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A new species of *Krapfiella* PRESTON from the Miocene of Kenya

(Mollusca, Stenogyridae).

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9 figures.

The genus *Krapfiella* was erected by PRESTON (1911) for *K. mirabilis* PRESTON, a snail which is quite frequent around Nairobi. Two other species were described by the same author later (PRESTON 1913), but so far as I am aware neither of these has been recollected. The genus stands very close to *Pseudoglessula* O. BOETTGER with which I once considered it should be merged (VERDCOURT 1952) since the radulae of the two genera are very similar; the strong spiral sculpture of the apical whorls is, however, a very adequate generic character. WATSON (1921) has given an account of the animal of *K. mirabilis*. The three recent species so far described may be distinguished as follows.

1. Shell 23·5 mm. long and 13 mm. wide *mirabilis*.
— Shell considerably longer 2
2. Shell broader, 40·5 mm. tall and 20·25 mm. wide; apical angle about 42° *magnifica*.
— Shell narrower, 41·5 mm. tall and 18·0 mm.[1]) wide; apical angle about 35° *princeps*.

Krapfiella mirabilis PRESTON 1911, Ann. Mag. nat. Hist., (8) 7: 472, pl. 12 f. 25a-b. [Fig. 8].

Material examined, preserved in the Coryndon Museum, is as follows. —

Locality: Kenya. Thika, Chania Gorge, riverine forest, 19. IX. 1953, B. VERDCOURT and 1. VII. 1954, B. VERDCOURT and V. 1960, B. VERDCOURT and 18. VI. 1960, R. M. POLHILL 108 and no date B. VERDCOURT and M. PAIN. Sagana River, H. COPLEY, C. M. 1339. Thego, OPIKO. Nairobi, Karura Forest, 1950, B. VERDCOURT, and same locality, in damp litter by riverside, 1. V. 1960, R. M. POLHILL 38 (and spirit material). The type material was collected on Mt. Kenya at 6-8000 feet probably by ROBIN KEMP.

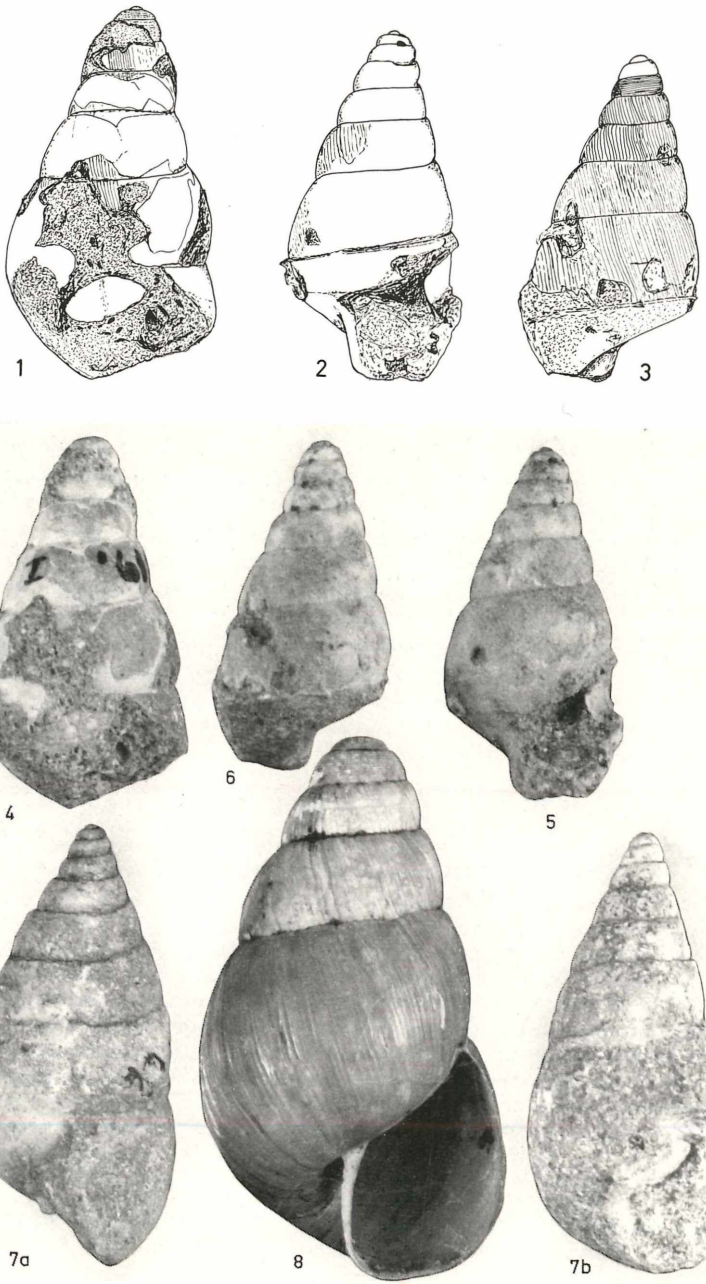
Krapfiella princeps PRESTON 1913, Proc. malac. Soc., 10: 284, text f.

Locality: Kenya. Mt. Nyiro, 8300 ft., A. BLAYNEY PERCIVAL. Barta Steppes, south of Mt. Nyiro, 4000 ft., A. BLAYNEY PERCIVAL (paratypes seen in Berlin Museum).

Krapfiella magnifica PRESTON 1913, Proc. malac. Soc., 10: 283, text f.

Locality: Kenya. Mathews Range, Uraguess, A. BLAYNEY PERCIVAL (paratypes seen in Berlin Museum).

[1]) Taken from the figure; PRESTON's measurement of 32·25 mm. given in the description is obviously wrong.


1
2
3
4
6
5
7a
8
7b

In August 1962, Dr. W. W. BISHOP of the Uganda Museum, Kampala handed over to me for examination a collection of fossil molluscs from various localities in Uganda and Kenya. Amongst the material from Songhor in the Nyanza District of Kenya were two fragments showing the characteristic sculpture of *Krapfiella*. Although poor the material is quite adequate to be absolutely certain of the generic placing. The two fragments are by no means identical, but since this is very probably due to differences in the method of fossilisation, I am considering them to belong to the same species until more complete material becomes available. This new material does, however, link up with a few specimens from Songhor and Koru, the former of which I previously reported (VERDCOURT 1963) as *Homorus (Subulona)* sp. Some of these specimens are adult but none shows any apical sculpture hence this revised generic placing was not obvious at the time. The Koru specimen does, however, show the transverse sculpture well. There are many *Homorus* species of exactly this shape. The smallest fragment has been chosen as the holotype beccause it shows both spiral and transverse sculpture adequately.

Krapfiella angusta n. sp.

Figs. 1-7

1963 *Homorus (Subulona)* sp., — VERDCOURT, Palaeontographica, **121**: 13, f. 21.

Description of holotype: Remaining fragment ovate-acuminate. Spire produced, sides straight and regular, apical angle about 38°, apex narrowly rounded. Remaining 6·5 whorls gradually increasing, slightly convex, first 2·5 (at least) with 12 strong, equidistant, spiral ridges, later whorls with fairly strong, slightly sinuous costulae, about 7-8 per millimetre. Aperture damaged, probably ovate. Base of shell convex.

Dimensions: length 14·5 mm., breadth 7·2 mm.

The other fragment also consists of 6·5 whorls, and is undoubtedly a whole fossil with traces of the shell remaining, whereas the type may be only an internal cast. The first two whorls are strongly spirally ridged, about 10 ridges being visible; there are slight traces of transverse striae on the later whorls. The apical angle is about the same as that of the holotype, but the apex is coarser.

Dimensions: length 15·5 mm., breadth 9 mm.

The adult specimens referred to above complete the description of the species. Shell widely turriform. Whorls 8·5, slightly convex. Aperture narrowly ovate-pyriform, damaged or entirely filled with material, but the columella appears to be smoothly rounded with the upper part reflected over a narrow umbilicus; this needs confirmation from better material.

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Fig. 1-7. *Krapfiella angusta* n. sp. — 1, 4) Specimen from Songhor I, W. W. BISHOP, ×3·2; — 2, 5) Holotype from Songhor II, W. W. BISHOP, ventral view ×3·2; — 3, 6) Holotype, dorsal view, ×3; — 7a-b) Specimens Songhor Sgr. 150/48, D. G. MACINNES, ×2·5.

Fig. 8. *Krapfiella mirabilis* PRESTON. Karura Forest, Nairobi, R. M. POLHILL, ×3.

Dimensions: length 23-23·5 mm., breadth 10-10·5 mm.

Locality: Kenya. Songhor, Miocene beds, „Songhor II", W. W. Bishop (holotype SMF 168973); Songhor, Miocene beds, „Songhor I", W. W. Bishop (Coryndon Museum); Songhor, Miocene beds, specimens Sgr. 150/48, D. G. Macinnes (SMF 168974 and Coryndon Museum); Koru, Miocene beds, specimen Ko 26/50, D. G. Macinnes (Coryndon Museum) and specimen Ko 14/50, D. G. Macinnes (SMF 168975).

This new species is intermediate in form between *K. mirabilis* and the two species from northern Kenya. In the appendix a complete list of the material from Songhor is given. The assemblage from Songhor II and III indicates wet evergreen forest under high rainfall conditions. The Songhor I assemblage could have lived in drier evergreen forest of a riverine type. This discovery only serves to confirm that much of Kenya was then covered with that type of evergreen forest that exists today and that most of the present day genera were clearly characterised in Miocene times having undergone little change since then. The various localities mentioned in this paper are marked on the map (Fig. 9).

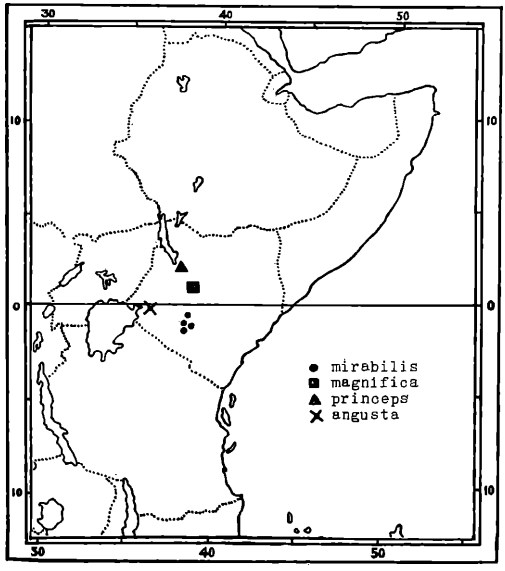

Fig. 9. Map showing distribution of the genus *Krapfiella*.

Appendix.

List of Miocene molluscs from Songhor found by Dr. W. W. Bishop.

Songhor I

a) Red beds within limestones
Trochonanina sp.

b) Various levels, Sept. 1961
Limicolaria leakeyi Crowley & Pain
Krapfiella angusta n. sp.
Helicarion sp.
Gonaxis (Marconia) cf. *costata* Verdcourt

c) Red outlier assemblage
Limicolaria leakeyi CROWLEY & PAIN
? *Thapsia* sp.

Songhor II, Sept. 1961
Ligatella sp.
Limicolaria sp. juv.
Limicolaria leakeyi CROWLEY & PAIN
Krapfiella angusta n. sp.
Homorus (Subulona) spp. (two species)
Stenogyridae indet.
Trochonanina spp. (two or three species)
? *Tayloria* sp. or juvenile *Gonaxis* sp.
Gonaxis sp. near *G. protocavallii* VERDCOURT
Gonaxis spp. (two species)
Gulella (Primigulella) sp.
Gulella sp. cf. *pretiosa nyiroensis* (PRESTON)
Gulella spp. (two species)

Songhor IIa
Limicolaria leakeyi CROWLEY & PAIN

Songhor III
Limicolaria leakeyi CROWLEY & PAIN
Homorus (Subulona) sp.
? *Trochonanina* sp.
Gulella (Primigulella) miocenica VERDCOURT

References.

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