

DISTRIBUTION OF ALIEN SPECIES *AILANTHUS ALTISSIMA* (MILL.) SWINGLE AND *AMBROSIA ARTEMISIIFOLIA* L. IN CRIMEA

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Introduction. The Crimean peninsula is one of the European centers of floristic diversity with a total flora richness of 2536 species (Yena, 2012.). One of the most important threats to biodiversity is the invasion of alien species, which is important for hotspots (Le Roux, 2019), including Crimea. To analyze the spatial features of the invasive species distribution on the Crimean Peninsula, we chose *Ailanthus altissima* (Mill.) Swingle (tree of heaven) and *Ambrosia artemisiifolia* L. (common ragweed).

A. altissima is an Asian plant was brought to Crimea from China about 200 years ago as an attractive ornamental plant. Distributed in many countries around the world. It is used as an ornamental plant for urban greening. The plant is growing rapidly, less demanding on soil, found in transformed habitats.

A. artemisiifolia L. is one of the most threatening alien species from North America and widespread throughout European Russia. It produces an allergenic pollen and poses a threat to public health.

Materials and methods. The data of invasive species locations were obtained from the platform iNaturalist (<https://www.inaturalist.org/>) and from authors' field observations.

In the Flora of Russia project, 75 observations of *A. artemisiifolia* and 195 of *A. altissima* are located on the Crimean peninsula. The data time range for *A. artemisiifolia* was 2013–2020, for *A. altissima* was 2000–2020. Geographical coverage – the Crimean peninsula, two administrative units – the Republic of Crimea and the Sevastopol city.

Results. *A. altissima* is widespread on the Crimean Peninsula, especially on the southern coast and in southwestern part (Skurlatova & Bagrikova, 2019). It spreads rapidly in flat steppe Crimea, in cities, especially on damaged soils. The main habitats in cities are abandoned construction sites, pits, dug areas, etc. In the Crimean mountains *A. altissima* have been observed near the river Urkusty, at Toropova dacha, etc.

The plant were observed in the protected areas of southern and southwestern Crimea: Baidarsky, Fiolent, Laspi, etc. reserves.

About 20–30 years ago *A. artemisiifolia* was found on the Crimean peninsula very seldom and about 10–15 years ago it could be found in steppe landscapes. At present, it is found everywhere: along highways, along the coast, in cities, on agricultural land and other transformed biotopes and human-dominated landscapes. It prefers relatively moist areas. In the last 3–5 years, an increasing occurrence of *A. artemisiifolia* is associated with construction, including the use of imported soil to create flower beds and urban green areas. For example, the species was recorded in Uchkuevka Park, in Pushkin Square at Cape Fiolent.

In non-urbanized landscapes, the distribution of *A. artemisiifolia* is related with highways, recreational areas and river valleys. Moreover, *A. artemisiifolia* was noted in the "Baydarsky" nature reserve in the Varnutskaya valley, in the Baydarskaya valley, near the village Kolkhoznoye, in the river Uzundzha bed. The species was also recorded in remote forest areas in Crimean mountains: the valley of the Ay-Todorka river, in the Uzundzhi valley. The authors observed "thickets" of *A. artemisiifolia* in the Adym-Chokrak valley. At the same time, there are significant interannual fluctuations in the number of the plant – from 10 to 90 % of the coverage.

According to our observations on the Crimean peninsula, the abundance of *A. artemisiifolia* was decreased when the transformed areas were overgrown with other species.

Conclusion.

1. In Crimea there has been an increasing occurrence of *A. artemisiifolia* over the past 20 years has been detected. The main *A. artemisiifolia* and *A. altissima* habitats were associated with human activities (agricultural land, highways and cities).

2. Both species pose a threat for biodiversity conservation. They are located in protected areas: *A. altissima* in anthropogenically altered habitats, and *A. artemisiifolia* along river, on mountain slopes.

3. At present human activity conditions, a continued occurrence of *A. artemisiifolia* in Crimea is highly possible.

References

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