



Arbeitskreis für Renaturierungsökologie in der
Gesellschaft für Ökologie

Restoration ecology in wet grasslands

Summer course at the University of Bremen
7 – 11 July 2003

Restoration ecology is the science of ecological restoration, the process of assisting the recovery and management of ecological integrity. This course is primarily intended for PhD students who work in the field of restoration ecology of wet grasslands, but also other grasslands and wetland communities. The program includes:

- lectures of specialists during the morning to provide theoretical background;
- practical field work during the afternoon to train restoration-related research skills;
- short presentations of research projects by the participants.

Restoration ecology is dealt with at the *community*, *population* and *genetical* levels. Topics that will be treated in the lectures include:

- general introduction to grassland ecology
- restoring wet grasslands
- landscape hydrology
- interactions between community and abiotic factors
- soil microbiology
- restoring avian communities
- modelling and multivariate techniques
- effects of fragmentation
- seed and dispersal ecology
- genetic constraints
- molecular methods
- restoration ecology in practice

The field work will consist of, for example, examining colonisation and re-establishment rates of species in different habitats, also using data of monitoring studies from the region.

Lecture rooms, laboratory and computer facilities will be located at the University of Bremen and a field station of the BUND (German Nature Conservation Organisation). Field work and excursions will take place in the areas Borgfelder Wümmewiesen, Blockland, Hollerland and Eispohl/Sandwehen. These areas all lie very close to Bremen and can easily be reached by bicycle.

Organizers: Martin Diekmann, Frank Hellberg, Raimund Kesel, Rudy van Diggelen

Language: English

No. of participants: 20 – 25

List of lecturers (preliminary):

Joachim Schrautzer (Christian-Albrechts-University Kiel, D)

Norbert Hoelzel (Justus-Liebig-University Giessen, D)

Rudy van Diggelen (Rijksuniversiteit Groningen, NL)

Jan Roelofs (KU Nijmegen, NL)

Hans Esselink (Stichting Bargerveen, NL)

Jim Harris (Cranfield University, UK)

Martin Diekmann (University Bremen, D)

Jan Bakker (Rijksuniversiteit Groningen, NL)

Kai Jensen (Christian-Albrechts-University Kiel, D)

Michael Kleyer (Carl von Ossietzky-University Oldenburg, D)

Gerard Oostermeyer (University of Amsterdam, NL)

Finances: Students have to pay their own travel and lodging costs (overnight stay: ca. 20-25 €/night for simple accommodation, more expensive hotel rooms are available on demand; costs for meals and renting of bicycles [in total ca.20 €/day] must be added). The organizers carry the costs for lecture rooms, working facilities and general course organisation.

Interested PhD students are asked to send their application (preferably by e-mail) to:

Martin Diekmann

Vegetation Ecology and Conservation Biology, Dept. of Ecology and Evolutionary Biology, FB 2, University Bremen, Leobener Str., 28359 Bremen, Germany

E-mail: mdiekman@uni-bremen.de

Website: <http://www.vegetation.uni-bremen.de/>

(Course-website: <http://www.vegetation.uni-bremen.de/restorationecology.html>)

Procedure: Interested PhD students should preliminary register before 9 May 2003 at the above mentioned address. They should include a complete postal address, e-mail address and a short description of the topic of their PhD research. More information will be sent to the participants shortly afterwards and will be available at the web site.

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Program

Date	Time	Lecturer	Topic/Activity
Monday, 7.7. (lectures in Room NW2, A4030)	9.30 - 10.00	Organizers	Welcome; Technical informations
	10.00 - 11.00	Jim Harris	General introduction to restoration ecology
	11.00 - 11.15		Coffee break
	11.15 - 12.30	Joachim Schrautzer	Introduction to grassland ecology; problems with wet grasslands
	12.30 - 13.30		Lunch break
	13.30 - 14.30	Gert Rosenthal	<i>Secondary progressive successions in wet grasslands</i>
	14.30 - 18.00		Excursion to the nature reserve "Borgfelder Wümmewiesen"
	20.00 -		Come-together-pub
Tuesday, 8.7. (lectures in Room NW2, B3236)	Restoration ecology at the community level		
	9.15 - 11.15	Rudy van Diggelen	Landscape hydrology and the restoration of wet grasslands
	11.15 - 11.45		Coffee break
	11.45 - 13.00	Jan Roelofs	Interactions between community characteristics and abiotic factors
	13.00 - 14.15		Lunch break
	14.15 - 18.00		Practical field exercises: Changes in hydrology and vegetation (nature reserves "Borgfelder Wümmewiesen" and "Hollerland")
Wednesday, 9.7. (lectures in Room NW2, B3236)	9.00 - 10.15	Jim Harris	Soil organisms and restoration ecology
	10.15 - 11.30	Maarten Mouissie	Spatial modelling (GIS) of natural patterns and processes
	11.30 - 11.45		<i>Coffee break</i>
	11.45 - 13.00	Martin Diekmann	Multivariate techniques in restoration ecology

	13.00 - 14.15		<i>Lunch break</i>
	14.15 - 18.00		Excursion to the nature reserve “Eispohl/Sandwehen”; practical field exercises in a wet heath (pond)
Thursday, 10.7. (lectures in Room NW2, B3236)		Restoration ecology at the population and genetic level	
	9.00 - 10.15	Hans Esselink	Fauna diversity and restoration ecology
	10.15 - 11.30	Jan Bakker	Propagule dispersal
	11.30 - 11.45		<i>Coffee break</i>
	11.45 - 13.00	Raimund Kesel	Succession contra degradation - Ecological restoration of degraded areas with ReviTec and first results from the MedOak project on Majorca island, Spain
	13.00 - 14.15		<i>Lunch break</i>
	14.15 - 18.30		Excursion to the “Borgfelder Wümmewiesen”; practical field exercises on restored ditches
	20.00 -		Course dinner
Friday, 11.7. (lectures in Room NW2, B3236)	9.00 - 10.15	Michael Kleyer	Fragmentation
	10.15 - 11.30	Kai Jensen	Seed ecology: seed banks, germination, establishment
	11.30 - 11.45		<i>Coffee break</i>
	11.45 - 13.00	Gerard Oostermeyer	Genetical aspects of restoration ecology
	13.00 - 14.15		<i>Lunch break</i>
	14.15 - 15.30	Norbert Hölzel	Consequences for nature conservation and restoration in practice
	15.30 - 16.30		Final discussion
	16.30	Organizers	Closure of the summer course