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ON A NEW ANDINIA (GASTROPODA, CLAUSILIIDAE) FROM PERU

by

F. E. LOOSJES

Some time ago Prof. Dr. W. Weyrauch at Lima, Peru, sent to me specimens of a species of the subfamily Neniinae that proved to be new to science. Already about 70 species of the subfamily have become known from Peru, for an important part discovered by Prof. Weyrauch himself.

***Andinia (Ehrmanniella) flammulata* spec. nov.** (Figs. 1, 2)

Diagnosis. A small, rather fusiform species of the subgenus *Ehrmanniella* Zilch. The decollated shell is provided with rather irregular fine white striae. Especially below the suture these striae are thickened, strikingly white, and arranged in groups of about 5 to 15 on low nodules. These nodules alternate with brown, quite smooth, malleated patches. At some distance it looks like small white and brown areas running obliquely over the surface of the shell below the suture. Lunella more or less interrupted below the middle. The principal plica is only $\frac{1}{4}$ whorl long. The receptaculum seminis and its duct unto the junction with the diverticulum are as long as the diverticulum itself.

Description. The shell is decollate, somewhat fusiform, moderately strong, with rather convex whorls of which the penultimate is broadest. Whorls of the decollate shell 4 to 7; some shed tops (juvenile shells) with straight outlines consist of about 10 whorls; sculptured with low, but rather large nodules (which can be taken as corresponding with the upper parts of the obliquely running ribs of Polinski's *Nenia wagneri* ¹⁾) below the suture, provided with groups of about 5-15 clear white striae, between these nodules there are brown smooth patches, often running obliquely below the nodules;

1) „breite, niedrige, stumpfe und wulstartige Rippen, welche von links oben nach rechts unten verlaufen“.

the middle and lower parts of each whorl are usually rather irregularly striated with whitish striae, 10-15 to the mm on the whorl above the

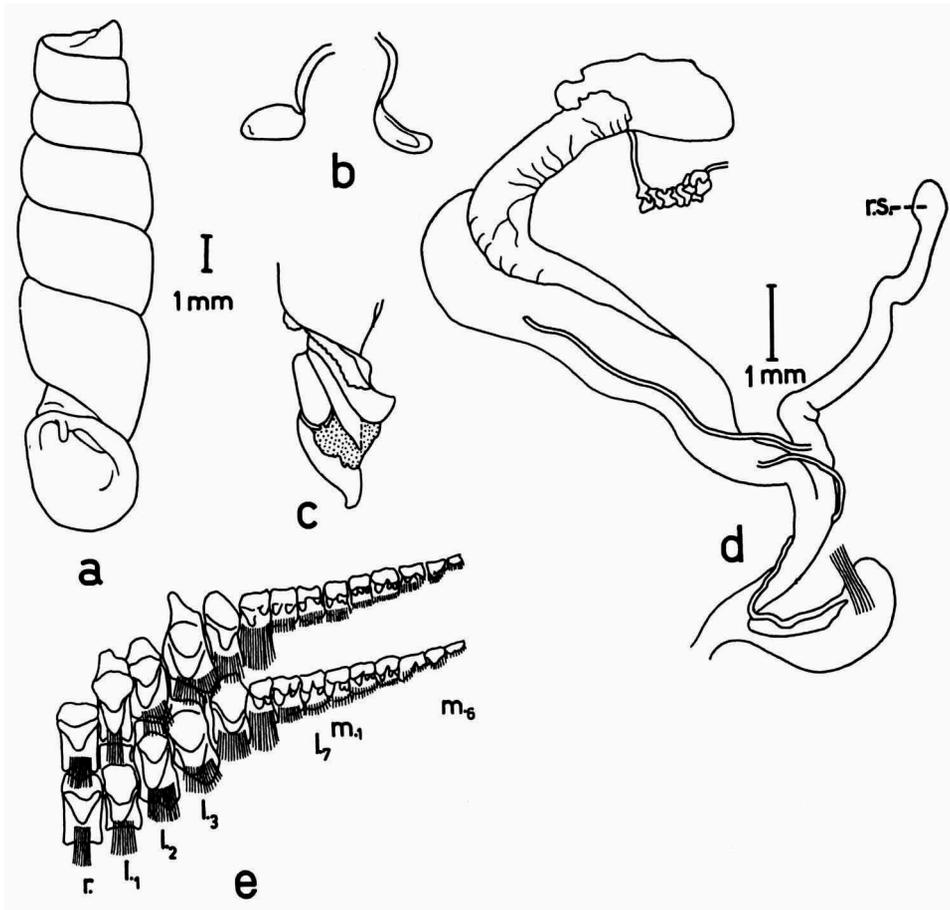


Fig. 1. *Andinia (Ehrmannicella) flammulata* spec. nov., Loc. Cerro Huilcashpata near Palta (Rio Tarma), 3100 m.

a, ventral side of the shell of the holotype; b, two views of the clausilium of a paratype; c, left side of the last whorl of a paratype, the palatal wall is broken away to show the inner structure of the shell; d, reproductive organs of a paratype, r.s. = receptaculum seminis; e, some elements of the radula of a paratype ($\times 195$), r. = rhachidian tooth, l.1-l.7 = lateral teeth, m.1-m.8 = marginal teeth.

aperture. In some individuals smooth patches are also rather irregularly distributed over this "malleated" part of the whorls. The back of the last whorl, the neck, is corrugated by irregular whitish striae, which are scarcely coarser than on the upper whorls. The neck is rather irregularly rounded,

sometimes one or two vague longitudinal ridges run to the basal edge of the peristome.

In a side view the neck is rather distinctly bent towards the base of the aperture. The last whorl with the aperture is protruding and is clear of the preceding whorl, as usual in Neniinae.

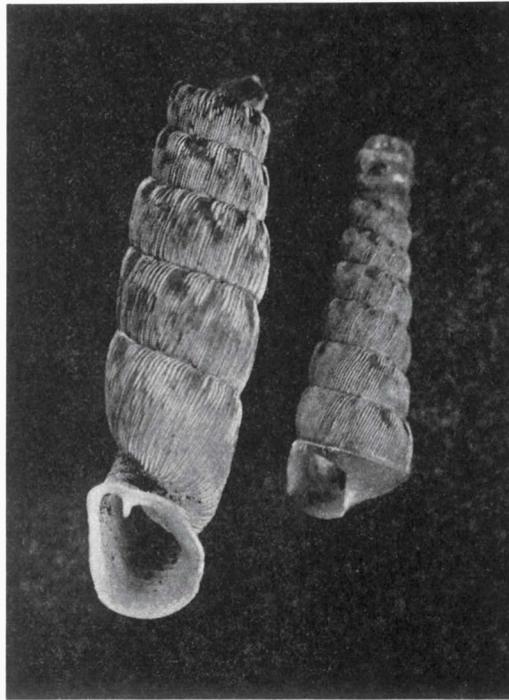


Fig. 2. *Andinia (Ehrmanniella) flammulata* spec. nov. Left side: ventral side of the holotype (enlarged); right side: shed top, paratype (enlarged).

The aperture is obliquely rounded, pear-shaped, whitish within, the sinulus is broad but not high, only separated from the aperture by the lamella superior. The base of the peristome is receding. The peristome is continuous, whitish, rather broadly reflexed. The upper margin is hardly or not incised at the place where it is reached by the lamella superior.

The outer margin descends obliquely in a faint curve or almost straight, so that the left side of the sinulus is the most left-handed point of the aperture. From the sinulus the parieto-columellar margin runs to the right and downward in an almost semicircular curve. The base of the peristome is also semicircular.

The lamella superior emerges at the margin of the peristome, it is a little concave to the left side and continuous with the spiral lamella, which ends inwardly rather abruptly at the dorsolateral-right side of the shell. The lamella inferior is visible as a fairly low, rather convex, almost horizontally running fold in the aperture, it curves spirally upward into the shell far beyond the inner end of the spiral lamella and ends ventrolaterally at the right side. The lamella inferior may be slightly notched at its outer end. In a full front view the lamella subcolumellaris is not visible in the aperture, the lowest end lies behind the end of the lamella inferior, it runs upward and ends on the columella at the ventral side.

The closing apparatus lies in a dorsal position. The plica palatalis principalis runs from the left side to the dorsal, so it is about $\frac{1}{4}$ whorl long. Below the principal plica lies a rather faint plica palatalis superior, diverging from it in the direction of the outer lip; the lunella is a low callus, more or less interrupted below the middle, running from the lowest part of the upper palatal plica straight downwards. The lunella ends sometimes by showing a faint lower palatal plica, close to the outer end of the subcolumellar lamella, in some cases these may be in contact (e.g., in the holotype), together enclosing the top of the clausilium.

The clausilium is strongly curved both longitudinally and transversely, the sides of the plate are parallel, the top is narrowly rounded and thickened, the greatest width is at about the middle of the tongue-like plate. The dimensions are:

length 1.7 mm, width 0.8 mm.

Dimensions (in mm) and number of whorls of 230 decollated specimens are:

	shell	aperture		number of
length	diameter	height	width	whorls
9.7-13.4	3.0-3.6	2.5-3.1	2.2-2.9	4-7

Some shed tops have 9-11 whorls and the dimensions are:
length 7.6-10.5, width 2.3-3.1 mm.

The holotype and some paratypes are in the Rijksmuseum van Natuurlijke Historie, Leiden, the Netherlands, paratypes are in the Academy of Natural Sciences of Philadelphia, in the W. Weyrauch collection, and in the author's collection.

The dimensions and number of whorls of the holotype are:

length	diameter	height	width	number of whorls
12.7	3.4	3.1	2.8	5½

Anatomy. The grey animals have the foot sole whitish. The radular formula is: $74 \times \frac{1}{1} + \frac{7}{1-2} + \frac{6}{3-\infty}$, i.e., 74 rows, each row consisting of a central or rhachidian tooth with 1 cusp and to each side 7 lateral teeth (the first 4 with basal plates which reach or almost reach the plates of the teeth of the previous and of the following rows, the plate of the fifth tooth only covers half this distance, and of the sixth only $\frac{1}{3}$ of it) with one to two cusps, and 6 marginal teeth with 3 to many cusps.

Genital organs. *Andinia flammulata* has a rather long, thin diverticulum to the duct of the receptaculum seminis; the penis has no appendage. The retractor and the nerve of the left upper tentacle pass between the penis and the vagina. The dimensions (to nearest $\frac{1}{2}$ mm) of some ducts and organs, taken from one of the paratypes, are: penis to the retractor muscle 2 mm, to the vas deferens $3\frac{1}{2}$ mm, vas deferens 5 mm, spermoviduct 7 mm, albuminous gland $1\frac{1}{2}$ mm, free uterus 1 mm, vagina 2 mm, duct of the receptaculum seminis to the attachment of the diverticulum 1 mm, from there to the end of the receptacle 4 mm, length of the diverticulum 4 mm. The diverticulum of the receptaculum seminis lies close against the spermoviduct, and is as long as the receptaculum seminis with its duct unto the junction with the diverticulum.

No eggs or embryos were present in the uterus.

Distribution. Type locality, Cerro (= mount) Huilcashpata near Palta (Rio Tarma), 3100 m, in rock crevices and under tufts of plants on precipices, leg. W. Weyrauch (no. W.W. 1310).

The species is closely related to *Nenia cumulloana* Pilsbry, which I know from the original publication and from a paratype kindly sent to me by Dr. Pilsbry. Our species is smaller, less darkly coloured and rather differently sculptured. It has a more oblique aperture, a shorter principal plica and the lamella inferior is visible in a frontal view as a little convex fold, whereas *cumulloana* has a more concave lamella inferior.

Nenia cumulloana was mentioned by Pilsbry under *Cylindronenia* Ehrmann, a subgenus of *Steeriana* Jousseau with a finger-like top to the clausilium, but neither *Andinia flammulata* nor *Nenia cumulloana* have such a clausilium.

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