

**CONFERENCE
PROGRAMME
ABSTRACT
BOOK**

**7th SER European Conference
on Ecological Restoration
23-27 AUGUST 2010
AVIGNON FRANCE**

**ECOLOGICAL
RESTORATION
AND SUSTAINABLE
DEVELOPMENT**

ESTABLISHING
LINKS ACROSS
FRONTIERS

*7^e Conférence Européenne SER
en Ecologie de la Restauration
23-27 AOUT 2010
AVIGNON FRANCE*

**ECOLOGIE DE LA
RESTAURATION ET
DEVELOPPEMENT
DURABLE**

DEPASSER
LES FRONTIERES



the northern and southern edges of these patches, and in open areas and measured seedling survival and growth for one year. First-year survival was two-fold higher in seedlings planted under patches than in those planted elsewhere. Survival underneath patches was mainly explained by slope, patch height and projected area (63% of the variability explained). Survival was also associated with dominant species: most seedlings planted near *Ephedra fragilis* survived, whereas those planted near *Rhamnus lycioides* died. Our study highlights the influence of microsite on establishment success, and provides new insights on population dynamics of patch-forming species. This information will enhance the efficiency of restoration practices in degraded *S. tenacissima* steppes.

266

Role of rangeland shrubs as safe sites for the restoration projects

Mohammad Jankju, Hamid Ejtehadi

Nurse shrubs may increase the establishment and survival of their understory plants, by providing a favorable microclimate or by protecting them against herbivores. However, there are suspicions about their capabilities as safe sites. Series of field studies were conducted from 2003-2010 in the extensively grazed rangelands of Iran. The objective was to compare the most common type of shrubs' facilitation in the arid or semiarid rangeland, normal or dry years, north or south facing aspects, and between different nurse shrubs. Results generally indicated higher soil moisture, soil fertility and protection against herbivores but lower sun irradiation and evapo-transpiration, under the canopy of shrubs than in open areas. Canopy facilitation generally increased the species diversity and richness of naturally growing plants. Protection against herbivores was a common facilitation under the all environmental conditions; only being dependent on the canopy structure of the nurse shrubs. On the other hand, shrubs' facilitation for soil moisture was reduced from the beginning towards the end of growth season; it was higher under the medium than the severe drought conditions; besides being higher in the semiarid than the arid rangelands. In conclusion, the most common and persistent facilitation effect of rangeland shrubs was due to protection against herbivory. Therefore, part of the controversies, on the capability of shrubs for being used as safe sites, might be because of paying much attention on the soil moisture and fertility, while neglecting their role for protecting other plants against the livestock grazing.

267

From buds to seeds: bees are key

James Cane

Government land managers oversee 40 million ha in the Great Basin of the western U.S.A. Its shrub steppe plant communities include diverse perennial wildflowers, but are widely degraded. Annual demand for 250 tons of affordable wildflower seed to restore Great Basin landscapes can only be satisfied by farming for seed. Sixteen wildflower species native to the region were chosen because they are widespread, common, broadly adapted, and practical for farming. We are studying each species' breeding biology, pollination needs and pollinators; these are often unknown for entire genera or even tribes. None are wind-pollinated. Only *Crepis* can be autogamous, the rest requiring a pollinator. All but two species sets more seed with outcrossing; some require it. Native bees are the dominant, often only visitors in each floral guild in the wild. We find that these steppe bee communities are surviving wildfire because most species nest in the ground. Where healthy wildflower communities follow burning, wild bees remain diverse and abundant. Most of the candidate plant genera host one or more potentially manageable bee species. *Osmia* bees abound at 7 of the wildflowers, especially *Astragalus*, *Hedysarum* and *Lupinus*. These legumes in particular share bee species, including cavity-nesting species with management potential. One or more of the 3 agricultural field pollination strategies - hived honeybees, nesting management of native non-social bees, and bee community stewardship - is being developed and prescribed for farming each flowering species.

GROOTJANS Ab
UNIVERSITY OF GRONINGEN
Centre for Energy and Environmental
Studies Nijenborgh 4
9747 AG GRONINGEN
PAYS BAS
A.P.Grootjans@rug.nl

GROSSET Stéphanie
EID-MÉDITERRANÉE
165 avenue Paul Rimbaud
34184 MONTPELLIER
FRANCE
sgrosset@eid-med.org

GUIXÉ David
CENTRE TECNOLÒGIC FORESTAL DE
CATALUNYA
Ctra/ Sant Llorenç de Morunys km2
25280 SOLSONA
ESPAGNE
david.guixe@ctfc.cat

GUZMAN LOPEZ Oswaldo
IRD
Service Missions 911 Avenue Agropolis
BP 64501
34394 MONTPELLIER CEDEX 5
FRANCE
oswaldoguzmanl@hotmail.com

HAAPALEHTO Tuomas
UNIVERSITY OF JYVÄSKYLÄ,
METSÄHALLITUS
P.O.Box 35, University of Jyväskylä
40014 JYVÄSKYLÄ
FINLANDE
tuomas.haapalehto@jyu.fi

HARRIS Jim
CRANFIELD UNIVERSITY
Dept Natural Resources Building 37
MK43 0AL CRANFIELD
ROYAUME UNI
j.a.harris@cranfield.ac.uk

HARVIE Barbra
UNIVERSITY OF EDINBURGH
SCHOOL OF GEOSCIENCES, CREW
BUILDING KING'S BUILDINGS, WEST
MAINS ROAD
EH9 3JN EDINBURGH
ROYAUME UNI
barbra.harvie@ed.ac.uk

HAZARD Laurent
INRA UMR1248 AGIR
BP52627
F-31326 CASTANET-TOLOSAN
FRANCE
hazard@toulouse.inra.fr

HENRY Alexandre
CNRS LABORATOIRE
UMR 8079 E S E Université Paris Sud Bat
362
91405 ORSAY CEDEX
FRANCE
alexandre.henry@u-psud.fr

HERRIER Jean-louis
AGENCY FOR NATURE AND FOREST /
FLEMISH GOVERNMENT
Zandstraat 255
8200 BRUGGE (SINT-ANDRIES)
BELGIQUE
jeanlouis.herrier@lne.vlaanderen.be

HESTER Mark
UNIVERSITY OF LOUISIANA
Coastal Plant Ecology Lab Biology Dept.
70504 LAFAYETTE, LA
ETATS UNIS
mhester@louisiana.edu

HLADNIK David
UNIVERSITY OF LJUBLJANA, BIOTECHNICAL
FACULTY
Vecna pot 83
1000 LJUBLJANA
SLOVENIE
david.hladnik@bf.uni-lj.si

HOBBS Richard
UNIVERSITY OF WESTERN AUSTRALIA
School of Plant Biology
WA 6162 CRAWLEY
AUSTRALIE
rhobbs@cyllene.uwa.edu.au

HOFFMANN Annebeth
COWI A/S
Parallelvej 2
2800 KONGENS LYNGBY
DANEMARK
abhm@cowi.dk

HÖLZEL Norbert
LANDSCAPE ECOLOGY, UNIVERSITY MÜNSTER
Robert-Koch-Str. 28
48149 MÜNSTER
ALLEMAGNE
nhoelzel@uni-muenster.de

HORREO ESCANDON Jose Luis
UNIVERSIDAD DE OVIEDO
C/Julian Claveria s/n
33006 OVIEDO
ESPAGNE
horreojose@uniovi.es

HUGHES Francine
ANGLIA RUSKIN UNIVERSITY
East Road
CB1 1PT CAMBRIDGE
ROYAUME UNI
francine.hughes@anglia.ac.uk

ISLAM Islam
JUTE LAND PVT LTD
H:1/A, R:12, Nikunja-2, Khilkhet Dhaka1229
1229 DHAKA
BANGLADESH
info@jutelandbd.com

ISSELIN Francis
UNIVERSITÉ BLAISE PASCAL INRA PIAF
24 Avenue des Landais, les Cèzeaux
63177 AUBIÈRE
FRANCE
francis.isselin@gmail.com

JANKJU BORZELABAD Mohammad
FERDOWSI UNIVERSITY OF MASHHAD
Azadi Square
91775-1363 MASHHAD
IRAN
mjankju@ferdowsi.um.ac.ir

JARASIUŠ Leonas
INSTITUTE OF BOTANY OF NATURE RESEARCH
CENTRE
Zaliuju Ezeru 49
08406 VILNIUS
LITHUANIA
'leonas.jarasius@botanika.lt';

JÄRVINEN Carina
METSÄHALLITUS NATURAL HERITAGE
SERVICES
Hietasaarenkatu 6
65100 VAASA
FINLANDE
carina.jarvinen@metsa.fi

JAUNATRE Renaud
UMR CNRS IRD UNIVERSITÉ D'AVIGNON IMEP
IUT, Site Agroparc, BP 1207
84000 AVIGNON
FRANCE
renaud.jaunatre@yahoo.fr

JIROVA Alena
UNIVERSITY OF SOUTH BOHEMIA &
INSTITUTE OF BOTANY AVCR
Branisovska 31
CZ 370 05 CESKE BUDEJOVICE
REPUBLIQUE TCHEQUE
cralenka@yahoo.co.uk

JONGEPIEROVA Ivana
PLA BILE KARPATY
Bartolomejske namesti 47
698 01 VESELI NAD MORAVOU
REPUBLIQUE TCHEQUE
ivana.jongepierova@nature.cz

JORGENSEN Amanda
SOCIETY FOR ECOLOGICAL RESTORATION
INTERNATIONAL
8135 Briar Creek Drive
22003 ANNANDALE, VIRGINIA
ETATS UNIS
ajorgenson@ser.org

JURJESCU Adela
USAMVBT
Calea Aradului no 119
300645 TIMISOARA
ROUMANIE
adela.jurjescu@yahoo.com