

2002

Tapertails

John E. Olney
Virginia Institute of Marine Science

Follow this and additional works at: <https://scholarworks.wm.edu/vimsbooks>



Part of the [Aquaculture and Fisheries Commons](#)

Recommended Citation

Olney, John E., "Tapertails" (2002). *VIMS Books and Book Chapters*. 195.
<https://scholarworks.wm.edu/vimsbooks/195>

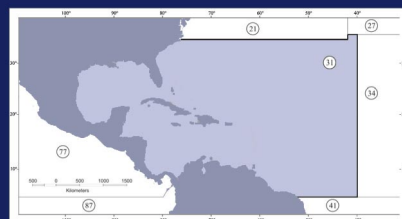
This Book Chapter is brought to you for free and open access by the Virginia Institute of Marine Science at W&M ScholarWorks. It has been accepted for inclusion in VIMS Books and Book Chapters by an authorized administrator of W&M ScholarWorks. For more information, please contact scholarworks@wm.edu.



FAO SPECIES IDENTIFICATION GUIDE FOR FISHERY PURPOSES

ISSN 1020-6868

THE LIVING MARINE RESOURCES OF THE WESTERN CENTRAL ATLANTIC



Volume 2 Bony fishes part 1 (Acipenseridae to Grammatidae)



AMERICAN
SOCIETY OF
ICHTHYOLOGISTS
AND
HERPETOLOGISTS



FOOD AND
AGRICULTURE
ORGANIZATION
OF THE
UNITED NATIONS

EUROPEAN
COMMISSION



FAO SPECIES IDENTIFICATION GUIDE FOR FISHERY PURPOSES
and
AMERICAN SOCIETY OF ICHTHYOLOGISTS AND HERPETOLOGISTS
SPECIAL PUBLICATION No. 5

THE LIVING MARINE RESOURCES OF THE WESTERN CENTRAL ATLANTIC

VOLUME 2

Bony fishes part 1 (Acipenseridae to Grammatidae)

edited by

Kent E. Carpenter

Department of Biological Sciences
Old Dominion University
Norfolk, Virginia, USA

with the support of the
American Society of Ichthyologists and Herpetologists
and the
European Commission

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS
Rome, 2002

The designations employed and the presentation of material in this information product do not imply the expression of any opinion whatsoever on the part of the Food and Agriculture Organization of the United Nations concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.

ISBN 92-5-104825-8

All rights reserved. Reproduction and dissemination of material in this information product for educational or other non-commercial purposes are authorized without any prior written permission from the copyright holders provided the source is fully acknowledged. Reproduction of material in this information product for resale or other commercial purposes is prohibited without written permission of the copyright holders. Applications for such permission should be addressed to the Chief, Publishing Management Service, Information Division, FAO, Viale delle Terme di Caracalla, 00100 Rome, Italy or by e-mail to copyright@fao.org

© FAO 2002

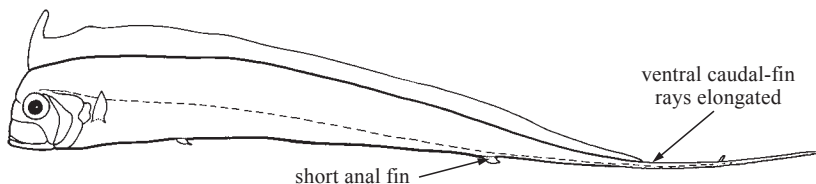
RADIICEPHALIDAE

Tapertails

by J.E. Olney, Virginia Institute of Marine Science, USA

Diagnostic characters:

Small to moderate-sized lampridiform fishes; body slender, elongate, compressed, its depth gradually decreasing from the head to caudal peduncle. Upper jaw highly protrusible; jaw teeth absent; 1 to several teeth on roof of mouth. Dorsal fin long, its first rays inserting over eye; anterior dorsal-fin rays somewhat elongate; total dorsal-fin soft rays 150 to 160. Anal fin short, inconspicuous, posteriorly placed near caudal peduncle; total anal-fin soft rays 6 or 7. Caudal fin highly modified into separate parts; **ventral caudal-fin soft rays (these total approximately 6 or 7) elongate, forming a caudal projection that may equal the body length in undamaged specimens**; upper caudal-fin lobe with 4 or 5 short rays. Pectoral fins with 9 or 10 soft rays; fin base obliquely rotated. Pelvic fins with 9 soft rays in small specimens, often damaged or inconspicuous in adults; pelvic fins inserted well posterior to pectoral-fin base. **Scales absent except for tubular lateral-line scales.** Total vertebrae 114 to 121 (36 to 39 thoracic, 77 to 79 abdominal); **fourth, fifth, and sixth preural centra with elongate haemal spines that pierce ventral margin of body** (unique among fishes). In radiicephalids (and all lampridiforms), the anterior palatamaxillary ligament and the palatine prong are absent, as a result, the maxilla is free to extend, along with the premaxilla, well away from the ethmo-vomerine region during jaw protrusion. Other anatomical features of radiicephalids (and all lampridiforms): first dorsal-fin pterygiophore inserts anterior to first neural spine; elongate ascending processes of premaxilla and a large rostral cartilage insert into a frontal vault or cradle; mesethmoid posterior to lateral ethmoids. In radiicephalids (and lophotids), the supraoccipital bears an anteriorly directed process (a weak spine in radiicephalids, but broader and well-developed in lophotids). **Colour:** body silver; dorsal, pectoral and caudal fins may be tinted red.



Habitat, biology and fisheries: A single, very rare species, *Radiicephalus elongatus* is known from a few small, immature specimens captured by research nets in the area. Usually attains 60 to 75 cm in length. Mesopelagic; little is known of its habits or reproduction. Like the Lophotidae, it possesses a gland that discharges a black, ink-like fluid through a vent near the anus in an alarm response. There is no fishery for the species.

Similar families occurring in the area

Lophotidae: more dorsal-fin soft rays (206 to 392 versus 152 to 160); head with conspicuous flesh crest or horn; anus situated near caudal fin (situated at mid-body in Radiicephalidae)

Trachipteridae: anal fin absent

List of species occurring in the area

A single species in the family.

Radiicephalus elongatus Osório, 1917. Usually under 80 cm. Mesopelagic in most oceans.

References

- Charter, S.R. and H.G. Moser. 1996. Lampridiformes, Lophotidae, Radiicephalidae, Trachipteridae. In *The early stages of fishes in the California current region*, edited by H.G. Moser. California Cooperative Oceanic Fisheries Investigations Atlas No. 33, pp. 659-677.
- Heemstra, P.C. and S.X. Kannemeyer. 1984. The families Trachipteridae and Radiicephalidae (Pisces, Lampriformes) and a new species of *Zu* from South Africa. *Annals South African Museum*, 94:13-39.
- Olney, J.E. 1984. Lampridiformes: development and relationships. In *Ontogeny and systematics of fishes*, edited by H.G. Moser, W.J. Richards, D.M. Cohen, M.P. Fahay, A.W. Kendall, Jr, and S.L. Richardson. American Society of Ichthyologists and Herpetologists, Publication 1, pp. 368-379.
- Olney, J.E., G.D. Johnson, and C.C. Baldwin. 1993. Phylogeny of lampridiform fishes. *Bull. Mar. Sci.*, 52:137-169.

