



*Washington
Department of*
**FISH and
WILDLIFE**

**Summary Report of the
2003 Experimental Purse Seine Fishery
for Pacific Sardine (*Sardinops sagax*)**

December 2003

Washington Department of Fish and Wildlife
Intergovernmental Resource Management
48 Devonshire Road
Montesano, Washington 98563

TABLE OF CONTENTS

| | |
|----------------------------------|---|
| Background | 1 |
| Fishery Regulations | 1 |
| Fishery Description | 2 |
| Observer Coverage/Logbooks | 3 |
| Bycatch | 3 |
| Biological samples | 3 |
| Summary of WDFW Activities | 5 |

Appendix

| | |
|---------------------------------|---|
| A. 2003 Permit Conditions | 6 |
|---------------------------------|---|

List of Tables and Figures

| | |
|--|---|
| Table 1. Washington fishery comparisons for 2000-03 | 2 |
| Table 2. Expanded observed bycatch data for 2003 and comparison to previous years | 3 |
| Figure 1. Monthly sardine landings into Washington 2000-03 | 2 |
| Figure 2. Maturity composition of Washington sardine samples collected in 2003 | 4 |

**WASHINGTON DEPARTMENT OF FISH AND WILDLIFE
SUMMARY REPORT OF THE 2003 EXPERIMENTAL PURSE SEINE FISHERY
FOR PACIFIC SARDINE (*Sardinops sagax*)**

Background

In Washington, sardines are managed under the Emerging Commercial Fishery provisions, which provide for the harvest of a newly classified species, or harvest of a previously classified species in a new area or by new means (WAC 220-88-010). From 2000 through 2002, the Washington Department of Fish and Wildlife had trial purse seine fisheries for Pacific sardines, under which the number of participants cannot be limited. Following an extensive public process which included establishing and meeting with a formal Sardine Advisory Board, the Director decided to advance the sardine fishery to an experimental fishery in 2003, under the Emerging Commercial Fisheries legislation, which mandates that permits be limited.

Pacific sardines are managed under the Pacific Fishery Management Council's Coastal Pelagic Species (CPS) fishery management plan. The Pacific Council develops and adopts a coastwide annual harvest guideline, which is then allocated between the two areas which take into account the biological and ecological impacts of harvesting forage fish. Earlier this year, the Pacific Council adopted an interim allocation regime with plans to develop a long-term allocation strategy over the next year.

The Northwest sardine fishery has rapidly expanded over the past few years, which was the primary reason the Department decided to convert from a trial to an experimental fishery. Oregon began its limited developmental fishery in 1999, which yielded 771 mt in sardine landings. Since then, the Northwest landings have increased with Oregon catching 22,711 mt and Washington landing another 15,212 mt, for a total of 37,923 mt in 2002. In 2003, the overall coastwide harvest guideline decreased slightly to 110,908 mt (from 118,442 mt in 2002), producing a northern allocation of 36,969 mt.

Fishery Regulations

There were 17 fishermen who met all of the criteria necessary to obtain a Washington sardine experimental fishery permit in 2003. The criteria included a cumulative total of 40 mt landed into Washington in the years 2000, 2001, and 2002, or landings in two of the three qualifying years. In addition to the minimum landing requirement, qualifying participants must have paid any outstanding fees owed to the Department for observer coverage in the 2000-02 sardine fisheries and renewed their fishing license by July 1.

The experimental fishery was scheduled to open on May 15 and continue through October 31, 2003. However, at the request of fishery participants, both Washington and Oregon took action to delay the season opener until June 22. Reasons for the delay included a desire to avoid an early closure in late August as a result of early attainment of the harvest guideline, and to promote fishing during a time when the product is of a higher quality. The full description of permit conditions that applied in 2003 are contained in Appendix A.

Fishery Description

Out of the 17 permit holders, 10 made landings this year, for a total of 11,604 mt sardines landed into Washington. This is a decrease from the previous year (15,212 mt); it has been suggested that the decline in landings was the result of a slow startup, rather than fish availability. The size of the average landing was 40 mt.

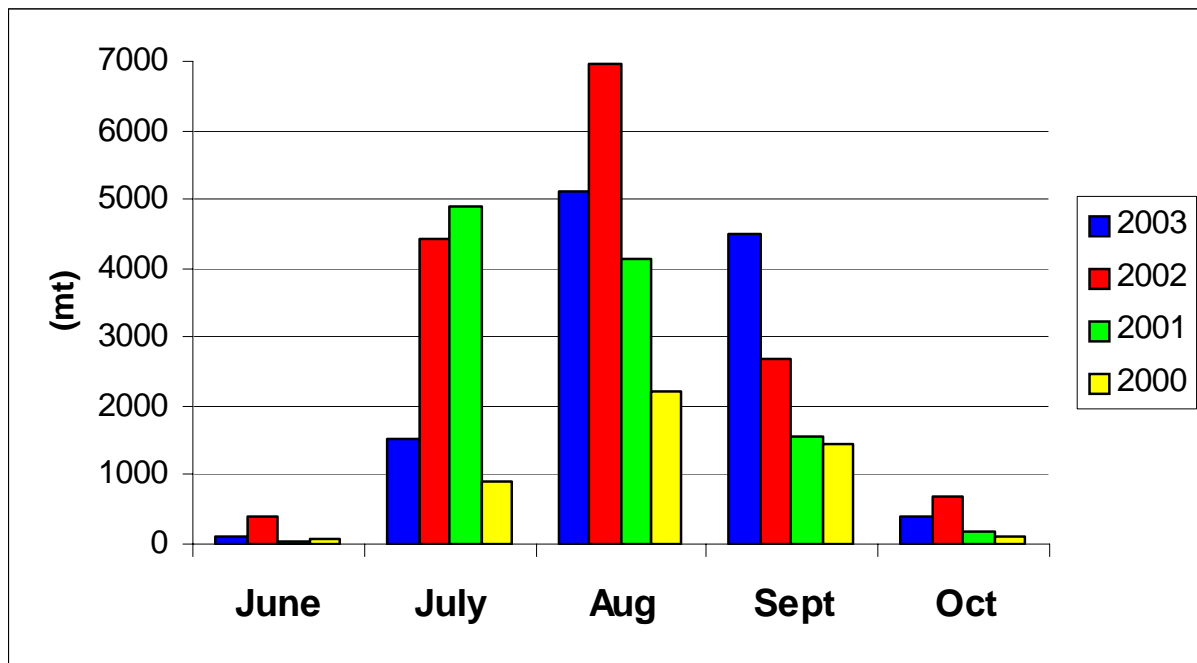
Sixty-seven percent of the sardines landed were caught in waters adjacent to the Washington coast. This is an increase over past years in which about 43% of the sardines landed were caught off Washington. Sardines are landed into two coastal ports—Westport and Ilwaco. Westport is located on the south side of Grays Harbor and Ilwaco is located on the northern shore of the Columbia River. In 2003, 88% of the sardines were landed into the port of Ilwaco.

A comparison of the Washington seasons and landings are contained in Table 1 and Figure 1.

Table 1. Washington fishery comparisons for 2000-03.

| | 2003 | 2002 | 2001 | 2000 |
|---------------|--------|--------|--------|-------|
| Landings (mt) | 11,604 | 15,212 | 10,837 | 4,791 |
| # Landings | 288 | 424 | 299 | 153 |
| # Vessels | 10 | 19 | 13 | 3 |
| Obs Coverage | 27% | 24% | 24% | 24% |

Figure 1. Monthly sardine landings into Washington for 2000-03.



Observer Coverage/Logbooks

The purpose of requiring observer coverage is to document total catch and bycatch in the purse seine fishery. Bycatch has been recorded in terms of species, amount, and condition; observers noted whether the fish were released or landed, and whether the fish were alive, dead, or in poor condition. All of the vessels participating in the fishery chose to utilize Department observers, rather than contract with private observer companies. A “sardine hotline” was established for fishers to notify the Department of their planned fishing activities so observer coverage could be scheduled accordingly. Observers were in daily contact with the vessels to schedule onboard trips directly. Fishers were cooperative in allowing observers on board and in scheduling departure times and locations. In general, logbooks were completed and submitted as requested.

Bycatch

Based on observer data, the bycatch of non-targeted species has been fairly low. Bycatch has included chinook and coho salmon, spiny dogfish, blue shark, and other species. The expanded total bycatch of salmon (in numbers of individuals) for the fishery, based on observer data, is contained in Table 2.

Table 2. Expanded observed bycatch data (in numbers of individuals) for the 2003 fishery and comparison to the previous fisheries.

| | 2003 | 2002 | 2001 | 2000 |
|----------------|------|------|------|------|
| Chinook (live) | 92 | 150 | 449 | 38 |
| Chinook (dead) | 262 | 356 | 170 | 3 |
| Coho (live) | 81 | 61 | 571 | 276 |
| Coho (dead) | 231 | 765 | 504 | 116 |
| Unknown Salmon | 173 | 200 | 80 | 7 |

Biological Samples

Department staff have collected and processed 60 biological samples of 25 sardines each. Otoliths were extracted and will be processed at the Department’s age-reading laboratory in Olympia. Accompanying data will include catch date, vessel name, standard lengths of the sardines, individual weights, sex, and maturity. Sex and maturity were determined by using the following standardized guide developed by the National Marine Fisheries Service Southwest Fisheries Science Center:

Females - Codes and Descriptions

- (1) Clearly Immature - Oocytes not visible, ovary is very small; translucent/clear and thin, but with rounded edges.
- (2) Intermediate - Individual oocytes are not visible to unaided eye (no visible yolk or hydrated oocytes in the ovaries), but ovary is not clearly immature. Includes possible maturing and regressed ovaries.

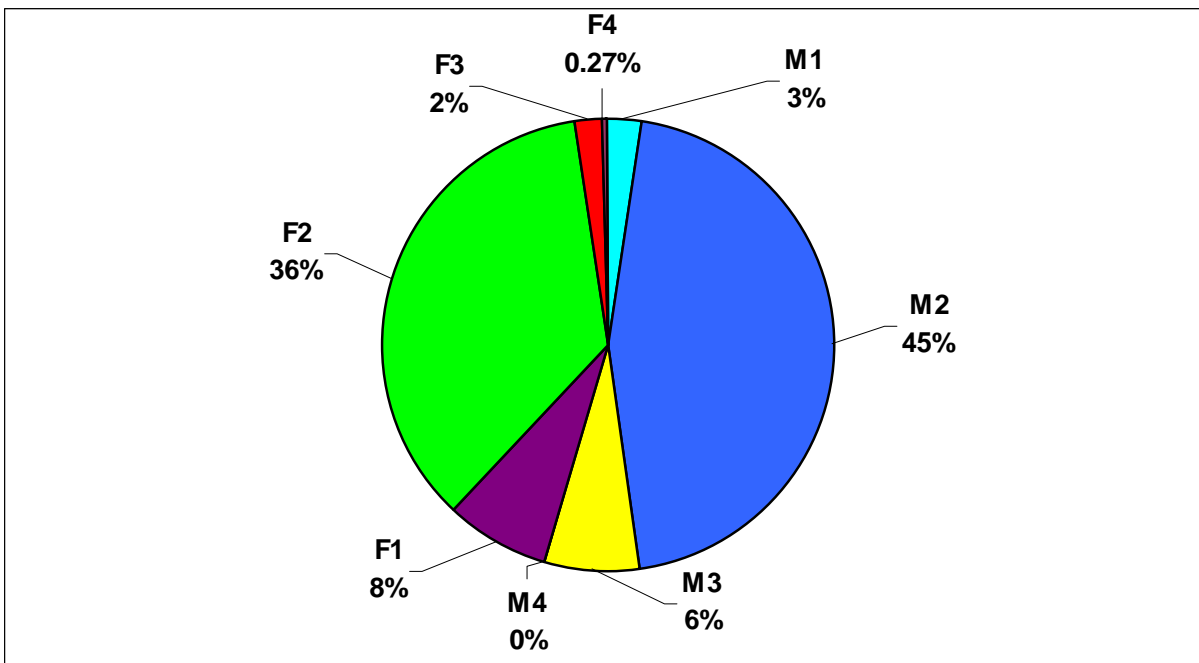
- (3) Active - Yolked oocytes visible, any size or amount as long as you can see them with the unaided eye in ovaries. This includes the smaller opaque oocytes (around 0.4-0.5 mm) to the large yellowish oocytes (about 0.6-0.8 mm). If hydrated oocytes are also present, then classify as a code 4.
- (4) Hydrated - Yolked oocytes may or may not be seen; any amount of hydrated oocytes (large and transparent) qualifies for this class from few to many or even if loose or oozing/running from ovary.

Males - Codes and Descriptions

- (1) Clearly Immature - Testis is very small, knife-shaped; thin with a flat ventral edge.
- (2) Intermediate - No milt evident and is not a clear immature; includes maturing or regressed testis.
- (3) Milt Present - Either oozing from pore, in the duct, or when testis is cut with a knife.

Fifty-five percent of the samples analyzed were females, with most of them having a sexual maturity of 2. The highest subcategory overall were males with a sexual maturity of 2. There were 4 females and 0 males with a sexual maturity of 4 (Figure 2).

Figure 2. Maturity composition of Washington sardine samples collected in 2003.



Standard lengths of sardine samples were taken and, in general, the average lengths of the samples decreased slightly over time. Average length overall was 219 mm, a slight decrease from 2002 (224 mm). Individual weights of sardines were also taken and the average weight was 168 g, also a decrease from the samples taken in 2002 (181 g).

Summary of WDFW Activities

WDFW staff administered the observer program, notification process, port sampling, data recording, and biological analyses. Two additional full-time observers were hired and existing staff were utilized to augment our observer program and conduct dockside sampling. The observers worked onboard commercial fishing trips to document bycatch, determine catch composition, and collect market samples.

Samplers monitored unloading at processing plants for incidental catch data, weighed sub-samples of the sardine catch, and collected logbooks to determine harvest distribution, CPUE, and unobserved bycatch information. Additional staff time was spent extracting otoliths, measuring, weighing, and determining sex and maturity of samples, age-reading and summarizing observer and logbook information.

**2003 WASHINGTON EXPERIMENTAL SARDINE FISHERY
PERMIT CONDITIONS**

Permits

1. Participants are required to purchase an Emerging Commercial Fisheries License (\$185 for residents; \$295 for non-residents) and an Experimental Sardine Fishery Permit issued by the Director by July 1, 2003.
2. Permits are non-transferable and must be carried on the fishing vessel during harvest and sale of catch.
3. Permit holder must designate a vessel on the permit by May 31 of each year; vessel designation cannot be changed during the sardine season (June 1-October 31) each year.
4. A vessel cannot be designated on more than one permit at a time.
5. Only one vessel's landings can be used to meet permit renewal criteria (i.e., cannot combine landings from more than one vessel to qualify permit).
6. The permit is subject to revocation by the Director for failure to abide by the conditions of the permit, violation of other fishing regulations, or other valid reason.
7. Permits will not be issued to (and may be revoked from) those who have an outstanding balance of fees owed to the Department for greater than 30 days. This decision will be at the discretion of the Director and may be waived if special circumstances warrant.

Season

8. Permits would be valid during the time period of June 22, 2003 to October 31, 2003

Observer Coverage

9. WDFW retains the right to require certified observers to be on-board for the duration of any trip harvesting sardines and the Director has the discretion to recover costs for observer coverage.
10. Options for observer coverage are:
 - A. Use a Department-provided observer - The Department will have observers available; fishers electing this option would need to reimburse the Department at a rate of \$100 per landing (even if the trip was not observed) and payment must be received by the 10th day of each month for the previous month's landings; or
 - B. Hire a NMFS-certified observer - Fishers may contract with an independent observer company to hire NMFS-certified observers; these observers would need to complete a training session with the Department prior to observing a trip. Fishers electing this option are required to have a minimum of 50% of their trips observed and their first fishing trip observed.
11. Fishers must notify the Department which option they are electing for observer coverage at least 48 hours prior to their first fishing trip of the season; this option cannot be changed during the season without approval by the Director.
12. If Option (a) is selected, checks should be made payable to the Washington Department of Fish and Wildlife and mailed to:

Washington Department of Fish and Wildlife
Attn: Accounts Receivable - Sardine Payment
600 Capitol Way North
Olympia, WA 98501-1091

Notification

13. Each fisher participating in the trial fishery must contact the Department's fishing hotline (360-249-4628 ext. 263) during official business hours (Monday-Friday; 8:00 a.m.-5:00 p.m.) at least 48 hours prior to departing for their first fishing trip, and at least 24 hours prior to departing for their subsequent fishing trips. On the message hotline, fishers are required to provide the following information:
 - C Name
 - C Phone number to contact fisher
 - C Time and location of departure
 - C Estimated time of return

NOTE: This notification requirement may be waived if other arrangements are made with individual fishers and/or processors.

Data Collection

14. Participants must identify the vessel to be used in the fishery and agree to carry WDFW employees on board the fishing vessel whenever fishing under the permit. Agency employees will be granted full access to the catch and be allowed to gather biological data as needed. Up to 500 sardine per day may be retained by WDFW for biological information.
15. Logbooks are required and will be provided by WDFW. Completed logs must be submitted to the Department by the 15th day following the end of each month in which fishing activity occurred. Logs must be submitted to:
 - Carol Henry
 - Washington Department of Fish and Wildlife
 - 48 Devonshire Road
 - Montesano, WA 98563

Gear

16. The trial fishery is open to purse seine gear only, and gear specifications will be detailed to ensure that the net meets a purse seine definition.
17. Legal purse seine gear must be onboard the vessel making the landing.

Species

18. Participants may retain and sell sardine and incidental catches of mackerel, squid, and anchovy. All other species must be released immediately and care taken to minimize damage to prohibited species.
19. No salmon may be landed on the boat's deck but must be released or dip netted directly from the net before the completion of each set.
20. Consistent with standards in the offshore whiting fishery, a mortality greater than 1 chinook per 20 mt of Pacific sardine would be sufficient to rescind a permit or close the experimental fishery.

Fishing Area

21. The fishery would be restricted from the area inside 3 miles to minimize bycatch, conserve forage fish, and reduce conflicts with the existing baitfish fishery.

Landings

22. All landings made under the authority of this permit into Washington must comply with existing state and federal regulations and requirements including observers.
23. The transfer of catch from one vessel to another vessel is prohibited.
24. All landings must be made to a shoreside processing facility.