

Lukas Petrulaitis

CONTACT INFORMATION

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EDUCATION AND ACADEMIC DEGREE

2019 – 2023 Vilnius University, Nature Research Centre, PhD in Ecology and environmental sciences.
PhD thesis topic: “Comparative Assessment of the Biological and Ecological Traits Determining the Invasiveness of Alien *Cornus* Taxa in Lithuania”.
Research was carried out at the Institute of Botany, Laboratory of Flora and Geobotany.

2015 – 2017 Vilnius University, Botany / Master studies (Magna Cum Laude)
Master thesis topic: “Diversity, distribution and population structure of the genus *Symphyotrichum* in Lithuania”.
Research was carried out at the Institute of Botany, Laboratory of Flora and Geobotany.
Research area: population structure, phytocenology, traits that lead to naturalization

2015 – 2017 Šiauliai University, Ecology and environmental sciences / Bachelor studies.
Thesis topic: “Diversity, ecology and distribution of the genus *Symphyotrichum* in Lithuania”.
Research was carried out at the Institute of Botany, Laboratory of Flora and Geobotany.
Research area: alien species, taxonomy; identification of critical taxa, morphometry.

PROFESSIONAL EXPERIENCE

2024 10 - present **Researcher**
Laboratory of Flora and Geobotany

2023 02 – 2024 10 **Junior Researcher**
Laboratory of Flora and Geobotany, Institute of Botany

2019 01 – 2022 12 **PhD student**
Laboratory of Flora and Geobotany, Institute of Botany

2016 05 – 2023 02 **Biologist**
Laboratory of Flora and Geobotany, Institute of Botany

RESEARCH INTERESTS

Population and distribution studies of native and alien species, experimental development work in the areas of invasive plant control and conservation of protected plant species. The object of research is alien and rare plant species, both in terrestrial and aquatic ecosystems. Also, taxonomically complex genera in Lithuania and neighbouring countries, characteristics of alien and

local woody plants, that determine their establishment in the southern part of the European hemiboreal. Aquatic plants as bioindicators or river ecological status.

PUBLICATIONS

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

1. Gudžinskas Z., **Petrulaitis L.**, Žalneravičius E. 2019. *Asclepias speciosa* (Apocynaceae, Asclepiadoideae): a rare or unrecognized alien species in Europe? – *PhytoKeys* 121: 29–41.
2. Gudžinskas Z., **Petrulaitis L.**, Žalneravičius E. 2020. Emerging invasion threat of the liana *Celastrus orbiculatus* (Celastraceae) in Europe. – *NeoBiota* 56: 1–26.
3. **Petrulaitis L.**, Gudžinskas, Z. 2020. The first records of two alien woody species, *Cornus alternifolia* and *Cornus amomum*, in Lithuania. – *BioInvasions Records*, 9 (2): 384–392.
4. Gudžinskas Z., **Petrulaitis L.**, Taura L. 2021. *Asclepias syriaca* (Apocynaceae) and its invasiveness in the southern part of the Boreal region of Europe – evidence from Lithuania. – *BioInvasions Records* (10) 2: 436–452.
5. **Petrulaitis L.**, Rašomavičius V., Uogintas D., Gudžinskas Z. 2022. Soil Seed Bank of Alien and Native *Cornus* (Cornaceae) Taxa in Lithuania: What Determines Seed Density and Vertical Distribution in Soil? – *Diversity* 14 (6): 488.
6. **Petrulaitis L.**, Gudžinskas Z., 2023. Drivers and Effects of Cryptic Invasion of *Cornus sanguinea* subsp. *australis* in Lithuania. – *Diversity* 15(1):107.
7. Sinkevičienė Z., Kamaitytė-Bukelskienė L., **Petrulaitis L.**, Gudžinskas Z., 2023. Current Distribution and Conservation Issues of Aquatic Plant Species Protected under Habitats Directive in Lithuania. – *Diversity* 15(2), 185.
8. Vilizzi L., Piria M., Pietraszewski D., Giannetto D., Flory S.L., Herczeg G., Baş Sermenli H., Britvec M., Jukoniene I., **Petrulaitis L.**, Vitasović-Kosić I., Almeida D., Al-Wazzan Z., Bakiu R., Boggero A., Chaichana R., Dashinov D., De Zoysa M., Gilles A.S. Jr, Gouletquer P., Interesova E., Kopecký O., Koutsikos N., Koyama A., Kristan P., Li S., Lukas J., Moghaddas S.D., Monteiro J.G., Mumladze L., Oh C., Olsson K.H., Pavia R.T. Jr, Perdikaris C., Pickholtz R., Preda C., Ristovska M., Slovák Švolíková K., Števo B., Ta K.A.T., Uzunova E., Vardakas L., Verreycken H., Wei H., Yoğurtçuoğlu B., Ferincz Á., Kirkendall L., Marszał L., Paganelli D., Stojchevska C., Tarkan A.S., Yazlık A. Development and application of a second-generation multilingual tool for invasion risk screening of non-native terrestrial plants. *Science of the Total Environment*. (917): 170475.
9. Walusiak E., Cieślak E., Wilk-Woźniak E., Szczepaniak M., Herrmann A., **Petrulaitis L.**, Rašomavičius V., Uogintas D., Krztoń W., 2024. A wide range of abiotic habitat factors and genetic diversity facilitate expansion of *Trapa natans* within its native range. *Journal of Environmental Management*. 370: 122468

Scientific articles published in journals (books), indexed in „Clarivate Analytics Web of Science“ database (without citation index):

1. Gudžinskas, Z., **Petrulaitis, L.**, Arlikevičiūtė, L., 2014. *Vaccinium macrocarpon* – a new alien plant species in Lithuania. *Botanica Lithuanica*. 20 (1): 41–45.
2. Gudžinskas, Z., **Petrulaitis, L.**, 2014. *Helianthus grosseserratus* a new alien plant species in Lithuania. *Botanica Lithuanica*. 20 (2): 173–176.
3. Gudžinskas, Z., **Petrulaitis L.**, 2016. New alien plant species recorded in the southern regions of Latvia. *Botanica Lithuanica*. 22(2): 153–160.
4. Gudžinskas Z., **Petrulaitis L.**, Žalneravičius E. 2017. New woody alien plant species recorded in Lithuania. – *Botanica Lithuanica*, 23 (2): 153–168.

5. Gudžinskas Z., Žalneravičius E., **Petrulaitis L.** 2018. Assessment of the potential of introduction, establishment and further spread of invasive alien plant species of European Union concern in Lithuania. – *Botanica*, 24 (1): 37–48.
6. **Petrulaitis L.**, Gudžinskas Z. 2018. What are we conserving? A case study of *Mentha longifolia* and allied species in Lithuania. – *Botanica*, 24 (1): 3–14.
7. Gudžinskas Z., **Petrulaitis L.** 2021. New alien taxa of the genus *Cornus* (Cornaceae) recorded in Lithuania and Latvia. – *Botanica*, 28 (1): 100–108.
8. **Petrulaitis L.** 2022. *Lotus maritimus* L. (Fabaceae), alien species new to Lithuania. – *Botanica*, 28 (1): 39–45.
9. **Petrulaitis L.**, 2023. *Veronica peregrina* (Plantaginaceae), an alien species rediscovered in Lithuania. – *Botanica*, 29(2): 91–95.

PARTICIPATION IN INTERNATIONAL AND NATIONAL SCIENTIFIC PROGRAMMES AND PROJECTS

2024–2027	Project implementer Modernizing and Optimizing Biomonitoring of Lithuania Rivers – LMT grant no. P-MIP-24-601
2023–2025	Project implementer Coexistence of native and alien plant and tick species along roadsides – LMT grant no. S-MIP-23-1
2022–2023	Junior researcher Investigations of the Status of Invasive and Alien Species in Lithuania.
2020–2022	Biologist Investigations of the Status of Invasive and Alien Species in Lithuania.
2018–2020	Babitats specialist Conservation of biodiversity in open wetland habitats of the LV-LT cross-border region applying urgent and long-term management measures.
2017–2018	Assessor 2017–2018 Analysis of unintentional introduction and spread of the invasive alien species of the EU Concern in Lithuania and identification of the priority introduction pathways, implementing the Regulation of the European Parliament and of the Council (1143/2014) on the Prevention and management of the introduction and spread of invasive alien species.
2016–2018	Co-author Preparation of the publication “Lithuanian Red Book”.
2016–2018	Assessor Evaluation of protected animals, plants and mushrooms in Lithuania according to IUCN categories and preparation of species descriptions.

INTERNSHIP AND TRAINING

2024 10	EMBO "Project Management" Vilnius University, Vilnius, Lithuania.
2024 09	AI Bootcamp for Researchers: From Data to Article Or Grant Proposal in 48 Hours – Lithuanian Research Council, Vilnius, Lithuania.
2024 04	DNA barcoding: from sequences to species – Norwegian University of Science and Technology, Trondheim, Norway.
2022 07	„Forest genetic monitoring“, Lithuanian Research Centre for Agriculture and Forestry (LAMMC), Kaunas, Lithuania.
2022 03	„Integrative Taxonomy in the big Data Era“, Muséum national d'Histoire naturelle (MNHN), Paris, France.

PARTICIPATION IN SCIENTIFIC CONFERENCES

International scientific conferences:

1. **Petrulaitis L.**, Gudžinskas Z. 2021. The structure and density of *Cornus* seeds in the soil seed bank in Lithuania. – „*The 63rd International Scientific Conference of Daugavpils University*“, April 15–16, Daugavpils, Latvia.
2. Kamaitytė-Bukelskienė L., **Petrulaitis L.**, Sinkevičienė Z. 2022. Recent distribution of *Najas minor* and *Najas flexilis* in Lithuania. – „*The 64th International Scientific Conference of Daugavpils University*“, April 21–22, Daugavpils, Latvia. Book of Abstracts: 11.
3. **Petrulaitis L.**, Gudžinskas Z. 2022. Ecology and invasiveness of the genus *Cornus* in Lithuania. – „*12th International Conference on Biological Invasions NEOBIOTA: Biological Invasions in a Changing World*“, September 12–16, Tartu, Estonia. Book of Abstracts: 118.
4. **Petrulaitis L.**, Gudžinskas Z. 2022. Silent invasion of *Cornus sanguinea* subsp. *australis* in Lithuania. – „*2nd International Conference on Botany and Mycology*“, September 19–20, Sofia, Bulgaria. Book of Abstracts: 37
5. Uogintas D., **Petrulaitis L.**, Kitrytė N., Šimanskaitė V., 2023. Coexistence of native and alien plant and tick species along roadsides: introduction to a project. *31st European Vegetation Survey*. 2023 May 21-25, Rome, Italy.
6. Zavatta L., Ranalli R., **Petrulaitis L.**, Barberis M., Zenga E.L., Flaminio S., Lutovinovas E., Lazauskaitė M., Bortolotti L., Galloni M., 2024. Ecological dynamics of the invasive species *Erigeron annuus*: impact on pollinator communities and resource availability. *7th European Congress of Conservation Biology “Biodiversity positive by 2030”* 17-21 June 2024 – Bologna, Italy.
7. **Petrulaitis L.**, Gudžinskas Z. 2024. Less productive, but successful. A case of *Cornus sericea* invasion in Lithuania. *International Conference Research and Practice in Forest Ecology*. Kórnik, Poland, May 8-10.
8. **Petrulaitis L.**, Šimanskaitė V., Kitrytė N., Uogintas D., 2024. Functional diversity in roadside plant communities: a case study on the impact of alien species in Lithuania. „*13th International Conference on Biological Invasions NEOBIOTA*. Book of Abstracts Anastácio, P., Brandão, P., Chainho, P., Trindade, H. & Ribeiro, F. (Eds.). September 3–6, Lisboa, Portugal.
9. Uogintas D., **Petrulaitis L.**, Kitrytė N., Šimanskaitė V., 2024. KELVEG - The Database of Roadside Vegetation in Lithuania. *International Association for Vegetation Science (IAVS) 2024 Abstract Book*. Funchal, Madeira, Portugal.
10. Ranalli R., Zavatta L., **Petrulaitis L.**, Barberis M., Flaminio S., Lutovinovas E., Lazauskaitė M., Zenga E.L., D’Agostino M., Bortolotti L., Galloni M., 2024. Impatto della specie aliena invasiva *Erigeron annuus* (L.) Desf. (Asteraceae) sulle dinamiche di impollinazione negli ecosistemi europei. Gruppo Di Lavoro Per Le Specie Alloctone Riunione Scientifica e Amministrativa 2024, Orto Botanico di Roma, Roma, Italia.

National scientific conferences:

1. **Petrulaitis L.**, Gudžinskas Z., 2021. Biological traits of the genus *Cornus* that determine their naturalization in Lithuania. – *14th Conference of young researchers of Lithuania „Biofuture: perspectives of nature and life sciences*, November 24, Kaunas, Lithuania: 15.

Supervision of bachelor and master students:

Aušrinė Kviklytė	Bachelor thesis: Population and habitat diversity of the broad-leaved helleborine (<i>Epipactis helleborine</i> L.) in anthropogenic habitats in Lithuania (Vilnius University)	2022-2024
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Books

Gudžinskas Z., **Petrulaitis L.**, Uogintas D., Vaitonis G., Balčiauskas L., Rakauskas V., Arbačiauskas K., Butkus R., Karalius S., Janulaitienė L., Rašomavičius. Invasive and alien species in Lithuania – Vilnius: Nature Research Centre, 2023. – 312 p. iliustr. – ISBN 978-609-8255-32-4

Other professional activity:

From 2024	Nature Research Centre Council on Invasive species – Coordinator
From 2024	Nature Research Centre Early Career Researchers Committee – Member
From 2024	Nature Research Centre Collections Department – Member
From 2024	International Aquatic Plants Group – Member
From 2023	International Research Group on Charophytes – Member
From 2022	Council on Invasive Species to the Ministry of Environment – Member
From 2019	International Association for Open Knowledge on Invasive Alien Species (INVASIVESNET) – Member
From 2017	Eurasian Dry Grassland Group (EDGG) – Member