

# On the karyology and morphology of *Sciurus anomalus* (Mammalia: Rodentia) in Turkey

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**Abstract:** Morphological and karyological parameters, including the baculum and phallus, of *Sciurus anomalus* from Turkey were examined. The diploid number of chromosomes is  $2n = 40$ , the fundamental number is  $NF = 80$ , the number of autosomal arms is  $NFa = 76$ . The X chromosome is a large submetacentric, and the Y chromosome is a small submetacentric.

**Kurzfassung:** In dieser Arbeit wurden von *Sciurus anomalus* aus der Türkei morphologische und karyologische Parameter einschließlich des Baculums und des Phallus untersucht. Die diploide Zahl der Chromosomen ist  $2n = 40$ , die Grundzahl der Chromosomen ist  $NF = 80$ , die Zahl der autosomalen Arme  $NFa = 76$ . Das X-Chromosom ist groß submetazentrisch, das Y-Chromosom dagegen klein und submetazentrisch.

**Key words:** *Sciurus anomalus*, karyology, baculum, phallus, Turkey, Middle East.

## Introduction

The Persian Squirrel, *Sciurus anomalus* Gmelin, 1778, is distributed in Transcaucasia (OGNEV 1940), Anatolia (ELLERMAN & MORRISON-SCOTT 1951, FELTEN et al. 1971), Israel (BODENHEIMER 1935, GAVISH 1993), Iraq (HATT 1959), the Lebanon (LEWIS et al. 1967), and Jordan (HARRISON & BATES 1991). In Turkey, its distribution is confined to the Asian part of the country, whereas in the European part it is replaced by the Red Squirrel, *Sciurus vulgaris*. The karyotype of *S. anomalus* was described by NADLER & HOFFMANN (1970) from Iran and by LYAPUNOVA & ZOLNEROVSKAYA (1969) from Armenia, but karyological data are not available from Turkey. The aim of this study is to contribute to the karyology and the taxonomy of *S. anomalus* in Turkey.

## Material and methods

Three specimens collected at two localities in Turkey were examined. Animals were trapped with live traps, and live specimens were transferred to the laboratory to perform karyological studies. Two specimens (Gönen and Akkuş) were karyotyped from the bone marrow of the colchicined animal (FORD & HAMERTON 1956). Twelve slides were prepared from each animal, and 25 metaphase cells, whose chromosomes are well separated, were examined in order to determine the diploid number of chromosomes ( $2n$ ), the fundamental number ( $NF$ ), and the number of autosomal arms ( $NFa$ ) as well as metacentric ( $m$ ), submetacentric ( $sm$ ),