ISSN 1993-3916

Том *Volume* **16** **Номер** Number **3 (43)** **Сентябрь** September **2010**

РОССИЙСКАЯ АКАДЕМИЯ НАУК
RUSSIAN ACADEMY OF SCIENCES

АРИДНЫЕ ЭКОСИСТЕМЫ
ARID ECOSYSTEMS

Журнал освещает фундаментальные исследования и результаты прикладных работ по проблемам аридных экосистем и борьбы с антропогенным опустыниванием в региональном и глобальном масштабах. Издается с 1995 года по решению Бюро Отделения общей биологии Российской академии наук.

The journal is published by the decision Department of Biological Sciences of Russian Academy of Sciences (RAS). The results of fundamental and applied investigations on the problems of arid ecosystems and on struggle against anthropogenic desertification are published on its pages. Principles of system study of arid territories and the dynamics of their biology potential changes in global and regional aspects are put into basis.

МОСКВА: Товарищество научных изданий КМК
MOSCOW: KMK Scientific Press Ltd.

2010

RUSSIAN ACADEMY OF SCIENCES
DEPARTMENT OF BIOLOGICAL SCIENCES
DAGHESTAN SCIENTIFIC CENTER
PRICASPIYSKIY INSTITUTE OF BIOLOGICAL RESOURCES
WATER PROBLEMS INSTITUTE

SECTION "Problems of arid ecosystems and combat against desertification"
Scientific council "Problems of ecology and biological systems"

ARID ECOSYSTEMS

Vol. 16, No. 3 (43), 2010, SEPTEMBER
Journal is founded in January 1995
Issued 4 times per year

Addresses of Editorial Offices:
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MOSCOW: KMK Scientific Press Ltd.

2010

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Издается при финансовой поддержке
Прикаспийского института биологических ресурсов
Дагестанского научного центра Российской академии наук,
Института водных проблем Российской академии наук,
Регионального благотворительного фонда им. А.М. Солтанмута,
и содействии региональных отделений секции
"Проблемы изучения аридных экосистем и борьбы с опустыниванием"
Научного совета "Проблемы экологии биологических систем"
отделения биологических наук Российской академии наук

© The journal has been founded in 1995.
It is published under financial support of
Pricaspian Institute of Biological Resources
Dagestan Scientific Center of Russian Academy of Sciences,
Water Problems Institute of Russian Academy of Sciences,
A.M. Soultanmut Regional Charitable Foundation,
with assistance of regional departments of the section:
"Problems of Arid Ecosystems and Desertification Control",
Scientific Council "Problems of Biosystems Ecology"
Department of General Biology of Russian Academy of Sciences

Журнал включен в список Реферируемых журналов
и Базы данных ВИНИТИ. Сведения о журнале ежегодно
публикуются в международной справочной системе
по периодическим и продолжающимся изданиям
«Ulrich’s Periodicals Directory»

The journal is included in the list of reviewed journals
and database of VINITI. Information about the journal is annually
published in the International inquiry system of the
«Ulrich’s Periodicals Directory»

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Volume 16, Number 3 (43), 2010 SEPTEMBER

ANNOTATIONS

ASSESSMENT OF MODERN BURNING DYNAMICS IN ARID ECOSYSTEMS USING REMOTE SENSING DATA (CASE STUDY OF CHERNYE ZEMLI)

© 2010. M.Yu. Dubinin*, A.A. Lushchekina, V.C. Radeloff***

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Abstract. Vegetation burning is a natural component of the dynamics of grassy arid ecosystems. Understanding of influence of fire on different components of arid ecosystems is essential for conservation, science and management and requires detailed assessment of area burned in high detail, both in space and time. Here we present a method and data that can be used to assess spatio-temporal change in burned area. The assessment of burned areas dynamics in Chernye zemli (Black lands) is provided, that utilizes this method. The assessment shows widespread nature of burning, high interannual variability, clustering in space and domination of large fires.
Key words: arid ecosystems, fire, remote sensing, Chernye Zemli.

BIODIVERSITY AND MACROINVERTEBRATE COMMUNITY STRUCTURE OF SALINE STREAMS OF ARID REGION OF THE SOUTH RUSSIA (LAKE ELTON'S PLAIN)

© 2010. T.D. Zinchenko, L.V. Golovatyuk

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Abstract. The rate of change of biological variety and functioning of communities in ecosystem, was investigated on the example of macroinvertebrate community structure of 5 small saline streams of area lake Elton, a unique natural-territorial complex of arid region of the Low Volga river basin. The number of species macrozoobenthos communities decreases due to the increase of mineralization from 39 in the river Hara (7-14 gL^-) to 10 taxa in the river Chernavka (26-32 gL^-). In 2006-2008 there were discovered new species of chironomids for science: *Tanytarsus kharaensis* Zinchenko et Zorina and *Cricotopus salinophilus* Zinchenko, Makarchenko et Makarchenko.
Key words: saline streams, biodiversity, structure of macroinvertebrates communities.

ECOLOGICAL PROBLEMS OF WESTERN NEAR-STEPPE LAKES IN THE VOLGA RIVER DELTA

© 2010. V.F. Brekhovskikh, P.I. Bukharitsin, Z.V. Volkova, E.N. Labunskaya

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Abstract. Some ecological problems of western near-steppe lakes in the Volga River delta have been studied. Main factors of forming the hydrological regime of lakes have been revealed, the dependence of their water level on the delta water level having been very strong. Pollutant concentrations and water quality were estimated with the use of the data for the Lower Volga River spring floods in 2001-2007. Phytoplankton characteristics and their dependence on the water salinity in lakes were analyzed.
Key words: The river Volga delta, Hydrological regime, western near- steppe lakes, chemical characteristics, Phytoplankton, water quality.

CHANGES IN THE RIVER NET AND IN THE WATER QUANTITY IN THE REGIONS OF THE UPPER AND MIDDLE STREAM OF THE DON RIVER IN RESULT OF CURRENT CLIMATIC CHANGES AND ECONOMIC DEVELOPMENT

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Abstract. In the article there is analysis of contemporary changes of the river net density, stream length, water quantity and natural processes which may be the consequences of global climatic changes and economic development within the river basins.
Key words: stream, river net density, water resources, water quantity, water supply.

SYSTEM OF STRICTLY PROTECTED NATURAL AREAS OF MONGOLIA AND PERSPECTIVES OF ITS DEVELOPMENT

© 2010. B. Oyungerel

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Abstract. In history of nature protection in Mongolia there are three distinct periods: before 1921, 1921-1990, from 1990 up to the present time. In accordance with the Law "On strictly protected natural areas" (1994), 65 protected areas of four categories were created up to now (12 reserves, 24 national parks, 20 refuges and 9 natural monuments) which occupy 14.4% of the total area of Mongolia. There is a map of their location, the author is describing criteria for creating and zoning and the role of each category in conservation of landscape and biological diversity. In connection with plans to increase a number of protected areas (with covering by them up to 30% of country's area) the special attention has been paid to creating protected areas in each natural province and also some transboundary protected areas together with neighboring countries.
Key words: Mongolia, nature protection, categories of protected areas, transboundary protected areas.

INFLUENCE OF CLIMATIC FLUCTUATIONS AND WAYS OF PLANTING HALOPHYTIC BUSHES ON RESULTS OF PHYTOMELIORATION OF SOLONCHAKS IN PRIARAL'E

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Abstract. The results of experimental investigations of the formation of artificial pastures on the former bottom of the Aral Sea under conditions of rapid climate changes by using halophytic plant species are examined. On the base of long-term monitoring of climate, soils, vegetation and also tests on phytomelioration the new approaches have been developed to restoration of strong and middle salinization of marine solonchaks, formed on the Aral Sea drying bottom's land.
Key words: climate change, precipitation, ecosystems, saline soils, solonchaks, halophytic plants.

THE FIRST ATLAS OF PROTECTED AREAS OF IRAN DARVISHSEFAT ALI A. 2006. ATLAS OF PROTECTED AREAS OF IRAN. UNIVERSITY OF TEHRAN, TEHRAN. 157+I-XI pp. (in English and Persian languages)

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Abstract. The first atlas of protected areas of Iran is considered. In the atlas detailed maps of four categories of protected areas, their descriptions (in English and Persian languages) and background materials on plant and animal diversity are presented.
Key words: Iran, atlas, national park, nature monument, wildlife sanctuary, protected area.