Body elongate, ribbon-like, tapering to caudal fin, with **anus located near posterior end of body**. Head very peculiar, with a considerably elevated occipital crest bearing the anterior rays of the dorsal fin and extending forward to level of mouth or far beyond; mouth small, weakly protrusible; maxilla extending beyond anterior eye margin; teeth conical, pointed and somewhat depressible, set in 1 to 3 irregular rows in both jaws, some of the anteriors slightly enlarged and curved; a small patch of teeth on vomer (roof of mouth); 6 branchiostegal rays. **Dorsal fin long-based**, extending backward to caudal fin, with 220 to 263 (**Lophotus** or 310 to 392 (**Eumecichthys**) rays, the anterior ones more or less elongate; anal fin short located near the caudal fin, with 12 to 20 (**Lophotus**) or 5 to 9 (**Eumecichthys**) rays; pectoral fins **inserted horizontally**; pelvic fins, when present, very small, laterally inserted below and slightly posterior to pectorals, with 5 or 6 (**Lophotus**) and 2 or 3 (**Eumecichthys**) soft rays; caudal fin short and pointed. Skin **smooth**, **without tubercles**; scales very thin, oblong, fragile, cycloid (smooth) and imbricate. **Lateral line with smooth plates**, terminating on upper portion of caudal fin base. An ink sac discharging into the cloaca.

**Colour:** blue dorsally, fading into white ventrally, with or without brilliant silvery spots (**Lophotus**) or with numerous dark subvertical bands (**Eumecichthys**); chest blackish; fins red or pinkish.

Large-sized (at least 2 m total length) mesopelagic fishes, from open waters, ranging in depth to 1 000 m. Only occasionally taken as bycatch in present fisheries. Flesh excellent eating.

**KEY TO SPECIES OCCURRING IN THE AREA**

1a. Body extremely elongate and slender, its depth contained 18 or more times in standard length; anal fin base much shorter than that of pectoral fin; occipital crest prolonged anteriorly beyond mouth; colour pattern banded (Fig.1) **Eumecichthys fiskii** (Günther, 1890), off South Africa and Japan

1b. Body elongate, its depth 5 to 8 times in standard length; anal fin base longer than that of pectoral fin; occipital crest not prolonged beyond mouth; colour pattern plain or spotted (Fig.2) **Lophotus capellei** (Temminck & Schlegel, 1845), of Western North Atlantic, South Atlantic, South Africa and Pacific

*So far not recorded from Fishing Area 51, but most likely occurring there*
SIMILAR FAMILIES OCCURRING IN THE AREA:

Regalecidae: anal fin absent; anus situated on anterior third of body or further forward; pelvic fins modified into a long filamentous ray; skin roughened by numerous bony tubercles.

Trachipteridae: anal fin absent; anus near middle of body; lateral line plates each with a spine.

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