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Short Database 'Alien Bird Species in the Fauna of Ukraine'

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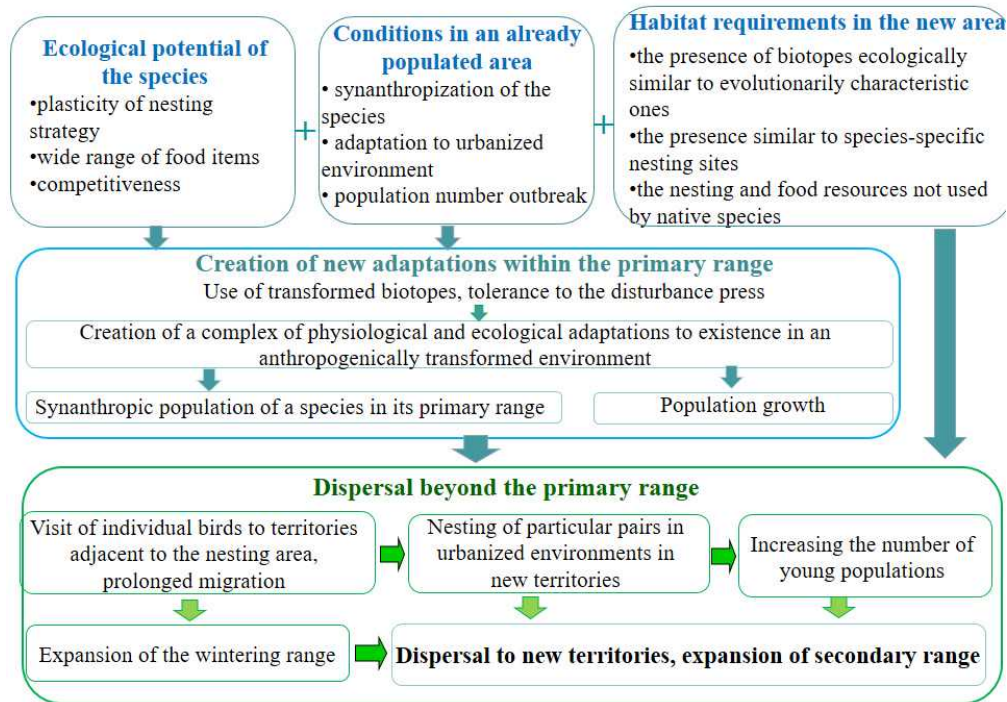
Abstract

In recent decades, there has been a shift in the ranges of species in different territories. The distribution of birds is influenced by a variety of factors, with the initial position of the primary centre of origin of the species being the most important (Payevsky 2015). Changes in the species composition of the fauna of many regions are associated with an increase in the abundance of some species and with climatic and anthropogenic changes. The primary impact factor driving the range expansion of numerous species is the shift in the European climate towards less continental (Huntley et al. 2008). Some birds are currently undergoing dispersal, and the breeding range boundaries of the species are not yet stable. An analysis of Internet resources showed that there are 254 online information systems of alien species of flora and fauna. The need to create a database of alien species in Ukraine is because the number of invasive species in the country is increasing. It is also important to recognize that military actions in Ukraine may both accelerate and slow down the process of bird dispersal. The Short database 'Alien bird species in the fauna of Ukraine' is a first effort to comprehensively catalog alien birds in Ukraine. The database material is based on the author's observations and analysis of ornithological literature published examining alien bird species in Ukraine up to 2024. Several new species of birds have emerged in the modern fauna of Ukraine. Most of them entered Ukraine independently. Thanks to urbanized green areas present in steppe areas that have always been deficient in tree plantations, the European Serin *Serinus serinus* and Greenish Warbler *Phylloscopus trochiloides* have been able to populate regions rich in food resources but previously unsuitable for dendrophiles. Collared Dove *Streptopelia decaocto* and Black Redstart *Phoenicurus ochruros* are nesting species in the parks and in the residential areas of the cities (Shupova 2018). In conjunction with the expansion of the breeding range, the wintering grounds of birds are undergoing a transformation. In Western Ukraine, European Serin was already recorded in small numbers in winter during the 20th century (Shupova 2024). Black Redstart is a winter species in its southern regions of Ukraine (Shupova 2014). Syrian woodpecker *Dendrocopos syriacus* and Collared Dove are sedentary (Marisova 1965; Brezghunova et al. 2017).

Step-by-step method for creating a Short database 'Alien bird species in the fauna of Ukraine'

- 1 Step 1. As a first step in creating a database of alien birds of Ukraine is to develop a list of the species, which invaded the territory of Ukraine. We conducted a systematic literature review of bird species not native for the territory of Ukraine for the period 1851–2024.
- 2 Step 2. We conducted a systematic literature review and we retrieved articles of published examining alien bird species in Ukraine up to 2024. A total of more than 200 literary sources were analyzed. Among them the 8 literature sources by Common Pheasant, 34 Collared Dove, 43 Syrian woodpecker, 24 Black Redstart, 45 European Serin, 39 Greenish Warbler, 11 Spanish Sparrow, containing information about bird occurrences in Ukraine. We restricted inclusion into database only key articles, which contain data on alien bird species in Ukraine.
- 3 Step 3. We have systematized our observations on the territory of Ukraine for the period 1991 - 2024. The changes in the range of the European Serin (<https://doi.org/10.5281/zenodo.10637245>) and Greenish Warbler (<https://doi.org/10.54944/tizrkvn15bc2>) within Ukraine were identified by creating a GIS map in the DIVA-GIS programme. These species are increasing their presence in the territory of Ukraine, but have not completely populated it. An analysis of the degree of adaptation of alien birds to habitat conditions in Ukraine was conducted including Black Redstart (<http://dx.doi.org/10.30970/sbi.0801.320>; <https://doi.org/10.2478/orhu-2022-0014>) and Spanish Sparrows. We have developed a scheme of adaptation of alien passerine birds to living in invaded territories.

Figure 1. Adaptation of alien passerine birds to living in invaded territories



- 4 Step 4. We data extraction from the literature sources, and supplemented it with the results of our empirical data analysis. Then a list of the characteristics of alien bird species was made: protection categories, biological and ecological features, primary area, range in Ukraine, time of entry and method of entry moving, habitats in Ukraine, degree of naturalization, limiting factors in the territory of Ukraine. Then transferred the resulting information into database-tables.

Result. Database 'Alien Bird Species in the Fauna of Ukraine'

- 5  Short database 'Alien bird species i... 14.8KB

Protocol references

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