

## Tree Rats in the Namib dunes

by

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*Thallomys paedulus* (Sundevall, 1846), the black-tailed tree rat, a species complex (D. Gordon, Transvaal Museum, pers. comm.), occurs throughout most of southern Africa and northwards into eastern Africa. It is absent south of the Orange River and from the Orange Free State and Lesotho (de Graaf, 1981, Smithers, 1983), *Thallomys* penetrates deep into the Namib Desert along ephemeral water courses that support *Acacia* trees.

Recently I have found evidence of several tree rats venturing far into the Namib dunes (see Fig. 1). During the nights of 20.12.1984, 27.1.1985, 15.2.1985 and 15.3.1985 tracks of unidentified small mammals were found 2 km south of the Kuiseb River on Bushmans Circle dune (23 41'S, 15 22'E), about 40km east of the research station at Gobabeb. The tracks were followed until lost in the gramadullas (a broken, deeply incised, rocky area forming the banks of the Kuiseb River in this area), 0,5km from the Kuiseb. On 19.4.1985 tracks were found 6,5km south of the Kuiseb River, on the same dune, and were followed northwards for 5km where a mature, male tree rat was captured in a livecapture small mammal trap. The identity of this individual was confirmed from photographs by M. Griffin (Dept. of Agriculture and Nature Conservation, in prep). The tracks made by this animal were identical in all aspects to the previous tracks. The only other small mammals known to occur in this area in 1984/85 were *Gerbillurus* spp. (Boyer, in prep.). *Gerbillurus* tracks differ markedly from *Thallomys* tracks and tracks of these two genera could not, therefore, be confused. All animals were moving northwards. No sign of foraging or of interaction with any animal, plant or object was detected.

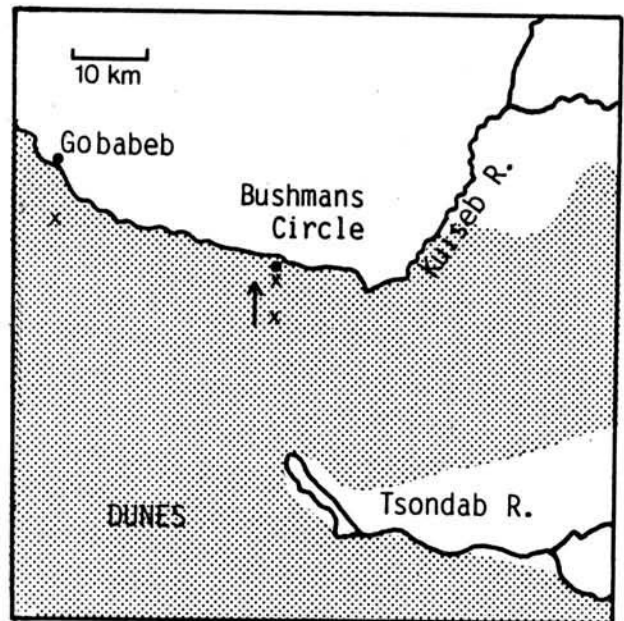


FIGURE 1: *Thallomys paedulus* occurs in the Kuiseb and Tsondab Rivers. It has also been found in the Namib dunes (X). Arrow denotes direction of movement when known.

On 17.11.1985 a tree rat, also a mature male, was found 7km south of Gobabeb (23 36'S, 15 03'E). The animal had died several hours previously during the night. Wind-blown sand had obliterated all tracks. This specimen was deposited at the State Museum, Windhoek (No. M11505).

*Thallomys paedulus* has a strong affinity for trees and has evolved certain morphological characteristics for an arboreal existence (Earl and Nel, 1976). de Graaf (1981) and Smithers (1983) report that all facets of *Thallomys*' ecology are dependant on trees. It is normally associated with *Acacia* woodland or mixed woodland types which include *Acacia* species. *Thallomys* feeds mainly on leaflets and seeds from the host tree, although insects, and occasionally meat, are also eaten (de Graaf, 1983).

If tree rats remain within tree canopies, they are unlikely to be preyed on by the owls of the Namib, spotted eagle owl (*Bubo africanus*) and barn owl (*Tyto alba*), which require an open habitat for hunting. However, these owls are recorded feeding on *Thallomys*. In one series of owl pellets collected in the Kuiseb River, *Thallomys* composed 11% and 13% of the total diet of spotted eagle and barn owls respectively (Tilson and Le Roux, 1983), and *Thallomys* has also been found in barn owl pellets from the central Namib gravel plains (M. Griffin, unpub data). I have been unable to find tree rat remains in spotted eagle owl pellets collected in the Kuiseb River and the adjacent dunes, and *Thallomys* has not been found in owl pellets from other localities in the central Namib (Brain and Brian, 1977; Meester, 1962; Nel, 1969; Skinner *et al.* 1980). This suggests that *Thallomys* may venture into open habitats, but only on occasion.

It seems unlikely that *Thallomys* would be able to adapt rapidly to a dune environment. The direct movement of the five animals on Bushmans Circle dune therefore suggests, rather than being resident in the dunes, that they may be in transit to the Kuiseb River from the Tsondab River system, 25km to the south. Movement of *Thallomys* would normally occur within the preferred habitat, however, in the dune area vegetated rivers tend to be narrow, linear habitats. It is possible that intraspecific aggression prevents movement within the habitat, forcing excluded animals to

enter, and even cross, large expanses of dunes. From the limited data presented here it is not possible to determine whether this is a random or directional dispersion.

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