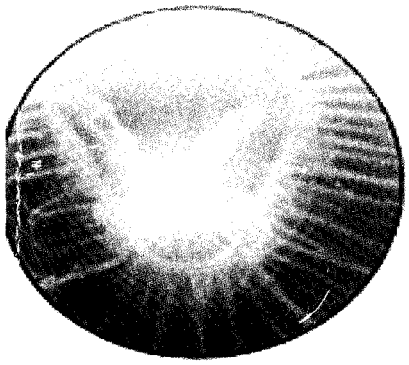

III International Symposium

INVASION OF ALIEN SPECIES IN HOLARTIC (BOROK – 3)

5-9 October 2010, Myshkin-Borok

- RUSSIA –

PROGRAMME &

BOOK OF ABSTRACTS

УДК 591.152:581.522.4:574.625

The III International Symposium "INVASION OF ALIEN SPECIES IN HOLARTIC. BOROK – 3". Programme and Book of Abstracts. October 5th-9th 2010, Borok - Myshkin, Yaroslavl District, Russia. 2010. – 118 pp.

The book represents proceedings of Second International Symposium "Invasion of Alien Species in Holarctic. (Borok – 3)" (5 – 9 Oct. 2010, Borok - Myshkin, Yaroslavl Region, Russia). The articles are divided into the four main divisions: General Problems, Plants, Invertebrates, and Vertebrates. The wide spectrum of problems related to appearance and spread of invasive plants and animals is discussed. The book may be interesting for specialists expertising in many fields, such as limnologists, hydrobiologists, ecologists, botanists, zoologists, geographers, managers dealing with nature preservation and fisheries.

Editors:
Yury Slynko, Yury Dgebuadze, Alexandr Krylov, Dmitriy Karabanov

Cover photos by (from above):
Yury Dgebuadze, Yury Slynko, Alexandr Krylov, Oleg Savinkin

Lable of Symposium:
Julia Kodukhova, Yury Slynko

Yaroslavl: Print-House Publ. Co, 2010

© The Authors, 2010

© Severtsov Institute of Ecology and Evolution Russian Academy of Science, Moscow, 2010

© Papanin Institute for Biology of Inland Waters Russian Academy of Science, Borok, 2010

ISBN 978-5-904234-13-3

ALIEN SPECIES OF FISHES FROM THE BASIN OF A MIDDLE COURSE OF THE OKA RIVER

Ivanchev V.P., Ivancheva E. Yu.
Oka state nature biosphere reserve, Russia, e-mail: eivancheva@mail.ru

Now 7 alien species of fishes are known in the basin of a middle course of Oka river (the Ryazan region).

Neogobius fluviatilis, *Proterorchinus marmoratus* and *Sabanejewia baltica* are usual in the Ryazan region in the Don basin. For Oksky basin in borders of region they are noted for the first time. *Neogobius fluviatilis* is found in July, 2009 in Oka near Kasimov, Proterorchinus marmoratus in August 2009 in Oka tributary - the Rubetsky source. Unlike these species which were already marked in Oksky basin (Дякина, Королев, 2008; Цепкин, Соколов, 1996), *Sabanejewia baltica* for the first time it is noticed in June 2007 г in Oka tributary - Khupta, that, it is possible to consider as the beginning of expansion by a species of new river basin.

Benthophilus stellatus in the Oka river has appeared rather recently. For the first time about dwelling of this species in the Oka river it became known in the summer of 2002 when one individual has been caught at Spassk (Иванчева, Иванчев, 2004).

Neogobius melanostomus in the Oka river is found out for the first time in 1980th (Бабушкин, 2001). Subsequently it was widely settled across Oka and now lives, probably, on all its extent within the Ryazan region. By present time this species besides the Oka river is noted in its tributaries - Pronya and Para (Иванчев, Иванчева, 2010).

Pungitius pungitius is noted in the Ryazan region in the end of 60-s' years (Бабушкин, 1990). Its find in November, 2009 on Bystrets river flowing on the regional centre is interesting.

Perccottus glenii meets in the Ryazan area from the beginning of 70-s' years. Now it was widely settled on various types of reservoirs and water currents of the Oksky pool.

ALIEN SPECIES OF PLANTS IN AQUATIC ECOSYSTEMS OF VJATKA-KAMA REGION

Kapitonova O.A.
Udmurt state university, Russia, e-mail: kapoa@uni.udm.ru

In the territory of Vjatka-Kama Region the growth of 22 species of the alien vascular macrophytes is noted. They make 6.5 % from the number of the regionrs known species of macrophytes. The majority alien species of macrophytes are not active participants of vegetative communities formation and they are a part of aquatic communities as accompanying elements (*Amaranthus retroflexus* L., *Chenopodium glaucum* L., *C. rubrum* L., *Xanthium strumarium* L., *Epilobium pseudorubescens* A. Skvorts., *Juncus gerardii* Loisel., *Senecio vulgaris* L., *Typha laxmannii* Lepechin, *Mimulus guttatus* DC., *Butomus junceus* Turcz., *Scirpus tabernaemontani* C.C. Gmel., *Zannichellia repens* Boenn.). They grow on secondary and open natural ecotopes. The given species do not represent now the big threat for ecosystems of the regionrs reservoirs as they have the lowest activity in aquatic communities.

Among considered group there are also invasive species. They include *Najas major* All., *Vallisneria spiralis* L., *Phragmites altissimus* (Benth.) Nabille., *Juncus tenuis* Willd., *Echinochloa crusgalli* (L.) Beauv. They strongly became a part of secondary biotopes communities, but they represent threat for aboriginal species of macrophytes only in the specific ecotopes which parametres considerably deviate from the normal. Probably, their wide expansion to water ecosystems of region may be expected in the future. Also the group of invasive species contains *Elodea canadensis* Michx., *Epilobium adenocaulon* Hausskn., *Impatiens glandulifera* Royle, *Mentha longifolia* (L.)

Huds., *Lemna gibba* L., naturalized in natural ecosystems or actively taking root into them. Some of them have already finished the process of accessible biotopes capture, others, developing own niche in ecosystems, behave rather aggressively.

STUDYING OF HISTORY OF EXPANSION, GENETIC AND MORPHOLOGICAL VARIABILITY STONE MOROKO *PSEUDORASBORA PARVA* (TEMM. ET SCHL., 1846) IN ITS AREA

Karabanov D.P., Kodukhova J.V., Slynko Yu.V.
Institute for Biology of Inland Water RAS, Borok, Russia
e-mail: dk@ibiw.yaroslavl.ru:

In less than four decades, *Pseudorasbora parva* has demonstrated its invasive potential by colonizing the majority freshwaters body of continental Europe. Established populations of *P. parva* have now been found in the wild, in large numbers, at several locations in delta and middle part of the stream of the Don River. The data on a morphological and genetic variety of *P. parva* are described. Carrying out the isozymes analysis has shown, that a lobe of polymorphic locuses P=21.05-31.52% (at criterion 0.95), general heterozygosis H=11.0-12.5% (S.E. 0.047), average quantity of alleles on a locus 1.42-1.47 (S.E. 0.16). Some morphological characters *P. parva* from Don River are characterized by the following magnitudes. Number of rays in a back fin (D) 6-7, 6.97±0.06, number of rays in an anal fin (A) 5-6, 5.97±0.06, number scales in a lateral line (l.l). 35-38, 35.9±0.72, number scales above a lateral line (SD) 5-6, 5.03±0.06, number scales under a lateral line (SA) 3-4, 3.97±0.06, the formula of pharyngeal teeth (d. ph.) (5-4) - (5-5), most frequently met (5-5). Total of vertebra (Vert) 33-37, M±m=35.43±0.18. Quantity of vertebra on departments: in a thoracic department (not considering 4 vertebra of the Veber's apparatus) Va (9-13), most frequently met (12); in the interjacent department Vi (3-5), most frequently met (4); in a caudal department (not considering of three accrete final vertebra) Vc (12-14), most frequently meeting (13).

CHANGE OF ALLELES FREQUENCIES OF LACTATE DEHYDROGENASE OF KILKA (*CLUPEONELLA CULTRIVENTRIS* NORDM., 1840) AT EXPANSION IN WATER RESERVOIRS OF VARIOUS TYPES

Karabanov D.P., Slynko Y.V.
Institute for Biology of Inland Water RAS, Borok, Russia, e-mail: dk@ibiw.yaroslavl.ru

Invasive fishes are gaining increasing importance, in the fauna structure of the Pont-Caspian region, lately. Kilka, *Clupeonella cultriventris* Nordmann, 1840 is one of the most active, in this respect, species. This work is devoted to studying of variability of alleles frequencies of lactate dehydrogenase (LDH, E.C. 1.1.1.27) of kilka's various populations. At the analysis of distribution of frequencies LDH alleles it was fix three mainframes - freshwater reservoirs (water reservoir of the Volga cascade), water reservoirs with this or that concentration of salts - sea type (Sea of Azov and Caspian Sea) and saltish-waters type. Most likely, such features are linked to existence of two big physiologic races of kilka - sea and saltish-waters and freshwater-Volga races. If this assumption is true, in this case allele LDH-A'120 it is possible to name "Volga"-allel. The assumption of communication of concentration of allele LDH-A' with a salinity of an inhabitancy of a concrete population is put forward. Probably, successful development of resources of boreal water reservoirs (in particular Rybinsk res.) descended due to individuals - «sea leaders».