# Population Dynamics – Session 2

## Population dynamics and breeding patterns of multimammate rat (*Mastomys natalensi*, Smith 1832) in semi-arid areas in Tanzania

**Emmanuel C.M. Mlyashimbi[1], Marien Joackim[2], Akwilini J. P. Tarimo[1], Didas N. Kimaro[3], Moses Isabirye[4], Robert S. Machang'u[5], Mashaka E. Mdangi[6], Rhodes H. Makundi[5], Herwig Leirs[2], Loth S. Mulungu[5]**

[1]Department of Crop Science and Horticulture, Sokoine University of Agriculture, P.O. Box 3005, Morogoro, Tanzania, ecmm14@yahoo.com
[2]Evolutionary Ecology Group, Universiteit Antwerpen, Groenenborgerlaan 171, B-2020 Antwerpen, Belgium
[3]Department of Engineering Sciences and Technology, Sokoine University of Agriculture, P.O. Box 3003, Morogoro, Tanzania
[4]Faculty of Natural Resources and Environment, Busitema University, P. O. Box 236, Tororo, Uganda
[5]Pest Management Centre, Sokoine University of Agriculture, P. O. Box 3110, Morogoro, Tanzania
[6]Ministry of Agriculture Training Institute (MATI) Ilonga, P. O. BOX 66, Kilosa, Tanzania

The population dynamics and breeding patterns of Multimammate rat (*Mastomys natalensis* Smith 1834) in maize agro-ecosystems in semi-arid areas in Tanzania was investigated from March 2016 to February 2018 in the maize fields and fallow land. A capture mark release study was carried out with four 70 x 70 m grids and set at farmers' fields using live-trapping at a distance of 10 x 10 m apart for three consecutive nights. Rodent species captured were: *Mastomys natalensis*, *Lemniscomys rosalia*, *Lemniscomys zebra*, *Gerbilliscus vicinus*, *Pelomys fallax*, *Arvicanthis neumani*, *Thallomys paedulcus* and *Acomys wilsoni*. *Mastomys natalensis* was the most abundant (>93%) of all species captured while other were in low number in both habitats. The highest population was observed from June to October indicating that was probably due to the influx of juveniles into the population. It was observed that the study area experiences a short rainfall season with extended breeding patterns for *Mastomys natalensis*. However, the highest percentage of reproductively active animals was found during April and the lowest level in September and October. We concluded that most females *Mastomys natalensis* are reproductively active when there is enough food and rainfall. It is recommended that there will be necessary to reduce breeding activity by preventing access to fresh vegetative food such as young sprouting grass.

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# 6th International Conference of Rodent Biology and Management and 16th Rodens et Spatium

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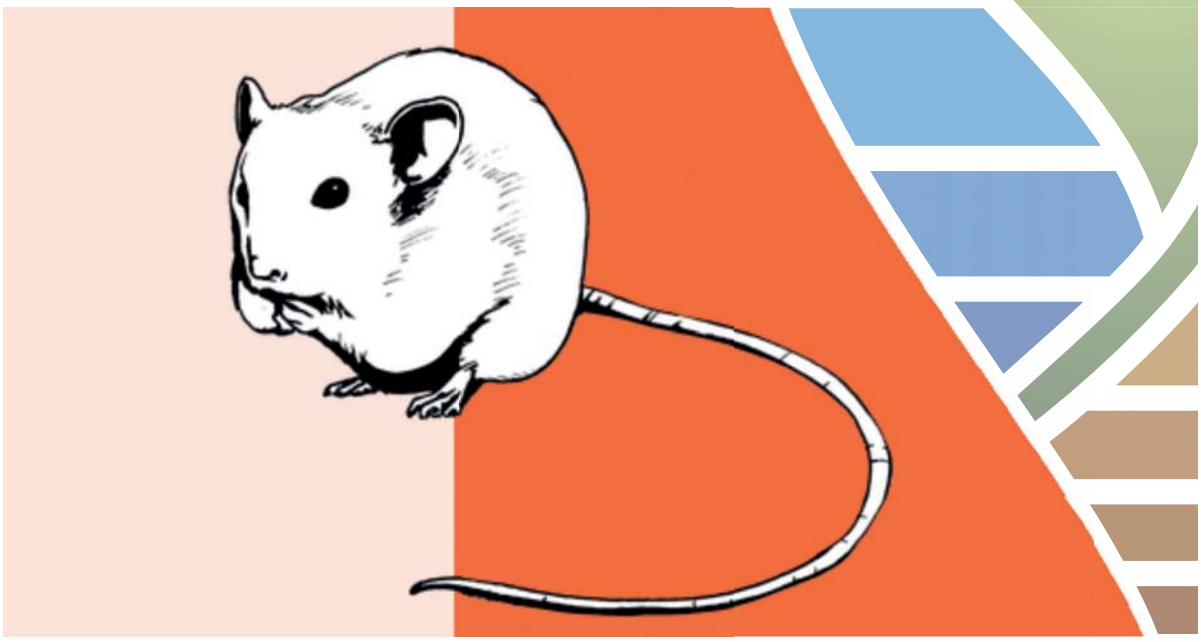

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**Editors:**
Jens Jacob[1] and Jana Eccard[2]
[1]Julius Kuehn Institute, Federal Research Centre for Cultivated Plants,
Institute for Plant Protection in Horticulture and Forests, Vertebrate Research,
Toppheideweg 88, 48161 Münster, Germany
[2]University of Potsdam, Institute of Biochemistry and Biology,
Animal Ecology Group, Maulbeerallee 1,
14469 Potsdam, Germany



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