

# **GUAM 2011 FISHERY STATISTICS**

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

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# GUAM 2011 FISHERY STATISTICS

## INTRODUCTION

The Territory of Guam is made up of the southernmost, largest, and most populous island in the Mariana Archipelago and its surrounding banks, fringing and barrier reefs and islets.

*Location:* 13.3°N latitude, 144.5°E longitude

*Population:* about 160,378 (*The World Factbook*, July 2013 estimate)

*Economy:* largely based on U.S. military and international tourism.



Guam:

Source: <https://www.cia.gov/library/publications/the-world-factbook/maps/gq-map.gif>;

*The World Factbook*

Fishing activities on Guam are divided into two basic categories: offshore and inshore fishing. Offshore fishing typically involves small boats (12-48 feet in length), which engage in one to two day trolling and bottomfishing trips to nearby banks, isles and pelagic areas. These trips usually originate from one of three principal harbors (Hagátña Boat Basin, Agat Marina and Merizo Pier), located on the west coast and southern tip of the island (leeward shores during the prevailing trade winds, March through August). Inshore fishing is usually conducted without the use of a boat and consists mainly of casting (rod & reel fishing), throw-netting, and spearfishing.

Besides imports, there are three sources of fish in Guam's commercial markets: 1) full-time commercial fishers, 2) part-time commercial fishers, and 3) subsistence or recreational "expense fishers," who frequently sell part of their catch to help defray costs. A license is not required to sell fish on Guam, nor are there any reporting requirements for those selling fish.

## DATA COLLECTION

In 1982, the NMFS WPacFIN program began working with the Guam Department of Agriculture, Division of Aquatic and Wildlife Resources (DAWR), and local fish dealers to obtain information on commercial landings through voluntary use of a fish receipt form provided by WPacFIN, referred to as a "trip ticket." The tables and graphs in this section are

## C.2

based on data summarized from receipts submitted by all participating fish dealers on Guam. The values recorded have been adjusted to create an estimate of total commercial landings, based on an annually-estimated proportion of the local commercial market represented in voluntary monitoring data.

In July 1979, the Guam Fishermen's Cooperative Association (GFCA) was established in Hagåtña (Agana) through government funding. The GFCA 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 GFCA to improve their invoicing system and obtain data on all fish purchases. A system was established, whereby GFCA 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 GFCA 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 Caught by Species
- Price per Pound by Species
- Fisherman Code
- Hours Fished
- Species Caught
- Pounds Caught by Species

Although a proposed law has been introduced several times over the years that would require reporting by dealers, and possibly commercial fishers, the proposal has never made it through the legislative process, and commercial landings data collection systems on Guam remain voluntary.

The Guam DAWR has also implemented boat-based and shore-based creel surveys over the years. Although funded through other sources, these monitoring activities are also supported through software developed under the WPacFIN program. Comparisons of total landings estimates, based on expanded commercial and non-commercial data from creel surveys, are useful to put historical commercial landings estimates into perspective. This comparison is a focus of recent monitoring research by fisheries scientists, in order to help put modern fisheries management mandates into perspective in light of available data.

### **DATA PROCESSING**

Initially, the data were processed at the PIFSC WPacFIN central office, in Honolulu, Hawaii. Since 1994, DAWR staff took over this task, using a computer and software provided by WPacFIN. The processing system for commercial landings data collected from fish dealers is fairly simple. Dealers complete a purchase form whenever they purchase fish from a fisherman. The form helps categorize the catch, and weights are recorded by species or major group. When possible, the number of pieces is also recorded by species or group.



## DATA REPORTING

After editing, quality control, and adjustments for factors such as: 1) condition of sale (gilled, gutted, converted to whole weight, etc.) and 2) estimated percentage of recorded sales are completed, monthly and annual summary reports by species are generated. Customized software, developed by WPacFIN, makes various standardized reports available for quality control and analyses. Only nonconfidential monthly and annual landings by species are provided in this document.

Each table contains information on the weight, value, and average price per pound by species or group. Each monthly report contains an estimated monthly subtotal for all species combined. Annual reports contain the estimated annual total landings by species, and totals for all species during the calendar year. Graphs of statistics for some of the more important species or groups are also provided.

Please note that the commercial landings data have been adjusted to reflect totals, based on an estimated proportion of coverage of commercial data available via the voluntary monitoring system, and are referenced as “Estimated Commercial Landings” in the charts and tables. To see the most current charts and estimates, please visit the WPacFIN website, <http://www.pifsc.noaa.gov/wpacfin>.

## SPECIES CATEGORIES

The species and taxonomic groups that are used in the tables and graphs for Guam's data are defined in this section. Many of the species or groups included in this report have been categorized into various groupings over the intervening years. For example, in 1992, the Magnuson Fishery Conservation and Management Act of 1976, was amended to include tunas in the Pelagic Management Unit Species (PMUS) category. However, this report maintains the original species categorizations from previous FSWP volumes for comparative purposes. As such, tunas are kept in a separate category. To see the most current taxonomic information for species caught commercially on Guam, and in other US-associated Pacific island areas, please visit the WPacFIN website, <http://www.pifsc.noaa.gov/wpacfin>.

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

Mahimahi	Spearfish
Marlins	Swordfish
Sailfish	Wahoo
Sharks	

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

Alfonsin	Kalikali (yellowtail, goldflag jobfish)
Amberjack	Lehi (silverjaw snapper, rusty jobfish)
Black jack	Mafute (emperors)
Ehu (red snapper)	Onaga (red snapper)
Gindai (flower snapper)	Opakapaka (pink snapper)
Groupers	Snappers
Jacks	Uku (green jobfish)

### III. Billfishes

Marlins	Spearfish
Sailfish	Swordfish

### IV. Tunas

Dogtooth tuna	Tunas (unknown)
Kawakawa	Yellowfin tuna
Skipjack tuna	

### V. Other Tunas

Dogtooth tuna	Tunas (unknown)
Kawakawa	

## VI. 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 (yellowtail, goldflag jobfish)
Black jack	Lehi (silverjaw snapper, rusty jobfish)
Bottomfishes (unknown)	Mafute (emperors)
Deep bottomfishes	Onaga (red snapper)
Ehu (red snapper)	Opakapaka (pink snapper)
Gindai (flower snapper)	Tagafi (general term for red snapper)
Groupers	Uku (green jobfish)

C. *Reef Fishes*

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

D. *Other Fishes Other Fishes, Algae & Invertebrates*

Bigeye scad (atulai)	Milkfish
Coconut crab	Miscellaneous
Crabs	Mulletts
Invertebrates	Octopus
Lemu (seaweeds, marine algae)	Shrimp (saltwater)
Lobsters	Squid

## C.6

**Table C-1**  
**Guam Annual 2011 Estimated Commercial Landings**

<b>Species</b>	<b>Pounds</b>	<b>Value (\$)</b>	<b>Price/Lb (\$)</b>
Bigeye scad (atulai)	2,272	6,445	2.84
Black jack	298	716	2.40
Jacks	1,948	5,152	2.64
Napoleon wrasse	4,164	11,576	2.78
Humphead parrotfish	63	141	2.25
Bottomfishes (unknown)	18	41	2.30
Deep bottomfishes	34	68	2.00
Ehu (red snapper)	1,060	4,197	3.96
Gindai (flower snapper)	245	967	3.96
Groupers	2,538	7,095	2.80
Kalikali (yellowtail, goldflag jobfish)	641	2,354	3.67
Lehi (silverjaw snapper, rusty jobfish)	423	1,568	3.70
Onaga (red snapper)	5,441	26,209	4.82
Opakapaka (pink snapper)	1,071	4,118	3.84
Uku (green jobfish)	317	856	2.70
Tagafi (red snapper)	177	467	2.64
Amberjack	382	1,027	2.69
Reef fishes (unknown)	25,054	75,124	3.00
Rabbitfishes	576	2,749	4.77
Rudderfish (guilli)	126	378	3.00
Mafute (emperors)	1,456	4,172	2.86
Squirrelfishes	109	322	2.97
Parrotfishes	37,247	120,584	3.24
Snappers	164	479	2.92
Surgeonfishes	4,912	14,720	3.00
Unicornfishes	25,333	75,994	3.00
Goatfishes	43	128	3.00
Sweetlips	385	1,042	2.71
Barracudas	1,426	2,802	1.97
Mahimahi	53,649	118,238	2.20
Marlins	20,354	29,315	1.44
Spearfish	46	69	1.50
Sailfish	780	1,261	1.62
Rainbow runner	2,310	4,555	1.97
Monchong	174	431	2.48
Wahoo	25,865	56,871	2.20
Tunas (unknown)	48	71	1.50
Skipjack tuna	21,248	40,906	1.93
Dogtooth tuna	1,505	2,263	1.50
Yellowfin tuna	15,643	32,968	2.11
Crabs	6	18	3.00
Lobsters	1,980	7,375	3.72

**Table C-1 (continued)**  
**Guam Annual 2011 Estimated Commercial Landings**

<b>Species</b>	<b>Pounds</b>	<b>Value (\$)</b>	<b>Price/Lb (\$)</b>
Octopus	3,938	11,889	3.02
Squid	14	43	3.00
<b>TOTAL</b>	<b>265,483</b>	<b>677,765</b>	<b>2.55</b>

**Table C-2**  
**Guam January 2011 Estimated Commercial Landings**

<b>Species</b>	<b>Pounds</b>	<b>Value (\$)</b>	<b>Price/Lb (\$)</b>
Black jack	14	31	2.21
Jacks	88	194	2.20
Napoleon wrasse	199	591	2.97
Ehu (red snapper)	24	98	4.00
Gindai (flower snapper)	35	138	4.00
Groupers	221	664	3.00
Kalikali (yellowtail, goldflag jobfish)	67	237	3.53
Lehi (silverjaw snapper, rusty jobfish)	64	253	3.94
Onaga (red snapper)	104	521	5.00
Opakapaka (pink snapper)	50	201	4.04
Uku (green jobfish)	38	96	2.50
Amberjack	15	53	3.50
Reef fishes (unknown)	1,938	5,776	2.98
Mafute (emperors)	99	297	2.99
Squirrelfishes	1	2	2.00
Parrotfishes	4,737	15,320	3.23
Surgeonfishes	394	1,183	3.00
Unicornfishes	1,331	3,993	3.00
Goatfishes	39	118	3.00
Barracudas	71	142	2.00
Mahimahi	8,698	19,258	2.21
Marlins	522	1,105	2.12
Sailfish	48	73	1.50
Rainbow runner	114	204	1.79
Wahoo	1,170	2,629	2.25
Skipjack tuna	540	1,021	1.89
Dogtooth tuna	234	351	1.50
Yellowfin tuna	218	431	1.98
Lobsters	64	238	3.74
Octopus	37	111	3.00
<b>TOTAL</b>	<b>21,174</b>	<b>55,326</b>	<b>2.61</b>

**Table C-3**  
**Guam February 2011 Estimated Commercial Landings**

<b>Species</b>	<b>Pounds</b>	<b>Value (\$)</b>	<b>Price/Lb (\$)</b>
Bigeye scad (atulai)	12	34	2.79
Jacks	59	165	2.80
Napoleon wrasse	341	1,007	2.95
Humphead parrotfish	63	141	2.25
Bottomfishes (unknown)	13	25	2.00
Ehu (red snapper)	191	766	4.00
Gindai (flower snapper)	35	141	4.00
Groupers	484	1,254	2.59
Kalikali (yellowtail, goldflag jobfish)	136	476	3.50
Lehi (silverjaw snapper, rusty jobfish)	72	253	3.52
Onaga (red snapper)	369	1,847	5.00
Opakapaka (pink snapper)	128	500	3.89
Uku (green jobfish)	43	121	2.85
Amberjack	13	36	2.79
Reef fishes (unknown)	1,710	5,099	2.98
Mafute (emperors)	63	177	2.83
Squirrelfishes	5	15	3.00
Parrotfishes	4,900	15,761	3.22
Snappers	18	53	3.00
Surgeonfishes	285	855	3.00
Unicornfishes	2,011	6,033	3.00
Barracudas	238	477	2.00
Mahimahi	10,590	23,372	2.21
Marlins	353	600	1.70
Sailfish	63	79	1.25
Rainbow runner	232	464	2.00
Wahoo	4,516	10,020	2.22
Skipjack tuna	782	1,561	2.00
Dogtooth tuna	370	560	1.51
Yellowfin tuna	472	862	1.83
Lobsters	145	540	3.73
Octopus	383	1,148	3.00
<b>TOTAL</b>	<b>29,093</b>	<b>74,440</b>	<b>2.56</b>

**Table C-4**  
**Guam March 2011 Estimated Commercial Landings**

<b>Species</b>	<b>Pounds</b>	<b>Value (\$)</b>	<b>Price/Lb (\$)</b>
Bigeye scad (atulai)	5	14	3.00
Jacks	152	430	2.84
Napoleon wrasse	155	426	2.75
Ehu (red snapper)	12	47	4.00
Gindai (flower snapper)	7	26	4.00
Groupers	88	278	3.15
Kalikali (yellowtail, goldflag jobfish)	25	88	3.50
Onaga (red snapper)	264	1,321	5.00
Reef fishes (unknown)	2,484	7,418	2.99
Rudderfish (guilli)	16	48	3.00
Mafute (emperors)	37	108	2.88
Parrotfishes	4,069	13,215	3.25
Snappers	40	120	3.00
Surgeonfishes	294	883	3.00
Unicornfishes	4,973	14,918	3.00
Barracudas	108	217	2.00
Mahimahi	13,943	30,617	2.20
Marlins	394	620	1.57
Sailfish	128	191	1.50
Rainbow runner	312	750	2.41
Wahoo	2,639	5,911	2.24
Skipjack tuna	857	1,714	2.00
Dogtooth tuna	110	165	1.50
Yellowfin tuna	320	640	2.00
<b>TOTAL</b>	<b>31,432</b>	<b>80,164</b>	<b>2.55</b>



**Table C-5**  
**Guam April 2011 Estimated Commercial Landings**

<b>Species</b>	<b>Pounds</b>	<b>Value (\$)</b>	<b>Price/Lb (\$)</b>
Jacks	154	392	2.56
Napoleon wrasse	28	83	3.00
Ehu (red snapper)	79	280	3.54
Groupers	47	135	2.89
Kalikali (yellowtail, goldflag jobfish)	46	162	3.51
Lehi (silverjaw snapper, rusty jobfish)	24	97	4.00
Onaga (red snapper)	123	613	5.00
Opakapaka (pink snapper)	209	737	3.54
Uku (green jobfish)	36	98	2.74
Amberjack	43	114	2.68
Reef fishes (unknown)	1,952	5,851	3.00
Rudderfish (guilli)	40	120	3.00
Mafute (emperors)	56	168	3.00
Parrotfishes	4,826	15,469	3.21
Surgeonfishes	292	875	3.00
Unicornfishes	2,519	7,558	3.00
Sweetlips	85	234	2.75
Barracudas	172	343	2.00
Mahimahi	11,494	25,465	2.22
Marlins	1,076	1,493	1.39
Sailfish	67	110	1.65
Rainbow runner	200	400	2.00
Wahoo	2,021	4,541	2.25
Skipjack tuna	2,348	4,628	1.97
Dogtooth tuna	194	291	1.50
Yellowfin tuna	736	1,472	2.00
Lobsters	42	149	3.53
Octopus	164	543	3.30
<b>TOTAL</b>	<b>29,070</b>	<b>72,418</b>	<b>2.49</b>

**Table C-6**  
**Guam May 2011 Estimated Commercial Landings**

<b>Species</b>	<b>Pounds</b>	<b>Value (\$)</b>	<b>Price/Lb (\$)</b>
Black jack	16	47	3.00
Jacks	271	720	2.66
Napoleon wrasse	266	736	2.77
Ehu (red snapper)	8	33	4.00
Gindai (flower snapper)	13	39	3.15
Groupers	24	74	3.05
Kalikali (yellowtail, goldflag jobfish)	60	224	3.74
Lehi (silverjaw snapper, rusty jobfish)	83	291	3.53
Onaga (red snapper)	166	515	3.10
Opakapaka (pink snapper)	140	508	3.63
Uku (green jobfish)	69	203	2.93
Amberjack	36	114	3.19
Reef fishes (unknown)	2,582	7,786	3.02
Rabbitfishes	455	2,323	5.10
Rudderfish (guilli)	70	210	3.00
Mafute (emperors)	13	39	3.00
Squirrelfishes	13	38	3.00
Parrotfishes	3,379	10,983	3.25
Snappers	16	44	2.75
Surgeonfishes	502	1,505	3.00
Unicornfishes	1,799	5,397	3.00
Goatfishes	3	8	3.00
Sweetlips	45	113	2.50
Barracudas	62	123	2.00
Mahimahi	693	1,560	2.25
Marlins	1,832	2,892	1.58
Sailfish	143	214	1.50
Rainbow runner	126	252	2.00
Wahoo	264	605	2.29
Tunas (unknown)	48	71	1.50
Skipjack tuna	1,199	2,398	2.00
Dogtooth tuna	63	95	1.50
Yellowfin tuna	2,460	5,254	2.14
Lobsters	159	569	3.58
<b>TOTAL</b>	<b>17,074</b>	<b>45,980</b>	<b>2.69</b>

**Table C-7**  
**Guam June 2011 Estimated Commercial Landings**

<b>Species</b>	<b>Pounds</b>	<b>Value (\$)</b>	<b>Price/Lb (\$)</b>
Black jack	31	77	2.50
Jacks	74	183	2.47
Napoleon wrasse	366	1,006	2.75
Deep bottomfishes	34	68	2.00
Ehu (red snapper)	85	338	4.00
Groupers	38	125	3.25
Lehi (silverjaw snapper, rusty jobfish)	20	80	4.00
Onaga (red snapper)	345	1,725	5.00
Tagafi (red snapper)	75	188	2.50
Amberjack	32	79	2.50
Reef fishes (unknown)	2,003	6,096	3.04
Rabbitfishes	98	358	3.64
Mafute (emperors)	23	64	2.75
Parrotfishes	3,250	10,563	3.25
Snappers	54	163	3.00
Surgeonfishes	580	1,740	3.00
Unicornfishes	1,361	4,083	3.00
Sweetlips	61	167	2.75
Barracudas	38	77	2.00
Mahimahi	377	531	1.41
Marlins	5,890	8,371	1.42
Sailfish	142	262	1.85
Rainbow runner	108	215	2.00
Wahoo	228	514	2.25
Skipjack tuna	2,143	4,287	2.00
Dogtooth tuna	42	63	1.50
Yellowfin tuna	2,723	6,190	2.27
Lobsters	64	238	3.73
Octopus	124	373	3.00
<b>TOTAL</b>	<b>20,409</b>	<b>48,223</b>	<b>2.36</b>

**Table C-8**  
**Guam July 2011 Estimated Commercial Landings**

<b>Species</b>	<b>Pounds</b>	<b>Value (\$)</b>	<b>Price/Lb (\$)</b>
Bigeye scad (atulai)	21	62	3.00
Black jack	3	6	2.50
Jacks	54	137	2.53
Napoleon wrasse	1,073	2,949	2.75
Bottomfishes (unknown)	5	16	3.00
Ehu (red snapper)	96	386	4.00
Gindai (flower snapper)	21	82	4.00
Groupers	258	778	3.02
Kalikali (yellowtail, goldflag jobfish)	86	302	3.50
Lehi (silverjaw snapper, rusty jobfish)	64	240	3.76
Onaga (red snapper)	1,218	5,768	4.73
Opakapaka (pink snapper)	315	1,261	4.00
Uku (green jobfish)	16	45	2.84
Amberjack	4	11	3.00
Reef fishes (unknown)	2,154	6,462	3.00
Rabbitfishes	23	69	3.00
Mafute (emperors)	245	655	2.67
Squirrelfishes	2	7	3.00
Parrotfishes	1,820	5,914	3.25
Snappers	23	62	2.75
Surgeonfishes	181	543	3.00
Unicornfishes	1,764	5,293	3.00
Sweetlips	53	147	2.75
Barracudas	48	95	2.00
Mahimahi	70	153	2.18
Marlins	2,026	3,076	1.52
Rainbow runner	230	460	2.00
Monchong	103	256	2.50
Wahoo	558	1,242	2.23
Skipjack tuna	2,295	4,531	1.97
Dogtooth tuna	78	116	1.50
Yellowfin tuna	1,715	3,559	2.08
Lobsters	165	610	3.70
Octopus	933	2,798	3.00
Squid	14	43	3.00
<b>TOTAL</b>	<b>17,730</b>	<b>48,132</b>	<b>2.71</b>

**Table C-9**  
**Guam August 2011 Estimated Commercial Landings**

<b>Species</b>	<b>Pounds</b>	<b>Value (\$)</b>	<b>Price/Lb (\$)</b>
Bigeye scad (atulai)	390	1,133	2.90
Black jack	94	220	2.34
Jacks	87	216	2.47
Napoleon wrasse	1,299	3,573	2.75
Ehu (red snapper)	117	459	3.93
Gindai (flower snapper)	54	217	4.00
Groupers	1,020	2,744	2.69
Kalikali (yellowtail, goldflag jobfish)	115	460	4.00
Onaga (red snapper)	1,176	5,832	4.96
Opakapaka (pink snapper)	87	341	3.91
Uku (green jobfish)	81	207	2.54
Amberjack	127	329	2.58
Reef fishes (unknown)	2,475	7,393	2.99
Mafute (emperors)	603	1,758	2.92
Parrotfishes	3,146	10,221	3.25
Surgeonfishes	565	1,695	3.00
Unicornfishes	2,014	6,043	3.00
Sweetlips	38	103	2.75
Barracudas	115	180	1.57
Mahimahi	192	294	1.53
Marlins	4,995	6,287	1.26
Rainbow runner	606	1,055	1.74
Wahoo	224	503	2.24
Skipjack tuna	1,682	3,305	1.96
Dogtooth tuna	23	34	1.50
Yellowfin tuna	2,575	5,360	2.08
Crabs	6	18	3.00
Lobsters	408	1,528	3.75
Octopus	603	1,835	3.04
<b>TOTAL</b>	<b>24,916</b>	<b>63,340</b>	<b>2.54</b>

**Table C-10**  
**Guam September 2011 Estimated Commercial Landings**

<b>Species</b>	<b>Pounds</b>	<b>Value (\$)</b>	<b>Price/Lb (\$)</b>
Bigeye scad (atulai)	728	2,128	2.93
Black jack	102	245	2.40
Jacks	280	793	2.84
Napoleon wrasse	438	1,205	2.75
Ehu (red snapper)	313	1,254	4.00
Gindai (flower snapper)	65	260	4.00
Groupers	239	676	2.83
Kalikali (yellowtail, goldflag jobfish)	70	278	3.97
Lehi (silverjaw snapper, rusty jobfish)	8	32	4.00
Onaga (red snapper)	1,623	7,805	4.81
Opakapaka (pink snapper)	103	411	4.00
Tagafi (red snapper)	102	280	2.75
Amberjack	85	219	2.57
Reef fishes (unknown)	2,345	7,032	3.00
Mafute (emperors)	145	416	2.88
Parrotfishes	2,720	8,840	3.25
Snappers	14	39	2.75
Surgeonfishes	779	2,338	3.00
Unicornfishes	2,223	6,670	3.00
Sweetlips	49	135	2.75
Barracudas	155	310	2.00
Mahimahi	173	379	2.20
Marlins	1,698	2,787	1.64
Rainbow runner	135	260	1.93
Monchong	38	100	2.61
Wahoo	2,551	5,471	2.14
Skipjack tuna	5,285	10,234	1.94
Dogtooth tuna	241	361	1.50
Yellowfin tuna	1,983	4,151	2.09
Lobsters	310	1,164	3.75
Octopus	815	2,445	3.00
<b>TOTAL</b>	<b>25,815</b>	<b>68,717</b>	<b>2.66</b>

**Table C-11**  
**Guam October 2011 Estimated Commercial Landings**

<b>Species</b>	<b>Pounds</b>	<b>Value (\$)</b>	<b>Price/Lb (\$)</b>
Bigeye scad (atulai)	508	1,523	3.00
Black jack	39	90	2.29
Jacks	281	739	2.63
Ehu (red snapper)	134	536	4.00
Gindai (flower snapper)	5	21	4.00
Groupers	85	257	3.03
Kalikali (yellowtail, goldflag jobfish)	31	113	3.60
Lehi (silverjaw snapper, rusty jobfish)	79	283	3.59
Onaga (red snapper)	53	263	5.00
Opakapaka (pink snapper)	40	159	4.00
Uku (green jobfish)	34	87	2.57
Amberjack	28	73	2.60
Reef fishes (unknown)	2,077	6,206	2.99
Mafute (emperors)	129	371	2.88
Squirrelfishes	22	65	3.00
Parrotfishes	2,254	7,326	3.25
Surgeonfishes	620	1,844	2.97
Unicornfishes	1,201	3,598	3.00
Barracudas	117	233	2.00
Mahimahi	1,838	4,091	2.23
Marlins	1,201	1,463	1.22
Rainbow runner	145	289	1.99
Monchong	33	75	2.25
Wahoo	2,651	5,775	2.18
Skipjack tuna	2,532	3,987	1.57
Dogtooth tuna	26	39	1.50
Yellowfin tuna	1,667	3,405	2.04
Lobsters	540	2,025	3.75
Octopus	413	1,238	3.00
<b>TOTAL</b>	<b>18,781</b>	<b>46,171</b>	<b>2.46</b>

**Table C-12**  
**Guam November 2011 Estimated Commercial Landings**

<b>Species</b>	<b>Pounds</b>	<b>Value (\$)</b>	<b>Price/Lb (\$)</b>
Bigeye scad (atulai)	337	843	2.51
Jacks	118	298	2.53
Groupers	15	50	3.25
Reef fishes (unknown)	1,810	5,430	3.00
Mafute (emperors)	24	66	2.75
Squirrelfishes	23	65	2.88
Parrotfishes	1,022	3,320	3.25
Surgeonfishes	225	675	3.00
Unicornfishes	2,428	7,285	3.00
Sweetlips	54	144	2.65
Barracudas	235	470	2.00
Mahimahi	3,654	8,182	2.24
Marlins	196	362	1.85
Sailfish	24	36	1.50
Rainbow runner	71	142	2.00
Wahoo	7,699	16,637	2.16
Skipjack tuna	477	954	2.00
Dogtooth tuna	125	187	1.50
Yellowfin tuna	448	973	2.17
Lobsters	67	250	3.75
Octopus	467	1,400	3.00
<b>TOTAL</b>	<b>19,517</b>	<b>47,769</b>	<b>2.45</b>



**Table C-13**  
**Guam December 2011 Estimated Commercial Landings**

<b>Species</b>	<b>Pounds</b>	<b>Value (\$)</b>	<b>Price/Lb (\$)</b>
Bigeye scad (atulai)	273	709	2.59
Jacks	331	885	2.67
Gindai (flower snapper)	11	42	4.00
Groupers	19	62	3.23
Kalikali (yellowtail, goldflag jobfish)	4	14	3.50
Lehi (silverjaw snapper, rusty jobfish)	10	40	4.00
Reef fishes (unknown)	1,525	4,576	3.00
Mafute (emperors)	19	53	2.75
Squirrelfishes	44	131	3.00
Parrotfishes	1,123	3,651	3.25
Surgeonfishes	195	585	3.00
Unicornfishes	1,709	5,128	3.00
Goatfishes	1	3	3.00
Barracudas	68	135	2.00
Mahimahi	1,928	4,337	2.25
Marlins	173	259	1.50
Spearfish	46	69	1.50
Sailfish	166	296	1.79
Rainbow runner	33	65	2.00
Wahoo	1,343	3,023	2.25
Skipjack tuna	1,108	2,288	2.06
Yellowfin tuna	327	671	2.05
Lobsters	17	63	3.75
<b>TOTAL</b>	<b>10,472</b>	<b>27,085</b>	<b>2.59</b>

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

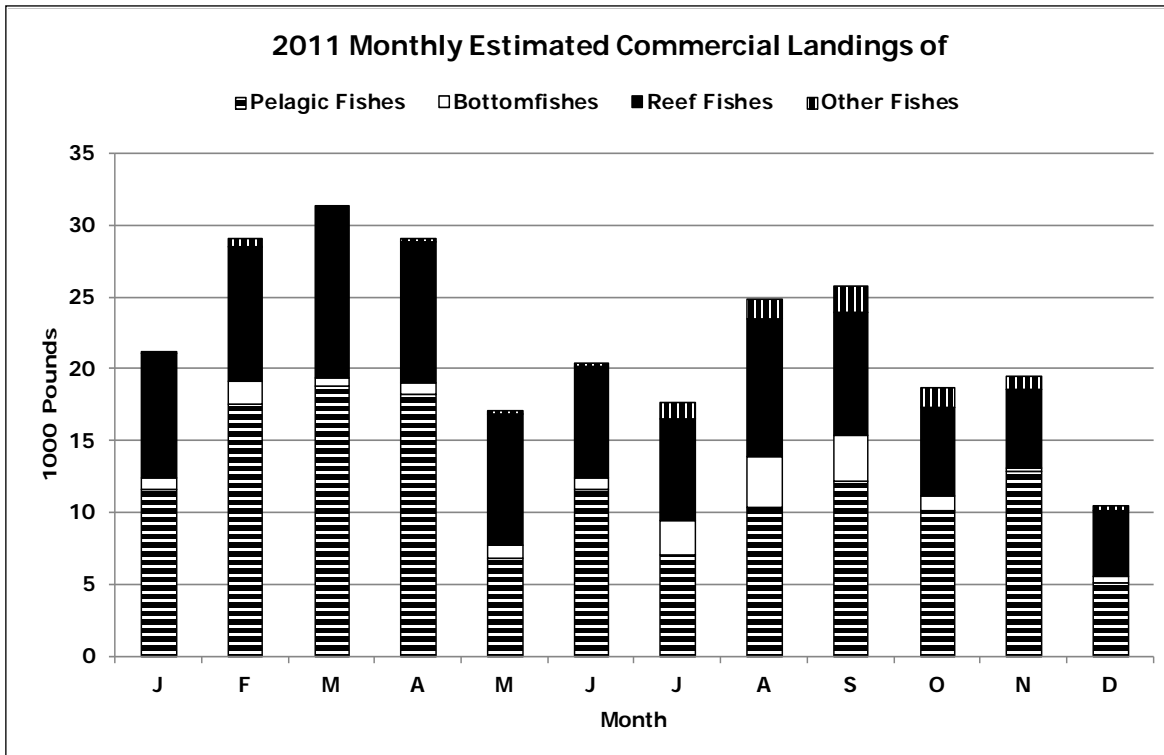


Figure C-1-1

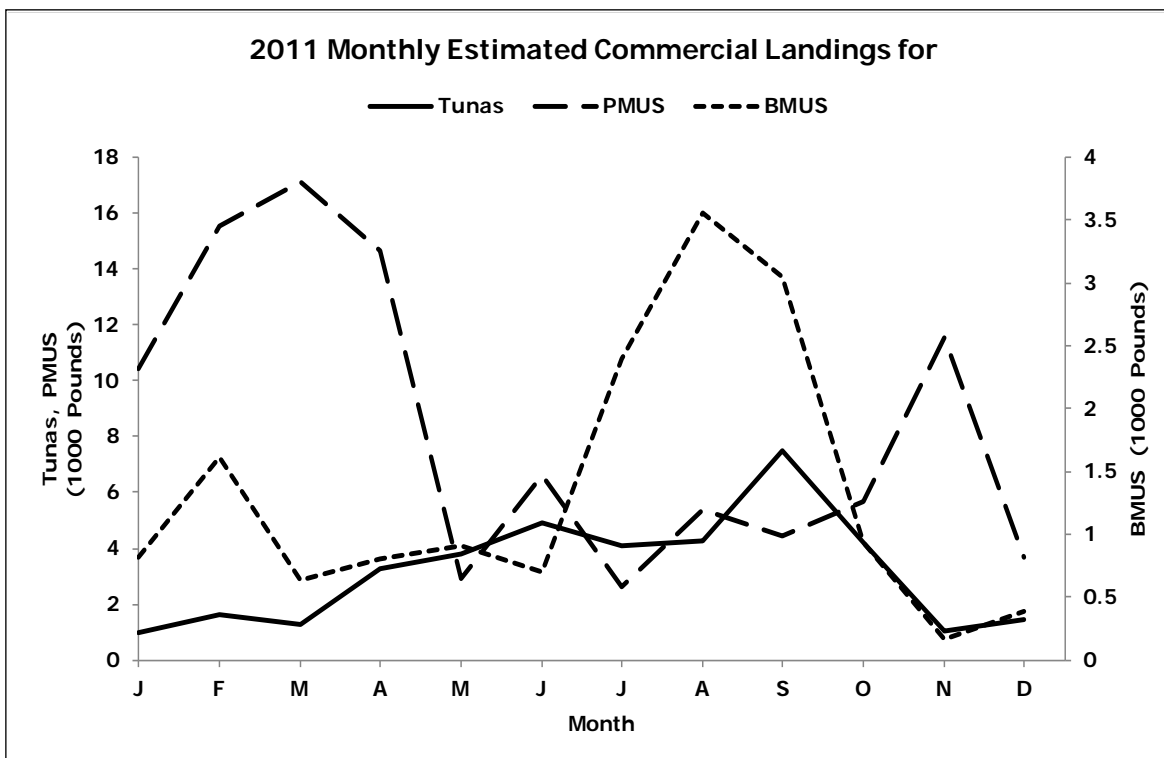


Figure C-1-2

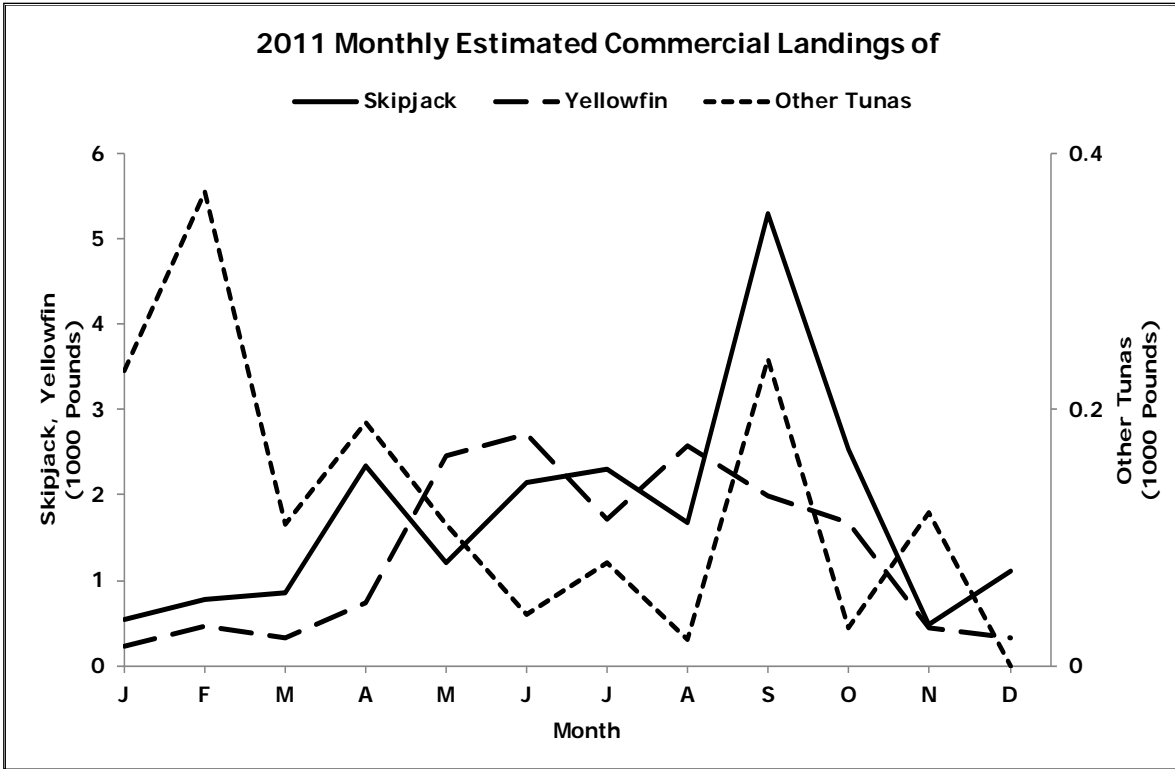


Figure C-1-3

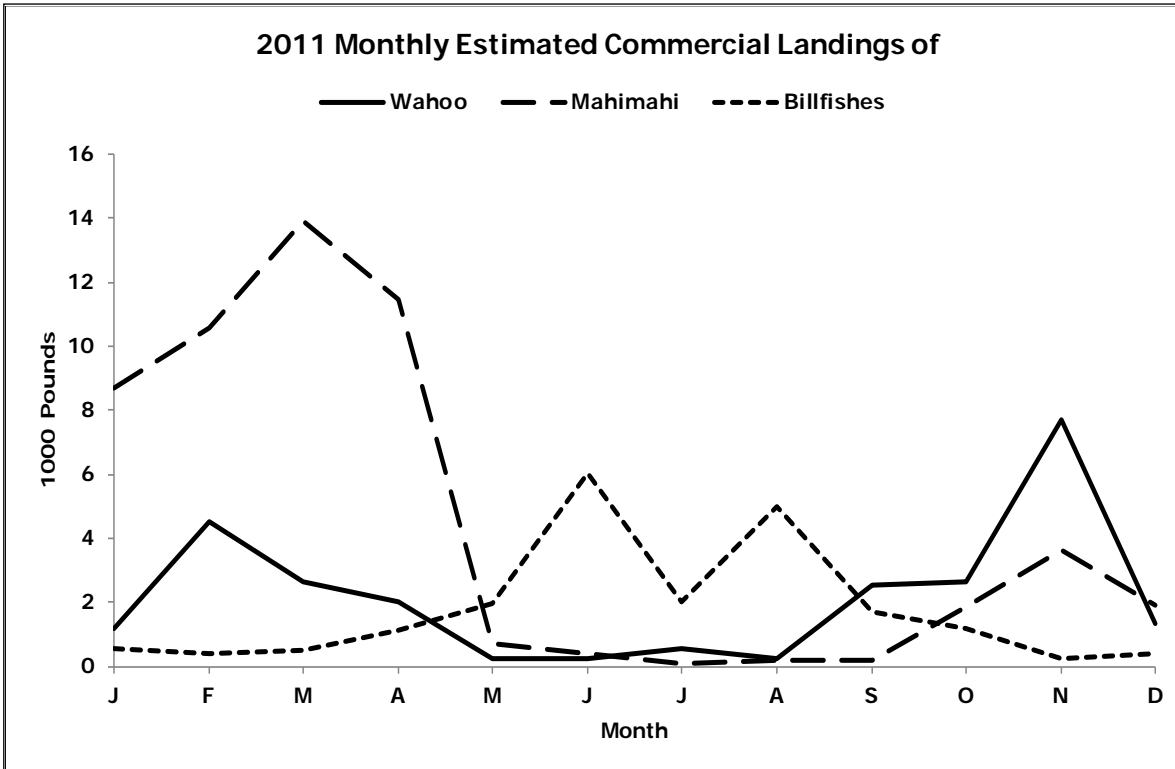


Figure C-1-4

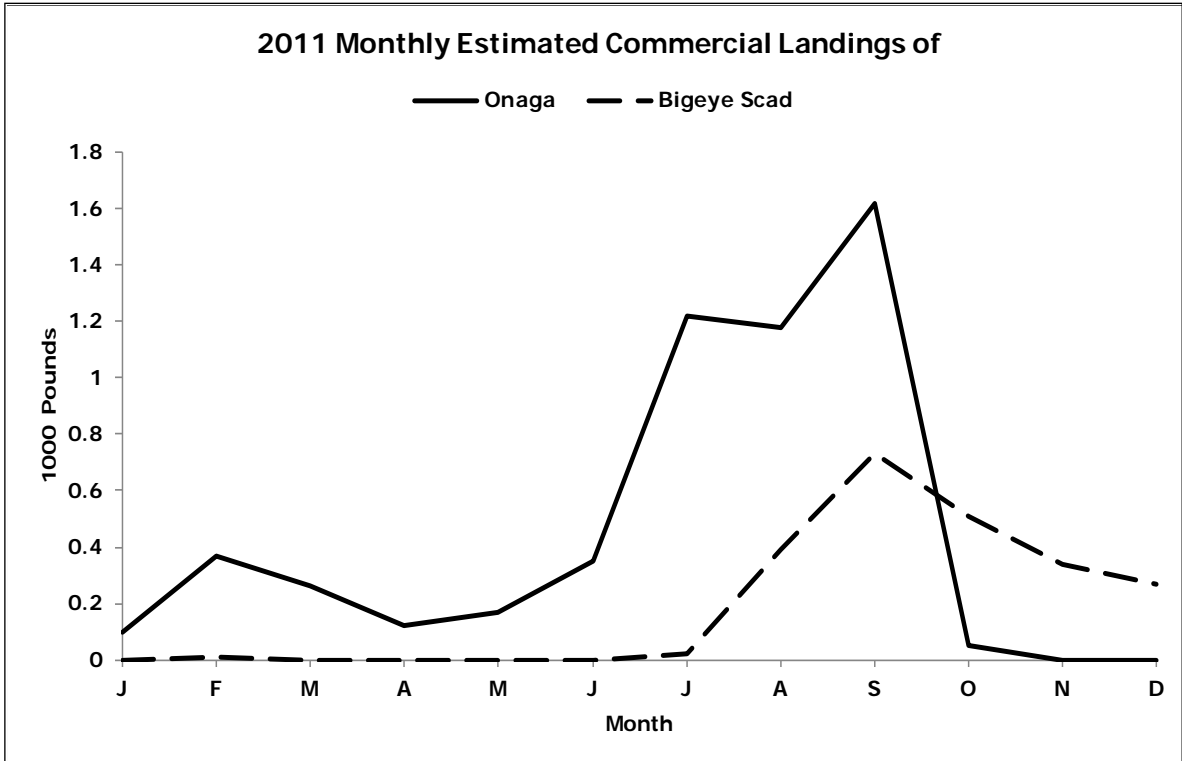


Figure C-1-5

C.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:

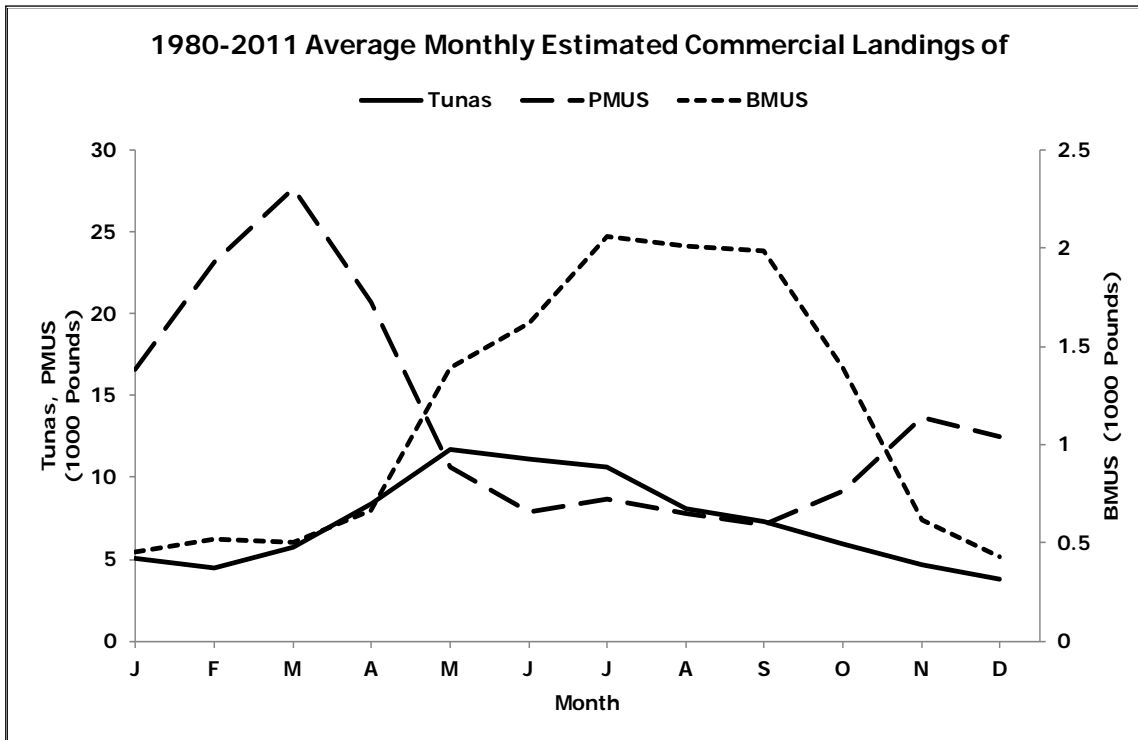


Figure C-2-1

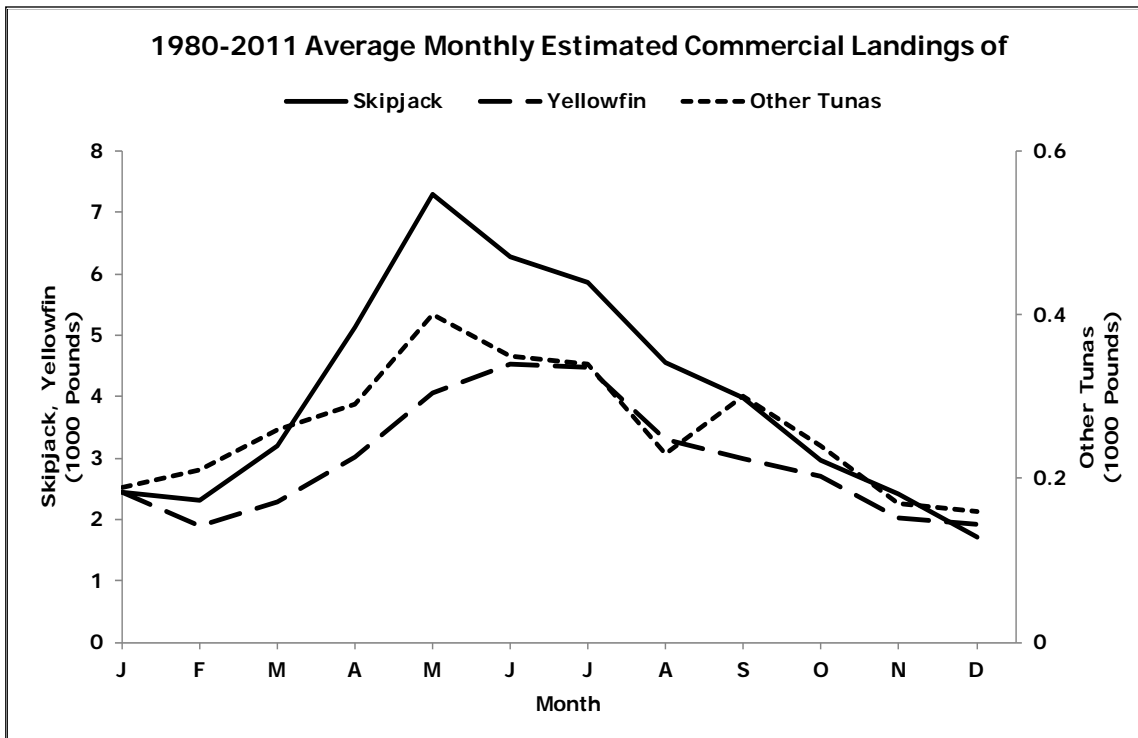


Figure C-2-2

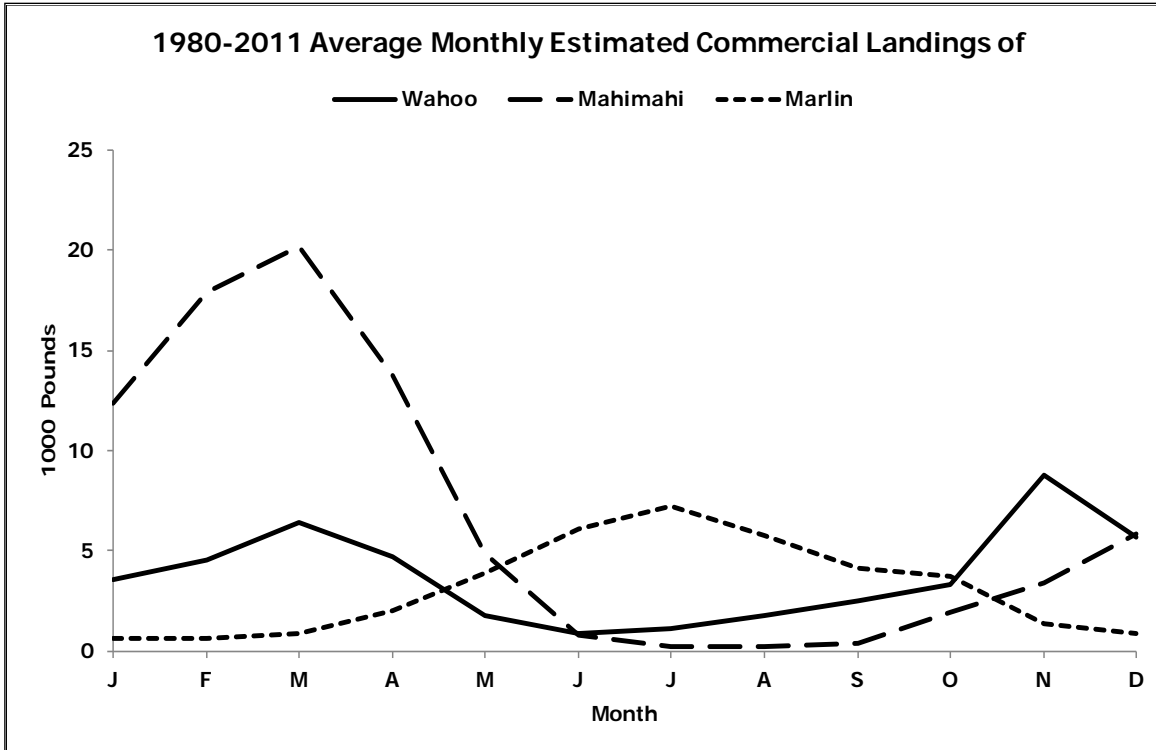


Figure C-2-3

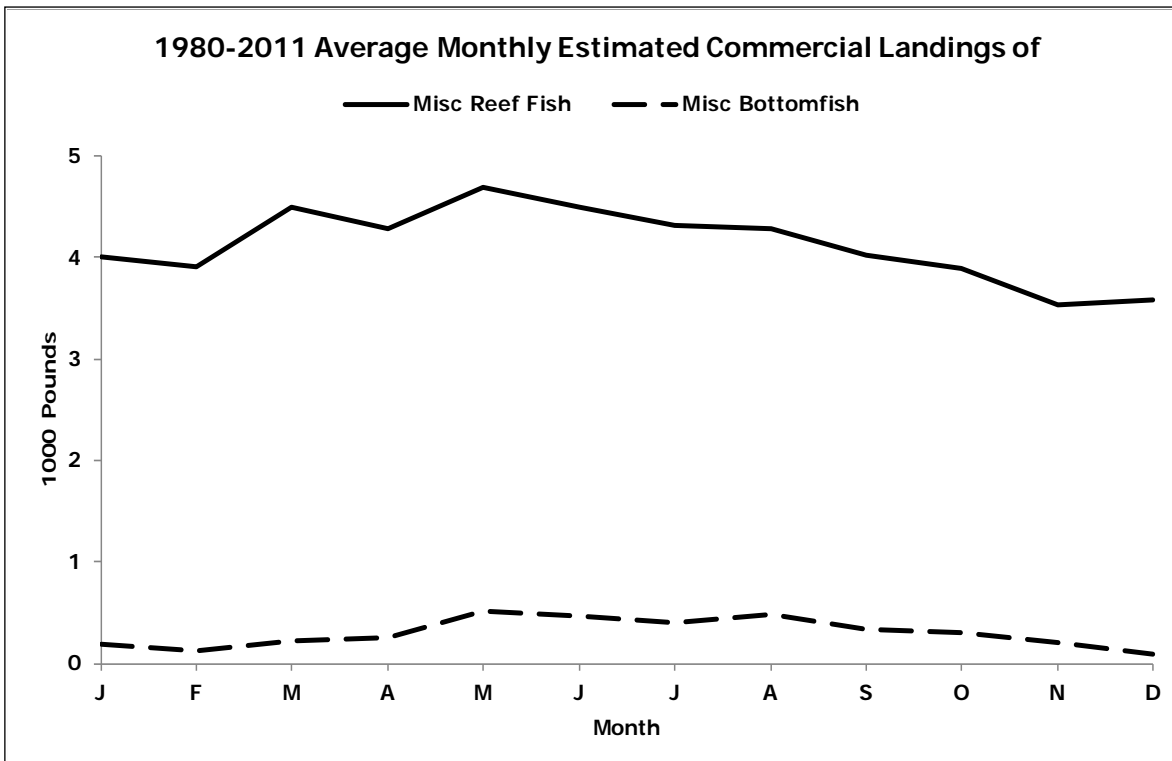


Figure C-2-4

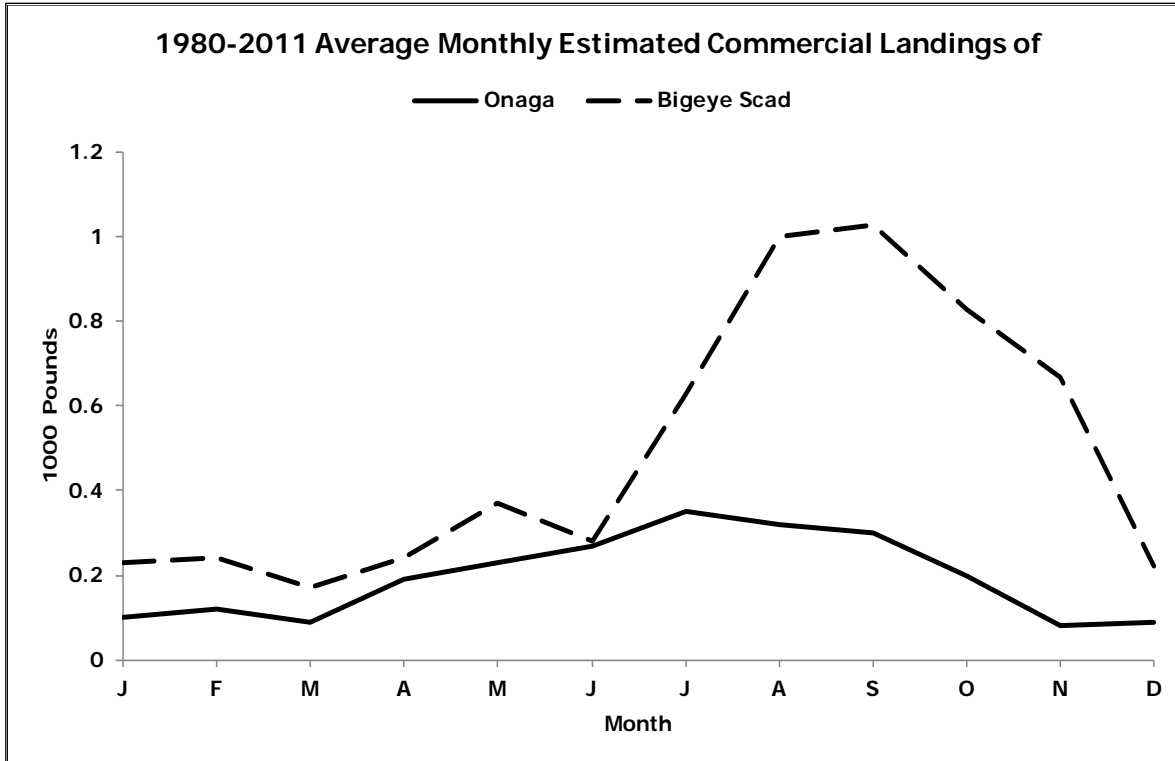


Figure C-2-5

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

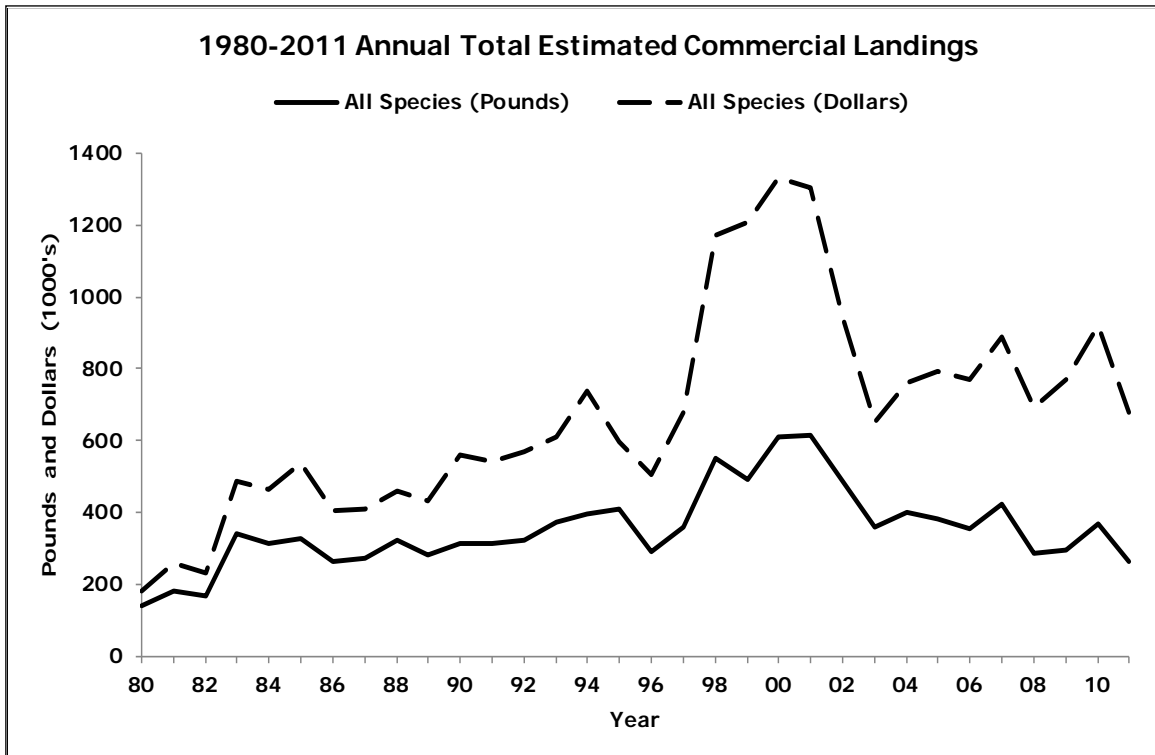


Figure C-3-1

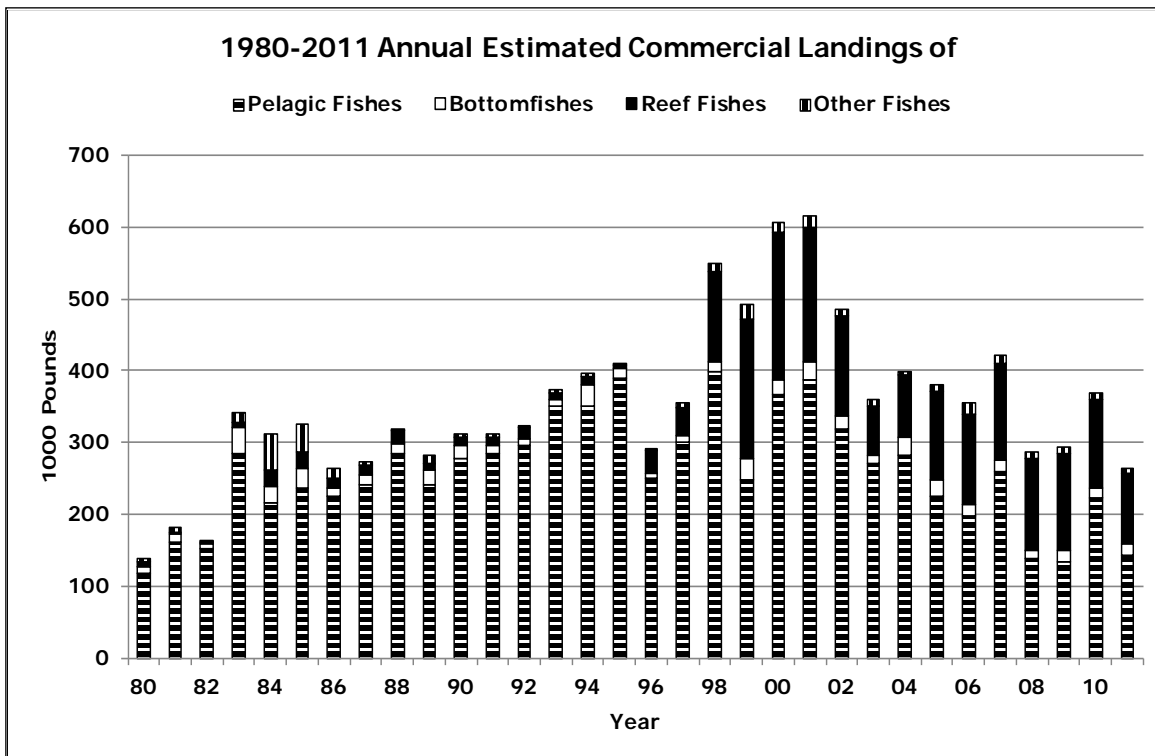


Figure C-3-2



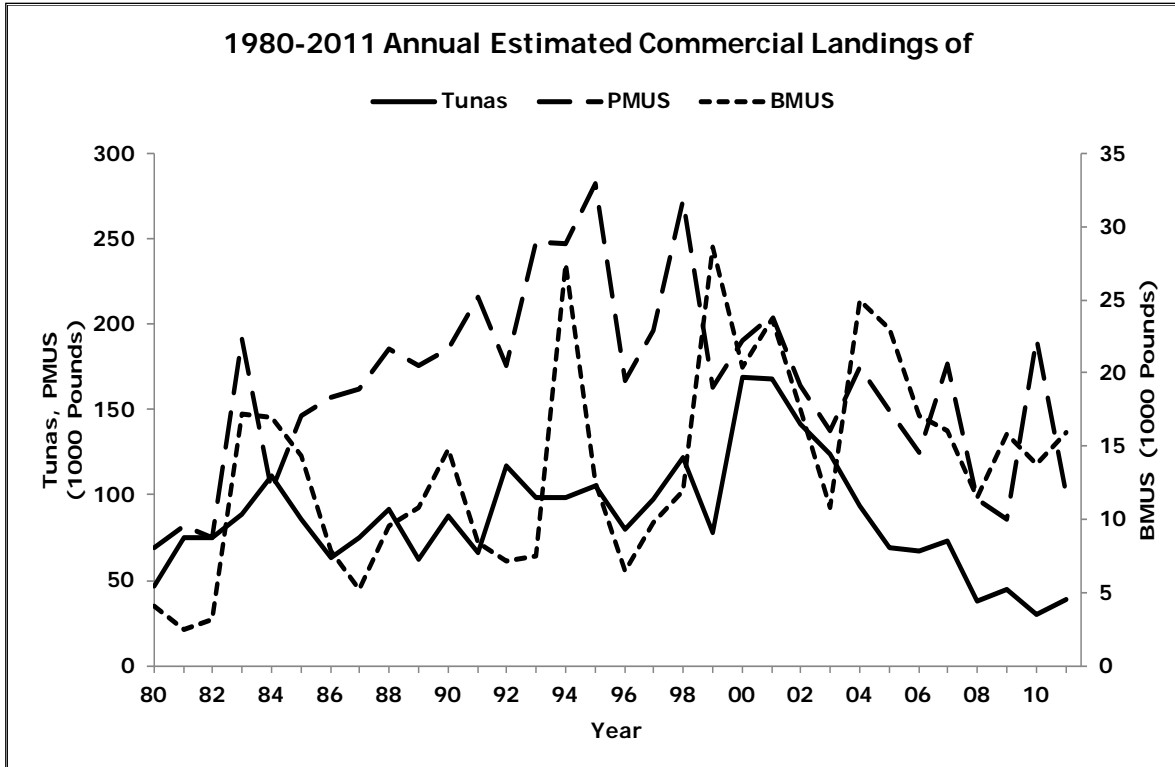


Figure C-3-3

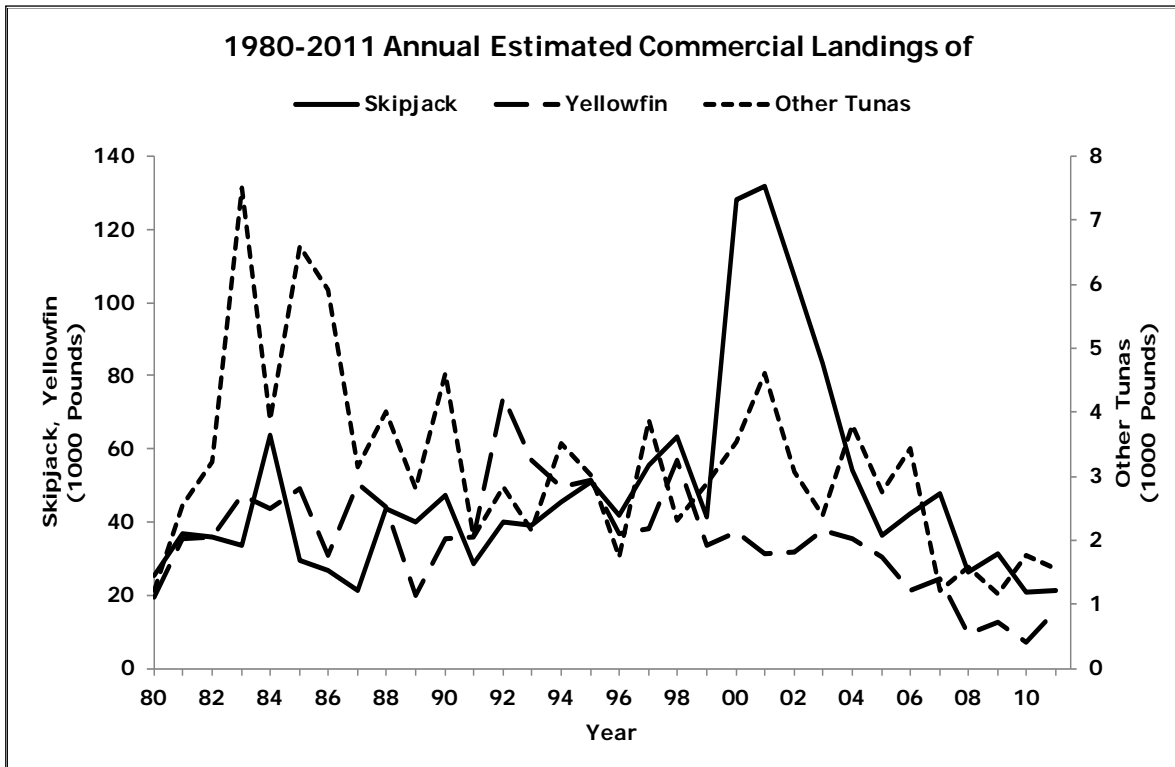


Figure C-3-4

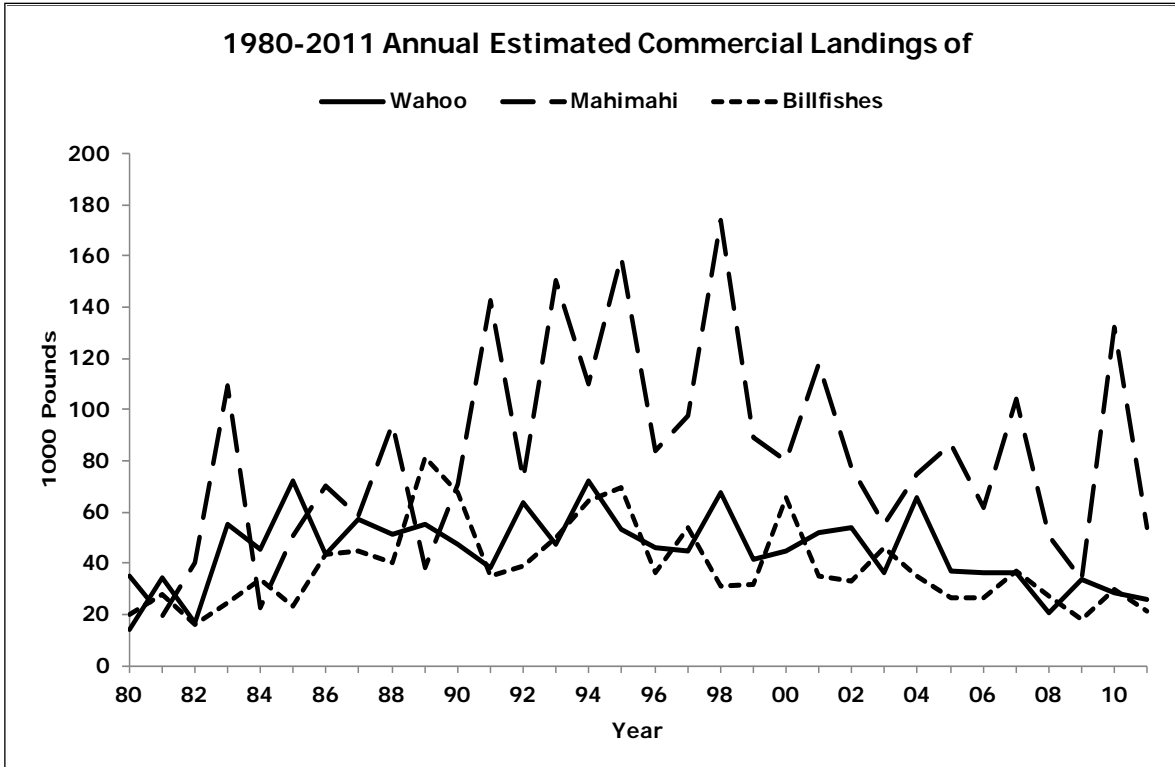


Figure C-3-5

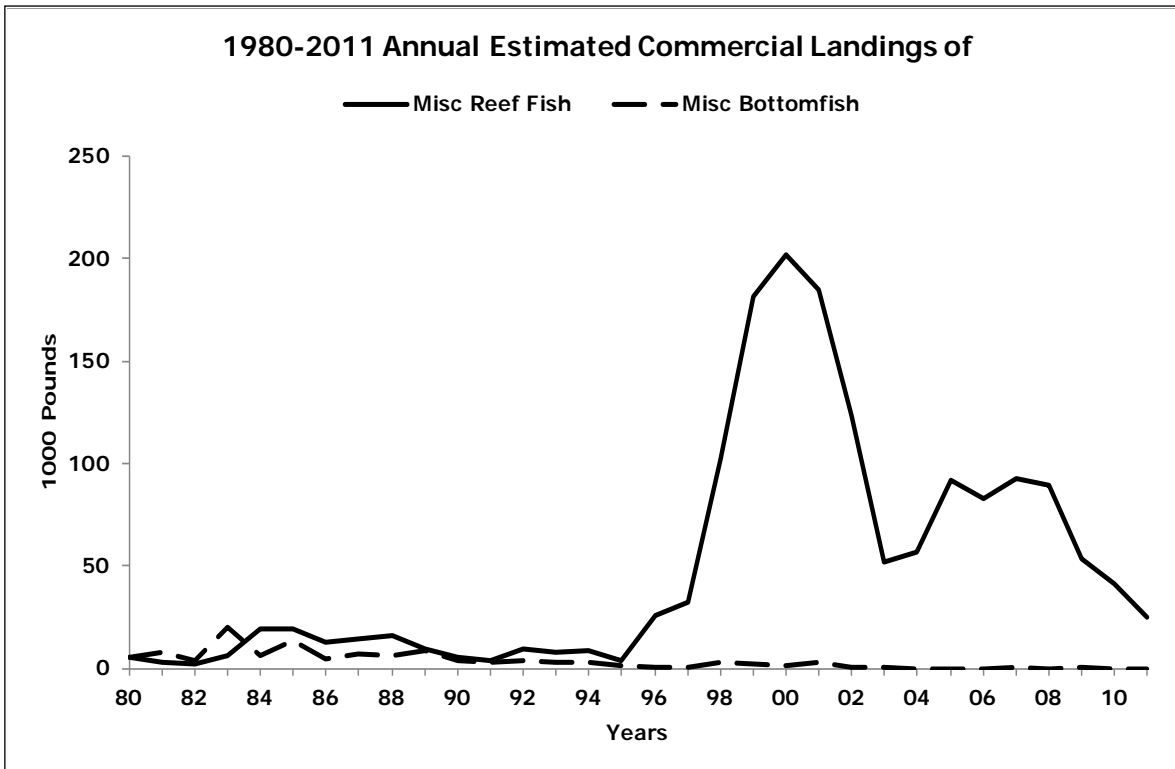


Figure C-3-6

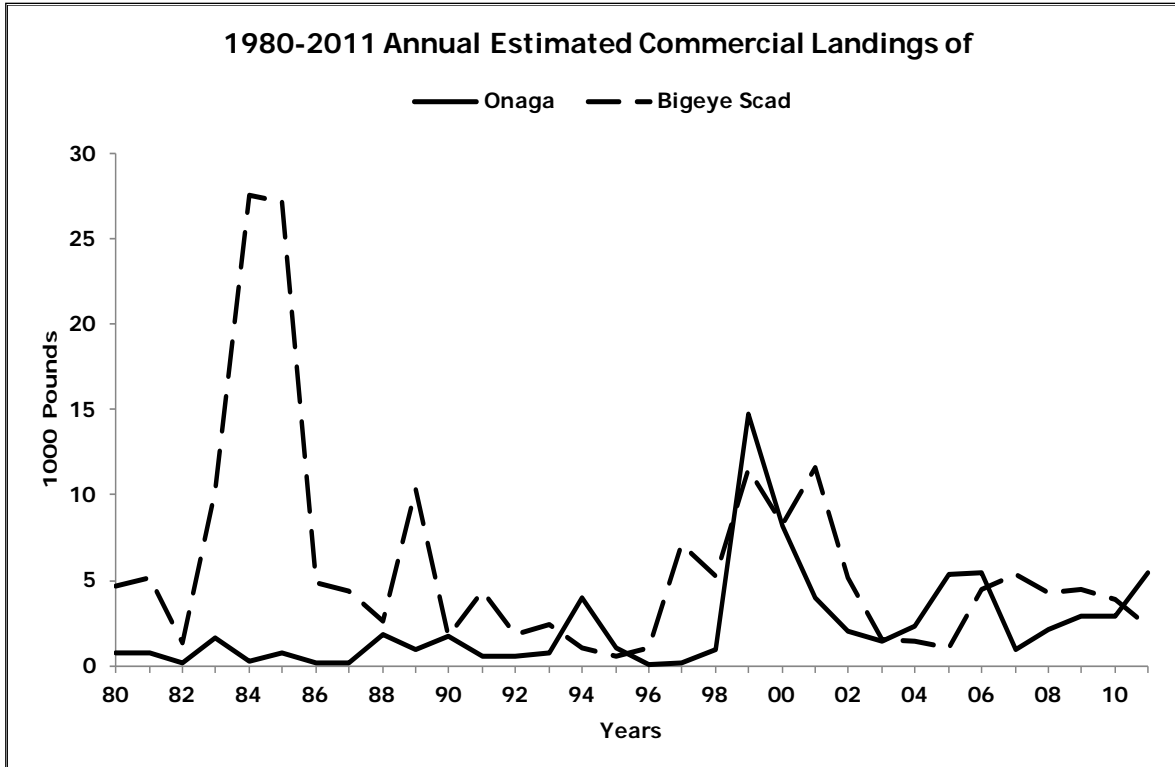


Figure C-3-7

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

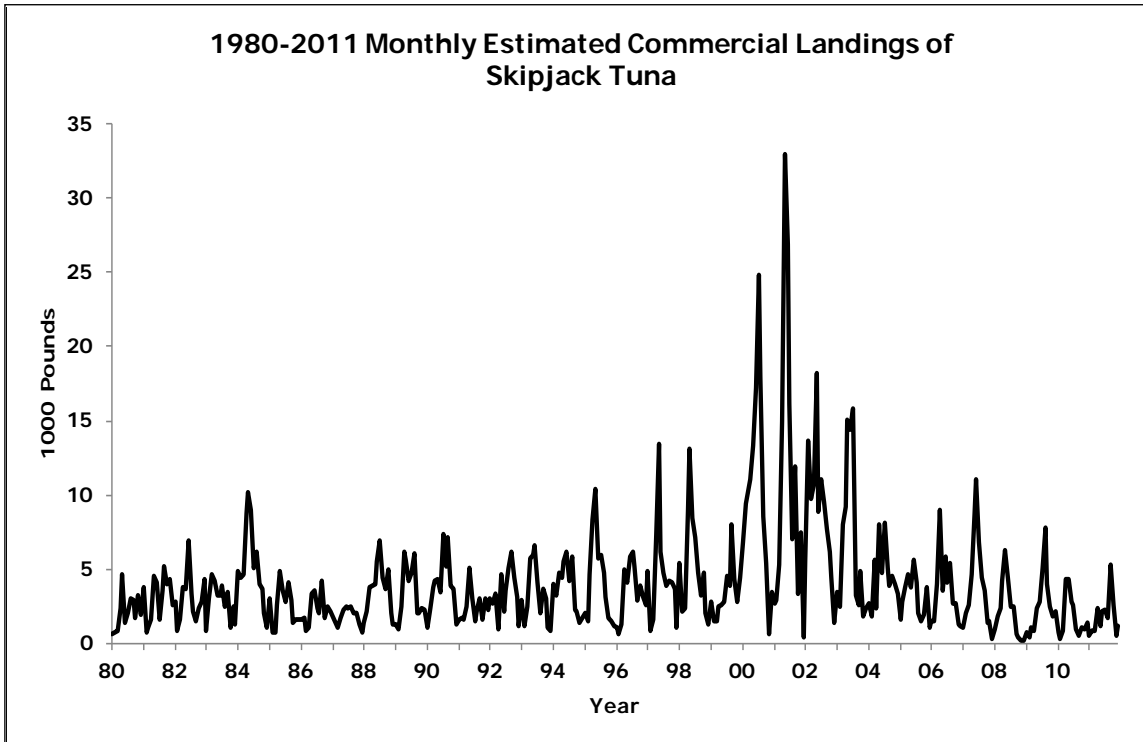


Figure C-4-1

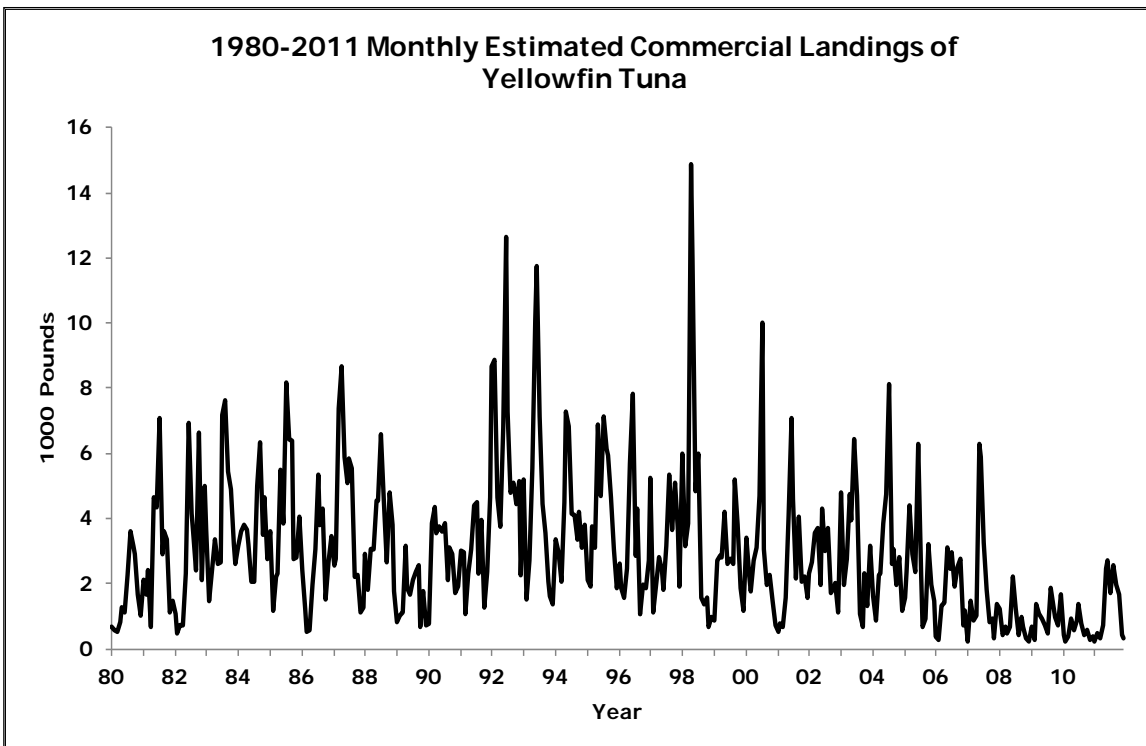


Figure C-4-2

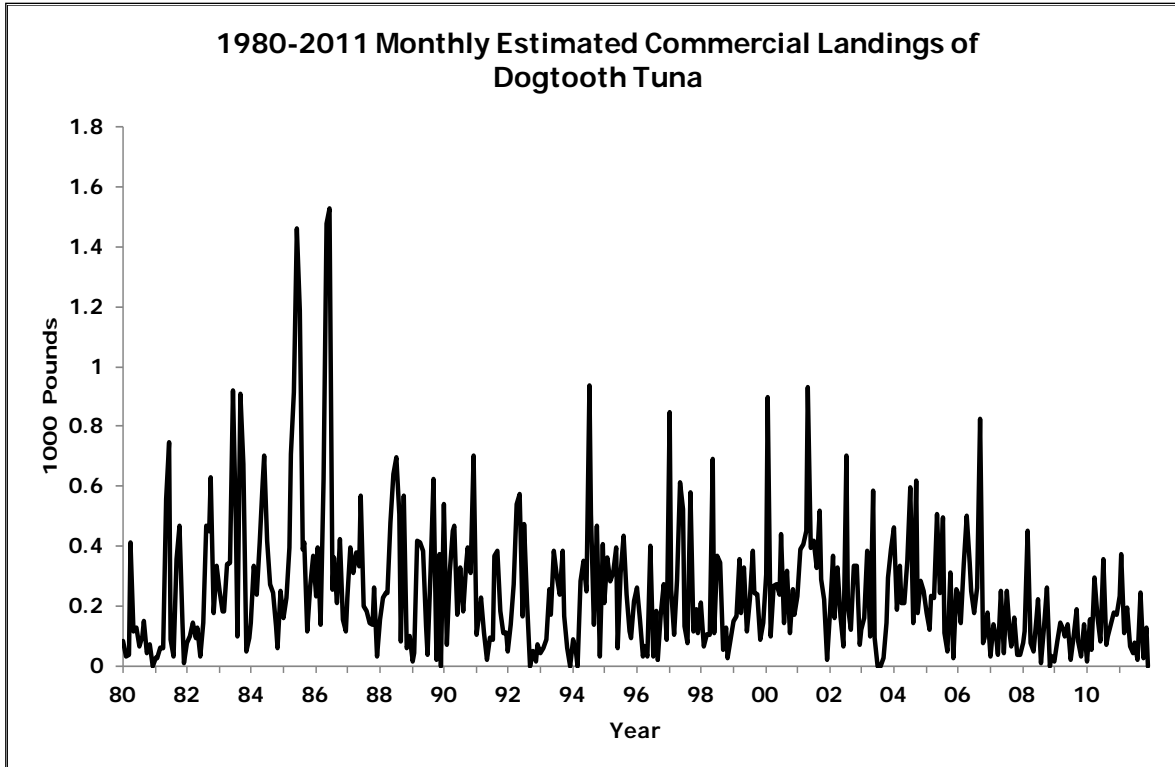


Figure C-4-3

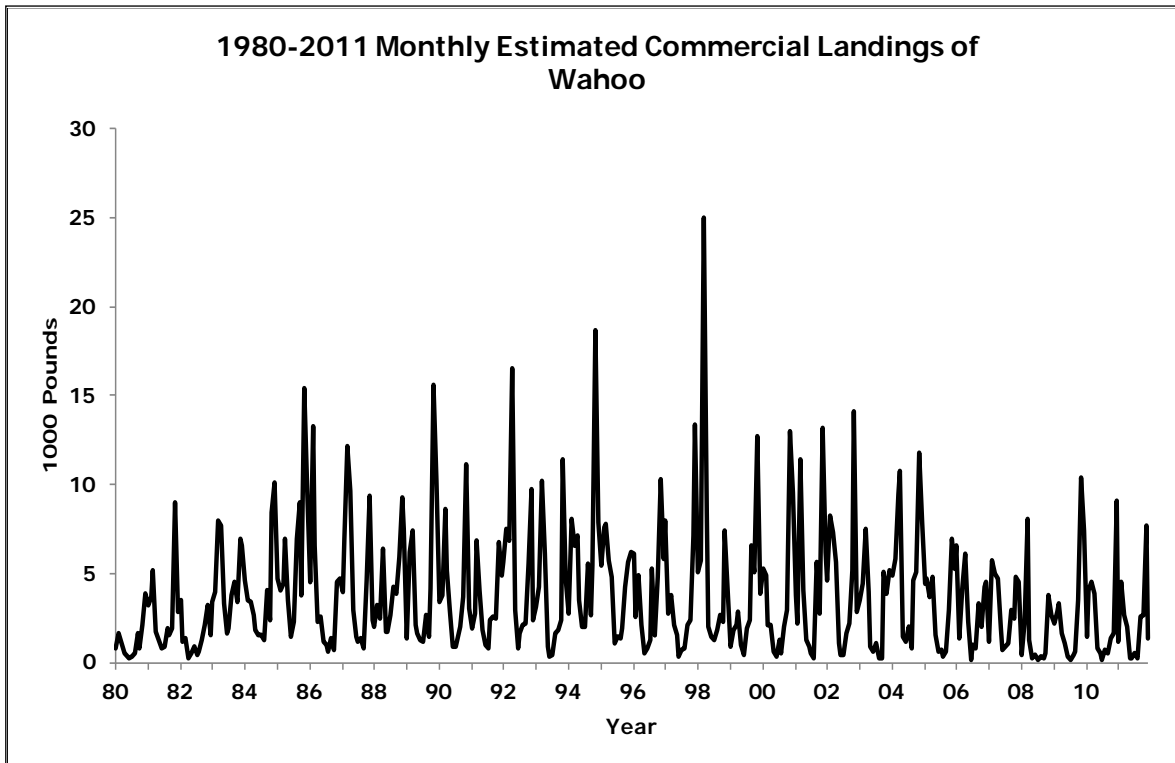


Figure C-4-4

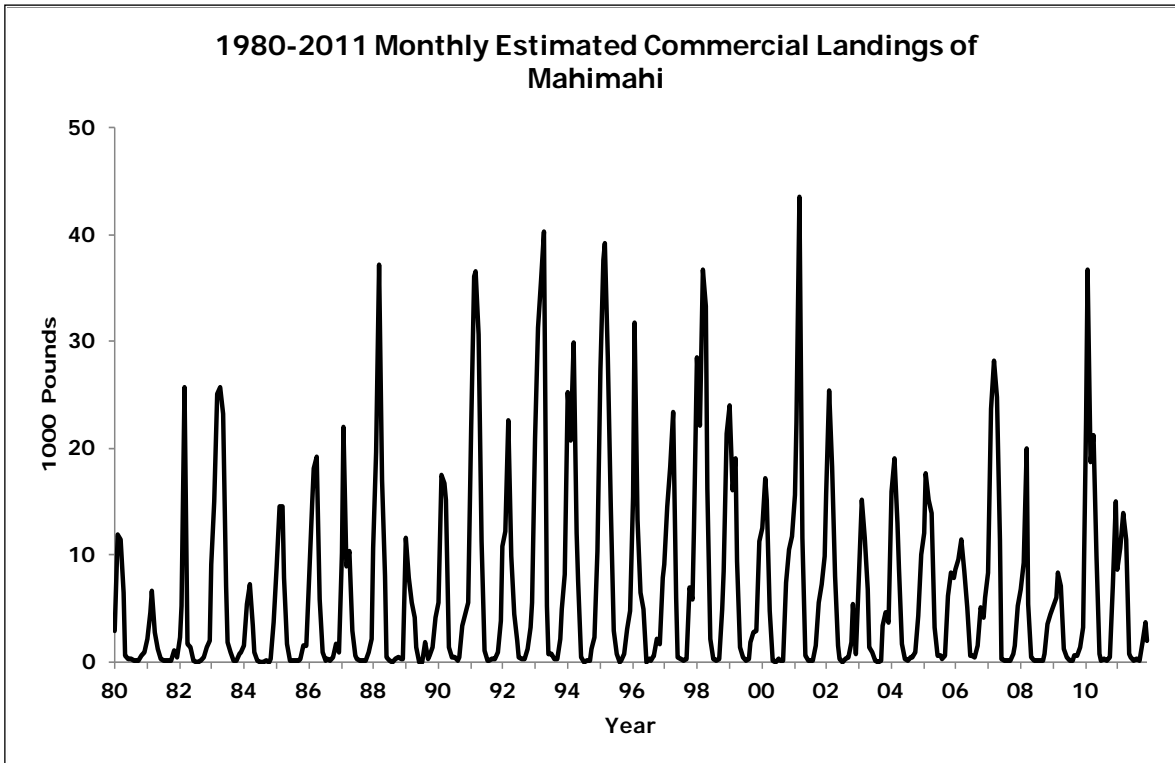


Figure C-4-5

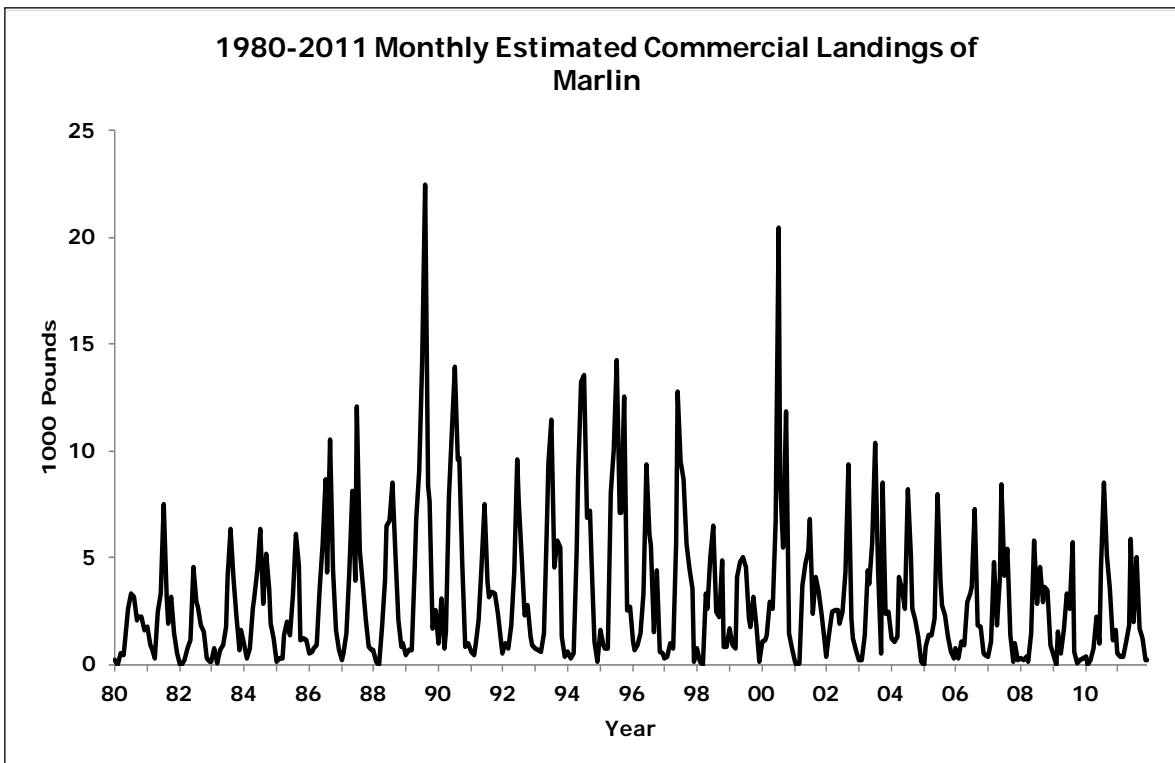


Figure C-4-6

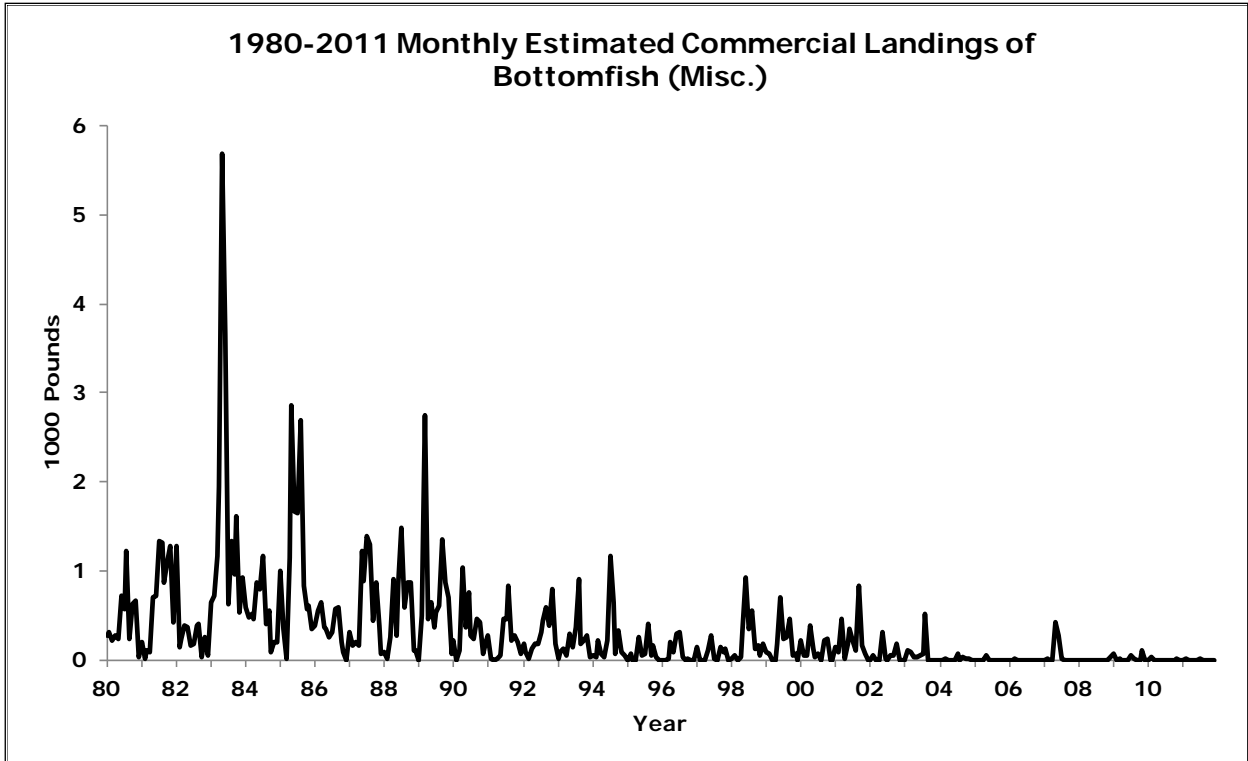


Figure C-4-7

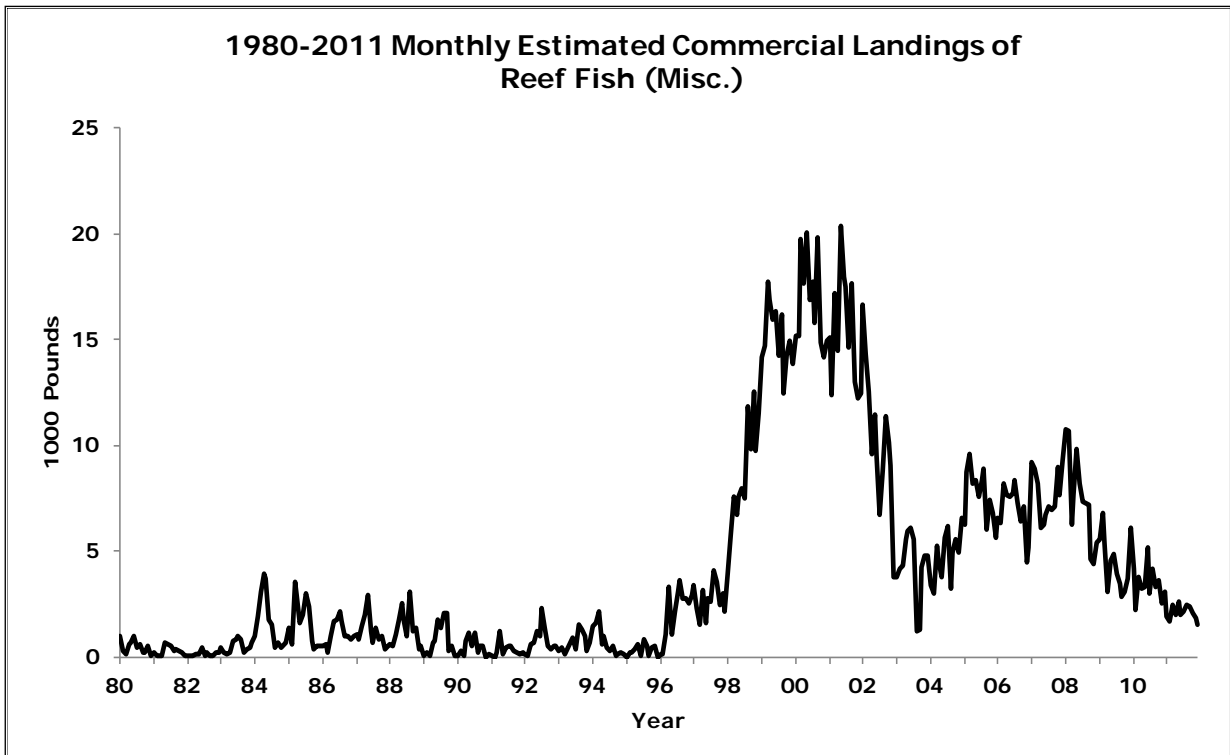


Figure C-4-8

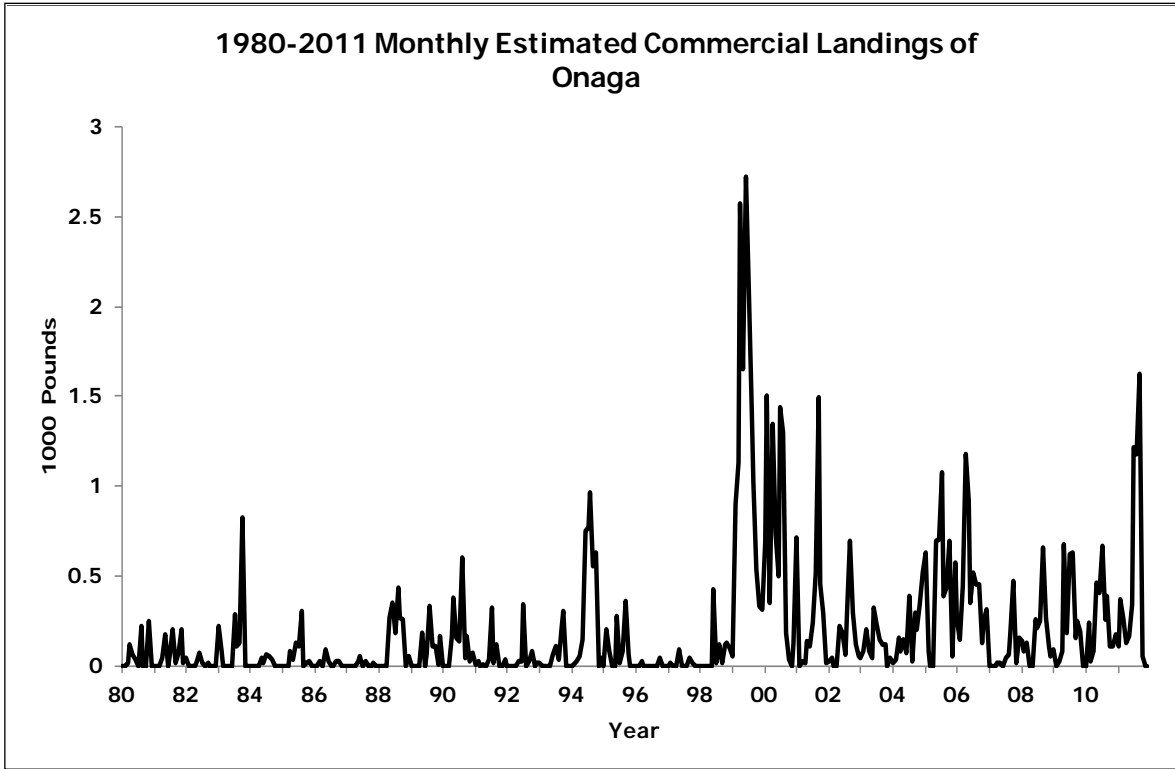


Figure C-4-9

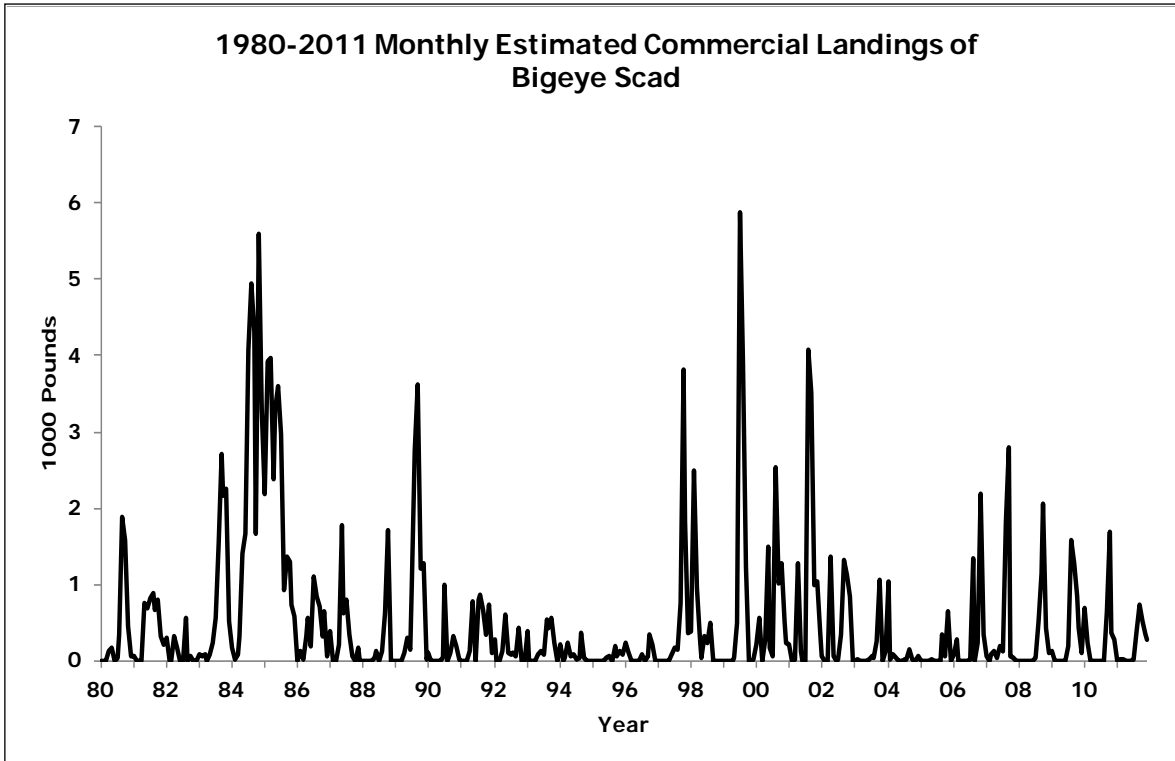


Figure C-4-10