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AUSTRIUMPHIS, A NEW GENUS OF BUCCINID GASTROPODS FROM THE PLIOCENE OF SOUTH AFRICA

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The genus *Austriumphis* is proposed for *Triumphis dilemma* Kilburn & Tankard, 1975, from the early Pliocene of South Africa. This species, which may belong to the buccinid gastropod subfamily Photinae Gray, 1857, differs in many shell characters from *Triumphis* Gray, 1857, whose only species, the tropical eastern Pacific *Buccinum distortum* Wood, 1828, is a Recent member of the Pseudolividae Cossmann, 1901.

Key words — Pliocene, South Africa, Buccinidae, new genus.

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INTRODUCTION

The early Pliocene molluscan fauna of South Africa contains a number of enigmatic species that have been questionably assigned to living genera. One of these is *Triumphis dilemma* Kilburn & Tankard, 1975. In reviewing all living and fossil genera of the neogastropod family Pseudolividae, I have examined *Buccinum distortum* Wood, 1828 (the Recent tropical eastern Pacific type species of *Triumphis* Gray, 1857) as well as the South African *T. dilemma*. The two species clearly do not belong to the same genus or even the same family. Whereas *T. distorta* is a member of the Pseudolividae (Vermeij, in prep.), *T. dilemma* belongs to the Buccinidae. My purpose here is to propose the new genus *Austriumphis* for *T. dilemma*, and to discuss the possible relationships of the South African fossil to other buccinids.

SYSTEMATIC PART

Order Neogastropoda
Family Buccinidae Latreille, 1825
Genus *Austriumphis* nov. gen.

Type species — *Triumphis dilemma* Kilburn & Tankard, 1975.

Etymology — Combination of the Greek prefix *austro-* (southern) and the genus name *Triumphis*; by happy coincidence, the German preposition 'aus' means 'out of', implying that the new genus was taken out of *Triumphis*, the genus to which its type species had previously been assigned.

Diagnosis — Shell of medium size, maximum height 30.6 mm, ovate. Spire of teleoconch consisting of at least five whorls, which are separated by a shallow, appressed suture. Spire relatively high, last whorl comprising two-thirds of total shell height. Whorls evenly convex in lateral profile; last whorl not constricted above siphonal canal. Siphonal canal very short, with deep anterior notch. Spiral ornament consisting of fine, evenly spaced cords, 9 to 11 on penultimate whorl, 24 to 27 on last whorl, axial sculpture absent. Outer lip with smooth, polished edge, lower one-third of outer lip forms very shallow, broad

sinus. Medial sector of outer lip convex when viewed ventrally; weak posterior notch present where adapical end of outer lip joins penultimate whorl at low angle.

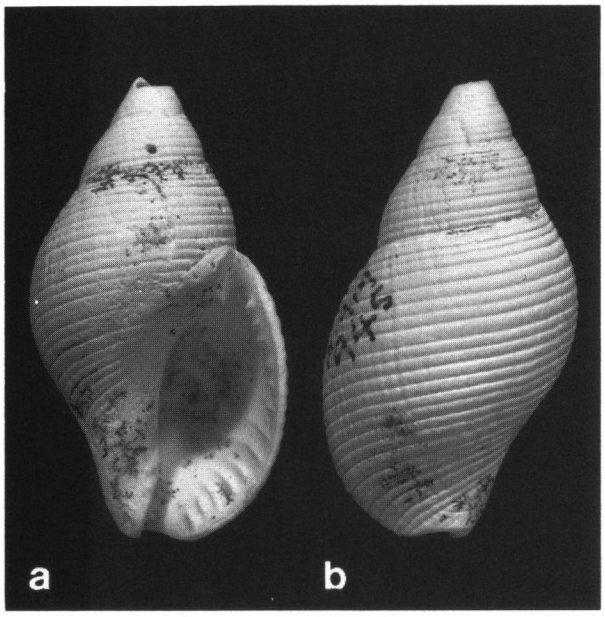

Fig. 1. *Austriumphis dilemma* (Kilburn & Tankard, 1975), early Pliocene, Hondeklip Bay, South Africa (South African Museum PQAV 945), apertural (a) and dorsal (b) views, x 2.

Upper sector of outer lip in adult abaxially slightly expanded and adapically extended; inner side of outer lip with deeply recessed ridge, which is marked by 14 short lirae. Inner lip adherent, somewhat excavated; margin of columella sinuous, ornamented on lower part by three very weak folds. Adapical end of inner lip bearing prominent parietal denticle; columellar callus absent. Parietal callus in adult forms narrow, low ridge at posterior end of aperture; aperture ovate, its height/width ratio 2:3; siphonal fasciole very low, rounded. Umbilicus absent.

Stratigraphic and geographic distribution — Early Pliocene, South Africa.

Included species — Only the type species, *Triumphis dilemma* Kilburn & Tankard, 1975.

Material examined — South African Museum PQAV 945 (9 specimens), Hondeklip.

Discussion — I propose the new genus for an enigmatic Pliocene buccinid that Kilburn & Tankard (1975) named *Triumphis dilemma*. The original material came from Pliocene deposits at Langebaanweg, on the west coast of Cape Province, South Africa. Kensley & Pether (1986) have since reported this species from a comparable horizon at Hondeklip Bay, and maintained its original placement in *Triumphis*. The deposits at Langebaanweg and Hondeklip Bay from which this species comes are now thought to be of early Pliocene age (J. Pether, pers. comm., 1995).

Characters of external ornament, the columella, and the outer lip set this species apart from *Triumphis* and from all other members of the family Pseudolividae. Spiral ornament in *Austriumphis* is evenly distributed over the last whorl from the suture to the base, and shows no indication of coarsening towards the base as it does in *Triumphis* and all other pseudolivids. The columella of *Triumphis* is smooth, and bears a weak fold at the entrance to the siphonal canal. In *Austriumphis*, the columella is excavated and lacks the basal fold. Instead, it bears three small basal folds. The outer lip of *Triumphis* and other Pseudolividae has a sharp edge and indicates indeterminate growth, whereas that of *Austriumphis* is smooth and polished and implies determinate growth. The upper sector of the outer lip of *Austriumphis* flares slightly, i.e. it is abaxially slightly expanded and ascends the spire slightly relative to earlier stages of growth. These characters conform to Vermeij & Signor's (1992) criteria for a unique adult lip, which indicates determinate growth in *Austriumphis*. The ventral profile of the outer lip also differs in the two genera. In *Triumphis* and other Pseudolividae, the lip is planar when viewed ventrally, whereas in *Austriumphis* the lip bears a very shallow, concave sinus on its lower third, and a medial convex sector. The inner side of the outer lip is marked by a deeply recessed ridge parallel to the outer edge in *Austriumphis*. No comparable ridge is known in *Triumphis* or any other pseudolivids.

No named genus closely resembles *Austriumphis*. The absence of axial ornament, the presence of lirae on the inner side of the outer lip, the presence of three folds on the lower, excavated portion of the columella, and the presence of a strong parietal ridge and a raised parietal callus at the posterior end of the aperture set *Austriumphis* apart from other genera. *Fusus (Angistoma) labratulus* von Koenen, 1889, from the latest Eocene (Latdorfian) of northern Germany, superficially resembles *Austriumphis* by lacking axial ornament, but the German species differs in lacking the parietal ridge, in having five denticles instead of fourteen lirae on the inner side of the outer lip, by lacking a determinate outer lip, and by having a higher spire (see von Koenen, 1889). Other latest Eocene to Oligocene European species assigned to *Angistoma* Sandberger, 1861 (type species *Fusus ringens* Beyrich, 1856) are characterised by the presence of axial ornament and by a narrowly elongate aperture (see Janssen, 1979; Schnetler & Beyer, 1987, 1990).

Austriumphis may belong to the subfamily Photinae, along with such other genera as *Cominella* Gray, 1850, and *Afrocominella* Iredale, 1918. It differs from most Photinae by the complete absence of axial ornament. A more definitive assignment must await a thorough review of the entire complex of genera now assigned to the Buccinidae.

As I understand the group, *Austriumphis* is an extinct, monotypic genus confined to the Pliocene of South Africa. Along with many other species in the deposits at Langebaanweg and Hondeklip Bay, *A. dilemma* probably lived in shallow water, and may have been a common constituent of low intertidal or shallow sublittoral rocky-bottom communities.

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REFERENCES

Janssen, R., 1979. Die Mollusken des Oberoligozäns (Chattium) im Nordseebecken. 2. Neogastropoda, Euthyneura, Cephalopoda. — Archiv für Molluskenkunde, 109: 277-376.

Kensley, B., & J. Pether, 1986. Late Tertiary and Early Quaternary fossil Mollusca of the Hondeklip area, Cape Province, South Africa. — Annals of the South African Museum, 97: 141-225.

Kilburn, R.N., & A.J. Tankard, 1975. Pleistocene molluscs from the west and south coasts of the Cape Province, South Africa. — Annals of the South African Museum, 67: 183-226.

Koenen, A. von, 1889. Das Norddeutsche Unter-Oligocän und seine Mollusken-Fauna. Lieferung I: Strombidae-Muricidae-Buccinidae. — Abhandlungen zu der geologischen Spezialkarte von Preussen und den Thüringischen Staaten, 10: 280 pp.

Schnetler, K.I., & C. Beyer, 1987. A Late Oligocene (Chattian B) mollusc fauna from the clay-pit of Galten Brickworks at Nørre Vissing, Jylland, Denmark. — Mededelingen van de Werkgroep voor Tertiaire en Kwartaire Geologie, 24: 193-224.

Schnetler, K.I., & C. Beyer, 1990. A Late Oligocene (Chattian B) molluscan fauna from the coastal cliff at Mogenstrup, north of Skive, Jutland, Denmarks. — Contributions to Tertiary and Quaternary Geology, 27: 39-81.

Vermeij, G.J., & P.W. Signor, 1992. The geographic, taxonomic and temporal distribution of determinate growth in marine gastropods. — Biological Journal of the Linnean Society (London), 47: 233-247.

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