

Occurrence of *Brevoortia gunteri* in Mississippi Sound

WILLIAM R. TURNER

THREE species of menhaden and one hybrid are currently recognized from the Gulf of Mexico. The most abundant species, Gulf menhaden, *Brevoortia patronus*, ranges from the Caloosahatchee River in southwest Florida (Christmas and Gunter, 1960) to the Yucatan peninsula in Mexico (Reintjes and June, 1961). The yellowfin menhaden, *B. smithi*, occurs in the Gulf from Florida Bay to the Mississippi Delta (Reintjes and June, 1961). Hybrid menhaden occur over part of the range where these two species overlap. *B. smithi* \times *patronus* have been collected offshore from Tampa Bay south to Cape Sable, Florida (Turner, 1969). Dahlberg (1966), who originally described the hybrids, recorded them from as far north as Port St. Joe along the west coast of Florida. The finescale menhaden, *B. gunteri*, occurs from Louisiana to the Gulf of Campeche in Mexico; the easternmost previous record is Chandeleur Sound NW of North Island, Louisiana (Christmas and Gunter, 1960).

The collection on 29 October 1966 of a finescale menhaden in a haul seine at Pascagoula Beach, Mississippi, extended the known range of the species eastward by approximately 35 miles and constitutes the first record from Mississippi Sound. The specimen, a 278 mm (fork length) mature male (Beaufort Biological Laboratory Catalog No. BL 955), was identified by the vertebral count (43, including the urostyle), which corresponded to the modal count obtained by Hildebrand (1948) and readily distinguished the fish from *B. smithi*, (the only other fine-scaled species of North American menhadens) which has 45 to 47 vertebrae. (*B. smithi* and *B. gunteri*, characterized by small scales, are frequently grouped as fine-scaled menhadens; *B. patronus* has larger scales and together with its cognate, *B. tyrannus*, along the Atlantic States composes the coarse-scaled menhadens).

The occurrence of *B. gunteri* in Mississippi Sound in late October represented an extension in time as well as range for this species in the northern Gulf. The latest date of collection previously recorded for finescale menhaden in waters of the northern Gulf was on 30 September (Christmas and Gunter, 1960). The October col-

lection was significant because it coincided with the time Suttkus (1956) inferred *B. patronus* began spawning in that region, and the specimen was categorized as stage III, ripening (as defined by Turner, 1969). Although this record establishes the occurrence of mature *B. gunteri* along the northern Gulf coast at the onset of the menhaden spawning season, young finescale menhaden have never been recognized in collections of juveniles from estuarine waters in that region. Hybrids between *B. gunteri* and the other two sympatric menhadens are unknown.

ACKNOWLEDGMENT

I wish to thank Mr. Hilton M. Floyd of the Bureau of Commercial Fisheries Exploratory Fishing and Gear Research Base, Pascagoula, Mississippi, who collected and donated the specimen to the Beaufort Biological Laboratory.

LITERATURE CITED

- CHRISTMAS, J. Y., AND GORDON GUNTER. 1960. Distribution of menhaden, genus *Brevoortia*, in the Gulf of Mexico. Trans. Amer. Fish. Soc., vol. 89, pp. 338-343.
- DAHLBERG, MICHAEL DANIEL. 1966. A systematic review of the North American species of menhaden, genus *Brevoortia*. Ph. D. Thesis, Tulane Univ., 161 pp. Univ. Microfilms. Ann Arbor, Mich. (Diss. Abstr. vol. 27, p. 1651-B).
- HILDEBRAND, SAMUEL F. 1948. A review of the American menhaden, genus *Brevoortia*, with a description of a new species. Smithsonian. Misc. Coll. vol. 107, no. 18, pp. 1-39.
- REINTJES, JOHN W., AND FRED C. JUNE. 1961. A challenge to the fish meal and oil industry in the Gulf of Mexico. Proc. Gulf Caribbean Fish. Inst. 13th Annu. Sess., pp. 62-66.
- SUTTKUS, ROYAL D. 1956. Early life history of the Gulf menhaden, *Brevoortia patronus*, in Louisiana. Trans. 21st N. Amer. Wildl. Conf., pp. 390-407, 6 pls.
- TURNER, WILLIAM R. 1969. Life history of menhadens in the eastern Gulf of Mexico. Trans. Amer. Fish. Soc. vol. 98, pp. 217-225.

National Marine Fisheries Service Center for Estuarine and Menhaden Research, Beaufort, N. C. 28516.



Turner, William R. 1971. "Occurrence of *Brevoortia gunteri* in Mississippi Sound." *Quarterly journal of the Florida Academy of Sciences* 33, 273-274.

View This Item Online: <https://www.biodiversitylibrary.org/item/129664>

Permalink: <https://www.biodiversitylibrary.org/partpdf/91522>

Holding Institution

Smithsonian Libraries and Archives

Sponsored by

Biodiversity Heritage Library

Copyright & Reuse

Copyright Status: In Copyright. Digitized with the permission of the rights holder.

License: <http://creativecommons.org/licenses/by-nc-sa/3.0/>

Rights: <https://www.biodiversitylibrary.org/permissions/>

This document was created from content at the **Biodiversity Heritage Library**, the world's largest open access digital library for biodiversity literature and archives. Visit BHL at <https://www.biodiversitylibrary.org>.