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Range extension of *Hyridella misoolensis* (Schepman, 1897) (Bivalvia: Unionida: Hyriidae) from Batanta Island, West Papua, Indonesia

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The freshwater bivalve fauna of Indonesia was recently reviewed by Sahidin *et al.* (2021), dividing the fauna into three geographic areas, with the last being the Sahul region, comprising only Papua and associated islands. It is a hotspot for the Hyriidae. They report four species of Hyriidae from this region but did not report any Hyriidae species from Batanta Island (Fig. 1).

Hungarian researchers began regular faunistic surveys on Batanta Island, West Papua, Raja Ampat Islands, Indonesia in 2010 (Kovács *et al.* 2015a), including a study of aquatic fauna in several water courses (Fig. 2). Some of the rivers on the southern side of the island have a steep slope and quickly reach the sea (Tanjung Lampu), and their lower stretches occasionally become dry (Kalisamsem, Kaliselatan, Kalijakut, rivers, and Wailebet Stream). Such rivers are found also on the northern side (Warai and Weras rivers), but a few have longer or shorter potamal sections as well: Ron, Waibin, Waridor, Warikambon, and Forum rivers on the west. They have a mangrove belt, and the tide has a considerable impact on their lower parts.

The second author and two colleagues, Róbert Horváth and Péter Juhász, were collecting dragonflies along the Waridor River in northwest Batanta Island, West Papua, Indonesia, in 2020 when they found dead shells of a freshwater bivalve. These valves were subsequently identified as *Hyridella misoolensis* (Schepman, 1897) with the aid of McMichael & Hiscock (1958) (Fig. 3).

Shell valves identified as *Hyridella misoolensis* were found in 2020 exclusively in the Waridor River, in parts less affected by the tide, when the water level was the lowest (the river was previously investigated twice in 2014 and once in 2015). The shells were collected from a 2300-metre-long stretch and in a major side branch. In 2023 and 2025, new specimens were found and the distribution area expanded to 3400 m (Figs 2, 3). Unfortunately, no live individuals were found. Waridor is the longest river on the island and has the most significant discharge volume of water on Batanta. Interestingly, the distribution of a damselfly species, *Neurobasis australis* Selys, 1897 (Kovács *et al.* 2015b), coincides with that of *Hyridella misoolensis*.

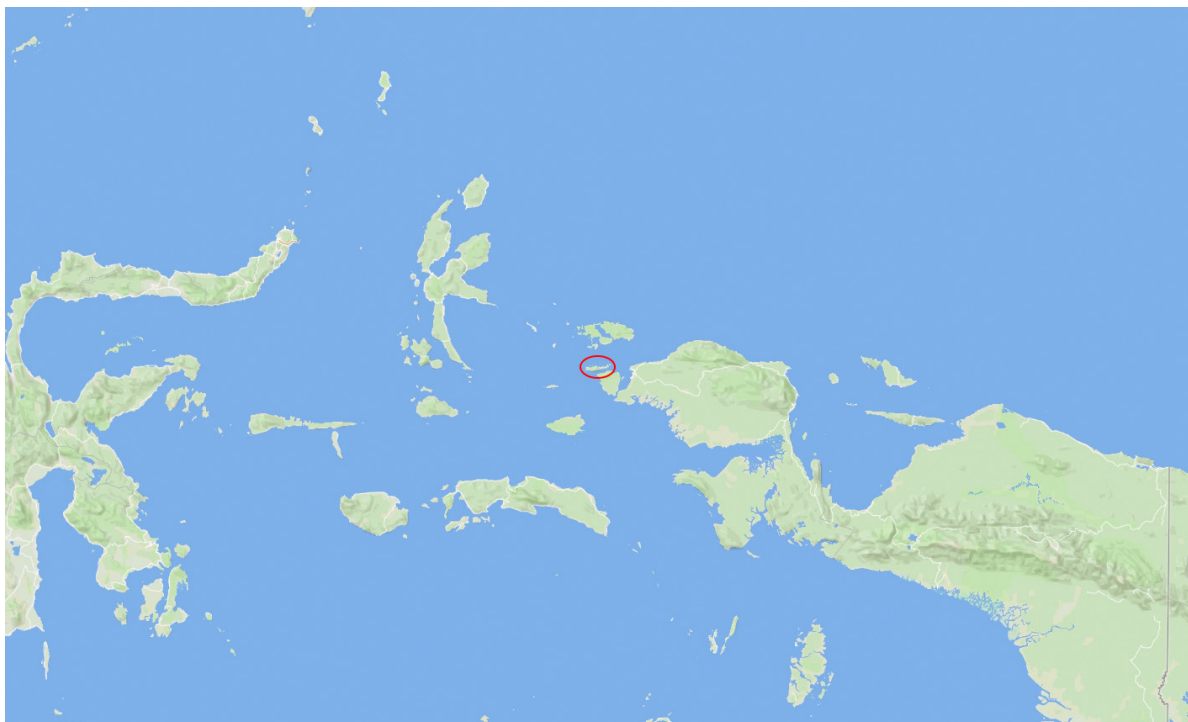


Figure 1. Study area. Within the circle is the Batanta Island (West Papua, Raja Ampat Islands, Indonesia). Base map © OpenStreetMap, Mapbox, and Mapcarta.



Figure 2. Records of *Hyridella misoolensis* on the Batanta Island. The color circles show the examined watercourses (yellow) and the species occurrences in the Waridor River (red). Base map © OpenStreetMap, Mapbox, and Mapcarta.

Schepman (1897) described a new species, *Unio misoolensis*, collected from Misool Island off the west end of New Guinea. The description was based on four specimens deposited in the Rijksmuseum, Leiden, the Netherlands. McMichael & Hiscock (1958:458) designated the adult specimen as the lectotype and the other three specimens as paralectotypes. They are now in the NBC Naturalis-Leiden: ZMA, MOLL.174342, Unionidae 60390. McMichael (1956) and McMichael & Hiscock (1958) and Walker *et al.* (2014) noted this species from western New Guinea, along the south coast of New Guinea as far east as the Fly River and from the Woru River at Seget on western New Guinea and Misool Island to the west. Walker (2022) and Walker *et al.* (2001, 2013) reviewed the freshwater mussel fauna and provided keys of Australasia, and noted *Hydrilla misoolensis* was restricted to New Guinea. MolluscaBase (2025) and Musselp (Graf & Cummings 2025) both list *Hyridella misoolensis* (Hyriidae) as a valid species.

Museum abbreviations:

MMGY – Mátra Museum of the Hungarian Natural History Museum, Gyöngyös, Hungary;
 NCSM – North Carolina Museum of Natural Sciences, Raleigh, North Carolina. U.S.A.



Figure 3. Habitat photos of *Hyridella misoolensis* on the Waridor River (Photos by T. Kovács).

Taxonomy

Order Unionida Gray, 1854

Superfamily Hyrioidea Swainson, 1840

Family Hyriidae Swainson, 1840

Hyridella misoolensis (Schepman, 1897)

Material examined: Indonesia, West Papua, Batanta Island, Waridor River, between S0°50'30.3", E130°31'28.7" and S0°51'22.6", E130°31'14.5", 18 m–30 m, 14.02.2020, T. Kovács, R. Horváth, P. Juhász, No.: 2020-7, MMGY: 74595.1-3, one pair, one single valve (Fig. 4a). – Same place, 23.02.2020, T. Kovács, R. Horváth, P. Juhász, No.: 2020-13, MMGY: 74596.1-7, three pairs, one single valve (Fig. 4b); NCSM: 113706, two pairs (Fig. 4c). – Batanta Island, valley of Waridor river, S0°51'49.1", E130°31'17.8", 31 m, 23.02.2023, T. Kovács, R. Horváth, P. Juhász, No.: 2023-23, MMGY: 74598.1-2, one pair (Fig. 4e). – Batanta Island, valley of Waridor River, S0°50'30.3", E130°31'28.7" and S0°51'54.6", E130°31'21.3", 18 m–33 m, 10.02.2025, T. Kovács, R. Horváth, P. Juhász, No.: 2025-5, MMGY: 74599.1-8, two pairs, four single valve (Fig. 4f). – Batanta Island, right side stream of Waridor River, S0°51'21.6", E130°31'15.6", 32 m, 14.02.2020, T. Kovács, R. Horváth, P. Juhász, No.: 2020-7.b, MMGY: 74597.1, one single valve (Fig. 4d).

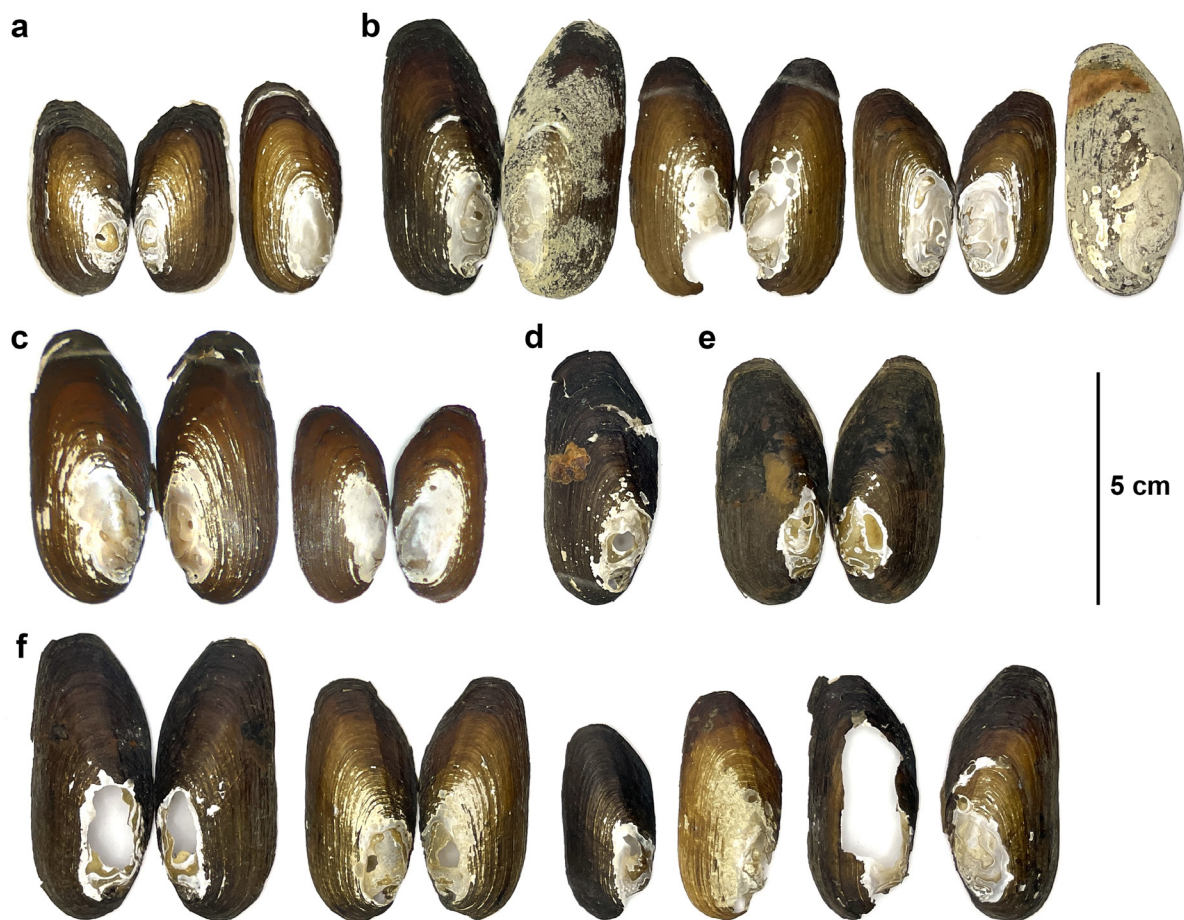


Figure 4. Specimens of *Hyridella misoolensis* collected from the Waridor River, Batanta Island: (a) MMGY 74595.1-3; (b) MMGY 74596.1-7; (c) NCSM 113706; (d) MMGY 74597.1, e – 74598.1-2; (f) MMGY 74599.1-8 (Photos by T. Kovács).

Range: New Guinea and the Raja Ampat Islands: Misool (Schepman 1897; McMichael & Hiscock 1958; Graf & Cummings 2025) and Batanta (first record).

Remarks: The specimens listed above document the range of *Hyridella misoolensis* in the Waridor River, Batanta Island, West Papua, Indonesia. These valves represent a new range extension for this species further west in Indonesia.

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