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**Crossing Boundaries: Integrative
Approaches to Malacology**

ABSTRACTS BOOK

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Recent changes in the freshwater malacofauna of Western Siberia

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The three main processes to cause faunistic changes are speciation, extinction, and migration. The first one is typically very durable and usually cannot be directly observed. However, one may detect species extinctions as well as biological invasions at the scale time of several decades. Most changes in the Western Siberian aquatic malacofauna registered by us since 1973 are result of establishment of non-indigenous species. In 2009, we reported findings of two *Unio* species in rivers of the western (Uralian) part of the Irtyshian basin. In 2010, *Unio* mussels have been found to occur far eastward – in vicinity of Tobolsk Town. Perhaps we observe a natural process of range expansion of this genus since no reliable records of *Unio* mussels in Western Siberia before 2000s are known. These mussels were thought to be utterly absent in the Western Siberian malacofauna, and may, probably, be designated as cryptogenis species. The aquarium trade is the main vector of non-indigenous mollusk species for Siberia. In the water reservoirs-coolers of electric power and metallurgical plants of this region several non-indigenous snails of tropical origin have been registered. These belong to the genera *Melanoides*, *Pomacea*, *Costatella*, *Ferrissia* and *Planorbella*. However it still is not clear if these species form stable and reproducing populations in the Western Siberian waterbodies. The only exception is the European prosobranchiate snail *Viviparus viviparus* that invaded the Novosibirsk water reservoir in the mid-1990s. In this locality, the species forms abundant populations with biomass reaching 6.3 kg/m². However, the way of its invasion is not known. *Viviparus* may have been introduced accidentally with fish from the European Russia although its aquarium origin is also probable. The only example of possible regional extinction in Western Siberia is disappearance of *Planorbis carinatus*. The last reliable findings of this snail date from the mid-1960s.

