

*Systematic Arrangement of the Subgenera of Macrurus.*<sup>1</sup>

I. Teeth in villiform bands above and below, that of the lower jaw always broadest near the symphysis, and sometimes tapering into a series on the side of the jaw.

A. Scales distinctly imbricate, without enlarged dorsal scales.

1. Scales spinigerous :—

a. Mouth entirely at the lower side of the head, a longitudinal ridge dividing the infraorbital region into a vertical and subhorizontal portion. Dorsal spine smooth, . . . . . *Cælorhynchus*.

b. Mouth inferior; infraorbital ridge more or less distinct. Dorsal spine serrated, . . . . . *Macrurus*.

c. Mouth wide and lateral. Dorsal spine serrated, *Coryphænoides*.

d. Mouth wide and lateral. Dorsal spine smooth, *Mystaconurus*.

2. Scales smooth, . . . . . *Lionurus*.

B. Scales indistinct, the whole skin covered with villosities, *Trachonurus*.

C. A series of enlarged scales along the base of the dorsal and anal fins, . . . . . *Cetonurus*.

II. Intermaxillary heterodont, with an outer series of strong widely-set teeth, and an inner villiform band; mandibular teeth uniserial.

A. Dorsal spine serrated, . . . . . *Chalinurus*.

B. Dorsal spine smooth, . . . . . *Optonurus*.

III. Intermaxillary teeth uni- or biserial; mandibular teeth uniserial.

A. Dorsal spine smooth, . . . . . *Malacocephalus*.

B. Dorsal spine serrated, . . . . . *Nematonurus*.

<sup>1</sup> Owing to insufficient description no further notice can be taken here of the following species :—

1. *Macrurus macrolepidotus*, Kaup (*Archiv f. Naturgesch.*, 1858, p. 91). Scales with fourteen to fifteen keels; twelve scales only from the anus upwards to the back.
2. *Macrurus acrolepis*, Bean (*Proc. U.S. Nat. Mus.*, vol. vi. p. 362). Washington Territory.
3. *Macrurus carribæus*, Goode and Bean (*Proc. U.S. Nat. Mus.*, 1886, p. 594), from the northern part of the Gulf of Mexico, depth 210 fathoms (belongs to the section *Cælorhynchus*).
4. *Malacocephalus occidentalis*, Goode and Bean (*Proc. U.S. Nat. Mus.*, 1886, p. 597), from depths of 132 and 164 fathoms, in the western and central Atlantic (would seem to belong to the section *Nematonurus*).
5. *Macrurus occa*, Goode and Bean (*loc. cit.*, p. 595), from 335 fathoms in the western central Atlantic. The authors consider this a near relation to *Macrurus trachyrhynchus*, but as they do not mention either the large dorsal scales, or the temporal fossa, or the structures of the gills, it is quite as likely that it is one of the long-snouted species of true *Macruri*.