



NOAA Technical Report NMFS SSRF-729

References for the Identification of Marine Invertebrates on the Southern Atlantic Coast of the United States

Richard E. Dowds

April 1979

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U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Marine Fisheries Service

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- 649 Distribution of forage of skipjack tuna (*Euthynnus pelamis*) in the eastern tropical Pacific. By Maurice Blackburn and Michael Laurs. January 1972, iii + 16 p., 7 figs., 3 tables. For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.
- 650 Effects of some antioxidants and EDTA on the development of rancidity in Spanish mackerel (*Scomberomorus maculatus*) during frozen storage. By Robert N. Farragut. February 1972, iv + 12 p., 6 figs., 12 tables. For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.
- 651 The effect of pre-mortem stress, holding temperatures, and freezing on the biochemistry and quality of skipjack tuna. By Ladell Crawford. April 1972, iii + 23 p., 3 figs., 4 tables. For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.
- 653 The use of electricity in conjunction with a 12.5-meter (Headrope) Gull of Mexico shrimp trawl in Lake Michigan. By James E. Ellis. March 1972, iv + 10 p., 11 figs., 4 tables. For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.
- 654 An electric detector system for recovering internally tagged menhaden, genus *Brevoortia*. By R. O. Parker, Jr. February 1972, iii + 7 p., 3 figs., 1 app. table. For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.
- 655 Immobilization of fingerling salmon and trout by decompression. By Doyle F. Sutherland. March 1972, iii + 7 p., 3 figs., 2 tables. For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.
- 656 The calico scallop, *Argopecten gibbus*. By Donald M. Allen and T. J. Costello. May 1972, iii + 19 p., 9 figs., 1 table. For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.
- 657 Making fish protein concentrates by enzymatic hydrolysis. A status report on research and some processes and products studied by NMFS. By Malcolm B. Hale. November 1972, v + 32 p., 15 figs., 17 tables, 1 app. table. For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.
- 658 List of fishes of Alaska and adjacent waters with a guide to some of their literature. By Jay C. Quast and Elizabeth L. Hall. July 1972, iv + 17 p. For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.
- 659 The Southeast Fisheries Center bionumeric code. Part I. Fishes. By Harvey R. Bullis, Jr., Richard B. Roe, and Judith C. Gathm. July 1972, xi + 95 p., 2 figs. For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.
- 660 A freshwater fish electro-motivator (FFEM) its characteristics and operation. By James E. Ellis and Charles C. Hoopes. November 1972, iii + 11 p., 2 figs.
- 661 A review of the literature on the development of skipjack tuna fisheries in the central and western Pacific Ocean. By Frank J. Hester and Tamo Otsu. January 1973, iii + 13 p., 1 fig. For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.
- 662 Seasonal distribution of tunas and billfishes in the Atlantic. By John P. Wise and Charles W. Davis. January 1973, iv + 24 p., 13 figs., 4 tables. For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.
- 663 Fish larvae collected from the northeastern Pacific Ocean and Puget Sound during April and May 1967. By Kenneth D. Waldron. December 1972, iii + 16 p., 2 figs., 1 table, 4 app. tables. For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.
- 664 Tagging and tag-recovery experiments with Atlantic menhaden, *Brevoortia tyrannus*. By Richard L. Kroger and Robert L. Drytoos. December 1972, iv + 11 p., 4 figs., 12 tables. For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.
- 665 Larval fish survey of Humboldt Bay, California. By Maxwell B. Eldridge and Charles F. Bryan. December 1972, iii + 8 p., 8 figs., 1 table. For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.
- 666 Distribution and relative abundance of fishes in Newport River, North Carolina. By William R. Turner and George N. Johnson. September 1973, iv + 23 p., 1 fig., 13 tables. For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.
- 667 An analysis of the commercial lobster (*Homarus americanus*) fishery along the coast of Maine, August 1966 through December 1970. By James C. Thomas. June 1973, v + 57 p., 18 figs., 11 tables. For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.
- 668 An annotated bibliography of the conner, *Tautoglabrus adspersus* (Wilbaum). By Fredric M. Serchuk and David W. Frame. May 1973, ii + 43 p. For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.
- 669 Subpoint prediction for direct readout meteorological satellites. By L. E. Eber. August 1973, iii + 7 p., 2 figs., 1 table. For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.
- 670 Unharvested fishes in the U.S. commercial fishery of western Lake Erie in 1969. By Harry D. Van Meter. July 1973, iii + 11 p., 6 figs., 6 tables. For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.
- 671 Coastal upwelling indices, west coast of North America, 1946-71. By Andrew Bakun. June 1973, iv + 103 p., 6 figs., 3 tables, 45 app. figs. For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.



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Juanita M. Kreps, Secretary

National Oceanic and Atmospheric Administration

Richard A. Frank, Administrator

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National Marine Fisheries Service

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CONTENTS

Introduction	1
Invertebrates - General	2
Ecological information	3
General	3
Benthos and the sargassum community	3
Plankton	4
Phylum Porifera	5
Phylum Cnidaria	5
Classes Hydrozoa and Scyphozoa	5
Class Anthozoa	6
Phylum Ctenophora	7
Phylum Platyhelminthes	7
Class Turbellaria	7
Class Trematoda	8
Class Cestoda	9
Phylum Nemertea	9
Phylum Gnathostomulida	9
Phylum Gastrotricha	9
Phylum Nematoda	10
Phylum Nematomorpha	10
Phylum Kinorhyncha	11
Phylum Rotifera	11
Phylum Acanthocephala	11
Phylum Annelida	11
Class Polychaeta	13
Class Myzostomaria	13
Class Archiannelida	13
Class Oligochaeta	13
Class Hirudinea	13
Phylum Sipuncula	13
Phylum Echiura	14
Phylum Mollusca	14
General	14
Class Gastropoda	15
Class Scaphopoda	16
Class Aplacophora	17
Class Polyplacophora	17
Class Pelecypoda	17
Class Cephalopoda	18
Phylum Arthropoda	18
Class Pycnogonida	18
Class Merostomata	19
Classes Chilopoda and Diplopoda	19
Class Arachnida	19
Class Insecta	19
Class Crustacea	20
Subclass Branchiopoda	20
Subclass Cephalocarida	20
Subclass Mystacocarida	20
Subclass Ostracoda	20
Subclass Copepoda	21
Subclass Branchiura	23
Subclass Cirripedia	23
Subclass Malacostraca	23
Superorder Peracarida	23
Order Mysidacea	23
Order Isopoda	24

Order Cumacea	24
Order Amphipoda	25
Order Tanaidacea	25
Superorder Hoplocarida	25
Superorder Eucarida	25
Order Euphausiacea	25
Order Decapoda	26
Phylum Pogonophora	27
Phylum Priapulida	27
Phylum Tardigrada	27
Phylum Entoprocta	28
Phylum Ectoprocta	28
Phylum Brachiopoda	28
Phylum Phoronida	28
Phylum Echinodermata	29
Phylum Chaetognatha	30
Phylum Hemichordata	30
Phylum Chordata	30
Subphylum Cephalochordata	30
Subphylum Urochordata	31
Author index	32
Systematic index	36

References for the Identification of Marine Invertebrates on the Southern Atlantic Coast of the United States

RICHARD E. DOWDS¹

ABSTRACT

This collection of 638 citations provides an entry to the taxonomic literature on invertebrates of the continental shelf and estuaries from the Chesapeake Bay to northeastern Florida. Many of the citations are annotated and most include a list of North Carolina libraries in which they can be found. Author and systematic indices are provided.

INTRODUCTION

This bibliography has been compiled to provide an entry to the taxonomic literature on invertebrates of the continental shelf and estuaries from Chesapeake Bay to northeastern Florida. I have emphasized summary works covering large groups; the bibliographies of such works will lead one to the more specialized and detailed literature of those groups. Ecological material has been included when it seemed particularly valuable. I recognize that, even within these limitations, this compilation is incomplete; useful works may have been overlooked and new ones are continually being published.

In many cases the citation is followed by a list of North Carolina libraries in which it can be found. For books, these listings are complete only for the libraries of the University of North Carolina, Zoology Department, Chapel Hill, and the Institute of Marine Sciences, Morehead City. For journals, however, I have been able to record the holdings of the libraries listed below thanks to two invaluable publications: Littleton, I. T., and G. W. Houser (editors). 1967. *North Carolina Union List of Scientific Serials*, North Carolina State University, Raleigh; and Moreland, M. C. (editor). 1973. *Marine literature: Serial publications in libraries of the coastal plains region, Part II: North Carolina*, Coastal Plains Center for Marine Development Services, Wilmington.

Libraries

UNC-ZOOL	Zoology Department, University of North Carolina at Chapel Hill
UNC-MAIN	L. R. Wilson Library, University of North Carolina at Chapel Hill

IMS	Institute of Marine Sciences, University of North Carolina, Morehead City
DUKE-BIOL	Biology-Forestry Library, Duke University, Durham
DUML	Duke University Marine Laboratory, Beaufort
NCSU	D. H. Hill Library, North Carolina State University, Raleigh
NMFS	National Marine Fisheries Service Laboratory, Beaufort
ALL	refers to all of the above libraries.

Occasionally I have included other libraries in the listings, namely:

UNC-BOT	Botany Department, University of North Carolina at Chapel Hill
UNC-GEOL	Geology Department, University of North Carolina at Chapel Hill
UNC-HEALTH	Health Affairs Library, University of North Carolina at Chapel Hill
DUKE-GEN	W. R. Perkins Library, Duke University, Durham
DUKE-MED	Medical Center Library, Duke University, Durham
UNC-WILM	University of North Carolina at Wilmington.

The work of compiling this list of references has been aided by the efforts of many people. Numerous references have been obtained from earlier lists compiled by the Duke University Marine Laboratory and Deborah M. Dexter and from several of the books listed under Invertebrates - General. References, advice, and clerical help have been contributed by Lawrence Burns, A. F. Chestnut, Michael Crezee, Patricia Finn, Richard S.

¹University of North Carolina, Institute of Marine Sciences, Morehead City, NC 28557, and Department of Zoology, Chapel Hill, NC 27514; present address: 24 Briarwood Trail, Weymouth, MA 02188.

Fox, Thomas H. Fox, Stephen L. Gardiner, Jeffrey D. Green, J. Thompson Hunter, Charles E. Jenner, Eric Lindgren, David Nixon, Hugh J. Porter, Frank J. Schwartz, Sarah G. Tomlinson, S. Ann Watkins, Austin B. Williams, and W. Herbert Wilson.

INVERTEBRATES - GENERAL

CARRIKER, M. R., coordinator.

Marine flora and fauna of the northeastern United States. (IMS, NMFS, NCSU, DUKE-BIOL. A series of pictorial keys being published in the National Marine Fisheries Service Circulars. Only a few issues have been completed but many more are anticipated. They cover the region from Maine to Virginia but many should have utility further south.)

GOSNER, K. L.

1971. Guide to identification of marine and estuarine invertebrates, Cape Hatteras to the Bay of Fundy. John Wiley & Sons, Inc., N.Y., 693 p. (IMS, UNC-ZOOL, DUML. Although its illustrations could be better and many southern species are not included, it should be useful for non-specialists. The extensive keys are particularly valuable for determining higher level taxa.)

HULINGS, N. C. (editor).

1971. Proceedings of the First International Conference on Meiofauna. *Smithson. Contrib. Zool.* 76, 205 p. (UNC-ZOOL, NMFS. Contains much systematic and ecological information concerning animals which live among sand grains. Some individual papers are listed elsewhere in this bibliography.)

HULINGS, N. C., and J. S. GRAY.

1971. A manual for the study of meiofauna. *Smithson. Contrib. Zool.* 78, 84 p. (IMS, UNC-ZOOL, NMFS. Techniques for collection and preservation with some references to systematic papers.)

KIRBY-SMITH, W. W., and I. E. GRAY.

1971. A checklist of common marine animals of Beaufort, North Carolina. *Duke Univ. Mar. Lab., Mimeogr.*, 33 p. (DUML. Common invertebrates listed by habitat.)

McERLEAN, A. J., C. KERBY, and M. L. WASS (editors).

1972. Biota of the Chesapeake Bay. *Chesapeake Sci.* 13 Suppl.:S1-S197. (ALL except IMS and UNC-MAIN. Summaries of the taxonomic and ecological knowledge of groups found in Chesapeake Bay with discussion of biological criteria for assessing environmental change. Neither species descriptions nor keys are included, but these can be found in some of the references cited. Some individual papers are listed elsewhere in this bibliography.)

MINER, R. W.

1950. Field book of seashore life. G. P. Putnam's Sons, N.Y., 888 p. (IMS, UNC-ZOOL, DUML.

Coverage extends only to Cape Hatteras and includes only common species. Some systematic nomenclature is out of date. No keys are provided. In spite of these shortcomings, the wide scope and good drawings make it useful for inexperienced students.)

PRATT, H. S.

1935. A manual of the common invertebrate animals (exclusive of insects). McGraw-Hill Book Co., Inc., N.Y., 854 p. (UNC-ZOOL. Short descriptions of taxa from phylum to species, and keys to taxa from class to family or genus. Emphasis is on species from eastern United States. Some nomenclature is out of date.)

SMITH, R. I. (editor).

1964. Keys to marine invertebrates of the Woods Hole Region. *Syst.-Ecol. Prog., Mar. Biol. Lab., Woods Hole, Mass.*, 208 p. (UNC-ZOOL, IMS. Does not include many southern species, but is useful for higher level taxa. Quality of chapters variable.)

WASS, M. L. (editor).

1972. A check-list of the biota of lower Chesapeake Bay with inclusions from the upper bay and the Virginia Sea. *Va. Inst. Mar. Sci., Spec. Sci. Rep.* 65, 290 p. (IMS. Includes a bibliography.)

The following works are useful for placing an unknown planktonic animal in the proper higher level group (phylum, class, order). References in the phylum listings are usually necessary for identification to lower levels.

DAVIS, C. C.

1955. The marine and fresh-water plankton. Michigan State Univ. Press, East Lansing, 562 p. (UNC-ZOOL, DUKE-BIOL, DUML. Contains keys to phyla and some lower taxa, and illustrations of representatives of many groups.)

JOHNSTONE, J., A. SCOTT, and H. C. CHADWICK.

1924. The marine plankton. University Press, Liverpool, 194 p. (DUKE-BIOL. Of some value although most species are British.)

NEWELL, G. E., and R. C. NEWELL.

1963. Marine plankton: a practical guide. Hutchinson Educational Ltd., Lond., 207 p. (UNC-ZOOL. Short descriptions and illustrations, but no keys, of British species. Useful for determining higher level taxa.)

VANNUCCI, M.

1959. Catalogue of marine larvae. No. 1. Foreword, the concept of larva, the fundamental types of larvae. *Inst. Oceanogr., Univ. São Paulo, São Paulo, Brazil*, 44 p. (The first number in a series that is intended eventually to provide descriptions and illustrations of all species of marine larvae. This general introduction has descriptions and illustrations of the major kinds of larvae.)

WICKSTEAD, J. H.

1965. An introduction to the study of tropical

plankton. Hutchinson & Co., Ltd., Lond., 160 p. (UNC-ZOOL. Contains short descriptions and illustrations of representatives of many groups, but no keys.)

ECOLOGICAL INFORMATION

General

CARRIKER, M. R.

1950. A preliminary list of the literature on the ecology of the estuaries, with emphasis on the middle Atlantic coast of the United States. Rutgers Univ., New Brunswick, Mimeogr., 52 p.

HEDGPETH, J. W. (editor).

1957. Treatise on marine ecology and paleoecology. I. Ecology. Geol. Soc. Am. Mem. 67, 1296 p. (IMS, UNC-ZOOL, NCSU, DUKE-GEN. Contains a wealth of diverse information including short annotated bibliographies of major groups.)

LIVINGSTONE, R., JR.

1965. A preliminary bibliography with KWIC index on the ecology of estuaries and coastal areas of the eastern United States. U.S. Fish Wildl. Serv., Spec. Sci. Rep. Fish. 507, 352 p. (IMS, DUKE-BIOL, NCSU.)

ODUM, H. T., B. J. COPELAND, and E. A. McMAHAN (editors).

1974. Coastal ecological systems of the United States. Conservation Foundation, Washington, D.C., 4 vols. (Descriptions of marine and estuarine ecosystems in all parts of the United States. The thoroughness of chapters is variable.)

PEARSE, A. S.

1936. Estuarine animals at Beaufort, North Carolina. J. Elisha Mitchell Sci. Soc. 52:174-222. (ALL except UNC-ZOOL and IMS. List of species with distribution information.)

Benthos and the Sargassum Community

ADAMS, J. A.

1960. A contribution to the biology and postlarval development of the sargassum fish, *Histrio histrio* (Linnaeus), with a discussion of the Sargassum complex. Bull. Mar. Sci. Gulf Caribb. 10:55-82. (ALL except UNC-MAIN and NMFS. Includes a list of invertebrates associated with *Sargassum*.)

BISHOP, S. H.

1960. Outer banks benthic fauna of the tidal flats in Pamlico Sound, N.C. M.A. Thesis, Duke Univ., Durham, 103 p.

BOESCH, D. F.

1972. Species diversity of marine macrobenthos in the Virginia area. Chesapeake Sci. 13:206-211. (ALL except UNC-MAIN.)

BRETT, C. E.

1963. Relationships between marine invertebrate infauna distribution and sediment type distribution in Bogue Sound, North Carolina. Ph.D. Thesis, Univ. North Carolina, Chapel Hill, 202 p. (UNC-GEOL, IMS.)

CAIN, T. D.

1972. Additional epifauna of a reef off North Carolina. J. Elisha Mitchell Sci. Soc. 88:79-82. (ALL except UNC-ZOOL.)

CALDER, D. R., and M. L. BREHMER.

1967. Seasonal occurrence of epifauna on test panels in Hampton Roads, Virginia. Int. J. Oceanol. Limnol. 1:149-164. (NCSU, NMFS, UNC-WILM.)

CERAME-VIVAS, M. J., and I. E. GRAY.

1966. The distribution pattern of benthic invertebrates of the continental shelf off North Carolina. Ecology 47:260-270. (ALL except UNC-MAIN. Includes a list of species and analysis of their distributions.)

CORY, R. L.

1967. Epifauna of the Patuxent River estuary, Maryland, for 1963 and 1964. Chesapeake Sci. 8:71-89. (ALL except UNC-MAIN.)

DAY, J. H., J. G. FIELD, and M. P. MONTGOMERY.

1971. The use of numerical methods to determine the distribution of benthic fauna across the continental shelf of North Carolina. J. Anim. Ecol. 40:93-125. (ALL except UNC-MAIN.)

DEXTER, D. M.

1969. Structure of an intertidal sandy-beach community in North Carolina. Chesapeake Sci. 10:93-98. (ALL except UNC-MAIN. Discusses diversity and niches of the six most abundant species.)

DÖRJES, J.

1972. Georgia coastal region, Sapelo Island, U.S.A.: VII. Distribution and zonation of macrobenthic animals. Senckenb. Marit. 4:183-216. (Results of a survey along three transects extending from the beach about 15 km seaward.)

FENCHEL, T. M., and R. J. RIEDL.

1970. The sulfide system: a new biotic community underneath the oxidized layer of marine sand bottoms. Mar. Biol. 7:255-268. (ALL except UNC-MAIN and DUKE-BIOL.)

FREY, D. G.

1946. Oyster bars of the Potomac River. U.S. Fish Wildl. Serv., Spec. Sci. Rep. 32, 93 p. (NMFS. Lists common marine invertebrates.)

FREY, R. W., and J. D. HOWARD.

1969. A profile of biogenic sedimentary structures in a Holocene barrier island-salt marsh complex, Georgia. Trans. Gulf Coast Assoc. Geol. Soc. 19:427-444. (UNC-GEOL, NCSU. Surveys burrowing animals in marine habitats around Sapelo Island.)

HACKETT, H. E.

1963. A preliminary list of the organisms of the

- pelagic sargassum complex. Mimeogr., 4 p. (DUML-Ref. Museum.)
- MARSH, G. A.
1973. The *Zostera* epifaunal community in the York River, Virginia. Chesapeake Sci. 14:87-97. (ALL except UNC-MAIN. Lists species in order of abundance and discusses affinity, diversity, periodicity, and trophic relationships.)
- McCLOSKEY, L. R.
1970. The dynamics of the community associated with a marine scleractinian coral. Int. Rev. Gesamten Hydrobiol. 55:13-81. (NCSU, DUKE-BIOL, UNC-ZOOL, DUML. Includes a list of animals in the community.)
- McDOUGALL, K. D.
1943. Sessile marine invertebrates of Beaufort, North Carolina. Ecol. Monogr. 13:321-374. (UNC-ZOOL, NCSU, DUKE-BIOL, DUML. Concerns settling rates, growth, and seasonal fluctuations of fouling organisms.)
- MENZIES, R. J., O. H. PILKEY, B. W. BLACKWELDER, D. DEXTER, P. HULING, and L. McCLOSKEY.
1966. A submerged reef off North Carolina. Int. Rev. Gesamten Hydrobiol. 51:393-431. (NCSU, DUKE-BIOL, UNC-ZOOL, DUML. Includes lists of species, underwater photographs, hydrography, and sediment information.)
- MENZIES, R. J., and R. D. TURNER.
1957. The distribution and importance of marine wood borers in the United States. Am. Soc. Test. Mater., Spec. Tech. Publ. 200:3-21. (NCSU, DUKE-BIOL.)
- PATTON, W. K.
1972. Studies on the animal symbionts of the gorgonian coral, *Leptogorgia virgulata* (Lamarck). Bull. Mar. Sci. 22:419-431. (ALL except UNC-MAIN.)
- PEARSE, A. S.
1947. On the occurrence of ectoconsortes on marine animals at Beaufort, N.C. J. Parasitol. 33:453-458. (UNC-ZOOL, DUKE-BIOL, NCSU, IMS-Repr., DUML.)
- PEARSE, A. S., H. J. HUMM, and G. W. WHARTON.
1942. Ecology of sand beaches at Beaufort, N.C. Ecol. Monogr. 12:136-190. (UNC-ZOOL, NCSU, DUKE-BIOL, DUML. Lists species in various habitats and discusses seasonal progression and adaptations to beach life.)
- PEARSE, A. S., and L. G. WILLIAMS.
1951. The biota of the reefs off the Carolinas. J. Elisha Mitchell Sci. Soc. 67:133-161. (ALL except UNC-ZOOL, IMS. A list of species.)
- SCHWARTZ, F. J., and H. J. PORTER.
1977. Fishes, macroinvertebrates, and their ecological interrelationships with a calico scallop bed off North Carolina. Fish. Bull., U.S. 75:427-446. (ALL except UNC-MAIN. Includes a list of species with their seasonal abundance.)
- STEPHENSON, T. A., and A. STEPHENSON.
1952. Life between tide-marks in North America, II. Northern Florida and the Carolinas. J. Ecol. 40:1-49. (UNC-BOT, NCSU, DUKE-BIOL.)
- SUTCLIFFE, W. H.
1947. Animals associated with marine algae on the jetty of Cape Lookout, North Carolina. M.A. Thesis, Duke Univ., Durham, 26 p. (DUKE-BIOL.)
- SUTHERLAND, J. P., and R. H. KARLSON.
1973. Succession and seasonal progression in the fouling community at Beaufort, North Carolina. In Proceedings of the Third International Congress on Marine Corrosion and Fouling, p. 906-929. Northwestern Univ. Press, Evanston.
- SWEDMARK, B.
1964. The interstitial fauna of marine sand. Biol. Rev. (Camb.) 39:1-42. (ALL except UNC-MAIN.)
- TENORE, K. R.
1972. Macrobenthos of the Pamlico River estuary, North Carolina. Ecol. Monogr. 42:51-69. (ALL except UNC-MAIN. See UNC Water Resour. Res. Inst. Rep. 40 for a longer account of this work.)
- VERNBERG, F. J., and W. B. VERNBERG.
1970. Lethal limits and the zoogeography of the faunal assemblages of coastal Carolina waters. Mar. Biol. (Berl.) 6:26-32. (ALL except UNC-MAIN and DUKE-BIOL. Determined in the lab, the upper and lower lethal thermal limits of species from the Gulf Stream and inshore waters off Cape Hatteras.)
- WELLS, H. W.
1961. The fauna of oyster beds, with special reference to the salinity factor. Ecol. Monogr. 31:239-266. (ALL except UNC-MAIN. Lists 303 species and relates their distribution to physical factors. Salinity tolerances of 20 species were determined in the laboratory.)
- WELLS, H. W., M. J. WELLS, and I. E. GRAY.
1964. The calico scallop community in North Carolina. Bull. Mar. Sci. Gulf Caribb. 14:561-593. (ALL except UNC-MAIN. Includes a list of species and discussion of geographical distribution and reproductive condition.)
- WIRTEINSON, M. E.
1964. Epifaunal associations on living bay scallops from North Carolina. M.A. Thesis, Duke Univ., Durham, 103 p. (DUKE-BIOL.)

Plankton

- COWLES, R. P.
1930. A biological study of the offshore waters of Chesapeake Bay. U.S. Bur. Fish., Bull. 46:277-381. (UNC-ZOOL.)
- CRONIN, L. E., J. C. DAIBER, and E. M. HULBERT.
1962. Quantitative seasonal aspects of zooplankton in the Delaware River estuary. Chesapeake

Sci. 3:63-93. (ALL except UNC-MAIN. Discusses occurrence of major species.)

DEEVEY, G. B.

1960. The zooplankton of the surface waters of the Delaware Bay region. Bull. Bingham Oceanogr. Collect., Yale Univ. 17(2):5-53. (IMS, UNC-ZOOL, DUKE-BIOL, NMFS.)

GRICE, G. D., and A. D. HART.

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MAYER, A. G.

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MILLER, R. J.

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RIEGER, R. M.

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McMAHON, J. W.

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1964. Monogenetic trematodes from some Chesapeake Bay fishes. Part II. The superfamily Diclidophoroidea. *Chesapeake Sci.* 5:124-133. (ALL except UNC-MAIN. Nine species described and five illustrated.)

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PRICE, E. W.

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CHANDLER, A. C.

1954. Cestoda. In Galtsoff, P. S. (coordinator), Gulf of Mexico - its origin, waters, and marine life. U.S. Fish Wildl. Serv., Fish. Bull. 55:351-353. (ALL except UNC-MAIN. Annotated list of species.)

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COE, W. R.

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KIRSTEUER, E.

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McCAUL, W. E.

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RIEDL, R. J.

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BRUNSON, R. B.

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- RUPPERT, E. E.
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1970. Interstitial gastrotrichs in some south Florida beaches. *Ophelia* 7:113-138. (UNC-ZOOL, DUKE-BIOL, NCSU, DUML. Primarily species descriptions, illustrations, and distributional information; plus an excellent list of references.)
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- PÉREZ FARFANTE, I.
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- PORTER, H. J.
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- POWELL, A. W. B.
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- WORMELLE, R. L.
1962. A survey of the standing crop of plankton of the Florida Current. VI. A study of the distribution of the pteropods of the Florida Current. Bull. Mar. Sci. Gulf Caribb. 12:95-136. (ALL except UNC-MAIN. Distribution and abundance of 29 species and information on vertical distribution.)

Class SCAPHOPODA

- DALL, W. H.
1889. (See Phylum Mollusca, General.)
- EMERSON, W. K.
1962. A classification of the scaphopod mollusks. J. Paleontol. 36:461-482. (UNC-GEOL, DUKE-GEN, NCSU, IMS-Repr.)
- HENDERSON, J. B.
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Class APLACOPHORA

HEATH, H.

1918. Solenogastres from the eastern coast of North America. Mem. Mus. Comp. Zool., Harvard Coll. 45:187-264. (NCSU. Genus and species descriptions and illustrations.)

HYMAN, L. H.

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Class POLYPLACOPHORA

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TURNER, R. D.

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Repr. A list of species with distribution information.)

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- VOSS, N. A.
1969. A monograph of the Cephalopoda of the North Atlantic. The family Histioteuthidae. Bull. Mar. Sci. 19:713-867. (ALL except UNC-MAIN. Includes a key, species descriptions, and distribution data.)

PHYLUM ARTHROPODA

Most members of the Classes Chilopoda, Diplopoda, Insecta, and Arachnida are terrestrial or freshwater animals. Only a few (for example, the members of the insect genus *Halobates* and most of the mite family Halacaridae) are wholly marine; however, many others spend a portion of their life in marine or brackish waters, or may occur there accidentally. Still others occur on the land bordering the ocean or estuaries. In addition to the references listed under the classes, the following will be useful for identifying some of these animals:

- EDMONDSON, W. T. (editor).
1959. Ward and Whipple's freshwater biology. 2nd ed. John Wiley & Sons, Inc., N.Y., 1248 p. (UNC-ZOOL, IMS.)
- PENNAK, R. W.
1953. Fresh-water invertebrates of the United States. Ronald Press, N.Y., 769 p. (UNC-ZOOL, IMS.)

Class PYCNOGONIDA

- HEDGPETH, J. W.
1948. The Pycnogonida of the western North Atlantic and the Caribbean. Proc. U.S. Natl. Mus. 97:157-342. (ALL except UNC-ZOOL. Very useful; includes good keys and descriptions.)
- KRAEUTER, J. N.
1973. Pycnogonida from Georgia, U. S. A. J. Nat. Hist. 7:493-498. (IMS, NCSU. A list of species with distribution data.)
- MCCLOSKEY, L. R.
1967. New and little-known benthic pycnogonids from North Carolina. J. Nat. Hist. 1:119-134. (IMS, NCSU. Descriptions and illustrations of five species.)
1973. Marine flora and fauna of the Northeastern United States. Pycnogonida. U.S. Dep. Commer., NOAA Tech. Rep. NMFS Circ.-386, 12 p. (IMS, NMFS, NCSU, DUKE-BIOL. Based largely on Hedgpeth 1948, above. The pictorial key is helpful for nonspecialists, although it must be used with caution because some southeastern U.S. species are not included.)

Class MEROSTOMATA

GOSNER, K. L.

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LOCHHEAD, J. H.

1950. *Xiphosura polyphemus*. In F. A. Brown, Jr. (editor), Selected invertebrate types, p. 360-381, 584-585. John Wiley & Sons, Inc., N.Y. (IMS, UNC-ZOOL. Includes a small amount of ecological information.)

SHUSTER, C. N., JR.

1950. Observations on the natural history of the American horseshoe crab, *Limulus polyphemus*. In Third report on investigations of methods of improving shellfish resources of Massachusetts. Mass. Dep. Conserv., Div. Mar. Fish., Boston, p. 18-23.; also, 1952. Collect. Repr. Woods Hole Oceanogr. Inst. 564:18-23. (ALL except NCSU. Short, with information on feeding, growth, migration, and breeding.)

Classes CHILOPODA and DIPLOPODA

GOSNER, K. L.

1971. Page 396. (See Invertebrates - General.)

Class ARACHNIDA

BARNES, B. M., and R. D. BARNES.

1954. The ecology of the spiders of maritime drift lines. Ecology 35:25-35. (ALL except DURL and UNC-MAIN.)

BARNES, R. D.

1953. The ecological distribution of spiders in non-forest maritime communities at Beaufort, North Carolina. Ecol. Monogr. 23:315-337. (ALL except UNC-MAIN.)

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GERTSCH, W. J.

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GOSNER, K. L.

1971. Pages 405-412. (See Invertebrates - General.)

HOFF, C. C.

1958. List of the pseudoscorpions of North America north of Mexico. Am. Mus. Novit. 1875, 50 p. (UNC-ZOOL, DUKE-BIOL, NCSU. Includes a key to genera and distribution information.)

MUCHMORE, W. B.

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NEWELL, I. M.

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Class INSECTA

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CHENG, L.

1974. Notes on the ecology of the oceanic insect *Halobates*. Mar. Fish. Rev. 36(2):1-7. (ALL except UNC-ZOOL, DURL, DUKE-BIOL. Distribution, general biology, predators, and prey.)

CHENG, L. (editor).

1976. Marine insects. North-Holland Publ. Co., Amst., 581 p. (Covers many aspects of numerous insect groups. Also brief coverage of other arthropod classes.)

DAVIS, L. V., and I. E. GRAY.

1966. Zonal and seasonal distribution of insects in North Carolina salt marshes. Ecol. Monogr. 36:275-295. (ALL except UNC-MAIN. Insects were collected in salt marsh vegetation. They found no evidence that any spent time immersed in seawater.)

GOSNER, K. L.

1971. Pages 412-422. (See Invertebrates - General.)

KING, W. V., G. H. BRADLEY, C. N. SMITH, and W. C. McDUFFIE.

1960. A handbook of the mosquitoes of the southeastern United States. U.S. Dep. Agric., Agric. Handb. 173, 188 p. (UNC-MAIN, DUKE-GEN, NCSU. Keys, short descriptions, and illustrations.)

SAVILOV, A. I.

1967. Oceanic insects of the genus *Halobates* (Hemiptera, Gerridae) in the Pacific. Oceanology 7:252-260. (UNC-GEOL, DURL, NMFS. General biology of the genus.)

SCHELTEMA, R. A.

1968. Ocean insects. Oceanus 14(3):8-12. (UNC-ZOOL, IMS, NCSU, DURL. An informative popular-press account. Says *Halobates micans* is the only oceanic insect found in the Atlantic Ocean.)

STOJANOVICH, C. J.

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TESKEY, H. J.

1969. Larvae and pupae of some eastern North American Tabanidae (Diptera). Mem. Entomol. Soc. Can. 63, 147 p. (NCSU, UNC-ZOOL. Keys and species descriptions.)

USINGER, R. L.

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Class CRUSTACEA

Subclass Branchiopoda

BAKER, H. M.

1938. Studies on the Cladocera of Monterey Bay. Proc. Calif. Acad. Sci. 23:311-365. (UNC-MAIN, DUKE-BIOL, NCSU. Discusses the worldwide distribution of several species of Cladocera; provides detailed species descriptions.)

BOSCH, H. F., and W. R. TAYLOR.

1968. Marine cladocerans in the Chesapeake Bay estuary. Crustaceana 15:161-164. (ALL except UNC-MAIN and NMFS.)

GOSNER, K. L.

1971. Pages 441-442. (See Invertebrates - General.)

LOCHHEAD, J. H.

1954. On the distribution of a marine cladoceran, *Penilia avirostris* Dana (Crustacea, Branchiopoda), with a note on its reported bioluminescence. Biol. Bull. (Woods Hole), 107:92-105. (ALL except UNC-MAIN.)

Subclass Cephalocarida

HESSLER, R. R., and H. L. SANDERS.

1973. Two new species of *Sandersiella* (Cephalocarida), including one from the deep sea. Crustaceana 24:181-196. (ALL except UNC-MAIN and NMFS. Includes a taxonomic and zoogeographic overview of the subclass.)

SANDERS, H. L.

1963. The Cephalocarida: functional morphology,

larval development, comparative external anatomy. Mem. Conn. Acad. Arts Sci. 15:1-80. (IMS-Repr.)

Subclass Mystacocarida

HALL, J. R.

1971. An autecological study of *Derocheilocaris typica* Pennak and Zinn (Crustacea, Mystacocarida). Ph.D. Thesis, Univ. North Carolina, Chapel Hill. (UNC-ZOOL, UNC-MAIN.)

1972. Aspects of the biology of *Derocheilocaris typica* (Crustacea: Mystacocarida). II. Distribution. Mar. Biol. (Berl.) 12:45-52. (ALL except DUKE-BIOL.)

HALL, J. R., and R. R. HESSLER.

1971. Aspects in the population dynamics of *Derocheilocaris typica* (Mystacocarida, Crustacea). Vie Milieu 22:305-326. (DUML, NMFS.)

HESSLER, R. R.

1971. Biology of the Mystacocarida: A prospectus. In N. C. Hulings (editor), p. 87-90 (see Invertebrates - General).

HESSLER, R. R., and H. L. SANDERS.

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PENNAK, R. W., and D. J. ZINN.

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Subclass Ostracoda

BAKER, J. H., and N. C. HULINGS.

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COHEN, A. C., and L. S. KORNICKER.

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DARBY, D. G.

1965. Ecology and taxonomy of Ostracoda in the vicinity of Sapelo Island, Georgia. In R. V. Kesling, D. G. Darby, R. N. Smith, and D. D. Hall, Four reports of ostracod investigations conducted under National Science Foundation Project GB-26, Report 2, 76 p. Univ. Michigan Mus. Paleontol., Ann Arbor.

DEEVEY, G. B.

1968. Pelagic ostracods of the Sargasso Sea off Ber-

- muda: Description of species, seasonal and vertical distribution. Peabody Mus. Nat. Hist., Yale Univ., Bull. 26, 125 p. (DUKE-BIOL, UNC-MAIN, IMS. Includes keys down to genus and descriptions of 43 species, 36 of them in the genus *Conchoecia*.)
- HULINGS, N. C.
1966. Marine Ostracoda from the western North Atlantic Ocean off the Virginia coast. Chesapeake Sci. 7:40-56. (ALL except UNC-MAIN. Includes some species descriptions and illustrations.)
1967. A review of the Recent marine podocypid and platycypid ostracods of the Gulf of Mexico. Contrib. Mar. Sci. 12:80-100. (ALL except UNC-MAIN.)
1967. Marine Ostracoda from the western North Atlantic Ocean between Cape Hatteras, North Carolina, and Jupiter Inlet, Florida. Bull. Mar. Sci. 17:629-659. (ALL except UNC-MAIN. Includes a list of species and illustrations.)
1971. Summary and current status of the taxonomy and ecology of benthic Ostracoda including interstitial forms. In N. C. Hulings (editor), p. 91-96 (see Invertebrates - General).
- KING, C. E., and L. S. KORNICKER.
1970. Ostracoda in Texas bays and lagoons: an ecologic study. Smithson. Contrib. Zool. 24, 92 p. (NMFS, IMS, UNC-ZOOL.)
- KLIE, W.
1944. Ostracoda. Cons. Int. Explor. Mer, Fiches Identification Zooplankton 5. (DUML, NMFS, DUKE-BIOL.)
- KORNICKER, L. S.
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- NEALE, J. W. (editor).
1969. The taxonomy, morphology and ecology of Recent Ostracoda. Oliver and Boyd, Edinb., 553 p.
- POULSEN, E. M.
1962. Ostracoda-Myodocopa. Part I. Cypridiniformes-Cypridinidae. Dana Rep. 57, 414 p. (Includes a key to the four families recognized in suborder Cypridiniformes and a key to the genera of subfamily Cypridininae. Poulsen has three more taxonomic ostracod papers in Dana Rep. 65, 75, and 84.)
- SANDBERG, P. A.
1964. The ostracod genus *Cyprideis* in the Americas. Stockholm Contrib. Geol. 12:1-178. (UNC-GEOL.)
- SKOGSBERG, T.
1920. Studies on marine ostracods. 1: Cypridinids, halocyprids and polycypids. Zool. Bidr. Uppsala Suppl. 1:1-784. (UNC-ZOOL, DUKE-BIOL.)
- TRESSLER, W. L.
1940. Ostracoda from Beaufort, North Carolina, sand beaches. Am. Midl. Nat. 24:365-368. (UNC-ZOOL, NCSU, DUKE-BIOL. Lists eight species with distribution notes.)

Subclass Copepoda

- BOWMAN, T. E.
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AUTHOR INDEX

ABBOTT, R. T.	14, 15	BUSH, L.	7
ADAMS, J. A.	3	BYCHOWSKY, B. E.	8
AGUAYO, C. G.	15	BYNUM, K. H.	25
ALLWEIN, J.	5	CAIN, T. D.	3
ALVARINO, A.	30	CALDER, D. R.	3, 5, 6
ANDERSON, H. G., JR.	8	CALMAN, W. T.	24
ANDREWS, J.	14	CARGO, D. G.	6
ANDREWS, J. D.	17	CARLGREN, O.	7
BAKER, H. M.	20	CARRIKER, M. R.	2, 3
BAKER, J. H.	20	CAUSEY, D.	21
BANNER, A. H.	23	CERAME-VIVAS, M. J.	3, 23, 29
BARDEN, A. A., JR.	13	CHACE, F. A., JR.	25, 26
BARGMANN, H. E.	6	CHADWICK, H. C.	2
BARNARD, J. L.	24	CHANDLER, A. C.	9
BARNES, B. M.	19	CHANLEY, P. E.	11, 17
BARNES, R. D.	19	CHEN, C.	15
BARTSCH, P.	17	CHENG, L.	19
BASSLER, R. S.	28	CHESTNUT, A. F.	6, 17
BATTLE, F. V.	19	CHITWOOD, B. G.	10
BAYER, F. M.	6, 30	CLARK, A. H.	29
BEQUAERT, J. C.	15	CLARK, A. M.	29
BERNER, L., JR.	16	CLARK, H. L.	29
BERRILL, N. J.	31	CLARK, R. B.	11
BERRY, S. S.	18	CLARKE, M. R.	18
BERVIUS, B.	11	CLAUSEN, C.	6
BIERMAN, J. A.	29	CLENCH, W. J.	15, 17
BIGELOW, H. B.	5, 30	COE, W. R.	9
BIRD, S. O.	14	COHEN, A. C.	20
BISHOP, J. W.	7	COLLETTE, B. B.	22
BISHOP, S. H.	3	CONES, H. N., JR.	6
BLACKWELDER, B. W.	4	CONOVER, R. J.	21
BLAKE, J. A.	11	COOK, D. G.	13
BOADEN, P. J.	9	COPELAND, B. J.	3
BOESCH, D. F.	3	CORRÉA, D. D.	9
BOSCH, H. F.	20	CORY, R. L.	3, 30
BOSCHMA, H.	23	COULL, B. C.	21
BOSCHUNG, H. T.	30	COWLES, R. P.	4
BOSS, K. J.	17	CRESSEY, R. F.	21, 22, 23
BOURDON, R.	24	CREZÉE, M.	7
BOUSFIELD, E. L.	24	CRITES, J. L.	10
BOWMAN, T. E.	21, 24, 25	CRONIN, L. E.	4
BRADLEY, G. H.	19	CULVER, S.	29
BRATTEGARD, T.	23, 27	CUTLER, E. B.	13
BREHMER, M. L.	3	DAIBER, J. C.	4
BRETT, C. E.	3, 14	DALES, R. P.	11
BRINKHURST, R. O.	13	DALL, W. H.	14, 16, 28
BROOKS, W. K.	28, 31	DAMKAER, D. M.	24
BRUNSON, R. B.	9	DANIELS, B. A.	13
BUCKERMANN, A.	31	DARBY, D. G.	20
BULLIS, H. R., JR.	26	DAVIS, C. C.	2
BULLOCK, W. L.	11	DAVIS, J. M.	11
BUMPUS, D. F.	30	DAVIS, L. V.	19
BURBANCK, W. D.	24	DAVIS, W. P.	29
BURNS, B. R.	24	DAY, J. H.	3, 11
BURRELL, V. G.	7	de CONINCK, L.	10
BURTON, M.	5	DEEVEY, G. B.	5, 20
BUSH, K. J.	17	DEICHMANN, E.	7, 29

de LAUBENFELS, M. W.	5	HAVEN, D. S.	6
DEXTER, D. M.	3, 4, 25	HEATH, H.	17
DILLON, W. A.	8, 23	HECHTEL, G. L.	5
DÖRJES, J.	3	HEDGPETH, J. W.	3, 7, 18
DOWNEY, M. E.	29	HEINLE, D. R.	22
DUDLEY, D. L.	26	HENDERSON, J. B.	16
EDMONDS, S. J.	14	HENRY, D. P.	23
EDMONDSON, W. T.	11, 18	HERMAN, S. S.	5
EINARSSON, H.	25	HESSLER, R. R.	20
ELDRIDGE, D.	23	HIGGINS, R. P.	11, 27
EMERSON, W. K.	16	HILLMAN, N. S.	15
EMIG, C. C.	28	HO, J.-S.	22
FAUCHALD, K.	12	HOFF, C. C.	19
FAUVEL, P.	12	HOLTHUIS, L. B.	26
FEELEY, J. B.	25	HOPE, W. D.	10
FELL, H. B.	29	HOPKINS, H. S.	31
FENCHEL, T. M.	3	HOPKINS, S. H.	5
FERGUSON, F. F.	7, 8, 13	HOPPER, B. E.	10
FIELD, J. G.	3	HOUBRICK, R. S.	15
FIELD, L. R.	7	HOWARD, J. D.	3
FISHER, L. R.	25	HUBBS, C. L.	31
FISHER, W. K.	13, 14	HUIZINGA, H. W.	11
FOSTER, N. M.	12	HULBERT, E. M.	4
FOX, R. S.	25	HULING, P.	4
FOYO, M.	22	HULINGS, N. C.	2, 20, 21
FRANKENBERG, D.	24, 30	HUMES, A. G.	22
FRANZ, D. R.	15	HUMM, H. J.	4
FRASER, C. M.	4	HUMMON, W. D.	9
FRASER, J. H.	30, 31	HYMAN, L. H.	7, 17, 30
FREY, D. G.	3	ILLG, P. L.	22
FREY, R. W.	3	JACOT, A. P.	14
GALTSOFF, P. S.	17	JAMES, B. M.	25
GAMO, S.	24	JAMIESON, B. G. M.	13
GARDINER, S. L.	12	JENNER, C. E.	15
GEORGE, W. C.	5	JOHNSON, C. W.	14, 17
GEROULD, J. H.	13	JOHNSTONE, J.	2
GERTSCH, W. J.	19	JONES, E. R.	13
GORDAN, J.	23	JOSEPH, E. B.	6
GOSNER, K. L.	2, 7, 10, 14, 17, 18, 19, 20, 24, 30, 31	JOUIN, C.	13
GRANT, G. C.	30	JUDY, M. H.	26
GRAVELY, F. H.	12	KARLSON, R. H.	4
GRAY, I. E.	2, 3, 4, 5, 12, 19, 28, 29	KEPNER, W. A.	8
GRAY, J. S.	2	KERBY, C.	2
GRICE, G. D.	5	KING, C. E.	21
GRUNER, H. E.	25	KING, W. V.	19
GUNTER, G.	30	KIRBY-SMITH, W. W.	2
GURNEY, R.	26	KIRSTEUER, E.	9
HACKETT, H. E.	3	KLIE, W.	21
HACKNEY, A. G.	14	KNIGHT-JONES, E. W.	13
HAIG, J.	26	KOEHLER, R.	29
HALEY, A. J.	11	KORATHA, K. J.	8
HALL, J. R.	20	KORNICKER, L. S.	20, 21
HALPERN, J. A.	29	KRAEUTER, J. N.	6, 18
HAMOND, R.	22	KRAMP, P. L.	6
HANSEN, H. J.	25	KRUCZYNSKI, W. L.	26
HARGIS, W. J., JR.	8	LAGAALJ, R.	28
HARIMA, H.	31	LANG, K.	22, 25
HART, A. D.	5	LARSON, R. J.	6
HARTMAN, O.	12	LASSEKRE, P.	13
HARTMAN, W. D.	5	LAWLER, A. R.	8, 13

LEVIN, N.	9	NIELSEN, C.	27, 28
LINCICOME, D. R.	11	NUTTING, C. C.	6
LINDGREN, E. W.	22, 27	ODUM, H. T.	3
LINTON, E.	8	OLD, M. C.	5
LITTLER, J. W.	7	OLSEN, L. S.	10
LIVINGSTONE, R., JR.	3	ORR, A. P.	22
LLEWELLYN, L. C.	13	OSBORN, R. C.	28
LOCHHEAD, J. H.	19, 20	OTT, J. A.	10
LONG, E. R.	28	OVERSTREET, R. M.	8, 13
LUNZ, G. R., JR.	25	OWRE, H. B.	22, 30
MADRUGA, J. E.	30	PAINÉ, R. T.	28
MAGALHAES, H.	15	PARR, A. E.	6
MANGUM, C. P.	12	PATTON, W. K.	4
MANNING, R. B.	25, 26	PAWSON, D. L.	29
MANTER, H. W.	8	PEARSE, A. S.	3, 4, 7, 8, 9, 22
MARCUS, ERNST	15, 16	PENNAK, R. W.	18, 20
MARCUS, EVELINE	15, 16	PEQUEGNAT, L. H.	26
MARKHAM, J. C.	24	PÉREZ FARFANTE, I.	16, 26, 30
MARSH, G. A.	4	PETTIBONE, M. H.	12
MARSHALL, S. M.	22	PFITZENMEYER, H. T.	14
MATURO, F. J. S., JR.	28	PHELAN, T.	29
MAUCHLINE, J.	25	PHILLIPS, P. J.	9
MAYER, A. G.	6, 7	PICKFORD, G. E.	18
McCAIN, J. C.	25	PIERCE, E. L.	30
McCAUL, W. E.	9	PILKEY, O. H.	4
McCLOSKEY, L. R.	4, 18, 23, 24, 27	PILSBRY, H. A.	23
McCRARY, A. B.	5, 12	PINSCHMIDT, W. C., JR.	26
McDOUGALL, K. D.	4	PLOUGH, H. H.	31
McDUFFIE, W. C.	19	POLLOCK, L. W.	27, 28
McEACHRAN, J. D.	26	PORTER, H. J.	4, 9, 14, 15, 16, 17
McERLEAN, A. J.	2	POULSEN, E. M.	21
McGINTY, M. M.	5, 27	POWELL, A. W. B.	16
McMAHAN, E. A.	3	PRATT, H. S.	2
McMAHON, J. W.	8	PRENANT, M.	13
MEEHAN, O. L.	23	PRICE, E. W.	8
MENZIES, R. J.	4, 24	PRICE, K. S., JR.	26
MERRILL, A. S.	17	PROVENZANO, A. J., JR.	26
METCALF, M. M.	31	RAMAZZOTTI, G.	28
MEYER, M. C.	13	RATHBUN, M. J.	26
MIHURSKY, J. A.	5	RENAUD-MORNANT, J.	28
MILLER, M. A.	25	RHODES, W. R., JR.	12
MILLER, R. J.	7	RICHARDSON, H.	24, 25
MINER, R. W.	2	RIEDL, R. J.	3, 9
MONNIOT, C.	31	RIEGER, R. M.	7, 8
MONNIOT, F.	31	ROBERTSON, R.	16
MONTGOMERY, M. P.	3	ROBSON, G. C.	18
MOORE, H. B.	6	ROGICK, M. D.	28
MORALES-ALAMO, R.	8	ROPER, C. F. E.	18
MORRIS, P. A.	14	ROSEWATER, J.	17
MORRISON, J. P. E.	17	ROSS, A.	23
MORTENSEN, T.	29	ROWE, F. W. E.	29
MUCHMORE, W. B.	19	RUCKER, J. B.	28
MUSICK, J. A.	26	RUPPERT, E. E.	10
MYERS, F. J.	11	RUSSEL, H. D.	16
MYERS, T. D.	16	RUSSELL, F. S.	6
NEALE, J. W.	21	RYLAND, J. S.	28
NELSON, T. C.	7	SANDBERG, P. A.	21
NEWELL, G. E.	2	SANDERS, H. L.	20
NEWELL, I. M.	19	SANDIFER, P. A.	26
NEWELL, R. C.	2	SANTOS, S. L.	12

SAVILOV, A. I.	19	TOTTON, A. K.	6
SAWYER, R. T.	13	TRESSLER, W. L.	21
SCHELTEMA, R. A.	19	TURNER, E. C., JR.	19
SCHMITT, W. L.	27	TURNER, R. D.	4, 15, 16, 17
SCHOEPFER-STERRER, C.	10	TYLER, J.	15
SCHULTZ, G. A.	24	USINGER, R. L.	20
SCHULTZ, L. P.	6	VAN CLEAVE, H. J.	11
SCHWARTZ, F. J.	4, 6	van der LAND, J.	27
SCOTT, A.	2	VAN ENGEL, W. A.	23
SETZLER, E. M.	6	VAN NAME, W. G.	31
SHIER, D. E.	28	VANNUCCI, M.	2
SHUSTER, C. N., JR.	19	VERNBERG, F. J.	4
SKINNER, R.	8	VERNBERG, W. B.	4
SKOGSBERG, T.	21	VERRILL, A. E.	17, 18
SMITH, C. N.	19	VOLKMANN-ROCCO, B.	22
SMITH, L. C.	17	VOSS, G. L.	18
SMITH, M.	15	VOSS, N. A.	18
SMITH, R. I.	2, 12	WARD, H. B.	10
SOUTHWARD, E. C.	27	WARD, H. L.	11
STEPHEN, A. C.	14	WARMKE, G. L.	15
STEPHENSON, A.	4	WASS, M. L.	2, 22, 25, 30
STEPHENSON, J.	13	WELLS, H. W.	4, 5, 12, 16
STEPHENSON, T. A.	4, 7	WELLS, M. J.	4, 5, 16
STERRER, W.	8, 9	WESTHEIDE, W.	12
STIREWALT, M. A.	8	WHARTON, G. W.	4
STOCK, J. H.	22	WICKSTEAD, J. H.	2
STOJANOVICH, C. J.	19	WIESER, W.	10
STUNKARD, H. W.	8	WIGLEY, R. L.	24
SÚAREZ-CAABRO, J. A.	30	WILLIAMS, A.	28
SUTCLIFFE, W. H.	4, 5, 22	WILLIAMS, A. B.	17, 24, 27
SUTHERLAND, J. P.	4	WILLIAMS, L. G.	4
SWEDMARK, B.	4, 16	WILLIAMSON, D. I.	27
TATTERSALL, O. S.	24	WILSON, C. B.	14, 22
TATTERSALL, W. M.	24, 25	WILSON, H. V.	5
TAYLOR, D.	16	WIRTENSON, M. E.	4
TAYLOR, W. R.	20	WIRTH, W. W.	20
TEAL, J. M.	10	WOLFE, D. A.	15
TENORE, K. R.	4	WOLFE, N.	15
TESCH, J. J.	16	WORMELLE, R. L.	15, 16
TESKEY, H. J.	19	YAMAGUTI, S.	8, 9, 10, 11, 22
THANE-FENCHEL, A.	10	YOUNG, R. E.	18
THOMAS, L. P.	30	ZINN, D. J.	20
THOMAS, R. F.	18	ZULLO, V. A.	23
TIMM, R. W.	10	ZWERNER, D. E.	8, 23
TOMLINSON, J. T.	23		

SYSTEMATIC INDEX

This index contains the invertebrate taxa from order to subfamily cited in the reference and annotations. In cases where an anglicized derivative of the Latin name was used, the Latin name is listed followed by the derivative in parentheses.

Acanthocotylidae	26	Clionidae	5
Acari	19	Clypeastridae	29
Acoela	7	Clypeastroidea	29
Acrothoracica	23	Comasterida	29
Actiniaria	7	Comatulida (comatulids)	29
Alciopidae	11	Corallimorpharia	7
Alloeochoela	8	Cryptorhagae	11
Alpheidae	27	Cumacea	24
Amphioxi	30	Cyatholaimidae	10
Amphipoda (amphipods)	24, 25	Cyclopoida (cyclopoid)	22
Amphisternata	29	Cymatiidae	15, 16
Amphiuridae (amphiurid)	29	Cypraeidae	16
Anasca	28	Cypridinacea	21
Anaspidea	15	Cypridinidae (cypridinids)	21
Ancorabolidae	21	Cypridiniformes	21
Anomura (anomuran)	26	Cypridininae	21
Aphroditidae	12		
Arachnoididae	29	Decapoda (decapod)	13, 25, 26, 27
Aspidocotylea	9	Diastylidae	24
Atelacyclidae	26	Diclidophoroidea	8
		Digenea (digenetic)	8
Beaniidae	28	Diptera	19, 20
Bodotriidae	24	Doliolidae	31
Bonneviellidae	6		
Bopyridae	24	Echinidae	29
Bothriocidaroida	29	Echinometridae	29
Brachyura (brachyuran)	26, 27	Enchytraeidae	13
Brissidae	29	Epicaridea	24
Bugulidae	28	Euclymeninae	12
		Eunicea	12
Calanoida	21	Euphausiacea (euphausiacean, euphausiids)	25
Caliginae	22	Euryalidae	26
Caligoida (caligoid)	22	Euryrhynchinae	26
Camarodonta	29		
Campanularidae	6	Fibulariidae	29
Cancridae	26	Fissurellidae (fissurellid)	16
Capitellidae	12		
Caprellidae	9	Galatheidea	26
Capsaloidea	8	Gammaridea (gammaridean)	24
Cardiidae	17	Gastrocotylidae	8
Caridea (caridean)	26	Gerridae	19
Catenulida	8	Glossiphoniidae	13
Cephalaspidea	15	Glyphocyphidae	29
Ceratopogonidae	19	Goniasteridae	29
Ceriantharia	7	Gorgoniidae	6
Cerithiidae	15	Gymnosomata	16
Cheilostomata (cheilostome)	28		
Chelonethida	19	Halacaridae	19
Chironomidae	20	Halocypridae (halocyprids)	21
Chondranchthidae	22	Harpacticoida (Harpacticiden)	21, 22
Cidaroida (cidaroid)	29	Haustoriidae (haustoriid)	24, 25
Cladocera (cladocerans)	20	Hemiptera	19
Cletodidae	21	Heteromysini	23

Heteropoda	16	Piscicolidae	13
Histioteuthidae	18	Platycopida (platycopid)	21
Homalorhagida (homalorhagid)	11	Plumularidae	6
Hydroida (hydroids)	5, 6	Podocopida (podocopid)	21
Hyperiididae	25	Polyciadida (polyclads)	7
Hyperiidea	25	Polycopidae (polycopids)	21
		Polynoidae	12
Isopoda (isopod)	24, 25	Polyodontidae	12
		Pontobdellinae	13
Jouanneliinae	17	Pontoniinae	26
		Porcellanidae	26
Kalyptorhynchia	7	Portunidae	26, 27
		Processidae	26
Laganidae	29	Pseudophilomedidae	21
Laophontidae	22	Pseudoscorpiones (pseudoscorpions)	19
Lepidocentroida	29	Ptychodactaria	7
Lernaeopodidae	22		
Lichomolgidae	22	Retronectidae	8
Limnoriidae	24	Rhadinorhynchidae	11
Loveniidae	29		
Loxosomatidae	28	Sacculinidae	23
		Salpidae	31
Macrodasypoidea (macrodasypoid)	10	Schizasteridae	29
Macrostomidae (macrostomine)	7	Scutellidae	29
Maldanidae (maldanid)	12	Sertularidae	6
Martesiinae	17	Siphonophora (siphonophorae)	5, 6
Melonechinoida	29	Solenofilomorphidae	7
Microbothriidae	26	Spatangoida	29
Molpadiidae	29	Speightiidae	16
Monocotylidae	8	Sphyrriidae	22
Monogenea (monogenetic)	8, 9	Spionidae	11
Myodocopa (mydocopid)	21	Stenopodidea (stenopodidean)	26
Myodocopina	20	Stirodonta	29
Mysidacea (mysid)	23, 24, 25	Stromatopoda (stomatopods)	25
		Strongylocentrotidae	29
Naididae	13	Synaptidae	29
Natantia	25, 26	Synaptinae	29
Neotonchinae	10		
Nudibranchia (nudibranch)	15, 16	Tabanidae	19
		Tanaidacea	25
Octopoda	18	Tellininae	17
Octopodinae	18	Temnopleuridae	29
Olpiidae	19	Tendipedidae	20
Onuphida (onuphid)	12	Teredinidae	17
Opisthocystidae	13	Teuthoidea	18
Orthopsidae	29	Thecosomata (thecosomatous)	16
Oxystomata (oxystomatous)	26	Thoracica (thoracic)	23
		Tomopteridae	11
Palaemonidae	26	Tonnidae	16
Palaemoninae	26	Toxopneustidae	29
Pandaridae	21	Trochochaetidae	12
Pandoridae	17	Tubificidae	13
Parasaleniidae	29	Turridae	16
Penaeidae	26	Typhloplanoida	7
Pericosmidae	29	Typhloscolecidae	11
Phasianellidae	16		
Philomedidae	21	Udonellidae	8
Pholadidae	17		
Pholadinae	17	Xanthidae (xanthid)	23, 26
Pilargidae	12	Xylophaginae	17
Pinnidae	17		
		Zoantharia	7

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NOAA, the *National Oceanic and Atmospheric Administration*, was established as part of the Department of Commerce on October 3, 1970. The mission responsibilities of NOAA are to monitor and predict the state of the solid Earth, the oceans and their living resources, the atmosphere, and the space environment of the Earth, and to assess the socioeconomic impact of natural and technological changes in the environment.

The six Major Line Components of NOAA regularly produce various types of scientific and technical information in the following kinds of publications:

PROFESSIONAL PAPERS—Important definitive research results, major techniques, and special investigations.

TECHNICAL REPORTS—Journal quality with extensive details, mathematical developments, or data listings.

TECHNICAL MEMORANDUMS—Reports of preliminary, partial, or negative research or technology results, interim instructions, and the like.

CONTRACT AND GRANT REPORTS—Reports prepared by contractors or grantees under NOAA sponsorship

TECHNICAL SERVICE PUBLICATIONS—These are publications containing data, observations, instructions, etc. A partial listing: Data serials; Prediction and outlook periodicals; Technical manuals, training papers, planning reports, and information serials; and Miscellaneous technical publications.

ATLAS—Analysed data generally presented in the form of maps showing distribution of rainfall, chemical and physical conditions of oceans and atmosphere, distribution of fishes and marine mammals, ionospheric conditions, etc.



Information on availability of NOAA publications can be obtained from:

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