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FAO SPECIES IDENTIFICATION GUIDE FOR FISHERY PURPOSES

THE LIVING MARINE RESOURCES OF THE EASTERN CENTRAL ATLANTIC

VOLUME 3

Bony fishes part 1 (Elopiformes to Scorpaeniformes)

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The living marine resources of the Eastern Central Atlantic. Volume 3: Bony fishes part 1 (Elopiformes to Scorpaeniformes).

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SUMMARY

This multivolume field guide covers the species of interest to fisheries of the major marine resource groups exploited in the Eastern Central Atlantic. The area of coverage includes FAO fishing area 34 and part of 47. The marine resource groups included are bivalves, gastropods, chitons, cephalopods, stomatopods, shrimps, lobsters, crabs, hagfishes, sharks, batoid fishes, chimaeras, bony fishes and sea turtles. The introductory chapter outlines the environmental, ecological, and biogeographical factors influencing the marine biota, and the basic components of the fisheries in the Eastern Central Atlantic. Within the field guide, the sections on the resource groups are arranged phylogenetically according to higher taxonomic levels such as class, order, and family. Each resource group is introduced by general remarks on the group, an illustrated section on technical terms and measurements, and a key or guide to orders or families. Each family generally has an account summarizing family diagnostic characters, biological and fisheries information, notes on similar families occurring in the area, a key to species, a checklist of species, and a short list of relevant literature. Families that are less important to fisheries include an abbreviated family account and no detailed species information. Species in the important families are treated in detail (arranged alphabetically by genus and species) and include the species name, frequent synonyms and names of similar species, an illustration, FAO common name(s), diagnostic characters, biology and fisheries information, notes on geographical distribution, and a distribution map. For less important species, abbreviated accounts are used. Generally, this includes the species name, FAO common name(s), an illustration, a distribution map, and notes on biology, fisheries, and distribution. Each volume concludes with its own index of scientific and common names.

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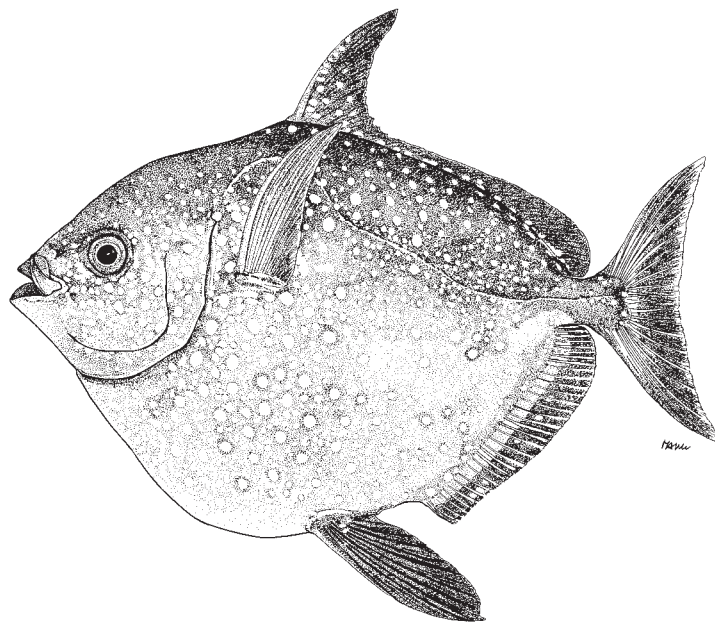
Order LAMPRIFORMES

LAMPRIDAE

Opahs

by J.E. Olney (†), Virginia Institute of Marine Science, Gloucester Point, VA, USA and
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Diagnostic characters: A large, deep, compressed, oval-shaped and brightly coloured fish. Mouth small and toothless. **Dorsal and anal fins long and single, both retractable into deep grooves, the first with a high anterior lobe;** caudal fin moderately forked; **pectoral fins long and sickle-shaped, placed high on sides,** their bases horizontal; pelvic fins large and placed on ventral margin of body, posterior to pectoral-fin origin. Body covered with very small, smooth scales. Lateral line strongly arched over pectoral-fin base. Total vertebrae 46 to 50; dorsal-fin rays, 48 to 52; anal-fin rays, 33 to 42. In lamprids (and all lampriforms), 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 lamprids (and all lampriforms): 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 lamprids, the foramen magnum is bounded laterally by exoccipital condyles. **Colour:** fresh intact opah are a uniform solid golden orange to vermilion with small oval white spots but much of the body colour quickly changes to steel blue or bottle green after death.



Habitat, biology, and fisheries: Found from the surface to depths of about 200 m; apparently solitary, mainly an inhabitant of warm water, but wandering far north in summer months; uses its pectoral fins for burst swimming, employing large muscles attached to its shoulder girdle for thrust. *Lampris guttatus* is a solitary, wandering predator and powerful swimmer, consuming molluscs, crustaceans, and small fish, sometimes in large quantities. A marketable bycatch of tuna and swordfish longline fisheries bringing high prices because of its excellent tasting pink flesh. No catch statistics are available from the area but about 200 000 fish have been recorded in the Hawaiian long-line fishery (1994–2011).

Similar families occurring in the area

None. No other large marine fish has the typical body shape, colour and wing-like pectoral fins of *Lampris guttatus*.

List of species occurring in the area

Lampris guttatus (Brünnich 1788). To at least 163 cm fork length and 89 kg; average about 100 cm. The IGFA all-tackle game fish record is 73.93 kg; worldwide in tropical and temperate waters; probably scattered occurrence throughout the area. A second species, *L. immaculatus*, is widely distributed in cold and temperate waters of the southern hemisphere and does not occur in the area. A field study in Hawaii has suggested there may be a third, undescribed spotted species in that region.

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