

THE REDISCOVERY AND ANATOMY OF *TROCHONANINA GWENDOLINAE* (PRESTON) (PULMONATA : UROCYCLIDAE)

B. VERDCOURT¹

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Abstract: Material collected in eastern Tanzania shows that *Ledoulxia pseudojenynsi* Thiele is conspecific with the earlier described *L. gwendolinae* Preston. Anatomical investigation shows the species is a typical *Trochonanina*.

About 30 years ago when dealing with the anatomy of *Sitala jenynsi* (Pfeiffer), I mentioned (1963: 190) the need for material of *Ledoulxia pseudojenynsi* Thiele and *L. gwendolinae* Preston, both of which resembled the *Sitala* rather closely; in fact I suggested Thiele's species might prove to be synonymous with Preston's. I was, therefore, pleased when Peter Kasigwa (Dar es Salaam University) showed me some *Trochonanina* he had been unable to identify and I recognised them to be a perfect match of Thiele's adequate description and figure. The material was collected by Kasigwa in Tanzania, Bagamoyo District, Miono Forest, Mwafuma; it had been drowned outstretched and preserved in spirit which greatly facilitated the anatomical investigation. Thiele (1931: 395, Fig. 5) described *Ledoulxia pseudojenynsi* from material collected in Tanzania by Stuhlmann² (in SE. Uluguru Mountains), Vosseler (Tanga District, Pongwe and perhaps Amani) and Conradt. *L. gwendolinae* was described by Preston with merely the locality 'Usagara' and no collector mentioned. The holotype is preserved at Tervuren but I found authentic material, probably paratypes, in the British Museum (Nat. Hist.). These specimens were BM 84.2.19.30 labelled Usagara, part of a lot purchased from the ill-fated Rev. James Hannington³ (later murdered in East Africa) and BM 85.5.25.1–3 part of a lot from Mr. J. Last³ collected 'on the plains within 50 miles of Mamboya'. Although material from both these collectors has at times been thought to exist only in the British Museum it is clear that duplicates also reached others. The collectors probably kept some material back for others before presenting it, although Preston's frequent failure to give the collector's names could hint at a more illegal source. Clearly the holotype of *L. gwendolinae* was almost certainly collected by Hannington. Comparison of Kasigwa's specimens with the BM material indicates that *gwendolinae* differs only in size from *pseudojenynsi* being slightly larger. I am quite certain they were from different populations of the same species. The synonymy is therefore as follows:—

***Trochonanina gwendolinae* (Preston)**

1910 *Ledoulxia gwendolinae* Preston, p. 527, Pl. 7, Fig. 9

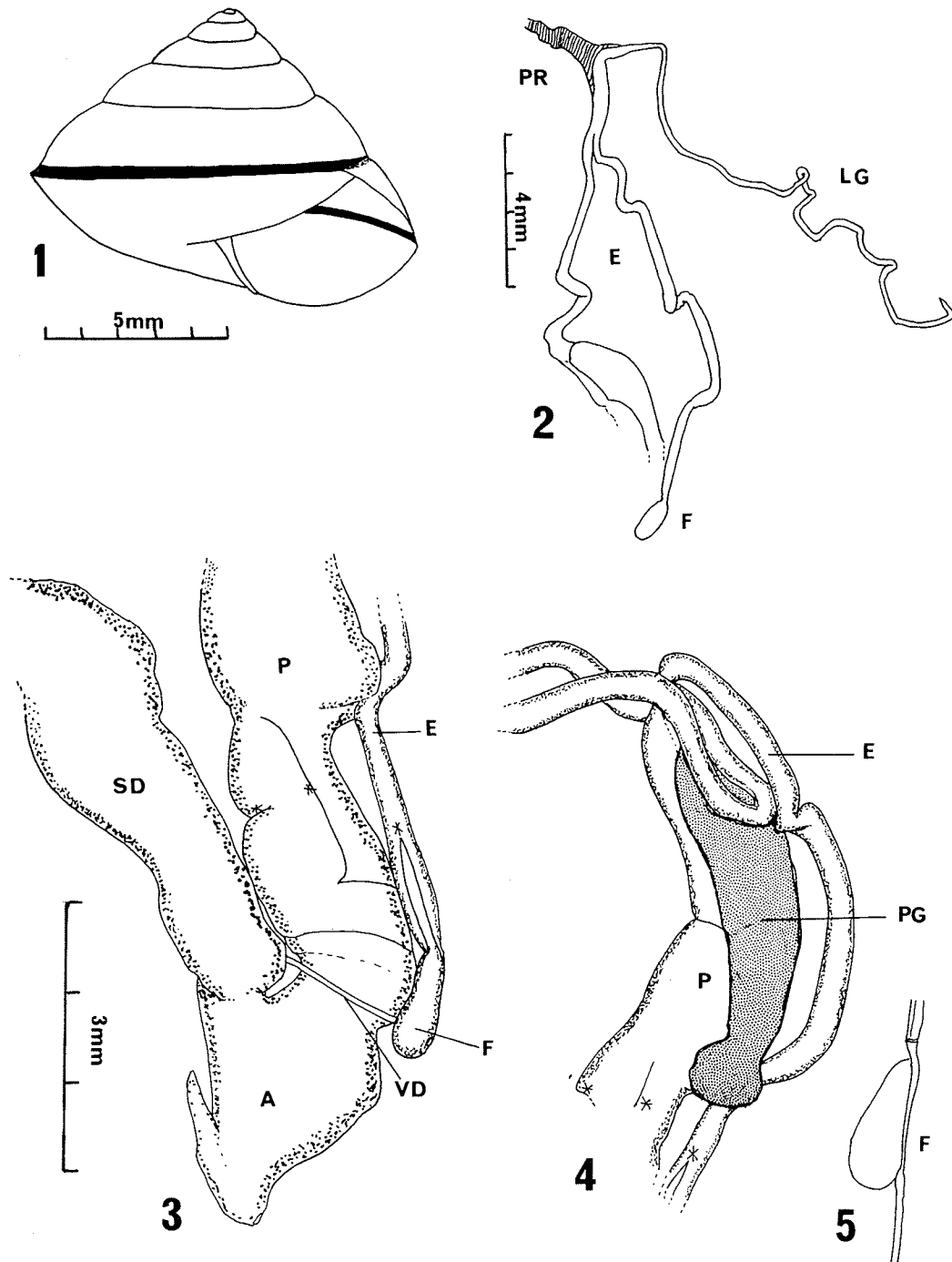
1931 *Ledoulxia pseudojenynsi* Thiele, p. 395, Fig. 5

Description: Shell similar to that of *Sitala jenynsi* (Pfeiffer) but thinner; apical whorls obscurely spirally striate and the rest with feeble transverse element, not at all crisply striate and scarcely perceptible under an ordinary lens, crossed by very fine spiral striae visible only at high magnifications; base with fine close wavy spiral striae.

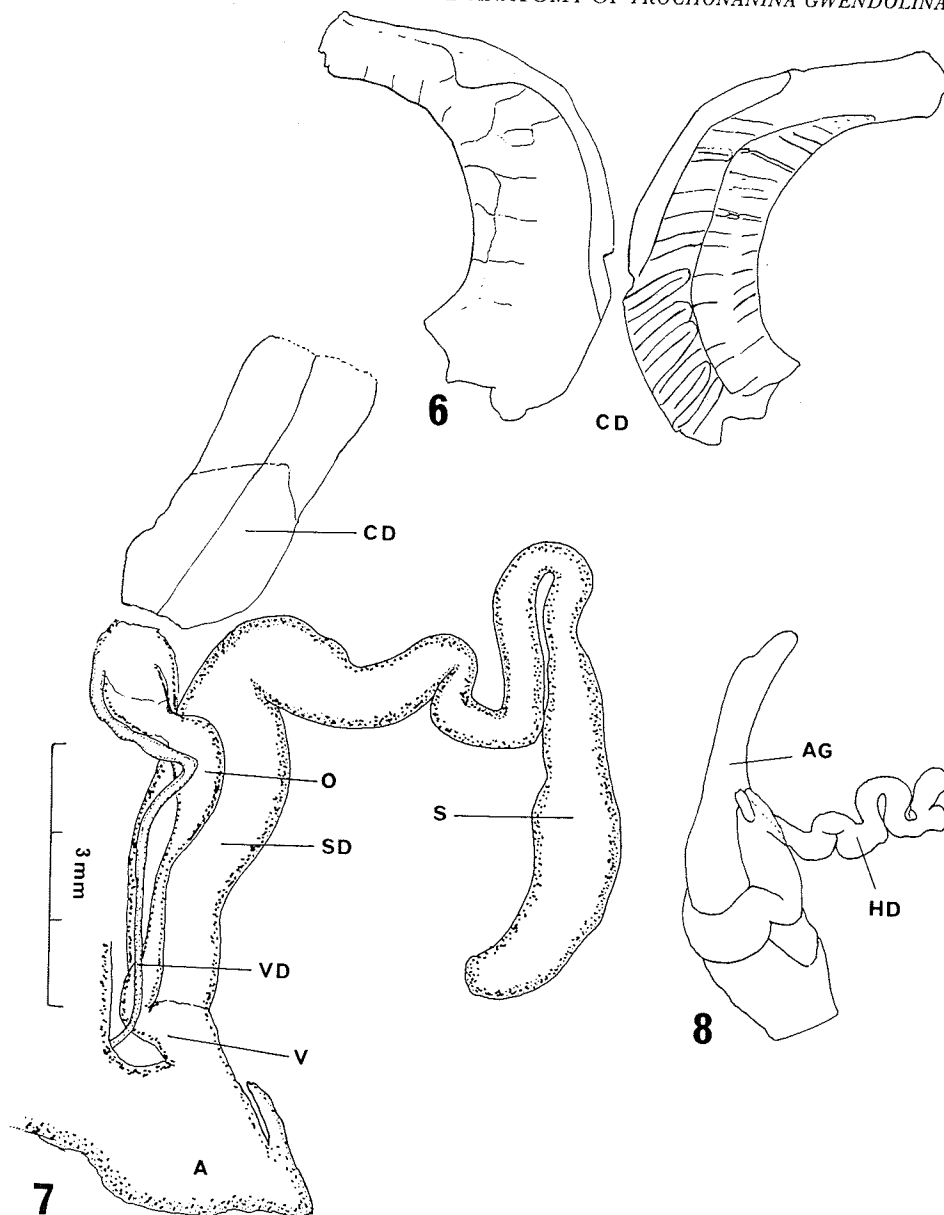
¹ Spring Cottage, Kimbers Lane, Maidenhead, Berks., SL6 2QP.

² This was omitted from my list given in the *Conchol. Newsl.* **109**: 181 (1989).

³ See *Conchol. Newsl.* **77**: 248–249 (1981) & **74**: 248–249 (1980).



Figs. 1-5. *Trochonanina gwendolinae* (Preston). 1 - shell. 2 - upper part of male genitalia. 3 - lower part of genitalia. 4 - middle part of male genitalia showing penial gland. 5 - flagellum.



Figs. 6–8. *Trochonanina gwendolinae* (Preston). 6—part of common duct. 7—part of genitalia showing spermatheca. 8—albumen gland and hermaphrodite duct.

Abbreviations used in the figures

A – atrium
AG – albumen gland
CD – common duct
E – epiphallus
F – flagellum
HD – hermaphrodite duct
LG – lime gland

VD – vas deferens

O – oviduct
P – penis
PG – penial gland
PR – penial retractor
S – spermatheca
SD – spermathecal duct
V – vagina

Mantle with a very pale grey-brown mid-longitudinal band of markings. Caudal tail well developed, 3 mm. long, tapering to a fine point; shell-lobes virtually absent.

Thiele examined the radula and briefly described it as follows "according to its radula it belongs to *Ledoulxia*, the middle tooth and six lateral teeth have long acute cusps and the three innermost marginals have the outer cusp moved backwards and the further teeth [marginals] have two evident cusps." My own examination of the radula agrees well, there being 6-7 true laterals, ± 3 transitional marginals and about 90 marginals. Scanning electron micrographs have been taken of part of the radula (Pl. 11). The genital anatomy is shown in Figs. 1-8 and closely resembles that of *Trochonanina mozambicensis* (Pfeiffer) the type species of the genus (see Watson in Connolly 1925, pl. 8, Fig. 3, Verdcourt 1960: 246, 1961, Figs. 5, 12) having a similar free glandular appendage. The lime-gland is long and convoluted with the penial retractor attached to its proximal end rather than to the epiphallus before its junction with the lime-gland; flagellum narrowly elongate ovoid, white and chalky.

Although it is possible to identify *Trochonanina* from their overall shapes and details of transverse and spiral sculpture, many species attributed to this genus may not actually belong to it since they have never been examined anatomically. No proper revision of the genus can be attempted until all the species have been dissected.

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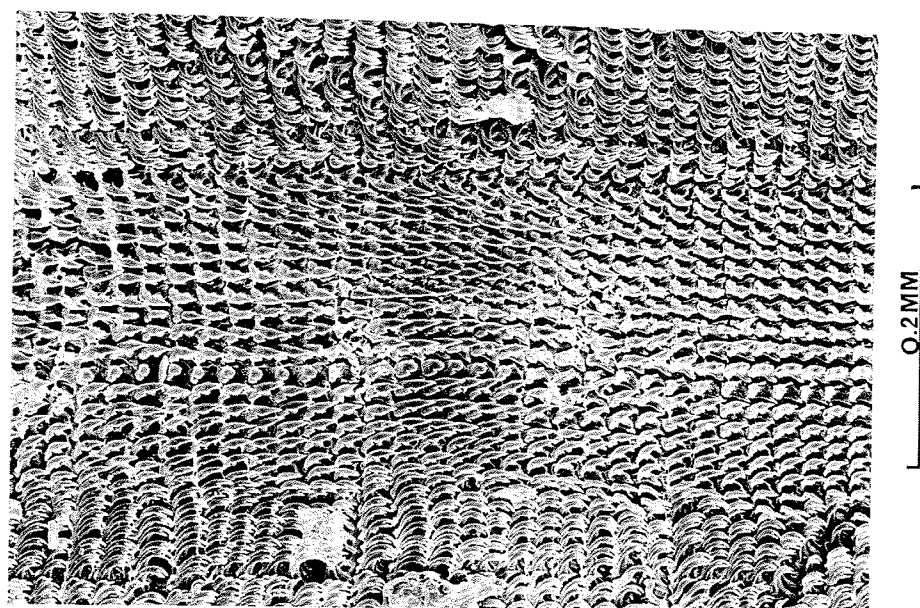
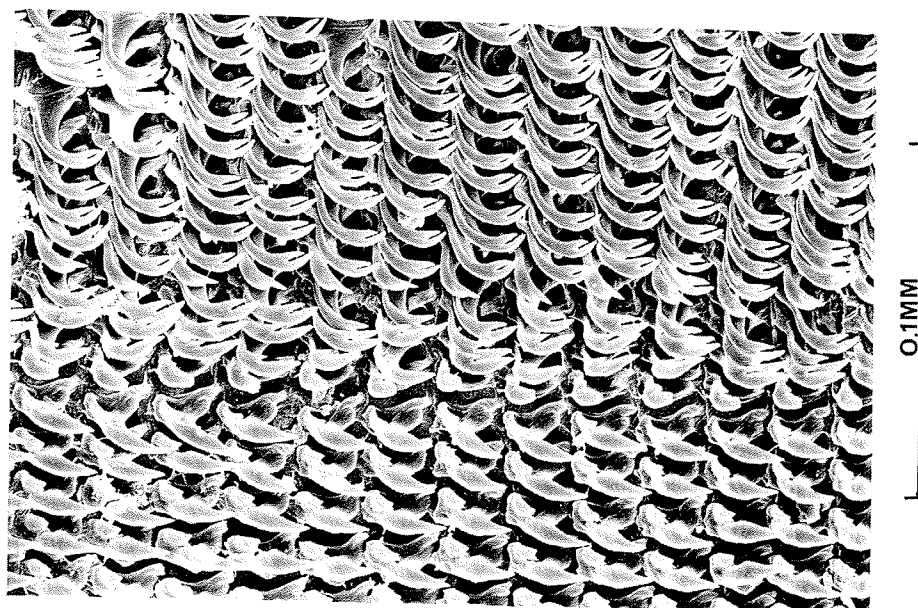


PLATE 11

Trochonanina gwendolinae (Preston). Tanzania, leg. P. Kasigwa. Part of radula.