

## Three New Australian Species of the Fish Genus *Xenisthmus* (Gobioidei: Xenisthmidae)

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**ABSTRACT.** *Xenisthmus chi* n.sp., described from two specimens from Rowley Shoals, Timor Sea, has in combination: second dorsal-fin rays I,12; anal-fin rays I,11; predorsal area with narrow median wedge of scales extending forward almost to pore D; posterior naris without flap; and head and body pale with brown reticulate mottling, forming about 11 X-shaped markings along sides between pectoral- and caudal-fin bases. *Xenisthmus eirosipilus* n.sp., described from 15 specimens from throughout the southwest Pacific (type locality Elizabeth Reef, Tasman Sea), has in combination: second dorsal-fin rays I,12–13, usually I,12; anal-fin rays I,11–12, usually I,11; vertebrae 10 + 17; tongue indented; posterior naris with well-developed flap; upper sides of body with 12 large closely spaced spots, which usually do not extend to dorsal edge of body; and predorsal scaled to vertical through posterior edge of preopercle. *Xenisthmus semicinctus* n.sp., described from two specimens from Rowley Shoals, Timor Sea, has in combination: second dorsal-fin rays I,12; anal-fin rays I,11; vertebrae 10 + 17; tongue indented; posterior naris with well-developed flap; upper sides of body with 12 large, closely spaced spots, each connecting dorsally to, or almost to, mid-line by short, dark bar; and predorsal area with narrow median wedge of scales extending forward almost to pore D.

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*Xenisthmus* Snyder, 1908 (*Gignimentum* Whitley, 1933, *Luzoneleotris* Herre, 1938, *Platycephalops* Smith, 1957, and *Kraemicus* Schultz, 1966, are synonyms) is one of five genera that constitute the Indo-Pacific family Xenisthmidae, a well-corroborated, monophyletic group within the perciform suborder Gobioidei (Springer, 1983, 1988; Gill & Hoese, 1993). Species of the genus are distinguished from

other xenisthmids by a single synapomorphy (third branchiostegal ray with an expanded proximal head), and in having the following combination of symplesiomorphies: first dorsal-fin with six spines; body scaled; and palatine teeth absent (Gill & Hoese, 1993). They are sand-diving fishes generally associated with sand patches adjacent to reef or rubble, particularly in surge areas.

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