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**Preliminary assessment of water and sediment pollutions in littoral zone of the Kotlin Island.**

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Anthropogenic impact on nature depends on many factors (mechanical, physical, chemical, etc.). They could not always be identified. It is even more difficult to foresee the result of an interaction of all these factors.

To assess the overall anthropogenic load on the ecosystem of the coastal zone of the island of Kotlin, we used crustacean *Gmelinoides fasciatus*. This species is originated out of Baikal Lake and now wide spread in the North-West region of Russia. It is important component of food webs of aquatic ecosystems.

Since the state of any living organism depends on the integrity of genetic apparatus of its cells, we conducted a preliminary analysis of samples collected in two sites of the Kotlin Island. “West” sampling site is an area with relatively clean territory (officially protected). In contrast, "East" site is located in the city of Kronstadt (close to the car wash, residential buildings, road with heavy traffic).

Ten gravid females of *Gm. fasciatus* per each site were collected. Slides of 6-10 embryos per female for cytogenetic analysis were prepared. We analyzed the frequency of chromosomal abnormalities in embryonic cells by ana-telophase method.

Preliminary data obtained show that the frequency of chromosomal aberrations and other mitotic disturbances four times higher in the “dirty” than in the “clean” site. To identify the exact reason(s) of cytogenetic disturbances in dividing cells of *Gm. fasciatus* embryos further detailed analysis of the main soluble and sedimentary pollutants seems necessary.

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