

New NMFS Scientific Reports Published

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NOAA Technical Report NMFS SSRF-717. Colton, John B., Jr., and Ruth R. Byron. "**Gulf of Maine-Georges Bank ichthyoplankton collected on ICNAF larval herring surveys September 1971-February 1975.**" November 1977. 35 p.

ABSTRACT

The families, genera, and species of all larval fishes are tabulated and the abundance, length frequencies, and distribution of 12 species and 2 families are summarized utilizing data collected on 8 ichthyoplankton surveys of the Gulf of Maine-Georges Bank area. The segregation of coastal and oceanic species north and south of the coastal/slope water boundary during December is evidenced in a comparison of the distribution of upper 100-m integrated temperature and Atlantic herring, Myctophidae, and Paralepididae larvae. All larval barracudinas and lanternfishes occurred in areas where the integrated temperature was above 11° and 13°C, respectively. Ninety-one percent of positive larval herring tows were in areas where the integrated temperature was below 13°C.

NOAA Technical Report NMFS

Circular 406. Ho, Ju-Shey. "**Marine flora and fauna of the northeastern United States. Copepoda: Lernaepodidae and Sphyriidae.**" December 1977. 14 p.

ABSTRACT

This manual includes an introduction to the general biology, a glossary, an illustrated key, an annotated systematic list, a selected bibliography, and an index to the 16 species of lernaepodoid Copepoda parasitic on marine fishes of the northeastern United States.

NOAA Technical Report NMFS SSRF-718. Squire, James L., Jr. "**Surface currents as determined by drift card releases over the continental shelf off central and southern California.**" December 1977. 12 p.

ABSTRACT

During March 1964 through February 1966, 8,320 plastic drift cards were released at selected points from an aircraft to measure surface current drift over two areas: From the coast to about 48 n.mi. off central California between Point Arena and Point Sur; and from the coast to about 90 n.mi. off southern California between Point Arguello and Punta Salsipuedes, Baja California, Mexico. The recovery rate was 3.5 percent in the central area and 5.7 percent in the southern area. An average 79.4 percent of the recoveries were found within 2 weeks following the date of release. Results lend support to studies concluded by earlier investigators. The distribution of the direction from which drift cards were returned increased the evidence for the presence of an eddy off the coast between San Francisco and

Monterey Bay during May through July, and of the large gyre and associated southern California countercurrent south of Point Conception during April through August and to a lesser extent in October and December.

NOAA Technical Report NMFS Circular 407. Williams, Austin B., and Roland L. Wigley. "**Distribution of decapod Crustacea off northeastern United States based on specimens at the Northeast Fisheries Center, Woods Hole, Massachusetts.**" December 1977. 44 p.

ABSTRACT

Distributional and environmental summaries are given in an annotated checklist, supplemented by charts, graphs, and tables, for 131 species of marine decapod Crustacea found between the Gulf of Maine and near the mouth of Chesapeake Bay. The geographical area lies mainly on the continental shelf with some extension beyond this to submarine canyons and the upper continental slope. The area lies within two climate zones which influence the distribution of decapods, cold temperate in the north and mild temperate in the south. The list is thought to be reasonably complete for benthic but not for pelagic species. Benthic samples collected with several types of gear by vessels of the National Marine Fisheries Service (NMFS) during the past 25 years provided the records that are charted. Data from samples on which this report is based are stored in computer files, and selected specimens are preserved in collections at the NMFS Northeast Fisheries Center, Woods Hole, Mass.

NOAA Technical Report NMFS Circular 408. Shomura, Richard S. (editor). "**Collection of tuna baitfish papers.**" December 1977. 167 p.

ABSTRACT

An invitational workshop on tuna baitfish problems, cosponsored by the National Marine Fisheries Service and the University of Hawaii Sea Grant College, was held at the Honolulu Laboratory, Southwest

Fisheries Center, NMFS, 4-6 June 1974. Issues addressed dealt with the problem of securing adequate supplies of bait to support the development or expansion of skipjack tuna, *Katsuwonus pelamis*, fishing in the central and western tropical Pacific Ocean. Three workshop sessions focused attention on: 1) Natural stocks of baitfish, 2) culture of suitable baitfish species, and 3) transportation and holding bait and substitute baits. Sessions were preceded by a general review of baitfish problems and a discussion on the criteria for a good baitfish species. Twenty papers from this workshop are presented in this volume.

NOAA Technical Report NMFS SSRF-719. Thompson, Perry A., Jr., and Thomas D. Leming. "Seasonal description of winds and surface and bottom salinities and temperatures in the northern Gulf of Mexico, October 1972 to January 1976." February 1978. 44 p.

ABSTRACT

Seasonal surface and bottom salinities and temperatures in the northern Gulf of Mexico are described. The area surveyed was between Mobile Bay, Ala. (long. 88°00'W), and Atchafalaya Bay, La. (long. 91°30'W), from 5 to 50 fathoms (9 to 91 m).

NOAA Technical Report NMFS Circular 409. Ho, Ju-Shey. "Marine flora and fauna of the northeastern United States. Copepoda: Cyclopoidea parasitic on fishes." February 1978. 12 p.

ABSTRACT

This manual includes an introduction on the general biology, an illustrated key, an annotated systematic list, a selected bibliography, and an index to the 19 species of cyclopoid copepods parasitic on marine fishes of the northeastern United States.

NOAA Technical Report NMFS SSRF-723. Mattson, Chester R., and Bruce L. Wing. "Ichthyoplankton

composition and plankton volumes from inland coastal waters of southeastern Alaska, April-November 1972." April 1978. 11 p.

ABSTRACT

Eighteen families of fish were represented in 119 plankton samples taken on monthly cruises from April to November 1972 in southeastern Alaska. Fifteen kinds of larval fish were identified to species. Abundance of larval fish, fish eggs, and total plankton biomass peaked in May and declined through the summer. Walleye pollock (family Gadidae) were the most abundant larvae in May and June and were more concentrated in large channels than in small bays. Osmeridae and Bathylagidae were the second and third most abundantly represented families; peak abundance for both was in June and July. Other families with distinct peaks in abundance were Agonidae and Ammodytidae in May; Cottidae, Cyclopteridae, Stichaeidae, and Pleuronectidae in June; and Scorpaenidae in July. Small numbers of Bathymasteridae were present from May through July. Myctophidae, Zoarcidae, and Hexagrammidae did not show distinct changes in seasonal abundance. Clupeidae, Gasterosteidae, Pholidae, and Ptilichthyidae were too rare in the catches to exhibit seasonal abundance. Calanoid copepods and phytoplankton made up most of the plankton retained by 0.333-mm mesh nets.

NOAA Technical Report NMFS SSRF-722. Nicholson, William R. "Gulf menhaden, *Brevoortia patronus*, purse seine fishery: Catch, fishing activity, and age and size composition, 1964-73." March 1978. 8 p.

ABSTRACT

The menhaden purse seine fishery in the Gulf of Mexico, primarily for Gulf menhaden, *Brevoortia patronus*, extends from about early April to early October. From 1964 to 1973 the catch fluctuated between 317,000 and 728,000 t and the number of vessels ranged from 65 to

82. Larger and faster refrigerated vessels replaced most of the smaller nonrefrigerated vessels and modern methods of fishing were adopted. Population levels were high and there were no large fluctuations in year class abundance. Age-1 and -2 fish supplied from 95 to 99 percent of the catch by weight. Over 97 percent of the fish were between 120 and 225 mm fork length. The mean age and size generally were slightly greater in the center of the fishery (central and eastern Louisiana) than in the eastern (Mississippi) and western areas (western Louisiana and Texas). Mean age decreased as the season progressed.

Atlas Examines Heat Budgets of Tropical Atlantic and Pacific

Publication of "The heat budget of the tropical Atlantic and eastern Pacific Oceans" has been announced by The University of Wisconsin Press. Authors Stefan Hastenrath, Professor of Meteorology, and Peter Lamb, Project Associate, are both with the Department of Meteorology, University of Wisconsin-Madison.

A sequel to the "Climatic atlas of the tropical Atlantic and eastern Pacific Oceans", published in January 1977, the latest volume is also based on a 60-year (1911-70) record of 7,000,000 sets of ship observations processed by one degree square areas. Monthly and annual maps are presented of net surface shortwave, net surface longwave, and net surface all-wave radiation; sensible and latent heat flux; evaporation; and net oceanic gain. The atlas also discusses the large- and small-scale heat budget features associated with atmospheric-ocean conditions, such as the near-equatorial convergence and cloudiness bands, cold and warm ocean currents, and coastal upwelling.

Spiral bound, this 9- \times 18-inch, 104-page volume is available from The University of Wisconsin Press, Box 1379, Madison, WI 53701 for \$35.00.