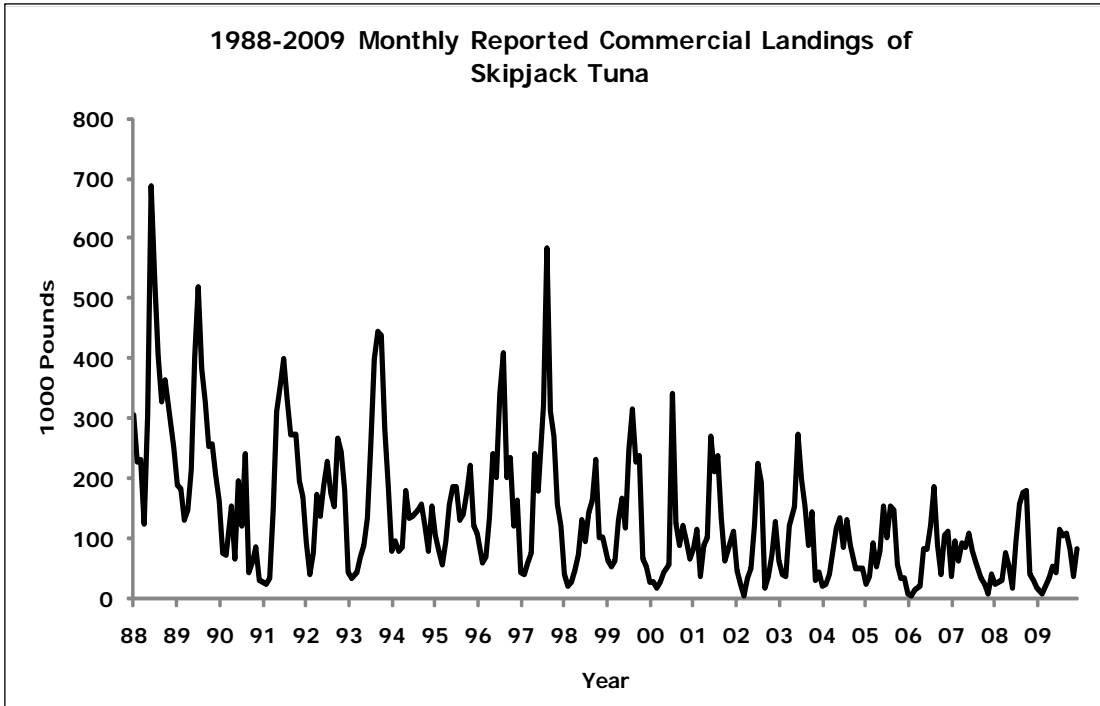


Figure D-4-1

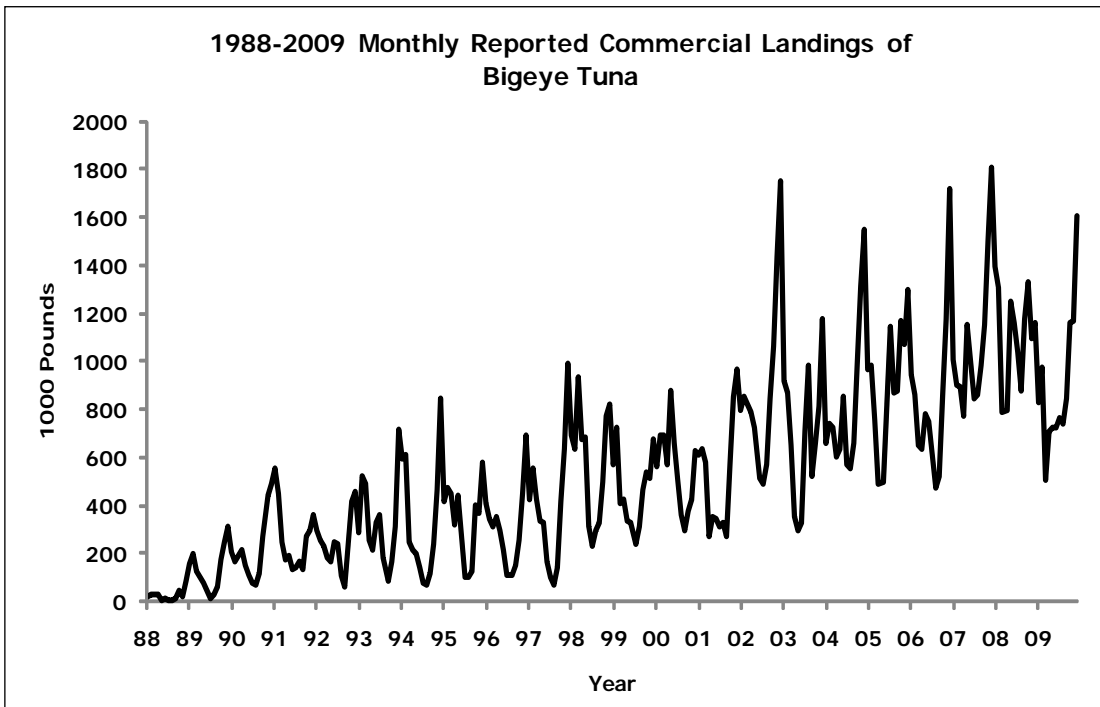


Figure D-4-2

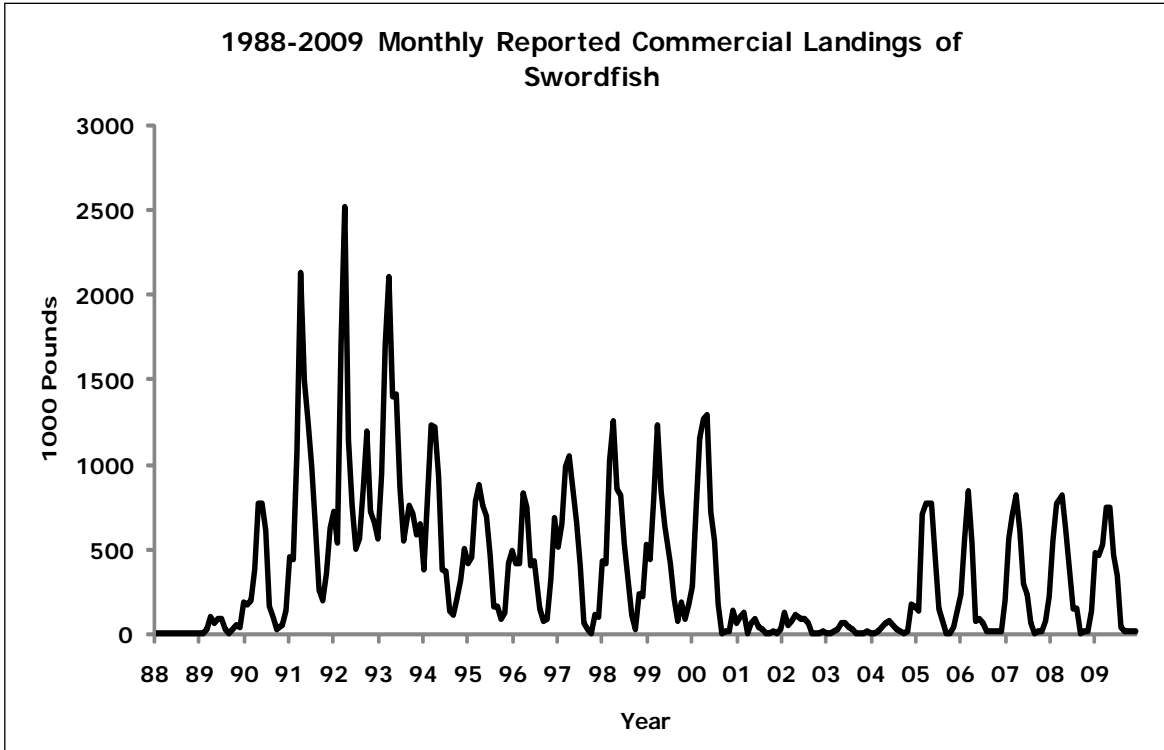


Figure D-4-3

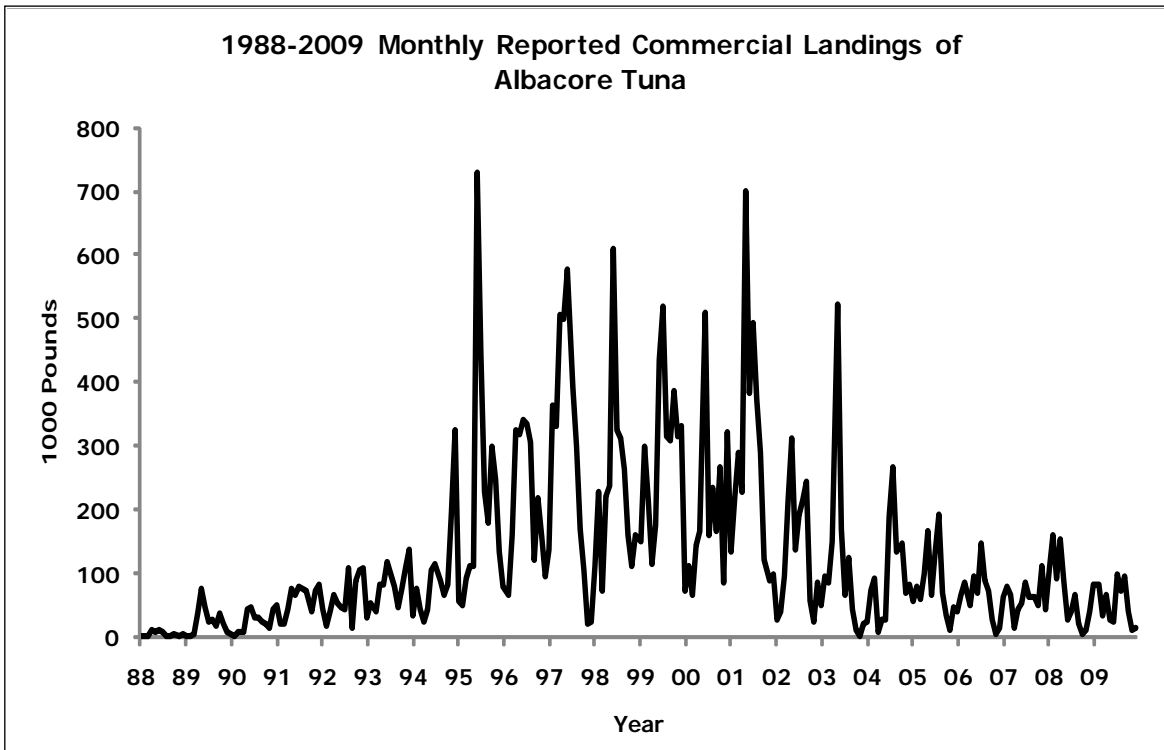


Figure D-4-4

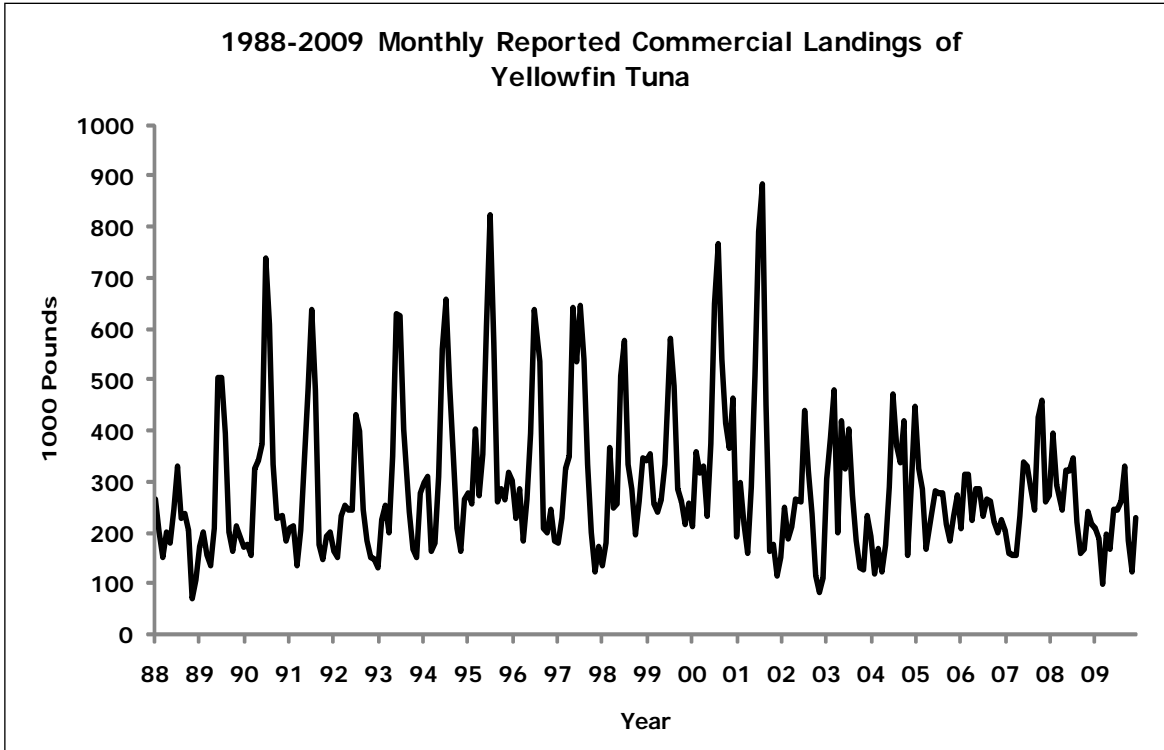


Figure D-4-5

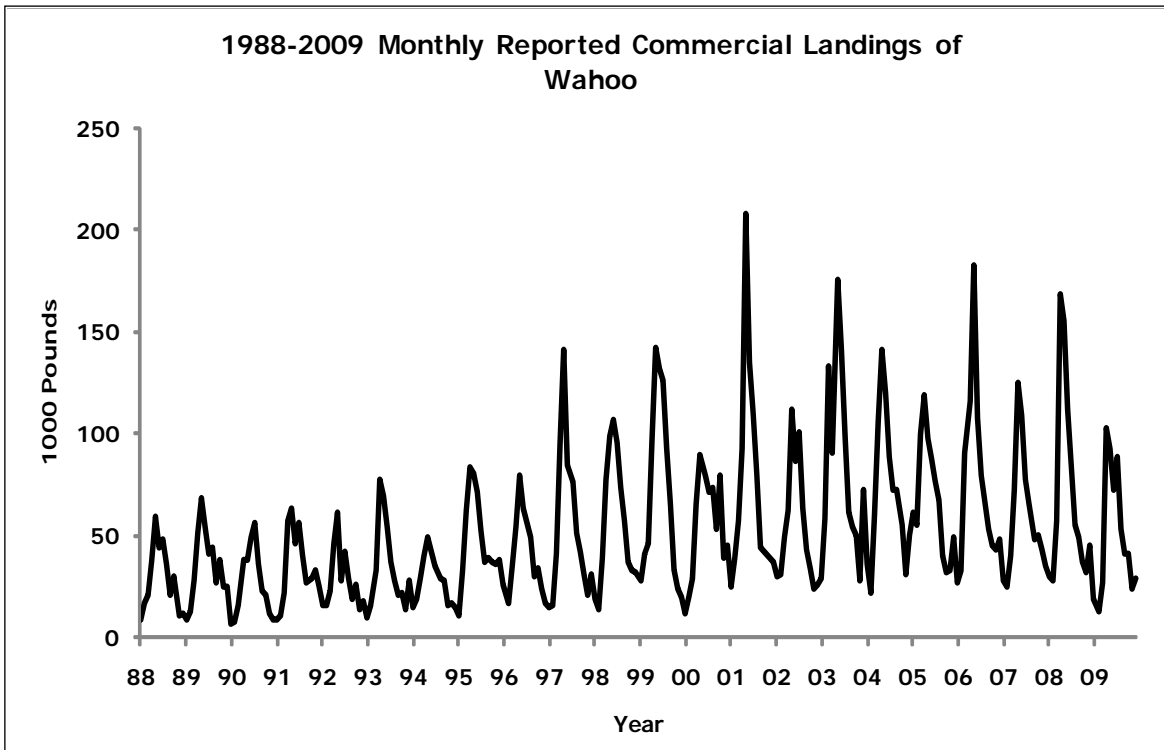


Figure D-4-6

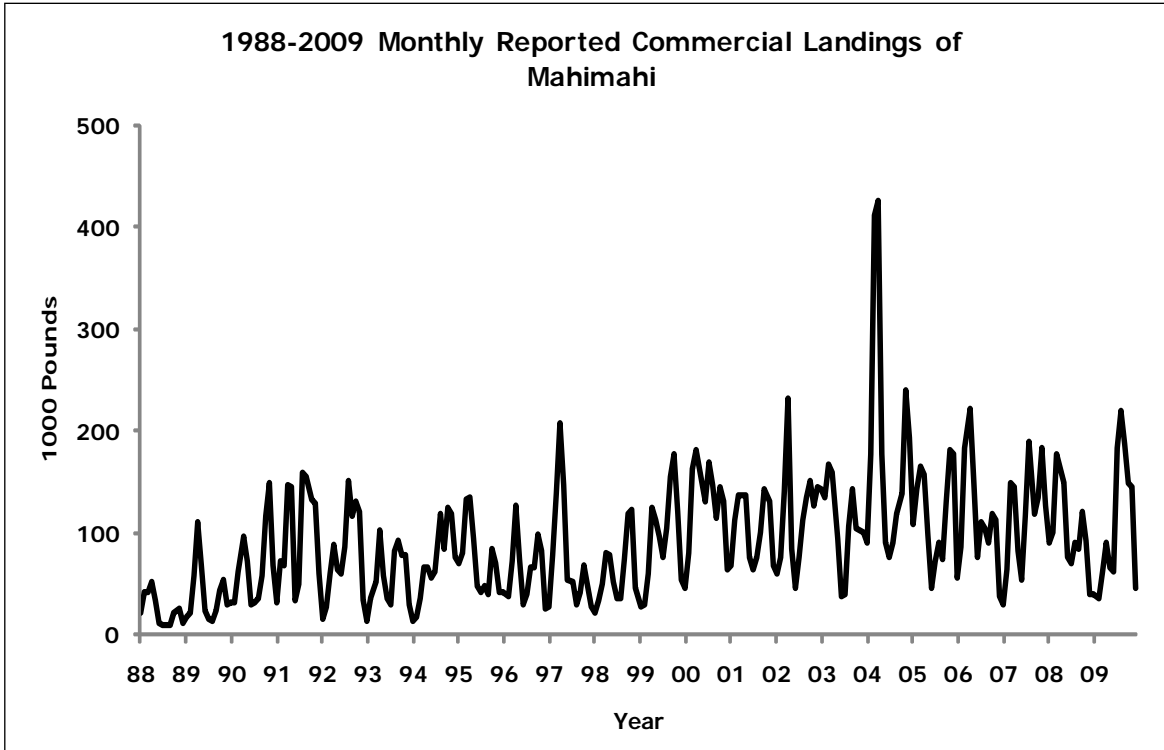


Figure D-4-7

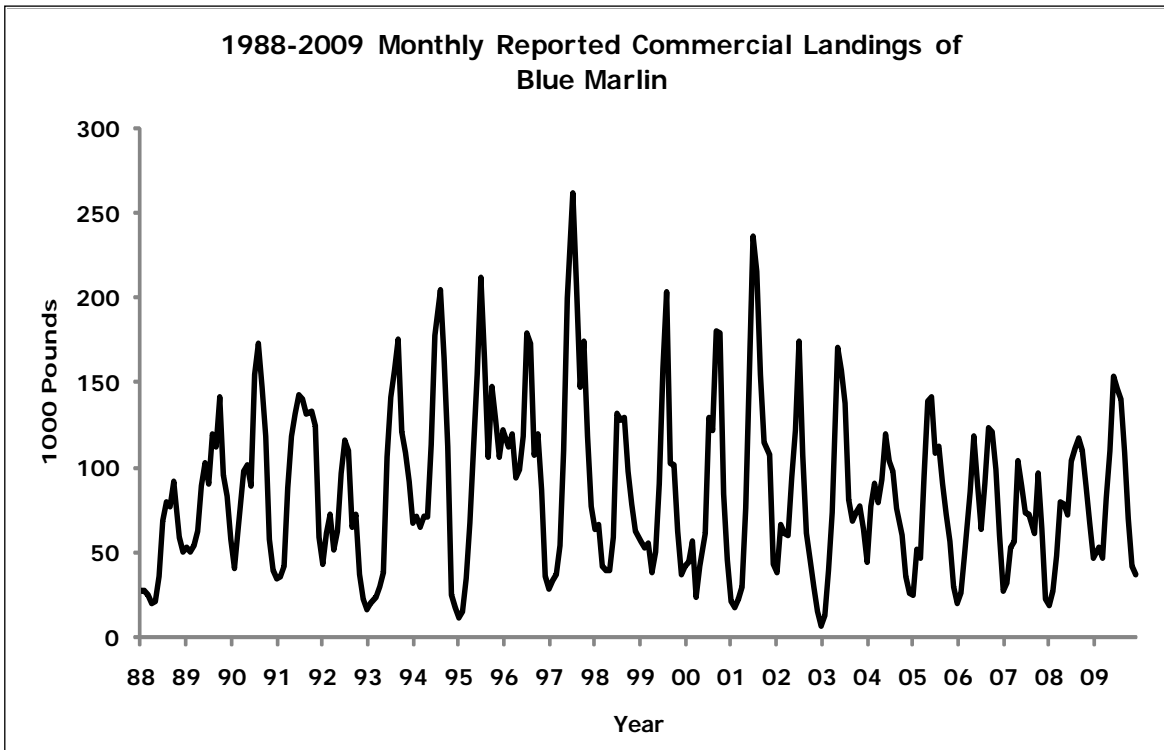


Figure D-4-8

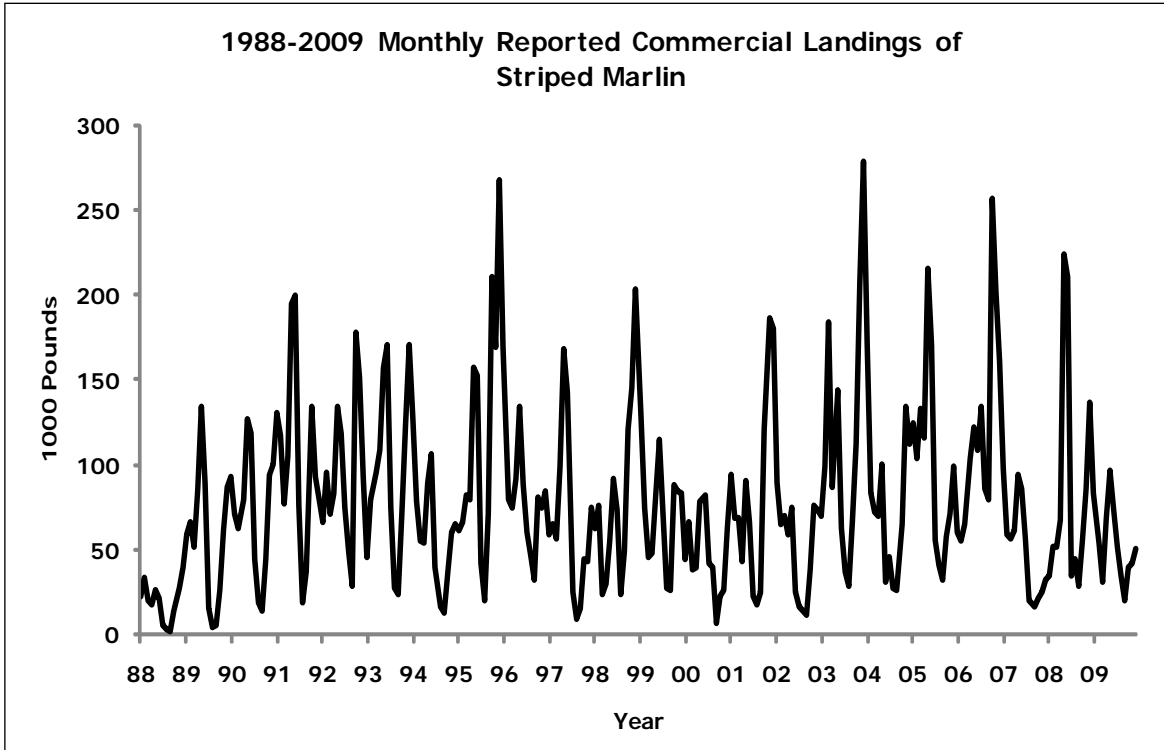


Figure D-4-9

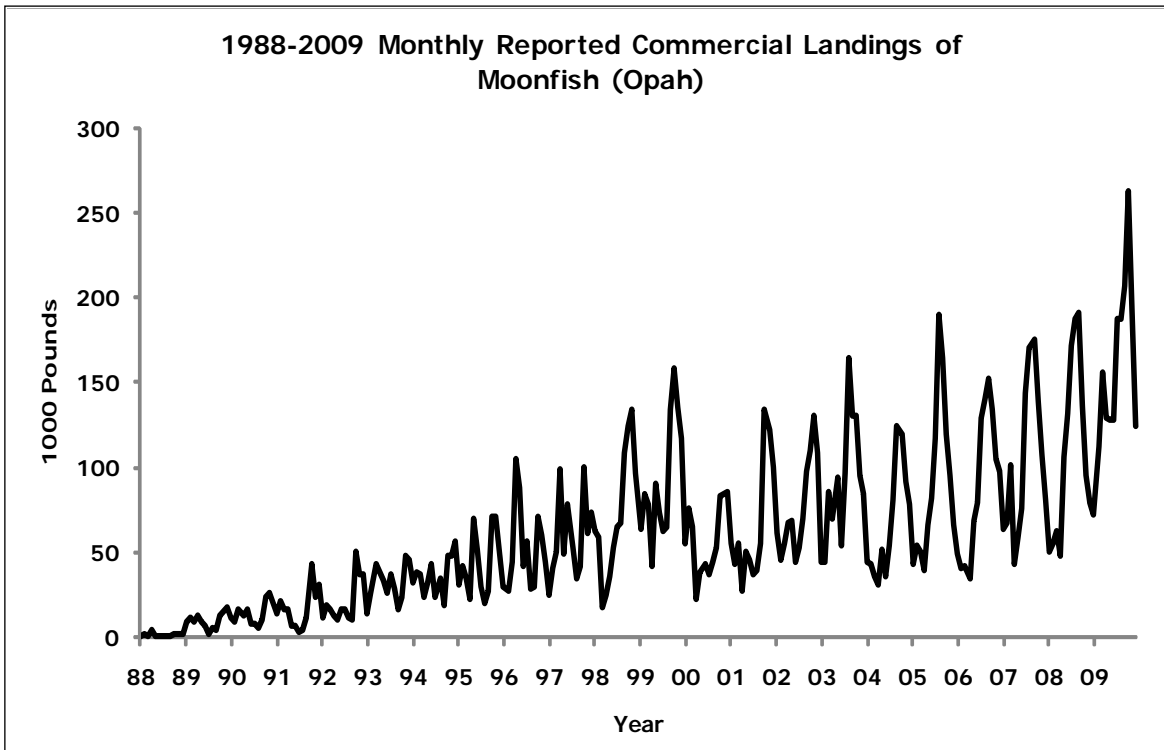


Figure D-4-10

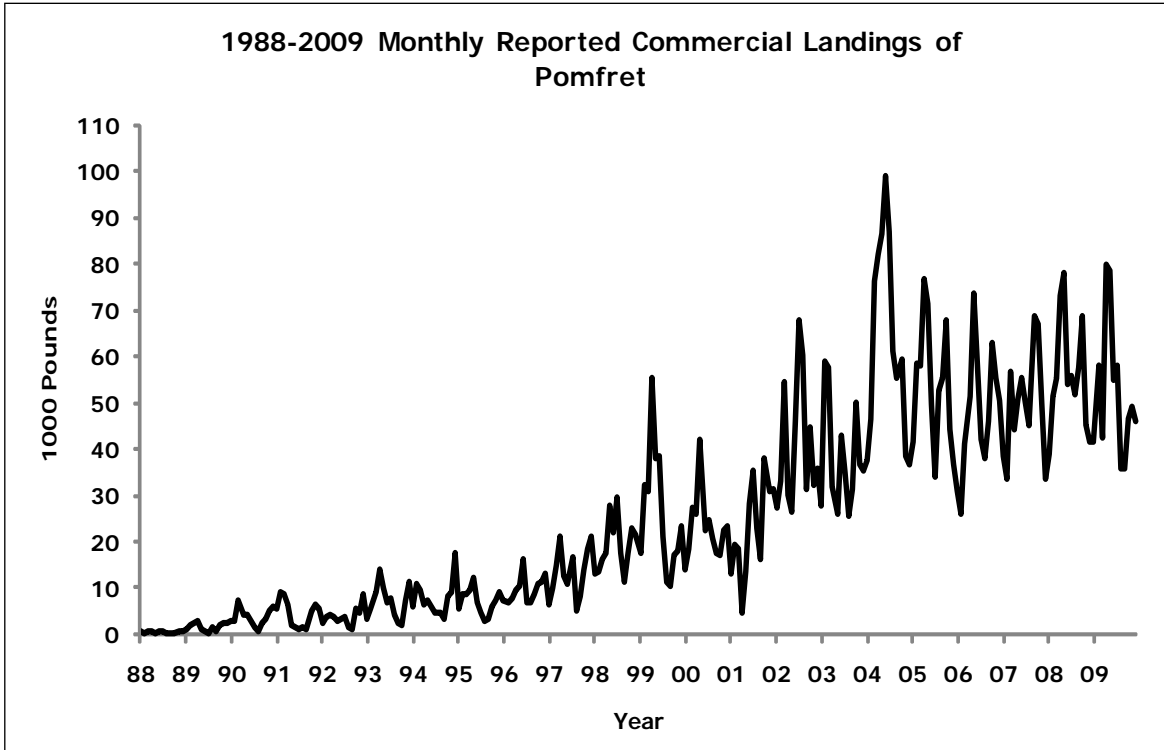


Figure D-4-11

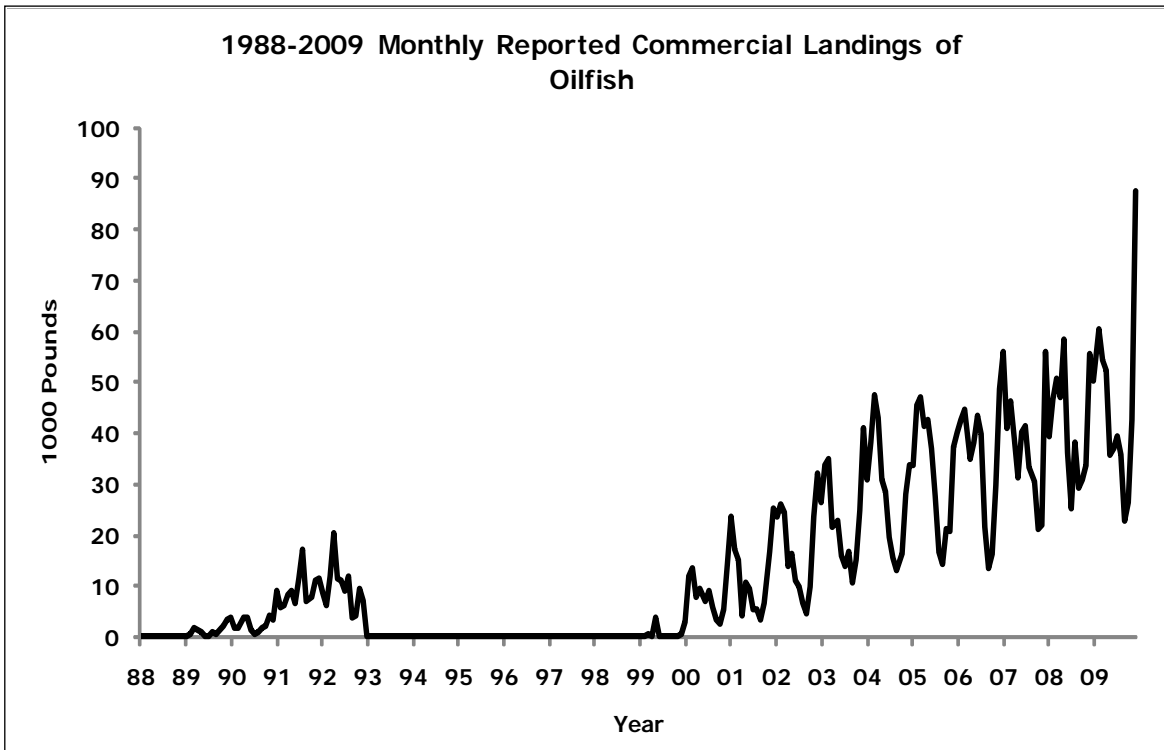


Figure D-4-12

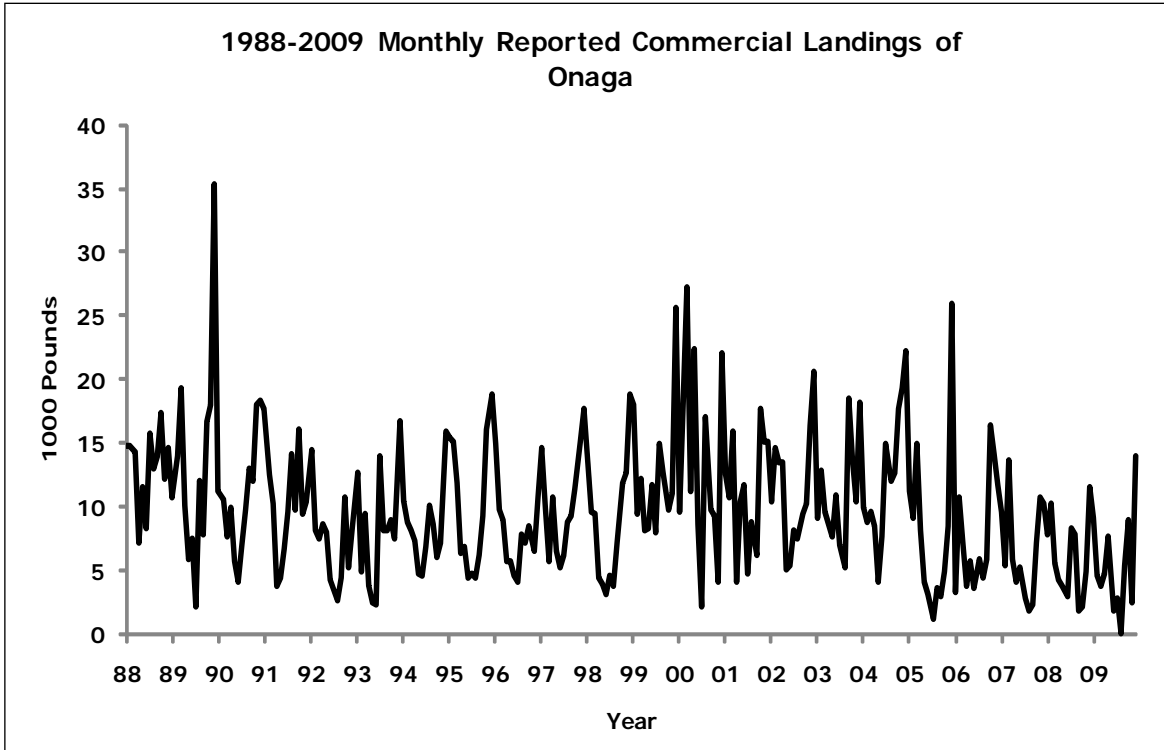


Figure D-4-13

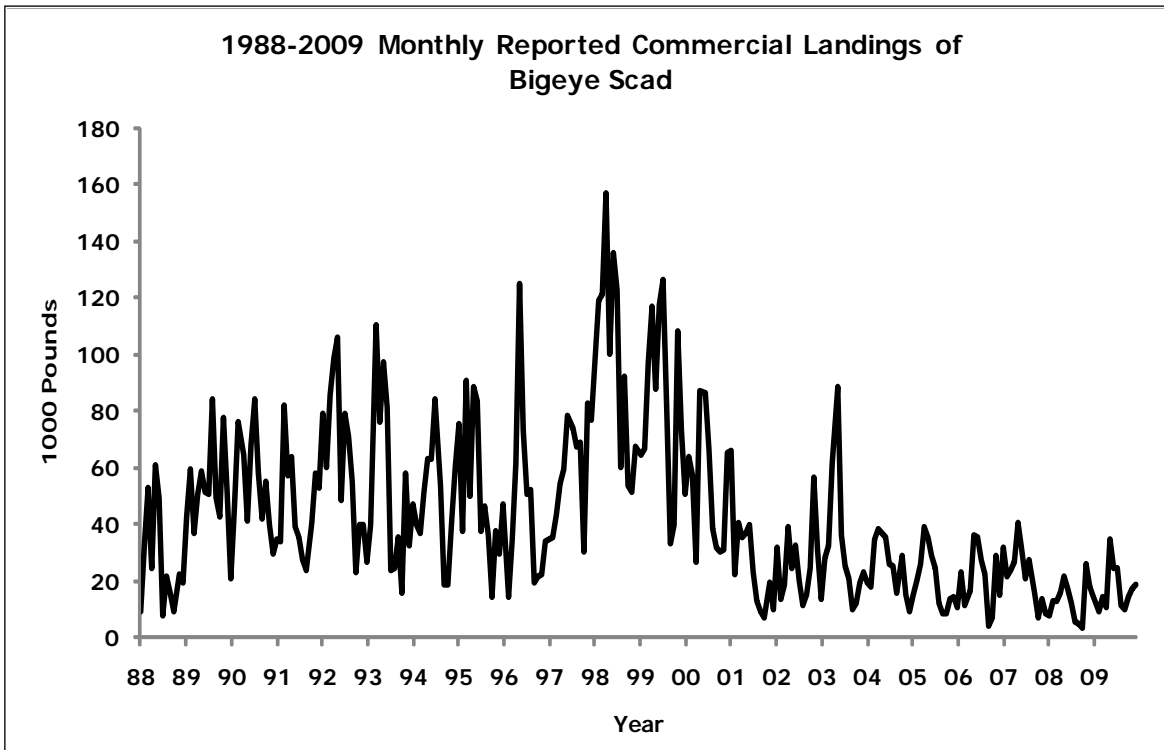


Figure D-4-14