



The second known specimen of a rare duckbill eel, *Nettenchelys taylori* Alcock, 1898, collected from the Solomon Islands (Nettastomatidae)

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Taylor's duckbill eel, *Nettenchelys taylori* Alcock, 1898, was originally described from a specimen collected from off the Travancore coast of India at a depth around 768 m. Recently, a specimen was found in the fish collection of Muséum national d'histoire naturelle, Paris (MNHN) which represents the second specimen of the species other than the holotype. The specimen (Fig. 1) was collected from off the Solomon Islands, southern Pacific Ocean, and the geographic distribution of this species extends from the Laccadive Sea (southern India) to the Solomon Sea. A detailed description of this specimen is provided.

Nine species were recognized in the genus *Nettenchelys*, and *N. taylori* can be separated from all congeners by having the posterior nostrils well behind the dorsal-fin origin and lacking a single row of enlarged teeth at the front of the vomer (Smith *et al.* 1981, 2015).

Methods for taking measurements and counts followed Smith *et al.* (2015). Because the fish is bent due to preservation, a string was used to take the precise measurements. The specimen was fixed by formalin and transferred to 70% ethanol for preservation. The registration number and detailed information are: MNHN 2006-0224, 414+ mm TL (tail tip with small part lost), Salomon 2, N.o. Alis, sta. cp2297, 9°8'27.6" S, 158°17'20.4" E, Solomon Islands, Southern Pacific Ocean, otter trawl, 728–777 m, 8 Nov. 2004.

Measurements in mm and proportion: preanal length (PAL) 150 (~36.2% TL); head length (HL) 49.6 (33.1% PAL); predorsal length 52.7 (35.1% PAL); trunk 100.4 (66.9% PAL); tail length ~264 (~63.8% TL); body depth at anus 14.7 (~3.6% TL); body width at anus 13.4 (~3.2% TL); snout length 17.8 (35.0% HL), eye diameter 5.4 (10.9% HL); upper jaw 25.8 (52.0% HL); gill-opening height 4.5(9.0% HL); and interbranchial width 11.1 (22.4% HL).

Body and head elongate; tail narrow and tapering, incomplete with a probably very small part broken off; anus at anterior third of total length. Dorsal and anal fins continuous around tail, dorsal-fin origin behind gill opening by a short distance, anal-fin origin immediately behind anus; height of dorsal fin about half body depth. Pectoral fin absent. Trunk length twice of head length. Snout moderately long, broad, slightly depressed, its anterior tip soft and fleshy, extending a short distance beyond intermaxillary tooth patch; snout length 2.8 times in HL; a median groove on underside of the fleshy snout tissue. Many small papillae on surface of snout and chin.

Eye well developed, slightly before midway between snout tip and gill opening. Eye diameter 3.3 times in snout length. Anterior nostril tubular, above anterior tip of lower jaw, directed anterolaterally; posterior nostril far behind gill opening, about midway between dorsal-fin origin and anus, connecting to anterior nostril by a canal beneath skin; distance from tip of snout to openings of posterior nostrils 58.7% PAL (~21.3% TL).

Supraorbital canal with 5 pores: first (ethmoid) pore on underside of tip of snout; second pore on upper side of snout before anterior nostril; third pore on top of snout above and immediately behind anterior nostril; fourth on top of snout about one third of distance between anterior nostril and eye; fifth on top of snout, slightly before anterior margin of eye.

Infraorbital canal with 9 pores along upper jaw and 3 behind eye: first pore on edge of upper lip below anterior nostril directly behind middle of anterior nostril base; second pore (the adnasal pore) elevated above first and directly behind anterior nostril base; the third to ninth pores on edge of upper lip spaced more-or-less evenly between second pore and rictus; three pores behind eye. Preoperculomandibular canal with 15 pores in the mandibular section and 3 pores in the preopercular: first pore on edge of lower lip at tip of jaw; second to tenth along lower lip; eleventh right below rictus;

twelfth behind rictus, thirteenth to fifteenth pores in an ascending arc the last one below the first-lateral line pore. Supra-temporal canal with one pore on each side, the median pore absent.

First lateral-line pore enlarged, 7 pores before gill opening, 11 pores before dorsal-fin origin, 45 pores before anal-fin origin, at least 121 total lateral-line pores (not accurate due to the damage of skin). Lateral-line canal extending to about 1.2 head lengths before the rear end, followed by a row of sensory papillae. Vertebrae: predorsal 9; preanal 44; precaudal 61; and total 150+.

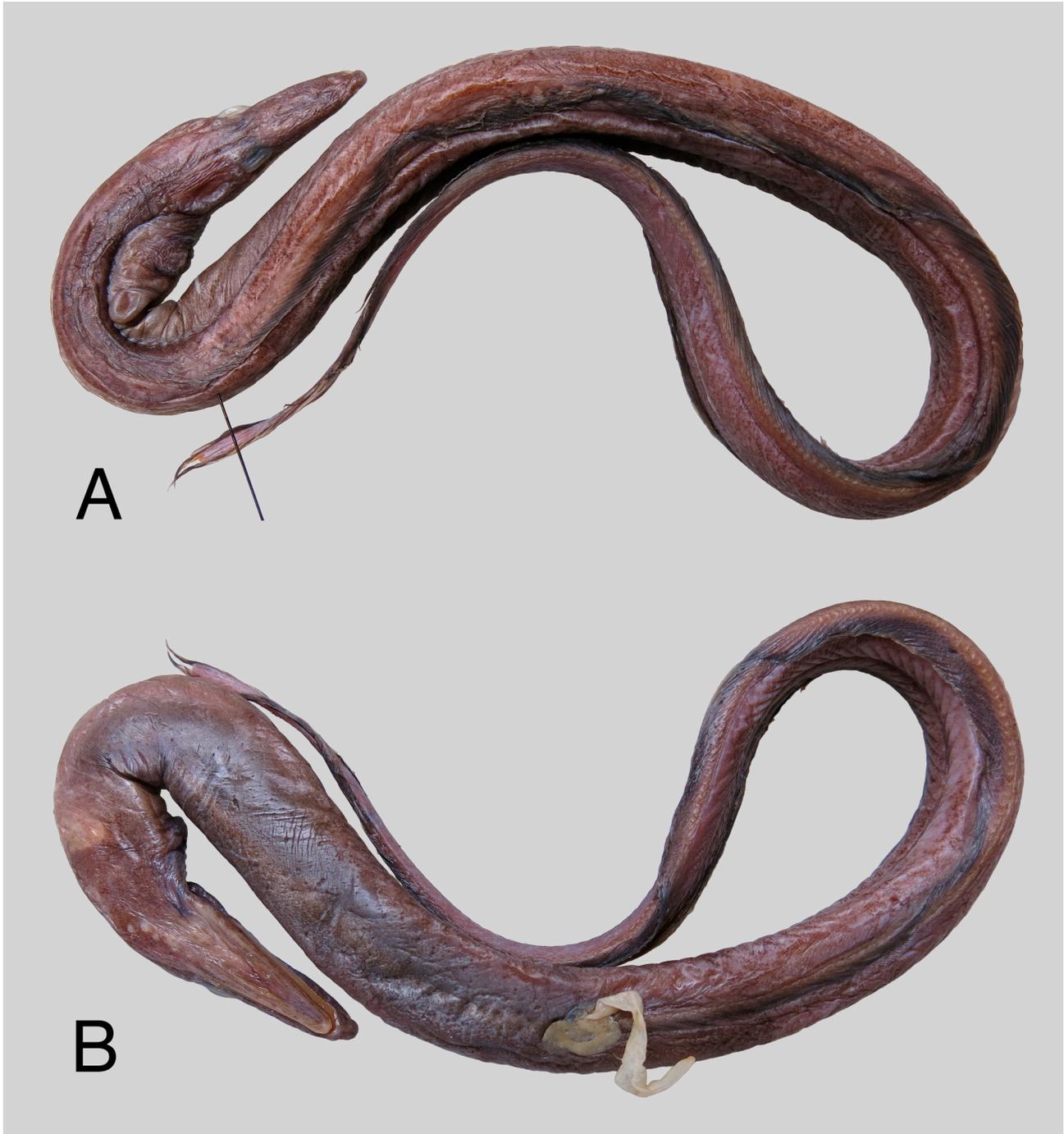


FIGURE 1. Second known specimen of *Nettenchelys taylori* Alcock, 1898, MNHN 2006-0224, 414+ mm TL. A. Dorsal view, needle points to the opening of posterior nostril canal. B. Ventral view.

Teeth mostly small, conical, in narrow bands on jaws and vomer. Intermaxillary tooth patch in a broad curved band, in four irregular rows (five or six rows in holotype), the inner and posterior teeth somewhat larger, continuous with maxillary teeth. Maxillary teeth in four irregular rows (six rows), those of the inner row larger than outer. Vomerine tooth patch elongate, extending from shortly behind intermaxillary teeth to below anterior margin of eye, in an elongate, broad

band, somewhat divided into two bands on posterior half (uniform), those in middle slightly larger than those on outside. Mandibular teeth in narrow bands, those of inner row larger than outer; largest teeth larger than any of the maxillary teeth. Color in preservative uniformly blackish brown; fins black; mouth white.

The specimen is almost identical with the holotype, the only previously known specimen, except for having 45 lateral-line pores before the anal-fin origin (48 in holotype) and slightly fewer tooth rows. The new specimen expands the known range of the species by some 10000 km, suggesting that it may occur over much of the intervening area as well. It is probably cryptic in habit and thus difficult to collect.

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