ARPHA Conference Abstracts 9: e204095
doi: 10.3897/aca.9.e204095

OPEN ACCESS

Conference Abstract

Spatial structure of *Ailanthus altissima* invasion foci in the Brenta riverscape (northeastern Italy)

Thomas Campagnaro‡, Giulia Foresta‡, Flora G. Simonelli‡, Nicola Menon‡, Samuele Pescarolo‡, Davide Bergomi‡, Michele Macellari‡, Tommaso Sitzia‡, Lorenzo Picco‡

‡ Dept. Land, Environment, Agriculture and Forestry; Università degli Studi di Padova, Legnaro, Italy

Corresponding author: Thomas Campagnaro (thomas.campagnaro@unipd.it)

Received: 15 Jun 2026 | Published: 17 Jun 2026

Citation: Campagnaro T, Foresta G, Simonelli FG, Menon N, Pescarolo S, Bergomi D, Macellari M, Sitzia T, Picco L (2026) Spatial structure of *Ailanthus altissima* invasion foci in the Brenta riverscape (northeastern Italy). ARPHA Conference Abstracts 9: e204095. https://doi.org/10.3897/aca.9.e204095

Abstract

Ailanthus altissima is a widespread invasive species in Europe and poses significant challenges for ecosystem management and conservation. However, its patterns of spread and ecological impacts are still not fully understood. The objective of this study was to elucidate the ecological patterns and processes associated with *Ailanthus altissima* invasion in a riparian landscape and to provide a basis for evidence-based management strategies. To address this objective, we analysed invasion foci within the Brenta riverscape (northeastern Italy). We identified invasion foci within a Natura 2000 site located along the middle course of the river. For each stem (>4000) within 18 invaded sites, we recorded its location and size (i.e., height and diameter). We then examined the spatial arrangement of *A. altissima* individuals and their relationship with landscape factors (i.e., distance from the main channel of the Brenta River and main land cover). Clustered spatial distribution was observed within invasion foci. Furthermore, invasion dynamics appear to be associated with localised management activities (e.g., paths, mowing). Our results provide ecological insights that may support more effective prevention and control strategies. Furthermore, analysing these dynamics improves our understanding of the structural development of *Ailanthus* stands and helps predict the evolution of invasion foci in riparian landscapes.

© Campagnaro T et al. This is an open access article distributed under the terms of the Creative Commons Attribution License (CC BY 4.0), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Keywords

tree of heaven; riparian ecosystems

Presenting author

Thomas Campagnaro

Presented at

Neobiota 2026, the 14th International Conference on Biological Invasions

Conflicts of interest

The authors have declared that no competing interests exist.