SPECIES COMPOSITION OF INDUSTRIAL TRAWL LANDINGS IN NEW ENGLAND, 1957

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SPECIES COMPOSITION OF INDUSTRIAL TRAWL LANDINGS

IN NEW ENGLAND, 1957

By

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ABSTRACT

This report presents data on the species composition of the industrial trawl fish catch landed at New England ports in 1957. The information is presented in the form of percent by weight and pounds landed for each of the principal fishing areas, by month and port, with appropriate summaries.



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SPECIES COMPOSITION OF INDUSTRIAL TRAWL LANDINGS

IN NEW ENGLAND, 1957

INTRODUCTION

The industrial trawl fishery has been growing rapidly in New England since its start in 1949 (Snow 1950 and Sayles 1951). These landings of so-called "trash fish" have excited the interest of members of the fishing industry since that time. Since the beginning there have been many complaints from sportsmen and fishermen to the effect that large quantities of valuable food species, particularly the yellowtail flounder, were being utilized for animal food. Others claimed that excessive quantities of small fish of various other species were likewise being wasted.

In order to clarify the situation and help to settle the considerable amount of discussion about the industry, research on the fishery was started at Woods Hole with Saltonstall-Kennedy funds in 1955. Initially, the project was primarily concerned with the effect of the fishery on the yellowtail flounder. Much of the original controversy now appears to have been unwarranted while other problems, equally serious but not so obvious, have come to light. Many of the species involved merited study and accordingly the research emphasis was shifted to a study of the species complexes involved in each major fishing area and to the significance of hydrography on their structure. In addition, a comprehensive life history study of the red hake, the mainstay of this fishery, was begun.

Until 1957, the greater part of the New England landings were made at Pt. Judith from the fishing grounds off southern New England. In 1957, due to the marked decline of the menhaden population in the Gulf of Maine, there was a notable increase in industrial trawl fish landings at Gloucester. In the event that a relatively stable industrial fleet develops at Gloucester, it is felt that the overall landing for New England could easily double in the next few years.

The landings with which we are concerned here are those made by vessels that are fishing a population wholly or in part for fish for reduction. This report is not concerned with those occasional trips of spoiled food fish that are sold for reduction, or those occasional trips of food fish sold for reduction because a skipper is not satisfied with the market price. The former situation occurs at all ports, the latter principally at Gloucester in connection with the silver hake fishery. In the main this fishery is a split fishery in that vessels land both fish for reduction and fish for food. In general terms, the southern New England industrial trawl fishery is based on a flounder economy and the Gulf of Maine fishery is based on a silver hake economy.

The present report is concerned solely with presenting an estimation of the landings of the various species involved at the principal New England ports. In 1957, the landings totaled about 168 million pounds, by port as follows: Gloucester, 37 million pounds, New Bedford, 42 million pounds, and Point Judith, 89 million pounds. For a summary of New England landings prior to 1957, see Edwards and Lux 1958. For general information on the Pt. Judith fishery, see Interim Report: The Flounder and Industrial Fishery Project. 1/For a detailed discussion of this fishery at Gloucester, see Edwards 1958. 2/

REMARKS ON THE SAMPLING PROCEDURE

At Pt. Judith, the catch is normally sampled by forking fish out of a conveyor belt as the fish are transported from the vessel to the reduction plant. Fish to be sampled are similarly obtained at New Bedford, but at Gloucester the catch is sampled from a dump truck. Proper precautions are taken to assure that the samples are not taken from mixed area trips. Complete interviews are made of all trips as far as possible, sampled or not.

^{1/} Interim Report: The Flounder and Industrial Fishery Project. Multilithed report prepared by R. L. Edwards for the Annual Meeting of the Point Judith Fishermen's Cooperative Ass'n., Inc., February 10, 1956. Available on request from North Atlantic Fishery Investigations, Woods Hole, Massachusetts.

^{2/} Edwards, Robert L. 1958. The Industrial Trawl Fishery at Gloucester. Manuscript.

Usually, the fish in each sample are counted and weighed by species. At intervals, all the individual fish in the sample are measured to obtain length frequency information. Sample size is usually one bushel although occasionally a two bushel sample is taken so that adequate numbers of individual species are present for length frequency information. It has been determined that a one bushel sample is an adequate representation of any single vessel's load for all species present that make up over 10% by weight of the catch. The increase in sample reliability in a two bushel sample for species composition by weight analyses does not justify the additional labor at this time. For the purposes of this report, it is presumed that the samples are sufficiently reliable to indicate the seasonal trends and relative amounts of the different species landed within $\frac{1}{2}$ 5% for all those species representing 10% or more by weight of the catch.

Those species present in quantities amounting to less than 10% of the catch are not reliably sampled and the limits of confidence are very broad. However, it is felt that the general picture presented is more than accurate enough for the purposes of those interested in what this fishery lands for reduction. An extended analysis of sample reliability will be published later in connection with other studies. As far as possible, only samples taken in 1957 were used. In some cases, however, the breakdown was made with information based on samples taken in 1955 and 1956. The tables are annotated accordingly.

Samples taken at one port may be used in an analysis of another port's landings; it is the fishing area that we are concerned with when we take the sample. The port of landing obviously has no significant effect on the species composition.

POINT JUDITH LANDINGS

To obtain as accurate figures as possible, the Pt. Judith landings are broken down into three general groups by area: landings from the No Man's area, landings from those local grounds with depths of less than 25 fathoms and referred to as the inshore area, and landings from local grounds with depths of greater than 25 fathoms and referred to as the offshore area. Only 1957 sample data was used for the inshore and offshore areas. For the No Man's breakdown, the data for the last three years has been combined. There has been no significant changes in the percentages from one year to the next in this particular area. Interview information on the fishing grounds was available for over 90% of the trips. The uninterviewed trips were assigned to one of the three areas according to the distribution of interviewed trips.

NEW BEDFORD LANDINGS

Interview information on the landings at New Bedford indicates that about 90% of the trips landed are from No Man's. Approximately 50% of the New Bedford trips were interviewed. The entire landings were therefore broken down with the data obtained from No Man's samples. In view of the great similarity of the other local fishing grounds, only a very negligible error, if any, is introduced by this action.

GLOUCESTER LANDINGS

The Gloucester landings originate from three general areas, referred to here as the Ipswich area, Nauset, and Stellwagen Bank. Since these areas differ considerably as far as the fish landed are concerned, the data is broken down accordingly. Approximately 90% of the trips landed at Gloucester were interviewed. A number of pure trips of silver hake were landed for reduction at Gloucester. These figures are not available, except for August, when an estimated 735,000 pounds of silver hake were landed for reduction from Stellwagen Bank. The Gloucester vessels will frequently fish two or more grounds during any one trip. Even with the excellent interview information available, a considerable amount of prorating was necessary. Thirty-seven percent of the trips were multiple area trips.

CATCH-PER-TRIP DATA

A table is included indicating the number of interviewed trips to each ground at Pt. Judith and Gloucester and the average catch per trip. The catch-per-trip data are based on interviewed single area trips so that it may serve as a rough index of abundance. It will be noticed that number of trips used in the calculations for the three Gloucester grounds is far less than the total number of trips for Gloucester for any one month, because the Gloucester vessels have a strong tendency to fish on two or more grounds during any one trip.

ACKNOWLEDGEMENT

The author wishes to acknowledge the assistance of Miss Elizabeth Gallagher in processing the bulk of the data presented.

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Commercial Fisheries Review 13 (7). Sep. No. 286.

Snow, George W.

1950. Development of Trash Fishery at New Bedford, Massachusetts. Commercial Fisheries Review 12 (7). Sep. No. 256.

Table 1. --1957 landings and number of trips by month and fishing area of industrial trawl fish vessels at Pt. Judith, Rhode Island. Landings are to nearest 1000 pounds.

| Area | a Offs | shore | Insho | re | No M | an's | Tot | als |
|-----------|--------|-------|---------|-------|--------|-------|--------|--------|
| Month | Pounds | Trips | Pounds | Trips | Pounds | Trips | Pounds | Trips |
| January | 806 | 62 | 249 | 39 | | | 1, 055 | 101 |
| February | 2,017 | 110 | 427 | 41 | 49 | 3 | 2,493 | 154 |
| March | 1,232 | 91 | 589 | 34 | 1010 | 32 | 2,831 | 157 |
| April | 8,610 | 246 | 493 | 78 | 3062 | 67 | 12,165 | 391 |
| May | 3,808 | 125 | 1540 | 200 | 7107 | 106 | 12,455 | 431 |
| June | 5,095 | 138 | 2679 | 256 | 4744 | 70 | 12,518 | 464 |
| July | 3,591 | 139 | 691 | 149 | 4885 | 76 | 9,167 | 364 |
| August | 5,131 | 142 | 1458 | 198 | 3919 | 59 | 10,508 | 399 |
| September | 3,884 | 123 | 1286 | 169 | 4221 | 70 | 9,391 | 362 |
| October | 3,716 | 117 | 1247 | 153 | 1732 | 26 | 6,695 | 296 |
| November | 4,709 | 169 | 1569 | 260 | 1959 | 26 | 8,237 | 455 |
| December | 331 | 23 | 1004 | 230 | 248 | 7 | 1,583 | 260 |
| Totals | 42,930 | 1,485 | 13, 232 | 1,807 | 32,936 | 542 | 89,098 | 3, 834 |

Table 2. --1957 landings and number of trips by month of industrial trawl fish vessels at New Bedford, Mass. — Landings are to nearest 1000 pounds.

| Month | Pounds | Trips |
|-----------|---------|-------|
| January | 140 | 5 |
| February | 533 | 25 |
| March | 846 | 32 |
| April | 3,195 | 59 |
| May | 7,532 | 123 |
| June | 6,789 | 118 |
| July | 4,035 | 92 |
| August | 5,323 | 122 |
| September | 5,344 | 146 |
| October | 4,978 | 131 |
| November | 3,697 | 91 |
| December | 200 | 18 |
| Гotals | 42, 612 | 962 |

 $[\]frac{1}{A}$ t least 90% of the landings from No Man's area.

Table 3. --1957 landings and number of trips by month and fishing area of industrial trawl fish vessels at Gloucester, Mass. Landings are to nearest 1000 pounds.

| Area | Ips | wich | Stellwa | agen | Naus | ets | Tot | als |
|-----------|--------|-------|---------|-------|--------|-------|--------|-------|
| Month | Pounds | Trips | Pounds | Trips | Pounds | Trips | Pounds | Trips |
| January | 63 | 8 | 64 | 8 | | | 127 | 16 |
| February | 32 | 4 | 33 | 4 | | | 65 | 8 |
| March | 25 | 3 | | | | | 25 | 3 |
| April | 4 | 1 | | | 4 | 2 | 8 | 3 |
| May | 61 | 6 | | | 1701 | 42 | 1762 | 48 |
| June | 152 | 13 | 61 | 4 | 3117 | 72 | 3330 | 89 |
| July | 140 | 10 | 466 | 13 | 3934 | 73 | 4540 | 96 |
| August | 205 | 12 | 705 | 28 | 5208 | 80 | 6118 | 120 |
| September | 253 | 11 | 6539 | 140 | 662 | 5 | 7454 | 156 |
| October | 414 | 18 | 6036 | 169 | 912 | 15 | 7362 | 202 |
| November | 367 | 37 | 3740 | 177 | 1393 | 22 | 5500 | 236 |
| December | 70 | 9 | 1167 | 79 | 114 | 6 | 1351 | 94 |
| Totals | 1786 | 130 | 18,811 | 621 | 17,045 | 305 | 37,642 | 1071 |

Table 4. --Species composition in percent by weight, by month of industrial trawl fish landings from the Offshore area, 1957.

| | Jan. | Feb. | March | April | May | June | July | Aug. | Sept. | Oct. | Nov.1/ | Dec. |
|----------------------|------|------|-------|-------|------|------|------|------|-------|------|--------|------|
| Number of samples | 9 | 11 | 2 | 7 | 8 | 5 | 5 | 4 | 2 | 1 | 10 | 3 |
| Red hake | 3. 7 | 0.8 | 1.5 | 47.8 | 21.0 | 17.4 | 22.7 | 34.8 | 11.9 | 2.2 | 59.9 | 1.4 |
| Silver hake | 20.1 | 6.0 | 5.3 | 15.2 | 9.1 | 14.1 | 49.9 | 43.7 | 85.5 | 35.8 | 12.1 | 0.9 |
| White hake | 1.8 | 0.6 | - | 1.0 | 2.0 | 0.9 | 1.9 | 1.0 | - | - | 0.1 | - |
| Spotted hake | | | | | | | | 0.1 | | 0.5 | 0.1 | |
| Cod | | | | | | | | | | | | 0.5 |
| Little skate | 10.9 | 17.0 | 18.3 | 4.0 | 7.8 | 9.5 | 6.5 | 2.7 | - | 5.3 | 7.0 | 12.8 |
| Big skate | 5.9 | 11.5 | 2.0 | 3.2 | 6.1 | 3.5 | 1.4 | 4.0 | - | - | 0.7 | 16.3 |
| Barndoor skate | 1.2 | 4.2 | 7.7 | 0.4 | 3.2 | 1.3 | 1.2 | 0.8 | - | - | 0.6 | - |
| Spiny dogfish | 16.5 | 4.4 | 4.9 | 1.7 | 4.6 | - | 0.2 | - | - | 49.0 | 4.3 | 43.0 |
| Yellowtail flounder | 3, 3 | 5.6 | 10.0 | 3.6 | 4.8 | 2.0 | 2.8 | 0.4 | - | - | 1.1 | 1.0 |
| Winter flounder | 0.1 | 0.1 | - | 0.2 | - | 0.5 | 1.2 | 0.1 | - | 0.5 | 0.1 | 0.1 |
| 4-spot flounder | 0.6 | 0.7 | 0.7 | 0.3 | 0.6 | 0.5 | 1.3 | 1.3 | - | 0.6 | 1.4 | 0.4 |
| Sand flounder | 3.7 | 3.1 | 1.2 | 0.4 | 0.6 | 2.1 | 0.3 | 0.8 | - | 0.8 | 0.2 | 0.7 |
| Gulf stream flounder | | - | 0.2 | - | - | - | - | - | - | - | - | - |
| Sea herring | 0.3 | 0.2 | - | 0.1 | - | - | - | 0.2 | - | - | - | - |
| Alewife | 7.3 | 2.7 | - | 0.3 | 0.9 | 2.2 | 0.1 | - | - | - | - | 1.6 |
| Cunner | - | - | - | - | - | - | 0.1 | - | - | - | - | - |
| Scup | 0.1 | - | - | 0.6 | - | - | - | ~ | - | 4.2 | 0.5 | - |
| Butterfish | 0.8 | - | - | - | - | 0.5 | 2.0 | 1.7 | - | 0.8 | 0.3 | 0.3 |
| Long-horned sculpin | 2,3 | 4.5 | 11.3 | 1.7 | 5.8 | 1.6 | 0.5 | - | - | - | 0.3 | 1.4 |
| Sea robin | - | - | - | 0.4 | 0.5 | - | - | - | - | 0.2 | 3.8 | - |
| Striped sea robin | - | ~ | - | - | - | - | - | - | - | 0.1 | 0.1 | - |
| Angler | 3.1 | 15.4 | | 8.9 | 9.8 | 20.2 | 5.6 | 8.3 | 2.6 | - | 6.0 | 16.8 |
| Sea raven | - | - | 0.3 | - | - | - | 0.5 | - | - | - | - | - |
| 4-bearded rockling | - | - | - | - | - | - | 0.2 | - | - | - | - | - |
| Conger eel | - | - | - | - | - | - | - | - | - | - | 0.3 | - |
| Eel pout | 18.1 | 23.2 | 23.6 | 10.2 | 23.2 | 23.7 | 1.4 | 0.1 | - | - | 1.1 | 2.8 |
| Wrymouth | - | - | - | - | - | - | 0.2 | - | - | | - | - |

 $[\]frac{1}{}$ Figures based on 1956 samples.

Table 5.--Species composition in pounds, by month, of Point Judith industrial trawl fish landings from the Offshore area, 1957.

Pounds to the nearest 1,000 pounds.

| Red hake 30 16 18 4,099 796 886 815 1, 1,792 2, white hake 815 1,792 2, white hake 15 12 65 1,300 347 718 1,792 2, white hake 815 1,792 2, white hake 815 1,792 2, white hake 815 1,300 347 718 1,792 2, white hake 815 1,300 347 718 1,792 2, white hake 815 2, white hake 815 2, white hake 815 34 224 344 237 438 233 234 232 23 43 23 23 23 23 43 23 43 23 23 43 23 43 23 43 23 43 43 <t< th=""><th>4, 099 1, 300 86 344 276 34 146 310 17 9</th><th></th><th>1, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2,</th><th>3, 320</th><th>82 1,330 - 19 - 197 - 1,821</th><th>2,816 565 5 330 33 202 52</th><th>2 1 2 5 4 5 5 7 1 1 4 5 5 7 1 1 1 4 5 5 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1</th></t<> | 4, 099 1, 300 86 344 276 34 146 310 17 9 | | 1, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, | 3, 320 | 82 1,330 - 19 - 197 - 1,821 | 2,816 565 5 330 33 202 52 | 2 1 2 5 4 5 5 7 1 1 4 5 5 7 1 1 1 4 5 5 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 |
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| Wrymouth 7 | ı | | - 1 | 1 | 1 | i | 1 |
| Totals 808 2,026 1,227 8,575 3,789 5,092 3,591 5, | 8,575 | | | 3,883 | 3,617 | 4,701 | 330 |

 $\frac{1}{2}$ Based on 1956 figures.

Table 6. -- Species composition in percent by weight, by month, of Point Judith industrial trawl fish landings from the Inshore area, 1957.

| | • | D.h. | N# l- | A 1 | D/I | June | T.,1., | Aug. | Sept. | Oct, | Nov. | Dec. |
|---------------------|-------|------|---------|-------------|-----------|--------|------------|------|-------|--------|------|------|
| Number of samples | Jan. | Feb. | March 4 | April 11 | May 17 | 14 | July 13 | 12 | 16 | 21 | 12 | 3 |
| | 1.9 | 2.8 | 1.0 | 16.1 | 33. 4 | 32.8 | 19.9 | 13.0 | 6.5 | 7.9 | 22,0 | 3, 2 |
| Red hake. | | 24.6 | 2.9 | 7.9 | 27.2 | 42.6 | 35.3 | 37.9 | 56.9 | 42.7 | 32.5 | 12.8 |
| Silver hake | 18.7 | | | 0.3 | 0.3 | 1.3 | 0.5 | - | 0.1 | 0.1 | 0.1 | - |
| White hake | 7.1 | 0.9 | - | | | | 0.5 | _ | 0.1 | - - | - | _ |
| Spotted hake | wh | - | - | - | - | - | - | _ | - | _ | | _ |
| Cod | - | - | - | - | - | 0.2 | - | - | - | - | - | - |
| Tom cod | _ | - | - | _ | - | - | 0.1 | - | - | ~ | - | - |
| Little skate | 10.9 | 4.9 | 13.1 | 6.0 | 2.1 | 2.3 | 7.3 | 7.3 | 11.8 | 8.0 | 6.4 | 1.5 |
| Big skate | 3.7 | 1.4 | 4.8 | 6.2 | 2.9 | 0.8 | 4.2 | 5.3 | 6.8 | 8.5 | 8.1 | 6.7 |
| Barndoor skate | _ | 0.8 | 0.5 | - | _ | - | - | - | | - | 0.6 | - |
| Spiny dogfish | 4.3 | - | - | 15.1 | 2.5 | 0.1 | 0.4 | 2.1 | 0.5 | 12.0 | 12.0 | 42.7 |
| Smooth dogfish | _ | _ | _ | _ | 1.3 | 1.6 | 4.3 | 0.1 | 0.1 | 1.5 | _ | - |
| Yellowtail flounder | 0.3 | _ | _ | _ | - | - | - | _ | - | _ | - | - |
| Winter flounder | - | 0.3 | 0.7 | 0.2 | 0.5 | 0.9 | 4.5 | 1.1 | 0.5 | 0.5 | 0.3 | _ |
| 4-spot flounder | 0.2 | - | _ | - | 0.5 | 1.7 | 3. 7 | 2.7 | 0.9 | 0.5 | 0.3 | _ |
| Sand flounder | 1.7 | 0.6 | 6.2 | 0.1 | 1.0 | | 1.6 | 1.1 | 1.7 | 0.5 | 0.1 | 0.4 |
| Dana Hounact | | 0.0 | 0,2 | 0, 1 | 2,0 | | | | | | | |
| Sea herring | 0.7 | 7.0 | 5.4 | 0.2 | 0.1 | - | - | - | - | - | - | - |
| Alewife | 11.9 | 11.0 | 2.0 | 1.3 | 1.0 | 0.2 | 0.1 | 0.1 | - | - | 0.3 | 10.6 |
| Menhaden | - | - | - | - | - | - | - | - | 0.1 | 0.1 | - | - |
| Cunner | - | - | - | - | 0.2 | 0.1 | - | - | - | ~ | - | - |
| Scup | - | - | - | - | 0.7 | - | - | 2.6 | 2.2 | 6.0 | - | - |
| Butterfish | _ | _ | _ | _ | 0.2 | 0.3 | 0.5 | 0, 4 | 0.4 | 2.4 | 2.2 | 0.5 |
| Long-horned sculpi | n 6.6 | 7.6 | 7.8 | 4.0 | 2.1 | _ | _ | _ | - | _ | 0.5 | 2.7 |
| Sea robin | - | - | - | 0.1 | 0.4 | 0.2 | 0.2 | 19.4 | 4.2 | 1.2 | - | - |
| Striped sea robin | _ | _ | _ | - | | - | 0.2 | 0.4 | 0.1 | 0.1 | 1.3 | - |
| Weakfish | - | - | - | - | - | - | - | 0.1 | - | 0.1 | - | - |
| Puffer | _ | | _ | _ | _ | _ | - | _ | 0.1 | _ | - | _ |
| Angler | 7.1 | 5.8 | 8.3 | 6.6 | 6.1 | 11.4 | 15.8 | 6.0 | 6.9 | 7.9 | 13.0 | 18.7 |
| Sea raven | - | J. 0 | 0.5 | - | - | - 11.4 | 0.2 | - | 0. 1 | - | - | - |
| Conger eel | _ | _ | - | _ | _ | _ | - | _ | - | _ | 0.3 | - |
| Eel pout | 24.9 | 32.3 | 46.8 | 35.9 | 17.5 | 3.5 | 1.2 | _ | _ | _ | - | 0. 2 |
| - | | | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| Totals | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |

Table 7.--Species composition in pounds, by month, of Point Judith industrial trawl fish landings from the Inshore area, 1957

Pounds to the nearest 1,000 pounds,

| | January | February | March | April | May | June | July | August | September | October | November | December |
|---------------------|------------|----------|-------|-------|-------|---------|------|---|-----------|---------|----------|----------|
| Red hake | ıc | 12 | 9 | 62 | 514 | 879 | 137 | 190 | 84 | 66 | 345 | 3.9 |
| Gilton Lolen | 2 5 | 100 | , [| 9 6 | 410 | 1 1 4 1 | 044 | 1 | 100 | 000 | 200 | |
| Silver hane | ; ; | 007 | 7 | 60 | CTE | 127 (1 | 117 | 7 70 | 671 | 000 | 100 | 071 |
| White hake | 18 | 4 | l | - | വ | 35 | က | ı | -1 | н | 67 | ı |
| Spotted hake | ŧ | ı | ı | ı | ı | ı | ı | ı | 1 | 1 | 1 | ì |
| Cod | • | 1 | 1 | ı | ı | വ | ı | ı | ı | ı | ŀ | 1 |
| | | | | | | | , | | | | | |
| Tom cod | 1 | 1 | 1 | 1 | 1 | ı | - | 1 | ı | 1 | ι | ı |
| Little skate | 27 | 21 | 17 | 30 | 32 | 62 | 20 | 106 | 152 | 100 | 100 | 15 |
| Big skate | 6 | 9 | 28 | 31 | 45 | 21 | 29 | 77 | 81 | 106 | 127 | 67 |
| Barndoor skate | 1 | က | က | 1 | ı | ı | 1 | ı | ı | ı | 6 | 1 |
| Spiny dogfish | 11 | ı | ı | 74 | 38 | က | က | 31 | 9 | 150 | 188 | 429 |
| Smooth doublin | ı | 1 | ı | ı | Q. | 73 | 30 | - | - | 10 | ı | 1 |
| Wallender! Sample | • | | | | 3 | P | 3 | • | 4 | 24 | | ı |
| I ellowiall Hounder | → | 3 | ı | 1 | 1 | 1 | ı | 1 | 1 | ı | 1 | 1 |
| Winter flounder | ı | - | 4 | 7 | œ | 24 | 31 | 16 | 9 | 9 | വ | |
| 4-spot flounder | - | 1 | 1 | ı | œ | 46 | 56 | 39 | 12 | 9 | 2 | 1 |
| Sand flounder | 4 | က | 37 | ı | 15 | 1 | == | 16 | 22 | 9 | 73 | 4 |
| • | , | , | , | , | | | | | | | | |
| Sea herring | 21 | 30 | 32 | 7 | 81 | ı | ı | ı | 1 | ı | 1 | 1 |
| Alewife | 30 | 47 | 12 | 9 | 15 | വ | 7 | 1 | | ı | ည | 106 |
| Menhaden | ı | ı | 1 | ı | 1 | 1 | ı | ı | 1 | 1 | ı | 1 |
| Cunner | 1 | 1 | | 1 | က | က | 1 | 1 | 1 | 1 | ı | ı |
| Scup | 1 | 1 | 1 | ı | 11 | 1 | ı | 38 | 28 | 75 | ı | ı |
| Duttonflot | | | | | c | c | c | ¢ | u | c | u c | u |
| ngir ranna | | . ; | , : | . ; | 0 | 0 | 3 | o | , | 00 | o o | ן י |
| Long-horned sculpin | 16 | 32 | 46 | 20 | 32 | ŀ | 1 | ı | | ı | oo | 2.1 |
| Sea robin | ı | ı | ı | ı | 9 | ro | | 283 | 54 | 12 | | 1 |
| Striped sea robin | ì | ı | ı | ı | 1 | 1 | П | 9 | 1 | 1 | 20 | ı |
| Weakfish | 1 | ı | 1 | 1 | ı | ı | 1 | 1 | 1 | 1 | ı | |
| Diffon | | | | | | | | | - | | | ! |
| rama | • | ı | ı | ı | ı | 1 | ı | | 4 | | ı | |
| Angler | 18 | 22 | 49 | 33 | 94 | 305 | 109 | 88 | 68 | 66 | 204 | 188 |
| Sea raven | 1 | 1 | က | t | 1 | ı | 1 | 1 | | ı | | 1 |
| Conger eel | ı | ı | 1 | ı | • | 1 | ı | 1 | 1 | 1 | വ | 1 |
| Eel pout | 62 | 137 | 274 | 173 | 265 | 29 | 9 | i | 1 | 1 | _ | 2 |
| Totals | 251 | 426 | 588 | 488 | 1,535 | 2,652 | 687 | 1,446 | 1,275 | 1,245 | 1,566 | 1,003 |
| | | | | | | | | | | | | |

Table 8.--Species composition in percent by weight, by month, of industrial trawl fish landings from the No Man's area (samples taken from New Bedford and Point Judith), 1955-1957.

| | Jan. | Feb. 2/ | March | April | May | June | July | Aug.3/ | Sept. | 3/ Oct. | Nov. | Dec. |
|---------------------|------|---------|-------|-------|------|------|------|-------------|-------|---------|------|------|
| Number of samples | 2 | 1 | 6 | 11 | 8 | 4 | 3 | 3 | 3 | 3 | 3 | 2 |
| Red hake | - | 0.3 | 4.9 | 49.3 | 75.9 | 64.1 | 56.9 | 63.3 | 58.9 | 69.9 | 37.3 | 3.6 |
| Silver hake | - | 4.7 | 0.4 | 0.7 | 4.4 | 17.2 | 21.2 | 21.6 | 26.9 | 9.5 | 17.4 | 2.4 |
| White hake | - | - | - | 0.3 | 0.8 | - | - | - | 0.3 | - | 0.9 | - |
| Haddock | - | - | - | - | - | 0.1 | - | 0.1 | 0.1 | - | - | - |
| Cod | - | 0.4 | - | - | - | - | - | - | - | - | - | - |
| Little skate | 23.8 | 28.5 | 11.8 | 6.6 | 3.0 | 5.7 | 7.4 | 5. 9 | 5.9 | 8. 5 | 10.3 | 14.6 |
| Big skate | 52.5 | 4.3 | 27.9 | 8.6 | 6.2 | 1.2 | 2,0 | 0.9 | 0,5 | 0.3 | 4.6 | 20,3 |
| Barndoor skate | - | - | 4.2 | 4.4 | - | 1.7 | 0.6 | 0.9 | 0.6 | 1.5 | 0.8 | 3.8 |
| Spiny dogfish | - | - | 2.2 | 3.1 | - | - | 0.8 | - | _ | 2.8 | 6.5 | 22.9 |
| Smooth dogfish | - | - | - | - | - | - | 0.6 | - | - | - | - | - |
| Yellowtail flounder | - | 10.3 | 0.2 | 0.7 | 0.6 | 0.9 | 0.1 | - | 0.3 | 1.2 | 0.1 | 1.1 |
| Winter flounder | - | - | - | - | - | 0.2 | 0.2 | 0.3 | 0.1 | - | - | - |
| Summer flounder | - | - | - | - | - | - | - | - | - | 0.1 | - | - |
| 4-spot flounder | - | - | - | - | 0.5 | 1.2 | 1.3 | 1.2 | 0.7 | 0.5 | 0.8 | 1.2 |
| Sand flounder | 4. 3 | 12.2 | 1.4 | 1.3 | 0.6 | 0.1 | 0.1 | 0.6 | - | - | 0.5 | 1.2 |
| Sea herring | _ | 0.8 | - | - | - | - | - | - | 0.1 | - | 1.7 | - |
| Alewife | - | - | 0.1 | - | - | 0.3 | 0.3 | 0.1 | 1.4 | - | 0.3 | 0,2 |
| Cunner | - | - | - | - | - | - | - | - | - | - | 0.5 | - |
| Scup | - | - | - | - | - | - | - | - | - | 0.2. | 0.1 | - |
| Butterfish | - | - | - | - | - | 0.3 | 7.7 | 1.1 | 3. 3 | 0.3 | 1.7 | 0.3 |
| Long-horned sculpin | 9.3 | 19.0 | 12.1 | 3, 1 | 0.7 | 0.2 | 0.3 | 0.1 | 0.2 | - | 7.6 | 2.0 |
| Sea robin | - | 0.2 | - | - | 0.3 | - | - | 0.8 | 0.3 | 3.7 | 2.9 | - |
| Angler | - | 0.2 | 6.0 | 4.8 | 3.2 | 6.7 | 0.3 | 3.1 | - | 0.6 | 5.9 | 23.8 |
| Sea raven | - | - | | - | - | 0.2 | 0.1 | - | - | 0.2 | - | - |
| 4-bearded rockling | - | - | - | - | 0.1 | - | - | - | - | - | - | - |
| Conger eel | _ | - | - | - | - | - | - | - | - | - | 0.1 | 1.1 |
| Eel pout | 10.1 | 19.1 | 27.9 | 17.0 | 3.7 | 0.2 | 0.1 | - | 0.4 | 0.7 | | 1.5 |
| Totals | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |

 $[\]frac{1}{2}$ All sample data for 1955, 1956, and 1957 combined.

 $[\]frac{2}{1957}$ sample

^{3/} July, August and September figures based on 1955 and 1956 samples only.

Table 9. --Species composition in pounds, by month, of New Bedford industrial trawl fish landings from the No Man's area, 1957.

Pounds to the nearest 1,000 pounds.

| | January | February ^{2/} | March | April | May | June | July 3 | August 3/ | September 3 October | October | November | December |
|---------------------|-----------|------------------------|-------|--------|-------|----------|--------|-----------|---------------------|---------|----------|----------|
| Red hake | • | 2 | 41 | 1,572 | 5,679 | 4,352 | 2, 288 | 3, 353 | 3, 132 | 3,470 | 1, 379 | 2 |
| Silver hake | ı | 25 | က | 22 | 331 | 1,168 | 855 | 1,150 | 1,411 | 473 | 643 | 21 |
| White hake | ı | 1 | ι | 10 | 09 | 1 | 1 | 1 | 16 | ı | 33 | ı |
| Haddock | ı | 1 | ı | ı | ı | 7 | ı | വ | D | ι | 1 | ı |
| Cod | ı | 7 | 1 | ı | 1 | ı | ı | ı | à | ı | 1 | ı |
| Tittle abate | er er | 159 | 100 | 211 | 966 | 28.7 | 299 | 314 | 305 | 493 | 381 | 96 |
| Bir skate | 23 6 | 2 66 | 936 | 975 | 459 | <u> </u> | 2 | 48 | 266 | 15 | 170 | 4 5 |
| Barndoor skate | <u></u> 1 | 3 1 | 36 | 141 | 20 1 | 115 | 24 | 48 | . 63 | 75 | 30 | 4 00 |
| Spiny dogfish | ŀ | 1 | 19 | 66 | ı | 1 | 32 | | ۱, | 139 | 240 | 46 |
| Smooth dogfish | ı | 1 | 1 | 1 | 1 | ı | 24 | ı | ı | ı | ı | ı |
| Yellowtail flounder | 8 | 55 | 81 | 22 | 45 | 61 | 00 | ı | 16 | 09 | 4 | 23 |
| Winter flounder | 1 | 1 | 1 | ı | 1 | 14 | 23 | 16 | ıo | 1 | ı | ı |
| Summer flounder | 1 | ı | 1 | ı | 1 | 1 | ı | 1 | í | D | 1 | ι |
| 4-spot flounder | ı | 3 | 1 | 1 | 38 | 81 | 52 | 64 | 37 | 22 | 30 | 2 |
| Sand flounder | 9 | 65 | 12 | 42 | 45 | 7 | 4 | 32 | | ı | 18 | 63 |
| Sea herring | ı | 4 | ı | 1 | 1 | 1 | 1 | 1 | വ | î | 63 | 1 |
| Alewife | 1 | 1 | - | က | 1 | 1 | 12 | က | 75 | ı | 11 | ı |
| Cunner | 1 | 1 | ı | 1 | 1 | ı | ı | ı | ı | ı | 18 | 1 |
| Scup | 1 | t | ı | ı | ı | 1 | 1 | ı | ı | 10 | 4 | |
| Butterfish | 1 | ı | ı | 1 | ı | 20 | 311 | 29 | 166 | 15 | 63 | 1 |
| Long-horned sculpin | 13 | 101 | 102 | 66 | 53 | 14 | 12 | വ | 11 | ı | 281 | 4 |
| Sea robin | 1 | П | ı | 1 | 23 | ı | 1 | 43 | 16 | 184 | 107 | 1 |
| Angler | 1 | T | 51 | 153 | 241 | 455 | 12 | 165 | 1 | 30 | 218 | 47 |
| Sea raven | 1 | 1 | t | 1 | 1 | 14 | 4 | ı | | 10 | 1 | ı |
| 4-bearded rockling | ı | 1 | ı | ı | ∞ | 1 | ı | ı | ı | 1 | 1 | ı |
| Conger eel | ı | 1 | 1 | 1 | ı | ı | 1 | 1 | , | 1 | 4 | 63 |
| Eel pout | 14 | 102 | 236 | 543 | 279 | 14 | 4 | ı | 21 | 35 | | က |
| Totals | 139 | 533 | 839 | 3, 192 | 7,480 | 6, 790 | 4,024 | 5,305 | 5,280 | 4,969 | 3,697 | 199 |
| | | | | | | | | | | | | |

Based on combined sample data for 1955, 1956 and 1957

 $[\]frac{2}{}$ Based on 1957 sample only.

Y Based on 1955 and 1956 samples only.

Table 10.--Species composition in pounds, by month, of Point Judith industrial trawl fish landings from the No Man's area; 1957. Pounds to the nearest 1,000 pounds.

| | January | February 2/ March | farch | April | May | June | July3/ | August3 | September 3/ October | October | November | December |
|---------------------|---------|-------------------|----------|-------|-------|-------|--------|---------|----------------------|---------|----------|----------|
| | | | | | | | 1 | | 0 | | | |
| Red hake | 1 | | 49 | 1,506 | 5,359 | 3,041 | 2, 770 | 2,469 | 2,473 | 1, 207 | 731 | o. |
| Silver hake | ı | 23 | 4 | 21 | 313 | 816 | 1,036 | 847 | 1,114 | 165 | 341 | 9 |
| White hake | ı | 1 | ı | 6 | 24 | ı | ı | 1 | 13 | 1 | 18 | 1 |
| Haddock | 1 | 1 | 1 | 1 | t | 2 | ις | 4 | 4 | 1 | 1 | 1 |
| Little skate | ι | 14 | 119 | 202 | 213 | 270 | 361 | 231 | 241 | 147 | 202 | 36 |
| Bjø skate | ı | 67 | 282 | 263 | 426 | 57 | 98 | 35 | 21 | ъ | 06 | 20 |
| Barndoor skate | ι | ١, | 42 | 135 | 1 | 81 | 29 | 35 | 25 | 56 | 16 | 6 |
| Spiny dogfish | ı | 1 | 22 | 95 | 1 | 1 | 39 | ı | 1 | 48 | 127 | 57 |
| Smooth dogfish | 1 | ı | 1 | ı | ı | 1 | 59 | ı | ı | 1 | 1 | 1 |
| Yellowtail flounder | ı | 2 | 63 | 21 | 43 | 43 | 63 | ı | 13 | 21 | 61 | က |
| Winter flounder | ı | 1 | ı | 1 | 1 | 10 | 10 | 12 | 4 | ı | | |
| Summer flounder | ı | 1 | 1 | ı | ı | 1 | 1 | 1 | t | c1 | 1 | , |
| 4-spot flounder | ı | 1 | 1 | 1 | 36 | 22 | 64 | 47 | 30 | 6 | 16 | က |
| Sand flounder | 1 | 9 | 14 | 40 | 43 | 2 | ıO | 24 | ı | 1 | 10 | က |
| Sea herring | ı | ı | í | t | ı | ı | ı | ı | 4 | ı | 33 | ı |
| | | | • | c | | | ŭ. | c | ŭ | | Q | ı |
| Alewije | 1 | ı | - | 3 | ı | ı | CT | 71 | 60 | 1 | ٥ | 1 |
| Cunner | ı | 1 | ı | ı | ı | ı | ı | 1 | ı | ı | 10 | 1 |
| Scup | 1 | 1 | ı | 3 | ı | ı | 1 | ı | 1 | က | 7 | 1 |
| Butterfish | 1 | 1 | ı | t | 1 | 14 | 376 | 43 | 131 | ເດ | 33 | |
| Long-horned sculpin | t | 6 | 121 | 92 | 20 | 10 | 15 | 4 | œ | t | 149 | വ |
| Sea robin | ı | 1 | ı | 1 | 21 | ı | 1 | 31 | 13 | 64 | 57 | 1 |
| Angler | 1 | 1 | 19 | 147 | 227 | 318 | 15 | 121 | ı | 10 | 116 | 58 |
| Sea raven | ı | ı | 1 | t | ı | 10 | ıc | 1 | ı | က | 1 | 1 |
| 4-bearded rockling | 1 | t | ı | ι | 7 | ı | ı | 1 | ı | ı | ı | ı |
| Conger eel | ı | 1 | 1 | ι | ı | ı | ı | 1 | 1 | ı | 61 | က |
| Eel pout | ı | G | 282 | 520 | 263 | 10 | ro | • | 17 | 12 | ı | 4 |
| Totals | 1 | 47 | 666 | 3,057 | 7,058 | 4,747 | 4,879 | 3,905 | 4,170 | 1,727 | 1,961 | 247 |
| | | | | | | | | | | | | |

² Based on combined sample data for 1955, 1956, and 1957.

^{2/ 1957} sample data only.

 $[\]frac{3}{}$ Based on 1955 and 1956 samples only.

Table 11.--Species composition in percent by weight, by month, of Gloucester trawl fish landings from the Ipswich area, 1957.

| | Jan. | Feb. | March | April | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. |
|---------------------|------|------|-------|-------|------|------|------|------|-------|------|------|------|
| Number of samples | - | - | _ | - | 2 | 2 | 1 | 2 | 1 | 4 | 2 | |
| Red hake | _ | - | - | - | 38.6 | 53.1 | 84.5 | 50.5 | 42.4 | 33.7 | 23.7 | - |
| Silver hake | - | - | - | - | 15.7 | 19.0 | - | 22.4 | 37.9 | 25.2 | 36.2 | - |
| White hake | - | - | - | - | 2.9 | - | - | - | - | - | - | - |
| Haddock | - | - | - | - | 0.8 | 0.1 | - | 2.0 | 5.5 | 0.4 | 0.6 | - |
| Cod | - | - | - | - | 0.3 | 0.3 | - | 0.6 | - | 0.6 | 0.3 | - |
| Ocean perch | - | - | - | - | 2.3 | 0.1 | - | - | - | 0.1 | - | - |
| Little skate | - | - | - | - | 1.3 | 0.5 | - | - | - | 2.0 | 0.5 | - |
| Big skate | - | - | - | - | - | - | - | - | - | 0.5 | 0.9 | - |
| Barndoor skate | - | - | - | - | 8.3 | - | - | - | - | - | - | - |
| Spiny dogfish | - | - | - | - | - | 5.9 | 9.3 | 1.1 | - | - | 3.5 | - |
| Yellowtail flounder | - | - | - | _ | 0.2 | - | - | - | - | - | - | - |
| Winter flounder | - | - | - | - | - | - | 1.5 | 0.5 | - | - | - | - |
| Greysole | - | - | - | - | 0.1 | 0.3 | - | - | - | - | - | - |
| 4-spot flounder | - | - | - | - | - | - | - | 0.1 | - | - | - | - |
| Sea herring | - | - | - | - | 0.3 | 0.3 | 1.3 | 1.3 | 11.9 | 1.4 | 0.2 | - |
| Alewife | - | - | - | - | - | - | - | 8.4 | - | - | - | - |
| Blueback | - | - | - | - | 2.2 | 7.9 | - | ~ | - | 4.9 | 9.3 | - |
| Shad | - | - | - | - | - | 3.2 | - | 2.2 | - | 0.2 | 0.6 | - |
| Butterfish | - | - | - | - | - | - | - | 0.2 | 0.1 | 0.1 | - | - |
| Long-horned sculpin | - | - | - | - | 1.0 | - | - | 0.2 | - | - | - | - |
| Angler | _ | _ | - | - | 6.6 | 3.4 | - | 7.2 | - | 9.3 | 7.0 | - |
| 4-bearded rockling | - | - | - | - | 0.5 | 0.3 | - | 0.1 | 0.7 | 1.9 | 0.2 | - |
| Eel pout | - | - | - | - | 1.9 | 2.6 | 1.9 | 2.1 | - | 0.9 | 1.1 | - |
| Dab | - | - | - | - | 8.8 | 3.0 | 1.5 | 1.1 | 1.5 | 18.4 | 10.4 | - |
| Totals | _ | - | - | - | 100 | 100 | 100 | 100 | 100 | 100 | 100 | - |

Table 12, -- Species composition in pounds, by month, of Gloucester industrial trawl fish landings from the Ipswich area, 1957 Pounds to the nearest 1,000 pounds.

| | January | January 1 February 1 March 1 April 1 | March 1/ A | | May | June | July | August | September | October | November | December 2/ |
|----------------------|---------|--|------------|---|-----|------|------|--------|-----------|---------|------------|-------------|
| Red hake | 25 | 12 | 10 | 2 | 42 | 81 | 118 | 104 | 107 | 139 | 87 | 17 |
| Silver hake | 10 | ວ | 4 | Ħ | 10 | 23 | 1 | 46 | 96 | 104 | 134 | 22 |
| White hake | 61 | 1 | H | 1 | 2 | ı | ı | 1 | 1 | 1 | 1 | |
| Haddock | 1 | 1 | ı | ı | 1 | ı | 1 | 4 | 14 | 87 | 63 | 1 |
| Cod | ı | | 1 | ı | ı | ı | 1 | 1 | ı | 61 | - 4 | 1 |
| 1 | - | *** | - | ı | - | | ı | , | 1 | ı | ı | ı |
| Ocean per cu | + | 1 1 | ٠, | 1 | 1 | 1 | 1 | 1 | 1 | 00 | 81 | • |
| Big skate | ٠, | 1 | 1 | ı | 1 | ı | 1 | 1 | 1 | 7 | က | 1 |
| Barndoor skate | വ | က | 67 | 1 | ß | 1 | 1 | ı | 1 | ı | 1 | , |
| Spiny dogfish | 1 | ι | ı | 1 | ı | 6 | 13 | 63 | 1 | 1 | 13 | 63 |
| Winter flounder | ı | , | 1 | ı | 1 | ı | 63 | 1 | 1 | ı | ı | , |
| Dah | 9 | က | 67 | ı | മ | ro | 1 63 | 8 | 4 | 75 | 38 | 2 |
| Sea herring | ' 1 | ' 1 | 1 | ı | 1 | ı | 23 | က | 30 | 9 | 1 | 1 |
| Alewife | 1 | 1 | 1 | 1 | 1 | 1 | ı | 17 | 1 | 1 | ı | |
| Blueback | 1 | 1 | 1 | ı | 1 | 12 | ı | 1 | 1 | 20 | 34 | 7 |
| To St | ı | 1 | ı | 1 | 1 | rc | ı | ro | 1 | - | N | , |
| I ong-horned scuipin | 1 | ı | ı | 1 | Н | 1 | ı | ı | 1 | 1 | 1 | 1 |
| Angler | 1 4 | 67 | 87 | t | 4 | ß | ı | 15 | 1 | 39 | 26 | S. |
| 4-bearded rockling | 1 | 1 | 1 | ı | 1 | 1 | 1 | 1 | 61 | œ | 1 | |
| Eel pout | н | 1 | 1 | 1 | 1 | 4 | က | 4 | 1 | 4 | 4 | 1 |
| Lumpfish | വ | က | 61 | 1 | വ | 1 | 1 | 1 | 1 | 23 | 20 | 4 |
| Totals | 63 | 32 | 22 | 8 | 09 | 151 | 140 | 204 | 253 | 412 | 368 | 69 |
| | | | | | | | | | | | | |

 $1/\sqrt{1}$ January, February, March and April figures are based on May sample data.

^{2/} December figures based on November sample data.

Table 13. -- Species composition in percent by weight, by month, of Gloucester industrial trawl fish landings from the Stellwagen Bank area, 1957.

| | Jan. | Feb. | March | April | May | June | July | Aug.1 | Sept. | Oct. | Nov. | Dec. |
|---------------------|-------|------|-------|-------|-----|------|------|-------|-------|------|------|------|
| Number of samples | 1 | - | - | - | - | 1 | 3 | | 12 | 11 | 2 | 6 |
| Red hake | 38.5 | - | - | - | - | 0.7 | 14.2 | 21.1 | 27.9 | 14.7 | 55.3 | 55.9 |
| Silver hake | 38. 3 | - | - | - | | 88.8 | 72.5 | 56.2 | 40.3 | 57.5 | 10.9 | 14.7 |
| Haddock | 0.9 | - | - | - | - | - | - | 3.2 | 6.1 | 5.1 | 7.0 | 8.4 |
| Cod | 0.4 | - | - | - | - | 0.6 | - | 3.3 | 6.5 | 0.1 | 9.4 | 10.7 |
| Pollock | - | - | - | - | - | - | - | - | 0.1 | - | - | - |
| Ocean perch | - | _ | _ | - | _ | 0.2 | - | 0.9 | 1.7 | 0.4 | 0.5 | 0.5 |
| Little skate | - | - | - | - | - | - | - | - | 0.1 | - | - | - |
| Big skate | - | - | - | - | - | - | - | - | - | 0.3 | 4.0 | - |
| Smoothtail skate | - | - | - | - | - | - | - | 0.1 | 0.2 | - | - | - |
| Spiny dogfish | 0.2 | - | - | - | - | 5.9 | 5.3 | 2.9 | 0.4 | 0.7 | - | 2.4 |
| Yellowtail flounder | _ | _ | - | - | - | - | - | - | 0.1 | 0.7 | 2.0 | 0.5 |
| Blackback | 0.6 | _ | - | - | - | - | - | - | - | - | - | 0.1 |
| Greysole | 1.5 | - | - | - | - | - | - | 0.2 | 0.3 | 0.1 | 0.2 | 0.3 |
| Dab | 14.5 | - | - | - | - | 0.2 | 1.0 | 1.6 | 2.1 | 2.6 | 2.1 | 2.5 |
| Sand flounder | - | - | - | - | - | - | - | - | - | - | - | 0.1 |
| Sea herring | - | _ | - | - | - | 0.6 | 0.2 | 4. 5 | 8.8 | 3. 3 | - | 0.7 |
| Alewife | - | - | - | - | - | - | - | 0.1 | 0.3 | 0.4 | 2.7 | 0.4 |
| Blueback | - | - | - | - | - | 1.7 | - | 0.2 | 0.5 | 12.2 | 2.8 | 0.9 |
| Shad | - | - | - | - | - | - | - | 0.5 | 1.0 | 0.6 | - | - |
| Butterfish | - | - | - | - | - | - | - | - | - | 0.3 | - | - |
| Long-horned sculpin | 0.6 | - | - | - | - | 0.3 | 0.1 | 0.2 | 0.3 | 0.2 | 2.0 | 0.6 |
| Angler | - | - | - | - | - | - | 6.1 | 4.5 | 2.8 | 0.4 | - | 0.1 |
| Sea raven | - | - | - | - | - | 0.2 | - | - | - | - | - | 0.1 |
| 4-bearded rockling | 0.3 | - | - | - | - | - | - | 0.1 | 0.3 | 0.3 | - | 0.1 |
| Conger eel | - | - | - | - | - | - | - | - | - | - | - | 0.4 |
| Eel pout | 4.2 | - | - | _ | - | 0.8 | 0.6 | 0.4 | 0.1 | 0.1 | 1.1 | 0.6 |
| Lamprey | - | - | - | - | - | - | - | - | 0.1 | - | - | - |
| Totals | 100 | - | - | - | - | 100 | 100 | 100 | 100 | 100 | 100 | 100 |

 $[\]frac{1}{2}$ Based on average of July and September samples.

Table 14. -- Species composition in pounds, by month, or Groncester inquistrial traw! lish landings from the Deliwagen bank area, 1957.

Pounds to the nearest 1, 000 pounds.

| | January | February 1/ March | March | April | May | June | July | August 2/ | September | October | November | December |
|---------------------|---------|-------------------|-------|-------|-----|------|------|-----------|-----------|---------|----------|----------|
| Red hake | 25 | 13 | ι | 1 | 1 | t | 99 | 149 | 1,824 | 887 | 2,072 | 650 |
| Silver hake | 24 | 13 | J | 1 | ı | 99 | 338 | 398 | 2,635 | 3,471 | 408 | 172 |
| Haddock | 1 | 1 | ı | 1 | ı | ì | ı | 23 | 399 | 308 | 262 | 86 |
| Cod | 1 | ı | ı | 1 | 1 | 1 | 1 | 23 | 425 | 9 | 352 | 125 |
| Pollack | 1 | ı | ı | 1 | ı | ı | ı | 1 | 2 | ı | 1 | ı |
| Octob nowoh | | 1 | ı | | 1 | 1 | ı | ç | | 24 | 19 | ų |
| Tittle skate | ı | • | 1 | | | ı | |) I | - | 1 | ì | , ı |
| Big skate | 1 | 1 | ı | ı | 1 | 1 | 1 | 1 | ٠, | 18 | 150 | 1 |
| Smoothtail skate | ı | 1 | 1 | ı | ı | 1 | 1 | _ | 13 | ı | 1 | , |
| Spiny dogfish | 1 | ı | 1 | ı | 1 | 4 | 25 | 20 | 26 | 42 | 1 | 28 |
| Yellowtail flounder | 1 | ı | ı | ı | ı | ı | ı | • | 2 | 42 | 75 | , |
| Winter flounder | 1 | ı | 1 | ı | ı | ı | ı | ı | 1 | ı | ı | 7 |
| Greysole | 1 | ı | 1 | 1 | ı | 1 | 1 | 1 | 20 | 9 | 7 | 4 |
| Dab | 6 | លេ | 1 | 1 | 1 | 1 | വ | 11 | 137 | 157 | 49 | 29 |
| Sand flounder | 1 | 1 | t | ı | 1 | ı | ı | ı | | t | 1 | 1 |
| | | | | | | | | | | | | |
| Sea herring | ı | | 1 | ı | ı | ı | 1 | 32 | 575 | 199 | 1 | œ |
| Alewife | 1 | 1 | 1 | 1 | 1 | ı | 1 | П | 20 | ı | 101 | ວ |
| Blueback | 1 | ı | 1 | ı | ı | - | ı | 1 | 33 | 736 | 105 | 11 |
| Shad | 1 | 1 | 1 | ı | ı | ι | 1 | 4 | 65 | 36 | 1 | 1 |
| Butterfish | 1 | ı | 1 | ı | 1 | 1 | 1 | 1 | ı | 18 | 1 | 1 |
| Long-horned sculpin | ι | t | ı | ı | ı | ı | 1 | 1 | 20 | 12 | 75 | 7 |
| Angler | 1 | 1 | 1 | 1 | 1 | 1 | 28 | 32 | 183 | 24 | 1 | 1 |
| Sea raven | 1 | 1 | 1 | ı | 1 | 1 | 1 | 1 | 1 | ı | 1 | 1 |
| 4-bearded rockling | ŧ | ı | i | 1 | ı | ı | 1 | 1 | 20 | 18 | 1 | 1 |
| Conger eel | ı | 1 | 1 | ı | ı | ı | ì | ı | ı | | ı | 2 |
| Eel pout | ଟୀ | - | ı | ı | ı | F | m | m | t~ | 9 | 41 | 7 |
| Lamprey | | ١, | 1 | ı | ı | ı | | ' 1 | 2 | 1 | 1 | 7 |
| Totals | 63 | 32 | | | 1 | 62 | 466 | 707 | 6541 | 6,010 | 3,746 | 1,166 |
| | | | | | | | | | | | | |

Based on January sample data. 1

Based on the average of July and September sample data. 2

Table 15. -- Species composition in percent by weight, by month of Gloucester industrial trawl fish landings from the Nausets area, 1957.

| | Jan. | Feb. | March | April | May | June | July | Aug | Sept 2 | Oct. | Nov. | Dec. |
|---------------------|------|------|--------------|-------|------|------|------|------|--------------|------|-------------|------|
| Number of samples | - | - | - | - | 5 | 8 | 11 | 2 | - | 4 | 1 | - |
| Red hake | - | _ | _ | - | 41.2 | 50.1 | 65.4 | 77.8 | 5 6.0 | 33.7 | 66.7 | - |
| Silver hake | - | - | - | - | 26.9 | 35.0 | 22.2 | 13.4 | 29.9 | 45.4 | _ | - |
| White hake | - | - | - | - | 1.2 | 2.3 | 0.8 | - | - | - | - | - |
| Haddock | - | - | - | - | 3.3 | 0.8 | 1. 1 | - | 5.9 | 11.7 | 12.5 | - |
| Cod | - | - | - | - | - | 0.1 | - | - | - | - | - | - |
| Pollock | - | - | - | - | - | - | 0.3 | - | - | - | - | - |
| Little skate | - | - | - | - | - | - | 0.1 | 0.9 | 0.5 | 0.1 | 0.4 | - |
| Big skate | - | - | - | - | - | - | - | 0.6 | 0.5 | 0.4 | - | - |
| Spiny dogfish | - | - | - | - | 2.4 | 1.7 | 4.3 | - | - | - | 4.8 | - |
| Yellowtail flounder | - | - | - | - | 0.1 | - | - | - | - | - | - | - |
| Greysole | - | - | - | - | - | - | - | - | - | - | 0.2 | - |
| Dab | - | - | - | - | 0.9 | 0.5 | - | - | 0.5 | 1.0 | 0.9 | - |
| Sea herring | - | - | - | - | 0.9 | 2.2 | - | - | 0.4 | 0.8 | 1.5 | - |
| Blueback | - | - | - | - | 0.4 | 0.1 | - | - | 1.7 | 3.4 | 4.7 | - |
| Shad | - | - | - | - | ~ | 0.2 | - | 0.8 | - | - | 4.2 | - |
| Butterfish | - | _ | - | - | - | _ | - | - | 0.3 | 0.5 | 0.5 | - |
| Long-horned sculpin | - | - | - | - | 0.1 | 0.2 | 0.2 | - | 0.1 | 0.1 | 0.5 | - |
| Angler | - | - | - | - | 1.0 | 3.0 | 3.1 | 5.3 | 2.7 | - | - | - |
| Sea raven | - | - | - | - | - | 0.1 | 0.7 | 1.2 | 0.1 | 0.1 | 0.6 | - |
| 4-bearded rockling | - | - | - | - | 0.1 | 0.1 | - | - | - | - | - | - |
| Conger eel | - | - | - | - | 2.8 | ** | 0.3 | - | - | - | - | - |
| Eel pout | - | - | - | - | 18.7 | 3.6 | 1.5 | - | 1.3 | 2.6 | 2. 5 | - |
| Lumpfish | | - | - | - | | | | - | 0.1 | 0.2 | - | - |
| Totals | - | - | - | - | 100 | 100 | 100 | 100 | 100 | 100 | 100 | - |

 $[\]frac{1}{2}$ Based on average of August and October samples.

Table 16.--Species composition in pounds, by month, of Gloucester industrial trawl fish landings from the Nausets' area, 1957
Pounds to the nearest 1,000 pounds.

જા

| - 1 458 1,091 873 4,057 369 307 926 1 2 699 1,562 2,573 4,057 369 307 926 2 26 25 43 - 39 107 174 5 6 25 43 - 39 107 174 6 6 25 43 - 39 107 174 1 1 11 11 11 11 11 11 11 11 11 11 | | Jamary | February | March | April 1/ | May | Jime | vlul. | Anonst | Soutember 2 | October | November | Doombon |
|--|---------------------|--------|----------|-------|----------|-------|-------|-------|----------|-------------|---------|-----------|---------|
| take | | | | | | | | (Tana | AGR GRAT | - Commanda | | TO ACTURE | 2000 |
| ake 1 458 1,091 873 698 195 413 | Red hake | ı | ı | ı | 73 | 669 | 1,562 | 2,573 | 4,057 | 369 | 307 | 926 | 92 |
| kate | Silver hake | 1 | 1 | 1 | П | 458 | 1,091 | 873 | 869 | 195 | 413 | ı | 1 |
| kate | White hake | ı | 1 | 1 | 1 | 22 | 72 | 31 | 1 | 1 | 1 | ı | ı |
| kate to be defined by the control of the control o | Haddock | ı | ı | 1 | 1 | 26 | 25 | 43 | 1 | 39 | 107 | 174 | 14 |
| kate te te te te te te te te te | Cod | ı | 1 | 1 | ı | ı | က | 1 | 1 | ı | 1 | 1 | ı |
| the table | : | | | | | | | , | | | | | |
| kate 4 47 33 19 6 - 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 | Pollock | ı | ι | 1 | ı | ı | ı | 12 | ı | | 1 | ı | ı |
| te per the per control of the pe | Little skate | ı | 1 | 1 | 1 | 1 | 1 | 4 | 47 | က | - | 9 | ı |
| ati flounder 41 53 169 | Big skate | 1 | 1 | 1 | 1 | ı | 1 | ı | 31 | က | 4 | 1 | ı |
| atl flounder - <t< td=""><td>Spiny dogfish</td><td>1</td><td>ł</td><td>1</td><td>1</td><td>41</td><td>53</td><td>169</td><td>1</td><td>1</td><td>ı</td><td>1</td><td>гò</td></t<> | Spiny dogfish | 1 | ł | 1 | 1 | 41 | 53 | 169 | 1 | 1 | ı | 1 | гò |
| ring 15 69 3 9 13 15 69 3 7 21 15 69 11 31 15 69 5 11 318 11 318 112 59 11 318 11 318 17 94 122 276 3 28 62 11 4 1,700 3,118 3,934 5,213 658 1 318 1,12 59 1 318 1,12 59 1 318 1,13 5,934 5,213 658 | Yellowtail flounder | ī | ı | ī | 1 | 67 | 1 | 1 | 1 | ı | 1 | 1 | ı |
| ring - | | | | | | ļ | , | | | | | | |
| sk - | Dab | 1 | ı | ı | ı | 15 | 16 | ı | ı | က | 6 | 13 | 1 |
| Sk 7 | Sea herring | 1 | ı | ı | ı | 15 | 69 | 1 | ı | က | 2 | 21 | 63 |
| tsh - - - - - - - - - 59 orned sculptin - - - - - - - - - 59 en - - 17 94 122 276 18 - - - en - - - - - - - - - - icd rockling - | Blueback | 1 | 1 | 1 | 1 | 7 | က | 1 | 1 | 11 | 31 | 65 | 2 |
| orned sculptin | Shad | • | ı | ı | 1 | ı | 9 | 1 | 42 | ı | 1 | 59 | S |
| orned sculptin | Butterfish | 1 | 1 | ì | 1 | 1 | 1 | i | 1 | 83 | 2 | 7 | 1 |
| orned sculpin 2 6 8 8 - 1 1 1 7 en 17 94 122 276 18 | | | | | | | | | | | | | |
| en cockling | Long-horned sculpin | ι | ı | 1 | ı | 64 | 9 | œ | ı | 1 | П | 7- | П |
| - | Angler | 1 | 1 | ı | 1 | 17 | 94 | 122 | 276 | 18 | 1 | 1 | 1 |
| 48 - 12 | Sea raven | , | ı | 1 | 1 | 1 | က | 28 | 62 | Ħ | 1 | œ | 1 |
| 48 - 12 | 4-bearded rockling | ι | 1 | ı | 1 | 63 | က | 1 | ì | 1 | ı | J | ı |
| 1 318 112 59 - 9 24 35 3 4 1,700 3,118 3,934 5,213 658 912 1,391 | Conger eel | 1 | 1 | ι | 1 | 48 | ı | 12 | ı | ı | ı | ı | ı |
| 3 4 1,700 3,118 3,934 5,213 658 912 1,391 | Eel pout | 1 | 1 | ı | 1 | 318 | 112 | 59 | 1 | o | 24 | 35 | က |
| 4 1,700 3,118 3,934 5,213 658 912 1,391 | Greysole | 1 | 1 | 1 | 1 | ı | 1 | ı | 1 | 1 | 1 | က | ı |
| | Totals | 1 | 1 | 1 | 1 | 1,700 | 3,118 | 3,934 | 5, 213 | 658 | 912 | 1, 391 | 114 |

Figures based on May sample data.

^{2/} Figures based on average of August and October samples.

^{3/} Figures based on November sample data.

Table 17. —Total pounds and percent of each species landed in the industrial traw! catch by port and fishing area, 1957.

Pounds to the mearest 1,000 pounds.

Species present in quantities less than 0.1 percent are indicated by a plue sign.

| | Offshore Point Judith | e dith | Inshore Point Judith | Hth | No Man'e Point Judith | a'e idith | No Man's New Bedford | ford | No Man's TOTALS | | pswich Glouceeter | ter | Nausets' Gloucester | 8° ster | Stellwagen G loucester | gen | Grand Total | Grand Percent |
|------------------------|--------------------------|------------|-------------------------|------------|--------------------------|--------------|-------------------------|--------|--------------------|--------|----------------------|------|------------------------|------------|---------------------------|------|----------------|------------------|
| | spunod | 88 | spunod | 88 | pounds | 89 | spunod | 80 | pounds | 88 | spunod | 88 | pounds | 88 | pound | 86 | | |
| Red hake | 11,800 | 27.5 | 2,382 | 18,1 | 19,814 | 59.8 | 25, 275 | 59.6 | 44,889 | 59.7 | 726 | 40.5 | 10,571 | 62.0 | 5,686 | 30,3 | 76,054 | 45.0 |
| Silver hake | 11,954 | 27.9 | 4,453 | 8 % 8 % | 4,665 | 14.1 | 110 | 24,3 | 10,751 | 14,3 | 404 R | 25,9 | 3, 729 | 21.9 | 616,7 | 40.0 | 38,866 | 23.0 |
| Spotted bake | 29 | • + | | ; + | 5 , | | ĝ . | ? , | 2 | ? , | ı | | 1 1 | . 1 | | 1 | 30 | • + |
| Haddock | , | . 1 | ı | . 1 | 18 | + | 11 | + | 35 | + | 23 | 1,3 | 458 | 2.7 | 1,091 | 5,8 | 1,602 | 1.0 |
| 7-0 | c | 4 | Ľ | 4 | 1 | 4 | c | 4 | c | 4 | 4 | 6 | ٣ | 4 | 031 | r. | 0.47 | 4 |
| Tom cod | 1 | ⊢ ¹ | | - 4 | 1 1 | ۱ - | 4 | ŀ I | 1 | ۱ - | 1 | | 1 | - ' | 2 1 | ; 1 | , p | · + |
| Pollock | . 1 | | 1 | - 1 | • | | | | 1 | | 1 | | 12 | 0,1 | 7 | + | 19 | F + |
| Ocean perch | ١ | ł | ı | ı | 1 | ı | ı | ı | 1 | t | 4 | 0,2 | ı | 1 | 166 | 0,9 | 170 | 0,1 |
| Little skate | 2,723 | 6.4 | 772 | 5.9 | 2,036 | 6.2 | 2,860 | 6.7 | 4,896 | 6.5 | 13 | 8 0 | 61 | 0,4 | 2- | + | 8,472 | 5.0 |
| Total all and a second | 1000 | | 640 | 0 | 000 | | 1 | o e | 0 0 1 | 0 | 4 | 6 | 96 | c | 16.0 | d | 200 | c |
| Barndoor akate | 624 | 1.2 | 15 | • | 398 | 1.2 | 505 | 2.0 | 907 | 1.2 | 15 | 3 6 | 9 1 | · · | 1 | n 1 | 1,461 | ာဏ |
| Smooth-tailed skate | 1 | 1 | , | | | 1 | | | , | · · | ١, | | ı | ı | 14 | 0,1 | 14 | · + |
| Spiny dogfish | 2,776 | 6,5 | 933 | 7.1 | 388 | 1,3 | 575 | 1,3 | 963 | 1,3 | 39 | 2.2 | 268 | 1,6 | 145 | 0.8 | 5, 123 | 3.0 |
| Smooth dogfish | 1 | ı | 114 | 6.0 | 29 | 0,1 | * | 0,1 | 63 | 0.1 | ı | ı | 1 | ı | 1 | ı | 167 | 0.1 |
| Yellowtail flounder | 1.035 | 2.4 | - | + | 155 | 0,5 | 275 | 9,0 | 430 | 9.0 | ı | t | 61 | + | 124 | 0.7 | 1.592 | 6.0 |
| Winter flounder | 111 | 0.3 | 102 | 0.8 | 36 | 0,1 | 37 | 0.1 | 73 | 0,1 | က | 0,2 | 1 | 1 | 2 | + | 302 | 0.2 |
| Summer flounder | 1 | 1 | 1 | 1 | 23 | + | 2 | + | 2 | + | • | , | • | 1 | 1 | ı | 2 | + |
| Greysole | ı | ı | ı | ı | ١ | ı | ı | ı | • | ı | 1 | + | က | + | 39 | 0.2 | 42 | + |
| Dab | 1 | ı | t | ı | t | ı | ı | 1 | ı | 1 | 149 | 8.4 | 57 | 0.3 | 432 | 2,3 | 638 | 0.4 |
| 4-spot flormder | 305 | 0.7 | 143 | 1.1 | 262 | 8.0 | 329 | 8 0 | 591 | 8.0 | , | + | • | 1 | 1 | , | 1.039 | 9.0 |
| Sand flounder | 365 | 0.9 | 120 | 6.0 | 150 | 0,5 | 233 | 0.5 | 383 | 0.5 | ٠ | . 1 | , | 1 | 1 | + | 869 | 0,5 |
| Gulf-stream flounder | 4 | + | 1 | | ı | . 1 | 1 | | , | | • | | • | ı | • | ı | 4 | + |
| Sea herring | 52 | +] | 67 | 0.5 | 37 | 0,1 | 72 | 0,1 | 109 | 0,1 | 42 | 2.4 | 117 | 0.7 | 815 | 4° | 1, 175 | 0.7 |
| Alewife | 294 | 0.7 | 228 | 1,7 | 88 | 0,3 | 105 | 0.3 | 191 | o. 3 | 11 | 1.0 | 1 | ı | 127 | 0.7 | 857 | 0.5 |
| Blueback | 1 | ı | ı | , | • | ı | 1 | ı | , | 1 | 7.7 | 4.3 | 122 | 7.0 | 887 | 4.7 | 1,086 | 0.6 |
| Shad | ı | ı | ı | ı | ١ | 1 | ı | , | 1 | ı | 13 | 1,0 | 112 | 0,7 | 105 | 9.0 | 230 | 0,1 |
| Menhaden | 1 | ı | 63 | + | • | ı | 1 | 1 | , | 1 | 1 | ı | ı | , | ı | ı | 61 | + |
| Cunner | 4 | + | œ | + | 10 | + | 18 | + | 83 | + | 1 | 1 | 1 | ı | ı | ı | 38 | + |
| Scup | 233 | 0.5 | 162 | 1, 2 | g | + | 14 | + | 19 | + | 1 | ı | | ı | 1 | ı | 404 | 0.2 |
| Butterfish | 235 | 0.6 | 82 | 7.0 | 603 | 1.8 | 835 | 1.6 | 1, 238 | 1.6 | ı | ı | 16 | 0.1 | 18 | 0,1 | 1.601 | 1,0 |
| Long-horned eculpin | 735 | 1.7 | 181 | 1.4 | 486 | 1,4 | 695 | 1,8 | 1,161 | 1,5 | 23 | 0.1 | 26 | 0,1 | 115 | 0.6 | 2,220 | 1,4 |
| Sea robin | 239 | 0.8 | 364 | 2.8 | 186 | 0.8 | 374 | 6.0 | 999 | 7.0 | 1 | 1 | 1 | ı | 1 | 1 | 1,163 | 0.7 |
| Striped sea robin | G | + | 59 | 0.2 | 1 | ı | | 1 | | | | ı | | ı | 1 | ı | 38 | + |
| Weakusn | | ı | 73 | + | ı | ı | ı | ı | , | | ı | ı | | | ı | ı | N | + |
| Puffer | 1 | | - | + | ١ | ٠ | ı | ı | ١ | | ı | • | ı | ı | ١ | 1 | 1 | + |
| Angler | 3, 731 | 8.7 | 1,301 | 9.9 | 1,073 | 3,3 | 1,373 | 9,2 | 2,446 | e 6 | 102 | 5.7 | 527 | 3,1 | 268 | 1,4 | 8,375 | 5.0 |
| Sea raven | 52 | + • | e) | + | 18 | + - | 8 9 | + - | 94. | + - | , : | , ; | 104 | 9.0 | - 9 | + 5 | 178 | 0,1 |
| Conser eel | - 4 | + + | 1 | ١ - | ;- u | + + | р | + + | 9 = | + + | ‡ , | D. 1 | a ç | + ° | θ ₄ | 7.0 | - 0 0 - 0 | + [|
| 100 109000 | 4 | ۲ | , | • | • | ۲ | 0 | ŀ | 1 | ٠ | ı | ı | 3 | • | , | , | ŝ | |
| Eel pout | 3,967 | 9,3 | 986 | 7.5 | 1, 122 | 3.4 | 1, 251 | 9.0 | 2, 373 | 3.2 | 23 | 1,3 | 561 | 3,3 | 72 | 0.4 | 7,982 | 4.7 |
| Vrymouth | | + 1 | , , | | | 1 1 | | 1 1 | 1 (| 1 (| , 5 | 1 0 | , , | ١ ٥ | | | 111 | + 1 |
| Lamprey | | 1 1 | | 1 | | | 1 1 | | | | ₽, | , ı | 2 , | , , | - | ۱ + | 1 | + |
| 0000 | 40 640 | | 19 109 | | 202 00 | | 277 07 | | 770 42 | | | | 770 4. | | 000 | | 100 040 | |
| Locare | שבט וְשִבּ | | 701 700 | | 32, 121 | | 42,441 | | 10,244 | | 1, 180 | | 11,044 | | 76, 197 | | 100,013 | |

Table 18. -- Catch per trip of industrial trawl fish on each of the principal fishing areas, by month, 1957. In thousands of pounds with the number of interviewed trips indicated in parentheses.

| Area Month | Pt. Judith Offshore | Pt. Judith Inshore | No Man's | Ipswich | Stellwagen | Nausets |
|---------------|------------------------|-----------------------|----------|---------|------------|---------|
| January | 13 (62) | 6 (39) | | 13 (2) | 13 (3) | |
| February | 18 (110) | 10 (41) | 16 (3) | 8 (2) | | |
| March | 14 (91) | 17 (34) | 32 (32) | 8 (3) | | |
| April | 35 (246) | 6 (78) | 46 (67) | 4 (1) | | 2 (1) |
| May | 30 (125) | 8 (200) | 67 (106) | 10 (6) | | 40 (42) |
| June | 37 (138) | 10 (256) | 68 (70) | 14 (9) | 26 (2) | 52 (49) |
| July | 27 (135) | 5 (149) | 64 (76) | 14 (5) | 35 (9) | 54 (41) |
| August | 36 (142) | 7 (198) | 66 (59) | 17 (5) | 25 (12) | 65 (42) |
| September | 32 (123) | 8 (169) | 60 (70) | 24 (3) | 39 (48) | 94 (2) |
| October | 32 (117) | 8 (153) | 67 (26) | 23 (18) | 36 (169) | 61 (15) |
| November | 28 (169) | 6 (260) | 75 (26) | 10 (21) | 21 (105) | 62 (13) |
| December | 14 (23) | 4 (230) | 35 (7) | 6 (6) | 14 (38) | 18 (3) |



