

Informateur



Newsletter N° 37

November 2003

OPTIMA Newsletter

OPTIMA Newsletter is a news journal for the presentation and discussion of issues pertinent to Mediterranean botany, published by the Secretariat of the Organization for the Phyto-Taxonomic Investigation of the Mediterranean Area.

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XI OPTIMA Meeting, Belgrade 5 – 11 September 2004

First Circular Inside!

ISSN 0376-5016 37 1-30, (2003), D.L. M-2412-1997, Inform. OPTIMA / OPTIMA Newslett.

OPTIMA Secretariat acknowledges the continuous support of:



Escuela Universitaria de Ingeniería
Técnica Agrícola
Universidad Politécnica de Madrid



Departamento de Biología Vegetal
Universidad Politécnica de Madrid

P U B L I C A T I O N S O F F E R

FREE OPTIMA MEMBERSHIP AND BOCCONEA VOLUMES

Through an agreement with the Herbarium Mediterraneo Foundation, it is now possible to pay OPTIMA membership fees or to purchase volumes of *Bocconea* by sending herbarium specimens to the Herbarium Mediterraneo in Palermo. This offer is regulated as follows:

1. Only specimens from the following areas are acceptable: peri-Mediterranean countries (except Italy and France), plus Portugal and Bulgaria, the Atlantic Islands (Macaronesia), and the domain of Boissier's "Flora Orientalis" (in particular the Middle East, Transcaucasia and the Crimea). Normally, material from the country of residence (if part of this area) should be given preference.
2. The herbarium specimens must be in good condition and contain complete information with readable, durable labels. The Herbarium Mediterraneo reserves the right to return specimens judged to be of insufficient quality.
3. Each herbarium specimen will be worth 1.67 SFr. Each delivery will consist of a minimum of 18 herbarium sheets. When a group of botanists from the same institution plan to send herbarium specimens, a joint delivery is preferable.
4. Each collaborator will include a copy of the enclosed form specifying his/her name, the number of herbarium specimens sent, the credit earned and whether they wish to use it to pay OPTIMA membership fees or to purchase Bocconea volumes.
5. The package containing the herbarium specimens and the letter will be sent to: Prof. F. Raimondo, Dipartimento di Scienze Botaniche dell'Università, Via Archirafi 38, I-90123 Palermo, Italy.
6. Please send a copy of the enclosed form or E-mail (optima@tiscali.es) to the OPTIMA Secretariat in Madrid. Be sure to include postage costs, as they will be considered additional membership credit.

Each year, the Herbarium Mediterraneo will transfer the sum of OPTIMA membership fees earned by participants during the year to OPTIMA.

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Form to be included with the delivery of herbarium specimens. One form per participant.

Name : _____

Institution: _____

Address: _____

N° of herbarium specimens () x 1.67 SFr/ specimen = _____ SFr. of credit.

I wish to use this credit to pay my OPTIMA membership fees (30.-SFr/year): _____ years of membership.

I wish to purchase a copy of *Bocconea* vol. _____ at the OPTIMA member reduced price (see prices at the Publications Offer section of this OPTIMA Newsletter).

COTISATIONS A L'OPTIMA ET DES VOLUMES DE BOCCONEA GRATIS

Par accord avec la Fondation de l'Herbarium Mediterraneum, il est désormais possible de payer ses cotisations à l'OPTIMA et d'acheter des volumes de *Bocconea* en envoyant des spécimens d'herbier à l'Herbarium Mediterraneum de Palerme. Cette possibilité est d'ores et déjà applicable selon les modalités suivantes :

1. Seuls des échantillons provenant de l'aire globale suivante pourront être acceptés: pays circum-méditerranéens sauf la France et l'Italie, plus le Portugal et la Bulgarie; îles atlantiques (Macaronésie); et domaine du "Flora orientalis" de Boissier (notamment le Moyen-Orient, la Transcaucasie et la Crimée). De préférence, ces échantillons proviendront du pays de résidence (s'il fait partie de l'aire globale mentionné ci-dessus).
2. Les spécimens d'herbier doivent être en bon état et comporter des informations complètes avec des étiquettes lisibles et définitives. L'Herbarium Mediterraneum se réserve le droit de retourner les spécimens jugés de qualité insuffisante.
3. Chaque spécimen d'herbier vaudra 1.67 SFr.

Chaque livraison consistera en un minimum de 18 planches d'herbier. Quand un groupe de botanistes de la même institution prévoit d'envoyer des spécimens d'herbier, une expédition groupée est préférable.

4. Chaque collaborateur joindra une copie du bordereau de livraison ci-joint comportant son nom, le nombre de spécimens d'herbier envoyés, la somme payée et la destination du crédit (cotisation à l'OPTIMA ou achat de volumes de *Bocconea*).
5. Le paquet contenant les spécimens d'herbier et la lettre seront envoyés à : Pr. F. Raimondo, Dipartimento di Scienze Botaniche dell'Università, Via Archirafi 38, I-90123 Palermo, Italy.
6. Veuillez envoyer une copie du bordereau de livraison ci-joint ou E-mail (optima@tiscali.es) au Secrétariat de l'OPTIMA a Madrid. Veuillez ajouter les frais d'expédition parce que ils seront crédités vers la cotisation à l'OPTIMA.

Chaque année, l'Herbarium Mediterraneum virera à l'OPTIMA le montant des cotisations gagnées par les participants pendant l'année.

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Bordereau à joindre au paquet de spécimens d'herbier (un bordereau par participant).

Nom: _____

Institution: _____

Adresse: _____

Nombre de spécimens d'herbier () x 1.67 SFr/ spécimen = _____ SFr.de crédit.

Je souhaite utiliser ce crédit pour payer ma cotisation à l'OPTIMA (30.-SFr): _____ années de cotisation.

Je souhaite acheter un exemplaire de *Bocconea* vol. _____ au tarif réduit pour les membres de l'OPTIMA (voir les prix a la section "Publications Offer" de l'Informateur OPTIMA).

ORDINARY AND INSTITUTIONAL OPTIMA MEMBERS ARE ENTITLED TO REDUCTIONS ON THE PRICES OF SEVERAL PUBLICATIONS!

From Laser Pages Publishing Ltd.,

New aspects of the biology and systematics of the Mediterranean flora – A Symposium in Memory of Clara Heyn. This special supplement issue of the *Israel Journal of Plant Sciences* is available to OPTIMA members at the special price of \$25, including postage and handling. Contact: Laser Pages Publishing Ltd., P.O. Box 35409, Jerusalem 91352, Israel. Fax: +972 2 652 2277, Tel.: +972 2 652 2226, Web page: www.sciencefromisrael.com E-mail: laserpages@netmedia.net.il.

From Al-Hadara Publishing,

Flora of Egypt. Volume 1 by Loutfy Boulos is available to OPTIMA members with a special discount of 18% (reduced price US\$ 70.00, non-member price US\$ 85.00). Details of the book can be found at <http://www.alhadara.com>. A downloadable form is available at this site. Payment by VISA and Master Card is accepted. Al-Hadara Publishing; 7, Abou El-Seoud Street, Dokki 12311, Cairo, EGYPT. Fax: 20 2 760 5898, E-mail: hadara@ritsec1.com.eg.

From the Institute of Botany, Bulgarian Academy of Sciences,

Flora of the Republic of Bulgaria. Volumes 4 (Cactaceae to Saxifragaceae), 5 (Rosaceae), 6 (Fabaceae), 7 (Oxalidaceae to Araliaceae), 8 (Apiaceae to Cuscutaceae) and 10 (Scrophulariaceae to Valerianaceae) are available to OPTIMA members. Prices are SF 48.- for volumes 4-8 and SF 52.- for volume 10. Postage is included in the price. Send your orders to Institute of Botany, Bulgarian Academy of Sciences, Acad. G. Bonchev Str., Bl. 23, 1113 Sofia, Bulgaria; E-mail: palam@iph.bio.acad.bg. Please credit the account: CB "Biochim" PLC,

SWIFT Code: CBBIBGSF Branch "Batenberg" Code: 66084219; Bank account n° 3110024518; Institute of Botany, 1113 Sofia, Bulgaria.

Phytologia Balcanica. Vol. 8 (I) publishes the results of research of the Balkan flora and vegetation, describing 5 new species of flowering plants and new findings of 3 bryophyte species:

Alyssum orbelicum Ancev & Uzunov sp. nova (*Phytologia Balcanica*, Sofia, vol. 8 (1): 26) is a low caespitose perennial plant with locus classicus in the subalpine vegetation belt of N. Pirin Mt. It is morphologically close to *A. nebrodense* Tineo and *A. alpestre* L. *Vicia jordanovii* Velcev sp. nova (op. c.: 3) is a perennial plant, close to *V. montenegrina* Rolena and *V. abbreviata* Fisch. & Spreng. Its locus classicus is in E Stara Planina Mts. near the S. Black Sea coast. *Festuca staroplaninica* Velcev sp. nova (op.c.: 5) is a perennial densely tuffaceous plant, described from Central Stara Planina Mt., morphologically close to *F. dalmatica* (Hack.) K. Richt. and *F. pseudodalmatica* Domin. The species is distributed above 1450 m in open habitats and forms individual communities or participates in other mostly grassy communities. *Festuca vandovii* Velcev sp. nova (op.c.: 9) is a perennial densely tuffaceous plant, with locus classicus in Mesta river valley, S.W. Bulgaria. It is morphologically close to *F. thracica* (Acht.) Markgr-Dannb. *Festuca calcarea* Velcev sp. nova (op. c.: 11) is a perennial densely tuffaceous plant, described from W. Stara Planina Mt. It is close to *F. panciana* (Huck.) K. Richt. and *F. stajanovii* (Acht.) Kozuharov. The bryophyte species *Homalothecium aureum* (Spruce) Robins, *Weissia levieri* (Limpr.) Kindb. and *Bryum rubens* Mitt. were found in Struma valley and reported for the first time for Bulgaria (Ganeva & Ros Espin, op.c.: 35-36).

The price is the equivalent of 30 Euros in US Dollars paid by bank transfer. Send your order to: Institute of Botany, Bulgarian Academy

of Sciences, Acad. G. Bonchev Str., Bl. 23, 1113 Sofia, Bulgaria. Please credit the account: CB "Biochim" PLC, SWIFT Code: CBBIBGSF Branch "Batenberg" Code: 66084219; IB-BAS account for USD: 3110024502. Past issues are also available. For more information: www.bio.bas.bg/~phytbalc/. E-mail: phytbalc@bio.bas.bg.

From B. Cabezudo, Editor of *Acta Botanica Malacitana*,

Acta Botanica Malacitana, vol. 27 (December 2002) covers articles dealing with taxonomy, vegetation, reproductive biology, anatomy, aeropalynology, and plant geography and chorology. This volume, as well as vols. 15-26 are available to OPTIMA members with a special discount of 33% (reduced price: SF 20.-/each vol.; non-member price: SF 30.-). Volumes 1-14 are also available to OPTIMA members at the special reduced price of SF 15.-/each. Please send orders and/or requests for further information to the following address: Dpto. Biología Vegetal, P.O. Box 59, E-29080 Málaga, Spain; <http://webdeptos.uma.es/BiolVeg/00Indice.html>; E-mail: abm@uma.es.

From the OPTIMA Secretariat,

B. Valdés & J. Pastor (eds.) *Proceedings of the VIII OPTIMA Meeting, Sevilla, 25 September - 1 October, 1995. Lagascalia*, 19. Universidad de Sevilla, Sevilla, 1997. 942 pages, black and white illustrations - 50% discount!

F.M. Raimondo & W. Greuter (eds.) *Flora Mediterranea and Bocconea* (70% and 20% discount). *Flora Mediterranea* and *Bocconea* are published by the Herbarium Mediterraneum Panormitanum under the auspices of OPTIMA. These publications cover articles dealing with plant geography, floristics and systematic botany in its widest sense, relating to Mediterranean plants of all groups, whether living or fossil. A special emphasis is placed on articles that exceed national limits in coverage or by their general interest. *Flora Mediterranea* is a journal published annually with a variety of articles

whereas *Bocconea* is devoted to monographic subjects:

- Vol. 1: Results of the First "Iter Mediterraneum" in south-eastern Spain, June-July 1988.
- Vol. 2: A check-list of Sicilian fungi.
- Vol. 3: Results of the Second "Iter Mediterraneum" in Israel, March-April 1989.
- Vol. 4: Current research on the biology of threatened plant species of the Mediterranean Basin and Macaronesia: a database.
- Vol. 5: Proceedings of the VII OPTIMA Meeting in Borovetz, 18-30 July 1992, (I and II).
- Vol. 6: Contributions towards a checklist of Mediterranean Lichens (out of print).
- Vol. 7: Proceedings of the Workshops on "Conservation of the Wild Relatives of European Cultivated Plants".
- Vol. 8: Catalogue des plantes vasculaires rares, menacées ou endémiques du Maroc.
- Vol. 9: The systematics of *Anthemis* L. (Compositae, Anthemideae) in W and C North Africa.
- Vol. 10: An annotated checklist of the flora of the Abruzzo
- Vol. 11: Results of the Fourth "Iter Mediterraneum" in Cyprus, April 1991
- Vol. 12: Catalogue of the benthic marine macroalgae of the Italian coast of the Adriatic Sea
- Vol. 13: Proceedings of the IX OPTIMA Meeting. Paris, 11-17 May 1998
- Vol. 14: Checklist of the Lichens and lichenicolous Fungi of the Iberian Peninsula and Balearic Islands.
- Vol. 16: Proceedings of the X OPTIMA Meeting. Palermo, 13-19 September 2001, (I & II).

**Please place your orders to the
OPTIMA Secretariat by filling out the
order form on the next page**

PUBLICATIONS ORDER FORM

Please send me the following publications (postage expenses are included in the shown prices):

Flora Mediterranea (Volumes 1-12)				
Volume	OPTIMA member Price	Non-member Price	Quantity	Value
	SF 30.-	SF 100.-		
<hr/>				
Bocconeae				
Volume	OPTIMA member Price	Non-member Price	Quantity	Value
Vol. 1	SF 56.-	SF 70.-		
Vol. 2	SF 56.-	SF 70.-		
Vol. 3	SF 56.-	SF 70.-		
Vol. 4	SF 56.-	SF 70.-		
Vol. 5 (I & II)	SF 220.-	SF 270.-		
Vol. 7	SF 84.-	SF 105.-		
Vol. 8	SF 56.-	SF 70.-		
Vol. 9	SF 56.-	SF 70.-		
Vol. 10	SF 56.-	SF 70.-		
Vol. 11	SF 56.-	SF 70.-		
Vol. 12	SF 56.-	SF 70.-		
Vol. 13	SF 56.-	SF 70.-		
Vol. 14	SF 56.-	SF 70.-		
Vol. 16 (I & II)	SF 125.-	SF 156.-		
Volume	OPTIMA member Price	Non-member Price	Quantity	Value
Proc. of the VIII OPTIMA Meeting				
	SF 65.-	SF 115.-		
<hr/>				
TOTAL SUM				

Payment:

- I am sending a bank transfer to the OPTIMA Publications Commission, account N° E-1651.05.02 (IBAN: CH23 0078 8001 E165 1050 2) Banque Cantonale de Genève, Genève, Switzerland. (Please, include photocopy of bank slip).
- I am enclosing with this order form an International bank cheque drawn on a Swiss bank or a Eurocheque extended to OPTIMA Publications Commission.
- Please send me a pro-forma invoice (items sent upon receipt of payment).

Name: _____

Address: _____

Date & Signature: _____

Please send this order form to: OPTIMA Secretariat - Dr. J. M. Iriondo. Dpto. Biología Vegetal, E.U.I.T. Agrícola, Universidad Politécnica, Ciudad Universitaria. E-28040 Madrid, SPAIN

OPTIMA MEMBERSHIP APPLICATION FORM

Membership categories

Ordinary members receive the newsletters and the circulars, a free subscription to *Flora Mediterranea*, reduced rates on publications and on OPTIMA Meetings and all the benefits of being a full member.

Institutional members, in addition to the above, also receive a free subscription to *Bocconeae*.

Associate members receive the newsletters and the circulars, but are not entitled to any other benefits.

Associate membership will become effective immediately upon receipt of the signed application form. Ordinary or institutional membership will become effective upon receipt of the signed application form and payment of the membership fee for the current year.

Current membership rates:

Ordinary (personal) members: SF 30 .-
 Life membership:SF 460 .-
 Institutional members: SF 110 .-

Payments can be made in one of the following ways:

- Bank transfer to OPTIMA, account No. 240-39619900D (IBAN: CH51 0024 0240 3961 9900 D) Union Bank of Switzerland, CH-1211 Genève, Switzerland.
- International postal money order to: OPTIMA, account No. 240-39619900D, Union Bank of Switzerland, postal account No. 12-2048-5, CH-1211 Genève, Switzerland.
- International bank cheque drawn on a Swiss bank or Eurocheque sent to OPTIMA Secretariat in Madrid.

Please, make sure your name is clearly written on your payment. Advance payment for two or more years, at current membership rates, are accepted. Pro forma invoices (also for life membership) and receipts of payment will be sent upon request.

✂

The undersigned applies for:

ordinary associate institutional membership of OPTIMA (check box as appropriate)

Name:	Country:
Surname:	Tel:
Institution:	Fax:
Street:	Email:
Zip code:	Web page:
City:	Signature:
Research interests:	Date:

Please sign and return to: OPTIMA Secretariat, Dr. José M. Iriondo, Dpto. Biología Vegetal, E.U.I.T. Agrícola, Universidad Politécnica, Ciudad Universitaria, E-28040 Madrid, SPAIN

Nominations are now open for OPTIMA medal awards!

The Prize Commission is now accepting proposals for recipients of the OPTIMA Gold Medal and the OPTIMA Silver Medals to be awarded at the forthcoming XI OPTIMA Meeting in Belgrade.

The OPTIMA Gold Medal will be awarded to a botanist who, by his or her activity, is considered to have made an outstanding contribution to the phytotaxonomy of the Mediterranean area.

Three OPTIMA Silver Medals will be awarded to the authors of the best papers or books on the phytotaxonomy of the Mediterranean area that were published in 2001, 2002 or 2003.

For the OPTIMA Gold Medal, simply send the name of your candidate and briefly state the reasons that support your proposal. For the OPTIMA Silver Medals, please submit papers or books published in 2001, 2002 or 2003 for consideration. Send your proposals to: José M. Iriondo, Dpto. Biología Vegetal, E.U.I.T. Agrícola, Universidad Politécnica, E-28040 Madrid, Spain; Fax: +34 1 336 5656; E-mail: optima@tiscali.es.

The regulations of the OPTIMA Gold and Silver Medals, as amended by the Executive Council of OPTIMA by decision of 10.3.1978, are as follows:

OPTIMA Gold Medal

A prize will be awarded every three years to a botanist who, by his or her activity, is considered to have made an outstanding contribution to the phytotaxonomy of the Mediterranean area.

The prize will consist of a gold medal.

The prize winner will be selected by a Prize Commission and its recommendation will be submitted to the International Board of the Organization for ratification and approval.

The prize will be awarded at a triennial meeting of the Organization.

No member of the Prize Commission will be eligible for consideration.

OPTIMA Silver Medals

Prizes will be awarded every three years to the authors of the best papers or books on the phytotaxonomy of the Mediterranean area published in the preceding three-year period.

The prizes will take the form of silver medals. The prize winners will be selected by a Prize Commission and its recommendations will be submitted to the Council of the Organization for ratification and approval. The prize will be awarded at a triennial meeting of the Organization.

Normally, one prize is available for each year of the triennium; the Prize Commission is free, however, to propose that in single years more than one prize, or no prize at all, be attributed.

Both members and non-members are eligible to submit papers or books for consideration by the Prize Commission.

No current member of the Prize Commission or International Board will be eligible for the prize.

La campagne de propositions pour les attributions de médailles de l'optima est maintenant ouverte!

La Commission des Prix reçoit dès maintenant les propositions pour la Médaille d'Or et les Médailles d'Argent de l'OPTIMA, qui seront décernées au prochain Colloque de l'OPTIMA à Belgrade.

La Médaille d'Or de l'OPTIMA sera décernée à un(e) botaniste qui, par son activité, est reconnu avoir apporté une contribution exceptionnelle à la phytotaxinomie de la région Méditerranéenne.

Trois Médailles d'argent de l'OPTIMA seront décernées aux auteurs des meilleurs articles ou livres sur la phytotaxinomie de la région Méditerranéenne publiés en 2001, 2002 ou 2003.

Pour la Médaille d'Or de l'OPTIMA, contentez-vous d'envoyer le nom de votre candidat et d'exposer brièvement les raisons qui justifient votre proposition. Pour les Médailles d'Argent de l'OPTIMA, vous pouvez soumettre pour étude des articles ou des livres publiés en 2001, 2002 ou 2003. Envoyez vos propositions à: José M. Iriondo, Dpto. Biología Vegetal, E.U.I.T. Agrícola, Universidad Politécnica, E-28040 Madrid, Espagne; Fax: +34 1 336 5656; E-mail: optima@tiscali.es.

Les règlements d'attribution des Médailles d'Or et d'Argent de l'OPTIMA, tels qu'ils ont été modifiés par une décision du Conseil de l'OPTIMA en date du 10.03.1978, sont les suivants :

Médaille d'Or de l'OPTIMA

Un prix sera décerné tous les trois ans à un(e) botaniste dont on estime que l'activité a apporté une contribution exceptionnelle à la phytotaxinomie de la région méditerranéenne.

Le prix consistera en une médaille en or.

Le lauréat sera choisi par une Commission des Prix dont la recommandation sera soumise au Comité International de l'Organisation pour ratification et approbation.

Le prix sera décerné à l'occasion d'une réunion triennale de l'Organisation.

Aucun membre de la Commission des Prix ne pourra être proposé.

Médailles d'Argent de l'OPTIMA

Les prix seront décernés tous les trois ans aux auteurs des meilleurs articles ou livres portant sur la phytotaxinomie de la région méditerranéenne et publiés pendant la période précédente de trois ans.

Les prix prendront la forme de médailles en argent. Les lauréats seront choisis par une Commission des Prix dont les recommandations seront soumises au Conseil de l'Organisation pour ratification et approbation. Le prix sera décerné à l'occasion d'une réunion triennale de l'Organisation.

En principe, un prix est attribué pour chaque année de la période de trois ans, mais la Commission des Prix est libre de proposer l'attribution de plus d'un prix pour une même année, ou qu'aucun prix ne soit attribué une année.

Les auteurs dont les articles ou les livres seront soumis à la Commission des Prix peuvent être choisis ou non parmi les membres de l'Organisation.

Aucun membre en activité de la Commission des Prix ou du Comité International ne pourra être désigné pour le prix.

O P T I M A N E W S

by JOSÉ M. IRIONDO

OPTIMA Newsletter nº 37 presents a new cover and format which we hope you will find attractive. Unfortunately, it has not been possible to include the Notices of Publications section in this issue, but we hope to continue with this section in issue nº 38.

As you all know, OPTIMA Meeting XI will be held in Belgrade in September 2004. The First Circular is included in this issue. Please make sure you pre-register as soon as possible and then register and submit your abstracts in due time. With the hard work and great motivation of our colleagues in Belgrade, I am sure the XI OPTIMA Meeting will be a great success. I look forward to seeing you there.

We would also like to invite you to participate in the process of designation of the OPTIMA Gold and Silver Medals to be awarded at the Meeting in Belgrade by sending your proposals to the OPTIMA Secretariat. You will find more information about this in this issue.

INTERNATIONAL BOARD

In 2002, the Board members approved the annual report and the financial report for 2001, submitted by the Secretary on behalf of the President and the Executive Council. It also appointed Dr. Santiago Pajarón and Dr. Adrián Escudero as auditors for the year 2002.

EXECUTIVE COUNCIL

In 2002, the Executive Council approved the members proposed for the OPTIMA Commissions and Committees for the period 2001-2007.

The Council also decided to keep the OPTIMA fees for the year 2003 unchanged.

SECRETARIAT

The Secretariat was active managing OPTIMA's accounts and the accounts of the Publications Commission and Prize Commission. It also managed the membership files and the

distribution and sale of OPTIMA's publications. The OPTIMA Secretariat worked as a liaising center for the Council and Board members and the working groups and commissions of our Organization.

OPTIMA Participates in the 50th Anniversary of the Creation of the Biology Degree in Spanish Universities.

The Secretariat prepared and sent a poster on the activities and publications of OPTIMA to an exhibition which was on display at different Spanish universities throughout 2002. This exhibition formed part of the commemoration activities of the 50th anniversary of the creation of the Biology Degree in Spanish universities.

DEATHS

Prof. Dr. Mustafa Imam, Cairo, Egypt, died 1 May 2003.

Prof. M. Nabil El-Hadidi, Cairo, Egypt, died 7 September 2003.

A full obituary of these prominent OPTIMA members will be published in a future volume of *Flora Mediterranea*.

Updates on Commissions

PUBLICATIONS COMMISSION

Flora Mediterranea 12 and Bocconea 16 (I)

This Commission stands ready to assist the Herbarium Mediterraneum Foundation in Palermo with the publication of its two journals, *Flora Mediterranea* and *Bocconea*. In the past year the Herbarium Mediterraneum published the 12th volume of *Flora Mediterranea*, which was distributed to the regular members of OPTIMA free of charge, and *Bocconea* 16 (1) devoted to the articles written by the speakers of the symposia at the X OPTIMA Meeting in Palermo. Volume 16 (II) will include articles corresponding to the poster contributions of this Meeting. Further information: F. Raimondo, E-mail: raimondo@unipa.it

COMMISSION FOR THE CONSERVATION AND SUSTAINABLE USE OF PLANT RESOURCES

Mediterranean Seedbanks

One of the goals of this Commission is to stimulate cooperation and coordination among existing Mediterranean seedbanks. In this context, this Commission maintains a discussion group on the networking of Mediterranean seedbanks at www.yahogroups.medseedbanks.

Crop Wild Relatives

In 2002 a PGR Forum (European Crop Wild Relative Diversity Assessment and Conservation Forum) was approved by the European Union with the participation of OPTIMA members Jose M. Iriondo, Nigel Maxted and Stephen Jury. The objective of this Forum is to assess the taxonomic and genetic diversity of European crop wild relatives and to develop appropriate conservation methodologies. PGR Forum aims to build an information system providing access to European crop wild relative data. One of the primary outputs of PGR Forum will be a conservation gap analysis and recommendations for *in situ* and *ex situ* conservation of European crop wild relatives. The development of methodologies, particularly for *in situ* conservation is also a major component of the project. Find more information on PGR Forum in the Conservation News section of this issue.

Endangered Plant Species

Contacts were also made with the Mediterranean Island Plant Specialist Group of the IUCN to coordinate conservation actions in the Mediterranean. The Mediterranean Island Plant Specialist Group is currently working on an initiative to protect the top 50 most endangered plant species. (See article "Plant Conservation Program Top 50" in Conservation News.)

Identifying Important Plant Areas in the Mediterranean

OPTIMA participated in the two-day workshop organised by the IUCN Centre for Mediterranean Cooperation and Plantlife International in Malaga on June 26 and 27, 2003. This workshop introduced the Important Plant Areas program to key plant and fungus conservationists in the Mediterranean. Thirty-five plant specialists from the Mediterranean developed proposals for the identification of Important Plant Areas (IPA's) in the region, and provided their insight for moving the IPA program in Mediterranean countries forward. The next

steps to be undertaken by the organisers and national experts is to compile a summary of national actions and identify national partners who would be interested in the initiative.

COMMISSION FOR FLORISTIC INVESTIGATION

XI Iter Mediterraneum in Armenia

The XI Iter Mediterraneum, organised by the Institute of Botany of the Armenian National Academy of Sciences (ARNAS), took place in Armenia from 11 June - 2 July 2002. A total of 2603 phanerogams were collected in 62 different localities. A complete list of the visited localities, the participants and the colleagues determining their special groups, as well as other more detailed information can be found at: <http://www.nhm-wien.ac.at/NHM/Botanik/news.htm>. (See article "XI Iter Mediterraneum" in Field Work News).

PRIZE COMMISSION

Submit your nominations for OPTIMA Gold and Silver Medals

This Commission stands ready to receive nominations for the next OPTIMA Gold and Silver Medals which are to be awarded at the XI OPTIMA Meeting in Belgrade 2004. For further details see the "call for nominations and the regulations of the OPTIMA Gold and Silver Medals" in the article found in the first pages of this issue.

COMMISSION FOR THE MAPPING OF ORCHIDS IN THE MEDITERRANEAN AREA

Atlas of Mediterranean Orchids

This Commission is in its last term. Prof. Del Prete is in charge of having the text of the "Atlas of Mediterranean Orchids" reviewed from a

scientific point of view. Hopefully in this last term the work can be published and made available for OPTIMA members at a reduced price. For further information, contact: H. Baumann, Beethovenstr. 45, D-71032 Böblingen, Germany.

PROGRAM COMMITTEE FOR THE XI OPTIMA MEETING

Don't miss the XI OPTIMA Meeting in Belgrade, 2004!

This Committee is busy preparing the Scientific Program for the XI OPTIMA Meeting scheduled to take place in Belgrade in 2004. For more information on the XI OPTIMA Meeting, see the First Circular in the Meetings section of this Newsletter.

COMMISSION FOR LICHENS

Lichen Checklist

The lichen checklists from most of the different countries or areas of the Mediterranean are now published or well advanced. There still remain some gaps in countries such as Algeria and Southern France. The next step to be taken by the Commission is to establish a connection among the lists on the Internet and to promote the application of these data to different purposes like the generation of predictive maps by means of a GIS. For further information, contact: P.L. Nimis, E-mail: nimis@univ.ts.it

COMMISSION FOR KARYOSYSTEMATICS AND MOLECULAR SYSTEMATICS

Mediterranean Chromosome Number Reports

For the twelfth successive year, this Commission prepared its "Mediterranean chromosome number reports" edited by G.

Kamari, C. Blanché and F. Garbari, as a standing column in *Flora Mediterranea*.

"PhytoKaryon"

The Botanical Institute of Patras is participating in the Euro+Med PlantBase Project as a partner with a satellite database "PhytoKaryon", which is concerned with the development and organization of information summaries on karyological and biosystematic data. (See article "PhytoKaryon" in Chromosome News). The data summaries will be linked to the Euro+Med PlantBase. Additionally, external databases with karyological information will be linked to "PhytoKaryon". This first phase of the Euro+Med PlantBase project, financed by the European Union, has a duration of three years ending in October 2003.

Chromosome Numbers for Italian Flora on-line

The Botany Institute of Pisa has made the wealth of data stored in their karyological database available to the scientific community on-line. This project, started in 2002 under the coordination of F. Garbari, aims to create an on-line clearing house for chromosome numbers of Italian flora, where interested scientists can find data, suggest corrections and propose the insertion of new records. Currently, over 5700 counts, 3000 taxa and almost 1000 bibliographic records can be consulted. (See article, "Chromosome numbers for the Italian flora on-line" in Chromosome News.)

For more information on this Commission's activities, contact: G. Kamari, E-mail: Kamari@upatras.gr

HERBARIUM MEDITERRANEUM COMMISSION

Over 800 herbarium specimens received!

In 2001 and 2002 twenty-five members took advantage of the offer of the Herbarium Mediterraneum Foundation to accept herbarium specimens in exchange for OPTIMA fees and/or the purchase of *Bocconea* volumes and the Herbarium received a total of 849 herbarium specimens. The Herbarium Mediterraneum also offered OPTIMA members the possibility of research visits to the Herbarium.

Publications

With regard to publications, this Commission supervised the publication of Volume 12 of *Flora Mediterranea* and co-sponsored, together with the Department of Botanical Sciences of the University of Palermo and the Faculty of Science, the publication of the trilogy "Il cielo, la terra, la pianta" by G. H. Fabre.

Meeting of the Scientific Committee of the Herbarium Mediterraneum Foundation

A meeting of the Scientific Committee of the Herbarium Mediterraneum Foundation was held on 10 May 2002. In addition to the above-mentioned activities, the Committee examined, discussed and commended plans of the prospective building of the Herbarium Mediterraneum.

Two research grants, each to cover the cost of a 3-month stay in Palermo plus travel expenses, will be funded. This offer is open to OPTIMA members resident in an Eastern Mediterranean country. (See the Institutions section in this issue for more details.)

COMMISSION FOR THE DIFFUSION OF KNOWLEDGE ON MEDITERRANEAN PLANTS

Plant Landscapes of the Mediterranean

The Commission for the Diffusion of Knowledge on Mediterranean Plants continued with the final steps in the preparation of the book "Plant Landscapes of the Mediterranean". Greece and Sicily are the two areas which are still missing. Maps and figures need to be provided in some cases and the standardization of scientific plant names in the various chapters is in progress. Having prepared a complete draft, the Secretary has initiated contact with the members of the Publications Commission to facilitate the publication of the book. The final editing and standardization will be carried out by the Publisher. At the XI OPTIMA Meeting in Belgrade a symposium will be focused on the main issues of some chapters of the book. For additional information, contact: U. Plitmann, E-mail: uzi@vms.huji.ac.il

COMMISSION ON BRYOPHYTES

Mediterranean Bryoflora Checklist

This Commission has begun the compilation of a checklist/database on Mediterranean bryoflora. The first stage of the compilation process was focused on liverworts and in the autumn of 2003 work will begin on mosses. An internal commission of four members representing

different areas of the Mediterranean has been established to coordinate the elaboration of the checklist. The Secretary of the internal commission is R.M. Ros with V. Mazimpaka representing the western Mediterranean area, M. Aleffi representing the central Mediterranean area, and I. Herrnstadt representing the eastern Mediterranean area. Data will first be compiled from published works relating to well-explored countries, checklists and recent papers. For additional information, contact: R.M. Ros, E-mail: mros@um.es

ADVISORY COMMITTEE FOR THE EURO+MED PLANTBASE

Planning Workshop for Establishing a Technical Cooperation Network for Taxonomic Capacity Building in North Africa

In May 2002 Prof. Benito Valdés represented OPTIMA at the "Planning Workshop for Establishing a Technical Cooperation Network for Taxonomic Capacity Building in North Africa", organized by BioNET International, Euro+Med Plant Base and the Institute Agronomique et Vétérinaire Hassan II, Rabat. Dr. Valdés gave an informative lecture on the role of OPTIMA in the study of Mediterranean flora, explaining the activities carried out by OPTIMA Commissions and Committees and stressing the important role OPTIMA can play in promoting communication and collaboration among experts of NAFRINET and European and eastern Mediterranean countries. For further information, contact: B. Valdés, E-mail: bvaldes@us.es

N O U V E L L E S D E L ' O P T I M A

par JOSÉ M. IRIONDO

L'informateur OPTIMA n° 37 présente une nouvelle couverture et un nouveau format, dont nous espérons que vous les trouverez séduisants. Malheureusement, il n'a pas été possible d'inclure les analyses de publications dans ce numéro, mais nous espérons reprendre cette rubrique dans le n° 38.

Comme vous le savez, le XIème Colloque de l'OPTIMA se tiendra à Belgrade en Septembre 2004. Vous trouverez la première circulaire dans ce numéro. Veuillez à prendre votre pré inscription dès que possible, et à vous inscrire et soumettre vos résumés en temps utile. Grâce au travail intense et à la motivation de nos collègues de Belgrade, je suis certain que le XIème Colloque de l'OPTIMA sera un succès total, et je suis impatient de vous y rencontrer.

Nous souhaiterions également vous proposer de participer au processus d'attribution des Médailles d'Or et d'Argent qui seront décernées au Colloque de Belgrade en faisant parvenir vos propositions au Secrétariat. Vous trouverez des informations supplémentaires sur ce sujet dans ce numéro.

COMITE INTERNATIONAL

En 2002, les membres du Comité ont approuvé le rapport annuel et le rapport financier pour 2001, soumis par le Secrétaire au nom du Président et du Conseil Exécutif. Il a également désigné le Dr Santiago Pajarón et le Dr Federico Fernández-González comme vérificateurs des comptes pour l'année 2000.

CONSEIL EXECUTIF

En 2002, le Conseil Exécutif a approuvé les propositions de membres des Commissions de l'OPTIMA pour la période 2001-2007.

Le Conseil a également décidé de maintenir inchangés les tarifs de cotisations pour l'année 2003.

SECRÉTARIAT

Le Secrétariat a pris en charge les comptes de l'OPTIMA et ceux de la Commission des Publications et de celle des Prix. Il a également

tenu à jour la liste des membres, et géré la diffusion et la vente des publications de l'OPTIMA. Le Secrétariat de l'OPTIMA a également assuré les relations entre les membres du Conseil et du Comité et les groupes de travail et commissions de notre Organisation.

L'OPTIMA participe au 50ème Anniversaire de la création du Diplôme de Biologie des Universités Espagnoles

Le Secrétariat a préparé un poster sur les activités et publications de l'OPTIMA et l'a envoyé à une exposition qui a circulé dans différentes universités Espagnoles tout au long de 2002. Cette exposition faisait partie des activités de commémoration du 50ème anniversaire de la création du Diplôme de Biologie dans les universités Espagnoles.

DÉCÈS

Prof. Dr. Mustafa Imam, Le Caire, Égypte, décédé le 1er mai 2003.

Prof. M. Nabil El-Hadidi, Le Caire, Égypte, décédé le 7 septembre 2003.

Une notice nécrologique complète de cet éminent membre de l'OPTIMA sera publiée dans un prochain volume de *Flora Mediterranea*.

Le Point Sur Les Commissions

COMMISSION DES PUBLICATIONS

Flora Mediterranea 12 et Bocconea 16 (I)

Cette Commission est à la disposition de la Fondation de l'Herbier Méditerranéen de Palerme pour la publication de ses deux périodiques, *Flora Mediterranea* et *Bocconea*. L'année passée, l'Herbier Méditerranéen a publié le 12ème volume de *Flora Mediterranea*, qui a été distribué gratuitement aux membres ordinaires de l'OPTIMA, et *Bocconea* 16(1), consacré aux articles écrits par les conférenciers des symposiums du Xème Colloque de l'OPTIMA à Palerme. Le volume 16 (2) comprendra les articles correspondant aux posters de ce Colloque. Informations supplémentaires: F. Raimondo, E-mail: raimondo@unipa.it

COMMISSION POUR LA CONSERVATION ET L'UTILISATION DURABLE DES RESSOURCES VEGETALES

Banques de graines méditerranéennes

L'un des objectifs de cette Commission est de stimuler la coopération et la coordination entre les banques de graines méditerranéennes. Dans ce contexte, cette Commission gère un groupe de discussion sur la mise en réseau des banques de graines méditerranéennes sur le site www.yahogroups.medseedbanks.

Plantes sauvages apparentées aux plantes cultivées

En 2002, un Forum PGR¹ (*European Crop Wild Relative Diversity Assessment and Conservation Forum*) a été approuvé par l'Union Européenne avec la participation des membres de l'OPTIMA Jose M. Iriondo, Nigel Maxted et Stephen Jury. L'objectif de ce Forum est d'évaluer la diversité taxinomique et génétique des plantes sauvages européennes apparentées aux plantes cultivées et de développer des méthodologies de conservation adaptées. Le Forum PGR vise à mettre en place un système d'information permettant l'accès aux données sur les plantes sauvages apparentées aux plantes cultivées. Une des premières réalisations de ce Forum PGR sera une analyse des lacunes de conservation et des recommandations pour la conservation *in situ* et *ex situ* des plantes sauvages européennes apparentées aux plantes cultivées. Le développement de méthodologies, notamment pour la conservation *in situ*, est également un aspect majeur du projet. Vous trouverez davantage d'informations sur le Forum PGR dans le chapitre de ce numéro consacré aux Nouvelles sur la Conservation.

Espèces végétales en danger

Des contacts ont également été pris avec le Groupe Spécialisé sur les Plantes Méditerranéennes Insulaires de l'UICN afin de coordonner les actions de conservation en région Méditerranéenne. Le Groupe Spécialisé sur les Plantes Méditerranéennes Insulaires travaille actuellement sur une initiative destinée à protéger les 50 espèces les plus menacées. (Voir l'article "*Plant Conservation Program Top 50*" dans les Nouvelles sur la Conservation)

¹ *Plant Genetic Resources*, Ressources génétiques des plantes.

Mise en évidence de Régions Importantes de plantes méditerranéennes

L'OPTIMA a participé à un atelier de deux jours organisé par le Centre de l'UICN pour la Coopération Méditerranéenne et *Plantlife International* à Malaga les 26 et 27 Juin 2003. Cet atelier a présenté le programme "Important Plant Areas" aux responsables de la conservation d'espèces clés de plantes et de champignons en région méditerranéenne. Trente cinq spécialistes de plantes de la région méditerranéenne ont exposé des propositions pour la mise en évidence de Régions Importantes de Plantes (IPA's) méditerranéennes, et ont apporté leur expérience pour étendre le programme IPA dans les pays méditerranéens. Les prochaines étapes à entreprendre à la suite de cet événement doivent être réparties entre les organisateurs et les experts nationaux. Les experts devraient avoir à faire la synthèse des actions nationales et repérer les partenaires nationaux qui seraient intéressés par cette initiative.

COMMISSION POUR LA RECHERCHE FLORISTIQUE

XIème Iter Mediterraneum en Arménie

Le XIème Iter Mediterraneum, organisé par l'Institut de Botanique de l'Académie Arménienne Nationale des Sciences (ARNAS), s'est tenu en Arménie du 11 juin au 2 juillet 2002. Ce sont au total 2603 phanérogames qui ont été récoltés dans 62 localités différentes. On trouvera sur le site <http://www.nhm-wien.ac.at/NHM/Botanik/news.htm> une liste complète des localités visitées, des participants, des spécialistes chargés de la détermination de groupes, ainsi que des informations plus précises.

(Voir l'article "XI Iter Mediterraneum" dans *Field Work News*)

COMMISSION DES PRIX

Faites vos propositions d'attribution des Médailles d'Or et d'Argent de l'OPTIMA

Cette Commission est prête à recevoir les propositions pour les prochaines médailles d'or et d'argent de l'OPTIMA, qui seront décernées au XIème Colloque de l'OPTIMA à Belgrade en 2004. Pour plus de détails, consulter "call for nominations and the regulations of the OPTIMA Gold and Silver Medals" dans l'article que vous trouverez dans les premières pages de ce numéro.

COMMISSION POUR LA CARTOGRAPHIE DES ORCHIDEES DANS LA REGION MEDITERRANEENNE

Atlas des Orchidées méditerranéennes

Cette Commission parvient au terme de son existence. Le Pr. Del Prete est chargé d'obtenir un texte scientifiquement corrigé pour l'"Atlas des Orchidées méditerranéennes". Au cours de cette dernière période, le travail devrait être publié et mis à la disposition des membres de l'OPTIMA à un prix réduit. Pour plus de détails, prendre contact avec H. Baumann, Beethovenstr. 45, D-71032 Böblingen, Allemagne.

COMITE DE PROGRAMME POUR LE XIEME COLLOQUE DE L'OPTIMA

Ne manquez pas le XIème Colloque de l'OPTIMA à Belgrade en 2004!

Ce Comité prépare activement le programme scientifique pour le XIème Colloque de l'OPTIMA qui devrait se tenir à Belgrade en 2004. Pour plus d'informations sur le XIème

Colloque de l'OPTIMA, consultez la Première Circulaire dans le chapitre "Congrès" de cet Informateur.

COMMISSION POUR LES LICHENS

Check-list des Lichens

Les *check-lists* de différents pays ou régions méditerranéens sont publiés ou au moins bien avancés. Il reste encore quelques lacunes dans certains pays, comme l'Algérie ou le sud de la France. La prochaine étape à organiser par cette Commission est d'établir une liaison entre les listes sur Internet puis d'exploiter ces données dans différentes directions telles que l'élaboration de cartes prédictives à l'aide de SIG. Pour plus d'informations, prendre contact avec P.L. Nimis, E-mail: nimis@univ.ts.it

COMMISSION POUR LA CARYOSYSTEMATIQUE ET LA SYSTEMATIQUE MOLECULAIRE

Mediterranean Chromosome Number Reports

Pour la 12ème année consécutive, cette Commission a préparé ses "*Mediterranean chromosome number reports*" publiés par G. Kamari, C. Blanché et F. Garbari, sous forme de rubrique permanente de *Flora Mediterranea*.

"PhytoKaryon"

L'Institut de Botanique de Patras participe au Projet *Euro+Med PlantBase* au titre de partenaire, avec une base de données satellite nommée "PhytoKaryon", qui se charge de développer et organiser les résumés d'informations sur les données caryologiques et biosystématiques (voir l'article "PhytoKaryon" dans les *Chromosome News*). Les sommaires de données seront reliés à *Euro+Med PlantBase*. De plus, des bases de données extérieures avec des informations caryologiques auront un lien avec

"PhytoKaryon". Cette première phase du projet *Euro+Med PlantBase*, financée par l'Union Européenne, est prévue pour trois années se terminant en octobre 2003.

Nombres de chromosomes pour la flore italienne en ligne

L'Institut Botanique de Pise a rendu accessibles en ligne à la communauté scientifique le trésor des données enregistrées dans sa base de données caryologique. Ce projet, qui a démarré en 2002 et qui est coordonné par F. Garbari, vise à créer un lieu d'échanges sur les nombres de chromosomes de la flore italienne, où les scientifiques intéressés pourront trouver des données, suggérer des corrections et proposer l'enregistrement de données nouvelles. Actuellement, plus de 5700 comptages, 3000 taxons et près de 1000 références bibliographiques peuvent être consultés. (voir l'article "*Chromosome numbers for the Italian flora on-line*" dans *Chromosome News*.)

Pour plus d'informations sur les activités de cette Commission, prendre contact avec: G. Kamari, E-mail: Kamari@upatras.gr

COMMISSION DE L'HERBARIUM MEDITERRANEUM

Plus de 800 spécimens d'herbier reçus!

En 2001 et 2002, vingt-cinq membres ont profité de l'offre de la Fondation pour l'Herbarium Mediterraneum d'accepter des spécimens d'herbier en lieu de cotisation à l'OPTIMA et/ou pour l'achat de volumes de *Bocconea* et l'Herbier a reçu un total de 849 spécimens. L'Herbarium Mediterraneum a également offert aux membres de l'OPTIMA la possibilité de séjours de recherche à l'Herbier.

Publications

En ce qui concerne les publications, cette commission a supervisé la publication du Volume

12 de *Flora Mediterranea* et co-financé, avec le Département des Sciences Botaniques de l'Université de Palerme et la Faculté des Sciences, la publication de la trilogie "*Il cielo, la terra, la pianta*" de G. H. Fabre.

Réunion du Comité Scientifique de la Fondation pour l'Herbarium Mediterraneum

Une réunion du Comité Scientifique de la Fondation pour l'Herbarium Mediterraneum s'est tenue le 10 mai 2002. En plus des activités déjà mentionnées ci-dessus, le Comité a examiné, discuté et recommandé les plans du futur immeuble de l'Herbarium Mediterraneum. Deux bourses de recherche, destinées chacune à couvrir le prix d'un stage de trois mois à Palerme et les frais de voyage attenants, seront mises en place et ouvertes à la compétition parmi les membres de l'OPTIMA résidant dans un pays de la Méditerranée orientale. (Voir la section Institutions dans ce numéro pour plus de détails).

COMMISSION POUR LA DIFFUSION DES CONNAISSANCES SUR LES PLANTES MEDITERRANEENNES

Paysages végétaux de la Région Méditerranéenne

La Commission pour la diffusion des connaissances sur les plantes méditerranéennes a progressé dans les dernières étapes de la préparation du livre "Paysages végétaux de la Région Méditerranéenne". Les deux régions encore absentes sont la Grèce et la Sicile. Les cartes et figures doivent encore être fournies dans certains cas, et l'homogénéisation des noms scientifiques des plantes entre les différents chapitres est en bonne voie. Ayant préparé une esquisse complète, le secrétaire a pris contact avec les membres de la Commission des Publications pour faciliter la publication du livre. La mise en forme et l'homogénéisation finale seront prises en charge par l'éditeur. Au XIème

Colloque de l'OPTIMA à Belgrade, un symposium sera consacré aux principales questions posées par certains chapitres du livre. Pour des informations supplémentaires, prendre contact avec: U. Plitmann, E-mail: uzi@vms.huji.ac.il

COMMISSION POUR LES BRYOPHYTES

Check-list de la bryoflore méditerranéenne

Cette Commission a commencé à réunir les informations pour une check-list/base de données sur la bryoflore méditerranéenne. La première phase de cette activité s'est concentrée sur les hépatiques, et à l'automne 2003, le travail sur les mousses commencera. Une commission interne de quatre membres représentant les différentes régions méditerranéennes a été mise en place pour coordonner l'élaboration de la check-list. Le Secrétaire de cette commission interne est R. M. Ros, avec V. Mazimpaka représentant la région méditerranéenne occidentale, M. Aleffi représentant la région méditerranéenne centrale et I. Herrstadt représentant la région méditerranéenne orientale. Les données seront d'abord réunies à partir de travaux publiés concernant les régions bien explorées, de check-lists et de publications récentes. Pour plus d'informations, prendre contact avec: R.M. Ros, E-mail: mros@um.es

COMITE DE CONSEILLERS POUR EURO+MED PLANTBASE

Atelier de Programmation pour l'établissement d'un Réseau de coopération technique en vue de la mise en place d'une Compétence taxinomique en Afrique du Nord

En mai 2002, le Pr. Benito Valdés a représenté l'OPTIMA au "Planning Workshop for

Establishing a Technical Cooperation Network for Taxonomic Capacity Building in North Africa”, organisé par BioNET International, Euro+Med Plant Base et l'Institut Agronomique et Vétérinaire Hassan II, Rabat. Le Dr. Valdés a donné une conférence instructive sur le rôle de l'OPTIMA dans l'étude de la flore méditerranéenne, en expliquant les activités entreprises par le

Commissions et Comités de l'OPTIMA et en mettant l'accent sur le rôle important que l'OPTIMA pourrait jouer en développant la communication et la collaboration entre les experts de NAFRINET et les pays de la Région méditerranéenne européenne et orientale. Pour plus d'informations, prendre contact avec: B. Valdés, E-mail: bvaldes@us.es

P E R S O N A L I A

DIMITAR V. VLAEV

On 5 February 2003 artist Dimitar V. Vlaev turned 65. He has been a collaborator of the Institute of Botany in Sofia for over 30 years. He has illustrated volumes 4-10 of *Flora of the Republic of Bulgaria* as well as many other academic works. Among these are *The Fungi in Bulgaria* (vols. 1-4), *Edible and Poisonous Mushrooms in Bulgaria* (1998), *Atlas of Medicinal Plants in Bulgaria* (1982), *A Guide to Bulgarian Vascular Flora* (1992) and *Atlas of Bulgarian Endemic Plants*, ed.2. (in English, in press).

Dimitar Vlaev has made the illustrations in *Key to the Trematoda in Europe* vol. 1. (Gibson *et al.* The Natural History Museum. CABI Publishing). He has also done the drawings in many biology textbooks and other popular scientific series.

The Institute of Botany has organized an exhibition with original graphics and water-paintings as a tribute to the 65th Anniversary of the artist Dimitar Vlaev. In recognition of his work, Dimitar Vlaev was awarded with the honourable badge of the Bulgarian Academy of Sciences.

I N S T I T U T I O N S

TWO RESEARCH GRANTS OFFERED BY THE INTERNATIONAL FOUNDATION PRO HERBARIO MEDITERRANEO

The International Foundation *pro Herbario mediterraneo* is offering two research grants, each of 3 months to be spent during 2004 at the *Herbarium Mediterraneum* of Palermo. These grants are open to graduates in plant biology with

special emphasis on systematics and phytogeography, under age 40 and resident in a country of the Eastern Mediterranean – from Lybia and former Yugoslavia eastwards – plus Transcaucasia (Georgia, Armenia, Azerbaijan).

The monthly amount of each grant is 774,68 Euros plus economy return airfare from the country of residence to Palermo. Applications are to be addressed to:

Fondazione Internazionale pro Herbario mediterraneo, c/o Orto Botanico dell'Università, via Lincoln, I-90123 Palermo, Italy

In order to be considered, applications must be received no later than December 30, 2003 and must include the applicant's *curriculum*, a research plan, and a letter of introduction by a Professor of Botany who has supervised her/his studies.

All applications will be examined by the Scientific Committee of the Foundation. Successful applicants will be informed by a letter from the President of the Foundation proposing the dates of sojourn at the *Herbarium Mediterraneum*. They will be asked to confirm acceptance of the grant for the dates and under the terms proposed.

Any grantee who should fail to arrive at the *Herbarium Mediterraneum* in Palermo on the agreed date will forfeit the grant.

FONDATION INTERNATIONALE PRO HERBARIO MEDITERRANEO DEUX BOURSES D'ÉTUDES

La Fondation Internationale *pro Herbario mediterraneo* met à la disposition de licenciés, qui n'ont pas passé l'âge de 40 années, habitant respectivement dans les pays du Méditerranée orientale qui appartient aux territoires compris entre la Libye et les Pays de la ex Yougoslavie et en outre les Pays caucasiens (Georgie, Arménie, Azerbaïdjan) n. 2 bourses d'études, durant 3 mois chacune à passer en 2004 à l'*Herbarium mediterraneum* de Palerme.

Les bourses s'adressent aux licenciés qui ont dans leur *curriculum* des examens de Biologie Végétale à caractère systématique et phytogéographique. La somme de chaque bourse d'études est de 774,68 Euro mensuels plus un billet d'avion d'aller et retour en classe économique du pays de provenance à Palerme et le logement économique gratuit pour toute la durée de la bourse d'études.

Les intéressés doivent présenter la requête aussi bien que leur *curriculum*, un projet de recherche et une lettre de présentation d'un

Professeur de matières botaniques de leur pays de provenance. La requête doit être adressée à:

Fondazione Internazionale pro Herbario mediterraneo, c/o Orto Botanico dell'Università, via Lincoln, I-90123 Palermo, Italy

Les requêtes doivent arriver d'ici le 30 décembre 2003 et elles seront examinées par le Comité Scientifique de la Fondation qui formulera la liste des candidats. Les assignataires de la bourse d'études recevront une communication du Président de la Fondation dans laquelle seront proposées les dates de commencement de la fréquentation de l'*Herbarium mediterraneum*. Les assignataires seront invités à confirmer l'acceptation de la bourse pour la période et les conditions proposées.

Il reste entendu que la bourse serait annulée au cas où la/le bénéficiaire devait ne pas se présenter à l'*Herbarium mediterraneum* à la date convenue.



CROATIAN BOTANICAL SOCIETY

by Bozena Mitic

I am pleased to inform OPTIMA members and the general public that for the first time in the history of Croatian botany, Croatian botanists established the Croatian Botanical Society (HBoD - Hrvatsko botaničko društvo) at the end of last year. The first constitutional conference was held on 18 November 2002 at the Department of Botany, Faculty of Science, University of Zagreb, with the aim of working on the prosperity of Croatian botany. After discussing the future work

of the Society, a second conference was held on 10 January 2003 with several foreign participants. All other details about our Society (such as statutes, presidency and supervisory board, as well as membership application forms) are available at the internet address:

<http://hirc.botanic.hr/HBoD/HBoDhome.htm>.

We currently have 60 members and you are all welcome to join our Society.

Address: Croatian Botanical Society. Marulićev trg 20/2, HR-10000 [Zagreb](#), [Croatia](#). Tel./Fax. (++385 1) 48 44 001, e-mail: hbod@botanic.hr

SPANISH SOCIETY OF CONSERVATION BIOLOGY OF PLANTS

by Juan Carlos Moreno

The Spanish Society of Conservation Biology of Plants was established at the beginning of 2003. This society was created by the team in charge of developing the Spanish project 'Threatened Flora Atlas' (see OPTIMA Newsletter no. 36 and also in this issue), reflecting the will of nearly 60 teams belonging to universities, botanic gardens and institutes to monitor their collaboration in the future within a professional

association focused on the conservation of plant species in Spain.

Among its targets, the Society aims to promote the debate and exchange of knowledge between its members, to become an interlocutor with the Spanish Administration on threatened flora, and to organize a congress on the topic every two years, following the example of the congress that took place in Valencia last fall.

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B R Y O P H Y T E N E W S

HUMAN ACTIVITIES AND THE BRYOFLOTA OF EGYPT*by Dr. Hanaa Shabbara*

Egypt has a bryologically unique position. It is mainly situated in Afr1 (North Africa, Madeira, the Azores and the Canary Islands). Its southern political border with Sudan is also the bryofloristic border between Afr1 and Afr2 (Central Africa and St. Helena Islands). While lands in the north of Egypt are Mediterranean, the rest of the country is an arid desert with the Sinai mountains in the northeast (the highest is 2642 m above sea level) and the Elba mountains in the southeast (the highest is 1428 m above sea level). The Nile River flows from south to north splitting Egypt into a wider Western (or Libyan) Desert with numerous oases and a much narrower Eastern (or Arabian) Desert which is transected by numerous dry valleys running east-west towards the Nile Valley or west-east towards the Red Sea.

The moss flora of Egyptian deserts, the oases and the elevations is similar to that of North African countries (Ros *et al.*, 1999; Refai *et al.*, 2002), while the moss flora of the Nile valley and delta is somewhat different. It includes some introduced African elements such as *Micropoma niloticum* and some species of *Philonotis* brought from Afr2 with the Nile waters.

Human activities in Egypt include the four following major projects:

The "Aswan High Dam". Constructed on the Nile in south Egypt in the 1960's, this project resulted in the formation of a great artificial lake (Lake Naser). Many plants including bryophytes (e.g. the three mosses reported by Boulos 1966, from Nile Nubia) became permanently drowned. The lake has also had its effect on the climate. The annual rainfall has increased from less than 1 mm to about 15 mm (El-Hadidi, 2000).

The irrigation project in Southern Sinai. Nile waters are being carried through huge pipes to irrigate lands in Southern Sinai.

The "Assalaam stream". This stream has recently been formed with Nile waters and is being used to irrigate lands in Northern Sinai.

The most recent "Toshka" irrigation project in south Egypt. During the high summer floods excess Nile waters are diverted to irrigate desert areas south of the "Khrga & Dakhla" Oases.

While the first project has already had its effect on the flora, the effects of the other three projects are still occurring. Therefore, we are presently, exploring the bryoflora of Northern Sinai (Shabbara, 1999; Refai & El-Saadawi, 2000; Abou Salama & El-Saadawi, 2001a), Southern Sinai (Abou Salama, 2001), and the Oases (Abou Salama & El-Saadawi, 2001b; Refai, 2001; Refai *et al.* 2002) in a race against time before the great expected changes take place.

References

- Abou Salama, U.Y. 2001. The moss flora of Gebel St. Katherine (Sinai) with nine new records. *Taeckholmia*, 21 (1): 81-91.
- Abou Salama, U.Y., El-Saadawi, W.E. 2001a. A contribution to the moss flora of Isthmic desert, Egypt. *J. Bryol.* 23 (2): 146-148.
- Abou Salama, U.Y., El-Saadawi, W.E. 2001b. A contribution to the moss flora of Egyptian Oases. 1-Farafra Oasis. 21 (2): 283-290.
- Boulos, L. 1966. Flora of the Nile Region in Egyptian Nubia. *Feddes Repertorium* 73: 184-215.

El-Hadidi, N.M. 2000. Geomorphology, climate and phytogeographic affinities of Egypt. *Flora Aegyptica* 1 (1): 1-25. Cairo.

Refai, M.S. 2001. The moss flora of the Egyptian Oases. 2- Siwa Oasis. *Taeckholmia* 21 (2): 291-302.

Refai, M.S., Abou Salama, U.Y., El-Saadawi, W.E. 2002. A contribution to the moss flora of Egyptian Oases. 3-Bahariya Oasis. *Taeckholmia* . 22 (2): 121-129.

Refai, M.S., El-Saadawi, W.E. 2000. Contributions to the moss flora of the Isthmic desert, Sinai, Egypt. *Taeckholmia*, 20 (2): 139-146.

Ros, R., Cano, M., Guerra, J. 1999. Bryophyte checklist of northern Africa. *Journal of Bryology* 21: 207-244.

Shabbara, H.M. 1999. Three new records of Funariaceae from Egypt. *Journal of Bryology* 21:201-205.

C H R O M O S O M E N E W S

CHROMOSOME NUMBERS FOR ITALIAN FLORA ON-LINE

(<http://www.dsb.unipi.it/chrobase>)

by Fabio Garbari & Gianni Bedini

Karyological databases have proven to be a useful tool for karyosystematic studies. They reduce the time required for collecting published material concerning plant distribution and chromosome counts, usually scattered over a wide range of scientific periodicals.

Early attempts to summarise known data, starting from 1931 (Tischler, 1931), took the shape of printed chromosome atlases and indices, generally large volumes with records sorted by plant name (Fedorov, 1969; Loeve *et al.*, 1977; Pingsheng and Diqing, 1988; Dobes and Vitek, 2000; see also Berendsohn *et al.*, 1997, for additional references).

Later projects took advantage of the more flexible approach granted by electronic databases (Martin, 1991; Pastor Díaz, 1993; Marchi and D'Amato, 1995). Some of these were designed according to a defined set of rules (Del Prete *et al.*, 1999; Simon *et al.*, 2001), but they were generally installed on single-user desktop computers, rather than database servers connected to a network. Therefore, the

advantages of these electronic databases over printed atlases and indices were restricted to a small number of local users who had access to the computer. In practical terms, only the research team that had set up the database could benefit from it.

More recently, karyological databases were made accessible through servers on the Internet with obvious benefits for the international community of botanists gathering karyological data. Excellent examples are:

- the searchable index maintained by the Missouri Botanical Garden in its VAST (VAScular Tropics) nomenclatural database at <http://mobot.mobot.org/W3T/Search/ipcn.html>, an offspring of the printed "Index to plant chromosome numbers" edited by different authors starting from 1968 (Ornduff, 1968; 1969; Moore, 1970; 1972; 1973; 1977; Goldblatt, 1981; 1984; 1985; 1988; Goldblatt and Johnson, 1990; 1994; 1998);

- the Cromocat database in the *Flora* section of the general Catalan biodiversity database BIOCAT, accessible through <http://biodiver.bio.ub.es/biocat/homepage.html> covering the taxa growing in Catalonia (Simon, pers. comm.);
- the BSBI cytology search form at the URL <http://rbg-web2.rbge.org.uk/BSBI/>, concerning vascular plants of the British Isles.

Other notable on-line resources are "Chromosome Counts for Malvaceae", edited by Stewart Robert Hinsley <http://www.meden.demon.co.uk/Malvaceae/Biology/Chromosomes.html>) and "Flora of North America" (<http://www.fna.org/FNA/>), where chromosome numbers are given for all genera but not for all species.

In the Department of Botanical Sciences of Pisa University, a database of chromosome numbers for Italian flora has been in use for over thirty-five years. Its creation shortly followed the foundation of the Working Group for Cytotaxonomy and Embryology of the Italian Botanical Society in 1967 (Garbari, 1988), an event heralding the rapid diffusion of cytotaxonomical research in Italy. The slow but constant growth beginning in the late 1920's resulted in the publication of 490 chromosome counts for the Italian flora by the end of 1970. This figure was quadrupled in the following decade (Garbari, 1979; 1988). No doubt the start of the "Chromosome numbers for the Italian flora" series in *Informatore Botanico Italiano* - the Italian Botanical Society bulletin - in 1972 was instrumental in this achievement with 1,000 counts published in the following 12 years (Diana Corrias *et al.*, 1984). Its format was soon adopted by cytotaxonomists in Spain, Portugal and South Africa, eventually leading to the Mediterranean Chromosome Numbers Reports, started in *Flora Mediterranea* in the early 1990's (Kamari *et al.*, 1991) and still continuing (Kamari *et al.*, 2002). The first series of this kind, albeit in a simpler format, had appeared in *Taxon* from 1964 (Loeve, 1964) to 1988, and then in *I.O.P.B. Newsletter* (Stace, 1989).

In this lively context, the Botany Institute of Pisa created a simple card index sorted by species name with each card containing data on

collection place, chromosome counts and bibliographic references. By 1994, it included about 2,500 cards. While it was still a convenient tool for quick checks of all known counts for a species or even a genus, it did not allow the rapid collation of statistical information that could be used to summarise the status of karyosystematic research in Italy or to point out data-deficient taxa or areas of the national territory, as outlined in Del Prete *et al.* (1999) for European orchids. Physical size was also a problem, because the cards had filled up the large drawer that had been set aside for them and no extra space was available. New cards had to be wedged in with great difficulty, eventually leading to the interruption of updates.

Therefore, the database was transferred to a computer, following the guidelines for karyological databases established by the OPTIMA Commission for Karyosystematics in its meeting of May 1993, in Neuchatel, Switzerland (Kamari *et al.*, 1993; OPTIMA, 1998; Del Prete *et al.*, 1999). An interface module for a single-user computer was developed in-house, first in DBase III and then in Claris FileMaker. The insertion of new data was spurred on, and about 1,000 records were added in the following two years, when insertion was again discontinued due to a shortage of staff. In 1999 it was finally resumed regularly, resulting in today's 5,722 counts, 3,010 taxa [approximately 54% of the Italian flora as considered by Pignatti (1982)], and 998 bibliographic records gathered from 145 scientific journals.

In order to make this wealth of data available to the scientific community worldwide, a project was started in 2002 under the coordination of F. Garbari. This project aimed to create an on-line clearing house for Chromosome numbers of Italian flora, where interested scientists can find data, suggest corrections and propose the insertion of new records.

Thus, the database was moved to a Linux/PostgreSQL platform, and PHP modules were developed to allow access to the database

via a standard web browser, such as Netscape Navigator or Internet Explorer, at the URL <http://www.dsb.unipi.it/chrobase/>.

The modules provide a sophisticated user interface organized in three access levels corresponding to different sets of safety constraints: no constraint for generic users, password check for users wishing to submit changes and/or insertions in the database, password and IP address check for local network users authorized to alter the database.

LEVEL 1 - generic users

The first level is designed for generic users wishing to access the database in read-only mode through specific queries. These users can visit the web site at <http://www.dsb.unipi.it/chrobase> and access the query form. Even at this basic access level, powerful query capabilities have been implemented. It is, therefore, possible to query the generic and specific epithet, the region of collection according to Italian administrative subdivision (including Corsica in view of its phytogeographic links with Italian flora), bibliographic references, or a combination thereof.

Simple queries, made by entering search parameters in a single field, may answer such questions as: What are the counts for the genus *Allium*? How many taxa have been investigated in the Region of Sicily? What species are given in papers by C. Del Prete? How many taxa were contributed globally in the year 1998?

More structured queries, making use of two or more search fields, allow us to find records of:

- specific and related infraspecific ranks. For example, a query for *Centaurea apolepa* returns six subspecies (*aetaliae*, *carueliana*, *cosana*, *lunensis*, *maremmana* and *subciliata*).
- specific and related infraspecific ranks in a certain region. For example, a query for *Centaurea apolepa* and the region "Liguria" only returns *Centaurea apolepa* Moretti subsp. *lunensis* (Fiori) Dost., as no counts are available for the other subspecies in that region.

- taxa for a certain region in a given year. For example, a query for the region "Tuscany" and the year "1999" returns 9 taxa.

The wild character "%" may be used in the query fields to search for words containing a specified sequence of characters. This feature is especially useful when one does not remember a plant name exactly. For example, if a user wishes to find data about *Rhamnus glaucophylla*, but he/she is uncertain about "glaucophylla", he may enter "glaucophyll%" and the search is performed correctly.

Although most users at this access level will probably browse records through the simplest route of plant names, the other access paths provided will be useful for regional analysis and for evaluating statistical data.

It is also possible to search for paper author and paper year, a choice that might seem redundant to those botanists accustomed to accessing information through plant names. A shortcoming of our database is that plant names were recorded as they were published in the original papers, without any synonymic correlation or correction. Consequently, queries referring to a plant name may return an incomplete set of records, as synonyms are not taken into account. A possible way around this is to search for authors who are known to have worked on the floristic unit in question. For example, the Apuan endemic *Santolina leucantha* Bertol. was formerly referred to as *Santolina pinnata* Viv. A query for the author "Garbari", who has long been studying Apuan plants, will return both names.

Independently on the access key, the query returns an index of records satisfying the search criteria. Each index item is linked to a web page displaying the full dataset available (taxon name, chromosome count, locality with related province and region, and bibliographic reference).

LEVEL 2 - external collaborators

Access to level 2 is restricted to users approved by the database coordinator, following a registration procedure. A registration form is available at the database home page. Registered

users will receive a user code and a password, and will be granted access to web pages allowing them to modify existing records and to insert new records from a standard web browser (no software installation is required).

Once the proposed modification or insertion has been completed and submitted by clicking on the "Submit" button at the bottom of the page, the interface marks the submitted record as "proposal" and stores it in the database. At the same time the interface automatically sends an e-mail message to the project coordinator to notify him that a proposal has been submitted. The coordinator then has the choice to accept or refuse the proposal, through a reserved module of the interface. The interface will automatically generate an e-mail message to inform the collaborator about the status of his/her proposal.

Through these pages, it is hoped that mistakes will be corrected and new records added by external collaborators involved in karyological studies on the Italian flora. Their contribution will be gratefully acknowledged in a collaborator page.

LEVEL 3 - local staff

Users from the local network of the Department of Botanical Sciences, Pisa University, have direct access to the database. They must be approved by the coordinator, following a registration procedure. Access to local staff pages is only possible on authorized computers, based on the user's IP address.

Level 3 is further subdivided into:

- i) operators - may modify and add records;
- ii) administrator - has operator privileges, can access the database in its "native" state, by-passing the interface (can use psql on a Linux terminal and access the data with the full range of query capabilities offered by SQL);
- iii) coordinator - has operator privileges, can create and delete users of levels 2 and 3, can access modification/insertion proposals submitted by external collaborators and choose to permanently incorporate them in the database or reject them.

A considerable amount of time and expertise has been needed to make the chromosome numbers for the Italian flora available not only for on-line consultation, but also open to external collaboration through simple HTML forms, accessible from a standard web browser. It is hoped that interested botanists will contribute to the project by indicating new data, mistakes in extant records or missing records.

The current dataset covers approximately half of the Italian flora with 3010 taxa. Much work is still needed in order to investigate the remaining half which is still unknown from a karyological perspective. By querying the database, researchers can choose to direct their efforts towards floristic units not yet investigated or to data-deficient Regions. If the botanical community takes advantage of this new tool, karyological studies might receive a new impulse.

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References

- Berendsohn, W.G., Greilhuber, J., Anagnostopoulos, A., Bedini, G., Jakupovic, J., Nimis, P.L., Valdes, B. 1997. A comprehensive datamodel for karyological databases. *Pl. Syst. Evol.* 205:85-98.
- Del Prete, C., Sgarbi, E., Bedini, G., Dallai, D. 1999. A database for mapping karyological data of European and Mediterranean orchids. *Acta Bot. Fennica* 162:155-159.
- Diana Corrias, S., Garbari, F., Marchi, P. 1984. Numeri cromosomici per la flora italiana 1-1000. *Inform. Bot. Ital.* 16(2-3): 219-241.
- Dobes, C., Vitek, E. 2000. Documented Chromosome Number Checklist of Austrian Vascular Plants. *Naturhistor. Mus., Wien*.
- Fedorov, A.N. (Ed.). 1969. Chromosome numbers of flowering plants. - Leningrad.
- Garbari, F. 1979. Cytotaxonomical and biosystematic aspects of the Mediterranean Flora of Italy. *Webbia* 34(1): 337-355.

- Garbari, F. 1988. L'indagine citotassonomica in Italia: cronache, risultati e prospettive. In: Pedrotti, F. (Ed.) 100 anni di ricerche botaniche in Italia, 2: 519-526. Soc. Bot. Ital., Firenze.
- Goldblatt, P. 1981. Index to plant chromosome numbers 1975-1978. - Monogr. Syst. Missouri Bot. Gard.
- Goldblatt, P. 1984. Index to plant chromosome numbers 1979-1981. - Monogr. Syst. Missouri Bot. Gard.
- Goldblatt, P. 1985. Index to plant chromosome numbers 1982-1983. - Monogr. Syst. Missouri Bot. Gard.
- Goldblatt, P. 1988. Index to plant chromosome numbers 1984-1985. - Monogr. Syst. Missouri Bot. Gard.
- Goldblatt, P., Johnson, D.E. 1990. Index to plant chromosome numbers 1984-1985. - Monogr. Syst. Missouri Bot. Gard.
- Goldblatt, P., Johnson, D.E. 1994. Index to plant chromosome numbers 1990-1991. - Monogr. Syst. Missouri Bot. Gard.
- Goldblatt, P., Johnson, D.E. 1998. Index to plant chromosome numbers 1994-1995. - Monogr. Syst. Missouri Bot. Gard.
- Kamari, G., Blanché, C., Garbari, F. (Eds.). 2002. Mediterranean chromosome numbers reports XII. *Fl. Medit.* 12:443-486.
- Kamari, G., Felber, F., Garbari, F. 1993. The Mediterranean chromosome number report and the chromosome count database. Present state and prospects of two projects of the commission for Karyosystematics. *Abstr. 7th OPTIMA meeting*: 29. Borovetz.
- Kamari, G., Felber, F., Garbari, F. (Eds.). 1991. Mediterranean chromosome numbers reports - 1. *Fl. Medit.* 1:223-245.
- Loeve, A. 1964. Chromosome Numbers Reports I. *Taxon* 13(3): 99-110.
- Loeve, A., Loeve, D., Pichi Sermolli, R.E.G. 1977. Cytotaxonomical Atlas of the Pteridophyta. J. Cramer, Vaduz.
- Marchi, P., D'Amato, P. 1995. Proposta per avviare una banca dati sulla Flora Italiana destinata a informazioni biosistematiche. *Boll. Soc. Sarda Sci. Nat.*, 30:489-500.
- Martin, C. A. 1991. Numeros cromosomáticos de plantas vasculares ibéricas: 1. *Archivos de Flora Iberica*, 1.
- Moore, J. 1970. Index to plant chromosome numbers for 1968. - *Regnum Veg.* 68.
- Moore, J. 1972. Index to plant chromosome numbers for 1970. - *Regnum Veg.* 84.
- Moore, J. 1973. Index to plant chromosome numbers for 1967-1971. - *Oost. hoekes Uitgeversmaatschappij*.
- Moore, J. 1977. Index to plant chromosome numbers for 1973-74. - *Regnum Veg.* 96.
- OPTIMA Commission for Karyosystematics, 1998. Report. <http://www.bgbm.fu-berlin.de /OPTIMA /activities/caryosystematics.htm>.
- Ornduff, R. 1968. Index to plant chromosome numbers for 1966. - *Regnum Veg.* 55.
- Ornduff, R. 1969. Index to plant chromosome numbers for 1967. - *Regnum Veg.* 59.
- Pastor Diaz, J.E. 1993. Atlas cromosómico de la flora vascular de Andalucía Occidental. Sevilla (1992).
- Pignatti, S. 1982. Flora d'Italia. 3 voll., Edagricole.
- Pingsheng, H., Diqing, Y. 1988. Index to plant chromosome numbers reported in Chinese literature. II. *Investigatio et studium naturae*, Supplement: 1-82.
- Simon, J., Margelí, M., Blanché, C. 2001. CROMOCAT: The Chromosome Database of the Catalan Countries. *Bocconea* 13: 281-297. Palermo, Italia.
- Stace, C.A. 1989. IOBP Chromosome Data 1. *I.O.B.P. Newsletter* 13: 15-22.
- Tischler, G. 1931. Pflanzliche Chromosomen-Zahlen. *Tabul. Biol. Periodicae*, 7:109-226.



PHYTOKARYON: THE KARYOLOGICAL RESOURCE FOR EURO-MEDITERRANEAN PLANT TAXA

Supervised by Prof. Georgia Kamari

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The Euro+Med PlantBase project has undertaken the development of an information system for European and Mediterranean vascular plants, based on an agreed taxonomic framework. Its aim is to give users the opportunity to access a broad range of data resources related to plant taxonomy, biology, cytology, distribution and conservation via the Internet.

Eleven Partner Institutes are carrying out the project in nine different Workpackages. The Botanical Institute of the University of Patras is responsible for Workpackage 9, which is concerned with the development and organization of information summaries on karyological data as well as editing, verifying and adding these data to the Euro+Med PlantBase. The data summaries will be linked to the Euro+Med PlantBase, as will external databases containing karyological data.

The on-line database, PhytoKaryon, has been constructed to meet this purpose and is currently being tested. Its logo is the Greek monotypic genus *Phitosia crocifolia* (Boiss. & Heldr.) Kamari & Greuter. The site contains karyological data of vascular plants in the European and Mediterranean region. Until now,

over 42000 records have been added, providing information on over 10500 different taxa.

Data for PhytoKaryon is obtained from various journals with either a constant section reporting karyological data or with frequent papers on this subject.

Data can be accessed in two stages. First, information is presented in a table format, displaying multiple chromosome number records for the same taxon along with the relevant Euro+Med geographical code, reference citation and origin database citation. Since other karyological databases are to be incorporated into PhytoKaryon, this last field will show the original name of the karyological database from which the information is derived. The recording unit in our database is based on locality information. Consequently, we may have many records for the same taxon in which case some geographical parameters will be different. The rest of the data for a multiple-recorded taxon may or may not differ.

If more information is required, the user may click on any of the records and a new window opens, showing the following details:

1. Taxonomy (6 fields): Family name, Genus name, Species name, Subspecies name, Species Author name, Subspecies Author name.

2. Karyology (2 fields): Chromosome number(s), karyotype morphology.

3. Specimen information (4 fields): Collector names, specimen number, date of collection and herbarium code according to Index Herbariorum (1990) by Holmgren *et al.*

4. Geography information (8 fields): Country name field (This is a remnant from the initial database which only helps in the inputting process and will probably be deleted in the final version.), Euro+Med geographical code, Latitude, Longitude, Altitude min, Altitude max, description corresponding to the Euro+Med geographical code, Locality field (+habitat).

5. Reference information (1 field) presented in the format according to Euro+Med PlantBase project.

6. Notes (1 field), synonyms, additional information on karyotype, habitat information and date mark whenever it is not complete.

Photographs of karyotypes, karyograms and idiograms taken from bibliographical references are also being added in the database inputting process.

Future plans include the construction of software for producing maps showing the areas where karyological studies have been carried out on a certain taxon of interest in Europe and the Mediterranean area. When these maps are combined with the corresponding maps of the mapping satellite database of the Euro+Med PlantBase project, we will be able to see areas/countries where karyological data is currently lacking.

We would like to take this opportunity to request all our colleagues to send us any contributions in their possession that contain karyological data, so that they can be included in PhytoKaryon. This will help fulfill our aim of creating a database with information on as many plant taxa of the Euro-Mediterranean region as possible.

C O N S E R V A T I O N N E W S

CONSERVATION OF WILD RELATIVES OF SOCIO-ECONOMICALLY IMPORTANT PLANTS IN EUROPE

by Shelagh Kell and Nigel Maxted

Introduction

The conservation of the wild relatives of socio-economically important plants native to Europe is the focus of a new European Community-funded project initiative, European Crop Wild Relative Diversity Assessment and Conservation Forum (PGR Forum). This project is funded under the Fifth Framework Program for

Energy, Environment and Sustainable Development.

The critical loss of plant genetic diversity occurring in Europe is acknowledged by the European Community Biodiversity Strategy and the European Plant Conservation Strategy, which also highlight the urgent need to collate baseline biodiversity data and develop appropriate genetic conservation techniques. The need to develop *in*

situ conservation techniques for biological resources is enshrined in Article 8 of the Convention on Biological Diversity (CBD).

Historically, much emphasis has been placed on the *ex situ* conservation of socio-economically important plants (or plant genetic resources (PGR)) and their wild relatives. There is a critical need to address the *in situ* conservation of these taxa, whilst also undertaking a gap analysis of their *ex situ* conservation representation. PGR Forum will address and help resolve some fundamental problems associated with the conservation and use of the wild relatives of socio-economically important plants native to Europe.

Scientific objectives and approach

PGR Forum's objective is to provide a European forum for the assessment of taxonomic and genetic diversity of European crop wild relatives and to develop appropriate conservation methodologies. To achieve this objective PGR Forum aims to:

- bring together European plant conservationists to debate the assessment and conservation of European crop wild relative PGR at both the species and component population levels;
- produce an assessment of baseline biodiversity data, threat and conservation status for crop wild relatives;
- debate data structures and documentation methodologies, formulate management and monitoring regimes, and establish a means of assessing genetic erosion and genetic pollution as an aid to their *in situ* conservation;
- communicate project results to European stakeholders, policymakers and user groups as a means of aiding the efficient and effective conservation and use of European crop wild relative diversity;
- establish a European level forum to enhance dialogue between national and regional crop wild relative conservationists,

policymakers and end-users, and to promote discourse with the broader international stakeholder communities.

Progress to date

PGR Forum held its inaugural meeting and first workshop in the Greek town of Véria, from February 5 - 8, 2003. The meeting brought together 30 PGR specialists representing 22 countries: Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Italy, Latvia, Lithuania, Norway, Poland, Portugal, Romania, Russia, Slovak Republic, Spain, Sweden, Switzerland, The Netherlands and The United Kingdom, with representatives of IPGRI (International Plant Genetic Resources Institute) and IUCN - The World Conservation Union. Some important outcomes of the meeting are summarized below.

European crop wild relative taxon list

Wild relatives of all socio-economically important plants native to Europe will be included in the taxon list, which will form the basis (and breadth) of the project database. These will include the wild relatives of species used for food, fodder and forage, medicinal plants, condiments, ornamentals, forestry species, as well as plants used for industrial purposes, such as oils and fibres.

The initial taxon list will be produced through a process of data harmonisation between existing databases; primarily the Mansfeld Database of Agricultural and Horticultural Crops (http://mansfeld.ipk-gatersleben.de/mansfeld/mf3-db_e.htm), Euro+Med PlantBase (www.euromed.org.uk), and the Catalogue of the Wild Relatives of Cultivated Plants Native to Europe (Heywood and Zohary, 1995). This list will then be circulated to PGR Forum participants for review and addition of further taxa.

Setting priorities for conservation

A methodology for prioritising taxa for conservation action was also discussed, and will be developed further throughout the course of the

project. The methodology for prioritising European crop wild relative taxa for conservation will be tested both within and outside the forum, providing an opportunity for all European countries to contribute. While assigning values and setting priorities will always remain subjective to some degree, the methodology will, nonetheless, be an important output from the project.

Definition of data types and data standards

PGR Forum aims to create a database system that will make detailed taxon specific data available for European crop wild relatives. This database will include all levels of data required in order to formulate comprehensive conservation strategies for European crop wild relative taxa. This involves the collation and analysis of taxonomic data (e.g. name, author, publication details, life form etc.), ecogeographic data (e.g. uses, habitat, geographical distribution, threats etc.), and conservation measures data (e.g. protected area status, IUCN Red List status, listings in conventions, *ex situ* conservation etc.). A further level of data collection required is detailed demographic data, which is without doubt one of the greatest challenges facing PGR conservationists.

The first step was to agree on the types of data required and the data standards that should be adopted (e.g. TDWG - Taxonomic Database Working Group standards - www.tdwg.org). Working groups to investigate these issues further have been established and will report their findings at the second workshop.

Existing sources of data and exploration into access to and sharing of data were also debated during the workshop. PGR Forum will work alongside existing projects, such as Euro+Med PlantBase, EPGRIS (European Plant Genetic Resources Information Infrastructure - www.ecpgr.cgiar.org/epgris), and national projects such as BIG (Federal Information System on Genetic Resources www.big-flora.de/index_ehtml) to bring together comprehensive taxon

conservation datasets for European crop wild relatives.

While much data is already available, a new database is likely to be required that provides the structure for the collection and dissemination of the in depth ecogeographic data associated with each taxon. It is envisaged that eventual links between web-enabled databases and search engines will be a primary means of linking and disseminating such data.

Exploratory in depth data collection

One of the objectives of PGR Forum is to establish and test methodologies for the conservation of European crop wild relatives. In particular, the focus of the project is on *in situ* conservation in genetic reserves (i.e. areas set aside for active PGR conservation), although recognising that on farm species management (i.e. within agricultural systems) is also of major importance for the conservation of crop wild relatives. The forum acknowledges that population level management methodologies developed for genetic reserve conservation may not be appropriate for on farm conservation; however, recommendations for on farm management are likely to be an additional output of the project.

In order to begin testing the methodologies, PGR Forum participants have agreed to select a minimum of 10 taxa, based on their own area of expertise, or on the known availability of data, and to begin to accrue in depth data for each taxon. The process of selection will also take into account the need to include at least some taxa that have a pan-European distribution. This process will not only provide some exemplar datasets that are of obvious value in their own right, but will serve to illustrate the ease of access to detailed ecogeographic and population level data, and to provide a means of testing data structures and data management tools.

Conclusion

The initiation of PGR Forum serves to address some critical issues in European PGR

conservation. An important initial product of the project will be the list of wild relatives of socio-economically important plants native to Europe, and associated taxonomic data. More importantly, however, PGR Forum will address the questions of how to identify gaps in conservation (*in situ* and *ex situ*), how to carry out *in situ* conservation of wild PGR, and how to bring the relevant data together and make it available in appropriate forms to the user community.

These challenges will be addressed through a series of further workshops and research associated with the project work-packages. Dissemination of the project products

will be through the project web site and database, journals, newsletters and comprehensive texts. If you are interested in further information about this project or its products, please contact Shelagh Kell, Project Officer, PGR Forum, School of Biosciences, University of Birmingham, Edgbaston, Birmingham, B15 2TT, UK (s.p.kell@bham.ac.uk).

Literature cited

Heywood, V.H. and D. Zohary 1995. A Catalogue of the Wild Relatives of Cultivated Plants Native to Europe. *Flora Mediterranea* 5: 375-415

ATLAS OF ENDANGERED FLORA IN SPAIN IN ITS LAST STAGE

The project of Atlas of Endangered Flora of Spain (OPTIMA Newsletter n° 36), which began in 2000, held a technical meeting at the beginning of this year in order to prepare its last stage.

When the fieldwork of nearly 500 endangered taxa of Spain was completed, 70 botanists, representing the different research teams and institutions related to the project, discussed the final content of the Atlas and Red List.

The debates focused on (a) elaborating the Red Card model, (b) organizing and planning the review of the endangered categories of the studied plants with the field information obtained in the Project and implementing the IUCN 2001 criteria, and (c) defining common proposals for the monitoring, updating and implementation of the knowledge on Spanish endangered flora, and the drafting of adequate conservation plans.

The review of the methodology handbook established the guidelines of the fieldwork and work teams were formed for the particular types of plants that need a specific methodology (rupicolous, annuals, aquatic, ...).

Moreover, the progress on the identification of important areas for flora and the description of alien invasive taxa that can threaten the preservation of the endangered flora was shown and discussed.

The first volume of the Atlas and Red List of Spain is going to be published at the end of 2003. It has detailed and updated information (distribution in UTM 10x10 Km, census and demographical information) of the endangered taxa of Spanish flora that are classified into EX, CR and EN categories.

Coordinators of AFA Project: François Tapia, Elena Bermejo Bermejo, Ángel Bañares Baudet, Gabriel Blanca López, Jaime Güemes Heras, Juan Carlos Moreno Sainz & Santiago Ortiz Núñez.

PLANT CONSERVATION PROGRAM “TOP 50”

by W. Strahm and B. de Montmollin

SSC recently received a generous grant from the MAVA Foundation to implement the “Top 50” plants campaign, aimed at raising awareness and undertaking conservation action on a focussed group of Critically Endangered plant species. The Plant Conservation Committee which guides SSC’s plant work is acutely aware of the sometimes daunting number of threatened plant species that all of the SSC Plant Specialist Groups have under their purview. These high numbers of plant species facing extinction are often not supported to the same extent as other more charismatic species, and this grant will be used to develop communication tools that will

serve as a template for “Top 50s” for all of the plant Specialist Groups. It will also support several field projects and hopefully catalyse funding for others. Some Specialist Groups have prepared “Top 50” species lists, and the first pilot project is being managed by the Mediterranean Island Plant Specialist Group, with activities in Corsica, the Balearic Islands and Crete. The Secretary of the MIPS group is Bertrand de Montmollin, who is also a member of the OPTIMA Commission for the Conservation and Sustainable Use of Plant Resources. For more information: Wendy Strahm (was@iucn.org) and Bertrand de Montmollin (gspim@biolconseils.ch).

EXPORTED GEOPHYTES OF TURKEY

by Tuna Ekim, Head of CITES National Botany Group

The export of native bulbs from Turkey started in the 1550’s with tulip bulbs and continued until the middle of last century. At first these bulbs were from the Aegean region, particularly from the environs of Izmir and then from the Taurus mountain range. From the 1960’s onwards the trade of flower bulbs increased steadily until the number of bulbs exported annually reached the millions. Especially after the 1970’s export increased greatly reaching 80 million in 1984. At this stage concern was expressed by Turkish botanists and they began to review and criticise the situation.

In order to preserve nature in Turkey, some serious measures were taken in the middle of the 1980’s and these measures have been expanded since then. As a result, propagation activities of some genera, such as *Fritillaria*, *Leucojum*, *Lilium* and *Sternbergia* have increased while total export figures decreased to 64 million in 1990, 50 m in 1991, 27 m in 1995, 33 m in 1997, 32 m in 1998, 29 m in 1999 and 27 m in 2000. A very striking

example is the case of *Galanthus*. Export figures of *Galanthus* reached 40 million in the middle of the 1980’s and has been subsequently reduced to 8 m (*G. elwesii* 6 m, *G. woronowii* 2 m) in recent years. The number of exported *Cyclamen* bulbs was 5 m in 1984 and has been reduced to 1.5 m. It is believed that these reductions should be enough to allow nature to recover.

Other important measures were the establishment of regulations on collecting, storage conditions and exporting. In light of studies in the 1980’s, some regulations were issued in 1989, but they were inadequate and in October 1991 their revision was issued. After new experiences, a revised version of previous regulations was issued in August 1995. (It should be remembered that Turkey was not a party of the CITES Convention in this period.)

During the last revision, national legislation was modified to take the terminology of the CITES Convention into account. A National Scientific

Botany Group, consisting of 8 scientists from science, pharmacy and agriculture faculties from different provinces where collection takes place, was officially appointed in 1995. After becoming a member of CITES (22 December 1996), TUBITAK (Turkish Scientific Research Council) was nominated as a scientific authority (SA) in Turkey and this same group has continued to work as a national advisory botany group to SA.

The 1991 regulation required export companies to have a main warehouse suitable for keeping the bulbs. This has become compulsory for every export company which decides to begin exporting. We now have only 4 export companies.

An interim warehouse on the Taurus mountain (near Serik- Antalya) plays a very important role in the conservation of commercial geophytes, particularly *Galanthus elwesii*, *Anemone blanda*, *Eranthis hyemalis* and *Cyclamen cilicicum* which are mainly collected from this range. Following collection or pre-treatment (such as cleaning, initial desiccation, etc.), the different exporters must send all bulbs collected from the Taurus range to this interim warehouse. Each year an independent scientific team monitors the bulbs particularly in the middle of May and the beginning of June when activity is at its peak. The interim warehouse is very important from a nature conservation perspective, as the materials coming from the mountains easily reflect natural conditions and materials can be tested and records checked by staff in charge of the warehouse without going into the field.

A rotation system has been implemented particularly in the Taurus mountain range for *Galanthus*. Collectors never visit the same pasture (yayla) of the mountain until three 3 years have passed.

The quota of collected and transplanted wild bulbs permitted for annual export is determined by the Flowerbulb Technical Committee which was first established in 1989, following field inspections made by scientific teams. In some instances, the export of collected material is forbidden, e.g the collection of *Galanthus elwesii* and *G. woronowii* was forbidden in 1995 and 1996 believing that there

was already enough transplanted material for export and that these two years would allow nature to recover. In other cases, collection from natural stocks of some economic geophytes such as *Fritillaria imperialis*, *F. persica*, and *Sternbergia lutea* has been totally prohibited since 1995 and all export material has been provided by propagated stocks. The first achievement in propagation was in *Lilium candidum* and the export material of this species has only been obtained from artificially propagated stocks since the mid-1980's. In contrast, the annual export quota for *Anemone blanda* and *Eranthis hyemalis* was increased to about 10 million following observations made in the Taurus mountains noting that the populations of these species are in good condition in this range and that they also occur in most other high mountains in Turkey.

Another important achievement has been observed in the collecting period. Before 1990, there was competition between companies to get enough material for export (There were about 15 companies in that period). Collection used to start in March when plants are in flower and each company used to collect and export as many geophytes as their financial potential allowed. At the beginning of 1990, a quota system was started limiting the collection period and the amount of material that could be collected. In recent years collection has started in May (except *Cyclamen*) when most geophytes in the mountains have mature fruits. Companies do not need more material as the export of geophytes only obtained from nature, such as *Galanthus* and *Cyclamen*, has sharply decreased. In *Galanthus elwesii*, only one week or, in some years, even less is enough to provide the 6 million bulbs for export. When the export limit for this species was 40 m, the collecting period lasted 2-3 months, causing great destruction in this species' populations. This case is one example of the success of our quota system.

Education programs carried out by scientists belonging to NGO's, mainly the Native Flowerbulb Association and The Society for The Protection of Nature [Doğal Hayatı Koruma Derneği (DHKD)], have had very positive results

in collecting villages. After these education programs, only export size bulbs have been collected from the wild in recent years. This result is easily seen by controlling the material coming from the Taurus mountain range at the interim warehouse in Serik, near Antalya. Some small bulbs are inevitably dug up during the collecting process, but they are now sieved *in situ* and immediately replanted by collectors. This is very important from a conservation and sustainable use of nature perspective.

With regard to propagation activities, no extra quotas will be issued to companies since scientists do not accept that there is artificial propagation for most geophytes, only transplantation from the wild to fields. Each year the Technical Committee decides the number of each species to be exported, depending upon its status in the wild and in cultivation. Turkish botanists and CITES agree on the concept of true and artificial propagation. Therefore, many transplantation activities are not accepted by Turkish scientists as true propagation, unless they are sustainable. In Turkey, only yields of *Lilium candidum*, *Sternbergia lutea*, *Fritillaria imperialis* and *F. persica* (completely) and *Leucojum aestivum* (partly) are accepted as artificially propagated. While propagation activities are mainly concentrated in western Anatolia for *Lilium candidum*, *Sternbergia lutea* and *Leucojum aestivum*, similar activities for *Fritillaria spp.* mainly take place in eastern Anatolia, where these species grow natively in the mountains of this region. Although there have been some propagation activities in Turkey with regard to *Galanthus*, *Eranthis*, and *Anemone*, our main exports, no sustainable success has been achieved so far. However, some companies have successfully propagated *Cyclamen*

hederifolium from seed after about ten years of trials. Therefore, the propagation quota of this species has been increased by 500.000 in the last two years.

There has also been collaboration between foreign and local scientists to investigate the situation of geophytes, mainly CITES species, in Turkey. The European Community (EC) organised field trips to study the *in situ* conditions of these species in 1989, 1992 and 1995. A group of European experts from various countries participated in these trips and a close scientific contact has been established between European and local scientists. After these trips the European experts highly commended the Turkish authorities and scientific institutions on their management structure to advise and implement controls on the collection and export of geophytes, adding that many CITES parties do not yet have such a structure for plants. The last CITES European Regional Plant Committee meeting was held in Turkey (Izmir-Menemen) from 24-27 April 2001. CITES Scientific authorities from Great Britain and Turkey also started a joint project on CITES plants, excluding *Orchidaceae*, in 2002.

The Turkish government, scientists and NGOs all agree that there must be continued efforts to conserve the wild populations of commercially important geophytes. However, the collection of geophytes is a necessary source of income for villagers who live in the areas where, for example, *Galanthus* occur. Thus, the dream of Turkish botanists is the conservation of wild populations in their natural habitat and the establishment of other areas where villagers can propagate locally occurring geophytes for sale.

FIRST CONFERENCE ON PLANT CONSERVATION BIOLOGY, VALENCIA, SPAIN

by Jaime Güemes

Organised by the Botanical Garden of the University of Valencia as one of its 200th anniversary events, the 1st Conference on Plant Conservation Biology took place from 2 - 5 October 2002.

The goal of this first meeting of Spanish researchers and administration technicians was to share experiences and disseminate the outcome of research conducted in recent years in Plant Conservation Biology, still a young discipline.

The Conference confirmed the need for collaboration between the scientific community -in charge of studying biological processes affecting plant disappearance- and the Administration – responsible for ensuring species survival. Scientific criteria are needed by the latter to produce strategies and recovery plans for endangered flora and to draw up suitable protection measures.

The Conference brought together more than 250 experts including scientists, technicians, and students, from all regions in Spain. Portuguese, French, British, and Italian researchers also attended. The participation of young post-graduate students doing their PhD in conservation biology and undergraduates in their last degree years was also remarkable, this pointing to the very promising human prospects of this line of research.

Over the three days, four plenary sessions were held focusing on each of the major conservation topics: population dynamics and methodologies, reproductive biology, molecular biology, and conservation and protection. Sessions were introduced by José María Iriondo (Polytechnic University of Madrid), César Blanché (University of Barcelona), Josep A. Rosselló (University of Valencia), and Emilio Laguna

(Environment Department of the Valencian Government) respectively. Nearly 130 communications were presented and discussed.

Chaired by Jaime Güemes (University of Valencia), a round table discussion was held on Blue Lists as quality indicators for endangered flora protection. The session showed that this subject could prove highly useful in the future, although further work is required particularly with regard to Red Lists.

The last day of the Conference consisted of a number of visits aimed at displaying some of the actions taken by the Valencian Administration in the field of on-site flora conservation. Visits were arranged to two natural parks, La Font Roja and El Saler-Albufera, which evidenced the cooperation between the Universities of Valencia and Alicante, and the Valencian Government.

The Spanish Society for Plant Conservation Biology has been set up as a result of the conference debate, seeking to combine efforts for the study and legal protection of Spanish flora.

The second Conference will take place in Madrid, following the commitment made by Juan Carlos Moreno from the Autonomous University of Madrid.

Different institutions and corporations cooperated as conference sponsors; the Valencian Government, the University of Valencia, the Environment Department, the *Life* Program, and Tragsa.

For information on the abstracts of the communications submitted to the 1st Conference on Plant Conservation Biology, please see:

<http://www.jardibotanic.org/congreso.html>.

(available throughout 2003).

FIELD WORK NEWS *

XITH OPTIMA ITER MEDITERRANEUM (ARMENIA, 12 JUNE - 2 JULY 2002)

by George Fayvush & Ernst Vitek

The eleventh Iter Mediterraneum took place in Armenia, and was organized by the Institute of Botany of Armenian National Academy of Sciences (ARNAS).

Participants

Organizers:

E. Gabrielian, G. Fayvush, K. Tamanyan and M. Hovhannesian (Erevan).

Senior participants:

Benito Valdés (University of Sevilla, substituted by Francisco Pino Gata after the first week)

Franco Raimondo (Universita degli studi di Palermo, substituted by Guiseppe Certa after 10 days)

Ernst Vitek (Naturhistorisches Museum, Wien).

Christoph Oberprieler (Botanischer Garten und Botanisches Museum Berlin-Dahlem).

Attilio Carapezza (entomologist, Universita degli studi di Palermo, substituted by lichenologist Domenico Ottonello after 10 days).

Junior participants:

Alessio Papini (Firenze)

Ofer Cohen (Jerusalem)

Julia Hellwig (Mainz)

Dimitar Ouzunov (Catania)

Giuseppe Caruso (Catanzaro)

Lia Pignotti (Firenze)

Vincenzo Ilardi (Palermo).

Also Mariam Agababian and Anush Nersesyan from the Institute of Botany in Erevan participated in almost all excursions.

**Institute of Botany and Herbarium
ERE**

The expedition was organized with the support of the Institute of Botany of ARNAS. This Institute is situated in Yerevan Botanical Garden which is a department of the Institute. During the expeditions all participants visited it to use the working facilities as well as the Herbarium ERE.

The Botanical Garden of ARNAS was organized in 1935 on a territory of 80 ha in Erevan, with additional smaller gardens in Sevan and Vanadzor. It is a large scientific, educational, ecological, recreational and cultural institution. The Botanical Garden has a rich collection of living plants from different phytogeographical regions of the world (about 5,000 names). Unfortunately, the collections of the Botanical Garden suffered intensively during the energy crisis in Armenia (1992-1994). The Department of the Armenian Flora has a special significance for *ex situ* conservation of rare and endangered species and their reintroduction into nature. Earlier it had more than half of the Armenian flora in culture. But this collection has been greatly damaged during the last few years. A number of valuable trees were cut down, and it is impossible to carry out actions for re-establishment due to lack of funding and irrigation.

The herbarium of the Institute of Botany of ARNAS (ERE) is the only collection which

* This column is edited by the Secretary of the "Commission for the Floristic Investigation" of OPTIMA, Prof. Dr. B. Valdés, Dpto. Biología Vegetal y Ecología, Facultad de Biología, Universidad de Sevilla. Avda. Reina Mercedes s/n, E-41080 Sevilla, Spain. Please send all items suitable for publication under this heading directly to him.

comprehensively represents the specific composition of the Armenian flora. ERE also contains rich collections from many other countries all over the world. The herbarium was founded in 1925 and it is now the main herbarium in the Republic of Armenia. The Institute of Botany was founded on the base of the herbarium in 1931. Now the Institute includes departments of taxonomy and phyto-geography including herbarium, phyto-sociology and ecology, dendrology and botanical garden, plant physiology, plant resources, and forestry. All these departments investigate different aspects of Armenian nature. Among the main results of the Institute's activities are the multivolume encyclopedia of "Flora of Armenia" (10 volumes already published with the last volume in preparation), different monographs and other comprehensive works of applied science. In spite of a very difficult economic situation, the Institute of Botany is rather active and working intensively.

Iter

The studied localities are situated in three main areas of Central and North Armenia: the basin of Lake Sevan, the vicinity of Yerevan and the surroundings of Vajk. Collections of vascular plants, insects and lichens were carried out at altitudes between 800-3,200 m above sea level from very different vegetative areas (semi-desert, steppes, meadows, forests, etc.).

The program started on June 12th in the morning in the town of Sevan with an initial meeting. During this meeting Prof. E. Gabrielian gave a short lecture on very characteristic features of Armenian flora. In the afternoon the fieldwork started in the vicinity of Sevan. During the next three days the work was concentrated in very nice and interesting places in the Sevan basin (meadows, steppes, traganth communities, rocks and cliffs, marshes, etc.) and the forests of North Armenia (*Quercus macranthera*, *Q. iberica*, *Fagus orientalis*). During the next two days work was carried out further south in forests and steppes. In this period the participants visited the Sevan Botanical garden every day (It was a basic facility for pressing plants). This small garden,

thanks to its staff and director (Simon Mnatsakanyan), is in very good condition. Even at the time of economic and energetic crisis in Armenia not a single tree was cut down here.

Subsequently, participants went on to Erevan. For the next four days they worked in the Ararat valley (semi-desert, salt marshes, steppes, arid open forests), and then moved southeast to Vajk. This region is very interesting from a phytogeographical point of view. Geologists believe that this part of Armenia is a piece of Gondvana and that it existed as an island during Thethys. There are many endemic plant species here and very special plant communities are represented at altitudes from 1,000 – 3,000 m above sea level. The participants worked here for five unforgettable days.

The last three days were spent once again in the vicinity of Erevan. Collection took place in the mountains of Arailer (3,100 m a.s.l.) and Aragats (4,095 m a.s.l. climbing up to 3,200 m, where there was still snow), in two more localities with oak forests, and in the only Caucasian population of *Acanthus dioscoridis*.

In all 2,603 numbers of phanerogams were collected in 62 localities. Eleven sets will be distributed to the herbaria in Erevan (ERE), Palermo (PAL), Berlin (B), Seville (SEV), Geneve (G), Vienna (W), Firenze (FI), Jerusalem (HJU), Catania (CAT), Munich (M) and Catanzaro. One more set will be available for specialists. Some additional collections will be used for specific scientific work carried out by the participants (chromosome fixations, material dried for DNA-analysis etc.). Lichens collected by D. Ottonello will be deposited mainly in PAL.

The material will be available soon and anyone interested is welcome to take part in the determination of the specimens. A complete list of the visited localities, the participants and the colleagues determining their special groups, as well as other more detailed information may be found at:

<http://www.nhm-ien.ac.at/NHM/Botanik/news.htm>.

HERBARIUM NEWS

PTERIDOPHYTES IN THE IBERIAN HERBARIA. II*by M^a CARMEN PRADA*

A first list of the pteridophyte collections at different Iberian herbaria was presented in *OPTIMA Newsletter* 36:19-21. This second report brings additional information on pteridophytes kept in fourteen Spanish herbaria. Most of the information has been provided by their keepers whose collaboration we would like to acknowledge. The list is arranged in alphabetical order following the *Index Herbariorum* abbreviations.

AH (Dpto. de Biología Vegetal, Facultad de Biología, Universidad de Alcalá, Campus Universitario, E-28871 ALCALÁ DE HENARES, Madrid, Spain). Pteridophytes are included with the rest of vascular plants in alphabetical order of genera and it is not possible at present to calculate the number of sheets. It is planned to keep them separately in the near future. The Herbarium holds the collection of Prof. Esteve Chueca, with many samples from the Canary Islands and Andalusia. Important collectors are J. Álvarez Jiménez, C. Bartolomé Esteban, M. de la Cruz Rot and M. Peinado. The best represented areas correspond to the central part of the Iberian Peninsula, especially the provinces of Ciudad Real, Cuenca, Guadalajara and Madrid. Keeper: F. J. Rejos. E-mail: fjavier.rejos@uah.es. Telephone: 34 918854980, Fax: 34 918855066.

ALBA (Dpto. de Ciencia y Tecnología Agroforestal, Universidad de Castilla-La Mancha, E-02002 ALBACETE, Spain). The Herbarium currently holds a total of about 8,000 databased sheets, 120 of which are pteridophytes from the provinces of Cáceres and Albacete. The main collectors are J. Gómez Navarro and A. Valdés-Franzi. Keeper: A. Valdés-Franzi. E-mail: avaldes@cita-ab.uclm.es. Telephone: 34 902204100 ext. 2510, Fax: 34 902204130. The

Herbarium is located at E. U. de Magisterio, Campus Universitario.

ARAN (Dpto. de Botánica, Sociedad de Ciencias Aranzadi, Alto de Zorroaga s.n., E-20014 DONOSTIA-SAN SEBASTIÁN, Spain). It keeps about 2,500 sheets, mainly from the Basque Country and the Spanish and French Pyrenees. Important collectors are I. Aizpuru, A. Aldezabal, C. Aseginolaza, P. Catalán, P. Garin, D. Gómez, X. Lizaur, M. Lorda, G. Montserrat, M. Salaverría, P. M. Uribe-Echebarría and J. Vivant. Keeper: I. Aizpuru. E-mail: iaizpuru@nekazari.gipuzkoa.net. Telephone: 34 943308212.

BC (Institut Botànic de Barcelona, Avda. Muntanyans s.n., Parc de Montjuïc, E-08038 BARCELONA, Spain). This important Herbarium holds about 800,000 sheets. It is presently not possible to know the exact number of pteridophytes kept, but in the near future the different collections will be integrated into one after moving to a new building. Plants from all over the world are represented, especially from the western Mediterranean area. Important collectors are M. Barnades, F. X. Bolòs, J. O. Bolòs, R. Bolòs, O. de Bolòs, J. Cadevall, A. C. Costa, J. Cuatrecasas, P. Font Quer, A. de Jussieu, C. Pau, F. Sennen, F. Trèmols, E. Vayreda and many others. Keeper: A.M. Romo Diez. E-mail: a.romo@ibb.csic.es. Telephone: 34 933258050, Fax: 34 934269321.

BIO (Laboratorio de Botánica, Dpto. de Biología Vegetal y Ecología (Botánica), Facultad de Ciencias, Campus de Leioa, Universidad del País Vasco/EHU, Aptdo. 644, E-48080 BILBAO, Bizkaia, Spain). The herbarium contains about 1,250 sheets from the northern half of the Iberian Peninsula. Important collectors are C. Aedo, I. Aizpuru, J. A. Alejandre, I. Biurrún, J. A.

Fernández Prieto, I. García Mijangos, P. Heras, M. Herrera, X. Lizaur, J. Loidi, J. M. Olano, M. Onaindia, M.R. Salaverria, P.M. Uribe-Echebarria and P. Urrutia. The best represented families are *Adiantaceae*, *Aspidiaceae* (*Dryopteris* and *Polystichum*), *Aspleniaceae*, *Athyriaceae*, *Blechnaceae*, *Equisetaceae*, *Hymenophyllaceae*, *Lycopodiaceae* and *Thelypteridaceae*. The collection is databased. Keeper: M. Herrera. E-mail: gvphegam@lg.ehu.es. Telephone: 34 946015497, Fax: 34 944648500. Herbarium information is available at: <http://www.ehu.es/botanica/>.

COA (Dpto. de Ciencias y Recursos Agrícolas y Forestales, Universidad de Córdoba, Apto. 3048, E-14080 CÓRDOBA, Spain). It keeps about 550 sheets, mainly from Andalusia. *Asplenium*, *Equisetum* and *Polypodium* are the genera with the greatest number of specimens. Important collectors are A. Pujadas, E. Hernández, A. Lora and L. Plaza. Keeper: A. J. Pujadas. E-mail: cr1pusaa@uco.es. Telephone: 34 957218506, Fax: 34 957218440. The Herbarium is located at the Jardín Botánico de Córdoba.

FCO (Dpto. de Biología de Organismos y Sistemas, Área de Botánica, c/ Catedrático Rodrigo Uría s/n, Universidad de Oviedo, E-33006 OVIEDO, Spain). It keeps about 950 sheets mainly from the northwestern part of the Iberian Peninsula, especially from Asturias. The main collectors are H.S. Nava, R.M. Simó and T.E. Díaz. Well-represented genera are *Asplenium*, *Cystopteris*, *Dryopteris* and *Polystichum*. Keeper: M.C. Fernández-Carvajal. E-mail: cfcarvaj@correo.uniovi.es. Telephone: 34 985104780, Fax: 34 985104865.

JAEN (Dpto. de Biología Animal, Biología Vegetal y Ecología, Botánica, Paraje Las Lagunillas s.n., Universidad de Jaén, E-23071 JAÉN, Spain). The Herbarium keeps about 250 sheets, mainly from the province of Jaen. Important collectors are E. Cano and C. Fernández. The best represented families are *Aspleniaceae*, *Sinopteridaceae* and *Equisetaceae*. Keeper: C. Fernández López. E-mail:

cfernan@ujaen.es. Telephone: 34 953012159, Fax: 34 953012141.

LPA (Jardín Botánico Canario Viera y Clavijo, Apto. 14 de Tafira Alta, E-35017 LAS PALMAS DE GRAN CANARIA, Spain). It includes the previous JVC Herbarium and holds about 250 sheets of 50 taxa representing 35% of the Macaronesian pteridoflora and 80% of the Canary Islands' ferns. Well-represented genera are *Culcita*, *Hymenophyllum*, *Diplazium* and *Woodwardia*. Important collectors are D. Bramwell, N. González, G. Kunkel, A. Marrero, V. Montelongo, J. Rodrigo, T. Sánchez and E.R. Sventenius. Keeper: A. Marrero. E-mail: agmarrero@granca.step.es. Telephone: 34 928219580, Fax: 34 928219581. The Herbarium is located at Carretera del Centro, Km 7.

MGC (Dpto. de Biología Vegetal, Universidad de Málaga, Apto. 59, E-29080 MÁLAGA, Spain). It keeps about 4,500 sheets of pteridophytes from all over the world but especially from Andalusia. There are good collections of *Asplenium*, *Cheilanthes*, *Culcita*, *Polypodium*, *Vandesboschia* and *Pteris*. The main collectors are E. Salvo, B. Cabezudo, A.V. Pérez and D. Navas. Keeper: D. Navas. E-mail: abm@uma.es. Telephone: 34 952131912, Fax: 34 952131944. Herbarium information is available at: <http://www.uma.es/organizacion/idepartamentos.html>.

SANT (Laboratorio de Botánica, Dpto. de Biología Vegetal, Facultad de Farmacia, Campus Sur, Universidad de Santiago de Compostela, E-15706 SANTIAGO DE COMPOSTELA, Spain) It holds about 2,000 sheets mainly from the northwestern Iberian Peninsula. There is a good collection of *Dryopteris*, and *Hymenophyllaceae* is a well-represented family with specimens from Spain and Chile. An important collector is L. García Quintanilla. A palinotheca has been started by L. García Quintanilla and it presently holds *Cystopteris*, *Dryopteris* and *Asplenium* spore samples. Keeper: R. Iglesias Louzao. E-mail: bvherbar@usc.es. Telephone: 34 981563100 ext. 14977, Fax: 34 981594912. Herbarium information is available at: <http://www.usc.es/~hsant>.

SEV (Servicio General de Investigación, Universidad de Sevilla, Avda Reina Mercedes nº 6, 2ª planta, Apdo. 1095, E-41080 SEVILLA, Spain). The herbarium contains about 370000 sheets from the Mediterranean area and the Canary Islands, about 6,000 of which are pteridophytes. It includes the previous Boutelou Herbarium with 11,964 sheets, 437 of which are pteridophytes collected in the Scientific Expeditions of the 18th century. Thirty sheets are type material of Cavanilles' taxa from the New World. The most important collector in the Boutelou Herbarium is Luis Née. Important collectors from the last century are E. F. Galiano, B. Valdés, S. Talavera, S. Silvestre, B. Cabezudo, A. Aparicio, J. A. Devesa, M^a J. Gallego y J.

Arroyo. Keeper: F. J. Salgueiro. E-mail: franja@us.es. Telephone: 34 954552763.

UNEX (Dpto. de Biología y Producción Vegetal: Botánica, Universidad de Extremadura, Avenida de Elvas s.n., E-06071 BADAJOZ, Spain). It holds 630 sheets mainly from Extremadura. Plants from Morocco and the Azores are also represented. Important collectors are J.A. Devesa, A.Ortega Olivencia, T. Ruiz, R. Tormo, A. Muñoz, F. Vázquez, P. Gómez, J. Malato-Beliz, P. Escobar, M.C. Viera and J. López. The groups with the greatest number of sheets are *Aspleniaceae*, *Isoetaceae*, *Polypodiaceae* and *Sinopteridaceae*. Keeper: J.A. Devesa. E-mail: jadevesa@unex.es. Telephone and Fax: 34 924289423.

M. Carmen Prada is a full professor at Dpto. de Biología Vegetal I de la Facultad de Ciencias Biológicas de la Universidad Complutense de Madrid.

W E B N E W S *

by José Luis Benito

EPIC, THE ELECTRONIC PLANT INFORMATION CENTRE

Kew Gardens has released the first stage in a new on-line information resource discovery service. You can now search for plant information across four databases held at Kew in one action. The first release includes:

a) The International Plant Names Index (IPNI). A list of plant names giving place of publication, storing ca. 1.4 million scientific plant names. Comprising data from 3 hitherto separate indices (Index Kewensis, Gray Card Index and the Australian Plant Name Index).

b) Bibliographic data in the Kew Record of Taxonomic Literature. A bibliography of over 200,000 publications published since 1971 and relating to the taxonomy of flowering plants, gymnosperms, and ferns.

c) The Survey of Economic Plants of Arid and Semi-Arid Lands (SEPASAL). Information on the economic uses of plants in a database of useful species of "wild" and semi-domesticated vascular plants of tropical and sub-tropical drylands. Uses, distribution, use-related properties, environmental tolerances, synonymy and vernacular names are stored for more than 6,200 species.

* Please send all items suitable for publication under this heading to the editor of this column: José Luis Benito Alonso. Instituto Pirenaico de Ecología, CSIC. Apdo. 64. E-22700 Jaca, Huesca, Spain. jlbenito@ipe.csic.es

d) The living collection of Kew Gardens comprising some 70,000 specimens of 30,000 different taxa. www.kew.org/epic/

THE KEW LIBRARY CATALOGUE

makes information about Kew's collections available to a worldwide readership for the first time.

This resource currently holds more than 145,000 individual records, mostly for published material like monographs and pamphlets. About 700 of the ca. 4,000 periodical titles held at Kew have entries on the catalogue, mainly those acquired by purchase.

More recent additions to the catalogue include recommended Internet resources relating to botany, which can be viewed via hyperlink from within bibliographic records. Another key feature of this botanical gateway is the ability to search other libraries from within the catalogue itself. Live connections to the Library of Congress and the Natural History Museum, London, are already set up and links to further libraries with relevant collections will be added in the future. www.kew.org/library/catalogue.html

PROYECTO ANTHOS

This information system about Spanish plants originated from the experience of the project *Flora iberica* and the collaboration of Fundación Biodiversidad. Thus, the Real Jardín Botánico (Consejo Superior de Investigaciones Científicas) has set up an on-line database that includes chorologic data (560,000 bibliographic citations) related to 54,000 names (accepted + synonyms), drawings, photographs, vernacular names (47,000), karyological data (10,000), conservation status, as well as distribution maps. www.programanthos.org

BIOCAT. DATABASE ON THE BIODIVERSITY OF CATALONIA (SPAIN)

It is the first and largest database on vascular flora and vegetation of Spain on the Internet. It has been developed by the Departamento de Biología Vegetal from the University of Barcelona. In this database information on the vascular flora (1,330,009 citations), cryptogamic flora (fungi: 45,000) and vegetation (17,000 inventories) of Catalonia is available. A module dedicated to lichens is currently in preparation.

This database allows searches by name, UTM coordinates, plant community, bibliography, etc. It has distribution maps (10x10 Km), photographs and data on chromosome numbers. <http://biodiver.bio.ub.es/biocat/homepage.html>

CONSERVACIÓN VEGETAL

The Flora Commission of the Spanish Committee of the IUCN has made its journal on information about plant conservation in Spain available on-line. It allows access to recovery plans and conservation and management of plants in Spain and in other countries, as well as access to legislation. www.uam.es/cv

Through the information server of the network of libraries of CSIC, the main research entity in Spain, it is possible to access all its bibliographic and electronic resources: network of libraries, catalogues, databases, electronic journals, etc. www.csic.es/cbic/cbic.htm

P R O J E C T S

THREATENED WEEDS IN THE TRADITIONAL AGRICULTURE OF CRETE

A research project funded by the National Geographic Society. Collaborators: Nicholas Turland (principal investigator, MO), Dimitrios Phitos (UPA), Georgia Kamari (UPA)

Changes in agricultural practices and land use in Crete (Kriti, Greece) during the 20th century have adversely affected the non-invasive Mediterranean weed flora of that island. Many of these species were presumably originally introduced by humans (archaeophytes), and they often exhibit peculiar, restricted distributions reflecting the isolation under which the traditional agriculture developed. The declining populations of archaeophytes are an important but overlooked issue in the conservation of the biodiversity of the Mediterranean region. It is currently difficult or impossible to measure population decline or threat levels of Cretan archaeophytes during the

20th century because insufficient comparative historic data exist. The goal of this research project is to carry out a floristic survey of at least 100 localities throughout Crete. The survey will generate full, accurate, and verifiable baseline data so that future surveys can usefully interpret their results, informed conservation decisions can be made, and sound action plans can be put into practice. The field work will take place in April and May 2003, the primary set of specimens collected will be deposited at UPA, and the full results will be published in an international botanical journal dealing with Mediterranean subject matter.

Nicholas Turland, Missouri Botanical Garden, P.O. Box 299, Saint Louis, Missouri 63166-0299, U.S.A.; E-mail: nicholas.turland@mobot.org

SEARCHING FOR *Rhamnus* L. AND *Ranunculus bullatus* L.

Riccardo M. Baldini, Dipartimento di Biologia Vegetale, Botanica Sistemica, Via G. La Pira 4, 50121-Firenze (E-mail: rbaldo@unifi.it) is looking for recent material of *Rhamnus* L.-species belonging to Sectio *Rhamnastrum* Rouy & Fouc. (i.e., *R. alpinus* L., *R. pumilus* L. and allied taxa) from Europe, North Africa (Algeria and

Morocco) and Turkey for a biosystematic investigation.

He is also looking for living material of *Ranunculus bullatus* L. s. l. from Europe and North Africa (Algeria and Morocco) for biosystematic research.

ACTIVITIES OF THE SPANISH WORKING GROUP ON URBAN AND ALIEN PLANTS: ATLAS OF INVASIVE PLANTS IN SPAIN

by E. Sobrino^{1,*}, E.D. Dana^{2,*} and M. Sanz-Elorza^{1,*}

The increasing spread of alien species into new territories is endangering global biodiversity as a consequence of biota homogenisation since they represent the second most important threat to native biodiversity after habitat destruction. According to Klaus Töpfer (Executive Director of United Nations Environment Program), few people are aware of the extent to which invasive exotics have changed the surrounding natural landscapes during the last decades.

This phenomenon is mainly caused directly through the alteration and change of native habitats [Dana, E.D., Vivas, S. & Mota, J. 2002. Urban Vegetation of Almería City –a contribution to Urban Ecology in Spain. – Landscape & Urban Planning 59(4): 203-216; Sobrino, E., Sanz-Elorza, M., Dana, E.D. & González-Moreno, A. 2002. Invasibility of the Catalanian Coast (NE Spain) by alien plants. *Journal of Vegetation Science* 13: 585-594] or indirectly through global warming by human species. As an example of these changes in the Iberian Peninsula, a strong concordance between the expansion of thermophilous, alien and native species and the increase of minimum temperatures during the last three decades has been recently detected in Spain [Sobrino, E., González-Moreno, A., Sanz-Elorza, M., Dana, E., Sánchez-Mata, D. & Gavilán, R. 2001. The expansion of thermo-philic plants in the Iberian Peninsula as a sign of climate change. In G.R. Walter, C.A. Burga J. Edwards (eds.). 'Fingerprints' of Climate Change- Adapted behaviour and shifting species ranges, pp. 163-184. Kluwer Academic/Plenum Publishers, New York & London].

Given the increasing attention paid to the studies about invasive plants, the Spanish Working Group on Urban and Alien Plants was created in 1998. The goals of this research group are:

- to promote the investigation and divulgation about alien species, with special emphasis on the risk assessment of exotics introduction;
- the development of an early warning system by means of botanical surveys;
- the elaboration of species lists;
- the analysis of ecological traits and environmental relationships of successfully established species and of newcomers. Prior to the creation of this group, the members already had some experience in these areas, which has greatly facilitated the increase in the studies developed in these four years. This experience has also been a great resource and optimisation of efforts.

Some of the results of the Group's activities have already been presented in different media (Congresses, Meetings or Scientific Publications). As a connection between all those interested in these topics (researchers, managers, etc.), a website has been created: <http://www.ual.es/personal/edana/alienplants> The website, which is being continuously improved and updated, offers the most recently recorded alien species and their ecological features, as well as summaries of all the publications generated by the group since its creation.

In 1999 the Spanish Working Group on Urban and Alien Plants initiated the elaboration of an Atlas and Database of Alien Plants in Spain. The final aim of this project is to obtain a list of all the alien species present in Spain, analyse their distribution patterns, routes of introduction and other basic features, which will allow us to identify the most influential parameters that favour their entrance and permanence at the different biotopes. The proposal of quarantine measures

for those species or human activities that could favour the massive entrance and further expansion of alien plants is also being discussed.

According to the initial goals of the Group, this project includes the detection and control of those highly invasive taxa, especially those that are currently threatening native species, communities or ecosystems with great biological value. It is expected that the elaboration of this database will also have repercussions in agriculture and gardening, since many invasive aliens behave as weeds that cause severe economic losses.

To record and present the information, a fact sheet in which various fields are considered has been elaborated in the following way [Sobrino, E., Sanz-Elorza, M., Zaragoza, C. & Dana, E.D. 1999. La flora alóctona española: Banco de datos. Proceedings Congreso Sociedad Española Malherbología: 39-46. Logroño (Spain)]: 1) Botanical Name, 2) Family, 3) Common Name, 4) First Locality (First Record), 5) Other Localities or Records, 6) Status (certain presence, probable presence, improbable presence, etc.), 7) Naturalisation Status, 8) Routes of Introduction, 9) Abundance or Frequency, 10) Biological Form,

11) Trend (Expansion, Reduction of Area, etc.), 12) Biotopes occupied, 13) Influence upon the environment, 14) Geographical origin, 15) Other Countries where introduced, 16) Literature, 17) Author of the fact sheet.

Of special interest is the preliminary list of invasive species in Spain (Sanz-Elorza, M., Dana, E.D. & Sobrino, E. 2001. Aproximación al listado de plantas alóctonas invasoras reales y potenciales en España. *Lazaroa* 22: 121-131], which offers information about the species' presence, invasive status and habitats invaded. This work should be considered a preview of what is intended to be the final study.

Given the intrinsic changing nature of the invasion subjects -the quick rate of appearance and the dispersed location of many of the initial populations- topics related to alien plant invasions are a fructiferous field for establishing collaborative research and holding continuous communication among those people interested. Therefore, anyone regardless of his/her nationality interested in this project is kindly invited to take part in the research activities and publications associated.

Biodiversity needs all of our help!

Contact addresses: ¹Dpto. de Producción Vegetal: Botánica y Protección Vegetal. Escuela Técnica Superior de Ingenieros Agrónomos. Ciudad Universitaria. 28040. Madrid. E-mail: esobrino@pyb.etsia.upm.es. ²Dpto. Biología Vegetal y Ecología. Escuela Politécnica Superior. Universidad de Almería. E-04120. Almería. Spain. E-mail: edana@ual.es. *Spanish Working Group on Urban and Alien Plants: <http://www.med-alienplants.org>

DATABASE OF THE FLORA OF ISRAEL

by Avinoam Danin

In the website of the Jerusalem Botanical Garden there is a new rich database of the Flora of Israel and adjacent countries. To reach it please: 1) Go to www.botanic.co.il, 2) Click on the English banner, 3) Click on "Flora of Israel". A page entitled "Flora and vegetation of Eretz Israel and adjacent areas" will appear. Following

"Articles" and "Introduction" you will find introductory articles and notes. Click on "Flora of Israel E-Book" and you will arrive at the database. There are almost 3,000 species pages where every species' updated name and a few common synonyms are presented. When possible a

common name in English and in German is provided. Chotrotype, Raunkiaer growth-form, habitat specifications and a few additional parameters are given for each species. Nearly half of the species are illustrated by 1-5 colour slides. The "Presentations" button will lead you to the following lectures in Power Point: a) "Flora of

the Shroud of Turin", b) "*Arundo hellenica* – a species new to science", c) "Present day ecology of plants mentioned in the Bible". d) "A case of moist patch on the Western Wall", e) "Strings from plants – the first word record from the Sea of Galilee beech".

For further information, please contact, Prof. Avinoam Danin, Department of Evolution, Systematics, and Ecology, The Hebrew University of Jerusalem, Israel 91904. E-Mail: DANIN@VMS.HUJI.AC.IL

VIRTUAL HERBARIUM, A TOOL TO STUDY BOTANY

by Juan Rita, Cristina Fontcuberta , Eva Moragues & Xavier Cardona

What is the Virtual Herbarium?

As a useful complement to traditional herbariums, the Botany Laboratory of the Universitat de les Illes Balears has developed a new tool to study Botany: a *Virtual Herbarium*.

A collection of high-quality, detailed images of vascular plant species in our archipelago can be accessed on a web page. This page was originally created for botany students enrolled in a biology degree. However, it has developed in such a way that the scientific world or anyone with an interest in biology would find it interesting.

As in any real herbarium, our virtual herbarium is constantly being improved and updated. In May 2003 over 1,160 species could be consulted.

Making of the Virtual Herbarium

Two types of images can be found in the *Virtual Herbarium*. The first type was obtained by scanning fresh specimens which still maintain the colours and shapes of the flowers and leaves. In this case, the final result is very similar to a real herbarium sheet before pressing. The other images are conventional digital photographs taken in a natural environment. In this way, there is a whole range of shapes and sizes for each species making it possible to recognize the most relevant

taxonomic characteristics. This system of obtaining images allows the specimens to be preserved in a real herbarium where they can be consulted at any given moment. There is also a record of the places and dates of collection for both the collected specimens and the photographs.

The digital image of a scanned fresh plant has several advantages over a photograph. It enables us to view a whole plant with the definition of a photograph taken with a "macro" lens and not just one detail alone. The image can also be composed in order to highlight important characteristics for diagnosis (flowers, fruits, etc.) which could otherwise go unnoticed.

The definition of these images oscillates between 150 ppp for the largest examples and 300 ppp for the details of smaller-sized examples. This is an acceptable compromise between the degree of detail desired and the final size of the images (200-700 Kb with some up to 1 Mb with a JPG compression) which allows for their transmission at a reasonable speed.

Sections of the *Virtual Herbarium* and finding images

The *Virtual Herbarium* is not only an image bank. Each species has a file with information (in Catalan) on its names, habitat, distribution in the

Balearic Islands, threats, life form and a descriptive commentary highlighting the most important characteristics. There is a file with a description of each of the families of vascular plants including the main species present on the islands, which of them are endemic and which are useful to man. There are also sections grouping relevant species such as the endemisms of the Balearic Islands, protected species, allochthonous species as well as the trees growing in the gardens of our University campus. These sections are enriched periodically.

Images in the database can be accessed through the scientific name, Spanish name or Catalan name indices. It is also possible to gain access by introducing the name of the family, genre and/or species, or by following a taxonomic search route starting from the categories of Family or Genre. Finally, a very simple classification key makes it possible to identify specimens under study as far as the family.

Use of images

The users of the Virtual Herbarium are allowed to make private use of the images with the possibility of recording and printing them. However, we do request that the source be quoted. Any commercial use or publication in other web pages is forbidden without the explicit consent of the Botany Laboratory of the *UIB*.

The Virtual Herbarium is a tool combining new technologies and classical botany, and we hope that it will be a doorway to communication and exchange with other people interested in Mediterranean plants.

For further information please contact: Lab. de Botànica, Dpto. de Biologia, Universitat de les Illes Balears, 07071 Palma de Mallorca, Spain, <http://herbarivirtual.uib.es>

M E E T I N G S

XI OPTIMA MEETING

BEOGRAD 5-11 SEPTEMBER 2004

First Circular

Dear Colleagues,

At the X OPTIMA Meeting in Palermo in 2001, it was agreed that the XI OPTIMA Meeting should be organized in 2004 in Belgrade (Serbia and Montenegro). You may recall that in Delphi (Greece), in 1989, organization of the OPTIMA Meeting for 1992 had already been entrusted to the Natural History Museum in Belgrade. This plan could not then be carried out due to unfortunate, non-botanical reasons. We therefore welcome this new opportunity with great pleasure.

We invite you to come to Belgrade in September 2004 to inaugurate the second decade of OPTIMA Meetings. We trust that we will host the Meeting in full agreement with its successful tradition, and we will do our best to organize it in such a way that you will keep a beautiful and pleasant memory of Belgrade.

Nikola Diklić & Olja Vasić

For further details please contact us at optima2004@beotel.yu

SCIENTIFIC PROGRAM

Includes 12 Symposia with invited speakers, and two Poster sessions with offered presentations, which may or not may be correlated to the Symposium topics.

SYMPOSIA

J. Pignatti: The legacy of the geological past and the ice ages in the Mediterranean area

Several elements were crucial in shaping, through time, the physical environment and the flora in the Mediterranean area. Symposium topics will include (a) the complex geological history of the region, where shifting tectonic plates caused fragmentation and reassortment of land and sea, influencing biogeographical patterns and enhancing spatial heterogeneity; (b) the biotic, adaptational and evolutionary consequences of recurrent, cyclic climatic changes that became increasingly rapid and extreme in late Neogene and Quaternary times, with sharp contrasts in processes, as reflected by the complex genetic structure of recent populations and species; and (c) the late Pleistocene and Holocene anthropic impact.

The invited oral presentations will focus on new concepts, methods and results, by presenting an array of subjects to illustrate the complexity and diversity of the disciplines involved. Such topics may include the genetic legacy of the ice ages, phylogeography, palynostratigraphy and paleobotany, biogeography, evolutionary interactions and dynamics, and palaeoclimatology. Posters on case studies and general issues are welcome, so that the Poster session may provide the opportunity for discussion and pave the way for new collaborations.

N. Kilian and C. Oberprieler: Mediterranean Compositae

This symposium will give an overview of the current synantherological research in the Mediterranean, presenting contributions to taxonomic, phylogenetic and evolutionary aspects

of the *Compositae* in one of its diversity centres. The invited oral presentations will cover different taxonomic levels, from species group to tribe, and range from the databasing of Mediterranean *Compositae* (Euro+Med Plant Base) to contributions to *Compositae* phylogenetics in the framework of the International Compositae Alliance (TICA). Posters dealing with the mentioned topics are welcome.

K. H. C. Başer: Medicinal and Aromatic Plants

The symposium will focus on various aspects of medicinal and aromatic plants growing in the Mediterranean area. Main topics will include (a) ethnobotany and traditional uses of plants for the benefit of humans and animals, (b) plant chemistry as a tool for studying Mediterranean medicinal and aromatic plants, and (c) the sustainable use of medicinal and aromatic plants growing wild in the Mediterranean region. Invited oral presentations will be given by distinguished speakers. Poster presentations on the above or any related topics are welcome.

U. Plitmann: Landscape ecology of the Mediterranean

The symposium shall present illustrated extracts of selected chapters from the OPTIMA book "Landscapes of the Mediterranean Vegetation". Each presentation is to describe the principal or important communities/formations (natural and man-made), with mention of their distribution, dominant components, the main ecological and biogeographical features, and floristic highlights (e.g. biologically unique, endemic or introduced species). The symposium will be preceded by general, introductory presentations.

T. Constantinidis: Edaphic Islands

The symposium will consider the various ways in which edaphic factors may affect the evolution, speciation, distribution and isolation of plant taxa or populations. Edaphic endemism, disjunct distributions, adaptation to particular geological substrates, floristics, and biodiversity estimates under contrasting geodaphic situations will also be considered. The invited oral presentations will demonstrate, by a variety of examples, the diverse influence that geological factors may have on plant life. Poster presentations that deal with any such (or similar) topic are welcome.

E. Pacini and A. Dafni: Pollen dispersal in the Mediterranean plants

Pollen dispersal must be adapted to the environment, exploit the most suitable vectors, and reduce losses to a minimum. The Mediterranean climate determines the prevalence of certain types of pollination syndrome and the relative rarity of others. In fact, the distribution of a species rarely extends beyond the climatic limits of its pollination system. This symposium will approach representative aspects of pollination in gymnosperms and angiosperms. In addition to the invited oral presentations, poster presentations are welcome.

S. Onofri: The influence of environmental factors on the diversity of fungi (including lichens) in the Mediterranean

Diversity of fungi in the Mediterranean area is barely known, and even the lichenised fungi are not yet exhaustively investigated. An in-depth knowledge of environmental factors affecting the presence and distribution of fungi (including lichens) could be a powerful tool for environmental monitoring. This symposium will deal with the study of diversity and distribution of fungi, including lichens, in the Mediterranean area. Invited oral presentations will focus on geographical, anthropic, and climatic factors

influencing fungal diversity, also contributing to the knowledge of mycota in different and scarcely known regions. Posters on local inventories and on the influence of environmental factors on mycodiversity, including adaptive strategies, will be welcome.

B. Valdés: Euro-Mediterranean Plant Databases

Floristic projects usually involve huge amounts of data which call for the use of computing facilities. The Symposium will focus on floristic projects using electronic databases as their core, from which a variety of outputs can be generated. Two types of such projects will be included: (1) those covering large areas, which may extend beyond the Mediterranean region, and (2) national and regional Mediterranean floristic projects. In addition to the invited oral presentations, posters, especially those dealing with the second topic, are welcome.

M. Fennane and P. L. Nimis: Botanical Networks in the Mediterranean area: collection data, georeferenced information and interactive identification tools

This symposium will be devoted to on-line networks providing access to data on plants and fungi of the Mediterranean region. It will concentrate on three main topics: (a) collection data (both from herbaria and living collections), (b) taxonomic, distributional and ecological data, and (c) the development of tools for the interactive or automated identification of organisms. The invited oral presentations will concentrate on already available large data sets, on links with broadly based international projects, on problems of data standardization, and on difficulties in certain countries or sub-regions for using data-processing tools in botany. Posters presenting local or specialized collections and data sets are welcome.

J. M. Iriondo: Spatial analysis in Mediterranean Botany

The fast development of Geographical Information Systems (GIS) combined with novel methods for the treatment of spatial data (geostatistics, spatial autocorrelation techniques, spatial modelling, etc.) is providing new perspectives for the study of Mediterranean botany. This symposium will present and discuss examples of the practical application of these novel tools, along with more traditional approaches linked to plant chorology. In addition to the invited oral presentations, poster presentations directly or indirectly linked to the use of spatial data in Mediterranean botany are welcome.

O. Vasić: Botany in Serbia and Montenegro

This symposium will be devoted to studies on the flora of Serbia and Montenegro. Main themes are to include diversity of the flora, the presence, distribution and abundance of plant taxa, as well as analyses of taxonomic and phytogeographic elements. The invited oral presentations will concentrate on relatively large and/or ecologically significant areas, as well as on taxonomic revisions at various levels. In addition to the invited oral presentations, poster presentations are welcome.

O. Vasić: Botany in ex-Yugoslav countries

This symposium will present the results of research on the flora of Slovenia, Croatia, Bosnia and Herzegovina, and Macedonia. Eminent experts from research institutions of these countries will be invited to present an overview of floristic, taxonomic and phytogeographical research in their respective area. Poster presentations on the above or any related topics are welcome.

POSTER SESSIONS

V. H. Heywood: Session 1

D. Zohary: Session 2

Location and dates

The XI OPTIMA Meeting will take place in Belgrade, the capital of Serbia and Montenegro, according to the program that follows:

3-5 September: Non-public meetings of the International Board, Executive Council, and the Commissions

6-11 September: Scientific program

12-15 September: Post-congress excursions

Official languages

English and French

REGISTRATION FEE

No.	Category	Payment in Euros		
		Regular	Late	On-Meeting
1	Regular OPTIMA Members	250	375	500
2	Associated members	320	480	640
3	Non-members	320	480	640
4	Accompanying persons	150	225	300
5	Students	120	180	240

Registration fee covers:

Full (1-3): book of abstracts, program, all printed meeting documents; welcome reception, farewell dinner, reception, break refreshments; one-day excursion.

Accompanying persons: program, welcome reception, farewell dinner, reception, break refreshments, one-day excursion.

Students: book of abstracts, program, welcome reception, break refreshments, one-day excursion. The farewell dinner will be available at extra cost.

Regular registration rates apply to payments made prior to 30 April 2004. After that date, late registration rates will apply. Details of payment will be announced in the second circular.

Deadlines

- 30 November 2003: Preliminary registration
- 30 April 2004: Payment of (regular) registration fee
- 15 April 2004: Registration for post-Meeting excursions
- 15 July 2004: Reception of abstracts
- Cancellation with full refund will be possible before 31 May 2004.

Preliminary program

Friday 03/09 & Saturday 04/09

Commission meetings (restricted)

Sunday 05/09

Registration of the participants

Morning: International Board Meeting, Executive Council Meeting (restricted)

Afternoon: Opening ceremony, Welcome Reception

Monday 06/09

Morning: Symposium 1 – O. Vasić: Botany in Serbia and Montenegro

Afternoon: Symposium 2 – B. Valdés: Euro-Mediterranean Plant Databases

Afternoon: Symposium 3 – T. Constantinidis: Edaphic Islands

Tuesday 07/09

Morning: Symposium 4 – J. Pignatti: The legacy of the geological past and the ice ages in the Mediterranean area

Morning: Symposium 5 – M. Fennane and P. L. Nimis: Botanical Networks in the Mediterranean area: collection data, georeferenced information and interactive identification tools

Afternoon: Poster session 1

Wednesday 08/09

Congress excursion

Thursday 09/09

Morning: Symposium 6 – U. Plitmann: Landscape ecology of the Mediterranean

Morning: Symposium 7 – E. Pacini and A. Dafni: Pollen dispersal in the Mediterranean plants

Afternoon: Symposium 8 – N. Kilian and C. Oberprieler: Mediterranean Compositae

Friday 10/09

Morning: Symposium 9 – S. Onofri: The influence of environmental factors on the diversity of fungi (including lichens) in the Mediterranean

Morning: Symposium 10 – K. H. C. Başer: Medicinal and Aromatic Plants

Afternoon: Poster session 2

Saturday 11/09

Morning: Symposium 11 – J. M. Iriondo: Spatial analysis in Mediterranean Botany

Morning: Symposium 12 – O. Vasić: Botany in ex-Yugoslav countries

Afternoon: Closing ceremony

Sunday 12/09

Departure of participants

Start of post-congress excursions

XI OPTIMA MEETING, BEOGRAD 5-11 SEPTEMBER 2004

Preliminary registration form

Given (first) name(s) _____

Family name(s) _____

Address _____

Phone _____ Fax _____ E-mail _____

I am

Regular OPTIMA member

Associated member

Non-member

Student

I will be accompanied by ___ person(s)

I intend to participate with:

Oral presentation

Poster presentation

Title of presentation _____

Signature _____

To be returned no later than **30 November 2003** to:

Olja Vasić. Natural History Museum. Njegoševa 51. 11000 Beograd. Serbia and Montenegro

MEDECOS X

X International Conference on Mediterranean Climate Ecosystems

RODOS, GREECE, APRIL 25- MAY 1, 2004

Objectives

Following the tradition of ISOMED to organise International Conferences every 3- 4 years, the tenth Conference of this series is planned to be held in Greece, from 25 April – 1 May 2004. The scope of the Conference is to bring together scientists from all parts of the World working on various aspects of Mediterranean Environments, to encourage presentations of the latest advances in research and applications, to promote discussions and to increase interactions among researchers and between researchers and managers.

Background

The unique environment of the five Mediterranean regions of the World, synonymous with the earliest human settle-ments and subsequent great civilizations, are the heavily populated places that today draw thousands of tourists. Since its interception, back at 1971, the MEDECOS meetings have played an important role in forecasting continuing interest and scientific research on the unique Mediterranean ecosystems, hot spots of global biodiversity and some of the most threatened among all terrestrial ecosystems.

It is expected that MEDECOS X, the 1st of the row in the new millennium, will meet its challenges and will offer the maximum of its capacities to future generations.

Topic

Following the tradition of the last MEDECOS Conferences the topic of MEDECOS X aims at accommodating as many interests as possible.

Thus, it will host an array of issues from basic ecology to conservation and sustainable management.

Consequently, the title will be:

'Ecology, Conservation and Sustainable Management of Mediterranean type ecosystems of the World'

Venue

The MEDECOS X International Conference will be held at Rodos Palace, in the island of Rodos. The Hotel and Convention Center of Rodos Palace, facing the deep blue of the Aegean Sea at its south-east edge, are located only 4km away from the medieval town of Rodos and 12 km from the international airport of the island.

Organisation

ISOMED Executive Committee: Margarita Arianoutsou, Greece, Gidi Neeman, Israel, Abraham Haim, Israel, Michel Etienne, France, Sue Milton, South Africa, Pablo Marquet, Chile, Martin Cody, California, Ray Wills, Australia.

Organizing Committee: Margarita Arianoutsou, University of Athens, Panagiotis Dimopoulos, Univ. of Ioannina, George Farangitakis, Argyrou-

polis Center of Environmental Education, Theodoros Georgiadis, Univ. of Patras, Pantazis-Alexandros Gerakis, Greek Biotope/Wetland Center, Anastasios Legakis, Zoological Museum of Univ. of Athens, George Lyrantzis, National Center for Agricultural Re-search, Michalis Modinos, National Center for the Environment & Sustainable Development, Moyses Mylonas, Univ. of Crete, Natural History Museum of Crete, Vassilios Papanastasis, Univ. of Thessaloniki, George Stamou, Univ. of Thessaloniki, Costas

Thanos, Univ. of Athens, Andreas Troumbis, Univ. of the Aegean.

Local Organizing Committee: Michalis Kais, Environmental Organisation of Rodos.

President of the Organizing and Executive Committee of ISOMED: Prof. Margarita Arianoutsou, Tel. +30.210.7274352, Fax: +30.210.7274885, E-mail: marianou@biol.uoa.gr, <http://www.biology.uoa.gr/MEDECOS2004.htm>

SEED ECOLOGY 2004

AN INTERNATIONAL MEETING ON SEEDS AND THE ENVIRONMENT

RHODES ISLAND, GREECE, APRIL 29 – MAY 4, 2004

SE2004 is the first thematic, scientific conference devoted exclusively to *Seeds and the Environment*. It aims to cover all aspects of Seed Ecology (dispersal, predation, soil and canopy seed banks, ecophysiology of dormancy and germination, seed research issues related to evolution, conservation and ecosystem functioning).

SEED ECOLOGY 2004 will overlap with MEDECOS X (the 10th Mediterranean Ecology Conference), also to take place in Rhodes (April 25 - May 1, 2004). On Friday, April 30th, we intend to run one or two common sessions on Mediterranean seed ecology. This overlap is intentional, of course, and will enable a number of participants to attend both events.

The venue of both conferences will be the Convention Center of Rodos Palace Hotel, conveniently situated on the outskirts of Rodos city (4 km), not far (12 km) from the International Airport of the island.

Conveners of SEED ECOLOGY 2004 are:

Costas Thanos, Univ. Athens-Greece (chair) cthanos@biol.uoa.gr and Ken Thompson, Sheffield-UK (co-chair) Ken.Thompson@sheffield.ac.uk, assisted by an International Organising Committee.

Web page: <http://www.biology.uoa.gr/SeedEcology2004.htm/>

A N N O U N C E M E N T S

3-7 November 2003

7th International Conference on the Ecology and Management of Alien Plant Invasions

Wyndham Bonaventure Resort, Ft.
Lauderdale, Florida.

Conference Themes: The joint conference will feature invited speakers, symposia, contributed posters, field trips, workshops, and panel discussions on numerous topics including: managing desired plant communities, ecological impacts of invasive plants, detecting invasive exotic plants, predicting species invasiveness and preventing entry, predicting community susceptibility and resistance to invasion, modeling biological invasions, economic impacts, control methods and technologies, information management and databases, role of genetics and rapid evolution in the spread, impact and control of damaging weeds, contributions of agriculture to wildland weed ecology, biological weed control, ecological impacts of control, public outreach and education, global change, human movement, and invasives, fire and invasives, priority setting, and linking science and policy.

If you are interested in the Conference, please e-mail : ipinams@esa.org.

world to consider matters of mutual importance and concern, particularly related to the development and implementation of common policies, programs and shared priorities.

In particular, it will review the implementation of the International Agenda for Botanic Gardens in Conservation. The International Agenda is a global policy framework for botanic gardens worldwide to contribute to biodiversity conservation, particularly as it relates to the implementation of the Convention on Biological Diversity. The International Agenda was launched at the First World Botanic Gardens Congress in Asheville, U.S.A., in 2000. This Congress provides an international forum to review progress over the intervening four years and to consider what targets are needed for its implementation.

The Congress programme will address the following themes during a week of plenary sessions, workshops, symposia and other meetings: plant conservation through botanic gardens, botanic gardens and ecosystem conservation, education and sustainability, botanic garden horticulture and development, botanic garden research, and heritage.

For further information see : <http://www.bcn.es/medciencias/botanicgardens2004/>. Specific enquiries can be made at: E-mail: botanicgardenscg@manners.es.

17-22 April 2004

The World Botanic Gardens Congress

Barcelona, Spain

The primary goal of the World Congress is to provide a forum for the botanic gardens of the

17-19 May 2004

International Organization of Plant Biosystematics "Plant Evolution in Mediterranean Climate Zones" IXth Meeting

Jardín Botánico de la Universidad de
Valencia, Valencia, Spain.

Communications and Symposia will include the following topics: multiple approaches to comparing Mediterranean floras throughout the world, Biogeographic (and Phylogeographic) patterns in the Mediterranean Region, speciation models in the Mediterranean Region (including polyploidy, hybridisation, vicariance), conservation and genetic diversity of rare and endemic species, symposia on specific plant families, and ecological factors affecting plant differentiation and speciation.

The deadline for early registration is 31 December 2003. Participants are invited to submit applications for oral and poster contributions to the meeting. For more information see: <http://www.jardibotanic.org/iannun.html>.

18-23 July 2005

XVII International Botanical Congress

Vienna, Austria

The XVII International Botanical Congress is being organized by the IBC Organizing Committee, the Society for the Advancement of Plant Sciences and the Vienna Medical Academy, with support from many societies related to Plant Sciences, as well as universities, research institutions, and private sponsors. The XVII IBC is held under the auspices of the International Association of Botanical and Mycological Societies (IABMS) of the International Union of Biological Sciences (IUBS).

The XVII IBC will be a centennial meeting, 100 years after the 2nd modern IBC Vienna in 1905. The Scientific Program will consist of Plenary Lectures, Symposia, Society or Association Meetings, New Media Presentations and Discussions and Workshops. The Scientific Disciplinary Areas include: 1) Cell Biology and Molecular Genetics, 2) Genomics, Proteomics, Metabolomics, 3) Structure and Development including Functional Aspects, 4) Botanical Diversity, Systematics, 5) Population Biology, 6)

Plant-/Eco-Physiology, Biogeogenic Cycles, 7) Phytochemistry (basic and applied), 8) Ecology, Environment; Conservation Biology, 9) Human Society and Plant Sciences, 10) Natural Resources, Biotechnology, Economic Botany, 11) Knowledge sharing Databases, Bioinformatics, Electronic Communication, Education.

Registration is open to any person interested in any field related to plant biology with reduced fees for students and scientists from developing countries.

The first circular, preregistration form and guidelines for proposals are available at <http://www.ibc2005.ac.at/>. Specific questions may be directed to the Secretary-General, Dr. Josef Greimler, E-mail: office@ibc2005.ac.at

23-27 July 2006

2006 International Solanaceae Conference and Poster Photo Competition

Madison, Wisconsin.

The VI International Solanaceae Conference will be held in Madison, Wisconsin, at the Monona Terrace, situated on Lake Monona. It will be held in conjunction with an annual meeting of the Potato Association of America. The International Solanaceae Conferences have been held every 5-6 years and all have resulted in published proceedings, as will this one. Details of the conference are being formulated, and can be viewed at: www.hort.wisc.edu/PAA-Solanaceae. The conference will be further advertised by full-color posters to be distributed worldwide, and we solicit artwork of any Solanaceae theme to form the centerpiece of the poster. The contributor of this artwork, and sponsors to the conference will be acknowledged on the poster. For more information, please contact the conference organizer: David M Spooner, USDA Agricultural Research Service, UW-Madison, Department of Horticulture, 1575 Linden Drive, Madison, WI 53706; 608-262-0159; dspooneer@wisc.edu.

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