

Leptocephalus tuberculatus n.sp., Text-fig. 1, F-H.

MATERIAL EXAMINED. *Australian Museum Collection* (2 specimens): 32.7mm total length (type) and 33.5mm (paratype), Aust. Mus. regd. no. IA. 2477, Manly Beach, N.S.W., 1907.

DESCRIPTION. Two specimens: myomeres 53-54 + 46-48 = 100-101, last vertical blood vessel at myomere 51-53, teeth $\frac{1+VI-VII+6-7}{1+V-VI+\frac{2}{3}}$, dorsal rays 180-182, anal rays 147-165, caudal rays ? 4 + 2, a-d = +10 to +11. Description made from the type specimen, 32.7mm total length (measurements in mm): head, 2.8, snout 0.9, eye 0.9, cleft of mouth 1.4, postorbital 1.0, pectoral 0.9, predorsal 11.0, snout-vent 20.1, depth just before eye 1.1, at pectoral origin 2.6, at midpoint between pectoral and vent 8.6, at vent 6.2. Dorsal rays 180, anal rays 147, caudal rays ?4 + 2. Teeth $\frac{1+VII+7}{1+VI+\frac{2}{3}}$. Myomeres 54 + 46 = 100. a-d = +11. Last vertical blood vessel at myomere 53, anterior margin of gall bladder at myomere 41.

Body elongate-oval, much compressed except along head, very deep, its greatest depth at the midpoint of the body and contained about 3.5 times in total length, tapering about equally anteriorly and posteriorly of this point. Head relatively long, nearly 12 in total, clearly differentiated from trunk; snout short, equal to eye length or just less than postorbital; nasal organ well differentiated with the two nostrils not quite separated; eye circular, its diameter a little less than postorbital; cleft of mouth oblique, reaching to below middle of eye; teeth relatively numerous, in three series on each side of upper and lower jaws, in detail as follows:—a minute anteriorly-directed tooth on the anterior tip of the snout followed by a series of seven larger teeth and then by seven much smaller teeth, this series ending below the middle of the eye; a similar pattern on the lower jaw although the posterior series has only three teeth. Pectoral fin relatively long, equal to the length of the eye; dorsal fin well differentiated with its origin about halfway between the levels of the pectoral and the vent; anal fin similar, caudal fin with clearly obvious rays but indistinct hypurals.

Pigmentation restricted entirely to a minute chromatophore on the dorsal surface of the snout above the nasal organ, a similar pigment spot at the base of the third tooth of the upper jaw, a small chromatophore below the tip of the lower jaw; at the level of the 48th myomere a large, dendritic chromatophore over the posterior face of the single upward loop of the intestine; an inconspicuous dendritic chromatophore on the lateral surface at the midlateral level between the 79th and 80th myomeres.

Intestine anteriorly very narrow but swelling out at about myomere 47 and looping upwards conspicuously at this point. Gall bladder posteriorly placed along the intestine, in front of the relatively large mass of the liver which extends in front of the vent. (*L. tuberculum* = a bump or swelling, in reference to the single swelling of the intestine near the vent).

REMARKS. The two features which immediately distinguish the present species from leptocephali of *Moringua* are the presence of only a single large chromatophore on the midlateral line and the anterior origin of the dorsal, between the levels of the pectoral and the vent. If larval moringuids are similar to larvae of other families in their generic differentiation according to conspicuous differences in pigmentation, I would confidently suggest that *L. tuberculatus* is representative of a genus distinct from *Moringua*. It has already been noted here that other genera have been placed in the Moringuidae, namely, *Stilbiscus* and *Anguilllichthys*, but that these are probable synonyms of *Moringua*. In the absence of a genus to which the present species might reasonably be referred I have taken the course of naming the two above specimens from Sydney as representatives of a new species of *Leptocephalus*.