



2022 Prague – Czech Republic

# Congress of the European Society for Evolutionary Biology

August 14–19, 2022

Prague Congress Centre

# Book of Abstracts

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fixed settlements during the Neolithic era. However, due to multiple intentional and accidental introductions from the mid-19<sup>th</sup> century onwards, the species is also invasive in Australasia, Southern Africa, and the Americas. In modern North America, the house sparrow now exists from Southern Panama all the way to the Northwest territories of Canada, attesting to the species' ability to survive in a diverse range of environments. This research aims to understand evolutionary success in biological invasion by reconstructing the history of the house sparrow invasive spread. Using whole genome resequencing, we generate further understanding of the genomic structure within the invasive range. Our results reconstruct the house sparrow invasion history to identify demographic changes between populations. We also studied parallel latitudinal clines within the United States and Australia to demonstrate the parallel evolution of new traits from bottlenecked founder populations, suggesting that certain genome regions and traits may be more beneficial for evolutionary success. Invasive species are an excellent model for understanding complex evolutionary processes, and this research will inform future work on understanding the genomics of successful adaptation to new environments.

**Abstract ID: 1887**

**Poster board number:**

P303

**Multi-year monitoring of *Asclepias syriaca* spread in protected reserve of Deliblato Sand in Serbia**

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*Asclepias syriaca*, (common milkweed), is an invasive species that has already been naturalized in 23 countries worldwide. Anticipated climate changes are predicted to help further its future spread beyond its current distribution. The common milkweed occurs in various habitats, most often those modified by humans, such as roadsides, railway areas, wastelands, abandoned orchards, vineyards, and abandoned arable land. Its massive occurrence threatens native species diversity, penetrating into natural and semi-natural habitats. Deliblato Sands, special Serbian nature reserve, the largest European continental sandy terrain located in the south-east part of the Pannonia Plain, is also subject to invasion by *A.syriaca*. In 2015 we analyzed the presence of *A.syriaca* on borders of natural protected reserve along the roads leading to reserve, as well as on approx. 200 km of roads and paths in the natural reserve itself. Those inner roads and paths were subsequently monitored in 2017, 2019, and 2021. for persistence and spread of already detected locations of *A.syriaca* and the occurrence of the new ones. Influence of proximity of reserve borders with different levels of infestation, type of use (commercial roads, tourist tracking paths), and levels of protection (three levels of protection exist on D. Sand), were analyzed. The largest increase in numbers was detected in the areas with the most intensive human activity. This study of dispersal and range extension can serve as a basis for further analysis of eco-evolutionary dynamics on *A.syriaca* populations and localities in the Deliblato Sand natural reserve.

**Abstract ID: 1958**

**Poster board number:**

P304