

**Proposed thesis topic for the Doctoral degree studies (2021-2025) in  
Ecology and Environmental Science at Marine Research Institute (Klaipėda University)**

<b>Title</b>	<b>Metazoan parasites of fish in coastal freshwater and brackish water ecosystems</b>
<b>Brief description of the topic</b>	Fish parasites are a natural component of healthy aquatic ecosystems. Multicellular parasites of fish, such as digenean trematodes, cestodes, nematodes and acanthocephalans, have complex life cycles with different stages that require different growth conditions. The abundance of fish parasites, species richness and prevalence can be influenced by the physical and chemical properties of water and bottom sediments, including pollutants, the presence and availability of forage benthic macrofauna species that serve as intermediate hosts, and, finally, physiological conditions of individual fish. Recent studies show that fish parasites can be used as biological indicators of environmental pollution in both freshwater and marine ecosystems, moreover, they appear to be more sensitive to environmental stressors than fish themselves. The study of fish parasites and their relation to the environmental conditions includes many research aspects, e.g. the role of forage macrofauna in transmitting of various life stages of parasites', patterns of parasitic infection of fish in the freshwater and estuarine environments, the role of environmental contaminants in dynamic of fish parasite diversity and prevalence. The proposed topic leaves sufficient freedom in choosing specific aspects and developing a research plan for a PhD project in fish parasitology, especially considering that there is not enough research in the field of fish parasitology in the coastal waters of Lithuania.
<b>Requirements for a candidate</b>	A candidate should have deep knowledge in the field of aquatic ecology, ichthyology and basic knowledge in parasitology. Also the good expertise in the laboratory analysis and in field work are necessary. Preference will be given to students who have the skills of fish life history traits and statistical analysis. Good knowledge of English is a prerequisite (knowledge of other languages is an advantage).
<b>Existing research experience</b>	A doctorate student will join the research team which has long-term experience in aquatic biological research. There is an opportunity for fellowship in leading centres in parasitology research in northern Europe. The future PhD student will be co-supervised by Dr. Yuriy Kvach, who has long time experience in the study of fish parasites, including experience of work in the Baltic Sea in Germany and Poland.
<b>Existing research infrastructure and support</b>	A wide spectrum of research methods may be applied depending on the specific task and the work plan, from field studies to laboratory analysis and environmental genetics. The Marine Research Institute has sufficient research infrastructure to fulfil all the tasks.
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