



## ***Polydactylus luparensis*, a new species of threadfin (Perciformes: Polynemidae) from the Batang Lupar River, Sarawak, Borneo, Malaysia**

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### **Abstract**

A new species of large-sized brackishwater threadfin, *Polydactylus luparensis*, is described from the Batang Lupar River in Sarawak, Malaysia, Borneo on the basis of 5 specimens (610–715 mm standard length). The new species can be distinguished from all other *Polydactylus* by having 8 dorsal-fin spines, first spine tiny, second spine very strong (its width more than 5 times the width of remaining spines); 13 second dorsal-fin soft rays; 11 anal-fin soft rays; 12 pectoral-fin rays, its length 22–24% (mean 23%) of SL, posterior tip not reaching a vertical through posterior tip of depressed pelvic fin; 6 pectoral filaments, fourth or fifth filament longest, its length 77–85% (mean 81%) of SL, posterior tip extending slightly beyond caudal-fin base; pored lateral-lined scales 67–75 (mean 71); lateral line unbranched, extending onto upper end of lower caudal-fin lobe; 6 scale rows above lateral line, 8 below; 14 gill rakers on upper limb, 18 on lower limb, 32 in total; occipital profile concave; posterior margin of maxilla extending considerably beyond a vertical through posterior margin of adipose eyelid; depth of posterior margin of maxilla 4–5% (mean 5%) of SL, greater than orbit diameter; well-developed swimbladder present; basal half of third to sixth pectoral filament white, becoming black distally. *Polydactylus luparensis* is currently known only from the mouth of the Batang Lupar River.

**Key words:** Polynemidae, *Polydactylus luparensis*, new species, Batang Lupar River, Borneo

### **Introduction**

The family Polynemidae comprises eight genera with 42 species and subspecies in the world (Motomura, 2004a, b; Motomura & Tsukawaki, 2006). Although the family contains primarily marine species, all species in the genus *Polynemus* Linnaeus, 1758 and *Polydactylus macrophthalmus* (Bleeker, 1858), live in freshwater rivers and lakes throughout their entire life cycle (except for *Polynemus paradiseus* Linnaeus, 1758, which is known to enter freshwater at spawning season only; David, 1954; Motomura *et al.*, 2002b) (Motomura *et al.*, 2001b; Motomura, 2004b).

Recently, five specimens of threadfin were collected from the mouth of the Batang Lupar River, Sarawak, Borneo, during the Fisheries Research Institute Sarawak Biodiversity Project 2008. These specimens were readily identified as belonging to the genus *Polydactylus* Lacepède, 1803, which was defined by the pectoral-fin insertion well below the midline of the lateral surface of the body, eye diameter relatively large, lip present on the anterior part of the lower jaw, anal-fin base length less than head length, pectoral-fin base (including pectoral-filament base) length less than upper-jaw length, and space separating the premaxillary tooth bands less than width of each band (Motomura, 2004b).

The Indo-Pacific species of *Polydactylus* were revised by Motomura (2002) who recognized 14 valid species in the genus and synonymized 12 nominal species under the 14 valid species. The Sarawak specimens differed from all Indo-Pacific species of *Polydactylus* in several aspects, including the head shape, body size, meristics and morphometrics. Thus, the specimens are described herein as a new species.