

CHAPTER 7

A KEY TO SOUTHERN AFRICAN BATHYERGIDAE

In this chapter an attempt is made to provide a key to the South African Bathyergidae. The H.B. measurements used in this key represent minimum and maximum sizes recorded on museum labels. These figures may therefore be open to a certain amount of criticism. In contrast however, the C.B. length of the skulls were all taken by me (in the majority of cases) and these values may therefore offer a truer comparative yard-stick.

It is unfortunate that some species are poorly represented in the study collections in the various South African museums. This is especially true of Cryptomys bocagei, C.beirae and C.nimrodi. The identification of these species with the aid of this key may lead to difficulties and it may eventually be shown that these three species are in fact synonyms of C. darlingi.

It must also be pointed out that C. holosericeus has tentatively been retained as a separate species. There are indications (discussed elsewhere) that it may be possible to synonymise holosericeus with hottentotus, but this step has not been taken in the present work.

Family Bathyergidae

Burrowing forms. Infraorbital (anteorbital) foramen secondarily reduced, not or scarcely transmitting muscle. Zygomatic plate below infraorbital foramen.

Mandible/...

Mandible hystricognath (cf. sciurognath), the musculus masseter lateralis superficialis being the chief agent in distorting the angular process outwards, thus modifying form of mandible. Scaphoid and lunar elements in carpus not fused. Fibula reduced, often fully fused with tibia (trivial characteristic). Cheekteeth $\frac{4}{4}$, rooted, relatively simple. Eyes, ears and tail reduced. Five hind toes.

Upper incisors grooved, not extending beyond infra-orbital foramen

..... subfamily Bathyerginae I.

Upper incisors not grooved, extending beyond infra-orbital foramen into pterygoid region

..... subfamily Georychinae II.

I. Subfamily Bathyerginae

Upper incisors (heavily grooved on anterior surface), not extending into pterygoid region (reaching only to infraorbital foramen). Lower incisors ungrooved (cf. Georychinae). Angular process of mandible much drawn backwards. Size large, H.B. 170-330 mm. Claws of forefeet long, adapted to digging

..... Bathyergus.

II. Subfamily Georychinae

Upper incisors not grooved on anterior surface, extending into pterygoid region. Lower incisors ungrooved (cf. Bathyerginae). Angular process of mandible drawn backwards to a lesser degree. Size smaller, H.B. 102-200 mm. Claws of forefeet not long (i.e. not adapted to digging).

Cheekteeth/...

Cheekteeth with one fold each side in upper molar series (showing this enamel pattern even when well worn); hindmost molar cut late in life; face prettily coloured, black cap on head, white ring around ear, cheeks black, nose white; jugal bone fitting dove-tail fashion into zygomata. General colouration dark to greyish orange cinnamon

..... Georchus.

Cheekteeth more or less simple, ringshaped in adults (showing enamel folds only in young specimens in exceptional cases); hindmost molar out earlier; colouration of face not as described above; jugal bone fitting into a long groove on the zygomata. General colouration uniform (usually) varying from black to cinnamon to brownish

..... Cryptomys.

Genus Bathyergus.

1. Darker, with distinct dark dorsal band; size smaller on the whole.

Males:

Females:

H.B. 170-235 mm., M = 205 mm. 170-206 mm., M = 183 mm.
 C.B. 41.1-54.8 mm., M = 51.6mm. 40.4-50.7mm., M = 43.9mm.

..... B.janetta

Bathyergus janetta Thomas & Schwann 1904. Namaqua dune mole-rat.

Synonyms: B.j.janetta, B.j.inselbergensis, B.j.plowesi.

Range: Fort Nolloth and adjacent areas (including Kamiesberg), and just across the mouth of the Orange river (Oranjemund).

Note: Ellerman et.al. (1953) regard janetta as only subspecifically distinct from suillus, but like Roberts (1951) recognize two subspecies viz. inselbergensis and plowesi.

2. Paler, with dorsal band indistinct (usually), or not visible; size larger on the whole.

Males/...

Males:Females:

H.B. 235-330 mm., M = 281 mm. 204-300 mm., M = 251 mm.
 C.B. 53.5-74.4mm., M= 62.9mm. 45.5-66.9mm., M= 55.6 mm.

..... B.suillus

Bathyergus suillus (Schreber) 1782. Cape dune mole-rat.

Synonyms: Mus suillus, M. maritimus, Marmota africana,
Bathyergus suillus suillus, B.s. intermedius.

Range: Southern and south-western Cape Province, from
 Knysna to Klaver.

Note: B.s.intermedius from Klaver is tentatively
 rejected.

Genus Georychus.

Size: Males:Females:

H.B. 177-200 mm., M = 189 mm. 155-204 mm., M = 182 mm.
 C.B. 44.1-53.3mm., M=48.3 mm. 41.0-51.2mm., M=45.1 mm.

..... Georychus capensis

Georychus capensis (Pallas) 1778. Cape mole-rat,
 'blesmol'.

Synonyms: G.c.capensis, G.c.canescens, G.c.yatesi.

Range: South-western and southern Cape coastal
 region, ranging to Nottingham Road, Natal,
 and Belfast, eastern Transvaal.

Note: It is tentatively suggested that the species
 is monotypic and not polytypic as believed.

Genus Cryptomys.

1. With outer wall of infraorbital foramen thickened.

a) Size large.

Males:Females:

H.B. 150-185 mm., M = 164 mm. 141-164 mm., M = 151 mm.
 C.B. 32.2-44.1mm., M=36.2 mm. 31.6-38.2mm., M=35.3 mm.

Colour: Three colour phases:- reddish-brown, seal
 grey and slaty-grey ("black"). White frontal (occipital)
 patch present (varying in size and extent) which may
 extend as a white line sagittally on dorsal and ventral
 surfaces damarensis

Cryptomys damarensis (Ogilby) 1838. Damara mole-rat.

Synonyms: Bathyergus (=C.) damarensis, Georychus
(=C.) lugardi, G.(=C.)micklemi, Cryptomys
ovamboensis.

Range/...

Range: From Southern Rhodesia (Matetsi) and Bechuanaland, westwards to South West Africa, and also into Northern Rhodesia.

Note: This species has a wide geographical distribution. The validity of C.ovamboensis as a separate species is open to question.

b) Size large, but on the average slightly less than damarensis.

b') Size:

Males:

Females:

H.B. 144-165 mm., M = 151 mm. 152-165 mm., M = 155 mm.
 C.B. 29.9-34.4mm., M=31.9 mm. 32.5-35.0 mm., M=33.5 mm.

Colour: Pale ".... grey-drab, almost silver grey" (de Winton, 1897). Occurrence of white frontal (occipital) patch variable. Individuals tend to show a rich-brown sheen on the fur

..... bocagei

Cryptomys bocagei (de Winton) 1896. Bocage's mole-rat.

Synonyms: Possibly C.kubangensis.

Range: Western Angola, southwards into the northern Kaokoveld in South West Africa.

Note: The measurements given above are based on extra-limital specimens from Mombola, Angola. The sample was small and therefore the position of bocagei in this key should be accepted with a certain degree of reservation.

b'') Size:

Males:

Females:

H.B. 155 mm. (type specimen) No data available.

C.B. 33.6-38.9 mm., M=35.8 mm. (Note: measurements from unsexed study skins and skulls).

Colour: Varying between 'ecru-drab' and 'drab-grey' (Thomas & Wroughton). White frontal (occipital) patch usually present, not produced backwards onto the dorsal thoracic and lumbar surfaces (cf.

damarensis) beirae

Cryptomys beirae (Thomas & Wroughton) 1907. Beira mole-rat.

Synonyms/...

Synonyms: C. zimbitiensis.

Range: Beira (Mocambique) and vicinity (e.g. Zimbiti) as well as at Gorongoza.

Note: The validity of C. zimbitiensis as a separate species is open to question. Study skins representing C. beirae are few in number and are of unknown sex. Size values given above are therefore open to question.

c) Size smaller (cf. damarensis, bocagei and beirae).

c') Size:

Males:

Females:

H.B. 125-165 mm., M = 145 mm. 135-150 mm., M = 141 mm.

C.B. 30.6-37.9mm., M=33.3 mm. 31.0-36.5mm., M=32.6 mm.

Colour: Generally a uniform 'drab' (nearest to 'drab-grey' of Ridgeway), modified by the slaty-grey bases of the hairs showing through. White frontal (occipital) patch usually prominent, not extending beyond nape of neck (cf. damarensis, bocagei and beirae)....

..... darlingi.

Cryptomys darlingi (Thomas) 1895. Mashona mole-rat.

Synonyms: None.

Range: Mashonaland, south-eastwards to Mt. Selinda, and south-westwards to Bulawayo and vicinity. Possibly Mocambique as well.

Note: It is possible that beirae and darlingi will eventually prove to be synonyms.

c'') Size:

Males:

Females:

H.B. 146 mm. (type specimen). No data available.

C.B. No data available. No data available.

Colour: Drably coloured (cf. darlingi). Frontal (occipital) patch absent. Ascending process of premaxillaries not extending backwards beyond nasals "... so that the suture between these bones and the frontals forms a simple, slightly bowed line, distinct from the complicated dove-tail pattern found in most of the Georychi" (de Winton) nimrodi

Cryptomys/...

Cryptomys nimrodi (de Winton) 1896. Nimrod's mole-rat.

Synonyms: None.

Range: Only known from the type locality, i.e. Essex Vale, Southern Rhodesia.

Note: This species may prove to be a synonym of darlingi.

2. With outer wall of infraorbital foramen not thickened.

(a) Size large.

(a') Mammae: 2 pairs pectoral, 1 pair inguinal = 6.

Males:

Females:

H.B. 125-160 mm., M = 141 mm. 125-145 mm., M = 138 mm.

C.B. 31.7-38.3mm., M=35.3mm. 30.4-34.2mm., M=32.7 mm.

Colour: 'cinnamon-buff' to 'clay-colour', with a decided yellower tinge (cf. natalensis), when a number of specimens are seen simultaneously. Colour geographically variable (cf. specimens from Vryburg). Frontal (occipital) patch usually absent

..... holosericeus.

Cryptomys holosericeus (Wagner) 1843. Greater grey mole-rat.

Synonyms: Georychus (=C.) holosericeus, G.(=C.) vryburgensis, G.(=C.) orangiae, Cryptomys vetensis, C.bigalkei, and C.h. valschensis.

Range: North-western Cape Province (Kimberley, Vryburg), north-western Orange Free State, as well as at Glen, north of Bloemfontein. In the south-western Transvaal at Bloemhof and Wolmaransstad.

Note: C.bigalkei (originally described as a representative of the hottentotus group) has tentatively been included under holosericeus above. The possibility also exists however, that holosericeus should be synonymised with hottentotus. This seems to be strongly suggested by the evidence.

(a'') Mammae: 2 pairs pectoral = 4.

Males:

Females:

H.B. 125-177 mm., M = 143 mm. 125-174 mm., M = 141 mm.

C.B. 30.4-38.1mm., M=34.8mm. 30.1-39.0mm., M=33.6mm.

Colour: On the average darker (more drab and dirtily coloured/...

coloured) than holosericeus, especially evident when a number of specimens are seen simultaneously. Colour geographically variable (cf. specimens from Swaziland). Frontal (occipital) patch usually absent
 natalensis.

Cryptomys natalensis (Roberts) 1913. Natal mole-rat.

Synonyms: Georychus (=C.) natalensis, G.(=C.) jamesoni, G.(=C.) arenarius, G.(=C.) anomalus, G.(=C.) aberrans, G.(=C.) mahali, Cryptomys montanus, C.junodi, C.langi and C.komatiensis zuluensis.

Range: Western Transvaal (e.g. Potchefstroom, Rustenburg), ranging eastwards to Johannesburg and Pretoria (northwards as far as Nylstroom). Also occurs in the eastern Transvaal (e.g. Wakkerstroom) extending eastwards to Pietermaritzburg and Durban, including north and south coast areas. Its southernmost coastal point of distribution seems to be Port St. Johns, while the northernmost point may be Masiyeni, north of the mouth of the Limpopo river.

Note: This species has been grossly oversplit.

(b) Size small.

(b') Mammæ: 2 pairs pectoral, 1 pair inguinal, = 6.

Males:

Females:

H.B. 105-150 mm., M = 120 mm. 100-160 mm., M = 119 mm.

C.B. 29.0-38.6mm., M=32.0mm. 27.2-36.4mm., M=31.2 mm.

Colour: More-or-less 'cinnamon-buff' to 'clay-colour', uniform. Colour geographically variable (cf. specimens from Knysna). Frontal (occipital) patch usually absent hottentotus.

Cryptomys hottentotus (Lesson) 1826. Hottentot mole-rat.

Synonyms: Bathyergus(=C.)hottentotus, B.(=C.) caecutiens, B.(=C.)ludwigii, Georychus (=C.) exenticus, G.(=C.)jorisseni, G.(=C.)albus, Cryptomys vandami, C.cradockensis, C.transvaalensis and C.hottentottus(sic) talpoides.

Range: South-western Cape, northwards to Namaqualand and eastwards along the coast to Port Alfred. Extends over a large portion over the eastern half of the Karoo, to the area south of Bloemfontein.

Occurs/...

Occurs in the drier north-western Transvaal and ranges along the Marico and Limpopo rivers eastwards to north-eastern Transvaal (e.g. Leydsdorp).

Note: It is possible that hottentotus will eventually also have holosericeus as synonym, if aspects of geographic distribution, size, number of mammae and colouration are taken into consideration.

(b'') Mammae: 2 pairs pectoral = 4.

Males:

Females:

H.B. 102-137 mm., M = 120 mm. 90-135 mm., M = 118 mm.

C.B. 26.5-34.6mm., M = 31.2mm. 28.6-32.6mm., M=30.6 mm.

Colour: A darker coloured species (cf. hottentotus), colour geographically variable (e.g. specimens from Tzaneen). Frontal (occipital) patch usually absent komatiensis.

Cryptomys komatiensis (Roberts) 1917. Komati mole-rat.

Synonyms: Georychus(=C.)komatiensis, G.(=C.) rufulus, G.(=C.) stellatus, Cryptomys melanoticus and C.natalensis streeteri.

Range: From Carolina, Barberton and Komatipoort in the eastern Transvaal ranging northwards and north-westwards to Acornhoek, Mariepskop and Balloon Farm on the Makoetsi river, Leydsdorp to the vicinity of Woodbush and Tzaneen.

Note: C.natalensis streeteri is here interpreted as a form of komatiensis.