HOME RANGE OF THE BROWN HARE (*LEPUS EUROPAEUS*) IN AN AGRICULTURAL ENVIRONMENT

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The brown hare (*Lepus europaeus*) is a keystone species in agro-ecosystems. Its population declines all over Europe, which is suspected to be caused by the negative outputs of the modern agriculture. In order to mitigate the negative trends, the factors affecting its population must be determined. A telemetry-survey have been established by our Institute since 2015 in Jászágó, Hungary. The fieldwork included sampling from hunting bags, spotlight surveys, and our main project: the attachment and tracking of telemetry collars. At the beginning, seven specimens were live-captured and then three more in the next year. Ecotone Felis GPS-GSM collars were used to survey the home-range and habitat-use of the hares. The devices were set to collect 4 localization points per day. The localization points of each specimen were divided into seasonal (Winter/Summer) and daily (diurnal/nocturnal) groups. The localization points were analyzed with Kernel Home Range and Minimum Convex Polygon methods at various percentages, which were statistically tested between seasons, parts of the day and individuals. The results show that nocturnal home ranges were significantly bigger than diurnal ones during Winter in 2016. There was no clear difference between seasons, due to the big deviation of data. In many cases, the home range of the specimens was bigger than we previously suspected, and at a specimen, a seasonal home-range shift could be perceived too.