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## ***Dentex carpenteri*, a new species of deepwater seabream from Western Australia (Pisces: Sparidae)**

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### **Abstract**

A new species of sparid fish, *Dentex carpenteri*, is described from nine type specimens collected off Ningaloo Reef near Exmouth, Western Australia. Four valid species of *Dentex* are currently known in the western Pacific, *Dentex abei* and *D. hypselosomus* in the Northern Hemisphere, and *D. fourmanoiri* and *D. spariformis* in the Southern Hemisphere. These four species comprise the “*Dentex hypselosomus* complex”. *Dentex carpenteri* n. sp. is most similar to *D. spariformis* in overall body form, but differs from *D. spariformis* in having the posterior margin of the upper jaw not reaching or reaching slightly beyond a vertical at the anterior margin of eye; often with the greater part from the snout to the second infraorbital yellowish; deeper suborbital (9.7–10.9% SL); and a considerably deeper body (vs. posterior margin of upper jaw reaching clearly beyond anterior margin of eye; slight yellow region on snout; suborbital depth shallow (7.6–9.6% SL); and a less deep body in *D. spariformis*). The mitochondrial 16S ribosomal RNA genes (16S rRNA, 545 bp) of the above five species were analyzed using the Atlantic congener, *Dentex macrophthalmus* as an out-group, the results clearly indicating that *D. carpenteri* n. sp. is a valid and distinct species. A key to the “*Dentex hypselosomus* complex” is provided. The distributional information available for the five species from the western Pacific, including western Australia and the nearby eastern Indian Ocean, are discussed, with the species considered to be allopatric.

**Key words:** taxonomy, Sparidae, *Dentex carpenteri*, New species, Western Australia, southeastern Indian Ocean

### **Introduction**

The Sparidae comprises about 33 genera in 6 subfamilies (based on teeth morphology: form of canines, incisors, and molars) and 141 species, including subspecies, worldwide (Akazaki 1962; Orrell & Carpenter 2004; Carpenter 2001; Nelson 2006; Iwatsuki & Carpenter 2006, 2009; Iwatsuki *et al.* 2007; Iwatsuki & Heemstra 2010, 2011a, 2011b; Hanel & Tsigenopoulos 2011; Iwatsuki 2013; Iwatsuki & Maclaine 2013; Tanaka & Iwatsuki 2013; Amir *et al.* 2014; Eschmyer 2014).

In the most recent taxonomic review of the sparid genus *Dentex* in the western Pacific (Iwatsuki *et al.* 2007), valid species were redescribed, and one new species was described (Iwatsuki *et al.* 2007), resulting in four species being recognized: *Dentex abei* Iwatsuki, Akazaki & Taniguchi, 2007 and *D. hypselosomus* Bleeker, 1854 in the Northern Hemisphere, and *D. fourmanoiri* Akazaki & Séret, 1999 and *D. spariformis* Ogilby, 1914 in the Southern Hemisphere, collectively known as the “*Dentex hypselosomus* complex” (Iwatsuki *et al.* 2007).

*Dentex* specimens from Western Australia were collected by the second author, who informed the first author of the specimens via photographs. Samples from this region were overlooked by Iwatsuki *et al.* (2007). The authors carefully examined counts, proportional measurements, and morphology of these new specimens, together with analysis of the mitochondrial 16S ribosomal RNA genes (545 bp), concluding that they represent an undescribed species of *Dentex* characterized by having the posterior margin of the upper jaw not reaching to or reaching slightly