

Master thesis project in Conservation Biology

Effect of urban green connectivity on bird diversity and foraging activity



Urban areas are growing in an unprecedented speed and size. This is also the case in Switzerland. Densifying built areas at the expenses of urban green areas is one of the options proposed to contrast urban spreading and to save green spaces within and outside cities. This could further reduce the high ecological values of suitably managed urban green harboring surprising species rich communities.

Birds are regarded as an important taxonomic group indicator of the quality of different habitats and environmental conditions. Moreover insectivore birds are important components of complex web and provide important ecosystem functions and services by, for instance, regulating the population of insects and other invertebrates.

Which components of bird biodiversity (e.g., single abundant species, species richness, functional diversity) provide such services is still not clear.

The proposed Master thesis investigate the bird species composition in urban parks along an urbanisation gradient and assess the effect of different community composition and foraging strategies on predation success by quantifying bird attacks on plasticine 'dummy caterpillars' (see pictures above).

Link: The thesis is part of an BiodivERsA project called BioVeins <https://www.biodiversa.org/1012>

Requirements: Knowledge in bird sampling by song and visual recognition. Driving license. Interest on the "Biodiversity-Ecosystem Functioning" debate. Good skills in writing English. Experience in GIS-techniques and R-statistics are advantageous as they will be needed. Collaboration with the project BioVeins is expected.

Offers: Support in different aspects of the Master work (conceptual, logistical) is provided by Marco Moretti (project leader), Kurt Bollmann (academic supervisor) and Joan Casanelles (PhD student) within the BioVeins project. Transport for field work will be compensated. Working place is at the Swiss Federal Research Institute WSL in Birmensdorf/ZH.

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