

Thomas, O. 1918. On the arrangement of the small Tenrecidae hitherto referred to *Oryzorictes* and *Microgale*. *Ann. Mag. Nat. Hist. Ser.* 9-1: 193-209.

Article:

Does the Cape sengi (*Elephantulus edwardii*) occur in Namibia?

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There are 15 species of sengi (elephant-shrews; order Macroscelidea) and all are found only in Africa (Rathbun 2004). Southern Africa has the greatest concentration of *Elephantulus* (Corbet and Hanks 1968), with five of the 10 species occurring in Namibia, Botswana, and South Africa (Skinner & Smithers 1990). The Cape Sengi (Plate 5) is thought to be the only species endemic to South Africa. It occurs in rocky habitats across the south-west from around Port Elizabeth on the south coast, north to Middelburg, west to Carnarvon, and then north-west to the Richtersveld National Park south of the Orange River, which forms the border with Namibia (Stuart & Stuart 1990). Mountainous rocky habitat occurs on both sides of the Orange River, mostly in South Africa's Richtersveld National Park and Namibia's Fish River Canyon National Park. It is not clear if large rivers, such as the Orange River, are barriers that can define the distribution of sengis. There are no records of *Elephantulus edwardii* north of the river, but this area is not biologically well known (Mike Griffin, personal communication) and it is possible that this sengi has escaped detection in Namibia. To determine if the Cape sengi occurs in Namibia, we live-trapped several sites on the north side of Orange River in July 2004 and qualitatively assessed habitats in the region.



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Plate 5. Cape sengi (*Elephantulus edwardii*) from Cederberg Mountains near Clanwilliam, South Africa. The dark tail is among the diagnostic traits for this species.

Methods

We used up to 54 Sherman live traps at each site, baited with a dry mixture of rolled oats, peanut butter, and Marmite. The traps were set in rough lines through rocky habitat at 10 to 20 metre intervals, where we believed sengis would occur. The traps were set in the afternoon, two or three hours before sunset, and then checked the next morning one or two hours after sunrise.

Results

Our results are summarized in the two tables below:

Table 1. Characteristics associated with our five trapping locations, which were on rocky ridges or kopjes. Site 3 was trapped on two consecutive nights.

Site No.	Date (2004)	Location with latitude/longitude	Elevation	Trap Nights
1	12 July	Kopje N of Cañon Lodge, Gondwana Park 27° 39.441' S, 17° 47.549' E.	780 m	30
2	13 July	Window ridge, NW of Cañon Lodge, Gondwana Park 27° 38.334' S, 17° 47.443' E	805 m	35
3	14 & 15 July	Ridge E. of Cañon Lodge, Gondwana Park 27° 38.428' S, 17° 48.602' E	850 m	45+45
4	25 July	Ca. Bosplasp Camp, road C13, near Orange River 28° 09.862' S, 17° 12.855' E	240 m	54
5	26 July	Ca. 12 km. E., Bosplasp Camp on Orange River 28° 14.654' S, 17° 16.260' E	95 m	35

Table 2. Number of individual small mammals trapped at each location (Table 1).

Species	Sites					Total
	1	2	3	4	5	
<i>Elephantulus rufescens</i>	0	0	1+0	0	0	1
<i>Petromyscus</i> sp.	5	7	3+5	5	4	29
<i>Aethomys namaquensis</i>	1	0	0+0	0	3	4
<i>Aethomys chrysophyllus</i>	0	0	0+0	1	1	2
<i>Petromyscus typicus</i>	0	1	0+0	0	0	1
Total	6	8	4+5	6	8	37

Discussion

It is much easier to determine the presence of a small mammal than its absence. Therefore, our lack of success in trapping *E. edwardii* in Namibia is inconclusive. The western rock sengi (*E. rufescens*), which we trapped in Gondwana Park (Plate 6), is found widely in Namibia, mostly in mountainous and rocky habitats associated with the Western Escarpment. In South Africa, *E. edwardii* and *E. rufescens* are sympatric where their distributions meet, such as in the Goegap Nature Reserve near Springbok. In areas where the two species occur together, however, it is not known whether they are truly syntopic or there is some yet undefined partitioning of rocky habitats. Thus, just because we found *E. rufescens* at Gondwana Park does not necessarily preclude *E. edwardii* from occurring there in the same habitats.

We noted the very arid nature of the rocky habitats on both sides of the Orange River; there was very little vegetation of any kind growing among the rocks and

boulders. Although this may be the result of recent below-average rainfall years, that would not explain the absence of perennial and woody plants. This is in contrast to the rich flora found at locations in South Africa where we have trapped *E. edwardii* in the past, including the fynbos in the Cederberg Mountains near Clanwilliam and the Succulent Karoo at Goegap Nature Reserve near Springbok. We believe that *E. edwardii* is probably associated with more mesic rocky areas compared to *E. rupestris*, which is usually found in more arid and quite barren rocky areas, at least in Namibia.

Plate 6: A western rock sengi, *Elephantulus rupestris*, captured in the current study at Gondwana Park, Namibia.



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Plate 7: Map of mean annual rainfall in South Africa (South African Rain Atlas, 2004)

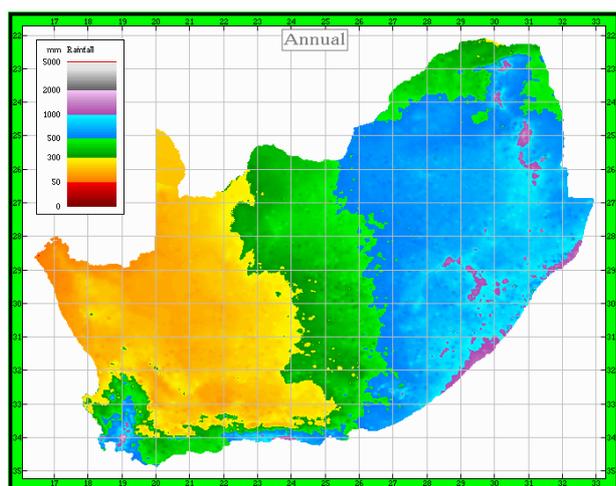
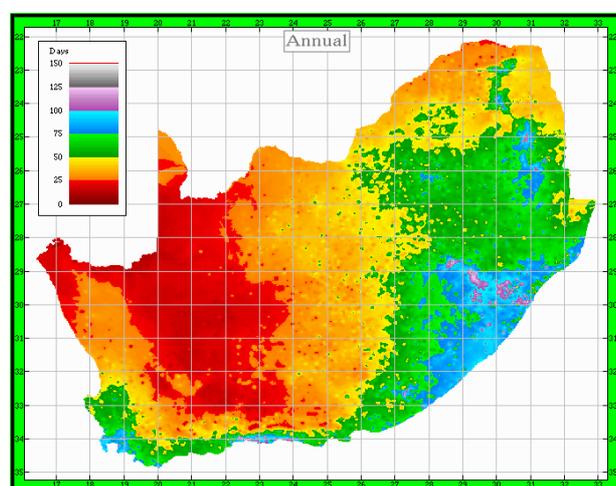


Plate 8: Map of mean annual rain days in South Africa (South African Rain Atlas, 2004).



The relatively moist or mesic habitats where the Cape Sengi is found are associated with the South Atlantic Anticyclone (winter rain) weather system that dominates the Cape Region of South Africa. In comparison, the Subtropical High Pressure Zone creates the more arid (and summer rain) conditions found in most of Namibia (Mendelsohn *et al.* 2002). The influence of the South Atlantic Anticyclone system wanes in the Orange River region, thus creating more arid habitats coincidentally with the Orange River (Plates 7 and 8).

We speculate, based on our trapping results and a qualitative assessment of habitats, that *E. edwardii* does not extend into Namibia. We suspect that it is restricted to South Africa because of the decline of mesic rocky habitats in southern Namibia in the vicinity of the Orange River. It is not likely that the Orange River acts as a physical barrier to their occurrence to the north.

Literature Cited

Corbet, G.B. & Hanks, J. 1968. A revision of the elephant-shrews, Family Macroscelididae. *Bulletin of the British Museum (Natural History) Zoology*, 16(2): 47-111.

Mendelsohn, J., Jarvis, A., Roberts, C. & Robertson, T. 2002. *Atlas of Namibia – A Portrait of the Land and its People*. David Philip Publishers, Cape Town, South Africa. 200 pp.

Rathbun, G.B. 2004. World Wide Web site: http://www.calacademy.org/research/bmammals/eshr_ews/

South African Rain Atlas. 2004. World Wide Web site: <http://134.76.173.220/rainfall/index.html/>

Skinner, J. D. & Smithers, R.H.N. 1990. *The mammals of the southern African subregion*. University of Pretoria, Pretoria, South Africa. 771 pp.

Stuart, C. & Stuart, T. 1990. *Chris and Tilde Stuart's field guide to the mammals of southern Africa*. Struik House, Cape Town, South Africa. 272 pp.

Afrotheria News

Black-and-rufous sengi (*Rhynchocyon petersi*) at the Philadelphia Zoo

The genus *Rhynchocyon* has rarely been held in zoo collections. Prior to 2000, the only individuals that were held for any extended period of time were two *R. chrysopygus* held at different times at the Frankfurt Zoo.

In November 2000, the Philadelphia Zoo acquired two pairs of black-and-rufous sengis (*R. petersi*) from a source within the US. The animals were reported to be captive-born and arrived already adapted to a diet of dried cat food. We have continued with this diet, with the addition of insects (mostly crickets and mealworms) and nutritional supplements. The following is a brief summary of our experience with these animals.