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Crestfishes

John E. Olney

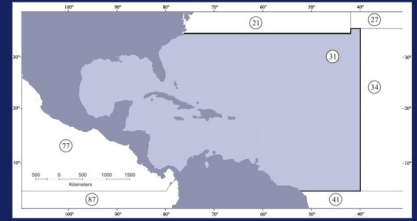
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THE LIVING MARINE RESOURCES OF THE
**WESTERN CENTRAL
ATLANTIC**



Volume 2 Bony fishes part 1 (Acipenseridae to Grammatidae)



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THE LIVING MARINE RESOURCES OF THE WESTERN CENTRAL ATLANTIC

VOLUME 2

Bony fishes part 1 (Acipenseridae to Grammatidae)

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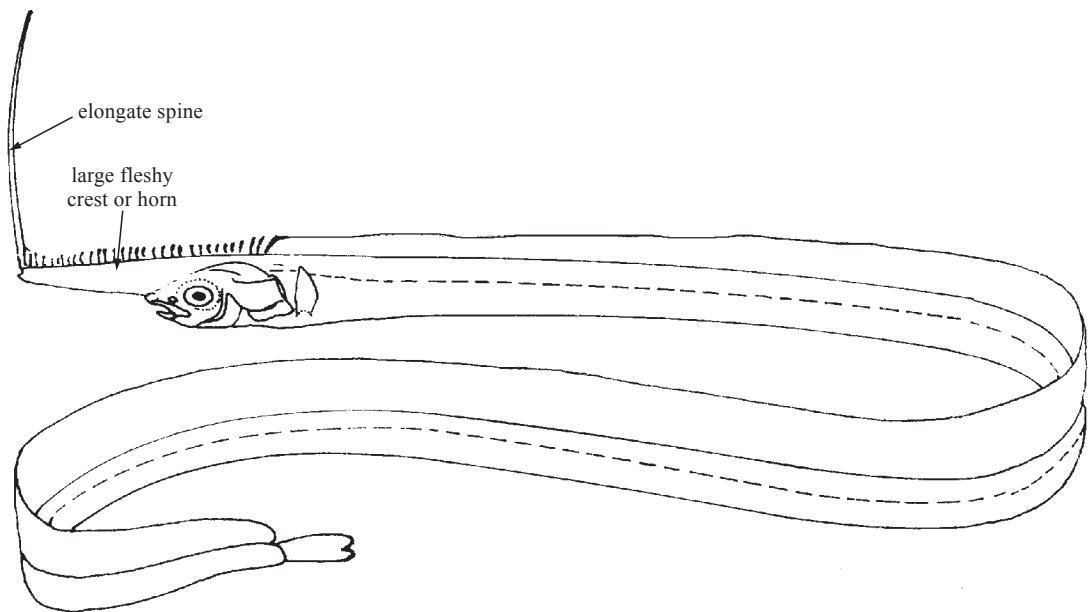
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LOPHOTIDAE

Crestfishes

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

Diagnostic characters: Large-sized, ribbon-like lampridiform fishes (to 2 m); body elongate and compressed. **Head bears a large, fleshy crest or horn that extends forward to tip of jaw in *Lophotus*, and protrudes far forward of jaw in *Eumecichthys*; crest or horn bears an elongate spine and supports multiple dorsal-fin soft rays.** Upper jaw protrusible; small conical teeth present on jaws and vomer. Dorsal fin long, with 2 spines (first spine short, second spine elongate) inserting well forward of eye; total dorsal-fin soft rays 204 to 390. Anal fin short, posteriorly placed; total anal-fin soft rays 5 to 20. Caudal fin somewhat reduced, with 12 to 17 soft rays. Pectoral fins with 13 to 17 soft rays, its base almost horizontal. Pelvic fins absent or small, with 3 to 6 soft rays, inserted posterior to pectoral-fin base. **Scales absent, except for tubular lateral-line scales.** Total vertebrae, 124 to 200 (56 thoracic in *Eumecichthys*). In lophotids (and all lampridiforms), the anterior palatamaxillary ligament and palatine prong are absent, as a result, maxilla is free to extend, along with the premaxilla, well away from the ethmo-vomerine region during jaw protrusion. Other anatomical features of lophotids (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 lophotids (and radiicephalids), the supraoccipital bears an anteriorly directed process that is well developed and stout in lophotids, projects over the frontal arch, and supports the fleshy crest on the head. **Colour:** body silver with multiple dark vertical bands in *Eumecichthys*; body blue dorsally, grading to silver ventrally in *Lophotus*, lacking vertical bands, and having multiple white or silver spots; dorsal fin, pectoral fins, pelvic fins (when present), and caudal fin reddish in lophotids (and most other lampridiforms).



Habitat, biology, and fisheries: Lophotids are rare mesopelagic fishes that occur in most oceans. *Lophotus* consumes squids and small fishes. Eggs and larvae have been described, but little else is known of their habits and reproductive ecology. As in the Radiicephalidae, lophotids possess a tubular gland that overlies the hind gut, and discharges a black ink-like fluid through a vent near the anus in an alarm response. No fishery exists for them.

Remarks: There may be only 2 species in this family, *Lophotus lacepede* (crestfish) and *Eumecichthys fiski* (unicornfish), although some authors recognize additional species that are not treated here. The family is in need of revision.

Similar families occurring in the area

Radiicephalidae: fewer dorsal-fin elements (152 to 160 versus 206 to 392); no conspicuous cranial crest or horn; anus situated near caudal fin (situated at midbody in lophotids).



Radiicephalidae

Key to the species of Lophotidae occurring in the area

- 1a. Crest on top of head extends forward to the tip of jaw (Fig. 1); dorsal fin with fewer than 300 rays. *Lophotus lacepede*
- 1b. Crest on top of head protrudes far forward of the jaw (Fig. 2); dorsal fin with more than 300 rays *Eumecichthys fiski*

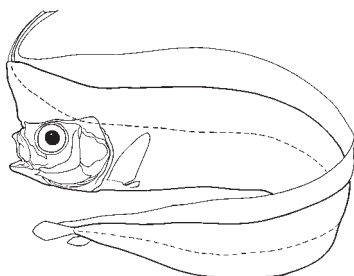


Fig. 1 *Lophotus lacepede*

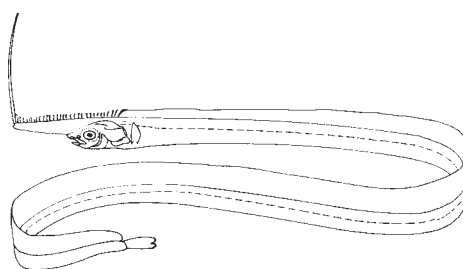


Fig. 2 *Eumecichthys fiski*

List of species occurring in the area

- Eumecichthys fiski* (Günther, 1890). To 130 cm. Mesopelagic in most oceans.
- Lophotus lacepede* Bosc, 1817. To 200 cm. Mesopelagic in most oceans.

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