



CURRICULUM VITAE

Sergey Mastitsky, Ph.D.

Dr. Mastitsky received his undergraduate degree in Ecology from Belarusian State University and PhD degree in Aquatic Ecology from Zoological Institute of the National Academy of Sciences of Belarus. His primary research interests are two-fold: (i) patterns of spread of aquatic exotic species and their role in invaded ecosystems; (ii) statistical analysis of biological data, including the development of novel analytical pipelines for analysis of large multivariate datasets. His specific knowledge in the area of bioinformatics and statistical modeling contributed to numerous international research projects.

ACADEMIC BACKGROUND

- Doctor of Philosophy, Aquatic Ecology (Institute of Zoology, National Academy of Sciences of the Republic of Belarus) – 2004
- Master of Science, Ecology (Belarusian State University) – 2001

PROFESSIONAL EXPERIENCE

- Data Analyst, RNT Consulting Inc. – 2008 to present
- Post-doctoral Researcher, Division of Theoretical Bioinformatics, German Cancer Research Center, Heidelberg, Germany – 2010 to 2012
- Associate Editor of the open access journals *Aquatic Invasions* and *BioInvasions Records* – since 2009 and 2012, respectively, to present
- Research Scientist, Great Lakes Center, Buffalo State College, Buffalo, N.Y., U.S.A. – 2008 to 2009
- Associate Professor, Biology Faculty, Belarusian State University – 2007 to 2008
- Assistant Professor, Biology Faculty, Belarusian State University – 2004 to 2007
- Invited Lecturer of Statistics, Belarusian Republican Institute of Higher School – 2007
- Teaching Assistant in Biometry, Biology Faculty, Belarusian State University – 2001 to 2004
- Junior Researcher, Research Laboratory of Aquatic Ecology, Biology Faculty, Belarusian State University – 2001

SELECTED ACTIVITIES AND ACHIEVEMENTS

- Manuscripts reviewer for *Acta Zoologica Lituanica*, *Aquatic Invasions*, *Ecology*, *Journal of Molluscan Studies*, *Revista de Biologia Tropical*, and the book “*The Zebra Mussel in Europe*”.
- Completed an online course “Biostatistics in R: Clinical Trial Applications”, The Institute for Statistics Education “statistics.com”, December 2011.
- Completed an advanced training course “Writing Scientific English”, German Cancer Research Center, October 2010.

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- Visiting scientist at the Laboratory of Ecotoxicology, Biodiversity and Ecosystems, University of Metz, France, January 2010.
- Belarusian team member in the European Commission-funded research project entitled “Assessing Large-Scale Risks for Biodiversity with Tested Methods (ALARM)”, 2007 to 2009.
- Visiting scientist at the Field Research Laboratory, New York State Museum, U.S.A., January and August 2007.
- Completed an advanced training course entitled “The impact of climate change on drainage basins and aquatic ecosystems”, Norr Malma Field Station, Uppsala University, Sweden, July 2007.
- Visiting scientist at the Institute of Technology, Sligo, Ireland, April 2006 and April 2010.
- Completed an advanced training course for university teachers entitled “Educational technologies in teaching of the environmental and mathematical subjects”, Belarusian Republican Institute of Higher School, 2006.
- Named stipend for postgraduate students from the Ministry of Education of the Republic of Belarus, 2003 to 2004.
- Completed a summer-school course entitled “Sustainable development in the Baltic Sea region” organized by Karlstad University (Sweden), Starbienino, Poland, 2000.
- Third prize winner at the Belarusian Republican contest of the student research projects; Named stipend from the Special Fund of the President of the Republic of Belarus for social support of gifted schoolchildren and students, 2000.

GRANTS AND CONTRACTS RECEIVED (PRINCIPAL INVESTIGATOR)

- Preliminary risk assessment of the parasites of aquatic exotic invertebrates in the Great Lakes region, New York Great Lakes Protection Fund, 2009, \$9500.
- Post-doctoral fellowship from the Alexander von Humboldt Foundation (Germany), 2008.
- Travel Grant for participation in the 15th International Conference on Aquatic Invasive Species (Nijmegen, The Netherlands), Belarusian State University, 2007, \$800.
- Eco-parasitological consequences of *Dreissena polymorpha* (Pallas) invasion into Lake Naroch, Belarusian Republican Foundation for Basic Research, 2005 to 2007, \$5000.
- Structure of the endosymbiont communities hosted by the zebra mussel in waterbodies of different trophy, Faculty Mini-Grant, Belarusian State University, 2003, \$1200.
- Seasonal dynamics of echinostomatid infection in the bivalve mollusc *Dreissena polymorpha* (Pallas), Faculty Mini-Grant, Belarusian State University, 2002, \$500.

PUBLICATIONS

Books and Book Chapters

Mastitsky S. E. 2007. The bivalve mollusc *Dreissena polymorpha* (Pallas) in Belarus: history of introduction, spread, and ecological impacts. In: *Classical and modern concepts of Biology*. Belarusian National Institute of Education, Minsk, pp 10-15. (in Russian)

Mastitsky S. E. 2009. *Study guide on the use of STATISTICA software for analysis of biological data*. Institute of Fish Industry, Minsk, 76 p. (in Russian)

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Lucy F., Burlakova L. E., Karatayev A. Y., Mastitsky S. E., Zanatta D. T. Zebra mussel impacts on unionids: A synthesis of trends in North America and Europe. In: *Quagga and Zebra Mussels: Biology, Impacts, and Control*, 2nd edition, in print.

Journal Articles

Karatayev A. Y., Mastitsky S. E., Molloy D. P., Burlakova L. E. 2003. Patterns of emergence and survival of *Conchophthirus acuminatus* (Ciliophora: Conchophthiridae) from *Dreissena polymorpha* (Bivalvia: Dreissenidae). *Journal of Shellfish Research* 22(1): 495-500.

Karatayev A. Y., Mastitsky S. E., Burlakova L. E., Molloy D. P., Vezhnovets G. G. 2003. Seasonal dynamics of endosymbiotic ciliates and nematodes in *Dreissena polymorpha*. *Journal of Invertebrate Pathology* 83: 73-82.

Mastitsky S. E., Gagarin V. G. 2004. Nematodes, which infect the mollusc *Dreissena polymorpha* (Bivalvia: Dreissenidae) in Narochanskies Lakes. *Vestnik Belorusskogo Gosudarstvennogo Universiteta. Ser. 2. 3: 22-25.* (in Russian with English summary)

Mastitsky S. E., Samoilenko V. M. 2005. Larvae of chironomids (Insecta, Diptera) encountered in the mantle cavity of zebra mussel, *Dreissena polymorpha* (Bivalvia, Dreissenidae). *International Review of Hydrobiology* 90(1): 42-50.

Mastitsky S. E. 2005. Role of the mollusc *Dreissena polymorpha* Pallas (Bivalvia: Dreissenidae) in the spread of trematode infections among vertebrate animals. *Vestnik Tyumenskogo Gosudarstvennogo Universiteta* 5: 130-134. (in Russian with English summary)

Mastitsky S. E., Vezhnovets G. G. 2006. Taxonomic composition and qualitative development of endosymbionts of the mollusc *Dreissena polymorpha* (Pallas) (Bivalvia: Dreissenidae) in the Berezina River. *Vestnik Belorusskogo Gosudarstvennogo Universiteta. Ser. 2. 1: 31-35.* (in Russian with English summary)

Mastitsky S. E., Samoilenko V. M. 2005. The gravel snail, *Lithoglyphus naticoides* (Gastropoda: Hydrobiidae), a new Ponto-Caspian species in Lake Lukomskoe (Belarus). *Aquatic Invasions* 1(3): 150-159.

Mastitsky S. E., Makarevich O. A. 2006. Distribution and abundance of *Bithynia tentaculata* (Gastropoda, Bithyniidae) in Lake Naroch (Republic of Belarus). *Research Journal of Chemistry and Environment* 10(2): 76-80.

Gagarin V. G., Mastitsky S. E. 2006. Fauna of the free-living nematodes in Narochanskies Lakes, Belarus. *Biologia Vnutrennikh Vod* 4: 3-8. (in Russian with English summary)

Grichik V. V., Kamlyuk L. V., Kulikov Y. K., Eremova N. G., Makarevich T. A., Semenyuk G. A., Mastitsky S. E., Minets M. L., Baranovskiy K. V., Gaevskiy E. E., Nemchinov M. Y., Savich I. V., Sandakov S. B. and Sakhvon V. V. 2006. Biodiversity of aquatic and terrestrial ecosystems as an object of investigations in the Department of General Ecology. *Vestnik Belorusskogo Gosudarstvennogo Universiteta. Ser. 2. 3: 34-39.* (in Russian with English summary)

Mastitsky S. E., Makarevich O. A. 2007. Distribution and abundance of Ponto-Caspian amphipods in the Belarusian section of the Dnieper River. *Aquatic Invasions* 2(1): 39-44.

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- Mastitsky S. E. 2007. First report of parasites in *Lithoglyphus naticoides* (Gastropoda: Hydrobiidae) from Lake Lukomskoe (Belarus). *Aquatic Invasions* 2(2): 149-151.
- Karatayev A. Y., Burlakova L. E., Molloy D. P., Mastitsky S. E. 2007. *Dreissena polymorpha* and *Conchophthirus acuminatus*: what can we learn from host-commensal relationships. *Journal of Shellfish Research* 26(4): 1153-1160.
- Karatayev A. Y., Mastitsky S. E., Burlakova L. E., Olenin S. 2008. Past, current and future of the central European corridor for aquatic invasions in Belarus. *Biological Invasions* 10: 215-232.
- Mastitsky S. E., Lucy F., Gagarin V. G. 2008. First record of endosymbionts in *Dreissena polymorpha* from Sweden. *Aquatic Invasions* 3(1): 83-86.
- Makarevich T. A., Mastitsky S. E., Savich Y. V. 2008. Phytoperiphyton on the shells of *Dreissena polymorpha* (Pallas) in Lake Naroch. *Aquatic Invasions* 3(3): 283-295.
- Mastitsky S. E., Veres Y. K. 2008. Ecological risks associated with the spread of alien species of fishes across the waterbodies of Belarus. *Voprosy Rybnogo Khozyaystva Belarusi* 24: 308-310. (in Russian with English summary)
- Makarevich T. A., Mastitsky S. E. 2008. Abundance of the periphyton growing on shells of the mollusc *Dreissena polymorpha* (Pallas) in mesotrophic Lake Naroch. *Voprosy Rybnogo Khozyaystva Belarusi*, 24: 303-305. (in Russian with English summary)
- Karatayev A. Y., Burlakova L. E., Padilla D. K., Mastitsky S. E., Olenin S. 2009. Invaders are not a random selection of species. *Biological Invasions* 11(9): 2009-2019.
- Semenchenko V. P., Rizevsky V. K., Mastitsky S. E., Vezhnovets V. V., Pluta M. V., Razlutsky V. I., Laenko T. 2009. Checklist of aquatic alien species established in large river basins of Belarus. *Aquatic Invasions* 4(2): 337-347.
- Mastitsky S. E. 2009. On the role of alien mollusc *Dreissena polymorpha* (Bivalvia, Dreissenidae) in the spread of trematode infections among fishes in Belarus. *Voprosy Rybnogo Khozyaystva Belarusi* 25: 183-189. (in Russian with English summary)
- Padilla D. K., Karatayev A. Y., Burlakova L. E., Mastitsky S. E., Olenin S. 2009. Are aquatic invertebrate invaders a random selection of species? *Integrative and Comparative Biology* 49(supplement 1): e129.
- Mastitsky S. E., Veres Y. K. 2010. Field evidence for a parasite spillback caused by exotic mollusc *Dreissena polymorpha* in an invaded lake. *Parasitology Research* 106(3): 667-675.
- Mastitsky S. E., Karatayev A. Y., Burlakova L. E., Adamovich B. V. 2010. Exotic fishes of Belarus: diversity, distribution, and classification of risks using the Fish Invasiveness Screening Kit. *Aquatic Invasions* 5(1): 103-114.

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- Lucy F. E., Connolly M., Graczyk T. K., Tamang L., Sullivan M. R., Mastitsky S. E. 2010. Zebra mussels (*Dreissena polymorpha*) are effective sentinels of water quality irrespective of their size. *Aquatic Invasions* 5(1): 49-57.
- Mastitsky S. E., Karatayev A. Y., Burlakova L. E., Molloy D. P. 2010. Parasites of exotic species in invaded areas: does lower diversity mean lower epizootic impact? *Diversity and Distributions* 16(5): 798-803.
- Mastitsky S. E., Adamovich B. V. 2010. Assessing the potential invasiveness of alien fishes of Belarus. *Voprosy Rybnogo Khozyaystva Belarusi* 26: 250-258. (in Russian with English summary)
- Karatayev A. Y., Mastitsky S. E., Padilla D. K., Burlakova L. E., Hajduk M. M. 2010. Differences in growth and survivorship of zebra and quagga mussels: size matters. *Hydrobiologia* 668(1): 183-194.
- Cheng H.-W., Lucy F. E., Graczyk T. K., Broaders M. A., Mastitsky S. E. 2011. Municipal wastewater treatment plants as removal systems and environmental sources of human-virulent microsporidian spores. *Parasitology Research* 109(3): 595-603.
- Karatayev A. Y., Burlakova L. E., Padilla D. K., Mastitsky S. E., Edward L. Mills. 2011. Contrasting rates of spread of two congeners, *Dreissena polymorpha* and *Dreissena rostriformis bugensis*, at different spatial scales. *Journal of Shellfish Research* 30(3): 923-931.
- Minguez L., Boiché A., Sroda S., Mastitsky S., Brulé N., Bouquerel J., Giamberini L. 2012. Cross-effects of nickel contamination and parasitism on zebra mussel physiology. *Ecotoxicology* 21: 538-547.
- Cheng H.-W., Broaders M. A., Lucy F. E., Mastitsky S. E., Graczyk T. K. 2012. Determining potential indicators of *Cryptosporidium* oocysts throughout the wastewater treatment process. *Water Science & Technology* 65(5): 875-882.
- Ivandic B. T.*, Mastitsky S. E.*, Schönsiegel F.*, Bekeredjian R., Eils R., Frey N., Katus H. A., Brors B. 2012. Whole-genome analysis of gene expression associates the ubiquitin-proteasome system with the cardiomyopathy phenotype in disease-sensitized congenic mouse strains. *Cardiovascular Research*. Online first: DOI 10.1093/cvr/cvs080.
(* shared first authorship)