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AMUR, OR SIBERIAN TIGER IN THE AMUR REGION

N.N. Kolobaev, E.K. Krasikova, I.G. Nikolaev, S.G. Kozlov

Summary

The Amur Region is not included into a constant area of the Amur tiger (*Panthera tigris altaica*). During centuries this species only periodically occurred in this Region. In article the first detailed report about meetings of tigers in the Amur Oblast in XIX—XXI eyelid is given. More than 40 messages on meetings by one or several specimens are registered. In XX eyelid the tigers occurred in Region on the average 1 case per 2 years. The majority of tigers observed in northern and central parts of this Region. It is supposed, that one of tracts of migrations runs from West — from the Chita Region. Here last decades the number of tigers has increased. The most long-term visiting was observed in 2003—2004. Is revealed the provisional route of an adult male (more than 1,5 thousand km). By results of followings the extent of 70 kms, carried out in Zeyskii and Norskii State Nature Reservations, describes places of movement, behavior and consequences of ability to live of a tiger.

COMPARATIVE ANALYSIS OF THE VOCALIZATION OF PIKAS (*OCHOTONA*, MAMMALIA) FROM ALPINA-HYPERBOREA GROUP.

A.A. Lissovsky

Summary

Comparison of the structure of acoustic repertory was carried out on four pika taxa: recognized species *Ochotona alpina*, *O. hyperborea*, *O. turuchanensis*, and the race *scorodumovi*. All calls can be divided into 4 categories: alarm calls, "chirring" — signals, reflecting the higher agitation, short-distance communicative signals, and "song". The last name induced by mating function and high showiness of the behavior complex associated with these calls. The song consists of the "trills", "quick series of calls", and "slow series of calls".

The analysis showed 3 acoustic races to exist within the range of *O. hyperborea*: so called "northern" (Chuckchee and Kamchatka peninsulas, Suntar-Hayata Range, Putorana plateau, Polar Ural), "eastern" (Hokkaido and Sakhalin Islands, Sikhote-Alin Mts., near Khabarovsk and Zeyskiy Reserve), and "southern" (Mongolia, Tuva Republic, Sayan Mts., all the Transbaikalian up to Amur-Yakutsk highway). The structure of acoustic repertory strongly discriminates *O. turuchanensis* from other species. The race *scorodumovi* has not revealed closer similarity to *O. alpina* than to other species analyzed. It was shown that pikas from the north of the Great Khingan Mts (China) are similar to the proper *scorodumovi*. It is supposed that there is a high probability of appearance of parallelisms of the time-and-frequency structure in the calls with relatively simple frequency modulation. The repertory of *O. hyperborea* can be characterized by reduction of the number of elements in the song (absence of "quick series of calls") and by differentiation of signals reflecting the higher agitation; *O. turuchanensis* — by personalization of the time-and-frequency structure of calls; and *O. alpina* — by predominance of "simple" "arcuate" signals. The abundance of the nonlinear phenomena in the calls of pikas was stated. The largest part of the nonlinear phenomena is observed in the calls of *O. turuchanensis* and "*scorodumovi*" race. In the last case biphonations occurred in more than a half of calls.

TYPES OF FLOWER STRUCTURE AND PATHWAYS OF THEIR MORPHOLOGICAL TRANSFORMATION IN *POLYGONACEAE*: THE PRELIMINARY DATA FOR THE MODEL OF FLORAL DEVELOPMENT

O.V. Yurtseva, V.V. Choob

Summary

The accumulated data on flower morphology and development in *Polygonaceae* are reviewed and reanalyzed. All the diversity of the flower structure could be described in terms of flower merosity and flower completeness. The flower merosity ($n = 4; 3; 2,5; 2$) is calculated as the number of tepals per whorl, and depends 1) on the meristem size and shape, and 2) on the size of presumptive tepal primordia, related to meristem, at the moment of spatial pattern formation in the flower. Merosity increases as a result of floral meristem diameter enlargement and/or of size reduction

of tepal primordia. The number of sites for stamen positioning is correlated with the number of tepals. Moreover, the number of sites in the inner whorl of androecium is influenced by the number and position of carpels.

The completeness of the flower could be related to the reduction/enrichment of flower structure, caused mainly by changes in stamen number in the sites of stamen positioning, and (rarely) in perianth whorl number. The flower in *Polygonaceae* includes one or two whorls of tepals. The number of stamens in any positioning site depends on the ratio of stamen primordia size to the available space of this site, and varies from 0 to 4. If the stamens in the sites of outer or inner whorl of androecium are absent, it is referred to as monocycly or obmonocycly. If the number of stamens is equal to 2, it is referred to as dedoublement, and if 3 or 4 stamens are located in positioning sites, it is referred to as polymery of androecium. The flower polymorphism in certain genera of *Polygonaceae* covers several structures, different in merosity and flower completeness, whereas the same flower structure occurs in far related taxa of the family. Correspondingly, the problem of the ancestral flower for *Polygonaceae* has no solution in the terms of single "typical" structure, and any taxonomic conclusions, based on the flower structure only (without other characters involved), seem to be invalid.

ANTHECOLOGY, PHENOLOGY AND CONSORTS OF *CYPRIPEDIUM CALCEOLUS* L. AND *CYPRIPEDIUM GUTTATUM* SW. IN SOUTHERN URAL

M.M. Ishmuratova, T. V. Zhimova, A.R. Ishbirdin, I. V. Sujundukov, A.M. Magafurov

Summary

Rhythms of seasonal development of *Cypripedium calceolus* and *C. guttatum* are investigated in Southern Ural. *Cypripedium calceolus* enters in separate vegetative phases before 1—3 days, than *C. guttatum*. The basic pollinators of *Cypripedium calceolus* are *Musca corvina* and *Andrena albicans*, and also *Andrena cineraria*, *Chrysotoxum festivum*, *Syrphus ribesii*, *Colletes* sp. As pollinator *Cypripedium guttatum* is only *Musca corvina*. Mellito- myiophilous syndromes are established for *C. calceolus* and myiophilous syndromes for *C. guttatum*. Some species of a class Aranei are revealed as consorts of *C. calceolus* — *Tetragnanthes pinicola*, *Enoplognatha ovata*, *Araneus marmoreus*, *Misumena vatia*, *Xysticus* sp. Spiders use flowers for the device of nets or use a lip as a live trap, settling down inside it. It is revealed, that is extreme one individual of a spider lives in one flower *C. calceolus*.

THE VARIABILITY OF DIFFERENT *DROSERA* (*DROSERACEAE*) SPECIES REVEALED BY CLASSIC AND GEOMETRIC MORPHOMETRY ANALYSES

P.A. Volkova, I.S. Jufirjakov, A.B. Shipunov

Summary

The classifications revealed by geometric morphometry and classical morphometry for *Drosera rotundifolia*, *D. x obovata*, *D. anglica* and *D. lineares* compared. We investigated microscopic sections of petioles, analysed with TPS computer programs; and morphometric characters of leaves, analysed by several multivariate methods. We found that: (1) the classifications of sundew plants by mean of morphological measurements and geometric morphometry return the similar and well-interpreted results; (2) the form of petiole middle part transverse section is the effective distinguishing character for the some different species and inter-species hybrids of *Drosera*; (3) the *D. x obovata* hybrids from White Sea region are more close to *D. rotundifolia* than to *D. anglica* which could be evidence of the selection pressure to the *D. rotundifolia* insectivore strategy.

ECTOPARASITES OF MAMMALS AND BIRDS IN BISHKEK-CITY AND THE CONTROL OF MASS SPECIES

S.Zh. Fedorova

Summary

111 species of ectoparasites have been found on the mammals and birds in Bischkek. The best results in the control of mass species were obtained with piretroides.

**PUBLISHING ACTIVITIES OF THE 'DE LA SOCIETE DES NATURALISTES
DE L'UNIVERSITE IMPERIALE DE MOSCOU'
IN THE END OF THE NINETEENTH - THE BEGINNING
OF THE TWENTIES CENTURIES**

O.A. Valkova

Summary

In the 19th century 'De la Societe des Naturalistes de l'Universite imperiale de Moscou' established in 1805 was one of the oldest and most famous scientific societies in Russia. From its first days publishing of the scientific periodicals was on the top in the shot list of its purposes. Different scientific periodicals published by 'De la Societe des Naturalistes de l'Universite imperiale de Moscou' were well known not only in Russia but all over the world. One of them — 'Bulletin de la Societe des naturalistes de Moscou'. The publication in such periodicals was very prestigious. Only members of the society had a right to publish their papers there. As there were much more people who wanted to put a paper in so useful magazine and only few possibilities to do this some times conflicts between the authors and the editors took place. Investigating the funding sources of the Society, analyzing the budget of its periodicals, and an every day life of the editorial staff in the end of the 19th the beginning of the 20th century we tried to found out a real role of the scientific periodicals in the scientific activities of the 'De la Societe des Naturalistes de l'Universite imperiale de Moscou'.