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# The molluscan species described by Robert James Shuttleworth

I. Gastropoda: Pulmonata

**Eike Neubert & Margret Gosteli**

## **ABSTRACT**

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So far as available, the primary types of Robert James Shuttleworth are identified, catalogued and photographed. If possible, the actual taxonomic position of each nominal taxon of Shuttleworth is given. Basic information about Shuttleworth, his private and scientific life and his collection is presented.

Key words: Shuttleworth, type catalogue, Pulmonata, Corsica, Canary Islands, Caribbean, Mexico, Puerto Rico, South America, USA, tropical West Africa.

## **KURZFASSUNG**

Die primären Typen von Robert James Shuttleworth werden, soweit vorhanden, identifiziert, katalogisiert und fotografiert. Soweit möglich wird die aktuelle taxonomische Stellung der von Shuttleworth beschriebenen Arten eruiert. Es werden grundsätzliche Informationen zu Shuttleworth, seinem Leben, seiner wissenschaftlichen Leistung und seiner Sammlung gegeben.

Schlüsselbegriffe: Shuttleworth, Typenkatalog, Pulmonata, Korsika, Kanarische Inseln, Karibik, Mexiko, Puerto Rico, Südamerika, USA, tropisches Westafrika.

## **Introduction**

Correct identification of organisms often is a major problem even in modern biology. Taxonomy and nomenclature represent the prerequisite skeleton of any subsequent investigation on subjects like biogeography, biodiversity, ecology, nature conservation, behavioural studies etc. Even advanced techniques like DNA-sequencing used to unravel phylogenetic relationships, are in need of an answer to the superficially simple question of: What is the name of the spe-



cies I am investigating? Wrong identifications yield wrong results, mislead other scientists, stimulate wrong decisions in nature conservation and continue the chains of errors we have to deal with.

The name, and thus the identity of a biological species, is formalistically bound to its type, i.e. the name-bearing specimen, which usually should be housed in the voucher collection of a museum. Consequently, types form the most important part of a collection. The work we present here offers the basic information on the primary type specimens of Robert James Shuttleworth (Fig. 1), i.e. species which have been described by Shuttleworth himself. We do not deal with type specimens of species described by other authors and which came to the collection as part of exchange or other ways. Species, whose descriptions were erroneously credited to Shuttleworth, are not taken into account even on the assumption of their presence in the collection. We have to keep in mind that Shuttleworth was part of an “International Mollusc Exchange Community”. He often received specimens from H. Cuming (as many other colleagues at that time), which he identified and sent back with his manuscript



**Fig. 1. Robert James Shuttleworth (1810–1874)**

name. Cuming distributed these specimens with the manuscript names of Shuttleworth, which later were used by others like L. Pfeiffer, who often described these species before Shuttleworth had the chance to do it. As a consequence, L. Pfeiffer has to be considered as the author, a fact, which led to some disagreements, and made Shuttleworth (1852a) complain about the “scientific privateering”.

Authors of that time did not have the strict ideas on “types” that we have today, and so it takes time to identify them in the collection and clarify their correct status. Moreover, a certain amount of taxonomical, historical (in particular malaco-historical), bibliographical and geographical knowledge is required. The problems we had to face originated from various sources, and a few of them may exemplify the difficulty of decisions. Shuttleworth sometimes registered new species by adding the species name and the phrase of “n. sp. Shuttleworth” on the label, but he often forgot to even write a personal label. Fortunately, he was quite correct in adding information on the size of specimens, collectors (or shell dealers), locations etc., and so we were able to clearly identify many types, which had been considered to be lost. In a few cases, types could not be found in the Natural History Museum Berne, but in the collection of A. Mousson in the Zoological Museum of Zurich. We also visited the Natural History Museum of Neuchâtel, which among others houses the collection of Nicolet, who received many specimens from Jacot-Guillarmod from Mexico. This is frequently noted by Shuttleworth, who used the latinized form of Neuchâtel by adding the phrase “Mus. Neocomense”. Still, many syntypes of the species described from Mexico are housed in Neuchâtel.

After his death, the collection of Shuttleworth was donated to the Natural History Museum of Berne. Until today, no major changes were undertaken, and the collection still is in its “native state”. During the last 140 years, curatorial actions were limited, and only a few contributions need to be mentioned.

In 1908, a person named Isenschmid “curated” some lots in the collection. Isenschmid substituted original labels by his own and threw away the “old labels” thus destroying essential original information. By chance only a few type lots are affected, and so the damage to the collection is limited.

The second and very helpful tool is the catalogue of the collection, which was compiled by Verena Gerber, assistant in the department of malacology, between 1960–1970. This inventory records the complete content of the collection using the system of F. Paetel (1888–1890: *Catalog der Conchyliensammlung*. 4. Neubearbeitung. Paetel, Berlin). Although misleading in some parts and overlooking some lots, the catalogue facilitated access and recovery of certain lots.





Fig. 2. Drawer from the collection of R.J. Shuttleworth. The shells are stored in the original boxes.

Photo: Lisa Schäublin

N<sup>o</sup>  
*Perideris Onager* Shuttl.  
 Grand Bassam  
 Verreaux. 1854

*H. uvulifera* Shuttl.  
 n. sp.  
 (*H. rugosus* Shuttl. in litt.)  
 Long Keys Sarasota Bay  
 Florida austr. occ.  
 Royal. 1845

N<sup>o</sup>  
*Glandina interrupta* Shuttl.  
 Portorico pr. Luquillo  
 Blauuer. 1853 N<sup>o</sup> 115

*H. nivaricus* Shuttl.  
 (Epiphragmata)  
 Sta Cruz. Steueruffe  
 Blauuer. 1851

äußere und  
 innere Deckel  
 für *Helix*  
 No. 9.

Fig. 3. Labels from the Shuttleworth collection. Four labels from type specimens in Shuttleworth's handwriting. At the bottom to the right a label written by Blauuer which reads "äußere und innere Deckel zur *Helix* No. 9" [outer and inner epiphragmata of *Helix* No. 9].

Leaving the collection in its native state means that until today many specimens are stored in acidic glasses or, as in many cases, in open cardboard boxes (Fig. 2). Moving the collection or single drawers sometimes caused damages like spilling the boxes and spreading shells and labels in the drawer. In some cases, specimens could be re-identified because of their excellent description or illustration and reunited with their original labels. Fig. 3 shows some original labels from the Shuttleworth collection.

A few bibliographic notes should be added. After Shuttleworth's death, the famous French malacologist Paul Fischer received the plates of the unpublished second part of the *Notitiae Malacologicae*. A text was not in existence, Shuttleworth obviously had not had the time or energy in his late years to finish it. In 1877, Fischer published the plates with a very short text. The original plates of Shuttleworth contained engraved captions with the names of the illustrated species, among them new species. These are considered as indications and thus, these taxa are available with the authorship of Shuttleworth.

Shuttleworth also intended to illustrate his descriptions of new species from the Canary Islands, but the plates were not published during his lifetime. In 1975, W. Backhuys edited the original plates. On page 8, a manuscript page of the "*Notitiae Malacologicae*, 1. Heft" in Shuttleworth's handwriting can be found.

In this context it has to be mentioned that a few of the species described from the Canary Island reached Shuttleworth via exchange with Moquin-Tandon from Toulouse and Barthélémy-Lapommeraye, who was director of the Museum in Marseille. Some of these specimens were given back by him and should be located in the respective museums and university collections. For reasons of better information, Moquin-Tandon selected specimens from the collections of Webb, Terver and Michaud, which he had at hand, for Shuttleworth. Obviously, these specimens were a gift, and they still are in the Natural History Museum Berne and contain original material or probably even syntypes of species described by these authors.

In 1854, Shuttleworth published three works, two of them in the "*Mittheilungen der naturforschenden Gesellschaft Bern*" in March and June 1854, and a third one in the "*Annals of Lyceum of Natural History New York*" in March. All three publications contained his ideas on (and descriptions of) the land shells of Puerto Rico and the neighbouring island of St. Thomas (USA, Virgin Islands). In the latter list of land shells from St. Thomas, Shuttleworth indicates several species as new, which also occur in the March publication of 1854. We were not able to trace the exact publication days, but as the full descriptive text is in almost all cases given in the "*Mittheilungen*", we consider this work as the valid description of the respective taxa.



The catalogue published here contains information on 129 nominal pulmonate taxa described by Shuttleworth. Of these, we have been able to identify type specimens of 117 species in his collection. Four species were only found in the Museums of Zurich and Neuchâtel, four species are stored in the Natural History Museum of Marseille and four taxa could not be traced or identified until now. Many of the types have never been illustrated before. If possible, we selected the most complete, colourful and representative specimen for the photo. All types are databased and bear a registration number, which may not be confused with the former numbers sometimes written on the shells or stamped on the labels.

### **Robert James Shuttleworth – his life and his scientific work**

Robert James Shuttleworth was born in February 1810 in Dawlish, South Devon, England. He was the son of James Shuttleworth (1766–1846) and of Anna Maria Roper (1770–1810). When his mother died shortly after childbirth, the boy was looked after by near relatives. He returned home when his father married again. Later on the family moved to Switzerland, where they first settled in Geneva, then in Solothurn (Guthnick 1874).

In Geneva, Shuttleworth spent some time at the famous boys' boarding school of the author and cartoonist Rodolphe Toepffer (1799–1846). At that time Geneva had a good reputation in the field of botany, due to the scientific work of Augustin Pyrame de Candolle (1778–1841). This great botanist engaged Nicolas Charles Seringe (1776–1858) as curator of his herbarium. Seringe became an important teacher for Shuttleworth. Together, they roamed the surroundings of Geneva, the Salève Mountain, and in this way Shuttleworth broadened his knowledge in botany.

Seringe was appointed to Lyon, France, and Shuttleworth, 18 years old, went first to Weimar, Germany, where he met Goethe, and then studied in Frankfurt and Heidelberg.

In 1830, Shuttleworth came back to Solothurn and spent the summer days in the Jura mountains to botanize. In the same year he began his studies at the University of Edinburgh, where he also attended lectures in medicine. During the cholera epidemic, he visited different hospitals.

When Shuttleworth married Susette von Sury, the daughter from a noble family in Solothurn in summer 1833, the bonds to Switzerland became durable and tightened. The young couple settled in Berne where Shuttleworth turned to the plants again. The nearby mountains offered him an inexhaustible field

for botanical studies, and he published some of his results in an English magazine (Shuttleworth 1836). A further publication deals with red algae colouring the snow (Shuttleworth 1840).

In the forties he formed a friendship with Jean de Charpentier (1786–1855), geologist and director of the salt mines in Bex, Switzerland. Charpentier was also a botanist but later began to collect and study molluscs, and he published a catalogue of Swiss land and freshwater molluscs (Charpentier 1837). He could convey his fascination for the snails to Shuttleworth. Many labels in the Shuttleworth collection carry the remark “Charp.” which points to joint excursions or a frequent exchange. Shuttleworth devoted himself to the shells with the same enthusiasm as before to botany. Research on molluscs fully occupied him for the next 20 years. Through many contacts to the leading contemporary malacologists and dealers, he acquired a great deal of shell material of scientific importance. Shuttleworth, as a private scholar, even had the resources to finance the expedition of the Bernese dealer and naturalist Bernhard Blauner (1803–1853), first to Corsica, then to the Antilles. In a relatively short time he built up a very large collection containing shells from all parts of the world and of the whole systematic range.

Another leading malacologist of that time was Albert Mousson (1805–1890), professor in physics at the Swiss Federal Institute of Technology in Zurich and at the University of Zurich. The two men were joined in a long-standing friendship, as can be inferred from the letters of Mousson found in the files of Shuttleworth. The scientific work of Shuttleworth was highly esteemed by Mousson who also admired the large collection of his Bernese friend. Mousson, in his calm and collected way, could prevent Shuttleworth from publishing an incensed answer to the German malacologist Louis Pfeiffer (1804–1877), who unjustly criticized a paper of Shuttleworth. Mousson was also interested in the shell material that Blauner would find on the Antilles and he helped Shuttleworth with the foundation of a joint-stock company. The shell material that Blauner sent back from his expedition was given to this company and was then divided between Shuttleworth and Mousson according to their shareholdings.

On his trip to the Antilles, Blauner was detained on the Canary Islands because of an epidemic on the Antilles. He used the time to collect snails and was able to send a large amount of shell material to Switzerland, which was revised by Shuttleworth (1852a, c, 1853a) and Mousson (1872). As can be concluded from letters of Mousson, both malacologists were quite happy about the amount of new species. In May 1852, Blauner arrived on the Antilles and collected mainly in Puerto Rico and on the Virgin Island St. Thomas. Blauner never re-

turned from his collecting trip. He was taken ill with tuberculosis and died. But his shell material that found the way to Switzerland resulted in the descriptions of many new species (Shuttleworth 1853a, 1854a, b, c).

Shells from the Antilles and the Canary Islands form a prominent part in the collection of Shuttleworth, with many type specimens. The collection also contains a large amount of material from the Indopacific region, mostly from the collector and dealer Hugh Cuming (1791–1865). Other important suppliers of shell material were: Charles Baker Adams (1814–1853) and Thomas B. Bland (1809–1885), both collected in the Caribbean region; Ludwig Parreyss (1799–1879), a Viennese collector and dealer, supplied Shuttleworth with material mainly from the Mediterranean and from the Balkans; Ferdinand Rugel (1806–1878), a German botanist, collected shells in the south-eastern United States; Jules Pierre Verreaux (1807–1873), a naturalist and explorer from Paris, amassed a large collection of Indopacific, Australian and African shells.

All in all the collection of Shuttleworth contains several thousand species from land, freshwater and marine habitats. Besides the species that Shuttleworth described himself, his collection contains a large amount of additional type specimens, sent to him by their authors.

Due to his scientific work in botany and malacology, great honours were bestowed upon Shuttleworth. In 1853, he was elected a corresponding member of the Lyceum of Natural History in New York, the present-day New York Academy of Sciences, and on November 10<sup>th</sup> 1856 he was given an honorary doctorate by the University of Basel.

It seems that Shuttleworth had a broad interest in other natural sciences. He was a member of the “Naturforschende Gesellschaft Bern” (1835–1874) and of the Swiss Entomological Society (1860–1874). As a selfless man, often engaged in non-profit activities, he became a member of the Masonic Lodge in 1847 and supported its ideas enthusiastically (Tschumi 1903).

Shuttleworth and his wife had to endure hard strokes of fate; they lost both their children. Their daughter died at the age of seven, and their son Henry, who studied medicine at the Universities of London and Cambridge, died in 1866. Gout attacks forced Shuttleworth to spend the winter months in warmer regions. He found a new home in Hyères, in Southern France, where he rented part of a castle. When he felt better, he went out to collect and to study plants. But his health got worse and he died on April 19<sup>th</sup> 1874.

Shuttleworth had good connections to the Natural History Museum in Berne, as several donations of minerals and of skins of birds (Güntert & al., in press) confirm. In 1866, he gave his son’s collection of beetles to the museum. From 1856–1864 he was a member of the committee of the Natural History Mu-

seum. In 1850, he had already promised to give his private shell collection to the museum, provided that it could be stored in an appropriate way, and in 1874 he bequeathed his collection to the museum. His large herbarium went to the Natural History Museum in London; pieces of wood and seeds came to the Botanical Garden in Berne.

### The scientific publications of Robert James Shuttleworth

- Shuttleworth, R.J. (1836): Account of a botanical excursion in the Alps of the Canton of Valais, Switzerland, in August 1835; and catalogue of the plants collected, with occasional remarks. — Magazine of Zoology and Botany 7: 1–24; 8: 25–41; 12: 43–75.
- (1840): Nouvelles observations sur la matière colorante de la neige rouge. — Bibliothèque Universelle Genève 1840: 1–25.
  - (1843a): Über die Land- und Süßwasser-Mollusken von Corsica. — Mitt. Naturf. Ges. Bern 1843 (No. 2, 3): 9–21.
  - (1843b): Über den Bau der Schale der zweischaligen Mollusken des frischen Wassers. — Mitt. Naturf. Ges. Bern 1843 (No. 7): 53–56.
  - (1844): Über das Vorkommen des Löss in der Schweiz bei Basel. — Mitt. Naturf. Ges. Bern 1844 (No. 36–38): 196–199.
  - (1845): Über *Gyrotoma*, eine neue Gattung der Melaniana, Gasteropoda, Pectinibranchiata. — Mitt. Naturf. Ges. Bern 1845 (No. 50): 85–88.
  - (1848): Über *Bulimus ovoideus* BRUG. — Zeitschrift für Malakozoologie 5: 79.
  - (1852a): Diagnosen einiger neuen Mollusken aus den Canarischen Inseln. — Mitt. Naturf. Ges. Bern 1852 (No. 241, 242): 137–146.
  - (1852b): Diagnosen neuer Mollusken. — Mitt. Naturf. Ges. Bern 1852 (No. 248, 249): 193–208.
  - (1852c): Diagnosen neuer Mollusken. — Mitt. Naturf. Ges. Bern 1852 (No. 260, 261): 289–304.
  - (1853a): Über den Bau der Chitoniden, mit Aufzählung der die Antillen und die Canarischen Inseln bewohnenden Arten. — Mitt. Naturf. Ges. Bern 1853 (No. 286–291): 169–207.
  - (1853b): Critische Beleuchtung der zur Gruppe *Sagda* BECK, Albers, gehörenden westindischen Heliceen. — Mitt. Naturf. Ges. Bern 1853 (No. 302–307): 297–335.
  - (1854a): Beiträge zur näheren Kenntniss der Land- und Süßwasser-Mollusken der Insel Portorico. — Mitt. Naturf. Ges. Bern 1854 (No. 314–316): 33–56.
  - (1854b): Catalogue of the terrestrial and fluviatile shells of St. Thomas, West Indies. — Ann. Lyc. Nat. Hist. N.Y. 6: 68–73.
  - (1854c): Beiträge zur näheren Kenntniss der Land- und Süßwasser-Mollusken der Insel Portorico. — Mitt. Naturf. Ges. Bern 1854 (No. 321, 322): 89–103.
  - (1855): Remarques sur la note de M. Marcel de Serres relative au genre *Stoa*. — Ann. Sci. Nat., série 4, Zoologie 4: 319–320.
  - (1856a): Notitiae Malacologicae oder Beiträge zur näheren Kenntniss der Mollusken. 1. Heft. — 90 pp. + 9 Tafeln. Haller, Bern.



- (1856b): Description de nouvelles espèces. Première décade; espèces nouvelles pour la faune des Antilles. — *Journal de Conchyliologie* 5: 168–175.
- (1857): Essai critique sur quelques espèces du genre *Cyclostoma*. — *Journal de Conchyliologie* 5: 261–272.
- (1872a): Énumération des plantes rares ou remarquables de la Corse. — In: Campbell, Th.: Notes sur l’île de Corse en 1868. Dédiées à ceux qui sont à la recherche de la santé et du plaisir: 291–313.
- (1872b): Énumération des mollusques terrestres et d’eau douce de la Corse. — In: Campbell, Th.: Notes sur l’île de Corse en 1868. Dédiées à ceux qui sont à la recherche de la santé et du plaisir: 314–320. [In the English original from 1868, the molluscan part is missing. A separatum was published by B.F. Haller; bibliographic information from Falkner & al. 2002: 337.]
- (1877): Notitiae Malacologicae oder Beiträge zur näheren Kenntniss der Mollusken. 2. Heft. — P. Fischer ed., 16 pp. + 15 Tafeln. Engelmann, Leipzig. [The Berne edition was published in 1878.]
- (after 1854): Diagnosen neuer Mollusken: Nr. 1–7. — 163 pp. Haller, Bern. [Private edition of his publications from the “Mittheilungen der naturforschenden Gesellschaft Bern” during the years 1852–1854.]
- (1975): Tabulae ineditae Molluscorum Insularum Canariensium. — W. Backhuys ed., 43 pp. + 8 Tafeln. Goecke & Evers, Krefeld.

## Systematic section

The species account follows the alphabetical order. Affiliation of a nominal taxon described by Shuttleworth to a present-day genus or family aims at a fast orientation of the reader. We are aware that in several cases, our conclusions may be incorrect (even on that level) and would be very grateful for additional information.

### Abbreviations:

AD	aperture diameter
AH	aperture height
D	shell diameter
H	shell height
MHNM	Muséum d’Histoire Naturelle de Marseille
MHNN	Muséum d’Histoire Naturelle de Neuchâtel
NMBE	Naturhistorisches Museum Bern (Natural History Museum Berne)
ZMZ	Zoologisches Museum der Universität Zürich
[ ]	comments of the authors

***acicularis, Stenogyra (Subulina)***

Plate 8, fig. 2

1854a *Stenogyra (Subulina) acicularis* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1854: 49.

Type material: Holotype NMBE 18895.

Type locality: Puerto Rico “specimen unicum prope Fajardo”, leg. Blauner 1853.

Taxonomy: Subulinidae, *Leptinaria*.

Remarks: This species recalls *Leptinaria gracilis* PILSBRY, 1908, from Port au Prince on Haiti (Pilsbry 1908: 299, pl. 44 fig. 66).

***acus, Spiraxis***

1852b *Spiraxis acus* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1852: 207.

Type material: No type material could be found in the collection of NMBE, probably lost.

Type locality: Mexico “Cordova, Vera Cruz”, ex Jacot-Guillarmod.

Taxonomy: Oleacinidae.

***adjaciensis, Clausilia***

Plate 5, fig. 1

1843a *Clausilia adjaciensis* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1843: 18 [sub *Clausilia kuesteri* ROSSMÄSSLER].

Type material: Syntypes NMBE 19082/21.

Type locality: Not mentioned in the text, but the label reads “Corsica, Ajaccio”, leg. Blauner.

Taxonomy: Clausiliidae, *Cochlodina (Procochlodina)*.

Remarks: For additional remarks refer to *Clausilia meisneriana*.

***alabastrina, Stenogyra (Opeas)***

Plate 8, fig. 6

1854a *Stenogyra (Opeas) alabastrina* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1854: 47.

Type material: Syntypes NMBE 18897/4.

Type locality: Puerto Rico “prope San Juan, ubi spec. 4 legit Blauner”, 1853.

Taxonomy: Subulinidae, *Opeas*.

***albopunctulata, Gaeotis***

Plate 7, fig. 1

1854a *Gaeotis albopunctulata* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1854: 36.

Type material: Lectotype NMBE 18853a, paralectotypes NMBE 18853b/1, NMBE 18854/1?

Type locality: Puerto Rico “prope Humacao ad truncos arborum”, leg. Blauner 1853.

Type designation: Breure (1974: 242).

Taxonomy: Amphibulimidae, *Gaeotis*.

Remarks: NMBE 18854 was probably not checked by Breure or not considered to be conspecific.

***antillarum, Leptinaria***

Plate 8, fig. 3

1854a *Leptinaria antillarum* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1854: 50.

Type material: Syntypes NMBE 18888/6, NMBE 18889/6, NMBE 18890/22.

Type locality: Puerto Rico “prope Humacao, sub foliis et herba”, leg. Blauner.

Taxonomy: Subulinidae, *Leptinaria*.

Remarks: Shuttleworth separated from the same locality a var., which is characterised “gracilior, lamella validior”. The original label reads “*antillarum* var. *gracilior*” (NMBE 18889). As Shuttleworth frequently repeated the text of the descriptions of the “varietas” on his labels, we interpret “gracilior” as a descriptive adjective and not as a nomenclaturally relevant name. Pilsbry (1908: 288, 289) treats *L. antillarum* as a junior subjective synonym of *L. lamellata* (POTIEZ & MICHAUD, 1838). In NMBE 18890 Isenschmid substituted the original label by his own (locality: Humacao).

***approximans, Succinea***

Plate 2, fig. 1

1854a *Succinea approximans* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1854: 55.

Type material: Syntypes NMBE 18942/7, NMBE 18943/4 (San Juan); NMBE

18944/7, NMBE 18945/7 (Fajardo); NMBE 18946/6 (Humacao); NMBE 18947/9 (Luquillo); NMBE 18948/6 (Rio Blanco).

Type locality: Puerto Rico “prope San Juan, Fajardo, Ceiba, Humacao, Luquillo et ad Rio Blanco”, leg. Blauner 1853.

Taxonomy: Succineidae, *Succinea* (pers. comm. Robinson 2002).

Remarks: Shuttleworth separated the lots from San Juan and Fajardo respectively. The two lots from San Juan contain specimens of different size.

### ***atomus*, Pupa**

Plate 3, fig. 4

1852a *Pupa atomus* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1852: 144.

1975 *Pupa atomus* – Shuttleworth, in Backhuys (ed.), Tab. ineditae: pl. 8 fig. 4.

Type material: Syntypes NMBE 18797/2.

Type locality: Canary Islands “sub foliis, Teneriffa”, leg. Blauner 1851.

Taxonomy: Vertiginidae, *Truncatellina*.

### ***atramentaria*, Nanina**

Plate 13, fig. 1

1852b *Nanina atramentaria* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1852: 194.

1877 *Nanina atramentaria* – Shuttleworth, in Fischer (ed.), Notitiae Malac. 2: 5, pl. 1 fig. 2.

Type material: No type material in NMBE, 1 syntype in MHNN, 1 syntype ZMZ 500573.

Type locality: “In Nov. Hollandia [= Australia]: Port Philip (Mus. Neocomense)”.

Taxonomy: Rhytididae, *Victaphanta*. This species is the type species of *Victaphanta* IREDALE, 1933 by original designation (Iredale 1933: 40).

Remarks: ZMZ 500573 label reads “Victoria, Shuttleworth 1867” [= Port Philip], which means that this specimen was given to Mousson in 1867 as a gift.

***auris-muris*, *Bulimus* SHUTTLEWORTH, 1852 = *auris-myoxi*, *Bulimus* SHUTTLEWORTH, 1852**

***auris-myoxi, Bulimus***

Plate 8, fig. 1

- 1852b *Bulimus auris-muris* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1852: 200 [non *Bulimus auris-muris* MORICAND, 1837].
- 1852c *Bulimus auris-myoxi* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1852: 289 [nom. nov. pro *Bulimus auris-muris* SHUTTLEWORTH, 1852].
- Type material: Holotype NMBE 19055.
- Type locality: No locality given by Shuttleworth [but the recent genus *Chilonopsis* is endemic to St. Helena], ex Marguier 1845.
- Taxonomy: Subulinidae, *Chilonopsis*.

***bassamensis, Limicolaria***

Plate 9, fig. 1

- 1856a *Limicolaria bassamensis* SHUTTLEWORTH, Notitiae Malac. 1: 45, pl. 6 figs. 1, 2.
- Type material: Syntypes NMBE 18960/4.
- Type locality: Africa, Ivory Coast “Grand Bassam”, ex Verreaux 1854.
- Taxonomy: Achatinidae, *Limicolaria*.
- Remarks: Shuttleworth mentioned five specimens, four of them are left in NMBE. The figure represents the originally illustrated specimen.

***bethencourtiana, Helix***

Plate 30, fig. 1

- 1852a *Helix bethencourtiana* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1852: 143.
- 1975 *Helix bethencourtiana* – Shuttleworth, in Backhuys (ed.), Tab. ineditae: pl. 5 fig. 3.
- Type material: Lectotype NMBE 18811a, paralectotypes NMBE 18811b/2.
- Type locality: Canary Islands “ad rupes et in fissuris prope Santa Cruz, Teneriffa”, leg. Blauner 1851.
- Type designation: Ibáñez, Groh, Caveró & Alonso (1987: 82, pl. 1 fig. 5).
- Taxonomy: Helicidae, Helicinae, *Hemicycla*.

***bifrons, Perideris***

Plate 10, fig. 6

- 1856a *Perideris bifrons* SHUTTLEWORTH, Notitiae Malac. 1: 78, pl. 1 fig. 1.
- 1856a *Perideris bifrons* var.  $\beta$  SHUTTLEWORTH, Notitiae Malac. 1: 79.

Type material: Syntypes NMBE 18967/10, NMBE 18968/6 [labelled by Shuttleworth as *Perideris bifrons* var.  $\beta$  *incolorata*].  
Type locality: Africa, Ivory Coast “Grand Bassam”, ex Verreaux 1854.  
Taxonomy: Achatinidae, *Lignus*.  
Remarks: Shuttleworth mentioned more than 40 specimens, but in his collection, only 16 specimens are left. The var.  $\beta$  probably contains juveniles of *Perideris incolorata* SHUTTLEWORTH (loc. cit).

***blauneri, Helix***

Plate 18, fig. 2

1843a *Helix blauneri* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1843: 13.

Type material: Lectotype NMBE 19038a, paralectotypes NMBE 19038b/3.  
Type locality: The original label reads “Bastia, Calvi, Aleria, Bonifacio. Corsica”, leg. Blauner 1842.  
Type designation: Falkner & al. (2002: 123).  
Taxonomy: Oxychilidae, *Oxychilus*.  
Remarks: The lot contains two additional species (cf. Falkner & al. 2002): *Oxychilus (Oxychilus)* sp. 2 = NMBE 19038c/2, and *Oxychilus (Ortizius)* sp. 3 = NMBE 19038d/2.

***blauneri, Vitrina***

Plate 20, fig. 1

1852a *Vitrina blauneri* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1852: 138.  
1975 *Vitrina blauneri* – Shuttleworth, in Backhuys (ed.), Tab. ineditae: pl. 1 fig. 2.

Type material: Holotype NMBE 19033, original lot NMBE 19034/49 [= *lamarckii* + *blauneri*!].  
Type locality: Canary Islands “in Teneriffa legit Blauner”.  
Taxonomy: Vitrinidae, *Plutonia (Insulivitrina)* (cf. Ibáñez, Morales & Alonso 1987, Alonso & al. 2000).  
Remarks: Shuttleworth mentioned one specimen, which was collected together with *Vitrina lamarckii* from Teneriffa. The NMBE houses two lots which have to be considered in this context. The first lot (NMBE 19034) under *Vitrina lamarckii* represents the original series. The original label was substituted by Isenschmid and reads “Teneriffa”. The second lot (NMBE

19033) contains a single specimen and a modern label, but the original label of Shuttleworth is missing. This specimen measures 16.5 mm (major diameter) and 12.3 mm (minor diameter), which approaches the original measurements of 17 mm and 11 mm. We consider this specimen to be the holotype of *Plutonia (Insulivitrina) blauneri* (SHUTTLEWORTH). A re-investigation of NMBE 19034 revealed that it contains several additional juvenile specimens of *Vitrina blauneri*.

***bryodes, Zonites***

Plate 16, fig. 2

1854a *Zonites bryodes* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1854: 36.

Type material: Syntypes NMBE 18950/5 (San Juan), NMBE 18951/1 (Luquillo, ill.).

Type locality: Puerto Rico “circa oppidum San Juan, et prope Luquillo, sub foliis”, leg. Blauner 1853.

Taxonomy: Gastrodontidae, *Zonitoides*. This taxon probably represents a junior synonym of *Zonitoides arboreus* (SAY, 1816).

Remarks: Van der Schalie (1948: 49) regarded *bryodes* and *arboreus* as conspecific. His figure of *bryodes* on plate 3 fig. 12 differs in many aspects from *bryodes* SHUTTLEWORTH. We therefore consider *bryodes* sensu Van der Schalie as a different species.

***candida, Achatina (Polyphemus)***

Plate 11, fig. 1

1852b *Achatina (Polyphemus) candida* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1852: 202.

Type material: Syntype NMBE 18843/1.

Type locality: “Mexico”, leg. Sandoz ex Nicolet.

Taxonomy: Oleacinidae, *Salasiella (Salasiella)*.

Remarks: Probably more type material in coll. Nicolet in MHNN.

***candidissima, Limicolaria***

Plate 9, fig. 6

1856a *Limicolaria candidissima* SHUTTLEWORTH, Notitiae Malac. 1: 49, pl. 6 figs. 7, 8.

1904 *Limicolaria candidissima* – Pilsbry, Manual of Conchology (2) 16: 273, pl. 36 figs. 4, 5.

Type material: Holotype ZMZ 517447.

Type locality: Africa, Sudan “Cordofan”, ex Kotschy.

Taxonomy: Achatinidae, *Limicolaria*.

Remarks: The specimen from ZMZ represents the single specimen illustrated by Shuttleworth. The original label (in Mousson’s handwriting) reads “Kordofan (Kotschy 39)”.

***castanea, Pupa***

Plate 3, fig. 1

1852a *Pupa castanea* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1852: 145

1975 *Pupa castanea* – Shuttleworth, in Backhuys (ed.), Tab. ineditae: pl. 8 fig. 7.

Type material: Syntypes NMBE 19083/5.

Type locality: “Teneriffa et Palma”, leg. Blauner.

Taxonomy: Lauriidae, *Leiostyla*.

Remarks: The label written by Isenschmid reads “Canaren”. The original label is missing.

***ceratina, Helix***

Plate 29, fig. 1

1843a *Helix ceratina* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1843: 16.

Type material: Syntypes NMBE 18812/34.

Type locality: France, Corsica “bei Ajaccio, an sandigen Stellen” [close to Ajaccio, at sandy places] leg. Blauner.

Taxonomy: Helicidae, *Tyrrhenaria* (Falkner & al. 2002).

***circumlineatus, Planorbis***

Plate 1, fig. 1

1854b *Planorbis circumlineatus* SHUTTLEWORTH, Ann. Lyc. Nat. Hist. N.Y. 6: 72.

1854c *Planorbis circumlineatus* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1854: 96.

Type material: Syntypes NMBE 18952/16 (Humacao), NMBE 18953/19 (Rio Blanco).

Type locality: Puerto Rico “in rivulis lente fluentibus prope Humacao; varietas ad Rio Blanco”, leg. Blauner 1853.

Taxonomy: Planorbidae, *Biomphalaria*?



***circumsessa, Helix***

Plate 17, fig. 1

- 1852a *Helix circumsessa* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1852: 139.  
1975 *Helix circumsessa* – Shuttleworth, in Backhuys (ed.), Tab. ineditae: pl. 1 fig. 6.

Type material: Lectotype NMBE 18791a, paralectotypes NMBE 18791b/20 (Teneriffa), NMBE 18940/2 (La Palma), NMBE 18941/15 (Teneriffa).

Type locality: Canary Islands “sub saxi et foliis emortuis, Teneriffa et Palma”, leg. Blauner 1851.

Type designation: Forcart (1960: 9, pl. 2 fig. 7).

Taxonomy: Oxychilidae, *Retinella* (*Lyrodiscus*).

Remarks: Forcart selected a lectotype from a lot where Isenschmid destroyed the original label.

***clymene, Zonites***

Plate 1, fig. 2

- 1852a *Zonites clymene* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1852: 138.  
1975 *Zonites clymene* – Shuttleworth, in Backhuys (ed.), Tab. ineditae: pl. 1 fig. 5.

Type material: Syntypes ZMZ 502607/9; no syntypes in NMBE.

Type locality: Canary Islands “sub saxi et ligno putrido, consort. Puparum, prope Garachico, Teneriffa”, ex Blauner 1852.

Taxonomy: Planorbidae, *Gyraulus*.

***coementitia, Helix***

- 1852c *Helix coementitia* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1852: 291.  
1975 *Helix coementitia* – Shuttleworth, in Backhuys (ed.), Tab. ineditae: pl. 6 fig. 11.

Type material: Two syntypes should be in MHNM.

Type locality: Canary Islands “in Ins. Canariis (Mus. Massiliense)”.

Taxonomy: Hygromiidae, *Monilearia*.

***coniformis, Spiraxis (Streptostyla)***

Plate 11, fig. 3

- 1852b *Spiraxis (Streptostyla) coniformis* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1852: 206.
- 1877 *Spiraxis (Streptostyla) coniformis* – Shuttleworth, in Fischer (ed.), Notitiae Malac. 2: 15, pl. 5 fig. 6.
- Type material: Syntype NMBE 18835/1.
- Type locality: Mexico “Cordova, Vera Cruz”, leg. Jacot-Guillarmod ex Nicolet.
- Taxonomy: Oleacinidae, *Streptostyla (Streptostyla)*.
- Remarks: Probably more type material in coll. Nicolet in MHNN.

***cordofana, Limicolaria* SHUTTLEWORTH, 1856 = *kordofanus, Bulimus* L. PFEIFFER, 1848.**

***corsica, Helix***

Plate 27, fig. 1

- 1843a *Helix corsica* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1843: 15.
- Type material: Lectotype NMBE 19087a, paralectotype NMBE 19087b/1. Two specimens originally present.
- Type locality: France, Corsica “Aleria”, leg. Blauner.
- Type designation: Giusti & Manganelli (1987: 138, pl. 3 figs. A-C).
- Taxonomy: Hygromiidae, *Cyrnotheba*.

***corsica, Succinea***

Plate 2, fig. 2

- 1843a *Succinea corsica* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1843: 13.
- Type material: Syntypes NMBE 18771/35 (Corsica), NMBE 18772/12 (Corsica, Bastia), NMBE 18773/2 (Corsica, Ajaccio).
- Type locality: France, Corsica, leg. Blauner 1843. There is no type locality specified.
- Taxonomy: Succineidae. A junior synonym of *Oxyloma elegans* (Risso, 1826) (cf. Falkner & al. 2002).

***couloni, Helix***

Plate 22, fig. 3

- 1852b *Helix couloni* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1852: 197.

Type material: Syntype NMBE 18826/1.  
Type locality: Mexico “Cordova, Vera Cruz”, leg. Guillarmod [most probably Jacot-Guillarmod] ex Nicolet 1852.  
Taxonomy: Polygyridae, ?*Linsia* (Emberton 1995a: 90).  
Remarks: In the description Shuttleworth noted “Mus. Neocomense” (= MHNN), so more type material should be present in the collection of this museum.

***cumingii*, *Achatina***

Plate 10, fig. 3

1852b *Achatina cumingii* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1852: 201.  
Type material: Syntype NMBE 19054/1.  
Type locality: Africa “ad oram occidentalem Africae”, ex Cuming 1847 (No. 126).  
Taxonomy: Achatinidae, aff. *Archachatina* (*Calachatina*) *marginata* SWAINSON, 1821.  
Remarks: The Shuttleworth collection houses one specimen without a label in Shuttleworth’s handwriting (but a Cuming label is left), that matches several morphological details described by Shuttleworth. These details may be cited here “Testa... sub epidermide flavido-albida strigis latis fuscis vel nigro-castaneis...ornata;...apice obtusa, rosea;...sutura marginata; columella arcuata, basi roseo-tincta,...”. He mentioned a shell height of 77 mm and that he examined two specimens. The specimen illustrated displays the features described above and measures 77.6 mm. The second specimen mentioned by him is not in the NMBE collections, but a handwritten remark states that a label (and specimen?) has been lost. We conclude that the specimen illustrated represents one of the syntypes of *Achatina cumingii*.

***cuticula*, *Helix***

Plate 20, fig. 2

1852a *Helix cuticula* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1852: 142.  
1975 *Helix cuticula* – Shuttleworth, in Backhuys (ed.), Tab. ineditae: pl. 4 fig. 5.  
Type material: Lectotype NMBE 18785a (Teneriffa), paralectotypes NMBE 18785b/3 (Teneriffa), NMBE 18786/6 (Palma).

Type locality: Canary Islands “in fissuris rupium et sub herbis, Teneriffa et Palma”, leg. Blauner 1851.  
Type designation: Valido & al. (1993: 119, fig. 6).  
Taxonomy: Vitrinidae, Plutoniinae, *Plutonia* (*Guerrina*) (Alonso & al. 2000); type species of *Guerrina* ODHNER, 1954 by monotypy (Odhner 1954).

***delicatula, Achatina (Polyphemus)***

Plate 12, fig. 1

1852b *Achatina (Polyphemus) delicatula* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1852: 202.

Type material: Syntype NMBE 18844/1.

Type locality: Mexico “Vera Cruz”, leg. Guillarmod [probably Jacot-Guillarmod] ex Nicolet 1852.

Taxonomy: Oleacinidae, *Varicoglandina*.

Remarks: On the original label, the type locality is specified with “Cordova, Vera Cruz”. In the description, Shuttleworth added “Mus. Neocomense” (= MHNN), so more type material should be present in the collection of this museum.

***dermatina, Helix***

Plate 25, fig. 1

1854a *Helix dermatina* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1854: 41.

Type material: Lectotype NMBE 18870a, paralectotypes NMBE 18870b/2.

Type locality: Puerto Rico “ad musas prope Luquillo”, leg. Blauner 1853.

Type designation: Turner (1958: 160).

Taxonomy: Cepolidae, *Levicepolis* (pers. comm. Robinson 2002).

***discobolus, Helix***

Plate 28, fig. 1

1852c *Helix discobolus* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1852: 290.

1975 *Helix discobolus* – Shuttleworth, in Backhuys (ed.), Tab. ineditae: pl. 6 fig. 6.

Type material: Holotype NMBE 18983.

Type locality: Canary Islands “In Ins. Canariis: Gomera (Orb.)”.

Taxonomy: Hygromiidae, *Canariella* (*Salvinia*) (Alonso et al. 2003).  
Remarks: Shuttleworth mentioned one specimen, which was found in the drawer of the Moquin-Tandon collection handed over to Shuttleworth in the early 1850s. The locality on the original label is “Madera” (leg. Webb), but Shuttleworth wrote in his description “Madera (sed certe falso)”.

***dysoni*, *Helix***

Plate 22, fig. 2

1852b

*Helix dysoni* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1852: 196.

Type material: Probable syntype NMBE 15276/1.  
Type locality: “In Honduras”, leg. Dyson.  
Taxonomy: Polygyridae, ?*Linsia* (Emberton 1995a: 90).  
Remarks: Shuttleworth noted that he had seen 6 specimens (“specimina 6 vidi”), but he gave no information on their whereabouts. In the collection, three labels are left: 1 [in Shuttleworth’s handwriting]: *H. dysoni* SHUTTL. n. sp., *H. dorfeuilliana* PF. No. 1067 non LEA quoad ex. Honduras – Honduras, Cum. No. 809-50. 1846; 2 [in Shuttleworth’s handwriting]: H., Honduras, Cum. No. 809. 1846 (ut *H. dorfeuilliana* LEA – sed error); 3 [Cuming label] 50. The name of Dyson does not appear on the labels, while there is no information in the description that the material originates from Cuming. In the collection we found one specimen without a label, which matches the description in so many details that we are convinced that this could be a syntype of *H. dysoni*. Probably, the specimens and the open box containing the labels had accidentally been separated and could not be correctly reunited later on.

***ejuncida*, *Spiraxis***

Plate 12, fig. 7

1854b

*Spiraxis ejuncida* SHUTTLEWORTH, Ann. Lyc. Nat. Hist. N.Y. 6: 70.

Type material: Syntypes NMBE 19030/6 (leg. Blauner 1853), NMBE 19031/8 (ex Bland).  
Type locality: USA, Virgin Islands, St. Thomas.  
Taxonomy: Oleacinidae, *Varicella* (*Costavarix*).

Remarks: Shuttleworth separated the lot NMBE 19031/8, because it was sent by Bland in 1853 with the same locality St. Thomas. As Shuttleworth submits no collector information in the description and both lots had arrived in 1853, both are considered to be syntypes of *S. ejuncida*.

***encaustus, Bulimus***

Plate 4, fig. 2

1852c *Bulimus encaustus* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1852: 293.  
1975 *Bulimus encaustus* – Shuttleworth, in Backhuys (ed.), Tab. ineditae: pl. 7 fig. 13.

Type material: Lectotype NMBE 18818 ex coll. Mousson; remaining paralectotypes ZMZ 513755/2 coll. Mousson.

Type locality: Canary Islands “sub foliis Crassulacearum et in fissuris rupium, Insulae Palma”, ex Blauner 1852.

Type designation: Alonso & al. (1995: 312, pl. 1 fig. 7 left).

Taxonomy: Enidae, *Napaeus* (*Napaeus*).

***engonata, Helix***

Plate 14, fig. 1

1852a *Helix engonata* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1852: 139.  
1975 *Helix engonata* – Shuttleworth, in Backhuys (ed.), Tab. ineditae: pl. 1 figs. 9, 10.

Type material: Syntypes NMBE 18790/69.

Type locality: Canary Islands “sub saxi et ligno prope Garachico, Teneriffa”, leg. Blauner 1851.

Taxonomy: Discidae, *Discus* (*Gonyodiscus*).

***euclasta, Helix***

Plate 25, fig. 3

1854a *Helix euclasta* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1854: 38.  
1854b *Helix euclasta* SHUTTLEWORTH, Ann. Lyc. Nat. Hist. N.Y. 6: 68.

Type material: Syntypes NMBE 18875/6 (St. Thomas), NMBE 18876/4 (var. β, Insula Vièque).

Type locality: “Forma typica in Insula St. Thomas” (leg. Blauner 1852); “var. β in Insula Vièque” (leg. Blauner 1853); “γ. prope Ponce in Insula Portorico (Bland!)”.

Taxonomy: Cepolidae (Helminthoglyptidae), *Plagioptycha*.  
Remarks: The typical population originates from St. Thomas, Virgin Islands. The lot collected by Bland from Ponce on Puerto Rico could not be found in the collection. Thompson (1987: 102) and Robinson (pers. comm. 2002) treat *euclasta* as a subspecies of *Plagioptycha musicola* (SHUTTLEWORTH, 1854).

***eximia, Spiraxis (Columna)***

Plate 13, fig. 2

1852b *Spiraxis (Columna) eximia* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1852: 208.

1877 *Achatina eximia* – Shuttleworth, in Fischer (ed.), Notitiae Malac. 2: 13, pl. 4 fig. 2.

Type material: Holotype NMBE 18819.

Type locality: “Madagascar”, ex Verreaux.

Taxonomy: Acavidae, *Clavator (Clavator)*.

Remarks: Recently, Shileyko (1999) resurrected the family name Clavatoridae THIELE, 1926 for the bulimoid Acavidae of Madagascar. We follow Emberton (1995b) and Groh & Poppe (2002), who keep *Clavator* in the family Acavidae.

***felina, Limicolaria***

Plate 9, fig. 2

1856a *Limicolaria felina* SHUTTLEWORTH, Notitiae Malac. 1: 47, pl. 6, figs. 5, 6.

Type material: Syntypes MNBE 18958/5 (Grand Bassam), NMBE 18959/4 (Gabon).

Type locality: Africa “Gabon”, ex Verreaux; Ivory Coast “Grand Bassam”, ex Verreaux 1854.

Taxonomy: Achatinidae, *Limicolaria*.

Remarks: The specimen illustrated by Shuttleworth originates from the lot from Gabon, which is complete (four specimens). The second lot from “Grand Bassam” contains only five specimens instead of seven.

***festinans, Zonites***

Plate 17, fig. 3

- 1852a *Zonites festinans* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1852: 138.  
1975 *Zonites festinans* – Shuttleworth, in Backhuys (ed.), Tab. ineditae: pl. 1 fig. 4.

Type material: Holotype NMBE 18766.  
Type locality: Canary Islands “sub foliis emortuis, Palma – specimen unicum”, leg. Blauner 1851.  
Taxonomy: Pristilomatidae, *Vermetum*.  
Remarks: Only one specimen originally mentioned, which thus has to be considered as the holotype.

***filicosta, Cylindrella***

Plate 5, fig. 7

- 1852c *Cylindrella filicosta* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1852: 296.

Type material: Syntypes NMBE 18863/2.  
Type locality: Mexico “Cordova, Vera Cruz”, leg. Jacot-Guillarmod ex Nicolet.  
Taxonomy: Urocoptidae, Holospirinae, *Gymnocentrum*.  
Remarks: Type species of *Gymnocentrum* PILSBRY, 1942 by original designation (Pilsbry 1942).

***flavescens, Spiraxis (Streptostyla)***

Plate 11, fig. 6

- 1852b *Spiraxis (Streptostyla) flavescens* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1852: 206.  
1877 *Spiraxis (Streptostyla) flavescens* – Shuttleworth, in Fischer (ed.), Notitiae Malac. 2: 15, pl. 5 fig. 7.

Type material: Syntypes NMBE 18836/2.  
Type locality: Mexico “Cordova, Vera Cruz”, leg. Jacot-Guillarmod ex Nicolet.  
Taxonomy: Oleacinidae, *Streptostyla (Streptostyla)*.

***flavolineata, Gaeotis***

Plate 7, fig. 2

- 1854a *Gaeotis flavolineata* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1854: 35.

Type material: Lectotype NMBE 18856a (Rio Blanco), paralectotypes NMBE



18856b/1 (Rio Blanco) not mentioned by Breure (1974), NMBE 18857/1 (Sierra de Luquillo) identified as *G. albopunctulata* SHUTTLEWORTH by Breure (1974).

Type locality: Puerto Rico “ad truncos et folia Musarum in Sierra de Luquillo et ad Rio Blanco”, leg. Blauner 1853.

Type designation: Breure (1974: 241).

Taxonomy: Amphibulimidae, *Gaeotis*.

***fortunata, Helix***

Plate 28, fig. 2

1852a *Helix fortunata* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1852: 141.

1975 *Helix fortunata* – Shuttleworth, in Backhuys (ed.), Tab. ineditae: pl. 2 fig. 4.

Type material: Lectotype NMBE 18936a, paralectotypes NMBE 18936b/28, NMBE 18937/8; ZMZ 508672/4.

Type locality: Canary Islands “sub saxis et foliis plantarum prope Santa Cruz, Teneriffa”, leg. Blauner 1851.

Type designation: Ibáñez & al. (1995: 119, fig. 8).

Taxonomy: Hygromiidae, *Canariella* (*Canariella*).

Remarks: Shuttleworth separated the specimens from lot NMBE 18937 with the remark “var.” on the original label. The name *fortunata* is available according to Gittenberger & Groh (1986). Ibáñez & al. (1995: 119) mentioned 7 instead of 28 paralectotypes from NMBE No. 307 (= old number of NMBE 18936 written on the shells), and 2 instead of 4 paralectotypes from the lot ZMZ 508672 (Santa Cruz, Teneriffa; Blauner 1852), where they did not add any label however.

***gabonensis, Pseudachatina***

Plate 10, fig. 1

1856a *Pseudachatina gabonensis* SHUTTLEWORTH, Notitiae Malac. 1: 86, pl. 8 figs. 5, 6.

Type material: Lectotype NMBE 19035a, paralectotypes NMBE 19035b/2 (ex Verreaux), NMBE 19036/1 (ex Redfield), NMBE 19037/2 (ex Haines).

Type locality: “Gabon”.

Type designation: Pain & Paul (1967: 52). The lectotype is the specimen originally figured by Shuttleworth on plate 8 figs. 5, 6.

Taxonomy: Achatinidae, *Pseudachatina*.  
Remarks: Shuttleworth mentioned 10 specimens ex Verreaux (not 12 as erroneously stated by Pain & Paul). The examination revealed that only 3 of the remaining 6 specimens definitely originate from Verreaux (1855). The remaining 3 specimens stem from Redfield (1 spec.) and Haines (2 spec.). On their respective labels Shuttleworth noted as entering date 1855, so these specimens were available to him in 1856. All these specimens are conspecific, and under this point of view, their status as paralectotypes is here accepted.

***glasiana*, *Helix***

Plate 30, fig. 2

1852a *Helix glasiana* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1852: 143.  
1975 *Helix glasiana* – Shuttleworth, in Backhuys (ed.), Tab. ineditae: pl. 4 fig. 9.

Type material: Syntypes NMBE 18807/3.  
Type locality: Canary Islands “ex insulis Canariis a d. Cuming accipi”, ex Cuming 1846.  
Taxonomy: Helicidae, *Hemicycla* (*Hemicycla*).  
Remarks: The original label of Cuming is missing, but there is a note on Shuttleworth’s label reading “Cuming No. 779”.

***gompharium*, *Stenogyra* (*Opeas*)**

Plate 8, fig. 7

1854a *Stenogyra* (*Opeas*) *gompharium* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1854: 47.

Type material: Syntypes NMBE 18896/3.  
Type locality: Puerto Rico “prope San Juan specimina 3 legit Blauner”.  
Taxonomy: Subulinidae, *Opeas*?

***guillarmodi*, *Helix***

Plate 13, fig. 3

1852b *Helix guillarmodi* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1852: 199.  
Type material: Syntypes NMBE 19080/3.

Type locality: Mexico “prope Vera Cruz”, leg. Guillarmod [probably Jacot-Guillarmod] ex Nicolet.  
Taxonomy: Humboldtianidae, Leptariontinae, *Leptarionta*.  
Remarks: The locality on the original label is “Cordova, Veracruz”.

***heldreichi, Helix***

Plate 29, fig. 2

1846 *Helix heldreichi* L. PFEIFFER, Symb. hist. helic. 3: 78.  
1852b *Helix heldreichi* – Shuttleworth, Mitt. Naturf. Ges. Bern 1852: 195.  
Type material: Neotype NMBE 18825, remaining original specimens NMBE 18824/5.  
Type locality: Greece “Athenae ad Acropolin”, leg. Heldreich.  
Type designation: Subai (1996: 18, pl. 3 fig. 22).  
Taxonomy: Helicidae, Helicinae, *Chilostoma* (*Thiessea*) (Subai 1996).

***hopetonensis, Helix***

Plate 21, fig. 2

1852b *Helix hopetonensis* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1852: 198.  
1940 *Triodopsis hopetonensis* – Pilsbry, Monogr. Acad. Nat. Sci. Philadelphia 3. 1 (2): 811.  
Type material: Syntypes NMBE 18828/16.  
Type locality: USA “prope Hopeton, Georgia”, leg. Rugel.  
Taxonomy: Polygyridae, *Triodopsis* (*Triodopsis*) (cf. Emberton 1995a: 86).

***hyalina, Succinea***

Plate 2, fig. 3

1854a *Succinea hyalina* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1854: 56.  
Type material: Syntypes NMBE 18949/3.  
Type locality: Puerto Rico “ad Rio Blanco”, leg. Blauner 1853.  
Taxonomy: Succineidae.

***hypolepta, Helix***

Plate 20, fig. 3

1854a *Helix hypolepta* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1854: 37.

Type material: Syntypes NMBE 19073/54.  
Type locality: “in Insula Bermuda”, ex Bland 1853.  
Taxonomy: Thysanophoridae, *Thysanophora*.

***incolorata, Perideris***

Plate 10, fig. 4

1856a *Perideris incolorata* SHUTTLEWORTH, Notitiae Malac. 1: 81, pl. 2 figs. 4, 5.

Type material: Syntypes NMBE 18969/4, NMBE 18970/2.  
Type locality: Africa, Ivory Coast “ad Grand Bassam”, ex Verreaux 1854.  
Taxonomy: Achatinidae, *Lignus*.  
Remarks: Only six specimens out of 12 are left in NMBE. The illustrated specimen probably represents the original figure 4 on plate 2. Shuttleworth separated the two lots. NMBE 18970 probably contains juvenile specimens of *P. incolorata*.

***ingallsiana, Helix***

Plate 22, fig. 1

1877 *Helix ingallsiana* SHUTTLEWORTH, in FISCHER (ed.), Notitiae Malac. 2: 10, pl. 3 fig. 5.

1940 *Mesodon clausus* – Pilsbry, Monogr. Acad. Nat. Sci. Philadelphia 3. 1 (2): 712.

Type material: Syntype NMBE 19046/1.  
Type locality: unknown.  
Taxonomy: Polygyridae, ?*Mesodon*.  
Remarks: In our opinion, this name is available under ICZN 12.2.7, because the name was cited in the caption of plate 3. There is no original label left in the collection because of mis-curation by Isenschmid. The specimen illustrated here very certainly represents the specimen figured by Shuttleworth (1877). Pilsbry (1940: 714) identifies *ingallsiana* with a form of *clausus* living in southern Alabama and designates a neotype in the collection of the Academy of Natural Sciences in Philadelphia (ANSP 113522). This action was initiated by the fact that Th. Studer, at that time curator of zoology in NMBE, was not able to identify a syntype specimen of *ingallsiana* in the Shuttleworth collection. We here consider the neotype selection of Pilsbry as invalid, because the originally illustrated

specimen exists and the name is available with Shuttleworth's authorship (ICZN 75.8).

***insititia, Helix***

Plate 24, fig. 1

1854a

*Helix insititia* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1854: 41.

Type material: Syntypes NMBE 19086/3.

Type locality: "Haiti", ex Cuming 1850 (No. 206) [the label reads "St. Domingo"].

Taxonomy: Camaenidae, *Caracolus*.

***interrupta, Glandina***

Plate 12, fig. 8

1854a

*Glandina interrupta* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1854: 51.

Type material: Syntypes NMBE 18899/4.

Type locality: Puerto Rico "sub foliis delapsis prope Luquillo", leg. Blauner 1853.

Taxonomy: Oleacinidae, *Laevaricella* (Baker 1941: 29; 1962: 144).

***intincta, Helix***

Plate 23, fig. 3

1852b

*Helix intincta* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1852: 196.

Type material: Syntype NMBE 15268/1.

Type locality: "In insulis Philippinis", ex Verreaux.

Taxonomy: Cochlostylidae, *Chloraea* (*Corasia*).

Remarks: This taxon is identical with *Cochlostyla* (*Corasia*) *sphaerion meridionalis* MOELLENDORFF, 1893, which is treated by Zilch (1982) as a junior synonym of *Chloraea* (*Corasia*) *sphaerion* (SOWERBY, 1841). The colour form *meridionalis* was described from "Placer, Mindanao".

***iodes, Orthalicus***

Plate 6, fig. 2

1856a

*Orthalicus iodes* SHUTTLEWORTH, Notitiae Malac. 1: 68, pl. 4 fig. 8.

Type material: Syntypes NMBE 19045/3.

Type locality: Columbia “in Andibus Columbiae”, ex Cuming 1848.  
Taxonomy: Orthalicidae, *Orthalicus*?  
Remarks: The label reads “*Ach. n. sp.*, Andes Columbia, Cuming No. 316, 1848”, the final collection label of Shuttleworth is missing. The specimen illustrated here represents the original figure 8 on plate 4.

***iolarynx, Perideris***

Plate 10, fig. 5

1856a *Perideris iolarynx* SHUTTLEWORTH, Notitiae Malac. 1: 80, pl. 2 fig. 1.

Type material: Syntypes NMBE 18971/3.  
Type locality: Africa, Ivory Coast “ad Grand Bassam”, ex Verreaux 1854.  
Taxonomy: Achatinidae, *Lignus*.  
Remarks: Three specimens are mentioned originally. The specimen illustrated here represents the original figure 1 on plate 2.

***irrigua, Spiraxis (Streptostyla)***

Plate 11, fig. 7

1852b *Spiraxis (Streptostyla) irrigua* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1852: 205.

1877 *Spiraxis (Streptostyla) irrigua* – Shuttleworth, in Fischer (ed.), Notitiae Malac. 2: 15, pl. 5 fig. 5.

Type material: Syntype NMBE 18837/1.  
Type locality: Mexico “Cordova, Vera Cruz”, leg. Jacot-Guillarmod ex Nicolet.  
Taxonomy: Oleacinidae, *Streptostyla (Streptostyla)*.  
Remarks: The anatomy of this species was treated by Baker (1943), his illustration reproduced by Schileyko (2000: 861, fig. 1134). Both authors assigned the species to the subgenus *Chersomitra*, although they obviously did not check the syntypes. This species clearly belongs to *Streptostyla* s. str., the anatomical observations of both authors cited for *Streptostyla* as well as *Chersomitra* have to be interpreted under this point of view. Additionally, *irrigua* was published in 1852, not 1885 (Schileyko, loc. cit.). Probably more type material in coll. Nicolet in MHNN.

**kordofanus, *Bulimus***

Plate 9, figs. 7, 8

- 1848 *Bulimus kordofanus* (PARREYSS) L. PFEIFFER, Monogr. Helic. 2: 179 [cited in the synonymy of *B. adansoni* L. PFEIFFER].
- 1856a *Limicolaria cordofana* SHUTTLEWORTH, Notitiae Malac. 1: 41, pl. 6 figs. 3, 4.
- 1904 *Limicolaria cordofana* SHUTTLEWORTH – Pilsbry, Manual of Conchology (2) 16: 273, pl. 36 figs. 4, 5.

Type material: Originals ZMZ 517398/1 (Cordofan), NMBE 18980/1 (Senaar).

Type locality: Africa, Sudan “Cordofan”, coll. Mousson ex Kotschy 1839.

Taxonomy: Achatinidae, *Limicolaria*.

Remarks: The name *kordofanus* is available with the authorship of L. PFEIFFER, 1848, because it was subsequently used by Shuttleworth for an accepted taxon (ICZN 11.6.1, a name published in the synonymy). Specimens were distributed by Kotschy and Parreyss in 1839, and subsequently reached Shuttleworth. He was the first to formally describe the species. He illustrated on his plate 6 figs. 3, 4 one adult specimen from the collection of Mousson, which is here shown again. The specimen NMBE 18980 is a juvenile and only measures 44.2 mm in height, but, as can be seen from our plate, NMBE 18980 in fact represents a specimen of *kordofanus*. We consider the specimens from NMBE as well as ZMZ as part of the original series. Shuttleworth mentioned “specimen unicum adultum exstat” and thus did not exclude the existence of juvenile specimens like NMBE 18980.

**latevittata, *Porphyrobaphe***

Plate 6, fig. 1

- 1856a *Porphyrobaphe latevittata* SHUTTLEWORTH, Notitiae Malac. 1: 71, pl. 5 figs. 2, 3.

Type material: Syntypes NMBE 18965/3.

Type locality: Peru “in Peruvia ab oriente Andium prope Tarapoto”, ex Moricand.

Taxonomy: Orthalicidae, *Porphyrobaphe*.

Remarks: Shuttleworth mentioned three specimens, which could be traced in the collection. An original label of Shuttleworth is missing, but a label of Moricand reading “*B. adamsonii*” is

left. One of the specimens (here figured) could be identified as the original on plate 5, figs. 2, 3.

***lenis, Zonites***

Plate 17, fig. 2

1852a *Zonites lenis* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1852: 138.  
1975 *Zonites lenis* – Shuttleworth, in Backhuys (ed.), Tab. ineditae: pl. 1 fig. 3.

Type material: Syntypes NMBE 18769/11, NMBE 18770/9.  
Type locality: Canary Islands “Palma, sub foliis emortuis”, leg. Blauner 1851.  
Taxonomy: Oxychilidae, *Retinella* (*Lyrodiscus*).  
Remarks: Shuttleworth separated the two lots and added the remark “var.” on the label of NMBE 18769.

***leprosa, Helix***

1852a *Helix leprosa* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1852: 142.  
1975 *Helix leprosa* – Shuttleworth, in Backhuys (ed.), Tab. ineditae: pl. 3 fig. 10.

Type material: Syntype(s) probably lost.  
Type locality: Canary Islands “sub filicibus semel in Teneriffa legit Blauner”.  
Taxonomy: Hygromiidae, *Canariella* (subgenus?) (Alonso & al. 2003).  
Remarks: Probably only one specimen.

***luquillensis, Helix***

Plate 23, fig. 1

1854a *Helix luquillensis* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1854: 40.

Type material: Syntypes NMBE 18867/10, NMBE 18868/9.  
Type locality: Puerto Rico “in formatione schistoso-lutosa nigra ad truncos Palmarum in montibus dictis Sierra de Luquillo”, leg. Blauner 1853.  
Taxonomy: Camaenidae, *Luquillia*.  
Remarks: This is the type species of *Luquillia* CROSSE, 1892 by monotypy (Crosse 1892). In NMBE 18868 Isenschmid substituted



the original label by his own (locality: “Sierra de Luquillo, Portorico”).

***lurida, Spiraxis (Streptostyla)***

Plate 11, fig. 8

1852b *Spiraxis (Streptostyla) lurida* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1852: 205.

1877 *Spiraxis (Streptostyla) lurida* – Shuttleworth, in Fischer (ed.), Notitiae Malac. 2: 14, pl. 5 fig. 4.

Type material: Syntypes NMBE 18838/2.

Type locality: Mexico “Cordova, Vera Cruz”, leg. Jacot-Guillarmod ex Nicolet.

Taxonomy: Oleacinidae, *Streptostyla (Chersomitra)*.

***lymneiformis, Spiraxis (Streptostyla)***

Plate 11, fig. 4

1852b *Spiraxis (Streptostyla) lymneiformis* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1852: 206.

1877 *Spiraxis (Streptostyla) lymneiformis* – Shuttleworth, in Fischer (ed.), Notitiae Malac. 2: 15, pl. 5 fig. 8.

Type material: Syntypes NMBE 18839/2.

Type locality: Mexico “Cordova, Vera Cruz”, leg. Jacot-Guillarmod ex Nicolet.

Taxonomy: Oleacinidae, *Streptostyla (Chersomitra)?*

***macilenta, Zonites***

Plate 16, fig. 3

1852b *Zonites macilenta* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1852: 195.

Type material: Syntype NMBE 19052/1.

Type locality: USA “in Tennessee orientali”, leg. Ruge 1845.

Taxonomy: Gastrodontidae, *Ventridens*.

Remarks: The original label of Shuttleworth reads “*H. n. sp. Tennessee orient. Ruge. 1845*”. The specimen measures 7.99 mm (major diameter), 7.40 mm (minor diameter) and 3.01 mm (height), which fits very well the measurements given by Shuttleworth: 8 mm, 7.33 mm and 3 mm respectively. Pilsbry (1946: 457) treats *Z. macilenta* as junior synonym of *Ventridens lasmodon* (PHILLIPS, 1841).

***marcida, Helix***

- 1852c *Helix marcida* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1852: 291.  
1975 *Helix marcida* – Shuttleworth, in Backhuys (ed.), Tab. ineditae: pl. 6 fig. 7.

Type material: One specimen (holotype) in MHNM.  
Type locality: Canary Islands “in Ins. Canariis (Mus. Massiliense)”.  
Taxonomy: Hygromiidae, *Leptaxis* (pers. comm. Groh 2002).  
Remarks: The type locality is most probably erroneous (Bank & al. 2002).

***margaritacea, Stenogyra (Opeas)*** Plate 8, fig. 8

- 1854a *Stenogyra (Opeas) margaritacea* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1854: 47.

Type material: Syntypes NMBE 18898/10.  
Type locality: Puerto Rico “Rio Blanco in Sierra de Luquillo”, leg. Blauner 1853.  
Taxonomy: Subulinidae, *Allopeas*. This taxon probably represents a junior synonym of *Allopeas micra* (D’ORBIGNY, 1835) (pers. comm. Robinson 2002).

***marmorata, Cyliodrella*** Plate 5, fig. 3

- 1852c *Cyliodrella marmorata* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1852: 297.

Type material: Syntypes NMBE 18864/44.  
Type locality: Cuba “ad rupes in valle Yumury prope Matanzas”, leg. Rugel 1849.  
Taxonomy: Urocoptidae, Tetrentodontinae, *Tetrentodon*.

***maugeana, Helix*** Plate 30, fig. 3

- 1852c *Helix maugeana* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1852: 292.  
1975 *Helix maugeana* – Shuttleworth, in Backhuys (ed.), Tab. ineditae: pl. 5 fig. 2.

Type material: Syntypes NMBE 18810/2.  
Type locality: Canary Islands “in Ins. Canariis”, ex Cuming 1846.  
Taxonomy: Helicidae, *Hemicycla* (*Hemicycla*).

***meisneriana*, *Clausilia***

Plate 5, fig. 2

1843a *Clausilia meisneriana* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1843: 18.

Type material: Syntypes NMBE 18794/15.  
Type locality: France, Corsica “Fiumorbe”, leg. Blauner.  
Taxonomy: Clausiliidae, *Cochlodina* (*Procochlodina*).  
Remarks: Falkner & al. (2002: 112) synonymized *adjaciensis* SHUTTLEWORTH, 1843 with the commonly used name *meisneriana* SHUTTLEWORTH, 1843. This procedure can be justified as action of the first revising authors under the assumption of a synonymy of *adjaciensis* with *meisneriana*. However, the authors did not check the syntypes of both nominal taxa. The syntypes presented here show important conchological differences, and a synonymisation should be postponed until a taxonomical revision of the *meisneriana*-complex from Corsica is done.

***melolontha*, *Helix***

1852c *Helix melolontha* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1852: 290.  
1975 *Helix melolontha* – Shuttleworth, in Backhuys (ed.), Tab. ineditae: pl. 6 fig. 12.

Type material: One specimen (holotype) in MHNM.  
Type locality: Canary Islands “in Ins. Canariis (Mus. Massiliense)”.  
Taxonomy: Hygromiidae, aff. *Discula* (pers. comm. Groh 2002).  
Remarks: According to Bank & al. (2002), this is most probably not a Macaronesian taxon.

***mitraeformis*, *Spiraxis* (*Streptostyla*)**

Plate 11, fig. 9

1852b *Spiraxis* (*Streptostyla*) *mitraeformis* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1852: 205.

- 1877 *Spiraxis (Streptostyla) mitraeformis* – Shuttleworth, in Fischer (ed.), Notitiae Malac. 2: 14, pl. 5 fig. 3.
- Type material: Syntypes NMBE 18840/3.
- Type locality: Mexico “Cordova, Vera Cruz”, leg. Jacot-Guillarmod ex Nicolet.
- Taxonomy: Oleacinidae, *Streptostyla (Chersomitra)*.

***mordax, Helix***

Plate 15, fig. 1

- 1852b *Helix mordax* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1852: 195.
- Type material: Syntypes NMBE 19051/8.
- Type locality: USA, Carolina “in mont. Carolinae sept.”, leg. Rugel 1845.
- Taxonomy: Discidae, *Anguispira alternata*-complex. *Helix mordax* represents one of the numerous forms of *alternata* (SAY, 1816). Pilsbry (1948: 581) repeated the discussion about this taxon and, amongst others, compared it to *A. cumberlandi* (LEA, 1840), following Shuttleworth. However, this species has a filiform keel and thus profoundly differs from *mordax*. Pilsbry did not have the original specimens of *mordax* at his disposal, otherwise he would have recognized the resemblance of *mordax* with *A. alternata paucicostata* KUTCHKA, 1938 (cf. Pilsbry 1948: 581, fig. 314), which obviously is a junior synonym of *mordax* (Hubricht 1976).
- Remarks: The original label of Shuttleworth does not contain the name *mordax*, but the information “Mt. Carolina sept., Rugel 1845”. Additionally, there is a short text, which discusses the differences to *alternata* and which is similar to his differential diagnoses in the description. There is no doubt that the specimens left (8 from originally 12) represent the syntypes of *Helix mordax*.

***musicola, Helix***

Plate 25, fig. 2

- 1854a *Helix musicola* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1854: 38.
- Type material: Syntypes NMBE 18872/8 (Luquillo), NMBE 18873/3 (San Juan), NMBE 18874/3 (Humacao).
- Type locality: Puerto Rico “forma typica ad folia Musarum prope Luquillo;

varietas prope Humacao et San Juan, locis umbrosis ad folia delapsa”, leg. Blauner 1853.

Taxonomy: Cepolidae, *Plagioptycha*.

Remarks: This species is the type species of *Euclastaria* PILSBRY, 1926 by original designation (Pilsbry 1926).

### ***myristica*, *Helix***

1852c *Helix myristica* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1852: 292.

1975 *Helix myristica* – Shuttleworth, in Backhuys (ed.), Tab. ineditae: pl. 6 fig. 5.

Type material: One syntype probably in coll. Shuttleworth, which is destroyed. More syntype specimens in coll. Moquin-Tandon, Toulouse?

Type locality: “In Ins. Promont. Viridis (Terver in coll. Moquin-Tandon)”.

Taxonomy: Hygromiidae, aff. *Leptaxis* (pers. comm. Groh 2002).

### ***nana*, *Achatina* (*Polyphemus*)**

Plate 12, fig. 2

1852b *Achatina* (*Polyphemus*) *nana* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1852: 202.

Type material: Syntype NMBE 18845/1.

Type locality: Mexico “Cordova, Vera Cruz”, leg. Jacot-Guillarmod ex Nicolet.

Taxonomy: Oleacinidae, *Varicoglandina*?

Remarks: Probably more type material in coll. Nicolet in MHNN.

### ***nanodes*, *Bulimus***

Plate 4, fig. 5

1852a *Bulimus nanus* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1852: 144 [non *Bulimus nanus* LAMARCK, 1804 nec REEVE, 1849].

1852c *Bulimus nanodes* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1852: 289.

1975 *Bulimus nanodes* – Shuttleworth, in Backhuys (ed.), Tab. ineditae: pl. 7 figs. 7, 8.

Type material: Lectotype NMBE 18800a, paralectotypes NMBE 18800b/2.

Type locality: Canary Islands “sub foliis, Teneriffa”, leg. Blauner 1851.

Type designation: Henriquez & al. (1993: 151, fig. 3A).

Taxonomy: Enidae, *Napaeus* (*Napaeinus*).

***nanus, Bulimus***

1852a *Bulimus nanus* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1852: 144 [non *Bulimus nanus* LAMARCK, 1804 nec REEVE, 1849].

Taxonomy: = *B. nanodes* SHUTTLEWORTH, 1852

***nicoleti, Spiraxis (Streptostyla)***

Plate 11, fig. 2

1852b *Spiraxis (Streptostyla) nicoleti* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1852: 204.

1877 *Spiraxis (Streptostyla) nicoleti* – Shuttleworth, in Fischer (ed.), Notitiae Malac. 2: 14, pl. 5 fig. 1.

Type material: Syntypes NMBE 18842/2.

Type locality: Mexico “Cordova, Vera Cruz”, leg. Jacot-Guillarmod ex Nicolet.

Taxonomy: Oleacinidae, *Eustreptostyla*.

Remarks: This species is the type species of *Eustreptostyla* BAKER, 1927 by original designation (Baker 1927).

***nigrolineata, Gaeotis***

Plate 7, fig. 3

1854a *Gaeotis nigrolineata* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1854: 35.

Type material: Lectotype NMBE 18850a, paralectotypes NMBE 18850b/4, NMBE 18850c/49.

Type locality: Puerto Rico “ad folia musarum in Sierra de Luquillo”.

Type designation: Breure (1974: 239).

Taxonomy: Amphibulimidae, *Gaeotis*.

Remarks: This species is the type species of *Gaeotis* SHUTTLEWORTH, 1854. NMBE 18850c was obviously not sent to Breure and thus is missing in his material list.

***nivariensis, Helix***

Plate 27, fig. 2

1852a *Helix nivariensis* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1852: 141.

1975 *Helix nivariensis* – Shuttleworth, in Backhuys (ed.), Tab. ineditae: pl. 3 fig. 4.

Type material: Syntypes NMBE 18805/58.

Type locality: Canary Islands “ad rupes calidas prope Santa Cruz, Teneriffa”, leg. Blauner 1851.  
Taxonomy: Hygromiidae, *Monilearia*. Currently a junior synonym of *Monilearia phalerata* (WEBB & BERTHELOT, 1833) (Bank & al. 2002).

***obductus, Orthalicus***

Plate 6, fig. 3

1856a *Orthalicus obductus* SHUTTLEWORTH, Notitiae Malac. 1: 61, pl. 3 figs. 1-3.

Type material: Syntypes NMBE 18955a/1, NMBE 18955b/1, NMBE 18955c/1.

Type locality: Venezuela, Barquisimeto “Barquimeseto [sic!] in Columbia, 2500 m”, ex Ed. Müller 1854.

Taxonomy: Orthalicidae, *Sultana*.

Remarks: Shuttleworth mentioned one juvenile and two adult specimens, which he received from Ed. Müller, and one juvenile specimen from Cuming. All three specimens from Müller are still present, the Cuming specimen is not in NMBE. NMBE 18955a represents the specimen on plate 3 figs. 1, 2, while NMBE 18955c represents fig. 3.

***oleacea, Helix***

Plate 27, fig. 4

1852a *Helix oleacea* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1852: 142.

1975 *Helix oleacea* – Shuttleworth, in Backhuys (ed.), Tab. ineditae: pl. 3 fig. 9.

Type material: Syntypes NMBE 18803/37.

Type locality: Canary Islands “sub foliis putridis, Palma”, leg. Blauner 1851.

Taxonomy: Hygromiidae, *Monilearia*.

***onager, Perideris***

Plate 10, fig. 7

1856a *Perideris onager* SHUTTLEWORTH, Notitiae Malac. 1: 81, pl. 2 figs. 2, 3.

Type material: Syntypes NMBE 18972/10, ZMZ 517471/1.

Type locality: Africa, Ivory Coast “Grand Bassam”, ex Verreaux 1854.  
Taxonomy: Achatinidae, *Lignus*.  
Remarks: 12 specimens mentioned originally. The originally illustrated specimens could not be identified positively (and is probably the missing one!), but as no specimen in the original lot is in perfect condition, the illustration is probably somewhat idealistic. A specimen matching the size of fig. 2 is illustrated here.

***opalescens*, *Leptinaria***

Plate 8, fig. 4

1854a *Leptinaria opalescens* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1854: 50.

Type material: Syntypes NMBE 18891/4 (San Juan), NMBE 18892/2 (Ceiba), NMBE 18893/3 (Humacao).

Type locality: Puerto Rico “prope San Juan, Ceiba, et Humacao”, leg. Blauner 1853.

Taxonomy: Subulinidae, *Leptinaria*.

***oppressa*, *Zonites***

Plate 18, fig. 1

1877 *Zonites oppressa* SHUTTLEWORTH, in Fischer (ed.), Notitiae Malac. 2: 6, pl. 2 fig. 4.

Type material: Syntype NMBE 18765/1.

Type locality: Italy, Sardinia, leg. Blauner 1844.

Taxonomy: Oxychilidae, *Oxychilus*.

Remarks: The tables including the captions on the same page, which were published in the second part of the Notitiae Malacologicae had been finished during Shuttleworth’s lifetime. Thus, the name *Zonites oppressa* SHUTTLEWORTH, indicated on plate 2 fig. 4 is available with the authorship SHUTTLEWORTH, 1877 under ICZN 12.2.7 and should not be cited with FISCHER and STUDER in SHUTTLEWORTH, 1877. The number of specimens available to Shuttleworth is not indicated originally because of the lack of any text. In the text accompanying the plates, Fischer and Studer refer to a single “type” specimen, a phrase which subsequently was copied by Paulucci (1882).



Due to this remark, Riedel (1967: 86) and Forcart (1967: 120) interpreted that specimen as “holotype”. In our opinion, this specimen should be considered a syntype rather than a holotype, because there is no definite information on the originally present number of specimens. At the moment, the collection houses one specimen (the one originally figured and re-figured here), but experience has shown that often more type specimens can be traced.

***payraudeai, Auricula myosotis* var.**

Plate 1, fig. 3

1843a *Auricula myosotis* var. *payraudeai* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1843: 18.

Type material: Syntypes NMBE 19047/56.

Type locality: France, Corsica “St. Florent”, leg. Blauner.

Taxonomy: Ellobiidae, *Myosotella*.

***pediculus, Pupa***

Plate 3, fig. 5

1852c *Pupa pediculus* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1852: 296.

Type material: Syntypes NMBE 15279/7 (Marquesas Islands), ZMZ 514634/2.

Type locality: “In insulis Marquesas et Taite”, ex Verreaux.

Taxonomy: Nesopupidae, *Sinalbinula*.

Remarks: ZMZ 514634/2 contains a label in Mousson’s handwriting reading “*Pupa pediculus* SHITTL., Marquesas Ins. (Shttl. 53)”. The two specimens were a gift of Shuttleworth to Mousson and entered the collection in Zurich in 1853.

***perlevis, Helix***

Plate 28, fig. 3

1852c *Helix perlevis* Shuttleworth, Mitt. Naturf. Ges. Bern 1852: 295.

Type material: Lectotype NMBE 18833a, paralectotype NMBE 18833b/1 (France, Corsica) [one paralectotype is destroyed]. Remaining original material NMBE 18834/3 (Italy, Sardinia).

Type locality: “Tam in Corsica quam in Sardinia”, leg. Blauner. The lot from Corsica is labelled with “Aleria, Corsica”.

Type designation: Giusti & Manganelli (1987: 131).

Taxonomy: Hygromiidae, *Monacha cantiana* fide Giusti & Manganelli (1987).

Remarks: The specimens from Sardinia (NMBE 18834) were identified by Giusti & Manganelli with *Ischnusotricha berninii* GIUSTI & MANGANELLI, 1987. The name *perlevis* was restricted to the lot from Corsica which these authors identified with *Monacha cantiana* MONTAGU, 1803.

***persimilis, Helix***

Plate 27, fig. 3

1852a *Helix persimilis* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1852: 141.

1975 *Helix persimilis* – Shuttleworth, in Backhuys (ed.), Tab. ineditae: pl. 3 fig. 8.

Type material: Syntypes NMBE 18801/31 (Teneriffa), NMBE 18802/59 (Palma).

Type locality: Canary Islands “sub saxis et ad herbas prope Santa Cruz, Teneriffa, et in Palma”, leg. Blauner 1851.

Taxonomy: Hygromiidae, *Monilearia*.

***physodes, Spiraxis (Streptostyla)***

Plate 11, fig. 5

1852b *Spiraxis (Streptostyla) physodes* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1852: 207.

Type material: Syntypes NMBE 18841/3.

Type locality: Mexico “Cordova, Vera Cruz”, leg. Jacot-Guillarmod ex Nicolet.

Taxonomy: Oleacinidae, *Streptostyla (Streptostyla)*.

***placentula, Zonites***

Plate 18, fig. 3

1852b *Zonites placentula* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1852: 194.

Type material: Syntypes NMBE 19053/3.

Type locality: USA “in Tennessee, Amer. sept.”, leg. Rugel 1845.

Taxonomy: Vitreidae, *Paravitrea* (pers. comm. Robinson 2002).

Remarks: On the original label, the specific name is missing. It reads “*H. nov. sp.*, aff. *H. demissae* BINN., sed umbilico latiori... Tennessee, Rugel 1845”. This text is so close to the original description that we consider these specimens to represent the syntypes of *Z. placentula*.

***placida, Helix***

Plate 4, fig. 1

1852a *Helix placida* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1852: 140.  
1975 *Helix placida* – Shuttleworth, in Backhuys (ed.), Tab. ineditae: pl. 2 fig. 1.  
Type material: Syntypes NMBE 18780/28, ZMZ 503338/8.  
Type locality: Canary Islands “ad truncos arb. prope Guimar, Teneriffa”, leg. Blauner 1851.  
Taxonomy: Valloniidae, *Plagyrona*.

***plagioptycha, Helix***

Plate 20, fig. 4

1854a *Helix plagioptycha* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1854: 37.  
Type material: Syntypes NMBE 18878/1 (Humacao), NMBE 18879/6 (Rio Blanco), NMBE 18880/2 (Fajardo), NMBE 18881/7 (Ceiba), NMBE 18882/3 (Vièque).  
Type locality: Puerto Rico “Humacao, Fajardo, Ceiba, ad Rio Blanco et in Insula Vièque”, leg. Blauner 1853.  
Taxonomy: Thysanophoridae, *Thysanophora*.  
Remarks: We follow Thompson (1987: 101), who treats this taxon under *Thysanophora*.

***pleurophora, Pupa***

Plate 3, fig. 6

1852c *Pupa pleurophora* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1852: 296.  
Type material: Syntypes NMBE 18861/27 (Marquesas), NMBE 18862/3 (Tahiti).  
Type locality: “In insulis Marquesas et Taite”, ex Verreaux.  
Taxonomy: Nesopupidae, *Nesopupa (Nesopupa)*.

**pompylia, *Helix***

Plate 16, fig. 1

- 1852a *Helix pompylia* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1852: 140.  
1975 *Helix pompylia* – Shuttleworth, in Backhuys (ed.), Tab. ineditae: pl. 1 fig. 12.

Type material: Syntypes NMBE 18777/3, ZMZ 502880/1.  
Type locality: Canary Islands “sub foliis emortuis, Palma”, leg. Blauner 1851.  
Taxonomy: Gastrodontidae, *Janulus*.

**porphyrostoma, *Achatina***

Plate 10, fig. 2

- 1852b *Achatina porphyrostoma* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1852: 201.

Type material: Syntypes NMBE 18820/3.  
Type locality: Africa “ad oram occidentalem Africae”, ex Cuming 1847 (No. 141).  
Taxonomy: Achatinidae, *Achatina*.

**portoricensis, *Simpulopsis***

Plate 26, fig. 1

- 1854a *Simpulopsis portoricensis* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1854: 55.

Type material: Syntypes NMBE 18860/11.  
Type locality: Puerto Rico “ad musas in Sierra de Luquillo”, leg. Blauner 1853.  
Taxonomy: Sagdidae, Platysuccineinae, *Platysuccinea*.  
Remarks: Type species of *Platysuccinea* ANCEY, 1881 by original designation (Ancey 1881).

**propinquus, *Bulimus***

Plate 4, fig. 3

- 1852a *Bulimus propinquus* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1852: 144.  
1975 *Bulimus propinquus* – Shuttleworth, in Backhuys (ed.), Tab. ineditae: pl. 7 fig. 10.

Type material: Syntypes NMBE 18792/4.

Type locality: Canary Islands “prope Santa Cruz, Teneriffa”, leg. Blauner 1851.

Taxonomy: Enidae, *Napaeus* (subgenus?).

***pulchellus, Bulimus* SHUTTLEWORTH, 1852 = *tandoniana, Achatina (Zua)* SHUTTLEWORTH, 1852**

***putillus, Bulimus***

Plate 3, fig. 3

1852c *Bulimus putillus* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1852: 295.

Type material: Syntypes NMBE 18869/24.

Type locality: Senegal “Insula Gorée” [a small island east of Dakar], ex Verreaux 1851.

Taxonomy: Pupillidae. A junior synonym of *Pupoides coenopictus* (HUTTON, 1834).

***retexta, Helix***

Plate 14, fig. 4

1852a *Helix retexta* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1852: 139.

1975 *Helix retexta* – Shuttleworth, in Backhuys (ed.), Tab. ineditae: pl. 1 fig. 8.

Type material: Syntypes NMBE 18783/13.

Type locality: Canary Islands “sub foliis emortuis, Palma”, leg. Blauner 1851.

Taxonomy: Discidae, *Discus* (*Gonyodiscus*?).

***rubicunda, Limicolaria***

Plate 9, fig. 3

1856a *Limicolaria rubicunda* SHUTTLEWORTH, Notitiae Malac. 1: 45, pl. 7 figs. 4, 5.

Type material: Syntypes NMBE 18957/2, ZMZ 517432/2.

Type locality: Africa, Guinea “Kissy”, ex Bossard 1854.

Taxonomy: Achatinidae, *Limicolaria*.

Remarks: Shuttleworth mentioned four specimens, two in his collection (NMBE) and two in coll. Mousson in ZMZ. The NMBE

specimens are juvenile, the illustrated adult syntype could be identified in ZMZ.

***rugeli, Cylindrella***

Plate 5, fig. 4

1852c *Cylindrella rugeli* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1852: 297.

Type material: Syntypes NMBE 18865/13 + 1.

Type locality: Cuba “ad rupes in valle Yumury prope Matanzas”, leg. Rugel 1849.

Taxonomy: Urocoptidae, Tetrentodontinae, *Tetrentodon*.

Remarks: The type lot contains 13 specimens with a fine ribbing, and a single specimen with coarse ribs, which represents a second species (plate 5, fig. 5).

***rugeli, Helix***

Plate 21, fig. 1

1852b *Helix rugeli* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1852: 198.

Type material: Syntypes NMBE 18827/3.

Type locality: USA “in Tennessee”, leg. Rugel 1845.

Taxonomy: Polygyridae, *Inflectarius* (*Inflectarius*) (cf. Emberton 1995a: 92).

Remarks: There are three syntypes in NMBE, which were labelled by Shuttleworth as minor. In fact, all three specimens are somewhat smaller than in the original description. Nevertheless they are considered to be syntypes as they had been collected in 1845 and thus were available for the description of the taxon in 1852. Moreover, Shuttleworth mentioned the size variation of the species. The difference in size of the actual specimens and the original description make it probable that there is more syntypical material, which is not in NMBE.

***scalarina, Cylindrella***

Plate 5, fig. 6

1852c *Cylindrella scalarina* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1852: 297.

Type material: Syntypes NMBE 18866/32 (including several juvenile shells).

Type locality: Cuba “ad rupes in valle Yumury prope Matanzas”, leg. Rugel 1849.  
Taxonomy: Urocoptidae, Tetrentodontinae, *Tetrentodon*.

***scutula, Helix***

Plate 14, fig. 2

1852a *Helix scutula* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1852: 139.  
1975 *Helix scutula* – Shuttleworth, in Backhuys (ed.), Tab. ineditae: pl. 1 fig. 7.

Type material: Syntype NMBE 18788/1.  
Type locality: Canary Islands “in mont. sub ligno putr., Teneriffa”, leg. Blauner 1851.  
Taxonomy: Discidae, *Discus* (*Gonyodiscus*?).

***sennaariensis, Bulimus***

Plate 9, fig. 4

1848 *Bulimus sennaariensis* [Parreyss] L. PFEIFFER, Monogr. Helic. 2: 180 [nom. nud.].  
1853 *Bulimus sennaariensis* L. PFEIFFER, Monogr. Helic. 3: 386 [in synonymy of *Bulimus cailliaudi* L. PFEIFFER, 1850].  
1856a *Limicolaria sennaariensis* SHUTTLEWORTH, Notitiae Malac. 1: 48, pl. 7 figs. 6, 7.

Type material: Originals NMBE 18981/1, ZMZ 517404/1.  
Type locality: Africa “Aegypt. superior”, ex Verreaux 1855 ex Cailliaud.  
Taxonomy: Achatinidae, *Limicolaria*. Pilsbry (1904: 282) relegates this taxon into the synonymy of *L. flammata* (CAILLIAUD, 1823).  
Remarks: Pfeiffer mentioned the name *sennaariensis* in 1853 in the synonymy of his *B. cailliaudi* with the remarks “Mus. Brit. (Fér. hist. t. 141 fig. 3?)”. According to ICZN 11.6.1 (a name published in the synonymy), he herewith made this name available. This name was later used for an accepted taxon by Shuttleworth in 1856a. Thus, *sennaariensis* has the authorship of L. PFEIFFER, 1853. Shuttleworth as first revising author excluded (with a questionmark) the figure of Férussac cited by Pfeiffer. The remaining remark of Pfeiffer “Mus. Brit.” obviously concerns a label in the British Museum. We believe that all these specimens originate from the same source (i.e. Cailliaud, who sold material to shell sellers of that time). For

this reason we conclude that the specimens in Zurich as well as in Berne form part of the original series. This is of particular interest, because the collection of Pfeiffer was destroyed during World War II (pers. comm. Zilch fide Urbanski), and specimens like those described here may be used for future neotype designations.

***servilis, Helix***

Plate 15, fig. 3

- 1852a *Helix servilis* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1852: 140.  
1975 *Helix servilis* – Shuttleworth, in Backhuys (ed.), Tab. ineditae: pl. 2 fig. 2.
- Type material: No type material in NMBE, but ZMZ 503343/6 (Garachico, Teneriffa) have to be considered syntypic.
- Type locality: Canary Islands “ad saxa prope Garachico, Teneriffa, et in Palma”, ex Blauner 1852.
- Taxonomy: Punctidae, *Paralaoma* (cf. Bank & al. 2002).

***steursiana, Helix***

Plate 23, fig. 2

- 1852b *Helix steursiana* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1852: 200.
- Type material: Holotype NMBE 18831.
- Type locality: Indonesia “Amboyna”, leg. Stuers [sic!] 1845.
- Taxonomy: Camaenidae, *Papuina* (*Rhynchotrochus*?).
- Remarks: In the original description, Shuttleworth mentioned a single specimen, which eo ipso represents the holotype.

***steursii, Nanina***

Plate 19, fig. 1

- 1852b *Nanina steursii* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1852: 194.
- Type material: Syntype NMBE 18823/1.
- Type locality: Indonesia “Amboyna”, leg. Stuers [sic!] 1845.
- Taxonomy: Ariophantidae, *Naninia*.
- Remarks: Shuttleworth mentioned that he had two specimens in his collection, but there is only one left.



***stigmatica, Achatina (Polyphemus)***

Plate 12, fig. 3

1852b *Achatina (Polyphemus) stigmatica* Shuttleworth, Mitt. Naturf. Ges. Bern 1852: 202.

Type material: Syntype NMBE 18846/1.

Type locality: Mexico "Cordova, Vera Cruz", leg. Jacot-Guillarmod ex Nicolet.

Taxonomy: Oleacinidae, *Varicoglandina*.

Remarks: Probably more type material in coll. Nicolet in MHNN.

***strigata, Limicolaria luctuosa var.***

Plate 9, fig. 5

1856a *Limicolaria luctuosa* var. *strigata* SHUTTLEWORTH, Notitiae Malac. 1: 51.

Type material: Holotype NMBE 18982.

Type locality: "Africa occ.", ex Marguier.

Taxonomy: Achatinidae, *Limicolaria*.

Remarks: Shuttleworth mentioned "specimen unicum varietatis a Marguier!"

***stylodon, Leptinaria***

Plate 8, fig. 5

1854a *Leptinaria stylodon* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1854: 50.

Type material: Syntypes NMBE 18894/4.

Type locality: Puerto Rico "prope Humacao, sub ligno putrido, spec. 4 legit Blauner", 1853.

Taxonomy: Subulinidae, *Leptinaria*. Pilsbry (1908: 292) treats this taxon as a synonym of *Leptinaria monodon* C.B. ADAMS, 1849 from Jamaica.

***subalbolabris, Helix clausa var.***

1877 *Helix clausa* var. *subalbolabris* SHUTTLEWORTH, in Fischer (ed.), Notitiae Malac. 2: 10, pl. 3 fig. 2.

Type material: Syntypes lost?

Type locality: unknown.

Taxonomy: Polygyridae, ?*Mesodon*.  
Remarks: This name indicated on plate 3 fig. 2 is available with the authorship SHUTTLEWORTH, 1877 under ICZN 12.2.7. The illustrated specimen could not yet be traced in the collection.

***subaquila, Helix***

Plate 26, fig. 2

1854a *Helix subaquila* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1854: 37.

1854b *Helix subaquila* SHUTTLEWORTH, Ann. Lyc. Nat. Hist. N.Y. 6: 68.

Type material: Syntypes NMBE 18883/11 (Humacao), NMBE 18884/8 (Luquillo), NMBE 18885/6 (San Juan), NMBE 18886/6 (Fajardo), NMBE 18887/1 (Ceiba).

Type locality: Puerto Rico “prope Ceiba, Fajardo, San Juan, Humacao et Luquillo, etiam in Insula Vièque”, leg. Blauner 1853.

Taxonomy: Sagdidae, *Hyalosagda (Microsagda)* (cf. Baker 1962: 143).

***subtilis, Achatina***

Plate 12, fig. 4

1854b *Achatina subtilis* SHUTTLEWORTH, Ann. Lyc. Nat. Hist. N.Y. 6: 70.

Type material: Syntypes NMBE 19032/3.

Type locality: USA, Virgin Islands, St. Thomas, ex Bland 1853.

Taxonomy: Oleacinidae, *Vagavarix*.

***sulculosa, Glandina***

Plate 12, fig. 5

1854a *Glandina sulculosa* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1854: 52.

Type material: Syntypes NMBE 18903/3 (San Juan), NMBE 18904/3 (Humacao).

Type locality: Puerto Rico “prope San Juan et Humacao”, leg. Blauner 1853.

Taxonomy: Oleacinidae, *Vagavarix* (Baker 1941: 28; pers. comm. Robinson 2002).

Remarks: Shuttleworth recognized this species as very similar to *Glandina terebraeformis* SHUTTLEWORTH, 1854, but separated them on the basis of shell sculpture and stature. Van der Schalie (1948: 64) pointed to the great variation in shape, size and

sculpture of the shells he examined, and treated *sulculosa* and *terebraeformis* as conspecific. Robinson (pers. comm. 2002) confirms this view.

***tabidus, Bulimus***

Plate 4, fig. 4

- 1852a *Bulimus tabidus* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1852: 143.  
1975 *Bulimus tabidus* – Shuttleworth, in Backhuys (ed.), Tab. ineditae: pl. 7 fig. 4.

Type material: Syntypes NMBE 18795/6.

Type locality: Canary Islands “prope Santa Cruz, Teneriffa”, leg. Blauner 1851.

Taxonomy: Enidae, *Napaeus* (*Napaeinus*).

***taeniata, Pupa***

Plate 3, fig. 2

- 1852a *Pupa taeniata* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1852: 144  
1975 *Pupa taeniata* – Shuttleworth, in Backhuys (ed.), Tab. ineditae: pl. 8 fig. 6.

Type material: Syntypes NMBE 19084a/3 (Palma), NMBE 19084b/3 (Teneriffa), NMBE 19085a/7 (Palma), NMBE 19085b/17 (Teneriffa).

Type locality: Canary Islands “sub foliis emortuis etc., Teneriffa et Palma”, leg. Blauner 1851.

Taxonomy: Lauriidae, *Leiostyla*.

Remarks: Shuttleworth separated the lots NMBE 19085a, b with the remark “var.” written on the original label. The type lots of *taeniata* contain two species: *Leiostyla taeniata* (SHUTTLEWORTH, 1852) (= NMBE 19084a, b; NMBE 19085a) and *Leiostyla castanea* (SHUTTLEWORTH, 1852) (= NMBE 19085b). We here illustrate a syntype from Palma (NMBE 19084a), which represents *taeniata* as subsequently understood by Shuttleworth and others.

**tandoniana, Achatina (Zua)**

Plate 15, fig. 2

- 1852c *Achatina (Zua) tandoniana* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1852: 293.
- 1852c *Bulimus pulchellus* – Shuttleworth, Mitt. Naturf. Ges. Bern 1852: 293 [nomen nudum].
- 1975 *Zua tandoniana* – Shuttleworth, in Backhuys (ed.), Tab. ineditae: pl. 8 fig. 1.

Type material: Syntype NMBE 18985/1.

Type locality: “In Ins. Canariis – Pico Branco”, ex Moquin-Tandon ex Webb.

Taxonomy: Ferussaciidae, *Amphorella*. A junior synonym of *Amphorella (Fusillus) oryza* (LOWE, 1852) (cf. Bank & al. 2002).

Remarks: The syntype specimen was accompanied by a label in the handwriting of Moquin-Tandon with the manuscript name *pulchellus* MOQUIN-TANDON. This name was cited by Shuttleworth in the synonymy of *tandoniana* and thus represents a nomen nudum. The type locality “Ins. Canariis” is erroneous, this species lives exclusively on Porto Santo, Madeira Archipelago. “Pico Branco” is one of the main peaks of Porto Santo (450 m in height).

**terebraeformis, Glandina**

Plate 12, fig. 6

- 1854a *Glandina terebraeformis* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1854: 52.

Type material: Syntypes NMBE 18900/3 (Ceiba), NMBE 18901/4 (Rio Blanco).

Type locality: Puerto Rico “prope Ceiba et ad Rio Blanco”, leg. Blauner 1853.

Taxonomy: Oleacinidae, *Vagavarix* (pers. comm. Robinson 2002).

Remarks: For additional remarks refer to *Glandina sulculosa*.

**textilis, Helix**

Plate 14, fig. 3

- 1852a *Helix textilis* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1852: 140.
- 1975 *Helix textilis* – Shuttleworth, in Backhuys (ed.), Tab. ineditae: pl. 1 fig. 11.

Type material: Syntypes NMBE 18781/3.

Type locality: Canary Islands “sub ligno putrido, Palma”, leg. Blauner 1851.

Taxonomy: Discidae, *Discus* (*Gonyodiscus*?).

***trullisatus*, *Orthalicus***

Plate 6, fig. 4

1856a *Orthalicus trullisatus* SHUTTLEWORTH, Notitiae Malac. 1: 58, pl. 5 fig. 1.

Type material: Syntypes NMBE 18962/2.

Type locality: Peru “ab oriente Andium prope Tarapoto”, ex Moricand.

Taxonomy: Orthalicidae, *Sultana*.

Remarks: Shuttleworth mentioned three specimens, which he received from Moricand, a collection label of his hand is missing. Two specimens of the type lot could be identified. The original label (of Moricand?) reads “Gallina Sultana”. One specimen is identical with the originally figured specimen. The shell of the second specimen is so close that it undoubtedly represents another syntype. The third specimen is probably lost. Shuttleworth gave as measurements H = 90 mm, D = 52 mm, AH = 53 mm, AD = 33 mm; the re-identified specimen has H = 87.4 mm, D = 54.5 mm, AH = 51.8 mm, AD = 30.8 mm.

***umbicula*, *Helix***

1852c *Helix umbicula* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1852: 290.

1975 *Helix umbicula* – Shuttleworth, in Backhuys (ed.), Tab. ineditae: pl. 6 fig. 10.

Type material: One specimen (holotype) in MHNM.

Type locality: Canary Islands “in Ins. Canariis (Mus. Massiliense)”.

Taxonomy: Hygromiidae, ?*Plebecula* (pers. comm. Groh 2002).

Remarks: The type locality is erroneous, this taxon is endemic to Madeira.

***uvulifera*, *Helix***

Plate 21, fig. 3

1852b *Helix uvulifera* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1852: 199.

Type material: Syntypes NMBE 18830/32.

Type locality: USA, Florida “in Insulis parvis ‘Long Keys’ sinu dicto ‘Sara-zota’, Florida Austr.”, leg. Rugel Aug. 1845.  
Taxonomy: Polygyridae, *Daedalochila* (*Daedalochila*) (cf. Emberton 1995: 92).

***vitellus*, *Nanina***

Plate 19, fig. 2

1852b *Nanina vitellus* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1852: 194.

Type material: Syntype NMBE 18822/1.  
Type locality: Indonesia “Amboyna”, leg. Stuers [sic!] 1845.  
Taxonomy: Ariophantidae, *Naninia*.  
Remarks: Only one specimen is left in the collection, although Shuttleworth mentioned 4 specimens.

## The pulmonate supraspecific taxa described by Shuttleworth

### ***Streptostyla* SHUTTLEWORTH, 1852**

1852b *Streptostyla* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1852: 203, 204.

Type species: *Achatina streptostyla* L. PFEIFFER, 1846 by tautonymy.  
Taxonomy: Schileyko (2000: 859) treats *Streptostyla* in the Oleacinidae. Robinson (pers. comm. 2002) uses this genus in the Spiraxidae.

### ***Gaeotis* SHUTTLEWORTH, 1854**

1854a *Gaeotis* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1854: 34.

Type species: *Gaeotis nigrolineata* SHUTTLEWORTH, 1854 by subsequent designation (Thiele 1931: 667).

Taxonomy: Amphibulimidae, currently valid genus (Breure 1974).

### ***Stenogyra* SHUTTLEWORTH, 1854**

1854a *Stenogyra* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1854: 45.

- Type species: *Bulimus terebraster* LAMARCK, 1822 by subsequent designation (Pilsbry 1906: 258).
- Taxonomy: Subulinidae, currently valid genus (Zilch 1959: 357; Schileyko 1999: 497).

#### ***Pseudobalea* SHUTTLEWORTH, 1854**

1854a *Pseudobalea* SHUTTLEWORTH, Mitt. Naturf. Ges. Bern 1854: 46.

- Type species: *Balea dominicensis* L. PFEIFFER, 1851, by monotypy.
- Taxonomy: Coeliacidae, currently valid genus (Zilch 1959: 359; Schileyko 1999: 505).

#### ***Porphyrobaphe* SHUTTLEWORTH, 1856**

1856a *Porphyrobaphe* SHUTTLEWORTH, Notitiae Malac. 1: 69/70.

- Type species: *Bulinus iostoma* SOWERBY, 1824 by subsequent designation (Albers 1860: 227).
- Taxonomy: Orthalicidae, currently valid genus (Schileyko 1999).

#### ***Perideris* SHUTTLEWORTH, 1856**

1856a *Perideris* SHUTTLEWORTH, Notitiae Malac. 1: 69/70 [non BRANDT, 1835 (Holothuria)].

- Type species: *Lignus tenuis* GRAY, 1834 by subsequent designation (Schileyko 1999: 488).
- Taxonomy: Achatinidae, synonym of *Lignus* GRAY, 1834 (Schileyko 1999).



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## Index

The index provides information on the illustration of the type specimens following an alphabetical order of the families.

Acavidae	<i>eximia, Spiraxis (Columna)</i>	Plate 13, fig. 2
Achatinidae	<i>bassamensis, Limicolaria</i>	Plate 9, fig. 1
	<i>bifrons, Perideris</i>	Plate 10, fig. 6
	<i>candidissima, Limicolaria</i>	Plate 9, fig. 6
	<i>cumingii, Achatina</i>	Plate 10, fig. 3
	<i>felina, Limicolaria</i>	Plate 9, fig. 2
	<i>gabonensis, Pseudachatina</i>	Plate 10, fig. 1
	<i>incolorata, Perideris</i>	Plate 10, fig. 4
	<i>iolarynx, Perideris</i>	Plate 10, fig. 5
	<i>kordofanus, Bulimus</i>	Plate 9, figs. 7, 8
	<i>onager, Perideris</i>	Plate 10, fig. 7
	<i>porphyrostoma, Achatina</i>	Plate 10, fig. 2
	<i>rubicunda, Limicolaria</i>	Plate 9, fig. 3
	<i>sennaariensis, Bulimus</i>	Plate 9, fig. 4
	<i>strigata, Limicolaria luctuosa</i> var.	Plate 9, fig. 5
Amphibulimidae	<i>albopunctulata, Gaeotis</i>	Plate 7, fig. 1
	<i>flavolineata, Gaeotis</i>	Plate 7, fig. 2
	<i>nigrolineata, Gaeotis</i>	Plate 7, fig. 3
Ariophantidae	<i>steursii, Nanina</i>	Plate 19, fig. 1
	<i>vitellus, Nanina</i>	Plate 19, fig. 2
Camaenidae	<i>insititia, Helix</i>	Plate 24, fig. 1
	<i>luquillensis, Helix</i>	Plate 23, fig. 1
	<i>steursiana, Helix</i>	Plate 23, fig. 2
Cepolidae	<i>dermatina, Helix</i>	Plate 25, fig. 1
	<i>euclasta, Helix</i>	Plate 25, fig. 3
	<i>musicola, Helix</i>	Plate 25, fig. 2
Clausiliidae	<i>adjaciensis, Clausilia</i>	Plate 5, fig. 1
	<i>meisneriana, Clausilia</i>	Plate 5, fig. 2
Cochlostylidae	<i>intincta, Helix</i>	Plate 23, fig. 3
Discidae	<i>engonata, Helix</i>	Plate 14, fig. 1
	<i>mordax, Helix</i>	Plate 15, fig. 1
	<i>retexta, Helix</i>	Plate 14, fig. 4
	<i>scutula, Helix</i>	Plate 14, fig. 2
	<i>textilis, Helix</i>	Plate 14, fig. 3

Ellobiidae	<i>payraudeaui</i> , <i>Auricula myosotis</i> var.	Plate 1, fig. 3
Enidae	<i>encaustus</i> , <i>Bulimus</i>	Plate 4, fig. 2
	<i>nanodes</i> , <i>Bulimus</i>	Plate 4, fig. 5
	<i>propinquus</i> , <i>Bulimus</i>	Plate 4, fig. 3
	<i>tabidus</i> , <i>Bulimus</i>	Plate 4, fig. 4
Ferussaciidae	<i>tandoniana</i> , <i>Achatina</i> ( <i>Zua</i> )	Plate 15, fig. 2
Gastrodontidae	<i>bryodes</i> , <i>Zonites</i>	Plate 16, fig. 2
	<i>macilenta</i> , <i>Zonites</i>	Plate 16, fig. 3
	<i>pompylia</i> , <i>Helix</i>	Plate 16, fig. 1
Helicidae	<i>bethencourtiana</i> , <i>Helix</i>	Plate 30, fig. 1
	<i>ceratina</i> , <i>Helix</i>	Plate 29, fig. 1
	<i>glasiana</i> , <i>Helix</i>	Plate 30, fig. 2
	<i>heldreichi</i> , <i>Helix</i>	Plate 29, fig. 2
	<i>maugeana</i> , <i>Helix</i>	Plate 30, fig. 3
Humboldtianidae	<i>guillarmodi</i> , <i>Helix</i>	Plate 13, fig. 3
Hygromiidae	<i>corsica</i> , <i>Helix</i>	Plate 27, fig. 1
	<i>discobolus</i> , <i>Helix</i>	Plate 28, fig. 1
	<i>fortunata</i> , <i>Helix</i>	Plate 28, fig. 2
	<i>nivariensis</i> , <i>Helix</i>	Plate 27, fig. 2
	<i>oleacea</i> , <i>Helix</i>	Plate 27, fig. 4
	<i>perlevis</i> , <i>Helix</i>	Plate 28, fig. 3
	<i>persimilis</i> , <i>Helix</i>	Plate 27, fig. 3
Lauriidae	<i>castanea</i> , <i>Pupa</i>	Plate 3, fig. 1
	<i>taeniata</i> , <i>Pupa</i>	Plate 3, fig. 2
Nesopupidae	<i>pediculus</i> , <i>Pupa</i>	Plate 3, fig. 5
	<i>pleurophora</i> , <i>Pupa</i>	Plate 3, fig. 6
Oleacinidae	<i>candida</i> , <i>Achatina</i> ( <i>Polyphemus</i> )	Plate 11, fig. 1
	<i>coniformis</i> , <i>Spiraxis</i> ( <i>Streptostyla</i> )	Plate 11, fig. 3
	<i>delicatula</i> , <i>Achatina</i> ( <i>Polyphemus</i> )	Plate 12, fig. 1
	<i>ejuncida</i> , <i>Spiraxis</i>	Plate 12, fig. 7
	<i>flavescens</i> , <i>Spiraxis</i> ( <i>Streptostyla</i> )	Plate 11, fig. 6
	<i>interrupta</i> , <i>Glandina</i>	Plate 12, fig. 8
	<i>irrigua</i> , <i>Spiraxis</i> ( <i>Streptostyla</i> )	Plate 11, fig. 7
	<i>lurida</i> , <i>Spiraxis</i> ( <i>Streptostyla</i> )	Plate 11, fig. 8
	<i>lymneiformis</i> , <i>Spiraxis</i> ( <i>Streptostyla</i> )	Plate 11, fig. 4
	<i>mitraeformis</i> , <i>Spiraxis</i> ( <i>Streptostyla</i> )	Plate 11, fig. 9
	<i>nana</i> , <i>Achatina</i> ( <i>Polyphemus</i> )	Plate 12, fig. 2
<i>nicoleti</i> , <i>Spiraxis</i> ( <i>Streptostyla</i> )	Plate 11, fig. 2	
<i>physodes</i> , <i>Spiraxis</i> ( <i>Streptostyla</i> )	Plate 11, fig. 5	

	<i>stigmatica</i> , <i>Achatina</i> ( <i>Polyphemus</i> )	Plate 12, fig. 3
	<i>subtilis</i> , <i>Achatina</i>	Plate 12, fig. 4
	<i>sulculosa</i> , <i>Glandina</i>	Plate 12, fig. 5
	<i>terebraeformis</i> , <i>Glandina</i>	Plate 12, fig. 6
Orthalicidae	<i>iodes</i> , <i>Orthalicus</i>	Plate 6, fig. 2
	<i>latevittata</i> , <i>Porphyrobaphe</i>	Plate 6, fig. 1
	<i>obductus</i> , <i>Orthalicus</i>	Plate 6, fig. 3
	<i>trullisatus</i> , <i>Orthalicus</i>	Plate 6, fig. 4
Oxychilidae	<i>blauneri</i> , <i>Helix</i>	Plate 18, fig. 2
	<i>circumsessa</i> , <i>Helix</i>	Plate 17, fig. 1
	<i>lenis</i> , <i>Zonites</i>	Plate 17, fig. 2
	<i>oppressa</i> , <i>Zonites</i>	Plate 18, fig. 1
Planorbidae	<i>circumlineatus</i> , <i>Planorbis</i>	Plate 1, fig. 1
	<i>clymene</i> , <i>Zonites</i>	Plate 1, fig. 2
Polygyridae	<i>couloni</i> , <i>Helix</i>	Plate 22, fig. 3
	<i>dysoni</i> , <i>Helix</i>	Plate 22, fig. 2
	<i>hopetonensis</i> , <i>Helix</i>	Plate 21, fig. 2
	<i>ingallsiana</i> , <i>Helix</i>	Plate 22, fig. 1
	<i>rugeli</i> , <i>Helix</i>	Plate 21, fig. 1
	<i>uvulifera</i> , <i>Helix</i>	Plate 21, fig. 3
Pristilomatidae	<i>festinans</i> , <i>Zonites</i>	Plate 17, fig. 3
Punctidae	<i>servilis</i> , <i>Helix</i>	Plate 15, fig. 3
Pupillidae	<i>putillus</i> , <i>Bulimus</i>	Plate 3, fig. 3
Rhytididae	<i>atramentaria</i> , <i>Nanina</i>	Plate 13, fig. 1
Sagdidae	<i>portoricensis</i> , <i>Simpulopsis</i>	Plate 26, fig. 1
	<i>subaquila</i> , <i>Helix</i>	Plate 26, fig. 2
Subulinidae	<i>acicularis</i> , <i>Stenogyra</i> ( <i>Subulina</i> )	Plate 8, fig. 2
	<i>alabastrina</i> , <i>Stenogyra</i> ( <i>Opeas</i> )	Plate 8, fig. 6
	<i>antillarum</i> , <i>Leptinaria</i>	Plate 8, fig. 3
	<i>auris-myoxi</i> , <i>Bulimus</i>	Plate 8, fig. 1
	<i>gompharium</i> , <i>Stenogyra</i> ( <i>Opeas</i> )	Plate 8, fig. 7
	<i>margaritacea</i> , <i>Stenogyra</i> ( <i>Opeas</i> )	Plate 8, fig. 8
	<i>opalescens</i> , <i>Leptinaria</i>	Plate 8, fig. 4
	<i>stylodon</i> , <i>Leptinaria</i>	Plate 8, fig. 5
Succineidae	<i>approximans</i> , <i>Succinea</i>	Plate 2, fig. 1
	<i>corsica</i> , <i>Succinea</i>	Plate 2, fig. 2
	<i>hyalina</i> , <i>Succinea</i>	Plate 2, fig. 3
Thysanophoridae	<i>hypolepta</i> , <i>Helix</i>	Plate 20, fig. 3
	<i>plagioptycha</i> , <i>Helix</i>	Plate 20, fig. 4

Urocoptidae	<i>filicosta</i> , <i>Cylindrella</i>	Plate 5, fig. 7
	<i>marmorata</i> , <i>Cylindrella</i>	Plate 5, fig. 3
	<i>rugeli</i> , <i>Cylindrella</i>	Plate 5, fig. 4
	<i>scalarina</i> , <i>Cylindrella</i>	Plate 5, fig. 6
Valloniidae	<i>placida</i> , <i>Helix</i>	Plate 4, fig. 1
Vertiginidae	<i>atomus</i> , <i>Pupa</i>	Plate 3, fig. 4
Vitreidae	<i>placentula</i> , <i>Zonites</i>	Plate 18, fig. 3
Vitrinidae	<i>blaureri</i> , <i>Vitrina</i>	Plate 20, fig. 1
	<i>cuticula</i> , <i>Helix</i>	Plate 20, fig. 2

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## PLATES

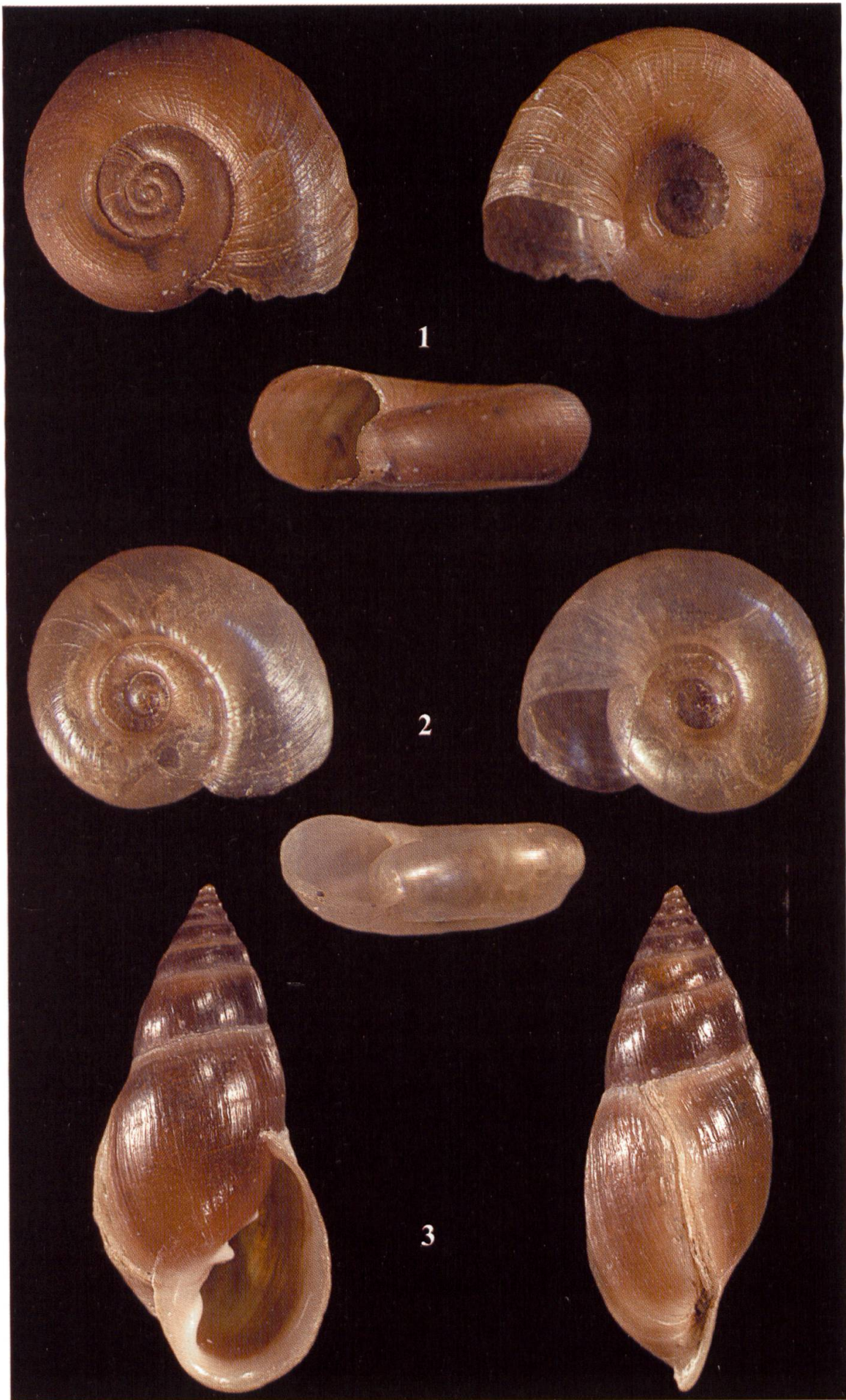
All plates phot./layout E. Neubert



## Plate 1

### Planorbidae, Ellobiidae.

- Fig. 1. *Planorbis circumlineatus* SHUTTLEWORTH, 1854, syntype NMBE 18952, Puerto Rico “prope Humacao”, leg. Blauner 1853 (D = 4.77 mm, scaled 10x).
- Fig. 2. *Zonites clymene* SHUTTLEWORTH, 1852, syntype ZMZ 502607, Canary Islands “Garachico, Teneriffa”, coll. Mousson ex Blauner 1852 (D = 2.13 mm, scaled 20x).
- Fig. 3. *Auricula myosotis* var. *payraudeaui* SHUTTLEWORTH, 1843, syntype NMBE 19047, France, Corsica “St. Florent”, leg. Blauner (H = 11.7 mm, scaled 6x).



## Plate 2

### Succineidae, all figures 6x.

- Fig. 1. *Succinea approximans* SHUTTLEWORTH, 1854, syntype NMBE 18948, Puerto Rico “Rio Blanco”, leg. Blauner 1853 (H = 12.4 mm).
- Fig. 2. *Succinea corsica* SHUTTLEWORTH, 1843, syntype NMBE 18771, France, Corsica, leg. Blauner 1843 (H = 12.8 mm).
- Fig. 3. *Succinea hyalina* SHUTTLEWORTH, 1854, syntype NMBE 18949, Puerto Rico “Rio Blanco”, leg. Blauner 1853 (H = 10.6 mm).



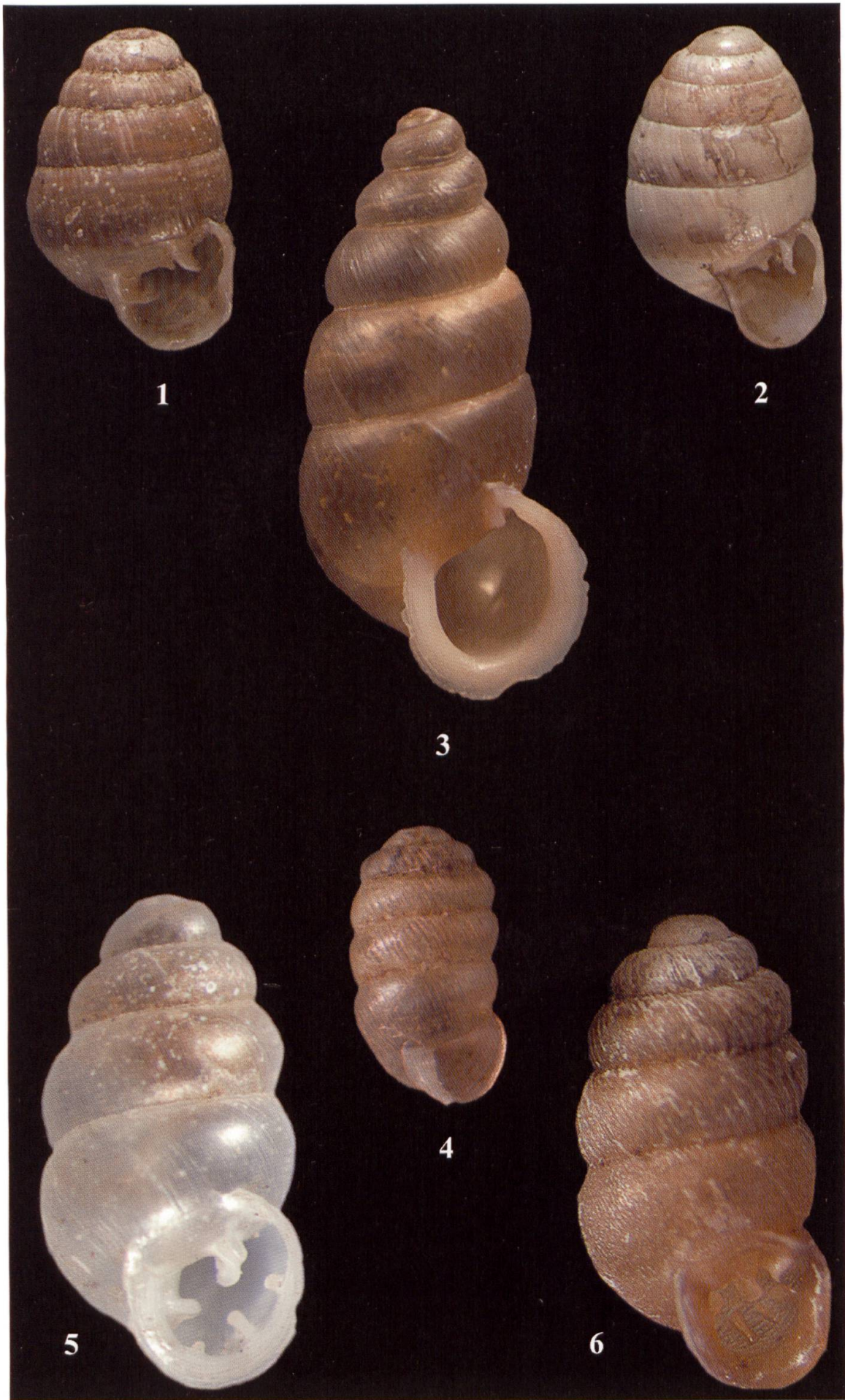


## Plate 3

### Lauriidae, Pupillidae, Vertiginidae, Nesopupidae.

- Fig. 1. *Pupa castanea* SHUTTLEWORTH, 1852, syntype NMBE 19083, Canary Islands “Teneriffa et Palma”, leg. Blauner (H = 3.0 mm, scaled 15x).
- Fig. 2. *Pupa taeniata* SHUTTLEWORTH, 1852, syntype NMBE 19084a, Canary Islands “Palma”, leg. Blauner 1851 (H = 3.0 mm, scaled 15x).
- Fig. 3. *Bulimus putillus* SHUTTLEWORTH, 1852, syntype NMBE 18869, Senegal “Insula Goreé”, ex Verreaux 1851 (H = 5.5 mm, scaled 15x).
- Fig. 4. *Pupa atomus* SHUTTLEWORTH, 1852, syntype NMBE 18797, Canary Islands “Teneriffa”, leg. Blauner 1851 (H = 1.3 mm, scaled 30x).
- Fig. 5. *Pupa pediculus* SHUTTLEWORTH, 1852, syntype ZMZ 514634, Marquesas Islands, ex Verreaux (H = 2.3 mm, scaled 30x).
- Fig. 6. *Pupa pleurophora* SHUTTLEWORTH, 1852, syntype NMBE 18861, Marquesas Islands, ex Verreaux. (H = 2.2 mm, scaled 30x).





## Plate 4

### Valloniidae, Enidae.

- Fig. 1. *Helix placida* SHUTTLEWORTH, 1852, syntype NMBE 18780, Canary Islands “Guimar, Teneriffa”, leg. Blauner 1851 (H = 2.08 mm, scaled 25x).
- Fig. 2. *Bulimus encaustus* SHUTTLEWORTH, 1852, lectotype NMBE 18818, Canary Islands “Palma”, ex coll. Mousson ex Blauner 1852 (H = 13.77 mm, scaled 5x).
- Fig. 3. *Bulimus propinquus* SHUTTLEWORTH, 1852, syntype NMBE 18792, Canary Islands “Santa Cruz, Teneriffa”, leg. Blauner 1851 (H = 13.07 mm, scaled 5x).
- Fig. 4. *Bulimus tabidus* SHUTTLEWORTH, 1852, syntype NMBE 18795, Canary Islands “Santa Cruz, Teneriffa”, leg. Blauner 1851 (H = 16.7 mm, scaled 5x).
- Fig. 5. *Bulimus nanodes* SHUTTLEWORTH, 1852, lectotype NMBE 18800, Canary Islands “Teneriffa”, leg. Blauner 1851 (H = 12.3 mm, scaled 5x).





## Plate 5

### Clausiliidae, Urocoptidae.

- Fig. 1. *Clausilia adjaciensis* SHUTTLEWORTH, 1843, syntype NMBE 19082, France “Corsica, Ajaccio”, leg. Blauner (H = 21.55 mm, scaled frontal view 5x, dorsal view 7x).
- Fig. 2. *Clausilia meisneriana* SHUTTLEWORTH, 1843, syntype NMBE 18794, France, Corsica “Fiumorbe”, leg. Blauner (H = 15.1 mm, scaled frontal view 5x, dorsal view 7x).
- Fig. 3. *Cylindrella marmorata* SHUTTLEWORTH, 1852, syntype NMBE 18864, Cuba “valle Yumury prope Matanzas”, leg. Rugel 1849 (H = 10.1 mm, scaled 7x).
- Fig. 4. *Cylindrella rugeli* SHUTTLEWORTH, 1852, syntype NMBE 18865, Cuba “valle Yumury prope Matanzas”, leg. Rugel 1849 (H = 10.1 mm, scaled 7x).
- Fig. 5. *Tetrentodon* sp. from the syntype lot of *Cylindrella rugeli* (H = 9.04 mm, scaled 7x).
- Fig. 6. *Cylindrella scalarina* SHUTTLEWORTH, 1852, syntype NMBE 18866, Cuba “valle Yumury prope Matanzas”, leg. Rugel 1849 (H = 10.1 mm, scaled 7x).
- Fig. 7. *Cylindrella filicosta* SHUTTLEWORTH, 1852, syntype NMBE 18863, Mexico “Cordova, Vera Cruz”, leg. Jacot-Guillarmod ex Nicolet (H = 25.2 mm, scaled 5x).





## Plate 6

### Orthalicidae, all figures original size.

- Fig. 1. *Porphyrobaphe latevittata* SHUTTLEWORTH, 1856, syntype NMBE 18965, Peru “prope Tarapoto”, ex Moricand (H = 80 mm).
- Fig. 2. *Orthalicus iodes* SHUTTLEWORTH, 1856, syntype NMBE 19045, Columbia “in Andibus Columbiae”, ex Cuming 1848 (H = 67.8 mm).
- Fig. 3. *Orthalicus obductus* SHUTTLEWORTH, 1856, syntype NMBE 18955a, Venezuela, Barquisimeto, 2500 m, ex Ed. Müller 1854 (H = 65.6 mm).
- Fig. 4. *Orthalicus trullisatus* SHUTTLEWORTH, 1856, syntype NMBE 18962, Peru “prope Tarapoto”, ex Moricand (H = 85 mm).





## Plate 7

### Amphibulimidae, all figures 3x.

- Fig. 1. *Gaeotis albopunctulata* SHUTTLEWORTH, 1854, lectotype NMBE 18853a, Puerto Rico "Humacao", leg. Blauner 1853 (D = 17.95 mm).
- Fig. 2. *Gaeotis flavolineata* SHUTTLEWORTH, 1854, lectotype NMBE 18856a, Puerto Rico "Rio Blanco", leg. Blauner 1853 (D = 15.3 mm).
- Fig. 3. *Gaeotis nigrolineata* SHUTTLEWORTH, 1854, lectotype NMBE 18850a, Puerto Rico "Sierra de Luquillo", leg. Blauner 1853 (D = 18.0 mm).







## Plate 8

### Subulinidae.

- Fig. 1. *Bulimus auris-myoxi* SHUTTLEWORTH, 1852, holotype NMBE 19055, type locality unknown [St. Helena], ex Marguier 1845 (H = 38.3 mm, scaled 2x).
- Fig. 2. *Stenogyra (Subulina) acicularis* SHUTTLEWORTH, 1854, holotype NMBE 18895, Puerto Rico "Fajardo", leg. Blauner 1853 (H = 9.1 mm, scaled 7x).
- Fig. 3. *Leptinaria antillarum* SHUTTLEWORTH, 1854, syntype NMBE 18888, Puerto Rico "Humacao", leg. Blauner (H = 12.1 mm, scaled 7x).
- Fig. 4. *Leptinaria opalescens* SHUTTLEWORTH, 1854, syntype NMBE 18891, Puerto Rico "San Juan", leg. Blauner 1853 (H = 5.5 mm, scaled 7x).
- Fig. 5. *Leptinaria stylodon* SHUTTLEWORTH, 1854, syntype NMBE 18894, Puerto Rico "Humacao", leg. Blauner 1853 (H = 7.0 mm, scaled 7x).
- Fig. 6. *Stenogyra (Opeas) alabastrina* SHUTTLEWORTH, 1854, syntype NMBE 18897, Puerto Rico "San Juan", leg. Blauner 1853 (H = 7.1 mm, scaled 10x).
- Fig. 7. *Stenogyra (Opeas) gompharium* SHUTTLEWORTH, 1854, syntype NMBE 18896, Puerto Rico "San Juan", leg. Blauner (H = 6.3 mm, scaled 10x).
- Fig. 8. *Stenogyra (Opeas) margaritacea* SHUTTLEWORTH, 1854, syntype NMBE 18898, Puerto Rico "Rio Blanco in Sierra de Luquillo", leg. Blauner 1853 (H = 5.2 mm, scaled 10x).





## Plate 9

### Achatinidae I, all figures 1.25x.

- Fig. 1. *Limicolaria bassamensis* SHUTTLEWORTH, 1856, syntype NMBE 18960, Ivory Coast “Grand Bassam”, ex Verreaux 1854 (H = 44.3 mm).
- Fig. 2. *Limicolaria felina* SHUTTLEWORTH, 1856, syntype NMBE 18959, Gabon, ex Verreaux (H = 38.35 mm).
- Fig. 3. *Limicolaria rubicunda* SHUTTLEWORTH, 1856, syntype ZMZ 517432, Guinea “Kissy”, ex Bossard 1854 (H = 41.3 mm).
- Fig. 4. *Bulimus sennaariensis* L. PFEIFFER, 1853, original specimen NMBE 18981, “Aegypt superior”, ex Verreaux 1855 ex Cailliaud (H = 54.6 mm).
- Fig. 5. *Limicolaria luctuosa* var. *strigata* SHUTTLEWORTH, 1856, holotype NMBE 18982, “Africa occ.”, ex Marguier (H = 46.2 mm).
- Fig. 6. *Limicolaria candidissima* SHUTTLEWORTH, 1856, holotype ZMZ 517447, Africa, Sudan “Cordofan”, ex Kotschy 1839 (H = 61.7 mm).
- Fig. 7. *Bulimus kordofanus* L. PFEIFFER, 1848, original specimen ZMZ 517398, Africa, Sudan “Cordofan”, coll. Mousson ex Kotschy 1839 (H = 55.35 mm).
- Fig. 8. *Bulimus kordofanus* L. PFEIFFER, 1848, original specimen NMBE 18980, Africa, Sudan “Sennaar”, ex Kotschy ex Mousson 1856 (H = 44.2 mm).



## Plate 10

### Achatinidae II, all figures original size.

- Fig. 1. *Pseudachatina gabonensis* SHUTTLEWORTH, 1856, lectotype NMBE 19035a, "Gabon", ex Verreaux 1855 (H = 86.2 mm).
- Fig. 2. *Achatina porphyrostoma* SHUTTLEWORTH, 1852, syntype NMBE 18820, Africa "ad oram occidentalem Africae", ex Cuming 1847 (H = 60.9 mm).
- Fig. 3. *Achatina cumingii* SHUTTLEWORTH, 1852, syntype NMBE 19054, Africa "ad oram occidentalem Africae", ex Cuming 1847 (H = 77.6 mm).
- Fig. 4. *Perideris incolorata* SHUTTLEWORTH, 1856, syntype NMBE 18969, Africa, Ivory Coast "ad Grand Bassam", ex Verreaux 1854 (H = 62.25 mm).
- Fig. 5. *Perideris iolarynx* SHUTTLEWORTH, 1856, syntype NMBE 18971, Africa, Ivory Coast "Grand Bassam", ex Verreaux 1854 (H = 63.25 mm).
- Fig. 6. *Perideris bifrons* SHUTTLEWORTH, 1856, syntype NMBE 18967, Africa, Ivory Coast "Grand Bassam", ex Verreaux 1854 (H = 47.7 mm).
- Fig. 7. *Perideris onager* SHUTTLEWORTH, 1856, syntype NMBE 18972, Africa, Ivory Coast "Grand Bassam", ex Verreaux 1854 (H = 66.0 mm).





## Plate 11

### Oleacinidae I, all figures 3x.

- Fig. 1. *Achatina (Polyphemus) candida* SHUTTLEWORTH, 1852, syntype NMBE 18843, "Mexico", leg. Sandoz ex Nicolet (H = 24 mm).
- Fig. 2. *Spiraxis (Streptostyla) nicoleti* SHUTTLEWORTH, 1852, syntype NMBE 18842, Mexico "Cordova, Vera Cruz", leg. Jacot-Guillarmod ex Nicolet (H = 32.3 mm).
- Fig. 3. *Spiraxis (Streptostyla) coniformis* SHUTTLEWORTH, 1852, syntype NMBE 18835, Mexico "Cordova, Vera Cruz", leg. Jacot-Guillarmod ex Nicolet (H = 19.9 mm).
- Fig. 4. *Spiraxis (Streptostyla) lymneiformis* SHUTTLEWORTH, 1852, syntype NMBE 18839, Mexico "Cordova, Vera Cruz", leg. Jacot-Guillarmod ex Nicolet (H = 17.2 mm).
- Fig. 5. *Spiraxis (Streptostyla) physodes* SHUTTLEWORTH, 1852, syntype NMBE 18841, Mexico "Cordova, Vera Cruz", leg. Jacot-Guillarmod ex Nicolet (H = 10.6 mm).
- Fig. 6. *Spiraxis (Streptostyla) flavescens* SHUTTLEWORTH, 1852, syntype NMBE 18836, Mexico "Cordova, Vera Cruz", leg. Jacot-Guillarmod ex Nicolet (H = 16.15 mm).
- Fig. 7. *Spiraxis (Streptostyla) irrigua* SHUTTLEWORTH, 1852, syntype NMBE 18837, Mexico "Cordova, Vera Cruz", leg. Jacot-Guillarmod ex Nicolet (H = 23.6 mm).
- Fig. 8. *Spiraxis (Streptostyla) lurida* SHUTTLEWORTH, 1852, syntype NMBE 18838, Mexico "Cordova, Vera Cruz", leg. Jacot-Guillarmod ex Nicolet (H = 15.25 mm).
- Fig. 9. *Spiraxis (Streptostyla) mitraeformis* SHUTTLEWORTH, 1852, syntype NMBE 18840, Mexico "Cordova, Vera Cruz", leg. Jacot-Guillarmod ex Nicolet (H = 22.75 mm).





## Plate 12

### Oleacinidae II, all figures 5x.

- Fig. 1. *Achatina (Polyphemus) delicatula* SHUTTLEWORTH, 1852, syntype NMBE 18844, Mexico “Vera Cruz”, leg. Guillarmod ex Nicolet 1852 (H = 21.95 mm).
- Fig. 2. *Achatina (Polyphemus) nana* SHUTTLEWORTH, 1852, syntype NMBE 18845, Mexico “Cordova, Vera Cruz”, leg. Jacot-Guillarmod ex Nicolet (H = 13.1 mm).
- Fig. 3. *Achatina (Polyphemus) stigmatica* SHUTTLEWORTH, 1852, syntype NMBE 18846, Mexico “Cordova, Vera Cruz”, leg. Jacot-Guillarmod ex Nicolet (H = 14.05 mm).
- Fig. 4. *Achatina subtilis* SHUTTLEWORTH, 1854, syntype NMBE 19032, USA, Virgin Islands, St. Thomas, ex Bland 1853 (H = 6.09 mm).
- Fig. 5. *Glandina sulculosa* SHUTTLEWORTH, 1854, syntype NMBE 18904, Puerto Rico “Humacao”, leg. Blauner 1853 (H = 10.6 mm).
- Fig. 6. *Glandina terebraeformis* SHUTTLEWORTH, 1854, syntype NMBE 18900, Puerto Rico “Ceiba”, leg. Blauner 1853 (H = 9.8 mm).
- Fig. 7. *Spiraxis ejuncida* SHUTTLEWORTH, 1854, syntype NMBE 19030, USA, Virgin Islands, St. Thomas, leg. Blauner 1853 (H = 3.16 mm).
- Fig. 8. *Glandina interrupta* SHUTTLEWORTH, 1854, syntype NMBE 18899, Puerto Rico “Luquillo”, leg. Blauner 1853 (H = 26.2 mm).







## Plate 13

### Rhytididae, Acavidae, Humboldtianidae.

- Fig. 1. *Nanina atramentaria* SHUTTLEWORTH, 1852, syntype ZMZ 500573, Australia “Port Philip”, coll. Mousson ex Shuttleworth 1867 (H = 19.0 mm, scaled 1.75x).
- Fig. 2. *Spiraxis (Columna) eximia* SHUTTLEWORTH, 1852, holotype NMBE 18819, Madagascar, ex Verreaux (H = 117.8 mm, original size).
- Fig. 3. *Helix guillarmodi* SHUTTLEWORTH, 1852, syntype NMBE 19080, Mexico “Vera Cruz”, leg. Guillarmod ex Nicolet (D = 28.1 mm, scaled 1.75x).





## Plate 14

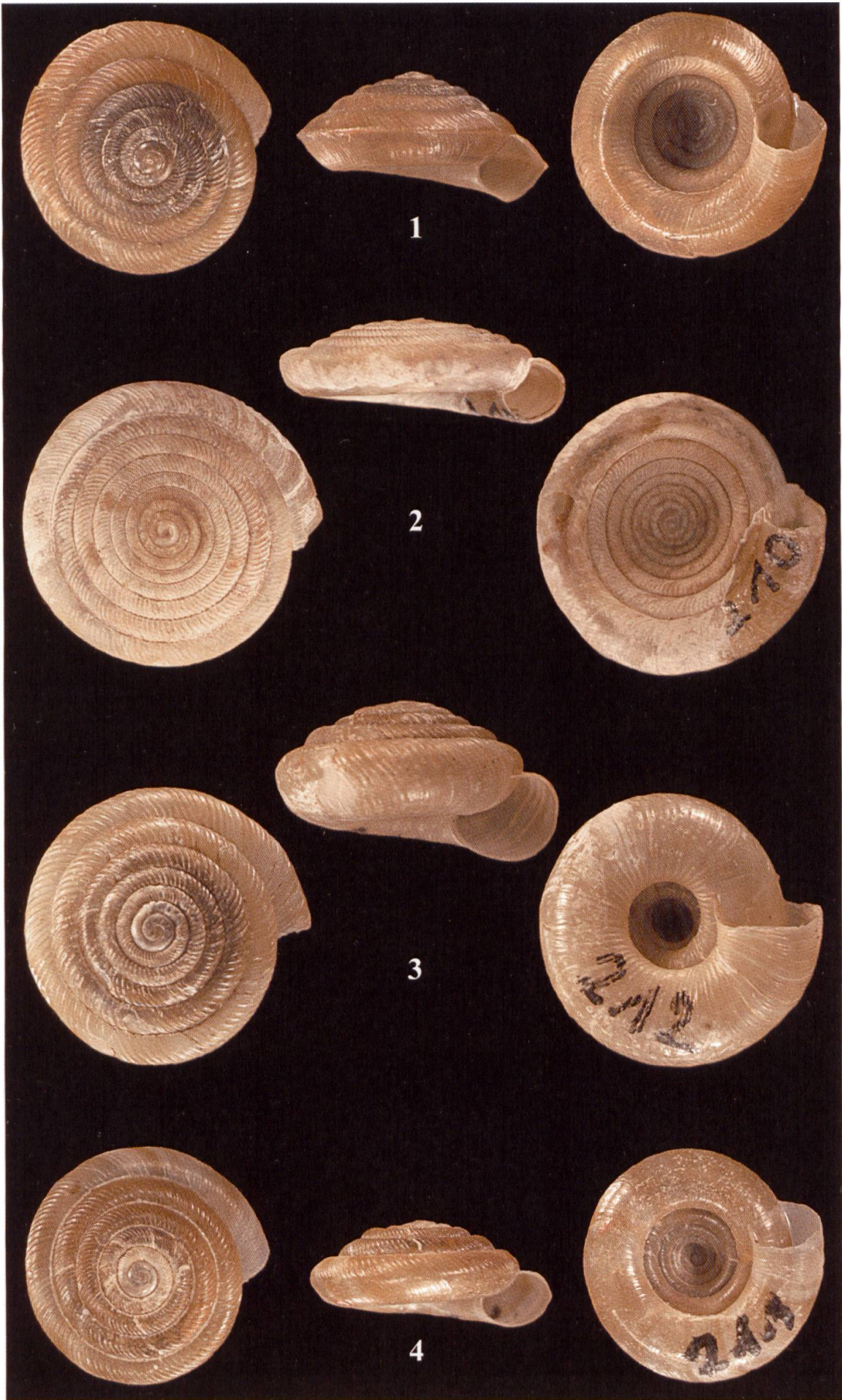
### Discidae, all figures 5x.

Fig. 1. *Helix engonata* SHUTTLEWORTH, 1852, syntype NMBE 18790, Canary Islands “Garachico, Teneriffa”, leg. Blauner 1851 (D = 7.0 mm).

Fig. 2. *Helix scutula* SHUTTLEWORTH, 1852, syntype NMBE 18788, Canary Islands “Teneriffa”, leg. Blauner 1851 (D = 8.0 mm).

Fig. 3. *Helix textilis* SHUTTLEWORTH, 1852, syntype NMBE 18781, Canary Islands “Palma”, leg. Blauner 1851 (D = 7.9 mm).

Fig. 4. *Helix retexta* SHUTTLEWORTH, 1852, syntype NMBE 18783, Canary Islands “Palma”, leg. Blauner 1851 (D = 6.7 mm).





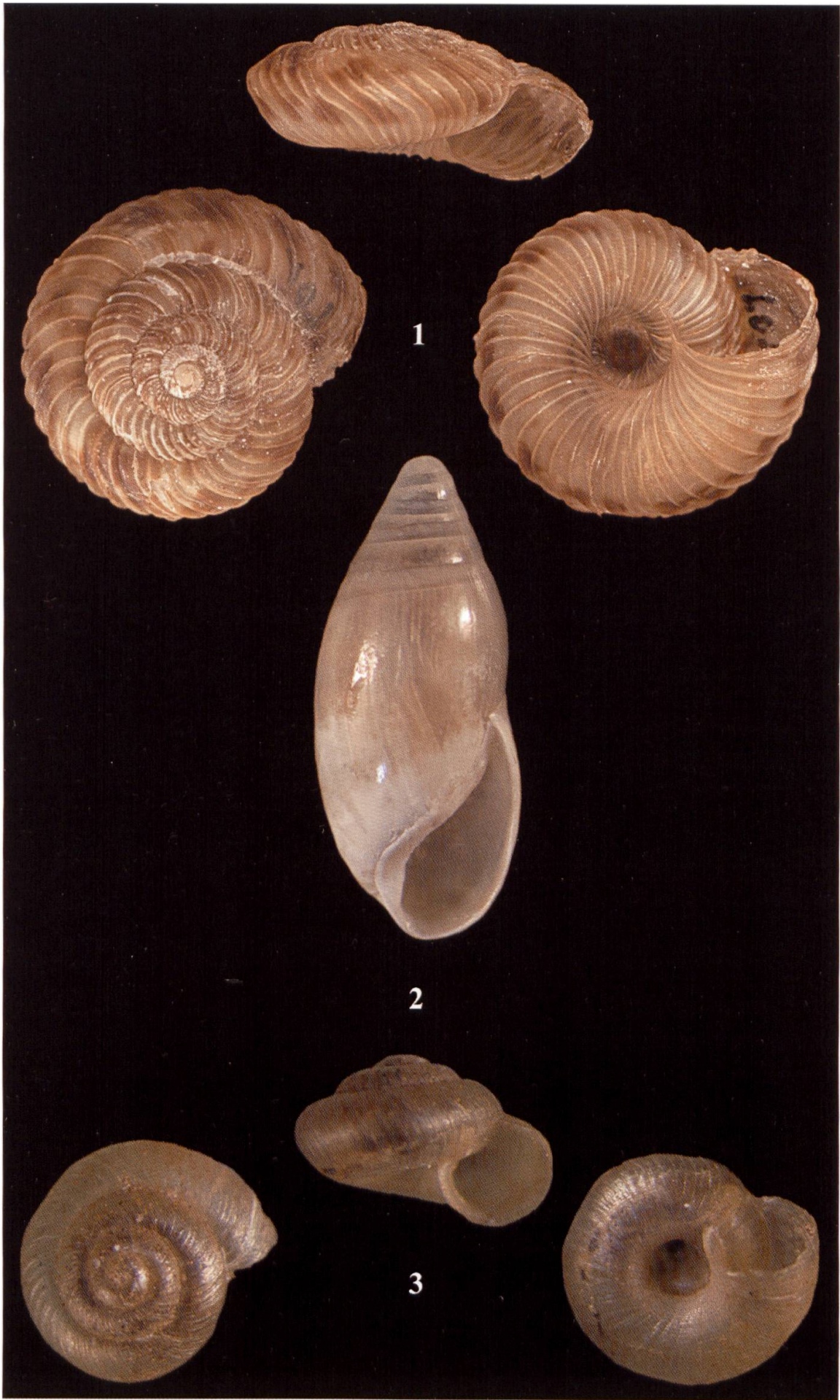
## Plate 15

### Discidae, Ferussaciidae, Punctidae.

Fig. 1. *Helix mordax* SHUTTLEWORTH, 1852, syntype NMBE 19051, USA, Carolina, leg. Rugel 1845 (D = 16.1 mm, scaled 3x).

Fig. 2. *Achatina (Zua) tandoniana* SHUTTLEWORTH, 1852, syntype NMBE 18985, Madeira, Porto Santo "Pico Branco", ex Moquin-Tandon ex Webb (H = 4.5 mm, scaled 15x).

Fig. 3. *Helix servilis* SHUTTLEWORTH, 1852, syntype ZMZ 503343, Canary Islands "Garachico, Teneriffa", coll. Mousson ex Blauner 1852 (D = 1.8 mm, scaled 20x).



## Plate 16

### Gastrodontidae.

- Fig. 1. *Helix pompylia* SHUTTLEWORTH, 1852, syntype NMBE 18777, Canary Islands "Palma", leg. Blauner 1851 (D = 5.1 mm, scaled 8x).
- Fig. 2. *Zonites bryodes* SHUTTLEWORTH, 1854, syntype NMBE 18951, Puerto Rico "Luquillo", leg. Blauner 1853 (D = 3.9 mm, scaled 8x).
- Fig. 3. *Zonites macilenta* SHUTTLEWORTH, 1852, syntype NMBE 19052, USA "Tennessee", leg. Rugel 1845 (D = 8.1 mm, scaled 5x).







## Plate 17

### Oxychilidae, Pristilomatidae, all figures 5x.

Fig. 1. *Helix circumsessa* SHUTTLEWORTH, 1852, lectotype NMBE 18791a, Canary Islands "Teneriffa", leg. Blauner 1851 (D = 7.4 mm).

Fig. 2. *Zonites lenis* SHUTTLEWORTH, 1852, syntype NMBE 18770, Canary Islands "Palma", leg. Blauner 1851 (D = 10.11 mm).

Fig. 3. *Zonites festinans* SHUTTLEWORTH, 1852, holotype NMBE 18766, Canary Islands "Palma", leg. Blauner 1851 (D = 5.1 mm).





## Plate 18

### Oxychilidae, Vitreidae.

Fig. 1. *Zonites oppressa* SHUTTLEWORTH, 1877, holotype NMBE 18765, Italy, Sardinia, leg. Blauner 1844 (D = 10.7 mm, scaled 4x).

Fig. 2. *Helix blauneri* SHUTTLEWORTH, 1843, lectotype NMBE 19038a, France, Corsica “Bastia, Calvi, Aleria, Bonifacio”, leg. Blauner 1842 (D = 10.63 mm, scaled 4x).

Fig. 3. *Zonites placentula* SHUTTLEWORTH, 1852, syntype NMBE 19053, USA “Tennessee”, leg. Rugel 1845 (D = 7.9 mm, scaled 5x).



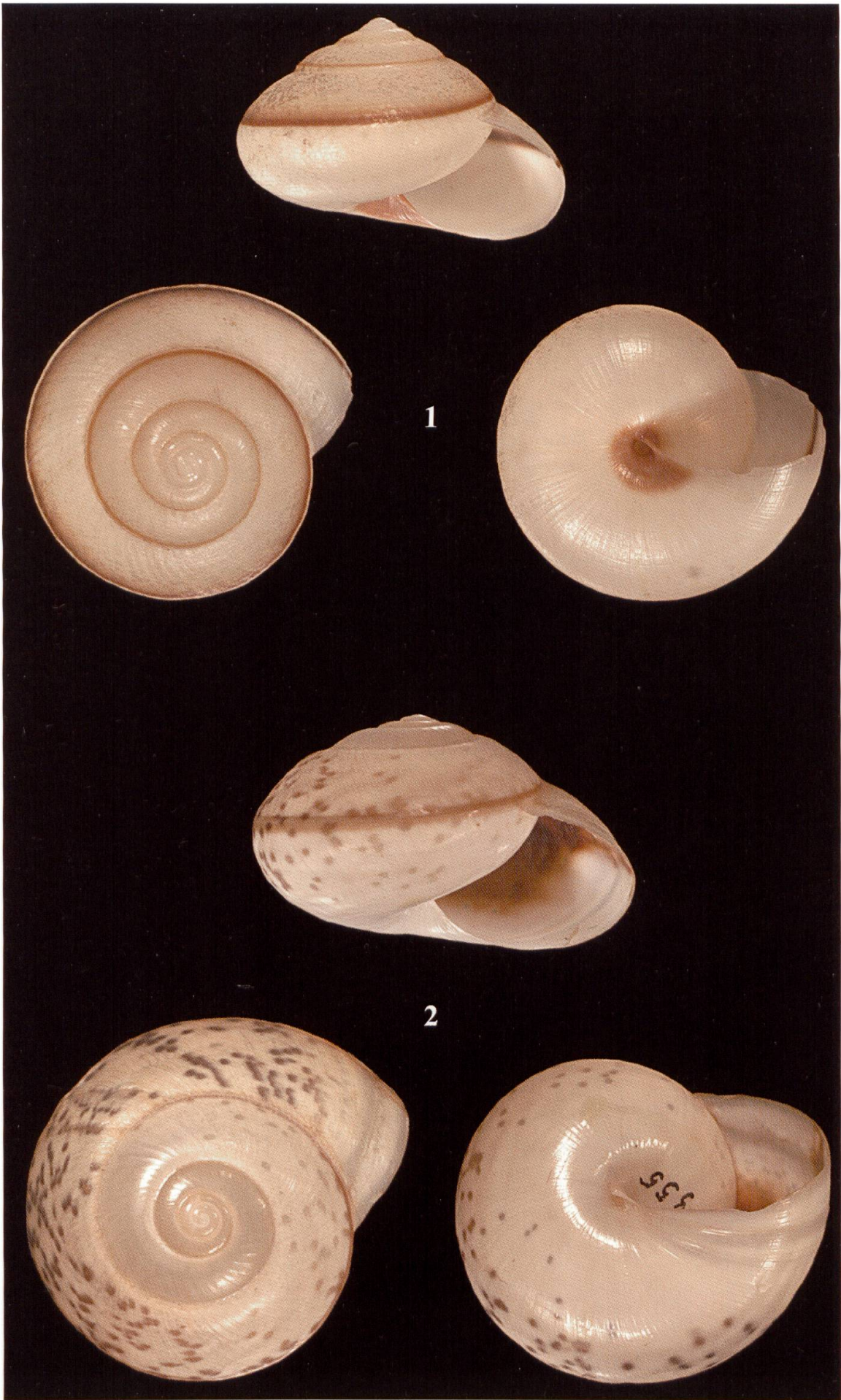


## Plate 19

### Ariophantidae, all figures 2x.

Fig. 1. *Nanina steursii* SHUTTLEWORTH, 1852, syntype NMBE 18823, Indonesia “Amboyna”, leg. Stuers [sic!] 1845 (D = 22.8 mm).

Fig. 2. *Nanina vitellus* SHUTTLEWORTH, 1852, syntype NMBE 18822, Indonesia “Amboyna”, leg. Stuers 1845 (D = 26.5 mm).





## Plate 20

### Vitrinidae, Thysanophoridae.

Fig. 1. *Vitrina blauneri* SHUTTLEWORTH, 1852, holotype NMBE 19033, Canary Islands “Teneriffa”, leg. Blauner (D = 16.4 mm, scaled 3x).

Fig. 2. *Helix cuticula* SHUTTLEWORTH, 1852, lectotype NMBE 18785a, Canary Islands “Teneriffa”, leg. Blauner 1851 (D = 9.18 mm, scaled 5x).

Fig. 3. *Helix hypolepta* SHUTTLEWORTH, 1854, syntype NMBE 19073, “Insula Bermuda”, ex Bland 1853 (D = 2.36 mm, scaled 15x).

Fig. 4. *Helix plagiopycha* SHUTTLEWORTH, 1854, syntype NMBE 18878, Puerto Rico “Humacao”, leg. Blauner 1853 (H = 2.7 mm, scaled 10x).





## Plate 21

### Polygyridae I, all figures 4x.

Fig. 1. *Helix rugeli* SHUTTLEWORTH, 1852, syntype NMBE 18827, USA "Tennessee", leg. Rugel 1845 (H = 5.8 mm).

Fig. 2. *Helix hopetonensis* SHUTTLEWORTH, 1852, syntype NMBE 18828, USA "Hopeton, Georgia", leg. Rugel (H = 6.4 mm).

Fig. 3. *Helix uvulifera* SHUTTLEWORTH, 1852, syntype NMBE 18830, USA, Florida "Long Keys, sinu dicto Sarazota", leg. Rugel Aug. 1845 (H = 5.65 mm).





## Plate 22

### Polygyridae II.

- Fig. 1. *Helix ingallsiana* SHUTTLEWORTH, 1877, syntype NMBE 19046, type locality unknown (H = 10.3 mm, scaled 3x).
- Fig. 2. *Helix dysoni* SHUTTLEWORTH, 1852, probable syntype NMBE 15276, Honduras, ex Cuming 1846 (H = 4.4 mm, scaled 5x).
- Fig. 3. *Helix couloni* SHUTTLEWORTH, 1852, syntype NMBE 18826, Mexico "Cordova, Vera Cruz", leg. Guillarmod ex Nicolet 1852 (H = 7.24 mm, scaled 4x).





## Plate 23

### Camaenidae, Cochlostylidae.

- Fig. 1. *Helix luquillensis* SHUTTLEWORTH, 1854, syntype NMBE 18867, Puerto Rico “Sierra de Luquillo”, leg. Blauner 1853 (H = 35.7 mm, scaled 1.5x).
- Fig. 2. *Helix steursiana* SHUTTLEWORTH, 1852, holotype NMBE 18831, Indonesia “Amboyna”, leg. Stuers [sic!] 1845 (H = 33.3 mm, scaled 2x).
- Fig. 3. *Helix intincta* SHUTTLEWORTH, 1852, syntype NMBE 15268, “In insulis Philippinis”, ex Verreaux (D = 38.7 mm, original size).



## Plate 24

### Camaenidae, scaled 1.5x.

Fig. 1. *Helix insititia* SHUTTLEWORTH, 1854, syntype NMBE 19086, "Haiti", ex Cuming 1850 (D = 45.9 mm).





## Plate 25

### Cepolidae, all figures 3x.

Fig. 1. *Helix dermatina* SHUTTLEWORTH, 1854, lectotype NMBE 18870a, Puerto Rico “Luquillo”, leg. Blauner 1853 (D = 15.4 mm).

Fig. 2. *Helix musicola* SHUTTLEWORTH, 1854, syntype NMBE 18872, Puerto Rico “Luquillo”, leg. Blauner 1853 (D = 10.55 mm).

Fig. 3. *Helix euclasta* SHUTTLEWORTH, 1854, syntype NMBE 18876, Puerto Rico “Insula Vièque”, leg. Blauner 1853 (D = 11.7 mm).







## Plate 26

### Sagdidae.

Fig. 1. *Simpulopsis portoricensis* SHUTTLEWORTH, 1854, syntype NMBE 18860, Puerto Rico “Sierra de Luquillo”, leg. Blauner 1853 (H = 17.2 mm, scaled 5x).

Fig. 2. *Helix subaquila* SHUTTLEWORTH, 1854, syntype NMBE 18883, Puerto Rico “Humacao”, leg. Blauner 1853 (D = 5.6 mm, scaled 8x).



## Plate 27

### Hygromiidae I.

- Fig. 1. *Helix corsica* SHUTTLEWORTH, 1843, lectotype NMBE 19087a, France, Corsica "Aleria", leg. Blauner (D = 14.9 mm, scaled 3x).
- Fig. 2. *Helix nivariensis* SHUTTLEWORTH, 1852, syntype NMBE 18805, Canary Islands "Santa Cruz, Teneriffa", leg. Blauner 1851 (D = 9.0 mm, scaled 4x).
- Fig. 3. *Helix persimilis* SHUTTLEWORTH, 1852, syntype NMBE 18801, Canary Islands "Santa Cruz, Teneriffa", leg. Blauner 1851 (D = 6.5 mm, scaled 4x).
- Fig. 4. *Helix oleacea* SHUTTLEWORTH, 1852, syntype NMBE 18803, Canary Islands "Palma", leg. Blauner 1851 (D = 7.9 mm, scaled 4x).





## Plate 28

### Hygromiidae II, all figures 3x.

Fig. 1. *Helix discobolus* SHUTTLEWORTH, 1852, holotype NMBE 18983, Canary Islands "Gomera" (D = 17.4 mm).

Fig. 2. *Helix fortunata* SHUTTLEWORTH, 1852, lectotype NMBE 18936a, Canary Islands "Santa Cruz, Teneriffa", leg. Blauner 1851 (D = 12.8 mm).

Fig. 3. *Helix perlevis* SHUTTLEWORTH, 1852, lectotype NMBE 18833a, France "Aleria, Corsica", leg. Blauner (D = 11.9 mm).







## Plate 29

### Helicidae I.

Fig. 1. *Helix ceratina* SHUTTLEWORTH, 1843, syntype NMBE 18812, France, Corsica "Ajaccio", leg. Blauner (D = 21.3 mm, scaled 2.5x).

Fig. 2. *Helix heldreichi* L. PFEIFFER, 1846, neotype NMBE 18825, Greece "Athinae ad Acropolin", leg. Heldreich (D = 15.8 mm, scaled 3x).



## Plate 30

### Helicidae II, all figures 2x.

- Fig. 1. *Helix bethencourtiana* SHUTTLEWORTH, 1852, lectotype NMBE 18811a, Canary Islands "Santa Cruz, Teneriffa", leg. Blauner 1851 (D = 21.05 mm).
- Fig. 2. *Helix glasiana* SHUTTLEWORTH, 1852, syntype NMBE 18807, Canary Islands, ex Cuming 1846 (D = 20.5 mm).
- Fig. 3. *Helix maugeana* SHUTTLEWORTH, 1852, syntype NMBE 18810, Canary Islands, ex Cuming 1846 (D = 20.2 mm).





## INSTRUCTIONS TO AUTHORS

**Content:** Contributions to Natural History is a publication series of the Natural History Museum Bern (NMBE). Publications cover the fields of zoology, paleontology, and geology (including mineralogy and meteoritics) and should be related to scientific collections (preferably to those of the NMBE) and/or to research activities of museum scientists. In zoology, priority is given to contributions on taxonomy and systematics, biodiversity, morphology, faunistics, biogeography and all other aspects of organismic biology.

**Language:** Manuscripts may be written in English (preferred), German or French.

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