

Two New Species of *Amphidromus* (Mollusca: Gastropoda: Camaenidae) from Indonesia and Vietnam

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ABSTRACT Two new species of the land snails in the genus *Amphidromus* Albers, 1850 are described: *Amphidromus gisellelieae* n. sp. from Indonesia, and *Amphidromus phamvutuanhae* n. sp. from Vietnam. They are compared to the closest congeners in this genus.

KEYWORDS Gastropoda, Helicoidea, Camaenidae, *Amphidromus*, *Amphidromus gisellelieae*, *Amphidromus phamvutuanhae*, Buton, Indonesia, Gia Lai, Vietnam

INTRODUCTION

Amphidromus is a prominent genus of land snails in the family Camaenidae. The genus is found in eastern India, southeast to Australia and north to Taiwan. These colorful snails are moderate to large in size ranging from 17.5 mm to 75.0 mm.

Two new *Amphidromus* species, one from Indonesia and another from Vietnam, have been identified by N.N. Thach, S. Lie and P. Ahn.

Abbreviations

JA = John Abbas collection
NNT = Nguyen Ngoc Thach collection
PA = Pham Anh collection
SL = Steven Lie collection
n. sp. = new species
AH = Aperture Height
SH = Shell Height
SW = Shell Width

SYSTEMATICS

Class Gastropoda Cuvier, 1797
Subclass Heterobranchia
Order Stylommatophora
Superfamily Helicoidea
Family Camaenidae Pilsbry, 1895
Genus *Amphidromus* Albers, 1850
Type species: *Helix perversus* Linnaeus, 1758
(subsequent designation)

Amphidromus gisellelieae Thach & Abbas,
new species
(Figures 1-9, & 12)

Description. Shell height between 35.1-37.8 mm (of collected specimens), elongate-tapering and sinistral. Shell width 44% of height (Table 1). Spire broad and moderately tall, sutures deep. Body whorl inflated and occupying 71% of shell height, periphery rounded. Outer surface ornamented with widely-spaced and irregularly-shaped axial stripes. Sculpture with oblique axial riblets. Aperture subquadrate with external pattern visible within and occupying 47.7% of shell height, outer lip moderately thick and slightly reflected. Columella straight, slightly elevated and parallel to shell axis, umbilicus open. Color yellowish with brown axial stripes.

No.	1	2	3
SH (mm)	35.1	37.8	35.5
SW (mm)	15.2	16.1	16.5
SW/SH	0.43	0.43	0.46
Mean SW/SH	0.440		
BH (mm)	24.8	26.5	25.5
BH/SH	0.71	0.70	0.72
Mean BH/SH	0.710		
AH (mm)	16.0	17.4	18.0
AH/SH	0.46	0.46	0.51
Mean AH/SH	0.477		

Table 1. *Amphidromus gisellelieae*

Type material. Holotype (35.1 mm high x 15.2 mm wide) deposited in the Paris Museum of Natural History with Registration No: MNHN-IM-2000-29957.

Other material. Paratype 1 (37.8 mm high) in JA collection, Paratype 2 (35.5 mm high) in SL collection. All types from type locality.

Type locality. Baubau area, Buton Island, Indonesia.

Habitat. Tree dweller.

Etymology. The new species is named after Giselle Natalie from Indonesia for her interest at land snails.

Discussion/Diagnosis. The new species resembles *Amphidromus glaucolarynx* (Dohrn, 1861) (Figure 10) in that the columella is parallel to shell axis and the presence of widely-spaced axial stripes, but differs mainly in different aperture shape, lack of subsutural bands and black spiral bands at early whorls, different shape of axial stripes, spire not slender and less pointed, parietal wall not wavy and not ornamented with black band, no black line along inner margin of outer lip and background color. *Amphidromus sinistralis* (Reeve, 1849) (Figure 11) resembles the new species in presence of widely-spaced axial stripes, but is distinguished mainly by rounded and darker aperture, more constricted sutures, presence of subsutural bands, columella is not straight, presence of conspicuous line along inner margin of outer lip and much broader parietal wall.

Amphidromus phamvutuanhae Thach, new species
(Figures 13-20)

Description. Shell height between 31.4-37.5 mm (of collected specimens, elongate-tapering and dextral. Shell width 51% of height (Table 2). Spire broad, moderately tall and straight-sided, sutures adpressed. Body whorl inflated and occupying 71% of shell height, periphery rounded. Outer surface ornamented with many broad axial stripes that are bisected and irregularly-spaced and sometimes crossed by spiral bands, giving rise to many blotches at spire whorls. Sculpture with oblique, closely-

spaced axial ribs and dark green subsutural bands. Aperture elongate with rounded extremity, occupying 55.3% of shell height, outer lip thick, rounded and reflected. Columella distorted, wavy and nearly parallel to shell axis, umbilicus closed. Color yellowish-green with green axial stripes, dark purple columella and purplish outer lip.

No.	1	2	3
SH (mm)	37.5	36.9	31.4
SW (mm)	19.5	18.0	16.6
SW/SH	0.52	0.48	0.53
Mean SW/SH	0.510		
BH (mm)	26.5	25.9	22.7
BH/SH	0.71	0.70	0.72
Mean BH/SH	0.710		
AH (mm)	21.0	20.6	17.0
AH/SH	0.56	0.56	0.54
Mean AH/SH	0.553		

Table 2. *Amphidromus phamvutuanhae*

Type material. Holotype (37.5 mm high x 19.5 mm wide) deposited in the Paris Museum of Natural History with Registration No: MNHN-IM-2000-29958.

Other material. Paratype 1 (36.9 mm high) in NNT collection, Paratype 2 (31.4 mm high) in PA collection. All types from type locality.

Type locality. Kbang District, Gia Lai Province, Central Vietnam.

Habitat. Around trees, among leaf litter.

Etymology. The new species is named after Pham Vũ Tú Anh from Vietnam to encourage her continued study of malacology.

Discussion/Diagnosis. The new species resembles *Amphidromus dungae* Thach, 2021 (Figures 21, 22) in shell shape but differs mainly in a narrower and more pointed aperture, columella and outer lip are not pink of curved, broader but not slender body whorl, lack of pink dots on subsutural bands and havinf differently shaped axial stripes. *Amphidromus marki* Thach, 2021 (Figures 23, 24) is distinguished mainly from the new species by a much shorter spire,

more swollen body whorl, black columella and outer lip, much wider aperture, columella that is not straight and oriented to opposite direction.

Satsuma backeljau Thach & F. Huber, 2021

This species was described in Thach (2021), pages 98-99, Pl. 75, No. 773*-774* and the holotype is deposited at the Royal Belgian Institute of Natural Sciences with Registration No: RBINS, I.G. 34432/MT.3915. The allocated general inventory number is I.G. 34432 and the allocated register number is MT.3915.

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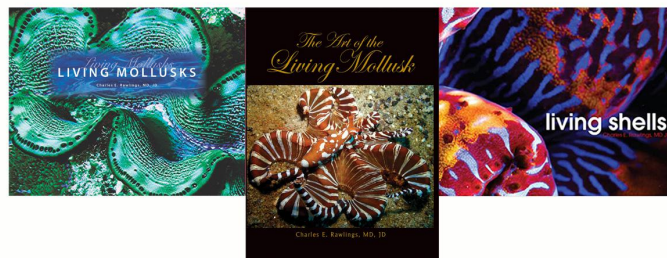
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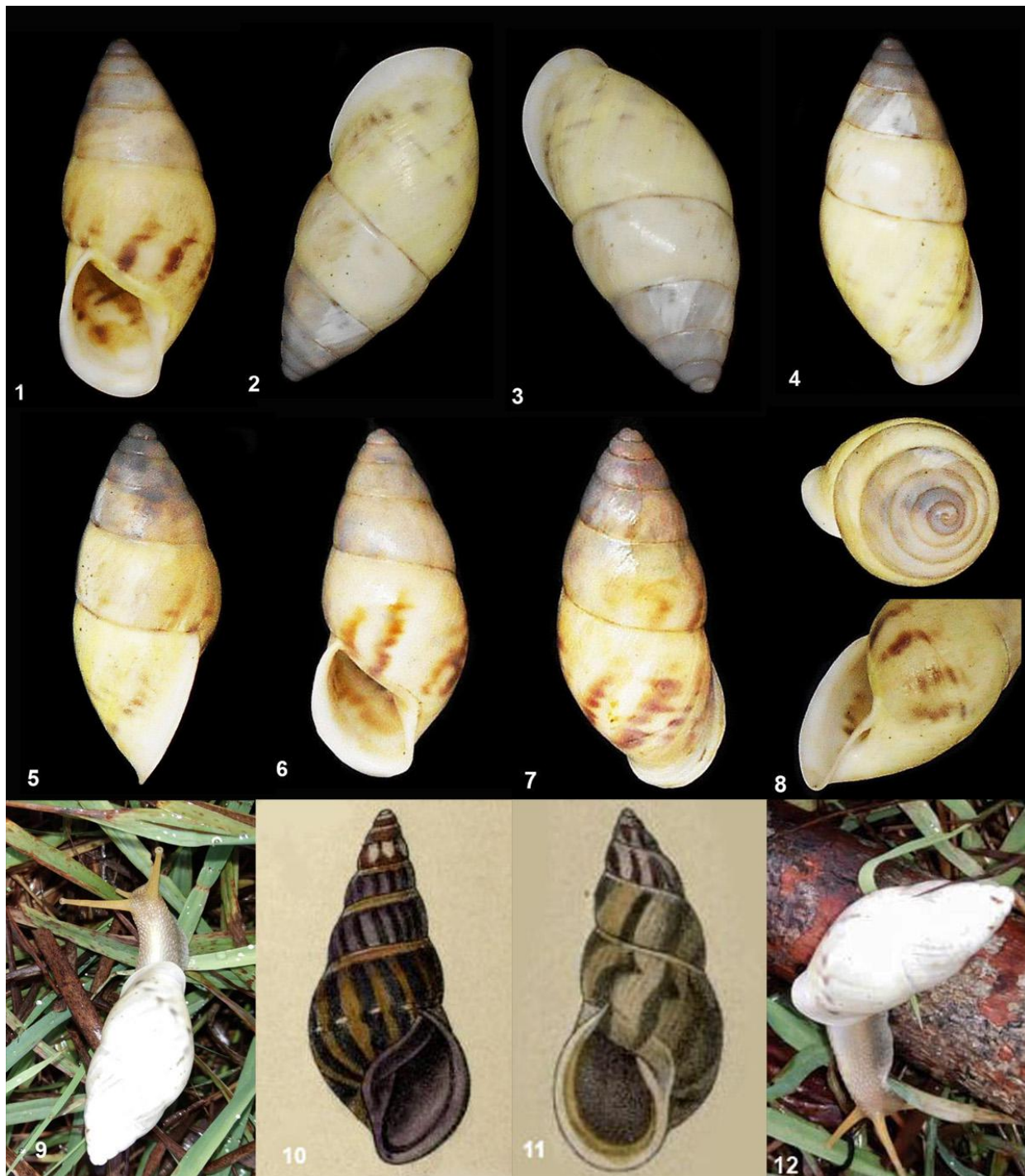
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Figures 1-9 and 12. *Amphidromus gisellelieae* Thach & Abbas n. sp., Indonesia; 1-2= holotype 35.1 mm high with apertural and reflected outer lip views; 3-4= holotype with spire and dorsal views, 5= holotype with lateral view; 6-7= paratype 1, 37.8 mm high with apertural and dorsal views; 8= Enlarged apex (top) and umbilicus (bottom) of holotype; 9, 12= photo of live molluscs; Figure 10. *Amphidromus glaucolarynx* (Dohrn, 1861) for comparison, original fig. 49, Plate 60 in Pilsbry (1900); Figure 11. *Amphidromus sinistralis* (Reeve, 1849) for comparison, original fig. 23, Plate 68 in Pilsbry (1900).



Figures 13-20: *Amphidromus phamvutuanhae* Thach n. sp., Vietnam; 13-14= holotype 37.5 mm high with apertural and reflected outer lip views; 15-16= holotype with spire and dorsal views, 17= holotype with lateral view; 18-19= Paratype 1, 36.9 mm high with apertural and dorsal views; 20= Enlarged apex (top) and umbilicus (bottom) of holotype; Figures 21, 22. *Amphidromus dungae* Thach, 2021, for comparison; Figures 23, 24. *Amphidromus marki* Thach, 2021, for comparison.