

***Symptychiella annae* n. sp., an extraordinary clausiliid from northern Peru (Gastropoda Pulmonata: Clausiliidae)**

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A new clausiliid species and genus from northern Peru, *Symptychiella annae* n. gen. n. sp., is described. The unique character combination of its shell (without neck keel, non-apostrophic aperture formation, one single lamella instead of superior and inferior lamellae, G-type clausiliar) does not allow a classification within one of the known subfamilies.

Key words: Gastropoda, Pulmonata, Clausiliidae, taxonomy, new genus, new species, Peru.

INTRODUCTION

Among Peruvian Neniinae which the late Dr. F. E. Loosjes received for identification from the Museo de Historia Natural of the Universidad Nacional Mayor de San Marcos (= MUSM) in Lima, Peru, and which was deposited with his collection in the Nationaal Natuurhistorisch Museum (= NNM) (cf. Loosjes & Loosjes-van Bemmelen, 1989) two samples were found from the surroundings of Mendoza, northern Peru, which were determined as *Columbinia* sp. One of them contained a shell which turned out to represent an extraordinary new species of a new genus. Its characters were so striking that an abnormality or a wrong locality were taken into consideration, although for both assumptions there were no indications. The new species is the only South American clausiliid which is not apostrophic (for apostrophy see Ehrmann, 1927: 51, 54-55; Nordsieck, 1978a: 71-72, note 2, figs. 1-3) and thus is no member of the subfamily Neniinae. This can be shown by a comparison with a Neniinae species with a similar shell with much protruding aperture, e. g. *Pseudogracilinena huallagana* (Pilsbry, 1949) (cf. figs. 4, 6). In addition, it is also the only species with one single lamella instead of superior and inferior lamellae and with a peculiar G-clausiliar (for the G-clausiliar see Nordsieck, 1978a: 72, note 4; 1982: 39, figs. 4-5, 8-9). The descriptions of the new genus and species are as follows (it has to be taken into consideration that the description of the new species is based on the examination of one shell which was collected empty and somewhat corroded).

SYSTEMATICS

***Symptychiella* n. gen.**

Type species. — *Symptychiella annae* n. sp.

Diagnosis. — Shell without neck keel; body whorl much protruding and descending, aperture formation non-apostrophic; only one lamella instead of superior and inferior lamellae developed, in front in the position of a superior lamella, inwards in that of an

inferior lamella, penetrating not deeply; subcolumellar lamella penetrating deeply, anterior part not shifting to the palatal wall; clausiliar of G-type, only anterior part of the principal plica developed; clausilium plate obliquely truncated.

Etymology. — Named for the characteristic lamella which possibly has originated by a fusion of the superior and inferior lamellae.

Symptychiella annae n. sp. (figs. 1-4, 7-8)

Material. — Holotype (MUSM 2173-B): Peru, dept. of Amazonas, 14 km W. of Mendoza, 1800 m alt. 10.iii.1985, leg. B. Calderón.

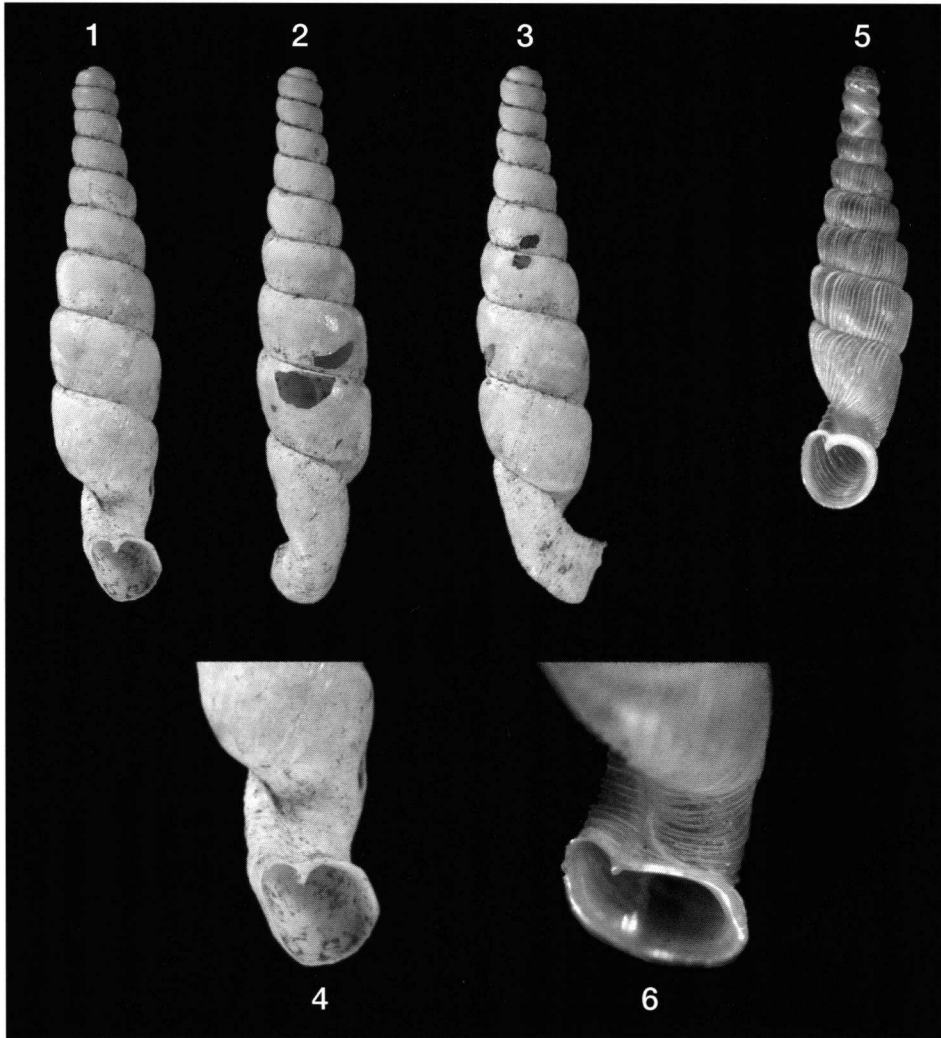
Diagnosis. — See genus diagnosis.

Description. — Shell slender, with tapering apical part, protoconch obtuse, as wide as the following teleoconch whorls, penultimate whorl broadest, body whorl narrowed, with a conspicuously protruding and descending last part; whorls of the teleoconch somewhat shouldered, separated by a deep suture; probably (assumed from less corroded parts) yellowish-brown; sculptured from the second whorl onwards with fine rib-striae, rib-striae on the lower whorls broader and faded, on the neck strong again (more pronounced than on the upper whorls), continued across the ridge of the protruding body whorl on the periomphalum; neck compressed to a dorsal elevation, but otherwise rounded; aperture formation non-apostrophic (no lamina developed); aperture turned outward, roundish-oval, peristome simple, thin, parallel to the peristome a weak palatal callus present; only one lamella instead of superior and inferior lamellae, in front similar to a superior lamella opposite to the principal plica, forming with it a wide sinulus, inwards higher and more concave on the left (palatal) side, like an inferior lamella near to the subcolumellar lamella, not decreasing towards the end, but ending abruptly in a nearly lateral position; subcolumellar lamella immersed, only in an oblique view in the aperture visible but in that view far inwards, anterior part not shifting to the palatal side, in front ending just beyond the lunellar, inwards penetrating to the beginning of the body whorl, with a low inner part; principal plica weakened, running from the palatal callus inwards to end dorsally, thus not reaching the lunellar; lunellar dorsolateral-lateral in position, upper palatal plica diverging from the suture, connected by an angle with the lunella, lunella straight, reaching near to the subcolumellar lamella, without lower palatal plicae; above the upper palatal plica at the parietal side with two callosities, one (parallel lamella?) along the suture, the other (lamella fulcrans) diverging from it and ending ventrolaterally; clausilium plate relatively narrow, somewhat excised at the filament, palatal edge slightly convex, distally with a pointed tip, columellar edge concave, less distally with a projection, thus plate obliquely truncated, tip and truncating edge thickened within, upper palatal corner not widened.

Measurements. — Holotype: Shell height 14.6 mm, width 3.0 mm, width/height 0.205; apertural height = 1.9 mm (because of the outward turning of the aperture, maximum height 2.1 mm), width 2.0 mm; whorls 10; clausilium plate, length 2.0 mm, width 0.9 mm.

Etymology. — Named after Anne Selinka, in recognition of her achievements in our late specialised course of biology, especially of her interest in phylogenetic problems.

Notes. — The locality where the shell was collected is in the Cordillera Central near Mendoza at an altitude in which a tropical cloud forest or a mountain laurel forest occurs. The shell contains organic material; in spite of its worn appearance it is evidently of Recent origin.



Figs. 1-6. Shells of *Symptychiella* and *Pseudogracilinena* species. 1-4, *S. annae* n. sp., holotype (MUSM 2173-B); 1, frontal view, 2, dorsal view, 3, lateral view, 4, body whorl, showing the non-apostrophy. 5-6, *P. huallagana* (Pilsbry, 1949), 5 km W. of Tingo Maria, 750 m alt., leg. F. Thompson (UF 268768); 5, frontal view, 6, body whorl, showing the apostrophy. Photographs by E. Neubert (SMF). Figs. 1-3, 5, $\times 5$; figs. 4, 6 $\times 8$.

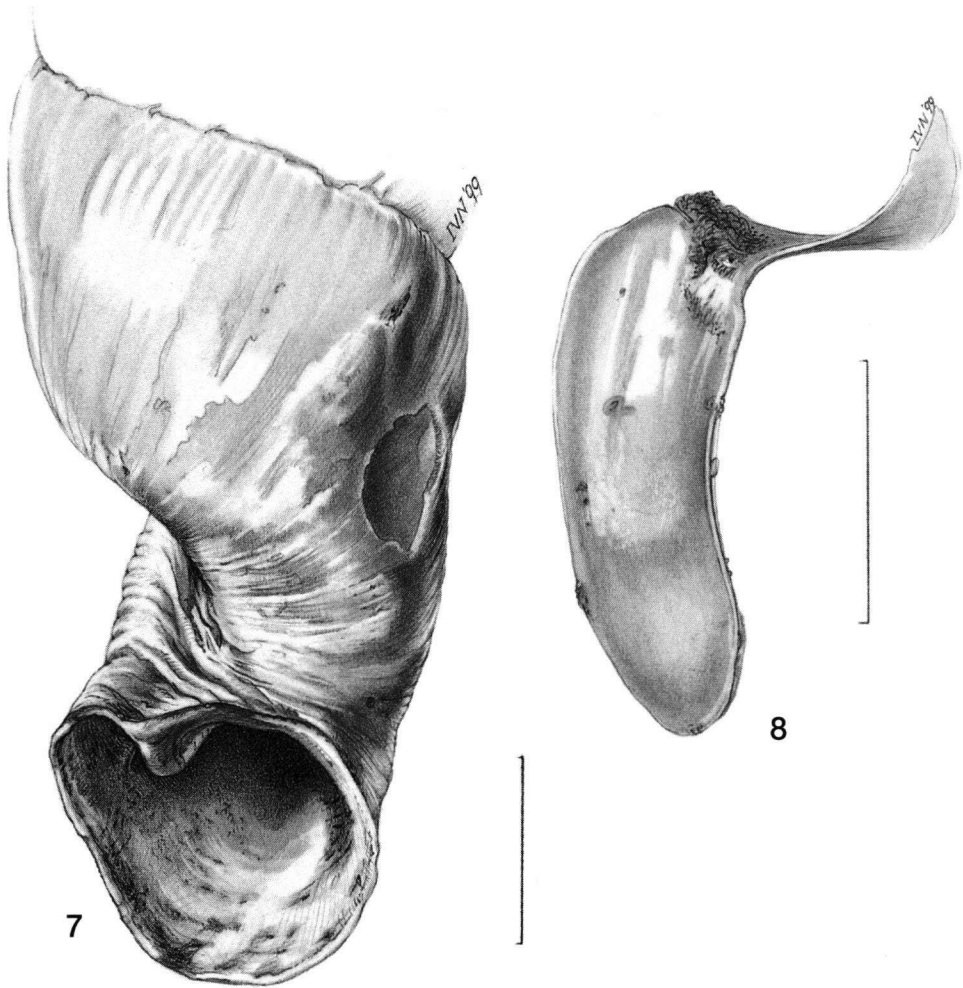
Discussion. — The clausiliar of *Symptychiella annae* n. sp. has some characters which are unique within the Clausiliidae. A single lamella instead of both a superior and an inferior lamella, as is present in the new species, occurs also in a group of the Asiatic Garnieriinae (*Tropidauchenia* (*Symptychia*) Ehrmann, 1927: 52), but in that group the fusion of the two lamellae is still recognizable. In *S. annae* this is not the case so that it is uncertain whether the lamella has really originated by such a fusion. The G-clausiliar of the new species is also peculiar, but because of the poor condition of the shell it is difficult to recognize its structure exactly. The anterior part of the principal plica is present, separated from it at the place of the posterior part, there is a well-developed upper palatal plica. Only the assumed parallel plica and the lamella fulcrans are discernible, as it seems that other pliculae or lamellulae are lacking. The assumed inferior lamella does not decrease at the inner end and the corner of the clausilium plate which fits into the sutural angle is not widened as in other G-clausiliids.

The characters of *S. annae* — non-apostrophic aperture formation, assumed inferior lamella not deeply ending, subcolumellar lamella not shifting to the palatal wall — indicate clearly that the species does not belong to the subfamily Neniinae. For the definition of this subfamily see Nordsieck (1978a: 81). A further important shell character of the Neniinae which was not discussed in that paper is the position of the anterior part of the subcolumellar lamella. In the Neniinae it shifts to the palatal wall where it may contact the lunellar. In the other apostrophic clausiliids, the Garnieriinae and the Laminiferinae, it remains near to the columella. This difference which was already stated but with other words by Moellendorff (1886: 207) and O. Boettger (1909: 165) is a further proof of the parallel evolution of the apostrophic clausiliid subfamilies.

The G-clausiliar of *S. annae* corresponds in the development of the inner lamellae (assumed inferior lamella penetrating less deeply than the lamella fulcrans) with that of the western Palaearctic Clausiliinae subfamily group (Mentissoideinae, Clausiliinae, Baleinae). A comparison with the G-groups of these subfamilies had the result that *S. annae* is not related to any of them. It resembles somewhat the Pliocene species *Truciella ballesioi* (Truc, 1972), which belongs to the Clausiliinae close to *Ruthenica* Lindholm (Truc, 1972: 270-272, figs. 17-19, pl. 19 figs. 1-5; Nordsieck, 1978b: 106-107, figs. 1-3). Because this species, as it seems, has no neck keel and only a single lamella which forms a pneumostome channel with an anterior palatal plica. But a careful examination has shown that these similarities are only superficial. The neck keel of *T. ballesioi* is weak, but present. The seemingly single lamella is the inferior lamella while the superior lamella is reduced but still discernible. The palatal plica with which the inferior lamella forms the pneumostome channel is probably no principal plica as its position is too low. Add to this that the lunellar and the clausilium plate of *T. ballesioi* are totally different from those of the new species.

It can be stated that though the development of the inner lamellae of *S. annae* is on the whole the same as that of the Clausiliinae subfamily group the formation of the neck and the peculiarities of the clausiliar do not allow a classification within this group. The occurrence of *S. annae* in South America also speaks against this classification. On the other hand, it leads to the assumption that in this continent two evolutionary lineages exist, the apostrophic Neniinae and a non-apostrophic lineage to which the new species belongs. Because the centre of origin of the Clausiliidae may be in the western Palaearctic (cf. Nordsieck, 1986: 98, fig. 4), this would mean that South America was colonized twice, by two groups which are not closely related, as it was also the case for Asia (Phaedusinae, Garnieriinae).

All the questions which arose with the detection of *S. annae* can only be answered when more and fresh material of the new species is available.



Figs 7-8. *Symptychiella annae* n. sp., holotype (MUSM 2173-B); 7, body whorl, showing the non-apostrophy; 8, clausilium. Scale bars 1 mm. I. van Noortwijk del. (NNM).

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