

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 NELLIS (1980) succeed in marking dwarf mongooses (*Helogale parvula*) and small Indian mongooses (*Herpestes auropunctatus*) by locally freezing their skins with dichlorodifluormethane. 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 Doñana 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 (Rompún, Bayer, Barcelona) injected intramuscularly.

The male weighed 3050 g and was immobilized twice in one week. The first time we used a dose of 20 mg of Ketolar and 20 mg of Rompún (that is, under 7 mg 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 (10 mg) and Rompún (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 15 min after the injection of the first dose. A neck inspection revealed no injuries.

The female weighed 2200 g and a dose of 15 mg of Ketolar and 15 mg of Rompún (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 BELTRÁN 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 (1.5 cm 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 (DÜCKER 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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References

- BEN-YAAKOV, R. YOM-TOV, Y. (1983): On the biology of the Egyptian Mongoose, *Herpestes ichneumon*, in Israel. *Z. Säugetierkunde* 48, 34-45.
 DELIBES, M.; BELTRÁN, J. F. (1986): Activity, daily movements and home range of an *Ichneumon* or Egyptian Mongoose (*Herpestes ichneumon*) in Southern Spain. *J. Zool.*, Lond. in press).
 DÜCKER, G. (1957): Farb- und Helligkeitssehen und Instinkte bei Viverriden und Feliden. *Zool. Beitr.* (NF) 3, 25-99.
 ROOD, J. P.; NELLIS, D. W. (1980): Freeze marking Mongooses. *J. Wildl. Manage.* 44, 500-502.

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BEKANNTMACHUNG

Conference Announcement of the International Association for Bear Research and Management (IBA)

The International Association for Bear Research and Management (IBA) will hold its 7th Conference at Williamsburg, Virginia, USA, from 21. to 26. February in 1986. A corollary meeting, co-sponsored by the Eurasian Bear Group (EBG), will be held at Plitvice Lakes National Park, Yugoslavia, from 2. to 5. March in 1986. These meetings are designed as forums for exchanging information on biology and management of all bears (ursids). For details on the American part of the conference write to Prof. M. PELTON, Department of Forestry and Wildlife, University of Tennessee, P.O.Box 1071, Knoxville, Tennessee 37901, USA for the European part write to Dr. D. HUBER, Biology Department, Veterinary Faculty, Heinzlova 55, YU-41000 Zagreb, Yugoslavia.

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