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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.

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(O43) ABRUPT CHANGES IN THE MACROZOOBENTHOS
COMMUNITIES OF STONY LITTORAL IN LAKE BAIKAL UNDER MASS
DEVELOPMENT OF *SPIROGYRA* GREEN FILAMENTOUS ALGAE

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Mass development of non-typical for Baikal green *Spirogyra* spp. has been detected in coastal zone since 2010–2011, first, locally, in South Basin (Kravtsova *et al.*, 2012; Timoshkin *et al.*, 2014). Results of 2014 round-Baikal expedition evidenced, that *Spirogyra* occupied shallow water zone (depth range 0.5–2 m) along ca 50 % of the coastal perimeter. General characteristics of the ecological crisis in coastal zone of Baikal, which also includes mass benthonic cyanobacterial blooms, giant coastal algal accumulations, illnesses and mass extinction of Baikal endemic Lubomirkiidae sponges, mollusks, faecal pollution, *etc.* is given by Timoshkin *et al.* (2016). Several types of cyanotoxins were isolated and determined in benthonic samples (Belykh *et al.*, 2015). The structure and composition of the macrozoobenthos communities (MC) of Baikal during last 87 years has been investigated on the example of the stony littoral zone (2–5 m depth). Most current and regular MC investigations have been performed on Berezovy ecological test site, "BTS" (South Baikal) since 2000 (Timoshkin *et al.*, 2009). The depth range of 2–5 m is normally occupied by II and III algal belts (*sensu* Meyer, 1930), where green macroalgae *Tetraspora cylindrica* var. *bullosa*, the diatom *Didymosphenia geminata* and representatives of endemic green *Draparnaldioides* usually dominated. Mass development of *Spirogyra* spp. (40–60 % of wet phytomass) we detected on BTS at 2–4 m depth during 2013–2014. Multiyear analysis of the stony littoral MC of south-western coast of Baikal during summer-autumn seasons of 1928, 1945–1946, 1963–1968, 2000–2001, as in June 2013–2014, evidences on rather stable condition of the MC. The mean macroinvertebrate abundance varied within 32.6–45.7 thousand specimens/m², the biomass – within 91.61–333.25 g/m². Gastropods, amphipods, caddies flies always dominated. The share of the mollusks was as high as 63–92 % of the total biomass and 36–82 % of the total invertebrate abundance. However, during mass *Spirogyra* bloom in September 2013 this parameter increased significantly (79.8±34.9 thousand specimens/m²), while the total biomass slightly decreased (141.67±88.31 g/m²). Rocky substrate was covered by *Spirogyra* (50–80 % of the projective area), nonetheless, the MC taxonomic structure was not changed (except for the leeches, which were mostly absent on the spirogyra-covered rocks). But the dominant groups were changed drastically: oligochaeta (44 % of total abundance and 26 % of the total biomass) and amphipoda (23 % and 43 % respectively) became dominating on BTS in September 2013. Chironomidae abundance increased significantly: up to 13 % (2013) and even to 21 % (2014). *Vice versa*, the share of Gastropods decreased 6 times in 2013 and over than 10 times in 2014. Their biomass was equal to 17–18 % of the total one. Mean values of Trichoptera abundance decreased over than 4 times. In summary, the mass development of *Spirogyra* first of all influences (suppressed) the share of the oxiphylous groups of MC, such as Gastropoda and Trichoptera. Significant changes in the quantitative characteristics and structure of the MC, accompanied by increasing of the total invertebrate abundance (1.7 times) and decreasing of their total biomass (2.3 times) can be explained by increased share of the numerous, but small-sized Oligochaetes. Respectively, it shall be considered as an indirect evidence of the increasing of the total organic matter contents.

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Key words: macrozoobenthos, *Spirogyra*, littoral zone, Baikal