

## Immobilization and marking of the Egyptian Mongoose, *Herpestes ichneumon* (L.), in Spain

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Marking mongooses has proved to be difficult. ROOD and NELLI5 (1980) succeed in marking dwarf mongooses (*Helogale parvula*) and small Indian mongooses (*Herpestes auropunctatus*) by locally freezing their skins with dichlorodifluoromethane. This produces white patches of hair that last the animal's life span. However, BEN-YAACOV and YOM-TOV (1983) failed to mark Egyptian mongooses (*Herpestes ichneumon*) by several procedures (freeze marking, neck collars, ear tags, dyeing, etc). Here we report the capture, immobilization and successful radio-tagging of two adult Egyptian mongooses (male and female) in the Donana National Park, SW Spain

To catch the male we used a livetrapp baited with dry fish. The female was captured in a bigger trap set for lynxes and baited with a live rabbit. Both individuals were immobilized by means of a combination of ketamine hydrochloride (Ketolar, Parke Davis, El Prat de Llobregat) and tiazine hydrochloride (Rompün, Bayer, Barcelona) injected intramuscularly.

The male weighed 3050 g and was immobilized twice in one week. The first time we used a dose of 20mg of Ketolar and 20mg of Rompün (that is, under 7mg of each product per kg of body weight). Induction time (IT) required for total immobilization was four minutes. Two hours later this individual, provided with the collar, was apparently recovered. The animal was anesthetized again after seven days to observe possible injuries produced by the collar. On this occasion we used a lower initial dose of Ketolar (10mg) and Rompün (16 mg). As the animal was still intractable twenty minutes later, an additional dose of 6 mg of each product was administered. The IT was then similar to that observed in the first immobilization. One hour later the animal was able to move but total motor control was only recovered 2 h 15mm after the injection of the first dose. A neck inspection revealed no injuries.

The female weighed 2200 g and a dose of 15mg of Ketolar and 15mg of Rompün (7 mg/kg) was sufficient to immobilize it. The IT was 2 minutes and three hours later the mongoose began to move. Its body temperature decreased from 39.5 °C (in the first minutes after the injection) to 35.9 °C (45 minutes before the first recuperation movements).

The male was provided with a white home-made radio-collar based on a SB2-IV transmitter (AVM Instrument Co., California) fitted to its neck by a nylon-plastic-belt two centimeters wide, A guitar string acting as an antenna lay loosely on the animal's back. The complete device weighed 90 g (3 % of the animal weight). Even if neck hairs covered the collar, it allowed field identification. The mongoose was kept in captivity for seven days to observe its reactions. During this time no attempts to pull the radio-collar out were observed, This individual was tracked from 14th July to 14th August 1983. Radio contact was then lost. Its home range (estimated by the minimum convex polygon method) was 2.8 square kilometers and the mean traveled distance per day 2.9 km (range = 0.62—6.42).

Activity was diurnal. It was observed eating from a rabbit and moving with another adult with young (DELIBES and BELTRAN 1986).

A radio-collar weighing 60 g (less than 3 % of the animal weight) and shipped by Wildlife Materials Inc. (Illinois) was fitted to the female. The package and the nylon belt (1.5cm wide) were black and identification of the animal in the field was difficult even though the antenna was red and white. This animal was tracked from 13th November 1984 to 9th January 1985. On this date it was found dead in a burrow under a dense thicket. Autopsy showed numerous blood punctures under the skin but not the actual cause of the death. A first analysis of the radio-tracking data reveals a home range close to 1.6 square kilometers and only diurnal activity.

To conclude, first data suggest that neck collars applied to mongooses are not pulled out, do not produce injuries, do not modify its general habits and do allow the recognition of the animal. Therefore they could be a suitable method for marking Egyptian mongooses and other Herpestinae. To determine whether the behaviour of these diurnal mammals endowed with colour vision (BUCKER 1957) as affected by coloured collars is a question that we failed to solve during this short period of radio-tracking.

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