

## Description of a new endemic *Ganesella* Blanford, 1863 snail from Yapen Island, Western New Guinea (Eupulmonata, Camaenidae)

Alain Celzard

Université de Lorraine, CNRS, IJL, F-88000 Epinal, France

[alain.celzard@univ-lorraine.fr](mailto:alain.celzard@univ-lorraine.fr)

**ABSTRACT** A new species of the genus *Ganesella* Blanford, 1863 is reported for the first time from Yapen Island, Papua Province, Indonesia, a region renowned for its endemic flora and fauna. A comprehensive comparison with established species of *Ganesella* and related genera from Southeast Asia, and especially New Guinea, is conducted to highlight the unique characteristics of this new species, which has remained unobserved since its initial discovery in 1953.

**KEY WORDS** Mollusca, Gastropoda, Camaenidae, *Ganesella vanessae*, new species, Papua, Indonesia

### INTRODUCTION

The family Camaenidae Pilsbry, 1895 is a highly diverse and ecologically important group of pulmonate snails within the superfamily Helicoidea Rafinesque, 1815. Among the most popular genera within Camaenidae, *Amphidromus* Albers, 1850 stands out due to its striking shell polymorphism and the coexistence of dextral and sinistral individuals within the same populations of certain species. In contrast, *Ganesella* Blanford, 1863 is far less well-known than *Amphidromus*, yet it remains a fascinating genus within Camaenidae. Currently, 65 species are recognized (accepted) on Molluscabase, for a total of 119 taxa. However, an undetermined number of additional species have been published, either as *Ganesella* or under closely related genera, without being incorporated into this database. Therefore, the actual species count is likely higher. *Ganesella* is distributed from India to China through Southeast Asia, including Myanmar, Thailand, Cambodia, Laos, Vietnam, Malaysia, Indonesia and the Philippines (Sutcharit *et al.*, 2019).

*Ganesella* species are most commonly found in the rainforests of Malaysia, Borneo and Sumatra, although they are also present in New Guinea. Unlike other camaenid genera that occupy a broad range of habitats, *Ganesella* species are often restricted to specific altitudes or microhabitats, typically in humid environments with abundant vegetation. Here, we present and describe the first *Ganesella* species ever recorded from Yapen Island, Papua Province, Indonesia.

### Abbreviations:

ACF:	Alain Celzard collection, Epinal, France
D:	Shell diameter
H:	Shell height
MNHN:	Muséum Nationale d'Histoire Naturelle, Paris, France
NHMUK:	Natural History Museum, London, UK
SMF:	Senckenberg Museum Frankfurt, Germany

**SYSTEMATICS**

Class: Gastropoda Cuvier, 1795  
 Subclass: Heterobranchia Burmeister, 1837  
 Order: Stylommatophora A. Schmidt, 1855  
 Superfamily: Helicoidea Rafinesque, 1815  
 Family: Camaenidae Pilsbry, 1895  
 Subfamily: Camaeninae Pilsbry, 1895  
 Genus: *Ganesella* Blanford, 1863  
 Type species: *Helix capitium* Benson, 1848, by subsequent designation (Pilsbry, 1895: p. 68)

*Helix* (*Ganesella*) Blanford, 1863: 86.  
*Trochomorphoides* Nevill, 1878: 80. Type species: *Helix acris* Benson, 1859, by original designation.

*Ganesella vanessae* Celzard, n. sp.  
 (Plate 1, Figures A-C)

**Description.** Shell small, very thin and lightweight, trochoid-pagodiform; protoconch absent (smooth, whitish with an obtuse apex on the paratypes). Whorls incomplete, 5 (6-6¼ on the paratypes), convex; last one increasing more rapidly and not descending in front, partially laterally compressed on the final quarter and slightly constricted behind the lip. Suture impressed, thread-margined on lower spire; surface almost smooth with very fine growth lines and the base also minutely spirally striated (Plate 1, Figure D). Last whorl subangular and filiform keeled, with the final quarter having a reduction in the thread-like carina, convex above and somewhat flattened beneath. Shell translucent white, except for the suture and periphery, each bearing a broad, light golden brown spiral band; aperture oblique, rhomboid-ovate. Lip whitish, very slightly expanded and sub-rostrate with a poorly pronounced, beak-like notch at the end of the peripheral keel; parietal callus only a

sub-translucent film. Umbilicus oblique, extremely narrow and eccentric; columellar margin whitish, angled and broadly reflexed, almost covering completely the umbilicus.

**Shell variation.** The variability described here is due to differences in the maturity of the studied specimens, with the holotype being fully mature, paratype 1 appearing to be sub-adult and paratype 2 being juvenile. Indeed, the shell of paratype 2, which is elevated-conical, has a simple lip and its last whorl is slightly rounded, convex beneath. On the holotype the complete lip is thickened with a poorly pronounced, beak-like notch at the periphery, last whorl has a clear constriction behind the lip, aperture appears flatter, and umbilicus is hardly visible. In contrast, paratype 2 has a simple, thin chipped lip that is not reflexed, squarer aperture, less angular periphery, and tiny umbilicus that is more exposed compared to almost covered by the peristome on the other two shells. Paratype 1 has a well-formed columellar margin and an incomplete chipped lip. It differs from the holotype in having narrower bands and a less flattened aperture. On the holotype, a contraction in width (laterally compressed) on the final quarter of its last whorl is followed by a re-expansion before a pre-apertural constriction, which has created a swelling behind the lip, appearing as a bulge on the upper surface in the anti-apertural view. In contrast, paratype 1 has reduced lateral compression and the swelling is weak, perhaps due to the lip damage. As the lateral compression of the last whorl occurs on both the holotype and paratype 1 but not on paratype 2, it must have happened on those two shells as they matured. However, all the minor differences mentioned do not diminish the unmistakable distinctiveness of this new species, as emphasized in the discussion below.

**Type Material.** Holotype: H 12.16 mm (but about 13.1 if the apex was not broken), D 12.96 mm; MNHN-IM-2000-28824. Plate 1A

Paratype 1: H 12.95 mm, D 12.78 mm; ACF. Plate 1B

Paratype 2: H 12.14 mm, D 10.66 mm; ACF. Plate 1C

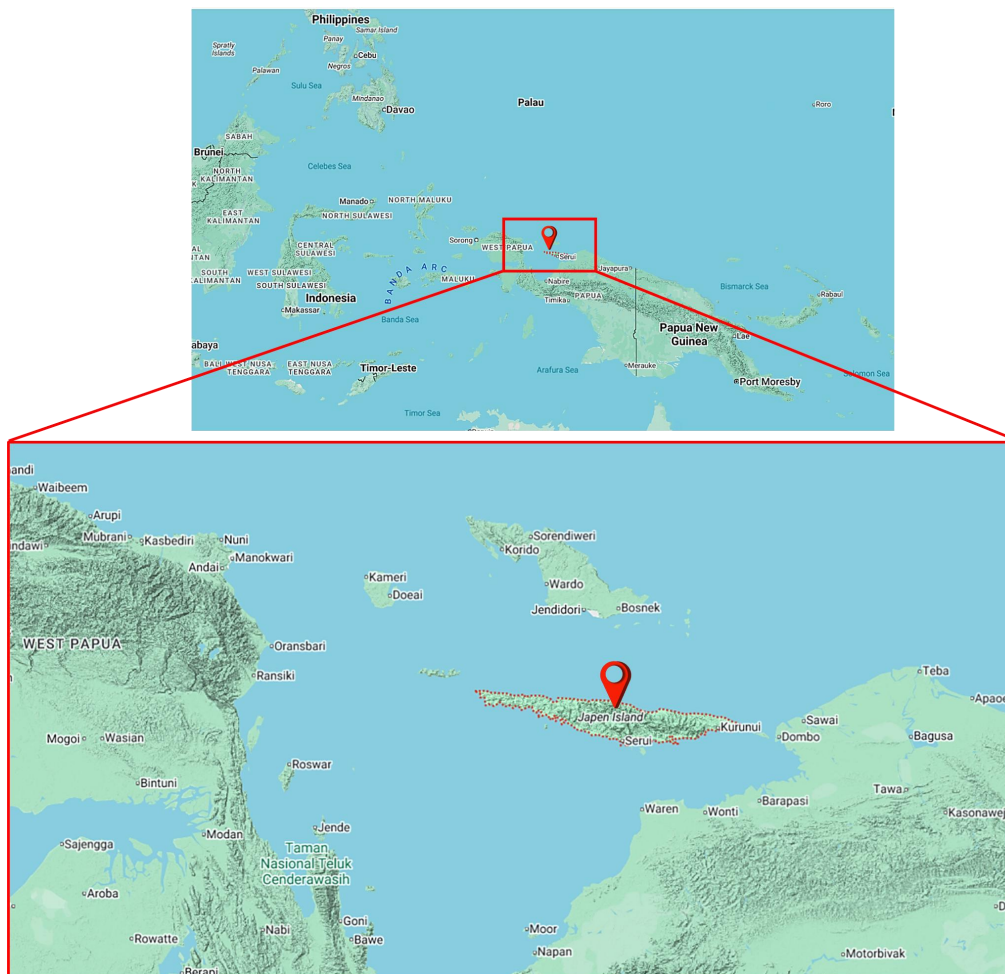
**Material Examined.** Three specimens, the only ones known to the author, were examined. All originate from Yapen Island (also known as ‘Japen’ or ‘Jobi’) in Papua Province and were found by a Japanese collector in 1953, according to the original labels. One specimen is in near-perfect condition, another is slightly damaged at the apex, and the third has an immature lip, which is chipped.

**Type Locality.** Yapen Island, Indonesia, no further details provided. Situated in

Cenderawasih Bay off the northwest coast of New Guinea, Yapen Island is part of the Yapen Islands Regency within Papua Province, Indonesia (see Figure 1).

**Habitat.** The Japanese collector who discovered the three specimens, noted on his labels: ‘taken on foliage after rain’, suggesting that the new species described here is arboreal. However, it remains unknown from which specific plant, tree, or shrub the specimens were collected.

**Etymology.** This species is dedicated to Vanessa Fierro, the author’s wife and an exceptional scientist in many respects, in gratitude for her unwavering love and support.



**Figure 1.** Partial view of Southeast Asia, centered on West Papua (top), with a zoomed-in map of Cenderawasih Bay, where Yapen Island is located (bottom) (© 2025 Google).

## DISCUSSION









The first issue that requires discussion is the attribution of *G. vanessae* n. sp. to the genus *Ganesella*. The generic placement of most Southeast Asian Camaenidae requires verification through anatomical and/or molecular phylogenetic analysis (Páll-Gergely *et al.*, 2020). Reproductive anatomy is particularly crucial in this regard, as pulmonate shell characteristics are often poor taxonomic markers due to their tendency to exhibit convergent evolution and/or plasticity. Traditionally, snails with relatively small to medium-sized, dextral, trochoid shells have been assigned to the genus *Ganesella* (Sutcharit *et al.*, 2019). As a result, the name *Ganesella* has been applied to a heterogeneous group that appears to contain a number of nominal subgenera (Thiele, 1931; Zilch, 1960; Richardson, 1985), yet there is no substantial anatomical information supporting these subgeneric placements. It is therefore unsurprising that several misclassifications have occurred. For example, *G. brevibarbis* (Pfeiffer, 1859) from China, was found after an anatomical study to belong to the genus *Plectotropis* von Martens, 1860, in the subfamily Bradybaeninae Pilsbry, 1934 (Zhou *et al.*, 2011). Following several anatomical and molecular studies (Sutcharit *et al.* 2019), it was concluded that the current interpretation of *Ganesella* is geographically restricted to eastern India and Southeast Asia and to the shell morphology discussed by Svihlryko (2003).

It is thus worth recalling Schileyko's (2003) most recent, and therefore most current diagnosis of *Ganesella*: “*Shell more or less trochiform, moderately thin to solid, of 4.5- 6 rather convex whorls. Last whorl angulated or carinated, a little descending in front. Color light, monochromatic or with a few dark bands.*

*Embryonic whorls smooth. Postapical whorls with irregular radial ridgelets and spiral lines (smooth below peripheral angle or keel). Aperture widely ovate, moderately oblique, with variously reflexed margins. Umbilicus narrowly open, rarely closed, Height 4.5-25.0, diam. 5.5-27.0 mm (11.5 × 12.8 mm). Distribution: Hindustan Peninsula, SE Asia, Japan, Taiwan, Indonesia, Philippines.”* The attribution of *G. vanessae* n. sp. to the genus *Ganesella* is also consistent from the perspective of its distribution area. Despite the absence of anatomical data, it must be noted that, after examining numerous species from all genera of Camaenidae in Southeast Asia, nothing resembles the specimens reported here more closely than the genus *Ganesella*, with which they align perfectly in every respect.

The genera that include some of the species most similar to *G. vanessae* n. sp. and have confirmed representatives in New Guinea are as follows (see Table 1): *Megalacron* I. Rensch, 1934, *Claudettea* Iredale, 1941, *Canefriula* Iredale, 1941, *Coliolus* Tapparone Canefri, 1886, *Papustyla* Pilsbry, 1893, *Papuina* E. von Martens, 1860 and *Papuolus* Schileyko, 2003. According to Molluscabase, the genera mentioned all belong to Hadrinae Iredale, 1937, except for *Ganesella*, which is accepted as belonging to Camaeninae. Examples shown in Table 1 are *Megalacron melanesia* Clench & Turner, 1964, *Claudetta bevani* (Hedley, 1891), *Canefriula rolandi* Iredale, 1941, *Coliolus thrix* Ponsonby, 1907, *Papustyla chancei* (Cox, 1870), *Papuina exsultans* (Tapparone-Canefri, 1883) (not in Molluscabase) and *Papuolus heliodorus* van Benthem Jutting, 1965.

Thus, genera that are closely related but have different distributions, such as *Satsuma* A. Adams, 1868, which includes species from Japan, Taiwan, and southern China that were formerly assigned to *Ganesella* (Sutcharit *et al.*,

Genus	Overall shell shape	Surface sculpture	Peristome	Umbilicus	Distinctive feature
 <i>Canefriula</i>	Depressed globose to high conical, periphery rounded	Fine to pronounced oblique ribs, sometimes with malleations or spiral striae	Reflexed, thickened and may form a weak beak at the periphery	Narrow to wide	Fine to coarsely sculptured, large protoconch, interior often dark colored and columella may be truncate or dentiform internally
 <i>Claudettea</i>	Depressed trochiform, strongly and sharply keeled	Finely obliquely costulated, weaker on the base	Broadly reflexed, thin or thickened	Narrow	Low spire, relatively large aperture and base flattened near the periphery
 <i>Coliolus</i>	Trochiform or depressed to elevated pagodiform	Apical whorls spirally striated	Reflexed, moderately thick with margins joined by a cord or raised callus	Narrow to nearly closed	Tower-like conical shape, partially setigerous periostracum and continuous peristome
 <i>Ganesella</i>	Conical to subglobose, periphery subangulate to keeled	Smooth or weakly striated] Fine growth lines, ridgelets or plicae, sometimes with fine spiral striae and/or minute granules	Reflexed, slightly so on upper margin	Narrow to nearly closed	Fine or moderate sculpture, sometimes sub-constricted behind the lip
 <i>Megalacron</i>	Discoidal to trochiform, sometimes sharply keeled	Irregular, incised lines oblique to growth lines and often spiral striae on the base	Narrowly to broadly reflexed, sometimes thickened	Absent, shell imperforate	Variable incised sculpture and columella arched or oblique, sometimes truncate or keeled internally and outer margin appressed
 <i>Papaina</i>	Lenticular to tall conical, periphery angulate or keeled	Costulated, granulated or irregularly ridged, sometimes spirally striated	Reflexed, thin to thick, sometimes obtusely pointed peripherally	Variable open (wide to narrow), mostly covered and rimate (umbilical chink) to closed	Aperture often notched or rostrate (beaked) peripherally and columella smooth or with a nodule
 <i>Papuolus</i>	Depressed pagodiform, last whorl strongly, abruptly descending in front	Alternating stronger and weaker riblets, weaker on the base	Strongly reflexed, thick, with margins joined by a cord or raised callus	Rather narrowly open and perspective	Presence of periostracal leaflets and continuous peristome processes
 <i>Papustyla</i>	Globose to high conic, attenuate, and periphery rounded to keeled	Fine growth lines to [weakly striated] obliquely costulated, sometimes spirally striated	Thick, narrowly to broadly reflexed, sometimes obtusely pointed peripherally	Narrowly open or absent (shell imperforate)	Brightly colored, thick peristome and columella narrow to broad and vertical, oblique or arched

**Table 1.** Key diagnostic differences between the shells of camaenid genera related to *Ganesella*, of which a number of their species are found in Papua New Guinea. The figured examples (not to scale) correspond to the species mentioned in the text, with the type species for *Ganesella*, *G. capitium*, from Thailand. Origin of the figures. *Canefriula rolandi*: © 2018 – Femorale; *Claudettea bevani*: original figure from Hedley (1891); *Coliolus thrix*: © 2008 – John Slapcinsky, CC BY-NC 2.0; *M. melanesia*: © 2010 – Femorale; *Papaina exsultans*: © 2015 – G. & Ph. Poppe; *Papuolus heliodorus*: © 2008 – John Slapcinsky, CC BY-NC 2.0; *Papustyla chancei*: © 2021 – Femorale. (Copyrighted images used with permission)

2019), have been deliberately excluded from this list. Moreover, the current taxonomic placement of *Satsuma* is indeed Bradybaeninae (tribe Aegistini). In contrast, the genus *Coliolus*, which was also previously considered a subgenus of *Ganesella* before the recent revision of the Camaenidae by Schileyko (2003), is present in New Guinea. However, a comparative study of the genera mentioned above strengthens the idea that the new species described here should certainly be placed in the genus *Ganesella*. Indeed, in Table 1, the main morphological characteristics in terms of overall shell shape (e.g. trochiform, conical, depressed heliciform or discoidal), surface sculpture (e.g. smooth, striated, ribbed or granulated), peristome thickness and reflection (thin or thickened) and reflection (slightly or heavily flared), and umbilicus (e.g. open, narrow, closed or rimate) have been compiled to highlight the differences between these genera (Pilsbry, 1895; Zilch, 1960; Richardson, 1985; Schileyko, 2003; Köhler & Criscione, 2015; Stanisic *et al.*, 2010). Although these distinguishing criteria are still far from being as robust and relevant as anatomical studies of the animal, which could lead (and have already led) to species being moved from one genus to another, they are all we currently have to propose a generic position for the new species. The examination of Table 1 thus clearly shows that only *Ganesella* can encompass all the specific features outlined in the description of *G. vanessae* n. sp.

To make the discussion as robust and comprehensive as possible, after reviewing the reasonably possible genera and concluding with *Ganesella*, it is now necessary to review the species of *Ganesella* already known from New Guinea. None, to the author's knowledge, have ever been reported from Yapen Island, but it is entirely conceivable that species from the mainland could have crossed the 22 km-wide

sea inlet and reached Yapen in one way or another.

The species of *Ganesella* from mainland New Guinea are as follows:

- *G. bertiniana* Tapparone Canefri, 1880 (see Plate 2A), whose description clearly mentions: “shell [...] obliquely and irregularly ridge-striated, dull white, covered with a pale horn-colored epidermis” (Tapparone Canefri, 1880). Tryon (1887) adds “irregularly rugosely striate, diaphanous, white, under a thin light corneous epidermis; whorls 6, [...] base convex.” These features are incompatible with *G. vanessae* n. sp.
- *G. cf. bertiniana* Tapparone Canefri, 1880, for which Van Benthem Jutting (1965) suggested that the species may produce banded shells and not just plain ones as originally described. Especially, according to this author: “The shells from the Klawilu canyon have two brown bands, one subsutural and one just above the periphery.” However, images of those shells have not been taken and so have not been compared with the holotype, hence the “cf.” added here. Recently collected shells of “*cf. bertiniana*” at Sorong Regency (Southwest Papua Province) are either plain white (Plate 2B) or banded (Plate 2C). The latter specimens are such that at least the peripheral band extends onto the back of the lip and shows through to the lip face, whereas on *G. vanessae* n. sp. neither spiral band extends onto the back of the lip. Additionally, the suture is not thread-margined, because the periphery is angular and not keeled as on *G. vanessae* n. sp, and protoconch and apex are dark coloured, unlike on *G. vanessae* n. sp.
- *G. dasypleuris* Möllendorff, 1895 (Plate 2D), which, in addition to a uniform and non-bicolored coloration, has the following characteristics, again incompatible with *G. vanessae* n. sp. if considered all together: “shell solid, corneous-brown; obliquely densely sculpted with sub-arcuate riblets; whorls 6, barely convex, base somewhat flatter; suture discretely margined by an exsert carina; last [whorl] very acutely carinate”; aperture not flattened; “columellar margin very dilated, sub-reflexed, forming a partially distinct angle with the basal” margin (columella oblique).

- *G. euconus* Möllendorff, 1895 (Plate 2E), with the junior synonym *stahlbergi* C.R. Boettger, 1914 (Plate 2F), which both clearly differ from *G. vanessae* n. sp. as soon as the following features are considered. *G. euconus*: “shell solid, opaque, yellow-corneous”, not banded; “faintly but distinctly striated, decussated with microscopic spiral lines; spire almost regularly conical; whorls 5½ somewhat flat, base somewhat convex; suture margined by a sub-exsert carina; last whorl quite acutely carinate; columellar margin dilated, reflexed, forming an obtuse angle with the basal” margin; columella almost vertical. *G. stahlbergi*: “shell rimate, turreted, dirty whitish, decorated with a purplish-brown band at the carina; apex whitish, shiny; very distinctly carinate; whorls 6, upper ones inflated, following ones flat; whorls separated by a flat suture”; columellar margin dilated, reflexed; columella oblique.
- *G. papuana* Thiele, 1928 (Plate 2G), whose shell (with an immature appearance) has significantly more whorls (8), according to the original description (Thiele, 1928). It is “solid brown, fairly tall and evenly cone-shaped”, with an oblique but square aperture, the last whorl almost completely flat at the base, and “3 rows of small scars on the lower whorls, which can be considered attachment points for short spines”. In contrast, *G. vanessae* n. sp. is bicolored, with a rather elliptical aperture and a surface uniformly covered with very fine growth lines, without any other sculpture. The rows of scars suggest that the shell may have a periostracum more like that of *Coliolus* than of *Ganesella*.
- *G. concatenata* van Benthem Jutting, 1965 (not in Molluscabase, Plate 2H) has “shell high conical, brownish, coarsely striated by the growth lines; whorls 9½ to 10, regularly increasing in diameter; top pointed, but not acute, base flattened; umbilicus open, the columellar side of the peristome hiding a small part of the opening; aperture quadrangular with rounded angles; position very oblique; peristome continuous, the parietal side just a little free from the” lip termination; “exterior margin slightly thickened and expanded, the upper edge sinuous”. In addition, the trochiform appearance featuring a distinctly convex spire with flattened whorls separates further

*G. concatenata* from *G. vanessae* n. sp., which has clearly convex whorls but a rather concave spire. Finally, “the juvenile paratype has one row of epidermal bristles along the suture and one in the middle of the whorls”, a feature not seen on paratype 2 of *G. vanessae* n. sp.

- *G. longicapillata* van Benthem Jutting, 1965 (not in Molluscabase, see Plate 2I) “is especially characterised by its long brown bristles”. Other important features are as follows, separating it definitely from *G. vanessae* n. sp.: “Shell trochiform, straw-colour, coarsely striated by the growth lines, the top whorls spirally striated; periostracum bears long brown hairs, one series in the middle of the whorls above the periphery, one series along the peripheral keel, and two rows of short brown bristles on the base of the whorls; whorls about 8, regularly increasing in diameter; top whorls more convex than the later ones; aperture quadrangular with rounded angles, position very oblique”.

The latter two species were originally described under *Ganesella* (*Coliolus*) by van Benthem Jutting (1965), who also stated for both species that the shells are coarsely striated by growth threads, apical whorls are spirally striated and have a hirsute periostracum. These points strongly suggest that they both belong to *Coliolus*. By the way, not included in this list are a number of species from New Guinea that were initially assigned to *Ganesella*, but have since been synonymized and/or reclassified under different genera. These include *G. heliodora*, a replacement name for the pre-occupied *Helix* (*Coliolus*) *canefriana* E.A. Smith, 1895, now accepted as *Papuolus heliodorus* (see Table 1), and *G. weiskei* Fulton, 1902 now accepted as *Paratrochus weiskei*. Also not considered are other closely related genera from New Guinea, particularly *Papuina*, some species of which exhibit clear morphological similarities and are found in the vicinity of Yapen Island, but do not appear in Molluscabase. However, given the number of species that have changed genera over the past

few decades, it may be useful not to overlook them entirely. Notable examples include *P. honorata* van Benthem Jutting, 1965 from Yapen Island, and *P. theonilla* van Benthem Jutting, 1965 from Idenberg River area, Papua Province. Nevertheless, their brown trochiform shells with a very flat spire profile and larger aperture leave little doubt as to their classification within the genus *Papuina*.

More debatable is the species originally described as *Helix (Papuina) beauforti* Bavay, 1908, which is also absent from Molluscabase. Gude (1910) confirmed the genus *Papuina* and provided arguments to justify it. However, the website BioPortal (2025), which provides access to all digitized details of the Naturalis collections (Netherlands), classifies it under *G. (G.) beauforti*, which is the most recent published opinion. The author has found no images of this species aside from the original figure, reproduced on Plate 2J. Not only is its resemblance to *G. vanessae* n. sp. striking, but the species was described from Wendehsi, a small area in West Papua on the western coast of Cenderawasih Bay, just over 160 km in a straight line from the nearest coast of Yapen Island (see Figure 1). At first glance, this species appears to be the closest to *G. vanessae* n. sp., especially since it indeed seems to belong to the genus *Ganesella* rather than *Papuina*. However, several details in the original description by Bavay (1908) confirm that the two species are distinct:

- First, according to the original description, *Papuina* (or *G.?*) *beauforti* has a shell that is wider (11 mm) than it is tall (10 mm), although this is not obvious from Plate 2J, whereas all specimens of *G. vanessae* n. sp. consistently exhibit the opposite height/diameter ratio (the holotype, if its apex were intact, possibly had a height of 13.1 mm for a diameter of 12.96 mm, so it is not an exception)
- Its body whorl is significantly taller and base more convex than that of *G. vanessae* n. sp., in which it is more flattened beneath

- Its aperture is larger and rhomboidal, with a thicker and more recurved lip than that of *G. vanessae* n. sp.
- Its collabral sculpture is more distinct than that of *G. vanessae* n. sp., where it is barely visible
- The shell color has a brown apex ("*apicis fuscus*" in the original text, even if not very apparent in Plate 2J), whereas the apex of *G. vanessae* n. sp. is white in the three specimens seen.
- Finally, the brown sutural band extends only to the penultimate whorl, whereas in *G. vanessae* n. sp., the suture is colored from the apex onward.

In fact, several characteristics of the species *Papuina* (or *G.?*) *beauforti* – while not absolute when considering only empty shells, as is the case here – suggest a stronger affinity with the genus *Papuina* rather than *Ganesella*. These are an apex differently colored from the rest of the shell, a more pronounced collabral surface sculpture, a more bulbous shape for the protoconch, a more robust shell, a thicker peristome, and a larger aperture with a much stronger pre-apertural constriction behind the lip. Whereas these features may occasionally apply to a few *Ganesella* species, they are much more typical of *Papuina* species. Bavay (1908) also reported the existence of an entirely white form, *Papuina* (or *G.?*) *beauforti* var. *alba*, found in a different locality near Lake Sentani (Papua Province), close to the border with Papua New Guinea.

Finally, it is worth considering the following species, which exhibit certain morphological similarities with *G. vanessae* n. sp.:

- *G. huberi* Thach, 2018 (Plate 3A), has a more evenly conical (trochoidal) shell with a less concave spire than *G. vanessae* n. sp., along with a sculpture of weak growth threads, a strongly reflexed, thick last whorl and a white to light beige coloration, accentuated only by a brown super-peripheral band above the white keel of the body whorl. It also has constricted suture, and an

umbilical area concave and bordered by a long ridge

- *G. sitalina* (Gredler, 1887) (Plate 3B) also has a much more regular conical shape, with significantly flatter whorls than *G. vanessae* n. sp., and a cream-colored shell, except at the suture and apex, which are darker. It also has the following features, according to the original description: “shell thin; corneous, base and fascia thinned above the keel, with the last whorl chestnut-yellow; finely whitish-carinate” (a thin white peripheral band, therefore the “fascia” is above the periphery); “evenly and quite strongly obliquely striated” (probably coarse growth threads), “almost invisibly above, very densely spirally lined below, scarcely striated” (probably very minutely spirally striated)
- *G. ulingensis* Zilch, 1966 (Plate 3C), with its tall spire, six flatter whorls, and uniformly white coloration, except for a dark-colored apex, is again unambiguously distinct from *G. vanessae* n. sp. Moreover, its shell is pale corneous-brown (slightly darker on protoconch and fading to whitish on last whorl); acutely carinate; transversely and curvedly striated (curved growth threads), minutely granulated (all over shell except on protoconch, which is smooth)
- *G. acris* (W.H. Benson, 1859) (Plate 3D) is again more conical than *G. vanessae* n. sp., and has a taller and less convex spire, dark-colored apex, rounder and more oblique aperture, less convex, flatter whorls, and a distinctly orange-beige peripheral band. In addition, the shell is whitish with oblique growth threads, obsoletely granulose and very minutely spirally striated beneath; acutely carinate at the periphery
- *G. subflava* (Godwin-Austen, 1891) (Plate 3E), whose original description states that the shell of the holotype (possibly sub-adult) is “pyramidal, keeled, rather flat on the base” with a “sculpture, rough papillate dottings arranged transversely”, in reality more papulous (*i.e.*, covered with small bumps or pimples) than truly papillate, and an ochre color (Godwin-Austen, 1891). These features make it easily distinguishable from *G. vanessae* n. sp.
- *G. perakensis* (Quadras & Möllendorff, 1896) (Plate 3F) has, according to the original description: “shell turret-conical; scarcely sub-

obliquely striated” (probably fine growth threads); “quite thin, sub-translucent; whitish first two whorls, corneous; acutely carinate at the periphery; chestnut carina”, thus it is again quite distinct from *G. vanessae* n. sp.

- *G. fernandesi* (Hidalgo, 1890) (Plate 3G) has a uniformly dark shell, thin and shiny, sub-smooth (under slow growth striae and obsolescently decussated), pellucid-white under a very thin, luteous epidermis, and with an aperture lip that features a characteristic, prominent beak-like deflection, in contrast to *G. vanessae* n. sp.
- *G. planasi* (Hidalgo, 1890) (Plate 3H) has a pagodiform shape, a suture that is not markedly different in color from the rest of the shell, a coarsely and densely sculpted (plicate) surface, and the last whorl very sharply carinate on the periphery, unlike *G. vanessae* n. sp.
- *G. apex* (Quadras & Möllendorff, 1896) (Plate 3I) has a low, concave spire, with flattened whorls and a uniform, shiny, pale yellow coloration, an obliquely striated, sculpted shell surface with very distinct spiral lines and subtle rugose folds running obliquely anteriorly (ridgelets), thus clearly different from *G. vanessae* n. sp.

Still other species could have been considered, but they differ too greatly from *G. vanessae* n. sp. in terms of overall morphology. For instance, *G. catocyrtia* (Quadras & Möllendorff, 1895) and *G. poecilotrochus* (Möllendorff, 1894) both from the Philippines, exhibit a much more regular conical shape, while *G. hyperteleia* (Morlet, 1892) from Laos, differs significantly in featuring delicately carved spiral sculpture. As a result, these species are not figured here.

Where similarities do exist, as in the case of *Papuina* (or *G.*?) *beauforti* with dark bands on a white or light-colored shell, they are most likely the result of pure evolutionary convergence, *e.g.* for camouflage, thermoregulation, or enhanced shell strength (Savazzi & Sasaki, 2013. and Rosin *et al.*, 2013).

There is every reason to believe that *G. vanessae* n. sp. is extremely rare, as no other specimens have been recorded since 1953 on Yapen Island, nor on the mainland, thus suggesting a likely endemic status. Additionally, the Yapen rainforests have been designated as a distinct ecoregion (AA0108) by the World Wide Fund for Nature (WWF) as part of its Global 200 initiative. The WWF has aimed since the late 1990s to identify and conserve the world's most biologically valuable ecoregions (Worldwildlife, 2025). Currently, 48.31% of the ecoregion falls within protected areas, most notably the Yapen Tengah Nature Reserve, the largest of these, covering 590 km<sup>2</sup> at the center of the island (Wikipedia, 2022; European Commission, 2025). Since this area is subject to strict conservation regulations prohibiting the extraction of natural resources without authorization, the likelihood of discovering new specimens of *G. vanessae* n. sp. is further reduced.

## ACKNOWLEDGEMENTS

The author thanks Jeff Parsons (Aitkenvale, Australia), Barna Páll-Gergely (Plant Protection Institute, Budapest, Hungary), and Bobbie Bruce (Western Australian Museum, Perth, Australia) for providing the missing bibliographic references. The author also thanks John Slapcinsky (Florida Museum of Natural History, Gainesville, USA), Philippe Poppe (Conchology, Inc., Cebu, Philippines), Marcus Coltro (Femorale, Vado Ligure, Italy), He Jing (Shellsfromchina, Shanghai, P.R.C.), Jasmine Yau (Malacology-Asia.com, Malaysia), and Somsak Panha (TNH editor, Chulalongkorn University, Thailand) for the images they kindly permitted to be reproduced here. Finally, the author extends gratitude to Virginie Héros (attaché at the MNHN, Paris, France) for her assistance in depositing the type

material of *Ganesella vanessae* n. sp., and to the reviewers, who shared their knowledge with the author and thus helped to improve this article considerably.

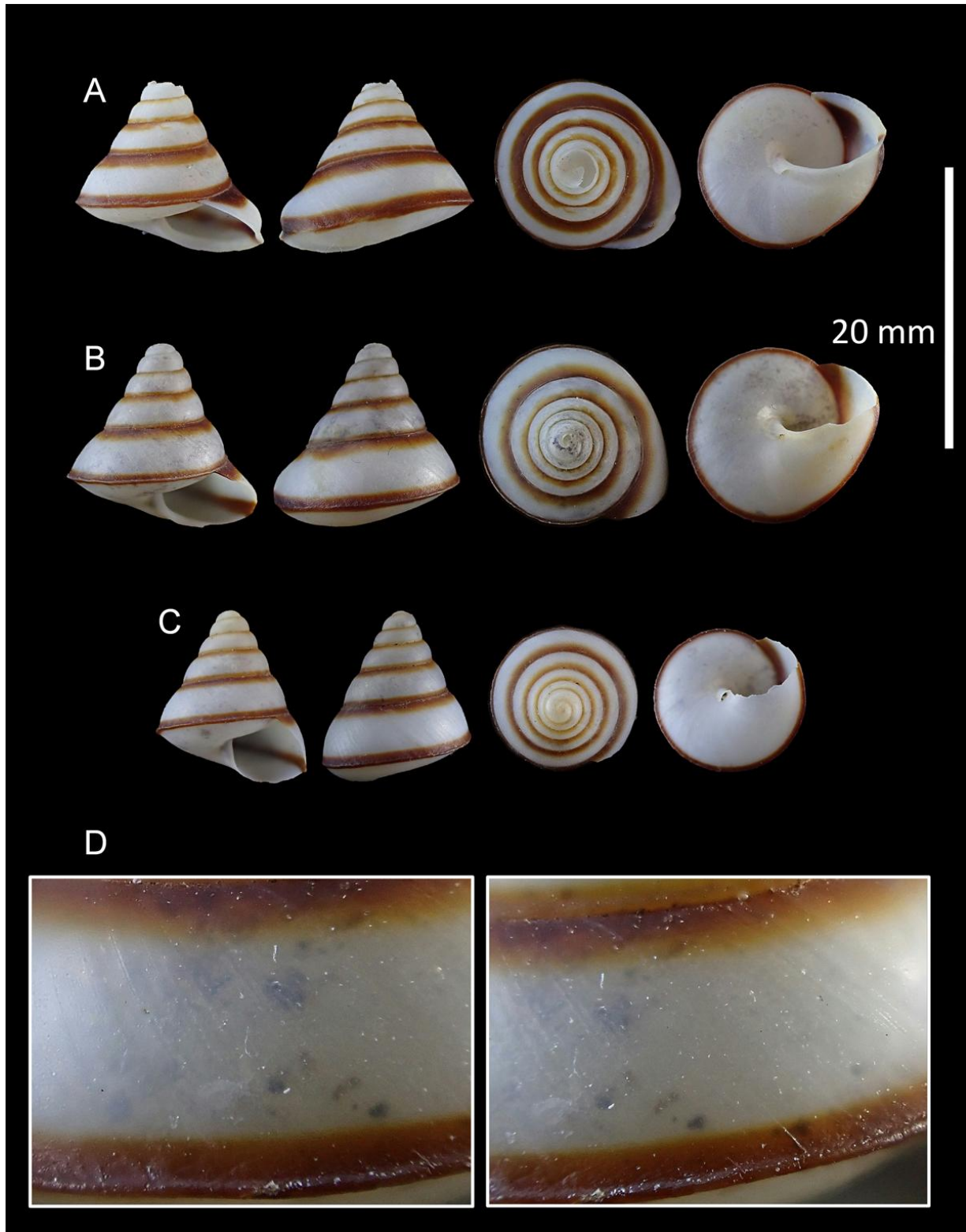
## LITERATURE CITED

- Bavay, A. 1908.** Mollusques terrestres et fluviatiles. Nova Guinea: résultats de l'expédition scientifique néerlandaise à la Nouvelle-Guinée 5:269-292.
- Bentham Jutting, W.S.S. van 1965.** Non-marine Mollusca of West New Guinea. Part 4, Pulmonata, 2. Nova Guinea, Zoology 32:205-304, pls. 7-10.
- BioPortal, 2025.** <https://bioportal.naturalis.nl/en>, accessed 15.ii.2025.
- Boettger, C.R. 1914.** Diagnoses of four new species of land shells from German New Guinea. Proceedings of the Malacological Society of London 11(2):118, pl. 3.
- European Commission, 2025.** Digital Observatory for Protected Areas (DOPA) Explorer. <https://dopa-explorer.jrc.ec.europa.eu/ecoregion/10108>, accessed 15.ii.2025.
- Godwin-Austen, H.H. 1891.** On a collection of land shells made in Borneo by Mr. Everett, with descriptions of supposed new species. Part II. Zotinidae and Helicinidae. Proceedings of the Zoological Society of London 59(1):22-47, pls 2-6. London.
- Google Maps, 2025.** View of Yapen Island in Cenderawasih Bay, made available at: [https://www.google.com/maps/place/Golfe+de+Cenderawasih/@-2.3775066,134.2565796,8.25z/data=!4m6!3m5!1s0x681dc209f071073d:0x133c0d12b49f56f4!8m2!3d-2.514d135.3!16zL20vMGeweWMz?authuser=0&entry=ttu&g\\_ep=EgoyMDI1MDYxMS4wIKXMDSoASAFQAw%3D%3D](https://www.google.com/maps/place/Golfe+de+Cenderawasih/@-2.3775066,134.2565796,8.25z/data=!4m6!3m5!1s0x681dc209f071073d:0x133c0d12b49f56f4!8m2!3d-2.514d135.3!16zL20vMGeweWMz?authuser=0&entry=ttu&g_ep=EgoyMDI1MDYxMS4wIKXMDSoASAFQAw%3D%3D) [Accessed: 15.vi.2025]
- Gude, G.K. 1910.** Notes on a collection of Helicoid Land Shells from New Guinea. Proceedings of the Malacological Society of London vol IX 1910-11:80-84.
- Hedley, C. 1891.** The land molluscan fauna of British New Guinea. Proceedings of the Linnean Society of New South Wales 2(6):67-116, pls. 9-22.
- Köhler, F. & Criscione, F. 2015.** A molecular phylogeny of camaenid land snails from north-western Australia unravels widespread homoplasy in morphological characters (Gastropoda, Helicoidea). Molecular Phylogenetics and Evolution 83:44-55.

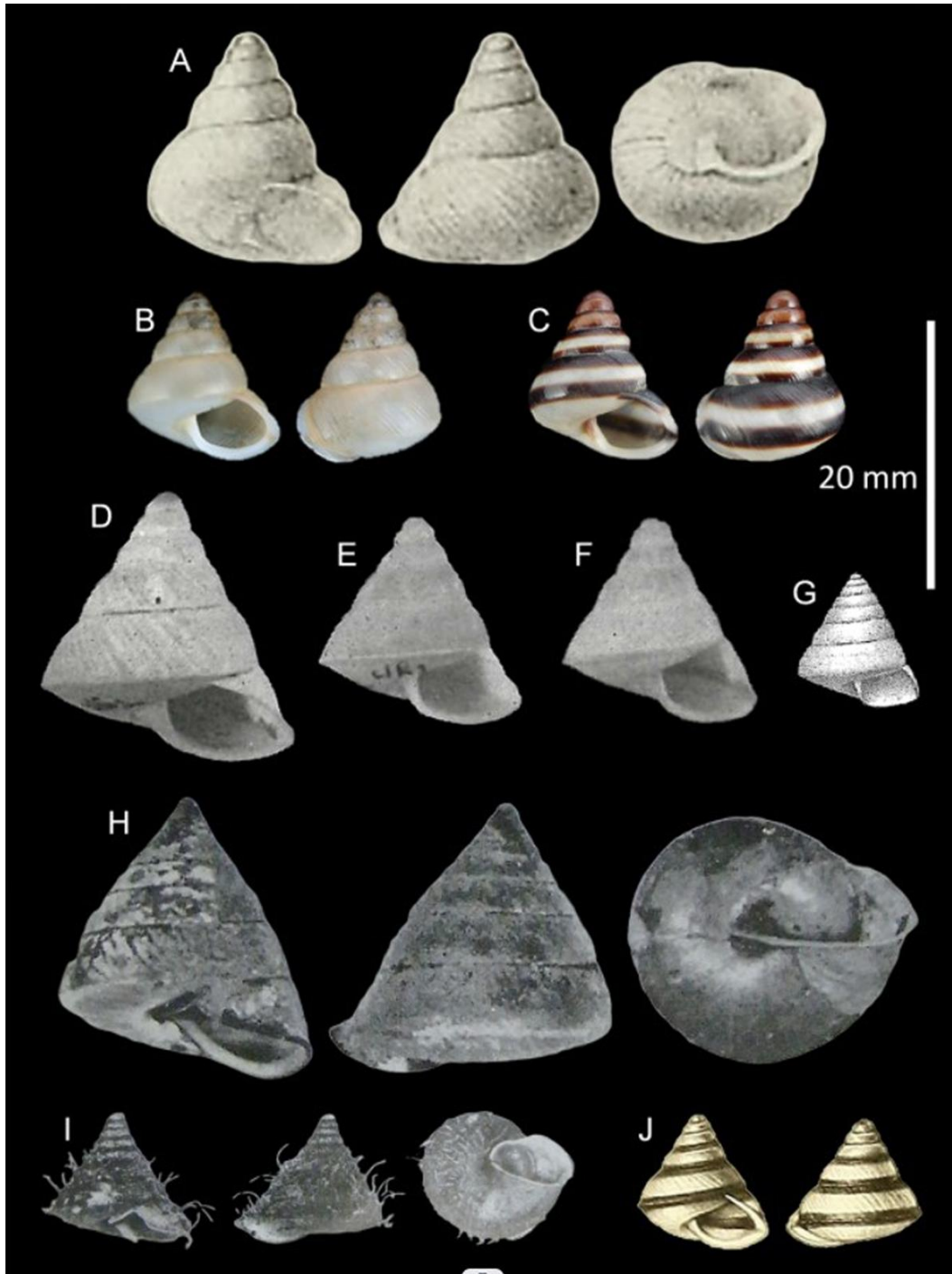
- Molluscabase, 2025.** <https://www.molluscabase.org/>, accessed 15.ii.2025
- Páll-Gergely, B., A. Hunyadi, & K. Auffenberg. 2020.** Taxonomic vandalism in malacology: comments on molluscan taxa recently described by N.N. Thach and colleagues (2014–2019). *Folia Malacologica* 28:35-76.
- Pilsbry, H.A. 1895 (1893-1895).** Manual of conchology, structural and systematic, with illustrations of the Species, Ser. 2, Pulmonata. Vol. 9: Helicidae, Vol. 7, Guide to the study of Helices. pp i-xlvi, 1-366, pls. 1-71. Philadelphia, published by the Conchological Section, Academy of Natural Sciences.
- Precece, R.C., White, T.S., Raheem, D.C., Ketchum, H., Ablett, J., Taylor, H., Webb, K. & Naggs, F. 2022.** William Benson and the golden age of malacology in British India: Biography, illustrated catalogue and evaluation of his molluscan types. *Tropical Natural History, Supplement* 6:1-434.
- Richardson, L., 1985.** Camaenidae: Catalogue of Species. *Tryonia* 12: 1-479.
- Rosin, Z.M., J. Kobak, A. Lesicki, & P. Tryjanowski. 2013.** Differential shell strength of *Cepaea nemoralis* colour morphs—implications for their anti-predator defence. *Naturwissenschaften* 100:843-851.
- Savazzi, E. & T. Sasaki. 2013.** Observations on land-snail shells in near-ultraviolet, visible and near-infrared radiation. *Journal of Molluscan Studies* 79:95-111.
- Schileyko, A.A. 2003.** Treatise on Recent terrestrial pulmonate molluscs. Part 11. Trigonochlamyidae, Papillodermidae, Vitrinidae, Limacidae, Bielziidae, Agriolimacidae, Boettgerillidae, Camaenidae. *Ruthenica. Supplement* 2:1467-1626.
- Stanisic, J., M. Shea, D. Potter, & O. Griffiths. 2010.** Australian Land Snails Volume 1 - A field guide to eastern Australian species. E. Weaver, Dr. D. Herbert Editors, Bioculture Press (for Australian Museum, Sydney).
- Sutcharit, C., T. Backeljau, & S. Panha. 2019.** Re-description of the type species of the genera *Ganesella* Blanford, 1863 and *Globotrochus* Haas, 1935; with description of a new *Ganesella* species from Thailand (Eupulmonata, Camaenidae). *ZooKeys* 870:51-76.
- Tapparone Canefri, C. 1880.** Contribuzioni per una fauna malacologica delle isole Papuane. *Annali del Museo civico di Storia Naturale di Genova* 16:59-61.
- Tapparone Canefri, C. 1883.** Fauna malacologica della Nuova Guinea e delle isole adiacenti. Parte I. Molluschi estamarini. *Annali del Museo Civico di Storia Naturale di Genova* 19:5-313.
- Thiele, J. 1928.** Mollusken vom Bismarck-Archipel, von Neu-Guinea und Nachbar-Inseln. *Zoologische Jahrbücher. Abteilung für Systematik, Geographie und Biologie der Tiere* 55:119-146, text-Plate 1, pl. 5.
- Thiele, J. 1931.** Handbuch der systematischen Weichtierkunde Theil 1. Gustav Fischer, Jena, Amsterdam, 735 pp.
- Tryon, G.W. 1887.** Manual of Conchology; Structural and Systematic, with illustrations of the species. Second series: Pulmonata. Vol. 3. Helicidae: Vol. 1. 1-313, pls. 1-63. G.W. Tryon, Philadelphia.
- Wikipedia, 2022.** Yapen rain forests. [https://en.wikipedia.org/wiki/Yapen\\_rain\\_forests](https://en.wikipedia.org/wiki/Yapen_rain_forests), accessed 15.ii.2025
- Worldwildlife, 2005.** Southeastern Asia: Island of Yapen in Indonesia. <https://www.worldwildlife.org/ecoregions/aa0108>, accessed 15.ii.2025
- Zhou, W.C., Q. Xiao, D.N. Chen, & C.C. Hwang. 2011.** *Plectotropis yonganensis* sp. nov. (Gastropoda: Bradybaenidae) from China, with revision of two Chinese camaenid species (Gastropoda: Camaenidae). *Zootaxa* 2929:51-56.
- Zilch, A. 1960.** Gastropoda, Euthyneura. In: Schindewolf, O.H. (Ed.) *Handbuch der Paläozoologie, Band 6, Gastropoda*. Gebrüder Borntraeger, Berlin, 601-834 pp.
- Zilch, A. 1966.** Die Typen und Typoide des Natur-Museums Senckenberg, 34<sup>1</sup>): Mollusca, Camaenidae (4)<sup>2</sup>). *Archiv für Molluskenkunde* 95:197-223.

## Cite as:

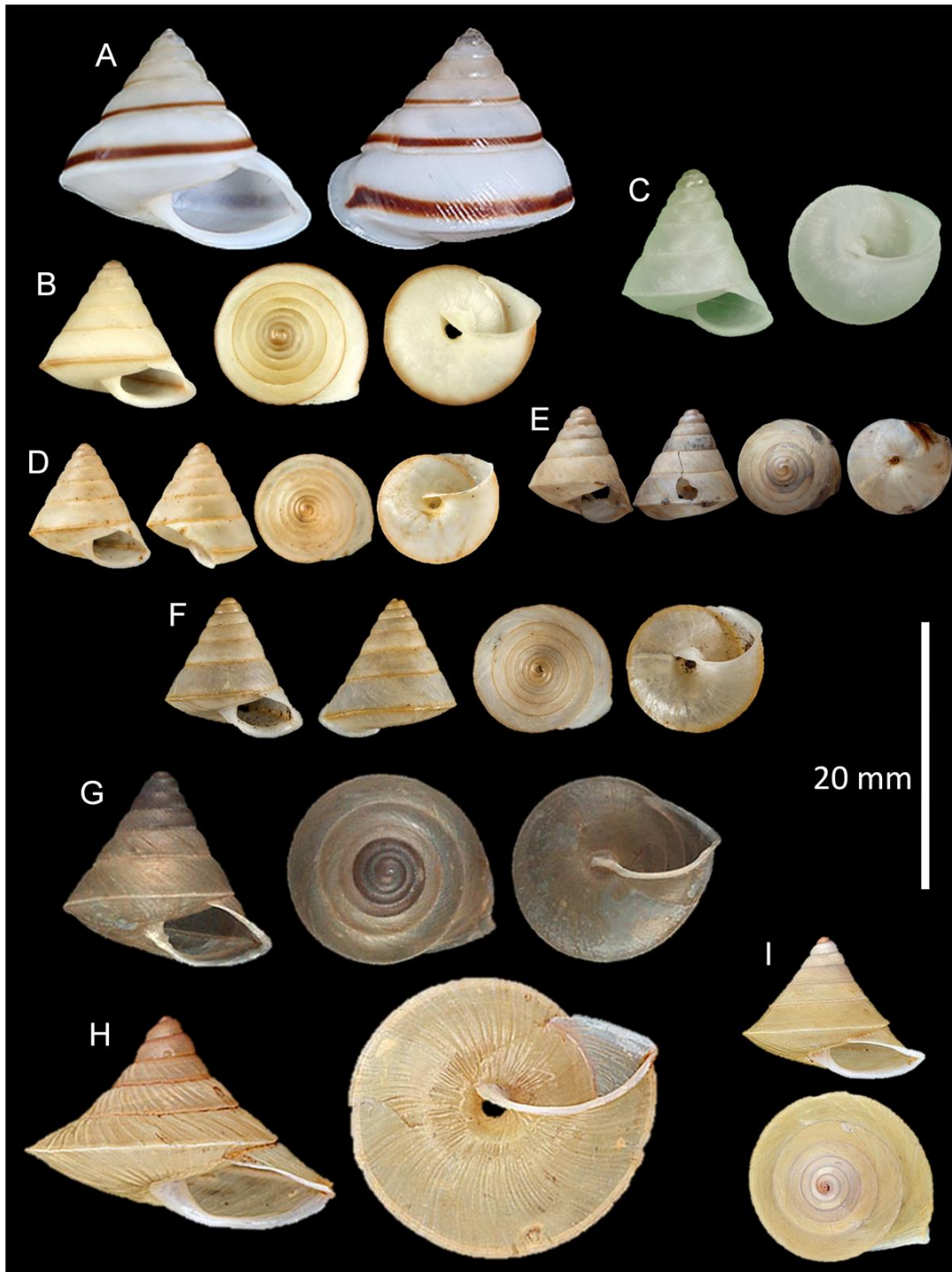
**Celzard, C. 2025.** Description of a new endemic *Ganesella* Blanford, 1863 snail from Yapen Island, Western New Guinea (Eupulmonata, Camaenidae). *The Festivus* 57(3):157-170. <http://doi:10.54173/F573157>



**Plate 1.** *Ganesella vanessae* n. sp. **A**= Holotype MNHN-IM-2000-28824, H 12.16 mm (but about 13.1 mm if the apex was not broken), Yapen Island. **B**= Paratype 1, H 12.95 mm, Yapen Island (ACF). **C**= Paratype 2, H 12.14 mm, Yapen Island (ACF). **D**= Close-ups reveal the fine growth lines, forming delicate spiral striations.



**Plate 2.** Specimens of *Ganesella* species from New Guinea: **A**= *G. bertiniana*, H 17 mm, New Guinea, original figure from Tapparone Canefri (1883). **B**= *G. cf. bertiniana*, plain white, H 12.3 mm, West Papua © 2021 – Malacology-asia.com. **C**= *G. cf. bertiniana*, banded, H 12.3 mm, West Papua © 2021 – Malacology-asia.com. **D**= *G. dasypleuris*, H 20.1 mm, German New Guinea, lectotype SMF 8495, after Zilch (1966). **E**= *G. euconus*, H 15.5 mm, German New Guinea, holotype SMF 8497, after Zilch (1966). **F**= *G. stahlbergi* (junior synonym of *G. euconus*, see text), H 15.2 mm, German New Guinea, holotype SMF 82283, after Zilch (1966). **G**= *G. papuana*, H 10 mm, Bismarck Archipelago, original figure from Thiele (1928). **H**= *G. concatenata*, H 21 mm, Papua Province, after van Benthem Jutting (1965). **I**= *G. longicapillata*, H 9.4 mm, West Papua, after van Benthem Jutting (1965). **J**= *Papui*. (or *G.?*) *beauforti*, height 10 mm, West Papua, original figure from Bavay (1908).



**Plate 3.** Specimens of *Ganesella* species from various regions of Southeast Asia: **A**= *G. huberi*, H 16.4 mm, Vietnam © 2023 – Malacology-asia.com. **B**= *G. sitalina*, H 11 mm, Vietnam © 2019 – G. & Ph. Poppe. **C**= *G. ulingensis*, H 12.2 mm, Philippines © He Jing. **D**= *G. acris*, H 9.0 mm, India, holotype NHMUK 1888.12.4.623, after Preece et al. (2022), with permission. **E**= *G. subflava*, H 8.4 mm, Malaysia, NHMUK 1891.3.17.13, © 2023, <https://data.nhm.ac.uk/>, [CC0-1.0](https://creativecommons.org/licenses/by/4.0/). **F**= *G. perakensis*, H 10.5 mm, Malaysia, syntype MNHN-IM-2000-1964, © Manuel Caballer 2018, [CC BY 4.0](https://creativecommons.org/licenses/by/4.0/). **G**= *G. fernandesi*, height 14.5 mm, Philippines, syntype MNHN-IM-2000-1887, [CC BY 4.0](https://creativecommons.org/licenses/by/4.0/). **H**= *G. planasi*, H 15.9 mm, Philippines © 2015 – Femorale. **I**= *G. apex*, H 14.3 mm, Philippines © 2015 – Femorale.