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Daily Activity Pattern in Free-living European Ground Squirrels *Spermophilus citellus* (Mammalia: Rodentia) from Northwestern Bulgaria

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Abstract: The study describes the daily activity of the European ground squirrel in an experimental plot, situated in a heavily grazed pasture near the town of Knezha, Northwestern Bulgaria. Above ground activity was recorded with a visual scanning procedure in summer and autumn of 2006. In summer animals emerged on an average 1.94 h after the civil twilight at dawn and the active period lasted about 11 h. In autumn the daily activity started 3.43 h after the the civil twilight at dawn and lasted about 7.3 h. The activity pattern in summer was bimodal, while in autumn only one clearly expressed peak was observed. The influence of climatic factors (temperature, humidity and claudiness) as well as of time of the year was analysed. Activity patterns were influenced mainly by the time of the year, as it represented consecutive periods of the annual activity of the ground squirrels.

Keywords: daily activity pattern, environmental effects, European ground squirrel, souslik, *Spermophilus citellus*, Bulgaria