

# Virtual International Symposium on Baltic Pike

November 23<sup>rd</sup>, 25<sup>th</sup> and 26<sup>th</sup> 2021  
9 am – 1 pm CET · online

Organizers:

**Robert Arlinghaus**, Integrative Fisheries Management, Leibniz Institute of Freshwater Ecology and Inland Fisheries · **Ulf Bergström**, Department of Aquatic Resources, Swedish University of Agricultural Sciences · **Petter Tibblin**, Department of Biology and Environmental Science, Linnaeus University

This virtual symposium aims to gather scientists, stakeholders, and the public with interest in the biology, ecology, evolution, exploitation and management of Northern pike (*Esox lucius*) in Baltic Sea. Pike is a freshwater piscivore that has colonized coastal areas in the Baltic Sea, developing a wide variation in life histories, such as anadromous and coastal resident lifestyles. The species is a highly regarded target for both commercial and recreational fisheries. Pike populations have seen declines in many areas of the Baltic Sea. Various explanations have been put forward, including environmental change, overharvest or predation by mesopredators, such as stickleback, or from top predators, such as seals. However, lack of standardized monitoring limits our ability to precisely track the developments of pike populations in the Baltic. This symposium aims to present the latest research on Baltic Sea pike with a primary aim to examine communalities and differences in pressures on pike in different coastlines along the salinity gradients along the Baltic Sea. Another goal is to build an informal network among researchers interested in further developing the knowledge base for sustainable management of this iconic fish.

The symposia will be held online and allow for a maximum of 500 participants. Registration deadline: 17:00 (CET), November 19. Please state affiliation, email and if invited as speaker. Link to online meeting will be emailed on Nov 22.

<https://lnu.se/en/meet-linnaeus-university/conferences/virtual-international-symposium-on-baltic-pike/>



## Tuesday, November 23<sup>rd</sup> 2021

08:45 – 09:00 Registration / Zoom link is open  
09:00 – 09:15 Introduction and Welcome

### REVIEWS

09:15 – 09:35 ***A review of the lagoon pike fishery in the southern Baltic Sea, Germany***  
Robert Arlinghaus | Leibniz Institute of Freshwater Ecology and Inland Fisheries (IGB), Germany

09:35 – 09:55 ***Brackish pike in Denmark: Status and ongoing experiments***  
Christian Skov | National Institute of Aquatic Resources, Technical University of Denmark (DTU Aqua), Denmark

09:55 – 10:15 ***Temporal and spatial trends in coastal pike populations – a pan-Baltic assessment of available monitoring data***  
Jens Olsson | Swedish University of Agricultural Sciences, Sweden

10:15 – 10:35 ***Long-term changes in the abundance of large pike in the northern Baltic Sea – patterns and potential drivers***  
Ulf Bergström | Swedish University of Agricultural Sciences, Sweden

10:35 – 10:50 BREAK (15 min.)

### ECOLOGY

10:50 – 11:10 ***Variation in habitat utilisation of Baltic pike: is it associated to growth rate, reproductive investment, and morphology?***  
Henrik Flink | Linnaeus University, Sweden

11:10 – 11:30 ***Importance of reed abundance and configuration on coastal pike population***  
Örjan Östman | Swedish University of Agricultural Sciences, Sweden

11:30 – 11:50 ***Battling the stickleback wave: does pike and perch habitat connectivity provide resistance against an ongoing shift towards stickleback dominance?***  
Agnes Olin | Stockholm University, Sweden

11:50 – 12:00 BREAK (10 min.)

12:00 – 12:20 ***Do olfactory cues inform sticklebacks on whether pike is predator or prey?***  
Jasper Münnich | Linnaeus University, Sweden

12:20 – 12:50 ***Development of pike populations along the Swedish coast, and potential effects of grey seal predation***  
Ulf Bergström | Swedish University of Agricultural Sciences, Sweden

12:50 – 13:00 Concluding remarks



## Thursday, November 25<sup>th</sup> 2021

- 08:45 – 09:00 Registration / Zoom link is open  
09:00 – 09:05 Welcome back

### MONITORING AND TRENDS

- 09:05 – 09:20 ***Using catch-only models to assess the status of the data-poor Baltic pike stock around the German island of Rügen***  
Rob van Gemert | Swedish University of Agricultural Sciences, Sweden
- 09:20 – 09:40 ***A length-based stock assessment of the pike stock in the southern Baltic Sea of Germany - Status and possible drivers***  
Jan Droll | Leibniz Institute of Freshwater Ecology and Inland Fisheries (IGB), Germany
- 09:40 – 10:00 ***The applicability of eDNA for monitoring pike abundance***  
Erik Karlsson | Swedish University of Agricultural Sciences, Sweden
- 10:00 – 10:05 BREAK (5 min.)
- 10:05 – 10:25 ***Using on-site cameras to estimate recreational pike fishing effort***  
Stefan Larsson | Swedish University of Agricultural Sciences, Sweden
- 10:25 – 10:45 ***Taking responsibility for resource use – a collaborative development of an app for recreational fisheries data collection***  
Göran Sundblad | Swedish University of Agricultural Sciences, Sweden
- 10:45 – 11:05 ***Age validation in Baltic pike and possible consequences of aging bias for estimation of growth rate***  
Timo Rittweg | Leibniz Institute of Freshwater Ecology and Inland Fisheries (IGB), Germany
- 11:05 – 11:15 BREAK (10 min.)

### REPRODUCTION AND SPAWNING

- 11:15 – 11:35 ***The more sheltered, the better – Coastal bays and lagoons are important reproduction habitats for pike in the northern Baltic Sea***  
Annie Pursiainen | Natural Resources Institute Finland (Luke), Finland
- 11:35 – 11:55 ***Anadromy of pike around the german island of Rügen***  
Phillip Roser | Leibniz Institute of Freshwater Ecology and Inland Fisheries (IGB), Germany



- 11:55 – 12:15 ***Telemetry studies on anadromous migrations of Baltic Sea pike in Väinameri Sea, Estonia***  
Mehlis Rohtla | University of Tartu (UT), Estonia
- 12:15 – 12:20 BREAK (5 min.)
- 12:20 – 12:40 ***Anadromous pike: How motivated are they to reach their spawning site?***  
Félicie Delhellmes | Leibniz Institute of Freshwater Ecology and Inland Fisheries (IGB), Germany
- 12:40 – :00 ***Using otolith microchemical analysis to investigate the relative importance of marine and freshwater spawning for pike (*Esox lucius* Linnaeus, 1758) in Estonia***  
Markus Vetemaa | University of Tartu (UT), Estonia
- 01:00 – 01:10 Concluding remarks



## Friday, November 26<sup>th</sup> 2021

- 08:45 – 09:00 Registration / Zoom link is open  
09:00 – 09:05 Welcome back

### GENETIC POPULATION STRUCTURE

- 09:05 – 09:25 ***Drivers of neutral and adaptive differentiation in pike (*Esox lucius*) populations from contrasting environments***  
Johanna Sunde | Linnaeus University, Sweden
- 09:25 – 09:45 ***Fine-scale genetic structure of Baltic Sea pike***  
Lovisa Wennerström | Swedish University of Agricultural Sciences, Sweden
- 09:45 – 10:05 ***Genetic population structure of Rügen pike based on pooled sequencing***  
Arne Nolte | University of Oldenburg, Germany
- 10:05 – 10:25 ***Genetic relations between coastal populations of the Northern pike *Esox lucius* L. in the southern Baltic area***  
Anna Waś-Barcz | National Marine Fisheries Research Institute (NMFRI), Poland
- 10:25 – 10:30 BREAK (5 min.)

### HUMAN DIMENSIONS

- 10:30 – 10:50 ***Risk and ambiguity in recreational fishing: An assessment using choice experiments with coastal anglers***  
Dieter Kömle | Leibniz Institute of Freshwater Ecology and Inland Fisheries (IGB), Germany
- 10:50 – 11:10 ***Conflicts among stakeholder in the Rügen pike fishery***  
Robert Arlinghaus | Leibniz Institute of Freshwater Ecology and Inland Fisheries (IGB), Germany
- 11:10 – 11:30 ***Public relations, stakeholder involvement and conflict management – an experience report***  
Dominique Niessner | Leibniz Institute of Freshwater Ecology and Inland Fisheries (IGB), Germany
- 11:30 – 11:40 BREAK (10 min.)

### MANAGEMENT

- 11:40 – 12:00 ***Effects of seasonal fishery closures on shallow coastal fish assemblages and food webs***  
Johan Eklöf | Stockholm University, Sweden
- 12:00 – 12:20 ***Using size limits to manage pike – does saving large pike pay off?***  
Robert Arlinghaus | Leibniz Institute of Freshwater Ecology and Inland Fisheries (IGB), Germany



12:20 – 12:40	<b><i>PIKE project – how to bring Baltic pike back to Polish coastal waters?</i></b> Dariusz P. Fey   National Marine Fisheries Research Institute (NMFRI), Poland
12:40 – 01:00	<b><i>Restored wetlands increase the abundances of adult pike in the coastal Baltic Sea</i></b> Kristofer Bergström   Linnaeus University, Sweden
01:00 – 01:20	<b><i>Harvest regulations and habitat restoration for Baltic pike – model-based assessment of management options integrating multiple stakeholder objectives</i></b> Elias Ehrlich   Leibniz Institute of Freshwater Ecology and Inland Fisheries (IGB), Germany
01:20	Concluding remarks

Workshop settings in the afternoon

#### MENTAL MODEL SESSIONS IN BREAK OUT GROUPS BY COUNTRY

Denmark  
Estonia  
Poland  
Sweden

#### TOWARDS A JOINT PERSPECTIVE ABOUT DRIVERS OF BALTIC PIKE

