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Invasive Alien Species along Nestos river: current status and preliminary results of the monitoring actions

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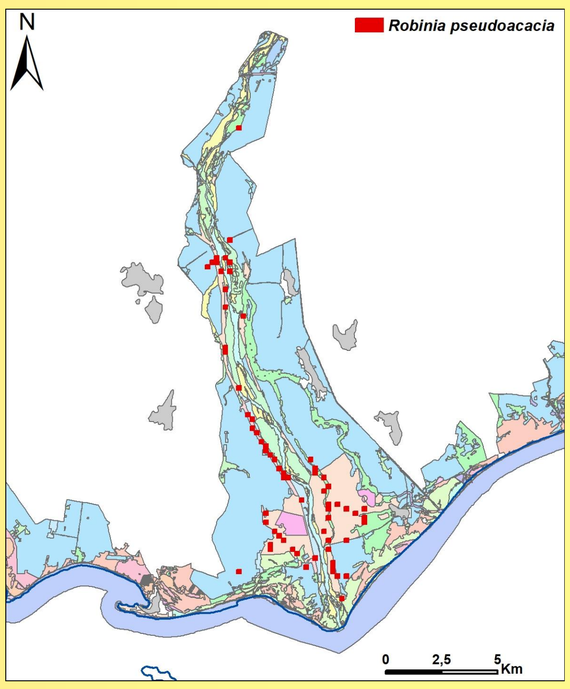
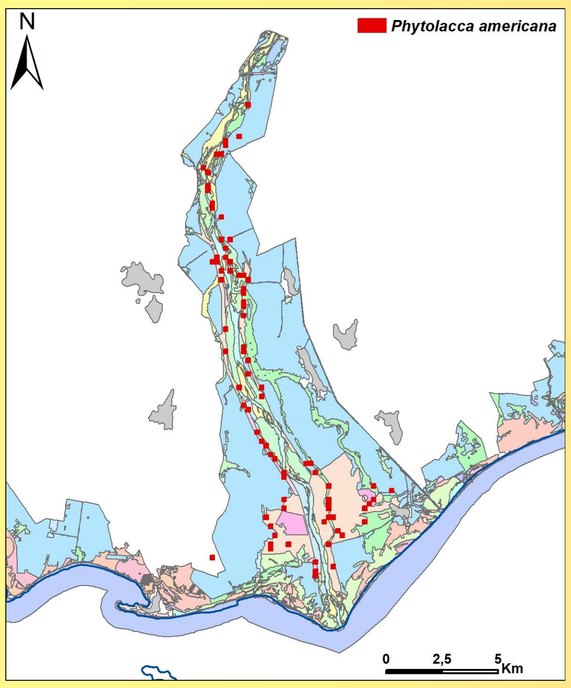
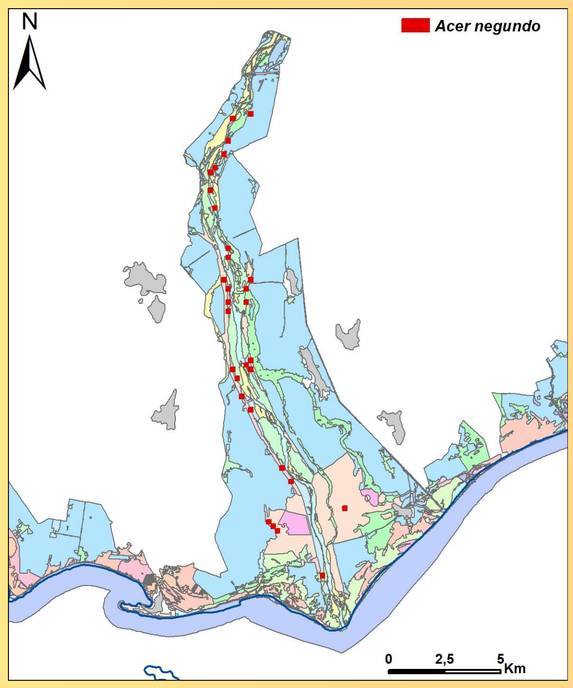
Introduction: **The study of the alien vascular flora of Greece started in the early 1970's (Yannitsaros 1982). Until now, 343 alien plant taxa have been recorded in Greece. Despite the rather large number of alien species that have been recorded, only a small number out of them are invasive. Specifically, out of the 343 alien species recorded in Greece, 50 are naturalized and present an invasive behavior, having established in a variety of habitats (Arianoutsou et al. 2010).**

Based on current knowledge (literature sources, stakeholders, etc.), we compiled a list of invasive alien species that occur along the Nestos River. We also conducted extensive field work in the study area to survey these species.





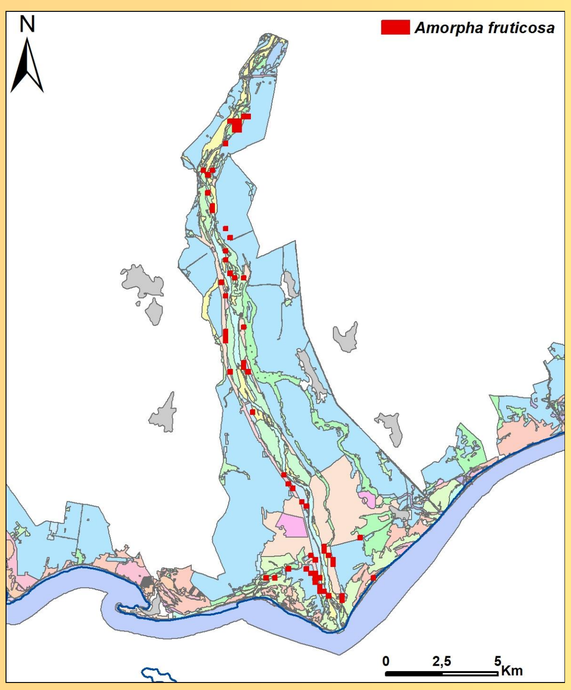


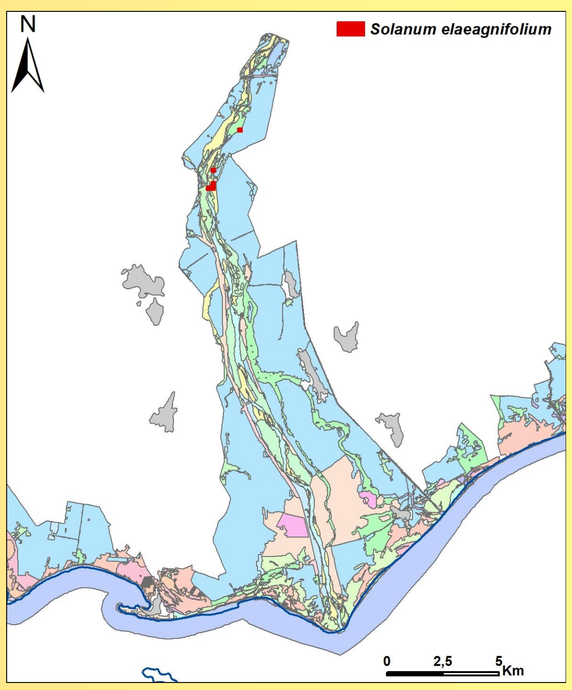

Dense thickets of *Amorpha fruticosa*

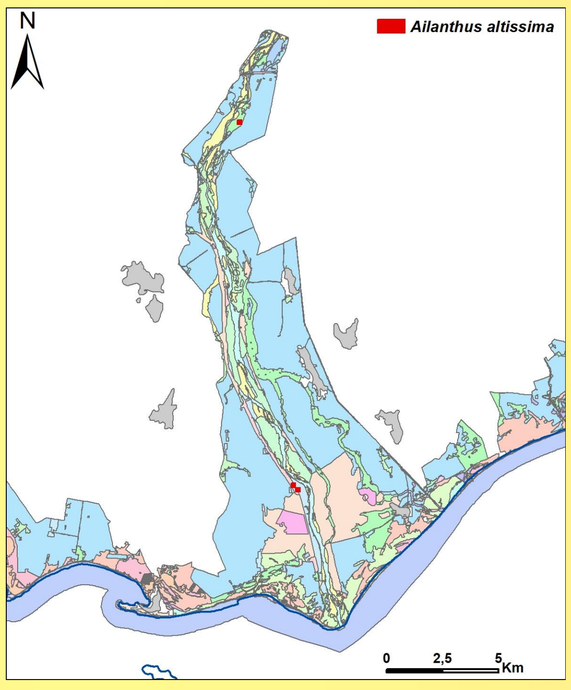

Phytolacca americana


Establishment of *Robinia pseudoacacia*


Solanum elaeagnifolia







Material and Methods: **The literature search revealed the presence of three alien plant species (*Acer negundo, Amorpha fruticosa* and *Robinia pseudoacacia*). Apart from the above, based on stakeholder review, field surveys should also be conducted for the following plant species: *Phytolacca americana, Solanum elaeagnifolium,* and *Ailanthus altissima*. During the spring and summer of 2021, we conducted a large number of field surveys focused on detecting the invasive alien plant species listed above.**

During our fieldwork, we used specific monitoring protocols. We decided to use a grid with a certain size of grid cells (200 m) for mapping. Based on this grid, we tried to map the current distribution of each species in detail, and this process will continue in 2022.

Results and conclusions: **Based on the fieldwork carried out in 2021, the six studied plant species were recorded at a significant number of grid cells, indicating that the area is strongly threatened by the existence of invasive species.**

The number of 200 × 200 m grid cells in which the six studied invasive alien plant species have been recorded is presented in Table 1:

Although *Phytolacca americana* appears to be the most widespread invasive alien species, it is found primarily in dry grassland communities and does not pose a direct threat to riparian vegetation along the Nestos River.

Table 1. Number of grid cells in which the invasive alien species studied were detected

***Acer negundo*: 31 grid cells**	***Phytolacca americana*: 82 grid cells**
***Ailanthus altissima*: 3 grid cells**	***Robinia pseudoacacia*: 67 grid cells**
***Amorpha fruticosa*: 63 grid cells**	***Solanum elaeagnifolium*: 5 grid cells**

In contrast, *Amorpha fruticosa, Robinia pseudoacacia*, and *Acer negundo* are continuously expanding their range and in this way directly and intensively threaten the natural vegetation formations in the area.


Acer negundo


Ailanthus altissima

References: Arianoutsou, M., Bazos, I., Delipetrou, P. andKokkoris, Y., 2010: The alien flora of Greece: taxonomy, life traits and habitat preferences. Biological Invasions, 12, 3525–3549.; Yannitsaros, A., 1982: The adventive flora of Greece. A review. Botanika Chronika, 2, 159–166.