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STROBILOPS VANDERDUSSENI, A NEW MIOCENE (SARMATIAN) GASTROPOD SPECIES OF THE NÖRDLINGER RIES (BAVARIA, GERMANY)

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Karnekamp, C. *Strobilops vanderdusseni*, a new Miocene (Sarmatian) gastropod species of the Nördlinger Ries (Bavaria, Germany). — Contr. Tert. Quatern. Geol., 37(3-4): 35-37. Leiden, December 2000.

From a Miocene fissure fill deposit at the Goldberg (Nördlinger Ries, Bavaria, Germany), a new species of the gastropod genus *Strobilops* Pilsbry, 1893, *S. vanderdusseni*, is described. Representatives of this genus have been recorded from the Eocene to Pliocene of Europe; extant members are known from the southern states of the USA, Mexico and northern South America.

Key words — Gastropoda, Miocene, Germany, fissure fill deposits, new species.

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INTRODUCTION

At regular intervals between 1977 and 1988, a fissure fill deposit high in the section exposed at the Goldberg (Nördlinger Ries) was sampled by the author (Karnekamp, 1982, 1985, 1995). From the so-called 'Süßwassermergel', of which a total of some 225 kg was collected over the years, a large number of terrestrial and freshwater molluscs have been recovered (Karnekamp, 1999). Amongst these are a few complete specimens as well as some apical fragments and ultimate whorls of an undescribed species of the genus *Strobilops* Pilsbry, 1893, which is formally named in the present note. The type material has been donated to the collections of the Nationaal Natuurhistorisch Museum/Naturalis (Leiden, the Netherlands; abbreviation RGM). In the literature, representatives of *Strobilops* have been recorded from the Eocene to Pliocene of Europe (Edwards, 1852; Klika, 1891; Miller, 1900; Fischer & Wenz, 1914; Wenz, 1915, 1923; Schutt, 1967 and Zilch, 1969). The genus went extinct in Europe during the Pliocene; extant members are known from northern South America, Mexico and the southern states of the USA (Pilsbry, 1927-1935, 1948; Schileyko, 1998).

The Goldberg molluscan faunas, of Sarmatian age (see Bolten & Müller, 1969; Bolten, 1977), are characterised by massive numbers of various species of the gastropod genera *Gastrocopta* Wollastron, 1878 and *Vertigo* O.F. Müller, 1774. In addition, fissure fill assemblages are known to contain also mammalian fossils, skeletal remains of lizards not being rare either. Of plants, the fruits of the ulmacean tree genus *Celtis* are a conspicuous element (pers. obs.).

SYSTEMATIC DESCRIPTION

Order Stylommatophora Schmidt, 1855
Family Strobilopsidae Hanna, 1922
Genus *Strobilops* Pilsbry, 1893

Type species — *Helix labyrinthica* Say, 1817.

Strobilops vanderdusseni n. sp.
Pl. 1

Types — Holotype is RGM 456 057 (Pl. 1, Figs 1, 2), paratypes are RGM 456 058-060.
Locus typicus and stratum typicum — Goldberg, Nördlinger Ries (co-ordinates: r 4520, h 14.600, 513.7 NN, sheet 7128 Nordlingen), Bavaria (Germany); from the so-called 'Süßwassermergel' of Sarmatian (Miocene) age.
Derivatio nominis — Named after my good friend Jobs van der Dussen (Amstelveen, the Netherlands), who accompanied me on collecting trips to the Goldberg.
Diagnosis — A species of *Strobilops* with a small, conical and conspicuously ribbed shell; ribs show slight inverted S-shaped course into the umbilicus.
Material — In addition to the types (see above), a number

of adult shells, ultimate whorls and juvenile specimens are in the author's collection (CK 11001-11004, CK 11005-11012, and CK 11013-11017, respectively).

Description — Shell small, up to 2 mm in height, width 2 mm, beehive shaped, stout, umbilicus obvious. Apex blunt, 5½ regularly expanding, lightly convex whorls, 1½ smooth embryonic whorl (Pl. 1, Fig. 4). Other whorls bear conspicuous prosocline ribs; the angle of inclination increases during ontogeny. Radial ornament is not absolutely continuous from whorl to whorl (Pl. 1, Fig. 1). Body whorl rounded, bearing 44 to 46 ribs, space between ribs matches the width of the ribs, which show an inverted S-shaped course into the well-developed umbilicus (Pl. 1, Fig. 2), when viewed from below. Aperture of medium height (*c.* 24 % of total shell height), ultimate whorl expanded, apertural rim thickened and slightly reflected (Pl. 1, Fig. 2). Two parietal teeth, of which the outer one is well developed and somewhat spoon shaped, the inner one less obvious; both continue to just posterior of the faintly retracted aperture (Pl. 1, Figs 2, 5). Three smooth, scythe-shaped basal folds (Pl. 1, Fig. 3).

Discussion — Specimens of *S. costata* (Clessin, 1923), collected from the former Pharion's quarry at Steinheim am Aalbuch are wider than tall and more finely ribbed than the new species, and their base is smooth. *Strobilops joossi* Gottschick, 1911 also is wider than tall and the ribs efface towards the umbilicus. This species occurs in Sarmatian strata at Steinheim as well (Gottschick, 1911). A third species from the deposits exposed at Steinheim, *S. subconoidea* (Jooss, 1912), may be conspecific with *S. joossi* in showing a shell that is wider than tall, and ribs which efface towards the umbilicus (Jooss, 1912). *Strobilops caucasica* Steklov, 1961, from the Upper Miocene of Ciscaucasia, is much less tall and here too the ribs are less well developed on the shell base (Steklov, 1966). Finally, *S. pappi* Schlickum, 1970 is less tall and more faintly ribbed at the base, while *S. tiarula* (Sandberger, 1886) does have well-developed ribs at the base, which continue up to the umbilicus, but here the inner parietal tooth is hardly developed; these species also is less tall. The two last-named taxa are known from the Pannonian of the Vienna Basin (Lueger, 1981).

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PLATE 1

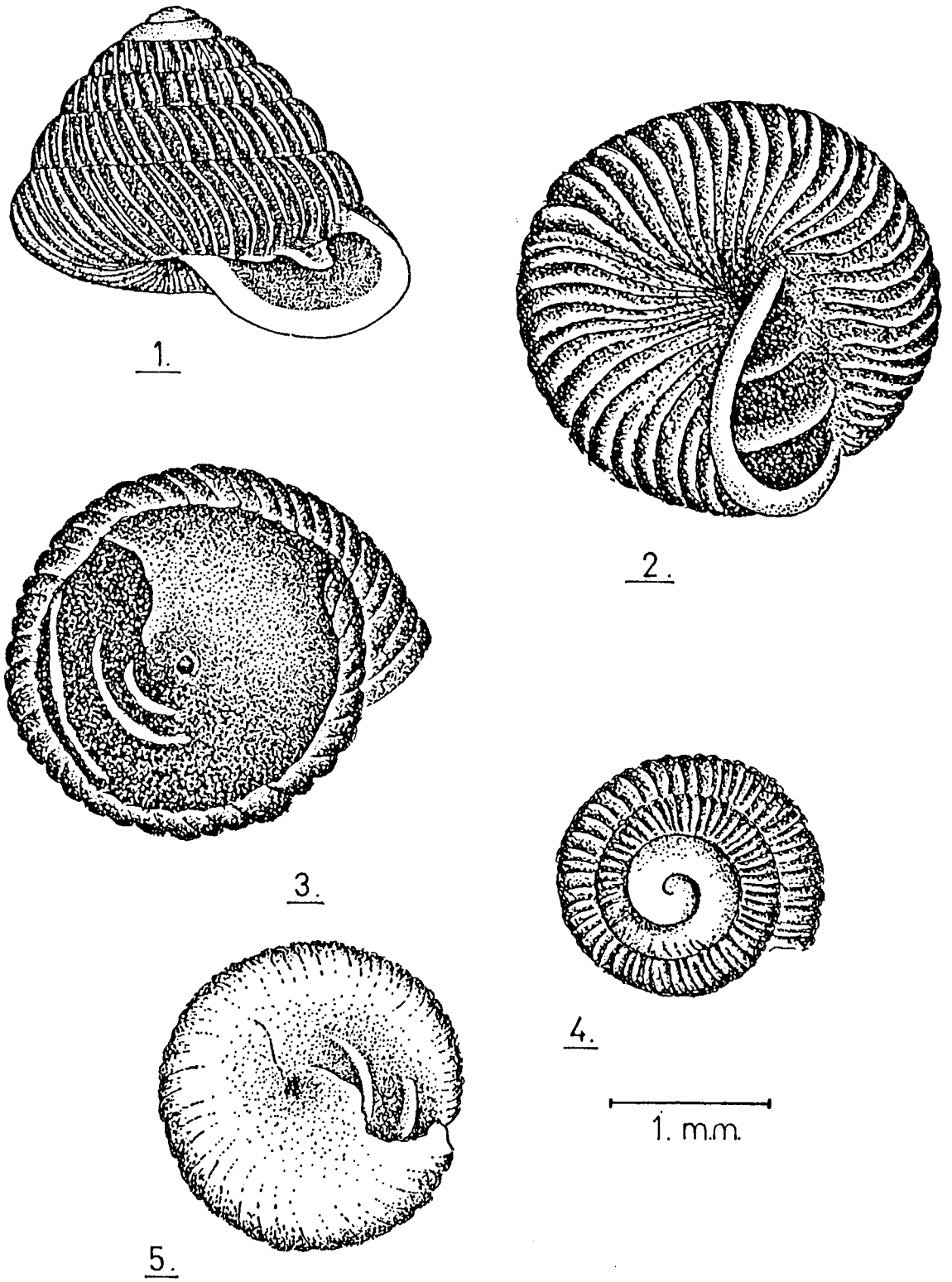

PLATE 1

Figs 1-5. *Strobilops vanderdusseni* n. sp., fissure fill deposits ('Süßwassermergel', Sarmatian, Miocene), Goldberg (Nördlinger Ries, Bavaria, Germany); 1, 2 - holotype RGM 456 057; 3 - paratype RGM 456 059, body whorl; 4, 5 - paratype RGM 456 060, juvenile shell. Scale bar equals 1 mm.