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MANAGEMENT AND REPRODUCTION OF PLAIN RESERVOIR WATERFOWL RESOURCES

Y.A. Gorshkov

Summary

Comparison of data on waterfowl withdrawal by hunters and on egg laying destruction gives basis to consider that the existing press of hunting is not the leading factor, which determine the game resources on plain water reservoirs. Analysis of literature and original data does not testify in favor of undoubted prohibition of spring game on drakes at plain water reservoirs. Early start of pasturing and hey making in the valleys of water reservoirs causes the changes in the waterfowls' reproduction process and noticeably decreases its efficiency. Correction of agricultural activities time in combination with wildlife management helps to increase the productivity of waterfowl population.

DISTRIBUTION OF HORSFIELD'S TORTOISE (*AGRIONEMYS HORSFIELDI* GRAY, 1844) IN VIRGIN AND ANTHROPOGENIC LANDSCAPES OF SOUTH UZBEKISTAN

D.A. Bondarenko, E.A. Peregontsev

Summary

A horsfield's tortoise distribution was considered in virgin and cultural landscapes of Karshy steppe and adjacent districts. In virgin landscapes the tortoise was met everywhere, but is distributed nonuniformly. In most virgin landscapes the population density of tortoise did not exceed 10 ind./ha. The low population density is noted in anchored sands (2,2 ind./ha) and ridge sands (0,1 ind./ha). On sandy-loam habitats the density of population strongly varies, but does not exceed 7 ind./ha. The greatest numbers is marked in wavy foothills (28,8 ind./ha) and piedmont plain (9,3 ind./ha). Cultivation of virgin landscapes has resulted in liquidation of some habitats and decreasing tortoise numbers. The large population groups can be saved among irrigation lands for a long time. In shallow and separate plots tortoise is being eliminated.

AN ATEMPT OF RECONSTRUCTION OF THE PHYLOGENY OF THE LEAF-ROLLING WEEVILS (COLEOPTERA: RHYNCHITIDAE, ATTELABIDAE)

A.A Legalov

Summary

Phylogenetic relationships in the families Rhynchitidae and Attelabidae are reconstructed. The basic synapomorphies are revealed. Morphological advancement of promofote various groups families of Rhynchitidae and Attelabidae is determined. The family Attelabidae consists of two large branches. The supertribe Rhynchititae is the most advanced which representatives could adapt not only to development in various parts of a plant, but also to wrap tubules. This supertribe comprises 9 well-defined tribes arranged in to three groups: 1) Auletini, Brenthorrhinoidi-ni and Minurini; 2) Cesauletini, Eugnamptini and Isotheini; 3) Pterocolini, Rhynchitini and Byctiscini. The subfamily rank of Apoderinae is confirmed.

ECOLOGO-FAUNISTIC REVIEW OF CUCUJOIDEA (COLEOPTERA) OF BEREZINSKY BIOSPHERE RESERVE (BELARUS)

V.A. Tsinkevich

Summary

As a result of analysis of personal collectings and sample materials a list of Coleoptera of superfamily Cucujoidea of Berezinsky biosphere reserve was arranged, including 185 species from

16 families. The analysis has revealed mycetofagi (93 species) as a prevailing group, the number of species from other trophic groups is considerably smaller. The predominance of mycetofagi is the evidence of favourable conditions formed on the territory of the reserve for vital functions of Coleoptera of this trophic group. Great diversity of Coleoptera of superfamily Cucujoidea in Berezinsky biosphere preserve serves as evidence that the territory is one of few reserves of biodiversity of Coleoptera in Eastern Europe.

VALIDATION OF THE ECOLOGICAL-COENOTICAL GROUPS OF VASCULAR PLANT SPECIES FOR EUROPEAN RUSSIAN FORESTS ON THE BASIS OF ECOLOGICAL INDICATOR VALUES, VEGETATION RELEVES AND STATISTICAL ANALYSIS

V.E. Smirnov, L.G. Khanina, M.V. Bobrovsky

Summary

The original approach for finding, testing and analysis of ecological-coenotical plant species groups (ECG) is proposed. The approach has been tested on the ECG system for the vascular plants of European Russian forests developed earlier by O. Smirnova and L. Zaugolnova with contribution of O. Evstigneev. The ECG system is an extension of A. Nitsenko ECG system (1969) and G. Zozulin historical suites (1970, 1973). Seven species groups of the system were obtained on the base of expert knowledge, and thus their verification by formal methods was desirable step. Ecological and coenotical species features for quantitative analysis were presented as variables of two types: (1) Ellenberg indicator values and (2) species scores derived from ordination of vegetation plots. The ordination was conducted by non-metric multidimensional scaling (NMS) technique and ordination scores for the species were calculated by weighted averaging of the plots coordinates. Further, discriminate analysis (DA) was used to identify misclassified species in ECG. DA was run repeatedly on the whole set of variables and on various subsets of them, with monitoring of results by experts on every step of the analysis. The procedure continued until a position of every species in the ECG system fits both DA results and expert judgment. Such joint expert-statistical approach allowed to greatly improve the ECG system, to put about 1000 vascular species into seven groups and to outline core species and intermediate species. It was also shown that the updated groups are homogeneous with respect to all variables under the study. The proposed methodology can be useful for improvement of any a priori species groups defined by either expert knowledge or traditional statistical methods such as cluster analysis.

INFLORESCENCE STRUCTURE OF *POLYGONACEAE*

O.V. Yurtseva

Summary

The inflorescence structure in two subfamilies of *Polygonaceae* was analysed. In *Eriogonoideae* the floral units terminated main axes are polytier pleyochasia, trichasia, dichasia or umbel-like cymoids. The axes of all orders in floral units are terminated by partial florescences — antodia, in appearance similar to pseudantia of *Euphorbiaceae*, but differ in bisexual flowers. Antodium is a simple umbel with centripetally developing flowers and involucre formed by laterally fused bracts of lower flowers. Both antodia and pleyochasia are formed through transformation of monotelic panicle by homogenization of lateral axes, disjunction of upper paracladia, racemisation and truncation of terminal flower of umbel or terminal antodium of pleyochasia. The compactness of antodia and pleyochasia is the result of shortening of main axis internodes in both and of lateral axes internodes in pleyochasia. Additional paracladia in enriching zone bring to appearance of thyrsus with lateral pleyochasia.

In *Polygonoideae* the floral units are spike-like thyrses with lateral partial florescences — manyflowered dichasia (*Rumiceae*) or monochasia (*Polygoneae*, *Persicarieae*, *Atraphaxideae*, *Coccolobeae*, *Triplariidae*). The thyrsus was formed from monotelic panicle through disjunction and homogenization of upper paracladia, racemisation and truncation of terminal flower. The lateral cymes are provided with ordinary foliage leaves in frondate thyrsus and bracts in bracteate thyrsus, or the bracts are absent (*Rheum*). Frondate thyrses with elongated internodes usually are able to prolonged growth, bracteate compact thyrses are not. The spike-like thyrses enter to more complicated floral units — spikes, racemes or panicles as lateral or/and terminal elements. The

pedicells of all flowers in dichasia of *Rumiceae* have no leaves at the base, but in *Polygoneae*, *Persicarieae* and *Atraphaxideae* each is surrounded by hyaline prophyll with two lobes correspondent to stipules. The internodes length, the presence or absence of terminal flowers and bracts, the number of tiers or flowers in pleyochasia, dichasia and monochasia probably have simple genie control.

The different morphological series in two subfamilies of *Polygonaceae* are: antodium — pleyochasium — thyrsus with lateral pleyochasia in *Eriogonoideae* and thyrsus — spike, raceme or panicle with lateral and terminal thyrses — panicle with lateral or terminal complex floral units. These series confirm the correctness of taxonomic division of *Polygonaceae*.

NATURAL DYNAMICS OF *FESTUCA VARIA* GRASSLAND IN THE TEBERDA RESERVE

T.G. Elumeeva, V.G. Onipchenko

Summary

Dynamic of an alpine plant community dominated by tussock grasses *Festuca varia* Haenke and *Nardus stricta* L. was studied at the Mt. Malaya Khatipara (2750 m a.s.l.) in the Teberda Reserve, the Northwestern Caucasus. During the period 1987—2004 we counted shoot number of all plant species on 40 permanent plots 25 x 25 cm (total area 2,5 m²) and number of generative shoots on permanent plots with total area 50 m². We recognized three groups of species according to their dynamic. Total shoot number of *Calamagrostis arundinacea*, *Campanula collina* and *Galium verum* increased significantly ($p < 0,01$) over the observation period. Shoot number of *Campanula tridentata*, *Carex atrata*, *Matricaria caucasica*, *Minuartia aizoides* and *Viola altaica* decreased significantly during the period of observation. Other species, including main dominant *Festuca varia*, did not show directional changes. Trends of dynamics of generative shoots were not similar to trends of total shoot number.

FIRST CAPTURE OF THE ARROWTOOTH FLOUNDER *ATHERESTHES STOMIAS* (PLEURONECTIDAE) WITH ABNORMAL COLORATION

A.M. Orlov

Summary

The first capture of the arrowtooth flounder *Atheresthes stomias* (Pleuronectidae) with abnormal coloration in the western Bering Sea is documented. Normal coloration of the blind side of species considered is silvery-gray. Specimen captured was 37 cm long. Rear end of its blind side was dark colored and coloration was similar to that of eyed side.

ADDITION ON THE FAUNA OF MICROLEPIDOPTERA (INSECTA: LEPIDOPTERA) OF PENZA PROVINCE

L.V. Bolshakov, O.A. Polumordvinov, S.V. Shibaev

Summary

The preliminary list of Microlepidoptera of Penza province collected up to 2004 inclusive is cited. It includes 110 species (16 families), 102 of which are cited for the first time for the province and 2 of them first for the Middle Volga region.

THREE NOTES ON ROSES OF THE EUROPEAN RUSSIA

A.K. Skvortsov

Summary

1. A new species, *Rosa viarum*, is described. It is related to *R. acicularis*, but cardinally differing from it in habitats and in geography.

2. A rather compact fragment of the area of *R. jundzillii* had been detected in the province of Volgograd.

3. A colony of *R. turcica* (*R. horrida* Fisch.) had been found in the extreme South of the province of Belgorod. Until now, the species had been known only in Crimea.

MORPHOGENESIS AND AGE STAGES OF SCUTELLARIA SUPINA L. (LAMIACEAE) IN THE CONDITIONS OF MIDDLE-RUSSIA UPLAND

T. V. Nedosekina, V.A. Agafonov

Summary

The article deals with morphogenesis of *Scutellaria supina*. Four stages are distinguished in ontogenesis. Nine age stages are described.

ON GEOPHILY IN SOME REPRESENTATIVES OF THE TRIBE *LOTEAE* (*LEGUMINOSAE*)

R.P. Barykina, T.A. Tsutsupa

Summary

Geophily is an important adaptive ability of great number of hemicryptophytes. A study of this phenomenon allows to make a conclusion that geophily is not only an obvious way of adaptation of plants to the unfavorable vegetative period, but also a biological peculiarity which plays an important role in different biomorphs formation.

THE ECOLOGICAL ESTIMATION OF SYNANTHROPIZATION LEVEL OF FOREST VEGETATION IN BASHKIRIAN REPUBLIC

L.M. Abramova, V.B. Martynenko

Summary

The estimation of synanthropization level of 34 associations, 2 communities of 7 classes of forest vegetation of Bashkortostan Republic was given. Low tolerance to synanthropization processes was typical of wetland forest communities (class *Salicetea purpurea* and alliance *Alno-Padion* of class *Querco-Fagetea*). Zonal forest communities (classes *Querco-Fagetea*, *Vaccinio-Piceetea* and *Brachipodio pinnati-Betuletea pendulae*) are more tolerant to intrusion of synanthropous species. Extremely low tolerance to synanthropization processes was spontaneous urban arboreal vegetation (class *Robinietea*), which relate to sinanthropous communities.

**ON SPECIES OF SUBSECTION *MESOGYNE*
(*SAXIFRAGA*, *SAXIFRAGACEAE*) FROM YAMAL PENINSULA**

M.V. Kapralov, O.S. Dymshakova

Summary

The geographical distribution on Yamal peninsula is reported for *Saxifraga cernua* L., *S. hyperborea* R.Br., *S. radiata* Small, and *S. rivularis* L. — the species that belong to subsection *Mesogyne* (Sternb.) Zhmylev (*Saxifraga* L., *Saxifragaceae*). The counted chromosome numbers for *S. cernua* from Yamal are $2n = 36—38, 48$.