ABSTRACTS

43rd Symposium of the International Association for Vegetation Science

July 23 - 28 2000 Nagano,Japan

Program Committee and Secretariat of IAVS 2000 Nagano

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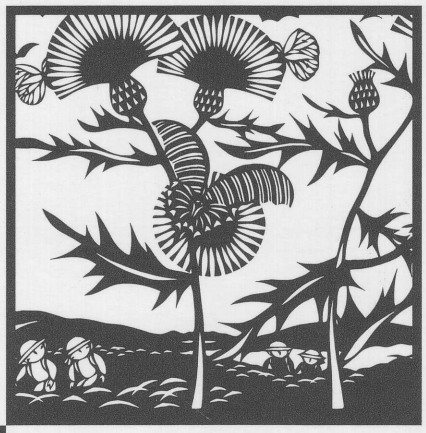
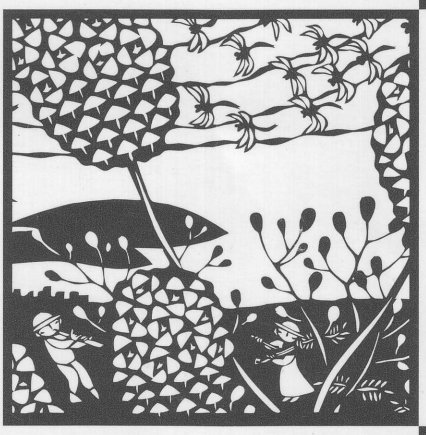
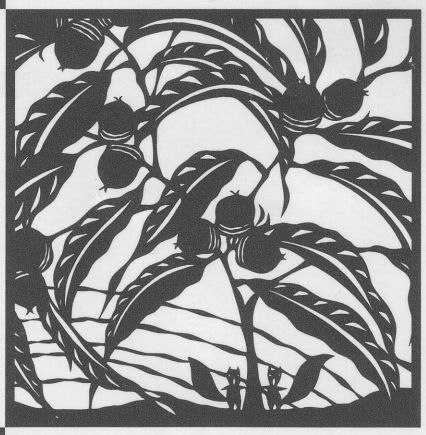
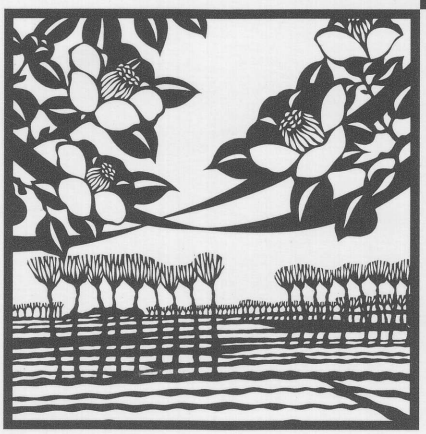
Global to local perspectives of vegetation science:





search for new paradigms for the 21st century





International Association Vegetation Science

RAINFALL EFFECTS ON GRASS-WEED SEEDBANKS IN WHEAT

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Forage, chickpea, medics, wheat, oilseed rape and sunflower were cultivated during four years as part of ten different types of rotation which always included wheat. These experiment took place in Southern Portugal, a mediterranean area where dryland agriculture is usual. Grass-weed seedbanks were evaluated annually before seeding. The variation founded in wheat plots without weed control was used to assess the effects of rainfall on grass-weed seedbanks. Evaluation of all grass-weeds taken together was made, and of each of the three major contributors, namely *Agrostis pourretii* Willd., *Phalaris minor* Retz. and *Briza maxima* L..

In mediterranean dryland agriculture, where water is a very limiting factor, rainfall appears to have a very strong and rapid effect on grass-weed seedbanks. In fact, the amount of rain felt between November and April has a direct effect on grass-weed seedbank density after the crop regarding all grass-weeds, *Phalaris minor* and *Briza maxima*. Conversely, *Agrostis pourretii* seedbank grows independently of rainfall until its own seed density becomes a limiting factor.

RELATIONSHIPS BETWEEN SIZE/NUMBER OF FRUITS BORN ON A FRUITING PLANT AND SEEDS DROPPED BENEATH THE FRUTING PLANT

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Seeds dropped by fruigivorous birds are not necessarily of the same species as the fruiting plants above. Fruigivorous birds drop seeds just beneath fruiting plants whose species may be the same or different from the seeds. We tested the correlation between size/number of the fruits born on the fruiting plants and the seeds dropped by birds, which were collected by seed traps set beneath three fruiting plants (*Callicarpa japonica*, *Viburnum dilatatum*, *Cocculus trilobus*) and non-fruiting plants in a 0.25ha plot in artificial pine forest. The number of seeds dropped by birds beneath fruiting plants was significantly more than that beneath non-fruiting plants. The number of seeds dropped by birds beneath a fruiting plant (Seed Input) correlated significantly with the number of fruits removed by birds out of the fruiting plant (Fruit Output). Species composition of the seeds dropped beneath plants differed among the three fruiting species. The original fruit size which contained the seed or seeds dropped beneath fruiting plants was similar to the fruit size born on the fruiting plant. The Fruit Value, calculated as Seed Input divided by Fruit Output, was higher for larger sized fruits than for small fruit species.