

Tomas Virbickas

CONTACT INFORMATION

Address Verkių Str. 98, Vilnius LT-08406, Lithuania

E-mail: tomas.virbickas@gamtc.lt

EDUCATION AND ACADEMIC DEGREE

1986 – 1992 Vilnius University, MSc Biology

1993 – 1998 PhD Biomedical sciences, Ecology and Environmental science (03B) (Vilnius University and Institute of Ecology)

PROFESSIONAL EXPERIENCE

1993 – 1998 **Research assistant**
Laboratory of Hydrobiont Ecology and Physiology, Institute of Ecology

1998 – 2003 **Researcher**
Laboratory of Hydrobiont Ecology and Physiology, Institute of Ecology

2003 – 2011 **Senior researcher**
Laboratory of Hydrobiont Ecology and Physiology, Institute of Ecology

2011 – 2018 **Senior researcher**
Laboratory of Hydrobiont Ecology and Physiology, Nature Research Centre

2019 – to date **Senior researcher**
Laboratory of Fish Ecology, Nature Research Centre

RESEARCH INTERESTS

Effects of natural and anthropogenic factors on the structure and functioning of freshwater fish populations and communities, ecological status of water bodies and integrated status assessment, measures to improve ecological status. Factors and patterns of change in fish stocks, measures for sustainable exploitation.

PUBLICATIONS (2015-2022)

Scientific articles published in journals (books), indexed in „Clarivate Analytics Web of Science“ database (with citation index):

1. Virbickas T, Stakėnas S, Steponėnas A (2015) Impact of Beaver Dams on Abundance and Distribution of Anadromous Salmonids in Two Lowland Streams in Lithuania. PLoS ONE 10(4): e0123107. <https://doi.org/10.1371/journal.pone.0123107>
2. Virbickas, T., Stakėnas, S. 2016. Composition of fish communities and fish-based method for assessment of ecological status of lakes in Lithuania. *Fisheries Research* 173: 70-79. <http://dx.doi.org/10.1016/j.fishres.2015.08.015>
3. Rakauskas, V., Stakėnas, S., Virbickas, T., Bukelskis, E. 2016. Non-indigenous fish in the northern branch of the central European invasion corridor. *Rev Fish Biol Fisheries* 26: 491–508. <https://doi.org/10.1007/s11160-016-9438-x>
4. Sandra Poikane, David Ritterbusch, Christine Argillier, Witold Białokoz, Petr Blabolil, Jan Breine, Nicolaas G. Jaarsma, Teet Krause, Jan Kubečka, Torben L. Lauridsen, Peeter Nõges,

- Graeme Peirson, Tomas Virbickas. 2017. Response of fish communities to multiple pressures: Development of a total anthropogenic pressure intensity index. *Science of the Total Environment* 586: 502–511. <http://dx.doi.org/10.1016/j.scitotenv.2017.01.211>
5. Stankevičiūtė M., Sauliūtė G., Makaras T., Markuckas A., Virbickas T., Baršienė J. 2018. Responses of biomarkers in Atlantic salmon (*Salmo salar*) following exposure to environmentally relevant concentrations of complex metal mixture (Zn, Cu, Ni, Cr, Pb, Cd). Part II. *Ecotoxicology* 27(8): 1069–1086. DOI: <https://doi.org/10.1007/s10646-018-1960-2>
 6. Rakauskas, V., Virbickas, T., Skrupskelis, K., Kesminas V. 2018. Delayed expansion of Ponto-Caspian gobies (Pisces, Gobiidae, Benthophilinae) in the Nemunas River drainage basin, the northern branch of the central European invasion corridor. *BioInvasions Records* 7 (2) 143–152. <https://doi.org/10.3391/bir.2018.7.2.05>
 7. J. Kriauciūnienė, T. Virbickas, D. Šarauskienė, D. Jakimavičius, J. Kažys, A. Bukantis, V. Kesminas, A. Povilaitis, J. Dainys, V. Akstinas, A. Jurgelėnaitė, D. Meilutytė-Lukauskienė, A. Tomkevičienė. 2019. Fish assemblages under climate change in Lithuanian rivers. *Science of the Total Environment* 661: 563-574. <https://doi.org/10.1016/j.scitotenv.2019.01.142>
 8. Dainys, J., Jakubavičiūtė, E., Gorfine, H., Pūtys, Ž., Virbickas, T., Jakimavičius, D., Šarauskienė, D., Meilutytė-Lukauskienė, D., Povilaitis, A., Bukantis, A., Kažys, J., Ložys, L. 2019. Predicted climate change effects on European perch (*Perca fluviatilis* L.) – A case study from the Curonian Lagoon, south-eastern Baltic. *Estuarine, Coastal and Shelf Science* 221: 83–89. <https://doi.org/10.1016/j.ecss.2019.03.020>
 9. Rakauskas, V., Virbickas, T., Stakėnas, S., Steponėnas, A. 2019. The use of native piscivorous fishes for the eradication of the invasive Chinese Sleeper, *Perccottus glenii*. *Knowledge & Management of Aquatic Ecosystems* 420 (21) online: <https://doi.org/10.1051/kmae/2019013>
 10. Virbickas, T., Vezza, P., Kriauciūnienė, J., Akstinas, V., Šarauskienė, D., Steponėnas, A. 2020. Impacts of low-head hydropower plants on cyprinid-dominated fish assemblages in Lithuanian rivers. *Scientific Reports* 10, 21687. <https://doi.org/10.1038/s41598-020-78701-8>
 11. Virbickas, T., Dementavičius, D., Rumbutis, S., Vaitkuvienė, D., Dagys, M., Treinys, R. 2021. Understanding recreational targets and ecological consequences: increased northern pike stocking reflected in top avian predator diet. *European Journal of Wildlife Research* 67, 5. <https://doi.org/10.1007/s10344-020-01445-3>
 12. Makaras, T., Stankevičiūtė, M., Šidagyte-Copilas, E., Virbickas, T., Razumienė, J. 2021. Acclimation effect on fish behavioural characteristics: determination of appropriate acclimation period for different species. *Journal of Fish Biology* 99(2):502-512. <https://doi.org/10.1111/jfb.14740>
 13. Rakauskas, V., Virbickas, T., Steponėnas, A. 2021. Several decades of two invasive fish species (*Perccottus glenii*, *Pseudorasbora parva*) of European concern in Lithuanian inland waters; from first appearance to current state. *Journal of Vertebrate Biology*, 70(4):21048.1-14. <https://doi.org/10.25225/jvb.21048>
 14. Skrodenytė-Arbačiauskienė, V., Virbickas, T., Lukša, J., Servienė, E., Blažytė-Čereškienė, L., Kesminas, V. 2021. Gut Microbiome of Wild Baltic Salmon (*Salmo salar* L.) Parr. *Microbial Ecology*, <https://doi.org/10.1007/s00248-021-01910-9>
 15. Akstinas, V.; Virbickas, T.; Kriauciūnienė, J.; Šarauskienė, D.; Jakimavičius, D.; Rakauskas, V.; Negro, G.; Vezza, P. The Combined Impact of Hydropower Plants and Climate Change on River Runoff and Fish Habitats in Lowland Watersheds. *Water* 2021, 13, 3508. <https://doi.org/10.3390/w13243508>
 16. Butrimienė R, Kalnaitytė A, Januškaitė E, Bagdonas S, Jurgelėnė Ž, Butkauskas D, Virbickas T, Montvydienė D, Kazlauskienė N, Skrodenytė-Arbačiauskienė V. 2022. Interactions of semiconductor Cd-based quantum dots and Cd²⁺ with gut bacteria isolated from wild *Salmo trutta* fry. *PeerJ* 10:e14025 <https://doi.org/10.7717/peerj.14025>

PARTICIPATION IN INTERNATIONAL AND NATIONAL SCIENTIFIC PROGRAMMES AND PROJECTS (2015-2022)

- 2014 – 2015 Fish research in the surface water bodies and assessment of ecological status based on fish metrics. Client – Environmental Protection Agency of Lithuania. Position – project manager, key expert.
- 2016 – 2018 Assessment of the Impact of Climate Change and Other Abiotic Environmental Factors on Aquatic Ecosystems (CLIMECO) (Project No. SIT-11/2015). Client – Research Council of Lithuania. Position – fish expert for inland waters.
- 2017 – 2018 Assessment of the status of fish stocks in inland waters, the development of fish management plans. Client – Ministry of Environment of Lithuania. Position – project manager, key expert.
- 2017 – 2019 Ecological flow estimation in Latvian-Lithuanian transboundary river basins (ECOFLOW) (Project No. LLI-249). Client – European regional development fund (Interreg Europe). Position – fish expert.
- 2019 – 2021 Assessment of the status of fish stocks in inland waters, the development of fish management plans. Client – Ministry of Environment of Lithuania. Position – project manager, key expert.
- 2020 – 2021 Impact assessment of hydrotechnical structures on river runoff and sustainable water management for conservation and restoration of water ecosystems. (ECODAM) (Project No. S-SIT-20-3). Client – Research Council of Lithuania. Position – project manager at the Nature Research Centre, biology expert.
- 2020 – 2022 Joint management of Latvian – Lithuanian transboundary river and lake water bodies (TRANSWAT) (Project No. LLI-533). Client – European regional development fund (Interreg Europe). Position – project manager at the Nature Research Centre, biology expert.
- 2022 – 2023 Services for ichthyofauna surveys to assess indicators of fish communities in rivers that characterise the ecological status of surface water bodies. Client – Environmental Protection Agency of Lithuania. Position – project manager, key expert.

PARTICIPATION IN SCIENTIFIC CONFERENCES (2015-2022)

1. J. Kriauciuniene, V. Akstinas, D. Jakimavicius and T. Virbickas. 2018. Ecological flow estimation in Latvian - Lithuanian transboundary river basin. In: Proceedings of the 5 th IAHR Europe Congress — New Challenges in Hydraulic Research and Engineering Editor(s) Aronne Armanini and Elena Nucci. 175-176 p. (ISBN: 978-981-11-2731-1) <http://rpsonline.com.sg/rps2prod/iahr2018/pdf/166.pdf>
2. Virbickas T. Klimato kaitos poveikis žuvų bendrijoms natūraliose ir pakeisto hidrologinio režimo upėse. *Klimato kaita ir vandens telkiniai: iššūkiai ir galimi sprendimo būdai*. 2019-12-05. Lietuvos mokslų akademija, Vilnius. <http://www.lma.lt/2019-12-05-klimato-kaita-ir-vandens-telkiniai-issukiai-ir-galimi-sprendimo-budai>
3. Šapolaitė, J., Ežerinskis, Ž., Barisevičiūtė, R., Rakauskas, V., Butkus, L., Garbaras, A., Virbickas, T., Maceika, E., Pabedinskas, A., and V. Remeikis. 2020. Investigation of carbon isotope ratio variations caused by natural and anthropogenic processes in lacustrine ecosystems. EGU General Assembly, <https://doi.org/10.5194/egusphere-egu2020-8265>

PARTICIPATION IN THE STUDY PROCESS (2015-2022)

Supervision of PhD students:

Gintarė Sauliūtė. *Accumulation of heavy metals in fish, exposed to the multi-metal mixtures*. Biomedical sciences, Ecology and Environmental Science (03B). 2017.

