B511 Ecological characteristics of introduced species, *Rumex acetosella*

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To find the ecological characteristics of *Rumex acetosella*, we studied both in the laboratory and in field survey. *R. acetosella* plant grows mainly straight after germination, stretch their rhizome and getting increment, get more sprout on their branches with the energetic growth. The number of leaves and ramets of the plant were shown the peak in April and the size of leaves and the cover of the plant were getting increase from April to May. *R. acetosella* plants were an ephemeral showing come to an end their life cycle within several months. Germination and seedling growth of receptor species were in inverse proportion to the comcentration of the aqueous extracts of the *R. acetosella*. GC and HPLC methods were employed for identification of *R. acetosella* chemical compounds and 12 different kinds of chemical substances were detected. *R. acetosella* plants grow vigorously from April and occupied superior ecological niche in forming their community than other neighbor species, in addition they release their own secondary metabolites into their environment.

B512 Effect of mosaic vegetation structure on pine seed predation by forest animals in agricultural landscape

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Movement of animals depends on the spatially heterogeneous structure and pattern of vegetation landscapes because the animals have special habitats each other in a landscape. Forest edge with high permeability and prey density is one of the important habitat. Understanding the ecological characteristics of the forest edges between mosaic vegetation patches is necessary to establish the strategies for the nature conservation and sustainable vegetation management. We examined the animal influence on pine seeds as one of the method of monitoring the animal activity in mosaic vegetation. Mosaic vegetations including open, edge and inner forests were carefully selected in the rural landscape. We carried out predation test on pine seed during one year. The result is that damages on seed are more significant at forest edge than inner and open forest. Pine seed on seedbeds was mainly attacked by squirrels and mice than bird. Pine seed was damaged by squirrels with different types of vegetation by seasons. Seed predation rate at forest edge was, in special, higher than other sites. Finally, this result also shown that the animal behaviour is related with spatial vegetation structure caused by human activity such as distance from human settlement.