

The History and Literature of America's Oysters

Historically, America's use and enjoyment of the oyster extend far back into prehistoric times. The Native Americans often utilized oysters, more intensively in some areas than in others, and, at least in some areas of the Caribbean and Pacific coast, the invading Spanish sought oysters as eagerly as they did gold—but for the pearls. That was the pearl oyster, *Pinctada* sp., and signs of its local overexploitation were recorded early in the 16th century. During the 1800's, use of the eastern oyster grew phenomenally and, for a time, it outranked beef as a source of protein in some parts of the nation. Social events grew up around it, as it became an important aspect of culture and myth. Eventually, research on the oyster began to blossom, and scientific literature on the various species likewise bloomed—to the extent that when the late Paul Galtsoff wrote his classic treatise "The American oyster *Crassostrea virginica* Gmelin" in 1954, he reported compiling an extensive bibliography of over 6,000 subject and author cards on oysters and related subjects which he deposited in the library of the Woods Hole Laboratory of the Bureau of Commercial Fisheries (now NMFS). That large report, volume 64 (480 pages) of the agency's *Fishery Bulletin*, was a bargain at \$2.75, and it has been a standard reference ever since. But the research and the attendant literature have grown greatly since Galtsoff's work was published, and now that has been thoroughly updated.

"**The Eastern Oyster *Crassostrea virginica*,**" edited by Victor S. Kennedy, Roger I. E. Newell, and Albert F. Ebel and authored by more than 25 authorities in their respective fields, has been published by the University of Maryland Sea Grant College, 0112 Skinner Hall, College Park, MD 20742. This superb volume will long stand as the reference source on the species' biology. The 734-page volume, with 21 chapters, costs

\$95.00, and it is distributed and sold by the publisher as well as by the Cornell Maritime Press, Inc., P.O. Box 456, 101 Water Way, Centreville, MD 21617.

Some of Galtsoff's chapters have been understandably merged—particularly those dealing with oyster anatomy—while a number of new chapters (on topics that Galtsoff may not have dreamed of) have been added, vastly broadening the scope and utility of this volume. The authors have synthesized new research findings into a well-planned volume that should be the authority on the species for some time to come.

The book leads off with a chapter cataloging selected species of living oysters of the world, ably produced by Melbourne Carriker and Patrick Gaffney. General anatomy (mantle, adductor muscle, heart and circulation, gills, labial palps; digestive, excretory, and reproductive systems; and larval stages) is reviewed by Albert Eble and Robert Scro, while Carriker then discusses more specifically the shell and ligament in Chapter 3. Additional coverage includes the adductor and mantle musculature by Carol Morrison in Chapter 4, and mechanisms and physiology of larval and adult feeding by Roger Newell and Christopher Langdon in Chapter 5. Further chapters review digestion and nutrition in both larvae and adult oysters (Christopher Langdon and Roger Newell), the circulatory system (Albert Eble) and forms and functions of hemocytes (Thomas Cheng), reproductive processes and early oyster development (Raymond Thompson, Roger Newell, Victor Kennedy, and Roger Mann), and larval and spat biology (Victor Kennedy).

Biochemical and population genetics, by Patrick Gaffney, were little known in Galtsoff's day; indeed, the term genetics is not in his index. The chapter on chromosomes, biology, and breeding by A. Crosby Longwell and S. S. Stiles

also reviews artificially induced triploidy from the cytogenetic perspective and associated aspects. Sandra Shumway then discusses natural environmental factors important to oyster biology, while the responses of oysters to various metals in their environment are considered by G. Roesijadi. Judith Capuzzo reviews bioaccumulation and biological effects of lipophilic organic contaminants (PAH's, PCB's, etc.). Oyster problems with predators, pests, and competing species are discussed by Marie White and Elizabeth Wilson, while Susan Ford and M. R. Tripp review oyster diseases and defense mechanisms. Chapters on oyster culture include one on genetic improvement of oyster stocks by Gary Newkirk and another on the history and current applications of oyster culture by Michael Castagna, Mary Gibbons, and Kenneth Kurkowski. Another important chapter deals with the transplanting of the eastern oyster worldwide and the results thereof (including the accidental transporting of associated and sometimes problem organisms) by James Carlton and Roger Mann. The final chapter is Clyde MacKenzie's discussion of the management of natural oyster populations. In summary, this is a very fine contribution to the literature, up-to-date, and should be of great value to students, researchers, and administrators involved with this species.

European Molluscan Shellfish Review

Also recently published is volume 3, for Europe, of "**The History, Present Condition, and Future of the Molluscan Fisheries of North and Central America and Europe,**" coedited by Clyde L. MacKenzie, Jr., Victor G. Burrell, Jr., Aaron Rosenfield, and Willis L. Hobart (volumes 1 and 2 for North America are in press). Volume 3, 240 pages, is sold by the Superintendent of Documents, U.S. Government Printing Office, P.O. Box 371954, Pittsburgh, PA 15250-7954. In addition it is sold in either paper copy or microfiche by the National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161.

This European volume covers the molluscan fisheries of the following nations: Sweden by J. Haamer, Norway by Ø. Strand and J. H. Vølstad, Denmark by P. S. Kristensen, Iceland by H. Eiríksson, Faroe Islands by Á. Nicolajsen, Germany by M. N. L. Seaman and M. Ruth, Britain by E. Edwards, Belgium by F. Redant, Netherlands by R. Dijkema, France by P. Gouilletquer and M. Heral, Spain by J. Caceres-Martinez and A. Figueras, Portugal by F. D. L. Ruano, Italy by N. Mattei and M. Pellizzato, Croatia by A. Benovic, Turkey by A. Alpbaz and B. Temelli, and Bulgaria by Y. Staykov.

Some of the important species covered in the volume include various oysters (flat, Pacific, etc.), scallops, whelks, mussels, cockles, hard clams, softshell clams, periwinkles, murex, and various marine snails, arcs, etc. Each national chapter covers the history of its molluscan fisheries for the various species of importance, along with the current status, culture methods, harvest data (tonnage and value) regulations and management; harvesting tools, vessels, and techniques; public health issues, processing and marketing methods, food preparation methods, environmental data, and more. In some nations, of course, few species and low tonnage are harvested, but for many others, mollusks are important locally and nationally and in trade. The volume is very thorough and provides a fine review of Europe's molluscan fisheries.

Vessels on the Oyster Grounds

Besides the scientific volumes, there are a surprising number of books dealing with various historic and cultural aspects of America's oysters and oystering. For example, "**Chesapeake Bay Log Canoes and Bugeyes**" by M. V. Brewington, published by Tidewater Publishers, Centreville, Md., is a fine review of those vessels that were long important to the oyster industry. This is a combined edition of the earlier "**Chesapeake Bay Log Canoes**" and "**Chesapeake Bay Bugeyes**," both long out of print, and it has been consider-

ably revised and enlarged (182 pages).

Lineage of the log canoe, truly a dug-out canoe, is traced by the author back to the early dugouts made and used by the Native Americans, and from there onward to the Chesapeake Bay sailing canoe. Excellent period drawings, along with photographs of canoe construction from The Mariners' Museum, Newport News, Va., add to the value of the book. Eventually sail power was added to the canoes, leading even to racing canoes.

The bugeye, which made its first Bay appearance in the late 1860's, drew on various features from the canoe (basic design, dugout hull, sail plan), the pungy (combination knight-heads and hawse-pieces, sweeping sheer, low freeboard, log rail), and from the Bay schooner (shoal draft, broad beam, clear deck layout, graceful longhead). It was particularly adapted for oyster dredging which had been legalized on the bay just after the Civil War. Likewise, period drawings and photographs add to the historical value of the book, as do extensive appendices. Appendix 1 reviews the origin of the term "bugeye" and its appearance in the literature, while appendix 2 reviews oystering gear. Others present specifications for an early bugeye, along with rigging details, and a roster of bugeyes. Finally, a series of 25 plates illustrates the lines and the deck and sail plans of various canoes and bugeyes. Priced at \$35.95, the volume is available from Cornell Maritime Press, Inc., P.O. Box 456, 101 Water Way, Centreville, MD 21617.

Another Tidewater Publishers book is "**Chesapeake Bay Skipjacks**" by Pat Vojtech. By the turn of the last century, the skipjack was a familiar sight on Chesapeake Bay, but most watermen just called them "bateaux." The strength of this book is the many personal interviews that the author made about 90 years later with longtime oystermen who used the vessels and provided many personal stories of historic note for their industry. The book is well illustrated with many color photographs; particularly noteworthy are those of the actual shipboard work. Besides its historic interest, the author imparts the feeling of danger that often faced the oystermen, including dramatic photographs of a

December 1991 rescue of a man who fell overboard.

Many consider the *Ruby G. Ford*, built in 1891, as the first true bateaux or skipjack, and by 1900 many such vessels were taking advantage of the Maryland law restricting oyster dredging to sailing vessels. The author discusses the early years of the skipjacks—the vessels and the men who made and sailed them, the problems they coped with and the money they made—with succeeding chapters telling of oystering with the vessels decade by decade. Described are the hazards of oystering, feuds over the oyster bars, Hurricane Hazel's effects in 1954, and the eventual law change in 1966 allowing Monday dredging under power by skipjacks.

The eventual decline of the skipjack fleet is chronicled, along with growing efforts to save and/or restore some of the historic vessels. An appendix lists the commercial skipjacks found in the Maryland Vessel Files and the Maryland Historical Society, in books by Howard Chapelle, Robert H. Burgess, Marion V. Brewington, and others, and in volumes of the "Merchant Vessels of the United States."

Well written and illustrated, the book is a good companion to the writings of Howard Chapelle on skipjacks, along with its updated material on later vessels and oystering developments. Priced at \$29.95, the volume is also available from Cornell Maritime Press.

Other related volumes from CMP include "**Chesapeake Bay Schooners**" by Quentin Snediker and Ann Jensen. These vessels are described as "the workhorses of the bay in the nineteenth and twentieth centuries." Included are economic and social aspects of the vessel, compiled in part from interviews with those actively using them for many decades. The 264-page volume costs \$44.95. "**Chesapeake Legacy: Tools and Traditions**," by Larry Chowning (234 pages, \$29.95) reviews the various implements in several Chesapeake Bay fisheries, as a follow-on to his earlier "Harvesting the Chesapeake: Tools and Traditions" (296 pages, \$29.95). The bay's valuable oysters also led to many confrontations among oystermen and between oystermen and law enforce-

ment personnel. Thus, "**The Oyster Wars of Chesapeake Bay**" by John R. Wennersten presents a brief history of some of the violent skirmishes between tongers and dredgers, Maryland vs. Virginia watermen, and oyster "pirates" against the "Oyster Navy" of the State of Maryland's marine patrol (159 pages, \$14.95). CMP even has a book for young readers, "**Oyster Moon**," by Marcy Dunn Ramsey (112 pages, \$9.95) which blends mystery with history in a late 1800's setting.

Oyster Cans and Plates

More along the cultural lines are two colorful and interesting publications produced by Schiffer Publishing Ltd., 77 Lower Valley Road, Atglen, PA 19310. The first is entitled simply "**Oyster Cans**" and is written by Jim and Vivian Karsnitz. It has a relatively short but authoritative text on oyster containers (cans, jugs, and bottles) and on oyster-related items including shucking knives, shucking tokens, shipping and store containers and labels, advertisements, and stationery. It also includes a brief bibliography and a long list of oyster brand names. Otherwise, it presents about 150 pages of full-color oyster containers, labels, advertisements, and the like with several items per page. Some of the containers and labels are very plain while many are colorful and well designed, showing the considerable monetary and food value of oysters in days gone by.

The other book, also by the Karsnizes, is titled "**Oyster Plates**." Likewise, it has a short but authoritative text on oyster history, oyster plates and serving pieces, and on oyster plate manufacturers, along with a few traditional oyster recipes. But the bulk of the book presents 130 pages of color photographs of a multitude of specially designed plates, each plate with generally from four to six oyster wells around a center well for a sauce or condiment. However, one French "platter" has 24 oyster wells, while a ceramic lazy Susan was made to hold 27 oysters. As with the oyster cans/advertisements, the designs and colors are incredibly diverse, reflecting the position and prestige of oysters in another era. One plate even has tiny

porcelain pea crabs in the wells, presumably for those times that your oysters lacked the little creature, which was a delicacy in its own right.

For the Victorian hostess who wanted to serve oysters in proper form, there were different "styles" of plates to do it with. One was quite deep-welled to allow the oysters to be served on ice on the half-shell. Another type of plate was sculpted to present oysters on the half-shell, but without ice. A third style was designed to hold shucked oysters, with those wells usually looking like the inside of an oyster itself. The authors report that the plates were made from about 1860 into the first part of this century. Both books, paperbound, cost \$29.95 plus \$2.95 postage each, and are available from the publisher.

Oysterhouse Cookbook

Yet another small book that covers oyster history, presentation, plates, recipes, and more is "**The Celebrated Oysterhouse Cookbook**" by Frederick J. Parks, 437 N. 7th Street, Allentown, PA 18102. In five well-written chapters, the author discusses "curiosities" of the food with various facts and trivia of interest to oyster buffs; gardeners of the sea—the harvesting and culture of oysters; how to serve oysters; and recipes from fine oyster houses. His chapter "An element of social existence," reviews the cultural, social, and healthful aspects of oysters. The Roman Pliny, for example, described oysters as "the palm and pleasure of the table," and of course the Romans reared them in their special lagoons. Parks also quotes others, such as John Runyon, who wrote that in eating oysters one sensed a "strange ethereal sensation as though one had supped off fairy food that whispered kindly and benignly to the digestion." In addition, the author recommends appropriate beverages to accompany an oyster meal, types of sauces for them, gives instructions on the proper way to eat an oyster on the half-shell, along with data on the proximate composition of the oyster.

Throughout, the book is illustrated with many period posters, can designs, cards, advertisements, and plates, often

in color. The 64-page book, available from the author, costs \$8.95, postage included. In addition, Parks has produced a series of colorful postcards relating to the seafood industry.

Oysters and Oystering in the Pacific Northwest

"**Blood on the Half Shell**" by Al Qualman, published by Binfords and Mort, Portland, Oreg., is a biography of the times and trials of an early Northwest oyster farmer. It is presented in two parts, the first a historical narrative of Qualman's introduction to oyster farming and his operations over the years, and the second being his two fictional stories on oysters, "Blood on the Half Shell" and "Ollie."

After spending 4 years in Washington's Willapa Bay, Qualman moved and set up his oyster farming operation on Oregon's Coos Bay in 1937. Among his oyster work, he details a meeting with Victor Loosanoff and a trip to the BCF Milford Laboratory in the early 1960's to learn more about laboratory techniques for producing oyster seed. While the author is plainly opinionated about those he dealt with, the book is an interesting addition to the region's oyster history by an active participant. It includes a number of photographs of oyster farming scenes in both Oregon and Washington. The small paperbound volume has 159 pages (price not listed).

Yet another local and biographical history of Northwest oystering is "**The Little Man and the Little Oyster**" by Humphrey Nelson, published by Ye Gallean Press for the Mason County Historical Society, Belfair, WA 98528. Nelson, who lived a full 100 years, was active in the early Washington oyster industry, as he and his two brothers farmed the Olympia oyster in southwestern Puget Sound from about 1913 onward.

The narrative relates the author's efforts to purchase good tidelands and tells of pre-automobile marketing problems (oysters were taken by wagon to Olympia, Wash., and shipped by train to California markets), early local oyster sales and promotion, the author's efforts to dike less productive tidelands to wash out silt, and his and other oyster farm-

ers' problems with pollution from a new pulp mill in 1927. As he put it, "This was the start of thirty years of problems..."

Nelson also tells of the introduction of "Japanese" or Pacific oysters in 1937,

leading to more widespread conversion to production of that species. Nelson also developed his own "secret" method of treating shucked oysters with controlled amounts of salt water to improve

meat quality and extend shelf life. The 88-page hardbound volume costs \$12.00 (\$1.00 postage) and is available from Ye Galleon Press, Box 287, Fairfield, WA 99012.