

Invasive Alien Plant Species in the Urban Ecosystem of Cahul, Republic of Moldova

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Abstract: Invasive alien species represent a current and significant issue at both national and international levels. These invasive alien plant species rank among the most critical ecological threats to biodiversity, ecosystem services, and human well-being. Invasive species alter natural ecosystems by degrading soil fertility, modifying the physicochemical properties of the soil, and deteriorating the quantitative and qualitative characteristics of plant cover, thereby competing aggressively with native species for water, light, and space. One of the objectives of the *Global Strategy for Plant Conservation*, adopted in 2002 in the Hague, recommends the development of so-called „Black lists” that include the invasive species present in each country. The assessment of invasive plant species in urban ecosystems is of major importance, given their key role as factors in the conservation of biological diversity. The urban ecosystem of Cahul is located on the banks of the Prut River, 175 km from Chişinău. From a physical-geographical perspective, it lies in the steppe zone of the Southern Plain, which is part of the Bugeac Steppe district. The urban ecosystem of Cahul is characterized by heavy traffic, the presence of degraded biotopes, and a high population density—conditions that facilitate the introduction and migration of alien species. Invasive plant species in this ecosystem were monitored and identified during the vegetation period of 2024–2025. The floristic spectrum in the investigated sites within Cahul includes 156 species, grouped into 133 genera from 42 families of magnoliophyta. Our research in this ecosystem revealed that 26 alien species, or 17% of the total, are invasive. The study of the origin of invasive species showed that half of them are of North American origin, followed by Eurasian, Cosmopolitan, Mediterranean, and other origins. These species pose a major threat to biological diversity, public health, and the national economy.

Keywords: Invasive Alien Species; Urban Ecosystem Cahul; Biodiversity Threats; Floristic Survey; North American Origin.

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