

INVASION OF ALIEN SPECIES IN HOLARCTIC

BOROK-VI

SIXTH INTERNATIONAL SYMPOSIUM

BOOK OF ABSTRACTS

BOROK — UGLICH, 11-15 OCTOBER 2021



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INVASION OF ALIEN SPECIES IN HOLARCTIC. BOROK-VI

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Editors:

Yury Yu. Dgebuadze, Dr.Sci. (Biol.), Prof., Academician of RAS

Alexander V. Krylov, Dr.Sci. (Biol.), Prof.

Varos G. Perosyan, Dr.Sci. (Biol.)

Dmitry P. Karabanov, Ph.D. (Biol.)

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The book represents proceedings of Sixth International Symposium “Invasion of Alien Species in Holarctic. Borok -VI” (11 Oct. – 15 Oct. 2021, Borok – Uglich, Russia). The wide spectrum of problems related to appearance and spread of invasive plants and animals is discussed. The book may be interested for specialists in many fields, such as limnologists, hydrobiologists, ecologists, botanists, zoologists, geographers, managers of dealing with nature preservation and fisheries.

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ЧУЖЕРОДНЫЕ ВИДЫ В ГОЛАРКТИКЕ. БОРОК-VI

Тезисы докладов VI Международного симпозиума

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В сборнике представлены тезисы докладов Шестого международного Симпозиума по изучению чужеродных видов “Invasion of Alien Species in Holarctic. Borok-VI”, 11–15 октября 2021 г., Борок – Углич, Россия. Обсуждается обширный спектр проблем, связанных с появлением и распространением инвазийных растений и животных. Книга рассчитана на широкий круг специалистов: лимнологов, гидробиологов, экологов, ихтиологов, ботаников, зоологов, географов и специалистов по охране природы.

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THE TAXONOMIC STATUS OF NATIVE POPULATIONS OF *CORBICULA* CLAMS (BIVALVIA: CYRENIDAE) OF THE FAR EAST OF RUSSIA

A.V. Kropotin¹, Y.V. Bespalaya¹, A.V. Kondakov¹, O.V. Aksenova¹, I.N. Bolotov¹, M.Yu. Gofarov¹, O.V. Travina¹, M.V. Vinarski², I.V. Vikhrev¹

¹ *N. Laverov Federal Center for Integrated Arctic Research of the Ural Branch of the RAS, Russia*

² *Laboratory of Macroecology & Biogeography of Invertebrates, Saint Petersburg State University, Russia*
e-mail: aleksropotin@yandex.ru

Corbicula clams have invaded all continents except Antarctica. This genus is one of the most successful invaders of aquatic ecosystems (Gomes et al. 2016); it consists of estuarine or freshwater clams native to Asia, Africa and Australia (Hedtke et al., 2008). The reliable data on the Far Eastern Russian endemic species of *Corbicula* are relatively poor. At present time as many as eight nominal species of *Corbicula* clams are listed in the fauna of the Russian Far East: *C. japonica* Prime, 1867; *C. finitima* Lindholm, 1927; *C. lindholmi* Kursalova et Starobogatov, 1971; *C. amurensis* Bogatov et Starobogatov, 1994; *C. nevelskoyi* Bogatov et Starobogatov, 1994; *C. sirotskii* Bogatov et Starobogatov, 1994; *C. producta* Martens, 1905; *Corbicula elatior* Martens, 1905 (Zatravkin, Bogatov, 1987; Glaubrecht et al., 2007; Vinarski, Kantor, 2016). Unfortunately, the validity of most Far Eastern species has not been confirmed by molecular genetic data and they are still characterized only conchologically (Glaubrecht et al., 2007).

Our study presents a taxonomic review of *Corbicula* species from the Russian Far East (Primorsky Krai). The primary material was collected from several localities of the Russian Far East, including the type localities of some nominal species – Artemovka River (type locality of *C. finitima*), Kiparisovka River (type locality of *C. lindholmi*) (Zatravkin, Bogatov, 1987; Vinarski, Kantor, 2016), Razdolnaya River, Kievka, and Partizanskaya Rivers.

The molecular genetic analysis included amplification and sequencing of mitochondrial (COI) and nuclear (28S rRNA) markers. The method of DNA isolation, primer combinations, PCR conditions, sequencing, primary sequence processing, and phylogenetic analysis are described in our previous papers (Bolotov et al., 2015; Bespalaya et al., 2018).

According to our data, the mitochondrial COI gene of *Corbicula* clams from investigated localities, contains representatives of a single genetic lineage. The COI haplotype network reveals that these haplotypes belong to the estuarine species *C. japonica*. Two nominal endemic species of Far East of Russia, *C. finitima*, and *C. lindholmi*, appeared to be the junior synonyms of the estuarine species *C. japonica*. The taxonomic status of the rest of nominal species of *Corbicula* of the Primorsky Krai deserves a further study.

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