

# PROGRAMA DE FORMACIÓN DE RECURSOS HUMANOS PARA LA INNOVACIÓN

## BECAS PARA FORMACIÓN

### OTORGADAS EN EL MARCO DEL PREMIO A LA MUJER INNOVADORA EN AGRICULTURA 2006

## FORMULARIO DE PROPUESTA

CÓDIGO  
(uso interno)

### SECCIÓN 1. ANTECEDENTES GENERALES DE LA PROPUESTA

#### NOMBRE DE LA ACTIVIDAD

Debe corresponder al nombre de la actividad de formación en la cual se quiere participar con el apoyo financiero de FIA.

Conservación y evaluación de poblaciones naturales de especies medicinales nativas

#### INSTITUCIÓN O ENTIDAD RESPONSABLE QUE DICTA U ORGANIZA LA ACTIVIDAD DE FORMACIÓN

Indicar el nombre de la universidad, instituto, corporación, fundación, empresa u otra entidad, extranjera o nacional, encargada de desarrollar la actividad de formación, indicando si es posible su página Web.

University of Birmingham, Gran Bretaña <http://www.biosciences.bham.ac.uk>

Universität Hohenheim, Stuttgart, Alemania [www.uni-hohenheim.de](http://www.uni-hohenheim.de)

Bund für Naturschutz, Bonn, Alemania [www.floraweb.de/map-pro](http://www.floraweb.de/map-pro)

PhytoConsulting, Marklkofen, Alemania [www.phyto-consulting.de](http://www.phyto-consulting.de)

#### LUGAR DE REALIZACIÓN DE LA ACTIVIDAD

Indicar el nombre de la localidad o ciudad, provincia y/o región y país donde se realizará la actividad de formación. En caso de haber más de un lugar, listarlos todos.

Birmingham, Inglaterra

Stuttgart, Baden-Württemberg, Alemania

Lottstetten, Baden-Württemberg, Alemania (frontera con Suiza)

Bonn, Alemania

Marklkofen, Bavaria, Alemania

#### FECHA DE INICIO Y TÉRMINO DEL PROGRAMA DE ACTIVIDADES

Indicar la fecha de inicio del programa de actividades de la propuesta y la fecha de término.

Inicio:

07-12-2006

Término:

16-01-2007

## CUADRO RESUMEN DE LA PARTICIPANTE EN LA ACTIVIDAD DE FORMACIÓN

En caso de estar prevista la participación de más de una persona, detallar los datos de todas ellas.

(En disquete adjunto se encuentra el archivo Microsoft Excel para completar esta sección)

Nombre del participante	RUT	Lugar o entidad en donde trabaja	Actividad que realiza (productor, investigador, docente, empresario, etc)	Región
1. Hermine Vogel	---	Universidad de Talca	Investigador y docente	VII
2.				
3.				
4.				
5.				

## OBJETIVOS DE SU PARTICIPACIÓN EN LA ACTIVIDAD DE FORMACIÓN

Indique el objetivo general y específicos de su participación en la Actividad de Formación en la que propone participar.

### Objetivo general:

Conocer métodos de conservación y evaluación de poblaciones naturales de especies medicinales nativas de Chile

### Objetivos específicos:

1. Conocer aspectos prácticos de los sitios, monitoreo y manejo de la diversidad de los recursos vegetales silvestres que se conservan *in situ* en proyectos de especies silvestres y recursos genéticos locales.
2. Conocer métodos estadísticos de evaluación de poblaciones naturales
3. Conocer ejemplos de aplicación de la genética de poblaciones en plantas silvestres
4. Conocer ejemplos de manejo de poblaciones silvestres para su conservación
5. Adquirir libros especializados
6. Discutir el caso de bailahuén con especialistas en plantas medicinales (Dr. Ernst Schneider, PhytoConsulting, y Dr. Uwe Schippmann, organizador del taller técnicas de recolección de plantas medicinales silvestres, BfN), buscando consejos y recomendaciones

## DESCRIPCIÓN DE LA ACTIVIDAD DE FORMACIÓN

En esta sección se deben describir las características fundamentales de la actividad de formación en la cual se propone participar. Dentro de éstas se debe identificar el o los objetivos de la actividad, la descripción de los contenidos que serán desarrollados o abordados o técnicas que serán transferidas, entre otras posibilidades y la malla curricular, cuando corresponda.

Además se debe listar el equipo docente o de instructores que serán responsables de impartir la actividad formativa.

Se deberá realizar también una descripción de las actividades que se realizarán durante el curso o pasantía u otra iniciativa, ya sean clases, reuniones, salidas a terreno, actividades de laboratorio, prácticas, informes, entre otros. Las actividades deberán presentarse ordenadas secuencialmente, indicando además la fecha en que serán realizadas de acuerdo al programa entregado por los organizadores.

**Carta o certificado de aceptación del postulante o grupo en la actividad de formación:** Se deberán adjuntar las cartas o documentos que certifiquen la aceptación del participante (o grupo de participantes, si es el caso) en la actividad de formación, emitido por la institución que la imparte.

### Objetivos de la actividad de formación

#### University of Birmingham, Inglaterra:

Esta actividad corresponde a la parte central de un curso de postgrado ("Conservation preparation", "ex situ conservation" e "in situ conservation") que dura del 20 de noviembre al 22 de diciembre. Por razones laborales y familiares sólo podré participar a partir del 11 de diciembre. Sin embargo, Dr. Nigel Maxted está dispuesto de ponerme al día.

Los objetivos de esta actividad son: familiarizar al alumno con el tema ilustrando aspectos prácticos sobre la localidad, el monitoreo y manejo de la diversidad genética vegetal y conservación de plantas silvestres *in situ* y razas locales en *on-farm* proyectos.

*Este curso se complementará con la visita a las siguientes instituciones con contactos específicos, relacionados al tema:*

#### Universität Hohenheim, Alemania:

En el Institute of Plant Production and Agroecology in the Tropics and Subtropics se dicta el curso de postgrado de "Biodiversity, Plant and Animal Genetic Resources", cuyo programa aún no está definido. Este curso está dirigido exclusivamente a alumnos de postgrado y no abierto a público. Sin embargo, la coordinadora me recomendó el contacto con el Dr. Heiko Parzies, quien está a cargo de los temas "on farm", "Homegarden", "Reservas genéticas", "Genetic structure of populations", "Parameters for genetic diversity within and between populations", "genetic diversity in crop species" y "Utilization of plant genetic resources in plant breeding".

El Dr. Parzies está dispuesto a recibirme en una fecha por definir en diciembre-enero para mostrar su trabajo de investigación y discutir sobre nuestro proyecto.

Además, se aprovechará de visitar la biblioteca, conocer publicaciones actuales significativas y relacionadas con el tema y comprar literatura especializada.

Dr. Schippmann, Head of the Dept. Plant Conservation, German Scientific Authority to CITES, Federal Agency for Nature Conservation, BfN

El Dr. Schippmann es el organizador del Expert Workshop "Assessing the sustainable yield in medicinal and aromatic plant collection" que se realizará en Alemania del 14 al 17 de septiembre. Ofreció reunirse conmigo en diciembre-enero para informarme de los resultados y avances en el tema y entregarme material de trabajo. El workshop pretende responder a las preguntas ¿Cuánto recurso existe? ¿Cómo es la regeneración de las plantas después de la cosecha en la recolección silvestre? – Son las mismas preguntas a las que nos enfrentamos en nuestros proyectos de cultivo *in situ* de plantas medicinales nativas.

Del mismo workshop contacté a un expositor por el interés de su tema: Dr. Tremp: "Scientifically reliable yet cost-effective population assessment methods: appropriate levels of statistical precision"

Dr. H. Tremp, Universität Hohenheim y Limnoterra, Lottstetten

El Dr. Tremp es docente en las Universidades de Hohenheim y Freiburg, pero trabaja como independiente. Está dispuesto a recibirme en su oficina para conversar sobre los principios importantes del estudio de los recursos naturales y los aspectos especiales a considerar en plantas silvestres sometidas a recolección. Además recomendará literatura que le parece útil para nuestros proyectos.

Dr. Schneider, PhytoConsulting, Marklkofen

El Dr. Schneider ha trabajado en un proyecto de cultivo *in situ* de la planta medicinal Devil's Claw en Sudáfrica. Por diversos proyectos laborales ha visitado Chile en varias oportunidades. Ha realizado un estudio sobre el mercado de baillahuén en Alemania. En un encuentro con él se discutirá el tema del.

## **Contenidos que se abordarán**

### University of Birmingham:

- Aspectos generales sobre la necesidad y diferentes técnicas de conservación de plantas
- Aspectos generales sobre la exploración de plantas, colección de semillas y otras formas de conservación
- Reservas genéticas, conservación de plantas silvestres o cultivos on-farm in situ

### Universität Hohenheim

- Conservación on-farm y en huertos caseros
- Estructura genética de las poblaciones y parámetros de la diversidad genética entre y dentro de las poblaciones
- uso de recursos genéticos para el mejoramiento genético de plantas

### Dr. Tresp

- Principios importantes del estudio de los recursos naturales
- Aspectos especiales a considerar en plantas silvestres sometidas a recolección

### Dr. Schneider, PhytoConsulting

- cultivo in situ de plantas medicinales silvestres
- el caso específico de bailahuén

### Dr. Schippmann, BfN

- Evaluación de las poblaciones naturales de plantas medicinales sometidas a recolección silvestre
- Evaluación de la regeneración de plantas después de la cosecha

## **Equipo docente o instructor(es)**

University of Birmingham: Dr. Nigel Maxted  
Universität Hohenheim: Dr. Heiko Parzies  
Dr. Tremp  
PhytoConsulting: Dr. Schneider  
BfN: Dr. Schippmann

(información detallada adjunta)

## **Programa de Actividades**

**Jueves 7 – domingo 10 de diciembre 2006**

Viaje Talca (Chile) – Frankfurt (Alemania) – Birmingham (Reino Unido)

**Lunes 11 – viernes 22 diciembre 2006**

Curso de Conservación, University of Birmingham

**Sábado 23 de diciembre de 2006**

Viaje Birmingham (RU) – Frankfurt – Stuttgart (Alemania)

**Domingo 24 a Martes 26 de diciembre de 2006**

Feriado

**Miércoles 27 a viernes 29 de diciembre de 2006**

Visita a Universität Hohenheim

**Sábado 30 de diciembre de 2006 a Lunes 1 de enero de 2007**

Feriado

**Martes 2 a miércoles 3 de enero de 2007**

Visita a Universität Hohenheim

**Jueves 4 a viernes 5 de enero de 2007**

Visita a Dr. Schippmann, BfN, Bonn

**Lunes 8 a martes 9 de enero de 2007**

Visita Dr. Tremp, Singen, Lottstetten

**Jueves 11 y viernes 12 de enero de 2007**

Visita a PhytoConsulting, Marklkofen

**Lunes 15 y martes 16 de enero de 2007**

Viaje de regreso Alemania - Chile

A pesar de que las personas han informado su disponibilidad de recibirme, podrían producirse cambios en las fechas indicadas arriba debido a las vacaciones de invierno en Alemania (27 diciembre a 5 de enero).

## **CRONOGRAMA DE ACTIVIDADES DE LA PROPUESTA**

Se deberá especificar la secuencia cronológica de las etapas de la propuesta, indicando las actividades, fecha y lugar en que se desarrollará cada una de ellas. Se deben detallar tanto las actividades previas a la iniciativa de formación, como las que constituyen la actividad de formación propiamente tal.

(En disquete adjunto se encuentra el archivo Microsoft Excel para completar esta sección)

<b>FECHA</b> <b>(Día/mes/año)</b>	<b>ACTIVIDAD</b>	<b>OBJETIVO</b>	<b>LUGAR</b>
7 - 10 dic 2006	Viaje		Talca, Chile - Inglaterra
11-22 dic 2006	Short course conservation	1, 2, 5	Birmingham, Reino Unido
23 dic 2006	Viaje		Inglaterra- Stuttgart, Alemania
27 dic 2006 a 3 ene 2007	Contactos y reuniones con científicos Univ. Hohenheim	2, 3, 5	Stuttgart, Alemania
4-5 ene 2007	Reunión Dr. Schippmann	4, 6	Bonn, Alemania
8-9 ene 2007	Reunión Dr. Tremp	2, 4, 5	Singen, Alemania
11-12 ene 07	Reunión Dr. Schneider	4, 6	Marklkofen, Alemania
15-16 ene 07	Viaje		Alemania-Chile

**FICHA DE ANTECEDENTES PERSONALES RESUMIDA****ANTECEDENTES PERSONALES**  
**(Obligatorio para todos los participantes)**

Nombre completo	Hermine Maria VOGEL
RUT	
Fecha de Nacimiento	
Nacionalidad	Alemana
Dirección particular (indicar comuna y región)	
Fono particular	
Celular	
E-mail	
Banco y número de cuenta corriente personal	
Género (Masculino o femenino)	Femenino
Indicar si pertenece a alguna etnia (mapuche, aymará, rapa nui, atacameña, quechua, collas, alacalufe, yagán, huilliche, pehuenche)	No
Nombre y teléfono de la persona a quien avisar en caso de emergencia	
<b>ACTIVIDAD PROFESIONAL Y/O COMERCIAL (ACTUAL)</b>	
Nombre de la Institución o Empresa a la que pertenece	Facultad de Ciencias Agrarias, Universidad de Talca
Rut de la Institución o Empresa	
Nombre y Rut del Representante Legal de la empresa	Juan Antonio Rock Tarud
Cargo	Rector
Profesión	Ingeniero Comercial
Dirección comercial (Indicar comuna y región)	2 Norte 685, Talca, VII Región
Fono y Fax comercial	



E-mail	
Clasificación de público o privado	público
Banco y número de cuenta corriente de la institución	
<b>ACTIVIDAD COMO AGRICULTOR (ACTUAL)</b> (Completar sólo si se dedica a esta actividad)	
Tipo de Agricultor (pequeño, mediano o grande)	No corresponde
Nombre de la propiedad en la cual trabaja	
Cargo (dueño, administrador, etc.)	
Superficie Total y Superficie Regada	
Ubicación (detallada)	
Rubros a los que se dedica (incluir desde cuando se trabaja en cada rubro) y niveles de producción en el rubro de interés	
Resumen de sus actividades	
Organizaciones (campesinas, gremiales o empresariales) a las que pertenece y cargo, si lo ocupa	

## **Anexo 2**

**Antecedentes académicos del curso  
Y de los científicos a contactar**

## Short Course for Hermine Vogel

<b>a</b>	<b>Conservation preparation</b>
<b>Sem 1/Mod 2</b>	<b>Staff responsible:</b> N. Maxted and A.S. Pullin
<b>Description:</b>	Students are introduced to biodiversity conservation and more specifically plant genetic conservation through an overview of the reasons to conserve diversity, the techniques used and the linking of conserved diversity to its utilisation. The course reviews the methods that are employed to target conservation actions efficiently, such as ecogeography and evidence-based conservation assessment.
<b>Aims:</b>	To provide an overview of the need for and the different techniques used for plant conservation. To provide a theoretical and practical overview of means of preparing for efficient and effective conservation action, using ecogeographic and evidence-based techniques.
<b>Objectives:</b>	This course provides an overview and introduction to biodiversity conservation and specifically, plant genetic resource conservation.
<b>Delivery:</b>	15 lectures (15 hours) 3 practicals (9 hours)
<b>Assessment:</b>	In course assignment

<b>b</b>	<b><i>Ex situ</i> conservation</b>
<b>Sem 1/Mod 2</b>	<b>Staff responsible:</b> N. Maxted, B. Ford-Lloyd
<b>Description:</b>	This is a lecture-based review of the practice and theory aspects of <i>ex situ</i> (off site) conservation including sampling germplasm of seed and vegetatively propagated crops, <i>in vitro</i> techniques and botanic garden conservation. The student is lead through the process of preparing for and undertaking a collection expedition, and then conservation of the material collected. The importance of non-selective, random and selective sampling is discussed in terms of wild species and crop germplasm. The value of botanic gardens, arboreta, farmer-based and community-based conservation, field gene banks and seed gene bank conservation are considered. Plant growth regulators, media and aseptic techniques used in tissue culture are reviewed along with micro-propagation and its applications. Preparation of plant protoplasts and protoplast fusion. Callus culture, genetic transformation. Somaclonal variation and genetic stability. Anther culture and the production of doubled haploids. Slow growth <i>in vitro</i> conservation and cryopreservation techniques and applications for conservation of vegetatively propagated crops and recalcitrant species.
<b>Aims:</b>	To provide a theoretical and practical overview of plant exploration, seed and other forms of germplasm collection, as well as the use of plant tissue culture in plant conservation.
<b>Objectives:</b>	To familiarise the student and illustrate practical aspects of plant exploration, seed and other germplasm collection, including the <i>ex situ</i> conservation of fruit and timber trees, forages and wild species.
<b>Delivery:</b>	10 lectures (supplemented by guest speakers) (10 hours) 2 practicals (6 hours) 1 seminar (3 hours) 1 gene bank visit (5 hours)
<b>Assessment:</b>	In course assignment

<b>c</b>	<b><i>In situ</i> conservation</b>
<b>Sem 1/Mod 2</b>	<b>Staff responsible:</b> N. Maxted, A.S. Pullin

<b>Description:</b>	The lecture course focuses on the conservation of plants in the location where they are currently found, whether as landraces of a crop conserved on-farm in traditional farming systems or as populations of wild species conserved in the wild. The course is illustrated using practical examples. Topics covered include farmer participation, relative site assessments, assessment of local socio-economic and political factors, reserve design, taxon and reserve sustainability, formulation of the management plan, initiation of reserve management plan, reserve monitoring, community inter-relationships, traditional, general and professional utilisation, and linkage to <i>ex situ</i> conservation, research, duplication and education. However, it is not always possible to undertake conservation in pristine habitats, ecosystems are often partly destroyed or degraded through the direct or indirect actions of humans. Damage to habitats need not be permanent and to some extent species, habitats and ecosystems can be restored on a local basis if the materials (the species) and the expertise exist. Case studies will be used to critically examine the effectiveness of ecological restoration and illustrate the range of approaches required to cope with different levels of damage.
<b>Aims:</b>	To familiarise the student and illustrate practical aspects of genetic reserve and on-farm <i>in situ</i> conservation of wild and crop species, as well as providing an introduction to the principles and practice of ecological restoration.
<b>Objectives:</b>	To familiarise the student and illustrate practical aspects of the location, monitoring and management of plant genetic diversity conserved <i>in situ</i> of wild species in genetic reserve and landraces of crop found in on-farm conservation projects. By the end of the course students should: 1. Be able to define ecological restoration and convey reasons for its significance for plant conservation; 2. Have knowledge of the different problems faced in restoration efforts; 3. Have knowledge of some practical examples of ecological restoration.
<b>Delivery:</b>	10 lectures (10 hours); 1 data interpretation practical (3 hours) 1 seminar (3 hours); 1 one day visits to reserve site (8 hours)
<b>Assessment:</b>	In course assignment

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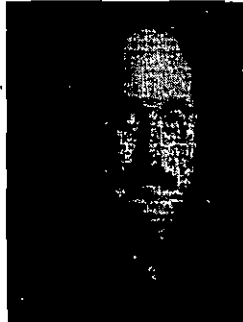
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Dr. N. Maxted



Telephone: +44 (121) 41 45571

Fax: +44 (121) 41 45463

Email: N.Maxted@bham.ac.uk

PhDs offered by Dr. Maxted @  
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School of Biosciences  
The University  
Edgbaston  
Birmingham  
B15 2TT  
UK

**Research Interests** Oct. 2002 to date: University of Birmingham, Birmingham, UK. Project for an EC Framework 5 Thematic Network project entitled, European Crop Wild Relative Conservation Forum (PGR Forum). The project involves 23 partners representing 21 countries and two institutes and aims to provide a European forum for the assessment of taxonomic (species) diversity of European wild crop relatives and develop appropriate methodologies that can be used to conserve this diversity.

January 2000 to date: University of Birmingham, Birmingham, UK. Principle investigator for funded project concerned with Studying the Relationship between Ecogeographic Distribution and Genetic Diversity in the UK's Plant Genetic Resources. This project is a multi-institute project (also including Millennium Seed Bank, RBG Kew; HRI, Wellesbourne and IGER, Aberystwyth) coordinated at the University of Birmingham with the aim of to investigate the relationship between ecogeographic distribution and genetic diversity for some economically important plant genetic resource species native to the UK.

Feb. 2003 to date: University of Birmingham, Birmingham, UK. Chair of the IUCN Species Conservation Commission Plant Genetic Resources Specialist Group. This is a new group established by experts with the aim of producing an IUCN Red List of Threatened Species for the world's economically important plant species. The PGR/SG also provides technical and scientific advice to governments, international environmental treaties, conservation organisations, and aims to develop a Conservation Action Plan.

Dec. 1985 to date: Various Plant Genetic Resources and Conservation Consultancies. Eco surveys linked to the targeted conservation activities in West and Central Asia, and Africa. These have involved using detailed ecogeographic data to pinpoint interesting taxon locations, establish and *in situ* conservation priorities and then undertaking finely targeted conservation mission writing conservation action plans for priority groups, such as temperate *Vicia* and tropical *Vicia*.

Selected Publications

Hawkes, J.G., Maxted, N. & Ford-Lloyd, B.V., (2000). The ex situ conservation of plant genetic resources. pp. 1-250. Kluwer, Dordrecht.

Maxted, N., Ford-Lloyd, B.V. & Hawkes, J.G., (1997). Plant genetic conservation: the in situ conservation of plant genetic resources. Chapman & Hall, London. pp. 451.

Maxted, N. & Bennett, S., (2001). *Plant Genetic Resources of Legumes in the Mediterranean*. Kluwer, Dordrecht.

Tomooka, N., Vaughan, D., Moss, H. and Maxted, N., (2003). *The Asian Vigna: Vigna subg Ceratotropis genetic resources*. Pp. 1-270. Kluwer, Dordrecht.

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## For Prospective Postgraduate Students

### MSc Conservation and Utilization of Plant Genetic Resources

- The Challenge
- Aim of Training
- The Courses
- Specific Course Objectives
- A Teaching Partnership
- Careers
- Course Structure
- Course Timetable
- Mediterranean Field Course
- Entry Requirements
- Finance
- Applying to Birmingham
- Comments from past students

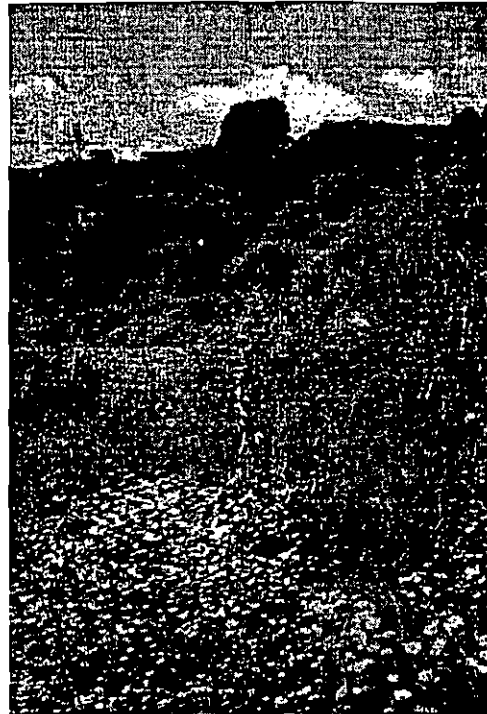


The School of Biosciences, The University of Birmingham, in collaboration with the Royal Botanical Gardens, Kew offer international postgraduate training opportunities in the Conservation and Utilization of Plant Genetic Resources.

#### The Challenge

The continuing challenge for the world's agricultural, botanical and conservation scientists is to feed an ever increasing population and to halt the rate of plant extinctions. The World Bank has estimated that currently 500 million people in the poorest countries of Africa, Asia and Latin America suffer from chronic undernourishment, while IUCN and WWF estimate that up to 60,000 plant species nearly one in four of the world's total may become extinct by the middle of this century.

The economic, political and social consequences of the steady loss of plant genetic diversity combined with rapid population growth is likely to be catastrophic if left unchecked. The potential benefits to humankind, however, that could result from the conservation and sustained exploitation of the world's genetic diversity are potentially limitless, especially with new found scientific expertise combining plant breeding and biotechnology. This exploitation assumes that such diversity will continue to exist and is available for incorporation into new varieties of economic plants. The steady loss of plant genetic diversity in recent years because of widespread landclearing and environmental degradation, casts doubt on the future availability of plant germplasm. The challenge therefore, is to provide scientists throughout the world with appropriate skills both to conserve and to utilise the world's flora.



#### Aim of Training

To provide trainees from developing and developed countries with the practical and theoretical skills they require to conserve and utilise botanical diversity for the benefit of all humankind.

#### The Courses

The leading training and research reputation of the School of Biosciences and the Royal Botanic Gardens in the conservation and utilisation of

botanical diversity is well established. Since 1969, the University of Birmingham has provided short course and Masters degree training for over 1,200 students from 93 countries in fields such as *in situ*, *ex situ* and *in vitro* conservation, applied taxonomy, crop diversity and seed technology, as well as aspects of plant breeding and biotechnology, leading to the effective utilization of plant genes. The educational activities offered at Birmingham are complemented by those of the Royal Botanic Gardens, where courses in Herbarium Techniques, Horticulture, the Management of Botanic Gardens and many others are taught.

### Specific Course Objectives

Specifically the course aims to provide students with:

- An understanding of genetic variation within the botanical diversity of crops and wild species;
- The ability and confidence to formulate effective conservation management policies;
- The skills to implement and integrate *ex situ*, *in situ* and *in vitro* conservation strategies;
- The competence required to manage *ex situ* (genebank) and *in situ* (reserve) collections;
- An understanding of breeding and biotechnology, and how genetic resources may be utilised for the benefit of humankind;
- The ability to identify, research and resolve a detailed scientific problem;
- An introduction to the international conservation and utilisation community;
- An understanding of the ethical, moral and economic issues involved in the conservation and utilisation of botanical diversity.



### A Teaching Partnership

The MSc in Conservation and Utilisation of Plant Genetic Resources is provided by the University of Birmingham in collaboration with the Royal Botanic Gardens, Kew. The Royal Botanic Gardens, Kew, founded in 1759, has long been regarded as one of the world's foremost institutions for botanical science. Kew manages a unique global reference collection of 40,000 living plant species (of which 2,000 are endangered) and six million preserved specimens. Its field and laboratory research programmes constantly generate new knowledge ranging from molecular biology to horticulture. Kew staff are involved both in teaching in Birmingham and at both of their two sites in

southern England. All students attend two five-day courses, one in gene bank management at the Millennium Seed Bank, Wakehurst Place, Sussex and the second in plant biodiversity and conservation at Royal Botanic Gardens, Kew. During the year, as well as visiting the Royal Botanic Gardens, Kew and Wakehurst Place, all students visit other relevant industrial and governmental training partners, such as John Innes Research Centre, Horticultural Research International, Natural History Museum, Plant Breeding International, Lion Seeds, English Nature, Institute of Grassland and Environmental Research, World Conservation Monitoring Centre, Oxford Forestry Institute, Henry Doubleday Research Association, to name but a few. Other specialist lectures are also provided by international and national plant conservation experts.

### Course Structure

The School offers Masters degree, diploma and certificate short course training. The Masters degree runs for twelve months, commencing in late September. The first 8 months are divided into four modules, (modules 1



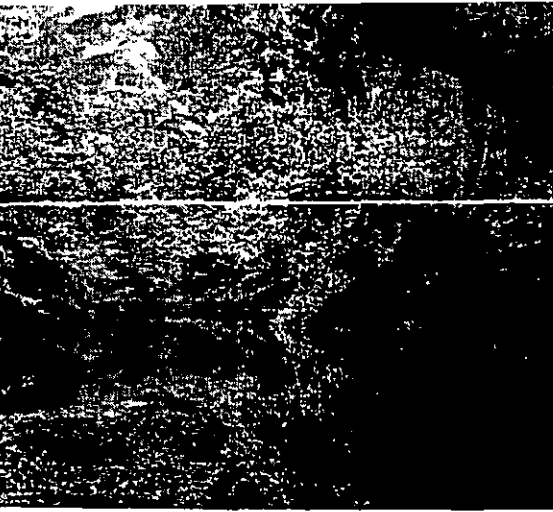


and 2, and 3 and 4 are taught in parallel), which are assessed on course work and written examinations. The examinations are taken following completion of modules 2 and 4. Following successful completion of the taught element of the course, students undertake a 4 month research project. An attempt is made to relate research projects to either the student's home country's needs or home institutional activities. Likely project topics may include: biosystematics or ecogeography studies of crop related taxa, conservation data management and methodologies, germplasm evaluation and seed technology, as well as many others. Projects can either be based within the School at Birmingham or in an appropriate offsite research centre, e.g. Royal Botanic Gardens, Kew or Wakehurst Place. Projects are examined by a written dissertation. Although the bulk of the lectures are taught by School staff, parts of the course are given by visiting national and international specialists.

The School annually offers a Diploma Course in Plant Genetic Resources. This course is composed of the four taught modules of the Masters course and lasts for twenty five weeks. The course modules are designed to be self-reliant, which means that they are also available as four independent Short Courses. Students attending a one-module course are provided with a Certificate of Attendance. The Diploma and Certificate courses are orientated to provide in-service, refresher or introductory training for those involved in the conservation, utilisation or development industries.

### Course Timetable

<i>Module 1 Basic genetics and data management</i>	<i>Module 2 Plant conservation and quantitative genetics</i>
Statistics	Complementary conservation
Computing	Ecogeography
Data management	Ex situ conservation
Database management	In situ conservation
Introductory cytogenetics	Restoration ecology
Basic genetics	Seed conservation
	Seed gene banks
	Quantitative genetics
Total Hours 112	Total Hours 117
Research Assignment 1 - Mock Grant application	
Exams for Module 1 and 2	
<i>Module 3 Sustainable plant utilisation and biotechnology</i>	<i>Module 4 Botanical diversity studies</i>
Plant breeding	Genetics of conservation
Biotechnology	Reproductive biology
Plant tissue culture / in vitro conservation	Genetics of disease resistance
Politics and ethics of conservation and use	Crop evolution and plant diversity
	Data analysis
	Applied taxonomy
	Botanical diversity
Total Hours 85	Total Hours 94
Research Assignment 2 - Conservation Field Course in the Mediterranean	
Exams for Module 3 and 4	
Research Project: Late May to Early September	



Students are expected to cover the whole course, but are encouraged to develop their individual interests to a greater depth through directed reading and assessment work.

#### **Outside Birmingham**

During the year students visit research establishments involved with conservation, plant breeding and genetic resources, spending five days at both the Royal Botanic Gardens, Kew and the Genebank at Wakehurst Place. Other visits may include: Horticultural Research International, Wellesbourne; Institute of Grassland and Environmental Research, Aberystwyth; John Innes Research Institute and Lion Seeds Limited. The students also visit one of the major British conservation Non-Governme

ntal Organisations, the Henry Doubleday Research Association, to learn of the national and international involvement of NGOs in plant conservation and utilisation.

#### **Mediterranean Field Course**

During the Easter vacation all students participate in a 14 day field course to the Mediterranean region. Recently the course has been given in Turkey. The object being to develop practical aspects of the theoretical subjects covered in detail in Birmingham. The areas covered include:

*ex situ* conservation of wild and crop species, field seed conservation, population sampling strategies, inventory making, plant identification, voucher specimen collection, vegetation assessment, *in situ* reserve management, community ecology and field data collection.



#### **Entry Requirements**

The MSc and Diploma courses are primarily designed for candidates proficient in English and with a good honours degree from an approved institution, or the equivalent, in biology, genetics, plant breeding, agricultural botany, horticulture, or agriculture. Candidates well qualified in certain other fields may also be considered. To attend a Certificate course candidates must be proficient in English. Advanced help with English is available and students will be advised if attendance at an arranged language course will be necessary.

#### **Careers**

Opportunities for career development need to be considered by the student throughout the course. Staff are pleased to discuss potential career paths and opportunities with students throughout the year. We are very proud of our past graduate employment rate, about 95% of our graduates obtain employment in a related field and many take up senior post in developing countries.

#### **Finance**

Students from developing countries should approach their institute or appropriate government Department concerning financial support. The British Council or British Embassy in their own country can give further advise about British training grants. The International Plant Genetic Resources Institute can provide advice concerning international fellowship funding.

The short courses and Masters degree regularly receive studentship funding from the premier international (International Plant Genetic Resources Institute, Food and Agriculture Organisation of the United Nations, United Nations Development Program, United Nations Environment Program, Southern African Development Coordination Centre, World Bank), European (European Science Foundation) and national (British Overseas Development Administration

and Ministry of Agriculture, Fisheries & Food) agencies in the fields of plant diversity and genetic conservation. Past students currently play important roles in numerous national and international agencies.

Students from European countries are eligible for a range of fellowships annually offered by the School and funded by the European Social Fund, BBSRC and Ministry of Agriculture, Fisheries and Food. Staff tutors are also willing to provide advice concerning other sources of national international fellowship funding

- Comments from past students

### **How to apply to Birmingham**

If you would like to obtain more information, please contact:

Lyn Ford, MSc Course Administrator,  
The School of Biosciences  
The University of Birmingham  
Edgbaston  
Birmingham  
B15 2TT

Tel: (+44) 0121 414 5890  
Fax: (+44) 0121 414 5463  
Email: L.C.Ford@bham.ac.uk

Or use our electronic application form:

- Application form for Postgraduate study

If you choose this method please reply to the question - "Which Study Programme do you wish to apply for?" with MSc Conservation and Utilization of Plant Genetic Resources.

The University of Birmingham web pages can provide further general information about:

- Information for Prospective Postgraduates
- The City of Birmingham
- About the University
- University accommodation
- Programme fees

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Hohenheim kompakt  
Studium  
Forschung  
Beratung, Dienstleistung  
Organisation und Struktur  
Suche

» Universität Hohenheim » Forschung & Lehre » Fakultäten  
» Fakultät Agrarwissenschaften (300) » Institut für  
Pflanzenzüchtung, Saatgutforschung und Populationsgenetik  
(350)

UNIVERSITÄT  
HOHENHEIM

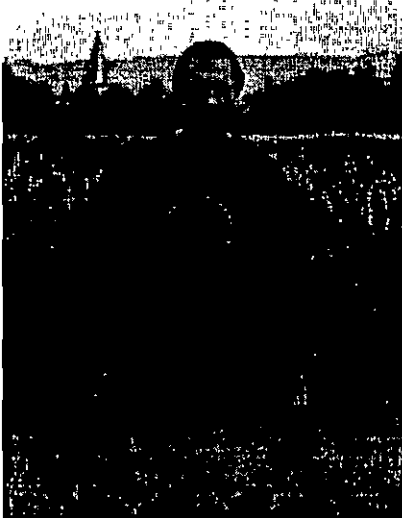


English

Rund ums WWW

Aktuelle Informationen

1998  
1999  
2000  
Dr. Heiko K. Parzies



▼ INFOS

▼ EXTRAS

Status ▶ Wissenschaftl. Angestellter  
Telefon ▶ 459-3488  
E-Mail (allg.) ▶ parzies@uni-hohenheim.de

Einrichtung	Funktion	E-Mail	Telefon	Raum
Eg. Populationsgenetik (350b)	Wiss. Assistent		459-3488	Fruwirthstr. 21, Inst.bau 129

INFO

EXTRAS

- ▶ Forschungsprojekte
- ▶ Publikationen

- ▶ Ausführliche Beschreibung aller Projekte am Lehrstuhl für Populationsgenetik

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Letzte Aktualisierung 06.07.2006

X-Sieve: CMU Sieve 2.2  
X-Virus-Scanned: amavisd-new at uni-hohenheim.de  
X-Virus-Scanned: amavisd-new at uni-hohenheim.de  
From: "Eike Fischer" <fischere@uni-hohenheim.de>  
To: "'Hermine Vogel'" <hvogel@utalca.cl>  
Subject: AW: WG: Anfrage Kurs Biodiversität WS  
Date: Tue, 11 Jul 2006 16:13:08 +0200  
X-Mailer: Microsoft Office Outlook, Build 11.0.5510  
Thread-Index: Acak8j4/3JZh6+pKTqmVIVnQXuwR0QAAJYTw  
X-Virus-Scanned: by amavisd-new-20030616-p10 (Debian) at utalca.cl

Liebe Frau Vogel,

diese Vorlesung wird aufgrund von Umstrukturierungen im Tropenmaster Programm leider erst vom 11. Januar bis 02. Februar 2007 wieder stattfinden. Falls Sie trotzdem an den Vorlesungsunterlagen interessiert sind, können Sie diese gerne unter:

[http://www.uni-hohenheim.de/www380/380c/lectures\\_in\\_english/Notes/Lecture\\_notes.htm](http://www.uni-hohenheim.de/www380/380c/lectures_in_english/Notes/Lecture_notes.htm)

Passwort: Biodiv\_WiSe0506

Bzw. das deutschsprachige Modul Biodiversität und Pflanzengenetische Ressourcen in den Tropen und Subtropen unter:

[http://www.uni-hohenheim.de/www380/380c/Vorlesungen\\_in\\_deutsch/Vorlesungen/Lecture\\_notes.htm](http://www.uni-hohenheim.de/www380/380c/Vorlesungen_in_deutsch/Vorlesungen/Lecture_notes.htm)

Passwort: M1113\_WiSe0506

einsehen. Ein eventuell interessanter Ansprechpartner wäre außerdem Dr. Heiko Parzies aus dem Institut für Pflanzenzüchtung, Saatgutforschung und Populationsgenetik. Seine E-Mail Adresse ist parzies@uni-hohenheim.de und er arbeitet relativ viel im Bereich Pflanzengenetische Ressourcen. Allerdings mit Schwerpunkt auf Nutzpflanzen. Möglicherweise kann er Ihnen aber auch sonst weiterhelfen.

Viele Grüße

Elke Fischer

\*\*\*\*\*  
Dr. Elke Fischer  
University of Hohenheim  
Institute 380 - Plant Production and Agroecology in the tropics and subtropics  
70599 Stuttgart



## PD Dr. H. Tremp



Fachgebiet Pflanzenökologie und Ökotoxikologie

Universität Hohenheim  
"Institut für Landschafts- und Pflanzenökologie (320)"

Ökologiezentrum 2  
August-von-Hartmann-Str. 3  
70599 Stuttgart-Hohenheim

[trempe@uni-hohenheim.de](mailto:trempe@uni-hohenheim.de)



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# UTB

Biologie · Agrarwissenschaften  
Ökologie · Geowissenschaften

### Statistik zum Anfassen!

Dieses kurz gefasste Lehrbuch gibt eine Übersicht über die **Methoden**, die bei der Erhebung von Vegetationsdaten im Gelände sowie bei der statistischen Datenauswertung eine Rolle spielen. Ausführliche **Beispiele** mit realen Datensätzen machen neugierig auf das, was aus eigenen Daten ausgearbeitet werden kann. Auf Fragen aus Vegetationsökologie, Umweltmonitoring und praxisorientiertem Artenschutz können so wissenschaftlich fundierte Antworten gegeben werden.

### Aus dem Inhalt:

- Vegetationsökologische Begriffe und Fragestellungen
- Vorbereitung vegetationsökologischer Untersuchungen
- Aufnahme der Vegetation
- Physiognomisch-strukturelle Vegetationsbeschreibung
- Skalierung vegetationsökologischer Merkmale
- Vegetation und Standortbeurteilung
- Ähnlichkeit, Distanz und Diversität
- Vergleich vegetationsökologischer Daten
- Kontingenz-, Korrelations- und Regressionsanalyse
- Räumliche Analyse, Klassifikation und Ordination

[www.utb.de](http://www.utb.de)



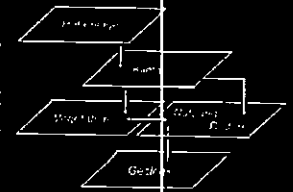
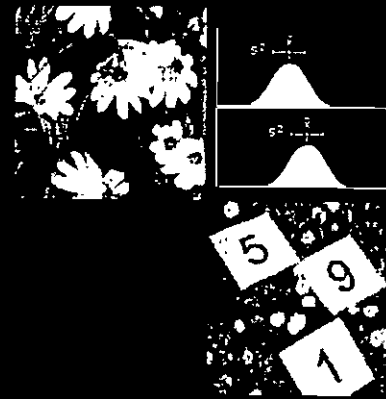
Aufnahme und Analyse  
vegetationsökologischer Daten

Tremp

UTB 8299

Horst Tremp

# Aufnahme und Analyse vegetationsökologischer Daten



Ulmer

# UTB

## Expert Workshop

# ***Assessing the Sustainable Yield in Medicinal and Aromatic Plant Collection***

International Academy for Nature Conservation,  
Isle of Vilm, Germany

**14 - 17 September 2006**

Everybody talks about sustainability but its definition is still a matter of debate amongst scientists, conservationists and policy makers. It is, however, clear that a core element of sustainable management of wild plants is a sound assessment of the resource itself. "How much of the resource is out there?", "How well does it regenerate after harvest?" are among the questions to be answered. All this involves field work, time and money.

Resource assessment is also a key issue in the elaboration of the *International Standard for the Sustainable Wild Collection of Medicinal and Aromatic Plants* (ISSC-map) which is presently being coordinated by WWF-TRAFFIC, IUCN-MPSG and BfN (for more information visit [www.floraweb.de/map-pro](http://www.floraweb.de/map-pro)).

We therefore considered it timely to hold a workshop which offers a platform to discuss the methodological basis of resource assessments for medicinal plants as well as minimum requirements to make them both scientifically sound and affordable.

It is obvious that the costs for well-founded resource assessment investigations are seen as prohibitive by many actors. The general aim of the workshop will therefore be to provide an overview of resource assessment methods and, in a second step, to discuss possible ways forward to make them cost effective. The outcomes of this meeting will be incorporated in the ISSC-map and its forthcoming implementation.

### **Organizers**

The expert workshop is organized by Dagmar Lange ([dagmarlange@t-online.de](mailto:dagmarlange@t-online.de)), University of Landau, Germany on behalf of the German Federal Agency for Nature Conservation (BfN) and in close cooperation with Uwe Schippmann ([uwe.schippmann@bfm.de](mailto:uwe.schippmann@bfm.de)) from BfN. Wiltrud Fischer from the BfN-branch office Vilm is the local organizer ([wiltrud.fischer@bfm-vilm.de](mailto:wiltrud.fischer@bfm-vilm.de)).

### **Venue**

The expert workshop will be held at the International Academy for Nature Conservation (INA) on the Island of Vilm in North Germany, 14-17 September 2006 (arrival 14th, departure 17th).



The International Academy for Nature Conservation is based on the Isle of Vilm. Vilm is adjacent to the Island of Rügen which is situated in the North East of Germany in the Baltic Sea. Vilm can be reached by a ten minute boat ride from Rügen. Participants will be accommodated in the guesthouses of the Academy on the island which is a natural reserve. Vilm is partly covered by spectacular beech forest which has not seen forestry measures since 1530. For more details about Vilm visit [www.bfn.de/06\\_akademie\\_natursch.html](http://www.bfn.de/06_akademie_natursch.html). For details on travelling see the attached form *Travel Information*.

## Registration and Funding

To register for the workshop, please complete and return the attached *Registration Form* to [Martina.Finger@bfn-vilm.de](mailto:Martina.Finger@bfn-vilm.de) by 20 August 2006. Limited funding is available to support transport and subsistence costs for participants who cannot afford their participation otherwise; please indicate on the attached form if such funding is required. All applicants will be informed in due course whether assistance can be granted.

## Draft Programme

Thursday, 14 September 2006		
<b>Arrival</b>		
20.00	Welcome by BfN INA and the organizers	
	Introduction to Vilm and warm up	
Friday, 15 September 2006		
<b>Resource assessment: An introduction</b>		
09.00-09.45	Dagmar Lange, Uwe Schippmann	Opening Presentation of the literature overview on resource assessment methods and case studies
09.45-10.30	Mary Stockdale [inquired]	Sustainable harvest of medicinal and aromatic plants: Methods and management
10.30-11.00	<i>Coffee break</i>	
11.00-11.30	Discussion of aims and expected outcomes	
<b>Resource assessment: Case studies</b>		
11.30-13.00	Marianne Strohbach, Windhoek	Resource assessment methods for sustainable collection of Devil's Claw ( <i>Harpagophytum procumbens</i> ) in Namibia
	David Newton, Johannesburg	Collection of <i>Pelargonium</i> in South Africa and Lesotho
	N.N.	
	N.N.	
13.00-14.30	<i>Lunch break, Guided tour of the island</i>	







Fecha: Tue, 25 Jul 2006 16:26:16 +0200

De: Uwe Schippmann <Uwe.Schippmann@BfN.de>

Para: Wiltrud Fischer <wiltrud.fischer@bfm-vilm.de>

Cc: dagmarlange@t-online.de, lange@uni-landau.de

Asunto: Invitation Workshop Resource Assessment Methods 14-17 Sep 2006

Parte (s):  2 Travel\_information\_per\_mail 2006.pdf application/pdf 178,31 KB   
 3 Registration Form.doc application/msword 72,53 KB   
 4 Draft\_Programme\_2.doc application/msword 704,05 KB 

Dear colleague,

attached please find the draft programme of an expert workshop to be held on the Isle of Vilm on 14-17 September 2006.

A core element of sustainable management of wild plants is a sound assessment of the resource itself. "How much of the resource is out there?", "How well does it regenerate after harvest?" are among the questions to be answered. Well-founded resource assessment investigations are often seen as prohibitive by many actors. The general aim of the workshop will therefore be to provide an overview of resource assessment methods and, in a second step, to discuss possible ways forward to make them cost effective.

The workshop will offer a platform to discuss the methodological basis of resource assessments for medicinal plants as well as minimum requirements to make them both scientifically sound and affordable.

We plan to invite a number of key speakers to cover general themes as well as case studies. The number of participants is limited to some 40 people with a background in resource assessment to allow substantial, well based and hopefully fruitful discussions.

We would be very privileged to have you in Vilm as a participant in the discussions of our meeting. We hope the attached draft programme raises your interest in this event. In case you can come, please advise us whether you would like to present a short case study of your work.

Of course there are many questions to be answered. Please ask and we will provide you with more information.

Looking forward to welcoming you on Vilm,  
with best wishes  
Uwe Schippmann

Dr. Uwe Schippmann  
Dept. Plant Conservation, Head  
German Scientific Authority to CITES, Plants  
Federal Agency for Nature Conservation  
Fachgebiet Botanischer Artenschutz, Leiter  
Bundesamt für Naturschutz  
Konstantinstraße 110  
D-53179 Bonn  
Fax: ++49/228/8491-1419  
email: uwe.schippmann@bfm.de

International Standard for the Sustainable Wild Collection of Medicinal & Aromatic  
Plants  
ISSC-MAP  
[www.floraweb.de/map-pro](http://www.floraweb.de/map-pro)

<b>Generic Issues 1: When do we consider an impact of harvest detrimental for the population?</b>		
14.30-15.00	N.N.	How much impact on plant populations is tolerable: <b>thresholds for detrimental impacts on populations and environment</b>
15.00-16:00	<i>Discussion</i>	
16.00-16.30	<i>Coffee break</i>	
<b>Generic Issues 2: Indigenous knowledge as information base for resource assessments</b>		
16.30-17.00	Giridhar Kinhal, Bangalore	Comparison of <b>indigenous knowledge</b> with scientific resource assessment methods
17.00-18.00	<i>Discussion</i>	
<b>Evening lecture</b>		
20:00	Tony Cunningham, Perth [inquired]: Why are some species more susceptible to harvesting than others?	

<b>Saturday, 16 September 2006</b>		
<b>Resource assessment: Case studies</b>		
08:30-09:00	Leonid N.Saiko, Moscow	Resource assessments in Russia for more than 75 years: Methods, practice and experiences
09.00-09.30	Maximilian Weigend, Berlin	Importance of <b>taxonomic accuracy</b> in resource assessment; a/o Resource assessment methods for sustainable collection of <i>Ratanhia (Krameria lappacea)</i> in Peru
09:30-10:00	N.N.	
10.00-10.30	<i>Coffee break</i>	
10:30-11:00	N.N.	
<b>Generic Issues 3: Minimum requirements: Cost effectiveness and appropriate precision</b>		
11.00-11.30	Horst Tremp, Hohenheim	Scientifically reliable yet cost-effective population assessment methods: Appropriate levels of <b>statistical precision</b>
11:30-12:30	<i>Discussion</i>	
12.30-14.30	<i>Lunch break</i>	
<b>Generic Issues 4: The steps to sustainability: Towards a routine process</b>		
14.30-15.00	Jennifer Wong, Bangor [inquired]	
15:00-16:00	<i>Discussion</i>	
16.00-16.30	<i>Coffee break</i>	