

Amorpha fruticosa

a plant that grows where it doesn't belong



LIFE17 NAT/GR/000511
LIFE PRIMED

Local beekeepers call this plant "bulgarit-sa", possibly because it initially appeared in the Nestos area through the neighboring Bulgaria. Its scientific name is *Amorpha fruticosa* and it belongs to the legume family, the same family of plants as beans, clovers and many others. It is native to North America, and was introduced to Europe as an ornamental plant in the early 18th century. Beekeepers favored it because of its remarkable ability to attract bees, a fact that played an essential role in its spread. It is included in a category of plants described as alien, exotic, foreign, non-indigenous, or invasive, since their occurrence is due exclusively to human activities.



Why is it a problem?

The expansion of *Amorpha fruticosa* affects the plant communities and physical appearance of the area, transforming open spaces into dense shrublands or even forests. This densification of vegetation caused by the expansion of *Amorpha fruticosa* displaces many plant species that lose their habitat, but it also affects fauna species, especially those that depend on open areas. Consequently, it has significant implications for ecosystem functions, and within a short timeframe, so the capacity for adaptation is limited.

Mediterranean ecosystems are expected to become more vulnerable to invasions by species such as *A. fruticosa* because of the degradation and loss of fertile soil. This degradation creates denuded, unproductive bare areas that invasive plants can exploit. Climate change, and in particular changes in microclimate, increase the establishment of invasive plants, which are more tolerant and adaptable than native plants. Therefore, it is crucial to manage invasive species promptly and efficiently since their occurrence and distribution are expected to increase.

What are invasive alien species?



Solanum elaeagnifolium



Opuntia humifusa



Phytolacca americana



Oxalis pes-caprae

Invasive alien species are plants, animals, and micro-organisms that are introduced into an ecosystem where they are not native. Once introduced, they have the ability to spread rapidly, posing significant threats to the local biodiversity, causing damage, for example to agricultural crops, fish farming, or infrastructure, or impacting human health by transmitting diseases.

Looking for Nature-based Solutions

Over the past decade, there has been a notable and rapid expansion of *Amorpha fruticosa* in the Nestos Delta. After its establishment, it spreads quickly throughout the area, even encroaching upon cultivated fields adjacent to natural areas. To safeguard the ecological equilibrium of the Nestos Delta riparian ecosystem and mitigate the diverse impacts on local biodiversity and native species, the LIFE Primed project is currently exploring methods to effectively address the problem. Areas of *A. fruticosa* scrub have been enclosed with fences in three locations within the Delta, and the following management interventions have been applied:

- I. Artificial shading through the installation of a sunshade positioned at a height of 3m.
- II. Natural shading by planting Black Alders (*Alnus glutinosa*).
- III. Natural shading by planting White Poplars (*Populus alba*).
- IV. Removal of *A. fruticosa* and covering of the ground with ground cloth.
- V. Regular and repeated cutting of *A. fruticosa* to manage its growth.
- VI. Controlled grazing of *A. fruticosa* by goats.



Based on the assessment of the outcomes from the pilot interventions targeted at restricting the plant's spread, the intervention(s) demonstrating the highest effectiveness and least environmental impact will be selected for extensive application.



LifePRIMED

COORDINATING BENEFICIARY



Hellenic Society
for the Protection
of Nature



DIPARTIMENTO DI BIOLOGIA AMBIENTALE
SAPIENZA
UNIVERSITÀ DI ROMA



DIPARTIMENTO DI INGEGNERIA
CIVILE EDILE E AMBIENTALE
SAPIENZA
UNIVERSITÀ DI ROMA



REGIONE
LAZIO



ARSIAL
SISTEMI INTEGRATI
PER LA GESTIONE
DELL'AGRICOLTURA DEL LAZIO

CO-FINANCING



SUPPORTED BY



The project is co-financed by the LIFE Programme of the European Union