Exostoma tenuicaudata, a new species of glyptosternine catfish (Siluriformes: Sisoridae) from the upper Brahmaputra drainage, northeastern India

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Glyptosternines are highly specialized sisorid catfishes with greatly depressed body profiles; enlarged, horizontally extended paired fins, modified for adhesion, typically inhabiting torrential waters in rocky mountain streams and rivers. Their range of distribution extends from the upper reaches of the Amu Darya River drainage in Turkmenistan southwards and eastwards to Indochina and the Yangtze River (Changjiang) drainage of central China, and the Mekong and Salween drainages in northern and western Thailand (Vidthayanon et al. 2009; Ng & Vidthayanon 2014).

The genus Exostoma is distinguished from other glyptosternines in having a continuous post-labial groove in the lower jaw; gill openings not extending onto venter; teeth in upper and lower jaws homodont and oar-shaped, flattened distally; tooth patches in upper jaw separated, not produced posteriorly at sides; 10–11 (10–12 herein) branched pectoral-fin rays; the dilator opercula and levator opercula isolated; anterior end of sternohyoideus broad, its width almost equal to width of this muscle in axilla of pectoral fin; and adductor pelvicalis superficialis partially contacting with its antimere in the midline (Thomson & Page, 2006; Zhou et al., 2011).

Species of Exostoma are known from the Brahmaputra drainage east and south to the headwaters of the Chao Phraya River drainage (Thomson & Page 2006; Ng & Vidthayanon 2014). Seven valid species of Exostoma are currently recognized viz. E. labiatum (McClelland 1842), E. berdmorei Blyth 1860, E. vinciguerrae Regan 1905, E. stuarti (Hora, 1923), E. barakensis Vishwanath & Joyshree 2007, and E. effrenum and E. peregrinator Ng & Vidthayanon 2014. Of the seven species, two (E. labiatum and E. barakensis) were originally described from the Brahmaputra drainage in northeast India (McClelland 1842; Vishwanath & Joyshree 2007), three (E. berdmorei, E. stuarti, and E. vinciguerrae) from the Sittang and Irrawaddy River drainages in Myanmar (Blyth 1860; Hora 1923; Regan 1905) and two (E. effrenum and E. peregrinator) from the Chao Phraya River drainage in northwestern Thailand (Ng & Vidthayanon 2014).

While conducting an ichthyological survey in northeastern India, five specimens of a species of Exostoma were obtained from a steeply sloping mountain drainage, directly debouching into the Siang River, in Upper Siang District of Arunachal Pradesh. The specimens could not be assigned to (or identified as) any of the described species and are here described as a new species.

Material and methods

The fish were caught using a castnet of diameter 3 m with a 7 mm mesh size, in shallow water (20–60 cm deep). The specimens were preserved in 10% formalin initially and later transferred to 70% ethanol for preservation. Measurements were made point-to-point with a Digimatic caliper to the nearest 0.1 mm. Counts and measurements were taken on the left side of specimens. Subunits of the head are expressed as a percentage of head length (HL). Head length and body measurements are expressed as percentages of standard length (SL). CPL refers to the caudal-peduncle length. Measurements and counts follow those of Ng & Rainboth (2001) except for body depth and width at dorsal fin, length of anal fin, length of first pectoral-fin element, and upper and lower first principal caudal-fin rays, which follow Vidthayanon et al. (2009). Values in brackets after a count denote the frequency of that count. Asterisks denote values relating to the holotype. Comparative data for species which could not be examined are derived from the following literature sources: Exostoma barakensis from Vishwanath & Joyshree (2007); E. labiatum from Vishwanath & Joyshree (2007) and Ng & Vidthayanon (2014); E. berdmorei, E. stuarti, E. peregrinator and E. effrenum from Ng & Vidthayanon (2014).