

The rapid spread of pumpkinseed (*Lepomis gibbosus*) in the ponds of southern Finland


Sanna Kuningas

Nordic IAS Forum: Pathways of IAS 25.3.2026



Image: Joakim Sjöroos

Alien fish species in Finland

- ~16 alien fish species, e.g.:
 - Prussian carp - 2005, potential threat
 - Brook trout – challenge to river trout (*Salmo trutta fario*)
 - Pink salmon – Teno river
- List of IAS of Union concern 
 - **Pumpkinseed** (*Lepomis gibbosus*) / Solabborre 2014, southwest Finland
 - **Chinese sleeper** (*Perccottus glenii*) / Amursömnfisk 2022, southwest Finland



Pumpkinseed (*Lepomis gibbosus*)



- North America, max. 20 cm
- Ponds, lakes, slowly moving rivers
- Aquarium and backyard ponds
- Invasive in whole of European Union area
 - Present in at least 25 countries
- Risks & impact
 - Fast growing, high reproductive potential
 - Defensive behaviour
 - Habitat and food generalist
 - Tolerates winter conditions
 - Resource competition with native species
 - Predation
 - Potential disease transmission



Images: Lauri Urho, Luke

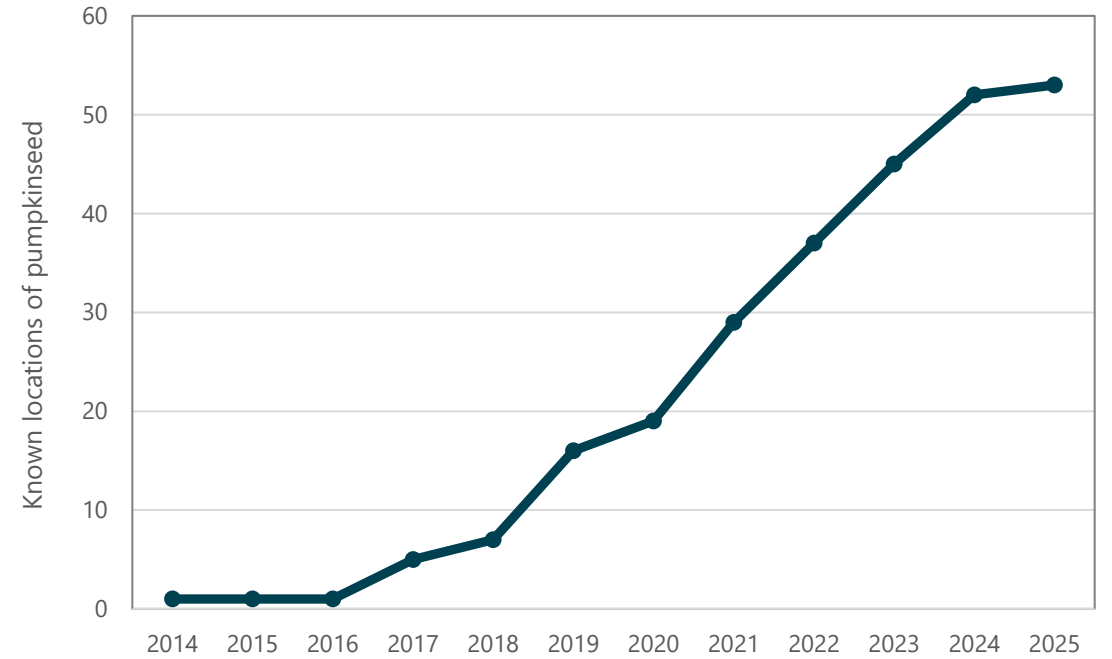
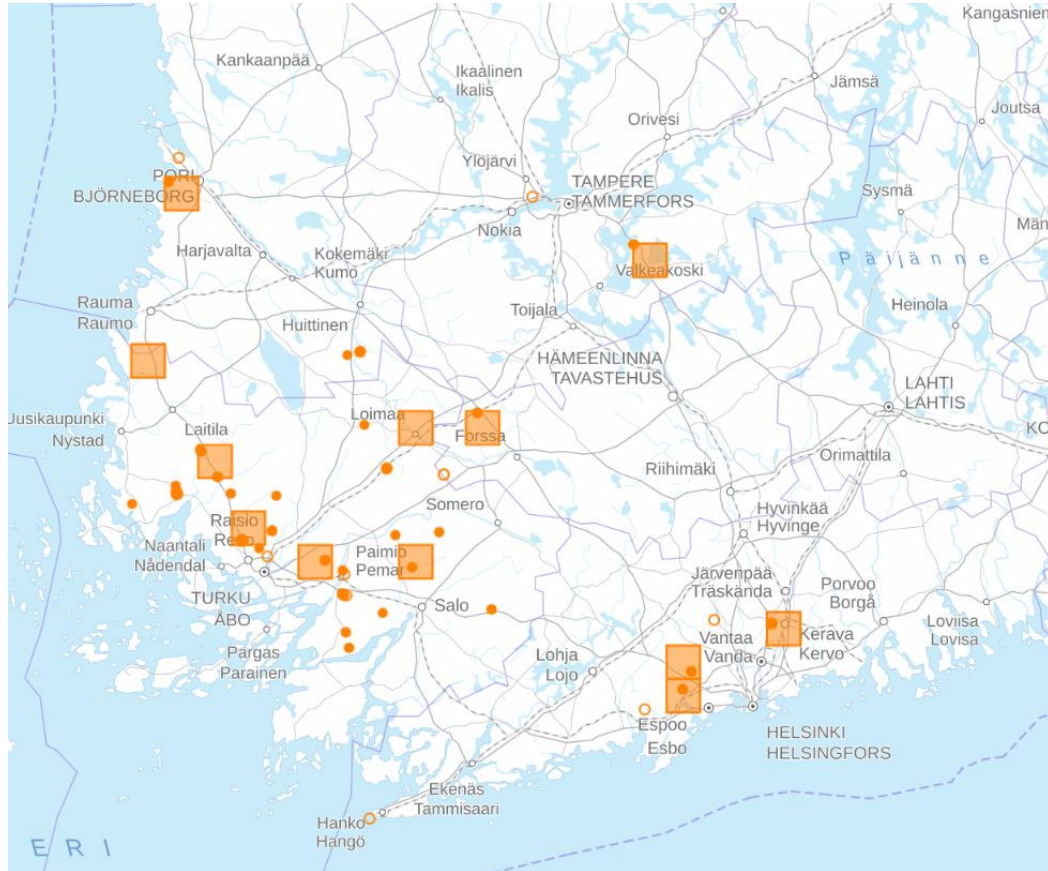
Legislation



"Harmful invasive species may not be brought into the EU, kept, bred, transported, placed on the market, supplied, sold or otherwise transferred, nor released into the environment."

Act on Managing the Risks Caused by Alien Species (1709/2015)

Spreading of pumpkinseed



<https://luonnonvaratiето.luke.fi/etusivu>



Image: Sanna Kuningas, Luke

Serious threats of aquatic IAS

- Harm to native species
- A **decline in biodiversity** has been observed elsewhere in Europe; e.g., in Hungary, 70–80% of the fish biomass in some lakes consists of non-native species.
- Impacts on commercial and recreational fishing
- Water quality issues -> recreational use

EU Member States are required to:

- Take action on pathways of unintentional introduction (i.e. **prevention**)
- Take measures for the **early detection and rapid eradication** of these species
- **Manage** species that are already widely spread in their territory



Actions taken

- **Citizen science** – vieraslaji.fi
- Sightings made by authorities (non systematic)
- Management plan 2021
 - Suggested actions:
 - Eradicate known pumpkinseed occurrences in locations where it is feasible
 1. Emptying ponds
 2. Rotenon treatment
 - Managing populations that can't be eradicated
 1. Removals
 - Monitoring
 - Communication



Luonnonvara- ja biotalouden tutkimus 1/2021

Ehdotus haitallisten vieraslajien hallintasuunnitelmaksi EU-luettelon toisen täydennysluettelon lajeille

Erja Huusela, Terho Hyvönen, Miia Jauni, Marika Rastas, Tuomas Seimola, Eeva-Maria Tuhkanen, Lauri Urho ja Sannakajsa Velmala

Implemented eradications

- Ankkalampi, Paimio
 - Pumpkinseed & Nuttall's waterweed
 - Emptying, dredging, rotenon, electrofishing 2023
 - Paimio city
 - **Costs ~200.000 €**
- Laihalampi, Espoo
 - Pumpkinseed
 - Rotenon treatment, Aug 2025
 - Espoo city & Uusimaa ELY centre
 - **Costs ~15.000 €, plus work hours**
 - Post-treatment follow up, summer 2026



Distribution of invasive fish species in small water bodies of southern Finland (VIKSU project)

- EMFAF financed, 2026-2027
 - Natural Resources Institute Finland (& Economic Development Centres)
- 1) eDNA – pilot assessment of the method's suitability, sampling in summer 2026
 - 2) Updated assessment of the distribution of pumpkinseed & Chinese sleeper
 - 3) Development of a cooperation model and promotion of removal actions for aquatic invasive species
 - 4) Communication



Image: Lauri Urho, Luke



Image: sylphium.com

Thank you!

