Hyperostosis in Fishes of the Genus *Platycephalus* (Platycephalidae)

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While investigating the biology of Moreton Bay flatheads, Mr. A. D. Lewis discovered that some *Platycephalus indicus* (Linnaeus) and *P. fuscus* Cuvier had swollen protrusions of the skull. Skeletons were compared between normal and hyperostotic individuals. The latter consisted of two *P. fuscus* (30.0 and 30.6 cm in standard length) and two *P. indicus* (34.5 and 37.5 cm in standard length), trawled from Moreton Bay, Queensland. These possessed pronounced swellings of the following skull bones: the frontals, prefrontals, mesethmoid, nasals and lacrymals (Fig. 1). The orbit was

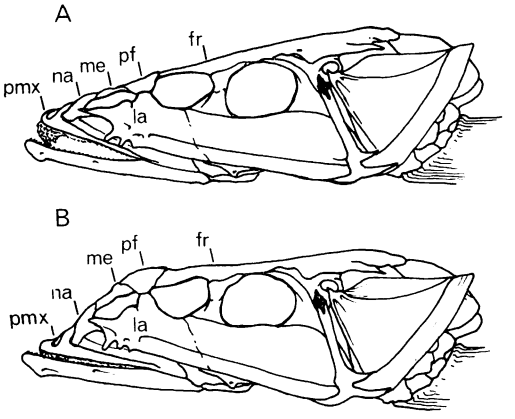

Fig. 1. Skull osteology of *Platycephalus fuscus* showing normal condition (A) and hyperostotic condition (B). pmx, premaxillary; na nasal; me, mesethmoid; pf, prefrontal; fr, frontal; la, lacrymal.

slightly reduced due to the frontal swelling and the premaxillary was shortened in comparison to normal fish. The swellings were more pronounced in *P. fuscus* than in *P. indicus*. No hyperostotic bones were observed in the axial skeleton. The only small fish with similar swellings of the skull was a 10 cm (standard length) specimen of *P. fuscus* beach seined from Moreton Bay. Although at least in *P. fuscus* some immature fish have this condition, the growth of the hyperostotic skull bones in both species appears related to growth and age. The relationship of growth of swollen bones to size and age is in agreement with Starks (1911) in the Carangidae and Olsen (1971) with *Trichiurus lepturus*.

Approximately 3% of the populations of *P. fuscus* and *P. indicus* in Moreton Bay have hyperostotic bones (based upon samples in excess of 1,000 specimens of each species). Apparently individuals with such swollen bones are normal in their behavior and biology (A. D. Lewis, pers. comm.). The cause of hyperostosis in fishes of the genus *Platycephalus* is unknown at present.

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コチ属魚類における骨格の異常形成について

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海産魚の多くで骨格の異常形成が知られているが，クインスランドのMoreton湾にすむコチ類，*Platycephalus indicus* と *P. fuscus* でも，総数の3% あまりに異常な成骨現象が認められた．これらの種類の標準体長 30 cm 台のものでは，前頭部を形成する額骨・前額骨・中篩骨・鼻骨および涙骨（眼前骨）が膨大しており，その状態は，*P. indicus* より *P. fuscus* の方が著しかった．このような異常現象のために眼窩は少し狭くなり，前上顎骨が短縮していた．なお，体長 10 cm の *P. fuscus* にも同様な現象が見られた．この骨格の異常現象は年令の増加や成長と関連しており，行動や生活は正常であるがその起因は現在のところ不明である．