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ABSTRACT BOOK

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The 3rd International Symposium of Benthological Society of Asia is held in Vladivostok, Russia, from 24 to 27 August 2016, then from 27 to 31 August 2016 is continuing as The First International Youth Freshwater Ecology School. Various aspects of freshwater and marine biodiversity, biology and ecology problems are in the focus of the Symposium papers. Special attention has been paid to conservation of waters in the urban and wildlife areas of Asian region. Water quality and transboundary water ecosystem monitoring and control are considered at the international point of view as well as questions of ecological education and involving of public to water resources protection. The future international cooperation in different branches of benthological fundamental and applied sciences is discussed.

The book will be interesting for specialists in biology, ecology and biogeography, for practical workers, students and public deal with the water ecosystems protection, monitoring and control.

Co-Conveners: Academician of RAS Yu.N. Zhuravlev,
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(O51) ZOOBENTHOS OF THE METHANE SEEPS IN DEEPWATER ZONE OF LAKE BAIKAL: DISTRIBUTION AND TROPHY**T.Ya. SITNIKOVA^{1*}, I.V. MEKHANIKOVA¹, T.V. NAUMOVA¹,
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In recent years more than 20 methane patchily distributed seepages were discovered in deepwater zone of Lake Baikal (Van Rensbergen *et al.*, 2002; Granin *et al.*, 2010; Cuylaerts *et al.*, 2012; Khlystov *et al.*, 2013, *etc.*). The most famous of them are hydrothermal vent Frolikha (300–400 m depth), oil-methane seep Gorevoy Utes (~900 m depth) and methane seep Sankt-Petersburg (at a depth of ~1400 m). The landscapes and habitats of animals in these regions are different. The bottom of vent Frolikha covered by fields of bacterial mats created by giant sulfur bacteria *Thioploca*, patches of pebbles and boulders, light-coloured sand, and pale grey silt and pelite. The bituminous hills ("volcanoes") of different size were found on the floor of oil-methane seep Gorevoy Utes. Some of these structures had a vertical tube on the top ("dropper"), from which oil oozed. The floor of methane seep Sankt-Petersburg was presented by mounds composed of massive layers of methane hydrates. Gas bubbles escaped from some mounds. The bottom had patches of both oxic and anoxic surficial sediments, jelly-like microbial mats formed above gas hydrate layers. Invertebrates of 8 meiobenthic taxa [Ciliata, Rotifera (in vent Frolikha only), Copepoda, Nematoda, Ostracoda, and small Turbellaria] and 5 macrobenthic groups [Porifera (in vent Frolikha only), giant Turbellaria, Gastropoda, Amphipoda, Chironomidae, and Oligochaeta) were recorded at these regions]. Most of these organisms were found early in other deepwater regions of the lake, and some of them only can be considered as seep or vent local endemics. We revealed a significant statistical dependence of meiobenthos abundance on the availability of microbial mats, but this was not the case for macrobenthos abundance. The most numbers of benthic macroinvertebrates were registered on solid substrates (pebbles, boulders, bitumen structures). The analysis of stable carbon and nitrogen isotopes in animal tissues showed that their life cycles are based on chemo- (methano-), photo- and mixotrophy. The trophic webs were estimated from 2 to 4 levels of the animals.

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Key words: *deepwater lake zone, methane hydrates, aquatic invertebrates, meiobenthos, macrobenthos*