Article:

Radio-tracking Namib Desert golden moles

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The Namib Desert golden mole (*Eremitalpa granti namibensis*) weighs about 25 g and occupies the vast dune seas of the Namib Desert in Namibia. These golden moles hunt down invertebrate prey while travelling on the surface of the dunes mostly at night, but also while swimming through the loose sand below the surface – thus our name for them: "dune sharks." Their distinct spoor has been used to visually track their movements. However, individual recognition is not possible using spoor, so in 2005 we spent a month in the NamibRand Nature Reserve developing a radio tag. We are currently in the process of submitting a manuscript to a journal that describes our results, but in the meantime we present here some photographs illustrating how we radio-tagged the "dune sharks".

Our tagged *Eremitalpa* appeared to be oblivious to their man-made tails; the very thin and flexible antennas never became entangled. The transmitters remained attached for at least seven days and up to 21 days, when they were removed or shed without harming the animals. With this successful method of attaching radio tags, detailed studies of the spatial and temporal ecology of individually identifiable Namib Desert golden moles are now possible.

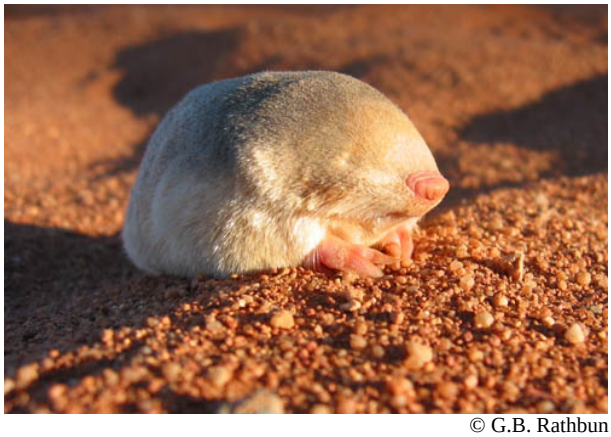

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Plate 1: No respectable free-ranging *Ertemitalpa* would allow itself to be photographed like this captive. Note the absence of ears and eyes on the animal.

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Plate 2: Spoor of a Namib Desert Golden Mole going from sand swimming to surface walking and back to swimming.

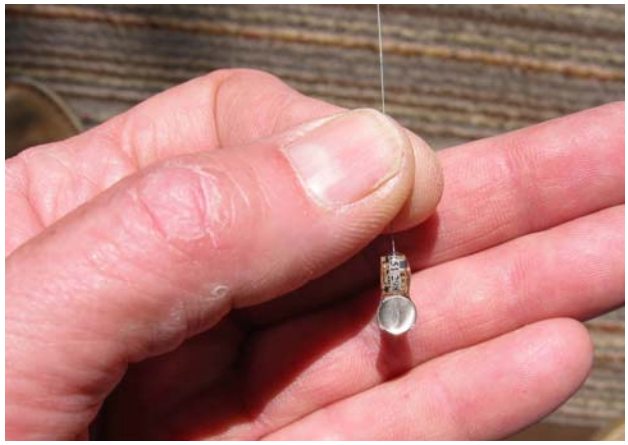

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Plate 3: Radio transmitter built especially for us by Blackburn Transmitters (Nacogdoches, Texas 75961). They measured 12 x 5 x 4 mm and weighed 0.3 g. The 7.0 cm-long whip antenna is made of nylon-coated stainless steel fishing leader wire (7x7 Surflon Micro Supreme 20 lb. test). To maximize transmitter life (nearly 30 days), we used a three second pulse interval.

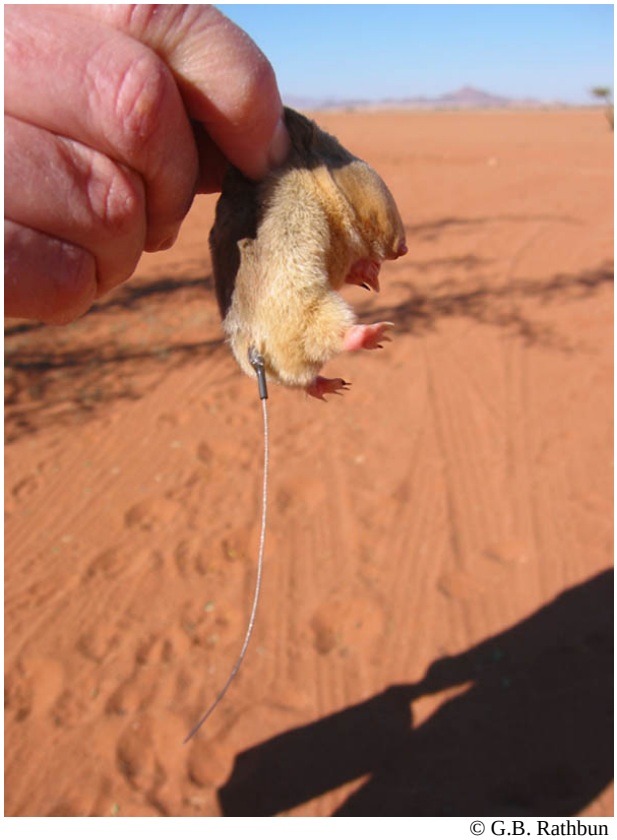

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Plate 4: Successful radio-tracking is dependent on having a transmitter attachment method that works. We coated a transmitter with cyanoacrylate adhesive (Devcon ZipGrip HV2200, product #44225) and then pushed the radio into the fur on the apex of the rump (*Eremitalpa* is tail-less) when the animals were torpid. When the transmitter was seated against the rump, we immediately pressed the surrounding fur firmly against the radio.

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Plate 5: We kept newly tagged golden moles in a dark bucket for about 15 minutes before releasing them. It takes a dune shark about three seconds to disappear into the sand!

Article:

Biodiversity of the Tubulidentata over geological time

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The aardvark - *Orycteropus afer* (Pallas, 1766) – is the only known representative of its kind, the last living member of the order Tubulidentata Huxley 1872 (Class Mammalia Linnaeus, 1758; family Orycteropodidae Gray, 1821). Several fossil aardvarks have been found but it must be a relief for palaeontologists to have at least one living example of this unusual mammalian order, comprising of an animal with the body of a pig, the head of a kangaroo, the ears of a rabbit, and the tail of a giant rat.

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Male Aardvark (named "Elvis") from Frankfurt Zoo, Germany. The animal's ear length is 215 mm.

The aardvark is a nocturnal mammal that spends the day in deep burrows. Aardvarks are very efficient diggers that can disappear underground in a very short time. Such skill is very useful for opening ant nests and termite mounts in order to prey upon those social insects which represent almost the entire diet of the aardvark. The anatomy of *O. afer* has been relatively well documented, in particular through the three part monograph supervised by Sonntag (Sonntag 1925, Sonntag & Woolard 1925, Clark & Sonntag 1926). The peculiar teeth of the aardvark lack enamel and consist of tubes of dentine joined together by cementum; this tubulidentate structure gave its name to the order. Little is known about its ethology, intra-specific and sexual variability, the origin of the peculiar tubulidentate microstructure of its teeth, and other details of its biology. For instance, a very intriguing question still to be answered is the validity of the 18 sub-species described so far (see Shoshani *et al.* 1988), especially as the number of individuals and the distribution of the populations are not well known. Figure 1 shows the