

**COMMONWEALTH OF THE  
NORTHERN MARIANA ISLANDS  
2011 FISHERY STATISTICS**

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

August 2013



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# COMMONWEALTH OF THE NORTHERN MARIANA ISLANDS 2011 FISHERY STATISTICS

## INTRODUCTION

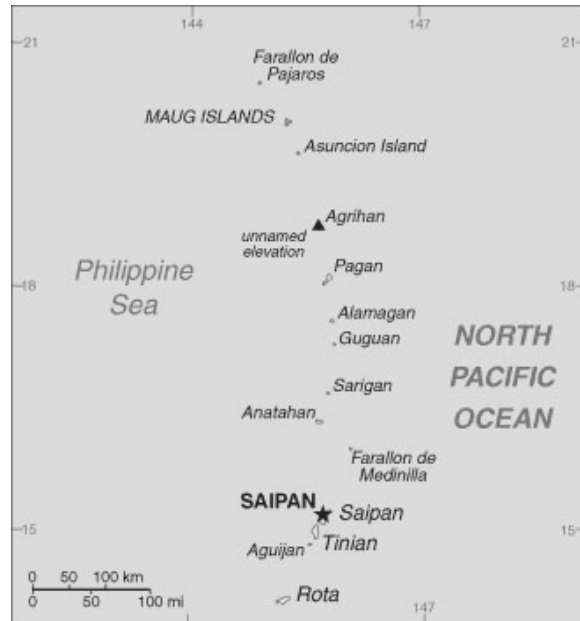
*Location:* 14° to 21°N latitude, 145°E longitude

*Main Islands:* Saipan, Rota, Tinian

*Population:* about 51,170 (*The World Factbook*, July 2013 estimate)

*Economy:* tourism, trade, agriculture

The domestic commercial fishery of the Commonwealth of the Northern Mariana Islands (CNMI) is mainly a small boat, troll fishery. Most of boats are 12-to-24-foot, outboard-powered, runabout-type vessels, that make trolling trips of generally a day or less in duration. There are a few larger boats which, in addition to trolling, have been used in recent years for bottomfishing around the islands north of Saipan. There is also a small charter fleet.



CNMI

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

Although trolling is the most common fishing method, 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. 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 began its efforts to improve data collecting and processing systems in the Commonwealth by providing computer hardware, software, and training. Since then, numerous system upgrades and replacements have been implemented to keep up with changing technologies and increasing demands for improved fisheries statistics.

## DATA COLLECTION

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

## B.2

DFW's principal domestic commercial fisheries data collection method is a dealer invoicing system, sometimes referred to as a "trip ticket system." The DFW provides numbered invoices, each with a duplicate carbonless copy, to all purchasers of fresh fishery products (including hotels, restaurants, stores, fish markets, and roadside vendors). These fish vendors complete an invoice each time they purchase fish directly from fishers. One copy goes to the DFW, and the other is maintained for their records.

Some advantages of this data collection method include the facts that it is relatively inexpensive to implement and maintain, and makes it fairly easy to completely cover the commercial fish vendors in this relatively small island economy. Because DFW is responsible for collecting the invoices in person, another advantage is that DFW staff can provide direct feedback to vendors to ensure data accuracy and continued cooperation. Some of the disadvantages that affect accuracy and completeness of data collected in this manner include: 1) dependency on non-DFW personnel (the vendors) to identify the catch and record the data, 2) restrictions on the types of data that can be requested via the invoice form, 3) reliance on education and cooperation of fish purchasers to ensure the forms are filled out correctly, and 4) limited feedback with fishermen (no fishermen reporting) or other means of checking that fish actually sold to dealers are being reported. These and other factors contribute to the potential for a significant portion of total landings to go unrecorded.

Since 1982, DFW has tried to minimize these drawbacks and maximize the benefits of the vendor invoicing system in several ways. They have tried to maintain a close working relationship with fish dealers, added new dealers to a list used to check on vendor invoices periodically, and monitored reporting. DFW staff have made periodic education and outreach efforts to fish vendors over the years. In addition, DFW implemented a creel survey program that includes boat ramps, ports, and shoreline areas, to help estimate not only commercial landings, but also the recreational and subsistence catch.

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

Information collected by DFW from fish vendors includes the following:

- Date
- Buyer's Name (dealer)
- Seller's Name (fisherman)
- Species
- Invoice Number
- Weight (pounds by species)
- Price per pound (by species)
- Total Sales Value

These data elements are collected for all purchases of fishery products. However, it should be noted that "species" identification is frequently made only to a family or higher taxonomic group level, especially for reef fishes.



## **DATA PROCESSING**

At the beginning of each month, a DFW employee visits each of the fish vendors on Saipan to collect the previous month's invoices, resolve problems, and 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 are entered into the Commercial Purchase System database. After the records are entered, reports are generated using software developed by WPacFIN, to help verify that the data were entered correctly. On a quarterly basis, a copy of the database is sent to the PIFSC-WPacFIN Central Office in Honolulu, where it is transferred to a central computer system and subjected to additional quality control and validation steps before generating summary reports. These nonconfidential reports are then ready for use by WPacFIN participants and clients, including the public. The confidential data warehouses remain the property of the DFW, but can be provided to eligible users, with DFW approval and appropriate nondisclosure agreements in place.

## **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 an estimated subtotal for each species or group for that month. Annual reports contain the total landings for each species and the total recorded landings for all species for the calendar year.

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

## **SPECIES CATEGORIES**

The species and groups that are used in the tables and graphs of DFW data for CNMI are described on the basis of commonly used regional names in this section. These common names, as well as corresponding scientific names, are in the midst of a review and standardization process, and will be updated in the 2012 volume of this publication. Additionally, many of the species included in this report have been categorized into different groups 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 volumes, for the purpose of easier comparison across historical reports. As such, tunas are kept in a separate category. For the most current taxonomic information by agency, species and group, please visit the WPacFIN website, <http://www.pifsc.noaa.gov/wpacfin>.

## B.4

### I. Pelagic Management Unit Species (PMUS)

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

### II. Bottomfish Management Unit Species (BMUS)

|                         |   |
|-------------------------|---|
| Alfonsin                | Green jobfish (uku)                                       |
| Amberjack               | Kalikali (yellowtail, goldflag jobfish)                   |
| Black jack              | Lyretail grouper  |
| Blacktip grouper        | Onaga (red snapper)                                       |
| Blue-lined snapper      | Opakapaka (pink snapper)                                  |
| Ehu (red snapper)       | Redgill emperor   |
| Giant trevally          | Silvermouth (silverjaw snapper, rusty jobfish, deep lehi) |
| Gindai (flower snapper) | Yelloweye opakapaka (golden eye jobfish)                  |

### III. Billfishes

|             |           |
|-------------|-----------|
| Blue marlin | Spearfish |
| Sailfish    |           |

### IV. Tunas

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

### V. Other Tunas

|                 |                 |
|-----------------|-----------------|
| Dogtooth tuna   | Tunas (unknown) |
| Kawakawa (saba) |                 |

### VI. Fisheries Categories

#### A. *Pelagic Fishes*

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

|                                  |                       |
|----------------------------------|-----------------------|
| Bigeyes/Glasseyes (priacanthids) | Reef fishes (unknown) |
| Blue-banded 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                     |                       |

B.6

D. *Other Fishes, Algae & Invertebrates*

|                               |                    |
|-------------------------------|--------------------|
| Bigeye scad (atulai)          | Octopus            |
| Coconut crab                  | Sea cucumbers      |
| Crabs, other                  | Shrimp (saltwater) |
| Invertebrates, other          | Slipper lobster    |
| Lemu (marine algae, seaweeds) | Spiny lobster      |
| Milkfish                      | Squid              |
| Miscellaneous                 | Trochus            |
| Mullet                        |                    |

**Table B-1**  
**CNMI Annual 2011 Estimated Commercial Landings**

| <b>Species</b>  | <b>Pounds</b>  | <b>Value (\$)</b> | <b>Price/Lb (\$)</b> |
|---|----------------|-------------------|----------------------|
| Bigeye scad (atulai)                                      | 24,798         | 59,341            | 2.39                 |
| Jacks   | 560            | 1,378             | 2.46                 |
| Mullet  | 318            | 796               | 2.51                 |
| Black jack  | 528            | 1,169             | 2.22                 |
| Giant trevally  | 96             | 168               | 1.75                 |
| Bottomfishes (unknown)                                    | 228            | 569               | 2.50                 |
| Sickle pomfret  | 2,608          | 5,411             | 2.08                 |
| Ehu (red snapper)   | 1,736          | 6,494             | 3.74                 |
| Gindai (flower snapper)                                   | 1,042          | 3,868             | 3.71                 |
| Blue-lined gindai (ornate jobfish)                        | 188            | 409               | 2.18                 |
| Groupers  | 410            | 1,186             | 2.89                 |
| Kalikali (yellowtail, goldflag jobfish)                   | 4,229          | 10,734            | 2.54                 |
| Onaga (red snapper)                                       | 3,292          | 14,136            | 4.29                 |
| Opakapaka (pink snapper)                                  | 2,908          | 8,747             | 3.01                 |
| Green jobfish (uku)                                       | 816            | 1,620             | 1.99                 |
| Silvermouth (silverjaw snapper, rusty jobfish, deep lehi) | 406            | 1,208             | 2.97                 |
| Eight banded grouper                                      | 238            | 772               | 3.25                 |
| Giant coral trout   | 16             | 41                | 2.50                 |
| Yellow banded grouper                                     | 238            | 475               | 2.00                 |
| Blue-lined snapper  | 1,878          | 4,233             | 2.25                 |
| Reef fishes (unknown)                                     | 21,386         | 58,270            | 2.72                 |
| Wrasses   | 55             | 144               | 2.61                 |
| Rabbitfishes  | 3,978          | 11,900            | 2.99                 |
| Emperors  | 3,696          | 9,236             | 2.50                 |
| Squirrelfishes  | 1,317          | 3,258             | 2.47                 |
| Soldierfishes   | 100            | 150               | 1.50                 |
| Parrotfishes  | 13,214         | 40,852            | 3.09                 |
| Surgeonfishes   | 4,643          | 11,460            | 2.47                 |
| Orangespine unicornfish                                   | 2,804          | 7,009             | 2.50                 |
| Unicornfishes   | 2,229          | 5,572             | 2.50                 |
| Goatfishes  | 3,473          | 8,939             | 2.57                 |
| Bluespine unicornfish                                     | 1,804          | 4,525             | 2.51                 |
| Humphead wrasse   | 113            | 225               | 2.00                 |
| Mahimahi  | 19,361         | 36,988            | 1.91                 |
| Blue marlin   | 175            | 350               | 2.00                 |
| Sailfish  | 38             | 56                | 1.50                 |
| Rainbow runner  | 1,376          | 2,793             | 2.03                 |
| Wahoo   | 7,526          | 14,891            | 1.98                 |
| Skipjack tuna   | 58,420         | 113,308           | 1.94                 |
| Dogtooth tuna   | 3,093          | 5,449             | 1.76                 |
| Yellowfin tuna  | 17,720         | 33,765            | 1.91                 |
| Kawakawa (saba)   | 1,779          | 3,577             | 2.01                 |
| Spiny lobster   | 810            | 5,256             | 6.49                 |
| Octopus   | 1,393          | 2,938             | 2.11                 |
| Squid   | 63             | 156               | 2.50                 |
| <b>TOTAL</b>  | <b>217,092</b> | <b>503,821</b>    | <b>2.32</b>          |

## B.8

**Table B-2**  
**CNMI January 2011 Estimated Commercial Landings**

| <b>Species</b>  | <b>Pounds</b> | <b>Value (\$)</b> | <b>Price/Lb (\$)</b> |
|---|---------------|-------------------|----------------------|
| Bigeye scad (atulai)                                      | 78            | 213               | 2.75                 |
| Jacks   | 60            | 150               | 2.50                 |
| Mullet  | 38            | 94                | 2.50                 |
| Black jack  | 328           | 819               | 2.50                 |
| Ehu (red snapper)   | 129           | 451               | 3.50                 |
| Gindai (flower snapper)                                   | 103           | 359               | 3.50                 |
| Blue-lined gindai (ornate jobfish)                        | 73            | 192               | 2.65                 |
| Groupers  | 70            | 210               | 3.00                 |
| Kalikali (yellowtail, goldflag jobfish)                   | 425           | 1,063             | 2.50                 |
| Opakapaka (pink snapper)                                  | 283           | 762               | 2.70                 |
| Green jobfish (uku)                                       | 73            | 127               | 1.75                 |
| Silvermouth (silverjaw snapper, rusty jobfish, deep lehi) | 115           | 314               | 2.73                 |
| Blue-lined snapper  | 95            | 238               | 2.50                 |
| Reef fishes (unknown)                                     | 576           | 1,441             | 2.50                 |
| Wrasses   | 13            | 38                | 3.00                 |
| Rabbitfishes  | 441           | 1,220             | 2.76                 |
| Emperors  | 340           | 850               | 2.50                 |
| Squirrelfishes  | 118           | 294               | 2.50                 |
| Soldierfishes   | 100           | 150               | 1.50                 |
| Parrotfishes  | 539           | 1,598             | 2.97                 |
| Surgeonfishes   | 169           | 391               | 2.32                 |
| Orangespine unicornfish                                   | 595           | 1,488             | 2.50                 |
| Goatfishes  | 435           | 1,104             | 2.54                 |
| Bluespine unicornfish                                     | 558           | 1,404             | 2.52                 |
| Mahimahi  | 2,090         | 4,148             | 1.98                 |
| Sailfish  | 38            | 56                | 1.50                 |
| Rainbow runner  | 18            | 35                | 2.00                 |
| Wahoo   | 1,234         | 2,468             | 2.00                 |
| Skipjack tuna   | 8,809         | 16,806            | 1.91                 |
| Dogtooth tuna   | 1,574         | 2,694             | 1.71                 |
| Yellowfin tuna  | 4,103         | 6,954             | 1.70                 |
| Kawakawa (saba)   | 33            | 65                | 2.00                 |
| Octopus   | 98            | 195               | 2.00                 |
| <b>TOTAL</b>  | <b>23,743</b> | <b>48,385</b>     | <b>2.04</b>          |

**Table B-3**  
**CNMI February 2011 Estimated Commercial Landings**

| <b>Species</b>                          | <b>Pounds</b> | <b>Value (\$)</b> | <b>Price/Lb (\$)</b> |
|---|---------------|-------------------|----------------------|
| Jacks                                   | 75            | 188               | 2.50                 |
| Mullet                                  | 80            | 203               | 2.53                 |
| Sickle pomfret                          | 63            | 156               | 2.50                 |
| Ehu (red snapper)                       | 40            | 140               | 3.50                 |
| Gindai (flower snapper)                 | 53            | 189               | 3.60                 |
| Blue-lined gindai (ornate jobfish)      | 115           | 218               | 1.89                 |
| Kalikali (yellowtail, goldflag jobfish) | 100           | 250               | 2.50                 |
| Onaga (red snapper)                     | 25            | 69                | 2.75                 |
| Opakapaka (pink snapper)                | 219           | 623               | 2.85                 |
| Green jobfish (uku)                     | 8             | 15                | 2.00                 |
| Yellow banded grouper                   | 238           | 475               | 2.00                 |
| Reef fishes (unknown)                   | 870           | 2,175             | 2.50                 |
| Rabbitfishes                            | 396           | 1,168             | 2.95                 |
| Emperors                                | 9             | 22                | 2.50                 |
| Squirrelfishes                          | 146           | 418               | 2.86                 |
| Parrotfishes                            | 1,135         | 3,409             | 3.00                 |
| Surgeonfishes                           | 904           | 2,128             | 2.35                 |
| Orangespine unicornfish                 | 430           | 1,075             | 2.50                 |
| Unicornfishes                           | 85            | 213               | 2.50                 |
| Goatfishes                              | 409           | 1,056             | 2.58                 |
| Bluespine unicornfish                   | 605           | 1,518             | 2.51                 |
| Mahimahi                                | 5,506         | 10,794            | 1.96                 |
| Rainbow runner                          | 75            | 150               | 2.00                 |
| Wahoo                                   | 2,371         | 4,562             | 1.92                 |
| Skipjack tuna                           | 2,808         | 5,615             | 2.00                 |
| Dogtooth tuna                           | 740           | 1,378             | 1.86                 |
| Yellowfin tuna                          | 2,676         | 5,353             | 2.00                 |
| Octopus                                 | 70            | 140               | 2.00                 |
| <b>TOTAL</b>                            | <b>20,249</b> | <b>43,697</b>     | <b>2.16</b>          |

**Table B-4**  
**CNMI March 2011 Estimated Commercial Landings**

| <b>Species</b>                          | <b>Pounds</b> | <b>Value (\$)</b> | <b>Price/Lb (\$)</b> |
|---|---------------|-------------------|----------------------|
| Mullet                                  | 200           | 500               | 2.50                 |
| Sickle pomfret                          | 50            | 125               | 2.50                 |
| Ehu (red snapper)                       | 35            | 133               | 3.79                 |
| Gindai (flower snapper)                 | 60            | 210               | 3.50                 |
| Kalikali (yellowtail, goldflag jobfish) | 153           | 381               | 2.50                 |
| Onaga (red snapper)                     | 79            | 358               | 4.53                 |
| Opakapaka (pink snapper)                | 66            | 197               | 3.00                 |
| Giant coral trout                       | 16            | 41                | 2.50                 |
| Reef fishes (unknown)                   | 1,218         | 3,571             | 2.93                 |
| Rabbitfishes                            | 700           | 2,178             | 3.11                 |
| Emperors                                | 338           | 798               | 2.36                 |
| Squirrelfishes                          | 303           | 778               | 2.57                 |
| Parrotfishes                            | 440           | 1,328             | 3.02                 |
| Surgeonfishes                           | 713           | 1,816             | 2.55                 |
| Orangespine unicornfish                 | 775           | 1,938             | 2.50                 |
| Unicornfishes                           | 299           | 747               | 2.50                 |
| Goatfishes                              | 460           | 1,150             | 2.50                 |
| Bluespine unicornfish                   | 394           | 984               | 2.50                 |
| Mahimahi                                | 4,381         | 7,477             | 1.71                 |
| Rainbow runner                          | 173           | 345               | 2.00                 |
| Wahoo                                   | 1,274         | 2,548             | 2.00                 |
| Skipjack tuna                           | 6,431         | 11,397            | 1.77                 |
| Dogtooth tuna                           | 50            | 75                | 1.50                 |
| Yellowfin tuna                          | 1,281         | 2,489             | 1.94                 |
| Kawakawa (saba)                         | 111           | 252               | 2.26                 |
| Octopus                                 | 8             | 15                | 2.00                 |
| Squid                                   | 63            | 156               | 2.50                 |
| <b>TOTAL</b>                            | <b>20,066</b> | <b>41,986</b>     | <b>2.09</b>          |



## B.11

**Table B-5**  
**CNMI April 2011 Estimated Commercial Landings**

| <b>Species</b>  | <b>Pounds</b> | <b>Value (\$)</b> | <b>Price/Lb (\$)</b> |
|---|---------------|-------------------|----------------------|
| Bigeye scad (atulai)                                      | 88            | 219               | 2.50                 |
| Jacks   | 83            | 206               | 2.50                 |
| Black jack  | 200           | 350               | 1.75                 |
| Ehu (red snapper)   | 153           | 613               | 4.02                 |
| Gindai (flower snapper)                                   | 125           | 436               | 3.50                 |
| Kalikali (yellowtail, goldflag jobfish)                   | 129           | 338               | 2.62                 |
| Onaga (red snapper)                                       | 8             | 34                | 4.50                 |
| Opakapaka (pink snapper)                                  | 155           | 465               | 3.00                 |
| Green jobfish (uku)                                       | 180           | 360               | 2.00                 |
| Silvermouth (silverjaw snapper, rusty jobfish, deep lehi) | 38            | 163               | 4.33                 |
| Reef fishes (unknown)                                     | 1,485         | 4,246             | 2.86                 |
| Rabbitfishes  | 334           | 897               | 2.69                 |
| Emperors  | 485           | 1,299             | 2.68                 |
| Squirrelfishes  | 211           | 519               | 2.46                 |
| Parrotfishes  | 1,306         | 4,030             | 3.09                 |
| Surgeonfishes   | 998           | 2,494             | 2.50                 |
| Orangespine unicornfish                                   | 336           | 841               | 2.50                 |
| Unicornfishes   | 1,006         | 2,516             | 2.50                 |
| Goatfishes  | 313           | 783               | 2.51                 |
| Mahimahi  | 2,371         | 4,356             | 1.84                 |
| Blue marlin   | 175           | 350               | 2.00                 |
| Rainbow runner  | 219           | 438               | 2.00                 |
| Wahoo   | 493           | 985               | 2.00                 |
| Skipjack tuna   | 6,661         | 11,666            | 1.75                 |
| Dogtooth tuna   | 348           | 558               | 1.60                 |
| Yellowfin tuna  | 2,404         | 4,062             | 1.69                 |
| Kawakawa (saba)   | 190           | 330               | 1.74                 |
| Spiny lobster   | 69            | 518               | 7.53                 |
| Octopus   | 66            | 158               | 2.38                 |
| <b>TOTAL</b>  | <b>20,624</b> | <b>44,225</b>     | <b>2.14</b>          |

**Table B-6**  
**CNMI May 2011 Estimated Commercial Landings**

| <b>Species</b>  | <b>Pounds</b> | <b>Value (\$)</b> | <b>Price/Lb (\$)</b> |
|---|---------------|-------------------|----------------------|
| Jacks   | 113           | 281               | 2.50                 |
| Giant trevally  | 96            | 168               | 1.75                 |
| Ehu (red snapper)   | 235           | 832               | 3.54                 |
| Gindai (flower snapper)                                   | 43            | 152               | 3.57                 |
| Groupers  | 158           | 512               | 3.25                 |
| Kalikali (yellowtail, goldflag jobfish)                   | 235           | 613               | 2.61                 |
| Onaga (red snapper)                                       | 80            | 360               | 4.50                 |
| Opakapaka (pink snapper)                                  | 535           | 1,487             | 2.78                 |
| Green jobfish (uku)                                       | 166           | 333               | 2.00                 |
| Silvermouth (silverjaw snapper, rusty jobfish, deep lehi) | 38            | 135               | 3.60                 |
| Blue-lined snapper  | 563           | 1,170             | 2.08                 |
| Reef fishes (unknown)                                     | 1,773         | 5,208             | 2.94                 |
| Rabbitfishes  | 264           | 703               | 2.66                 |
| Emperors  | 491           | 1,185             | 2.41                 |
| Squirrelfishes  | 114           | 286               | 2.50                 |
| Parrotfishes  | 1,337         | 4,305             | 3.22                 |
| Surgeonfishes   | 576           | 1,439             | 2.50                 |
| Orangespine unicornfish                                   | 313           | 781               | 2.50                 |
| Unicornfishes   | 203           | 506               | 2.50                 |
| Goatfishes  | 193           | 481               | 2.50                 |
| Mahimahi  | 1,995         | 4,159             | 2.08                 |
| Rainbow runner  | 78            | 155               | 2.00                 |
| Wahoo   | 186           | 392               | 2.10                 |
| Skipjack tuna   | 6,637         | 13,362            | 2.01                 |
| Dogtooth tuna   | 88            | 175               | 2.00                 |
| Yellowfin tuna  | 955           | 1,925             | 2.02                 |
| Kawakawa (saba)   | 43            | 85                | 2.00                 |
| Spiny lobster   | 13            | 81                | 6.50                 |
| <b>TOTAL</b>  | <b>17,516</b> | <b>41,272</b>     | <b>2.36</b>          |

## B.13

**Table B-7**  
**CNMI June 2011 Estimated Commercial Landings**

| <b>Species</b>  | <b>Pounds</b> | <b>Value (\$)</b> | <b>Price/Lb (\$)</b> |
|---|---------------|-------------------|----------------------|
| Jacks   | 88            | 206               | 2.36                 |
| Bottomfishes (unknown)                                    | 23            | 56                | 2.50                 |
| Sickle pomfret  | 1,165         | 2,368             | 2.03                 |
| Ehu (red snapper)   | 596           | 2,162             | 3.63                 |
| Gindai (flower snapper)                                   | 10            | 35                | 3.50                 |
| Groupers  | 53            | 139               | 2.64                 |
| Kalikali (yellowtail, goldflag jobfish)                   | 610           | 1,531             | 2.51                 |
| Onaga (red snapper)                                       | 2,758         | 11,921            | 4.32                 |
| Opakapaka (pink snapper)                                  | 701           | 2,598             | 3.70                 |
| Silvermouth (silverjaw snapper, rusty jobfish, deep lehi) | 28            | 76                | 2.75                 |
| Blue-lined snapper  | 144           | 359               | 2.50                 |
| Reef fishes (unknown)                                     | 1,941         | 5,799             | 2.99                 |
| Wrasses   | 43            | 106               | 2.50                 |
| Rabbitfishes  | 626           | 1,957             | 3.12                 |
| Emperors  | 155           | 388               | 2.50                 |
| Squirrelfishes  | 198           | 494               | 2.50                 |
| Parrotfishes  | 1,378         | 4,252             | 3.08                 |
| Surgeonfishes   | 303           | 754               | 2.49                 |
| Orangespine unicornfish                                   | 158           | 394               | 2.50                 |
| Unicornfishes   | 163           | 406               | 2.50                 |
| Goatfishes  | 503           | 1,293             | 2.57                 |
| Mahimahi  | 80            | 160               | 2.00                 |
| Rainbow runner  | 105           | 210               | 2.00                 |
| Skipjack tuna   | 6,511         | 13,147            | 2.02                 |
| Dogtooth tuna   | 50            | 75                | 1.50                 |
| Yellowfin tuna  | 1,295         | 2,713             | 2.10                 |
| Kawakawa (saba)   | 558           | 1,155             | 2.07                 |
| <b>TOTAL</b>  | <b>20,239</b> | <b>54,752</b>     | <b>2.71</b>          |

**Table B-8**  
**CNMI July 2011 Estimated Commercial Landings**

| <b>Species</b>  | <b>Pounds</b> | <b>Value (\$)</b> | <b>Price/Lb (\$)</b> |
|---|---------------|-------------------|----------------------|
| Bigeye scad (atulai)                                      | 413           | 1,160             | 2.81                 |
| Sickle pomfret  | 203           | 419               | 2.07                 |
| Ehu (red snapper)   | 248           | 961               | 3.88                 |
| Gindai (flower snapper)                                   | 550           | 2,125             | 3.86                 |
| Kalikali (yellowtail, goldflag jobfish)                   | 1,464         | 3,663             | 2.50                 |
| Opakapaka (pink snapper)                                  | 361           | 1,017             | 2.82                 |
| Silvermouth (silverjaw snapper, rusty jobfish, deep lehi) | 19            | 53                | 2.85                 |
| Eight banded grouper                                      | 238           | 772               | 3.25                 |
| Blue-lined snapper  | 243           | 381               | 1.57                 |
| Reef fishes (unknown)                                     | 1,529         | 4,586             | 3.00                 |
| Rabbitfishes  | 49            | 164               | 3.37                 |
| Squirrelfishes  | 90            | 225               | 2.50                 |
| Parrotfishes  | 1,643         | 5,269             | 3.21                 |
| Surgeonfishes   | 254           | 634               | 2.50                 |
| Unicornfishes   | 234           | 584               | 2.50                 |
| Goatfishes  | 423           | 1,135             | 2.69                 |
| Humphead wrasse   | 113           | 225               | 2.00                 |
| Mahimahi  | 39            | 97                | 2.50                 |
| Rainbow runner  | 415           | 871               | 2.10                 |
| Skipjack tuna   | 4,463         | 9,274             | 2.08                 |
| Dogtooth tuna   | 73            | 153               | 2.10                 |
| Yellowfin tuna  | 896           | 2,004             | 2.24                 |
| Kawakawa (saba)   | 305           | 610               | 2.00                 |
| Spiny lobster   | 178           | 1,148             | 6.46                 |
| Octopus   | 43            | 213               | 5.00                 |
| <b>TOTAL</b>  | <b>14,479</b> | <b>37,743</b>     | <b>2.61</b>          |

**Table B-9**  
**CNMI August 2011 Estimated Commercial Landings**

| <b>Species</b>                          | <b>Pounds</b> | <b>Value (\$)</b> | <b>Price/Lb (\$)</b> |
|---|---------------|-------------------|----------------------|
| Bigeye scad (atulai)                    | 218           | 654               | 3.00                 |
| Jacks                                   | 48            | 109               | 2.29                 |
| Ehu (red snapper)                       | 191           | 764               | 3.99                 |
| Gindai (flower snapper)                 | 100           | 363               | 3.63                 |
| Kalikali (yellowtail, goldflag jobfish) | 189           | 477               | 2.53                 |
| Onaga (red snapper)                     | 50            | 225               | 4.50                 |
| Opakapaka (pink snapper)                | 91            | 251               | 2.75                 |
| Green jobfish (uku)                     | 64            | 133               | 2.09                 |
| Blue-lined snapper                      | 236           | 591               | 2.50                 |
| Reef fishes (unknown)                   | 1,143         | 3,428             | 3.00                 |
| Rabbitfishes                            | 153           | 492               | 3.23                 |
| Emperors                                | 106           | 266               | 2.50                 |
| Squirrelfishes                          | 100           | 150               | 1.50                 |
| Parrotfishes                            | 420           | 1,322             | 3.15                 |
| Surgeonfishes                           | 454           | 1,134             | 2.50                 |
| Unicornfishes                           | 143           | 356               | 2.50                 |
| Goatfishes                              | 248           | 653               | 2.64                 |
| Mahimahi                                | 33            | 65                | 2.00                 |
| Rainbow runner                          | 179           | 358               | 2.00                 |
| Skipjack tuna                           | 2,133         | 4,613             | 2.16                 |
| Dogtooth tuna                           | 66            | 133               | 2.00                 |
| Yellowfin tuna                          | 376           | 798               | 2.12                 |
| Kawakawa (saba)                         | 500           | 1,000             | 2.00                 |
| Spiny lobster                           | 20            | 100               | 5.00                 |
| Octopus                                 | 70            | 140               | 2.00                 |
| <b>TOTAL</b>                            | <b>7,328</b>  | <b>18,572</b>     | <b>2.53</b>          |

**Table B-10**  
**CNMI September 2011 Estimated Commercial Landings**

| <b>Species</b>  | <b>Pounds</b> | <b>Value (\$)</b> | <b>Price/Lb (\$)</b> |
|---|---------------|-------------------|----------------------|
| Bigeye scad (atulai)                                      | 9,003         | 21,409            | 2.38                 |
| Jacks   | 28            | 69                | 2.50                 |
| Bottomfishes (unknown)                                    | 205           | 513               | 2.50                 |
| Sickle pomfret  | 1,103         | 2,294             | 2.08                 |
| Ehu (red snapper)   | 110           | 440               | 4.00                 |
| Kalikali (yellowtail, goldflag jobfish)                   | 925           | 2,419             | 2.62                 |
| Opakapaka (pink snapper)                                  | 470           | 1,272             | 2.71                 |
| Green jobfish (uku)                                       | 79            | 158               | 2.00                 |
| Silvermouth (silverjaw snapper, rusty jobfish, deep lehi) | 18            | 48                | 2.75                 |
| Blue-lined snapper  | 378           | 944               | 2.50                 |
| Reef fishes (unknown)                                     | 2,776         | 7,458             | 2.69                 |
| Rabbitfishes  | 241           | 827               | 3.43                 |
| Emperors  | 25            | 63                | 2.50                 |
| Squirrelfishes  | 15            | 38                | 2.50                 |
| Parrotfishes  | 1,847         | 5,830             | 3.16                 |
| Surgeonfishes   | 179           | 431               | 2.41                 |
| Goatfishes  | 273           | 737               | 2.70                 |
| Bluespine unicornfish                                     | 35            | 88                | 2.50                 |
| Skipjack tuna   | 4,893         | 9,277             | 1.90                 |
| Yellowfin tuna  | 613           | 1,225             | 2.00                 |
| Kawakawa (saba)   | 14            | 28                | 2.00                 |
| Spiny lobster   | 531           | 3,410             | 6.42                 |
| Octopus   | 200           | 400               | 2.00                 |
| <b>TOTAL</b>  | <b>23,957</b> | <b>59,374</b>     | <b>2.48</b>          |

**Table B-11**  
**CNMI October 2011 Estimated Commercial Landings**

| <b>Species</b>  | <b>Pounds</b> | <b>Value (\$)</b> | <b>Price/Lb (\$)</b> |
|---|---------------|-------------------|----------------------|
| Bigeye scad (atulai)                                      | 10,119        | 23,369            | 2.31                 |
| Jacks   | 33            | 81                | 2.50                 |
| Sickle pomfret  | 25            | 50                | 2.00                 |
| Groupers  | 105           | 263               | 2.50                 |
| Onaga (red snapper)                                       | 30            | 120               | 4.00                 |
| Opakapaka (pink snapper)                                  | 28            | 76                | 2.75                 |
| Green jobfish (uku)                                       | 248           | 495               | 2.00                 |
| Silvermouth (silverjaw snapper, rusty jobfish, deep lehi) | 153           | 419               | 2.75                 |
| Blue-lined snapper  | 170           | 425               | 2.50                 |
| Reef fishes (unknown)                                     | 2,833         | 7,081             | 2.50                 |
| Rabbitfishes  | 548           | 1,624             | 2.97                 |
| Emperors  | 1,488         | 3,719             | 2.50                 |
| Squirrelfishes  | 23            | 56                | 2.50                 |
| Parrotfishes  | 2,538         | 7,613             | 3.00                 |
| Surgeonfishes   | 23            | 56                | 2.50                 |
| Orangespine unicornfish                                   | 78            | 194               | 2.50                 |
| Goatfishes  | 146           | 366               | 2.50                 |
| Bluespine unicornfish                                     | 213           | 531               | 2.50                 |
| Mahimahi  | 223           | 445               | 2.00                 |
| Rainbow runner  | 75            | 150               | 2.00                 |
| Wahoo   | 298           | 595               | 2.00                 |
| Skipjack tuna   | 2,628         | 5,255             | 2.00                 |
| Yellowfin tuna  | 1,626         | 3,253             | 2.00                 |
| Octopus   | 486           | 973               | 2.00                 |
| <b>TOTAL</b>  | <b>24,130</b> | <b>57,208</b>     | <b>2.37</b>          |

**Table B-12**  
**CNMI November 2011 Estimated Commercial Landings**

| <b>Species</b>        | <b>Pounds</b> | <b>Value (\$)</b> | <b>Price/Lb (\$)</b> |
|-----------------------|---------------|-------------------|----------------------|
| Bigeye scad (atulai)  | 2,555         | 6,388             | 2.50                 |
| Jacks                 | 35            | 88                | 2.50                 |
| Blue-lined snapper    | 50            | 125               | 2.50                 |
| Reef fishes (unknown) | 1,819         | 4,716             | 2.59                 |
| Rabbitfishes          | 125           | 375               | 3.00                 |
| Emperors              | 124           | 311               | 2.50                 |
| Parrotfishes          | 458           | 1,373             | 3.00                 |
| Mahimahi              | 1,339         | 2,678             | 2.00                 |
| Rainbow runner        | 41            | 83                | 2.00                 |
| Wahoo                 | 809           | 1,618             | 2.00                 |
| Skipjack tuna         | 1,456         | 2,913             | 2.00                 |
| Dogtooth tuna         | 93            | 185               | 2.00                 |
| Yellowfin tuna        | 838           | 1,675             | 2.00                 |
| Octopus               | 10            | 20                | 2.00                 |
| <b>TOTAL</b>          | <b>9,751</b>  | <b>22,544</b>     | <b>2.31</b>          |



**Table B-13**  
**CNMI December 2011 Estimated Commercial Landings**

| <b>Species</b>          | <b>Pounds</b> | <b>Value (\$)</b> | <b>Price/Lb (\$)</b> |
|-------------------------|---------------|-------------------|----------------------|
| Bigeye scad (atulai)    | 2,326         | 5,928             | 2.55                 |
| Groupers                | 25            | 63                | 2.50                 |
| Onaga (red snapper)     | 263           | 1,050             | 4.00                 |
| Reef fishes (unknown)   | 3,425         | 8,563             | 2.50                 |
| Rabbitfishes            | 101           | 295               | 2.91                 |
| Emperors                | 135           | 338               | 2.50                 |
| Parrotfishes            | 175           | 525               | 3.00                 |
| Surgeonfishes           | 73            | 181               | 2.50                 |
| Orangespine unicornfish | 120           | 300               | 2.50                 |
| Unicornfishes           | 98            | 244               | 2.50                 |
| Goatfishes              | 73            | 181               | 2.50                 |
| Mahimahi                | 1,305         | 2,610             | 2.00                 |
| Wahoo                   | 863           | 1,725             | 2.00                 |
| Skipjack tuna           | 4,993         | 9,985             | 2.00                 |
| Dogtooth tuna           | 13            | 25                | 2.00                 |
| Yellowfin tuna          | 658           | 1,315             | 2.00                 |
| Kawakawa (saba)         | 26            | 53                | 2.00                 |
| Octopus                 | 343           | 685               | 2.00                 |
| <b>TOTAL</b>            | <b>15,011</b> | <b>34,064</b>     | <b>2.27</b>          |

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

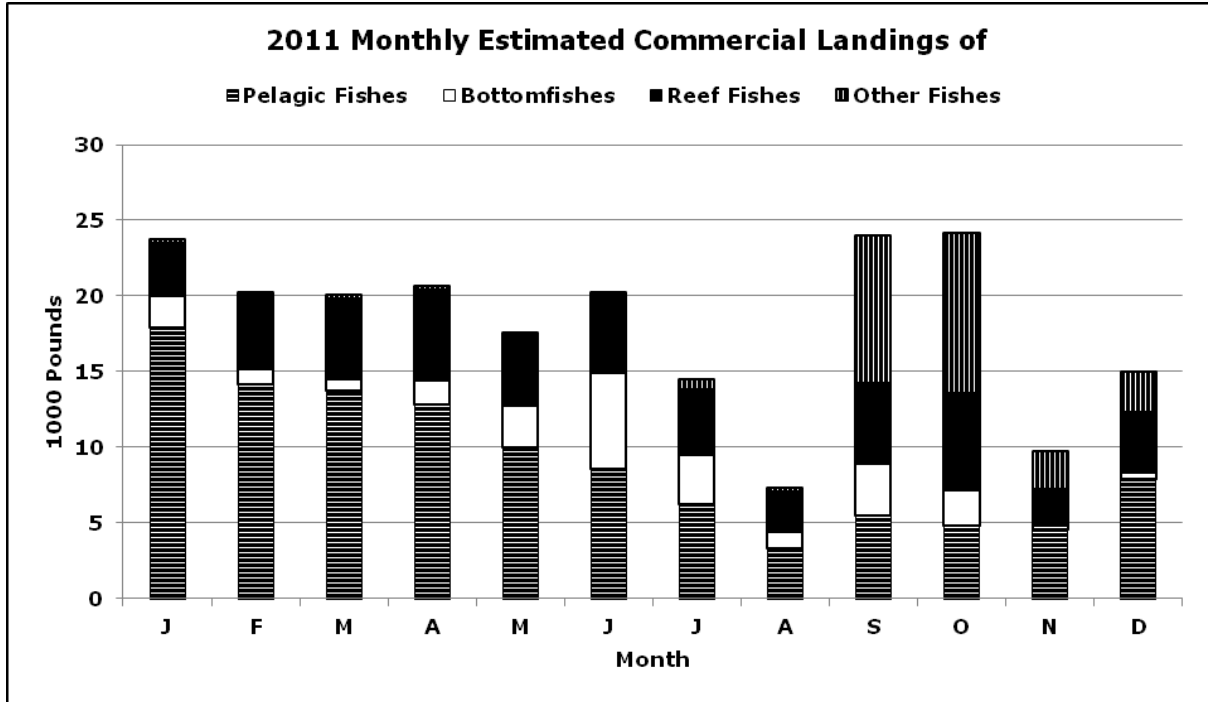


Figure B-1-1

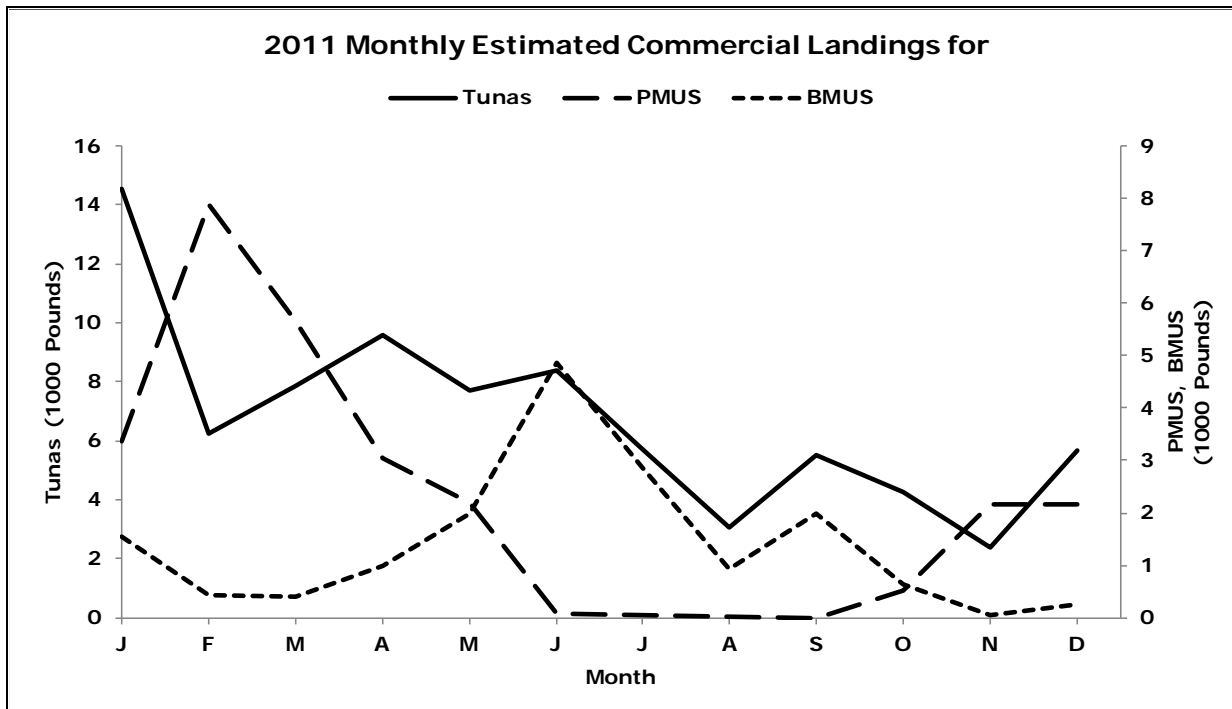


Figure B-1-2

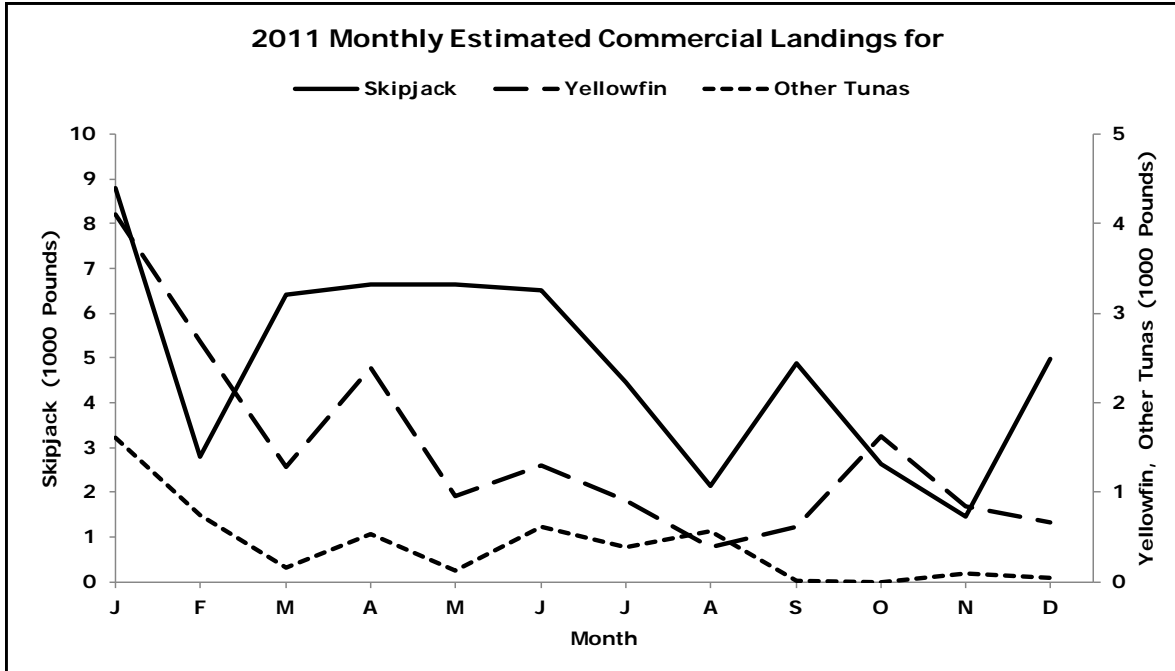


Figure B-1-3

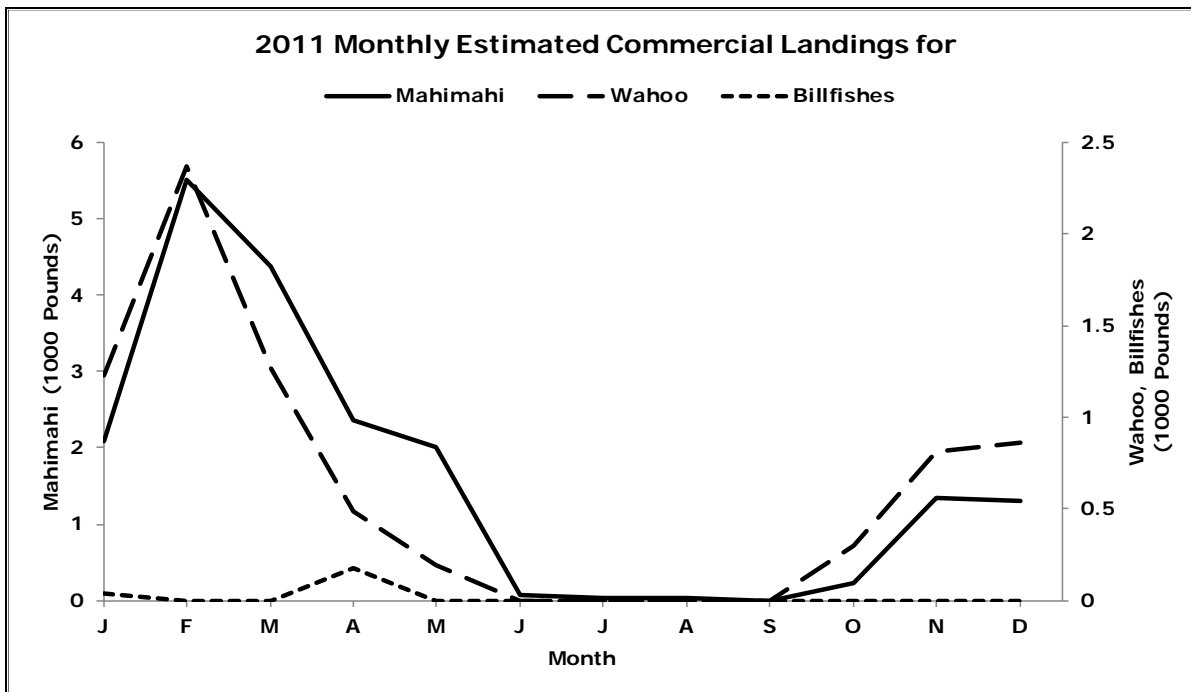


Figure B-1-4

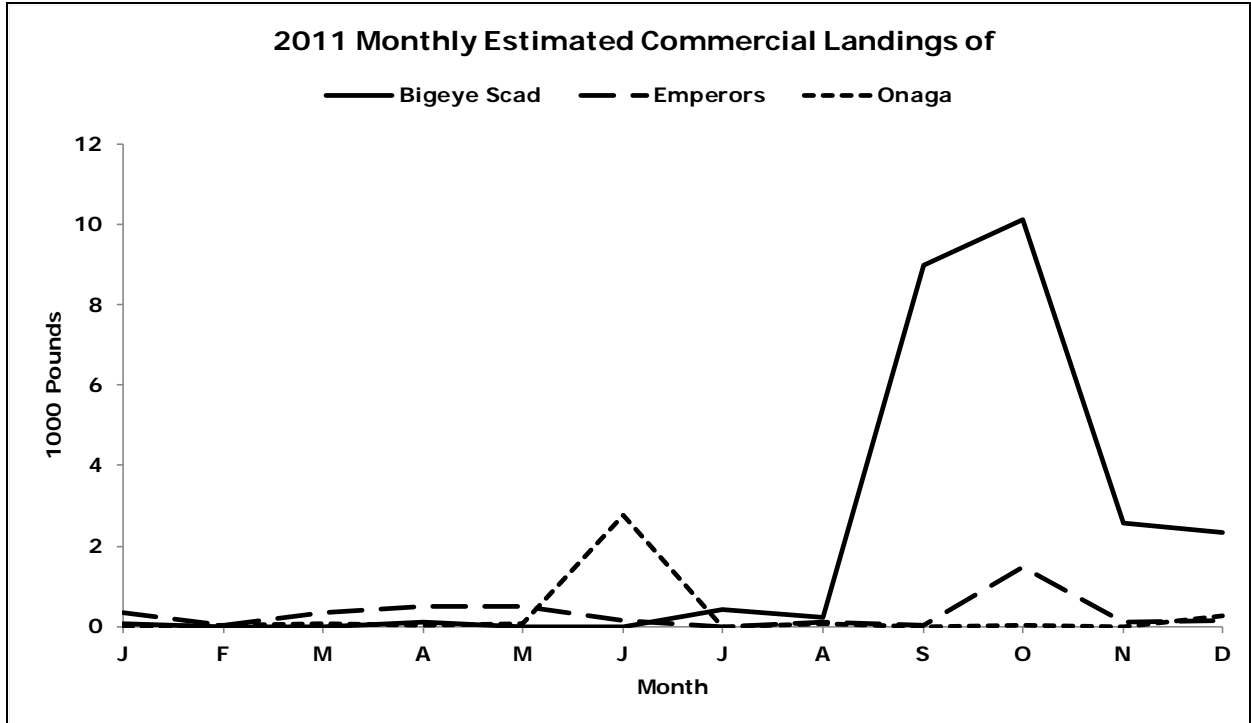


Figure B-1-5

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:

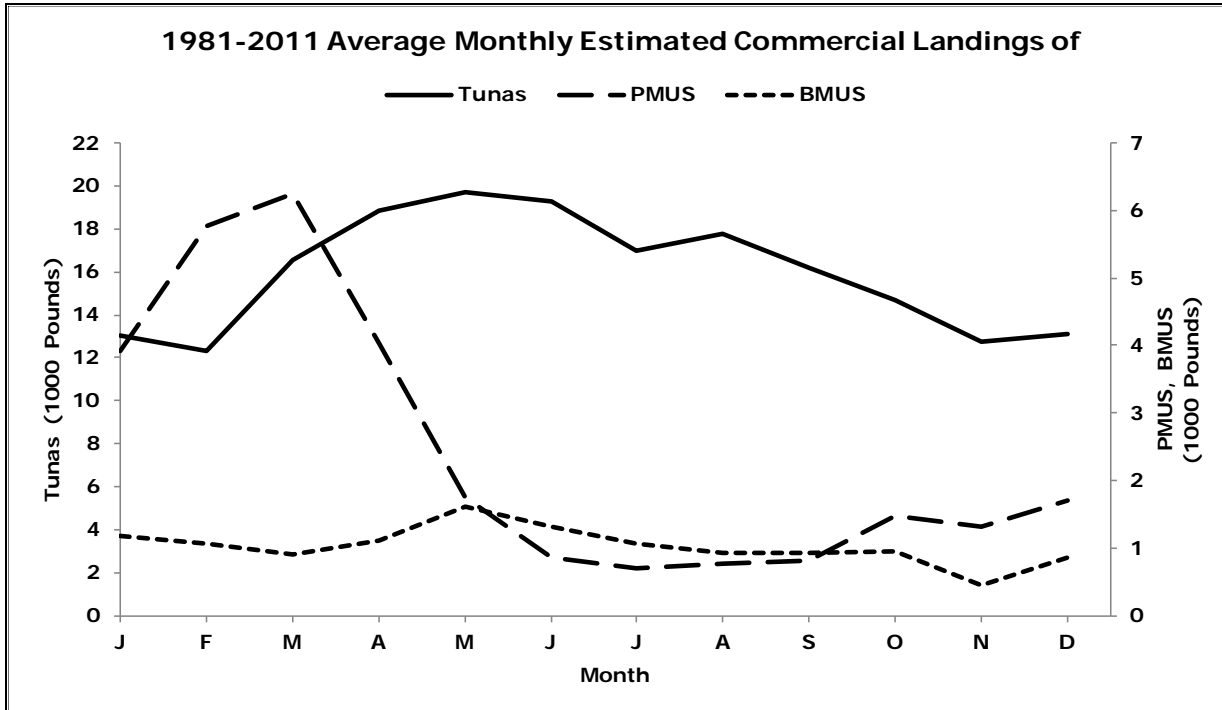


Figure B-2-1

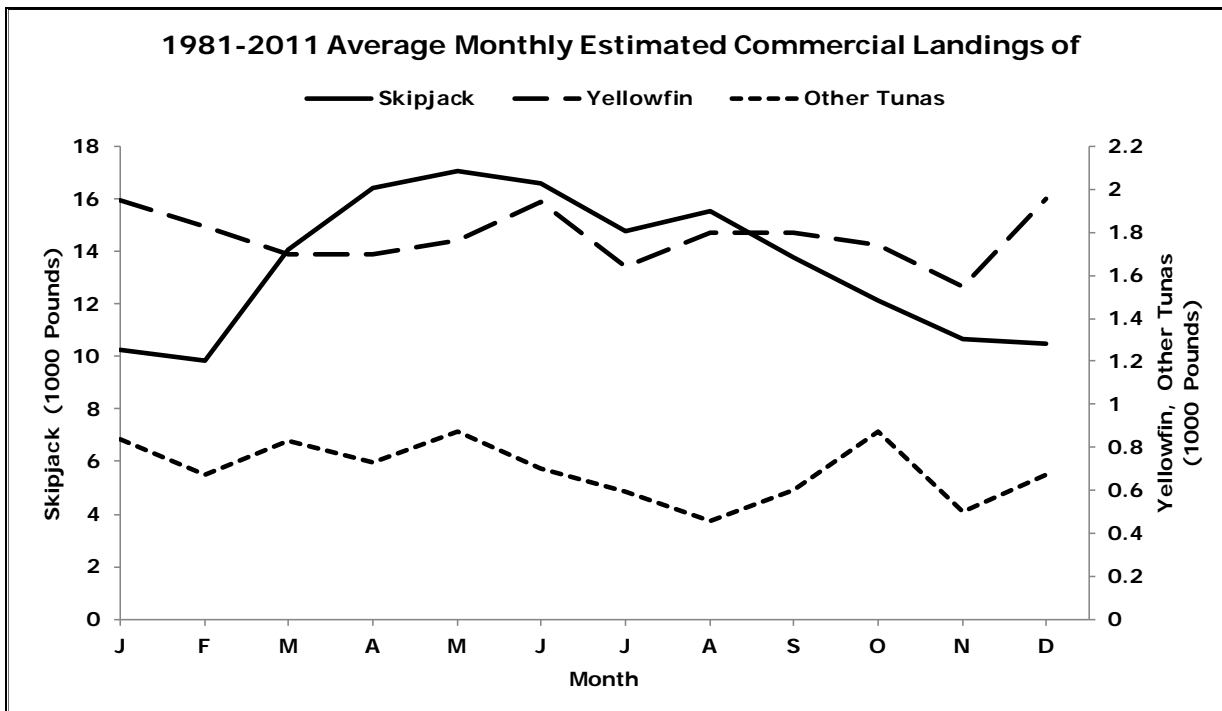


Figure B-2-2

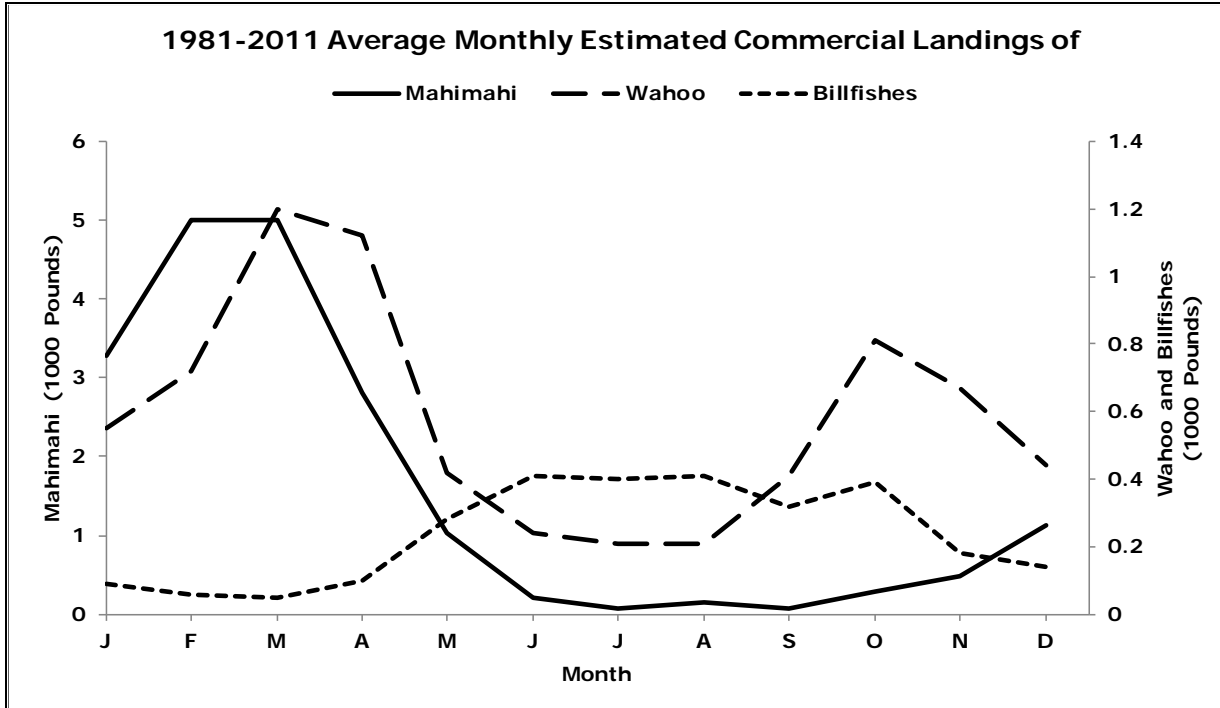


Figure B-2-3

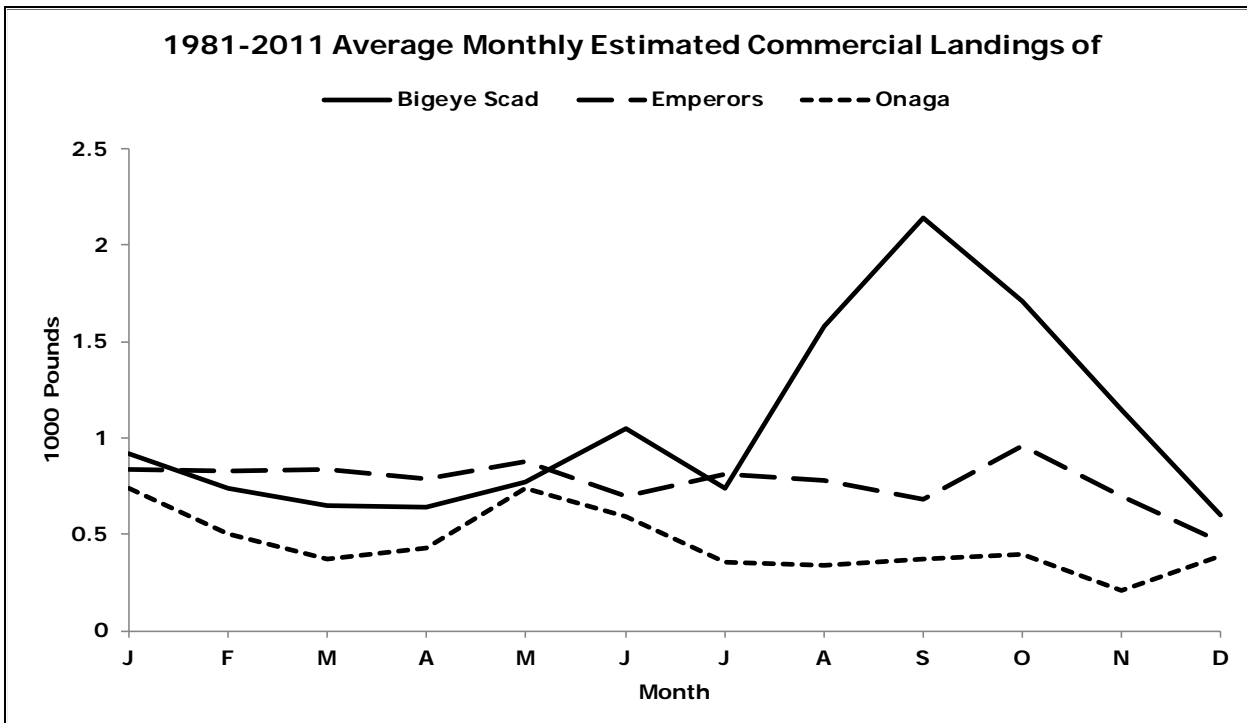


Figure B-2-4

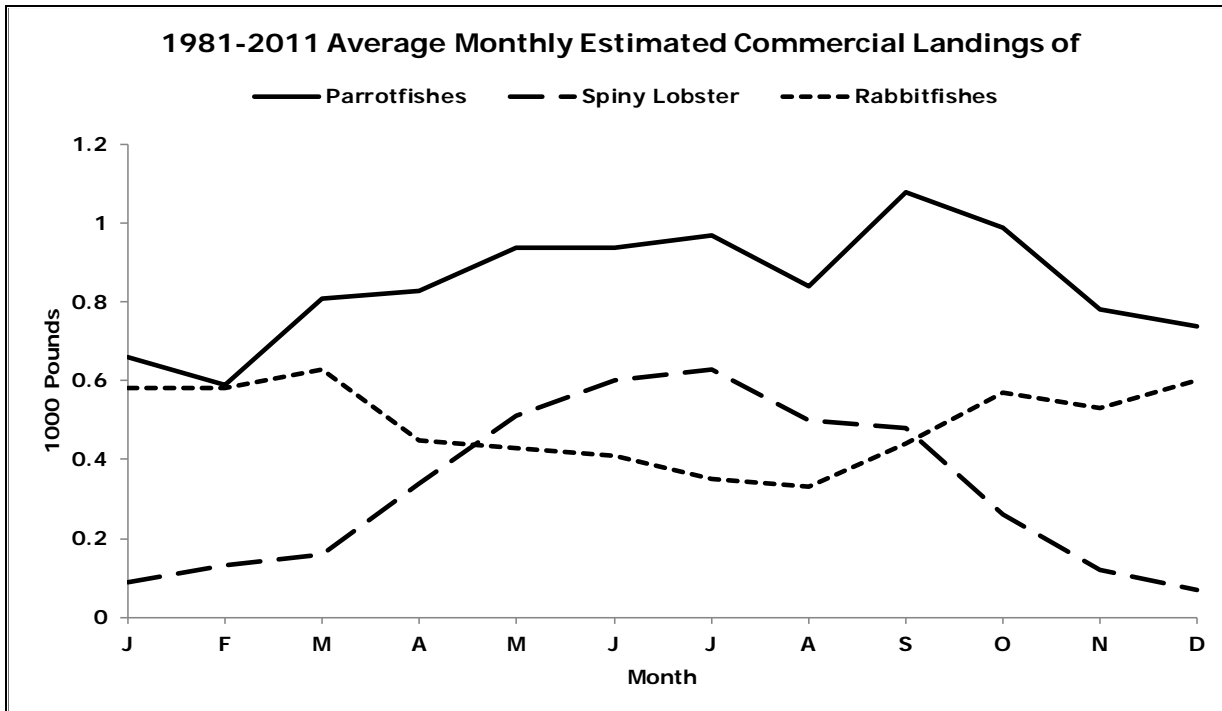


Figure B-2-5

The following graphs plot annual summary statistics to illustrate inter-annual variability:

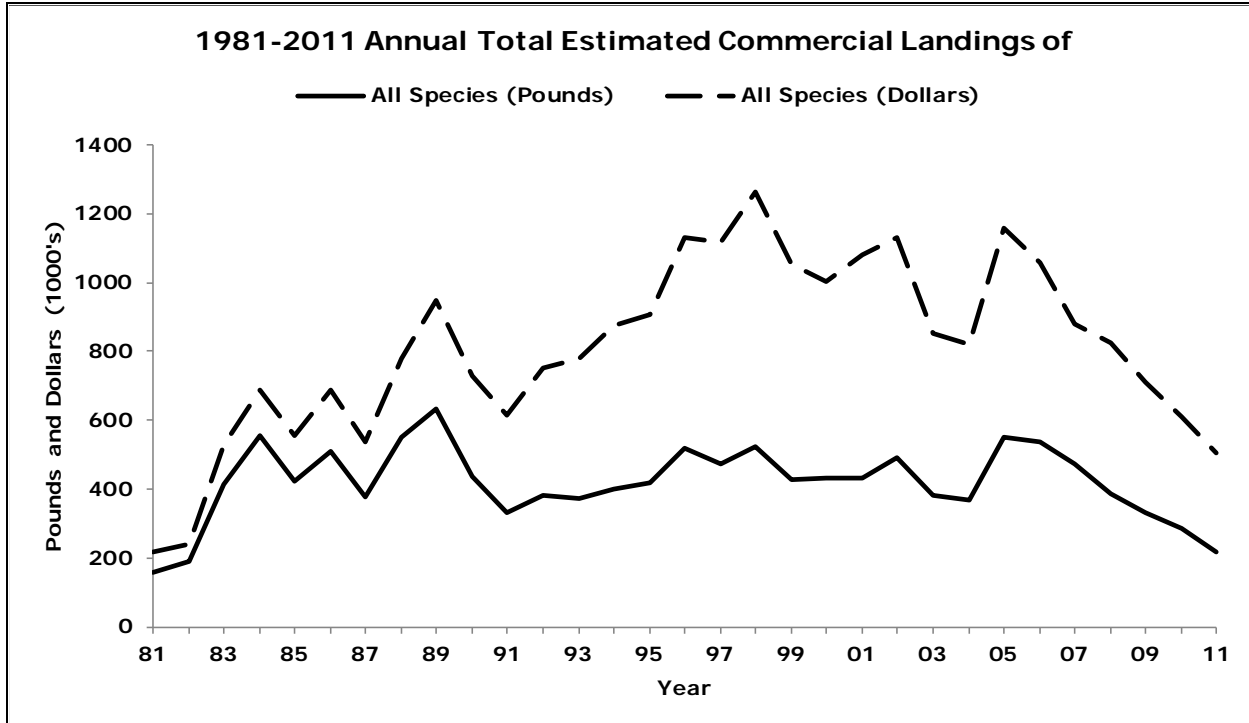


Figure B-3-1

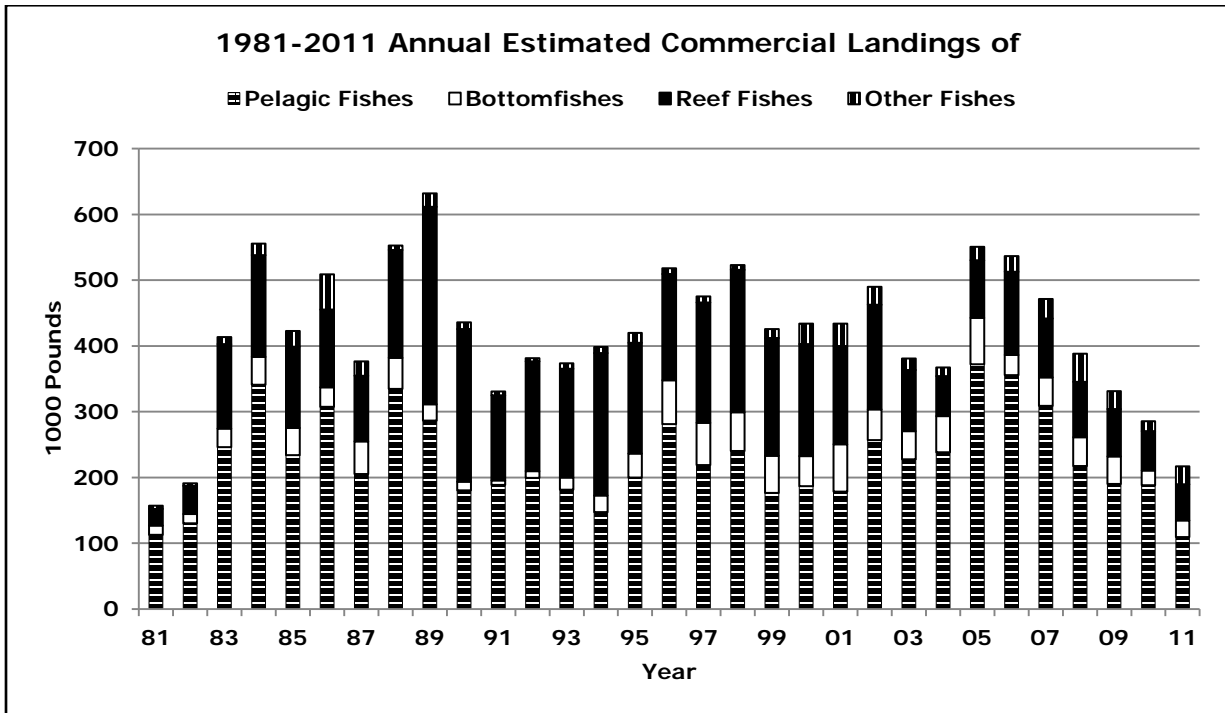


Figure B-3-2



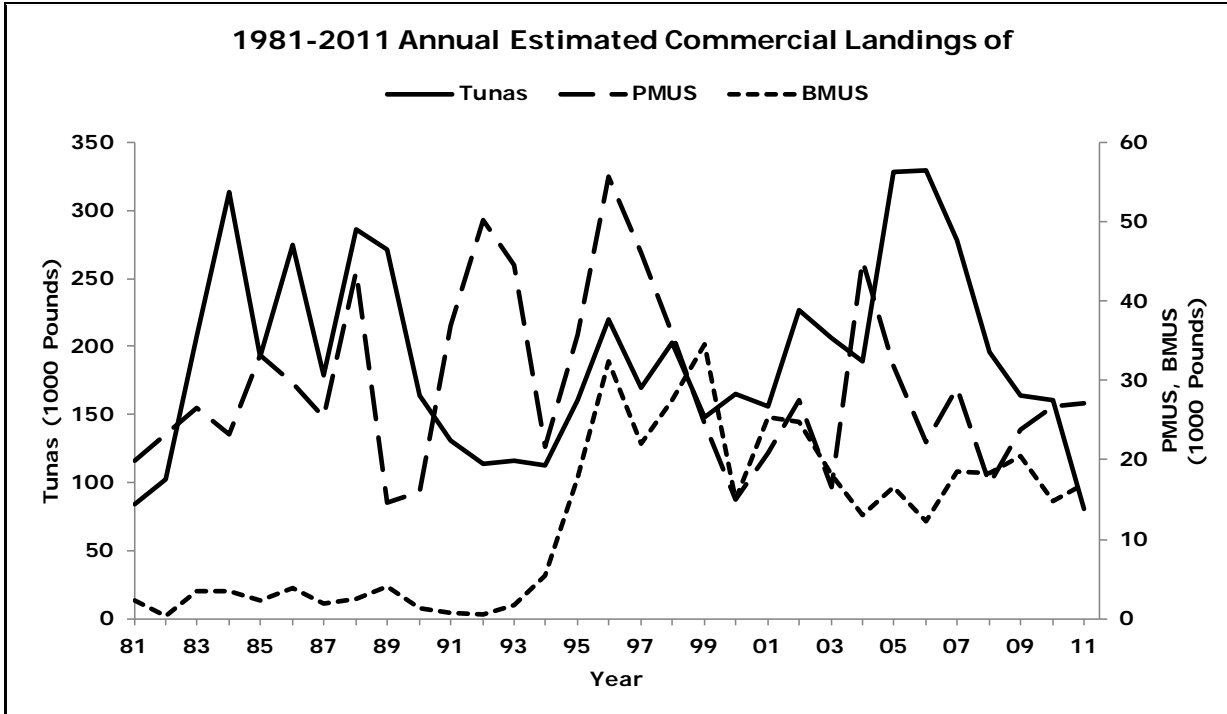


Figure B-3-3

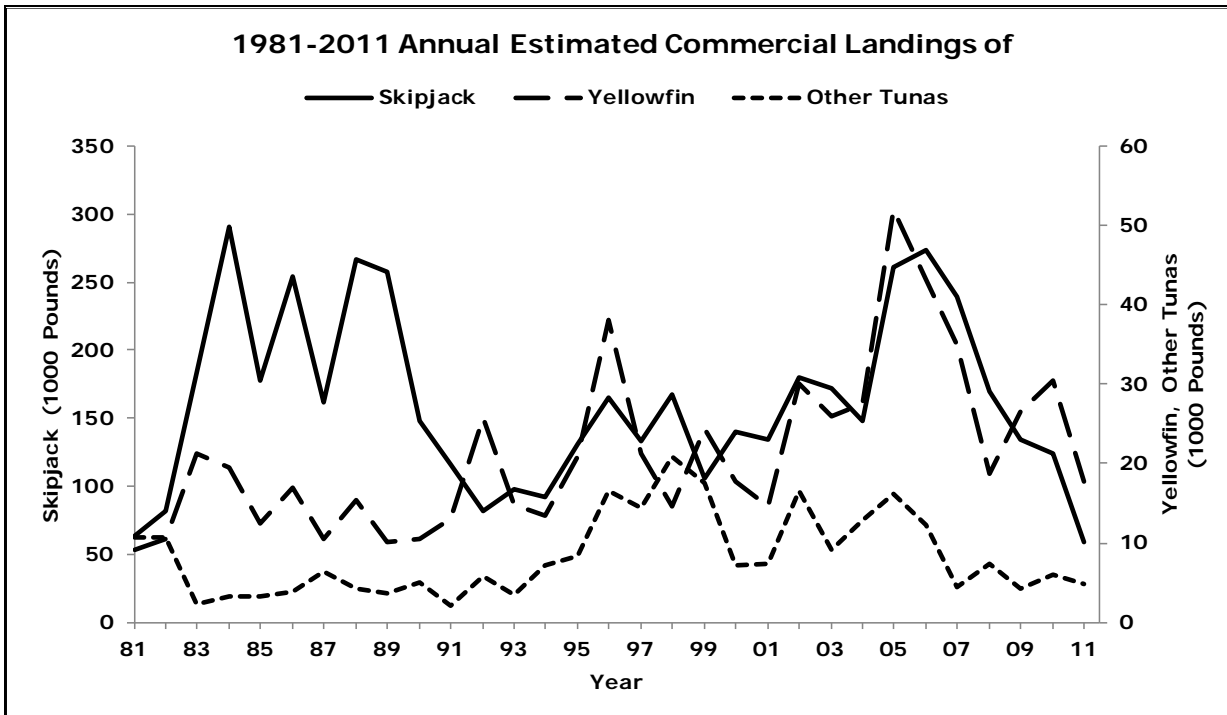


Figure B-3-4

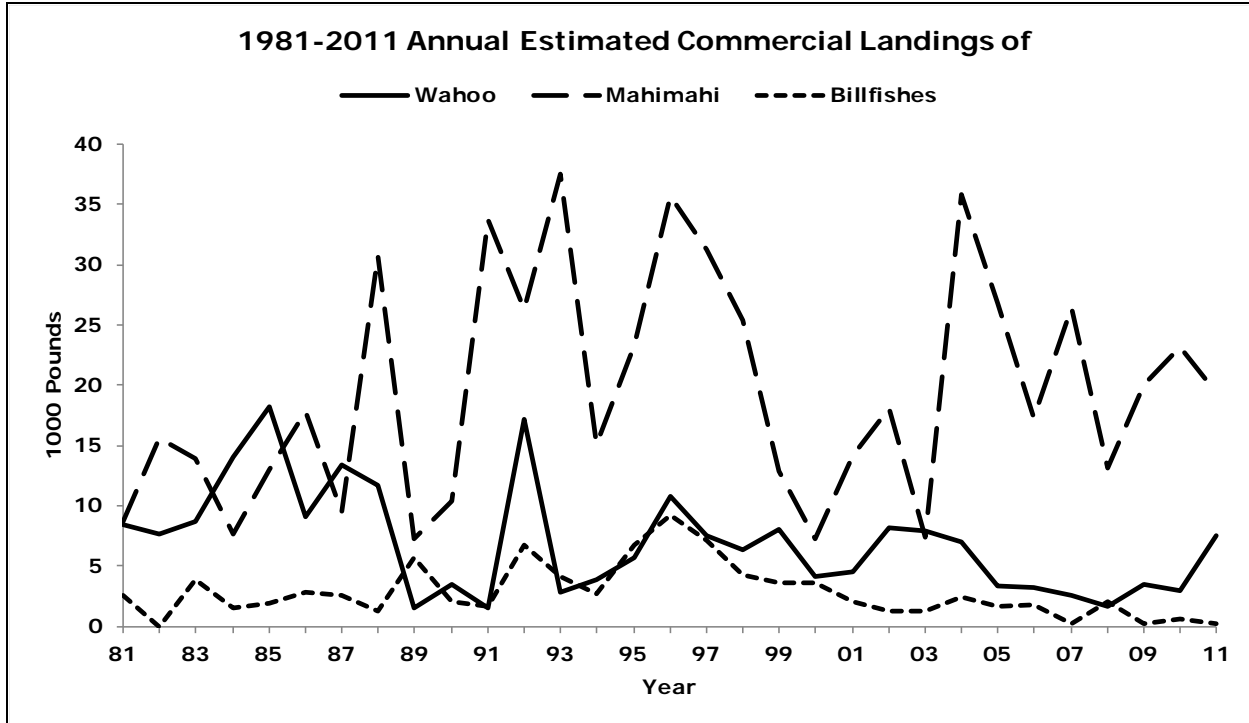


Figure B-3-5

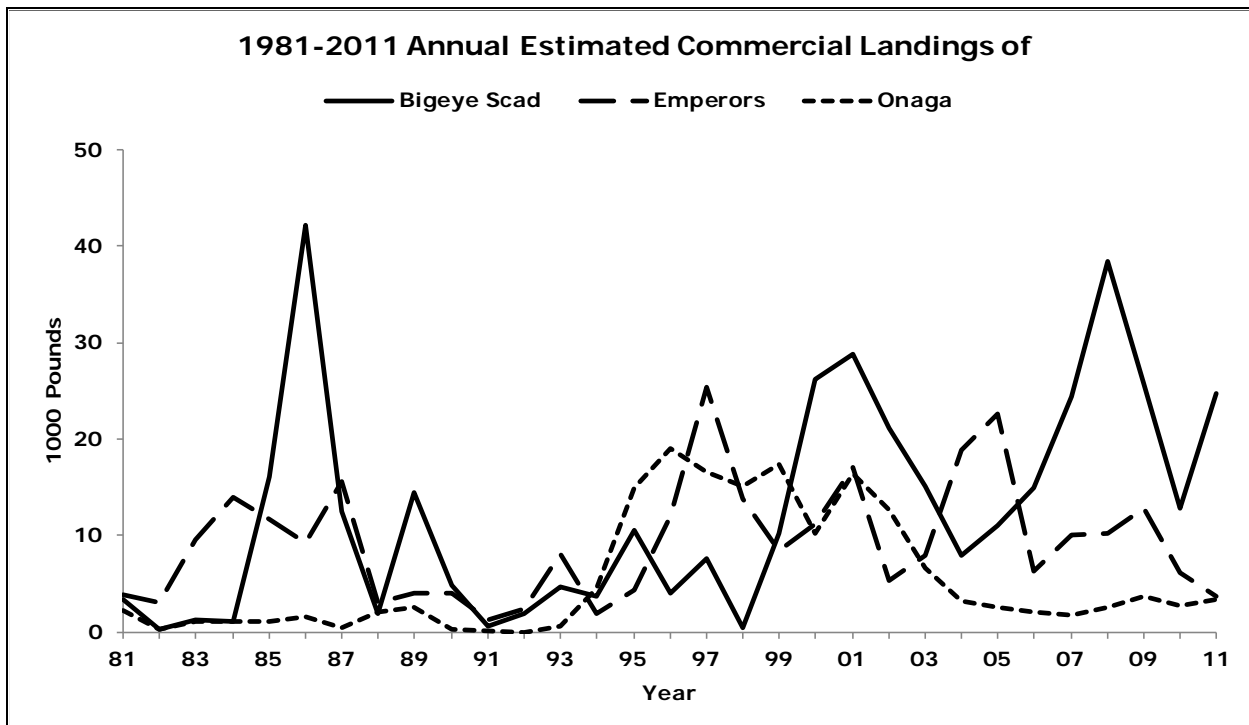


Figure B-3-6

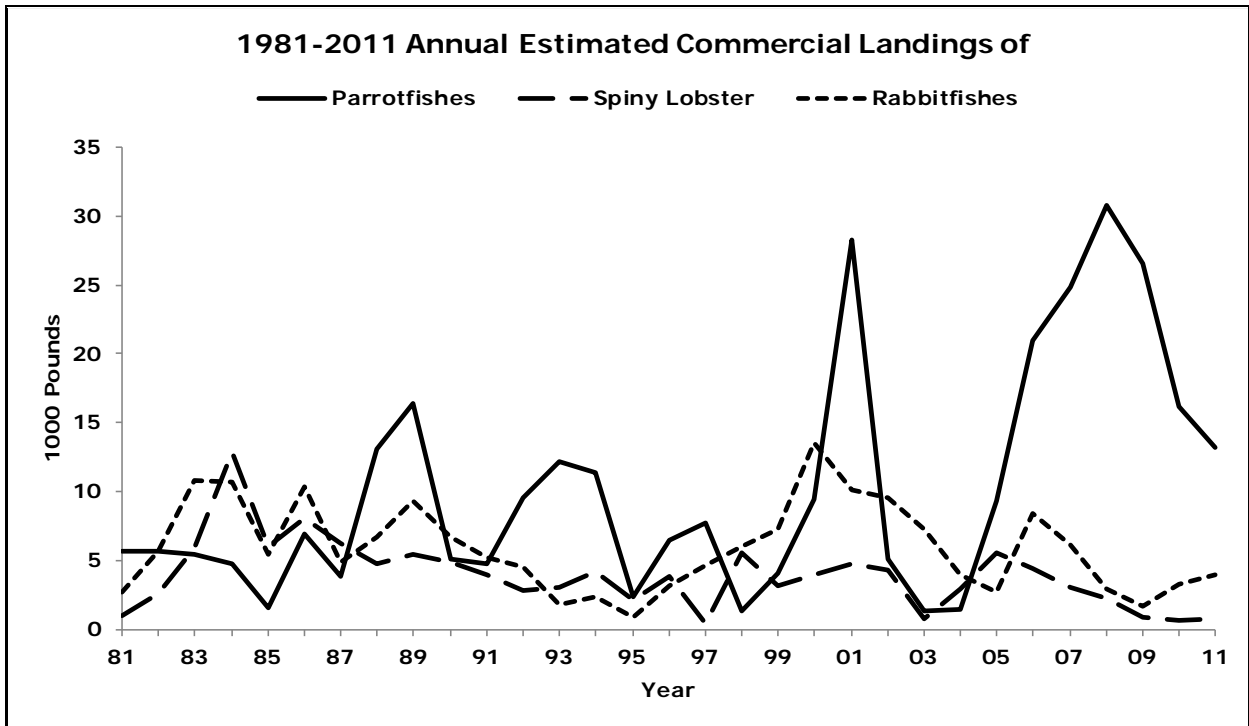


Figure B-3-7

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:

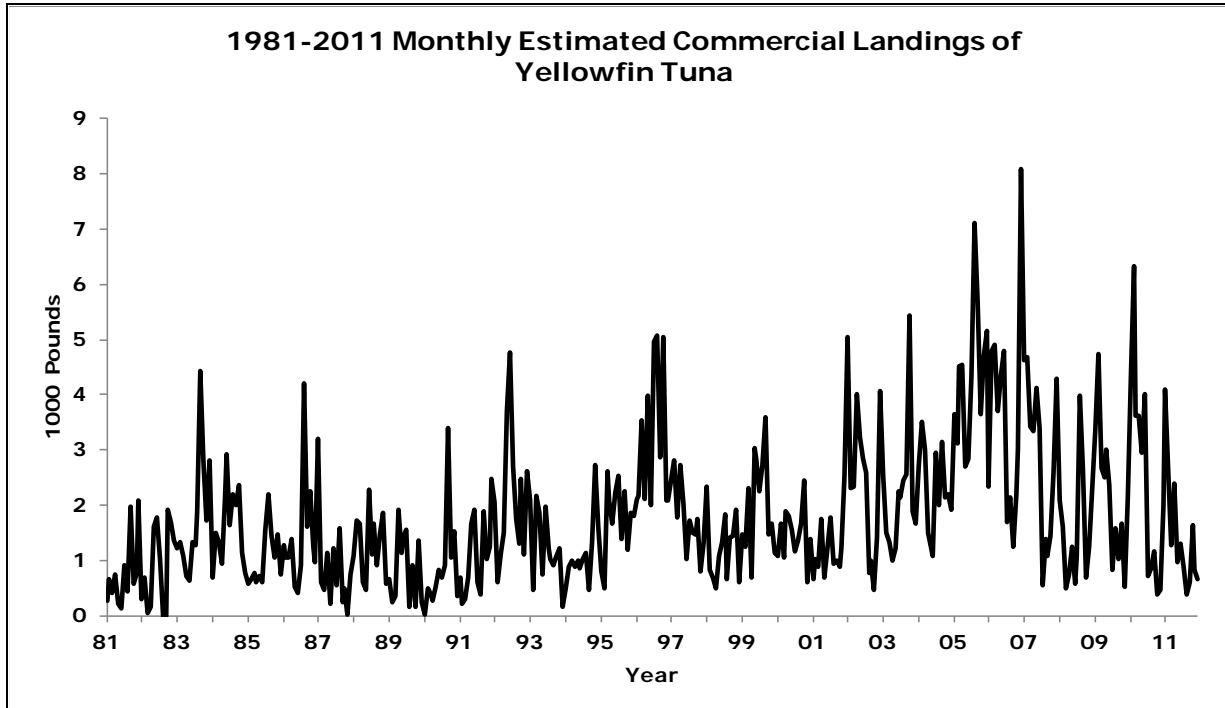


Figure B-4-1

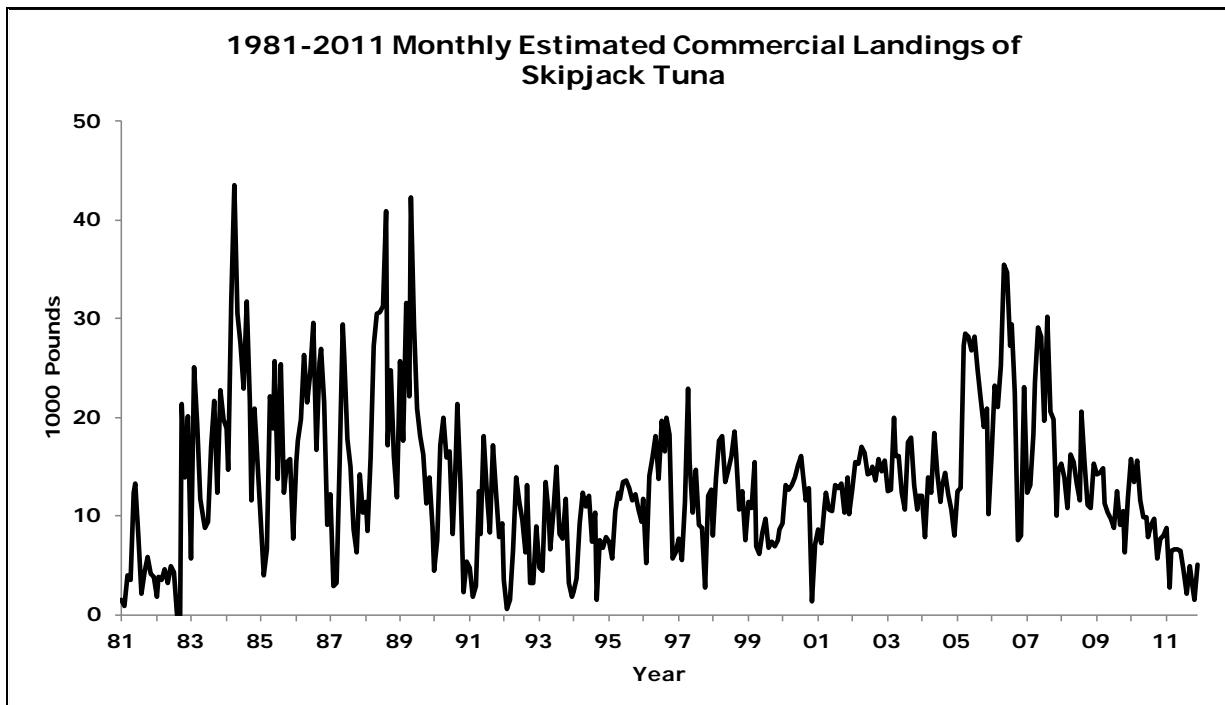


Figure B-4-2

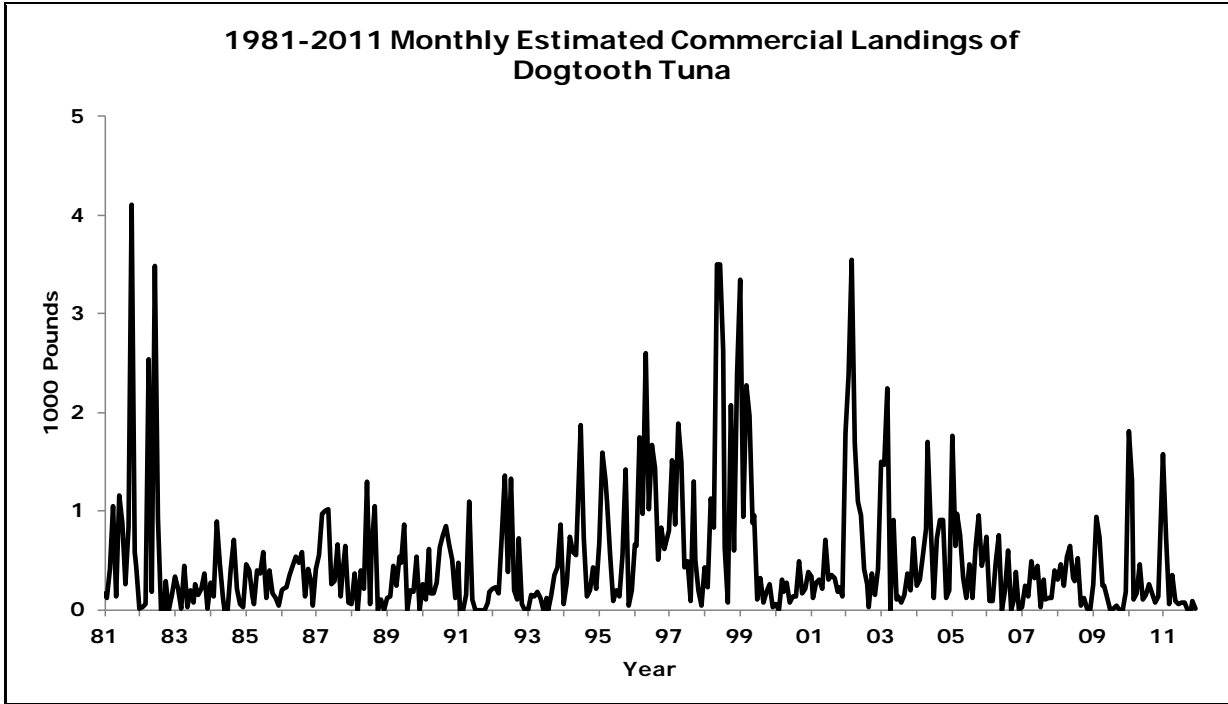


Figure B-4-3

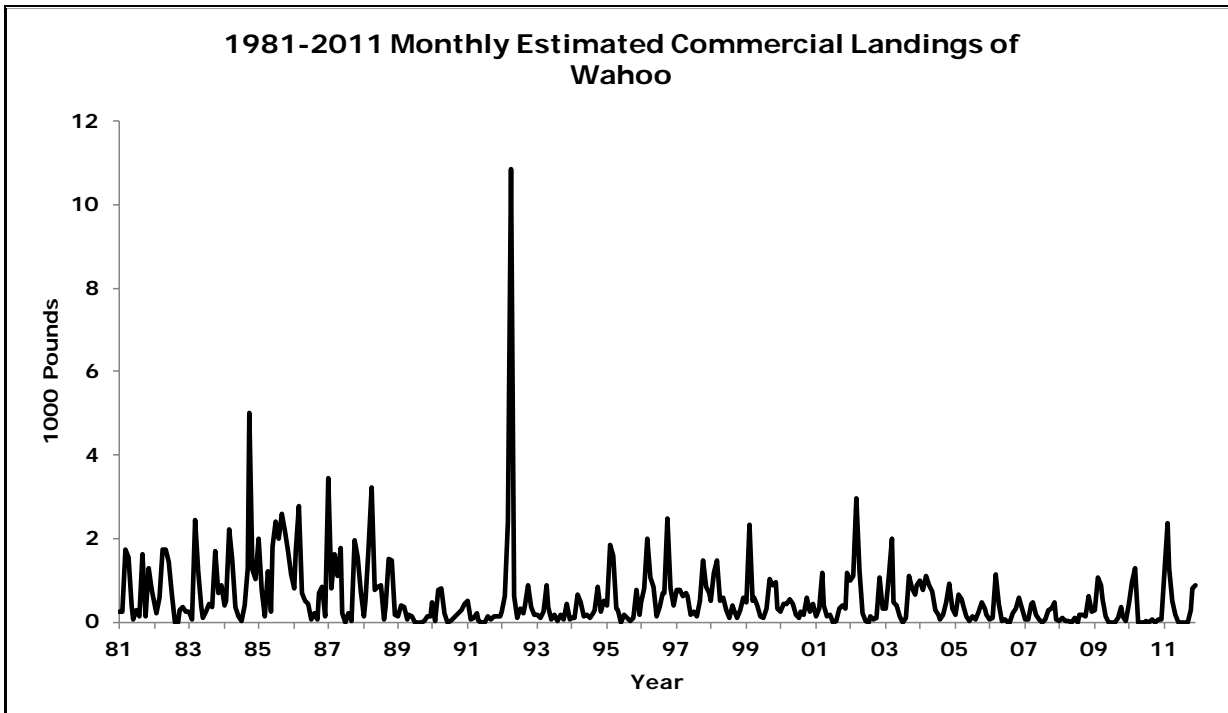


Figure B-4-4

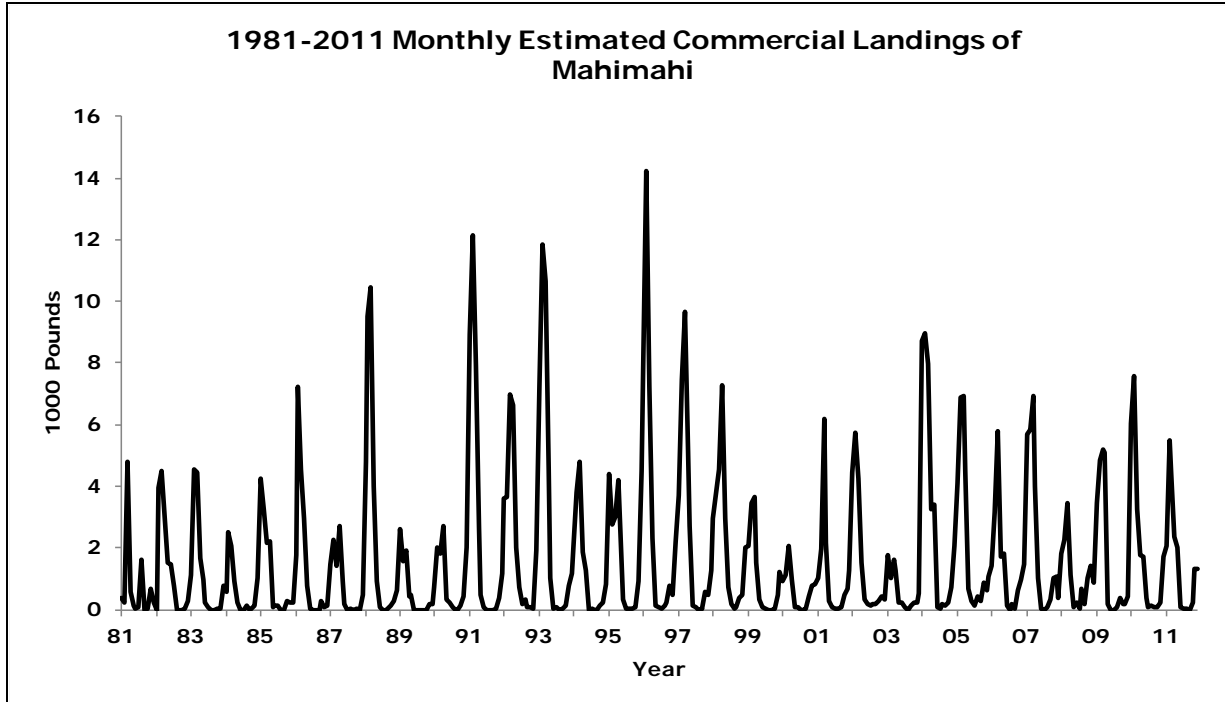


Figure B-4-5

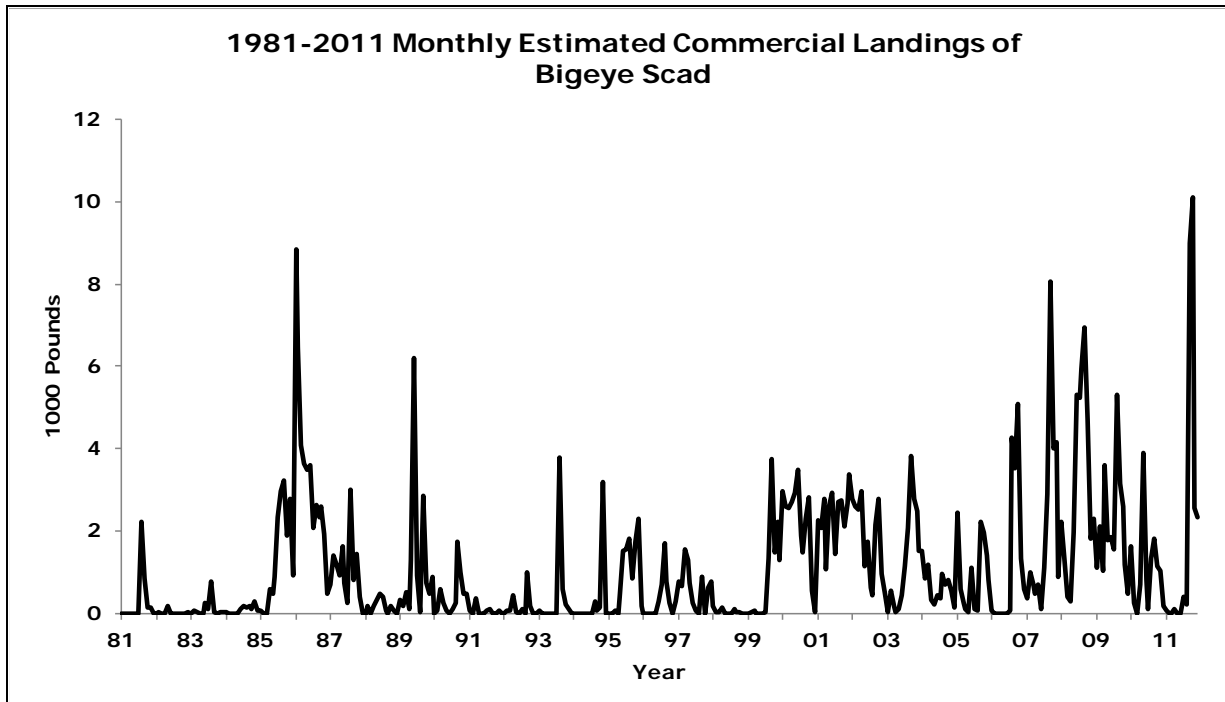


Figure B-4-6

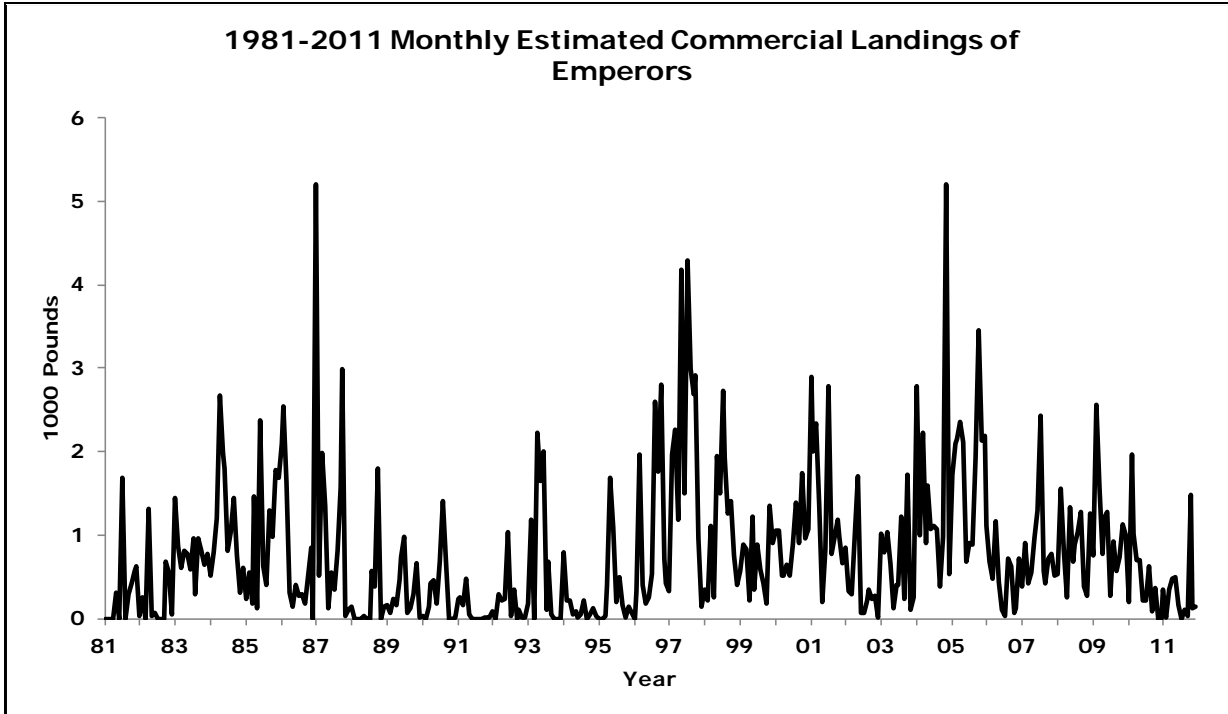


Figure B-4-7

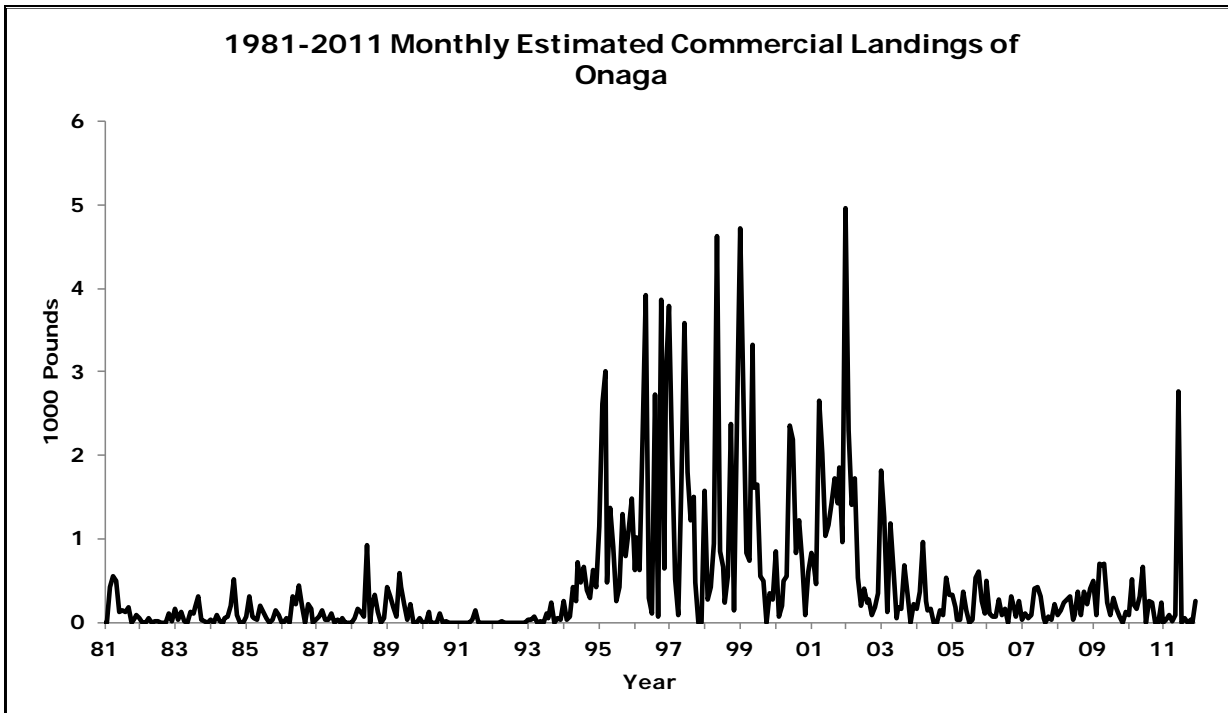


Figure B-4-8

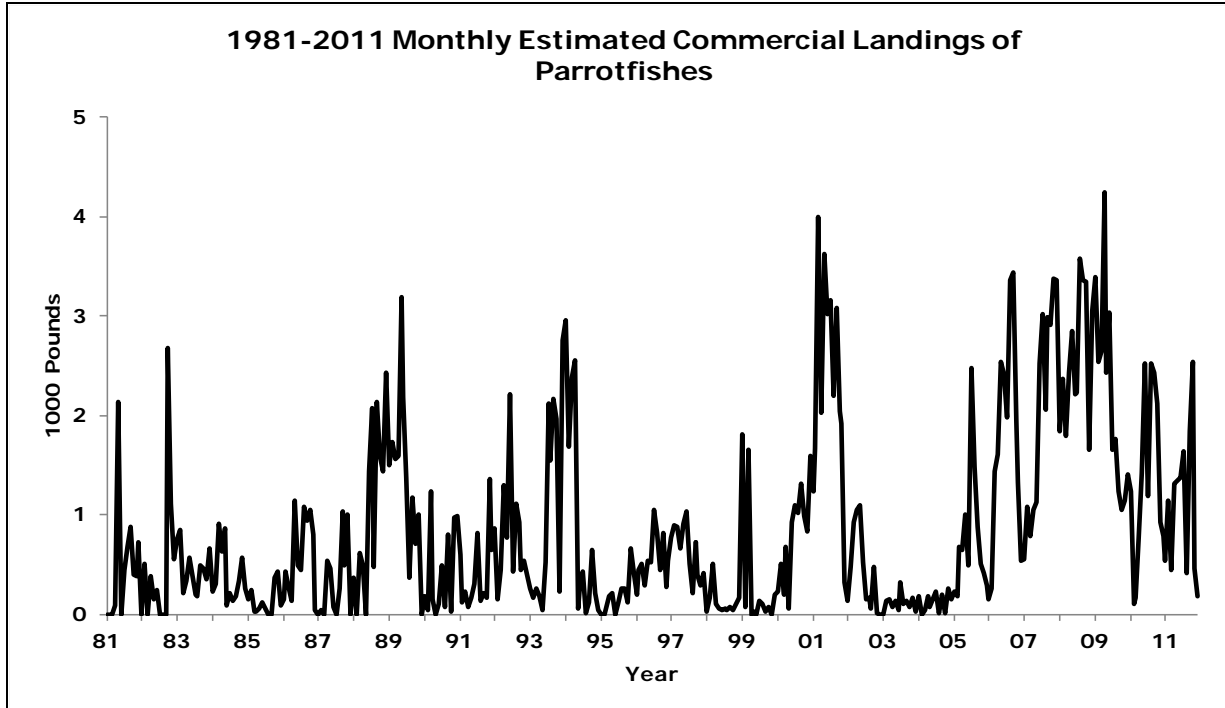


Figure B-4-9

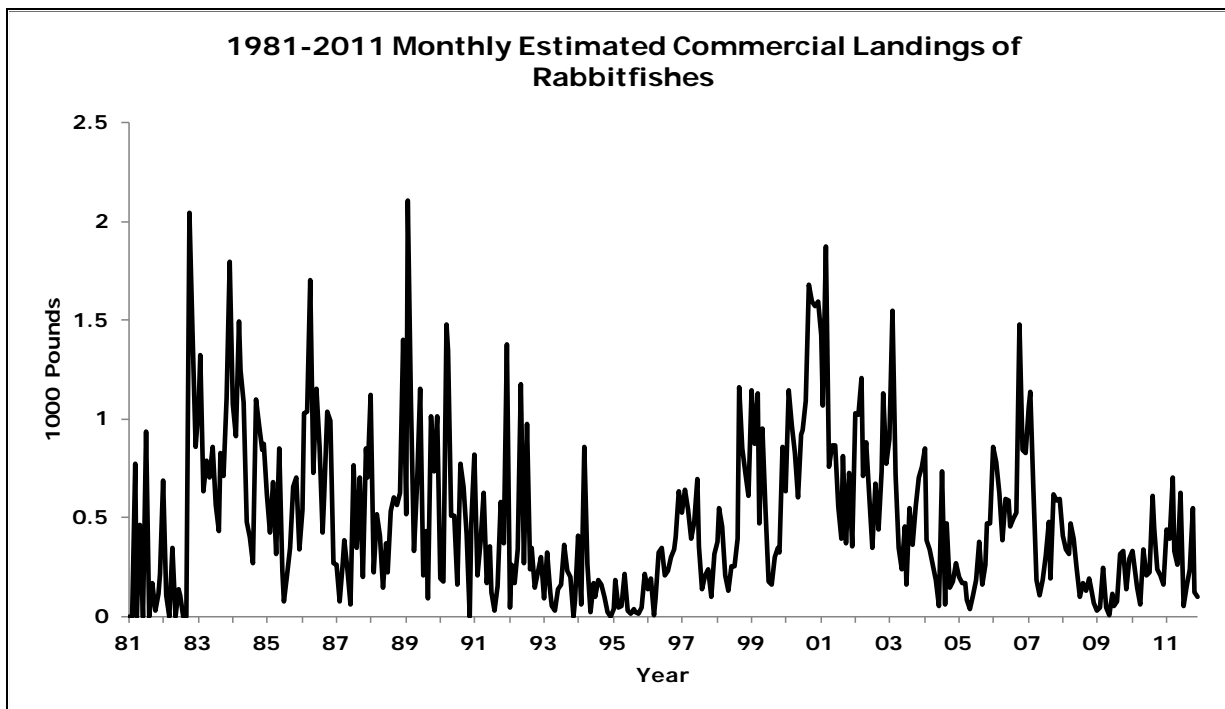


Figure B-4-10



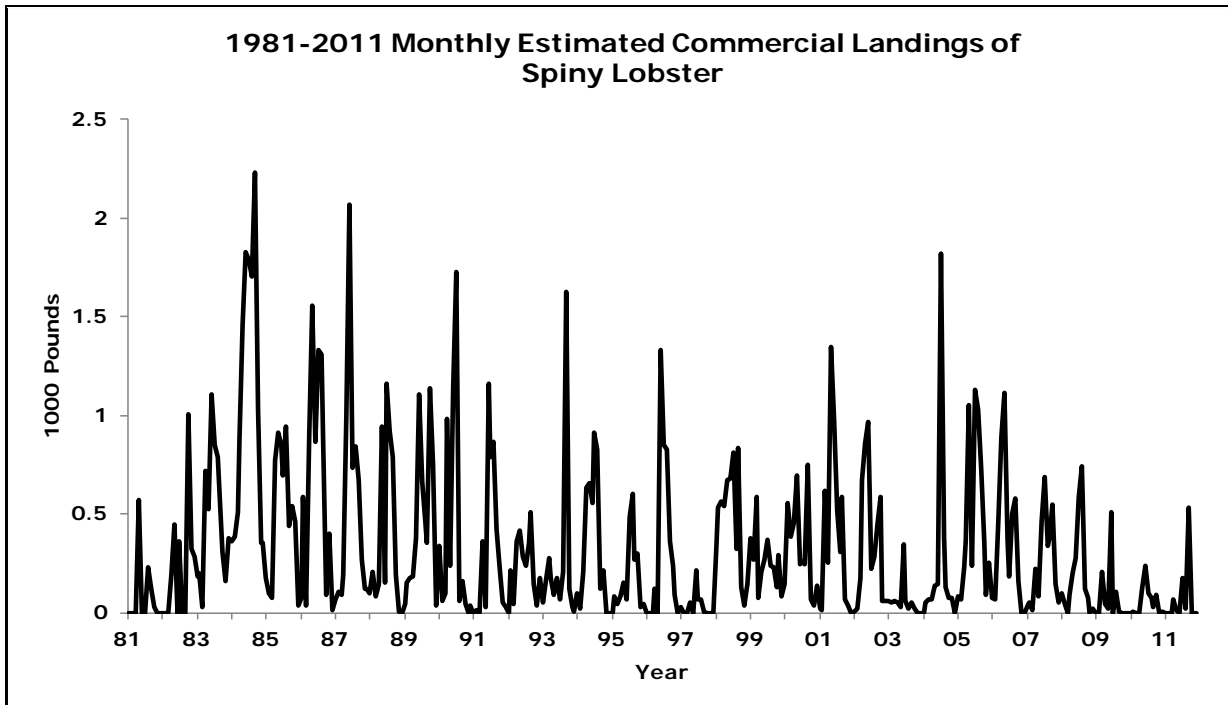


Figure B-4-11