



Description of three new species of *Glossogobius* from Australia and New Guinea

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Abstract

The present paper describes two new species of the gobiid fish genus *Glossogobius* from southern New Guinea and a third related species from northeastern Australia. All three species are restricted to a small number of river systems. *Glossogobius bellendenensis*, **sp. nov.** is distinctive in having reduced predorsal scales and fin-ray counts and mental frenum shape. It is restricted to relatively clear water rivers of northeastern Queensland. The closely related, *Glossogobius muscorum* **sp. nov.** is also distinctive in reduced predorsal scales and fin-ray count and is found only in the Fly River system of New Guinea. *Glossogobius robertsi* **sp. nov.** is distinctive in fin-ray and scale counts and is found in the Fly River in Papua New Guinea and possibly in a river in Papua close to the Fly River. That species has been confused with *Glossogobius giuris*, which generally occurs in lower reaches of the river.

Key words: *Glossogobius*, Gobiidae, new species, Australia, New Guinea, freshwater

Introduction

The genus *Glossogobius* (Gill) is one of the most speciose genera of gobioid fishes. The genus is characterized by a longitudinal papilla pattern, with at least 6 lines running longitudinally on cheek, 27–30 vertebrae, a bilobed tongue, gill opening reaching below a point just before to just behind posterior preopercular margin, a typically lobed mental frenum and a long bony process extending from the preoperculum to the symplectic. In addition most species have a large mouth (10–15% SL) and depressed head. Currently only 24 valid species are recognized. Hoese and Allen (1990) estimated that 27 species were known from Australia and New Guinea. Subsequently new species have been found in the Philippines, Madagascar, South Africa and Sulawesi bringing the total number of estimated species to over 50. Most of the species fall into the *Glossogobius celebius* (Valenciennes, 1837) complex, which are characterized by a well developed mental frenum, such as that shown in Figure 3. Most of the new species are small sized ranging in size as adults from 25–100 mm SL. Only *Glossogobius giuris* (Hamilton, 1822), *Glossogobius aureus* Akihito and Meguro, 1975, *Glossogobius koragensis* Herre, 1935 and *Glossogobius olivaceus* (Temminck and Schlegel, 1845) reach a size in excess of 200 mm SL, with some populations of *Glossogobius giuris* reaching a size of 500 mm in eastern Africa (Eccles, 1992). Except for the mangrove species, *Glossogobius circumpectus* (Macleay, 1883), all species are normally confined to freshwater as adults.

The present paper describes two new species in the *Glossogobius celebius* complex from the Fly River in southern New Guinea and a related species from northeastern Australia.

The material upon which the descriptions are based was collected by the authors from northeastern Australia and southern New Guinea and by Tyson Roberts in the Fly River. Roberts (1978) reported on his collections from the Fly River made in 1975. At that time he recorded *Glossogobius celebius* and *Glossogobius*