

On the peculiar features of the reproductive anatomy of *Cylindrus obtusus* (DRAPARNAUD, 1821)

(Pulmonata, Helicidae)

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Six specimens of *Cylindrus obtusus* from Schneeberg have been dissected. The results of investigation were surprising in two ways. Firstly, among dissected specimens I did not find a classic ariantoid picture: the presence of a single stylophore with two simple mucus glands, as it was depicted by STURANY & WAGNER (1914, Denkschr. k. Akad. Wiss. Wien, math.-nat. Cl., 91, Taf. X, Fig.55a; comp. the title page of this abstract chapter). The material of these authors came from the same locality as mine. Secondly, I found one specimen without any trace of the stylophore (fig.1 D), whereas in remaining five animals there was a stylophore and a single ariantoid mucus gland (fig.1 B,E,F). Thus, there exist at least 3 variants of the dart apparatus structure:

1. Stylophore plus a pair of mucus glands;
2. Stylophore plus a single mucus gland;
3. A single mucus gland without stylophore.

Such a phenomenon of total reduction (probably by mutagenesis) of some accessory organs of genitalia is known in some other taxa. For example, in *Circassina circassica* (MOUSSON, 1863) (Hygromiidae); in some Bradybaenidae (complete reduction of mucus glands and/or a stylophore); in Enidae disappearance of some parts of penial appendix in *Brephulopsis bidens* (KRYNICKI, 1833), and an absence of penial appendix and/or spermathecal diverticle in any combinations in Multidentulinae; at last in Ariophantidae s. lat. one can see the absence of sarcobellum, penial caecum and flagellum in all possible combinations. At the same time this phenomenon in Ariantinae is discovered for the first time. Another issue is: does *Cylindrus* belong to Ariantinae? I am inclined to say yes, since all the rest anatomical characters are quite characteristic for the subfamily. On the other hand, the shell of *C. obtusus* is very peculiar, and external appearance of the stylophore is unusual for Helicidae as a whole in having narrowed and elongated basal portion. Therefore, it is desirable to investigate more material to resolve the issue.

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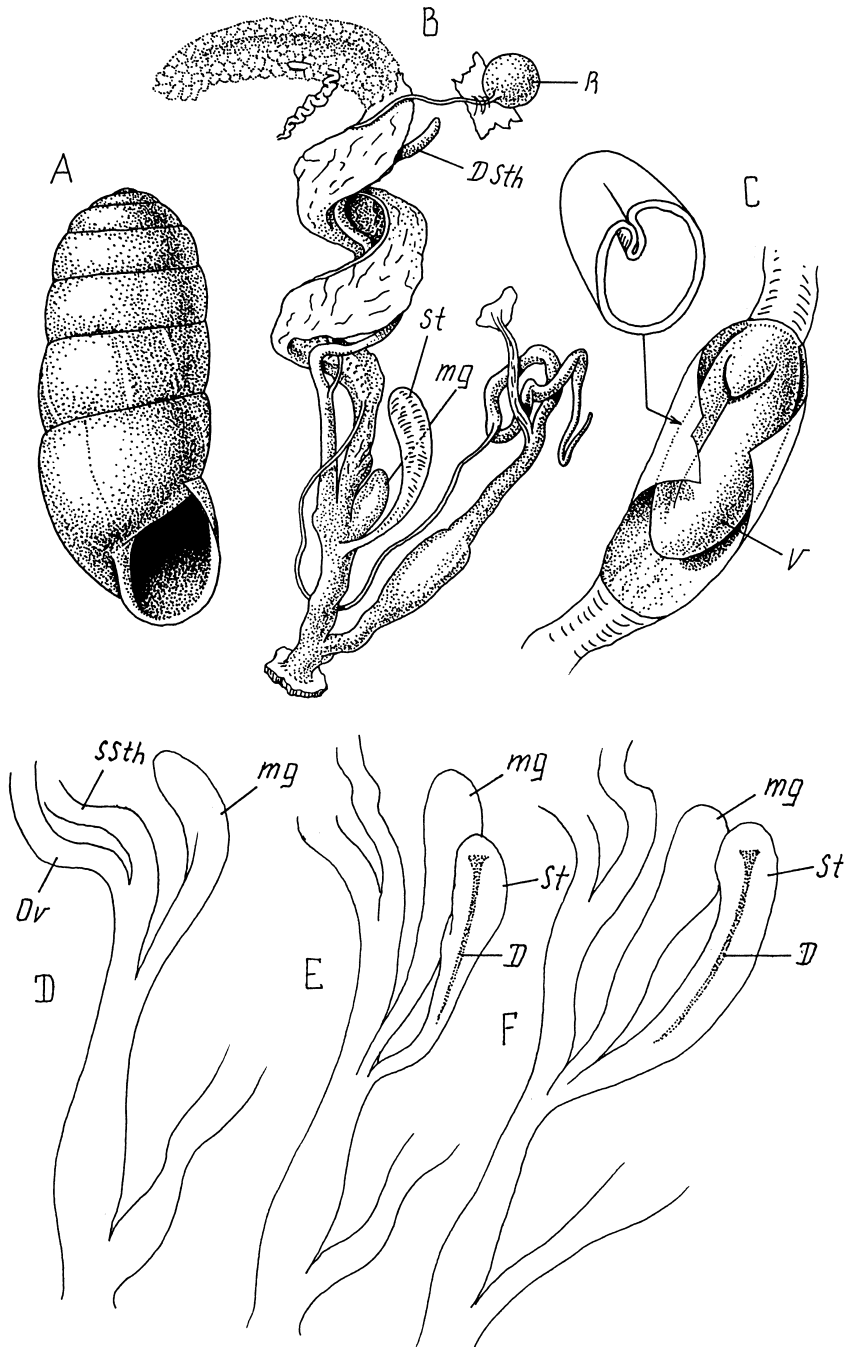


Fig. 1 *Cylindrus obtusus* (Drap.) from „Schneeberg; Weg kurz vor Fischerhütte, 14.6.1981. Leg. O. Paget“. A - shell; B - reproductive apparatus; C - penis opened; D,E,F - distal genitalia of 3 other specimens. D - dart; DSth - diverticle of spermatheca; MG - mucus gland; Ov - free oviduct; R - reservoir of spermatheca; SSth - shaft of spermatheca; St - stylophore.

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