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BOOK OF ABSTRACTS

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576. EFFECTS OF ORGANIC FARMING AND LANDSCAPE COMPLEXITY ON SPECIES RICHNESS OF BIRDS, CARABIDS AND PLANTS ACROSS EUROPE

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Organic farming has been proposed to reduce negative effects of agricultural intensification and to enhance biodiversity in agricultural landscapes. Effects of organic farming on biodiversity are often studied on single organism groups in single countries and without considering effects of the surrounding landscape. In the Europe-wide AGRIPOPES project we study effects of agricultural intensification on biodiversity and ecosystem services in contrasting landscapes. To study the effects of organic farming on biodiversity, we measured species richness of birds, plants and carabids on organic and conventional farms in simple and complex landscapes. Our results show that organic farming only enhances parts of the overall biodiversity. Organic farming positively affects species richness of birds and plants but not species richness of carabids. Birds and plants are negatively affected by homogenous landscapes, whereas no effect of landscape was found for carabids. For plants and birds it is important to promote organic farming in homogenous landscapes to increase their species richness. For organic farming to better promote biodiversity, the landscape context and target organism group need to be considered.

577. OPTIMISING SURVEY EFFORT FOR AMPHIBIANS IN LUXEMBOURG: MORE MONITORING OR MORE METHODS?

Wood, Laura R., Durrell Institute of Conservation and Ecology, United Kingdom; **Griffiths, Richard A.**, Durrell Institute of Conservation and Ecology, United Kingdom

Fundamental to the assessment of the conservation status of a species is the ability to distinguish between true absence and non-detection in habitat patches. Occupancy modelling offers statistical confidence in assigning species as present or absent at a site. Models were developed using Program PRESENCE to (1) assess the status of amphibians in ponds in Luxembourg, and (2) determine how much survey effort is needed to be confident of true absence at a site. Data were collected using three survey methods repeated on up to seven survey visits in both breeding seasons over two years. Dip-netting was not an effective method for detecting *Triturus cristatus*. In contrast, aquatic funnel traps were very efficient in detecting the same species. Indeed, surveys for *Triturus cristatus* without traps were found to be highly ineffective, failing to detect the species in 41% ponds that were occupied. The best predictors of *T. cristatus* pond occupancy were pond size and the extent of external shade. *T. cristatus* detection was most influenced by water turbidity at the time of the pond survey and pond size. Occupancy modelling is a powerful tool in designing survey protocol and achieving confidence in the accuracy of results.

578. MEASURING INVASIVE SPEED OF ALIEN PLANT SPECIES USING DATA FROM A GENERAL MAPPING PROGRAM IN THE NORTH OF BELGIUM

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The start and spread of alien plant species in most countries is not well documented. Often alien plant species are not detected in the early start of their introduction. Once the presence of a certain alien plant species is detected they get a lot of attention resulting in numerous new records which rather reflect the recording effort rather than a real expansion of the species. To cope with this problem we used a dataset which was set up for mapping the flora of Flanders with a time scope from 1972 until 2008. Each year on average 200 grid cells of 1 km² are prospected and the field surveyors record all plant species they find in the grid cell without having special attention for certain species. By calculation the proportion of the prospected grid cell where a certain alien species was present for each year we could calculate the spread of alien species in a more objective way so we could compare the expansion of alien species with each other. This method is useful for species which are easy to recognize and are not limited to rare habitats. It also requires a wide spread of the prospected grid cells over the country or region.