

## **Social patterns of female raccoons and their young over the breeding and weaning period (*Procyon lotor* L., 1758)**

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We have analysed the home range and the social behaviour of raccoon-mother-families in a bog and swamp area with the help of the VHF-Telemetric-System. The focus of intention was to have a closer look at the important time in the young families' life between the litter period and the breeding and weaning of the cups.

This study was carried out in the Müritz-Nationalpark (Mecklenburg-Western Pomerania), in the year 2007. It is part of a research project, investigating the population ecology of raccoons in the northeast German lowlands ([www.projekt-waschbaer.de](http://www.projekt-waschbaer.de)).

The social patterns of female raccoons and their young have not sufficiently been investigated yet (GEHRT 2003). Therefore only very few data has been collected concerning the sensitive period of weaning, taking place between the 4th. and the 8th. month of the cups' life (SCHNEIDER 1972).

So, as a consequence the determined timeframe for this substudy was July, when the young start to accompany their mothers until November (SCHÄUBLE 2009).

In this space of time six racoon-families (6 adult females, 13 cups) were fitted with VHF radio collars. For the cups special flexible collars (WAGENER<sup>®</sup>, Germany) were taken that adapt to the growing process.

With the help of the collected telemetric data survey (n = 2462), the home ranges of the racoons were localised and compared with each other. The investigated females showed an average home range size of 225 ha (n = 6, Min. = 99 ha, Max. = 459 ha, S = 133 ha), and for the cups the average home range size was 212 ha (n = 11, Min. = 52 ha, Max. = 370 ha, S = 178 ha). The home ranges of the cups differ insignificantly from the ones of the females over the investigated period (U-Test,  $U_1 = 23$ ,  $U_2 = 31$ ,  $p > 0,05$ ).

In order to have precise illustration of the social contact between female and cup, data of the dynamic interaction has additionally been collected via the Jakobs- Index (JAKOBS 1974). The Jakobs-Index averages at 0,53 (Jx) (n = 10, Min. = 0,14, Max. = 0,99, S = 0,33). The results show a wide range of different social contact among the raccoons, from very a close contact to a loose liaison.

The modified home ranges and the Jakobs-Index both showed differences between the six investigated raccoon families. Over the investigated period, four families showed preceding substeps of disbandment of the social tie between female and cup, ending in the migration of a male cup in October 2007. In the same time, two families showed no noticeable changes concerning the social ties. Nonetheless, the results of this study lead to the conclusion, that for raccoons the sensitive process of weaning is a very complex procedure, which is not uniformly happening.

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