

ERFORSCHUNG
BIOLOGISCHER RESSOURCEN
DER MONGOLEI

Abstracts

International Symposium

„Biodiversity Research in Mongolia“

Halle (Saale), Germany; 25-29 March 2012



Erforschung biologischer Ressourcen der Mongolei
Exploration into the Biological Resources of Mongolia

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of the International Symposium

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Martin-Luther-Universität Halle Wittenberg, Halle (Saale) 2012

International Symposium in Halle/Saale

25-29 March 2012

“Biodiversity Research in Mongolia”

*50 Years of Mongolian-German Biological Expeditions:
an Anniversary (1962-2012)*

hosted by

Martin-Luther-University Halle-Wittenberg
(Institute of Biology and Central Magazine of Natural Sciences
Collections)

in cooperation with

International Academy for Nature Conservation Isle of Vilm
Senckenberg Museum of Natural History Görlitz
Helmholtz Centre of Environmental Research UFZ Magdeburg
Leibniz Institute of Plant Genetics and Crop Plant Research Gatersleben
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Printed in Germany

Herstellung: Salzland Druck GmbH & Co. KG, Staßfurt

ISSN: 0440-1298

Morphological disparity among rock voles of the subgenus *Alticola* from Mongolia, Kazakhstan and Russia (Rodentia, Cricetidae)

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Taxonomic status of various geographic forms among Asian mountain (ore rock) voles of the genus *Alticola* is not yet established until our days. This genus is not enough examined by molecular genetic methods. We analyzed morphological disparity among rock voles of subgenus *Alticola* from 5 localities in South Siberia (Russia), East Kazakhstan and East Mongolia by means of geometric morphometrics methods. The samples studied represent four nominal species: *Alticola argentatus* Severtzov, 1879 (Trans-Ilian Ala-tau, Kazakhstan), *A. tuvunicus* Ognev, 1950 (Tuva, Russia), *A. olchonensis* Litvinov, 1960 (Olchon Island, Russia) and *A. semicanus* Allen, 1924 (Mongolia). The last species included two samples of subspecies *A. semicanus alleni*: the first one from Kentei Aimak (North-East Mongolia) and the second one from Sukhe-Bator Aimak (East Mongolia). Some of samples were collected by us, but the other were allowed for study by Zoological Museum of Moscow University. Variations of shape of dental crown patterns were examined. Enamel contour of chewing surface of the third upper molar was outlined and digitized by 28 homologous landmarks, after that Procrustes superimposition was carried out and partial warps and relative warps (RW) were calculated. By means of discriminant analysis of RW we found that the voles from Olchon Island differ from *Alticola argentatus* and *A. tuvunicus* much more than two conspecific forms of *A. semicanus* from each other. Our findings supported *A. olchonensis* to be distinct species within the subgenus *Alticola*. The most significant morphological divergence was revealed between *A. semicanus* and other species under study.