FOLIA MALACOLOGICA
Folia Malacol. 28(1): 35–76
ISSN 1506-7629 (print) • ISSN 2300-7125 (on-line)
The Association of Polish Malacologists
Faculty of Biology, Adam Mickiewicz University
Bogucki Wydawnictwo Naukowe
Poznań, March 2020
https://doi.org/10.12657/folmal.028.002

TAXONOMIC VANDALISM IN MALACOLOGY: COMMENTS ON MOLLUSCAN TAXA RECENTLY DESCRIBED BY N. N. THACH AND COLLEAGUES (2014–2019)

BARNA PÁLL-GERGELY[1]*, ANDRÁS HUNYADI[2], KURT AUFFENBERG[3]

[1]Plant Protection Institute, Centre for Agricultural Research, Herman Ottó Street 15, H-1022 Budapest, Hungary (e-mail: pall-gergely.barna@agrar.mta.hu, pallgergely2@gmail.com)
https://orcid.org/0000-0002-6167-7221
[2]Independent researcher, Adria sétány 10G 2/5, 1148 Budapest, Hungary (e-mail: hunand@freemail.hu)
[3]Florida Museum of Natural History, University of Florida, 1659 Museum Rd, FL 32611 Gainesville, USA (e-mail: kurtauffenberg@gmail.com)
*corresponding author

ABSTRACT: A Vietnamese malacologist Nguyen Ngoc Thach described 235 land snail species and subspecies from Southeast Asia with co-authors; further 11 species were described by an Austrian malacologist Franz Huber in Thach's publications (2014–2019). Nearly all taxa were described in self-published books and non-peer-reviewed journals. The low quality of the published photographs, imprecise locality data, deficient literature surveys, and the lack of examination of type specimens raise reasonable doubts concerning the validity of these taxa. In this paper we list all land snails described by Thach and colleagues, and comment on approximately half of his taxa based on examination of the literature and type specimens. As a result, 102 of their taxa are moved to the synonymies of previously described taxa. Three additional taxa, described by other authors, are also considered synonyms of known species here: *Helix* (*Ganesella*?) *lamyi* Dautzenberg et Fischer, 1905, *Helix* (*Plectotropis*?) *chaudroni* Bavay et Dautzenberg, 1909, *Amphidromus xiengkhaungensis* Inkhavilay et Panha, 2017. Further, nine species are moved to other genera: *Pearsonia huberi* Thach 2016 to *Spiraculum*, *Streptartemon huberi* Thach 2016 to *Indoartemon*, *Tropidophora huberi* Thach, 2018 to *Leptopoma*, *Microstele huberi* Thach, 2018 to *Apoecus*, *Camaena khamducensis* Thach et Huber, 2018 to *Hemiplecta*, *Camaena abbasi* Thach, 2016 to *Asperitas*, *Mysticarion huberi* Thach, 2016 to *Megaustenia*, *Helixarion annhiae* Thach et Huber, 2017 to *Megaustenia*, and *Lamprellia huberi* Thach, 2018 to *Trichochloritis*. *Chloritis bifoveata vinhensis* Thach et Huber, 2018 is elevated to species level. *Oospira naggsi callosa* Páll-Gergely, nom. nov. is established as a replacement name for *Hemiphaedusa huberi* Thach, 2016, non *Oospira huberi* Thach, 2016. *Trichochloritis mussonena* Páll-Gergely, nom. nov. is established for *Mussonena huberi* Thach, 2018, non *Trichochloritis huberi* (Thach, 2018).

KEY WORDS: new synonyms, new combinations, splitting, poor taxonomy

INTRODUCTION

The description of Southeast Asian land snails began in the late 18th century when European travellers returned with large and conspicuous specimens. The most active period was the mid-late 19th and early 20th centuries when colonial European naturalists travelled the world to document its biodiversity. Therefore, most specimens examined during the descriptions of these species are housed in European museums. The majority of land snail genera have yet to be properly revised and many species described over a century ago have not yet been illustrated in scientific literature. And, even when illustrated, these early descriptions do not necessarily demonstrate what we now consider as critical morphologi-

cal characters by which to differentiate species. The description of new Southeast Asian land snail species, as well as their revision, generally requires the examination of all type specimens. This work is often challenging as some museums do not loan type specimens so researchers must visit those collections to properly examine these types.

Vietnamese malacologist NGUYEN NGOC THACH, at times with colleagues, published three non-peer reviewed, self-published books (THACH 2016a, 2017a, 2018a) and several papers (THACH & HUBER 2014, 2015, 2017, THACH 2015a, b, c, 2016b, c, d, e, f, g, h, 2017b, c, d, e, f, 2018b, c, 2019a, b, c, d, e, f, g, h, THACH & ABBAS 2017a, b). Most taxa in the publications were described solely by Nguyen Ngoc Thach, but occasionally with others, such as the Austrian malacologist, Franz Huber. The lack of peer-review, low quality of the published photographs, imprecise locality data, deficient literature surveys, and the lack of examination or even mention of type specimens of other species that should have been examined, raise reasonable doubts concerning the validity of these taxa. A few species have already been synonymised (PÁLL-GERGELY & HUNYADI 2018, INKHAVILAY et al. 2019, SUTCHARIT et al. in press).

The high number of new species and subspecies, assigned to 63 genera, makes it impossible to properly deal with them in a single contribution. Most of the groups require extensive systematic revision that may take several years each. Therefore, in this paper we comment only on those taxa that are obvious synonyms, those that have been reviewed earlier, or on those we are currently working.

MATERIALS AND METHODS

All scientific names of THACH mentioned in this study are validly introduced according to the ICZN Code, and thus, are available, validly introduced names. The terms "valid species", "valid taxon" and "validity" in the following refers to scientifically acceptable taxa (i.e. not synonyms).

We examined the published photographs of specimens or the actual type specimens described by THACH and his colleagues, and compared them with specimens from other sources and figures published in the literature.

Abbreviations: CNHM – Chicago Natural History Museum, Chicago, Illinois (= FMNH), HA – Collection András Hunyadi (Budapest, Hungary), ICZN – International Commission on Zoological Nomenclature, MNHN – Muséum National d'Histoire Naturelle (Paris, France), NHMUK and NHM – The Natural History Museum (London, UK), RMNH – National Museum of Natural History Naturalis (Leiden, The Netherlands), SMF – Senckenberg Forschungsinstitut und Naturmuseum (Frankfurt am Main, Germany).

RESULTS

GENERAL REMARKS

Altogether THACH and his colleagues (see: Introduction) described 246 land snail species and subspecies from Southeast Asia (Cambodia: 5 taxa, Indonesia: 36 taxa, Laos: 51 taxa, Myanmar: 2 taxa, the Philippines: 1 taxon, Thailand: 11 taxa, Vietnam: 140 taxa). Eleven of these were authored by Franz HUBER ("Huber in Thach") in THACH's books (THACH 2016a, 2017a, 2018a), and one species was described by F. HUBER in a paper authored only by him (HUBER 2015).

Besides these, THACH described a species from Spain (*Helicella candoni* Thach in THACH 2018a: 72), and one from Madagascar (*Kalidos huberi* Thach in THACH 2018a: 43), and 88 marine and one freshwater species were described, which are not treated here. Appendix 1 summarises all terrestrial species.

The general shortcomings of these publications are:

1. In most cases it is obvious that the authors have not examined type specimens of similar species or their illustrations/photographs. Instead, they compared their specimens with images posted on shell dealer websites and other online sources (https://www.conchology.be/, http://www.bagniliggia.it, Wikipedia, etc.) and popular science books (e.g. ABBOTT's [1989] Compendium of Landshells).
2. Their general understanding of basic intraspecific variability in some genera differs from ours and that of recently active malacologists working in the same geographic areas. As a result, minor differences in shell morphology and colouration observed between individuals are interpreted as characters by which to distinguish species. This has resulted in an unrealistic increase in species numbers, especially in the genus *Amphidromus*, which often differ in colour and colour pattern even within populations.
3. They have placed new species in genera and families that have not been recorded from Southeast

Asia, but are known from the Neotropics (*Streptartemon* Kobelt, 1905, *Helminthoglypta* Ancey, 1887, *Obeliscus* Beck, 1837), Australia (*Mysticarion* Iredale, 1941, *Lamprellia* Stanisic, 2010, *Megalacron* I. Rensch, 1934, *Mussonena* Iredale, 1938), and Madagascar (*Tropidophora* Troschel, 1847, *Cyclotopsis* W. T. Blanford, 1864), a clear sign of their lack of knowledge of evolutionary convergence and biogeography. A vast majority of land snail taxa are known to have limited dispersal abilities, and most have clear geographically definable distributions. They are far more likely to be related to taxa that occur in the same geographical area instead of those inhabiting different areas of the world. Furthermore, THACH and his coauthors often place new species in inappropriate families, most conspicuously the Camaenidae versus Ariophantidae/Dyakiidae/ Helicarionidae.

4. Very poor locality data of the new taxa are often provided, making the collection of additional specimens to investigate intraspecific variability unlikely.
5. In many cases these new species belong in genera and families that have never been revised, or not in the past few decades. For example, hundreds of species have been described in the family Camaenidae over the last two centuries. These are often very similar in shell morphology yet no comprehensive revision has been published, even at the genus level. Generic boundaries are not well defined, species' ranges of variation and distributions are largely unknown, and many of the species have never been illustrated. The description of a camaenid species without a comparison of it to pertinent species has a great risk of creating a synonym.
6. The types or illustrated specimens are often immature, juvenile, or so weathered that further taxonomic work on the species will be greatly impeded (see: Appendix 1).
7. The ICZN (Art. 72.10) recommends that holotypes be deposited in institutions that can provide proper care to allow examination by others. Despite this recommendation, holotypes of 18 taxa were deposited in private collections. The holotypes of *Amphidromus anthonyabbotti*, *A. lamdongensis*, *A. montesdeocai*, *A. noriokowasoei*, *Pearsonia franzhuberi*, *P. thachi*, *P. vilvensi*, *Pseudobuliminus huberi*, *Pseudopartula huberi* and *Pterocyclos schileykoi* are deposited in the private collection of F. HUBER, whereas the holotype of *A. mariae* is in the "Huber Museum", which may mean the same collection. *Amphidromus calvinabbasi*, *Camaena binhgiaensis*, *C. hoabinhensis*, *C. lacthuyensis*, *C. leeana* and *C. ninhbinhensis* are deposited in the THACH's collection, whereas the holotype of *Amphidromus thachi krisi* is in the private collection of N. KHOA.
8. Providing names to new species is completely at the discretion of the author(s). However, we find it unadvisable to give the same specific epithet to many species, particularly in areas where species boundaries are unclear or unknown. Among the species described by N. N. THACH, 43 are named *huberi*, 9 as *franzhuberi*, and 7 as *abbasi* and F. HUBER named 10 species as *thachi* (in THACH 2017a, 2018a, and HUBER 2015). These patronyms greatly increase the possibility of secondary homonyms when the generic assignments are changed (e.g. PÁLL-GERGELY & HUNYADI 2018 and this study). Furthermore, homonyms occur even within the same publication, as well as multiple original spellings (e.g. PÁLL-GERGELY 2019).

The inadequate description of THACH's taxa comes from a general lack of knowledge of the groups and/or faunas made apparent by: 1) lack of comparison (LC) or mention of previously described species, to which they are similar or identical, and 2) the use of minor shell characters (MC) that are known to be of little or no use by which to distinguish species. These two types are listed in Appendix 1 after each taxon.

TAXONOMY AND SYSTEMATICS

Subclass Caenogastropoda

Superfamily Cyclophoroidea Gray, 1847

Family Alycaeidae W. T. Blanford, 1864

Genus *Alycaeus* Baird, 1850

Alycæus BAIRD 1850: 27.

Alycaeus somnueki Panha et Patamakanthin, 2001

Fig. 1

Alycaeus somnueki PANHA & PATAMAKANTHIN 2001: 189–190, plates 1–5.

Alycaeus huberi THACH 2018a: 19, figs 94–95. **new synonym**

Remarks. In the original description THACH (2018a) stated that *A. huberi* Thach, 2018 (Fig. 1) differs from *A. somnueki* Panha et Patamakanthin, 2001 by the ovate, not triangular, aperture, "spire whorls much broader" and dorsal side of body whorl concave (convex in *A. somnueki*). Firstly, the aperture is "ovate" because the holotype of *A. huberi* is a subadult specimen.

Fig. 1. Holotype of *Alycaeus huberi* (MNHN-IM-2000-34058). Photo: M. CABALLER

It is clear that the aperture of the holotype of *A. huberi* is not continuous, as the peristome is not yet developed in the parietal area. In only one alycaeid species (the Japanese *Cipangocharax okamurai* (Azuma, 1980)) does it appear that the aperture is discontinuous, but even in that case the parietal callus is developed, just thin and blunt, represented as a slight, thin calcareous layer. The aperture is continuous in all other alycaeid species (we have examined most types of all the ca. 380 alycaeid taxa recently). Therefore, the not fully expanded peristome of the subadult holotype of *A. huberi* causes it to appear different than that of *A. somnueki*. Secondly, we cannot concur that the body whorl of *A. huberi* is broader than that of *A. somnueki* (at least we believe this is what the author meant by "spire whorls"). Thirdly, it is unclear what THACH (2018a) meant by the concave-convex difference of the dorsal body whorl, and we see no difference between the two taxa. Additionally, the type locality of *A. huberi* "Aouluc, South Thailand" is the same as that of *A. somnueki* "Ao Luk limestone areas, Krabi Province, (...) Thailand". Therefore, we consider *A. huberi* as a junior synonym of *A. somnueki*.

Family Cyclophoridae Gray, 1847

Genus *Cyclophorus* Montfort, 1810

Cyclophorus MONTFORT 1808–1810, vol. 2 (1810): 290.

Remarks. The genus *Cyclophorus* Montfort, 1810 contains hundreds of names and it is clear that the infra- and intra-variability of almost all species are very poorly understood. Revision and description of new species of *Cyclophorus* requires morphometric analysis of large series of specimens and perhaps molecular phylogeny to reveal species boundaries (e.g. NANTARAT et al. 2019). Although the description of new species during the 19th and 20th centuries from a few specimens with imprecise collection data was normal, it is very unwise to do so now. We find it nearly impossible to decide whether the new taxa introduced by THACH and his colleagues are valid and is beyond the scope of this paper. Unfortunately, the thorough paper of NANTARAT et al. (2014) predates the descriptions of new *Cyclophorus* species presented by THACH.

Genus *Cyclotus* Guilding in Swainson, 1840

Cyclostoma (*Cyclotus*) Guilding in SWAINSON 1840: 186, 336.

Cyclotus huberi Thach, 2018

Fig. 2

Cyclotus huberi THACH 2018a: 16, figs 63–64.

Remarks. According to the original description *C. huberi* Thach, 2018 is characterised by a "deep groove at periphery". However, it is clear from photos of the holotype that the deep groove is of teratological origin. The specimen had stopped growing about half a whorl behind the peristome, when the snail probably estivated for some time. The groove on the last half whorl was developed probably due to an injured mantle. The groove cannot be ascribed to any breathing functions known in several terrestrial caenogastropod genera (PÁLL-GERGELY et al. 2016), because it would require the presence of a passage between the operculum and the peristome to allow gas exchange.

This species was compared with the Vietnamese *C. lubricus* (Dautzenberg et Fischer, 1908), which has a short snorkel near its peristome, and *C. micron* Pilsbry, 1900 (in PILSBRY 1900b). The latter species, now assigned to *Nakadaella* Ancey, 1904, is ca. 1 mm in diameter while the holotype of *C. huberi* is 21.2 mm in diameter. This species could be valid because the only species known from Laos (*C. porrectus* Möllendorff, 1898) is clearly not conspecific (see:

Fig. 2. Holotype of *Cyclotus huberi* (MNHN-IM-2000-34053). Photo: M. CABALLER

INKHAVILAY et al. 2019). A comprehensive revision of this genus of the neighbouring countries is also necessary.

Cyclotus setosus (Möllendorff, 1894)

Opisthoporus setosus MÖLLENDORFF 1894: 152, plate 16, figs 14–15.
Cyclotus (*Siphonocyclus*) *setosus* – ZILCH 1956: 189, plate 15, fig. 30.
Cyclotus setosus – BENTHEM JUTTING 1960: 11.
Tubicyclotus setosus – HABE 1965: 119, plate 2, figs 8, 9.
Cyclotus setosus – MAASSEN 2001: 14.
Cyclotus (*Opisthoporus*) *setosus* – EGOROV 2009: 19, fig. 1G.
Spiraculum grohi Thach et Huber in THACH 2018a: 18 **new synonym**
Spiraculum harryleei Thach et Huber in THACH 2018a: 18 **new synonym**
Cyclotus harryleei – SUTCHARIT et al. 2019a: 28, fig. 6H.

Remarks. In the original descriptions of *Spiraculum grohi* Thach et Huber, 2018 and *S. harryleei* Thach et Huber, 2018 (NHMUK 20180248), they were compared with each other, *S. vilvensi* Thach et Huber, 2017 (given as "*viviensis*" in comparison in THACH 2018a), and *Pearsonia lamphunensis* Tumpeesuwan et Tumpeesuwan, 2015. However, both taxa of Thach et Huber in THACH 2018a are obvious synonyms of *C. setosus* (Möllendorff, 1894), a species known from the Samui Islands (MÖLLENDORFF 1894), peninsular Malaysia near Perlis (BENTHEM JUTTING 1960), and Phuket, Thailand (unpublished information). Both *S. grohi* and *S. harryleei* were described from the nearby Krabi area, Thailand. The differences in shell colour and the slightly differently shaped tube are best explained by intraspecific variation.

Genus *Lagocheilus* Blanford, 1864

Lagocheilus BLANFORD 1864: 452.

Lagocheilus klobukowskii (Morlet, 1885)

Cyclophorus klobukowskii MORLET 1885[1884]: 391, 392, plate 12, fig. 1.
Cyclotopsis huberi THACH 2018a: 24, figs 178–179. **new synonym**
Lagocheilus klobukowskii – INKHAVILAY et al. 2019: 19, figs 9B–C, 18C.

Remarks. *C. huberi* Thach, 2018, described as a member of the family Pomatiidae Newton, 1891, is identical with *L. klobukowskii* (family Cyclophoridae) based on comparisons with the original figures and those of INKHAVILAY et al. (2019), and therefore considered a junior synonym of the latter here.

Genus *Leptopoma* L. Pfeiffer, 1847

Leptopoma L. Pfeiffer 1847: 47.

Leptopoma huberi (Thach, 2018)
new combination

Tropidophora huberi Thach 2018a: 24.

Remarks. The genus *Tropidophora* Troschel, 1847 (family Pomatiidae) is distributed in mainland Africa, the small islands of the western Indian Ocean, and has radiated extensively in Madagascar (Fischer-Piette et al. 1993, Emberton 1995). Therefore, placing a species collected in Laos in this genus is inappropriate. Furthermore, *T. huberi* Thach, 2018 differs from *Leptopoma annamiticum* Möllendorff, 1900 (described in Möllendorff 1900a), the only *Leptopoma* species known from Laos (Inkhavilay et al. 2019), only by the rounded body whorl (keeled in *L. annamiticum*), but we are reluctant to include this species as a synonym at this time. Instead, this species is herein only transferred to the genus *Leptopoma*.

Genus *Rhiostoma* Benson, 1860

Rhiostoma Benson 1860: 96.

Rhiostoma herosae Thach et Huber, 2017

Rhiostoma herosae Thach et Huber in Thach 2017a: 17, figs 87–89.

Rhiostoma ninhbinhensis Thach et Huber in Thach 2018a: 17, figs 81a, 82a, 83a, 83b. **new synonym**

Remarks. The holotypes of the *R. herosae* Thach et Huber, 2017 and *R. ninhbinhensis* Thach et Huber, 2018 are virtually identical in appearance, therefore *R. ninhbinhensis* is considered here a junior synonym of *R. herosae*. Moreover, the type locality of both species is Vietnam, Ninh Bình. The validity of *R. herosae* can be inferred after a revision of *Rhiostoma*.

Rhiostoma marioni (Ancey, 1898)

Pterocyclos marioni Ancey 1898: 137, plate 9, fig. f.

Rhiostoma ableti Thach 2016a: 37, figs 53, 122–124. **new synonym**

Rhiostoma christae Thach 2016a: 38, figs 51, 130–133. **new synonym**

Rhiostoma marioni – Inkhavilay et al. 2019: 22, figs 11A–B, 18E.

Rhiostoma ableti – Sutcharit et al. 2019a: 5, fig. 1A

Rhiostoma christae – Sutcharit et al. 2019a: 17, fig. 3L

Remarks. The holotypes of *R. ableti* Thach, 2016 (NHMUK 20160307) from northwest of Lai Châu city, on the way to Paso, Lai Châu Province, north Vietnam and *R. christae* Thach, 2016 (NHMUK 20160306) from near the road No. 6 to Chieng Ngan, Son La Province, north Vietnam are nearly identical in appearance. The two type localities are situated in neighbouring northern Vietnamese provinces, less than 200 km apart, not a great distance for molluscs not restricted to limestone habitats. Both taxa are assigned herein as junior synonyms of *R. marioni* (Ancey, 1898), described from neighbouring Laos (Muang Khua Town, Phongsaly Province).

Genus *Spiraculum* Pearson, 1833

Spiraculum Pearson 1833: 590.

Spiraculum huberi (Thach, 2016)
new combination

Pearsonia huberi Thach 2016a: 36, figs 48, 115–118.

Pearsonia franzhuberi Thach 2017a: 15, figs 82–86. **new synonym**

Pearsonia thachi Huber in Thach 2017a: 16, figs 78–81. **new synonym**

Pearsonia huberi – Sutcharit et al. 2019a: 29, fig. 6K.

Remarks. According to the original description of *P. franzhuberi* Thach, 2017, it differs from *P. huberi* in the "shape of superior margin of aperture and air tube is directed backward". *P. thachi* Huber, 2017 is said to differ from *P. franzhuberi* by the "shape of operculum with four layers and wing-like structure that is very swollen at dorsal side". Those differences are all best explained by intraspecific variation. Since there are no essential differences between these three taxa, we treat them as a single species, *Spiraculum huberi*. Additionally, this species in reassigned to *Spiraculum* Pearson, 1833. Kobelt (1902) fixed *Spiraculum hispidum* Pearson, 1833 as a type species for both *Spiraculum* Pearson, 1833 and *Pearsonia* Kobelt, 1902. Thus, the latter is a junior objective synonym of the former.

Family Pupinidae L. Pfeiffer, 1853

Genus *Pollicaria* Gould, 1856

Pollicaria Gould 1856: 14.

Pollicaria myersii (Haines, 1855)

Cyclostoma (*Megalomastoma*) *myersii* Haines 1855: 157, plate 5, figs 9–11.

Pollicaria myersii – Kongim et al. 2013: 30, figs 2A, 4F–G, 6A.

Pollicaria huberi Thach 2018a: 20, figs 116–123. **new synonym**

Remarks. The shell and aperture shape and shell colour of *P. huberi* Thach, 2018 agree with that of *P. myersii* (see: Kongim et al. 2013), which is also known from Laos. Therefore, the former is considered a junior synonym of the latter.

Pollicaria rochebruni (Mabille, 1887)

Hybocystis rochebruni Mabille 1887: 12.

Hybocystis crossei Dautzenberg & d'Hamonville 1887: 220, plate 8, fig. 4.

Pollicaria rochebruni – Kongim et al. 2013: 35, figs 5D–E, 6E.

Pollicaria crossei – Kongim et al. 2013: 37, figs 5F–G, 6F.

Pollicaria nicoi THACH 2018a: 21, figs 109–115. **new synonym**
Ariophanta huberi THACH 2018a: 41, figs 548–549 (PÁLL-GERGELY & HUNYADI 2018).

Remarks. *A. huberi* Thach, 2018 was synonymised with *P. rochebruni* (Mabille, 1887) in an earlier report (PÁLL-GERGELY & HUNYADI 2018).

According to the original description, *P. nicoi* Thach, 2018 differs from *P. crossei* by having "subsutural bands", "short axial ribs below suture", and an operculum with red-brown lines. The meaning of "subsutural bands" is unclear, because the illustrated specimens show no distinct bands below the suture. Short axial ribs below suture are visible on *P. crossei* specimens examined by KONGIM et al. (2013). The stripes on the operculum cannot be used to distinguish species, as no evidence is provided on the intra- and interspecific variability of this trait, and the latest revisions (KONGIM et al. 2013, MINTON et al. 2017) did not use operculum colour as an important trait for species recognition and delimitation. As a consequence, *P. nicoi* is assigned a junior synonym of *P. crossei*, which was synonymised with *P. rochebruni* by MINTON et al. (2017).

Genus *Pupinella* Baird, 1850

Pupinella BAIRD 1850: 33.

Pupinella frednaggsi Thach et Huber, 2017

Pupinella frednaggsi Thach et Huber in THACH 2017a: 19, figs 127, 129–130, INKHAVILAY et al. 2019: 46, figs 16c, 18h.

Type locality. "suburb of Luang Prabang, Central Laos".

Remarks. This is a valid species. We examined a specimen from the following site: Laos, Luang Prabang Province, Ban Pak Ou, Nam Wu (opposite side of Ban Pak Ou), 364 m a.s.l., 20°03'29.0"N, 102°12'48.0"E (site code: 20061113B), leg. K. OHARA 13.11.2006.

Genus *Tortulosa* Gray, 1847

Tortulosa GRAY 1847: 177.

Tortulosa tortuosa (Gray, 1825)

Figs 3–5

Pupa tortuosa GRAY 1825: 413.
Tortulosa tortuosa – KOBELT 1902: 288.
Perlisia tweediei TOMLIN 1948: 225, plate 11, fig. 6.
Tortulosa tortuosa – BENTHEM JUTTING 1960: 11.
Tortulosa tortuosa – MAASSEN 2001: 44.
Tortulosa tortuosa – HEMMEN & HEMMEN 2001: 40, fig. 7.
Tortulosa tortuosa – EGOROV 2013: 14, fig. 23.
Tortulosa tortuosa – RAHEEM et al. 2014: 53.
Tortulosa huberi THACH 2018a: 21, figs 133–138. **new synonym**
Tortulosa schileykoi Thach et Huber in THACH 2018a: 22, figs 142–146. **new synonym**

Types examined. Kaki Bukit, Perlis, NHMUK 1948.10.2.6 (holotype of *Perlisia tweediei*, Fig. 3); Thailand: Krabi Province, MNHN-IM-2000-34055 (holotype of *Tortulosa schileykoi*, Fig. 4); Thailand: Krabi Province, MNHN-IM-2000-34054 (holotype of *Tortulosa huberi*, Fig. 5).

Remarks. *T. huberi* Thach, 2018 and *T. schileykoi* Thach et Huber, 2018 were compared with *T. tortuosa* and *P. tweediei* (a synonym of *T. tortuosa*, see: BENTHEM JUTTING 1960, MAASSEN 2001, EGOROV 2013) in the original description (THACH 2018a). All differences mentioned, such as shell colour and relative length of the free portion of the body whorl are better explained by intraspecific variation. Therefore, *T. huberi* and *T. schileykoi* are treated as junior synonyms of *T. tortuosa*.

T. tortuosa is distributed in Krabi Province (HEMMEN & HEMMEN 2001), Phuket Island, Thailand (unpublished information) and Kaki Bukit, Malaysia (BENTHEM JUTTING 1960). The type locality, Nicobar Islands, is erroneous (see: BENTHEM JUTTING 1960). The author of the species is BECK (1837) according to CHEMNITZ (1795 see: KOBELT 1899–1902), GRAY (1825) [fide RAHEEM et al. (2014)] and MAASSEN (2001). The former is surely not correct, because that name was not made available (BENTHEM JUTTING 1960, RAHEEM et al. 2014). Solving this seemingly complex nomenclatural problem is beyond the scope of the present paper.

Genus *Vargapupa* Páll-Gergely, 2015

Vargapupa Páll-Gergely in PÁLL-GERGELY et al. 2015: 42.

Vargapupa oharai Páll-Gergely, 2015

Vargapupa oharai Páll-Gergely in PÁLL-GERGELY et al. 2015: 42, fig. 8C.
Vargapupa huberi THACH 2018a: 22, figs 147–151, 153 (bottom), 154 (right), (PÁLL-GERGELY & GREGO 2019)

Remarks. *V. huberi* was synonymised with *V. oharai* Páll-Gergely, 2015 by PÁLL-GERGELY & GREGO (2019).

Superorder Eupulmonata

Order Stylommatophora

Suborder Achatinina

Family Achatinidae Swainson, 1840

Genus *Prosopeas* Mörch, 1876

Bulimus (*Prosopeas*) MÖRCH 1876: 358.

Figs 3–5. Shells of *Tortulosa tortuosa* (Gray, 1825): 3 – holotype of *Perlisia tweediei* (NHMUK 1948.10.2.6); 4 – holotype of *Tortulosa schileykoi* (MNHN-IM-2000-34055); 5 – holotype of *Tortulosa huberi* (MNHN-IM-2000-34054). Scale bar 10 mm. Photos: H. TAYLOR (3) and M. CABALLER (4–5)

Remarks. *Prosopeas* Mörch, 1876 was traditionally classified in the family Subulinidae Fischer et Crosse, 1877 (Fischer & Crosse 1872–1902). However, this family is not recognised by Bouchet et al. (2017) as a valid taxon (see: explanation therein).

Prosopeas anceyi Pilsbry, 1906

Figs 6–8

Prosopeas anceyi Pilsbry 1906–1907: 33 (nom. nov. pro *Prosopeas macilentum* Ancey, 1904 [described in Bavay & Dautzenberg 1904])

Prosopeas huberi Thach 2018a: 38, figs 497–501. **new synonym**

Types examined. Bac-Khan, Tonkin, leg. Messager, MNHN-IM-2000-4693 (syntype of *Prosopeas macilentum*, Fig. 8).

Remarks. We cannot find notable differences between *P. anceyi* and *P. huberi* Thach, 2018 (Figs 6–7), so the latter is here considered a synonym of the former.

Prosopeas excellens Bavay et Dautzenberg, 1909

Figs 9–10

Prosopeas excellens Bavay & Dautzenberg 1909a: 247.

Prosopeas excellens – Bavay & Dautzenberg 1909b: 282, plate 10, figs 11–12.

Obeliscus owengriffithsi Thach et Huber in Thach 2017a: 30, figs 413–417. **new synonym**

Types examined. MNHN-IM-2000-33211, holotype of *Obeliscus owengriffithsi* Thach et Huber, 2017 (Fig. 9); MNHN-IM-2000-4661, syntype of *P. excellens* (Fig. 10).

Remarks. Thatch & Huber (2017) assigned *O. owengriffithsi* to the Neotropical (see: Schileyko 1999) genus *Obeliscus* Beck, 1837 (type species: *Helix obeliscus* Moricand, 1834), and compared it with two other *Obeliscus* species in the original description. We do not find it likely that this species described from Vietnam could belong to that genus. Furthermore, Thatch & Huber (2017) failed to compare *O. owengriffithsi* to any of the 23 Vietnamese achatinid species (Schileyko 2011, Do & Do 2014).

The holotype is indistinguishable from *P. excellens* Bavay et Dautzenberg, 1909 in shape (Bavay & Dautzenberg 1909b, Do & Do 2014, Inkhavilay et al. 2019), although larger. In the superfamily Achatinoidea, most species have undetermined growth so overall size and number of whorls are not critical for species discrimination. Therefore, we regard *O. owengriffithsi* as a junior synonym of *P. excellens*.

Figs 6–8. Shells of *Prosopeas anceyi* Pilsbry, 1906: 6 – holotype of *Prosopeas huberi* Thach, 2018; 7 – paratype of *Prosopeas huberi* Thach, 2018; 8 – syntype of *Prosopeas macilentum* Ancey, 1904 (MNHN-IM-2000-4693). Scale bar 10 mm

Figs 9–10. Shells of *Prosopeas excellens* Bavay et Dautzenberg, 1909: 9 – holotype of *Obeliscus owengriffithsi* Thach et Huber, 2017 (MNHN-IM-2000-33211); 10 – syntype of *Prosopeas excellens* Bavay et Dautzenberg, 1909 (MNHN-IM-2000-4661). Scale bar 10 mm

Family Streptaxidae Gray, 1860

Genus *Discartemon* L. Pfeiffer, 1856

Streptaxis (*Discartemon*) L. PFEIFFER 1856: 173.

Discartemon discus (L. Pfeiffer, 1853)

Streptaxis discus L. PFEIFFER 1853: 252.
Discartemon pallgergelyi THACH 2017a: 31, figs 370–373.
Discartemon discus – BUI et al. 2019: 88, figs 1, 2A–B
Discartemon discus – INKHAVILAY et al. 2019: 146, fig. 59A
Discartemon discus – SUTCHARIT et al. (in press) (treats *pallgergelyi* as a junior synonym)

Remarks. According to the original description, *D. pallgergelyi* Thach, 2017 differs from *D. discus* (L. Pfeiffer, 1853) by the presence of a basal lamella. However, a slight thickening of the basal lip is present in the lectotype of *D. discus* (SMF 108534) as well (see: SIRIBOON et al. 2014b, INKHAVILAY et al. 2019). This character is variable and insufficient as a distinguishing character at the species level. Therefore, in agreement with SUTCHARIT et al. (in press), we treat *D. pallgergelyi* as a synonym of *D. discus*.

Discartemon moolenbeeki Maassen, 2016

Discartemon moolenbeeki MAASSEN 2016: 139, fig. 1.
Discartemon szekeresi Thach et Huber in THACH 2018a: 38, figs 507–510.
Discartemon moolenbeeki – SUTCHARIT et al. (in press) (treats *szekeresi* as a junior synonym)

Remarks. *D. szekeresi* Thach et Huber, 2018 is identical with *D. moolenbeeki* Maassen, 2016, therefore, the former is considered a synonym of the latter (see: SUTCHARIT et al. in press). Furthermore, their type localities are within a few kilometres of each other (*szekeresi*: Ao Luc, between Krabi and Phang Nga, Thailand; *moolenbeeki*: Krabi Province, Noppharat Thara Beach along the Andaman Sea, Thailand).

Discartemon discamaximus Siriboon et Panha, 2014

Discartemon discamaximus Siriboon et Panha in SIRIBOON et al. 2014a: 62, figs 5a, b.

Discartemon huberi THACH 2017a: 30, figs 365–368, 373 (bottom).
Discartemon discamaximus – SUTCHARIT et al. (in press) (treats *huberi* as a junior synonym).

Remarks. *D. huberi* Thach, 2017 has been assigned as a junior synonym of *D. discamaximus* (see: SUTCHARIT et al. in press).

Genus *Indoartemon* Forcart, 1946

Oophana (*Indoartemon*) FORCART 1946: 215.

Indoartemon huberi (Thach, 2016) new combination

Streptartemon huberi THACH 2016a: 60, figs 54, 263–265.

Material examined. 2019/9. Vietnam, Lâm Đồng Prov., Bảo Lộc NNW ca. 17 km, Thác Đạ Mbri (800 m), 11°38'30.8"N, 107°44'30.8"E, leg. HUNYADI & OTANI, 04.02.2019, coll. HA.

Remarks. *Streptartemon* Kobelt, 1905 is a neotropical genus, inhabiting much of South America (SCHILEYKO 2000), therefore this species is transferred to the morphologically similar *Indoartemon* Forcart, 1946 (see: SIRIBOON et al. 2014a, INKHAVILAY et al. 2016).

Genus *Oophana* Ancey, 1884

Streptaxis (*Oophana*) ANCEY 1884: 399.

Oophana bulbulus (Morelet, 1862)

Ennea bulbulus MORELET 1862: 477.
Oophana bulbulus – SCHILEYKO 2000: 796, fig. 1038.
Indoartemon huberi THACH 2018a: 39, figs 516–520. **new synonym**

Remarks. The holotype of *I. huberi* Thach, 2018 is stated to differ from *O. bulbulus* (Morelet, 1862) by the absence of a blunt basal denticle. However, a slight thickening is visible behind the basal lip, and it would have developed further if the animal lived longer. Due to the identical shell shape we consider *I. huberi* a junior synonym of *O. bulbulus*.

By transferring *S. huberi* Thach, 2016 to *Indoartemon* (see above), *I. huberi* Thach, 2018 becomes a secondary homonym of *I. huberi* (Thach, 2016). However, since we consider *I. huberi* Thach, 2018 a junior synonym of *O. bulbulus* there is no need to provide a replacement name.

Genus *Perrottetia* Kobelt, 1905

Odontartemon (*Perrottetia*) KOBELT 1905 (1905–1906): 108.

Perrottetia thachi Huber, 2018

Perrottetia thachi Huber in THACH 2018a: 40, figs 528–531.

Remarks. This species is very similar to *Oophana pachyglottis* (Möllendorff, 1900) (described in MÖLLENDORFF 1900a, see: photo in ZILCH 1961), but we did not compare the two in detail. The validity of *P. thachi* Huber, 2018 needs further revision.

Perrottetia gregoi Thach, 2018

Perrottetia gregoi THACH 2018a: 39, figs 534–536.

Remarks. This species is very similar to *Oophana diplodon* (Möllendorff, 1900) (described in MÖLLENDORFF 1900a, see: photo in ZILCH 1961), but we did not have the opportunity to compare the two species in detail. Thus, the validity of *P. gregoi* requires further revision.

Suborder Helicina

Infraorder Pupilloidei

Family Enidae

Genus *Apoecus* Möllendorff, 1902

Buliminus (*Apoecus*) Möllendorff in KOBELT 1902 (1899–1902): 887, 1022, 1030.

Apoecus huberi (Thach, 2018) new combination

Microstele huberi THACH 2018a: 37, figs 477–482.

Remarks. Although *M. huberi* Thach, 2018 is clearly a member of the family Enidae, no revision of Southeast Asian enids has been published making the generic assignment of the species challenging. The genus *Microstele* consists of small species with apertural denticles, whereas "*M. huberi*" has no apertural barriers. We provisionally place this species in *Apoecus* Möllendorff, 1902, which includes species with similar shell morphology (KÖHLER et al. 2016).

Apoecus macrostoma (Bavay et Dautzenberg, 1912)

Buliminus macrostoma BAVAY & DAUTZENBERG 1912: 25, 26, plate 4, figs 11–13.
Mirus huberi THACH 2018a: 37, 485–488. **new synonym**
Apoecus macrostoma – INKHAVILAY et al. 2019: 58, fig. 25F.

Remarks. *M. huberi* Thach, 2018 is identical in shell morphology to *A. macrostoma* Bavay et Dautzenberg, 1912, so we have no reservation in treating the former as a synonym of the latter. The type specimen of *A. macrostoma* figured in the original description has fine, vertical, brown stripes on its shell. The shell photographed by INKHAVILAY et al. (2019) also has these stripes, but they are very pale, probably because it is a dead-collected specimen. The holotype of *M. huberi* lacks any radial stripes due to its weathered condition.

Infraorder Limacoidei

Family Ariophantidae Godwin-Austen, 1883

Ariophantinae Godwin-Austen 1883 (1882–1920): 79.

Genus *Hemiplecta* Albers, 1850

Hemiplecta Albers 1850: 60.

Hemiplecta khamducensis (Thach et Huber, 2018) new combination

Camaena khamducensis Thach et Huber in Thach 2018a: 67, figs 886–888.

Remarks. *C. khamducensis* Thach et Huber, 2018 is clearly a member of the Ariophantidae, and not a camaenid. Although the assignment of the species to the genus *Hemiplecta* is provisional, it is very similar in shell morphology to better-known members of *Hemiplecta* (see: photos of *Hemiplecta* species in Inkhavilay et al. 2019). Its validity will be determined upon a systematic revision.

Hemiplecta lanxangnica Inkhavilay et Panha, 2019

Helminthoglypta huberi Thach 2017a: 54, figs 747–749.

Hemiplecta lanxangnica Inkhavilay et Panha in Inkhavilay et al. 2019 [nomen novum pro *Helminthoglypta huberi* Thach 2017: 54, non *Hemiplecta huberi* Thach, 2017: 33].

Remarks. Inkhavilay et al. (2019) transferred *H. huberi* Thach, 2017 (in Thach 2017a: 54) from *Helminthoglypta* Ancey, 1887 to the genus *Hemiplecta* thus creating a secondary homonym of *H. huberi* Thach, 2017 (in Thach 2017a: 33). The replacement name, *H. lauxangnica* Inkhavilay et Panha, 2019 has been proposed.

Hemiplecta pluto (L. Pfeiffer, 1863)

Helix pluto L. Pfeiffer 1863[1862]: 268.

Hemiplecta huberi Thach 2017a: 33, figs 389–391. **new synonym**

Hemiplecta pluto – Inkhavilay et al. 2019: 78, figs 36E–F, 56D

Remarks. In the original description, *H. huberi* Thach, 2017 was compared with photos of a single specimen of *H. pluto*, which were downloaded from a shell dealer's website. However, *H. pluto* is very variable in terms of basic shell morphology (Inkhavilay et al. 2019), the species inhabits an extensive area in Southeast Asia, and the differences between the two taxa mentioned by Thach (2017a) (weaker keel and stronger sculpture of *H. huberi*) do not seem correct based on the presented photos. Therefore, we assign *H. huberi* as a junior synonym of *H. pluto*.

The use of "*Hemiplecta buberi*" in the figure captions (Thach 2017a: 97) is an incorrect original spelling.

Genus *Kalidos* Gude, 1911

Kalidos Gude 1911: 273.

Kalidos chastellii (Deshayes in Férussac, 1832)

Helix chastellii G. P. Deshayes in D. de Férussac 1832: 106, plate 80, fig. 4.

Kalidos chastellii – Fischer-Piette et al. 1994: 230, plate 33, figs 10–12.

Kalidos huberi Thach, 2018 in Thach 2018a: 43. **new synonym**

Remarks. *Kalidos huberi* Thach, 2018 is a synonym of *Kalidos chastellii* (Deshayes in Férussac, 1832), which is one of Madagascar's first described snail. It occurs around Tulear/St Augustin which was already a port of call for Europeans since the 1600s. This snail is still abundant there today (Owen Griffiths pers. comm., December 2019). This taxonomic decision is based on the Fischer-Piette et al. (1994), and not the holotype of *Helix chastellii*, which seems lost.

Genus *Megaustenia* Cockerell, 1912

Megaustenia Cockerell 1912: 70.

Megaustenia huberi (Thach, 2016) new combination

Mysticarion huberi Thach 2016a: 61, figs 56, 273–275.

Remarks. *Mysticarion* Iredale, 1941 is an Australian endemic genus (Schileyko 2002, Hyman et al. 2017) and its use by Thach (2016a) is puzzling. We transfer this species to the genus *Megaustenia*, where it most likely belongs based on shell morphology and locality. The validity of the taxon can be determined by systematic revision.

Megaustenia annhiae (Thach et Huber, 2017) new combination

Helixarion annhiae Thach et Huber in Thach 2017a: 34, figs 405–407 (erroneous mention as figs 495–497: 34).

Remarks. The genus *Helicarion* (*Helixarion* is an incorrect original spelling) contains small (at most 22 mm in diameter) semislugs (Schileyko 2002). We transfer this species to the genus *Megaustenia*, where it most probably belongs based on shell morphology and locality. The validity of the taxon can be determined by systematic revision.

Family Dyakiidae Gude et Woodward, 1921

Genus *Asperitas* Gude, 1911

Asperitas Gude 1911: 273.

Asperitas abbasi (Thach, 2016) new combination

Camaena abbasi Thach 2016d: 109, figs 1–8.

Remarks. The thin peristome and shell colour clearly indicates that *C. abbasi* Thach, 2016 is not a cama-

enid, but a dyakiid/ariophantid species. We transfer the taxon herein to *Asperitas*, a genus widespread in the Indonesian area. Anatomical examination may refine this assignment.

Genus *Dyakia* Godwin-Austen, 1891

Dyakia Godwin-Austen 1891: 29.

Dyakia maarseveeni (Bock, 1881)

Helix (*Nanina*) *maarseveeni* Bock 1881: 629, plate 55, fig. 2.
Dyakia maarseveeni – Laidlaw 1963: 142, fig. 14.
Ariophanta abbasi Thach 2018a: 41, 543–545. **new synonym**

Remarks. The holotype of *A. abbasi* Thach, 2018 (type locality: eastern side of Mount Singgalang, Sumatra) is a juvenile, sinistral shell, which is better assigned to the genus *Dyakia* Godwin-Austen, 1891. For unknown reasons this species was only compared with *A. interrupta* (Benson, 1834), originally described from "Sicrigali" (=Sakrigali, northeastern India). Benthem Jutting (1959) lists 10 *Dyakia* species from Sumatra. The most widespread Sumatran *Dyakia* species (*D. mackensiana* (Souleyet, 1841)) has a more elevated spire than that of "*A. abbasi*" (see: Sutcharit et al. 2012). However, *D. maarseveeni* (Bock, 1881), which was described from practically the same area, largely matches *A. abbasi*. Therefore we consider Thach's (2018a) species as a junior synonym of *D. maarseveeni*.

Family Trochomorphidae Möllendorff, 1890

Genus *Trochomorpha* Albers, 1850

Helix (*Trochomorpha*) Albers 1850: 116.

Trochomorpha benigna (L. Pfeiffer, 1863)

Helix benigna L. Pfeiffer 1863: 269, plate 36, figs 11, 12.
Trochomorpha vinhensis Thach 2018a: 45, figs 598–600. **new synonym**
Trochomorpha benigna – Inkhavilay et al. 2019: 72, fig. 32F.

Remarks. *T. vinhensis* Thach, 2018 is identical to *H. benigna* L. Pfeiffer, 1863 in terms of shell shape, colour, and sculpture. Even the type localities (*T. vinhensis*: Vinh city, Nghệ An Province, northern Vietnam; *T. benigna*: Lao Mountains, Cambodia = environs of Luang Prabang) are relatively near to each other. Therefore, we assign *T. vinhensis* Thach, 2018 as a junior synonym of *T. benigna* (L. Pfeiffer, 1863).

Family Clausiliidae Gray, 1855

Genus *Oospira* Blanford, 1872

Clausilia (*Oospira*) Blanford 1872: 205.

Oospira bolovenica (Möllendorff, 1898)

Oospira franzhuberi Szekeres et Thach in Thach 2018a: 36, figs 469–470. **new synonym**

Remarks. *O. franzhuberi* Szekeres et Thach, 2018 fits within the morphological variability of *O. bolovenica*, and is considered a synonym (M. Szekeres pers. comm., June 2019).

Oospira naggsi callosa Páll-Gergely, nom. nov.

Hemiphaedusa huberi Thach 2016a: 58, figs 59, 295–297.

Types examined. Vietnam, Dong Nai Province, eastern part of the Cat Tien National Park near Bau Sau (Crocodile Lake, 11°27'39"N, 107°20'24"E), 140 m a.s.l., leg. Natural History Museum Expedition 14.02.2012 (NHMUK 20140657, holotype of *O. naggsi*); RMNH 5004199 (holotype of *Hemiphaedusa huberi*, Fig. 11).
Material examined. 2019/9. Lâm Đồng Province, Bảo Lộc NNW ca. 17 km, Thác Đạ Mbri (800 m), 11°38'30.8"N, 107°44'30.8"E, leg. Hunyadi & Otani, 04.02.2019, coll. HA.
Remarks. "*Hemiphaedusa huberi*" is very similar to *Oospira naggsi* Luong et Szekeres, 2014 (described in Grego et al. 2014), but it is more corpulent than *O. naggsi*, and its plicae are fused to form a lunella-like callus. Based on these minor differences we treat *H. huberi* as a subspecies of *O. naggsi*. Thus, *H. huberi* Thach, 2016 (Fig. 12, Thach 2016a: 58) belongs to the genus *Oospira*, and becomes a secondary homonym with *O. huberi* Thach, 2016 (Thach 2016a: 57). Therefore, we propose *callosa* as a replacement name for *H. huberi*, referring to its lunella-like thickened callus (M. Szekeres pers. comm., January 2020).

Genus *Liparophaedusa* Lindholm, 1924

Phaedusa (*Liparophaedusa*) Lindholm 1924: 62, 71.

Liparophaedusa szekeresi Thach, 2017

Liparophaedusa szekeresi Thach 2017a: 29, figs 335–345.

Remarks. Considered a valid taxon based on examination of type material (M. Szekeres pers. comm., June 2019).

Genus *Grandinenia* Minato et Chen, 1984

Grandinenia Minato & Chen 1984: 301.

Grandinenia rugifera (Möllendorff, 1898)

Clausilia (*Garnieria*) *rugifera* Möllendorff 1898: 76.
Neniauchenia rugifera – Inkhavilay et al. 2019: 64, fig. 28E.
Neniauchenia huberi Thach 2016a: 58, figs 57, 299–301. **new synonym**

Types examined. RMNH 5004200 (holotype of *Neniauchenia huberi*, Fig. 13).
Remarks. *N. huberi* Thach, 2016 is a synonym of *G. rugifera*, which is known from the Boloven plateau, approximately 100 km west-southwest. This species is easily recognisable based on the wavy neck

Figs 11–13. Shells of Clausiliidae described by Thach: 11 – *Oospira naggsi callosa* Páll-Gergely, nom. nov. (holotype of *Hemiphaedusa huberi* Thach, 2016), H: 29.2 mm; 12 – *Castanophaedusa huberi* (Szekeres et Thach, 2017) (holotype of *Oospira huberi* Thach, 2016), H: 19.7 mm; 13 – *Grandinenia rugifera* (Möllendorff, 1898) (holotype of *Neniauchenia huberi* Thach, 2016), H: 26.5 mm. All photos: B. Páll-Gergely

sculpture. The taxon *Neniauchena* H. Nordsieck, 2002 is now considered a junior synonym of the genus *Grandinenia* (see: Grego et al. 2014).

Genus *Castanophaedusa* Páll-Gergely et Szekeres, 2017

Castanophaedusa Páll-Gergely & Szekeres 2017: 517.

Castanophaedusa huberi (Thach, 2016)

Oospira huberi Thach 2016a: 57, figs 58, 283–286.
Castanophaedusa huberi – Páll-Gergely & Szekeres 2017: 517.

Type examined. RMNH 5004194 (holotype of *Oospira huberi*, Fig. 12).
Remarks. A valid species belonging to the genus *Castanophaedusa* (see: Páll-Gergely & Szekeres 2017).

Genus *Messageriella* Páll-Gergely et Szekeres, 2017

Messageriella – Páll-Gergely & Szekeres 2017: 518.

Messageriella gregoi (Szekeres et Thach, 2017)

? *Oospira gregoi* Szekeres et Thach in Thach 2017a: 29, figs 350–354.
Messageriella gregoi – Thach 2018a: 36, fig. 468.

Remarks. A valid species, but, based on the lamella structure and the deeply situated ventral plicae, it is better assigned to the genus *Messageriella*. The paper of Páll-Gergely & Szekeres (2017), in which *Messageriella* was described, was in press while Thach (2017a) prepared his book. Thus, to avoid nomenclatural problems, this species was tentatively introduced as *Oospira*.

Infraorder Helicoidei

Family Camaenidae Pilsbry, 1893

Genus *Amphidromus* Albers, 1850

Bulimus (*Amphidromus*) Albers 1850: 138.

Remarks. MolluscaBase (2019) lists 187 species of *Amphidromus*, 92 species described by Thach and Huber. Only 95 species have been described by all other authors (MolluscaBase 2019). It is highly unlikely that doubling the number of species in the genus is warranted. Many *Amphidromus* species have highly variable colour forms, and in some cases, minor aspects of shell morphology are also variable. This has been noted by multiple, competent malacologists over the last two centuries. With the availability of many more specimens due to increased collecting activity over the last few decades, recent studies have clearly demonstrated that this variability exists and many *Amphidromus* species are some of the most variable of all land snails (Sutcharit & Panha 2006, Inkhavilay et al. 2017).

The *Amphidromus* of West Timor are extremely variable in shell colour and pattern. This variability was extensively studied by Haniel (1921) and was even mentioned in the original description (Schepman 1892) of *A. reflexilabris*. Yet, Thach (2017a, d, e, f, 2018a) and Thach & Abbas (2017a, b) described nine new species from the island, all of which we synonymise with *A. reflexilabris* below.

Additionally, Solem (1965) studied 500 shells (91 samples), and reported that 9 valid taxa inhabit Thailand. Thach and his colleagues describe three new species from Thailand while only examining 18 specimens (3 samples).

Here we synonymise the *Amphidromus* species of Thach and co-authors that we believe identical with previously described taxa, or whose shell morphologies and colour patterns fall well within the known variability of those species.

Amphidromus areolatus (L. Pfeiffer, 1861)

Bulimus areolatus L. Pfeiffer, 1861: 194.
Amphidromus (*Syndromus*) *areolatus* – Inkhavilay et al. 2017: 28, fig. 10C
Amphidromus frednaggsi Thach & Huber in Thach 2018a: 52, figs 655–660. **new synonym**
Amphidromus pallgergelyi Thach & Huber in Thach 2018a: 58, figs 731–737. **new synonym**
Amphidromus patamakanthini Thach & Huber in Thach 2018a: 59, figs 779–785. **new synonym**
Amphidromus gerberi Thach et Huber in Thach 2017a: 39, figs 649–652, 654–655. **new synonym**

Remarks. *A.* (*S.*) *areolatus* is distributed in southern Laos (Inkhavilay et al. 2017) and peninsular and southeast Thailand (Solem 1965). The colour pattern of *A. patamakanthini* Thach et Huber, 2018 is well within the colour variations presented by Inkhavilay et al. (2017) and we consider it a junior synonym of *A. areolatus*. *A. pallgergelyi* Thach et Huber, 2018 has strongly reduced colouration, but agrees in shape and size with *A. patamakanthini*. *A. frednaggsi* Thach et Huber, 2018, described on the basis of juvenile shells, forms a continuum between the richly ornamented *A. patamakanthini* and the pale *A. pallgergelyi*. Therefore, all three species, described from southern Thailand, are considered conspecific and synonyms of the widely distributed *A. areolatus*.

A. gerberi, also described from southern Laos, agrees with *A. areolatus* in the relatively small size, the prominent reddish subsutural band, and fork shape of upper periphery band (clear on penultimate whorl). Thus, that taxon is a junior synonym of *A. areolatus*.

Amphidromus asper Haas, 1934

Figs 14–16

Amphidromus (*Goniodromus*) *asper* Haas 1934: 96, figs 11–12.

Figs 14–16. Shells of *Amphidromus asper* Haas, 1934 (14–15) and *Amphidromus buelowi* Fruhstorfer 1905 (16): 14 – holotype of *Amphidromus franzhuberi* (MNHN-IM-2000-31892); 15 – holotype of *Amphidromus asper* (SMF 7762); 16 – paralectotype of *Amphidromus buelowi* (FMNH 72436). Scale bar 10 mm

Amphidromus franzhuberi THACH 2016a: 64, figs 42, 315–319. **new synonym**

Types examined. Vietnam, Nha Trang, along the border of Nha Trang outskirts and Khanh Vinh District, leg. N. N. THACH, MNHN-IM-2000-31892 (holotype of *franzhuberi*, Fig. 14); Süd-Annam, 120 km von der Küste, auf dem Wege zum Plateau von Lang-Bian, zw. 600–1,000 m a.s.l., SMF 7762 (holotype of *asper* Fig. 15); NHMUK 1910.12.30.98 (lectotype of *buelowi*); "CNHM 72436" = FMNH 72436 (paralectotype of *buelowi*, Fig. 16).

Remarks. THACH (2016a) compared *A. franzhuberi* Thach, 2016 only with *A. buelowi* Fruhstorfer, 1905, which is indeed a different species. However, the holotype of *A. franzhuberi* is identical to that of *A. asper* (although the latter shell is weathered). Therefore, *A. franzhuberi* is a junior synonym of *A. asper*. THACH (2017a: 37) later stated that *A. asper* (referring to it as "the new species") and *A. franzhuberi* are similar, but noted that the anterior extremity of the aperture is rounded in *A. asper* and pointed in *A. franzhuberi*, and that *A. asper* lacks a canal. This is correct for the figured specimen of *A. asper* (THACH 2017a: figs 432–433) (although we find this insufficient to distinguish species), but inaccurate when compared with the holotype of *A. asper*.

Amphidromus baolocensis Thach et Huber, 2016

Amphidromus baolocensis Thach et Huber in THACH 2016a: 62, figs 34, 302–304.

Amphidromus dambriensis Thach et Huber in THACH 2016a: 63, figs 36, 308–310. **new synonym**

Amphidromus ngocanhi THACH 2017a: 43, figs 565–569, 572. **new synonym**

Remarks. *Amphidromus baolocensis* and *A. dambriensis* Thach et Huber, 2016 are nearly identical, and are described in the same publication (THACH 2016a). We consider *A. baolocensis* a valid species with page priority in respect to *A. dambriensis*, which we assign as a synonym. *A. ngocanhi* Thach, 2017 agrees with the other two forms in terms of the slender shell, green colour, and yellow vertical stripes. We herein also consider this taxon a synonym of *A. baolocensis*.

Amphidromus cambojiensis (Reeve, 1860)

Bulimus cambojiensis REEVE 1860: 204.

Amphidromus cambojiensis – SUTCHARIT et al. 2015: 62, figs 4F–G.

Amphidromus lamdongensis Thach et Huber in THACH 2016a: 67, figs 32, 339–342. **new synonym**

Amphidromus schileykoi THACH 2016a: 68, figs 39, 381–383. **new synonym**

Amphidromus montesdeocai Thach et Huber in THACH 2017a: 43, figs 454–458. **new synonym**

Remarks. *A. schileykoi* Thach, 2016 and *A. montesdeocai* Thach et Huber, 2017 differ from typical specimens of *A. cambojiensis* mostly in shell colouration. Namely, *A. montesdeocai* is pale with greenish colouration on the body whorl, whereas *A. schileykoi* possesses a pinkish last whorl, and typical *A. cambojiensis* has faint, brownish radial stripes on the teleoconch. However, the very similar shell and aperture shape, the pink aperture, and the overall simple colour pattern suggest that they all belong to the same species. Therefore, we treat them as junior synonyms of *A. cambojiensis*. *A. cambojiensis* was originally described from Cambodia, whereas the other two forms are known from neighbouring southern Vietnam. The shell and aperture shape, the colour of the aperture and the shell colouration of *A. lamdongensis* agrees with that of *A. cambojiensis*, therefore we consider that species also as a synonym of *A. cambojiensis*.

Amphidromus comes (L. Pfeiffer, 1861)

Bulimus comes L. PFEIFFER 1861: 193.

Cochlostyla polymorpha TAPPARONE-CANEFRI 1874: 82, plate 2, figs 4a–b.

Amphidromus comes – PILSBRY 1900a: 170, plate 57, figs 1–5.

Amphidromus comes subsp. *polymorphus* – PILSBRY 1900a: 171, plate 57, figs 6–10.

Amphidromus hueae Thach et Huber in THACH 2016a: 66, figs 38, 331–334. **new synonym**

Amphidromus ngocngai THACH 2017a: 44, figs 446–449. **new synonym**

Amphidromus vietnamensis Thach et Huber in THACH 2017a: 48, figs 630–635. **new synonym**

Amphidromus dongnaiensis THACH 2018a: 51, 789–793. **new synonym**

Amphidromus atricallosus vovanae THACH 2019a: 84 **new synonym**

Remarks. *A. hueae* Thach et Huber, 2016, *A. ngocngai* Thach, 2017, *A. vietnamensis* Thach et Huber, 2017, *A. dongnaiensis* Thach, 2018, *A. atricallosus vovanae* Thach, 2019 fit well into the colour variation exhibited by the widespread *A. comes polymorphus*. However, even that taxon was considered to be a synonym of *A. comes* ("colour phase") (LAIDLAW & SOLEM 1961: 651, MAASSEN 2001). Therefore, we treat all mentioned taxa as synonyms of *A. comes*. Further fieldwork and analysis is required.

Amphidromus cruentatus (Morelet, 1875)

Bulimus cruentatus MORELET 1875: 264, 265, plate 13, fig. 5.

Amphidromus cruentatus – SUTCHARIT et al. 2015: 67, fig. 6F.

Amphidromus daoae THACH 2016a: 63, figs 29, 384–388. **new synonym**

Amphidromus daoae robertabbasi THACH 2017f: 36, figs 16–18. **new synonym**

Amphidromus daoae robertabbasi – THACH 2018a: figs 651–652.

Remarks. The differences between *A. daoae* Thach 2016 and *A. daoae robertabbasi* Thach 2017 are very minor and the two forms are nearly identical. They are similar to the holotype of *A. cruentatus* in their shell shape, reddish brown aperture, and yellow sutural band (SUTCHARIT et al. 2015). We see no reason to maintain *A. daoae* as a separate species, and consider it a synonym of *A. cruentatus*.

Amphidromus eudeli Ancey, 1897

Amphidromus eudeli ANCEY 1897: 63.
Amphidromus eudeli – INKHAVILAY et al. 2017: fig. 13N.
Amphidromus yangbayensis Thach et Huber in THACH 2016a: 70, figs 33, 305–307. **new synonym**
Amphidromus yenlinhae Thach et Huber in THACH 2017a: 49, figs 594–600. **new synonym**

Remarks. *A. yangbayensis* Thach et Huber, 2016 is based on a juvenile specimen of *A. eudeli* (see: INKHAVILAY et al. 2017). *A. yenlinhae* Thach et Huber, 2017 is also similar to the syntype of *A. eudeli* in the brown-yellow radial stripes and the brown-yellow-brown band on the base of the shell. Therefore, both are considered here as synonyms of *A. eudeli*. SCHILEYKO (2011) considers *A. eudeli* a synonym of *Syndromus zebrinus* (L. Pfeiffer, 1861), but INKHAVILAY et al. (2017) regards them as separate species, which we follow here.

Amphidromus flavus (L. Pfeiffer, 1861)

Bulimus flavus L. PFEIFFER 1861: 194.
Amphidromus (*Syndromus*) *flavus* – INKHAVILAY et al. 2017: 24, figs 1, 9B, 10E–K, 11C–D, 12A–C.
Amphidromus truongkhoai THACH 2018a: 64, figs 855–862. **new synonym**

Remarks. *A. truongkhoai* Thach, 2018 is identical with the form of *A. flavus* (var. *tryoni* Pilsbry, 1900 [in PILSBRY 1900a], see: INKHAVILAY et al. 2017: figs 10I–K), therefore we consider it as a synonym of *A. flavus*.

Amphidromus (*Syndromus*) *fuscolabris* Möllendorff, 1898

Amphidromus zebrinus fuscolabris MÖLLENDORFF 1898: 75.
Amphidromus fuscolabris – INKHAVILAY et al. 2017: 32, figs 1, 9E–F, 12G–I, 13J–M, 14C–D.
Amphidromus anhdaoorum THACH 2017a: 36, figs 601–608. **new synonym**
Amphidromus goldbergi Thach et Huber in THACH 2018a: 53, figs 678–683. **new synonym**
Amphidromus pengzhuoani THACH 2018b: 34, figs 11–13. **new synonym**
Amphidromus stungtrengensis Thach et Huber in THACH 2018a: 63, figs 828–832. **new synonym**
Amphidromus thakhekensis Thach et Huber in THACH 2017a: 48, figs 553–556 (synonymised with *A. fuscolabris* by INKHAVILAY et al. (2019)).

Remarks. The shell shapes and colour patterns of *A. anhdaoorum* Thach, 2017, *A. goldbergi* Thach et Huber, 2018, *A. pengzhuoani* Thach, 2018 and *A. stungtrengensis* Thach et Huber, 2018 fall well within the known intraspecific variation of typical *A. fuscolabris* (see: INKHAVILAY et al. 2017: figs 13I–K therein). Therefore, we consider all as synonyms of *A. fuscolabris*. *A. thakhekensis* Thach et Huber, 2017 is identical to the bandless form of *A. fuscolabris* and is already deemed a synonym (see: INKHAVILAY et al. 2017: fig. 13L).

Amphidromus givenchyi Geret, 1912

Amphidromus givenchyi GERET 1912: 55, 56, plate 2, figs 21, 22.
Amphidromus givenchyi – LAIDLAW & SOLEM 1961: 526, 621.
Amphidromus richgoldbergi Thach et Huber in THACH 2017a: 45, figs 505–508.
Amphidromus givenchyi – INKHAVILAY et al. 2019: 90, figs 43D–E (treated *A. richgoldbergi* as a junior synonym of *A. givenchyi*).
Amphidromus severnsi THACH 2017a: 46, figs 585–591. **new synonym**

Remarks. INKHAVILAY et al. (2019) considered *A. richgoldbergi* simply as a form of *A. givenchyi*. We consider the same is true for *A. severnsi* Thach, 2017 due to the broad shell, green or yellow background colour and lighter subsutural band and regard that taxon as a synonym of *A. givenchyi*. *A. givenchyi* may be a synonym of *A. roseolabiatus* due to the overall similar shell shape and colouration.

Amphidromus haematostoma Möllendorff, 1898

Amphidromus haematostoma MÖLLENDORFF 1898: 74–75.
Amphidromus haematostoma – ZILCH 1953: 132, plate 22, figs 4–5.
Amphidromus (*Syndromus*) *haematostoma* – INKHAVILAY et al. 2017: 34, figs 1, 13O–R.
Amphidromus attapeuensis Thach et Huber in THACH 2017a: 37, figs 573–578.
Amphidromus haematostoma – INKHAVILAY et al. 2019: fig. 44A–C (*Amphidromus attapeuensis* is considered as a junior synonym)

Remarks. LAIDLAW & SOLEM (1961) suggested that *A. haematostoma* was a junior synonym of *A. roseolabiatus* Fulton, 1896, however, based on the type and recently collected material, INKHAVILAY et al. (2017) maintained both species as valid taxa. *A. attapeuensis* Thach et Huber, 2017 is clearly identical with *A. haematostoma*, and is regarded as a synonym by INKHAVILAY et al. (2019).

Amphidromus huberi Thach, 2014

Amphidromus huberi THACH 2014: 39, figs 1–8.

Amphidromus huberi – THACH 2016a: 66, figs 358–361.
Amphidromus ledaoae anhi THACH 2018a: 56, figs 845–849. **new synonym**
Amphidromus ledaoae anhi – PÁLL-GERGELY 2019: 75.

Remarks. We consider *A. huberi* Thach, 2014 a valid species. *A. ledaoae anhi* Thach, 2018 is nearly identical to *A. huberi* and we herein synonymise the former with *A. huberi*.

Amphidromus ingens Möllendorff, 1900

Amphidromus ingens MÖLLENDORFF 1900b: 23.
Amphidromus ingens – ZILCH 1953: 135, plate 23, fig. 25.
Amphidromus naggsi THACH & HUBER 2014: 35, figs 1–13, 15. **new synonym**

Remarks. *A. naggsi* Thach et Huber, 2014 is very similar to the lectotype of *A. ingens* (see: ZILCH 1953). According to the original description of *A. naggsi*, it differs from *A. ingens* by the wrinkled shell surface and the presence of 2–3 broad spiral channels on the body whorl instead of a single spiral channel, the latter being incorrect. However, both possess two elevated spiral ridges on the body whorl, although it is a bit more marked in *A. naggsi*. The difference in the shell surface also does not seem to be supported by the presented photographs. For example, the shell of *A. naggsi* (THACH & HUBER 2014: fig. 5) appears smoother than the one presented as *A. ingens* (THACH & HUBER 2014: fig. 14). Since shell sculpture appears to be variable, we consider this character insufficient to differentiate species. Therefore, we allocate *A. naggsi* as a junior synonym of *A. ingens*.

Amphidromus mirandus Bavay et Dautzenberg, 1912

Amphidromus mirandus BAVAY & DAUTZENBERG 1912: 17–18, plate II, figs 23–24.
Amphidromus heinrichhuberi Thach et Huber in THACH 2016a: 65, figs 30, 321–324. **new synonym**

Material examined. Lang-Biang, Annam, MNHN IM-2000-2046 (lectotype of *mirandus*); South Vietnam, Lâm Đồng, Bảo Lộc city, Đoàn Kết commune NHMUK 20160298 (holotype of *heinrichhuberi*).

Remarks. In the original description *A. heinrichhuberi* Thach et Huber, 2016 was not compared with any other *Amphidromus* species. According to the authors, the taxon is unique in terms of its large size, pointed "anterior end of outer lip" and the presence of a "prominent ridge around siphonal fascicole". The shell shape and colour clearly agrees with that of *A. mirandus* Bavay et Dautzenberg, 1912, described from a subadult specimen. The shells of *A. heinrichhuberi* are indeed very large (58.3–63.5 mm), whereas the lectotype of *A. mirandus* is 48.5 mm. However, this size difference is insufficient for species distinction. Therefore, *A. heinrichhuberi* is a junior synonym of *A. mirandus*.

The type localities of both species are situated within the same province (Lâm Đồng), approximately 110 km from each other.

Amphidromus mouhoti (L. Pfeiffer, 1861)

Bulimus mouhoti L. PFEIFFER 1861: 194.
Amphidromus setzeri THACH 2015a: 56, figs 1–7. **new synonym**
Amphidromus renkeri THACH 2018b: 33, plate 1, figs 1–3. **new synonym**
Amphidromus mouhoti – SUTCHARIT et al. 2015: 82, fig. 11E.

Material examined. 2019/10. Lâm Đồng Province, Bảo Lộc, College of Economics & Technology, park (850 m), 11°32'39.2"N, 107°48'05.0"E, leg. HUNYADI & OTANI, 04.02.2019, coll. HA.

Remarks. *A. setzeri* Thach, 2015 and *A. renkeri* Thach, 2018 agree with *A. mouhoti* (see: SUTCHARIT et al. 2015) in shell shape, the greenish-yellowish, finely striped shell, the slight band below the suture, and the light pinkish columella. Therefore the two former species are here considered as synonyms of *A. mouhoti*. All species are known from southern Vietnam.

Amphidromus palaceus (Mousson, 1849)

Bulimus palaceus – MOUSSON 1849a: 266 (nomen nudum)
Bulimus palaceus MOUSSON 1849b: 28, 108, plate 3, fig. 1.
Amphidromus palaceus – LAIDLAW & SOLEM 1961: 557, fig. 22.
Amphidromus andytani Thach et Abbas in THACH 2017a: 36, figs 460–461, 463–467. **new synonym**

Remarks. The large, thick walled, yellow shell is characteristic of *A. palaceus*, which is also known from Java, so we consider *A. andytani* Thach et Abbas, 2017 a junior synonym.

Amphidromus (*Syndromus*) *reflexilabris* Schepman, 1892

Amphidromus reflexilabris SCHEPMAN 1892: 152–153.
Amphidromus (*Syndromus*) *reflexilabris* – LAIDLAW & SOLEM 1961: 570, 653, fig. 26.
Amphidromus beschaueri THACH 2018a: 47, figs 622–627. **new synonym**
Amphidromus calvinabbasi THACH 2017d: 41, figs 1–8. **new synonym**
Amphidromus (*Amphidromus*) *chrisabbasi* THACH 2017e: 206, figs 1–8. **new synonym**
Amphidromus juniorabbasi THACH 2018a: 55, figs 699–704. **new synonym**
Amphidromus lucsegersi THACH & ABBAS 2017a: 28, figs 1–10. **new synonym**
Amphidromus marieabbasae THACH 2017a: 42, figs 435–441. **new synonym**
Amphidromus pamabbasae THACH 2017f: 34, figs 1–4. **new synonym**

Amphidromus petuchi THACH 2018a: 60, figs 759–765. **new synonym**

Amphidromus stevehubrechti THACH & ABBAS 2017b: 119, figs 1–10. **new synonym**

Remarks. SCHEPMAN (1892) mentioned in the original description of *A. reflexilabris*, that "this species varies very much in size and colour, no two specimens being alike...". HANIEL (1921) extensively studied the radula, genital and shell variability of *Amphidromus* from West Timor. Apparently the *Amphidromus* taxa of West Timor are among the most variable of land snails in terms of shell morphology and colour. The synonymised nine *Amphidromus* taxa described by Thach and by Thach & Abbas can be easily placed in the morphological continuum presented by HANIEL (1921) as follows: *A. beschaueri* Thach, 2018 (HANIEL 1921: fig. 17), *A. calvinabbasi* Thach, 2017 (HANIEL 1921: table 1, figs 1–4 in the lower row), *A. chrisabbasi* Thach, 2017 (HANIEL 1921: plate 2, figs 15–16), *A. juniorabbasi* Thach, 2018 (HANIEL 1921: plate 1, figs 3–4 in the upper row), *A. lucsegersi* Thach et Abbas, 2017 (HANIEL 1921: plate 2, figs 22–28), *A. marieabbasae* Thach, 2017 (HANIEL 1921: plate 3, figs 1–7, plate 5, figs 10–13), *A. pamabbasae* Thach, 2017 (HANIEL 1921: plate 1, figs 1–4 in the lower row), *A. petuchi* Thach, 2018 (HANIEL 1921: plate 1, figs 1–4 in the lower row), *A. stevehubrechti* Thach et Abbas, 2017 (HANIEL 1921: plate 1, fig. 26, plate 2, figs 22–28). Consequently, we consider all of these taxa are colour forms (synonyms) of *A.* (*S.*) *reflexilabris*.

Amphidromus (*Syndromus*) *rhodostylus* Möllendorff 1901

Amphidromus rhodostylus MÖLLENDORFF 1901: 47, 48 (with the following colour variations: var. *simplex*, *roseolineata*, *nigrolineata*, *ignea*, *rhabdota*, *bipartita*, *subconfluens*)

Amphidromus rhodostylus – ZILCH 1953: 133, plate 22, figs 12–18.

Amphidromus rhodostylus – SCHILEYKO 2011: 51.

Amphidromus abbotthuberorum THACH 2017a: 35, 638–639, 641–646. **new synonym**

Amphidromus anthonyabbotti Thach et Huber in THACH 2017a: 37, figs 625–629. **new synonym**

Amphidromus baoi THACH 2017a: 38, figs 470–474. **new synonym**

Amphidromus hongdaoae THACH 2017a: 40, figs 673–678. **new synonym**

Remarks. The four species mentioned here (*A. abbotthuberorum* Thach, 2017, *A. anthonyabbotti* Thach et Huber, 2017, *A. baoi* Thach, 2017 and *A. hongdaoae* Thach, 2017) fit into the morphological continuum known in *A. rhodostylus* (see: ZILCH 1953). Therefore, we consider them synonyms of that species.

Amphidromus roseolabiatus Fulton, 1896

Amphidromus roseolabiatus FULTON 1896: 89, plate 6, fig. 8.

Amphidromus roseolabiatus – SUTCHARIT et al. 2015: 86, figs 13J–K.

Amphidromus phuonglinhae THACH 2017a: 45, figs 581–584.

Amphidromus koonpoi Thach et Huber in THACH 2018a: 56, figs 766–772. **new synonym**

Amphidromus phuonglinhae vinhensis Thach et Huber in THACH 2018a: 60, figs 812–815. **new synonym**

Amphidromus severnsi anhi THACH 2018a: 62, figs 816–823.

Amphidromus arlingi THACH 2017f: 34, figs 11–13. **new synonym**

Amphidromus arlingi daklakensis THACH 2017f: 36, figs 6–8. **new synonym**

Amphidromus johnabbasi THACH 2017b: 35, figs 1–4. **new synonym**

Amphidromus roseolabiatus – INKHAVILAY et al. 2019: 94, figs 45D–F, 58A. (considered *Amphidromus phuonglinhae* as a junior synonym)

Amphidromus severnsi improvidus PÁLL-GERGELY 2019: 75 (nom. nov. pro *Amphidromus severnsi anhi* Thach, 2018) **new synonym**

Remarks. *A. phuonglinhae* Thach, 2017, *A. phuonglinhae vinhensis* Thach et Huber, 2018, *A. severnsi improvidus* Páll-Gergely, 2019 [replacement name for *A. severnsi anhi* Thach, 2018], *A. arlingi* Thach, 2017, *A. arlingi daklakensis* Thach, 2017, and *A. johnabbasi* Thach, 2017 fall well within the morphological variability of *A. roseolabiatus* (see: SUTCHARIT et al. 2015). The corpulent shell, white and/or reddish line along the suture, and the yellow-greenish stipes are characteristic of *A. roseolabiatus*, and therefore, we treat them as synonyms of that species.

A. koonpoi Thach et Huber, 2018 (see: note on multiple original spellings in PÁLL-GERGELY 2019) is slightly more slender than typical *A. roseolabiatus*, which is not sufficient for species-level distinction from *A. roseolabiatus*, which is a common species in central Laos, near Takhek (INKHAVILAY et al. 2019). The lighter colour of *A. koonpoi* is a result of weathered condition. Thus, *A. koonpoi* is considered here to be a junior synonym of *A. roseolabiatus*.

Amphidromus schomburgki (L. Pfeiffer, 1860)

Bulimus schomburgki L. PFEIFFER 1860: 137, plate 51, fig. 9.

Amphidromus schomburgki – SUTCHARIT & PANHA 2006: 23, figs 2, 4J–L, 16A–C, 17A–E.

Amphidromus friedae Thach et Huber in THACH 2016a: 65, figs 41, 350–354. **new synonym**

Remarks. The holotype of *A. friedae* is a bleached shell of *A. schomburgki*, which is characterised by the pinkish or purplish ground colour and dark pur-

ple lip. *A. schomburgki* is known from Ko Kut island (Thailand) (SUTCHARIT & PANHA 2006), close to the type locality (Phú Quốc Island in Vietnam) of *A. friedae*. Therefore, we treat that species as a junior synonym of *A. schomburgki*.

Amphidromus smithii Fulton, 1896

Amphidromus smithii FULTON 1896: 88, 89, plate 7, figs 12, 12a.
Amphidromus smithii – SUTCHARIT et al. 2015: 91, figs 14I–J.
Amphidromus tedbaeri THACH 2017b: 37, figs 18–20. **new synonym**
Amphidromus baerorum THACH 2017c: 297, figs 6–9. **new synonym**
Amphidromus christabaerae THACH 2017c: 296, figs 1–4. **new synonym**
Amphidromus noriokowasoei THACH & HUBER 2017: 123, figs 1–8. **new synonym**
Amphidromus eboricolor THACH 2018a: 51, figs 795–798. **new synonym**
Amphidromus davidmonsecouri THACH 2018a: 50, figs 803–807. **new synonym**
Amphidromus gittenbergeri Thach et Huber in THACH 2018a: 53, figs 670–675. **new synonym**
Amphidromus noriokowasoei – THACH 2018a: figs 810–811.
Amphidromus semicinereus THACH 2018a: 62, figs 603–606. **new synonym**
Amphidromus steveni THACH 2017b: 36, figs 11–14. **new synonym**

Remarks. *A. eboricolor* Thach, 2018 and *A. gittenbergeri* Thach et Huber, 2018 are virtually identical to each other and the paralectotype of *A. smithii* (see: SUTCHARIT et al. 2015: fig. 14J, NHMUK 1896.6.13.38) and we allocate them as synonyms of *A. smithii*. *A. baerorum* Thach, 2017, *A. christabaerae* Thach, 2017, *A. davidmonsecouri* Thach, 2018, *A. noriokowasoei* Thach et Huber, 2017, *A. semicinereus* Thach, 2018, *A. tedbaeri* Thach, 2017 and *A. steveni* Thach, 2017 are best interpreted as colour variants of *A. smithii* and are assigned as synonyms.

Amphidromus suspectus var. *albolabiatus* Fulton, 1896

Amphidromus suspectus var. *albolabiatus* FULTON 1896: 79, plate 6, fig. 9.
Amphidromus chrisabbasi roberti THACH 2018a: 49, figs 638–644. **new synonym**

Remarks. *A. chrisabbasi roberti* Thach, 2018 is identical to *A.* (*Syndromus*) *suspectus* var. *albolabiata* Fulton, 1896 (see: SUTCHARIT et al. 2015: fig. 3D) and we designate it a synonym.

Amphidromus thanhhoaensis Thach et Huber, 2016

Amphidromus thanhhoaensis Thach et Huber in THACH 2016: 69, figs 35, 325–328.
Amphidromus (*Syndromus*) *xiengkhaungensis* Inkhavilay et Panha in INKHAVILAY et al. 2017: 35, figs 1, 13S–T. **new synonym**

Remarks. *A. thanhhoaensis* appears to be a valid species and has priority over *A. xiengkhaungensis* Inkhavilay et Panha, 2017 which is relegated as a synonym.

Amphidromus ventrosulus Möllendorff, 1900

Amphidromus smithi subsp. *ventrosulus* MÖLLENDORFF 1900a: 133.
Amphidromus smithi ventrosulus – ZILCH 1953: 133, plate 23, fig. 19.
Amphidromus ventrosulus – LAIDLAW & SOLEM 1961: 668.
Amphidromus ventrosulus – SCHILEYKO 2011: 51.
Amphidromus cargilei Thach et Huber in THACH 2018a: 48, figs 630–634. **new synonym**
Amphidromus fraussenae Thach et Huber in THACH 2017a: 38, figs 525–530. **new synonym**
Amphidromus hassi Thach et Huber in THACH 2018a: 54, figs 687–693. **new synonym**
Amphidromus hassi ngoanmucensis Thach et Huber in THACH 2018a: 54, figs 749–755. **new synonym**
Amphidromus salzmanni Thach et Huber in THACH 2017a: 45, figs 537–542. **new synonym**

Remarks. These taxa (*A. cargilei* Thach et Huber, 2018, *A. fraussenae* Thach et Huber, 2017, *A. hassi* Thach et Huber, 2018, *A. hassi ngoanmucensis* Thach et Huber, 2018, *A. salzmanni* Thach et Huber, 2017), all described from central and southern Vietnam, agree with each other with respect to shell shape and the uniformly coloured shell (or the apical whorls have a slightly different colour than the body whorl) with a slender sutural band, and some darker colouration on the callus and/or on the peristome and should be classified within the same species. They also largely match *A. ventrosulus*, and are therefore handled as synonyms here. Moreover, *A. hassi ngoanmucensis* nearly matches the paralectotype of *A. ventrosulus* in all important characters (see: SUTCHARIT et al. 2015).

Genus *Camaena* Albers, 1850

Helix (*Camaena*) ALBERS 1850: 85.

Camaena choboensis (Mabille, 1889)

Helix choboensis MABILLE 1889: 7.
Camaena choboensis – SCHILEYKO 2011: 41 (see: other synonyms of this species there).
Camaena diepae THACH 2017a: 50, figs 717–720. **new synonym**

Types examined. Tonkin, MNHN-IM-2000-1908 (2 syntypes of *choboensis*).
Remarks. *C. diepae* Thach, 2017 is identical to *H. choboensis*, therefore, we assign it as a junior synonym.

Camaena duporti (Bavay et Dautzenberg, 1909)

Helix (*Camaena*) *duporti* Bavay & Dautzenberg 1909a: 234.
Camaena duporti – Schileyko 2011: 42.
Camaena lacthuyensis Thach 2016a: 71, figs 47, 399. **new synonym**

Types examined. Phu-Ly, coll. Demange, MNHN-IM-2000-2033 (syntype of *duporti*); Phu-Ly, coll. Demange, MNHN-IM-2000-2065 (syntype of *duporti* var. *palidior*).
Remarks. *C. lacthuyensis* Thach, 2016 agrees with *C. duporti* in shell shape and size, and although the latter has several brownish spiral bands, both agree in the presence of a white band just below the middle line of the body whorl. We interpret the slight colour pattern differences as intraspecific variability, and handle *C. lacthuyensis* as a junior synonym of *C. duporti*.

Camaena gabriellae (Dautzenberg et d'Hamonville, 1887)

Helix gabriellae Dautzenberg & d'Hamonville 1887: 216, plate 8, fig. 2.
Camaena gabriellae – Schileyko 2011: 42.
Camaena binhgiaensis Thach 2016a: 70, figs 46, 397–401. **new synonym**
Camaena anhi Thach 2017a: 49, figs 713–715. **new synonym**

Types examined. Tonkin, Than-Moi, MNHN-IM-2000-1896 (syntype of *gabriellae*).
Remarks. *C. anhi* Thach, 2017 is identical to *C. gabriellae*, therefore we designate it a junior synonym of the latter. *Camaena binhgiaensis* Thach, 2016 differs from typical *C. gabriellae* only by the more strongly pronounced reddish spiral bands, which we believe to be insufficient for species-level distinction. Therefore, it is also regarded as a junior synonym of *C. gabriellae*.

Camaena longsonensis (Morlet, 1891)

Helix longsonensis Morlet 1891: 26.
Camaena longsonensis – Schileyko 2011: 43.
Camaena leeana Thach 2017a: 52, figs 693–696. **new synonym**

Types examined: MNHN-IM-2000-1928 (syntype of *longsonensis*).
Remarks. *C. leeana* Thach, 2017 was compared with *C. longsonensis*, although all discussed differences (shell size, strength of keel, and height of umbilical area) appear to represent intraspecific variability so we allocate *C. leeana* as a junior synonym of *C. longsonensis*.

Camaena marmorivaga (Mabille, 1889)

Helix marmorivaga Mabille 1889: 8.
Camaena duyconi Thach et Huber in Thach 2017a: 51, figs 701–702. **new synonym**

Types examined. Tonkin, leg. Balansa 1889, MNHN-IM-2000-1936 (syntype of *marmorivaga*).
Remarks. *C. duyconi* Thach et Huber, 2017 is identical with *H. marmorivaga*, therefore we designate the former as a junior synonym of the latter.

Camaena pachychila Pilsbry, 1893

Camaena pachychila Pilsbry 1893 (1893–1895): 265, plate 52, figs 50–52.
Camaena suprafusca Möllendorff 1898: 71. **new synonym**
Camaena (*Camaena*) *suprafusca* – Zilch 1964: 245, plate 6, fig. 4.
Camaena franzhuberi Thach 2018a: 66, figs 873–876. **new synonym**
Camaena franzhuberi laosianus Thach 2018a: 66, figs 878–881. **new synonym**
Camaena (*Camaena*) *suprafusca* – Inkhavilay et al. 2019: 97, figs 47E, 58C.

Types examined. Annam, NHMUK 1893.2.26.2.3 (holotype + paratype of *pachychilus*).
Additional material examined. 2019/15. Khánh Hòa Province, Khánh Vĩnh, Sơn Thái, Trạm kiểm lâm Hòn Giao, forest behind the Nat. Park Headquarter (1,630 m) 12°11'09.4"N, 108°42'51.8"E, leg. Hunyadi & Otani, 06.02.2019, coll. HA; 2019/16. Khánh Hòa Province, Khánh Vĩnh, Khánh Phú, Thác Yang Bay, (90 m), 12°11'27.1"N, 108°54'37.0"E, leg. Hunyadi & Otani, 07.02.2019, coll. HA; 2019/33. Quảng Nam Province, Nam Giang, Thạnh Mỹ 9 km – A Sơ, Hồ Chí Minh (QL14) Highway, 15°47'18.0"N, 107°46'33.4"E, leg. Hunyadi, 16.02.2019, coll. HA.
Remarks. *C. franzhuberi* Thach, 2018, *C. franzhuberi laosianus* Thach, 2018 and *C. suprafusca* Möllendorff, 1898 do not differ from *C. pachychila* in important shell characters such as shell and aperture shape, and sculpture, therefore, we consider the three taxa above as junior synonyms of *C. pachychila*.

Genus *Chloritis* H. Beck, 1837

Helix (*Chloritis*) Beck 1837: 29.

Chloritis huberi Thach, 2016

Fig. 17

Chloritis huberi Thach 2016a: 72, figs 49, 407–410.
Chloritis huberi – Inkhavilay et al. 2019: 150, fig. 60B.

Type examined. MNHN-IM-2014-6068 (paratype, Fig. 17).

Fig. 17. Shells of paratype of *Chloritis huberi* Thach, 2016 (MNHN-IM-2014-6068). Photos: M. CABALLER

Remarks. The types are juvenile specimens not suitable for taxonomic comparison with possibly similar species known from adult individuals. Thus, this species is considered a taxon inquirendum.

Chloritis khammouanensis Inkhavilay et Panha, 2019

Megalacron huberi THACH 2017a: 53, figs 741–743.

Chloritis khammouanensis Inkhavilay et Panha in INKHAVILAY et al. 2019: 100 (non *Chloritis huberi* Thach, 2016, nomen novum pro *Megalacron huberi* Thach, 2017a)

New material examined. 6L07: South-Central Laos, Khammouan Province, ca. 9 km NE of Thakhek (Muang Khammouan), on and under rocks in dry secondary forest under NW exposed cliff, 17°26'45.4"N, 104°52'56.2"E, alt. 190 m a.s.l., leg. A. ABDOU & I. V. MURATOV, 27.11.2007, MNHN-IM-IM-2012-27068/33 adult shells (some broken), 17 juvenile shells; 5L07: South-Central Laos, Khammouan Province, ca. 22.5 km ENE of Thakhek (Muang Khammouan), ca. 19.5 km WNW of Mahaxai, under rocks in dry secondary forest, 17°26'43.2"N, 105°01'11.4"E, alt. 181 m a.s.l., leg. A. ABDOU & I. V. MURATOV, 27.11.2007, MNHN-IM 2012-27069/7 intact, 2 broken shells; 14L07: South-Central Laos, Khammouan Province, ca. 34 km WNW of Thakhek (Muang Khammouan), ca. 9 km N of Ban Namdik, on and under rocks in dry secondary forest with some large trees under W exposed cliff and in the ravine, leg. A. ABDOU & I. V. MURATOV, 03.12.2007, MNHN-IM 2012-27070/3 shells, MNHN-IM 2012-27073/1 intact, 1 broken shell; 19L07: South-Central Laos, Khammouan Province, ca. 4 km W of Ban Phong Dong, less than 1 km S of road 12, across the Houei Ine River, on and under rocks in secondary forest with some large trees on N exposed slope, 17°34'20.9"N, 105°38'36.6"E, alt. 191 m a.s.l., leg. A. ABDOU & I. V. MURATOV, 06.12.2007, MNHN-IM 2012-27071/1 shell, MNHN-IM 2012-27076/1 shell; 17L07: South-Central Laos, Khammouan Province, ca. 12.5 km NE of Thakhek (Muang Khammouan), ca. 3 km SW of Ban Nase, on and under rocks in secondary forest with some large trees under SE exposed cliff, 17°29'50.5"N, 104°51'58.3"E, alt. 193 m a.s.l., leg. A. ABDOU & I. V. MURATOV, 04.12.2007, MNHN-IM 2012-27072/1 shell; 10L07: South-Central Laos, Khammouan Province, ca. 14 km N of Thakhek (Muang Khammouan), ca. 5.5 km ESE of Ban Nakok, on and under limestone rocks in dry secondary forest under N exposed cliff, 17°31'24.8"N, 104°48'14.9"E, alt. 133 m a.s.l., leg. A. ABDOU & I. V. MURATOV, 30.11.2007, MNHN-IM 2012-27074/2 intact, 2 broken shells; 8L07: South-Central Laos, Khammouan Province, ca. 16 km NE of Thakhek (Muang Khammouan), ca. 2.3 km ESE of Ban Nase, on and under limestone rocks in dry secondary forest with some large old trees in the isolated limestone outcrop, 17°30'49.7"N, 104°54'20.3"E, alt. 162 m a.s.l., leg. A. ABDOU & I. V. MURATOV, 28.11.2007, MNHN-IM 2012-27075/16

shell (some slightly broken); 25L07: South-Central Laos, Khammouan Province, ca. 10.5 km E of Thakhek (Muang Khammouan), on and under rocks, cave deposits, in secondary forest under entrance and in large cave on NE exposed steep slope, 17°24'20.4"N, 104°54'53.6"E, alt. 160 m a.s.l., leg. A. Abdou & I. V. Muratov, 09.12.2007, MNHN-IM 2012-27077/4 shells; 24L07: South-Central Laos, Khammouan Province, ca. 22 km NNW of Thakhek (Muang Khammouan), ca. 5.5 km NNE of Ban Nakok, ca. 7 km ESE of Ban Namdik, under rocks in secondary forest under SW exposed cliff, 17°35'13.4"N, 104°45'58.8"E, alt. 165 m a.s.l., leg. A. Abdou & I. V. Muratov, 08.12.2007, MNHN-IM 2012-27078/2 shells; 11L07: South-Central Laos, Khammouan Province, ca. 15 km ENE of Thakhek (Muang Khammouan), on and under limestone rocks in dry secondary forest in the upper entrance of the large cave on NW exposed steep slope, 17°26'39.0"N, 104°56'56.6"E, alt. 157 m a.s.l., leg. A. Abdou & I. V. Muratov, 01.12.2007, MNHN-IM 2012-27079/3 intact, 6 broken shells; 9L07: South-Central Laos, Khammouan Province, ca. 13.5 km N of Thakhek (Muang Khammouan), ca. 5 km SE of Ban Nakok, under limestone rocks in dry secondary forest under W exposed cliff, 17°30'59.0"N, 104°47'40.9"E, alt. 138 m a.s.l., leg. A. Abdou & I. V. Muratov, 30.11.2007, MNHN-IM 2012-27080/10 adult shells + 2 juvenile shells; 12L07: Central Laos, southern Khammouan Province, ca. 15.5 km ENE of Thakhek (Muang Khammouan), on and under limestone rocks in dry secondary forest under NW exposed cliff, 17°26'49.0"N, 104°57'12.0"E, alt. 155 m a.s.l., leg. A. Abdou & I. V. Muratov, 01.12.2007, MNHN-IM 2012-27081/4 shells; 4L07: South-Central Laos, Khammouan Province, ca. 35 km ENE of Thakhek (Muang Khammouan), ca. 7 km WNW of Mahaxai, on and under rocks in dry secondary forest under S exposed cliff, 17°26'44.2"N, 105°08'21.6"E, alt. 169 m a.s.l., leg. A. Abdou & I. V. Muratov, 25.11.2007, MNHN-IM 2012-27082/4 shells; 25L07, MNHN-IM 2012-27083/1 shell; 7L07: South-Central Laos, Khammouan Province, ca. 15 km NE of Thakhek (Muang Khammouan), ca. 12.5 km SE of Ban Nase, on and under rocks in dry secondary forest near large flooded cave under W exposed cliff, 17°30'32.8"N, 104°53'26.6"E, alt. 127 m a.s.l., leg. A. Abdou & I. V. Muratov, 28.11.2007, MNHN-IM-IM-2014-6129/36 adult shells and 18 juvenile shells.

Remarks. This species was described from Thakhek, Khammouan Province, Laos. Here we report it from several more localities in the same province.

Chloritis klausgrohi Thach et Huber, 2017

Chloritis klausgrohi Thach et Huber in Thach 2017a: 52, figs 729–730.

New material examined. Laos, Bam Na Ka Yak (Nhoum), ex coll. Saurin, MNHN-IM-2012-27090; 8L07: South-Central Laos, Khammouan Province, ca. 16 km NE of Thakhek (Muang Khammouan), ca. 2.3 km ESE of Ban Nase, on and under limestone rocks in dry secondary forest with some large old trees in the isolated limestone outcrop, 17°30'49.7"N, 104°54'20.3"E, alt. 162 m a.s.l., leg. A. Abdou & I. V. Muratov, 28.11.2007, MNHN-IM-2012-27067/8 intact shells, 3 juvenile shells, 2 broken adult shells; 13L07: South-Central Laos, Khammouan Province, ca. 11.5 km ENE of Thakhek (Muang Khammouan), on and under rocks in dry secondary forest in the ravine and on the pass, 17°26'23.8"N, 104°54'45.1"E, alt. 277 m a.s.l., leg. A. Abdou & I. V. Muratov, 01.12.2007, MNHN-IM-2012-27065/1 broken adult shell; 20L07: South-Central Laos, Khammouan Province, ca. 2 km SE of Ban Xieng Dao, less than 1 km S of road 12, across the Houei Ine River, on and under rocks in secondary forest on large limestone outcrops, 17°34'43.3"N, 105°32'58.8"E, alt. 200 m a.s.l., leg. A. Abdou & I. V. Muratov, 06.12.2007, MNHN-IM-2012-27064/1 intact shell, 3 adult, broken shells; 3L07: South-Central Laos, Khammouan Province, ca. 37 km ENE of Thakhek (Muang Khammouan), ca. 4.5 km WNW of Mahaxai, on and under rocks in dry secondary forest under E exposed cliff, 17°25'57.4"N, 105°09'40.1"E, alt. 150 m a.s.l., leg. A. Abdou & I. V. Muratov, 25.11.2007, MNHN-IM-2012-27088/10 broken shells/shell fragments; 4L07: South-Central Laos, Khammouan Province, ca. 35 km ENE of Thakhek (Muang Khammouan), ca. 7 km WNW of Mahaxai, on and under rocks in dry secondary forest under S exposed cliff, 17°26'44.2"N, 105°08'21.6"E, alt. 169 m a.s.l., leg. A. Abdou & I. V. Muratov, 25.11.2007, MNHN-IM-2012-27089/14 adult, mostly intact shells and 2 juvenile shells.

Remarks. The type locality given in the original description was listed as Laos without further information. Inkhavilay et al. (2019) reported the species from a locality in Khammouan Province. Here we report this species from several other localities in the same province.

Chloritis vinhensis Thach et Huber, 2018

Figs 18–25

Chloritis bifoveata vinhensis Thach et Huber in Thach 2018a: 68, figs 900–902.

Material examined. 2019/27. Đà Nẵng, Hòa Vang, Đính Bà Nà, Cầu Vàng NE ca. 400 m a.s.l. (1270 m a.s.l.), 15°59'45.8"N, 107°59'56.7"E, leg. Hunyadi, 13.02.2019, coll. HA. (Fig. 19)

Remarks on the anatomy. Traits of the reproductive anatomy (Fig. 20), such as the proportions of the male organs and the insertion of the retractor muscle, are similar to those of *C. bifoveata* (Benson, 1856) and *C. diplochone* Möllendorff, 1898 (see: Sutcharit & Panha 2010: figs 3A, 3E vs. Páll-Gergely &

Figs 18–19. Shells of *Chloritis vinhensis* Thach et Huber, 2018: 18 – holotype (MNHN-IM-2000-34047); 19 – anatomically examined specimen. Photos: M. CABALLER (18) and B. PÁLL-GERGELY (19). Scale bar 10 mm

NEUBERT 2019: fig. 16 therein, Figs 21–25 herein). The main difference was found to be the structure of the penial papilla. In *C. bifoveata* and *C. diplochone*, it was described as "irregularly shaped" (SUTCHARIT & PANHA 2010: figs 3B, 3F), and deeply grooved (PÁLL-GERGELY & NEUBERT 2019: fig. 17 therein, Figs 21-23 here), whereas in the *C. vinhensis* specimen we dissected, the longitudinal folds of the epiphallus merge to a stalk which ends in a flattened knob with a terminal opening. This structure is surrounded by a fleshy rim. Given the differently shaped penial verge and the absence of constriction on the body whorl, we elevate *C. bifoveata vinhensis* to species level.

Genus *Ganesella* Blanford, 1863

Helix (*Ganesella*) BLANFORD 1863: 86.

Remarks. The type species of *Ganesella* (*Helix capitium* Benson, 1848) is a senior synonym of *Darwininitium shiwalikianum* Budha et Mordan, 2012, which was anatomically described in its original description (SUTCHARIT et al. 2019b). Thus, *Ganesella* is defined in terms of reproductive anatomy.

The placement of *G. emma* follows SCHILEYKO (2011), although we note that the generic placement of most Southeast Asian camaenids needs verification by means of anatomy and/or molecular phylogeny.

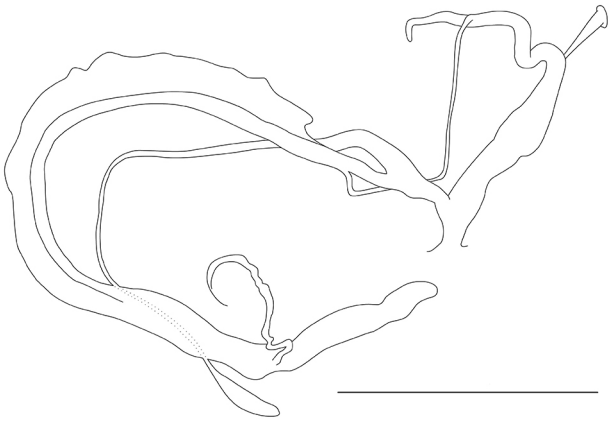
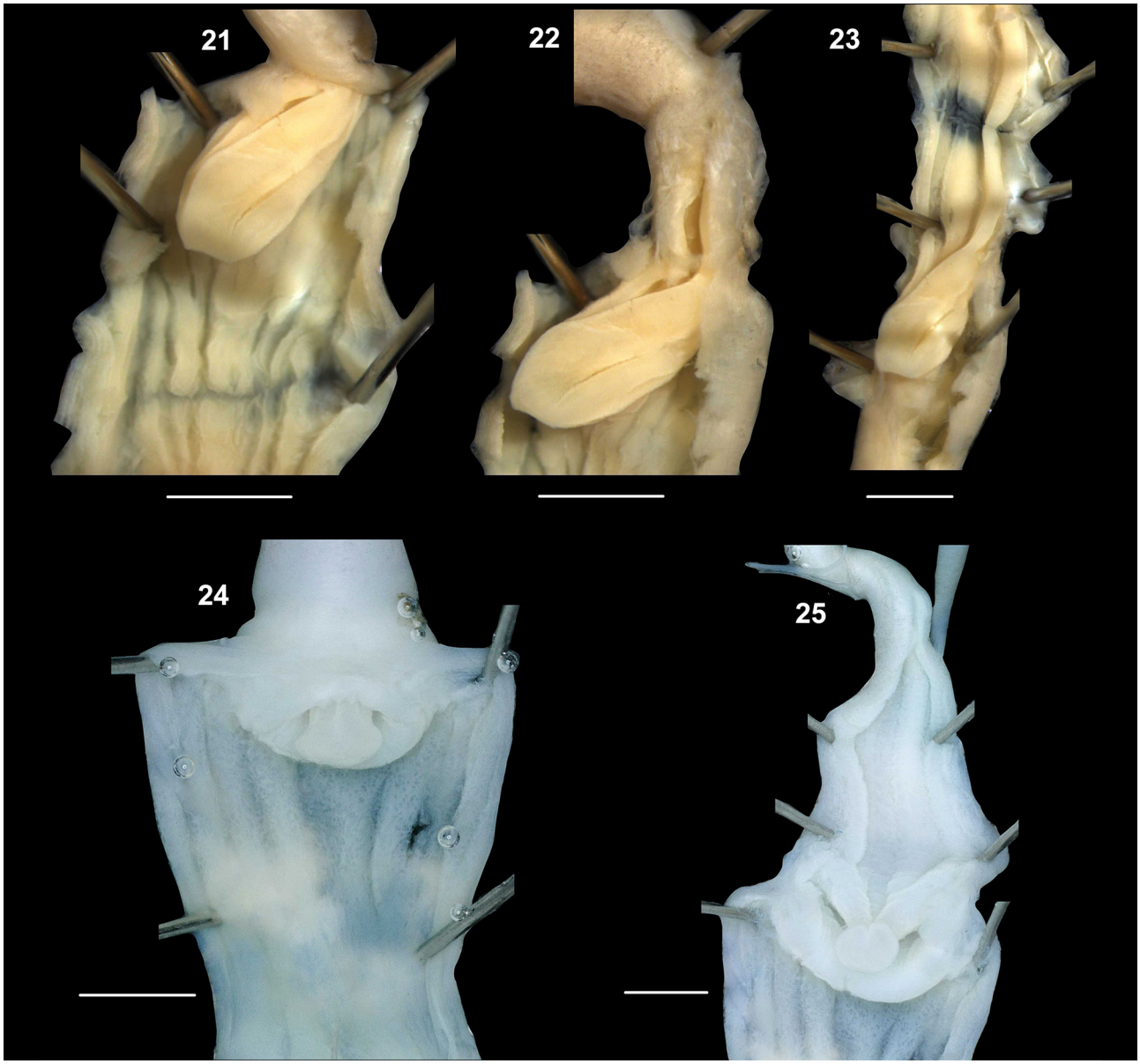


Fig. 20. Reproductive anatomy of *Chloritis vinhensis* Thach et Huber, 2018. Scale bar 10 mm



Figs 21–25. Penial papilla of *Chloritis bifoveata* (Benson, 1856) (21–23 – from PÁLL-GERGELY & NEUBERT 2019) and *Chloritis vinhensis* Thach et Huber, 2018 (24–25). Scale bars 1 mm. All photos: B. PÁLL-GERGELY

Ganesella emma (L. Pfeiffer, 1863)
Figs 26–29

Helix emma L. PFEIFFER 1863: 273.
Helix (*Ganesella?*) *lamyi* DAUTZENBERG & FISCHER 1905: 91, plate 3, figs 10–12. **new synonym**
Helix (*Plectotropis?*) *chaudroni* BAVAY & DAUTZENBERG 1909a: 242. **new synonym**
Helix (*Plectotropis?*) *chaudroni* – BAVAY & DAUTZENBERG 1909b: 193, plate VIII, figs 1–3.
Euplecta huberi THACH 2018a: 41, figs 551–553. **new synonym**

Types examined. Lao Mountains, Cambodia, coll. Mouhot, m.c. [Museum Cuming], NHMUK 20170016 (syntype of *Helix emma*, Fig. 26); Tonkin, Ile Krieu, baie d'Along, leg. BLAISE, MNHN-IM-2000-1920 (syntype of *Helix* (*Ganesella?*) *lamyi*, Fig. 27); Cam-Duong, Phong-Tho, Gia Phu, leg. MESSAGER, MNHN-IM-2000-32867 (syntype of *Helix* (*Plectopylis?*) *chaudroni*, Fig. 28); Bosavan, Laos, MNHN-IM-2000-34093 (holotype of *Euplecta huberi*, Fig. 29).

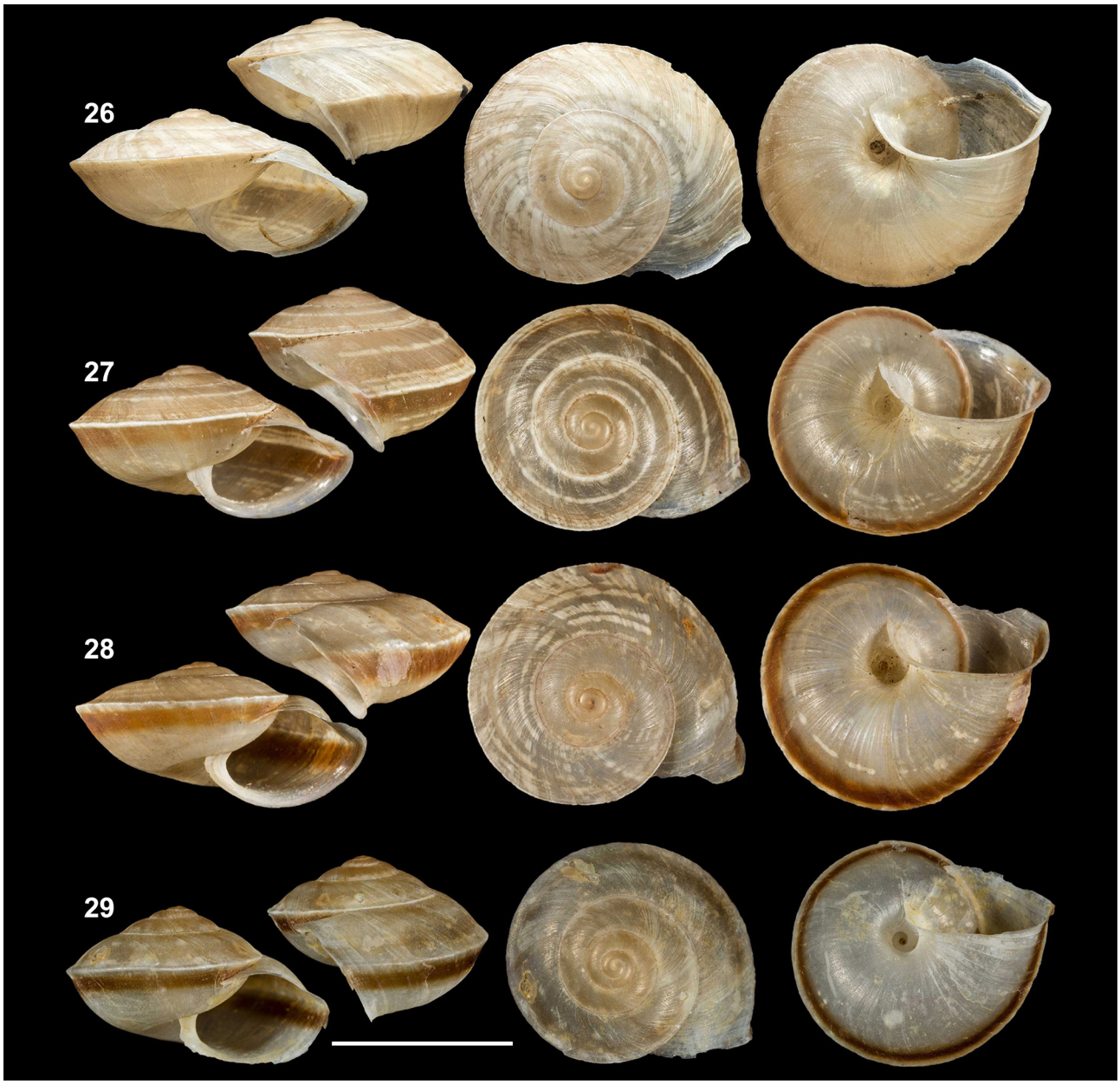
Remarks. The type specimens of *H. emma* L. Pfeiffer, 1863, *H.* (*Plectotropis?*) *chaudroni* Bavay et Dautzenberg, 1909, *H.* (*Ganesella?*) *lamyi* (Dautzenberg et Fischer 1905) and *E. huberi* Thach, 2018 differ only in minor shell characters, such as the height of the spire, and the arrangement of the white bands between the keel and the suture. Although these four taxa were placed in different genera, their differences can be explained by intraspecific variability only, because the overall shell shape, colouration and sculpture are identical. Therefore, we regard *H. chaudroni*,

H. lamyi and *Euplecta huberi* as junior synonyms of *Ganesella emma*.

Ganesella rhombostoma (L. Pfeiffer, 1861)

Bulimus rhombostomus L. Pfeiffer 1861: 194, 195
Pseudobuliminus harryleei Thach 2017a: 54, 55, figs 756–760.
Pseudobuliminus tuongvyae Thach 2017a: 56, figs 751–755.
Pseudobuliminus huberi Thach 2017a: 55, figs 759–760.
Ganesella rhombostoma Sutcharit et al. 2019b: 61, figs 1C, 3C–I, 5E–G, 7D–F, 8 (*harryleei*, *tuongvyae* and *huberi* are considered synonyms)

Remarks. Thach described 8 species of *Pseudobuliminus* Gredler, 1886 as follows: *P. franzhuberi* Thach, 2018, *P. harryleei* Thach, 2017, *P. huberi* Thach, 2017, *P. maestratii* Thach, 2017, Thach, 2017a, *P. obesa* Thach et Huber, 2018, *P. ovoideus* Thach et Huber, 2018, *P. thachi* Huber, 2018, *P. tuongvyae* Thach, 2017. *Pseudobuliminus harryleei*, *P. tuongvyae* and *P. huberi* were synonymised with *G. rhombostoma* by Sutcharit et al. (2019b) without explanation, although we agree with their decision. The genera *Pseudobuliminus* and *Giardia* Ancey, 1907 have not been revised, and the species are known to exhibit great variability in terms of shell size (Schileyko 2011), and probably



Figs 26–29. Shells of *Ganesella emma* (L. Pfeiffer, 1863: 26 – syntype of *Helix emma* L. Pfeiffer, 1863 (NHMUK 20170016); 27 – *Helix* (*Ganesella*?) *lamyi* Dautzenberg et Fischer, 1905 (MNHN-IM-2000-1920); 28 – *Helix* (*Plectotropis*?) *chaudroni* (MNHN-IM-2000-32867); 29 – holotype of *Euplecta huberi* Thach, 2018. Scale bar 10 mm. Photos: H. Taylor (26) and M. Caballer (27–29)

other characters. Therefore, most likely, the remaining taxa of Thach and Huber will be considered synonyms upon comprehensive revisions.

G. rhombostoma was classified in *Amphidromus* and *Giardia*, although SUTCHARIT et al. (2019b), based on anatomical evidence, transferred it to *Ganesella*.

Ganesella rostrella (L. Pfeiffer, 1863)

Helix rostrella L. PFEIFFER 1863: 270.
Euplecta hueae Thach et Huber in THACH 2018a: 42, figs 557–559. **new synonym**
Bradybaena (?) *rostrella* – SCHILEYKO 2011: 40.
Ganesella rostrella – INKHAVILAY et al. 2019: 104, figs 53B–C.

Types examined. Cambodia, Museum Cuming ex. Mouhot collection NHMUK 20130217 (3 syntypes of *Helix rostrella*).

Remarks. *E. hueae* Thach et Huber, 2018 was described as a member of the family Ariophantidae. However, it is nearly identical to typical *G. rostrella*, although the spire of typical specimens is slightly more elevated. This difference should not be used as a distinguishing character at the species level. We herein consider *E. hueae* a junior synonym of *G. rostrella*.

Genus *Globotrochus* Haas, 1935

Globotrochus HAAS 1935: 47.
Globotrochus – SUTCHARIT et al. 2019b: 66.

Globotrochus onestera (Mabille, 1887)

Helix onestera MABILLE 1887: 3.
Diastole simonei THACH 2017a: 34, figs 418–420.
Globotrochus onestera – SUTCHARIT et al. 2019b: 67, figs 1D, 4E–G, 6, 7G–I, 8 (considered *Diastole simonei* as a junior synonym).

Remarks. In the original description, *D. simonei* Thach, 2017 was only compared to another *Diastole* species, "*Diastole rectangular* (L. Pfeiffer, 1846)" (probably *Mendana rectangula* (L. Pfeiffer, 1846)). However, *Diastole* Gude, 1913 is known only from islands of the Pacific Ocean (Society, Cook, Samoa, Futuna, Fiji, Tonga, Tuamotu, Norfolk and Austral Islands), and belongs to the family Euconulidae H. B. Baker, 1928 (SCHILEYKO 2002). In contrast, "*D. simonei*" is a camaenid species, and its type locality (northern Vietnam) makes the generic assignment of THACH (2017a) biogeographically inexplicable. We agree with SUTCHARIT et al. (2019b), and consider *D. simonei* as a junior synonym of *H. onestera*.

Genus *Trichochloritis* Pilsbry, 1891

Trichochloritis PILSBRY 1891: 267.
Trichochloritis – PÁLL-GERGELY & NEUBERT 2019: 141.

Trichochloritis fouresi Morlet, 1886

Figs 30–32

Helix fouresi MORLET 1886: 74.
Euplecta herosae Thach et Huber in THACH 2018a: 42, figs 554–556. **new synonym**
Bouchetcamaena huberi THACH 2018a: 65, figs 863–865. **new synonym**
Chloritis fouresi – INKHAVILAY et al. 2019: 100, figs 50C–D.

Types examined. Plateau de Stang-Trang, Cambodia, leg. PAVIE, MNHN-IM-2000-1888 (syntype of *fouresi*, Fig. 30); South of Pakse, Champasak Province, South Laos, MNHN-IM-2000-34039 (holotype of *Bouchetcamaena huberi*, Fig. 31); Boloven Plateau, South Laos, MNHN-IM-2000-34040 (holotype of *Euplecta herosae*, Fig. 32); Siam, m.c. [Museum Cuming], NHMUK 20160333 (3 syntypes of *caseus*); Kamchay, Cambodia, leg. MORLET, MNHN-IM-2000-1953 (holotype of *norodomiana*); Fuyen-Moth [Phú Yen Province, S Vietnam, 14°01'N, 108°23'E, see: SCHILEYKO 2011], leg. CROSSE, MNHN-IM-2000-31779 (syntype of *tanquereyi*); Same data, MNHN-IM-2000-31780 (syntype of *tanquereyi* var. *intermedia*); Same data, MNHN-IM-2000-31781 (syntype of *tanquereyi* var. *minima*); W-Siam, Kanburi, coll. O. Möllendorff ex coll. Fruhstorfer, SMF 8598 (lectotype of *siamensis*); Same data, SMF 8602/2 (paralectotypes of *siamensis*); Siam, Tschaya, coll. O. Möllendorff ex coll. Roebelen, SMF 8526/1 (lectotype of *platytropis*); Same data, SMF 8527/1 (paralectotype of *platytropis*); Golf von Siam, Insel Samui, coll. O. Möllendorff ex coll. Roebelen, SMF 8524/1 (lectotype of *platytropis* var. *samuiana*); Same data, SMF 8525/1 (paralectotype of *platytropis* var. *samuiana*).

Remarks. In the original description, *B. huberi* Thach, 2018 was compared to two species, *Camaena vanbuensis* Smith, 1896 and *Eurytrachia mucosa* (Cox, 1868). Although the shell shape of *C. vanbuensis* is superficially similar to that of *B. huberi*, it is 68 mm in diameter (SCHILEYKO 2011, INKHAVILAY et al. 2019) compared to 18.5 mm in diameter for *B. huberi*, making it highly unlikely that they are closely related. *E. mucosa* lives in eastern Australia (STANISIC et al. 2010), a biogeographic region that has virtually no taxa in common with that of southern Laos, where the type locality of *B. huberi* is located. In contrast, *B. huberi* was not compared to a number of taxa with similar shell morphology described from Thailand, Cambodia, and southern Vietnam (e.g. *Helix caseus* L. Pfeiffer, 1860, *H. norodomiana* Morlet, 1883, *Chloritis siamensis* Möllendorff, 1902, *Helix tanquereyi* Crosse et Fischer, 1863 and its varieties, and *Chloritis platytropis* Möllendorff, 1894).

Besides slight differences in shell height, which can be best explained by intraspecific variability, there are no essential differences between the type specimens of *Helix fouresi* Morlet, 1886, *E. herosae* Thach et

Figs 30–32. Shells of *Trichochloritis fouresi* Morlet, 1886: 30 – syntype of *Helix fouresi* Morlet, 1886 (MNHN-IM-2000-1888); 31 – holotype of *Bouchetcamaena huberi* Thach, 2018 (MNHN-IM-2000-34039); 32 – holotype of *Euplecta herosae* Thach et Huber, 2018 (MNHN-IM-2000-34040). Scale bar 10 mm. Photos: M. CABALLER

Huber, 2018 and *B. huberi* Thach, 2018, therefore the latter two are synonyms of the former.

The validity of the genus *Bouchetcamaena* can be verified when more material becomes available.

Trichochloritis huberi (Thach, 2018) new combination

Lamprellia huberi THACH 2018a: 70, figs 971–973.

Remarks. This species was originally assigned to the genus *Lamprellia* Stanisic, 2010 (type species: *Helix zebina* Brazier, 1878), which is endemic to eastern Australia, and was only compared with a *Lamprellia* species (*L. angulata* Stanisic, 2010). However, there are a number of similar species described from Cambodia, Vietnam, and Laos in more appropriate genera. This species is very similar to the type species of *Trichochloritis* (*Helix breviseta* L. Pfeiffer, 1862) in terms of general shell and aperture shape, but differs from it by the angled body whorl, which is rounded in *T. breviseta*. Therefore, it is transferred here to *Trichochloritis*.

Trichochloritis mussonena Páll-Gergely, 2020 nom. nov.

Mussonena huberi THACH 2018a: 70, figs 919–921.

Remarks. *Mussonena* Iredale, 1938 is distributed in eastern Australia, not Southeast Asia (SCHILEYKO 2003). This species is moved to *Trichochloritis* herein, and becomes a secondary homonym of *T. huberi* (Thach, 2018) (see: THACH 2018a: 70). Therefore, the replacement name, *T. mussonena*, referring to the original generic name, is proposed.

DISCUSSION

WHEELER (2014: 371) summarised the specific traits of a taxonomist as follows: "If the focus of your work is to make as many species of a clade known as possible, to carefully interpret and analyse the transformational history of as many of its homologous characters as possible, to study and master

all taxonomic literature on a group since 1753, to apply informative names, and to ultimately build a phylogenetic classification summarizing all that is known of a taxon, then you are unquestionably a taxonomist." Unfortunately, the authors discussed here have not followed these guidelines in their mostly non-peer-reviewed descriptions of more than three hundred species and subspecies over the last 5 years (2014–2019).

Ideally, the purpose to describe an unknown species or subspecies is to contribute to the knowledge of the biodiversity of our planet. However, these descriptions must be presented to the scientific community in a consistent and accepted manner, i.e. a peer-reviewed journals and books. Why do some authors choose not to adhere to the accepted formats, i.e. present new taxa in non-peer-reviewed publications, even when they have interest in biodiversity?

Time and effort are surely factors. Some authors simply do not want to take the time or apply the effort necessary to complete the peer-review process. They may also believe that review is unnecessary because no one knows more about the subject so why should it be reviewed? Also, some degree of fame and respect comes with the introduction of new taxa and this increases as the number of taxa described increases. This is a well-known phenomenon already described as nomenclatural mihilism (Dubois 2008) and "Mihi itch" (Evenhuis 2008). And, finally, some invertebrate groups such as molluscs, butterflies, beetles, corals, etc. are widely collected by enthusiasts worldwide. These are traded, bought, and sold and this has become a huge industry in many parts of the world. Specimens with attractive colours and colour patterns are particularly sought after and supply and demand forces values up (and profits). Value is also greatly determined by rarity. So, new taxa described, particularly those with attractive colour patterns and small distributions, drive interest and desire in enthusiasts to enhance their collections with species that no other collector possesses. For the seller, new names create more taxa to inventory and sell, even when the taxa represent nothing but intra-specific variation. Some authors retain or give type specimens to the collector instead of depositing them in recognised institutions. These specimens have much higher value than non-typical material if sold. Some collectors, but surely not all, that provide specimens to those that may describe them as new taxa are sometimes motivated by two purposes: 1) potential future financial gain, and 2) the naming of patronyms. The latter has certainly occurred.

For whatever reasons, Nguyen Ngoc Thach and his colleagues described over three hundred species over the last five years, mostly land snails from Southeast Asia, almost all without peer review. Our estimate is that ca. 30–40 species of their terrestrial taxa are valid (less than 15% of all of the newly described taxa!), although we are unable to judge in many cases with the general lack of generic revisions. Similar to the activity of the Australian "herpetologist" R. Hoser (Kaiser et al. 2013, Denzer et al. 2016) and some other pseudo-taxonomists (see e.g. Moore et al. 2014), the hundreds of taxon names introduced by these authors simply must be considered unacceptable and marked as taxonomic vandalism. Although the community of taxonomists rejects the concept of more bureaucracy over taxonomy (Garnett & Christidis 2017, Thomson et al. 2018), it seems inevitable to require peer-review for the description of new taxa and other taxonomic decisions to be acceptable as valid (e.g. Kaiser et al. 2013, Schutze et al. 2017).

ACKNOWLEDGEMENTS

We are grateful for Virginie Héros and Philippe Bouchet (MNHN), Jonathan Ablett (NHM), Sigrid Hof and Ronald Janssen (SMF) for granting access to their museum collections to Bram van der Bijl (RMNH) for lending us holotypes, to Miklós Szekeres and Owen Griffiths for providing important information, to M. Caballer (MNHN) for photographing type specimens (project E-RECOLNAT: ANR-11-INBS-0004) and to three reviewers for their comments on the manuscript. This study was supported by the MTA (Hungarian Academy of Sciences) Premium Post Doctorate Research Program for BPG.

REFERENCES

Abbott R. T. 1989. Compendium of landshells. A full color guide to more than 2,000 of the World's terrestrial shells. American Malacologists, Inc., Melbourne, Florida.

Albers J. C. 1850. Die Heliceen nach natürlicher Verwandtschaft systematisch geordnet. Enslin, Berlin.

Ancey C. F. 1884. Sur les divisions proposées dans le genre *Streptaxis*. Le Naturaliste 6(50): 399.

Ancey C. F. 1887. Description of new genera or subgenera of Helicidæ. The Conchologists' Exchange 1(9–10): 53–54, 1(12): 75–76; 2(3): 38–39.

Ancey C. F. 1897. On two new species of *Amphidromus*. The Nautilus 11: 62–63.

Ancey C. F. 1898. Notes malacologiques. A – Observation sur les mollusques terrestres et fluviatiles recueillies dans l'Indo-Chine et particulièrement au Laos par Henri Counillon. B – Description d'espèces nouvelle du centre

d'Afrique. C – Notes sur quelques coupes génériques ou sous-génériques de Mollusques. D – Description d'un mollusque méditerranéen nouveau. Bulletin du Musée d'Histoire Naturelle de Marseille Série II 1(1): 125–150.

ANCEY C. F. 1904. Notes critiques et synonymiques. Journal de Conchyliologie 52: 288–316.

ANCEY C. F. 1907. Observations sur les mollusques gastéropodes sénestres de l'epoque actuelle. Bulletin Scientifique de la France et de la Belgique 40: 187–205.

AZUMA M. 1980. Description of a new species of the genus *Awalycaeus* Kuroda, 1915, (Family Cyclophoridae) from Mt. Sarumasa, Shimane Pref., Japan. Venus (Japanese Journal of Malacology) 39: 139–141.

BAIRD W. 1850. Nomenclature of molluscous animals and shells in the collection of the British Museum. Part I. Cyclophoridae. Spottiswoodes and Shaw, New-Street-Square, London.

BAVAY A., DAUTZENBERG P. 1904. Description de coquilles nouvelles de l'Indo-Chine. (3e suite). Journal de Conchyliologie 51: 201–236. ["1903"]

BAVAY A., DAUTZENBERG P. 1909a. Molluscorum terrestrium Tonkinorum diagnoses. Journal de Conchyliologie 56: 229–251. ["1908"]

BAVAY A., DAUTZENBERG P. 1909b. Description de coquilles nouvelles de l'Indo-Chine. Journal de Conchyliologie 57: 81–105, 163–206, 279–288.

BAVAY A., DAUTZENBERG P. 1912. Description de coquilles nouvelles de l'Indo-Chine. Journal de Conchyliologie 60: 1–54.

BECK H. 1837. Index molluscorum praesentis aevi musei principis augustissimi Christiani Frederici. Hafniae, Copenhagen.

BENTHEM JUTTING W. S. S. VAN 1959. Catalogue of the non-marine Mollusca of Sumatra and of its satellite islands. Beaufortia 7: 41–191.

BENTHEM JUTTING W. S. S. VAN 1960. Some notes on land and freshwater Mollusca of Malaya. Basteria 24: 10–20.

BENSON W. H. 1834. Observations on a collection of land and freshwater shells formed in the Gangetic provinces of India. Proceedings of the Zoological Society of London 1834: 89–91.

BENSON W. H. 1848. Characters of seven new species of *Helix*, with amended descriptions of some species previously described, and notes on other requiring remark. Proceedings of the Zoological Society of London 16: 158–164.

BENSON W. H. 1860. On *Clostophis* and *Rhiostoma*, new Burmese genera of land-shells. The Annals and Magazine of Natural History, series 3, 5: 95–97.

BLANFORD W. T. 1863. On Indian species of land-shells belonging to the genera *Helix*, Linn., and *Nanina*, Gray. The Annals and Magazine of Natural History, series 3, 11: 80–86.

BLANFORD W. T. 1864. On the classification of the Cyclostomacea of Eastern Asia. The Annals and Magazine of Natural History, series 3, 13: 441–465.

BLANFORD W. T. 1872. Monograph of Himalayan, Assamese, Barmese and Cingalese Clausiliae. Journal of the Asiatic Society of Bengal 41: 199–206.

BOCK C. 1881. List of land and freshwater shells collected in Sumatra and Borneo, with descriptions of new species. Proceedings of the Zoological Society of London (1881): 628–635.

BUI T. C., DO V. N., NGO D. C., DO D. S. 2019. The land snail family Streptaxidae J. Gray, 1860 from Thua Thien Hue, Vietnam, with description of two new species (Gastropoda: Pulmonata). Ruthenica 29: 87–94.

BOUCHET P., ROCROI J. P., HAUSDORF B., KAIM A., KANO Y., NÜTZEL A., PARKHAEV P., SCHRÖDL M., STRONG E. E. 2017. Revised classification, nomenclator and typification of gastropod and monoplacophoran families. Malacologia 61: 1–526. https://doi.org/10.4002/040.061.0201

BRAZIER J. 1878. Descriptions of seven new species of terrestrial and marine shells from Australia. Proceedings of the Linnean Society of New South Wales 3: 77–81.

BUDHA P. B., MORDAN P. B., NAGGS F., BACKELJAU T. 2012. *Darwininitium* – a new fully pseudosigmurethrous orthurethran genus from Nepal (Gastropoda, Pulmonata, Cerastidae). ZooKeys 175: 19–26. https://doi.org/10.3897/zookeys.175.2755

COCKERELL T. D. A. 1912. The genera *Cryptogirasia* and *Cryptosoma*. The Nautilus 26: 70.

COX J. C. 1868. On some new species of Australian land shells. Proceedings of the Zoological Society of London 1867: 722–726.

CROSSE H., FISCHER P. 1863. Note sur la faune malacologique de Cochinchine, comprenant la description des espèces nouvelles ou peu connues. Journal de Conchyliologie 11: 343–379.

DAUTZENBERG P. 1887. Description d'espèces nouvelles de coquilles du Tonkin et observations dur quelques autres mollusques de la même région. Journal de Conchyliologie 35: 1–15.

DAUTZENBERG P., FISCHER H. 1905. Liste des mollusques récoltés par M. le Capitaine de Frégate Blaise au Tonkin et déscription d'espèces nouvelles. Journal de Conchyliologie 53: 85–234.

DAUTZENBERG P., FISCHER H. 1908. Liste des mollusques récoltés par M. Mansuy en Indo-Chine et description d'espèces nouvelles. II. Journal de Conchyliologie 56: 169–217.

DAUTZENBERG P., D'HAMONVILLE L. 1887. Description d'espèces nouvelles du Tonkin et observations sur quelques autres molluscque de la même région. Journal de Conchyliologie 35: 213–225.

DENZER W., MANTHEY U., WAGNER P., BÖHME W. 2016. A critical review of Hoser's writings on Draconinae, Amphibolurinae, *Laudakia* and Uromastycinae (Squamata: Agamidae). Bonn Zoological Bulletin 64: 117–138.

DO D. S., DO V. N. 2014. The landsnail family Subulinidae (Gastropoda: Pulmonata) from Son La, Vietnam, with description of two new species. Tap Chi Sinh Hoc 36: 451–459.

DUBOIS A. 2008. A partial but radical solution to the problem of nomenclatural taxonomic inflation and synonymy load. Biological Journal of the Linnean Society 93: 857–863. https://doi.org/10.1111/j.1095-8312.2007.00900.x

EGOROV R. V. 2009. The genus *Cyclotus* Guilding in Swainson, 1840: Systematics and nomenclature. Conchylia 40: 16–22.

EGOROV R. V. 2013. Treasure of Russian shells. Supplement 3. A review of the genera of the terrestrial pectinibranch molluscs (synopsis mainly based on published data). Part III. Littoriniformes: Liareidae, Pupinidae, Diplommatinidae, Alycaeidae, Cochlostomidae. Roman Egorov, Moscow.

EMBERTON K. C. 1995. Cryptic, genetically extremely divergent, polytypic, convergent, and polymorphic taxa in Madagascan *Tropidophora* (Gastropoda: Pomatiasidae). Biological Journal of the Linnean Society 55: 183–208. https://doi.org/10.1111/j.1095-8312.1995.tb01059.x

EVENHUIS N. L. 2008. The "Mihi itch" – a brief history. Zootaxa 1890: 59–68. https://doi.org/10.11646/zootaxa.1890.1.3

FÉRUSSAC A. E. J. P. F. D'AUDEBARD DE 1819–1832. Histoire naturelle générale et particulière des mollusques terrestres et fluviatiles tant des espèces que l'on trouve aujourd'hui vivantes, que des dépouilles fossiles de celles qui n'existent plus; classés d'après les caractères essentiels que présentent ces animaux et leurs coquilles. J.-B. Baillière, Paris.

FISCHER P., CROSSE H. 1872–1902. Etudes sur les Mollusques terrestres et fluviatiles du Mexique et du Guatemala. Mission scientifique au Mexique et dans l'Amérique Centrale. Recherches zoologiques, Partie 7. Imprimerie Nationale, Paris.

FISCHER-PIETTE E., BLANC C. P., BLANC F., SALVAT F. 1993. Gastéropodes terrestres prosobranches. Faune de Madagascar 80: 1–281.

FISCHER-PIETTE E., BLANC C. P., BLANC F., SALVAT F. 1994. Gastéropodes terrestres pulmonés (excl. Veronicellidae et g. *Elisolimax*). Faune de Madagascar 83: 1–551.

FORCART L. 1946. *Indoartemon* subgen. nov. for *Odontartemon* Kobelt, 1905 (non Pfeiffer, 1856); Streptaxidae. Journal of Conchology 22: 215.

FRUHSTORFER H. 1905. Ein neuer *Amphidromus*. Nachrichtsblatt der Deutschen Malakozoologischen Gesellschaft 37: 83–84.

FULTON H. 1896. A list of the species of *Amphidromus* Albers, with critical notes and descriptions of some hitherto undescribed species and varieties. The Annals and Magazine of Natural History, series 6, 17: 66–94.

GARNETT S. T., CHRISTIDIS L. 2017. Taxonomy anarchy hampers conservation. Nature 546: 25–27. https://doi.org/10.1038/546025a

GERET P. 1912. Description d'un nouvel *Amphidromus*. Journal de Conchyliologie 60: 55–56.

GODWIN-AUSTEN H. H. 1882–1920. Land and freshwater Mollusca of India, including South Arabia, Baluchistan, Afghanistan, Kashmir, Nepal, Burmah, Pegu, Tenasserim, Malay Peninsula, Ceylon, and other islands of the Indian Ocean. Supplementary to Messrs. Theobald and Hanley's Conchologia Indica. Taylor & Francis, London.

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. Zonitidae and Helicinidae. Proceedings of the Zoological Society of London 1891: 22–47.

GOULD A. A. 1856. Descriptions of shells. Proceedings of Boston Society of Natural History 6: 11–16.

GRAY J. E. 1825. A list and description of some species of shells not taken notice of by Lamarck. Annals of Philosophy New Series 9: 134–140, 407–415.

GRAY J. E. 1847. A list of genera of Recent Mollusca, their synonyms and types. Proceedings of the Zoological Society of London 15: 129–219.

GRAY J. E. 1855. Catalogue of Pulmonata or air-breathing Mollusca in the collection of the British Museum, Part I. Taylor & Francis, London.

GRAY J. E. 1860. On the arrangement of the land pulmoniferous Mollusca into families. The Annals and Magazine of Natural History, series 3, 6: 267–269.

GREDLER V. 1887. Zur Conchylien-Fauna von China. IX. Stück. Malakozoologische Blätter 9 (N. F.): 1–20. https://biodiversitylibrary.org/page/35483047

GREGO J., LUONG H. V., PHAM S. V., SZEKERES M. 2014. Vietnamese Clausiliidae (Gastropoda: Pulmonata): new taxa and novel distribution data. Journal of Conchology 41: 749–757.

GUDE G. K. 1911. Note on some preoccupied generic names and proposed new genera of the family Zonitidae. Proceedings of the Malacological Society of London 9: 269–273.

GUDE G. K. 1913. Definitions of further new genera of Zonitidae. Proceedings of the Malacological Society of London 10: 389–391.

GUDE G. K., WOODWARD B. B. 1921. On *Helicella*, Férussac. Proceedings of the Malacological Society of London 14: 174–190.

HAAS F. 1934. Neue Landschnecken des Senckenberg-Museums. Senckenbergiana 16: 94–98.

HAAS F. 1935. Kleine Bemerkungen, IV. Zoologischer Anzeiger 108: 45–47.

HABE T. 1965. Operculated land molluscs from South-East Asia. In: Nature and Life in Southeast Asia. 4. Fauna and Flora Research Society, Kyoto, Japan, pp. 111–128.

HANIEL C. B. 1921. Variationsstudie an timoresischen Amphidromusarten. Zeitschrift für inductive Abstammungs- und Verebungslehre 25: 1–88.

HAINES W. A. 1855. Descriptions of four new species of terrestrial shells from Siam. Annals of the Lyceum of Natural History of New York 6: 157–158.

HEMMEN J., HEMMEN C. 2001. Aktualisierte Liste der terrestrischen Gastropoden Thailands. Schriften zur Malakozoologie - aus dem Haus der Natur Cismar 18: 35–70.

HUBER F. 2015. *Amphidromus thachi*, a new species (Gastropoda: Camaenidae) from Vietnam. Gloria Maris 54: 29–31.

Hyman I. T., de la Iglesia Lamborena I., Köhler F. 2017. Molecular phylogenetics and systematic revision of the south-eastern Australian Helicarionidae (Gastropoda, Stylommatophora). Contributions to Zoology 86: 51–95. https://doi.org/10.1163/18759866-08601004

Inkhavilay K., Siriboon T., Sutcharit C., Rowson B., Panha S. 2016. The first revision of the carnivorous land snail family Streptaxidae in Laos, with description of three new species (Pulmonata, Stylommatophora, Streptaxidae). ZooKeys 589: 23–53. https://doi.org/10.3897/zookeys.589.7933

Inkhavilay K., Sutcharit C., Bantaowong U., Chanabun R., Siriwut W., Srisonchai R., Pholyotha A., Jirapatrasilp P., Panha S. 2019. Annotated checklist of the terrestrial molluscs from Laos (Mollusca, Gastropoda). ZooKeys 834: 1–166. https://doi.org/10.3897/zookeys.834.28800

Inkhavilay K., Sutcharit C., Panha S. 2017. Taxonomic review of the tree snail genus *Amphidromus* Albers, 1850 (Pulmonata: Camaenidae) in Laos, with the description of two new species. European Journal of Taxonomy 330: 1–40. https://doi.org/10.5852/ejt.2017.330

Iredale T. 1938. A basic list of the land Mollusca of Australia. Part III. The Australian Zoologist 9: 83–124.

Iredale T. 1941. Guide to the land shells of New South Wales. Part III. Australian Naturalist 11: 1–8.

Kaiser H., Crother B. L., Kelly C. M. R., Luiselli L., O'Shea M., Ota H., Passos P., Schleip W. D., Wüster W. 2013. Best practices: in the 21st century, taxonomic decisions in herpetology are acceptable only when supported by a body of evidence and published via peer-review. Herpetological Review 44: 8–23.

Kobelt W. 1899–1902. Die Familie Buliminidae. In: Küster H. C., Kobelt W. (eds). Systematisches Conchylien-Cabinet von Martini und Chemnitz (vol. 1, 13(2)). Bauer & Raspe, Nürnberg, pp. 397–1051.

Kobelt W. 1902. Das Tierreich. Eine Zusammenstellung und Kennzeichnung der rezenten Tierformen. In Verbindung mit der Deutschen Zoologischen Gesellschaft herausgegeben von der Königlich Preussischen Akademie der Wissenschaften zu Berlin. Mollusca: Cyclophoridae. R. Friedländer und Sohn, Berlin.

Kobelt W. 1905–1906. Die Raublungenschnecken (Agnatha). Abtheilung 2, Streptaxidae und Daudebardiidae. In: Martini F. H. W. von, Chemnitz J. H. (eds). Systematisches Conchylien-Cabinet, ed. 2. Bd. 1, Abt. 12B, Theil 2. Bauer & Raspe, Nürnberg, pp. 1-211 [pp. 1–96, pls 42–59 (1905); 97–211, pls 60–71 (1906)].

Köhler F., Criscione F., Burghardt I., Kessner V. 2016. The Enidae of Timor (Stylommatophora: Orthurethra). Molluscan Research 37: 8–16 (2017). https://doi.org/10.1080/13235818.2016.1200959

Kongim B., Sutcharit C., Naggs F., Panha S. 2013. Taxonomic revision of the elephant pupinid snail genus *Pollicaria* Gould, 1856 (Prosobranchia, Pupinidae). ZooKeys 287: 19–40. https://doi.org/10.3897/zookeys.287.4617

Laidlaw F. F. 1963. Notes on the genus *Dyakia*, with a list of species. Journal of Conchology 25: 137–151.

Laidlaw F. F., Solem A. 1961. The land snail genus *Amphidromus*. A synoptic catalogue. Fieldiana: Zoology 41: 503–677.

Lindholm W. A. 1924. A revised systematic list of the genera of the Clausiliidae, recent and fossil, with their subdivisions, synonymy, and types. Proceedings of the Malacological Society of London 16: 53–80.

Maassen W. J. M. 2001. A preliminary checklist of the non-marine molluscs of West-Malaysia: "a hand list". De Kreukel, Extra Editie 2001: 1–155.

Maassen W. J. M. 2006. Four new species of terrestrial gastropods from Tonkin, North Vietnam (Gastropoda, Diplommatinidae, Strobilopsidae and Ariophantidae). Basteria 70: 13–18.

Maassen W. J. M. 2016. Descriptions of two new carnivorous snail species from Thailand (Pulmonata: Streptaxidae, Diapheridae). Basteria 80: 139–142.

Mabille J. 1887. Molluscorum Tonkinorum Diagnoses. A. Masson, Meulan.

Mabille J. 1889. Contributions a la faune macalogique [sic!] du Tonkin. Masson, A. Meulan.

Minato H., Chen D.-N. 1984. A new clausiliid genus *Grandinenia* for *Steatonenia mirifica* Chen & Gao, 1982 (Gastropoda: Pulmonata). Venus (Japanese Journal of Malacology) 43: 301–304.

Minton R. L., Harris P. M., North E., Tu D. V. 2017. Diversity and taxonomy of Vietnamese *Pollicaria* (Gastropoda, Pupinidae). Zoosystematics and Evolution 93: 95–104. https://doi.org/10.3897/zse.93.10794

Möllendorff O. F. von 1890. Die Landschnecken-Fauna der Insel Cebu. Bericht der Senckenbergischen Naturforschenden Gesellschaft in Frankfurt am Main (1889–90): 189–292.

Möllendorff O. F. von 1894. On a collection of land-shells from the Samui Islands, Gulf of Siam. Proceedings of the Zoological Society of London 1894: 146–156. https://www.biodiversitylibrary.org/item/97157#page/212/mode/1up

Möllendorff O. F. von 1898. Die Binnenmollusken Annams. Nachrichtsblatt der Deutschen Malakozoologischen Gesellschaft 30(5/6): 65–85.

Möllendorff O. F. von 1900a. Zur Binnenmollusken-Fauna von Annams III. Nachrichtsblatt der Deutschen Malakozoologischen Gesellschaft 32: 117–121; 129–139.

Möllendorff O. F. von 1900b. Zwei neue *Amphidromus* aus Annam. Nachrichtsblatt der Deutschen Malakozoologischen Gesellschaft 32: 22–24.

Möllendorff O. F. von 1901. Zur Binnenmollusken-Fauna von Annam IV. Nachrichtsblatt der Deutschen Malakozoologischen Gesellschaft 33: 45–50.

Möllendorff O. F. von 1902. Binnenmollusken aus Hinterindien. Nachrichtsblatt der Deutschen Malakozoologischen Gesellschaft 34: 153–162.

MolluscaBase 2019. *Amphidromus* Albers, 1850. Accessed at: http://www.molluscabase.org/aphia.php?p=taxdetails&id=818112 (accessed 26 April 2019).

MONTFORT P. 1808–1810. Conchyliologie systématique et classification méthodique des coquilles.Vol. 1: pp. lxxx-vii + 409 [1808]. Vol. 2: pp. 676 + 16, Schoell, Paris.

MOORE M., JAMESON M. E., PAUCAR-CABRERA A. 2014. Taxonomic vandalism is an emerging problem for biodiversity science: A case study in the Rutelini (Coleoptera: Scarabaeidae: Rutelinae). Entomological Society of America 62nd Annual Meeting, Portland, Oregon, November 16-19, 2014.

MÖRCH O. A. L. 1876. Révision des mollusques terrestres des îsles Nicobar. Journal de Conchyliologie 24: 353–367.

MORELET A. 1862. Diagnoses testarum Indo-Sinarum. Revue et Magasin de Zoologie pure et appliquée 2e série, 14: 477–481.

MORELET A. 1875. Series Conchyliologiques, comprenant L'énumération de mollusques terrestres et fluviatiles, recueillis pendant le cours de différents voyages, ainsi que la description, de plusieurs espèces nouvelles. IV. 4e livraison Indo Chine. F. Savy, Paris, pp. 227–377. https://doi.org/10.5962/bhl.title.11458

MORLET L. 1883. Description d'espèces nouvelles de coquilles recueillies par M. Pavie au Cambodge. Journal de Conchyliologie 23: 104–110.

MORLET L. 1885. Descriptions despèces nouvelles de coquilles recueillies par M. Pavie, au Cambodge. Journal de Conchyliologie 32 [1884]: 386–403.

MORLET L. 1886. Diagnoses molluscorum novorum Cambodgiae. Journal de Conchyliologie 34: 74–75.

MORLET L. 1891. Diagnoses molluscorum novorum, in Indochinâ collectorum. Journal de Conchyliologie 39: 25–28.

MOUSSON A. 1849a. Über die Land- und Süsswassermollusken von Java. Mittheilungen der Naturforschenden Gesellschaft in Zürich 1: 264–273.

MOUSSON A. 1849b. Die Land- und Süsswasser- Mollusken von Java. Friedrich Schulthess, Zurich. iv + 126 pp., 22 pls.

NANTARAT N., SUTCHARIT C., TONGKERD P., ABLETT J., NAGGS F., PANHA S. 2014. An annotated catalogue of type specimens of the land snail genus *Cyclophorus* Montfort, 1810 (Caenogastropoda, Cyclophoridae) in the Natural History Museum, London. ZooKeys 411: 1–56. https://doi.org/10.3897/zookeys.411.7258

NANTARAT N., SUTCHARIT C., TONGKERD P., WADE C. W., NAGGS F., PANHA S. 2019. Phylogenetics and species delimitations of the operculated land snail *Cyclophorus volvulus* (Gastropoda: Cyclophoridae) reveal cryptic diversity and new species in Thailand. Scientific Reports 9: 7041. https://doi.org/10.1038/s41598-019-43382-5

NORDSIECK H. 2002. Revision of the Garnieriinae (Gastropoda: Stylommatophora: Clausiliidae), with descriptions of new taxa. Stuttgarter Beiträge zur Naturkunde, Serie A (Biologie) 640: 1–23.

PÁLL-GERGELY B. 2019. Correction of two homonyms and an original spelling of Thach. Ruthenica 29: 75–76 [2018].

PÁLL-GERGELY B., GREGO J. 2019. Notes on *Pseudopomatias* Möllendorff, 1885 and *Vargapupa* Páll-Gergely, 2015 (Gastropoda: Caenogastropoda: Pupinidae). Raffles Bulletin of Zoology 67: 587–594.

PÁLL-GERGELY B., HUNYADI A. 2018. *Ariophanta huberi* Thach, 2018 is not a pulmonate, but a juvenile *Pollicaria rochebruni* (Mabille, 1887) (Gastropoda: Cyclophoroidea: Pupinidae). Folia Malacologica 26: 267–269. https://doi.org/10.12657/folmal.026.025

PÁLL-GERGELY B., NEUBERT E. 2019. New insights in *Trichochloritis* Pilsbry, 1891 and its relatives (Gastropoda: Pulmonata: Camaenidae). ZooKeys 865: 137–154. https://doi.org/10.3897/zookeys.865.36296

PÁLL-GERGELY B., SZEKERES M. 2017. New and little-known Clausiliidae (Gastropoda: Pulmonata) from Laos and southern Vietnam. Journal of Conchology 42: 507–521.

PÁLL-GERGELY B., FEHÉR Z., HUNYADI A., ASAMI T. 2015. Revision of the genus *Pseudopomatias* and its relatives (Gastropoda: Cyclophoroidea: Pupinidae). Zootaxa 3937: 1–49. https://doi.org/10.11646/zootaxa.3937.1.1

PÁLL-GERGELY B., NAGGS F., ASAMI T. 2016. Novel shell device for gas exchange in an operculated land snail. Biology Letters 12: 20160151. https://doi.org/10.1098/rsbl.2016.0151

PANHA S., PATAMAKANTHIN S. 2001. A new *Alycaeus* species from southern Thailand (Prosobranchia: Cyclophoracea: Cyclophoridae). Of Sea and Shore 23: 189–190.

PEARSON J. T. 1833. Note on the genus *Spiraculum*. Journal of the Asiatic Society of Bengal 2: 590–592.

PFEIFFER L. 1846. Descriptions of thirty-six new species of *Helix*, belonging to the collection of H. Cuming, Esq. Proceedings of the Zoological Society of London [1845]: 126–133.

PFEIFFER L. 1847. Ueber die Eintheilung der Cyclostomaceen. Zeitschrift für Malakozoologie 4: 45–48, 52–59.

PFEIFFER L. 1853. Catalogue of Phaneropneumona or Terrestrial Operculated Mollusca in the Collection of the British Museum. Woodfall & Kinder, London.

PFEIFFER L. 1856. Versuch einer Anordnung der Heliceen nach natürlichen Gruppen. Malakozoologische Blätter 2: 112–185.

PFEIFFER L. 1860. Description of thirty-six new species of land shells from Mr. H. Cuming's collection. Proceedings of the Zoological Society of London 1860: 133–141.

PFEIFFER L. 1861. Descriptions of new land-shells, in the collection of H. Cuming, Esq. Proceedings of the Zoological Society of London 29: 190–196.

PFEIFFER L. 1863. Descriptions of thirty-six new land shells, from the collection of H. Cuming, Esq. Proceedings of the Zoological Society of London 30: 268–278 [1862].

PILSBRY H. A. 1890–1891. Manual of conchology, structural and systematic, with illustrations of the species, Second series: Pulmonata. Vol. VI. Helicidae. Academy of Natural Sciences, Philadelphia.

PILSBRY H. A. 1893–1895. Manual of conchology, structural and systematic, with illustrations of the species. Second series: Pulmonata. Vol. VIII, Helicidae, Vol. 6. Conchological Section, Academy of Natural Sciences, Philadelphia.

PILSBRY H. A. 1900a. Manual of conchology, structural and systematic, with illustrations of the species. Second series, Volume 13. Academy of Natural Sciences, Philadelphia.

PILSBRY H. A. 1900b. Notices of some new Japanese mollusks. The Nautilus 14: 11–12.

PILSBRY H. A. 1906–1907. Manual of conchology, (2) 18. Achatinidae: Stenogyrinae and Coeliaxinae. Academy of Natural Sciences, Philadelphia.

RAHEEM D. C., TAYLOR H., ABLETT J., PREECE R. C., ARAVIND N. A., NAGGS F. 2014. A systematic revision of the land snails of the Western Ghats of India. Tropical Natural History Supplement 4(1–13): 1–285.

REEVE L. 1860. On two new species of shells from Cambojia. The Annals and Magazine of Natural History, series 3, 6: 203–204.

RENSCH I. 1934. Systematische und tiergeographische Untersuchungen über die Landschneckenfauna des Bismarck-Archipels I. Archiv für Naturgeschichte, Neue Folgen 3: 445–488.

SCHEPMAN M. M. 1892. Land- and freshwater shells collected by Dr. H. Ten Kate in Soemba, Timor, and other East-Indian Islands. Notes from the Leyden Museum 14: 145–160.

SCHILEYKO A. A. 1999. Treatise on recent terrestrial pulmonate molluscs, Part 4: Draparnaudiidae, Caryodidae, Macrocyclidae, Acavidae, Clavatoridae, Dorcasiidae, Sculptariidae, Corillidae, Plectopylidae, Megalobulimulidae, Strophocheilidae, Cerionidae, Achatinidae, Subulinidae, Glessulidae, Micractaeonidae, Ferrussaciidae. Ruthenica, Supplement 2: 435–564.

SCHILEYKO A. A. 2000. Treatise on recent terrestrial pulmonate molluscs, Part 6: Rhytididae, Chlamydephoridae, Systrophiidae, Haplotrematidae, Streptaxidae, Spiraxidae, Oleacinidae, Testacellidae. Ruthenica, Supplement 2: 731–880.

SCHILEYKO A. A. 2002. Treatise on recent terrestrial pulmonate molluscs, Part 9: Helicarionidae, Gymnarionidae, Rhysotinidae, Ariophantidae. Ruthenica, Supplement 2: 1167–1307.

SCHILEYKO A. A. 2003. Treatise on recent terrestrial pulmonate molluscs, Part 11: Trigonochlamydidae, Papillodermidae, Vitrinidae, Limacidae, Bielziidae, Agriolimacidae, Boettgerillidae, Camaenidae. Ruthenica, Supplement 2: 1467–1626.

SCHILEYKO A. A. 2011. Check-list of land pulmonate molluscs of Vietnam (Gastropoda: Stylommatophora). Ruthenica 21: 1–68.

SCHUTZE M. K., BOURTZIS K., CAMERON S. L., CLARKE A. R., DE MEYER M., HEE A. K. W., HENDRICHS J., KROSCH M. N., MWATAWALA M. 2017. Integrative taxonomy versus taxonomic authority without peer review: the case of the Oriental fruit fly, *Bactrocera dorsalis* (Tephritidae). Systematic Entomology 42: 609–620. https://doi.org/10.1111/syen.12250

SIRIBOON T., SUTCHARIT C., NAGGS F., ROWSON B., PANHA S. 2014a. Revision of the carnivorous snail genus *Indoartemon* Forcart, 1946 and a new genus *Carinartemis* from Thailand (Pulmonata: Streptaxidae). Raffles Bulletin of Zoology 62: 161–174.

SIRIBOON T., SUTCHARIT C., NAGGS F., ROWSON B., PANHA S. 2014b. Revision of the carnivorous snail genus *Discartemon* Pfeiffer, 1856, with description of twelve new species (Pulmonata, Streptaxidae). ZooKeys 401: 45–107. https://doi.org/10.3897/zookeys.401.7075

SMITH E. A. 1896. Notes on some land-shells from Vanbu, Tonkin, with descriptions of two new species. The Annals and Magazine of Natural History, series 6, 17: 128–130.

SOLEM A. 1965. Land snails of the genus *Amphidromus* from Thailand (Mollusca: Pulmonata: Camaenidae). Proceedings of the United States National Museum 117: 615–628.

SOULEYET M. 1841. Description de deux espèces nouvelles des genres Hélice et Cyclostome. Revue Zoologique par la Société Cuvierrenne 4: 347.

STANISIC J., SHEA M., POTTER D., GRIFFITHS O. 2010. Australian land snails. Volume 1. A field guide to Eastern Australian species. Queensland Museum, Brisbane.

SUTCHARIT C., ABLETT J. D., PANHA S. 2019a. An annotated type catalogue of seven genera of operculate land snails (Caenogastropoda, Cyclophoridae) in the Natural History Museum, London. ZooKeys 842: 1–65. https://doi.org/10.3897/zookeys.842.29243

SUTCHARIT C., ABLETT J., TONGKERD P., NAGGS F., PANHA S. 2015. Illustrated type catalogue of *Amphidromus* Albers, 1850 in the Natural History Museum, London, and descriptions of two new species. ZooKeys 492: 49–105. https://doi.org/10.3897/zookeys.492.8641

SUTCHARIT C., BACKELJAU T., PANHA S. 2019b. Redescription 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. https://doi.org/10.3897/zookeys.870.36970

SUTCHARIT C., LIN A., CHANABUN R., SRISONCHAI R., PANHA S. (in press). Two new species of the carnivorous snails genus *Discartemon* Pfeiffer, 1856 (Eupulmonata: Steptaxidae) from Thailand and Myanmar with taxonomic review of the genus. Raffles Bulletin of Zoology.

SUTCHARIT C., PANHA S. 2006. Taxonomic review of the tree snail *Amphidromus* Albers, 1850 (Pulmonata: Camaenidae) in Thailand and adjacent areas: subgenus *Amphidromus*. Journal of Molluscan Studies 72: 1–30. https://doi.org/10.1093/mollus/eyi044

SUTCHARIT C., PANHA S. 2010. Taxonomic re-evaluation of *Chloritis bifoveata* (Benson, 1860) and *C. diplochone* Mollendorff, 1898 (Pulmonata: Camaenidae). Journal of Conchology 40: 277–285.

SUTCHARIT C., TONGKERD P., SHAU-HWAI A. T., PANHA S. 2012. Taxonomic revision of *Dyakia janus* from peninsular Malaysia (Pulmonata: Dyakiidae), with notes on other sinistrally coiled helicarionids. Raffles Bulletin of Zoology 60: 279–287.

SWAINSON W. 1840. A treatise on malacology or the natural classification of shells and shellfish. Longman, Brown, Green & Longman, London.

TAPPARONE-CANEFRI C. 1874. Zoologia del viaggio intorno al globo della regia fregata Magenta durante gli anni 1865–68. Malacologia (Gasteropodi, Acefali e Brachiopodi). Torino.

THACH N. N. 2014. A new *Amphidromus* (Gastropoda: Camaenidae) from Vietnam. Gloria Maris 53: 38–42.

THACH N. N. 2015a. *Amphidromus setzeri*, a new species (Gastropoda: Camaenidae) from Vietnam. Gloria Maris 54: 56–58.

THACH N. N. 2015b. *Pterocyclos huberi*, a new species from Vietnam (Gastropoda: Caenogastropoda: Cyclophoridae). Novapex 16: 59-61.

THACH N. N. 2015c. *Bertia setzeri*, a new species of land snail from Vietnam (Gastropoda: Stylommatophora: Dyakiidae). The Festivus 47: 240–242.

THACH N. N. 2016a. Vietnamese new molluscs. Seashells – Landsnails – Cephalopods. 48HrBooks Company, Akron (Ohio, USA).

THACH N. N. 2016b. *Cyclophorus stevenabbasorum* (Gastropoda: Cyclophoridae), a new species from Indonesia. Gloria Maris 54: 118–120.

THACH N. N. 2016c. *Amphidromus jeffabbasorum*, a new species (Gastropoda: Camaenidae) from Indonesia. Xenophora Taxonomy 13: 3–5.

THACH N. N. 2016d. *Camaena abbasi*, a new species (Gastropoda: Camaenidae) from Indonesia. The Festivus 48: 109–112.

THACH N. N. 2016e. *Camaena chuongi*, a new species (Gastropda: Camaenidae) from Vietnam. The Festivus 48: 253–256.

THACH N. N. 2016f. *Camaena onae*, a new species (Gastropoda: Camaenidae) from Vietnam. Gloria Maris 55: 17–20.

THACH N. N. 2016g. *Obba louiseae*, a new species (Gastropoda: Camaenidae) from the Philippines. Xenophora Taxonomy 10: 3–5.

THACH N. N. 2016h. *Papuina abbasi*, a new species (Gastropoda: Pupinidae) from Indonesia. Malacologia Mostra Mondiale 93: 23–25.

THACH N. N. 2017a. New shells of Southeast Asia. Sea shells & Land snails. 48HrBooks Company, Akron (Ohio, USA).

THACH N. N. 2017b. Four new species of *Amphidromus* Albers, 1850 (Gastropoda: Camaenidae) from Vietnam. Gloria Maris 56: 35–39.

THACH N. N. 2017c. Three new species of *Amphidromus* Albers, 1850 (Gastropoda: Camaenidae) from Vietnam, and presentation of *Conus* (*Rhizoconus*) *paulkersteni*, nom. nov. pro *Conus kersteni* Thach, 2017 non Tenorio, Afonso & Rolán, 2008. The Festivus 49: 296–300.

THACH N. N. 2017d. *Amphidromus calvinabbasi*, a new species (Gastropoda: Camaenidae) from Indonesia. Xenophora Taxonomy 17: 41–43.

THACH N. N. 2017e. *Amphidromus chrisabbasi*, a new species (Gastropoda: Camaenidae) from Indonesia. The Festivus 49: 206–209.

THACH N. N. 2017f. Four new species and subspecies of *Amphidromus* Albers, 1850 (Gastropda [sic!]: Camaenidae) from Indonesia and Vietnam. Malacologia Mostra Mondiale 97: 34–37.

THACH N. N. 2018a. New shells of South Asia. Seashells-landsnails-freshwater shells. 3 new genera, 132 new species & subspecies. 48HRBooks Company, Akron (Ohio, USA).

THACH N. N. 2018b. Four new species and subspecies of *Amphidromus* Albers, 1850 (Gastropoda: Camaenidae) from Vietnam, Laos and Indonesia. Conchylia 48: 33–40.

THACH N. N. 2018c. *Leptopoma melanostoma janetabbasae*, a new subspecies (Gastropoda: Cyclophoridae) from Indonesia, and correction of errata in "New Shells of South Asia". The Festivus 50: 264–267.

THACH N. N. 2019a. *Amphidromus atricallosus vovanae*, a new subspecies of *Amphidromus* from Vietnam (Mollusca: Gastropoda: Camaenidae). Gloria Maris 57: 84–87.

THACH N. N. 2019b. Two new species of *Amphidromus* (Gastropoda: Camaenidae) from Cambodia & Laos. The Festivus 51: 37–42.

THACH N. N. 2019c. Two new species of *Amphidromus* (Gastropoda: Camaenidae) from Vietnam. The Festivus 51: 103–108.

THACH N. N. 2019d. *Amphidromus siongkiati* and *Amphidromus bramvanderbijli*, two new species of *Amphidromus* (Mollusca: Gastropoda: Camaenidae) from Vietnam and correction of errata in "New Shells of South Asia". Gloria Maris 58: 17–21.

THACH N. N. 2019e. Two new subspecies of *Amphidromus* from Indonesia (Mollusca: Gastropoda: Camaenidae). The Festivus 51: 231–236.

THACH N. N. 2019f. *Amphidromus huynhanhi*, a new species (Gastropoda: Camaenidae) from Laos. Conchylia 50: 11–14.

THACH N. N. 2019g. A new species of *Amphidromus* (Mollusca: Gastropoda: Camaenidae) from Vietnam, and a replacement name for *Amphidromus berschaueri mingmini* Thach, 2019. The Festivus 51: 293–296.

THACH N. N. 2019h. Two new species of *Amphidromus* from Vietnam (Gastropoda: Camaenidae). Visaya 5: 33–38.

THACH N. N., ABBAS J. 2017a. *Amphidromus lucsegersi*, a new species (Gastropoda: Camaenidae) from Indonesia. Gloria Maris 55: 52–54.

THACH N. N., ABBAS J. 2017b. *Amphidromus stevehubrechti*, a new species (Gastropoda: Camaenidae) from Indonesia. Gloria Maris 55: 119–121.

THACH N. N., HUBER F. 2014. A new *Amphidromus* (Gastropoda: Camaenidae) from Vietnam. Basteria 78: 35–37.

THACH N. N., HUBER F. 2015. New species of Vietnam landsnails. American Conchologist 43: 26–27.

THACH N. N., HUBER F. 2017. A new species of *Amphidromus* Albers, 1850 (Gastropoda: Camaenidae) from Vietnam. Gloria Maris 55: 123–125.

THOMSON S., PYLE R. L., AHYONG S. T., ALONSO-ZARAZAGA M., AMMIRATI J., ARAYA J. F., ASCHER J. S., AUDISIO T. L., AZEVEDO-SANTOS V. M., BAILLY N., BAKER W. J., BALKE M., BARCLAY M. V. L., BARRETT R. L., BENINE R. C., BICKERSTAFF J. R. M., BOUCHARD P., BOUR R., BOURGOIN

T., Boyko C. B., Breure A. S. H., Brothers D. J., Byng J. W., Campbell D., Ceríaco L. M. P., Cernák I., Cerretti P., Chang C. H., Cho S., Copus J. M., Costello M. J., Cseh A., Csuzdi C., Culham A., D'Elía G., d'Udekem d'Acoz C., Daneliya M. E., Dekker R., Dickinson E. C., Dickinson T. A., van Dijk P. P., Dijkstra K. B., Dima B., Dmitriev D. A., Duistermaat L., Dumbacher J. P., Eiserhardt W. L., Ekrem T., Evenhuis N. L., Faille A., Fernández-Triana J. L., Fiesler E., Fishbein M., Fordham B. G., Freitas A. V. L., Friol N. R., Fritz U., Frøslev T., Funk V. A., Gaimari S. D., Garbino G. S. T., Garraffoni A. R. S., Geml J., Gill A. C., Gray A., Grazziotin F. G., Greenslade P., Gutiérrez E. E., Harvey M. S., Hazevoet C. J., He K., He X., Helfer S., Helgen K. M., van Heteren A. H., Hita Garcia F., Holstein N., Horváth M. K., Hovenkamp P. H., Hwang W. S., Hyvönen J., Islam M. B., Iverson J. B., Ivie M. A., Jaafar Z., Jackson M. D., Jayat J. P., Johnson N. F., Kaiser H., Klitgård B. B., Knapp D. G., Kojima J. I., Kõljalg U., Kontschán J., Krell F. T., Krisai-Greilhuber I., Kullander S., Latella L., Lattke J. E., Lencioni V., Lewis G. P., Lhano M. G., Lujan N. K., Luksenburg J. A., Mariaux J., Marinho-Filho J., Marshall C. J., Mate J. F., McDonough M. M., Michel E., Miranda V. F. O., Mitroiu M. D., Molinari J., Monks S., Moore A. J., Moratelli R., Murányi D., Nakano T., Nikolaeva S., Noyes J., Ohl M., Oleas N. H., Orrell T., Páll-Gergely B., Pape T., Papp V., Parenti L. R., Patterson D., Pavlinov I. Y., Pine R. H., Poczai P., Prado J., Prathapan D., Rabeler R. K., Randall J. E., Rheindt F. E., Rhodin A. G. J., Rodríguez S. M., Rogers D. C., Roque F. O., Rowe K. C., Ruedas L. A., Salazar-Bravo J., Salvador R. B., Sangster G., Sarmiento C. E., Schigel D. S., Schmidt S., Schueler F. W., Segers H., Snow N., Souza-Dias P. G. B., Stals R., Stenroos S., Stone R. D., Sturm C. F., Štys P., Teta P., Thomas D. C., Timm R. M., Tindall B. J., Todd J. A., Triebel D., Valdecasas A. G., Vizzini A., Vorontsova M. S., de Vos J. M., Wagner P., Watling L., Weakley A., Welter-Schultes F., Whitmore D., Wilding N., Will K., Williams J., Wilson K., Winston J. E., Wüster W., Yanega D., Yeates D. K., Zaher H., Zhang G., Zhang Z. Q., Zhou H. Z. 2018. Taxonomy based on science is necessary for global conservation. PLoS Biology 16: e2005075. https://doi.org/10.1371/journal.pbio.2005075

Tomlin J. R. le B. 1948. New Malay land-shells. Proceedings of the Malacological Society of London 27: 224–225.

Troschel F. H. 1847. Ueber die Gattungen der Cyclostomiden. Zeitschrift für Malakozoologie 4: 42–45.

Tumpeesuwan S., Tumpeesuwan C. 2015. First record and description of a new species of the land snail genus *Pearsonia* Kobelt, 1902 (Cyclophoridae: Pterocyclinae) from Thailand, with a note on radula morphology. Raffles Bulletin of Zoology 63: 287–292.

Wheeler Q. 2014. Are reports of the death of taxonomy an exaggeration? New Phytologist 201: 370–371. https://doi.org/10.1111/nph.12612

Wu S.-P., Hwang C.-C., Lin Y.-S. 2008. Systematic revision of the arboreal snail *Satsuma albida* species complex (Mollusca: Camaenidae) with descriptions of 14 new species from Taiwan. Zoological Journal of the Linnean Society 154: 437–493. https://doi.org/10.1111/j.1096-3642.2008.00415.x

Zilch A. 1953. Die Typen und Typoide des Natur-Museums Senckenberg, 10: Mollusca, Pleurodontidae (1). Archiv für Molluskenkunde 82: 131–140.

Zilch A. 1956. Die Typen und Typoide des Natur-Museums Senckenberg, 18: Mollusca, Cyclophoridae, Cyclophorinae-Cyclophoreae (4). Archiv für Molluskenkunde 85: 171–196.

Zilch A. 1961. Die Typen und Typoide des Natur-Museums Senckenberg, 24: Mollusca, Streptaxidae. Archiv für Molluskenkunde 90: 79–120.

Zilch A. 1964. Die Typen und Typoide des Natur-Museums Senckenberg, 29: Mollusca, Camaenidae (3). Archiv für Molluskenkunde 93: 243–262.

Received: September 5th, 2019
Revised: December 12th, 2019 / February 2nd, 2020
Accepted: February 5th, 2020
Published on-line: March 13th, 2020

APPENDIX 1

Terrestrial species and subspecies described in the publications of Nguyen Ngoc Thach (some with co-authors Franz Huber, J. Abbas and Miklós Szekeres). Abbreviations: MC – use of shell characters of minor importance, NC – new combination, LC – lack of comparison.

Species and subspecies	Original generic placement	References	Remarks
abbasi	*Ariophanta*	Thach 2018a: 41	LC
abbasi	*Asperitas*	Thach 2018a: 43	no comment
abbasi	*Bellardiella*	Thach 2017a: 19	no comment
abbasi	*Camaena*	Thach 2016d: 109	NC
abbasi	*Leptopoma*	Thach 2017a: 15	no comment
abbasi	*Papuina*	Thach 2016h: 23	no comment
abbasi	*Tylotoechus*	Thach 2017a: 20	no comment
abbasorum	*Amphidromus*	Thach 2017a: 35	no comment
abbotthuberorum	*Amphidromus*	Thach 2017a: 35	LC

Species and subspecies	Original generic placement	References	Remarks
abletti	*Austenia*	THACH 2017a: 33	no comment
abletti	*Chloritis*	Thach et Huber in THACH 2018a: 68	valid
abletti	*Rhiostoma*	THACH 2016a: 37	LC
andytani	*Amphidromus*	Thach et Abbas in THACH 2017a: 36	LC
anhdaoorum	*Amphidromus*	THACH 2017a: 36	LC
anhduongae	*Haploptychius*	THACH 2017a: 31	valid
anhi	*Camaena*	THACH 2017a: 49	LC
annhiae	*Helixarion*	Thach et Huber in THACH 2017a: 34	NC
anthonyabbotti	*Amphidromus*	Thach et Huber in THACH 2017a: 37	LC
arlingi	*Amphidromus*	THACH 2017f: 34	LC
arlingi	*Pollicaria*	THACH 2018a: 19	no comment
arlingi daklakensis	*Amphidromus*	THACH 2017f: 36	LC
atricallosus vovanae	*Amphidromus*	THACH 2019a: 84	LC
attapeuensis	*Amphidromus*	Thach et Huber in THACH 2017a: 37	LC
baerorum	*Amphidromus*	THACH 2017c: 297	LC
baoi	*Amphidromus*	THACH 2017a: 38	LC
baolocensis	*Amphidromus*	Thach et Huber in THACH 2016a: 62	valid
bernardfamyi	*Amphidromus*	THACH 2017a: 38	no comment
bernardfamyi kefaensis	*Amphidromus*	THACH 2018a: 47	no comment
berschaueri mingmini	*Amphidromus*	THACH 2019e: 231	no comment
beschaueri	*Amphidromus*	THACH 2018a: 47	LC
bifoveata vinhensis	*Chloritis*	Thach et Huber in THACH 2018a: 68	NC
bimaensis liei	*Asperitas*	THACH 2018a: 44	no comment
binhgiaensis	*Camaena*	THACH 2016a: 70	LC
binhphuocensis	*Amphidromus*	THACH 2019g: 293	no comment
bramvanderbijli	*Amphidromus*	THACH 2019d: 18	no comment
calvinabbasi	*Amphidromus*	THACH 2017d: 41	MC
candoni	*Helicella*	THACH 2018a: 72	no comment
cargilei	*Amphidromus*	Thach et Huber in THACH 2018a: 48	LC
chrisabbasi	*Amphidromus*	THACH 2017e: 206	MC
chrisabbasi roberti	*Amphidromus*	THACH 2018a: 49	LC
christabaerae	*Amphidromus*	THACH 2017c: 296	LC
christae	*Rhiostoma*	THACH 2016a: 38	LC
chuongi	*Camaena*	THACH 2016e: 253	valid
contrarius rolfei	*Amphidromus*	THACH 2018a: 50	no comment
dambriensis	*Amphidromus*	Thach et Huber in THACH 2016a: 63	LC
daoae	*Amphidromus*	THACH 2016a: 63	LC
daoae robertabbasi	*Amphidromus*	THACH 2017f: 36	LC
davidmonsecouri	*Amphidromus*	THACH 2018a: 50	LC
delsaerdti	*Amphidromus*	THACH 2016a: 64	holotype is very weathered
delsaerdti	*Camaena*	Thach et Huber in THACH 2018a: 67	valid
delsaerdti melanica	*Camaena*	Thach et Huber in THACH 2018a: 68	valid
diepae	*Camaena*	THACH 2017a: 50	MC
donchani	*Amphidromus*	THACH 2019b: 39	no comment
donghoiensis	*Cyclophorus*	Thach et Huber in THACH 2017a: 13	see under *Cyclophorus*
dongnaiensis	*Amphidromus*	THACH 2018a: 51	MC
ducae	*Camaena*	THACH 2017a: 50	no comment
duyconi	*Camaena*	Thach et Huber in THACH 2017a: 51	LC
eboricolor	*Amphidromus*	THACH 2018a: 51	LC

Species and subspecies	Original generic placement	References	Remarks
franzhuberi	*Amphidromus*	THACH 2016a: 64	LC
franzhuberi	*Camaena*	THACH 2018a: 66	LC
franzhuberi	*Cyclophorus*	THACH 2017a: 14	see under *Cyclophorus*
franzhuberi	*Hemiglypta*	THACH 2018a: 45	no comment
franzhuberi	*Oospira*	Szekeres et Thach in THACH 2018a: 36	MC
franzhuberi	*Papuina*	THACH 2018a: 71	no comment
franzhuberi	*Pearsonia*	THACH 2017a: 15	MC
franzhuberi	*Pseudobuliminus*	THACH 2018a: 73	valid
franzhuberi	*Pterocyclos*	THACH 2017a: 16	valid
franzhuberi laosianus	*Camaena*	THACH 2018a: 66	LC
fraussenae	*Amphidromus*	Thach et Huber in THACH 2017a: 38	LC
frednaggsi	*Amphidromus*	Thach et Huber in THACH 2018a: 52	LC, types all juveniles
frednaggsi	*Pupinella*	Thach et Huber in THACH 2017a: 19	valid
friedae	*Amphidromus*	Thach et Huber in THACH 2016a: 65	LC
friedae	*Pterocyclos*	Thach et Huber in THACH 2016a: 36	no comment
friedahuberae	*Amphidromus*	Thach et Huber in THACH 2017a: 39	valid
gerberi	*Amphidromus*	Thach et Huber in THACH 2017a: 39	LC
gerberi bolovenensis	*Amphidromus*	Thach et Huber in THACH 2018a: 52	no comment
gittenbergeri	*Amphidromus*	Thach et Huber in THACH 2018a: 53	LC
goldbergi	*Amphidromus*	Thach et Huber in THACH 2018a: 53	MC
gregoi	*Oospira*	Szekeres et Thach in THACH 2017a: 29	valid
gregoi	*Perrottetia*	THACH 2018a: 39	see comment under *P. gregoi*
grohi	*Spiraculum*	Thach et Huber in THACH 2018a: 18	LC
harryleei	*Pseudobuliminus*	THACH 2017a: 54	MC
harryleei	*Spiraculum*	Thach et Huber in THACH 2018a: 18	LC
hassi	*Amphidromus*	Thach et Huber in THACH 2018a: 54	LC
hassi ngoanmucensis	*Amphidromus*	Thach et Huber in THACH 2018a: 54	LC
heinrichhuberi	*Amphidromus*	Thach et Huber in THACH 2016a: 65	LC
herosae	*Euplecta*	Thach et Huber in THACH 2018a: 42	LC
herosae	*Rhiostoma*	Thach et Huber in THACH 2017a: 17	valid
hoabinhensis	*Camaena*	THACH 2016a: 71	no comment
hongdaoae	*Amphidromus*	THACH 2017a: 40	LC
huberi	*Alycaeus*	THACH 2018a: 19	MC, damaged subadult
huberi	*Amphidromus*	THACH 2014: 39	probably valid, subadult
huberi	*Ariophanta*	THACH 2018a: 41	LC, juvenile of *Pollicaria rochebruni*
huberi	*Barnaia*	THACH 2017a: 18	valid
huberi	*Bouchetcamaena*	THACH 2018a: 65	LC
huberi	*Bradybaena*	THACH 2018a: 73	no comment
huberi	*Camaena*	THACH 2017a: 51	juveniles or subadults
huberi	*Chloritis*	THACH 2016a: 72	no comment
huberi	*Cyathopoma*	THACH 2018a: 15	no comment
huberi	*Cyclophorus*	THACH 2016a: 35	see under *Cyclophorus*
huberi	*Cyclotopsis*	THACH 2018a: 24	LC
huberi	*Cyclotus*	THACH 2018a: 16	key trait is teratological
huberi	*Discartemon*	THACH 2017a: 30	LC
huberi	*Euplecta*	THACH 2018a: 41	MC
huberi	*Ganesella*	THACH 2018a: 69	no comment
huberi	*Glessula*	THACH 2018a: 37	no comment
huberi	*Helminthoglypta*	THACH 2017a: 54	see under *Hemiplecta lanxangnica*

Species and subspecies	Original generic placement	References	Remarks
huberi	*Hemiphaedusa*	THACH 2016a: 58	subspecies of *Oospira naggsi*
huberi	*Hemiplecta*	THACH 2017a: 33	MC
huberi	*Indoartemon*	THACH 2018a: 39	LC
huberi	*Kalidos*	THACH 2018a: 43	LC
huberi	*Lamprellia*	THACH 2018a: 70	no comment
huberi	*Megalacron*	THACH 2017a: 53	NC
huberi	*Microstele*	THACH 2018a: 37	NC
huberi	*Mirus*	THACH 2018a: 37	LC
huberi	*Mussonena*	THACH 2018a: 70	NC
huberi	*Mysticarion*	THACH 2016a: 61	NC
huberi	*Neniauchenia*	THACH 2016a: 58	valid
huberi	*Oophana*	THACH 2018a: 39	valid
huberi	*Oospira*	THACH 2016a: 57	valid
huberi	*Pallgergelyia*	THACH 2017a: 32	valid
huberi	*Pearsonia*	THACH 2016a: 36	NC
huberi	*Pollicaria*	THACH 2018a: 20	LC
huberi	*Prosopeas*	THACH 2018a: 38	LC
huberi	*Pseudobuliminus*	THACH 2017a: 55	LC
huberi	*Pseudopartula*	THACH 2016a: 74	valid
huberi	*Pterocyclos*	THACH 2015b: 59	no comment
huberi	*Rhiostoma*	THACH 2018a: 17	no comment
huberi	*Satsuma*	THACH 2018a: 71	no comment
huberi	*Streptartemon*	THACH 2016a: 60	NC
huberi	*Tortulosa*	THACH 2018a: 21	MC
huberi	*Trochomorpha*	THACH 2018a: 45	valid
huberi	*Tropidophora*	THACH 2018a: 24	subadult shell
huberi	*Vargapupa*	THACH 2018a: 22	MC
huberi vinhensis	*Camaena*	THACH 2018a: 67	juveniles
hueae	*Amphidromus*	Thach et Huber in THACH 2016a: 66	LC
hueae	*Euplecta*	Thach et Huber in THACH 2018a: 42	LC
huynhanhi	*Amphidromus*	THACH 2019f: 11	no comment
huynhi	*Amphidromus*	THACH 2019c: 104	no comment
jeffabbasorum	*Amphidromus*	THACH 2016c: 3	no comment
johnabbasi	*Amphidromus*	THACH 2017b: 35	LC
johnstanisici	*Amphidromus*	Thach et Huber in THACH 2017a: 41	no comment
juniorabbasi	*Amphidromus*	THACH 2018a: 55	LC
keppensdhondtorum	*Amphidromus*	THACH 2018b: 31	no comment
khamducensis	*Camaena*	Thach et Huber in THACH 2018a: 67	NC
khammouanensis	*Amphidromus*	Thach et Huber in THACH 2017a: 41	valid, two broken, half shells
khongensis	*Cyclophorus*	Thach et Huber in THACH 2017a: 14	See under *Cyclophorus*
klausgrohi	*Chloritis*	Thach et Huber in THACH 2017a: 52	valid
koenigi	*Amphidromus*	Thach et Huber in THACH 2018a: 56	valid, subadult shells
koonpoi	*Amphidromus*	Thach et Huber in THACH 2018a: 56	LC
lacthuyensis	*Camaena*	THACH 2016a: 71	LC
laevus lakorensis	*Amphidromus*	THACH 2019e: 232	no comment
laii	*Amphidromus*	THACH 2019b: 37	no comment
lamdongensis	*Amphidromus*	Thach et Huber in THACH 2016a: 67	LC
ledaoae	*Amphidromus*	THACH 2016a: 67	no comment
ledaoae anhi	*Amphidromus*	THACH 2018a: 56	LC, subadult shells

Species and subspecies	Original generic placement	References	Remarks
leeana	*Camaena*	THACH 2017a: 52	LC
liei	*Amphidromus*	THACH 2017b: 36	no comment
liei	*Hemiplecta*	THACH 2018a: 43	no comment
liei joshuathami	*Amphidromus*	THACH 2018b: 35	no comment
louiseae	*Obba*	THACH 2016g: 3	no comment
lucsegersi	*Amphidromus*	THACH & ABBAS 2017a: 52	LC
maestratii	*Pseudobuliminus*	THACH 2017a: 55	see under *Giardia*
mariae	*Amphidromus*	Thach et Huber in THACH 2017a: 42	valid
marieabbasae	*Amphidromus*	THACH 2017a: 42	MC, juvenile shells
mariesandersae	*Amphidromus*	Thach et Huber in THACH 2017a: 42	valid, juvenile shells
melanostoma janetabbasae	*Leptopoma*	THACH 2018c: 264	no comment
monsecourorum	*Amphidromus*	Thach et Huber in THACH 2017a: 43	no comment
montesdeocai	*Amphidromus*	Thach et Huber in THACH 2017a: 43	MC
naggsi	*Amphidromus*	THACH & HUBER 2014: 35	MC
ngai	*Amphidromus*	THACH 2019h: 33	no comment
ngheanensis	*Cyclophorus*	Thach et Huber in THACH 2018a: 15	see under *Cyclophorus*
ngocanhi	*Amphidromus*	THACH 2017a: 43	MC
ngocngai	*Amphidromus*	THACH 2017a: 44	MC
ngocngai	*Rhiostoma*	Thach et Huber in THACH 2018a: 17	no comment
nicoi	*Amphidromus*	THACH 2017c: 298	no comment
nicoi	*Pollicaria*	THACH 2018a: 21	MC
ninhbinhensis	*Camaena*	THACH 2016a: 72	valid
ninhbinhensis	*Rhiostoma*	Thach et Huber in THACH 2018a: 17	LC
ninhhoaensis	*Thachia*	Huber in THACH 2018a: 40	valid
noriokowasoei	*Amphidromus*	THACH & HUBER 2017: 123	LC
obesa	*Pseudobuliminus*	Thach et Huber in THACH 2018a: 73	see under *Giardia*
onae	*Camaena*	THACH 2016f: 17	valid
ovoideus	*Pseudobuliminus*	Thach et Huber in THACH 2018a: 74	see under *Giardia*
owengriffithsi	*Obeliscus*	Thach et Huber in THACH 2017a: 30	LC
pallgergelyi	*Amphidromus*	Thach et Huber in THACH 2018a: 58	LC
pallgergelyi	*Discartemon*	THACH 2017a: 31	MC
pamabbasae	*Amphidromus*	THACH 2017f: 34	LC
patamakanthini	*Amphidromus*	Thach et Huber in THACH 2018a: 59	LC
pengzhuoani	*Amphidromus*	THACH 2018b: 34	LC
perversus siglerae	*Amphidromus*	THACH 2018a: 59	no comment
petuchi	*Amphidromus*	THACH 2018a: 60	LC
phamanhi	*Amphidromus*	THACH 2016a: 68	valid
philippeboucheti	*Amphidromus*	THACH 2019c: 103	no comment
phuonglinhae	*Amphidromus*	THACH 2017a: 45	LC
phuonglinhae vinhensis	*Amphidromus*	Thach et Huber in THACH 2018a: 60	LC, juveniles, weathered
renkeri	*Amphidromus*	THACH 2018b: 33	LC
reuselaarsi	*Amphidromus*	THACH 2018a: 61	no comment
richgoldbergi	*Amphidromus*	Thach et Huber in THACH 2017a: 45	LC
salzmanni	*Amphidromus*	Thach et Huber in THACH 2017a: 45	LC
schileykoi	*Amphidromus*	THACH 2016a: 68	MC
schileykoi	*Pterocyclos*	Thach et Huber in THACH 2017a: 17	valid
schileykoi	*Tortulosa*	Thach et Huber in THACH 2018a: 22	MC
semicinereus	*Amphidromus*	THACH 2018a: 62	LC
setzeri	*Amphidromus*	THACH 2015a: 56	LC

Species and subspecies	Original generic placement	References	Remarks
setzeri	*Bertia*	THACH 2015c: 240	valid
severnsi	*Amphidromus*	THACH 2017a: 46	LC
severnsi anhi	*Amphidromus*	THACH 2018a: 62	LC
siglerae	*Rhynchotrochus*	THACH 2018a: 72	no comment
simonei	*Diastole*	Thach et Huber in THACH 2017a: 34	LC
simonei	*Quantula*	Thach et Huber in THACH 2018a: 44	no comment
siongkiati	*Amphidromus*	THACH 2019d: 17	no comment
sriabbasae	*Amphidromus*	THACH 2017a: 47	no comment
sowyani	*Amphidromus*	THACH 2019h: 35	no comment
stevehubrechti	*Amphidromus*	THACH & ABBAS 2017b: 119	LC
stevenabbasorum	*Cyclophorus*	THACH 2016b: 118	see under *Cyclophorus*
steveni	*Amphidromus*	THACH 2017b: 36	LC, immature shells
stungtrengensis	*Amphidromus*	Thach et Huber in THACH 2018a: 63	LC, single subadult shell
stungtrengensis	*Cyclophorus*	Thach et Huber in THACH 2018a: 16	see under *Cyclophorus*
szekeresi	*Discartemon*	Thach et Huber in THACH 2018a: 38	LC
szekeresi	*Liparophaedusa*	THACH 2017a: 29	valid
tedbaeri	*Amphidromus*	THACH 2017b: 37	LC, immature shells
thachi	*Bouchetcamaena*	Huber in THACH 2018a: 65	no comment
thachi	*Chloritis*	Huber in THACH 2018a: 69	no comment
thachi	*Ganesella*	Huber in THACH 2018a: 70	no comment
thachi	*Pearsonia*	Huber in THACH 2017a: 16	LC
thachi	*Perrottetia*	Huber in THACH 2018a: 40	see comment under *P. thachi*
thachi	*Pseudobuliminus*	Huber in THACH 2018a: 74	see under *Giardia*
thachi	*Pterocyclos*	Huber in THACH 2017a: 17	no comment
thachi	*Rhiostoma*	Huber in THACH 2018a: 17	no comment
thachi	*Satsuma*	Huber in THACH 2018a: 71	no comment
thachi krisi	*Amphidromus*	THACH 2018a: 63	valid
thachi laosianus	*Chloritis*	Huber in THACH 2018a: 69	no comment
thakhekensis	*Amphidromus*	Thach et Huber in THACH 2017a: 48	LC
thakhekensis	*Cyclophorus*	Thach et Huber in THACH 2018a: 16	See under *Cyclophorus*
thanhhoaensis	*Amphidromus*	Thach et Huber in THACH 2016a: 69	valid
thanhhoaensis	*Camaena*	THACH 2016a: 72	valid
thuthaoae	*Oophana*	THACH 2017a: 32	valid
trianensis	*Amphidromus*	Thach et Huber in THACH 2018a: 64	no comment
trochus janetabbasae	*Asperitas*	THACH 2018a: 44	no comment
truongkhoai	*Amphidromus*	THACH 2018a: 64	LC
tuongvyae	*Pseudobuliminus*	THACH 2017a: 56	LC
vietnamensis	*Amphidromus*	Thach et Huber in THACH 2017a: 48	MC
vilvensi	*Pearsonia*	Thach et Huber in THACH 2017a: 16	valid
vinhensis	*Trochomorpha*	THACH 2018a: 45	LC
yangbayensis	*Amphidromus*	Thach et Huber in THACH 2016a: 70	LC, weathered juveniles
yauyeejiae	*Amphidromus*	Thach et Abbas in THACH 2017a: 49	no comment
yenlinhae	*Amphidromus*	Thach et Huber in THACH 2017a: 49	LC