

CURRICULUM VITAE
MARCIN PENK
B.Sc., Dip. Stat., M.Sc., Ph.D.

EDUCATION

- 2010-2014: Trinity College Dublin, School of Natural Sciences
Ph.D. in Aquatic Ecology
Thesis: "Facing multiple challenges at range margins: influence of climate change, nutrient enrichment and an introduced competitor on the glacial relict, *Mysis salemaa*".
- 2010-2011 Trinity College Dublin, School of Computer Science and Statistics
Postgraduate Diploma in Statistics
- 2004-2006 Trinity College Dublin, School of Natural Sciences
MSc (Environmental Sciences), Trinity College Dublin, Ireland
Thesis: "Investigations into the food sources of the cockle, *Cerastoderma edule* in Dublin Bay: multiple stable isotopes approach"
- 2000-2004 West Pomeranian University of Technology, Szczecin, Poland
BSc in Agricultural Economics
Thesis: "Marine biodiversity and fisheries"

CAREER HISTORY

Consultant ecologist, BEC Consultants Ltd 02/2018-present
Assessing saltmarsh vegetation in support of Irish compliance with EU Habitats Directive for NPWS.

Postdoctoral Fellow, Trinity College Dublin, Botany Department 03/2016-02/2018
Investigating impacts of anthropogenic pressures on saltmarsh vegetation within the EPA-funded SAMFHIRE project (Saltmarsh Function and Human Impacts in Relation to Ecological Status). In summer 2016, I recorded 260 vegetation quadrats representing the full range of saltmarsh communities and distributed among 16 saltmarshes on the east and south coast of Ireland. At each plot, I recorded plant species coverage, collected and analysed samples of plant biomass and soil nutrients. This survey will fill an important information gap and support policy implementation to better protect saltmarshes and maximise their benefits to society, both in Ireland and internationally.

Postdoctoral Fellow, Trinity College Dublin, School of Natural Sciences 10/2014-09/2015
IRC Fellowship aimed at maximising publication output of my PhD with additional field-based research on life history and ecology of the freshwater mysid shrimp *Mysis salemaai* and experimental work on the interactive effects of warming and invasive species on lake functioning; field survey and macroinvertebrate identification assistance for an EPA-funded postdoctoral project aiming to develop monitoring methodology for tidally influenced rivers pursuant to the Water Framework Directive (2000/60/EC).

Visiting Scientist, Leibniz-Institute of Freshwater Ecology and Inland Fisheries (IGB), Berlin, Germany 11/2014-12/2014
German Academic Exchange Service (DAAD) award for experimental work on the metabolic mechanisms underlying the effect of warming on comparative advantage of an invasive shrimp *Hemimysis anomala* in lakes.

Research Assistant, Trinity College Dublin, School of Natural Sciences 12/2013-09/2014
I've been involved in teaching and research within the School of Natural Sciences, including:

- Completion of an integration chapter on ecological functioning of turloughs (temporary lakes) based on completed work packages and consultations with primary investigators within the NPWS-

funded 'Assessing the conservation status of turloughs' project (project website: http://www.tcd.ie/Botany/research/turlough_conservation/index.php).

- Identification of freshwater macroinvertebrate fauna samples from a mesocosm experiment within the EU-INTERREG-funded 'Development of targeted ecological modelling tools for lake management (DOLMANT)' project (project website: <http://www.afbini.gov.uk/index/research/hp-work-area-environment-land/dolmant.htm>)
- Marine Biology Field Course Instructor: teaching and supervision of undergraduate (3rd year) students in field and lab, logistic support.

Associate Ecologist, BEC Consultants Ltd

04/2012-02/2018

Habitat and macroinvertebrate surveys in rivers, river macroinvertebrate identification, Appropriate Assessments.

Ecologist, EcoServe Ltd

01/2010-03/2012 (part time)

05/2007-12/2009 (full time)

I participated in 62 projects, leading 38 of them, either individually or in a team, gaining broad experience at all project stages, from tendering and project planning through data collection and processing to report-writing and dissemination of results and recommendations. My work typically focused on assessment and mitigation of impacts of infrastructural (bridges, rail tracks, roads, ports, marinas, petroleum pipelines and tank farm) and residential developments, water supplies, waste water treatment and waste incineration schemes, quarries, wind farms, aquaculture and waste disposal sites on ecological integrity and protected features of rivers, lakes, estuaries and coasts. I also carried out surveys pursuant to legislative requirements, including the Water Framework Directive (2000/60/EC).

Research Technician, Trinity College Dublin, School of Natural Sciences

09/2006-04/2007

Extracting lake invertebrates from littoral and profundal benthic samples for an EU-INTERREG-funded NS Share project aiming at developing invertebrate metrics of eutrophication in lakes.

ADDITIONAL INFORMATION

Engagement with scientific community

- Member of the British Ecological Society and the Irish Ecological Association
- Reviewer for scientific journals: *Global Change Biology*, *Freshwater Biology*, *Hydrobiologia*, *Aquatic Invasions*, *Canadian Journal of Fisheries and Aquatic Sciences*, *Biology and Environment: Proceedings of the Royal Irish Academy*

Other

- Driving licence (cat. B, full clean)

PUBLICATIONS

Peer-reviewed journal articles

Penk M, Saul W-C, Dick JTA, Donohue I, Alexander ME, Linzmaier S & Jeschke JM (2017) A trophic interaction framework for identifying the invasive capacity of novel organisms. *Methods in Ecology and Evolution*. DOI: 10.1111/2041-210X.12817.

Minchin D, **Penk M** & Igoe F (2017) Evidence of the winter occurrence of the whitefish *Coregonus pollan* Thompson, 1835 in the Shannon River, Ireland. *Biology and Environment: Proceedings of the Royal Irish Academy*, **117B**: 47–52.

Dick JTA, Lavery C, Lennon JJ, Barrios-O'Neill D, Mensink PJ, Britton JR, Medoc V, Boets P, Alexander ME, Taylor NG, Dunn AM, Hatcher MJ, Rosewarne PJ, Crookes S, MacIsaac HJ, Xu M, Ricciardi A, Wasserman RJ, Ellender BR, Weyl OLF, Lucy FE, Banks PB, Dodd JA, MacNeil C, **Penk MR**, Aldridge DC & Caffrey JM (2017) Invader relative impact potential: a new metric to understand and predict the ecological impacts of existing, emerging and future invasive alien species. *Journal of Applied Ecology*, **54**: 1259–1267.

Penk MR, Donohue I, Minchin D & Irvine K (2016) Life history timing, but not body size, of *Mysis salemaai* (Crustacea: Mysida) conserved across a trophic gradient at its southern distribution. *Hydrobiologia* **775**: 83–95.

Penk M, Jeschke JM, Minchin D & Donohue I (2016) Warming can enhance invasion success through asymmetries in energetic performance. *Journal of Animal Ecology*, **85**: 419–426.

Penk M, Irvine K & Donohue I (2015) Ecosystem-level effects of a globally spreading invertebrate invader are not moderated by a functionally similar native. *Journal of Animal Ecology* **84**: 1628–1636.

Penk MR, Donohue I, Récoules V & Irvine K (2015) Elevated temperatures interact with habitat quality to undermine survival of ectotherms in climatic refugia. *Diversity and Distributions* **21**: 200–210.

Penk MR & Minchin D (2014) Seasonal migration of a glacial relict mysid (Crustacea) into the littoral zone and its co-occurrence with an introduced competitor in Lough Derg (Ireland). *Hydrobiologia* **726**: 1–11.

Dick JTA, Gallagher K, Avlijas S, Clarke HC, Lewis SE, Leung S, Minchin D, Caffrey J, Alexander ME, Maguire C, Harrod C, Reid N, Haddaway NR, Farnsworth KD, **Penk M** & Ricciardi A (2013) Ecological impacts of an invasive predator explained and predicted by comparative functional responses. *Biological Invasions* **15**: 837–846.

Penk MR (2011) A review of the current distribution of the freshwater opossum shrimp *Mysis salemaai* Audzijonyte and Väinölä, 2005 in Ireland. *Biology and Environment: Proceedings of the Royal Irish Academy* **111**: 107–115.

Knight L & **Penk MR** (2010) Groundwater Crustacea of Ireland: a survey of the stygobitic Malacostraca in caves and springs. *Biology and Environment: Proceedings of the Royal Irish Academy* **110**: 211–235.

Brophy JT & **Penk MR** (2008) A new record for *Mysis relicta* Loven, 1862 from Lough Allen, Co. Leitrim. *Irish Naturalist's Journal* **29**: 122–124.

Reports

Penk MR, Waldren S, Allott N, Coxon C, Gill L, Irvine K, Johnston P & Kimberley S (2015) Integration of work packages: turlough ecological functioning. In: *Turloughs: hydrology, ecology and conservation* (ed. Waldren S), pp. 619–648. National Parks and Wildlife Service, Dublin.

Penk MR (2009) Survey of the freshwater opossum shrimp *Mysis relicta* in Ireland. Heritage Council's Wildlife Grant 17419. Report for the Heritage Council.

Penk MR, Brophy JT & Nash R (2009) The implications of climate change for the natural heritage of Ireland's coast and inland waterways. In: *Climate change, heritage and tourism: implications for Ireland's coast and inland waterways* (eds Kelly B & Stack M) pp: 55–81. The Heritage Council, Kilkenny, Ireland.

Penk MR & Knight LRFD (2008) Groundwater Crustacea of Ireland: a survey of the stygobitic Malacostraca in caves and springs. Heritage Council's Wildlife Grant 16426. Report for the Heritage Council.

Penk MR, Maciejewska B & Atalah J (2009) Invasive flora of the major waterways of the Dublin City Council area: species inventory. Report for Dublin City Council.

Press articles

Penk MR (2012) Glacial relict fauna: ecology and future prospects. Trinity Centre for Biodiversity Research Newsletter 7: 6–7.

Penk MR & Nash R (2009) Dublin City Council leads the way in recording invasive species. Local Authority News 30(4): 30.

Internet articles

Penk MR (2009). Threats to marine biodiversity: non-native species invasions. Marine Biodiversity Wiki. Marine Biodiversity and Ecosystem Functioning EU FP6 Network of Excellence. URL http://www.marbef.org/wiki/Non-native_species_invasions.

Penk MR (2009). Marine ecosystems: estuaries. Marine Biodiversity Wiki. Marine Biodiversity and Ecosystem Functioning, EU FP6 Network of Excellence. URL <http://www.marbef.org/wiki/Estuaries>.

Posters

Perrin P, **Penk M**, Waldren S, Devaney F, O'Neill F, Virkki E, Martin J & Barron S (2017) Ireland's Water Future. *Environmental Protection Agency National Water Event 2017*. Galway, Ireland.

Penk M, Perrin P, O'Neill F & Waldren S (2016) Detecting impacts of eutrophication on saltmarsh vegetation. *1st Ecology & Evolution Ireland Conference*, Sligo, Ireland.

Penk M & Maciejewska B (2009) Macroinvertebrate bioindicators of freshwater quality in Ireland. *6th Baltic Science Festival*. Sopot, Poland.

Laurand S, **Penk M**, Wilson JG & Riera P (2006) The impact of changing anthropogenic pressures on the Dublin Bay ecosystem: a trophic approach using C and N stable isotopes. *41st European Marine Biology Symposium*. Cork, Ireland.

Oral presentations

2017: British Ecological Society Joint Annual Meeting: Ecology Across Borders, Ghent, Belgium

2016: Ecology & Evolution Ireland Conference, Sligo, Ireland

2016: Annual Meeting of Irish Freshwater Biologists, Dublin, Ireland

2015: Symposium for European Freshwater Sciences, Geneva, Switzerland

2015: Association for the Sciences of Limnology and Oceanography: Aquatic Sciences Meeting, Granada, Spain

2015: Annual Meeting of Irish Freshwater Biologists, Galway, Ireland

2012: Annual Botany-Zoology Postgraduate Symposium, Trinity College Dublin, Ireland

2011: Annual Botany-Zoology Postgraduate Symposium, Trinity College Dublin, Ireland

2010: Annual Zoology Postgraduate Symposium, Trinity College Dublin, Ireland

2010: Irish Environmental Researchers' Colloquium, Limerick, Ireland