

A new *Kanamarua* (Gastropoda: Colubrariidae) with a remarkable shape from the southern Philippines

Koen FRAUSSEN⁽¹⁾ & David MONSECOUR⁽²⁾

⁽¹⁾ Vinkenstraat 2, 3200 Aarschot, Belgium
koen.fraussen@skynet.be

⁽²⁾ Dahliastraat 24, 3200 Aarschot, Belgium
david.monsecour@gmail.com

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Abstract: *Kanamarua aikenii* sp. nov., from Balut Island, Philippines, is described as new to science and compared with other similar *Kanamarua* Kuroda, 1951 and *Iredalula* Finlay, 1926 species.

Introduction: The Celebes Sea is a vast waterbody, about 280,000 km², and home to a unique fauna. The high biodiversity with faunal influences from the Sulu Sea and Pacific Ocean, the Molucca Sea and Java Sea (via Makassar Strait) is connected to the fauna of the Philippines (Mindanao) and Indonesia (Borneo, Celebes, Mollukas). The holotype of *Kanamarua aikenii* sp. nov. was collected by fishermen offshore Balut Island, also called Malulong, where the southern margin of the Philippines faces the Celebes Sea, also called Dagat Selebes. The northern part of the Celebes Sea, the Exclusive Economic Zone of the Philippines, is also called the Mindanao Sea while the southern part, the EEZ of Indonesia, is called the Celebes Sea.

Kanamarua aikenii sp. nov. has a peculiar shape and sculpture, with affinities to more than one species within the genus *Kanamarua*, but also sharing conchological characteristics with *Iredalula* Finlay, 1926. We compare those similarities and differences without deriving a conclusion about the relation between *Kanamarua* and *Iredalula*.

Abbreviations:

MNHN: Muséum national d'Histoire naturelle, Paris, France

DM: collection David Monsecour, Belgium

KF: collection Koen Fraussen, Belgium

Systematic account:

Family **Colubrariidae** Dall, 1904

Genus ***Kanamarua*** Kuroda, 1951

Type species: *Colus adonis* (Dall, 1919), as *Colus (Aulacofusus) adonis* Dall, 1919, by original designation.

For a discussion of the taxonomy and systematics of the genus *Kanamarua* and its species, we refer to Fraussen & Lamy (2008: 129-140). For a brief discussion of the relation between *Kanamarua* and *Iredalula* Finlay, 1926 we refer to Monsecour et al., 2017.

***Kanamarua aikenii* sp. nov.**

Figs 3-9

Kanamarua sp. nov. - Aiken, 2019: 10, fig.

Type material: Holotype, 25.3 mm, MNHN IM-2000-34886.

Type locality: Celebes Sea, southern Philippines, Mindanao, off Balut Island, deep water.

Material examined. The holotype is the only specimen known to us.

Description: Shell small for the genus, about 25 mm in length, thin, semi-translucent to transparent, slender, elongate with an exceedingly high spire and a very short siphonal canal; base weakly constricted along siphonal canal but strongly convex at outer lip. Protoconch of about 3 ½ whorls, large, 6.6 mm high, diameter 2.2 mm, papilliform; upper whorls smooth; last whorl with 1 fine subsutural and 1 fine suprasutural spiral line. Transition

to teleoconch ill-defined, only marked by a moderately broad, but low axial rib followed by the appearance of the teleoconch sculpture. Teleoconch with $5 \frac{1}{3}$ weakly convex whorls; suture distinct but fine, weakly constricted. Spiral sculpture consisting of 21-22 broad, flat and hardly visible spiral cords on the first teleoconch whorl, interspaces shallow and narrow. Spiral cords gradually slightly broader with slightly broader interspaces, eventually with an additional, weak, hardly visible secondary spiral cord; their number slightly increasing, up to about 26 on the penultimate whorl and about 40 on the last whorl (including the siphonal canal). Subsutural spiral cords are slightly stronger. Axial sculpture only microscopically discernable and consisting of numerous fine, straight incremental lines. In addition two weak axial varices are present along the spire. Apertural varix stronger. Aperture lens-shaped, narrow, without constriction towards the siphonal canal. Outer lip thin, smooth, without lirae within (spiral sculpture of the teleoconch shining through). Columella weakly curved, parietal area weakly concave, smooth. Siphonal canal very short, broad, open; the combination with a twisted columella gives a viewpoint deep into the shell. Aperture and siphonal canal combined account for slightly less than $\frac{1}{3}$ of total shell length.

Colour off-white with some pale brown tinges, with two broad pale brownish-orange blotches on varices, siphonal canal pale brownish orange, protoconch off-white.

Periostracum absent. Animal and operculum unknown.

Comparison: *Kanamarua aikenii* sp. nov. is characterised by its large, papilliform protoconch, the rather obscure spiral sculpture of broad and flattened cords in combination with fine interspaces, the slender shape with peculiar high spire, the wide and open siphonal canal in combination with a twisted columella that allows a viewpoint deep into the shell, and the small adult size.

Kanamarua wangae Monsecour, Fraussen & Fei, 2017 (Fig. 1), from the South China Sea differs by its smaller, flattened protoconch, the broader shape, the (weakly) incised suture, the narrower aperture with a longer siphonal canal, the uniform colour and the larger adult size.

Kanamarua hyatinthus Shikama, 1973 (type locality: Taiwan; = *K. rehderi* Kilburn, 1977, type locality: southern Mozambique; = *Metula vicdani* Kosuge, 1989, type locality: Philippines) differs by its much smaller protoconch, the broader shape, the smooth shell without spiral sculpture, the slightly flatter shape of the upper spire whorls, the narrower aperture with longer siphonal canal, the weakly constricted base resulting in a more

defined siphonal canal, the brightly coloured pattern and the larger adult size. (Fig. 2)



1. *Kanamarua wangae* Monsecour, Fraussen & Fei, 2017, South China Sea, off Spratly Island, 113°38'E, 07°N, 500-600 m, paratype 3, 30.0 mm, DM.

2. *Kanamarua hyatinthus* Shikama, 1973, 57.9 mm, Somalia, off Ras Hafun, deep water, KF-1224.

Kanamarua magnifica Fraussen & Chino, 2012, a species also only known from Balut Island, differs by its much smaller protoconch, the much broader shape, the longer siphonal canal, the coloured shell and the much larger adult size.

Species belonging to *Iredalula* Finlay, 1926 (type species: *Iredalula striata* (Hutton, 1873), as *Bella striata* Hutton, 1873, by original designation, fossil, Pleistocene, New Zealand) have a moderately blunt protoconch that is quite large, compared to shell size, similar to a protoconch as observed in *K. aikenii* sp. nov. and in *K. wangae*. The distinguishing conchological features listed in the comparison of *Iredalula* and *Kanamarua* by Fraussen & Lamy (2008: 132) are overruled by characteristics present in the new species. Further study may prove a closer relation between *Kanamarua* and *Iredalula* than expected.

Remarks: The conchological characteristics that we describe in *K. aikenii* sp. nov. are typical of the genus, but the exceedingly slender shape is atypical. The species belonging to the genus *Kanamarua* are quite diverse in appearance, ranging from slender shells with a glossy and patterned surface (the *hyatinthus* "group") to lens-shaped shells covered with fine spiral grooves and a rather dull colour (the *adonis* "group"). However, these groups are easily recognisable and well defined.

They were all assigned to a single genus in the revision (Fraussen & Lamy, 2008: 129-140), together with the *Metula*-like *K. boswellae* (Kilburn, 1975) from eastern Africa. A first intermediate species, *K. magnifica* Fraussen & Chino, 2012, combining the shape and sculpture of the *adonis* “group” with the pattern of the *hyatinthus* “group”, was discovered in the southern Philippines. A second intermediate species, *K. wanae* Monsecour, Fraussen & Fei, 2017, combines characteristics of *K. hyatinthus* with the *K. adonis* “group” and with the genus *Iredalula*, while the big, flattened protoconch had not yet been observed in either of these groups. The present species, *K. aikeni* sp. nov., is a third so-called “intermediate” species, combining characteristics of the *hyatinthus* and *adonis* “groups” with the genus *Iredalula*. The general appearance in shell structure and colour is typical of the *adonis* “group”, while the exceedingly slender spire in combination with a small aperture had not yet been observed in either of these groups. As already stated in Monsecour et al (2017: 106-107) it is therefore not appropriate to assign genus or subgenus names to the *hyatinthus* “group”, the *adonis* “group” or any other group or species with a distinct appearance.

Etymology: *Kanamarua aikeni* sp. nov. is named in honour of our friend Simon Aiken from England, who travels the world in search of interesting and little-known molluscs, for his vast contribution to the knowledge of conchology.

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Plate:

- 3-9: *Kanamarua aikeni* sp. nov., holotype, 25.3 mm, Celebes Sea, southern Philippines, Mindanao, off Balut Island, deep water, by local fishermen. MNHN IM-2000-34886.

