

THE OREGON GROUND FISH FISHERY AND ITS INVESTIGATION IN 1985

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I. REVIEW OF GROUND FISH PROGRAM

A. Activities in 1985

In 1985, the restructuring of Agency Marine Resources Programs resulted in certain organizational changes effective January 1, 1986. Structure and function of Marine Region and the Groundfish and Shrimp Program were, however, unchanged in 1985 from prior years (see organization chart). Effective in 1986, Shrimp Investigations staff and functions were placed under the Shellfish Program together with Scallop and Squid projects.

Monitoring of the groundfish ("bottomfish") fisheries/resources continued much as in the past. Although major emphasis continued on the dominant trawl fisheries, jig fisheries received some attention, especially species composition of rockfish. A somewhat revived salmon troll fishery helped encourage effort switch from rockfish to salmon. Good markets for sablefish helped spur increasing effort on that species. Most activities remained fairly routine and unchanged in substance from previous years, however.

In 1985 there were 1,094 biological samples taken, 33% more than in 1984 with an increase in numbers for all species and the addition of 29 sablefish samples (Table 1). In most cases the sampling rate for age composition achieved or exceeded the 2 samples per 100 mt guideline. Rockfish species composition samples exceeded the guideline of 5 per 100 mt and made up 76% of the total number of samples. Some of the increase in sampling is due to the requirement that fishermen and dealers sort out species of rockfish so that quotas and harvest guidelines for them can be monitored in-season. We currently have six rockfish sampling categories including widow rockfish, Pacific ocean perch, yellowtail rockfish, other large and small rockfish, and thornyheads. Age composition sampling of widow rockfish and Dover sole made up 8% and 4% of the samples respectively.

Table 1. Number of biological samples by PMFC Area in 1985.

| Species ^{1/} | 1C | 2A | 2B | 2C | 3A | 3B | Total |
|-----------------------|----|-----|-----|-----|-----|----|-------|
| Dover sole | | 10 | 23 | | 14 | | 47 |
| English sole | 1 | 9 | 4 | | 8 | | 22 |
| Petrale sole | | | | | | | |
| Rockfish | | | | | | | |
| <u>S. alutus</u> | | | | 12 | 12 | | 24 |
| <u>S. borealis</u> | | | | | | | |
| <u>S. crameri</u> | | 2 | | | | | 2 |
| <u>S. entomelas</u> | 2 | 6 | 23 | 33 | 20 | | 84 |
| <u>S. flavidus</u> | | | 8 | 4 | 14 | | 26 |
| <u>S. melanops</u> | | | | | 4 | | 4 |
| <u>S. paucispinis</u> | | | | | | | |
| <u>S. pinniger</u> | | | 9 | 6 | 13 | | 28 |
| Species composition | 3 | 71 | 185 | 296 | 233 | 41 | 829 |
| Sablefish | 1 | 13 | 14 | 1 | | | 29 |
| TOTALS | 7 | 111 | 266 | 351 | 318 | 41 | 1094 |

^{1/} See Appendix 1 for a list of common and scientific names.

Statistics prepared for this report were done with the help of our Data Systems staff and the Pacific Fisheries Information Network (PACFIN). All logbook, fishticket and species composition data were put into the mini-computer located in Portland via terminals in Newport. The PACFIN system was able to produce the necessary catch by Pacific Marine Fisheries Commission statistical area. After receiving magnetic tapes from Portland, computer programs on the Oregon State University Cyber computer were used to summarize and compare 1984 and 1985 catch statistics to PACFIN produced reports for trawl gear. The effort statistics were produced in Newport as the conversion of routines necessary to accomplish this using the Portland computer and PACFIN are still under development.

Software development for our field station based microcomputers continued in 1985. In addition to allowing data entry of biological sample data on age, length, sex, and maturity of rockfish and flatfish, the system now permits summarization of average length at age and development of catch at age tables used in virtual population analysis.

Mainframe programs were improved to allow data extractions from our logbook and fishticket files for trip and vessel characteristics analysis. The programs are menu driven and allow the user to set selection criteria on time, landing interval, port, and target species. In addition to statistics on the distribution of landed catches of a target species by size interval, summary statistics are produced on the numbers of vessels, vessel characteristics, and coincidental species. Staff has initiated purchase of a microcomputer and data base management software which will allow files to be analyzed in a similar fashion, off-line after down-loading files from host mainframes.

Dr. Ellen Pikitch's activities in support of our research role picked up considerably in 1985 and as a result several analyses and resultant papers now in press were completed (see Section B). Dr. Pikitch, as principal investigator, also began a major, three-year Sea Grant funded study entitled "Biological Risk and Economic Consequences of Alternative Management Strategies". Funding of this cooperative study also has ODFW, OSU, and NMFS components. This study is aimed at documenting and analyzing various attributes of the Oregon trawl fishery, especially the economics and management implications of groundfish species retained and discarded. Preliminary work began in February; ODFW's direct role began in October 1985, other than proposal planning. Basically, we are collecting data on catch at sea and its disposition, as well as skipper strategy, attitudes, and economic/social variables. Major problem with this project to date has been liability insurance concerns of the boat owners. Some skippers' concern about possible use of data "against them" has been a second problem.

Much time was spent by project staff in evaluating trip limit options, especially for Sebastes complex, widow rockfish, and sablefish quota or harvest guideline-managed fisheries. Also, staff participated in Pacific Council activities as members of the Council's Groundfish Management Plan Maintenance Team and ad hoc Groundfish Select Group advisory bodies.

Major analytical task in 1985 included continuation of an English sole stock assessment and progress on a Dover sole aging technique study. The latter study was initiated after preliminary work indicated scales underestimated true ages compared to broken-burned otoliths. As in other species the bias gets larger with increasing real age of the fish.

A second important analysis was begun by Robert Demory late in 1985 to estimate probable discard of sablefish in the directed Dover sole fishery

caused by prohibited species status of sablefish after December 6 when its quota was taken.

B. Reports Completed or in Preparation in 1985

Demory, R.L. and E.K. Pikitch, 1986. A comparison of age determinations made by scales and broken and burned otoliths for Dover sole (Microstomus pacificus). Oregon Department of Fish and Wildlife. Processed Report, 16 p.

Golden, J.T., R.L. Demory and W.H. Barss. 1986. Results of virtual population analysis of English sole in the INPFC Columbia-Vancouver areas. In preparation.

Pikitch, E.K. 1986. Use of a mixed species yield-per-recruit model to explore the consequences of various management policies for the Oregon flatfish fishery. Can. J. of Fish. and Aq. Sci. Accepted subject to revision.

Pikitch, E.K. and R.L. Demory. 1986. Problems associated with two commonly used methods of indirect age validation: the case of Dover sole age determinations. Trans. Am. Fish. Soc. Accepted subject to revision.

Rexstad, E.A. and E.K. Pikitch. 1986. Stomach contents and food consumption estimates of Pacific hake (Merluccius productus). Fishery Bulletin. Accepted subject to revision.

GROUND FISH STAFF

| | |
|--|------------|
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II. REVIEW OF 1985 FISHERY

A. Commercial Fisheries

1. Total Landings. Total landed catch of groundfish by commercial gear types was 29,361 mt (Table 2). This represents a decline of 2% from the 1984 landings of 28,721 mt^{1/}.

The trawl fishery accounted for 25,790 mt or 88% of the landed commercial catch, a 1% increase over the trawl landings of 25,514 mt landed in 1985 (Table 3). Trawl effort in 1985 was 76,994 hours compared to the 82,639 hours expended in 1984. Major species/species groups in the trawl fishery were rockfish, 48%; Dover sole, 22%; and sablefish, 11%.

Landed catch by all other gear types was 3,571 mt, a slight increase over 1984 (Table 2). Pot gear and long line were most important, accounting for 53% and 29% respectively. Sablefish was the most important species landed by the other gear types.

2. Trawl Landings of Major Species.

- a. Dover sole. Trawl landings of Dover sole in 1985 were 5,695 mt, 7% less than landings in 1984 but 18% greater than the 10-year mean (Table 3). Areas of major production were PMFC areas 1C-2A, 2B and 3A. Slight increases in CPUE occurred in 1C-2A, 2C, and 3A but declined slightly in area 2B (Table 4).
- b. English sole. Trawl landings of English sole were 468 mt, a slight increase over the 1984 landing of 450 mt. Although CPUE remained at low levels modest increases were noted in PMFC areas 2C and 3A, but CPUE declined in area 2B (Table 5).

^{1/} See Appendix 2 for commercial catch by gear type and international statistical area.

Table 2. Oregon landed catch (mt) of groundfish by gear type in 1985^{1/}.

| Species | Trawl ^{2/} | Shrimp Trawl | Pot | Jig | Long Line | Troll | Other Gear ^{3/} | Recreational | Total |
|-------------------------|---------------------|-----------------|--------------|------------|--------------|-----------|-----------------------------|--------------|---------------|
| English sole | 468 | Tr | | | | | | | 468 |
| Rock sole | 1 | | | | | | | | 1 |
| Petrale sole | 577 | 1 | | | Tr | Tr | | | 578 |
| Dover sole | 5,695 | 18 | Tr | | Tr | | | | 5713 |
| Rex sole | 397 | 1 | | | | | | | 398 |
| Starry flounder | 358 | | | Tr | | | Tr | Tr | 358 |
| Arrowtooth flounder | 688 | 9 | Tr | | Tr | | | | 698 |
| Pacific halibut | | | | Tr | 366 | 3 | | 5 | 374 |
| Other flatfish | 415 | Tr | Tr | Tr | | Tr | Tr | | 416 |
| Pacific cod | 38 | Tr | | | Tr | | | | 38 |
| Lingcod | 946 | 20 | 2 | 35 | 22 | 28 | Tr | | 1087 |
| Sablefish | 2,843 | 19 | 1,899 | | 514 | Tr | | | 5275 |
| Rockfish (all species) | 12,473 | 204 | 2 | 234 | 129 | 55 | Tr | | 13,284 |
| Misc. species | 7 | 1 | Tr | 3 | 3 | Tr | Tr | 6 | 21 |
| Dogfish (see misc. sp.) | Tr | | | | Tr | | | | Tr |
| Pacific whiting (hake) | 884 | 1 | | Tr | | Tr | | Tr | 885 |
| Total | 25,790 | 274 | 1,903 | 272 | 1,035 | 86 | 1 | 233 | 29,594 |

^{1/} See appendix tables for commercial gear catch by international statistical area

^{2/} Includes midwater trawl

^{3/} Includes scallop dredge, set net, crab pots, and other nets

Table 3. Oregon trawl landings (mt) of groundfish, total effort (hr) and CPUE (mt/hr), 1975-84. Landings include bottom and midwater trawl but exclude shrimp trawl.

| Species | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1975-84 Mean |
|------------------------|--------------|---------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|-----------------|
| English sole | 982 | 1,643 | 1,001 | 1,041 | 1,084 | 718 | 724 | 990 | 914 | 450 | 468 | 955 |
| Rock sole | 13 | 7 | 10 | 12 | 6 | 13 | 9 | 30 | 4 | 2 | 1 | 11 |
| Petrale sole | 1,202 | 793 | 822 | 1,000 | 1,040 | 850 | 880 | 1,504 | 1,105 | 688 | 577 | 988 |
| Dover sole | 2,168 | 2,262 | 1,818 | 3,374 | 5,066 | 4,008 | 5,228 | 8,083 | 8,459 | 6,103 | 5,695 | 4,657 |
| Rex sole | 464 | 477 | 425 | 642 | 734 | 524 | 606 | 841 | 645 | 549 | 397 | 591 |
| Starry flounder | 371 | 773 | 283 | 489 | 284 | 193 | 400 | 218 | 196 | 107 | 358 | 331 |
| Arrowtooth flounder | 45 | 30 | 87 | 170 | 319 | 188 | 588 | 721 | 534 | 416 | 688 | 310 |
| Other flatfish | 414 | 536 | 348 | 394 | 569 | 427 | 483 | 642 | 574 | 507 | 415 | 489 |
| Total flatfish | 5,659 | 6,521 | 4,794 | 7,122 | 9,102 | 6,921 | 8,918 | 13,029 | 12,431 | 8,822 | 8,599 | 8,332 |
| Pacific cod | 265 | 277 | 364 | 398 | 401 | 156 | 44 | 116 | 81 | 78 | 38 | 72 |
| Lingcod | 694 | 439 | 381 | 445 | 686 | 652 | 904 | 1,345 | 1,621 | 978 | 946 | 815 |
| Sablefish | 305 | 442 | 326 | 958 | 1,493 | 1,026 | 1,304 | 2,951 | 2,771 | 2,775 | 2,843 | 1,435 |
| Pacific ocean perch | 186 | 567 | 424 | 486 | 848 | 1,128 | 859 | 543 | 1,138 | 752 | 797 | 693 |
| Other rockfish | 1,379 | 2,528 | 2,398 | 4,388 | 8,450 | 15,354 | 22,699 | 19,587 | 13,865 | 11,713 | 11,676 | 10,236 |
| Misc. species | 13 | 294 | 153 | 185 | 187 | 92 | 197 | 45 | 98 | 58 | 7 | 132 |
| Dogfish | 2 | 6 | 122 | 56 | 40 | 23 | 5 | 1 | 1 | Tr | Tr | 26 |
| Minkfood | 264 | 56 | 85 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 41 |
| Pacific whiting (hake) | 2 | 218 | 450 | 383 | 129 | 257 | 162 | 1 | 58 | 338 | 884 | 200 |
| Reduction | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Landings | 8,769 | 11,348 | 9,497 | 14,424 | 21,336 | 25,609 | 35,092 | 37,618 | 32,064 | 25,514 | 25,790 | 22,127 |
| Hours, bottom trawl | 28,468 | 33,259 | 26,683 | 38,447 | 56,444 | 46,606 | 68,297 | 94,997 | 101,517 | 80,859 | 74,726 | 57,558 |
| Hours, pelagic trawl | - | - | - | - | - | - | - | - | - | 1,780 | 2,268 | - |
| CPUE, bottom trawl | 0.308 | 0.341 | 0.356 | 0.375 | 0.366 | 0.362 | 0.303 | 0.302 | 0.298 | 0.261 | 0.345 | .384 |
| CPUE, pelagic trawl | - | - | - | - | - | - | - | - | - | 2.459 | 1.889 | - |

Tr = less than 0.1 mt

Table 4. Oregon trawl catch (mt) and CPUE (mt/hr) of Dover sole from major fishing areas^{1/}

| Year | 1C-2A | | 2B | | 2C | | 3A | |
|-----------------|-------|-------|-------|-------|-------|-------|-------|-------|
| | Catch | mt/hr | Catch | mt/hr | Catch | mt/hr | Catch | mt/hr |
| 1975 | 212 | 0.145 | 1,187 | 0.170 | 114 | 0.071 | 648 | 0.143 |
| 1976 | 259 | 0.122 | 1,276 | 0.162 | 145 | 0.140 | 574 | 0.139 |
| 1977 | 152 | 0.146 | 760 | 0.175 | 141 | 0.118 | 764 | 0.165 |
| 1978 | 280 | 0.121 | 1,580 | 0.189 | 288 | 0.128 | 1,226 | 0.174 |
| 1979 | 331 | 0.120 | 2,745 | 0.241 | 668 | 0.152 | 1,324 | 0.148 |
| 1980 | 540 | 0.129 | 1,982 | 0.163 | 266 | 0.115 | 1,207 | 0.124 |
| 1981 | 757 | 0.118 | 2,488 | 0.176 | 540 | 0.112 | 1,351 | 0.162 |
| 1982 | 1,074 | 0.176 | 4,114 | 0.184 | 1,037 | 0.088 | 1,391 | 0.141 |
| 1983 | 1,786 | 0.162 | 3,700 | 0.138 | 878 | 0.116 | 1,612 | 0.145 |
| 1984 | 967 | 0.140 | 2,631 | 0.154 | 556 | 0.073 | 1,210 | 0.111 |
| 1985 | 1,141 | 0.154 | 2,040 | 0.116 | 611 | 0.084 | 1,548 | 0.153 |
| 1975-84 Mean | | 0.142 | | 0.170 | | 0.106 | | 0.165 |

^{1/} CPUE is based on significant trips where 30% or more of the catch was composed of the above species. Catch was estimated using all available logbook data and includes trips with less than 30% of the species.

Table 5. Oregon trawl catch (mt) and CPUE (mt/hr) of English sole from major fishing areas^{1/}.

| Year | 2B | | 2C | | 3A | |
|-----------------|-------|-------|-------|-------|-------|-------|
| | Catch | mt/hr | Catch | mt/hr | Catch | mt/hr |
| 1975 | 293 | 0.108 | 305 | 0.083 | 303 | 0.110 |
| 1976 | 498 | 0.128 | 299 | 0.134 | 721 | 0.176 |
| 1977 | 342 | 0.109 | 318 | 0.102 | 310 | 0.122 |
| 1978 | 152 | 0.068 | 178 | 0.074 | 606 | 0.169 |
| 1979 | 224 | 0.081 | 177 | 0.067 | 756 | 0.106 |
| 1980 | 77 | 0.032 | 98 | 0.058 | 408 | 0.086 |
| 1981 | 124 | 0.039 | 142 | 0.028 | 363 | 0.068 |
| 1982 | 179 | 0.062 | 258 | 0.043 | 303 | 0.077 |
| 1983 | 188 | 0.032 | 186 | 0.037 | 249 | 0.042 |
| 1984 | 84 | 0.037 | 58 | 0.024 | 157 | 0.049 |
| 1985 | 51 | 0.028 | 102 | 0.033 | 232 | 0.075 |
| 1975-84 Mean | | 0.070 | | 0.058 | | 0.097 |

^{1/} CPUE is based on significant trips where 30% or more of the catch was composed of the above species. Catch was estimated using all available logbook data and includes trips with less than 30% of the species.

- c. Petrале sole. Trawl landings of petrale sole were 577 mt in 1985, a 19% decline from 1984 and 70% less than the 10-year mean. PMFC areas 2B and 3A were the principal areas of production. CPUE showed modest increases in all areas (Table 6).
- d. Lingcod. Trawl landings of lingcod were 946 mt, a slight decline from the 1984 landings of 978 mt but 20% greater than the 10-year mean. PMFC areas 3A and 2C accounted for most of the landings.
- e. Sablefish. Trawl landings of sablefish in 1985 were 2,843 mt, 2% greater than 1984, but nearly double the 10-year mean of 1,435 mt (Table 3). In December 1985 sablefish was declared a prohibited species, resulting in substantial discard and adverse publicity.
- f. Rockfish. Trawl landings of all rockfish species in 1985 amounted to 12,473 mt, nearly equal to the 1984 landings. Bottom trawls accounted for 72% of the landed catch. Principal species landed were widow rockfish 35%; yellowtail rockfish, 12%; Sebastes spp, 9%; and canary rockfish, 8%. Most landings were from PMFC area 2C, 3A, and 2B in descending order (Table 7).

B. Recreational Fisheries

Caution must be used when evaluating the catch data from Oregon's 1985 recreational groundfish fishery. The 1985 sampling period was very short, only 71% as many sampling days occurred as in 1984. In addition, directed bottomfish effort was only 38% of that occurring in 1984.

During our ocean sampling period, only 19,270 bottomfish-directed trips occurred, compared to 1984 when 50,530 bottomfish trips were taken. It is very interesting to note that in 1985, bottomfish trips were only 7.2% of total ocean angling trips, whereas in 1984 they were

Table 6. Oregon trawl catch (mt) and CPUE (mt/hr) of petrale sole from major fishing areas^{1/}.

| Year | 2B | | 2C | | 3A | |
|-----------------|-------|-------|-------|-------|-------|-------|
| | Catch | mt/hr | Catch | mt/hr | Catch | mt/hr |
| 1975 | 458 | 0.109 | 298 | 0.074 | 404 | 0.116 |
| 1976 | 342 | 0.122 | 94 | 0.085 | 338 | 0.091 |
| 1977 | 274 | 0.116 | 147 | 0.063 | 387 | 0.126 |
| 1978 | 358 | 0.098 | 157 | 0.105 | 459 | 0.112 |
| 1979 | 443 | 0.089 | 121 | 0.076 | 368 | 0.066 |
| 1980 | 255 | 0.083 | 114 | 0.111 | 387 | 0.082 |
| 1981 | 327 | 0.057 | 158 | 0.057 | 324 | 0.093 |
| 1982 | 320 | 0.037 | 162 | 0.065 | 341 | 0.052 |
| 1983 | 356 | 0.064 | 53 | 0.026 | 432 | 0.068 |
| 1984 | 178 | 0.048 | 72 | 0.036 | 293 | 0.063 |
| 1985 | 188 | 0.067 | 81 | 0.042 | 218 | 0.071 |
| 1975-84 Mean | - | 0.076 | | 0.066 | | 0.085 |

^{1/} CPUE is based on significant trips where 30% or more of the catch was composed of the above species. Catch was estimated using all available logbook data and includes trips with less than 30% of the species.

Table 7. Species composition (mt) in 1985 for Oregon landed rockfish in the trawl fishery (includes pelagic and bottom trawls but excludes shrimp trawl).

| | 1C | 2A | 2B | 2C | 3A | 3B | Total |
|-------------------------------|------|-------|--------|--------|--------|-------|---------|
| <u>S. brevispinus</u> | Tr | .3 | 38.3 | 102.7 | 119.8 | 33.3 | 294.5 |
| <u>S. crameri</u> | 12.5 | 128.3 | 299.1 | 263.1 | 119.6 | 25.5 | 848.2 |
| <u>S. diploproa</u> | 2.4 | 15.1 | 63.0 | 111.2 | 20.1 | 12.6 | 224.4 |
| <u>S. flavidus</u> | 4.1 | 59.4 | 294.8 | 258.7 | 845.8 | 67.2 | 1530.0 |
| <u>S. goodei</u> | Tr | 1.1 | 2.0 | .0 | .0 | .0 | 3.1 |
| <u>S. melanops</u> | .0 | .2 | .0 | .1 | 55.4 | .0 | 55.7 |
| <u>S. paucispinus</u> | 1.4 | 11.1 | 138.5 | 234.3 | 99.3 | 10.5 | 495.0 |
| <u>S. pinniger</u> | 2.9 | 25.8 | 197.7 | 338.5 | 374.9 | 77.1 | 1016.8 |
| <u>S. proriger</u> | Tr | .9 | 118.4 | 78.0 | 102.0 | 5.8 | 304.9 |
| <u>S. reedi</u> | .1 | .8 | 25.8 | 590.1 | 81.2 | 8.6 | 706.7 |
| <u>S. ruberrimus</u> | .9 | 6.0 | 20.0 | 44.2 | 17.3 | 3.5 | 91.9 |
| <u>S. zacentrus</u> | .1 | 1.4 | 40.2 | 77.7 | 104.0 | 5.8 | 229.2 |
| Other <u>Sebastes</u> | 3.0 | 29.4 | 94.9 | 60.3 | 107.3 | 62.8 | 357.7 |
| Total <u>Sebastes</u> Complex | 27.3 | 279.8 | 1332.7 | 2158.8 | 2046.8 | 312.8 | 6158.1 |
| <u>S. alutus</u> | 3.5 | 26.1 | 53.8 | 337.3 | 265.5 | 110.7 | 796.7 |
| <u>S. entomelas</u> | 14.7 | 279.6 | 1305.0 | 1850.8 | 885.8 | 14.2 | 4350.1 |
| <u>S. jordani</u> | .0 | Tr | 10.9 | Tr | .0 | .0 | 10.9 |
| Unspecified Rockfish | .0 | .8 | .6 | 1.2 | 35.8 | 7.7 | 46.2 |
| Total <u>Sebastolobus</u> | 8.3 | 190.7 | 521.8 | 232.5 | 93.5 | 64.3 | 1111.2 |
| Total All Rockfish | 53.8 | 777.0 | 3224.7 | 4580.7 | 3327.4 | 509.6 | 12473.2 |

24.8% of the total. This occurred because the 1985 ocean salmon fishery was very intensive and resulted in a much decreased emphasis on bottomfish activity during that period.

The catch by bottomfish anglers was comparable to that seen before; bottomfish-directed trips produced 5.8 fish per angler, compared to the 6.1 per angler seen in 1984.

Our total bottomfish catch during the sampling period was 161,934 fish. Table 8 shows the catch distribution by port and species group. Rockfish again dominated the recreational catch, comprising over 90 % of the total.

On an individual species basis, black rockfish was the most abundant (Table 9), making up 61.9% of the landings. The normal assemblage of 5 rockfish species (black, yellowtail, canary, blue and yelloweye) were the most important. Fifteen other rockfish species are represented by the Sebastes spp. category, and comprised slightly over 5% of the total.

PMFC area 2C again produced the most fish, 136.8 mt (Table 10). Rockfish comprised 80% of the landings. Less than 3% of the total were made up of flatfish; sand sole were the most common flatfish caught. The miscellaneous species group also accounted for less than 3%, and was comprised mainly of kelp greenling and cabezon.

C. Canada-U.S. Domestic Groundfish Regulations-Oregon

Numerous changes in trip limits for Sebastes complex, widow rockfish, Pacific ocean perch, and sablefish occurred in response to Pacific Fishery Management Council (PFMC) recommendations and to match similar changes in federal regulations during 1985.

Table 8. Estimated 1985 Oregon Recreational Catch by Ocean Boat Fishery 1/

| Port | Rockfish | Flatfish | Lingcod | Misc. | Total |
|------------------------------|----------|----------|---------|-------|---------|
| Astoria ^{2/} | 587 | 21 | 237 | 135 | 970 |
| Garibaldi ^{3/} | 37,641 | 98 | 1,808 | 318 | 39,865 |
| Pacific City ^{3/} | 3,571 | 329 | 758 | 262 | 4,920 |
| Depoe Bay ^{3/} | 9,162 | 86 | 900 | 730 | 10,878 |
| Newport ^{3/} | 32,464 | 938 | 2,194 | 1,401 | 36,997 |
| Florence ^{3/} | 127 | 172 | 0 | 9 | 308 |
| Winchester Bay ^{3/} | 1,504 | 232 | 38 | 15 | 1,789 |
| Charleston ^{3/} | 13,704 | 28 | 558 | 197 | 14,487 |
| Gold Beach ^{3/} | 7,784 | 7 | 983 | 204 | 8,978 |
| Brookings ^{4/} | 39,770 | 314 | 1,328 | 1,320 | 42,732 |
| TOTAL | 146,314 | 2,225 | 8,804 | 4,591 | 161,934 |

1/ Catch in numbers of fish.

2/ Sampling period - June 24 through August 25.

3/ Sampling period - July 1 through September 2.

4/ Sampling period - May 25 through May 31, and July 1 through October 31.

Table 9. Species Composition of the 1985 Oregon Recreational Bottomfish Ocean Boat Fishery.

| Species | Percent of catch | Number of fish | Total weight (mt) |
|-----------------------------------|------------------|----------------|-------------------|
| <u>Sebastes melanops</u> | 61.9 | 100,283 | 130.4 |
| <u>S. flavidus</u> | 8.3 | 13,388 | 21.7 |
| <u>S. pinniger</u> | 7.9 | 12,752 | 12.9 |
| <u>Ophiodon elongatus</u> | 5.4 | 8,804 | 34.3 |
| <u>Sebastes spp.</u> | 5.2 | 8,391 | 8.0 |
| <u>S. mystinus</u> | 4.4 | 7,169 | 5.2 |
| <u>S. ruberrimus</u> | 2.7 | 4,331 | 8.8 |
| <u>Hexagrammus decagrammus</u> | 1.3 | 2,167 | 2.0 |
| <u>Scorpaenichthys marmoratus</u> | 1.0 | 1,671 | 2.5 |
| Other fish | 1.8 | 2,978 | 7.2 |
| TOTAL | 100 | 161,934 | 233.0 |

Table 10. Estimated 1985 Oregon Recreational Bottomfish Catch (mt) by Area.

| Species | PMFC Area | | | | State Total |
|------------|-----------|------|-------|-----|-------------|
| | 2A | 2B | 2C | 3A | |
| Lingcod | 9.0 | 2.3 | 22.1 | 0.9 | 34.3 |
| Rockfish | 60.8 | 19.6 | 105.8 | 0.8 | 187.0 |
| Flatfish | 0.2 | 0.2 | 5.6 | 0.1 | 6.1 |
| Other Fish | 1.9 | 0.3 | 3.3 | 0.1 | 5.6 |
| Total | 71.9 | 22.4 | 136.8 | 1.9 | 233.0 |

The sablefish fishery ceased entirely on December 6 when the quota was taken, and further retention prohibited until January 1, 1986. A summary of regulations recommended by the PFMC is shown in Appendix 3. These changes were subsequently adopted by ODFW.

Angling regulation changes were made in 1985 to be effective January 1, 1986. The most significant was imposition of an angling license requirement on marine fish except shellfish, invertebrate animals, and smelt. The license requirement is identical in structure and fees to that long imposed on "game fish" in Oregon.

A second change in regulations was a changed daily bag limit for certain groundfish, which was 25 (aggregate) flounder, surfperch, sole, and "others". Prior to this there had been a 25 fish aggregate upper limit, not to exceed 15 fish of certain species. The flounder, surfperch, and sole were structured to separate them from rockfish, etc. and try to thereby encourage fishing for these comparatively underutilized species. Also, this might help relieve pressure on the comparatively heavily used rockfish, especially offshore, since anglers rarely target for both groups on a given day in any Oregon waters.

III. GROUND FISH RESEARCH

A. Stock Assessments

Work continued through 1985 on virtual population analysis (VPA) of English sole in the INPFC Columbia and Vancouver areas. VPA estimated female biomass during 1973-1976 ranged from 7,458-8,642 mt compared to a survey estimate of 15,926 mt during the same period. Declining CPUE and VPA estimates of five-year-old English sole indicated a downward trend in recruitment since 1980. While fishing mortality generally increased from 1976-1983, mortality rates appear to have declined since 1983.

B. Related Studies

1. Dover sole aging. A comparison was made of age determinations made by the scale method and the broken and burned otolith method. Precision of the otolith method was low. Total agreement after three independent readings was only 3%, but 73% of the readings were within four years. In all but 7 cases, otolith age was equal to or greater than scale age. The maximum difference in age between the two methods was 27 years for males and 22 years for females. The age at which scale age and otolith age diverge was age 5 for males and age 6 for females.

Age composition determined by the two methods was substantially different. Mean scale age was 11.1 and 12.1 years for males and females respectively while mean otolith age was 20.5 and 18.6 years respectively.

It is recommended that the broken and burned otolith method replace the scale method for routine aging of Dover sole.

2. Black Rockfish Tagging. Oregon conducted a black rockfish tagging project in 1985 that was funded by the National Marine Fisheries Service under the Saltonstall-Kennedy Act. Tagging was done in May out of Garibaldi and Newport aboard charterboats. Angling equipment was used to capture the fish; we worked in areas that were used by both recreational and commercial jig fishermen.

We released 3,850 tagged fish out of Garibaldi, and 3,908 out of Newport. Through December, 1985, we had recovered 154 tags. Most showed little or no movement. Maximum distance traveled was seen in two fish that were recovered eight miles north of their release area.

Appendix 1. Common and scientific names of species reported in the groundfish catch.

ROCKFISH

| | |
|------------------------|-------------------------------|
| Aurora rockfish | <u>Sebastes aurora</u> |
| Bank rockfish | <u>S. rufus</u> |
| Black rockfish | <u>S. melanops</u> |
| Blackgill rockfish | <u>S. melanostomus</u> |
| Blue rockfish | <u>S. mystinus</u> |
| Bocaccio rockfish | <u>S. paucispinis</u> |
| Canary rockfish | <u>S. pinniger</u> |
| Chilipepper | <u>S. goodei</u> |
| China rockfish | <u>S. nebulosus</u> |
| Dark-blotched rockfish | <u>S. crameri</u> |
| Greenspotted rockfish | <u>S. chlorostictus</u> |
| Greenstriped rockfish | <u>S. elongatus</u> |
| Longspine thornyhead | <u>Sebastolobus altivelis</u> |
| Pacific ocean perch | <u>S. alutus</u> |
| Pygmy rockfish | <u>S. wilsoni</u> |
| Quillback rockfish | <u>S. maliger</u> |
| Redbanded rockfish | <u>S. babcocki</u> |
| Redstripe rockfish | <u>S. proriger</u> |
| Rosethorn rockfish | <u>S. helvomaculatus</u> |
| Rougheye rockfish | <u>S. aleutianus</u> |
| Sharpchin rockfish | <u>S. zacentrus</u> |
| Shortbelly rockfish | <u>S. jordani</u> |
| Shortraker rockfish | <u>S. borealis</u> |
| Shortspine thornyhead | <u>Sebastolobus alascanus</u> |
| Silvergray rockfish | <u>S. brevispinis</u> |
| Speckled rockfish | <u>S. ovalis</u> |
| Splitnose rockfish | <u>S. diploproa</u> |
| Stripetail rockfish | <u>S. saxicola</u> |
| Tiger rockfish | <u>S. nigrocinctus</u> |
| Vermilion rockfish | <u>S. miniatus</u> |
| Widow rockfish | <u>S. entomelas</u> |
| Yelloweye rockfish | <u>S. ruberrimus</u> |
| Yellowmouth rockfish | <u>S. reedi</u> |
| Yellowtail rockfish | <u>S. flavidus</u> |

FLATFISH

| | |
|---------------------|-----------------------------------|
| Arrowtooth flounder | <u>Artheresthes stomias</u> |
| Butter sole | <u>Isopsetta isolepis</u> |
| Curlfin turbot | <u>Pleuronichthys decurrens</u> |
| Dover sole | <u>Microstomus pacificus</u> |
| English sole | <u>Parophrys vetulus</u> |
| Flathead sole | <u>Hippoglossoides elassodon</u> |
| Pacific halibut | <u>Hippoglossus stenolepis</u> |
| Pacific sanddab | <u>Citharichthys sordidus</u> |
| Petrale sole | <u>Eopsetta jordani</u> |
| Rex sole | <u>Glyptocephalus zachirus</u> |
| Rock sole | <u>Lepidopsetta bilineata</u> |
| Sand sole | <u>Psettichthys melanostictus</u> |
| Slender sole | <u>Lyopsetta exilis</u> |
| Starry flounder | <u>Platichthys stellatus</u> |

OTHER FISH

| | |
|-----------------|-----------------------------------|
| Cabezon | <u>Scorpaenichthys marmoratus</u> |
| Green sturgeon | <u>Acipenser medirostris</u> |
| Pacific cod | <u>Gadus macrocephalus</u> |
| Pacific whiting | <u>Merluccius productus</u> |
| Lingcod | <u>Ophiodon elongatus</u> |
| Sablefish | <u>Anoplopoma fimbria</u> |
| Skates | <u>Raja spp.</u> |
| Souppin shark | <u>Galeorhinus zyopterus</u> |
| Spiny dogfish | <u>Squalus acanthias</u> |

Appendix 2. Regulations recommended by the Pacific Fishery Management Council in 1985.

Effective January 10, 1985

- Recommended coastwide widow rockfish trip limit of 30,000 pounds; trip frequency limited to one per week (or 60,000 pounds once-every-two-weeks with appropriate declaration to state in which fish are landed); adjust after first trimester, as necessary (OY = 9,300 mt).
- IIG for Sebastes complex in Vancouver-Columbia area fixed at 10,100 mt.
- For Sebastes complex north of Cape Blanco (42°50'N): recommended 30,000 pound trip limit of which no more than 10,000 pounds may be yellowtail rockfish (or 60,000 pounds once-every-two-weeks of which no more than 20,000 pounds may be yellowtail rockfish with appropriate declaration to state in which fish are landed).
- For Sebastes complex south of Cape Blanco: recommend 40,000 pound trip limit without a trip frequency.
- Recommended that if fishermen fish on both sides of the Cape Blanco line during a trip, the northern (more restrictive) limit on Sebastes complex will apply.
- Recommended that landings of Sebastes complex and widow rockfish smaller than 3,000 pounds be unrestricted.
- Recommended continuing 22-inch size limit on sablefish in all areas north of Point Conception (abolishes Monterey Bay exclusion); retain 5,000 pound limit incidental landing limit for sablefish less than 22 inches.
- Recommended Vancouver-Columbia area POP trip limit of 20 percent by weight of all fish on board (no 5,000 pound limit as specified in last half of 1984).

Effective April 28, 1985

- Recommended retention of the coastwide widow rockfish trip limit of 30,000 pounds once per week, but rescinded the option to land 60,000 pounds once-every-two-weeks.
- Recommended reduction in the coastwide widow rockfish trip limit to 10 percent by weight of all fish on board not to exceed 3,000 pounds if 90 percent of the OY (about 8,400 mt) is reached before the Council's July meeting (under this incidental limit, landings of widow rockfish less than 1,000 pounds will be unrestricted).
- For the Sebastes complex north of Cape Blanco (42°50'N): recommended reduction in the current trip limit to 15,000 pounds once per week of which no more than 5,000 pounds may be yellowtail rockfish (or 30,000 pounds once-every-two-weeks of which no more than 10,000 pounds may be yellowtail rockfish). Recommended a third option to land 7,500 pounds twice each week of which no more than 3,000 pounds in each landing may be yellowtail rockfish; landings declaration apply.
- Recommended the Vancouver-Columbia area POP trip limit be reduced to 5,000 pounds or 20 percent by weight of all fish aboard whichever is less. Landings of POP less than 1,000 pounds will be unrestricted. The fishery for this species will close when the OY in each area is reached.

Effective June 10, 1985

- Recommended landings of POP up to 1,000 pounds per trip will be unrestricted regardless of the percentage of these fish on board.

Effective July 21, 1985

- Recommended reduction of the coastwide widow rockfish trip limit to 3,000 pounds per trip without a trip frequency.

Effective July 25, 1985

- Recommended that "tickler chains" which contact the sea floor ahead of the rollers may not be used with a roller or bobbin trawl.

Effective September 1, 1985

- Recommended changing the management boundary line separating northern and southern trip limits for the Sebastes complex from Cape Blanco (42°50'N) northward 30 miles to the north jetty at Coos Bay (43°22'N).

Effective October 6, 1985

- Recommended increasing the Vancouver-Columbia area Sebastes complex trip limit to 20,000 pounds once per week except that no more than 5,000 pounds may be yellowtail rockfish (or one landing once-every-two-weeks of 40,000 pounds of which no more than 10,000 pounds may be yellowtail rockfish, or two landings per week of 10,000 pounds each of which no more than 3,000 pounds per landing may be yellowtail rockfish; landings declaration apply).

The largest user group to recover tags was the charterboat fleet, with 55% percent of the total. Commercial jig fishermen made 6% of the recoveries. No tags were returned by trawl vessels.

V. FISHERY ASSESSMENT

There were 134 trawlers participating in 1985, a 21% reduction from the 169 that participated in 1984 (Table 11). Some groundfish trawlers shifted into the shrimp fishery which saw an increase in the number of vessels participating. Ninety-six shrimp vessels participated in 1985 compared to a recent low of 59 in 1984. Bottom trawlers, although fewer in number, enjoyed a higher landed catch per trip in 1985 (Figure 1). In 1985 they made 3,131 deliveries averaging 15,162 pounds per delivery compared to 4,037 deliveries averaging 11,653 pounds per delivery in 1984. Midwater trawlers made 310 deliveries averaging 30,473 pounds per delivery in 1985 and 306 deliveries averaging 31,533 pounds per delivery in 1984 (Figure 2). Regulation changes continued to influence the size and frequency of trips in both years. Bottom trawlers fishing for rockfish had more flexible regulations in 1985 compared to 1984 resulting in reduced numbers and increased size of deliveries (Figure 3). Although midwater trawlers had more restrictive trip-limits by the end of April in 1985 compared to trip limits in 1984, there was very little change in either number of deliveries or average trip size. The 30,000 pound trip limit on widow rockfish in 1985 increased the frequency of trips close to the trip limit. Trip sizes greater than 30,000 pounds were made by fishermen exercising an option which allowed delivery of twice the weekly trip limit once every two weeks. The total number of Dover sole deliveries declined in 1985 with a slight increase in average landing per delivery (Figure 4).

Table 11. Number of vessels by major gear type, fishing for groundfish and shrimp and landing in Oregon in 1984 and 1985.

| Vessel Type | 1984 | | 1985 | |
|---------------------|---------|------------|---------|------------|
| | Vessels | Deliveries | Vessels | Deliveries |
| Jig | 180 | 2,223 | 226 | 2,433 |
| Longline | 24 | 124 | 48 | 400 |
| Trawl ^{1/} | | | | |
| Bottom | 163 | 4,037 | 131 | 3,131 |
| Midwater | 27 | 306 | 31 | 310 |
| Total | 169 | 4,343 | 137 | 3,441 |
| Pot | 12 | 301 | 24 | 497 |
| Shrimp trawl | 59 | 507 | 96 | 956 |

^{1/} Most midwater vessels also make bottom trawl landings, thus vessel classes are not additive.

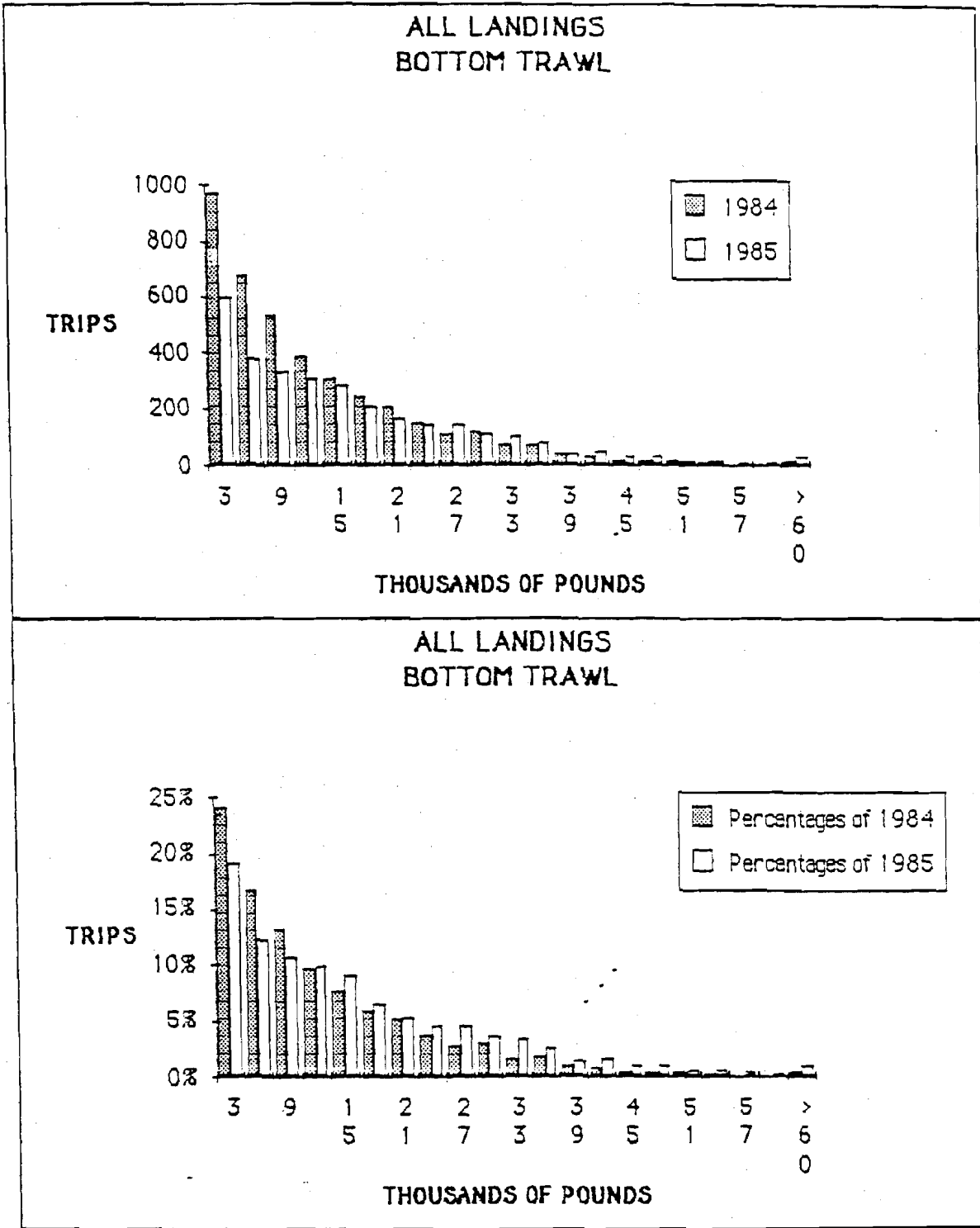


Figure 1. Number and percent of bottom trawl landings in 1984 and 1985 Oregon data only.

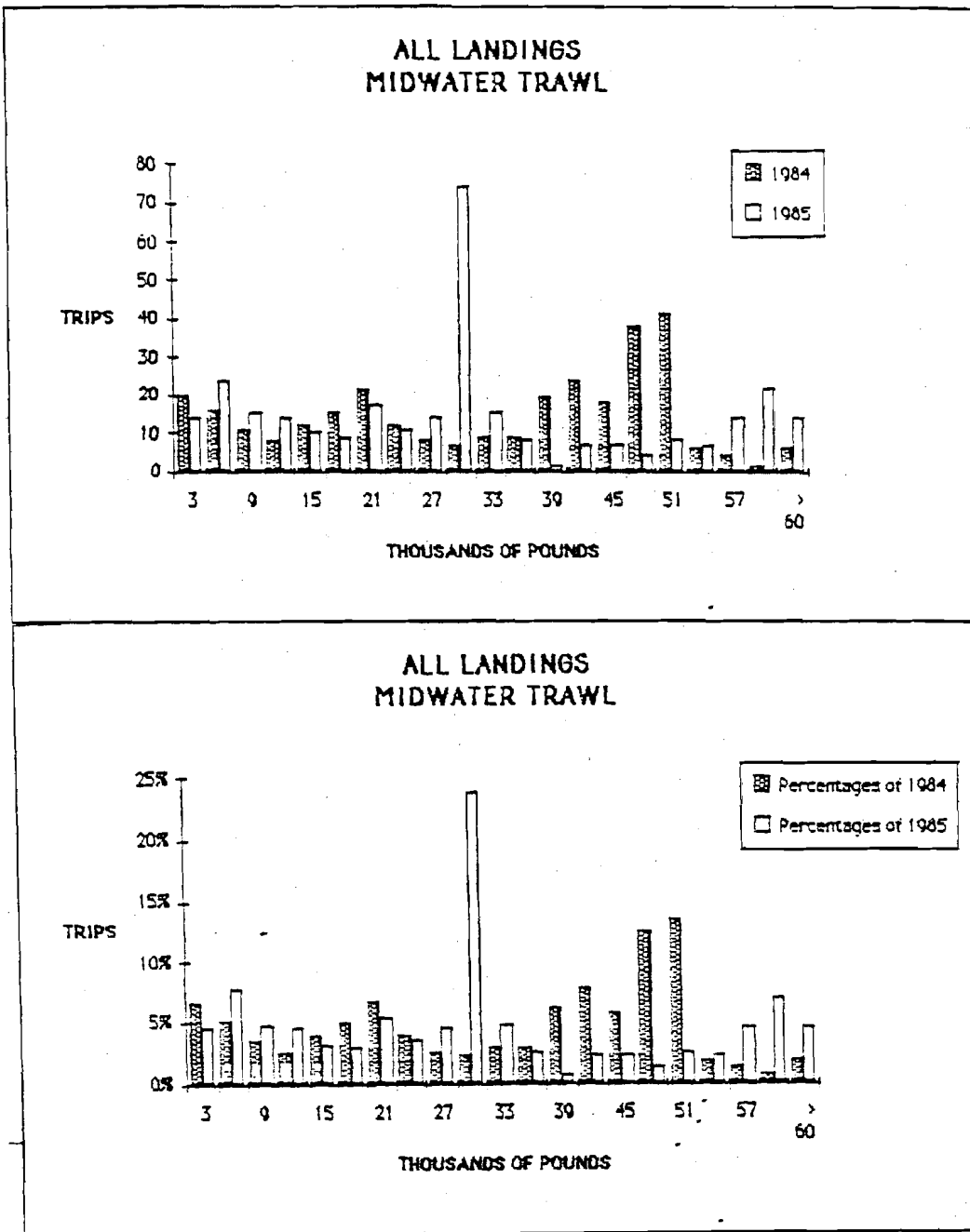


Figure 2. Number and percent of midwater trawl landings in 1984 and 1985. Oregon data only.

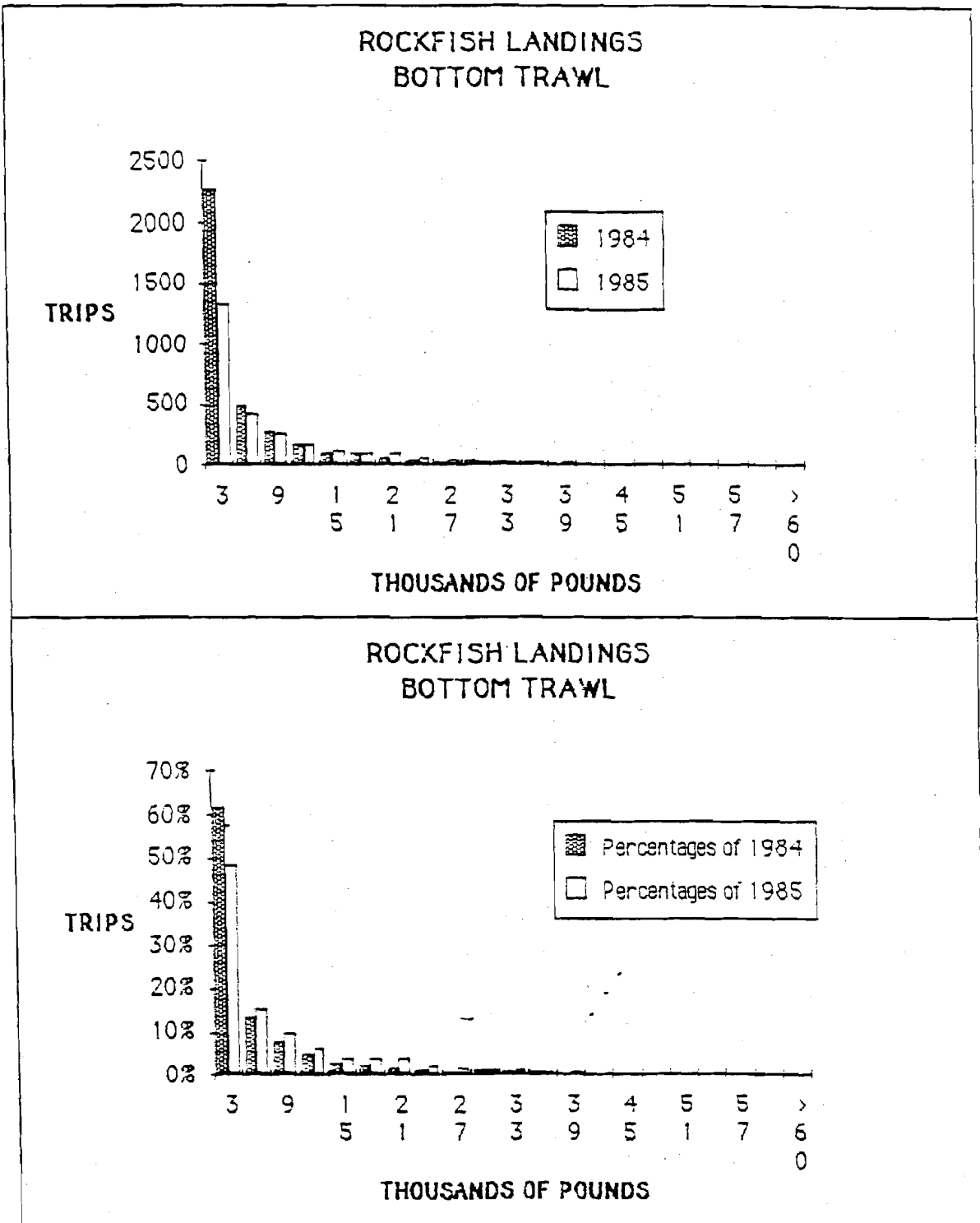


Figure 3. Number and percent of bottom trawl rockfish landings (all species) in 1984 and 1985. Oregon data only.

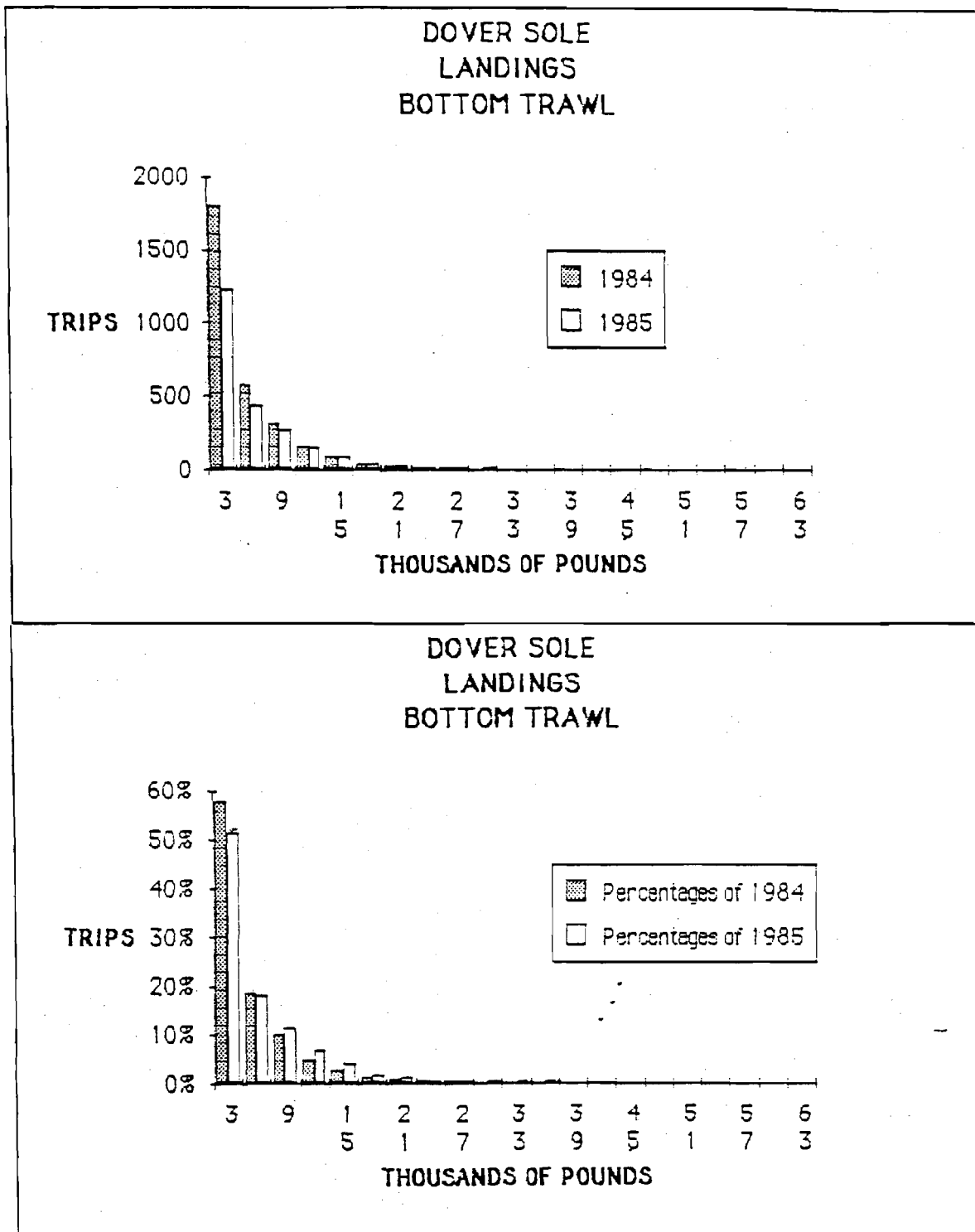


Figure 4. Number and percent of landings of Dover sole in 1984 and 1985. Oregon data only.

APPENDIX III

Commercial landed catch by gear type and international statistical area

OREGON NMFC AREA REPORT: COMMERCIAL GROUND FISH LANDED CATCH (METRIC TONS) FOR 1985 FOR GROUND FISH (OTTER) TRAWL

| SPECIES | 3B | 3A | 2C | 2B | 2A | 1C | TOTAL |
|-----------------------|--------|--------|--------|---|--------|-------|---------|
| ARROWTOOTH FLOUNDER | 140.5 | 305.8 | 171.2 | 57.9 | 10.7 | 2.1 | 688.2 |
| DOVER SOLE | 649.0 | 1257.2 | 716.2 | 2076.0 | 959.4 | 37.4 | 5695.2 |
| ENGLISH SOLE | 37.8 | 219.2 | 104.1 | 68.2 | 36.1 | 2.7 | 468.0 |
| PETRALE SOLE | 24.4 | 197.7 | 96.4 | 186.2 | 71.0 | 0.9 | 576.6 |
| REX SOLE | 47.7 | 223.2 | 40.4 | 55.1 | 28.8 | 1.6 | 396.8 |
| ROCK SOLE | - | 0.1 | TR | 0.5 | - | - | 0.6 |
| STARRY FLOUNDER | 212.5 | 110.1 | 16.7 | 17.7 | 0.3 | 0.6 | 358.9 |
| OTHER FLATFISH | 28.6 | 207.4 | 52.1 | 123.4 | 1.8 | 1.5 | 415.0 |
| --- ALL FLATFISH | 1140.6 | 2520.8 | 1197.2 | 2585.1 | 1108.1 | 46.8 | 8598.5 |
| BLACK ROCKFISH | - | 55.4 | 0.1 | - | 0.2 | - | 55.7 |
| BUCACCIO | 10.5 | 99.3 | 234.3 | 138.5 | 11.1 | 1.4 | 495.9 |
| CANARY ROCKFISH | 77.1 | 374.1 | 338.5 | 197.7 | 25.8 | 2.9 | 1016.1 |
| CHILIPEPPER | - | - | - | 2.0 | 1.1 | TR | 3.1 |
| DARKBLOTCHED ROCKFIS | 25.5 | 119.6 | 263.1 | 299.1 | 128.3 | 12.5 | 848.2 |
| RED STRIPE ROCKFISH | 5.8 | 102.0 | 78.0 | 118.4 | 0.8 | TR | 304.8 |
| SHARPCHIN ROCKFISH | 5.8 | 104.0 | 77.7 | 40.2 | 1.4 | 0.1 | 229.2 |
| SILVERGREY ROCKFISH | 33.3 | 119.8 | 102.7 | 38.3 | 0.3 | TR | 294.5 |
| SPLITNOSE ROCKFISH | 12.6 | 20.1 | 111.2 | 63.0 | 15.1 | 2.4 | 224.4 |
| YELLOW EYE ROCKFISH | 3.5 | 17.3 | 44.2 | 20.0 | 6.0 | 0.9 | 91.9 |
| YELLOWMOUTH ROCKFISH | 8.6 | 81.2 | 590.1 | 25.8 | 0.8 | 0.1 | 706.7 |
| YELLOWTAIL ROCKFISH | 67.2 | 778.9 | 252.7 | 292.9 | 59.0 | 4.1 | 1454.3 |
| OTHER ROCKFISH | 62.8 | 107.3 | 60.3 | 94.9 | 29.4 | 3.0 | 357.7 |
| --- SEBASTES COMPLEX | 312.8 | 1979.1 | 2152.8 | 1330.8 | 279.3 | 27.3 | 6082.1 |
| PACIFIC OCEAN PERCH | 110.7 | 262.3 | 337.3 | 53.8 | 26.1 | 3.5 | 793.6 |
| SHORTBELLY ROCKFISH | - | - | TR | 9.7 | TR | - | 9.7 |
| THORNYHEADS | 64.3 | 92.6 | 232.5 | 521.8 | 190.7 | 8.3 | 1110.3 |
| WIDOW ROCKFISH | 9.9 | 216.2 | 360.7 | 284.0 | 39.2 | 14.7 | 924.7 |
| UNSP. ROCKFISH | - | - | - | 0.1 | - | - | 0.1 |
| --- ALL ROCKFISH | 497.6 | 2550.3 | 3083.3 | 2200.2 | 535.3 | 53.8 | 8920.4 |
| LINGCOD | 121.8 | 313.2 | 268.8 | 195.3 | 39.6 | 6.2 | 945.9 |
| PACIFIC COD | 31.4 | 6.8 | 0.1 | 0.1 | - | - | 38.4 |
| PACIFIC WHITING | - | 16.4 | 0.8 | 118.7 | 16.2 | - | 152.1 |
| SABLEFISH | 137.0 | 336.9 | 791.3 | 1253.9 | 292.8 | 30.8 | 2842.8 |
| --- ALL ROUND FISH | 290.3 | 673.4 | 1061.1 | 1568.1 | 348.6 | 37.0 | 3978.3 |
| SPINY DOGFISH | - | TR | TR | 0.1 | - | - | 0.1 |
| OTHER GROUND FISH | 0.1 | 2.2 | 0.5 | 0.2 | 0.1 | TR | 3.1 |
| UNSP. GROUND FISH | TR | 0.2 | 1.5 | 2.2 | TR | - | 3.9 |
| --- MISC. GROUND FISH | 0.1 | 2.4 | 2.0 | 2.4 | 0.1 | TR | 7.2 |
| ALL GROUND FISH | 1928.6 | 5746.9 | 5343.5 | 6355.7 | 1992.1 | 137.6 | 21504.3 |
| ALL GROUND FISH | 5708 | 19844 | 16695 | T R A W L H O U R S 24940 6992 | | 583 | 74762 |
| ALL GROUND FISH | 0.34 | 0.29 | 0.32 | M E T R I C T O N S P E R T R A W L H O U R | | 0.24 | 0.29 |

TR => LANDED CATCH LESS THAN 0.05 METRIC TONS, OR METRIC TONS PER UNIT OF EFFORT LESS THAN 0.005

OREGON PHFC AREA REPORT: COMMERCIAL GROUND FISH LANDED CATCH (METRIC TONS) FOR JANUARY 1985 FOR GROUND FISH (OTTER) TRAWL

| SPECIES | 3B | 3A | 2C | 2B | 2A | 1C | TOTAL |
|-----------------------|-------|-------|-------|---|-------|------|--------|
| ARROWTOOTH FLOUNDER | 2.6 | 6.9 | 2.0 | 2.3 | TR | - | 13.9 |
| DOVER SOLE | 93.9 | 34.1 | 6.0 | 239.8 | 45.4 | 0.4 | 419.6 |
| ENGLISH SOLE | 1.4 | 18.1 | 5.9 | 10.2 | 1.4 | 0.1 | 37.0 |
| PETRALE SOLE | 1.3 | 62.6 | 5.2 | 54.1 | 26.2 | TR | 149.4 |
| REX SOLE | 4.5 | 19.0 | 1.8 | 11.1 | 4.5 | 0.2 | 40.9 |
| STARRY FLOUNDER | - | 0.6 | 0.2 | - | TR | TR | 0.7 |
| OTHER FLATFISH | 6.6 | 17.1 | 0.4 | 5.5 | TR | 0.1 | 29.7 |
| --- ALL FLATFISH | 110.2 | 158.3 | 21.4 | 323.0 | 77.4 | 0.8 | 691.2 |
| BLACK ROCKFISH | - | 14.8 | TR | - | - | - | 14.9 |
| BACCALIO | 0.2 | 24.3 | 20.3 | 9.2 | 2.8 | 0.8 | 57.6 |
| CANARY ROCKFISH | 0.8 | 42.3 | 61.4 | 18.0 | 1.1 | 2.3 | 125.9 |
| CHILIPEPPER | - | - | - | 0.5 | 0.1 | - | 0.6 |
| DARKBLOTCHED ROCKFISH | 1.4 | 12.7 | 31.9 | 30.7 | 17.5 | 3.2 | 97.4 |
| RED STRIPE ROCKFISH | 0.1 | 5.0 | 7.6 | 25.1 | 0.5 | TR | 38.2 |
| SHARPCHIN ROCKFISH | TR | 9.6 | 13.3 | 3.6 | 0.3 | TR | 26.8 |
| SILVERGREY ROCKFISH | 0.2 | 3.8 | 15.8 | 2.1 | TR | - | 21.9 |
| SPLITNOSE ROCKFISH | 0.5 | 3.6 | 11.6 | 4.1 | 1.2 | 1.5 | 22.6 |
| YELLOW EYE ROCKFISH | - | 1.9 | 3.4 | 1.5 | 0.1 | 0.7 | 7.6 |
| YELLOWMOUTH ROCKFISH | 0.3 | 6.3 | 100.3 | 2.7 | 0.1 | - | 109.6 |
| YELLOWTAIL ROCKFISH | 9.3 | 152.9 | 14.0 | 34.6 | 12.9 | 1.8 | 225.4 |
| OTHER ROCKFISH | 3.0 | 6.2 | 10.3 | 15.8 | 2.4 | 0.6 | 38.4 |
| --- SEBASTES COMPLEX | 15.7 | 283.3 | 290.0 | 147.8 | 39.1 | 10.9 | 786.9 |
| PACIFIC OCEAN PERCH | 8.4 | 45.4 | 23.1 | 3.1 | 4.2 | 0.3 | 84.4 |
| SHORTBELLY ROCKFISH | - | - | TR | 3.1 | - | - | 3.1 |
| THORNYHEADS | 22.6 | 9.9 | 9.5 | 60.4 | 22.3 | 0.3 | 125.1 |
| WIDOW ROCKFISH | 1.1 | 69.9 | 71.9 | 73.9 | 19.0 | 9.5 | 245.2 |
| --- ALL ROCKFISH | 47.9 | 408.4 | 394.4 | 288.4 | 84.6 | 21.0 | 1244.7 |
| LINGCOD | 8.0 | 23.9 | 13.4 | 6.3 | 1.4 | 1.1 | 54.1 |
| PACIFIC COD | 2.4 | 0.5 | 0.1 | TR | - | - | 3.0 |
| SABLEFISH | 18.2 | 12.2 | 22.3 | 85.4 | 20.6 | 1.4 | 160.1 |
| --- ALL ROUND FISH | 28.6 | 36.5 | 35.8 | 91.7 | 22.0 | 2.5 | 217.2 |
| OTHER GROUND FISH | 0.1 | 0.4 | 0.2 | TR | TR | TR | 0.8 |
| UNSP. GROUND FISH | - | - | 0.2 | - | - | - | 0.2 |
| --- MISC. GROUND FISH | 0.1 | 0.4 | 0.4 | TR | TR | TR | 0.9 |
| ALL GROUND FISH | 186.8 | 603.6 | 452.1 | 703.2 | 184.1 | 24.3 | 2154.1 |
| ALL GROUND FISH | 458 | 2438 | 982 | T R A W L H O U R S 2482 747 | | 48 | 7155 |
| ALL GROUND FISH | 0.41 | 0.25 | 0.46 | M E T R I C T O N S P E R T R A W L H O U R | | 0.51 | 0.30 |

TR => LANDED CATCH LESS THAN 0.05 METRIC TONS, OR METRIC TONS PER UNIT OF EFFORT LESS THAN 0.005

OREGON PWFC AREA REPORT: COMMERCIAL GROUNDFISH LANDED CATCH (METRIC TONS) FOR FEBRUARY 1985 FOR GROUNDFISH (OTTER) TRAWL

| SPECIES | 3B | 3A | 2C | 2B | 2A | TOTAL |
|-----------------------|------|-------|-------|-------|-------|--------|
| ARROWTOOTH FLOUNDER | 2.0 | 7.0 | 6.6 | 0.6 | - | 16.2 |
| DOYER SOLE | 27.8 | 39.1 | 15.8 | 147.5 | 58.9 | 289.2 |
| ENGLISH SOLE | - | 5.5 | 0.4 | 2.4 | 0.6 | 8.9 |
| PETRALE SOLE | 0.6 | 19.3 | 9.4 | 9.8 | 4.2 | 43.3 |
| REX SOLE | 0.3 | 4.6 | 0.7 | 3.0 | 1.7 | 10.3 |
| STARRY FLOUNDER | - | 0.8 | TR | 10.7 | - | 11.6 |
| OTHER PLATFISH | - | 4.9 | 0.2 | 9.0 | - | 14.1 |
| ___ ALL FLATFISH | 30.7 | 81.3 | 33.0 | 183.1 | 65.4 | 393.5 |
| BLACK ROCKFISH | - | 11.9 | TR | - | - | 11.9 |
| EDCACCIO | 0.1 | 23.8 | 11.0 | 4.6 | 0.1 | 39.5 |
| CANARY ROCKFISH | 0.3 | 40.9 | 34.0 | 6.7 | TR | 81.9 |
| CHILIPEPPER | - | - | - | 0.2 | TR | 0.2 |
| DARKBLOTCHED ROCKFIS | 1.0 | 10.1 | 20.1 | 13.2 | 26.6 | 70.9 |
| REDSTRIPE ROCKFISH | TR | 6.7 | 4.4 | 25.7 | TR | 36.9 |
| SHARPCHIN ROCKFISH | TR | 12.4 | 7.6 | 6.7 | 0.1 | 26.9 |
| SILVERGREY ROCKFISH | 0.1 | 3.7 | 8.5 | 24.5 | TR | 36.7 |
| SPLITNOSE ROCKFISH | 0.2 | 3.3 | 6.6 | 4.6 | 1.4 | 16.2 |
| YELLOWEYE ROCKFISH | - | 1.9 | 1.8 | 1.1 | TR | 4.7 |
| YELLOWMOUTH ROCKFISH | 0.2 | 5.6 | 55.4 | 15.0 | TR | 76.2 |
| YELLOWTAIL ROCKFISH | 0.2 | 111.5 | 26.3 | 14.1 | 0.1 | 152.1 |
| OTHER ROCKFISH | 1.8 | 5.1 | 5.7 | 15.3 | 1.6 | 29.5 |
| ___ SEBASTES COMPLEX | 4.0 | 236.7 | 181.3 | 131.7 | 29.8 | 583.5 |
| PACIFIC OCEAN PERCH | 5.1 | 18.3 | 21.2 | 2.2 | 5.5 | 52.4 |
| SHORTBELLY ROCKFISH | - | - | TR | 3.3 | - | 3.3 |
| THORNYHEADS | 3.7 | 2.6 | 5.7 | 58.7 | 12.6 | 83.3 |
| WIDOW ROCKFISH | - | 18.9 | 61.2 | 52.2 | TR | 132.3 |
| ___ ALL ROCKFISH | 12.8 | 276.5 | 269.5 | 248.1 | 47.9 | 854.8 |
| LINGCOD | - | 9.4 | 16.3 | 5.9 | 0.1 | 31.7 |
| PACIFIC COD | - | 0.2 | TR | TR | - | 0.2 |
| SABLEFISH | 5.0 | 6.6 | 22.6 | 51.3 | 8.3 | 93.8 |
| ___ ALL ROUND FISH | 5.0 | 16.2 | 38.9 | 57.2 | 8.4 | 125.7 |
| SPINY DOGFISH | - | - | TR | - | - | TR |
| OTHER GROUND FISH | - | 0.2 | TR | 0.1 | - | 0.3 |
| UNSP. GROUND FISH | - | - | - | 0.2 | - | 0.2 |
| ___ MISC. GROUND FISH | - | 0.2 | TR | 0.3 | - | 0.6 |
| ALL GROUND FISH | 48.5 | 374.1 | 341.4 | 488.8 | 121.7 | 1374.5 |
| ALL GROUND FISH | 101 | 1080 | 686 | 1364 | 275 | 3506 |
| ALL GROUND FISH | 0.48 | 0.35 | 0.50 | 0.36 | 0.44 | 0.39 |

TR => LANDED CATCH LESS THAN 0.05 METRIC TONS, OR METRIC TONS PER UNIT OF EFFORT LESS THAN 0.005

OREGON PNFC AREA REPORT: COMMERCIAL GROUND FISH LANDED CATCH (METRIC TONS) FOR MARCH 1985 FOR GROUND FISH (OTTER) TRAWL

| SPECIES | 3B | 3A | 2C | 2B | 2A | TOTAL |
|-----------------------|-------|-------|-------|---|-------|--------|
| ARROWTOOTH FLOUNDER | 13.1 | 7.8 | 5.0 | 0.2 | TR | 26.1 |
| DOVER SOLE | 116.8 | 75.5 | 3.6 | 106.6 | 125.9 | 428.4 |
| ENGLISH SOLE | 0.1 | 3.3 | 1.5 | 1.2 | 0.7 | 6.8 |
| PETRALE SOLE | 2.6 | 7.8 | 1.8 | 2.9 | 1.3 | 16.4 |
| REX SOLE | 3.4 | 3.5 | 1.1 | 0.6 | 1.1 | 9.6 |
| STARRY FLOUNDER | - | 1.8 | TR | - | - | 1.8 |
| OTHER FLATFISH | 2.6 | 7.0 | 0.3 | 0.6 | - | 10.6 |
| ___ ALL FLATFISH | 138.6 | 106.7 | 13.3 | 112.1 | 129.0 | 499.7 |
| BLACK ROCKFISH | - | 14.6 | - | - | - | 14.6 |
| BACCALIO | 0.5 | 18.1 | 3.6 | 0.9 | 0.1 | 23.3 |
| CANARY ROCKFISH | 2.1 | 31.9 | 6.5 | 1.5 | TR | 42.1 |
| CHILIPEPPER | - | - | - | 0.1 | TR | 0.1 |
| DARKBLOTCHED ROCKFIS | 2.9 | 11.7 | 44.1 | 11.2 | 15.5 | 85.4 |
| REDSTRIPE ROCKFISH | 0.3 | 10.0 | 6.4 | 21.9 | TR | 38.7 |
| SHARPCHIN ROCKFISH | 0.1 | 17.9 | 10.2 | 3.3 | 0.1 | 31.5 |
| SILVERGREY ROCKFISH | 0.5 | 2.8 | 3.0 | 0.7 | TR | 7.1 |
| SPLITNOSE ROCKFISH | 1.1 | 2.6 | 7.5 | 4.9 | 0.8 | 17.0 |
| YELLOW EYE ROCKFISH | - | 1.4 | 0.5 | 0.6 | TR | 2.4 |
| YELLOWMOUTH ROCKFISH | 0.6 | 4.5 | 31.1 | 1.4 | TR | 37.7 |
| YELLOWTAIL ROCKFISH | 4.5 | 87.7 | 27.9 | 4.4 | 2.3 | 126.8 |
| OTHER ROCKFISH | 6.8 | 4.7 | 3.0 | 13.1 | 1.2 | 28.8 |
| ___ SEBASTES COMPLEX | 19.4 | 208.1 | 143.9 | 64.0 | 20.1 | 455.5 |
| PACIFIC OCEAN PERCH | 7.5 | 13.1 | 24.1 | 2.0 | 3.4 | 50.1 |
| SHORTBELLY ROCKFISH | - | - | - | 2.8 | - | 2.8 |
| THORNYHEADS | 10.1 | 4.7 | 2.0 | 32.0 | 21.7 | 70.5 |
| WIDOW ROCKFISH | 0.5 | 32.7 | 33.2 | 52.8 | 0.1 | 119.2 |
| ___ ALL ROCKFISH | 37.5 | 258.6 | 203.2 | 153.7 | 45.3 | 698.2 |
| LINGCOD | 11.8 | 8.2 | 6.6 | 1.3 | 0.6 | 28.6 |
| PACIFIC COD | 1.6 | TR | TR | - | - | 1.6 |
| SABLEFISH | 11.3 | 8.2 | 3.5 | 34.5 | 24.2 | 82.1 |
| ___ ALL ROUND FISH | 25.3 | 16.4 | 10.1 | 35.8 | 24.8 | 112.4 |
| SPINY DOGFISH | - | - | TR | - | - | TR |
| OTHER GROUND FISH | - | TR | TR | - | - | TR |
| UNSP. GROUND FISH | - | - | - | TR | - | TR |
| ___ MISC. GROUND FISH | - | TR | TR | TR | - | 0.1 |
| ALL GROUND FISH | 201.3 | 381.7 | 226.6 | 301.6 | 199.2 | 1310.4 |
| ALL GROUND FISH | 426 | 979 | 480 | 793 | 487 | 3165 |
| | | | | T R A W L H O U R S | | |
| ALL GROUND FISH | 0.47 | 0.39 | 0.47 | 0.38 | 0.41 | 0.41 |
| | | | | M E T R I C T O N S P E R T R A W L H O U R | | |

TR => LANDED CATCH LESS THAN 0.05 METRIC TONS, OR METRIC TONS PER UNIT OF EFFORT LESS THAN 0.005

OREGON PHFC AREA REPORT: COMMERCIAL GROUND FISH LANDED CATCH (METRIC TONS) FOR APRIL 1985 FOR GROUND FISH (OTTER) TRAWL

| SPECIES | 3B | 3A | 2C | 2B | 2A | 1C | TOTAL |
|-----------------------|-------|-------|-------|---|-------|------|--------|
| ARROWTOOTH FLOUNDER | 14.3 | 9.5 | 8.8 | 3.8 | 0.5 | - | 36.9 |
| DOVER SOLE | 143.1 | 65.9 | 22.3 | 151.2 | 143.7 | - | 526.2 |
| ENGLISH SOLE | 1.0 | 6.3 | 6.0 | 4.8 | 3.6 | 0.3 | 22.0 |
| PETRALE SOLE | 0.6 | 4.8 | 8.2 | 7.4 | 0.5 | TR | 21.5 |
| REX SOLE | 1.1 | 10.4 | 2.0 | 1.7 | 1.4 | TR | 16.6 |
| STARRY FLOUNDER | - | 2.5 | 0.3 | 0.2 | - | 0.1 | 3.1 |
| OTHER FLATFISH | - | 8.9 | 0.6 | 3.8 | 0.1 | 0.3 | 13.8 |
| --- ALL FLATFISH | 160.2 | 108.4 | 48.3 | 172.8 | 149.7 | 0.8 | 640.0 |
| BLACK ROCKFISH | - | TR | - | - | - | - | TR |
| BOCACCI | 0.5 | 4.1 | 15.5 | 3.6 | 1.0 | TR | 24.6 |
| CANARY ROCKFISH | 10.7 | 37.7 | 24.6 | 12.6 | 2.3 | 0.1 | 88.0 |
| CHILIPEPPER | - | - | - | 0.2 | TR | - | 0.2 |
| DARKBLOTCHED ROCKFIS | 4.3 | 11.8 | 28.4 | 38.7 | 3.9 | 0.1 | 87.2 |
| REDSTRIPE ROCKFISH | 1.7 | 5.0 | 6.4 | 12.0 | TR | - | 25.2 |
| SHARPCIN ROCKFISH | 1.7 | 11.6 | 11.6 | 2.5 | 0.1 | - | 27.6 |
| SILVERGREY ROCKFISH | 2.1 | 20.5 | 7.1 | 0.2 | TR | - | 29.9 |
| SPLITNOSE ROCKFISH | 1.7 | 1.9 | 22.9 | 3.2 | 1.7 | TR | 31.5 |
| YELLOW EYE ROCKFISH | 0.6 | 1.4 | 3.3 | 0.5 | 0.6 | TR | 6.4 |
| YELLOWMOUTH ROCKFISH | 1.4 | 10.4 | 90.2 | 0.5 | - | - | 102.4 |
| YELLOWTAIL ROCKFISH | 7.5 | 104.5 | 62.8 | 22.7 | 0.3 | TR | 197.8 |
| OTHER ROCKFISH | 2.3 | 8.8 | 6.0 | 5.9 | 1.5 | TR | 24.5 |
| --- SEBASTES COMPLEX | 34.5 | 217.7 | 278.9 | 102.5 | 11.5 | 0.2 | 645.3 |
| PACIFIC OCEAN PERCH | 8.2 | 12.2 | 35.1 | 4.4 | 1.3 | TR | 61.3 |
| SHORTBELLY ROCKFISH | - | - | TR | 0.1 | - | - | 0.1 |
| THORNYHEADS | 5.6 | 7.3 | 6.1 | 23.4 | 29.0 | - | 71.4 |
| WIDOW ROCKFISH | 0.1 | 23.3 | 41.2 | 32.1 | 0.1 | TR | 96.8 |
| --- ALL ROCKFISH | 48.5 | 260.4 | 361.3 | 162.5 | 41.9 | 0.3 | 874.9 |
| LINGCOD | 8.6 | 16.3 | 15.1 | 13.9 | 1.6 | TR | 55.5 |
| PACIFIC COD | 1.5 | 1.1 | - | - | - | - | 2.6 |
| PACIFIC WHITING | - | - | - | - | 4.5 | - | 4.5 |
| SABLEFISH | 11.5 | 5.2 | 26.3 | 47.4 | 32.5 | 0.1 | 123.1 |
| --- ALL ROUND FISH | 21.5 | 22.6 | 41.4 | 61.4 | 38.6 | 0.2 | 185.7 |
| SPINY DOGFISH | - | - | TR | - | - | - | TR |
| UNSP. GROUND FISH | - | - | TR | 0.3 | TR | - | 0.4 |
| --- MISC. GROUND FISH | - | - | TR | 0.3 | TR | - | 0.4 |
| ALL GROUND FISH | 230.2 | 391.4 | 451.0 | 397.0 | 230.2 | 1.2 | 1701.1 |
| | | | | T R A W L H O U R S | | | |
| ALL GROUND FISH | 454 | 1170 | 1120 | 1237 | 599 | 16 | 4596 |
| | | | | M E T R I C T O N S P E R T R A W L H O U R | | | |
| ALL GROUND FISH | 0.51 | 0.34 | 0.40 | 0.32 | 0.38 | 0.08 | 0.37 |

TR => LANDED CATCH LESS THAN 0.05 METRIC TONS, OR METRIC TONS PER UNIT OF EFFORT LESS THAN 0.005

OREGON PHFC AREA REPORT: COMMERCIAL GROUNDFISH LANDED CATCH (METRIC TONS) FOR MAY 1985 FOR GROUNDFISH (OTTER) TRAWL

| SPECIES | 3B | 3A | 2C | 2B | 2A | 1C | TOTAL |
|----------------------|-------|-------|-------|---|-------|------|--------|
| ARROWTOOTH FLOUNDER | 34.4 | 59.4 | 18.9 | 9.4 | 3.5 | 0.1 | 125.6 |
| DOVER SOLE | 61.8 | 174.1 | 70.9 | 210.4 | 53.1 | 2.1 | 572.3 |
| ENGLISH SOLE | 2.4 | 13.3 | 17.9 | 4.2 | 4.0 | 0.5 | 42.3 |
| PETRALE SOLE | 2.0 | 10.7 | 27.9 | 3.7 | 0.6 | TR | 44.9 |
| REX SOLE | 5.3 | 30.1 | 3.6 | 2.5 | 3.5 | 0.3 | 45.4 |
| STARRY FLOUNDER | 31.1 | 10.9 | 0.3 | 0.4 | 0.1 | 0.1 | 42.9 |
| OTHER FLATFISH | 4.3 | 19.6 | 1.7 | 25.7 | TR | 0.5 | 51.8 |
| ---ALL FLATFISH | 141.3 | 318.1 | 141.2 | 256.3 | 64.8 | 3.5 | 925.2 |
| BLACK ROCKFISH | - | TR | - | - | - | - | TR |
| BOCACCIO | 0.6 | 5.2 | 9.6 | 4.9 | 1.3 | TR | 21.6 |
| CANARY ROCKFISH | 13.3 | 53.6 | 14.1 | 17.3 | 2.6 | TR | 100.9 |
| CHILIPEPPER | - | - | - | 0.2 | TR | - | 0.2 |
| DARKBLOTCHED ROCKFIS | 2.6 | 24.8 | 29.2 | 38.7 | 4.8 | TR | 100.1 |
| REDSTRIPE ROCKFISH | 0.6 | 12.3 | 4.8 | 6.4 | 0.1 | - | 24.2 |
| SHARPCHIN ROCKFISH | 1.1 | 19.7 | 7.9 | 1.4 | 0.2 | TR | 30.2 |
| SILVERGREY ROCKFISH | 2.6 | 29.9 | 4.8 | 0.3 | TR | - | 37.6 |
| SPLITNOSE ROCKFISH | 2.2 | 1.9 | 18.8 | 3.0 | 2.8 | 0.1 | 28.8 |
| YELLOWEYE ROCKFISH | 0.8 | 1.8 | 2.0 | 0.7 | 0.5 | TR | 5.9 |
| YELLOWMOUTH ROCKFISH | 1.7 | 10.8 | 59.5 | 0.3 | TR | - | 72.3 |
| YELLOWTAIL ROCKFISH | 6.9 | 84.4 | 23.7 | 15.2 | 0.3 | - | 130.4 |
| OTHER ROCKFISH | 2.7 | 12.8 | 4.6 | 3.6 | 2.2 | TR | 25.8 |
| SEBASTES COMPLEX | 35.2 | 257.0 | 178.9 | 91.8 | 15.0 | 0.2 | 578.1 |
| PACIFIC OCEAN PERCH | 15.6 | 32.7 | 31.5 | 5.8 | 2.0 | TR | 87.6 |
| SHORTBELLY ROCKFISH | - | - | TR | 0.1 | TR | - | 0.1 |
| THORNYHEADS | 3.1 | 9.1 | 9.6 | 56.5 | 12.3 | 0.6 | 91.2 |
| WIDOW ROCKFISH | 0.7 | 8.6 | 41.0 | 7.7 | 4.0 | - | 62.0 |
| ---ALL ROCKFISH | 54.7 | 307.5 | 261.0 | 162.0 | 33.2 | 0.8 | 819.1 |
| LINGCOD | 12.2 | 55.2 | 22.5 | 8.3 | 1.9 | 0.1 | 100.2 |
| PACIFIC COD | 4.0 | 1.9 | - | - | - | - | 5.9 |
| PACIFIC WHITING | - | - | 0.4 | - | 5.6 | - | 6.0 |
| SABLEFISH | 19.5 | 48.6 | 73.7 | 113.5 | 30.6 | 2.4 | 288.3 |
| ---ALL ROUNDFISH | 35.7 | 105.6 | 96.7 | 121.9 | 38.0 | 2.5 | 400.3 |
| UNSP. GROUNDFISH | - | - | TR | 0.4 | - | - | 0.4 |
| ---MISC. GROUNDFISH | - | - | TR | 0.4 | - | - | 0.4 |
| ALL GROUNDFISH | 231.6 | 731.2 | 498.8 | 540.6 | 136.0 | 6.8 | 2145.1 |
| | | | | T R A W L H O U R S | | | |
| ALL GROUNDFISH | 668 | 2630 | 1737 | 2049 | 482 | 40 | 7606 |
| | | | | M E T R I C T O N S P E R T R A W L H O U R | | | |
| ALL GROUNDFISH | 0.35 | 0.28 | 0.29 | 0.26 | 0.28 | 0.17 | 0.28 |

TR => LANDED CATCH LESS THAN 0.05 METRIC TONS, OR METRIC TONS PER UNIT OF EFFORT LESS THAN 0.005

OREGON PHFC AREA REPORT: COMMERCIAL GROUND FISH LANDED CATCH (METRIC TONS) FOR JUNE 1985 FOR GROUND FISH (OTTER) TRAWL

| SPECIES | 3B | 3A | 2C | 2B | 2A | 1C | TOTAL |
|-----------------------|-------|-------|-------|---|-------|------|--------|
| ARROWTOOTH FLOUNDER | 12.9 | 31.3 | 21.5 | 8.4 | 0.4 | TR | 74.5 |
| DOVER SOLE | 17.9 | 123.2 | 72.8 | 146.5 | 40.5 | 0.4 | 401.2 |
| ENGLISH SOLE | 4.6 | 21.2 | 6.1 | 6.4 | 3.3 | 0.2 | 41.7 |
| PETRALE SOLE | 1.3 | 10.3 | 7.0 | 2.5 | 0.8 | TR | 22.0 |
| REX SOLE | 2.7 | 19.7 | 3.4 | 4.8 | 3.0 | TR | 33.6 |
| ROCK SOLE | - | - | TR | - | - | - | TR |
| STARRY FLOUNDER | 112.9 | 12.5 | 0.4 | 1.6 | TR | 0.1 | 127.5 |
| OTHER FLATFISH | 5.3 | 17.9 | 0.6 | 23.8 | 1.3 | 0.1 | 49.1 |
| ___ ALL FLATFISH | 157.7 | 236.2 | 111.8 | 194.0 | 49.3 | 0.8 | 749.7 |
| BLACK ROCKFISH | - | TR | - | - | - | - | TR |
| BACALCIO | 0.8 | 3.3 | 8.1 | 2.2 | 1.2 | 0.1 | 15.6 |
| CANARY ROCKFISH | 17.3 | 34.8 | 11.9 | 7.6 | 3.1 | 0.2 | 74.9 |
| CHILIPEPPER | - | - | - | 0.1 | TR | - | 0.1 |
| DARKBLOTCHED ROCKFIS | 3.1 | 16.1 | 17.0 | 20.9 | 5.2 | 0.3 | 62.6 |
| RED STRIPE ROCKFISH | 0.6 | 7.1 | 3.5 | 5.5 | TR | - | 16.7 |
| SHARPCHEIN ROCKFISH | 1.4 | 12.7 | 6.3 | 1.2 | 0.1 | TR | 21.7 |
| SILVERGREY ROCKFISH | 3.4 | 19.4 | 3.8 | 0.1 | TR | - | 26.6 |
| SPLITNOSE ROCKFISH | 2.8 | 1.2 | 12.9 | 1.7 | 4.3 | 0.2 | 23.1 |
| YELLOW EYE ROCKFISH | 1.0 | 1.2 | 1.7 | 0.3 | 0.9 | 0.1 | 5.2 |
| YELLOWMOUTH ROCKFISH | 2.2 | 7.0 | 48.0 | 0.2 | TR | - | 57.5 |
| YELLOWTAIL ROCKFISH | 8.4 | 46.0 | 6.0 | 4.4 | 0.4 | 0.1 | 65.3 |
| OTHER ROCKFISH | 3.5 | 8.3 | 3.3 | 2.8 | 1.8 | 0.1 | 19.8 |
| ___ SEBASTES COMPLEX | 44.6 | 157.2 | 122.6 | 47.0 | 17.0 | 1.0 | 389.3 |
| PACIFIC OCEAN PERCH | 11.6 | 28.4 | 31.6 | 2.8 | 1.0 | TR | 75.4 |
| SHORTBELLY ROCKFISH | - | - | TR | 0.1 | TR | - | 0.1 |
| THORNYHEADS | 3.4 | 6.8 | 22.9 | 52.1 | 12.3 | 0.1 | 97.6 |
| WIDOW ROCKFISH | 0.2 | 7.6 | 16.4 | 0.4 | 0.4 | 0.1 | 25.1 |
| ___ ALL ROCKFISH | 59.7 | 200.1 | 193.5 | 102.4 | 30.6 | 1.1 | 587.4 |
| LINGCOD | 43.0 | 71.2 | 3.3 | 5.1 | 6.5 | 0.9 | 129.9 |
| PACIFIC COO | 3.3 | 0.2 | - | TR | - | - | 3.5 |
| PACIFIC WHITING | - | TR | - | 80.7 | 6.1 | - | 86.8 |
| SABLEFISH | 6.2 | 49.8 | 87.8 | 126.4 | 21.0 | 0.3 | 291.5 |
| ___ ALL ROUND FISH | 52.5 | 121.3 | 91.1 | 212.2 | 33.6 | 1.2 | 511.8 |
| SPINY DOGFISH | - | TR | - | - | - | - | TR |
| OTHER GROUND FISH | - | TR | - | - | - | - | TR |
| UNSP. GROUND FISH | - | - | - | 0.4 | - | - | 0.4 |
| ___ MISC. GROUND FISH | - | TR | - | 0.4 | - | - | 0.4 |
| ALL GROUND FISH | 270.0 | 557.6 | 396.3 | 508.9 | 113.5 | 3.0 | 1849.3 |
| | | | | T R A W L H O U R S | | | |
| ALL GROUND FISH | 919 | 1646 | 1432 | 2521 | 332 | 18 | 6868 |
| | | | | M E T R I C T O N S P E R T R A W L H O U R | | | |
| ALL GROUND FISH | 0.29 | 0.34 | 0.28 | 0.20 | 0.34 | 0.17 | 0.27 |

TR => LANDED CATCH LESS THAN 0.05 METRIC TONS, OR METRIC TONS PER UNIT OF EFFORT LESS THAN 0.005

OREGON PNFC AREA REPORT: COMMERCIAL GROUND FISH LANDED CATCH (METRIC TONS) FOR JULY 1985 FOR GROUND FISH (OTTER) TRAWL

| SPECIES | 3B | 3A | 2C | 2B | 2A | 1C | TOTAL |
|-----------------------|-------|-------|-------|-----------------------|-------|------|--------|
| ARROWTOOTH FLOUNDER | 22.4 | 47.4 | 33.4 | 6.5 | 1.2 | 0.1 | 111.2 |
| DOVER SOLE | 23.0 | 167.9 | 153.3 | 149.3 | 68.4 | 5.2 | 567.1 |
| ENGLISH SOLE | 13.8 | 41.3 | 9.4 | 8.7 | 9.3 | 0.7 | 83.2 |
| PETRALE SOLE | 5.4 | 16.1 | 11.3 | 5.2 | 3.8 | TR | 41.7 |
| REX SOLE | 8.6 | 39.5 | 7.6 | 5.2 | 3.6 | 0.3 | 64.8 |
| ROCK SOLE | - | - | TR | 0.4 | - | - | 0.4 |
| STARRY FLOUNDER | 9.8 | 8.4 | 2.1 | 2.6 | 0.2 | 0.1 | 23.2 |
| OTHER FLATFISH | 2.5 | 39.2 | 7.5 | 24.6 | 0.3 | 0.1 | 74.3 |
| ___ ALL FLATFISH | 85.5 | 359.9 | 224.6 | 202.5 | 86.8 | 6.6 | 965.9 |
| BLACK ROCKFISH | - | - | - | - | 0.1 | - | 0.1 |
| BACCACCIO | 1.3 | 7.3 | 19.5 | 17.1 | 2.2 | 0.2 | 47.6 |
| CANARY ROCKFISH | 10.5 | 51.1 | 31.1 | 10.9 | 7.7 | TR | 111.4 |
| CHILIPEPPER | - | - | - | 0.1 | 0.3 | TR | 0.4 |
| DARKBLDTCHED ROCKFIS | 1.1 | 2.3 | 15.2 | 3.6 | 7.7 | 1.1 | 31.0 |
| REDSTRIPE ROCKFISH | 1.0 | 15.4 | 4.3 | 0.5 | TR | - | 21.2 |
| SHARPCHIN ROCKFISH | 0.4 | 5.2 | 1.6 | 1.0 | 0.2 | TR | 8.3 |
| SILVERGREY ROCKFISH | 9.6 | 12.8 | 11.8 | 1.6 | TR | - | 35.7 |
| SPLITNOSE ROCKFISH | 0.5 | 2.0 | 6.4 | 2.4 | 0.9 | 0.1 | 12.4 |
| YELLOW EYE ROCKFISH | 0.3 | 1.4 | 6.4 | 2.0 | 1.9 | TR | 12.0 |
| YELLOWMOUTH ROCKFISH | 0.2 | 5.1 | 28.6 | 0.6 | 0.2 | TR | 34.8 |
| YELLOWTAIL ROCKFISH | 9.5 | 45.6 | 11.7 | 5.2 | 15.1 | 0.1 | 87.1 |
| OTHER ROCKFISH | 5.0 | 12.5 | 5.9 | 1.8 | 4.2 | 0.4 | 29.6 |
| ___ SEBASTES COMPLEX | 39.3 | 160.7 | 142.4 | 46.8 | 40.5 | 2.0 | 431.8 |
| PACIFIC OCEAN PERCH | 5.4 | 27.2 | 30.7 | 1.0 | 0.8 | 0.1 | 65.2 |
| SHORTBELLY ROCKFISH | - | - | TR | TR | TR | - | TR |
| THORNYHEADS | 0.7 | 6.8 | 46.3 | 44.1 | 6.7 | TR | 104.6 |
| WIDOW ROCKFISH | 3.0 | 23.8 | 15.6 | 20.3 | 10.3 | 0.1 | 73.1 |
| ___ ALL ROCKFISH | 48.4 | 218.5 | 235.1 | 112.3 | 58.3 | 2.2 | 674.7 |
| LINGCOD | 14.5 | 31.8 | 34.1 | 9.7 | 7.8 | 1.3 | 99.3 |
| PACIFIC COD | 15.6 | 1.2 | TR | - | - | - | 16.8 |
| PACIFIC WHITING | - | 8.1 | - | 29.1 | - | - | 37.1 |
| SABLEFISH | 9.3 | 79.1 | 152.7 | 98.8 | 28.7 | 2.6 | 371.2 |
| ___ ALL ROUND FISH | 39.3 | 120.1 | 186.8 | 137.6 | 36.5 | 3.9 | 524.3 |
| SPINY DOGFISH | - | - | TR | - | - | - | TR |
| OTHER GROUND FISH | TR | 0.2 | TR | - | TR | TR | 0.3 |
| UNSP. GROUND FISH | TR | TR | TR | 0.2 | - | - | 0.2 |
| ___ MISC. GROUND FISH | TR | 0.2 | TR | 0.2 | TR | TR | 0.5 |
| ALL GROUND FISH | 173.3 | 698.7 | 646.5 | 452.6 | 181.6 | 12.7 | 2165.4 |
| ALL GROUND FISH | 805 | 2733 | 2765 | 2481 | 777 | 81 | 9642 |
| | | | | T R A W L H O U R S | | | |
| ALL GROUND FISH | 0.22 | 0.26 | 0.24 | 0.18 | 0.23 | 0.16 | 0.23 |

TR => LANDED CATCH LESS THAN 0.05 METRIC TONS, OR METRIC TONS PER UNIT OF EFFORT LESS THAN 0.005

OREGON PHFC AREA REPORT: COMMERCIAL GROUND FISH LANDED CATCH (METRIC TONS) FOR AUGUST 1985 FOR GROUND FISH (OTTER) TRAWL

| SPECIES | 3B | 3A | 2C | 2B | 2A | 1C | TOTAL |
|----------------------|-------|-------|-------|---|-------|------|--------|
| ARROWTOOTH FLOUNDER | 14.5 | 55.9 | 24.7 | 7.7 | 3.5 | 1.8 | 108.1 |
| DOVER SOLE | 37.5 | 181.3 | 127.8 | 205.1 | 71.1 | 9.0 | 631.8 |
| ENGLISH SOLE | 7.4 | 60.3 | 5.9 | 9.1 | 6.0 | 0.4 | 89.1 |
| PETRALE SOLE | 2.1 | 24.5 | 5.1 | 5.1 | 1.7 | 0.1 | 38.6 |
| REX SOLE | 8.7 | 39.4 | 6.1 | 3.7 | 2.0 | 0.5 | 60.4 |
| ROCK SOLE | | | | 0.2 | | | 0.2 |
| STARRY FLOUNDER | 0.4 | 10.2 | 3.6 | 1.6 | TR | TR | 15.8 |
| OTHER FLATFISH | 1.7 | 41.4 | 2.8 | 25.0 | 0.1 | TR | 71.1 |
| ---ALL FLATFISH | 72.4 | 413.1 | 176.0 | 257.3 | 84.5 | 11.7 | 1015.1 |
| BLACK ROCKFISH | | | | | 0.1 | | 0.1 |
| BOCACCI | 1.3 | 5.2 | 22.1 | 25.2 | 1.8 | 0.2 | 55.8 |
| CANARY ROCKFISH | 10.2 | 36.7 | 35.0 | 20.1 | 6.5 | TR | 108.7 |
| CHILIPEPPER | | | | 0.2 | 0.3 | TR | 0.6 |
| DARKBLOTCHED ROCKFIS | 1.1 | 1.6 | 16.6 | 15.8 | 6.4 | 1.5 | 43.0 |
| REDSTRIPE ROCKFISH | 1.0 | 9.6 | 4.8 | 1.1 | TR | | 16.5 |
| SHARPCIN ROCKFISH | 0.4 | 3.5 | 1.9 | 2.3 | 0.2 | TR | 8.4 |
| SILVERGREY ROCKFISH | 9.3 | 9.2 | 13.0 | 9.2 | TR | | 33.8 |
| SPLITNOSE ROCKFISH | 0.5 | 1.5 | 6.3 | 6.6 | 0.8 | 0.2 | 15.9 |
| YELLOW EYE ROCKFISH | 0.3 | 1.0 | 7.2 | 2.9 | 1.7 | TR | 13.1 |
| YELLOWMOUTH ROCKFISH | 0.2 | 3.7 | 31.2 | 1.7 | 0.1 | TR | 37.0 |
| YELLOWTAIL ROCKFISH | 10.1 | 32.1 | 20.4 | 8.9 | 24.4 | 1.0 | 96.8 |
| OTHER ROCKFISH | 4.9 | 9.0 | 6.3 | 3.6 | 3.8 | 0.5 | 27.9 |
| ---SEBASTIES COMPLEX | 39.2 | 113.2 | 164.9 | 90.6 | 46.0 | 3.6 | 457.5 |
| PACIFIC OCEAN PERCH | 15.5 | 26.3 | 47.0 | 5.1 | 0.6 | 0.1 | 94.6 |
| SHORTBELLY ROCKFISH | | | TR | TR | TR | | TR |
| THORNYHEADS | 2.2 | 13.6 | 53.8 | 58.5 | 6.4 | 0.4 | 134.9 |
| WIDDOW ROCKFISH | 2.4 | 7.1 | 8.1 | 1.9 | 3.3 | 2.9 | 25.7 |
| ---ALL ROCKFISH | 59.3 | 160.2 | 273.8 | 156.1 | 56.4 | 7.0 | 712.8 |
| LINGCOD | 9.6 | 35.8 | 71.8 | 24.7 | 11.1 | 1.3 | 154.2 |
| PACIFIC COD | 3.2 | 0.8 | | TR | | | 3.9 |
| PACIFIC WHITING | | 5.0 | 0.2 | 9.0 | | | 14.2 |
| SABLEFISH | 16.9 | 55.9 | 160.6 | 171.0 | 26.6 | 9.1 | 440.2 |
| ---ALL ROUND FISH | 29.7 | 97.5 | 232.6 | 204.6 | 37.7 | 10.4 | 612.5 |
| SPINY DOGFISH | | | TR | | | | TR |
| OTHER GROUND FISH | TR | 0.6 | TR | | TR | TR | 0.7 |
| UNSP. GROUND FISH | | 0.1 | 0.1 | 0.2 | | | 0.4 |
| ---MISC. GROUND FISH | TR | 0.7 | 0.1 | 0.2 | TR | TR | 1.1 |
| ALL GROUND FISH | 161.4 | 671.5 | 682.6 | 618.2 | 178.7 | 29.1 | 2341.5 |
| | | | | T R A W L H O U R S | | | |
| ALL GROUND FISH | 630 | 2536 | 2195 | 3195 | 876 | 128 | 9560 |
| | | | | M E T R I C T O N S P E R T R A W L H O U R | | | |
| ALL GROUND FISH | 0.26 | 0.27 | 0.31 | 0.19 | 0.20 | 0.23 | 0.25 |

TR => LANDED CATCH LESS THAN 0.05 METRIC TONS, OR METRIC TONS PER UNIT OF EFFORT LESS THAN 0.005

OREGON PWFC AREA REPORT: COMMERCIAL GROUNDFISH LANDED CATCH (METRIC TONS) FOR SEPTEMBER 1985 FOR GROUNDFISH (OTTER) TRAWL

| SPECIES | 3B | 3A | 2C | 2B | 2A | 1C | TOTAL |
|-----------------------|-------|-------|-------|---|-------|------|--------|
| ARROWTOOTH FLOUNDER | 7.9 | 39.6 | 24.6 | 7.3 | 0.6 | TR | 80.1 |
| DOVER SOLE | 12.9 | 120.2 | 94.4 | 174.4 | 56.7 | 8.0 | 466.5 |
| ENGLISH SOLE | 4.2 | 31.3 | 9.7 | 8.8 | 3.0 | 0.4 | 57.4 |
| PETRALE SOLE | 0.6 | 15.0 | 5.7 | 4.2 | 0.5 | 0.1 | 26.1 |
| REX SOLE | 1.9 | 25.3 | 5.9 | 3.9 | 1.3 | 0.1 | 38.4 |
| STARRY FLOUNDER | 25.5 | 49.5 | 3.4 | 0.4 | TR | 0.1 | 78.9 |
| OTHER FLATFISH | 2.9 | 26.0 | 7.8 | 1.2 | TR | 0.1 | 38.1 |
| ___ ALL FLATFISH | 55.9 | 306.9 | 151.5 | 200.2 | 62.1 | 8.7 | 785.4 |
| BLACK ROCKFISH | - | - | - | - | TR | - | TR |
| BOCACCI | 0.7 | 5.0 | 18.0 | 49.2 | 0.4 | 0.1 | 73.3 |
| CANARY ROCKFISH | 5.4 | 34.6 | 29.4 | 29.6 | 0.8 | TR | 99.9 |
| CHILIPEPPER | - | - | - | 0.3 | 0.2 | TR | 0.5 |
| DARKBLOTCHED ROCKFIS | 0.6 | 1.7 | 5.3 | 11.2 | 4.9 | 1.0 | 24.6 |
| REDSTRIPE ROCKFISH | TR | 11.9 | 4.0 | 2.2 | TR | - | 18.2 |
| SHARPCHIN ROCKFISH | 0.1 | 3.8 | 1.3 | 4.9 | 0.2 | TR | 10.4 |
| SILVERGREY ROCKFISH | 4.9 | 8.7 | 10.8 | 4.4 | TR | - | 28.7 |
| SPLITNOSE ROCKFISH | 0.2 | 1.5 | 2.8 | 12.5 | 0.4 | 0.2 | 17.5 |
| YELLOWEYE ROCKFISH | 0.1 | 1.0 | 6.0 | 5.4 | 0.2 | TR | 12.7 |
| YELLOWMOUTH ROCKFISH | 0.1 | 3.5 | 24.2 | 1.8 | 0.3 | 0.1 | 30.0 |
| YELLOWTAIL ROCKFISH | 6.5 | 45.4 | 8.2 | 47.7 | TR | - | 107.8 |
| OTHER ROCKFISH | 2.6 | 8.5 | 2.2 | 7.0 | 1.9 | 0.2 | 22.4 |
| ___ SEBASTES COMPLEX | 21.2 | 125.6 | 112.3 | 176.1 | 9.4 | 1.6 | 446.2 |
| PACIFIC OCEAN PERCH | 5.5 | 24.1 | 22.8 | 2.8 | 1.8 | 2.8 | 59.8 |
| SHORTBELLY ROCKFISH | - | - | TR | TR | - | - | 0.1 |
| THORNYHEADS | 1.1 | 9.3 | 30.6 | 32.6 | 8.9 | 1.9 | 84.5 |
| WIDOW ROCKFISH | 1.0 | 15.0 | 8.2 | 7.3 | 0.1 | 0.1 | 31.7 |
| ___ ALL ROCKFISH | 28.9 | 174.0 | 173.9 | 218.9 | 20.2 | 6.4 | 622.3 |
| LINGCOD | 5.5 | 33.3 | 31.8 | 90.1 | 4.2 | 0.4 | 165.3 |
| PACIFIC COD | - | 0.5 | TR | - | - | - | 0.5 |
| PACIFIC WHITING | - | 3.2 | 0.1 | - | - | - | 3.3 |
| SABLEFISH | 10.3 | 32.1 | 97.8 | 174.4 | 25.2 | 6.2 | 346.1 |
| ___ ALL ROUND FISH | 15.9 | 69.1 | 129.7 | 264.5 | 29.4 | 6.6 | 515.2 |
| SPINY DOGFISH | - | - | TR | - | - | - | TR |
| OTHER GROUND FISH | - | 0.4 | 0.1 | TR | - | - | 0.5 |
| UNSP. GROUND FISH | - | - | 0.4 | 0.1 | - | - | 0.5 |
| ___ MISC. GROUND FISH | - | 0.4 | 0.5 | 0.1 | - | - | 1.0 |
| ALL GROUND FISH | 100.7 | 550.4 | 455.7 | 683.7 | 111.6 | 21.7 | 1923.8 |
| | | | | T R A W L H O U R S | | | |
| ALL GROUND FISH | 275 | 2135 | 1803 | 2652 | 528 | 126 | 7519 |
| | | | | M E T R I C T O N S P E R T R A W L H O U R | | | |
| ALL GROUND FISH | 0.37 | 0.26 | 0.25 | 0.26 | 0.21 | 0.17 | 0.26 |

TR => LANDED CATCH LESS THAN 0.05 METRIC TONS, OR METRIC TONS PER UNIT OF EFFORT LESS THAN 0.005

OREGON PNFC AREA REPORT: COMMERCIAL GROUND FISH LANDED CATCH (METRIC TONS) FOR OCTOBER 1985 FOR GROUND FISH (OTTER) TRAWL

| SPECIES | 3B | 3A | 2C | 2B | 2A | 1C | TOTAL |
|-----------------------|-------|-------|-------|-------|------|------|--------|
| ARROWTOOTH FLOUNDER | 8.6 | 15.5 | 22.3 | 6.6 | 0.2 | TR | 53.2 |
| DOVER SOLE | 29.8 | 91.2 | 87.8 | 181.5 | 42.3 | 6.2 | 438.8 |
| ENGLISH SOLE | 2.5 | 10.3 | 22.7 | 6.2 | 1.0 | 0.2 | 42.9 |
| PETRALE SOLE | 1.5 | 8.6 | 9.0 | 5.0 | 0.4 | 0.5 | 24.9 |
| REX SOLE | 4.6 | 16.7 | 5.2 | 1.4 | 1.7 | TR | 29.6 |
| ROCK SOLE | - | 0.1 | - | - | - | - | 0.1 |
| STARRY FLOUNDER | 32.7 | 10.9 | 4.6 | TR | TR | 0.1 | 48.4 |
| OTHER FLATFISH | 2.6 | 13.8 | 8.9 | 0.3 | TR | 0.1 | 25.9 |
| --- ALL FLATFISH | 82.2 | 167.1 | 160.6 | 201.0 | 45.6 | 7.1 | 663.7 |
| BLACK ROCKFISH | - | 2.7 | - | - | - | - | 2.7 |
| BODACCIO | 1.5 | 0.6 | 28.7 | 6.4 | TR | TR | 37.3 |
| CANARY ROCKFISH | 2.3 | 2.3 | 23.9 | 22.3 | 0.1 | 0.1 | 51.0 |
| CHILIPEPPER | - | - | - | 0.1 | - | - | 0.1 |
| DARKBLOTCHED ROCKFIS | 2.5 | 5.7 | 13.4 | 44.0 | 2.5 | 3.7 | 71.9 |
| REDSTRIPE ROCKFISH | TR | 4.3 | 7.9 | 7.9 | - | - | 20.2 |
| SHARPCHIN ROCKFISH | 0.2 | 1.5 | 3.8 | 5.4 | TR | TR | 11.0 |
| SILVERGREY ROCKFISH | 0.2 | 1.8 | 6.5 | 0.7 | TR | TR | 9.2 |
| SPLITNOSE ROCKFISH | 1.0 | 0.1 | 4.2 | 7.3 | TR | TR | 12.6 |
| YELLOW EYE ROCKFISH | 0.1 | 0.8 | 3.2 | 1.6 | TR | TR | 5.8 |
| YELLOWMOUTH ROCKFISH | 0.5 | 4.7 | 32.8 | 0.6 | - | - | 38.6 |
| YELLOWTAIL ROCKFISH | 2.7 | 27.8 | 12.8 | 24.2 | - | - | 67.5 |
| OTHER ROCKFISH | 10.4 | 6.3 | 3.3 | 9.4 | 0.6 | 1.0 | 31.1 |
| --- SEBASTIES COMPLEX | 21.6 | 58.8 | 140.5 | 129.9 | 3.3 | 4.9 | 359.0 |
| PACIFIC OCEAN PERCH | 9.5 | 6.7 | 24.6 | 9.4 | 0.1 | 0.2 | 50.5 |
| SHORTBELLY ROCKFISH | - | - | - | TR | - | - | TR |
| THORNYHEADS | 2.3 | 3.4 | 17.6 | 28.6 | 12.6 | 1.6 | 66.0 |
| WIDOW ROCKFISH | 0.9 | 2.8 | 18.2 | 10.3 | TR | - | 32.1 |
| UNSP. ROCKFISH | - | - | - | 0.1 | - | - | 0.1 |
| --- ALL ROCKFISH | 34.3 | 71.7 | 200.8 | 178.2 | 16.0 | 6.7 | 507.7 |
| LINGCOD | 4.2 | 14.3 | 24.9 | 15.4 | 0.7 | 0.7 | 60.1 |
| PACIFIC COD | - | 0.3 | - | - | - | - | 0.3 |
| PACIFIC WHITING | - | 0.2 | - | - | - | - | 0.2 |
| SABLEFISH | 15.6 | 10.3 | 72.8 | 169.1 | 23.1 | 2.6 | 293.5 |
| --- ALL ROUND FISH | 19.8 | 25.1 | 97.7 | 184.6 | 23.8 | 3.3 | 354.1 |
| SPINY DOGFISH | - | - | TR | - | - | - | TR |
| OTHER GROUND FISH | - | TR | TR | TR | - | - | 0.1 |
| UNSP. GROUND FISH | - | 0.1 | TR | 0.1 | - | - | 0.2 |
| --- MISC. GROUND FISH | - | 0.1 | TR | 0.1 | - | - | 0.2 |
| ALL GROUND FISH | 136.3 | 264.0 | 459.1 | 563.9 | 85.4 | 17.1 | 1525.8 |
| ALL GROUND FISH | 416 | 1026 | 1523 | 2333 | 347 | 62 | 5707 |
| ALL GROUND FISH | 0.33 | 0.26 | 0.30 | 0.24 | 0.25 | 0.28 | 0.27 |

TR => LANDED CATCH LESS THAN 0.05 METRIC TONS, OR METRIC TONS PER UNIT OF EFFORT LESS THAN 0.005

OREGON PWFC AREA REPORT: COMMERCIAL GROUND FISH LANDED CATCH (METRIC TONS) FOR NOVEMBER 1985 FOR GROUND FISH (OTTER) TRAWL

| SPECIES | 3B | 3A | 2C | 2B | 2A | 1C | TOTAL |
|-----------------------|------|-------|-------|---|-------|------|--------|
| ARROWTOOTH FLOUNDER | 5.2 | 6.0 | 2.4 | 5.0 | 0.5 | 0.1 | 19.2 |
| DOVER SOLE | 24.8 | 79.2 | 44.7 | 170.0 | 85.4 | 4.9 | 408.9 |
| ENGLISH SOLE | - | 2.4 | 5.6 | 3.3 | 2.8 | TR | 14.1 |
| PETRALE SOLE | 1.5 | 2.3 | 3.0 | 9.0 | 2.5 | 0.1 | 18.3 |
| REX SOLE | 1.6 | 7.0 | 1.0 | 10.8 | 3.6 | 0.2 | 24.2 |
| STARRY FLOUNDER | - | 0.5 | 0.7 | - | - | TR | 1.2 |
| OTHER FLATFISH | - | 4.4 | 9.8 | - | TR | 0.1 | 14.4 |
| ___ ALL FLATFISH | 33.1 | 101.7 | 67.2 | 198.0 | 94.9 | 5.4 | 500.3 |
| BLACK ROCKFISH | - | 2.7 | - | - | - | - | 2.7 |
| BACCALIO | 0.9 | 0.6 | 44.2 | 8.8 | 0.1 | TR | 54.6 |
| CANARY ROCKFISH | 1.3 | 2.0 | 38.4 | 28.9 | 0.7 | 0.1 | 71.4 |
| CHILIPEPPER | - | - | - | 0.1 | - | - | 0.1 |
| DARKBLOTCHED ROCKFISH | 1.4 | 3.7 | 26.2 | 38.7 | 17.5 | 1.5 | 88.9 |
| RED STRIPE ROCKFISH | TR | 1.3 | 13.8 | 6.4 | TR | - | 21.5 |
| SHARPCHIN ROCKFISH | 0.1 | 1.5 | 7.0 | 4.9 | TR | TR | 13.5 |
| SILVER GREY ROCKFISH | 0.1 | 1.8 | 10.2 | 0.7 | 0.1 | TR | 12.8 |
| SPLITNOSE ROCKFISH | 0.6 | 0.1 | 6.5 | 7.4 | 0.3 | TR | 14.9 |
| YELLOW EYE ROCKFISH | 0.1 | 0.8 | 5.0 | 1.8 | 0.1 | TR | 7.8 |
| YELLOW MOUTH ROCKFISH | 0.3 | 4.7 | 50.2 | 0.5 | TR | - | 55.8 |
| YELLOWTAIL ROCKFISH | 0.5 | 14.5 | 29.3 | 78.4 | 0.9 | 1.1 | 124.8 |
| OTHER ROCKFISH | 5.8 | 6.1 | 6.3 | 9.6 | 3.3 | 0.2 | 31.2 |
| ___ SEBASTES COMPLEX | 11.0 | 39.7 | 237.0 | 186.1 | 23.0 | 2.9 | 499.8 |
| PACIFIC OCEAN PERCH | 7.7 | 7.9 | 25.8 | 7.1 | 4.6 | TR | 53.0 |
| SHORTBELLY ROCKFISH | - | - | - | TR | - | - | TR |
| THORNYHEADS | 1.1 | 10.2 | 24.1 | 65.0 | 22.1 | 2.2 | 124.7 |
| WIDOW ROCKFISH | TR | 0.5 | 25.9 | 12.7 | 1.6 | 2.1 | 42.8 |
| ___ ALL ROCKFISH | 19.9 | 58.4 | 312.8 | 270.9 | 51.2 | 7.3 | 720.4 |
| LINGCOD | 0.8 | 3.5 | 18.7 | 9.4 | 2.1 | 0.5 | 35.0 |
| PACIFIC COD | - | - | TR | - | - | - | TR |
| SABLEFISH | 11.0 | 28.8 | 71.3 | 181.5 | 52.1 | 5.9 | 350.6 |
| ___ ALL ROUND FISH | 11.9 | 32.3 | 90.0 | 190.9 | 54.2 | 6.4 | 385.6 |
| OTHER GROUND FISH | - | TR | - | - | TR | - | TR |
| UNSP. GROUND FISH | - | - | 0.1 | 0.1 | - | - | 0.3 |
| ___ MISC. GROUND FISH | - | TR | 0.1 | 0.1 | TR | - | 0.3 |
| ALL GROUND FISH | 64.8 | 192.4 | 470.1 | 659.9 | 200.3 | 19.1 | 1606.6 |
| | | | | T R A W L H O U R S | | | |
| ALL GROUND FISH | 176 | 529 | 1213 | 1993 | 759 | 53 | 4723 |
| | | | | M E T R I C T O N S P E R T R A W L H O U R | | | |
| ALL GROUND FISH | 0.37 | 0.36 | 0.39 | 0.33 | 0.26 | 0.36 | 0.34 |

TR => LANDED CATCH LESS THAN 0.05 METRIC TONS, OR METRIC TONS PER UNIT OF EFFORT LESS THAN 0.005

OREGON PMFC AREA REPORT: COMMERCIAL GROUND FISH LANDED CATCH (METRIC TONS) FOR DECEMBER 1985 FOR GROUND FISH (OTTER) TRAWL

| SPECIES | 3B | 3A | 2C | 2B | 2A | 1C | TOTAL |
|-----------------------|-------|-------|-------|-------|-------|------|--------|
| ARROWTOOTH FLOUNDER | 2.7 | 19.5 | 0.9 | 0.1 | 0.2 | - | 23.3 |
| DOYER SOLE | 59.9 | 105.5 | 16.8 | 193.7 | 168.0 | 1.3 | 545.1 |
| ENGLISH SOLE | 0.5 | 5.9 | 13.0 | 3.0 | 0.4 | - | 22.7 |
| PETRALE SOLE | 4.9 | 15.6 | 3.0 | 77.4 | 28.5 | - | 129.5 |
| REX SOLE | 4.9 | 8.0 | 2.1 | 6.5 | 1.4 | - | 23.0 |
| STARRY FLOUNDER | - | 1.6 | 1.2 | 0.1 | - | - | 2.9 |
| OTHER FLATFISH | 0.1 | 7.0 | 11.3 | 3.8 | - | - | 22.3 |
| --- ALL FLATFISH | 72.9 | 163.1 | 48.3 | 284.7 | 198.5 | 1.3 | 768.7 |
| BLACK ROCKFISH | - | 8.6 | - | - | - | - | 8.6 |
| BOCACCIO | 2.1 | 1.8 | 33.7 | 6.4 | 0.1 | - | 44.2 |
| CANARY ROCKFISH | 3.0 | 6.1 | 28.0 | 22.2 | 0.7 | - | 59.9 |
| CHILIPEPPER | - | - | - | 0.1 | - | - | 0.1 |
| DARKBLOTCHED ROCKFIS | 3.5 | 17.6 | 15.7 | 32.6 | 16.0 | - | 85.4 |
| REDSTRIPE ROCKFISH | 0.4 | 13.2 | 10.0 | 3.8 | TR | - | 27.3 |
| SHARPCIN ROCKFISH | 0.3 | 4.6 | 5.1 | 3.0 | TR | - | 13.0 |
| SILVERGREY ROCKFISH | 0.3 | 5.6 | 7.5 | 0.7 | TR | - | 14.1 |
| SPLITNOSE ROCKFISH | 1.3 | 0.3 | 4.7 | 5.3 | 0.3 | - | 11.9 |
| YELLOW EYE ROCKFISH | 0.2 | 2.6 | 3.7 | 1.5 | 0.1 | - | 8.1 |
| YELLOWMOUTH ROCKFISH | 0.7 | 14.9 | 38.7 | 0.5 | TR | - | 54.7 |
| YELLOWTAIL ROCKFISH | 1.1 | 26.6 | 9.6 | 33.2 | 2.4 | - | 72.9 |
| OTHER ROCKFISH | 14.1 | 19.1 | 3.4 | 7.1 | 5.0 | - | 48.6 |
| --- SEBASTES COMPLEX | 26.9 | 121.0 | 160.1 | 116.3 | 24.6 | - | 449.0 |
| PACIFIC OCEAN PERCH | 10.6 | 20.1 | 19.7 | 8.0 | 0.8 | - | 59.3 |
| SHORTBELLY ROCKFISH | - | - | - | TR | - | - | TR |
| THORNYHEADS | 8.3 | 8.9 | 4.4 | 9.9 | 23.8 | 1.2 | 56.5 |
| WIDOW ROCKFISH | TR | 6.0 | 19.7 | 12.5 | 0.4 | - | 38.6 |
| --- ALL ROCKFISH | 45.7 | 156.1 | 204.0 | 146.6 | 49.6 | 1.2 | 603.3 |
| LINGCOD | 3.6 | 10.4 | 10.3 | 5.2 | 1.5 | - | 31.0 |
| PACIFIC COD | - | 0.1 | - | - | - | - | 0.1 |
| SABLEFISH | 1.5 | 0.2 | 0.1 | 0.5 | - | - | 2.3 |
| --- ALL ROUND FISH | 5.1 | 10.7 | 10.3 | 5.7 | 1.5 | - | 33.4 |
| SPINY DOGFISH | - | - | - | 0.1 | - | - | 0.1 |
| OTHER GROUND FISH | - | 0.3 | 0.1 | - | TR | - | 0.4 |
| UNSP. GROUND FISH | - | TR | 0.6 | 0.1 | - | - | 0.8 |
| --- MISC. GROUND FISH | - | 0.3 | 0.7 | 0.2 | TR | - | 1.3 |
| ALL GROUND FISH | 123.7 | 330.2 | 263.3 | 437.3 | 249.7 | 2.5 | 1406.7 |
| ALL GROUND FISH | 380 | 942 | 759 | 1840 | 783 | 11 | 4715 |
| ALL GROUND FISH | 0.33 | 0.35 | 0.35 | 0.24 | 0.32 | 0.23 | 0.30 |

TR => LANDED CATCH LESS THAN 0.05 METRIC TONS, OR METRIC TONS PER UNIT OF EFFORT LESS THAN 0.005

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OREGON FMFC AREA REPORT: COMMERCIAL GROUND FISH LANDED CATCH (METRIC TONS) FOR 1985 FOR MIDWATER TRAWL

| SPECIES | 3B | 3A | 2C | 2B | 2A | TOTAL |
|---------------------|------|-------|--------|---------------------|-------|--------|
| ARROWTOOTH FLOUNDER | - | 0.2 | - | - | - | 0.2 |
| ENGLISH SOLE | - | TR | - | - | - | TR |
| ALL FLATFISH | - | 0.3 | - | - | - | 0.3 |
| CANARY ROCKFISH | - | 0.8 | - | - | - | 0.8 |
| REDSTRIPE ROCKFISH | - | - | - | - | 0.1 | 0.1 |
| YELLOWTAIL ROCKFISH | - | 66.9 | 6.0 | 1.9 | 0.4 | 75.2 |
| SEBASTES COMPLEX | - | 67.7 | 6.0 | 1.9 | 0.5 | 76.1 |
| PACIFIC OCEAN PERCH | - | 3.2 | - | - | - | 3.2 |
| SHORTBELLY ROCKFISH | - | - | - | 1.1 | - | 1.1 |
| THORNYHEADS | - | 0.9 | - | - | - | 0.9 |
| WIDOW ROCKFISH | 4.3 | 669.6 | 1490.2 | 1021.0 | 240.4 | 3425.4 |
| UNSP. ROCKFISH | 7.7 | 35.8 | 1.2 | 0.6 | 0.8 | 46.1 |
| ALL ROCKFISH | 12.0 | 777.2 | 1497.4 | 1024.5 | 241.7 | 3552.8 |
| JACK MACKEREL | - | - | - | TR | - | TR |
| LINGCOD | - | 0.6 | TR | TR | TR | 0.6 |
| PACIFIC WHITING | - | 54.8 | - | 677.0 | - | 731.3 |
| ALL ROUND FISH | - | 54.9 | TR | 677.0 | TR | 732.0 |
| UNSP. GROUND FISH | - | - | - | TR | - | TR |
| MISC. GROUND FISH | - | - | - | TR | - | TR |
| ALL GROUND FISH | 12.0 | 832.3 | 1497.4 | 1701.6 | 241.7 | 4285.0 |
| ALL GROUND FISH | 12 | 556 | 727 | 785 | 188 | 2268 |
| | | | | T R A W L H O U R S | | |
| ALL GROUND FISH | 1:00 | 1.50 | 2.06 | 2.17 | 1.29 | 1.89 |

TR => LANDED CATCH LESS THAN 0.05 METRIC TONS, OR METRIC TONS PER UNIT OF EFFORT LESS THAN 0.005

OREGON PNFC AREA REPORT: COMMERCIAL GROUND FISH LANDED CATCH (METRIC TONS) FOR JANUARY 1985 FOR MIDWATER TRAWL

| SPECIES | 3A | 2C | 2B | 2A | TOTAL |
|---------------------|-------|-------|-------|---|--------|
| RED STRIPE ROCKFISH | - | - | - | 0.1 | 0.1 |
| YELLOWTAIL ROCKFISH | 1.7 | - | - | - | 1.7 |
| SEBASTES COMPLEX | 1.7 | - | - | 0.1 | 1.8 |
| WIDOW ROCKFISH | 224.2 | 729.9 | 139.3 | 15.1 | 1108.6 |
| UNSP. ROCKFISH | 1.5 | 0.3 | TR | - | 1.8 |
| ALL ROCKFISH | 227.4 | 730.2 | 139.3 | 15.2 | 1112.2 |
| LINGCOD | - | TR | - | - | TR |
| ALL ROUND FISH | - | TR | - | - | TR |
| ALL GROUND FISH | 227.4 | 730.2 | 139.3 | 15.2 | 1112.2 |
| ALL GROUND FISH | 56 | 269 | 40 | 22 | 387 |
| | | | | T R A W L H O U R S | |
| ALL GROUND FISH | 4.06 | 2.71 | 3.48 | 0.69 | 2.87 |
| | | | | M E T R I C T O N S P E R T R A W L H O U R | |

TR => LANDED CATCH LESS THAN 0.05 METRIC TONS, OR METRIC TONS PER UNIT OF EFFORT LESS THAN 0.005

OREGON PMFC AREA REPORT: COMMERCIAL GROUND FISH LANDED CATCH (METRIC TONS) FOR FEBRUARY 1985 FOR MIDWATER TRAWL

| SPECIES | 3A | 2C | 2B | TOTAL |
|---------------------|------|-------|-------|---|
| YELLOWTAIL ROCKFISH | 3.6 | - | 0.5 | 4.0 |
| SEBASTES COMPLEX | 3.6 | - | 0.5 | 4.0 |
| WIDOW ROCKFISH | 84.2 | 229.8 | 385.5 | 699.5 |
| ALL ROCKFISH | 87.7 | 229.8 | 386.0 | 703.5 |
| ALL GROUND FISH | 87.7 | 229.8 | 386.0 | 703.5 |
| | | | | T R A W L H O U R S |
| ALL GROUND FISH | 63 | 90 | 111 | 264 |
| | | | | M E T R I C T O N S P E R T R A W L H O U R |
| ALL GROUND FISH | 1.39 | 2.55 | 3.48 | 2.67 |

TR => LANDED CATCH LESS THAN 0.05 METRIC TONS, OR METRIC TONS PER UNIT OF EFFORT LESS THAN 0.005

OREGON PMFC AREA REPORT: COMMERCIAL GROUND FISH LANDED CATCH (METRIC TONS) FOR MARCH 1985 FOR MIDWATER TRAWL

| SPECIES | 3A | 2C | 2B | TOTAL |
|---------------------|------|------|-------|----------------------------|
| YELLOWTAIL ROCKFISH | TR | - | 0.1 | 0.1 |
| SEBASTES COMPLEX | TR | - | 0.1 | 0.1 |
| PACIFIC OCEAN PERCH | 2.3 | - | - | 2.3 |
| WIDOW ROCKFISH | 9.2 | 74.8 | 123.6 | 207.6 |
| UNSP. ROCKFISH | 8.6 | - | 0.2 | 8.9 |
| ALL ROCKFISH | 20.1 | 74.8 | 124.0 | 218.9 |
| ALL GROUND FISH | 20.1 | 74.8 | 124.0 | 218.9 |
| | | | | TRAWL HOURS |
| ALL GROUND FISH | 12 | 46 | 149 | 207 |
| | | | | METRIC TONS PER TRAWL HOUR |
| ALL GROUND FISH | 1.68 | 1.63 | 0.83 | 1.06 |

TR => LANDED CATCH LESS THAN 0.05 METRIC TONS, OR METRIC TONS PER UNIT OF EFFORT LESS THAN 0.005

OREGON PMFC AREA REPORT: COMMERCIAL GROUND FISH LANDED CATCH (METRIC TONS) FOR APRIL 1985 FOR MIDWATER TRAWL

| SPECIES | 3B | 3A | 2C | 2B | 2A | TOTAL |
|---------------------|------|------|-------|---|------|-------|
| CANARY ROCKFISH | - | 0.2 | - | - | - | 0.2 |
| YELLOWTAIL ROCKFISH | - | 3.7 | 0.1 | - | 0.4 | 4.1 |
| SEBASTES COMPLEX | - | 3.8 | 0.1 | - | 0.4 | 4.3 |
| SHORTBELLY ROCKFISH | - | - | - | 0.7 | - | 0.7 |
| WIDOW ROCKFISH | - | 75.7 | 111.1 | 179.3 | 63.2 | 429.2 |
| UNSP. ROCKFISH | 7.7 | - | - | - | 0.1 | 7.8 |
| ALL ROCKFISH | 7.7 | 79.5 | 111.1 | 180.0 | 63.7 | 442.0 |
| LINGCOD | - | - | - | - | TR | TR |
| PACIFIC WHITING | - | - | - | 50.5 | - | 50.5 |
| ALL ROUND FISH | - | - | - | 50.5 | TR | 50.5 |
| ALL GROUND FISH | 7.7 | 79.5 | 111.1 | 230.5 | 63.7 | 492.5 |
| | | | | T R A W L H O U R S | | |
| ALL GROUND FISH | 2 | 62 | 75 | 155 | 42 | 336 |
| | | | | M E T R I C T O N S P E R T R A W L H O U R | | |
| ALL GROUND FISH | 3.85 | 1.28 | 1.48 | 1.49 | 1.52 | 1.47 |

TR => LANDED CATCH LESS THAN 0.05 METRIC TONS, OR METRIC TONS PER UNIT OF EFFORT LESS THAN 0.005

OREGON PMFC AREA REPORT: COMMERCIAL GROUND FISH LANDED CATCH (METRIC TONS) FOR MAY 1985 FOR MIDWATER TRAWL

| SPECIES | 3B | 3A | 2C | 2B | 2A | TOTAL |
|---------------------|------|-------|-------|---|-------|-------|
| CANARY ROCKFISH | - | 0.4 | - | - | - | 0.4 |
| YELLOWTAIL ROCKFISH | - | 15.1 | 0.1 | 0.6 | - | 15.8 |
| SEBASTES COMPLEX | - | 15.5 | 0.1 | 0.6 | - | 16.1 |
| SHORTBELLY ROCKFISH | - | - | - | 0.2 | - | 0.2 |
| WIDOW ROCKFISH | 4.3 | 116.5 | 174.9 | 70.4 | 99.8 | 465.9 |
| UNSP. ROCKFISH | - | 1.1 | - | 0.3 | 0.4 | 1.8 |
| ALL ROCKFISH | 4.3 | 133.1 | 175.0 | 71.4 | 100.2 | 484.0 |
| LINGCOD | - | - | TR | - | - | TR |
| PACIFIC WHITING | - | - | - | 408.1 | - | 408.1 |
| ALL ROUND FISH | - | - | TR | 408.1 | - | 408.1 |
| ALL GROUND FISH | 4.3 | 133.1 | 175.1 | 479.5 | 100.2 | 892.1 |
| | | | | T R A W L H O U R S | | |
| ALL GROUND FISH | 10 | 111 | 110 | 251 | 76 | 558 |
| | | | | M E T R I C T O N S P E R T R A W L H O U R | | |
| ALL GROUND FISH | 0.43 | 1.20 | 1.59 | 1.91 | 1.32 | 1.60 |

TR => LANDED CATCH LESS THAN 0.05 METRIC TONS, OR METRIC TONS PER UNIT OF EFFORT LESS THAN 0.005

OREGON PNFC AREA REPORT: COMMERCIAL GROUND FISH LANDED CATCH (METRIC TONS) FOR JUNE 1985 FOR MIDWATER TRAWL

| SPECIES | 3A | 2C | 2B | 2A | TOTAL |
|---------------------|------|-------|-------|---------------------|-------|
| ARROWTOOTH FLOUNDER | 0.2 | - | - | - | 0.2 |
| ENGLISH SOLE | TR | - | - | - | TR |
| ALL FLATFISH | 0.3 | - | - | - | 0.3 |
| CANARY ROCKFISH | 0.2 | - | - | - | 0.2 |
| YELLOWTAIL ROCKFISH | 6.0 | 5.5 | 0.7 | TR | 12.3 |
| SEBASTES COMPLEX | 6.2 | 5.5 | 0.7 | TR | 12.5 |
| SHORTBELLY ROCKFISH | - | - | 0.2 | - | 0.2 |
| WIDOW ROCKFISH | 74.1 | 145.4 | 47.4 | 38.7 | 305.6 |
| UNSP. ROCKFISH | 0.9 | 0.9 | - | 0.4 | 2.2 |
| ALL ROCKFISH | 81.3 | 151.9 | 48.4 | 39.1 | 320.6 |
| LINGCOD | - | - | TR | TR | TR |
| PACIFIC WHITING | - | - | 197.0 | - | 197.0 |
| ALL ROUND FISH | - | - | 197.0 | TR | 197.0 |
| ALL GROUND FISH | 81.5 | 151.9 | 245.4 | 39.1 | 517.9 |
| ALL GROUND FISH | 92 | 108 | 39 | 30 | 269 |
| | | | | T R A W L H O U R S | |
| ALL GROUND FISH | .89 | 1.41 | 6.29 | 1.30 | 1.93 |

TR => LANDED CATCH LESS THAN 0.05 METRIC TONS, OR METRIC TONS PER UNIT OF EFFORT LESS THAN 0.005

OREGON PNFC AREA REPORT: COMMERCIAL GROUND FISH LANDED CATCH (METRIC TONS) FOR JULY 1985 FOR MIDWATER TRAWL

| SPECIES | 3A | 2C | 2B | 2A | TOTAL |
|---------------------|------|---|------|---------------------|-------|
| YELLOWTAIL ROCKFISH | 13.3 | 0.3 | - | - | 13.6 |
| SEBASTES COMPLEX | 13.3 | 0.3 | - | - | 13.6 |
| PACIFIC OCEAN PERCH | 0.9 | - | - | - | 0.9 |
| WIDOW ROCKFISH | 58.8 | 24.3 | 75.4 | 23.5 | 181.9 |
| UNSP. ROCKFISH | 3.6 | - | - | - | 3.6 |
| ALL ROCKFISH | 76.6 | 24.5 | 75.4 | 23.5 | 200.0 |
| ALL GROUND FISH | 76.6 | 24.5 | 75.4 | 23.5 | 200.0 |
| ALL GROUND FISH | 90 | 29 | 38 | 18 | 175 |
| | | | | T R A W L H O U R S | |
| ALL GROUND FISH | 0.85 | 0.85 | 1.98 | 1.31 | 1.14 |
| | | M E T R I C T O N S P E R T R A W L H O U R | | | |

TR => LANDED CATCH LESS THAN 0.05 METRIC TONS, OR METRIC TONS PER UNIT OF EFFORT LESS THAN 0.005

OREGON PMFC AREA REPORT: COMMERCIAL GROUND FISH LANDED CATCH (METRIC TONS) FOR AUGUST 1985 FOR MIDWATER TRAWL

| SPECIES | 3A | TOTAL |
|---------------------|-------|-------|
| YELLONTAIL ROCKFISH | 18.6 | 18.6 |
| SEBASTES COMPLEX | 18.6 | 18.6 |
| WIDOW ROCKFISH | 18.4 | 18.4 |
| UNSP. ROCKFISH | 14.3 | 14.3 |
| ALL ROCKFISH | 51.3 | 51.3 |
| LINGCOD | 0.6 | 0.6 |
| PACIFIC WHITING | 54.3 | 54.3 |
| ALL ROUND FISH | 54.9 | 54.9 |
| ALL GROUND FISH | 106.2 | 106.2 |
| | | |
| | | |
| ALL GROUND FISH | 52 | 52 |
| | | |
| | | |
| ALL GROUND FISH | 2.04 | 2.04 |

TRAWL HOURS

METRIC TONS PER TRAWL HOUR

TR => LANDED CATCH LESS THAN 0.05 METRIC TONS, OR METRIC TONS PER UNIT OF EFFORT LESS THAN 0.005

OREGON PMFC AREA REPORT: COMMERCIAL GROUND FISH LANDED CATCH (METRIC TONS) FOR SEPTEMBER 1985 FOR MIDWATER TRAWL

| SPECIES | 3A | 2B | TOTAL |
|---|------|-------|-------|
| YELLOWTAIL ROCKFISH | 4.9 | - | 4.9 |
| SEBASTES COMPLEX | 4.9 | - | 4.9 |
| THORNYHEADS | 0.9 | - | 0.9 |
| WIDOW ROCKFISH | 8.5 | - | 8.5 |
| UNSP. ROCKFISH | 5.8 | TR | 5.8 |
| ALL ROCKFISH | 20.2 | TR | 20.2 |
| JACK MACKEREL | - | TR | TR |
| PACIFIC WHITING | - | 21.5 | 21.5 |
| ALL ROUND FISH | - | 21.5 | 21.5 |
| UNSP. GROUND FISH | - | TR | TR |
| MISC. GROUND FISH | - | TR | TR |
| ALL GROUND FISH | 20.2 | 21.5 | 41.7 |
| T R A W L H O U R S | | | |
| ALL GROUND FISH | 18 | 2 | 20 |
| M E T R I C T O N S P E R T R A W L H O U R | | | |
| ALL GROUND FISH | 1.12 | 10.76 | 2.08 |

TR => LANDED CATCH LESS THAN 0.05 METRIC TONS, OR METRIC TONS PER UNIT OF EFFORT LESS THAN 0.005

Shrimp Incidental Landings by International Statistical Area in 1985

(Landings in metric tons)

| Species | 1C | 2A | 2B | 2C | 3A | 3B | Total |
|-----------------------|----|-----|------|------|------|------|-------|
| English Sole | | | Tr | Tr | .1 | Tr | .1 |
| Rock Sole | | | | | | | |
| Petrale Sole | | | .3 | .1 | .2 | .1 | .7 |
| Dover Sole | .1 | Tr | 3.6 | 6.1 | 4.6 | 3.1 | 17.5 |
| Rex Sole | | | | .1 | .4 | .2 | .7 |
| Starry Flounder | | | | | | | |
| Arrowtooth Flounder | | | .2 | 1.2 | 3.2 | 4.8 | 9.4 |
| Other Flatfish | | | | | Tr | .2 | .2 |
| Pacific Cod | | | | .1 | 3.1 | .2 | .3 |
| Lingcod | .1 | .1 | 1.1 | 2.9 | 8.4 | 7.0 | 19.6 |
| Sablefish | .1 | .3 | 2.5 | 4.7 | 6.4 | 4.9 | 18.8 |
| Nominal POP | Tr | | 1.5 | .5 | | | 1.9 |
| True <u>S. alutus</u> | | | | .1 | .1 | | .3 |
| Other Rockfish | .3 | .6 | 46.9 | 65.3 | 40.4 | 48.1 | 201.5 |
| Pacific Whiting | | | | .7 | | .4 | 1.0 |
| Misc. Groundfish | .1 | .1 | .1 | .1 | .1 | .2 | .7 |
| Dogfish | | | | | | | |
| Total Landings | .6 | 1.1 | 57.0 | 81.2 | 64.2 | 68.6 | 272.7 |

Fish Pot Landings By International Statistical Area in 1985

(Landings in metric tons)

| Species | 1C | 2A | 2B | 2C | 3A | 3B | Total |
|----------------------|----|-------|-------|--------|----|----|--------|
| English Sole | | | | | | | |
| Rock Sole | | | | | | | |
| Petrale Sole | | | | | | | |
| Dover Sole | | | | .1 | | | .1 |
| Rex Sole | | | | | | | |
| Starry Flounder | | | | | | | |
| Arrowtooth Flounder | | Tr | | Tr | | | Tr |
| Pacific Halibut | | | | | | | |
| Other Flatfish | | | | Tr | | | Tr |
| Pacific True Cod | | | | | | | |
| Lingcod | | .2 | .2 | 1.2 | | | 1.6 |
| Sablefish | | 421.8 | 437.7 | 1039.7 | | | 1899.2 |
| Pacific Ocean Perch | | | | | | | |
| Unsp. Other Rockfish | | .2 | .2 | 1.4 | | | 1.8 |
| Misc. Groundfish | | | | Tr | | | Tr |
| Dogfish | | | | | | | |
| Total Landings | | 422.2 | 438.0 | 1042.4 | | | 1902.6 |
| Total Deliveries | | 282 | 64 | 141 | | | 487 |

Jig Landings By International Statistical Area in 1985

(Landings in metric tons)

| Species | 1C | 2A | 2B | 2C | 3A | 3B | Total |
|----------------------|----|------|-----|-------|----|----|-------|
| English Sole | | | | | | | |
| Rock Sole | | | | | | | |
| Petrale Sole | | | | | | | |
| Dover Sole | | | | | | | |
| Rex Sole | | | | | | | |
| Starry Flounder | | | | Tr | | | Tr |
| Arrowtooth Flounder | | | | | | | |
| Pacific Halibut | | | | .1 | | | .1 |
| Other Flatfish | | | | Tr | | | Tr |
| Pacific True Cod | | | | | | | |
| Lingcod | | 5.0 | 1.5 | 29.8 | | | 35.3 |
| Sablefish | | | | | | | |
| Pacific Ocean Perch | | | | | | | |
| Unsp. Other Rockfish | | 72.4 | .5 | 160.8 | | | 233.7 |
| Misc. Groundfish | | 1.0 | .1 | 1.9 | | | 3.0 |
| Dogfish | | | | | | | |
| Total Landings | | 78.3 | 1.1 | 192.6 | | | 272.0 |
| Total Deliveries | | 473 | 13 | 1822 | | | 2308 |

Longline Landings By International Statistical Area In 1985

(Landings in metric tons)

| Species | 1C | 2A | 2B | 2C | 3A | 3B | Total |
|----------------------|----|-------|-------|-------|-------|----|--------|
| English Sole | | | | | | | |
| Rock Sole | | | | | | | |
| Petrale Sole | | Tr | Tr | Tr | | | .1 |
| Dover Sole | | | Tr | Tr | | | Tr |
| Rex Sole | | | | | | | |
| Starry Flounder | | | | | | | |
| Arrowtooth Flounder | | | .2 | .1 | | | .3 |
| Pacific Halibut | | .2 | 17.2 | 74.6 | 274.0 | | 366.0 |
| Other Flatfish | | | | | | | |
| Pacific Cod | | | | | Tr | | Tr |
| Lingcod | | 4.4 | 7.9 | 9.0 | .8 | | 22.1 |
| Sablefish | | 147.0 | 153.5 | 154.3 | 59.1 | | 513.9 |
| Pacific Ocean Perch | | | | | | | |
| Unsp. Other Rockfish | | 29.2 | 38.0 | 36.5 | 25.4 | | 129.1 |
| Misc. Groundfish | | .2 | 2.0 | .9 | .1 | | 3.2 |
| Dogfish | | | | Tr | - | | Tr |
| Total Landings | | 180.7 | 218.8 | 275.3 | 359.4 | | 1034.5 |
| Total Deliveries | | 114 | 133 | 92 | 19 | | 358 |

Troll Landings By International Statistical Area In 1985

(Landings in metric tons)

| Species | 1C | 2A | 2B | 2C | 3A | 3B | Total |
|---------------------|----|-----|------|------|-----|----|-------|
| English Sole | | | | | | | |
| Rock Sole | | | | | | | |
| Petrale Sole | | | Tr | Tr | | | Tr |
| Dover Sole | | | | | | | |
| Rex Sole | | | | | | | |
| Starry Flounder | | | | | | | |
| Arrowtooth Flounder | | | | | | | |
| Pacific Halibut | | | 1.2 | 1.4 | .1 | | 2.7 |
| Other Flatfish | | | Tr | | | | Tr |
| Pacific Cod | | | | | | | |
| Lingcod | Tr | 1.0 | 22.3 | 4.4 | .4 | | 28.1 |
| Sablefish | | | | Tr | | | Tr |
| Pacific Ocean Perch | | | | | | | |
| Other Rockfish | Tr | 2.1 | 38.5 | 14.0 | .7 | | 55.3 |
| Misc. Groundfish | | | | Tr | | | Tr |
| Dogfish | | | | | | | |
| Total Landings | Tr | 3.0 | 62. | 19.9 | 1.2 | | 86.1 |
| Total Deliveries | | 5 | 140 | 50 | | | 195 |

Crabpot Landings By International Statistical Area In 1985

(Landings in metric tons)

| Species | 1C | 2A | 2B | 2C | 3A | 3B | Total |
|----------------------|----|----|----|----|----|----|-------|
| English Sole | | | | | | | |
| Rock Sole | | | | | | | |
| Petrale Sole | | | | | | | |
| Dover Sole | | | | | | | |
| Rex Sole | | | | | | | |
| Starry Flounder | | | | Tr | | | Tr |
| Arrowtooth Flounder | | | | | | | |
| Pacific Halibut | | | | | | | |
| Other Flatfish | | | | Tr | | | Tr |
| Pacific Cod | | | | | | | |
| Ling Cod | | | | Tr | | | Tr |
| Sablefish | | | | | | | |
| Pacific Ocean Perch | | | | | | | |
| Unsp. Other Rockfish | | | | .1 | .2 | | .3 |
| Misc. Groundfish | | | | Tr | | | Tr |
| Dogfish | | | | | | | - |
| Total Landings | | | | .1 | .2 | | .3 |
| Total Deliveries | | | | 11 | 2 | | 13 |

Gill Net Landings By International Statistical Area In 1985

(Landings in metric tons)

| Species | 1C | 2A | 2B | 2C | 3A | 3B | Total |
|---------------------|----|----|----|----|----|----|-------|
| English Sole | | | | | | | |
| Rock Sole | | | | | | | |
| Petrale Sole | | | | | | | |
| Dover Sole | | | | | | | |
| Rex Sole | | | | | | | |
| Starry Flounder | | | | | .2 | | .2 |
| Arrowtooth Flounder | | | | | | | |
| Pacific Halibut | | | | | | | |
| Other Flatfish | | | | | | | |
| Pacific True Cod | | | | | | | |
| Lingcod | | | | | | | |
| Sablefish | | | | | | | |
| Pacific Ocean Perch | | | | | | | |
| Other Rockfish | | | | | | | |
| Misc. Groundfish | | | | .9 | | | .9 |
| Dogfish | | | | . | | | |
| Total Landings | | | | .9 | .2 | | 1.1 |
| Total Deliveries | | | | 3 | | | 3 |

Other Known Landings By International Statistical Area In 1985

(Landings in metric tons)

| Species | 1C | 2A | 2B | 2C | 3A | 3B | Total |
|----------------------|----|----|----|----|----|----|-------|
| English Sole | | | | | | | |
| Rock Sole | | | | | | | |
| Petrale Sole | | | | | | | |
| Dover Sole | | | | | | | |
| Rex Sole | | | | | | | |
| Starry Flounder | | | | | | | |
| Arrowtooth Flounder | | | | | | | |
| Pacific Halibut | | | | | | | |
| Other Flatfish | | | | | | | |
| Pacific Cod | | | | | | | |
| Lingcod | | | | | | | |
| Sablefish | | | | | | | |
| Pacific Ocean Perch | | | | | | | |
| Unsp. Other Rockfish | | | | | | | |
| Misc. Groundfish | | | .1 | Tr | Tr | | .1 |
| Dogfish | | | | | | | |
| Total Landings | | | .1 | Tr | Tr | | .1 |
| Total Deliveries | | | 5 | 11 | 1 | | 17 |