



European crop wild relative diversity
assessment and conservation forum



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Crop wild relative

Issue 4 July 2005



Incorporating the Second Circular for the
First International Conference on *Crop Wild Relative*
Conservation and Use

Conserving plant genetic resources
for use now and in the future



Crop wild relative

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Front cover:

Securigera varia (L.) Lassen,
pictured in southern
Lithuania. Commonly known
as Crownvetch, this forage
species is cultivated in some
countries, but in Lithuania is
only found growing in the
wild.

Photo: Juozas Labokas,
Institute of Botany, Lithuania

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Editorial

It is now only a matter of weeks until the First International Conference on Crop Wild Relative Conservation and Use takes place in Agrigento, Sicily, Italy from 14th-17th September 2005 (see page 8). The response to the first circular and call for papers was tremendous, and clearly indicative of the level of interest in the conservation and use of CWR. More than 150 delegates from 44 countries will attend at the conference. The Conference Scientific Programme Committee had a difficult task on its hands in selecting papers for the Conference, such was the interesting and enticing range of abstracts submitted. Fortunately, the Committee was able to offer poster presentations to those whose papers were not selected for inclusion in the oral sessions. The Conference will incorporate the Final Dissemination Conference of the PGR Forum project, and in addition to these presentations, papers will be presented on a wide range of CWR conservation and use topics from a broad spectrum of countries and contributor disciplines. A major publication associated with the Conference will be published by CAB International (www.cabi-publishing.org/index.asp) after the Conference has taken place. This will contain a selection of papers presented at the Conference with the addition of some other key CWR conservation and use papers. Another major outcome of the Conference will be the publication of a Global Strategy for CWR Conservation and Use that will be the subject of group and plenary discussion sessions during the Conference. The Conference also provides the platform for the inauguration of the CWR Specialist Group of the Species Survival Commission of IUCN-The World Conservation Union, which will provide an important framework for building on the initiatives of PGR Forum in conservation and use of CWR.

One such initiative is the PGR Forum Crop Wild Relative Information System (CWRIS) which will be launched at the Conference. CWRIS provides the CWR conservation and user community with access to information on these resources and a tested means of recording data at site and population level, which is vital for CWR conservation. CWRIS incorporates the CWR Catalogue for Europe and the Mediterranean, which contains more than 23,000 species records and in excess of 243,000 records of taxon occurrences in 130 geographical units across the region. An introduction to the CWRIS is provided in this issue (see page 4).

It is not too late to participate in the Conference, but places are limited and registration closes on August 15th. If you have not registered but are interested in learning about conservation and use of CWR and in sharing ideas and information, please visit the Conference web site at: www.pgrforum.org/conference.htm

Issue 5 of *Crop wild relative* will be published in the final month of the PGR Forum project, October 2005. If you wish to contribute to this issue, please send your contributions to the editors at s.p.kell@bham.ac.uk. Guidelines for contributors can be consulted online at www.pgrforum.org/Documents/Newsletters/Guidelines_for_contributors.pdf

On behalf of the PGR Forum participants, Organising Committee and Scientific Programme Committee, we look forward to welcoming you to the First International Conference on Crop Wild Relative Conservation and Use in September.



Nawwaf Al-Atanaweh

Wadi Sair, Hebron, Palestine: a proposed site for a genetic reserve for the conservation of targeted CWR species. Representatives from a major initiative to conserve CWR in the Middle East, the Conservation and Sustainable Use of Dry Land Agrobiodiversity Project, will present papers at the First International Conference on Crop Wild Relative Conservation and Use, including first-hand experience in genetic reserve location, design and management planning.

The PGR Forum Crop Wild Relative Information System (CWRIS): an introduction

Shelagh Kell¹ and Jay Moore²

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Effective and efficient information management is the crux of any conservation programme, and a vital component of current CWR conservation and use initiatives. Suitable standard descriptors and a management paradigm are required to manage CWR inventories, and to facilitate access to existing information on CWR taxon, site and population level data. To this end, the EC-funded project, European Crop Wild Relative Diversity Assessment and Conservation Forum (PGR Forum) has developed such standards and a paradigm, as well as implementing them in the Crop Wild Relative Information System (CWRIS), the first information management system specifically designed to facilitate CWR conservation and use.

CWRIS has two main dimensions: taxon information breadth is provided by the catalogue of crops and their wild relatives of Europe and the Mediterranean (Kell *et al.*, in prep.), while the CWR descriptors for conservation and use for individual CWR taxa provide taxon information depth. The Catalogue contains more than 23,000 species records and in excess of 243,000 records of taxon occurrences in 130 geographical units across the region. The CWR descriptors provide a comprehensive set of data standards that can be used to effectively manage genetic conservation of CWR taxa and their component populations. The descriptors provide the structure within which existing data can be accessed or mapped onto the data model, and novel data can be provided.

The two main components of the CWRIS are available as an online information management system (www.pgrforum.org/cwr.htm) which will be launched at the First International Conference on Crop Wild Relative Conservation and Use in September 2005 (see page 8). CWRIS has been designed to facilitate access to CWR data for a diverse range of user communities, including plant breeders, protected area managers, policy-makers, conservationists, taxonomists and the wider public. A survey has been conducted to establish specific user requirements (www.pgrforum.org/User_survey.htm). CWRIS provides the opportunity for users to carry out taxon searches and to download a list of CWR taxa for geographical areas of interest. The taxonomic back-bone to CWRIS is provided by Euro+Med PlantBase (www.euromed.org.uk). CWRIS also provides access to ancillary information on the taxa contained in the Catalogue

via links to external online resources, such as Mansfield's World Database of Agricultural and Horticultural Crops, GRIN Taxonomy, European Nature Information System (EUNIS), the IUCN Red List, Electronic Plant Information Centre (EPIC) and key publication search engines. The opportunity exists to link to any number of useful and relevant online information resources that will benefit the CWR conservation and use community.

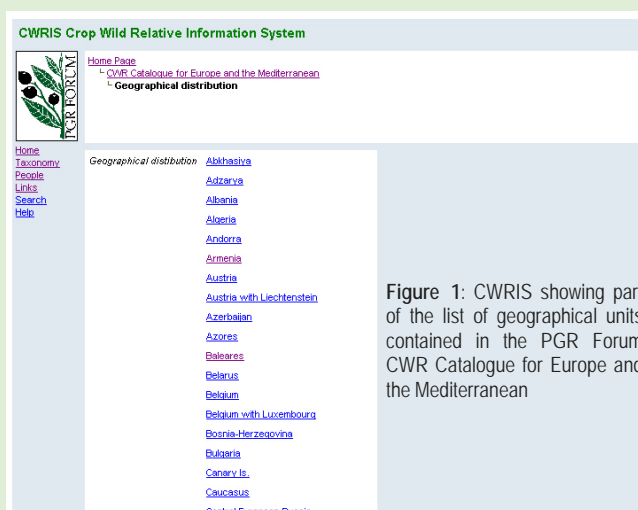


Figure 1: CWRIS showing part of the list of geographical units contained in the PGR Forum CWR Catalogue for Europe and the Mediterranean

Figure 1 is a view of CWRIS showing part of the list of geographical units contained in the PGR Forum CWR Catalogue for Europe and the Mediterranean. The hyperlinks reveal a list of CWR species of the geographical unit selected, as shown in Figure 2 for Armenia.



Figure 2: CWRIS showing part of the list of CWR species of Armenia

“Effective and efficient information management is the crux of any conservation programme, and a vital component of current CWR conservation and use initiatives”

Figure 3 shows an example of taxon distribution; in this case, *Securigera varia*. To the right of the screen are a number of external links providing detailed information on different aspects of the taxon. For example, information can be retrieved about

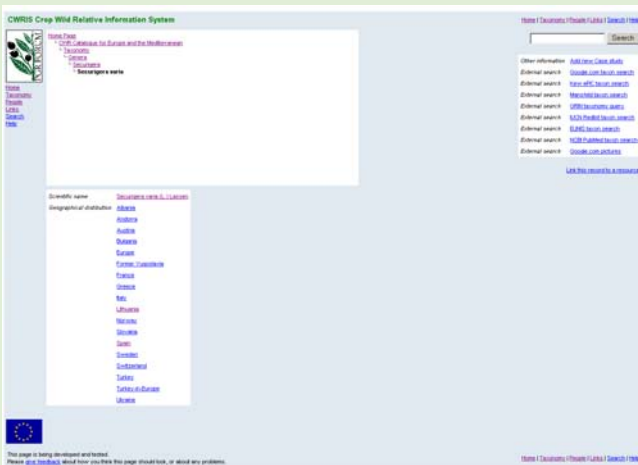


Figure 3: CWRIS showing the geographical distribution of *Securigera varia* and links to external data sources.

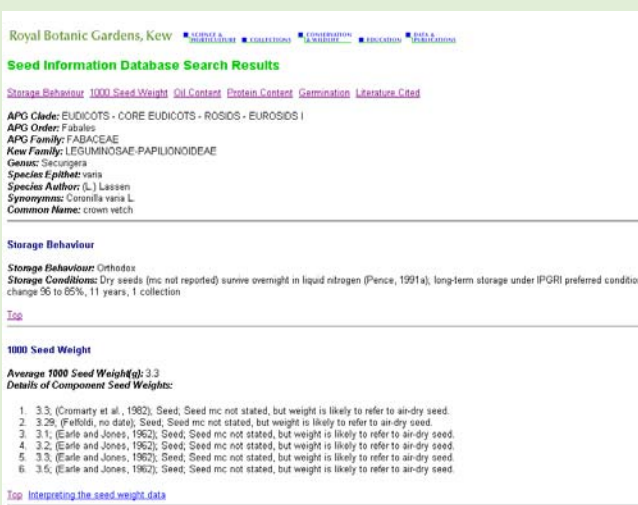


Figure 4: Information retrieval on seed physiology and storage behaviour via CWRIS by linking directly to EPIC. Source: Royal Botanic Gardens, Kew, Seed Information Database [Online]. URL: <http://www.kew.org/sid/SidServlet?Source=epic&ID=3819&Num=919> (27 July 2005)

seed physiology and storage behaviour by clicking on the link to EPIC (Fig. 4), or by clicking on the link to GRIN Taxonomy, information that can be retrieved includes economic importance, distribution, references and accessions held in the USDA National Plant Germplasm System (Fig. 5).

The CWR descriptors have undergone an intensive process of standardisation, testing and refinement by CWR user groups, and a number of case study datasets have been collated for selected CWR taxa. The purpose of the case studies is three-fold: a) to test and refine the CWR descriptors, b) to illustrate the functionality of CWRIS and c) to highlight the importance of CWR. The use and testing of CWRIS in this way is vital to steer further adjustments and development, which is ongoing. Perhaps not surprisingly, the case studies reveal that there is a lack of detailed information available at site and population level for many taxa, or that if it is available it is not in a format that can easily be translated into a standard data model. This emphasises further the need for a standard paradigm and data exchange formats to ease data sharing between all CWR conservation practitioners.



Figure 5: Information retrieval via CWRIS by linking directly to GRIN Taxonomy Source: USDA, ARS, National Genetic Resources Program. *Germplasm Resources Information Network - (GRIN)* [Online Database]. National Germplasm Resources Laboratory, Beltsville, Maryland. URL: <http://www.ars->

Figure 6a shows the base (level 1) CWR taxon descriptors: taxonomic information, site and population information, and geographic information. Within each of the three root descriptors are several branches to more detailed information (level 2). For example, site and population information contains the descriptors: site location, population size, population structure, population dynamics, population management, biotic interactions, ethnography, characterisation and evaluation, local threats and conservation measures (Fig. 6b). In turn, each branch leads to a further set of detailed descriptors (level 3). For example, population structure contains the descriptors: number of subpopulations or microhabitats, spatial pattern of individuals, population density, isolation/fragmentation, location of individuals, reproductive/vegetative ratio and sex ratio (Fig. 6c).

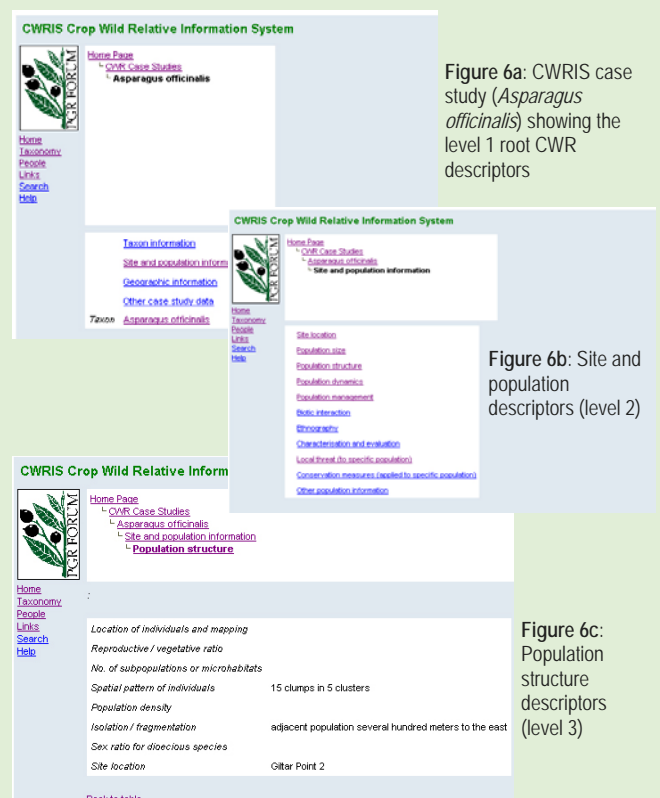


Figure 6a: CWRIS case study (*Asparagus officinalis*) showing the level 1 root CWR descriptors

Figure 6b: Site and population descriptors (level 2)

Figure 6c: Population structure descriptors (level 3)

CWRIS is a major achievement and product of PGR Forum. There is however a need to continue to develop, refine and improve CWRIS, including expansion for provision of CWR

Kell, S. P., H. Knüpffer, S. L. Jury, N. Maxted, B. V. Ford-Lloyd In prep. Creating a regional catalogue of crop taxa and their wild relatives: a methodology illustrated for Europe and the Mediterranean.



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of the workshop, given by Craig Hilton-Taylor. Session 1 focussed on Red List assessments, with presentations given by Marianne Mitchell from the University of Birmingham, UK on National Red List assessments of selected European CWR taxa and José Iriando from the Universidad Politécnica de Madrid, Spain on the implications of Red List assessments on genetic reserve conservation of CWR in Spain. These were followed by a presentation from Paul Smith of the Millennium Seed Bank Project, Royal Botanic Gardens Kew, UK (delivered by Craig Hilton-Taylor) on establishing priorities for seed conservation.



Participants at PGR Forum Workshop 2, CWR Threat and Conservation Assessment, held in Korsør, Denmark, 27-30 April 2005

Following the session 1 presentations, participants formed working groups to discuss and put forward recommendations on aspects of establishing the Red List status of CWR, including the availability and accessibility of population and distribution data, how to detect population declines and the use of proxy data.

On day 2, session 2 addressed the issue of how to establish conservation priorities for CWR taxa. Presentations were given by participants from the University of Birmingham, UK: Brian Ford-Lloyd provided an overview of options for priority-setting, Maria Scholten presented an investigation into options for establishing economic value for CWR, and Joana Magos Brehm presented a methodology for setting priorities at national level for CWR, illustrated with a case study for Portugal.

Session 3 investigated methods of systematic conservation planning for CWR. Presentations were given by Bob Smith from the Durrell Institute of Conservation and Ecology, University of Kent, UK, who introduced the concept of systematic conservation planning, and Liz Radford from Plantlife International, UK who presented "The criteria for identifying Important Plant Areas, and progress in Europe". These were followed by working groups addressing the incorporation of CWR into broader planning initiatives, the use of scoring systems to establish important CWR conservation areas, and other types of data that could be included in existing planning initiatives to make them more relevant for CWR conservation.

Day 3 was devoted to *in situ* and *ex situ*

gap analysis for CWR and data limitations. Nigel Maxted from the University of Birmingham, UK, opened session 4 with an overview of current experience in genetic resource gap analysis and how such methodologies can be used to target CWR populations for *in situ* and *ex situ* conservation. This was followed by presentations from staff of the International Plant Genetic Resources Institute, with Ehsan Dulloo presenting his experience of undertaking *in situ* gap analysis of *Coffea* spp. in Mauritius, and Sónia Dias describing the potential and limitations of EURISCO as a tool to assist in *ex situ* gap analysis of CWR. Bob Smith followed up with a presentation on the effect of data limitations and how to set targets for conservation.

The session 4 working groups discussed data availability for *in situ* and *ex situ* CWR conservation planning by investigating what data are available on the *in situ* distribution of CWRs and



The Storebælt Bridge, Western Sealand, Denmark

Nigel Maxted

whether these data can be converted into a suitable format for use in planning exercises, and how to set targets for conserving CWR *in situ* and *ex situ*.

A number of specific recommendations for CWR threat and conservation assessment resulted from this workshop. These include:

- Raise awareness about CWR and encourage their incorporation into broader planning initiatives where possible;
- Utilise the PGR Forum CWR Catalogue for Europe and the Mediterranean to flag CWR species in existing conservation initiatives e.g. Important Plant Areas and Protected Areas;
- Conduct a gap analysis of European CWR using existing distribution and protected area data;
- Compile all Red List assessments for European CWR (national, European and global);
- Create a priority list of CWR for Europe;
- Utilise the prioritised list to establish CWR reserves in European countries, with an emphasis on multiple-species reserves;
- Encourage the collection of distribution data at a finer scale than 10x10 km² to enable more accurate conservation assessment;
- Promote monitoring of CWR populations in protected areas;
- Encourage collection of information on breeding and dispersal systems, including host-parasite relationships;
- Consider 'casuals' carefully in the conservation planning process;
- Adopt a range of proxy indicators of genetic erosion.

The workshop concluded with an excursion to visit the island of Sprogø, a protected area and bird sanctuary, the Storebælt Bridge, one of the longest suspension bridges in the world, the Viking fortress of Trelleborg, and a walk through coastal woodland typical of Denmark.

A full report of Workshop 2 will shortly be available on the PGR Forum web site.

Reference

IUCN 2001. IUCN Red List Categories and Criteria: Version 3.1. IUCN Species Survival Commission. IUCN, Gland, Switzerland and Cambridge, UK. ii + 30 pp.

Second Circular

First International Conference on Crop Wild Relative Conservation and Use

14th-17th September 2005
Dioscuri Bay Palace Hotel, Agrigento, Sicily, Italy

Shelagh Kell¹, Damiano Avanzato², Jozef Turok³ and Ignazio Vassallo⁴

www.pgrforum.org/conference.htm

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The First International Conference on Crop Wild Relative Conservation and Use will bring together the international community to address the current status and future of crop wild relatives (CWR) as a vital resource for improving agricultural production, increasing food security, and sustaining the environment. The Conference will be a landmark in PGR conservation, highlighting CWR as critical but neglected resources. The specific objectives of the Conference are to:

- Promote the importance of wild plant species of socio-economic value to the international community;
- Review the establishment of CWR inventories and establish a baseline for their conservation assessment;
- Assess procedures for establishing conservation priorities for CWR;
- Review the current status of information access and management for CWR;
- Evaluate methodologies for *in situ* and *ex situ* CWR conservation;
- Explore ways of strengthening CWR conservation and use through international and inter-agency collaboration;
- Disseminate PGR Forum products to the European and global PGR community, and discuss their wider application and continued use.



Perennial pea vine (*Lathyrus latifolius* L.) on Sár mountain near the town of Gyöngyös, Hungary



La Valle dei Templi di Agrigento (Valley of the Temples, Agrigento): the location for the First International Conference on Crop Wild Relative Conservation and Use

Participation

More than 150 delegates from 44 countries will attend, confirming the international scope of this first CWR Conference: Albania, Armenia, Australia, Belgium, Benin, Bulgaria, Canada, Colombia, Czech Republic, Denmark, Estonia, Finland, France, Georgia, Germany, Greece, Hungary, India, Iran, Israel, Italy, Latvia, Lithuania, Morocco, Netherlands, Nigeria, Norway, Palestine, Poland, Portugal, Romania, Russia, Serbia, Slovak Republic, South Africa, Spain, Sri Lanka, Sweden, Switzerland, Syria, Tunisia, United Kingdom, United States of America and Vietnam. Delegates will include conservation practitioners and researchers from a wide range of PGR institutes, including crop breeding institutes, botanic gardens, universities and NGOs, as well as representatives of other stakeholder communities such as suppliers of health products.

UNIVERSITY OF
BIRMINGHAM



REGIONE SICILIANA

First International Conference on Crop Wild Relative Conservation and Use, organised by the University of Birmingham, UK, CRA-Istituto Sperimentale per la Frutticoltura di Roma, Italy, the International Plant Genetic Resources Institute and Agricultural Extension Service of the Regional Administration of Agrigento, Italy

Scientific programme

The Conference will comprise ten sessions:

- CWR conservation and use: an overview
- Establishing CWR inventories and conservation priorities
- CWR threat and conservation assessment
- Genetic erosion and genetic pollution of CWR
- *In situ* management and monitoring for CWR
- *Ex situ* conservation of CWR
- CWR information management
- CWR as gene donors for crop improvement
- Use of CWR and under-utilised species
- Towards a Global Strategy for CWR Conservation and Use

46 oral papers and more than 60 posters will be presented during what promises to be an intensive and motivating 3 days, and the Conference will conclude with a 1 day excursion (see page 11).

The full programme can be consulted online at:

http://www.pgrforum.org/Documents/Conference/First_ICCWRCU_Programme.pdf



Briza media L. in Sutton Coldfield Park, near Birmingham, United Kingdom

Joana Magos Brehm



Sea kale (*Crambe maritima* L.), pictured on the coast of Norway

Ásmund Ásdal

Organisation and support

The Conference is organised by the University of Birmingham (UK), the International Plant Genetic Resources Institute, CRA-Istituto Sperimentale per la Frutticoltura di Roma (Italy) and the Agricultural Extension Service of the Regional Administration of Agrigento (Italy).

The Conference is jointly funded by the European Community Fifth Framework Programme for Energy, Environment and Sustainable Development and the Agricultural Development Service, Regional Government of Sicily, Palermo. The Conference organisers are also grateful to the Parco dei Templi, Municipality of Palma, Agrigento Wine Association and Agrigento Tourist Service for generously providing their services in support of the conference.

Organising Committee

- Damiano Avanzato (CRA-Istituto Sperimentale per la Frutticoltura di Roma, Italy)
- Ignazio Vassallo (Agricultural Extension Service of the Regional Administration of Agrigento, Sicily, Italy)
- Shelagh Kell (University of Birmingham, United Kingdom)
- Jozef Turok (International Plant Genetic Resources Institute)
- Katy Elphinstone (International Plant Genetic Resources Institute) (Organising Secretariat)
- Carlo Fideghelli (CRA-Istituto Sperimentale per la Frutticoltura di Roma, Italy)
- Giuseppe Barbera (University of Palermo, Sicily, Italy)

Scientific Programme Committee

- Shelagh Kell (University of Birmingham, United Kingdom) (Scientific Programme Secretariat)
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- Brian Ford-Lloyd (University of Birmingham, United Kingdom)
- Jozef Turok (International Plant Genetic Resources Institute)
- Ehsan Dulloo (International Plant Genetic Resources Institute)
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- José Iriondo (Universidad Politécnica de Madrid, Spain)
- Sabine Roscher (German Centre for Documentation and Information in Agriculture (ZADI), Germany)
- Eliseu Bettencourt (Instituto Nacional de Investigação Agrária e das Pescas, Portugal)
- Craig Hilton-Taylor (IUCN/SSC Red List Programme, UK)



Trifolium rubens L., a wild relative of the cultivated clovers, growing in a dry oak forest at Kismaros, near the Danube Bend, Hungary

László Udvardy

Location and venue

The Conference will be held in Agrigento (Italy), a city located in the south of Sicily with 60,000 inhabitants. It was founded as a Greek colony in the 5th century B.C. and played a significant part in the history of that era. The city faces south towards the Mediterranean sea and enjoys a pleasant climate. The venue is the Dioscuri Bay Palace Hotel (www.framonhotels.com), around 5 km from Agrigento. The conference will be held in the well-equipped conference room. A wireless internet connection is available throughout the hotel.

Registration

The registration cost of 200 € includes lunches and refreshments, social events including dinners, one-day excursion, book of abstracts and a peer-reviewed publication containing key scientific papers associated with the Conference that will be published by CABI (<http://www.cabi-publishing.org/index.asp>) following the Conference. Participants must pay their own transportation costs to and from Agrigento and the cost of hotel accommodation.

If you wish to participate in the Conference, please visit <http://www.pgrforum.org/conference.htm>. The closing date is August 15th and all payments must be received by this date.

The conference registration desk will be open from 12:00-17:00 on Tuesday 13th September, and again from 8:00-8:30 on Wednesday 14th September.



Shelagh Kell

View to the south-west of Sicily from the Parco dei Templi, Agrigento

Accommodation

A special rate of 95 € per night (single room) and 140 € per night (double room) has been arranged at the Conference venue, Dioscuri Bay Palace Hotel (www.framonhotels.com). This four star hotel is situated beside the beach on the promenade of San Leone, around 5 km from Agrigento. It has excellent restaurant and bar facilities and a swimming pool. A limited number of rooms are available at the Dioscuri Bay Palace Hotel. If a room at the Dioscuri Bay Palace Hotel is not available, an alternative hotel will be offered at a similar cost. Less expensive accommodation is also available and the Organising Secretariat will be glad to put participants in contact with a local travel agent who can help with the bookings.



Damiano Avanzato

Montechiaro Castle

Social events

A number of social events will take place during the Conference; these are included in the registration costs:

Welcome cocktail and buffet: Montechiaro castle

The castle dates from 1300, and is found in the Palma Montechiaro territory, the scene of the *Gattopardo*.

Guided tour of the Valle dei Templi (Valley of Temples)

Unique in the world, the *Valle dei Templi* combines Greek monuments of the fifth century B.C. with typical Mediterranean vegetation. It has 500 hectares of almond and olive trees, and ruins from classical times and the late nineteenth century. The national archeological museum there contains one of the most extensive Hellenistic collections in the world.

Stoaj theatre production

"The Stoaj" is found in the heart of the Valley of Temples, and features a reconstructed ancient Greek bazaar. Inside this area there is a small theatre where a production with a classical theme will be performed.



Shelagh Kell

Tempio della Concordia in the Valley of the Temples, Agrigento

Traditional farm dinner with folk group

The dinner will take place in a traditional farmhouse in the Sicilian countryside around 35km from Agrigento. The traditional food served will consist almost exclusively of produce from the farm. Guests will have the opportunity to take part in making bread in the wood-burning oven and in cheese-making. There will be music performed by a local folk group in the evening.

Dinner with traditional produce and wine tasting

This will take place in a typical country inn, around 20km from Agrigento. Traditional dishes will be served among which *schicciate* (traditional Sicilian bread), *cuddruruna* (Sicilian pizza), *focaccia* etc., accompanied by excellent wines produced in the province of Agrigento. The wine-tasting will be led by expert wine tasters.

Visit to the birthplace and tomb of Pirandello

Pirandello, Nobel prizewinner for literature, was born and later also buried near Agrigento. The house where Pirandello was born is located around 1 km from the hotel, and is now a museum. His ashes were buried beneath a large rock which looks out over the sea.

Conference excursion

A one day excursion on Saturday 17th September is included in the registration costs. Participants will visit the following sites:

Siculiana nature reserve

This is a WWF nature reserve which covers 500 hectares, and extends from the sea to the hills. In the reserve there is a wealth of indigenous Mediterranean flora. The nature reserve is around 25km from Agrigento and is part of the Siculiana territory.



The birthplace of Pirandello

Damiano Avanzato



Capparis spinosa L., a species typical of Sicily. The flower buds are collected and used in Mediterranean dishes.

Damiano Avanzato



Kolymbetra garden, Agrigento, showing an example of a reconstruction of a Greek water duct

Shelagh Kell

Almond germplasm bank

This tree collection, situated in the heart of the Valley of Temples has been set up by different public authorities working together to conserve germplasm of over 200 old almond varieties.

The Kolymbetra Garden

The Kolymbetra Garden is situated in a gorge in the heart of the Valley of Temples. It is thought that in ancient Greek times it consisted of a large pool that was used for games and/or as a fish pond. In the 19th century it was transformed into a Mediterranean garden. Now, after many years of neglect, it has been restored to its former glory by the Fondo per L'Ambiente Italiano (FAI) (www.fondoambiente.it) and is one of the major tourist attractions of the park.



The almond germplasm bank, Agrigento

Ignazio Vassallo



Kolymbetra garden, Agrigento, showing replanted citrus groves

Giuseppe Barbera

Post conference excursion

An optional three-day post-conference excursion is offered to participants at their own cost:

Day 1: Etna/Taormina

Departure from Agrigento for excursion to Etna. Typical Sicilian lunch at the *Tenuta Scammacca del Murgio*, with a visit to the wine cellars. In the afternoon, a guided tour of Taormina. Transfer to Taormina hotel, dinner and overnight stay.

Day 2 : Panarea/Stromboli

Leaving for Milazzo in the morning, transport by private boat to the island of Panarea. Tour of the island with stop-off for a swim at the Bay of Calajunco. Arrival at the port and brief tour of the town. Lunch on the boat. Afternoon departure for the island of Stromboli. Tour of the island with optional trekking. Late evening motorboat trip to below the *Sciara del Fuoco*, from where volcanic eruptions can be seen. Back to the hotel late evening.

Day 3 : Palermo

Morning departure for Palermo. Guided tour of the city which includes the Duomo: "founded by the Byzantines, transformed into a mosque by the Arabs and chosen by the Normans to bury their nobles, the first of whom was Frederick II". The tour continues with a visit of the Palatine Chapel in the Royal Palace, the *Castello della Zisa*, which hosts the Museum of Islamic Culture and the famous monument *La Cuba*. Islamic architectural influences can be seen in the Norman churches S. Giovanni degli Eremiti, Martorana and the church in Palazzo Chiaramonte. Lunch in traditional restaurant. Afternoon trip to the island *Isola delle Femmine*. Transfer to the hotel in Palermo, dinner and overnight stay.



Emilio Laguna

Prunus insititia Jusl., a CWR closely related to *P. domestica* L.



Emilio Laguna

Lavandula pedunculata (Mill.) Cav. subsp. *sampaiana* (Rozeira) Franco, endemic to the southwest Iberian Peninsula (Spain and Portugal)

Cost (Post conference excursion)

Price per person (with 40 as the min. n° of participants): 450 €

Supplement for single room accommodation: 130 €

The price includes:

- Transport
- Accommodation in 4 star hotels
- Traditional restaurant lunches
- Private boat trip to Panarea and Stromboli with lunch on board

The price does not include:

- Entry fees for museums and archeological sites
- Guided tours as described in the programme
- Tour of wine cellars
- Drinks during meals

Getting to the conference

- By air to Palermo or Catania
- By rail from Palermo to Agrigento
- By rail or coach from Catania to Agrigento

For full travel details, please visit the conference web site: www.pgrforum.org/conference.htm

Organising Secretariat

For matters relating to registration, accommodation and logistics, please contact:

Katy Elphinstone, Organising Secretariat
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Scientific Programme Secretariat

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