

# The terrestrial snail family Clausiliidae (Gastropoda: Pulmonata) from Son La, Vietnam, with description of a new subspecies

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**ABSTRACT.** This paper reports the systematics of the Clausiliidae species occurring in Son La Province, Vietnam. Specimens of 15 species and subspecies of Clausiliidae from Son La were investigated based on their shell characteristics. The subspecies *Garnieria mouhoti nhuongi* **subsp. nov.** was collected in Phu Yen, Muong Do, approximately 200 km NE of the type locality of the nominotypical subspecies *Garnieria mouhoti mouhoti*. This is the first species of genus *Garnieria* Bourguignat, 1877 from Vietnam.

## Introduction

Son La is a province in the northwestern Tonkin of Vietnam. There are good reasons to suppose that the province of Son La, with a surface 14.125 km<sup>2</sup>, a large variety of habitats, plants, and many different limestone areas, will have a diverse terrestrial mollusk fauna of which very little is known at present. Many species are known already from this region [Nordsieck, 2011], but many still wait to be discovered.

The medium-sized clausiliid species seem to be relatively well-known [Maassen, Gittenberger, 2007; Nordsieck, 2010b]. Member of the family Clausiliidae comprise the largest group of terrestrial pulmonate snails, it is mainly distributed in Europe, East and Southeast Asia and South America [Nordsieck, 2002a, 2002b, 2007, 2010a, 2010b; Grego, Szekeres, 2011]. To date, 5 genera consisting of 11 species of Clausiliidae have been recorded from Son La province, making it the most diverse terrestrial pulmonates in this region [Schileyko, 2011]. The system of Clausiliidae is still unstable [Schileyko, 2011; Nordsieck, 2011]. Additional studies are necessary to resolve the systematic position of a number of taxa of Clausiliidae.

## Material and methods

Areas were surveyed throughout Son La Province (Fig. 1). Living snails were drowned in water and transferred in 70% ethanol for fixation and

preservation. The terminology used in the descriptions follows Loosjes and Loosjes-van Bommel [1973], Maassen and Gittenberger [2007], Nordsieck [2002a, 2002b, 2010a, 2010b]. The type specimens and topotypic materials of all known nominal species were examined and compared with our material. The description of the new subspecies is based on shell characters. Taxa were arranged according to Nordsieck [2011]. Four zoogeographical subregions of northern Vietnam were divided according to Nordsieck [2011], and Schileyko [2011].

The type material of the new subspecies is deposited in the Terrestrial Animals Research Center (TARC) of Hanoi National University of Education (HNUE), Vietnam, National Museum of Nature (VNMN), Hanoi National University of Education Museum of Biology (HNUEM), and in the private collections of Do Duc Sang (ST, Hanoi).

**Abbreviations in the text:** H, shell height; D, shell width; DA, aperture wide; HA, aperture height; M, by monotypy; OD, by original designation; SD, by subsequent designation; W, whorl number.

## Systematic part

Family Clausiliidae J. E. Gray, 1855

Subfamily Phaedusinae A. J. Wagner, 1922

Genus *Hemiphaedusa* Boettger, 1877

Boettger, 1877: 65 (*Clausilia*, *Phaedusa* sect.).

**Type species:** *Clausilia pluviatilis* Benson, 1842 (SD, Kennard, Woodward, 1923).

1. *Hemiphaedusa chiemhoaensis*  
(Sykes, 1902)  
(Fig. 2A)

Sykes, 1902: 194, pl. III, fig. 5 (*Clausilia*); Dautzenberg, Fischer, 1905: 369, pl. IX, fig. 4, 5 (*Clausilia lavillei*); Nordsieck, 2002a: 88; 2010b: 2; 2011: 150 [*Hemiphaedusa* (*Selenophaedusa*)]; Schileyko, 2011: 13 (*Selenophaedusa*).

Type locality: Vietnam, Tuyen Quang, Chiem Hoa.

Material examined. Van Ho, Pa Cop (20°45'56"N; 104°44'30"E; 1.013 m): TARC 1161 (10 shells); Thuan Chau, Bon Phang, Bon (21°22'23.5"N; 103°46'19"E; 595 m): TARC 1162 (5 shells).

Measurements. H 19-21 mm; D 4.7-5 mm; HA 4.9-5.1 mm; DA 4.0-4.2 mm; W 10-10½.

**Remarks.** The shell of this species is externally similar to *Hemiphaedusa thatkheana* (Bavay et Dautzenberg, 1899). However, the shell of *H. chiemhoaensis* is smaller, light corneous, more or less smooth; the lamella inferior is thicker and ascends more rapidly into the shell. It is mainly distributed in two zoogeographical subregions of northern Vietnam (Northeastern Tonkin: Ha Giang, Tuyen Quang; Northwestern Tonkin: Son La) [Sykes, 1902; Nordsieck, 2011].

### Genus *Oospira* Blanford, 1872

Blanford, 1872: 205 (*Clausilia*, section).

**Type species:** *Clausilia philippiana* Pfeiffer, 1847 (OD).

#### 2. *Oospira duci khanhi* Nordsieck, 2011 (Fig. 2B)

Nordsieck, 2011: 154, pl. 1, fig. 4.

Type locality: Vietnam, Son La, Moc Chau.

Material examined. Van Ho, Pa Cop (20°45'56"N; 104°44'30"E; 1.013 m): TARC 1166 (10 shells); Moc Chau, Muong Sang (20°47'6"N; 104°50'10"E; 982 m): TARC 1167 (15 shells).

Measurements. H 25.1-28.2 mm; D 7.6-8.2 mm; HA 7.3-7.5 mm; DA 6.3-6.5 mm; W 6-6½.

**Remarks.** This subspecies differs from the nominotypical subspecies by the larger shell with more whorls, the weaker rib-striation, the non-emerging subcolumellar lamella and the higher number of palatal plicae, uppermost one is mostly longest, lowermost one shortest. *Oospira duci* is mainly distributed in the Southern Tonkin: Thanh Hoa, Son La [Maassen, Gittenberger, 2007; Nordsieck, 2011].

#### 3. *Oospira mairei* (Bavay et Dautzenberg, 1909) (Fig. 2C)

Bavay, Dautzenberg, 1909: 96, pl. III, fig. 1-6 (*Clausilia*); Nordsieck, 2010b: 1; 2011: 151 (*Oospira*); Schileyko, 2011: 17 (*Oospira*).

Type locality: Vietnam, Lao Cai.

Material examined. Muong La, Chieng Cong, Mao (21°26'45.8"N; 104°13'49.0"E; 1.766 m): TARC 1170 (10 shells); Phu Yen, Tuong Thuong (21°10'35.6"N; 104°37'49.7"E; 599 m): TARC 1171 (12 shells).

Measurements. H 10-15 mm; D 2.5-3.2 mm; HA 2.9-3.1 mm; DA 2.2-2.4 mm; W 8-9½.

**Remarks.** In the material of *Oospira mairei*, four different forms (*major*, *monstrosa*, *minor* and *laevigata*) have been found from provinces Lao Cai and Lai Chau [Bavay, Dautzenberg, 1909]. The sample from Son La province resembles the form from Lai Chau, Phong Tho. *O. mairei* is closely



FIG. 1. Location map of the type locality of *Garnieria mouhoti mouhoti* (Pfeiffer, 1862) (triangle) and *Garnieria mouhoti nhuongi* Do subsp. nov. (square).

РИС. 1. Карта расположения типового местонахождения *Garnieria mouhoti mouhoti* (Pfeiffer, 1862) (треугольник) и *Garnieria mouhoti nhuongi* subsp. nov. (квадрат).

related to *O. semipolita* (Bavay et Dautzenberg, 1899) but differs from it by the less conspicuous colour of the body whorl and stronger lamellae and the clausilium plate.

#### 4. *Oospira oviformis* Nordsieck, 2011 (Fig. 2D)

Nordsieck, 2011: 154, pl. 1, fig. 5.

Type locality: Vietnam, Thanh Hoa, Pu Luong.

Material examined. Van Ho, Pa Che (20°47'07"N; 104°45'21"E; 1.050 m): TARC 1176 (85 shells); Yen Chau, Yen Son, Chi Day Mountain (20°08'29.7"; 104°10'29.1"; 815 m): TARC 1177 (10 shells).

Measurements. H 17.1-20.8 mm; D 6.2-7.0 mm; HA 5.4-5.9 mm; DA 4.6-4.9 mm; W 6-6½.

**Remarks.** Among the species of *Oospira*, this species is most similar to *O. bouddah* (Bavay et Dautzenberg, 1912). However, it differs from *O. bouddah* (population was discovered at Quang Ninh Prov.) by the more coarsely sculptured, smaller shell, yellowish-white in color. *Oospira oviformis* differs from *O. duci* Maassen et Gittenberger, 2007, and *O. antibouddah*, Nordsieck, 2003 by its entire and more ventricose shell as well as somewhat more deeply situated lunella with mostly four palatal plicae. It is mainly distributed in the Southern Tonkin and Northern Annam: Hoa Binh, Thanh Hoa, Son La) [Nordsieck, 2011].

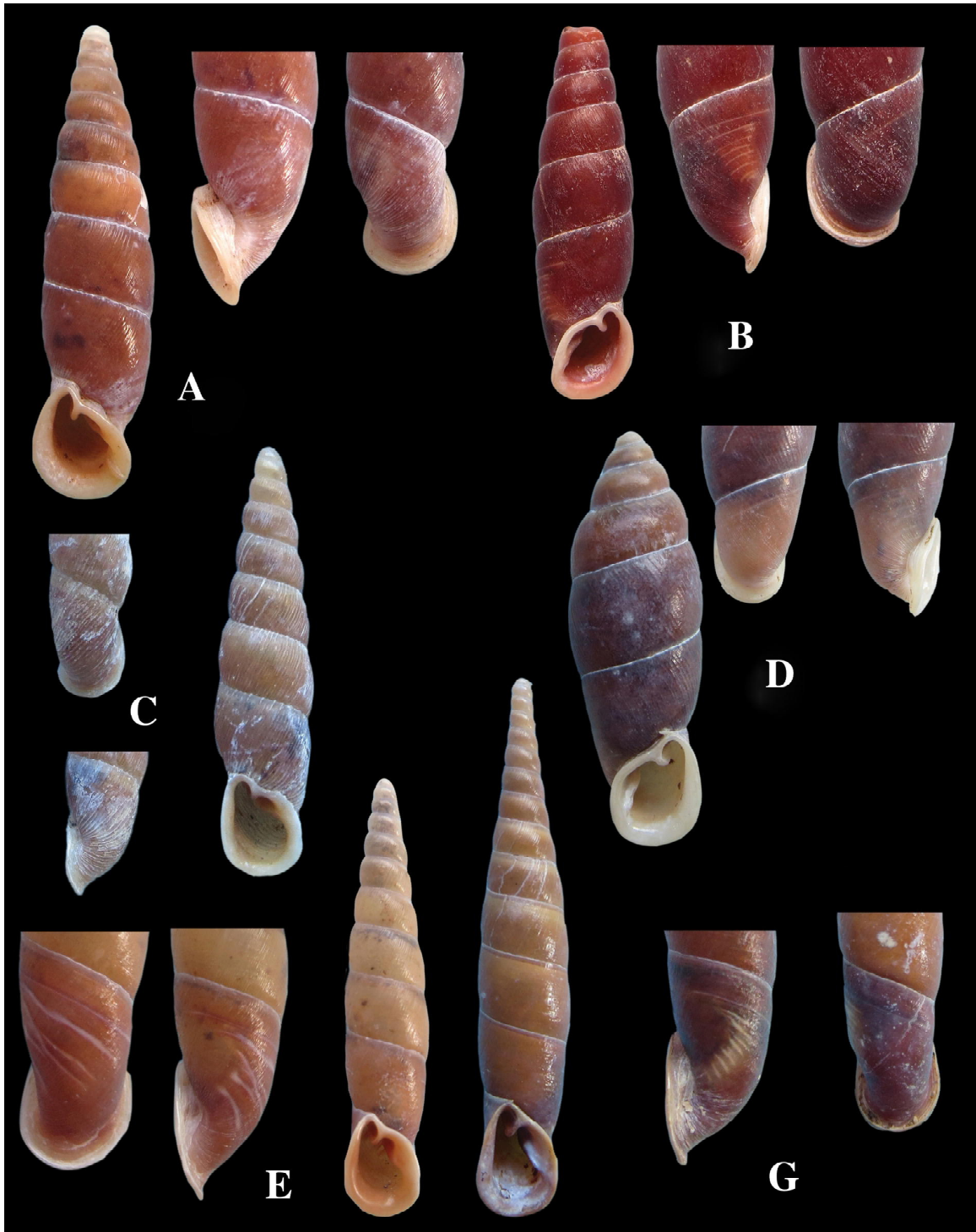


FIG. 2. A, *Hemiphaedusa chiemhoaensis*; B, *Oospira duci khanhi*; C, *Oospira mairei*; D, *Oospira oviformis*; E, *Oospira triptyx*; G, *Oospira vanbuensis*.

РИС. 2. A, *Hemiphaedusa chiemhoaensis*; B, *Oospira duci khanhi*; C, *Oospira mairei*; D, *Oospira oviformis*; E, *Oospira triptyx*; G, *Oospira vanbuensis*.

5. *Oospira triptyx* Nordsieck, 2011  
(Fig. 2E)

Nordsieck, 2011: 154, pl. 1, fig. 3.

Type locality: Vietnam, Son La, Thuan Chau.

Material examined. Thuan Chau, Chieng Pac, Na Linh (21°23'56"N; 103°46'15"E; 662 m): TARC 1181 (15 shells).

Measurements. H 24-27 mm; D 4.9-5.4 mm; HA 7.8-8.0 mm; DA 5.0-5.1 mm; W 10-12.

**Remarks.** *Oospira vanbuensis* (Bavay et Daut-

zenberg, 1899) is conchologically most similar species. However, the shell of *O. triptyx* has fewer elongated palatal plicae, clausilium plate in oblique view partly or not visible, with hook, shell of 10-12 whorls (versus 13). This species is only known from its type locality (Thuan Chau District), despite several surveys in nearby areas.

6. *Oospira vanbuensis*  
(Bavay et Dautzenberg, 1899)  
(Fig. 2G)

Bavay, Dautzenberg, 1899: 38, pl. II, fig. 1, 1a, 1b (*Clausilia*); Sykes, 1902: 193 (*Clausilia*); Fischer, Dautzenberg, 1904: 22 (*Clausilia*); Szekeres, 1969: 313, Abb. 1 (*Oospira pocsi*); Szekeres, 1970: 81, Abb. 1-2 (*Oospira umbratica*); Nordsieck, 2010b: 2; 2011: 151; Schileyko, 2011: 18.

Type locality: Vietnam, Son La.

Material examined. Muong La, Muong Bu, Na Loong (21°23'28"N; 104°02'47"E; 679 m); TARC 1185 (18 shells); Thuan Chau, Co Ma (21°21'25.6"N; 103°31'17.7"E; 1.246 m); TARC 1186 (20 shells).

Measurements. H 30-34 mm; D 5.5-6.2 mm; HA 7.8-8.0 mm; DA 5.0-5.1 mm; W 12½-13.

**Remarks.** Among the species of the subfamily Phaesusinae, this species is most similar to *Phaedusa paviei* (Morlet, 1892). It differs from *P. paviei* by the larger shell, with a clearly visible lamella subcolumellaris, 12½-13 whorls (versus 12). It is mainly distributed in two zoogeographical subregions of northern Vietnam (Northwestern Tonkin: Son La; Southern Tonkin and Northern Annam: Ninh Binh, Hoa Binh, Thanh Hoa, Nghe An) [Szekeres, 1969, 1970; Nordsieck, 2011].

Genus *Phaedusa* H. Adams et A. Adams,  
1855

*Phaedusa* Adams H. et Adams A., 1855: 184 (*Clausilia* subgen.).

**Type species:** *Clausilia corticina* Pfeiffer, 1842 (SD, Martens, 1860).

7. *Phaedusa lypra eupleura*  
(Bavay et Dautzenberg, 1899)  
(Fig. 3A)

Bavay, Dautzenberg, 1899: 291, pl. XII, fig. 11 (*Clausilia eupleura*); Sykes, 1902: 190 (*Clausilia*); Fischer, Dautzenberg, 1904: 20 (*Clausilia*); Nordsieck, 2010b: 1; 2011: 159, pl. 3, fig. 12 (*Phaedusa*); Schileyko, 2011: 19 (*Phaedusa eupleura*).

Type locality: Vietnam, Lang Son, Trang Dinh.

Material examined. Mai Son, Co Noi, Lech (21°07'31"N; 104°09'18"E; 685 m); TARC 1190 (45 shells); Thuan Chau, Tong Lenh, Ban Tham (21°26'20"N; 103°04'6"E; 572 m); TARC 1191 (10 shells).

Measurements. H 15-19 mm; D 3.4-3.8 mm; HA 4.1-4.2 mm; DA 3.0-3.05 mm; W 9-10.

**Remark.** This subspecies differs from *Phaedusa lypra pereupleura* by the following characters: teleoconch whorls less coarsely ribbed; lunella less

deep-seated; palatal plicae less weakly developed. *Phaedusa lypra eupleura* is distributed in North-eastern Tonkin (Lang Son) [Bavay, Dautzenberg, 1899].

8. *Phaedusa lypra pereupleura* Nordsieck, 2011  
(Fig. 3B)

Nordsieck, 2011: 159, pl. 3, fig. 13.

Type locality: Vietnam, Son La, Mai Son.

Material examined. Mai Son, Co Noi, Nhaph (21°08'12"N; 104°09'34"E): TARC 1192 (20 shells); Yen Chau, Chieng On, Nha Nhung mountain (20°58'43"N; 104°10'45"E; 775 m): TARC 1193 (10 shells).

Measurements. H 16-20 mm; D 3.5-4 mm; HA 3.9-4.1 mm; DA 3.9-4.0 mm; W 10-12.

**Remark.** This subspecies differs from *P. lypra eupleura* by its teleoconch whorl coarsely ribbed, lunella deeply seated, palatal plicae more weakly developed [Nordsieck, 2011].

9. *Phaedusa micropaviei* Nordsieck, 2011  
(Fig. 3C)

Nordsieck, 2011: 159, pl. 3, fig. 11 (*Phaedusa*).

Type locality: Vietnam, Son La, Moc Chau.

Material examined. Moc Chau, Dong Sang, Tu Nhien (21°52'36"N; 104°35'19"E; 997 m): TARC 1194 (20 shells); Mai Son, Chieng Mung, Na Ha (21°12'35"N; 103°59'47"E; 738 m): TARC 1195 (25 shells).

Measurements. H 19.5-25 mm; D 4.6-5.5 mm; HA 4.2-4.3 mm; DA 3.4-3.5 mm; W 11-12½.

**Remarks.** This species is close to *Phaedusa paviei* from which it differs by smaller shell. The shell shapes of *P. micropaviei* and *P. lypra* (Mabille, 1887) are very similar, the principal differences between two species are the translucent corneous shell, which is slightly darker in the earlier whorls in *P. lypra*, whilst *P. micropaviei* has a creamy shell, clausilium plate with hook. *P. micropaviei* has only been located in limestone areas, mainly distributed in Moc Chau plateau, Son La Province.

10. *Phaedusa paviei* (Morlet, 1892)  
(Fig. 3D)

Morlet, 1892: 319, pl. VII, fig. 1, 1a, 1b, 1c (*Clausilia*); Fischer, Dautzenberg, 1904: 21 (*Clausilia*); Dautzenberg, Fischer, 1905b: 368 (*Clausilia*); Bavay, Dautzenberg, 1909: 84 (*Clausilia*); Loosjes, 1948: 4, fig. 5-8; Loosjes, Loosjes van Bommel, 1973: 296, fig. 6; Nordsieck, 2002a: 88; 2010b: 1; 2011: 151 (*Phaedusa*); Schileyko, 2011: 19 (*Phaedusa*).

Type locality: Vietnam, Dien Bien, Muong Lay.

Material examined. Phu Yen, Muong Do, Lan (21°11'46"N; 104°47'6"E; 674 m): TARC 1201 (25 shells); Muong La, Muong Bu, Tham Bo (21°24'5"N; 104°6'13"E; 718 m): TARC 1202 (20 shells).

Measurements. H 29-32 mm; D 5.6-6.3 mm; HA 6.2-6.9 mm; DA 4.5-5.4 mm; W 12-13.

**Remarks.** This species is similar to *Oospira vanbuensis* and *Phaedusa micropaviei*. Our speci-

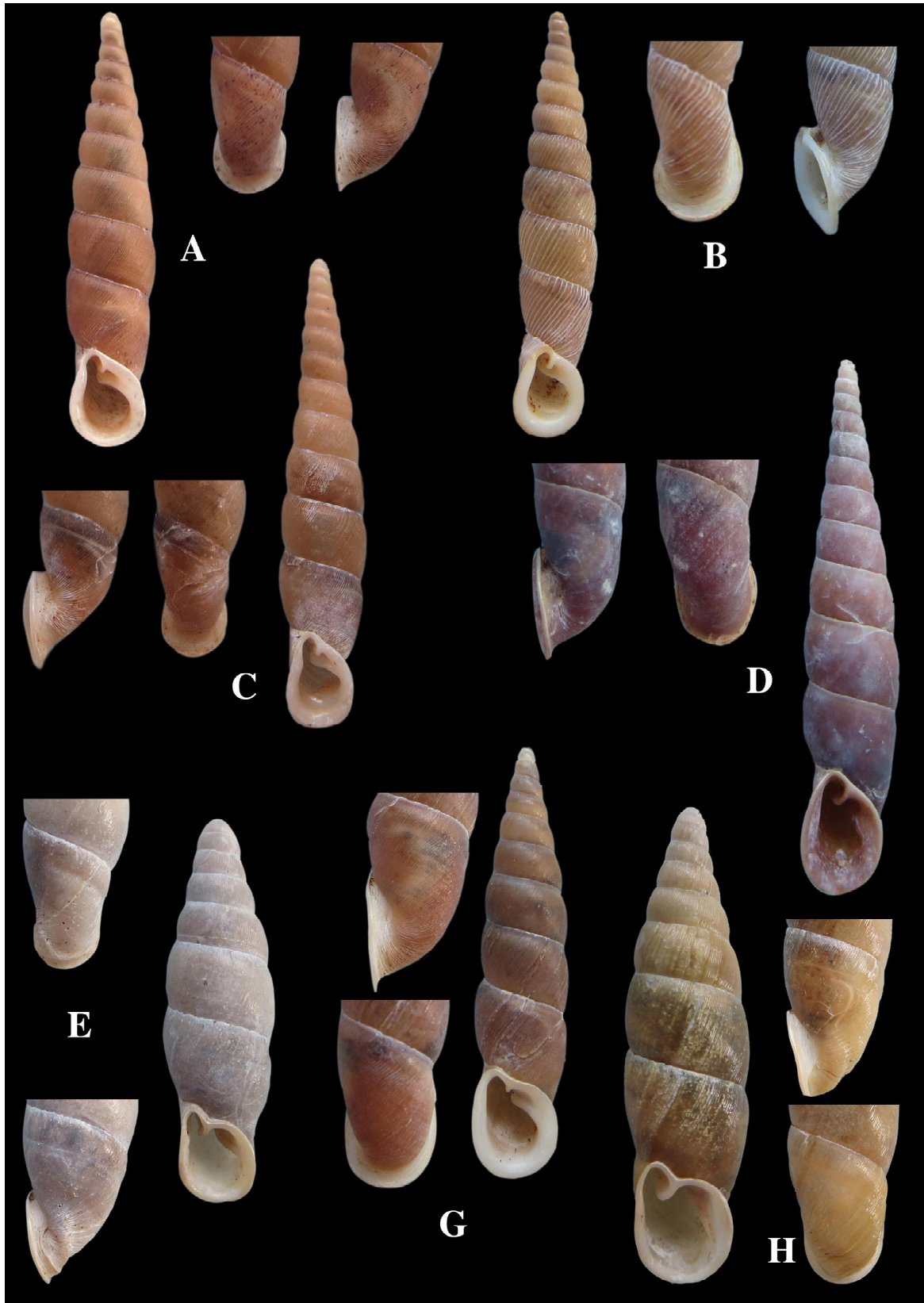


FIG. 3. A, *Phaedusa lypra eupleura*; B, *Phaedusa lypra pereupleura*; C, *Phaedusa micropaviei*; D, *Phaedusa paviei*; E, *SynprospHYma cervicalis*; G, *Phaedusa dichroa*; H, *SynprospHYma suilla*.

РИС. 3. А, *Phaedusa lypra eupleura*; В, *Phaedusa lypra pereupleura*; С, *Phaedusa micropaviei*; D, *Phaedusa paviei*; E, *SynprospHYma cervicalis*; G, *Phaedusa dichroa*; H, *SynprospHYma suilla*.



mens differ from specimens of Loosjes and Loosjes-van Bemmelen (who discovered population at Ninh Binh Pro., Cuc Phuong National Park) by the larger shell height, clausilium plate in oblique view fully visible. It is widely distributed in three zoogeographical subregions of northern Vietnam (Northeastern Tonkin; Northwestern Tonkin; Southern Tonkin and Northern Annam) [Schileyko, 2011; Nordsieck, 2011].

11. *Phaedusa dichroa*  
(Bavay et Dautzenberg, 1899)  
(Fig. 3G)

Bavay, Dautzenberg, 1899: 287, pl. XII, fig. 8 (*Clausilia*); Sykes, 1902: 190 (*Clausilia*); Fischer, Dautzenberg, 1904: 20 (*Clausilia*); Bavay, Dautzenberg, 1915: 151, pl. V, fig. 10, 11 (*Clausilia duporti*); Nordsieck, 2002a: 88; 2010b: 1; 2011: 151 (*Phaedusa*); Schileyko, 2011: 19 (*Phaedusa*).  
Type locality: Vietnam, Bac Kan.

Material examined. Van Ho, Pa Cop (20°45'56"N; 104°44'30"E; 1.166 m): TARC 1239 (15 shells); Moc Chau, Ban On, Ngu Dong (20°53'34"N; 104°34'12"E; 986 m): TARC 1240 (20 shells).

Measurements. H 20-22 mm; D 4.6-5.2 mm; HA 5.1-5.6 mm; DA 4.1-4.3 mm; W 9-9½.

**Remarks.** Among the species of the genus *Phaedusa*, this species is most similar to *P. inanis*, but differs from it by the following characters: shell larger, with the clausilium plate partially visible through the aperture. The form from the Son La differs from the other forms of *P. dichroa* (of which a population was discovered at Hoa Binh, Chi Ne) by the smaller shell. It is widely distributed in northern Vietnam (Lang Son, Bac Kan, Ninh Binh, Hoa Binh, Son La) [Schileyko, 2011; Nordsieck, 2011].

Genus *Synprosphyra* Wagner, 1920

Wagner, 1920: 12.

**Type species:** *Clausilia suilla* Bavay et Dautzenberg, 1909 (SD, Lindholm, 1924).

12. *Synprosphyra cervicalis*  
(Bavay et Dautzenberg, 1909)  
(Fig. 3E)

Bavay, Dautzenberg, 1909: 94, pl. II, fig. 17, 18 (*Clausilia*); Nordsieck, 2002a: 87; 2010b: 1; 2011: 150 (*Synprosphyra*); Schileyko, 2011: 12 (*Hemiphaedusa*).

Type locality: Vietnam, Lai Chau, Muong Te.

Material examined. Thuan Chau, Co Ma, Hua Luong (21°21'28"N; 103°31'18"E; 1.248 m): TARC 1227 (10 shells); Thuan Chau, Chieng Bom, Co My (21°22'19.8"N; 103°37'27"E; 1.570 m): TARC 1228 (5 shells).

Measurements. H 23-25 mm; D 6.5-7.0 mm; HA 5.9-6.3 mm; DA 4.5-5.0 mm; W 8-8½.

**Remark.** *Synprosphyra acrostoma* (Bavay et Dautzenberg, 1909), is conchologically most similar species. However, the shell of *S. cervicalis* is larger, with continuous peristome, whitish, aperture

margins are reflexed and detached, peristome double, aperture pear-shaped, with two palatal plicae.

13. *Synprosphyra suilla*  
(Bavay et Dautzenberg, 1909)  
(Fig. 3H)

Bavay, Dautzenberg, 1909: 88, pl. II, fig. 7-12 (*Clausilia*); Nordsieck, 2002a: 87; 2011: 151 (*Synprosphyra*); Schileyko, 2011: 12 (*Hemiphaedusa*).

Type locality: Vietnam, Lai Chau, Muong Te.

Material examined. Muong La, Chieng Cong, Nam Hong (21°26'48"N; 104°13'50"E; 1.794 m): TARC 1276 (11 shells); Phu Yen, Gia Phu (21°12'23"N; 104°34'29"E; 326 m): TARC 1277 (8 shells).

Measurements. H 27.9-30.1 mm; D 7.6-8.0 mm; HM 8.0-8.2 mm; DM 5.9-6.1 mm; W 8-8½.

**Remark.** In the material of *Synprosphyra suilla* within a small area between provinces Lai Chau and Lao Cai three different forms have been found, the type form from Muong Bo and Binh Lu, the second form from Muong Hum and Bac Ha, the third form from Muong Bo (Bavay, Dautzenberg, 1909). The sample from Son La province resembles the form from Muong Hum and Bac Ha.

Subfamily Garnieriinae C. Boettger, 1926  
Genus *Megalauchenia* Nordsieck H., 2007

Nordsieck, 2007: 217-243.

**Type species:** *Nenia proctostoma* Mabilite, 1889 (OD).

14. *Megalauchenia proctostoma proctostoma*  
(Mabilite, 1889)  
(Fig. 4G)

Mabilite, 1889: 13 (*Clausilia*); Rolle, 1910: 135 (*Garnieria goliath*); Loosjes-van Bemmelen, 1973: 301, fig. 10, 11c-d (*Tropidauchenia*); Schileyko, 2000: 608, fig. 797 B-D; 2011: 22 (*Tropidauchenia*); Thach, 2007: 165, pl. 53, No. 928 (*Phaedusa*); Nordsieck, 2002b: 6 (*Tropidauchenia*); 2010b: 2; 2011: 152 (*Megalauchenia*).

Type locality: Vietnam, Ha Nam, Phu Ly.

Material examined. Van Ho, Long Luong, Pa Kha (20°42'7"N; 104°50'8"E; 1.237 m): TARC 1308 (60 shells); Moc Chau, Muong Sang, Ban Lun (20°45'46"N; 104°35'17"E; 1.029 m): TARC 1309 (28 shells).

Measurements. H 34.5-38.7 mm; D 8.2-9.4 mm; HA 8.8-9.9 mm; DA 8.9-10 mm; W 7-10.

**Remarks.** *M. proctostoma* is widely distributed in northern Vietnam, from Son La in the northwestern Tonkin to Thanh Hoa in the northernmost Annam [Schileyko, 2011; Nordsieck, 2011]. This species has the following characters: shell sinistral, rather large, solid, yellowish-brown; ribbing is not coarse; inferior lamella ending in front with an arch projecting into the lumen of the body whorl; clausilium plate in part projecting over lunella, distal palatal edge bent up [Nordsieck, 2011]. The samples from the Son La province are similar to the type form, but are more coarsely ribbed.

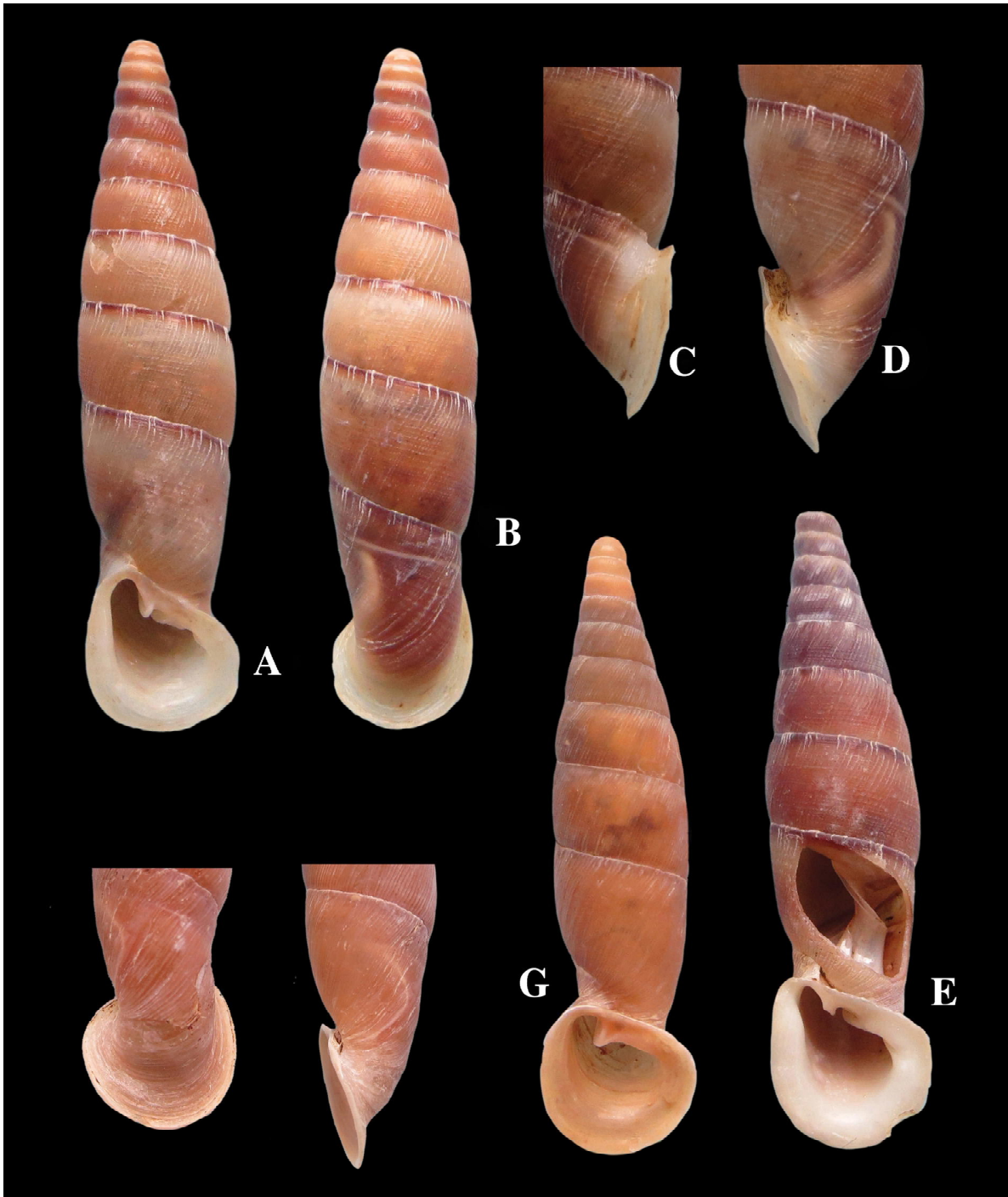


FIG. 4. A-E, *Garnieria mouhoti nhuongi* subsp. nov.: A-D, Holotype, TARC 1341, E, paratype, TARC 1342; G, *Megalauchenia proctostoma proctostoma*,

РИС. 4. A-E, *Garnieria mouhoti nhuongi* subsp. nov.: A-D, голотип, TARC 1341, E, паратип, TARC 1342; G, *Megalauchenia proctostoma proctostoma*.

Genus *Garnieria* Bourguignat J.R., 1877

Bourguignat, 1877: 2.

**Type species:** *Clausilia mouhoti* Pfeiffer, 1862 (M).

15. *Garnieria mouhoti nhuongi* Do Duc Sang, subsp. nov. (Fig. 4 A-E)

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Type material. Holotype TARC 1341 (Fig. 4. A-D): Vietnam, Son La, Phu Yen, Muong Do, 21°11'46"N; 104°47'6"E; 674 m; 12. July. 2014. Paratypes: same data, TARC 1342 (15 shells), (Fig. 4E).

**Etymology.** The specific epithet "nhuongi" comes from Do Van Nhung, malacologist at the Terrestrial Animals Research Center of Hanoi National University of Education, who has initiated and continuously supported terrestrial snail research in Vietnam.

**Diagnosis.** Shell entire, sinistral, rather large, conical, solid, varying from greyish reddish-brown to nearly white; the neck is developed; teleconch whorls ribbed, uppermost ones more densely; irregular white ribs emerge and reach the suture; aperture oblique, broadly oval to piriform, peristome much expanded.

[**Диагноз.** Раковина цельная (не деколлированная), синистральная, довольно крупная, коническая, окраска варьирует от сероватой, красновато-коричневой до почти белой; шейка развита; обороты телеоконха скульптурированы осевыми ребрами, более тесно расположенными на верхних оборотах. Вдоль верхнего края оборотов располагаются нерегулярные белые ребра, достигающие шва. Устье скошенное, от широко овального до грушевидного, перистом сильно отвернутый.]

**Description.** Shell entire, sinistral, conical; varying from greyish, reddish-brown to nearly white. Teleconch whorls ribbed, uppermost ones more densely, especially the lower whorls with spiral striae which cross and thereby undulate the riblets, sculpture on the neck scarcely coarser. Along the upper margin of the whorls widely spaced, irregular white ribs emerge and reach the suture. Aperture oblique, protruding, broadly oval to piriform. The peristome solid, much expanded; superior lamella high, oblique, continuous, bent inwards and much lowered. Inferior lamella close to superior lamella, not steeply ascending, low in the interior and turned up, forked in front, with additional fold below, additional fold sometimes weakened. The subcolumellar lamella steeply ascending, emerging to the peristome, indented by the adjacent clausilium plate; upper palatal plica continuous with lunella by an arch or with a nearly straight angle, lunella oblique, continuous, occasionally an anterior upper palatal plica present, but only its posterior part is developed, separated from the upper palatal plica respectively lunella and running parallel to the principal plica; palatal edge of the clausilium plate extended up to the inferior lamella. Spiral lamella ending dorsolaterally in the interior, at the end running together with the lamella inserta, inferior lamella penetrating the penultimate whorl near the insertion point of the clausilium.

**Measurements.** Holotype: H 37.8 mm; D 9.0 mm; HA 10.2 mm; DA 8.5 mm; W 10. Paratypes (n

= 15): H 37.0-41.1 mm, mean 38.7 mm; D 8.3-9.0 mm, mean 8.9 mm; HA 9.3-11.0 mm; DA 8.1-9.3 mm; W 10-11.

**Distribution.** This limestone dwelling species is known from the type locality (Muong Do Com., Phu Yen Dis., Son La Pro.).

**Remark.** This new subspecies is most similar to *Garnieria moellendorffi moellendorffi* Nordsieck, 2002 (of which a population was discovered at Laos, Luang Prabang), but differs from it by larger shell, with expanded and thick peristome. Our specimens differ from original description of *Garnieria mouhoti* (Pfeiffer, 1862) in having a coarser rib-striation and much smaller shell height.

This is the first species of *Garnieria* Bourguignat, 1877 from Vietnam, which lives approximately 200 km NE of the type locality of the *Garnieria mouhoti*.

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Наземные брюхоногие семейства Clausiliidae (Gastropoda: Pulmonata) из Сон Ла, Вьетнам, с описанием нового подвида

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**РЕЗЮМЕ.** В статье приведены данные о Clausiliidae, обитающих в провинции Сон Ла, Вьетнам. На основании признаков раковины выявлены 15 видов и подвидов из Сон Ла. Подвид *Garnieria mouhoti nhuongi* **subsp. nov.** был собран в Фу Йен, Муонг До, приблизительно в 200 км к NE от типового местонахождения номинативного подвида *Garnieria mouhoti mouhoti*. Это первый вид рода *Garnieria* Bourguignat, 1877, найденный во Вьетнаме.