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Freshwater fishes of South Carolina by Fred C. Rohde, Rudolf G. Arndt, Jeffrey W. Foltz, and Joseph M. Quattro with photographs by Fred C. Rohde-Book Review

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Freshwater Fishes of South Carolina

**Fred C. Rohde, Rudolf G. Arndt,
Jeffrey W. Foltz, and Joseph M.
Quattro with photographs by Fred
C. Rohde. The University of South
Carolina Press. Columbia, South
Carolina. 2009. 430 pages. \$59.95**

Fish biologists and ichthyologists enjoy the arrival of any new "Fishes of..." book. These books are our main tools when a strange fish is found in a seine during a class trip or when unidentified fishes are brought to our offices by local anglers. With the fish in question laid out on a table, we reach for and begin opening our state and regional fish books, often stacking multiple open books on top each other as we compare species accounts and distributions in our quest to figure out the mystery fish. Admittedly, there is usually a significant amount of redundant information among books, especially when dealing with widespread species. But often the most valuable help for indentifying the fish will come from that one book that has a little bit more information or perhaps includes a more timely reference than the others. Obviously as more "Fishes of..." books are produced and more information is put at our fingertips, we feel better equipped to take on challenging fish identifications.

So I was pleased when I received my copy of *Freshwater Fishes of South Carolina*. In fact, my first response as I took the book from its box was, "Oooh... a chunky fish book with a nice-looking clupeid on the front. This is going to be good." In general, I remained pleased with the book after reading the introductory material and the species accounts. As with similar texts, the South Carolina book begins with a history of ichthyology in the state, then moves to six introductory chapters covering habitats, geography, conservation, fish collecting methods, and explanations of the keys and accounts. The second part of the book consists of the species accounts divided into families with a key for each family at the beginning of each chapter. The book ends with a small overview of estuarine fishes that may occur in state fresh waters and a short (three page) glossary of useful terms. While all of this is fairly typical of state fish books, the smaller page size of the South Carolina book (19 X 26 cm) separates it from other books that more closely resemble large cumbersome photo albums. I imagine that

the smaller, chunkier book will be easier to handle and more likely taken along when heading out with a class or pursuing research in the field.

Fortunately, a concern and passion for conserving and understanding fishes as whole organisms pervades the South Carolina book, more so than most other state fish books. The introductory material is especially rich with information that encourages both scientists and amateurs to use fishes wisely. I particularly enjoyed the section describing proper seining techniques. As fish biologists we know all of this by heart, but the book provides a clear summary of how it is done for students who have never seined before. In a later section, students are also encouraged to discover needed fish reproductive data because so little is known about many of our southeastern freshwater fishes. This type of essential information can be collected by those with just a basic knowledge of fishes: "A hobbyist can make worthwhile observations." There is also a section on what to do with live fishes when they are no longer needed which correctly warns not to release even native fishes back into the wild. Instead of preaching to the ichthyological choir, the authors are reaching out to those people (students and fish hobbyists) who can better help us conserve these animals in the future.

Interesting and useful material is also scattered throughout the species accounts. Many pond managers in the Southeast stock gizzard shad (*Dorosoma cepedianum*) as prey for game fishes. The authors correctly point out, though, that this species grows so quickly that it is only suitable as prey for a short portion of its life. While the much maligned creek chub (*Semotilus atromaculatus*) can be the bane of trout fishermen because of its large mouth and appetite, the authors put a positive spin on this species, pointing out it is a "spunky fighter." The species account for the robust redhorse (*Moxostoma robustum*) relates the story of how this species had been lost to science for 122 years. Starting from the species' original discovery by Edward Cope to its rediscovery by Bob Jenkins and finally to the establishment of the Robust Redhorse Conservation Committee, the reader is again shown the links between the work of dedicated ichthyologists and the actual conservation efforts carried out by managers, agencies, and non-government organizations.

The species distribution maps and photographs also contribute to the overall usefulness of the book. The



high detail of the point maps allows for easy recognition of specific water bodies and the statewide coverage is extensive. These maps also show the fall line that separates the Coastal Plain from the Piedmont provinces, allowing the reader to better understand which fishes are in which habitats. For the most part, the fish photographs are high quality and accurately represent the life colors of the specimens. Photographs can be particularly useful (more so than line drawings) when comparing the morphology of closely related species, such as the comparison of sturgeon mouths (page 68) and sucker lips (page 185). Some species accounts contain helpful multiple photographs, allowing the reader to either compare males to females or adults to juveniles. The only drawback to this approach is that once I saw it used for the centrarchids and some other groups, I wished it

had been used consistently throughout the book for all the species.

Freshwater Fishes of South Carolina is a fine addition to my collection of state fish books. In making the book readable for non-ichthyologists, the authors have not compromised the quality and quantity of worthwhile information on South Carolina fishes. My hope is that future fish books will, like this one, do a better job of linking scientific information to a passion for species conservation. Such an approach can inspire people who are not fish biologists and ichthyologists to respect and better protect our native freshwater fishes.

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