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Review: Fishes of the Gulf of Mexico, Texas, Louisiana and Adjacent Waters by H. Dickson Hoese and Richard H. Moore

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Reviews:

H. Dickson Hoese and Richard H. Moore, **Fishes of the Gulf of Mexico, Texas, Louisiana and adjacent waters.** XV + 327 pp., 513 color plates. ISBN 0-89096-027-5, Texas A&M University Press, College Station Texas, 1977. \$12.50.

Researchers and students of fishes of the Gulf of Mexico have labored in a literary twilight since the region became subject to serious ichthyological studies three quarters of a century ago. Comprehensive keys and field guides available were based primarily on Atlantic coast areas and modified by the user for the Gulf. Distributional comments of species frequently terminated with a cursory . . . "including the Gulf of Mexico". Now, the seventies have witnessed suddenly the appearance of three significant contributions (Parker *et al.*, 1972; Walls, 1975; and Hoese and Moore, 1977) which promise to make field work on fishes in the area, especially the northwest Gulf coast, some of the most rewarding and accurate of any place in the world.

The subject of this review, "Fishes of the Gulf of Mexico, Texas, Louisiana and

adjacent waters", by H. Dickson Hoese and Richard H. Moore is certainly the most useful, complete, and accurate of the three. The field key by Parker *et al.* (1972) was not intended as more than an identification guide, but served its stated purpose admirably for half a decade. Walls (1975) is a semipopular approach, but suffers from lack of keys, inadequate line drawings, spotty and depauperate literature citations, and an approach too ambitious and not especially geared toward scientific investigation.

Although every regional handbook benefits from the endless appearance of the latest systematic revisions, Hoese and Moore have the added bonus of the experience of a mature generation of diving scientists, their contributions (e.g. Bright and Cashman, 1974), and their perspectives on the marine environment. This adds a new dimension to our information base on marine shelf fishes.

The most general criticism of this quite good work must be directed toward vagueness of scope. Specifically, the authors indicate uncertainty regarding geographic and vertical extent of coverage. The very title is set in two type styles throughout, emphasizing "Gulf of Mexico" with bold print, then qualifying with "Texas, Louisiana, and Adjacent Waters" in smaller or lighter characters. The map on the introductory section is of most of the Gulf of Mexico, with location legends diminishing in number from Louisiana eastward. This basic philosophy permeates the body of the work, with many species treated that are not, but might be, reported from the Texas-Louisiana region. This tends to leave the reader confused about the distribution of a number of species, although the very useful Appendix I clarifies the situation for most forms. However, one cannot help but get the impression that the vagueness is intentional, and certainly this is understandable in a work of this nature.

The section on ecology and life history tends to ramble in parts, and occasionally gives scent of a biased provincialism (e.g. . . . “it is probably true that the Texas and Louisiana coasts contain a greater variety of marine and estuarine environments than any comparable length of coastline in the United States” — hardly defensible when one considers, say, Apalachicola to Key West, or the Georgia Sea Islands southward to Miami).

The zoogeography segment is well written and instructive. It is unfortunate however, that the most significant faunal break in the northern Gulf is misaligned with the Mississippi River discharge. It is in fact the Mobile Bay drainage that marks the eastern extent of the mud bottom, high river discharge region characteristic of the shallow shelf northwestern Gulf. From Perdido, Florida eastward the shelf is characterized by a clear water, low discharge region. This faunal break has been demonstrated repeatedly in numerous fish groups (e.g. *Chasmodes*, Springer 1959; *Gymnachirus*, Dawson 1964; *Sphoeroides*, Shipp and Yerger 1969; *Prionotus*, Miller and Kent 1971; *Syacium*, Topp and Hoff 1972; as well as unpublished but widely recognized data on *Ogcocephalus* by Bradbury).

The section on Conservation presents numerous subjective judgments and frequent opinions couched in “seem to be” phraseology. However, it is followed by an excellent and informative history of ichthyology along the Louisiana-Texas coast. I think the portion on “Identifying Fishes” should not be separated from the “Glossary”. This disjunction, shared by many similar works, leads to unfortunate misplacement of critically important information on procedural methodology. For example, instructions on determining proper soft ray counts are buried in a paragraph which begins by describing the format for species nomenclature.

In general, the color plates are quite

good, and those few line drawings required for rare species should not overshadow a monumental task of plate gathering. I would prefer to see scientific names accompany common names under each plate. The plate for the alligator gar is cropped on the diagnostic snout, and that for the king and spanish mackerels is poorly labeled and the specimens hardly demonstrate diagnostic characters.

The keys are straightforward and workable by apprentice students, but more line drawings of diagnostic characters would be welcome. Unfortunately, editorial errors are inevitable and I note several here likely to cause student error: p. 140, barbel numbers refer to total barbels, not number on lower chin as implied; p. 154, tooth character of couplet five reversed; p. 160, second component of couplet 1 should lead to couplet 10 rather than 8; p. 182-183, there is no route to couplet 5; p. 202, couplet 4, second component does not hold for numerous species.

The species accounts, comprising the majority of the work, are exceptionally pertinent and well done. They demonstrate a true, first hand familiarity with the habitats and characters of most forms, as well as a command of salient literature. There are a few inaccuracies, such as the origin of the name “requiem” for Carcharhinidae, which refers to their being deadly sharks — a requiem mass being a mass for the dead — rather than their occurring in “ ‘masses’ near the surface”, and the erroneous interpretation of my (Shipp 1975) semipopular account of *Emblemaria piratula* as *E. pandionis*. However, such trivial flaws are inevitable, and of no consequence when one considers the wealth of data presented in these accounts. Following this section the authors present a number of very useful and colorful appendices, including “cajun” and spanish common names. This imparts a literary flavor to an excellent

scientific contribution which brands it as genuine Louisiana.

Production quality is good, and price (\$12.50 hard cover, \$ 7.95 soft cover) is modest. Gulf coast naturalists, whether professional, amateur, or student will welcome this contribution, and they would do well to place their confidence in it.

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Reviewers

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