

SUMMARIES

BOTANICA

Barchenkov A.P. Variability of larch in Northern Transbaikalia (Stanovoe plateau). Variability of larch morphological traits has been investigated in Stanovoe plateau. Two ecotypes certainly differentiated by quantitative traits of generative organs and some features of vegetative structure have been discovered. One ecotype is characterized by small size of generative organs, vertical cylinder crown, cracked texture of bark. It grows in mountain zone. Another ecotype is formed in flood-lands of rivers and depressions and it has bigger size of cones, branchy of crown and bark scaly. The altitudinal zoning is the main factor which causes differentiation of these ecotypes and determines phytocenotic and climatic conditions of population vegetation.

Dirks M.N., Timoshok E.E., Skorokhodov S.N. Species diversity of vascular plants on the young moraines of the valley glaciers on the northern macroslope of the Severo-Chujskiy ridge. Species diversity and specific features of species composition of vascular plants on the young moraines of three valley glaciers on the northern macroslope of the Severo-Chujskiy ridge were revealed. They are conditioned by territorial and altitudinal position of young moraines and diversity of surrounding plant communities.

Nikolaeva S.A., Velisevich S.N., Savchuk D.A. Ontogeny of siberian stone pine in the Ket-Chulym divide. The comprehensive description of ontogeny and quantitative characteristics of physiological age are first given in Siberian stone pine trees of the first afterfire generation of normal and lower vitality (the most typical regeneration and age series of green mossy Siberian stone pine forests in West Siberian taiga as an example).

Nozhinkov A.E., Taran G.S. On bryoflora of the Ob river floodplain in the Bystroistokskiy district of the Altai Territory. 67 mosses were found in Ob floodplain within the limits of Bystroistokskiy district, Altai Territory. Among the species, 64 ones are new for the floodplain of the area and 45 are new for the Ob floodplain within the limits of Altai Territory. 5 species are first recorded for Altai Territory.

Yamburov M.S. Male shoots structure and pollen quality of «witches' broom» in the Scotch pine (*Pinus sylvestris* L.). Comparative analysis of growth features and structure of male sexual shoots and also qualities of pollen of «witches' broom» branches and a normal part of a tree crone in the Scotch pine is lead.

BIOTECHNOLOGY

Karnachuk R.A., Dorofeev V.Yu., Gvozdeva E.S., Golovatskaya I.Ph., Churin A.A., Suslov N.I., Medvedeva G.V. Influence of physiological activity substances on growth and level of triterpenoid saponins and flavonoides *Atragene speciosa* Weinm. cell cultures. *Atragene speciosa* Weinm. (clematis sibirian) *in vitro* cell cultures was obtained, possess stable of growth rate for further disclosure and analysis of pharmacological activity. Solution of MS medium for active growth cell cultures was optimized. Research influence of jasmonic acid and 24-epibrassinolide and effectiveness was showing for accumulation of triterpenoid saponins and flavonoides.

MICROBIOLOGY

Chikin Yu.A., Lukjantsev S.V. Propagation of a conditional-pathogenic fungi by synanthropic cockroaches. Synanthropic arthropods promote a directional and fast enough succession of mycobiota, the species of fungi known as producers of various bioactive metabolites, including mycotoxins. Fungal microorganisms which are potentially dangerous to the health of the human being and animals, and also capable to biodegradation in conditions of book-depositories and libraries, can accumulate in populations of synanthropic cockroaches.

PLANTS PHYSIOLOGY

Kurovskiy A.V., Kurovskaya L.V. Influence of some hydrochemical parameters of r. Irtysh waters on anatomo-morphological parameters of needles of a pine ordinary, growing on fluvial terraces. An average size of diameter of pitch channels in needles pines, growing on fluvial terraces in of 980 kms from a mouth r. Irtysh sharply grew and statistically significantly differed from average values of this parameter on other trial areas on a background of the common tendency of decrease from the south on the north. The similar picture was observed and concerning width of needles of researched plants. In the given area the minimal values of width of cells mesophyll needles have been fixed. The multivariate analysis of the data has shown, that variability of anatomo-morphological attributes of needles of the pine collected on a site of 980 kms from a mouth is determined not by geographical breadth and not the main hydrochemical parameters of waters of Irtysh's river, and any others which still yet have been not taken into account by factors, most likely having the adverse nature.

HUMAN AND ANIMAL PHYSIOLOGY

Begletsov O.A., Kaizer A.A. Biochemical characteristics the gall of some species wild carnivorous animals. Is established, that gall of the wild carnivorous animals contents besides bilious acids the wide spectrum of biologically active substances, such as macro- and microelements, greasy acids, aminoacids and vitamins. The distinctions in concentration of components of biologically active substances gall the wolverine, sable, brown and white bears are shown.

CYTOLOGY AND GENETIC

Wasserlauf I.A., Usov K.E., Mitrenina E.Yu., Stegny V.N. Investigation of species – specific peculiarities of ovarion nurse cells polytene chromosomes spatial arrangement of *D. yakuba* Burla и *D. santomea* Lachaise, Harry *D. melanogaster* subgroup (*Sophophora*). Spatial arrangement of ovarion nurse cells polytene chromosomes of two species *D. yakuba* and *D. santomea* has been revealed. Chromosomes of inter-specific hybrids differ in their orientation in the nucleus. The orientation is species-specific, it comes out in asynapsis of homeologous chromosomes. It can be explained by the fact that chromosomes maintain their species-specific position in the hybrid nucleus. Investigation of chromosome association of *D. yakuba* and *D. santomea* through endomitotic cycle has shown that movement of chromosomes 2 and 3 heterochromatic blocks is determined by nucleolus formation.

ECOLOGY

Babenko A. S., Siewert Ch. Landscape-ecological excursion: the experience of Russian and German universities international cooperation. The experiences of international landscape-ecological excursion organization are described. Detail description of trip crossing south part of West Siberia is accompanying with the comments concerning the key places peculiarities. The complex characters of teaching and scientific program and its advantages are stressed. The perspectives of Russian-German summer field schools development and the universities teachers and students participation are discussed.