

KARYOTYPE OF *GERBILLUS PYRAMIDUM* I. GEOFFROY
(RODENTIA, GERBILLIDAE) FROM SENEGAL

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ABSTRACT

Gerbillus pyramidum is reported from Senegal for the first time. The external and cranial measurements and karyotype of

the female specimen are presented.

INTRODUCTION

A large hairy-footed gerbil was collected for the first time in Senegal near M'Boro (15°12'N, 16°55'W), in December 1975 by W. Böhme, during a scientific expedition (for details of this excursion see Böhme, 1978).

This specimen is a large female; its dorsal fur is

orange-fawn in color, but rather pale. The hairs of the middle of the back have a gray base; those of the sides are white. The belly is pure white. A dark line surrounds the eye; there is a white spot just behind the eye and another behind the ear. The vibrissae are pale or dark.

RESULTS

External measurements are given to the nearest millimeter. Cranial measurements were taken with a dial caliper and recorded to the nearest tenth of a millimeter. The bullae are measured as indicated by Ellerman and Morrison-Scott (1951), that is from the paraoccipital process to the anterior tip of the bulla. Length of feet includes the claws.

External and cranial measurements were as follows: head and body, 122; tail, 156; ear, 14; hind

foot, 34; occipitonasal length, 34.8; greatest zygomatic breadth, 19.1; least interorbital constriction, 6.1; length of maxillary tooththrow, 4.8; auditory bulla, 9.3.

The karyotype was prepared by the "air-drying" method and shows 40 chromosomes—18 pairs of biarmed chromosomes and one pair of small acrocentrics (Fig. 1). The two X-chromosomes are metacentrics. The FN is 78 arms.

DISCUSSION

According to Petter (1975), the morphological characters and the measurements are those of *Gerbillus pyramidum* I. Geoffroy, 1825. The karyotype (2N = 40) is closely related to those published by Matthey (1952), from Beni Abbes, Algeria, by Wharman and Zahavi (1955) also from Algeria, by Jordan et al. (1974) from Tunisia, and by Lay et al. (1975) from Morocco. These last authors still distinguished *Gerbillus pyramidum tarabuli*, with 2N = 40, from *Gerbillus pyramidum pyramidum*, whose karyotype, with 38 chromosomes, is similar to that described by Wassif et al. (1969) from Egypt.

The Senegalese specimen was collected in a very dry coastal area consisting of wind-blown sand dunes of quaternary origin; herpetologically these sand dunes are characterized by lizards with northern (Palearctic) affinities (for example, *Acanthodactylus dumerili*, *Scincus albobasatus*, *Chalcides sphepsiformis* and so on). The rather large measurements of the Senegalese specimen agree with those of the other specimens collected south of the Sahara (Rosevear, 1969; Setzer and Ranck, 1971). It presented the same morphological details as those described by Lay et al., 1975: "tympanic and

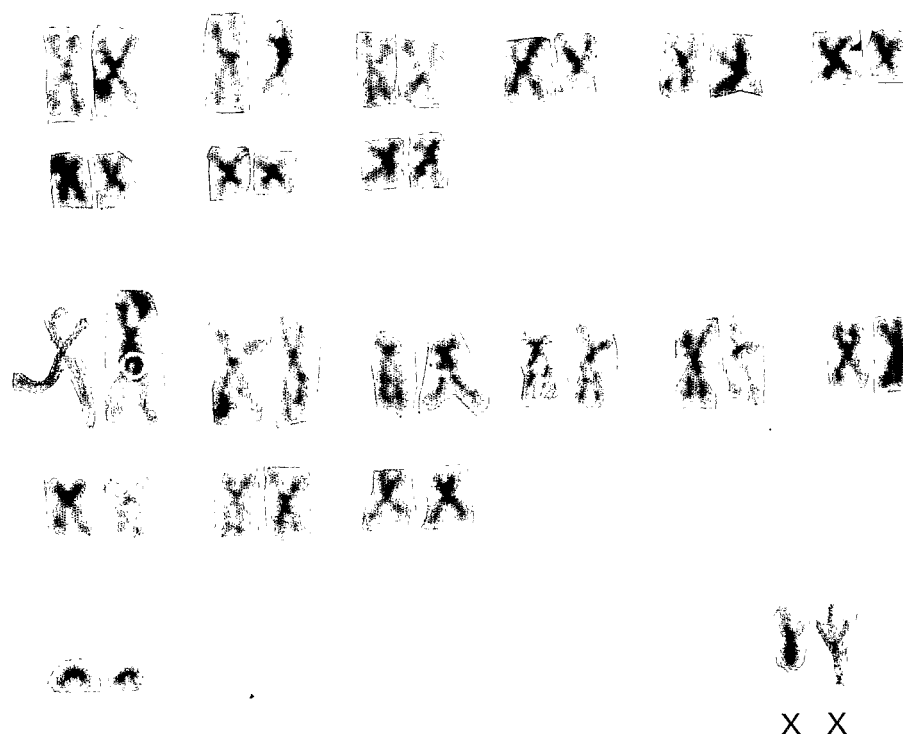


Fig. 1.—Karyotype of a female *Gerbillus pyramidum* from M'Boro, Senegal.

mastoid components of the auditory bullae are distinctly less voluminous in *G. pyramidum*, the anterior end of the basio-occipital contacts the medial walls of both tympanic bullae and is relatively narrower in the Algeria-Morocco sample; the posterior palatine foramina are shorter and more constricted; the nasal-frontal bone contact is broad in *G. pyramidum* and narrow in the Algeria-Morocco sample."

This gerbil, whose chromosomes are nearly all metacentrics, and whose karyotype, the first known

south of the Sahara, is homogenous with the other populations of *Gerbillus pyramidum* from Africa, seems to be particularly closely allied with the specimens from Morocco. A hypothesis is that these individuals have been derived from a single ancient population that existed throughout the Sahara; however the communication is now broken, as it is for *Mastomys* (Tranier, 1974). An extensive collection of *Gerbillus* from this area and other similar but distant areas would allow completion of this study.

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