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A study on the morphology and biology of *Spermophilus fulvus* (Mammalia: Rodentia) in Zanjan province

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ABSTRACT

While conducting a research project "Biosystematic study of speceis of *Spermophilus fulvus* in Zanjan provience" the morphological and biological characteristics of this species were also studied. Thus 72 living samples (45♀ and 27 ♂) were trapped in 4 research sites in various areas in Zanjan province (Zanjan, Sultaniyeh, Abhar and kidar). Morphological characteristics used in this study included: Total length, body and head length, tail length, hind foot length, ear length (mm) and total weight (gr).

The morphometric results obtained by studying these characteristics indicated that, the male samples except for their tail length were larger than females. When sexualy matured, male animals tend to have a darker color than female ones. In the biological studies, the developmental growth of the animals from birth to maturity was studied, also increase in daily food intake until the beginnig of hibernation (AUG-44gr) as well as decrease in food intake during hibernation (OCT-26gr, NOV-4.5gr and DEC-0.gr) was investigated. The longest and shortest hibernation bouts of ground squirreles were found to be 150 and 107 days respectivety.

In this period, the longest uninterruped hibernation was 13 days. These samples reproduced twice a year (MAR. and JUN.) and also giving birth to 5-7 babies each time.

Key words: Morphology, Biology, *Spermophilus fulvus*.

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References

ELLERMAN, J. R. and T. C. S. MORRISON-SCOTT, 1951. Checklist of Palearctic and Indian Mammals, 1758 to 1946. Trastees of the Brit. Mus (N. H.) Pub1. London.

ETEMAD, E. 1978. The Mammals of Iran, rodents and their identification key, A publication of national society of natural resource and environment Iran. Vol. 1, p: 26-30

DAVIS, D. and D. SWADE, 1926. Circunnal Rhythm of Torpor and Moltintno ground Sguirrerl *Spermophilus* boochoyi-Comp. B. Ochem. physiol. 764 (1): 183-187

GEOFFROY, I. 1834. in Belanger, voyage auz Indes. Orientales paris. Benezit, Emmanuel.

KARABAG, T. 1953. Ankara Dolaylarindaki Tarla Sincaplavinin biologisi ve Bunlarla Savas usulleri Ankara univ. Zir. Fak. Yay., No. 48: 1-68.

MURSALOGLU, B. 1965. Geographic variation in *citellus citellus* (Mammalia: Rodentia) in Turkey. Com. Fae. Sci. Uuniv., Ankara. C. 10.78-109.

NITHAMMER, J. und F. Krapp, 1978. Handbuchder Saugetiere Europas. Rodentia Band 1. Aklademischs verlagsgesellscchaft Wiesbaden. Mitt Heft 2. 121-128.

SATUNIN, K. A. 1909. Uber einen neuen ziesol aus Nord-persia. Ann. Mus. zool. St. petersb. 14:1, 314-1318.

SCOTT, G. W. and K. C. FISHER, 1972. Hibernation of Esttern Chipmunks (*Tamias striatus*) Maintained under Controlled Conditions. Can. J. Zoology, 50: 95-105,

THOMAS, O. 1905. On a collection of mammals from Persia and Armenia presented to the British Museum by col, A. C. Bailward. Proc. Zool. Soc. London.

TAGHIZADEH, F. 1981. Identification of Hurmful Rodents and Their Control publication, Plant Pests and Diseases Research Institute, Department of Zoology: 1, Tehran. p: 15-18

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