

New environment brings new interactions: coexistence of closely related birds in urban mosaic

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1. SUMMARY OF THE THESIS

The ongoing urbanization rapidly changes environments of most plant and animal species worldwide and ecologists have recently increased their attention to biodiversity conservation in man-affected landscapes. However, besides specialised species, which disappear due to dramatic habitat conversion, many organisms are able to change their behaviour, physiology and life histories and have adapted to human proximity. Cities therefore provide a „natural laboratory“, which enables us to study ecological and physiological adaptations of synanthropic organisms. Urban environments are also typical for their habitat heterogeneity. Thanks to the mosaic nature of diverse habitats, species with different habitat selection come to close contact in cities. This phenomenon was a relatively neglected research area in urban ecology. A good model for this kind of investigation seems to be a couple of congeneric bird species, which are recently common in urban habitats across Europe – Black Redstart (*Phoenicurus ochruros*) and Redstart (*P. phoenicurus*). The two species have similar nesting and foraging ecology but occupy different habitats under natural conditions. The Black Redstart primarily breeds in open, rocky terrain in mountainous areas. This relatively special habitat type has spread across Europe with urban sprawl as the Black Redstart recognizes man structures as a rocky environment. The primary habitat of the Redstart are fairly open woodlands. This species has also entered cities where it occupies various urban green areas – wooded streets, parks and gardens. The two redstart species come to close contact in cities thanks to mosaic nature of the urban environment. How the two redstarts coexist under new established ecological conditions? I have tried to respond to this question in my thesis, which comprises four papers investigating all important mechanisms of species coexistence – spatial distribution and habitat selection of the species, feeding ecology and interspecific behavioral interactions.