

UNITED STATES DEPARTMENT OF THE INTERIOR

Stewart L. Udall, *Secretary*

Charles F. Luce, *Under Secretary*

Stanley A. Cain, *Assistant Secretary for Fish and Wildlife and Parks*

FISH AND WILDLIFE SERVICE, Clarence F. Pautzke, *Commissioner*

BUREAU OF COMMERCIAL FISHERIES, Harold E. Crowther, *Acting Director*

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Fishery Leaflet 597

Washington, D.C. 20240

December 1966

LIST OF FISHERY BULLETINS OF THE U.S. FISH AND WILDLIFE SERVICE

Fishery Bulletins are technical reports on scientific investigations of fishery biology. The Bulletin of the United States Fish Commission was begun in 1881; it became the Bulletin of the Bureau of Fisheries in 1904 and the Fishery Bulletin of the Fish and Wildlife Service in 1941. Separates were issued as documents through volume 46; the last document was No. 1103. Beginning with volume 47 in 1931 and continuing through volume 62 in 1963, each separate appeared as a numbered bulletin. A new system began in 1963 with volume 63 in which papers are bound together in a single issue of the bulletin instead of being issued individually. Some bulletins are for sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402; all are distributed free to libraries and to a limited number of scientific cooperators. (Articles preceded by asterisks are out of print, but can be borrowed from some public and college libraries.)

- | <u>No.</u> | <u>Title</u>                                                                                                                                                                                                 |
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| *1.        | Temperature and the shell movements of oysters. By A. E. Hopkins. 1931, vol. 47, i + p. 1-14, 10 figs., 2 tables.                                                                                            |
| *2.        | Fluctuations in the supply of herring ( <u>Clupea pallasii</u> ) in Southeastern Alaska. By George A. Rounsefell. 1931, vol. 47, ii + p. 15-56, 26 figs., 14 tables.                                         |
| *3.        | Factors influencing the spawning and setting of oysters in Galveston Bay, Tex. By A. E. Hopkins. 1931, vol. 47, ii + p. 57-83, 18 figs., 3 tables.                                                           |
| *4.        | Studies on the oyster drill ( <u>Urosalpinx cinerea</u> , Say). By Henry Federighi. 1931, vol. 47, i + p. 85-115, 7 figs., 8 tables.                                                                         |
| *5.        | Juvenile and sex characters of <u>Evorthodus lyricus</u> (fam. Gobiidae). By Isaac Ginsburg. 1931, vol. 47, i + p. 117-124, 2 figs., 1 table.                                                                |
| *6.        | Effects of pulp mill pollution on oysters. By A. E. Hopkins, Paul S. Galtsoff, and H. C. McMillin. 1931, vol. 47, i + p. 125-186, 50 figs., 16 tables.                                                       |
| *7.        | Statistical review of the Alaska salmon fisheries. Part III: Prince William Sound, Copper River, and Bering River. By Willis H. Rich and Edward M. Ball. 1932, vol. 47, i + p. 187-247, 10 figs., 13 tables. |
| *8.        | Sensory stimulation of the oyster, <u>Ostrea virginica</u> , by chemicals. By A. E. Hopkins. 1932, vol. 47, i + p. 249-261, 11 figs., 1 table.                                                               |



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| *9.        | Fluctuations in the supply of herring, <u>Clupea pallasii</u> , in Prince William Sound, Alaska. By George A. Rounsefell and Edwin H. Dahlgren. 1932, vol. 47, i + p. 263-291, 15 figs., 15 tables.                                                                          |
| *10.       | Contributions to the early life histories of sixty-two species of fishes from Lake Erie and its tributary waters. By Marie Poland Fish. 1932, vol. 47, i + p. 293-398, 144 figs., 4 tables.                                                                                  |
| *11.       | Salmon-tagging experiments in Alaska, 1930. By Willis H. Rich. 1932, vol. 47, i + p. 399-406, 1 fig., 3 tables.                                                                                                                                                              |
| *12.       | Limnological studies of Karluk Lake, Alaska, 1926-1930. By C. Juday, Willis H. Rich, G. I. Kemmerer, and Albert Mann. 1932, vol. 47, i + p. 407-436, 6 figs., 14 tables.                                                                                                     |
| *13.       | Statistical review of the Alaska salmon fisheries. Part IV: Southeastern Alaska. By Willis H. Rich and Edward M. Ball. 1933, vol. 47, i + p. 437-673, 55 figs., 30 tables.                                                                                                   |
| *14.       | Preliminary report on the life history of the common shrimp, <u>Penaeus setiferus</u> (Linn.). By F. W. Weymouth, Milton J. Lindner, and W. W. Anderson. 1933, vol. 48, i + p. 1-26, 11 figs., 4 tables.                                                                     |
| *15.       | The homing instinct and age at maturity of pink salmon ( <u>Oncorhynchus gorbuscha</u> ). By Frederick A. Davidson. 1934, vol. 48, i + p. 27-39, 10 figs., 1 table.                                                                                                          |
| *16.       | Reproduction and development of whittings or kingfishes, drums, spot, croaker, and weak-fishes or sea trouts, family Sciaenidae, of the Atlantic coast of the United States. By Samuel F. Hildebrand and Louella E. Cable. 1934, vol. 48, i + p. 41-117, 44 figs., 5 tables. |
| *17.       | Races of herring, <u>Clupea pallasii</u> , in Southeastern Alaska. By George A. Rounsefell and Edwin H. Dahlgren. 1935, vol. 48, i + p. 119-141, 10 figs., 9 tables.                                                                                                         |
| *18.       | Effects of crude oil pollution on oysters in Louisiana waters. By Paul S. Galtsoff, Herbert F. Prytherch, Robert O. Smith, and Vera Koehring. 1935, vol. 48, i + p. 143-210, 20 figs., 23 tables.                                                                            |
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| *20.       | Supplemental notes on fishes of the Gulf of Maine. By Henry B. Bigelow and William C. Schroeder. 1936, vol. 48, i + p. 319-343.                                                                                                                                              |
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| *25.       | The migrations of pink salmon ( <u>Oncorhynchus gorbuscha</u> ) in the Clarence and Sumner Straits regions of Southeastern Alaska. By Frederick A. Davidson and Leroy S. Christey. 1938, vol. 48, i + p. 643-666, 5 figs., 8 tables.                                         |
| *26.       | The geographic distribution and environmental limitations of the Pacific salmon (genus <u>Oncorhynchus</u> ). By Frederick A. Davidson and Samuel J. Hutchinson. 1938, vol. 48, i + p. 667-692, 9 figs., 2 tables.                                                           |

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| *27. | The salmon and salmon fisheries of Swiftsure Bank, Puget Sound, and the Fraser River. By George A. Rounsefell and George B. Kelez. 1938, vol. 49, i + p. 693-823, 29 figs., 58 tables.                                                                              |
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| *29. | Effect of currents on distribution and survival of the eggs and larvae of the haddock ( <u>Melanogrammus aeglefinus</u> ) on Georges Bank. By Lionel A. Walford. 1938, vol. 49, i + p. 1-73, 50 figs., 5 tables.                                                    |
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| *31. | Natural history and method of controlling the starfish ( <u>Asterias forbesi</u> , Desor). By Paul S. Galtsoff and Victor L. Loosanoff. 1939, vol. 49, i + p. 75-132, 32 figs., 24 tables.                                                                          |
| *32. | The history and development of the fisheries of the Columbia River. By Joseph A. Craig and Robert L. Hacker. 1940, vol. 49, iii + p. 133-216, 16 figs., 27 tables.                                                                                                  |
| *33. | Spawning and setting of oysters in Long Island Sound in 1937, and discussion of the method for predicting the intensity and time of oyster setting. By Victor L. Loosanoff and James B. Engle. 1940, vol. 49, i + p. 217-255, 11 figs., 18 tables.                  |
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| *35. | Studies on the striped bass ( <u>Roccus saxatilis</u> ) of the Atlantic Coast. By Daniel Merriman. 1941, vol. 50, ii + p. 1-77, 36 figs., 23 tables.                                                                                                                |
| *36. | The young of some marine fishes taken in lower Chesapeake Bay, Virginia, with special reference to the gray sea trout, <u>Cynoscion regalis</u> (Bloch). By John C. Pearson. 1941, vol. 50, ii + p. 79-102, 26 figs., 3 tables.                                     |
| *37. | The salmon runs of the Columbia River in 1938. By Willis H. Rich. 1942, vol. 50, ii + p. 103-147, 8 figs., 26 tables.                                                                                                                                               |
| *38. | Biology of the Atlantic mackerel ( <u>Scomber scombrus</u> ) of North America. Part 1: Early life history, including the growth, drift, and mortality of the egg and larval populations. By Oscar Elton Sette. 1943, vol. 50, ii + p. 149-237, 18 figs., 21 tables. |
| *39. | Fluctuations in abundance of red salmon, <u>Oncorhynchus nerka</u> (Walbaum), of the Karluk River, Alaska. By Joseph T. Barnaby. 1944, vol. 50, ii + p. 237-295, 9 figs., 43 tables.                                                                                |
| *40. | The whitefish fishery of Lakes Huron and Michigan with special reference to the deep-trap-net fishery. By John Van Oosten, Ralph Hile, and Frank W. Jobes. 1946, vol. 50, ii + p. 297-394, 23 figs., 63 tables.                                                     |
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| *42. | Effect of different concentrations of micro-organisms on the feeding of oysters ( <u>O. virginica</u> ). By V. L. Loosanoff and James B. Engle. 1947, vol. 51, ii + p. 31-57, 25 figs., 3 tables.                                                                   |
| *43. | Ecological and physiological studies of the effect of sulfate pulp mill wastes on oysters in the York River, Virginia. By Paul S. Galtsoff, Walter A. Chipman, Jr., James B. Engle, and Howard N. Calderwood. 1947, vol. 51, ii + p. 59-186, 71 figs., 20 tables.   |
| *44. | Contributions to the biology of the Pacific tunas. By Milner B. Schaefer and John C. Marr. 1948, vol. 51, ii + p. 187-206, 10 figs., 2 tables.                                                                                                                      |

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| 45.        | Age and growth of immature rosefish ( <u>Sebastes marinus</u> ) in the Gulf of Maine and off western Nova Scotia. By Alfred Perlmutter and George M. Clarke. 1949, vol. 51, ii + p. 207-228, 21 figs., 14 tables. 15¢.                      |
| *46.       | Notes on the Philippine frigate mackerels, family Thunnidae, genus <u>Auxis</u> . By Charles B. Wade. 1949, vol. 51, ii + p. 229-240, 10 figs., 7 tables.                                                                                   |
| 47.        | Definitions of body dimensions used in describing tunas. By John C. Marr and Milner B. Schaefer. 1949, vol. 51, ii + p. 241-244, 1 fig. 5¢.                                                                                                 |
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| *49.       | Biology of the Atlantic mackerel ( <u>Scomber scombrus</u> ) of North America. Part II--Migrations and habits. By Oscar Elton Sette. 1950, vol. 51, ii + p. 251-358, 21 figs., 31 tables.                                                   |
| 50.        | On the effectiveness of spermatozoa of the pink salmon ( <u>Oncorhynchus gorbuscha</u> ) at varying distances from point of dispersal. By Richard F. Shuman. 1950, vol. 51, i + p. 359-363, 1 fig., 1 table. 10¢.                           |
| *51.       | Fluctuations in abundance of Columbia River chinook salmon ( <u>Oncorhynchus tshawytscha</u> ), 1935-45. By Ralph P. Silliman. 1950, vol. 51, ii + p. 365-383, 11 figs., 16 tables. 15¢.                                                    |
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| *57.       | Larvae of tuna and tuna-like fishes from Philippine waters. By Charles B. Wade. 1951, vol. 51, ii + p. 445-485, 28 figs., 20 tables.                                                                                                        |
| *58.       | An annotated bibliography on the biology of Pacific tunas. By Bell M. Shimada. 1951, vol. 52, ii + p. 1-58. 30¢.                                                                                                                            |
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| *63.       | Postlarval <u>Neothunnus macropterus</u> , <u>Auxis thazard</u> , and <u>Euthynnus lineatus</u> from the Pacific coast of Central America. By Giles W. Mead. 1951, vol. 52, iii + p. 121-127, 5 figs., 2 tables. 15¢.                       |

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64.	Juvenile oceanic skipjack from the Phoenix Islands. By Bell M. Shimada. 1951, vol. 52, i + p. 129-131, 1 table. 10¢.
65.	Estimation of age and growth of yellowfin tuna ( <i>Neothunnus macropterus</i> ) in Hawaiian waters by size frequencies. By Harvey L. Moore. 1951, vol. 52, ii + p. 133-149, 14 figs., 11 tables. 15¢.
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*71.	Flounders of the genus <i>Paralichthys</i> and related genera in American waters. By Isaac Ginsburg. 1952, vol. 52, ii + p. 267-351, 4 figs., 9 tables, 15 plates.
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*74.	Fishes of the Gulf of Maine. By Henry B. Bigelow and William C. Schroeder. 1953, vol. 53, viii + p. 1-577, 288 figs.
75.	Fluctuations in the fisheries of State of Michigan waters of Green Bay. By Ralph Hile, George F. Lunger, and Howard J. Buettner. 1953, vol. 54, ii + p. 1-34, 15 figs., 25 tables. 25¢.
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*77.	Spawning of yellowfin tuna in Hawaiian waters. By Fred C. June. 1953, vol. 54, ii + p. 47-64, 11 figs., 6 tables.
*78.	Estimation of growth rate in animals by marking experiments. By Milton J. Lindner. 1953, vol. 54, i + p. 65-69, 3 figs.
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| *85.  | Determining age of Atlantic shad from their scales. By James P. Cating. 1953, vol. 54, ii + p. 187-199, 12 figs., 1 table.                                                                                                                                                         |
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| *89.  | Gulf of Mexico - its origin, waters, and marine life. Prepared by American scientists under the sponsorship of the Fish and Wildlife Service, United States Department of the Interior. Coordinated by Paul S. Galtsoff. 1954, vol. 55, xiv + 604 p., 74 figs., 34 tables. \$3.25. |
| 90.   | Studies of Georges Bank haddock. Part II: Prediction of the catch. By William F. Royce and Howard A. Schuck. 1954, vol. 56, ii + p. 1-6, 1 fig., 4 tables. 10¢.                                                                                                                    |
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| *102. | Limnological effects of fertilizing Bare Lake, Alaska. By Philip R. Nelson and W. T. Edmondson. 1955, vol. 56, ii + p. 415-436, 6 figs., 5 tables.                                                                                                                                 |
| *103. | Limnological study of the lakes in Convict Creek Basin, Mono County, California. By Norman Reimers, John A. Maciolek, and Edwin P. Pister. 1955, vol. 56, iii + p. 437-503, 25 figs., 37 tables, 10 maps. 50¢.                                                                     |
| 104.  | The gas bladder and its relation to the inner ear in <u>Sardinops caerulea</u> and <u>Engraulis mordax</u> . By Charles P. O'Connell. 1955, vol. 56, ii + p. 505-533, 15 figs. 25¢.                                                                                                |



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