

(although in the middle of the body this line may consist of as many as eight chromatophores); in some specimens the chromatophores on the myosepta may normally appear confluent to give the impression of a number of thin, short, dark lines along the body; posterior to the level of the vent on the underside of the dorsal aorta about ten equally-spaced groups of deep chromatophores.

Intestine as described above swollen and looped conspicuously at 10 places along its length. Gall bladder spherical and placed at the level of the second expansion of the liver, that is, at the 18th to 19th segment. The first vertical blood vessel to the intestine occurs at the 7th segment, but is not as conspicuous as in other groups of leptocephali but in contrast the last, at the 76th myomere, is very large.

REMARKS. The most conspicuous features of the leptocephali described above are the looped intestine, the pointed caudal tip, and the pigmentation on and between the swellings of the gut, and on the myosepta below the midlateral line. In these respects the present species conforms well with other ophichthid leptocephali. There can be little doubt that it can further be referred to the same species as that described and figured by Dakin & Colefax (1940, p. 204, Pl. 4, fig. 11). The material examined by these authors consisted of a number of eggs and early larvae, the latter having  $65-74 + 80 = 145-154$  myomeres, and a 100mm specimen having 72 preanal myomeres. The rather low myomere count in the smaller larvae doubtless reflects the difficulty generally in counting segments in small ophichthid leptocephali. Deraniyagala (1934, p. 94) earlier described a leptocephalus (Larva VI) which shows close similarities to the present material, but as the pigmentation of Deraniyagala's specimen was not described and the figures are not clear enough for sufficient detail to be seen I hesitate to refer my material definitely to Deraniyagala's species. The 90mm specimen had 70 preanal myomeres (in a total of 158), so that in this respect it falls within the range shown by the present series of specimens (153-163 myomeres). From Deraniyagala's figure there appear to be groups of chromatophores on the dorsal aspect of the intestine midway between successive swellings of the intestine, pigment occurs on the under surface of the snout, at various points along the lateral surface on the myosepta below the midlateral line, and on the base of the anal fin. There are 10 branchiostegal rays in the specimen but more than 14 in the present material from Australasian waters. However, these structures are difficult to see when in an early stage of development in ophichthids and in any case are always very numerous in the family. An ophichthid larva described by Gopinath (1950, pp. 94-95, Pl. 10, fig. 6) from southern India has almost identical pigmentation, but the intestine is looped in only six places and there are 183 myomeres.

The presence of full-grown and metamorphic specimens of this species in such numbers (this species makes up two-thirds of the total number of ophichthid leptocephali in the present collection) close to Sydney suggests that the juveniles and possibly the adults are relatively common inhabitants of the area. As far as I can determine, the only ophichthids which are known from here are *Ophisurus serpens* (L.), whose leptocephalus has already been characterised and is readily distinguished from the present form, species of *Muraenichthys*, which do not possess a pointed caudal without rays (precluding the identification of the larva described above with this genus), *Ophichthus pinguis* Günther, 1872 and possibly *O. episcopus* Macleay, 1878. Whatever the final identification of the present species may be (and a simple check on the number of vertebrae in the two species of *Ophichthus* listed here would resolve this) I would suggest that it will probably be referable to *Ophichthus*.

The present series of specimens range in size from 6.5mm-108.8mm, including a small number of early metamorphic forms. Those in the collection of the Australian Museum (50 specimens), with a single exception, were all collected as