

## Beyond the spots: Discovery of a new *Hoplisoma* species from the Curuá-Una River masked within the *H. julii* complex

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### ABSTRACT

With the recent reclassification of the Corydoradinae subfamily, the genus *Hoplisoma* has been resurrected and split from *Corydoras* as a distinct monophyletic lineage. Taxonomic challenges persist in the genus due to the highly variable colour patterns of its species, which result in species complexes with numerous cryptic species. *Hoplisoma julii* is a prime example. This species is reportedly widely distributed across the Parnaíba River basin and several Lower Amazonian drainages. Over the years, *Hoplisoma* forms from said regions have been assigned to that species complex. Such a situation is a hallmark of potential greater diversity, yet unrecognized and unsorted. To improve understanding of the diversity within the genus and address broader evolutionary questions such as convergence of colour evolution, this study employs a multidimensional taxonomic approach — morphological, osteological, and molecular analyses - to delimit the actual species diversity in that complex. Preliminary results support the existence of a new *Hoplisoma* species fitting the *H. julii* complex from the Curuá-Una River in the state of Pará, Brazil. This species is distinguished from other congeners by the following combination of characters: (1) very fine grey or black spots covering the head and flank; (2) absence of brownish stripe along midline flank; (3) 8 or more transversal dark brown bars on caudal fin; (4) posterior expansion of infraorbital 2 poorly-developed; and (5) slender posterodorsal ridge of the hyomandibular. This discovery marks the first formal description of a Corydoradinae species from the Curuá-Una River, underscoring the ichthyological uniqueness of that basin. Species-level differentiation of that form will be explored using a concatenated molecular matrix based on mitochondrial (COI) gene and exonic regions.

**Keywords:** Corydoradinae, *Hoplisoma*, *Hoplisoma* CW037, Curuá-Una, Taxonomy.

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