FUNDAMENTAL AND APPLIED RESEARCHES, EDUCATIONAL TRADITIONS IN ZOOLOGY

Materials of international scientific conference dedicated to the 135th anniversary of Tomsk State University, 125th 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


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.

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 © Tomsk State University, 2013
© Authors of the articles, 2013
ORGANIZERS:

NATIONAL RESEARCH TOMSK STATE UNIVERSITY
BIOLOGICAL INSTITUTE OF TSU
RUSSIAN FOND FUNDAMENTAL RESEARCHES
THERIOLOGICAL SOCIETY OF RUSSIAN ACADEMY
OF SCIENCES
RUSSIAN BIRD CONSERVATION UNION
NIKOLSKY'S HERPETOLOGICAL SOCIETY
OF RUSSIAN ACADEMY OF SCIENCES

ORGANIZING COMMITTEE

Chairman:
Georgy V. Meyer — Rector of Tomsk State University, D.Sc., Professor

Co-Chairs:
Nina S. Moskvitina — D.Sc., Professor (TSU)
Alexander M. Adam — D.Sc., Professor (TSU)
Mikhail P. Moshkin — D.Sc., Professor (Institute of Cytology and Genetics SB RAS, Novosibirsk, TSU)

Members of the committee:
Vladimir N. Bolshakov — Academician of Russian Academy of Sciences (Institute of Plant and Animal Ecology, Ural Branch of Russian Academy of Sciences, Moscow)
Emilia I. Vorobyova — Academician of Russian Academy of Sciences (Institute of Ecology and Evolution, Russian Academy of Sciences, Moscow)
Viacheslav V. Rozhnov — Corresponding Member of Russian Academy of Sciences (Institute of Ecology and Evolution, Russian Academy of Sciences, Moscow)
Ernest V. Ivanter — Corresponding Member of the Russian Academy of Sciences (Petrozavodsk State University, Petrozavodsk)
Iuri S. Ravkin — D. Sc., Professor (Institute of Systematics)
and Ecology of Animals, Novosibirsk, TSU)
Sergei P. Kulizhsky
– Director of Biological Institute, D. Sc., Professor (TSU)
Vladimir L. Vershinin
– D. Sc., Professor (Ural Federal University, Yekaterinburg)
Victor V. Glupov
– D. Sc., Professor (Institute of Systematics and Ecology of Animals, Novosibirsk)
Valery B. Loktev
– D. Sc., Professor (Research Center of Virology and Biotechnology «Vector», Koltsovo, Novosibirsk Region)
Yuri N. Litvinov
– D. Sc. (Institute of Systematics and Ecology of Animals, Novosibirsk)
Marina V. Kholodova
– D. Sc., Professor (Institute of Ecology and Evolution, Russian Academy of Sciences, Moscow)
Alexander I. Koshelev
– D. Sc., Professor (Melitopol State Pedagogical University, Melitopol, Ukraine)
Sergei S. Moskvitin
– Associate Professor, Head. Zoological Museum of TSU
Boris D. Kuranov
– D. Sc., Professor (TSU)
Aleksandr A. Ananin
– D. Sc., (FGBU «Zapovednoe Podlemorye», Ulan-Ude)
Vadim M. Efimov
– D. Sc., Professor (Institute of Cytology and Genetics SB RAS, Novosibirsk, TSU)

Secretariat:
Igor G. Korobiitsyn
– Ph.D., associate professor
Natalia P. Bolshakova
– Ph.D., research associate of RLBEM
Vadim V. Yartsev
– graduate, junior researcher of RLBEM

The Working Group:
Lyudmila P. Agulova
– D.Sc., professor
Olga B. Vaishlya
– Ph.D., associate professor
Sergei I. Gashkov
– Ph.D., associate professor
Larisa B. Kravchenko
– Ph.D., associate professor
Valentina N. Kuranova
– Ph.D., associate professor
Dmitry V. Kurbatsky
– research associate of RLBEM
Nelya G. Suchkova
– Ph.D., associate professor
Oleg Yu. Tyutenkov
– research associate of RLBEM
Paul G. Vlasenko
– undergraduate
Alexander V. Zhigalin
– undergraduate
Nutrition of red deer in the conditions of snowy winters of northeast Altai

Y.N. KALINKIN

Altaiisky State Nature Biosphere Reserve (Gorno-Altaisk, Russia)

kalinkin72@mail.ru

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.