

THE MINISTRY OF EDUCATION AND SCIENCE
OF THE RUSSIAN FEDERATION
TOMSK STATE UNIVERSITY

**FUNDAMENTAL AND APPLIED
RESEARCHES, EDUCATIONAL
TRADITIONS IN ZOOLOGY**

Materials of international scientific conference dedicated
to the 135 th anniversary of Tomsk State University,
125 th anniversary of Department of Vertebrate Zoology
and Ecology and Zoological Museum, 20th anniversary
of Research Laboratory of Bioindication and Environmental
Monitoring of National Research Tomsk State University,
14–18 October 2013

Tomsk
Publishing House Tomsk State University
2013

UDK 597/599

BBK 28.6

F947

F947 **Fundamental and applied researches, educational traditions in zoology** : materials of International scientific conference dedicated to the 135-th anniversary of Tomsk State University, 125-th anniversary of Department of Vertebrate Zoology and Ecology and Zoological Museum, 20th anniversary of Research Laboratory of Bioindication and Environmental Monitoring of National Research Tomsk State University / ed. N.S. Moskvitina. – Tomsk : Publishing House Tomsk State University, 2013. – 248 p.

ISBN 978-5-9462-1419-3

The present issue includes materials of modern state of some zoology problems. The reports are devoted to fauna, ecology, morphology, systematics, phylogeography of terrestrial vertebrates. Problems of exploitation and conservation of animal world, modern views on infection focus functioning and methods and traditions of zoology and ecology training are discussed.

For students and professors of biological colleges of universities and specialists concerning to problems of environmental management and conservation.

UDK 597/599

BBK 28.6

Editor – professor, D. Sc. N.S. Moskvitina

The conference was supported by RFFR grant № 13-04-06105

Translation to English is made by PhD M.M. Samsonova

ISBN 978-5-9462-1419-3

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Nutrition of red deer in the conditions of snowy winters of north-east Altai

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One of the reasons which hamper the growth of number of red deer *Cervus elaphus sibiricus* S. in Altai Mountains is death from exhaustion in snowy winters. Nutrition of red deer in harsh winter conditions was the object of our study. Tracking of red deer was conducted with the analysis of its nutrition by leftovers, control areas were processed on the winter pastures. Parameters such as daily food intake, the structure of the diet, the abundance of forage types, the index of preference of food and the coefficient of the utilization of food was assessed. The study was carried out in the North-East Altai on the territory of Nature reserve on the coast of the Teletskoye lake under different environmental conditions: high-altitude pine-fir forests and birch-larch forests.

In the middle-altitude pine-fir forests basis of the diet of red deer consists of arboreal lichens mainly of the genus *Usnea* – 15.7 % and currants – 57.3 %. In the larch-birch forests basis of the diet of red deer consists of siberian peashrub – 89.0 % and aspen – 7.3 % from the total of twig forage. Siberian peashrub, epiphytic lichens and currants can be considered the major diet of red deer on the south-eastern coast of Teletskoye lake. To favorite but numerically small can be included aspen, mountain ash, and black cotoneaster. Spiraea and raspberry are poorly consumed. When possible the red deer consumes grass in the form of hay from the haystacks of pikas, dry tall grasses, grass reminders on the snow-covered pastures, pastures at the heat of the sun and snowless zones on the ground surface, from which the wind blow away a snow in winter. For these complexes of habitats the red deer is relatively stable, and changes the habitats only under the influence of certain critical factors. The most favorable for wintering of red deer are birch-larch forests, where there is a highest population density of this species – up to 40 ind. / 1 000 ha.