

Some new records of Streptaxidae and Hypselostomatidae from Sumatra, Indonesia, with descriptions of three new species

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Sinoennea karnekampi spec. nov. (Streptaxidae), and *Parabosydia kitteli* spec. nov. and *Bensonella karoensis* spec. nov. (Hypselostomatidae) from Sumatra (Indonesia) are described. New records are given for the streptaxid species *Huttonella bicolor* (Hutton, 1834), *Sinoennea sumatrensis* van Benthem Jutting, 1959, and the hypselostomatids *Gyliotrachela hungerfordiana* (Moellendorff, 1886) and *Parabosydia boettgeri* (Moellendorff, 1897).

Keywords: Gastropoda, Pulmonata, Streptaxidae, Hypselostomatidae, taxonomy, Indonesia, Sumatra.

INTRODUCTION

During several trips to Sumatra, Indonesia, a fairly large number of species of land molluscs were collected. Several new species were encountered. This paper deals with the Streptaxidae and the Hypselostomatidae. A particularly rich material was found at the entrance of the cave Liangdehar, near Kuta Buluh, with a new streptaxid species (Pilsbry, 1916-1918; van Benthem Jutting, 1950; Thompson & Dance, 1983) and two new hypselostomatid species (Schileyko, 1998: 136). For the apertural teeth the terminology published by Pilsbry (1918: vii) was adopted.

Abbreviations: B, shell width; H, shell height. For collections: HW, J. Hemmen, Wiesbaden; KW, K. Kittel, Wiesthal; MD, W. J. M. Maassen, Duivendrecht; MZB, Museum Zoologicum Bogoriense, Bogor; RMNH, Nationaal Natuurhistorisch Museum (formerly Rijksmuseum van Natuurlijke Historie), Leiden; ZMA, Zoologisch Museum, Universiteit van Amsterdam, Amsterdam.

STREPTAXIDAE

Huttonella bicolor (Hutton, 1834)

This species, known from several localities in Sumatra (van Benthem Jutting, 1959: 172) was collected in N. Sumatra in the vicinity of rocks at the "Wisma Cottage" in Bukit Lawang.

Sinoennea sumatrensis van Benthem Jutting, 1959 (fig. 1)

This species until now only known from two locations (van Benthem Jutting, 1959: 170), was collected at several localities in N. Sumatra: 1, Bukit Lawang, (a) at the

entrance of the "Bat-cave", (b) near "Boat-rock", (c) at the entrance of the cave Luntir, (d) near rocks at the "Wisma Cottage"; 2, Tinggi Radja, between Brastagi and Pematangiantar, in debris of the river Bah Banai (400 m alt.).

***Sinoenaea karnekampi* spec. nov.** (figs. 2-4)

Material examined.— N. Sumatra. Karo Highlands, Kuta Buluh, 40 km N. of Brastagi, near the entrance of the cave Liangdehar in leaf litter at the foot of limestone rocks; 14.vii.1993 (170 shells), vii.1996 (69 shells); leg. W. J. M. Maassen (holotype RMNH/ 59150; paratypes RMNH 59151, ZMA, MZB, MD). Same locality; 17.vii.1993; leg. K. Kittel (KW/19 paratypes). 40 km N. of Brastagi, in leaf litter near a limestone cave; 16.vi.1990; leg. G. A. Clark (probably this is the same locality as the type locality) (RMNH 59152/8 paratypes; HW/5 paratypes).

Description.— Shell high-ovoid, glassy-transparent, shining. The two initial whorls smooth; the following ones with rather strong, widely spaced, radial ribs. A spiral striation is absent. With 6-6.5 whorls, the three initial ones gradually increasing in diameter, the fourth and fifth about equal in width, the last one narrower than the previous one. Profile of each whorl convex, suture well impressed. Top rather blunt. Umbilicus open, but not wide, partly obstructed by a swelling in the distal part of the last whorl. Aperture almost vertical, quadrangular with rounded angles. Peristome continuous, adnate or barely free from the previous whorl, broadened and reflected. The aperture with a very strong parieto-angular lamella in the upper corner. Palatal side with two teeth, a strong upper one at the edge of the peristome, and a much smaller lower one deeper inside. Columellar side of peristome without teeth at exterior edge, but with a blade-like lamella deeper inside. This lamella corresponds to a groove on the exterior distal part of the last whorl, in the umbilical region. Between this groove and the peristome the shell is slightly swollen.

Dimensions: H 3.6-4.2 mm; B 1.8-2.1 mm. Holotype H 3.8 mm, B 2.0 mm.

Derivatio nominis. — The name refers to Cor Karnekamp (Diemen), malacologist and friend for more than 35 years.

Remarks. — The only other *Sinoenaea* species known from Sumatra, i.e. *Sinoenaea sumatrensis* van Benthem Jutting, 1959, has a normal tooth at the free margin of the columellar side. When compared to the other ovoid species from the Malay Peninsula (van Benthem Jutting, 1961b: 9), the only similar species is *Sinoenaea callizonus* van Benthem Jutting, 1961. However, in this species there is no swelling in the umbilical region, it is smaller and has more ribs on the last whorl. The new species is only known from the type locality, where living specimens were observed in the dark, on wet limestone rocks near the cave-entrance.

HYPSELOSTOMATIDAE

Gyliotrachela hungerfordiana (Moellendorff, 1886)

Shell-fragments of this species were found July 1997 in Aceh Besar, near Lhong at the west coast of Sumatra, along the coastal road in leaf litter near limestone rocks. This is the first record of a species of this genus for Sumatra. *G. hungerfordiana* is the only species with a wide distribution in Malaya (van Benthem Jutting, 1961a: 26).

Paraboysidia boettgeri (Moellendorff, 1897)

Some specimens of this species, already known from Sumatra (van Benthem Jutting 1959: 126), were found in leaf litter at the entrance of the cave Liangdehar, near Kuta Buluh.

***Paraboysidia kitteli* spec. nov.** (figs. 5–7)

Material examined.— N. Sumatra. Karo Highlands, Kuta Buluh, 40 km N. of Brastagi, near the entrance of the cave Liangdehar in leaf litter at the foot of limestone rocks; 14.viii.1993 (» 500 shells), vii.1996 (» 500 shells); leg. W. J. M. Maassen (holotype RMNH 59153; paratypes RMNH 59154, ZMA, MZB, MD). Same locality; 17.viii.1993; leg. K. Kittel (KW/116 paratypes). 40 km N. of Brastagi, in leaf litter, limestone cave; 16.vi.1990; leg. G. A. Clark (probably this is the same locality as the type locality) (RMNH 59155/16 paratypes; HW/10 paratypes).

Description.— Shell small, about 2.4 mm high and 1.7 mm wide. Spire pyramidal, the apex rather acute. Translucent, white with a dull sheen. Umbilicus open, measuring about 1/4 the width of shell, showing previous whorl. About 6 1/4 whorls with a distinct suture. Embryonic whorls 1.5, rounded, sculptured with a dense mesh of very fine granules. Adjoining whorls rounded, sculptured as the embryonic whorls. Growth lines irregular and vague, nearly absent. Last quarter of the body whorl ascending, with a narrow impressed zone along the palatal side, corresponding with the upper palatal tooth. Aperture a little higher than wide, nearly quadrangular, with a rounded base, adnate to the previous whorls, ascending. Peristome continuous and thickened. Interior of the aperture with six teeth. The very strong angular and upper palatal teeth nearly touching each other, forming a rounded sinus. The columellar, the lower palatal and the parietal teeth are of almost equally prominent, lying at about the same distance from the peristome edge. They are well visibly from the outside, but the subcolumellar tooth is very weak and situated deep inside.

Dimensions: H 2.3–2.5 mm; B 1.65–1.75 mm. Holotype H 2.4 mm, B 1.7 mm.

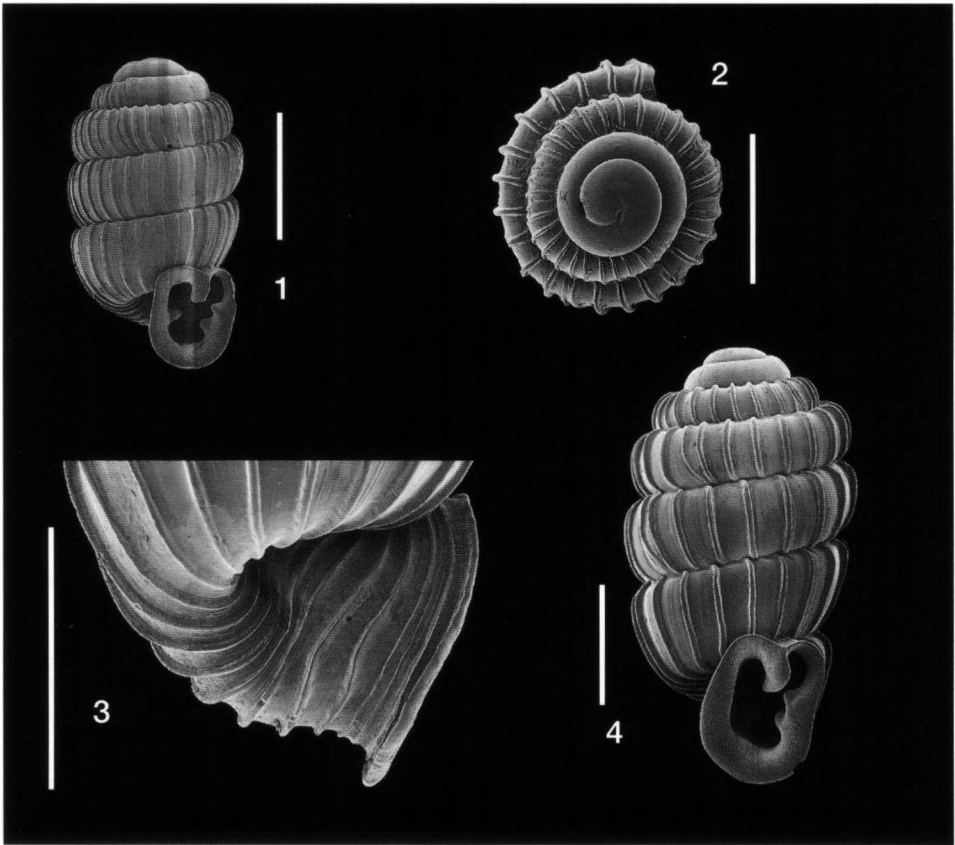
Derivatio nominis.— Named after Klaus Kittel, the author's friend and his companion on the trip to Sumatra in 1993.

Remarks.— Only known from the type locality. Living specimens were observed in the dark on wet rocks near the cave-entrance. *Paraboysidia kitteli* differs from other *Paraboysidia* species by its translucent, white, dull shell, without prominent growth lines, and with very large angular and upper palatal teeth.

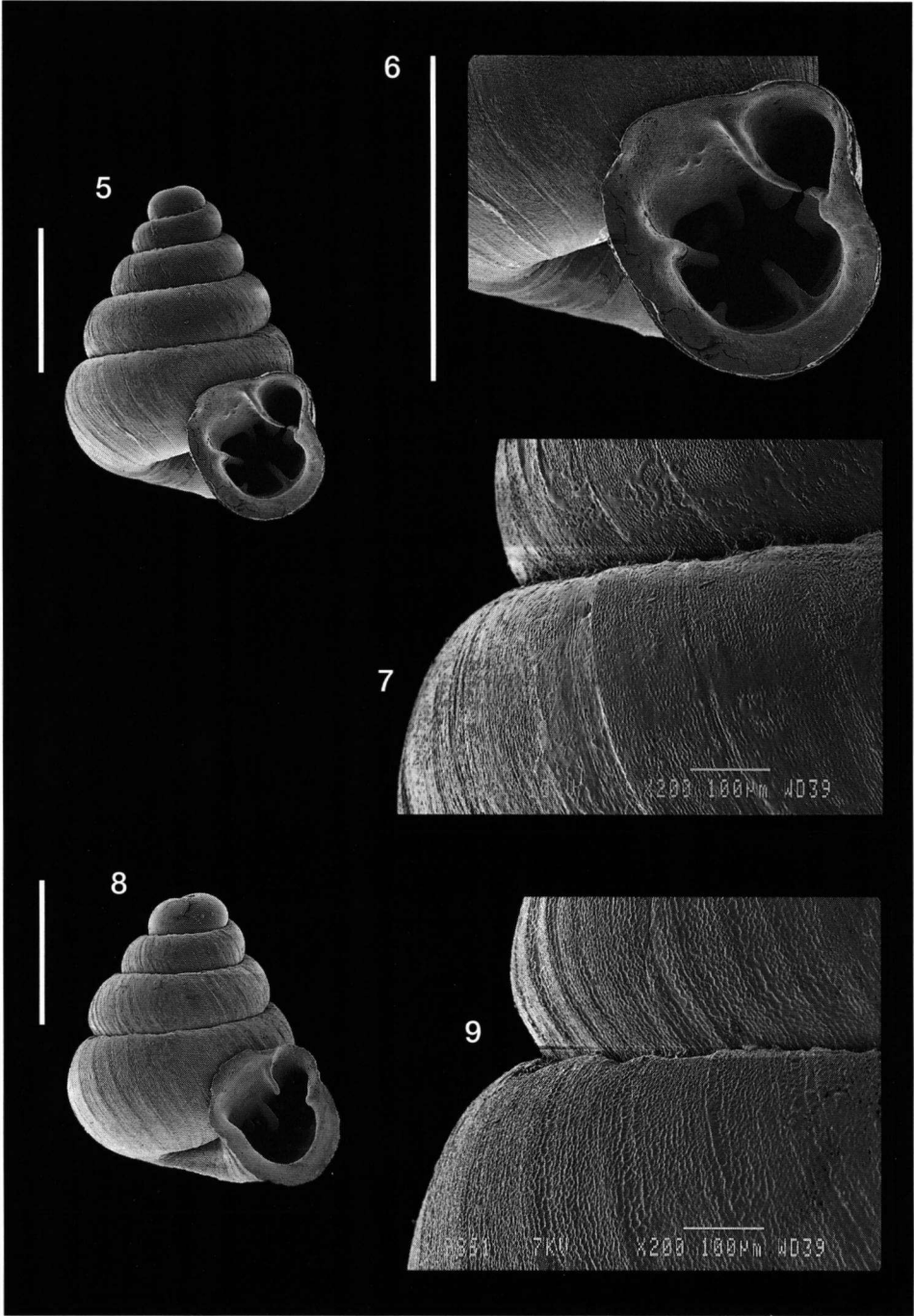
***Bensonella karoensis* spec. nov.** (figs. 8, 9)

Material examined.— N. Sumatra. Karo Highlands, Kuta Buluh, 40 km N. of Brastagi, near the entrance of the cave Liangdehar in leaf litter at the foot of limestone rocks; vii.1996; leg. W. J. M. Maassen (holotype RMNH 59156).

Description.— Shell very small, about 2.0 mm high and 1.6 mm wide. Spire low conical, the apex blunt. Shell about 1.2 times as high as wide. Color reddish-brown, with a dull sheen. Umbilicus open, very narrow, measuring about 1/10 of the shell width. With about 4 1/4 whorls, separated by a shallow suture. Profile of each whorl evenly round. Apex rounded, sculptured with a dense mesh of fine granules. Adjoining whorls also rounded, sculptured with distinct and regular growth lines. Last quarter whorl of the body whorl ascending, with a shallow impressed zone along the palatal side,



Figs. 1-9. 1, *Sinoennea sumatrensis* van Benthem Jutting, 1959, N Sumatra, Bukit Lawang (H 2.5 mm); 2-4, *Sinoennea kamekampii* spec. nov., N Sumatra, Cave Liangdehar (paratype RMNH 591512, H 3.5 mm); 5-7, *Paraboysidia kitteli* spec. nov., N Sumatra, Cave Liangdehar (paratype RMNH 59154, H 2.4 mm); 6-9, *Bensonella karoensis* spec. nov., N. Sumatra, Cave Liangdehar (holotype RMNH 59156, H 2.0 mm). Scale bars 1 mm. Photographs by J. Goud.



corresponding with the upper palatal. Aperture irregular, a little higher than wide, with several folds, most of them ending in front as acute hooks. Aperture somewhat higher than wide, nearly circular, adnate to the previous whorls, ascending. Peristome continuous, sinuous and somewhat reflected; the margins connected by an expanded callus.

On the parietal wall there are five lamellae: a large, conspicuous angular, which forms a sharp hook deep inside, more ventrally becomes reduced to only an indication of a lamella, to change again to a large lamella that reaches the lip-edge; two very small lamellae, deep inside between the angular and the palatal side; a short, simple, parietal fold; a small, immersed lamella with a hook in front between the parietal and the columellar edge. The columellar lamella is short, horizontal and hooked, as are the small supra- and sub-columellar lamellae. There are two small basal plcae, a larger upper and lower palatal, one supra-palatal, and an interpalatal.

Dimensions: H 2.05 mm; B 1.6 mm.

Derivatio nominis.— Named after the Karo Highlands, the region of the type locality, the Liangdehar cave.

Remarks.— Known only from the holotype. During two visits a large number of soil samples were taken at different points near the cave entrance, but only a single specimen was found.

The holotype was carefully compared with many specimens in two samples of *Bensonella plicidens* (Benson, 1849) from Japan, on loan from RMNH. Shells of that species, known from India, China, Japan and Thailand (Pilsbry, 1917: 199), differ from those of *B. karoensis* in being higher conical, with a deeper suture, a more acute apex, which is sculptured finer, and the distinctly hooked parietal fold.

ACKNOWLEDGEMENTS

I wish to thank K. Kittel and J. Hemmen who enabled me to study the material in their collections, J. Goud who made the micrographs, and J. P. M. Clerx and E. Gittenberger for usefull suggestions and corrections to the manuscript.

REFERENCES

- BENTHEM JUTTING, W. S. S. VAN, 1950. The Malayan species of *Boysidia*, *Paraboysidia*, *Hypselostoma*, and *Gylotrachela* (Gastropoda, Vertiginidae) with a catalogue of all the species hitherto described. — Bulletin of the Raffles Museum, Singapore, 21: 5-47
- , 1959. Catalogue of the non-marine Mollusca of Sumatra and of its satellite islands. — Beaufortia, Amsterdam, 7 (83): 41-191
- , 1961a. Additional new species and new localities of the family Vertiginidae and the genera *Ophana* and *Opishostoma* from Malaya. — Bulletin of the Raffles Museum, Singapore, 26: 34-48
- , 1961b. The Malayan Streptaxidae genera *Hutonella* and *Sinoennea*. — Bulletin of the Raffles Museum, Singapore, 26: 1-33
- PILSBRY, H. A., 1916-1918. Pupillidae (Gastrocoptinae). — Manual of conchology. Second series: Pulmonata 24: 1-112, pls. 1-13 [1916], 113-256, pls. 14-38 [1917], 257-380, i-xii, pls. 39-49 [1918].
- SCHILEYKO, A. A., 1998. Treatise on recent terrestrial pulmonate molluscs. Part 2. Gastrocoptidae, Hypselostomatidae, Vertiginidae, Truncatellinidae, Pachnodidae, Enidae, Sagdidae. — Ruthenica, Supplement 2, pp. 129-261
- THOMPSON, F. G. & S. P. DANCE, 1983. Non-marine Mollusks of Borneo II Pulmonata: Pupillidae, Clausiliidae III Prosobranchia: Hydrocenidae, Helicinidae. — Bulletin of the Florida State Museum, Biological Sciences, 29 (3): 101-152