
Poster Session 1 – Rodent Behaviour

11 Comparative analysis of isolation-induced pup ultrasonic calls of five gerbil species

Julia D. Kozhevnikova¹, Ilya A. Volodin¹, Daria D. Yurlova¹, Olga G. Ilchenko², Elena V. Volodina²

¹Lomonosov Moscow State University, Moscow, Russia, julia_k98@mail.ru

²Moscow Zoo, Moscow, Russia

Gerbils (*Gerbillinae*), inhabiting arid areas of Asia and Africa, display different ecological specializations and sociality. Adults primarily use ultrasound but some species produce also audible vocalizations. Pup vocal behaviour is poorly known. For five species (*Gerbillus campestris*, *Gerbillus perpallidus*, *Meriones unguiculatus*, *Meriones vinogradovi*, *Sekeetamys calurus*), we compared ultrasonic isolation calls of captive 6-10-day pups (each from a different litter; 5 pups per species, 25 in total). Each pup was recorded for 2 min at 22 °C using a recorder Pettersson D1000X (384 kHz, 16 bit), weighed and measured for body variables. Calls (5 per pup, 125 in total) were examined using Avisoft SASLab Pro software for duration and fundamental frequency variables and contour shape. Flat contours were common in *Gerbillus perpallidus* (60% of calls), chevron contours in *Gerbillus campestris* (52% of calls) and *Sekeetamys calurus* (56% of calls), ascending contours in *Meriones unguiculatus* (76% of calls), wavelike contours in *Meriones vinogradovi* (all calls). All the four contour variants occurred only in *Gerbillus campestris*. Most short calls were produced by *Gerbillus campestris* (85±52 ms) and *Gerbillus perpallidus* (89±32 ms) and the longest calls were produced by *Meriones vinogradovi* (184±37 ms). The maximum fundamental frequency was the highest in *Gerbillus campestris* (77.5±6.34 kHz) and ranged of 47.9-53.2 kHz in other species. Depth of frequency modulation varied from 8.2±4.0 kHz in *Gerbillus campestris* and 5.0±3.7 kHz in *Gerbillus perpallidus* to 11.7-16.0 kHz in other species. Pups of *Gerbillus campestris* were the smallest in body weight and size. The differences in fundamental frequency were higher between pups of *Gerbillus campestris* and *Gerbillus perpallidus* than between pups of species from different genus. Probably, such large differences were related to the differences in body size between these species, but further investigation is necessary to confirm this. Supported by the RSF grant 14-14-00237.

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6th International Conference of Rodent
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16th Rodens et Spatium

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Book of Abstracts



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Editors:

Jens Jacob¹ and Jana Eccard²

¹Julius Kühn Institute, Federal Research Centre for Cultivated Plants,
Institute for Plant Protection in Horticulture and Forests, Vertebrate Research,
Toppeideweg 88, 48161 Münster, Germany

²University of Potsdam, Institute of Biochemistry and Biology,
Animal Ecology Group, Maulbeerallee 1,
14469 Potsdam, Germany

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