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Ophichthid Leptocephali in Australasian Waters

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Abstract

EEL-LARVAE of the Ophichthidae are usually of moderate to large size when full-grown (80mm–180mm), the caudal fin is often absent or reduced to be replaced by the hard, pointed caudal tip characteristic of many ophichthid adults, the intestine is always swollen or looped conspicuously at various points along its length and pigment occurs on these swellings or loops as well as on the lateral body surface, the pectoral fin is usually reduced, but if absent from the metamorphosed eel remains in the larva until late in metamorphosis, and myomeres range from 120–220. A collection of 124 specimens examined includes 18 species, referable by differences in pigmentation to nine genera. Adults of at least two of these species spawn off eastern Australia, while the others probably do so in the New Caledonia region. Larval life of ophichthids is probably from about 10 months to one year.

INTRODUCTION

DURING the initial sorting of the collection of eel-larvae assembled from the New Caledonian-Australasian region, a collection numbering about 1,100 specimens and discussed in major part in earlier accounts (Castle, 1963a–1965b), a relatively large group of leptocephali, belonging to the Family Ophichthidae, was set aside with little difficulty from the remainder. All of the larvae, so grouped, show the intestine swollen or looped at intervals along its length, and in addition the majority have a much abbreviated caudal fin with the tip of the caudal region sometimes bluntly pointed and devoid of all fin-rays. These two characters have long been known to characterise ophichthid leptocephali, but it is the nature of the caudal tip which is the definitive character linking these larvae with the family. With two major exceptions, metamorphosed ophichthid eels have a hard, pointed, burrowing tail-tip which is free from the posterior tips of the dorsal and anal fins and which lacks fin-rays. The looped or swollen intestine is a larval character which does not carry over into the juvenile ophichthid.

There are 124 leptocephali of the Ophichthidae in the present collection, this number superficially reflecting the relative abundance of adult ophichthids in the subtropical and tropical waters in which the larvae were collected. However, well over half of this number (78) belong to a single species so that, compared with families such as the Congridae, the Ophichthidae is not well represented in the collection. The leptocephali here described are referred to nine genera

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