

NOUVELLES DE L'OPTIMA

par JOSÉ M. IRIONDO

Le Xème Colloque de l'OPTIMA se tiendra à Palerme en septembre 2001. Bientôt vous recevrez la première circulaire. Veillez à vous inscrire et à soumettre vos résumés en temps utile. N'hésitez pas à prendre contact avec le Pr. F. Raimondo à Palerme ou le Secretariat de l'OPTIMA à Madrid si vous avez besoin d'informations supplémentaires. Les dernières nouvelles du Colloque seront disponibles sur le Web à l'adresse : <http://www.bgbm.fu-berlin.de/OPTIMA/>.

Nous souhaiterions également vous inviter à participer au processus de désignation des bénéficiaires des Médailles d'Or et d'Argent de l'OPTIMA qui seront décernées au Xème Colloque en envoyant vos propositions au Secrétariat de l'OPTIMA.

COMITÉ INTERNATIONAL

En 1999, les membres du Comité ont approuvé le rapport annuel et le rapport financier pour 1998, soumis par le Secrétaire au nom du Président et du Conseil Exécutif. Le Comité a également désigné le Dr. Santiago Pajarón et le Dr. Federico Fernández-González comme vérificateurs des comptes pour l'année 1999.

CONSEIL

Le Conseil a donné son accord pour maintenir sans changement les cotisations des membres de l'OPTIMA pour l'année 2000. Le Dr. Stephen L. Jury a été désigné pour assurer la fonction de Membre Suppléant au Comité Scientifique de la Fondation Pro Herbario Mediterraneo.

SECRÉTARIAT

Le Secrétariat s'est occupé de la gestion des comptes de l'OPTIMA et de ceux de la Commission des Publications et de la Commission des Prix, ainsi que de la gestion de la vente des publications et de la tenue des fichiers des membres. Le Secrétariat de l'OPTIMA a également assuré la liaison entre les membres du Conseil et du Comité et les groupes de travail et commissions de notre Organisation.

Les autres activités en cours comprennent la publication des Nouvelles de l'OPTIMA et la mise à jour du site Web de l'OPTIMA. L'annuaire des membres, qui était en cours de transfert pour consultation sur le site Web de l'OPTIMA, a été ajourné en raison de problèmes légaux.

DÉCÈS

Mr. Michel Kerguelen, Paris, France, décédé en 1999.

Le Pr. G. Orshan, Jerusalem, Israël, décédé en 1999.

Le Pr. Dr. Hüsnü Demiriz, Caddebostan Istanbul, Turquie, décédé en Mars 1999. Le Pr. Demiriz avait organisé le Vème Colloque de l'OPTIMA à Istanbul en 1986 et fut membre du Comité International pendant de nombreuses années.

Le Pr. Dr. Jaako Jalas, membre fondateur de l'OPTIMA, Helsinki, Finlande, décédé en novembre 1999.

La Dr. Patricia Geissler, Chambésy, Suisse, décédée en avril 2000.

Le Dr. Henk 't Hart, Utrecht, Pays-Bas, décédée en juillet 2000.

Des notices nécrologiques détaillées de ces membres éminents de l'OPTIMA seront publiées dans les prochains numéros de *Flora Mediterranea*.

LE POINT SUR LES COMMISSIONS

PAYSAGES VEGETAUX DU BASSIN MEDITERRANEEN

La Commission pour la diffusion des connaissances sur les plantes méditerranéennes progresse constamment dans l'élaboration du livre "Paysages végétaux du Bassin méditerranéen". La plupart des chapitres sont en cours de révision. Ceux qui concernent les Balkans, la Sicile, la Syrie et le Liban, ainsi que les Enclaves Méditerranéennes, sont en préparation. Les seuls chapitres qui manquent encore sont ceux sur Chypre et les Iles de la mer Égée.

Les prochaines étapes comportent l'achèvement des chapitres manquants, la mise au point scientifique et linguistique finale, la recherche et la sélection des photographies, cartes et autres illustrations.

Pour plus d'informations, contacter le Prof. Uzi Plitmann, Department of Botany, The Hebrew University, Jerusalem 91904, Israel. E-mail: uzi@vms.huji.ac.il

COMMISSION DE L'HERBARIUM MEDITERRANEUM

Le processus d'acquisition de l'immeuble qui doit héberger l'Herbarium Mediterraneum est maintenant terminé. La construction, située à proximité du Jardin Botanique de Palerme, sera très prochainement

restaurée. Le projet de restauration a été confié à d'éminents architectes de la région.

Sur le front des publications, le Volume 9 de *Flora Mediterranea* a été publié en Décembre 1999. Les Volumes 11 et 12 de *Bocconea* ont également été publiés avec les résultats du IVème *Iter Mediterraneum* à Chypre et le catalogue des macroalgues marines benthiques de la côte italienne de la Mer Adriatique.

L'ATLAS DES ORCHIDEES MEDITERRANEENNES ARRIVE !

La Commission pour la Cartographie des Orchidées Méditerranéennes a fait des progrès considérables sur l'atlas. Après une longue période de préparation, il a été possible de réaliser une base de données numérique pour imprimer les cartes de distribution. Le territoire complet s'étend d'ouest en est des Iles Canaries à l'Iran, et de la Libye au sud jusqu'à la latitude 48° au nord. Une maison d'édition a été contactée pour publier le travail. La Commission envisage maintenant de compléter l'atlas avec une présentation complète de toutes les orchidées européennes-méditerranéennes (texte et iconographie).

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 (Xème) Colloque de l'OPTIMA à Palerme, Italie.

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 1998, 1999 ou 2000.

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 1998, 1999 ou 2000. 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: iriondo@ccupm.upm.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

1. 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.
2. Le prix consistera en une médaille en or.
3. Le lauréat sera choisi par une Commission des Prix dont la recommandation sera soumise au Comité International de l'Organisation pour ratification et approbation.
4. Le prix sera décerné à l'occasion d'une réunion triennale de l'Organisation.
5. Aucun membre de la Commission des Prix ne pourra être proposé.

Médailles d'Argent de l'OPTIMA

1. 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.
2. Les prix prendront la forme de médailles en argent.

3. Les lauréats seront choisis par une Commission des Prix dont les recommandations seront soumises au Conseil de l'Organisation pour ratification et approbation.
4. Le prix sera décerné à l'occasion d'une réunion triennale de l'Organisation.
5. 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.
6. 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.
7. Aucun membre en activité de la Commission des Prix ou du Comité International ne pourra être désigné pour le prix.



OPTIMA NEWS

by JOSÉ M. IRIONDO

The X OPTIMA Meeting will be held in Palermo in September 2001. Soon you will receive the first circular. Please, make sure you register and submit the abstracts in due time. Do not hesitate to contact Prof. F. Raimondo in Palermo or the OPTIMA Secretariat in Madrid if you need further information. The latest news on the meeting will be available on the Web at: <http://www.bgbm.fu-berlin.de/OPTIMA/>.

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 X OPTIMA Meeting by sending your proposals to the OPTIMA Secretariat.

INTERNATIONAL BOARD

In 1999, the Board members approved the annual report and the financial report for 1998, submitted by the Secretary on behalf of the President and the Executive Council. The Board also appointed Dr. Santiago Pajarón and Dr. Federico Fernández-González as auditors for the year 1999.

EXECUTIVE COUNCIL

The Council approved to keep OPTIMA membership fees unchanged for the year 2000. Dr. Stephen L. Jury was elected to fill the position of Substitute Member on the Scientific Committee of the Foundation Pro Herbario Mediterraneo.

SECRETARIAT

The Secretariat was active keeping OPTIMA's accounts and the accounts of the Publications Commission and Prize Commission and managing publication sales and membership files. The OPTIMA Secretariat also functioned as a liasing centre for Council and Board members and the working groups and commissions of our organization.

Further activities taking place at this moment include the edition of OPTIMA Newsletter and the updating of the OPTIMA Website. The membership database that was going to be made available through the OPTIMA Website has been temporarily postponed due to legal problems.

DEATHS

Mr. Michel Kerguélen, Paris, France, died in 1999.

Prof Dr. G. Orshan, Jerusalem, Israel, died in 1999.

Prof. Dr. Hüsnü Demiriz, Caddebostan Istanbul, Turkey, died in March 1999. Prof. Demiriz organised the V OPTIMA Meeting in Istanbul in 1986 and was a member of the International Board for many years.

Prof. Dr. Jaako Jalas, founding member of OPTIMA, Helsinki, Finland, died in November 1999.

Dr. Patricia Geissler, Chambésy, Switzerland, died in April 2000.

Dr. Henk 't Hart, Utrecht, The Netherlands, died in July 2000.

Full obituaries of these prominent OPTIMA members will be published in future volumes of *Flora Mediterranea*.

UPDATES ON COMMISSIONS

VEGETAL LANDSCAPES OF THE MEDITERRANEAN

The Commission for the Diffusion of Knowledge on Mediterranean Plants is steadfastly progressing on the book "Vegetal Landscapes of the Mediterranean". Most of the chapters are in the revision process. Chapters on the Balkans, Sicily, Syria and Lebanon and Mediterranean Enclaves are in preparation. The only chapters that are still missing are those on Cyprus and the Aegean Islands.

The next steps include the completion of the lacking chapters, final scientific and lingual editing, and the compilation and selection of photographs, maps and other illustrations.

For further information, please contact: Prof. Uzi Plitmann, Department of Botany, The Hebrew University, Jerusalem 91904, Israel. E-mail: uzi@vms.huji.ac.il

HERBARIUM MEDITERRANEUM COMMISSION

The acquisition process of the building that will house the Herbarium Mediterraneum has now been completed. The structure, located next to the Botanical Garden in Palermo, will be restored in the near future. The restoration project has been assigned to prominent architects of the area.

On the publishing front, Volume 9 of *Flora*

Mediterranea was published in December 1999. *Bocconeae* Volumes 11 and 12 were also published with the results of the IV *Iter Mediterraneum* in Cyprus and the Catalogue of the benthic marine macroalgae of the Italian coast of the Adriatic Sea.

ATLAS OF MEDITERRANEAN ORCHIDS COMING SOON!

The Commission for the Mapping of Mediterranean Orchids has made considerable progress on the atlas. After a long period of preparation, it was possible to construct a digital database for printing distribution maps. The complete territory reaches from the Canary Islands in the west to Iran in the east and from Libya in the south to a latitude of 48° in the north. A commercial publisher has been contacted and will publish this work. The Commission now intends to enlarge the atlas with a complete presentation of all European-Mediterranean orchids (text and icono-graphy).

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 X OPTIMA Meeting in Palermo, Italy.

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 1998, 1999 or 2000.

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 1998, 1999 or 2000 for consideration. Send your proposals to: José M. Iriando, Dpto. Biología Vegetal, E.U.I.T. Agrícola, Universidad Politécnica, E-28040 Madrid, Spain; Fax: +34 1 336 5656; E-mail: iriondo@ccupm.upm.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

1. 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.

2. The prize will consist of a gold medal.
3. 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.
4. The prize will be awarded at a triennial meeting of the Organization.
5. No member of the Prize Commission will be eligible for consideration.

OPTIMA Silver Medals

1. 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.
2. The prizes will take the form of silver medals.

3. 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.
4. The prize will be awarded at a triennial meeting of the Organization.
5. 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.
6. Both members and non-members are eligible to submit papers or books for consideration by the Prize Commission.
7. No current member of the Prize Commission or International Board will be eligible for the prize.



CONSERVATION NEWS

SURVEY OF WILD SPECIES CONSERVATION IN GENETIC RESERVES

The Wild Species Conservation in Genetic Reserves Task Force of the European Cooperative Programme for Genetic Resources (ECP/GR) is undertaking a survey of current reserves where the genetic diversity of plant genetic resources for food and agriculture (PGRFA) is conserved. The objective is to identify geographical and technical gaps in the current reserve network and so identify existing and novel sites that require increased support as well as future research objectives.

To avoid confusion of what constitutes a reserve for wild species conservation, genetic reserve conservation is defined as:

“the location, management and monitoring of genetic diversity in natural wild populations within defined areas designated for active, long-term conservation”

Therefore, to be considered a genetic reserve the following two criteria must be met:

- a. the population of the target taxon must be actively managed to promote the long-term health of the population, and
- b. the target taxon population at the site must be monitored, either in terms of population density or genetic diversity.

If you are responsible for a genetic reserve in which PGRFA taxa are conserved, could you please complete the questionnaire below as fully as possible.

Reserve Details

Target species: _____

Location: Country: _____ Province: _____
 Settlement: _____ Land area: _____ ha
 Latitude: _____ N Longitude: _____ W/E Altitude: _____ m

Organisation managing site: _____ Key Personnel: _____

Land ownership (e.g. public / private / other): _____ Financial support (e.g. public / private / other): _____

Reason(s) for establishment: _____

Management interventions: _____

Monitoring procedures: _____

Involvement of local people: _____

Users of reserve: 1 _____ 2 _____
 3 _____ 4 _____

Link to *ex situ* conservation: _____

Access policy for diversity: _____

Breeder's evaluation? _____ Molecular evaluation? _____

Please return the form to Chair of the ECP/GR Genetic Reserve Task Force, Nigel Maxted, School of Biological Sciences, University of Birmingham, Birmingham B15 2TT, UK

Fax work: (44) 121 414 5463, Email work: N.Maxted@bham.ac.uk. or N.Maxted@bham.ac.uk.

HERBARIUM NEWS*

edited by PALOMA BLANCO

IBERIAN MYCOLOGICAL HERBARIA

by FRANCISCO PANDO

The starting point of Iberian mycology can be placed at the beginning of the 19th century, with studies by M. Lagasca (1802), S. Rojas Clemente (1864) and J. Cavanilles (1802). These authors were the introducers of cryptogamy in Spain. During the rest of the century, hardly any mycological works were published. We can mention the appendices found in the works by M. Willkomm and by F. Loscos y Bernál & J. Pardo y Sastrón.

During the first third of the 20th century, mycology became the subject of prominent botanists like T. Aranzadi, P. Font Quer, R. González Fragoso, T. M. Losa España, J. Veríssimo Almeida, M. C. Rezende-Pinto and M. Souza Câmara along with some prominent professors from abroad including R. Heim, R. Maire, A. A. Pearson and R. Singer. Their work set up a base for the study of fungi on the Iberian Peninsula. This effort was continued after the Spanish Civil War by authors like L. M. Unamuno and M. J. Urries. However, the tradition had been largely lost by the 60's until it was taken up once again by F. D. Calonge, who was closely followed by a new generation of mycologists: G. Moreno, E. Pérez Moral and M. T. Tellería. These mycologists, through their work and their students, laid the foundation for the currently large Iberian Mycological community. Nowadays, the Iberian Fungus Flora Project, sponsored by the Spanish government, conveys most systematic mycological studies.

A great number of the specimens studied by mycologists from Spain and Portugal – as well as from abroad – are kept in the herbaria listed below. I hope that the information presented here contributes to a better knowledge of this relevant mycological resource.

A list of Iberian fungus collections follows. The information provided for each herbarium was kindly submitted by their keepers. I would like to acknowledge their cooperation here.

AH (Dpto. de Biología Vegetal (Botánica), Universidad

de Alcalá de Henares, Ctra. Madrid-Barcelona Km. 33.600, E-28875 ALCALÁ DE HENARES, Madrid, Spain). Started in 1978, this collection holds 27,052 specimens, mainly Agaricales, "Gasteromicetes", Myxomycetes from the Iberian Peninsula. The principal collectors are J. M. Barrasa, M. Checa, R. Galán and G. Moreno. Loan service. Keeper: F. J. Rejos. E-mail: bfjrb@bioveg.alcala.es (soon to be changed to fjavier.rejos@uah.es) Telephone: +34 918854965 / +34 918854924; Fax: +34 918855066

BCC (Dpt. de Biología Vegetal (Unitat de Botànica) Facultat de Biologia, Universitat de Barcelona, Av. Diagonal, 645. E-08028 BARCELONA, Spain). Started in 1920, it holds nearly 30,000 specimens, mainly Dothideales, "Gasteromicetes", Myxomicetes and Russulales, from the Iberian Peninsula, specially from Catalonia and the Balearic Islands. Important collectors are E. Gracia, X. Llimona, J. Llistosella, M. P. Martín, A. Rocabrana, D. Sierra, M. Tabarés and J. Vila. Remarks: Herbarium of the "Societat Catalana de Micologia" (c. 5000 specimens) kept and managed in BCC. Loan service. Keeper: Dr. Jaume Llistosella. E-mail: jllistos@porthos.bio.ub.es Collection manager: Antoni Sánchez-Cuxart. E-mail: acuxart@porthos.bio.ub.es Telephone: +34 934021471/ +34 934021472, Fax: +34 934 112 842. Herbarium information available at: <http://www.ub.es/div3/serveis/d3serv06.htm>

BIO (Dpto. de Biología Vegetal y Ecología, Facultad de Ciencias, Universidad del País Vasco, Apartado 644, E-48080 BILBAO, Spain). Started in 1981, it contains 8,000 specimens, mainly Aphylophorales from the Basque country. Loan service. Keeper: Isabel Salcedo. E-mail: gvpsalai@lg.ehu.es Telephone: +34 946012613, Fax: +34 944648500

GDA-GDAC (Herbario de la Universidad de Granada, c/ Rector López Argüeta nº 8, E-18071 GRANADA, Spain). Started in 1853, it keeps 6,000 specimens mainly

* Please send all items suitable for publication under this heading directly to the editor of this column: Paloma Blanco, Real Jardín Botánico, Plaza de Murillo, 2, E-28014 Madrid, Spain.

Agaricales, Aphyllophorales, Boletales and Lycoperdales from Andalusia. The principal collectors are A. Ortega, G. Moreno and F. Esteve-Raventós. Remarks: GDA and GDAC have recently merged. 80% of the collection is databased. Loan service. Keeper: J. Eduardo Linares Cuesta. E-mail: elinares@goliat.ugr.es / herbario@ugr.es Tele-phone: +34 958246329, Fax: +34 958243254. Herbarium information: www.ugr.es/~herbario

LISU (Museu, Laboratório e Jardim Botânico, Universidade de Lisboa, Rua da Escola Politécnica, 58, 1294 LISBOA Codex, Portugal). Started in 1878, it keeps 12,000 specimens mainly Aphyllophorales from Portugal. Important collectors are P. Coutinho and J. Pinto-Lopes. Loan service. Keeper: Ireneia Melo. E-mail: jb@fc.ul.pt Telephone: +351 213921802, Fax: +351 213970882.

LOU-Fungi (Centro de Investigacións Forestais e Ambientais de Lourizán-Centro de Información e Tecnoloxía Ambiental-Consellería de Medio Ambiente-Xunta de Galicia. Apartado de Correos 127, E-36080 PONTEVEDRA, Spain.) Started in 1990, it holds nearly 8,000 specimens, mainly Agaricales and Aphyllophorales, from the northwestern Iberian Peninsula. Two holotypes: *Amanita porrinensis* L. Freire & M. L. Castro and *Gyroporus ammophilus* (M. L. Castro & L. Freire) M. L. Castro & L. Freire. Important collectors are Marisa Castro, Luis Freire, Francisco J. Fernández de Ana Magán and their teams. Loan service. Keeper: Francisco Javier Fernández de Ana-Magán. E-mail: fmagan@sfp.cifl.cesga.es Telephone: +34 986856400 ext. 291, Fax: +34 986856420.

MA (Real Jardín Botánico-CSIC, Pza. de Murillo, 2, E-28014 MADRID, Spain). Started in 1755, it holds 72,000 specimens mainly Aphyllophorales, Dothideales, "Gasteromycetes", Myxomycetes, Phomales, Phyllostictales, Uredinales and Ustilaginales from the Iberian Peninsula. Important collectors are R. González Fragoso, J. Urries, J.M. Unamuno, L. Crespí I. Zubía, F.D. Calonge, M.T. Tellería, C. Lado, F. Pando and Balensón. Fungi are kept in two separate collections: MA-FunHist (specimens included before 1976) and MA-Fungi (specimens included after 1976). Loan service. Keeper: Francisco Pando. E-mail: pando@ma-rjb.csic.es Telephone: +34 914203017, Fax: +34 91 4200157. Remarks: The collections are fully databased and accessible via Internet at: <http://www.rjb.csic.es/herbario/crypto/cryphola.htm>

MACB (Dpto. Biología Vegetal I, Facultad de Biología, Universidad Complutense de Madrid, Ciudad Universitaria, E-28040 MADRID, Spain). Started in 1966, it keeps 87 specimens from the center of the Iberian Peninsula. Important collectors are M.T. Tellería,

Truchero and G. Moreno. Keeper: María A. Carrasco. E-mail: carrasco@eucmax.sim.ucm.es Telephone: +34 913944781 / +34 913944414, Fax: +34 913945034.

MAF (Dpto. de Biología Vegetal, II, Facultad de Farmacia, Universidad Complutense de Madrid, Pza. de Ramón y Cajal s/n, Ciudad Universitaria, E-28040 MADRID, Spain). Started in 1892, it keeps between 2,500-3,000 specimens from Spain, mainly Aphyllophorales. An important collector is B. Lázaro Ibiza. Loan service is temporarily suspended as the collection is being catalogued. Keeper: José Pizarro. E-mail: mafherb@eucmax.sim.ucm.es Telephone: +34 913941769, Fax: +34 91394 1774.

PAMP (Dpto. Botánica, Facultad de Ciencias, Universidad de Navarra, E-31080 PAMPLONA, Spain). Started in 1970, it keeps approximately 1,200 specimens mainly Coprophylus fungi from Navarra. Important collectors are Luis Miguel García Bona and Maria José Solans. Loan service restricted to revised and databased specimens. Keeper: Alicia Ederra Indurain. E-mail: aederra@unav.es Telephone: +34 948425600 ext. 6406, Fax: +34 948425649.

SALA (Dpto. de Biología Vegetal, Facultad de Biología, (Botánica), Universidad de Salamanca, SALAMANCA, Spain.). Started in 1995, it keeps 1,300 specimens, mainly Agaricales from the western and central Iberian Peninsula. Loan service. Keeper: Enrique Rico Hernández. Collection manager: Fco. Javier Hernández García. E-mail: herjavi@gugu.usal.es Telephone: +34 923294469, Fax: +34 923294484.

TFC Myc (Departamento de Biología Vegetal (Botánica), Universidad de La Laguna, 38071 La Laguna, Tenerife, Islas Canarias, Spain). Started in 1969, it keeps 9,300 specimens, mainly Aphyllophorales, Agaricales, "Gasteromycetes" and Myxomycetes. The Canary Island area is particularly well-represented. Important collectors are A. Bañares, J.R. Rodríguez-Armas, J. Mosquera, A. Rodríguez and E. Beltrán. Loan service. Keeper: Dra. A. Losada Lima (No Vascular Plants). Telephone: +34 922318438 / +34 922318436. For Fungi contact: Esperanza Beltrán-Tejera. E-mail: ebeltran@ull.es Telephone and Fax: 922318600.

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3. Gasteromycetes, I. Lycoperdales, Nidulariales, Phallales, Sclerodermatales, Tulostomatales / CALONGE, F. de. 1998

4. Laboulbeniales, I. Laboulbenia / SANTAMARIA, S. 1998

Cuadernos de trabajo de Flora Micológica Ibérica . Madrid: RJB (CSIC), 1990.

Information on literature, chorology and databases of Iberian fungi (14+ volumes).

FIELD WORK NEWS*

OPTIMA ITER IX

by DR. STEPHEN JURY**

Iter Mediterraneum IX took place along the Black Sea Coast of Bulgaria from 20 May – 9 June 1999. The 12-person expedition to this species rich and relatively unknown area was led by Mr. DMITAR Uzunov. Over 2,500 collections were made with duplicate sets for the participating institutions (Berlin, Catania, Palermo, Reading, Sevilla and Sofia).

The Iter worked from the southern border to the "steppe" near the Romanian border. The best/worst day was in the Strandja Mountains, right against the Turkish border, when the collections were so numerous that pressing only finished at 3 a.m.! This area has a

splendid flora including *Rhododendron ponticum*, *Daphne pontica*, *Ilex colchica*, *Prunus laurocerasus* and *Vaccinium arctostaphylos* as an understorey of *Fagus orientalis*. This Euxine element was mentioned by Oleg Polunin in his *Wild Flowers of Greece and the Balkans*, but has effectively been inaccessible being in a restricted area.

At Reading, all the specimens (c. 2000) from the Optima Iter VIII to Calabria have now all been mounted, identified and incorporated for use. The collection data can be viewed through our Herbarium Homepage over the Internet at: www.herbarium.reading.ac.uk

* This column is edited by the Secretary of the "Commission for Floristic Investigation" of OPTIMA, Prof. Dr. B. Valdés, Departamento de 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.

** Extracted with permission from *Herbarium News*, University of Reading (1999).

XTH OPTIMA ITER MEDITERRANEUM (SE-FRANCE, 26 MAY - 3 JUNE 2000)

by MICHAELA MARIA SONNENTAG

The tenth Iter Mediterraneum - organized by two scientific institutions of Nice, the Botanical Garden and the Museum of Natural History - took place in SE-France, mainly in the Maritime Alps.

Organizers:

Alziar, Gabriel, Jardin Botanique de la Ville de Nice
Ewald, Philippe, Muséum d'Histoire Naturelle, Nice

Senior participants:

Certa, Guisepe, Università degli Studi di Palermo
Everest, Ayse, Mersin Üniversitesi
Gambino, Alessandro, Università degli Studi di Palermo
Thomine, Jean-Charles, Jardin Botanique de la Ville de Nice (assistant, 2nd week)
Triphon, Jean-Luc, Jardin Botanique de la Ville de Nice (assistant, 1st week)

Junior participants:

Domina, Giannantonio, Università degli Studi di Palermo
Pina Gato, Francisco, Universidad de Sevilla
Sonnentag, Michaela, Freie Universität Berlin / Botanischer Garten und Botanisches Museum Berlin-Dahlem

The study area is situated in the departments **Alpes-Maritimes** (24 locations), **Alpes-de-Haute-Provence** (8 locations) and **Var** (3 locations) between 48°32'-48°57' N and 4°47'-5°19' W. For the floristic investigation of this poorly known area, collections of vascular plants were carried out at altitudes between (350-) 700-1400 (-1680) m above sea level.

As variable as the geomorphological landscapes (high cliffs, gorges, crests, karst, deeply embanked valleys) are the substratum (calcareous, marls, pelites, sandstones) and water availability (dry to aquatic) within the studied habitats. The flora of the region is essentially compound of mediterranean, provencal and south-alpine elements.

The program started on 26 May in the afternoon with a visit to the Botanical Garden of Nice. The Botanical Garden was created in 1983 and now has over 3500 species on 3 hectares. In spite of a low budget and consequent lack of staff, the Garden is well-developed and has a certain originality due to the form of

presentation. Beyond that, the personal engagement and devotion of the few people working in the garden is obvious in every respect.

The first station of the expedition was **St.-Vallier-de-Thiery**, a small village situated about 35 km west of Nice on the **Route Napoléon** (700 m above sea level). On the morning of 27 May we were introduced to the vegetation, geology, climate and geographical features of the selected area. Until 1 June we visited various locations in the marvellous surroundings such as **Vallon de Barosse**. There we worked in a rather dense forest of *Quercus pubescens* with some clearings dominated by *Genista cinerea*. We also visited the **Forêt de Briasq** (karst-plateau with *Quercus pubescens* and *Pinus sylvestris*) and the spring of the **Estéron** river (e.g., aquatic: *Potamogeton* spec., *Nasturtium* spec., humid: *Eriophorum* spec, *Narcissus poeticus*, dry: *Globularia cordifolia*, *Anthyllis montana*, *Hippocrepis comosa*). On the rather isolated **Mont Arpille** we collected in dry grassland with dense clusters of *Buxus sempervirens* and *Ribes uva-crispa*. During the first week we collected 564 numbers of specimens altogether.

On 2 June we moved to **Puget-Théniers** (about 70 km north of **St. Vallier** on the **Var** river, 400 m above sea level). On our way we stopped twice to make extensive collections in a mixed forest with *Quercus pubescens*, *Ostrya carpinifolia* and *Pinus sylvestris* near **Conségudes** and - for the first time on siliceous substratum (sandstone) - near **St. Pierre** (163 numbers of specimens).

The next day we climbed the mountains north of **Léouve** to the **Col de Roua** (1282 m). The landscape and the vegetation were really fascinating there. Walking through a forest of *Quercus pubescens* and *Pinus sylvestris* we passed clearings with dry grasslands and springs with *Pinguicula vulgaris*, *Eriophorum* spec. and *Luzula nivea*, which forms dense patches and gives the meadows a very special aspect. Nevertheless, we were all glad to reach the summit. There, we enjoyed the refreshing wind and the beautiful view of the adjacent mountain ridges. We also had the pleasure to find *Centaurea balbisiana*, which had never been collected before in this massif.

We spent the next five days on **Mount Mayola**, the banks of the **Var** and the **Chalvagne** river, the **Col du Fam** and other locations of diverse character.

In all we collected 1341 numbers of specimens, with a multitude - as expected - belonging to the large Poaceae, Fabaceae and Asteraceae families.

Some words about the group: Although there were

a few language problems at the beginning, the joint interest in nature made us forget about the difficulties. Very soon we became accustomed to speaking a mixture of French, English, Spanish, Italian and even German. Thus, it was possible to become a close group working hand-in-hand and therefore being more effective. A motto which led us through the whole expedition: "This is not a competition, this is school!". I have to confirm this: I really learned a lot, above all because everybody shared his knowledge.

As we were the only two women I felt rather featherbedded by the male participants, who were always very polite and attentive. Every day we got fresh flowers (☺) and - whenever possible - somebody collected the sweet "fruits" of *Fragaria vesca* for us. In the second week when I wanted to close a thick press I was even asked: "Are you able to handle it?" (no comment).

Last but not least, I would like to thank G. Alziar

and P. Ewald for the perfect organization. I never ate so luxuriously and deliciously in the field as on that trip. There was no lack of anything - not even a cup of coffee after lunch. As the German saying is: "Leben wie Gott in Frankreich!".

Michaela Maria Sonnentag. Freie Universität Berlin, Fachbereich Biologie, Chemie, Pharmazie. Institut für Biologie, *Systematische Botanik und Pflanzengeographie*. Altensteinstraße 6, D-14195 Berlin
Tel. (++ 49 30) 83 85 31 65, Fax: (++ 49 30) 83 85 54 34
e-mail: msonne@zedat.fu-berlin.de

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WEB NEWS*

edited by Jose M. Iriondo

ECOLOGICAL MODELING LINKS

Modeling tools are increasingly being used in different aspects of botany, such as plant conservation. Ever thought of browsing the exciting world of modeling? Now, you have a chance to do it simply by clicking <http://dino.wiz.uni-kassel.de/mod-info/all.html>. This web page includes registers and sources of ecological models, and an extensive list of links to journals, societies, initiatives, databases and documents related to ecological modeling.

THREATENED AND PROTECTED PLANTS AT WCMC

Three important datasets regarding threatened and protected plants are available at the Web site of the World Conservation Monitoring Centre. The first one is the *1997 IUCN Red List of Threatened Plants* with information on all globally threatened plant taxa

(<http://www.wcmc.org.uk/species/plants/plants-by-taxon.htm>). The contents of this database are the same as those found in the corresponding IUCN publication: name of the taxon, synonymy, conservation status, distribution information and relevant bibliography. However, being in a searchable database format the information can be extremely useful as one can perform queries by taxon, family or country. The second database contains all plants that are covered by CITES (Convention on International Trade of Endangered Species) and provides information on synonymy, common name, native distribution, CITES Appendix (I, II or III), date listed, listing notes, country of origin, and export quotas for each country (<http://www.wcmc.org.uk/CITES/eng/dbase/index.shtml>). Finally, plants that are covered by European Union regulations can be found at http://www.wcmc.org.uk/species/trade/eu/database_plants.htm. This database has a structure similar to the previous one and also incorporates information on CITES species.

* Please send all items suitable for publication under this heading to the editor of this column: Jose M. Iriondo, Dpto. Biología Vegetal, EUIT Agrícola, Universidad Politécnica, Ciudad Universitaria, E-28040 Madrid, Spain.

LAND PLANTS ONLINE

This web site (<http://www.science.siu.edu/landplants/index.html>) focuses on the phylogenetic relationships among embryophytes and provides information on the biology of these organisms including phylum descriptions, life cycle accounts and comparisons among existing molecular and morphological phylogenetic hypotheses. A remarkable number of photographs are presented that illustrate plant habit, gross morphology, anatomical features and ultrastructural details. Additional features are links to botanical experts, arranged according to organism groups, and to other web sites that relate to plant evolution, phylogeny and taxonomy.

RJB "HERBARIO DE CRIPTOGAMIA" ON LINE

This Web-accessible database (<http://www.rjb.csic.es/herbario/crypto/crydb.htm>) contains detailed information on the specimens of the collections of the "Herbario de Criptogamia" at the Real Jardín Botánico de Madrid, which includes seaweeds, bryophytes, lichens and fungi, totaling over 125,000 specimens. The queries can be performed by multiple criteria such as genus, locality or habitat, and the output contains additional interesting data such as all identifications done on the material, whether the specimen is the nomenclatural type, and a location map for geo-referenced specimens.

PROJECTS

EURO+MED PLANTBASE: A NEW EURO-MEDITERRANEAN INITIATIVE IN PLANT SYSTEMATICS

by M.A. CARINE, V. H. HEYWOOD & S.L. JURY

The Euro+Med PlantBase project aims to provide an on-line database and information system for the vascular plants of Europe and the Mediterranean, against an up-to-date and critically evaluated consensus taxonomic core of the species concerned. The first phase of this project now has financial support for three years from the European Union under Framework V.

The need for this new initiative in Euro-Mediterranean plant systematics is readily apparent. Since the completion of *Flora Europaea* (Tutin et al., 1964 – 1980) and three of six volumes of *Med-Checklist* (Greuter et al., 1984 – 1989), large numbers of new taxa have been described from the Euro-Mediterranean region. Most remain to be adequately assessed. A large number of country Floras have also been produced which naturally tend to adopt a national rather than a European perspective and for some countries there are up to six or more authoritative treatments available for the same taxon. As a consequence, the consensus established by *Flora Europaea* and, in part by *Med-Checklist*, has been overtaken by events.

A partial revision of the first volume of *Flora Europaea* (Tutin et al., 1993) included nearly ten-percent additional species but a decision was made not to revise the other four volumes in a similar way. However, the need for an agreed taxonomic framework for

conservation, legislation and other purposes has never been greater. Indeed, the Convention on Biological Diversity gives rise to new needs for inventories and assessments on the state and trends of species and an increasing number of international and regional conventions include lists of species to be considered for conservation purposes.

In addition to taxonomic and floristic data, a great amount of information has been amassed on the biology, mapping, phytochemistry, karyology, uses and conservation of European plant species and no consistent attempt has been made to bring this together and relate it to an agreed taxonomic framework. The agreed taxonomic framework provided by Euro+Med PlantBase will, therefore, be used by many different kinds of users whose work is impeded by the absence of such an agreed background.

The Editors of *Flora Europaea* readily acknowledged the fact that the area they termed 'Greater Europe', i.e. the area dealt with in *Flora Europaea*, together with the countries bordering the Mediterranean, is phytogeographically a more natural unit than is Europe alone. The close relationships between many European plant species, especially in southern parts of the continent, and those growing in neighbouring Mediterranean countries is well known, and these are

compelling reasons for extending the taxonomic consensus for the entire Euro+ Mediterranean region, an area estimated to contain approximately one-eighth of global vascular plant species.

A key component of the new Euro+Med PlantBase initiative is the mechanism of regional co-operative revision of the taxonomic status of all families, genera, species, subspecies and, where appropriate, cultivars described from the Euro-Mediterranean region. The organisation of this work follows that established by the highly successful *Flora Europaea* project and involves specialists from over fifty countries and territories within the region. The revisionary process will result in an **agreed taxonomic core** which will be one of the main outputs of the project. Specifically, this will comprise:

- the scientific name of each taxon
- the author citation
- the place of publication
- the basionym
- selected synonyms
- distribution – worldwide, within the region and by territories
- status of occurrence – native, introduced, naturalised, cultivated
- endemic to region/country/territory
- description (standardised for auto-translation)
- growth form – revised Raunkiaer system
- ecology – basic habitat type
- phenology
- karyology – chromosome number(s) and ploidy level (referring to native occurrences)

Surrounding the core data, there will be a set of minimal summaries of verified data, termed **'beads'**, on topics such as:

- distribution maps
- phytosociology – to the level of alliance and order
- representative illustrations – line drawings, colour plates, photographs
- biosystematics – breeding system, crossability, hybridisation
- phytochemistry
- conservation status (national and global, following the IUCN categories, for species)
- legal protection (Protected Areas such as National Parks, Biosphere Reserves, Natural Parks)
- economic or scientific importance
- genetic resources – status, availability and location of germplasm
- growth habit – tree architecture, etc.

The Euro+Med PlantBase will also be hot-linked through the 'beads' to 'satellite' data sets where more detailed information would be available. Many such datasets already exist electronically or are presently being actively developed by individuals, organisations and institutions. Examples include the OPTIMA chromosome database in Patras, the rare plant information database in Madrid, the *Atlas Florae Europaeae* database in Helsinki, the FAO and IPGRI crop and genetic resources databases, the UNEP/WCMC species, protected areas and trade databases. The main thematic coverage envisaged by these associated projects in **satellite databases** will be:

- maps
- ecology – habitats, communities, biotopes
- phytosociology
- illustrations, slides, drawings, SEMs, habitat, photographs
- karyology
- phytochemistry
- biosystematics
- horticulture
- conservation status
- legal protection
- economic uses – medicinal and aromatic, fuel, fibre, food, ornamental
- genetic resources, including crop relatives
- threats, including weediness, invasiveness, parasitism.

These classes of information will be organised and co-ordinated by groups of appropriate specialists. Thus the taxonomic data will be revised and assessed by taxonomists, the ecological information by ecologists and phytosociologists, and the conservation information by conservation and genetic resource organisations.

The European Union-funded Phase One of the project will start to develop all three aspects of Euro+Med PlantBase. The following institutions have received EU funding for this phase of the project:

- Centre for Plant Diversity and Systematics, School of Plant Sciences, The University of Reading, UK
- Universidad de Sevilla, Departamento de Biología Vegetal y Ecología
- Department of Botany, Università de Palermo, Sicily, Italy
- Dept. of Biodiversity Informatics, Botanical Garden and Botanical Museum Berlin-Dahlem, Freie Universität Berlin, Germany
- Real Jardín Botánico, CSIC, Madrid, Spain
- Botanischer Garten der Universität Bern, Switzerland

- Royal Botanical Garden, Edinburgh, UK
- Institute of Botany of the Slovak Academy of Sciences, Bratislava, Slovakia
- Institute of Botany of the Bulgarian Academy of Sciences, Sofia, Bulgaria
- Finnish Museum of Natural History, Botanical Museum, University of Helsinki, Finland
- The Botanical Institute, University of Patras, Greece

Specifically, Phase One will result in the following output:

- a consensus synonymic checklist of all European vascular plant species.
- new taxonomic treatments of several important groups.
- the first ever working list of plants of the entire Euro-Mediterranean region which can be used to determine priorities for future revisionary work.
- software development for the future management of the project
- development of several 'beads' including those dealing with distribution, mapping, karyology, conservation and genetic resources.

The second and subsequent phases of the project will proceed as further funding becomes available.

The Euro+Med PlantBase project is organized as a decentralised federal structure throughout the area. It comprises **National and Territorial Centres** throughout Europe and the Mediterranean which will co-ordinate the checking of data relevant to the Country or Territory in question, **Regional Centres** which will provide advice on local botanical expertise, **Taxonomic Centres**, which will provide expertise in particular groups of plants and other **Co-operating Centres and Institutions**.

A **Steering Committee** is responsible for the overall scientific, administrative and financial aspects of the project. **Editorial Panels** are being established for individual families or groups of related families. These will ensure that the accounts of the groups concerned are prepared in accordance with agreed editorial procedures, they will maintain liaison between the authors and specialists in the National and Regional Centres and will check that comments and suggestions from them have been taken into account. The European Union-funded phase of the project is managed by an **Executive Committee**, and the day-to-day management is the responsibility of the **Secretariat** based at the University of Reading.

The long-term aim is to have a decentralised database. However, initially the development of the core database and work on design and software development are co-ordinated at Reading. The set of names and associated data originally developed at Reading by the European Science Foundation European Documentation System (ESFEDS) has been used to provide the initial starting point for Euro+Med PlantBase. Work to supplement this with information available in the MedChecklist database, the Flora of Macaronesia dataset, and published Floras from the Euro-Mediterranean region will soon start.

Amongst the outputs planned from the Euro+Med PlantBase initiative are:

- A consensual **Synonymic Conspectus of the Plants of the Euro-Mediterranean Region** (SCOPER) that will be revised periodically (possibly every five years) but with Internet links to later data, both verified and unverified. It will be available on the Internet. This will provide the scientific community, the European Union, individual countries and conservation agencies with a single key source of electronically available information on the plant biodiversity of the region.
- CD ROMS and other electronic outputs (as they develop) of various classes or combinations of data, such as wild relatives of crops, medicinal and aromatic plants, weeds, reforestation species, their geographic distribution, ecological preferences, and their phytochemical characteristics, genetic resources and conservation status.
- Hard copy ad hoc 'tailor-made' handbooks, Floras, illustrated keys or other desired outputs that are needed by various classes of consumers.

After several years of planning, the project is now firmly underway and the Secretariat would be pleased to receive details or enquiries from any botanists in the Euro-Mediterranean region keen to co-operate in this exciting new initiative in plant systematics. Further details may be obtained from:

Euro+Med PlantBase Secretariat, Centre for Plant Diversity and Systematics, School of Plant Sciences, The University of Reading, Reading, RG6 6AS, UK

Fax: + 44 (0)118 9753676

Email: s.l.jury@reading.ac.uk

<http://www.herbarium.rdg.ac.uk/EuroMed/Euro+Med.html>

REQUEST FOR *Thymelaea tartonraira* (L.) All.

As a part of a research project dealing with phylogeny and biogeography of the genus *Thymelaea*, we are currently studying the highly polymorphic taxon *T. tartonraira*. Our intention is to clarify its systematics and phylogeography using molecular techniques and taking into account a high number of populations all over its distribution area, which is strictly Mediterranean.

We have collected samples of numerous populations, mainly from those present in the western Mediterranean region. However, material from some other populations is more difficult for us to get, so we ask for your help in doing this task.

We would like to obtain well-dried material (herbarium specimens or pieces of young branches with plenty of leaves desiccated in silica-gel) of 5-10 individuals from each population of *Thymelaea*

tartonraira native from the following places: Algeria, Tunisia, Italy (specially Sicily and Sardinia), Greece (Cephalonia, Euboea, Jalkidiki Peninsula, Tasos, Crete), European Turkey and Cyprus.

Please do not mix the material from different individuals and do not forget to write down all the information concerning the locality, province, department or region, altitude, date, collector, etc.

Please do not hesitate to tell me how I can pay you back for this favour. Perhaps we could exchange *Thymelaeaceae*.

Contact: David Galicia-Herbada; Dpto. Biología (Botánica), Fac. Ciencias (Biológicas), Universidad Autónoma de Madrid; 28049 Madrid, Spain. E-mail: david.galicia@uam.es.

MEETINGS



I SYMPOSIUM "ISLAND ECOSYSTEMS - A CONSERVATION AND MOLECULAR APPROACH"

FUNCHAL, MADEIRA ISLAND - PORTUGAL, 5-9 MARCH 2001

The meeting organised by Centre of Biological and Geological Sciences will focus on work carried out on Island Ecosystems although papers on non-island research will be considered if they contribute in some way to our understanding of this subject. The symposium will be based primarily upon submitted papers volunteered by intending delegates; but there will be a limited number of Plenary lecturers invited by the Scientific Committee focusing on major themes. There will also be a series of specialist workshops. Some of the papers will be presented as posters.

The symposium will be held in Funchal (Madeira Island, Portugal) and will run from 5 Monday, to 9 Friday, March 2001. The official language will be English.

SYMPOSIUM SECRETARIAT

Mafalda Fonseca: Tel: + 351 291 233229

Isabel Marques: Tel: + 351 291 231101

Address: Apartado 105. P-9001-902 Funchal. Madeira. Portugal

SYMPOSIUM ON MEDITERRANEAN PLANT COLLECTIONS: NEEDS AND OPTIONS. X OPTIMA MEETING, PALERMO 2001

It is planned to hold a half-day symposium on this topic. The problems arising from historical matters, databases and computer tools will be presented. Papers will also deal with case studies and possible future opportunities. It is expected that there will be discussion and some proposals that might be submitted for consideration and action by the OPTIMA Commission for Herbarium Mediterraneum.

There are several different sorts of herbaria serving very different roles, but these roles have often become confused. There are now many herbaria in the Mediterranean area that are either new or being revitalised, which are lacking sources of expert help and advice. Therefore, there is a need to provide information, and sources of information, on specialists, techniques, supplies and herbarium data. There are other herbaria that are in danger of being closed and their collections left to deteriorate in bad storage or even destroyed. There are universities with herbaria that now undertake no taxonomic work and universities with small, new herbaria that are investing in taxonomy. Many collections now appear to be situated in the wrong place. This means that specimens need to be loaned or botanists need to travel. There are no coherent policies and each centre writes its own rules. Specimens are required for destructive sampling,

including DNA studies, but DNA may be damaged by fungicide and pests treatments. (Many of these are anyway now considered hazardous under present health and safety legislation.) DNA extraction, analysis and publication of results may contravene the Convention on Biological Diversity, yet few herbaria have considered rational policies on the use of their specimens. Many herbaria are creating databases of information from their collections in a haphazard way that makes it difficult to exchange data with others, or results in lower usage and standing in the botanical community.

Not only is it planned to address some of these issues, but also to consider the implications of charging for services, including identification for commercial companies, and obtaining grant money for processing voucher specimens.

I would appreciate your views and ideas on these matters so that we can develop the symposium and create an appropriate strategy for Mediterranean herbaria to adopt. Please contact Dr Stephen L. Jury, Centre for Plant Diversity and Systematics, The School of Plant Sciences, The University of Reading, Whiteknights, Reading, RG6 6AS, UK. Fax: +44 (0)118 975 3676; E-mail: s.l.jury@reading.ac.uk

*ANNOUNCEMENTS**

3-8 September 2000

The Fourth IAL Symposium.
Barcelona.

The Fourth International Symposium, arranged by the International Association of Lichenology, will be held from 3-8 September 2000 at the Facultat de Biologia, of the Universitat de Barcelona (UB). Most of the sessions will take place in the Aula Magna, Avda. Diagonal, 645,

Barcelona. The Universitat de Barcelona (UB), the Ministerio de Educación y Cultura, and the Generalitat de Catalunya (Autonomic Government of Catalonia) will act as main sponsors. The lichenologists of the Grup de Recerca de Criptogàmia (Dept. de Biologia Vegetal, UB) will act as the Local Organising Committee, assisted by an Advisory Board composed of leading lichenologists of the

Iberian Peninsula.

This Symposium is a continuation of a series of international meetings on lichen biology, which started in Berlin 1969, and continued in Bristol 1974, Münster 1986 (IAL 1), London 1989, Madrid 1990, Lund 1992 (IAL 2) and Salzburg 1996 (IAL 3). It aims to bring together scientists and students from different fields such as morphology, physiology, ecology, chemistry and classic and

* Coordinated by S. Pajarón and J.M. Iriondo. Please, send your announcements to S. Pajarón, Dpto. Biología Vegetal I Fac. Biología, Univ. Complutense, Ciudad Universitaria, E-28040 Madrid, Spain. E-mail: SPAJBOT@eucmax.sim.ucm.es

molecular systematics, in order to extend our knowledge of the lichenized fungi.

Information: IAL4 – AOPC. Edif. Colon, Avda. Drassanes, 6-8. Barcelona, Spain. Tel.: +34 93 302 7541. Fax: +34 93 301 1255. E-mail: aopc@ncsa.es More information at the Symposium Website: <http://www.bio.ub.es/ial2000.htm>

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4-9 September 2000

Curso Livre de Etnobotânica. Vila Real, Miranda do Douro, Portugal.

Concepts and perspectives of Ethnobotany as a scientific discipline. Methods for gathering ethnobotanical information. Medicinal plants. Landscape ecology, ethnobotany and conservation. Aromatic and medicinal plants in rural development.

Lectures, study visits, field work and lab work, for a total of 40 hours.

Contact: Comissão Organizadora do curso Livre de Etnobotânica. Universidade de Trás-os-Montes e alto douro/ departamento de Protecção de Plantas. 5001-911 Vila Real. Portugal. Tel.: +351 259 350 515; Fax: +351 259 350 480; E-mail: etnobotn@utad.pt
<http://www.utad.pt/~etnobotn>

11-15 September 2000

Ninth International Conference on Mediterranean-Type Ecosystems (MEDECOS 2000) – Stellenbosch, South Africa.

The theme of the conference is "Mediterranean-type ecosystems - Past, present and future". Much interest has been expressed in this conference, and we are expecting good representation from all parts of the world with MTEs.

For the latest details on MEDECOS 2000, including the preliminary list of sessions, keynote and other invited speakers, registration details etc,

details of pre-, mid-, and post-conference tours, please check the web site at: <http://www.botany.uwc.ac.za/medecos/index.htm>

For any enquiries, please feel free to contact the conference coordinator, Glaudin Kruger, at: kruger@jaywalk.com.

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11-16 September 2000

Algae and Extreme Environments. Ecology and Physiology.

Trebon, South Bohemia, Czech Republic.

All aspects of the ecology and physiology of Cyanobacteria and algae of the natural and the man-influenced objectively extreme and marginal ecosystems will be considered.

The conference will be held at the AURORA Spa complex. Trebon is a historical town reserve founded in the 13th century, situated 145 km south of Prague, Czech Republic.

For more information, please contact: Václav Bauer and Dana Švehlová. Algae conference Secretariat. Institute of Botany AS CR, Dukelská 135, CZ-379 82, Trebon, Czech Republic. Tel.: +420 333 721156; Fax: +420 333 721136; E-mail: jelster@butbn.cas.cz

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13-17 October 2000.

1st European Botanic Garden Education Congress "Partnership for People and Plants"

Botanic Gardens Conservation International in association with The Birmingham Botanical Gardens & Glasshouses present the 1st European Botanical Garden Education Congress "Partnership for People and Plants". The congress will take place at The Birmingham Botanical Gardens &

Glasshouses. The major themes of the congress will be: Building public awareness, Working with different audiences, and Raising the status of education within and outside Botanic Gardens.

More information: BGCI, "Partnership for People and Plants", Descanso House, 199 Kew Road, Richmond, Surrey TW9 3BW, UK.

Tel.: +44 020 8332 5953/4; Fax: +44 020 8332 5956

E-mail: bgci@rbgkew.org.uk

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15-21 October 2000

V Reunión de la Red de Herbarios de Mesoamérica y el Caribe. Universidad de Puerto Rico.

The V Reunión de la Red de Herbarios de Mesoamérica y el Caribe will be hosted by the Herbarium of the Department of Biology (MAPR) at the University of Puerto Rico, Mayagüez Campus next fall. The meeting has been scheduled for the week of 15-21 October, 2000, principally at the UPR Mayagüez Campus. We are also counting on the collaboration of other botanists and herbaria in Puerto Rico, and we are planning a visit to two herbaria in San Juan as well as to the UPR Botanical Garden. The central theme of the meeting will be the role of herbaria in conservation. Among the activities will be conferences, field trips, a workshop, meetings, and the presentation of the results of current projects of the Red.

Contact: Ms. Vélez; E-mail: je_velez@rumac.uprm.edu

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16-20 October 2000

27th Annual Natural Areas Conference — Managing the Mosaic: Connecting People and Natural Diversity in the 21st Century. St. Louis, Missouri.

The Natural Areas Association, the member agencies of the Missouri Natural Areas Committee, and the Missouri Department of Conservation invite you to attend the first Natural Areas conference of the new century. It will be held in St. Louis, Missouri, just a short walk from the Gateway Arch National Monument. The celebration of the bicentennial anniversary of the Lewis and Clark Expedition has begun in St. Louis, and our banquet speaker, Dr. Daniel Botkin, will discuss the historical and future implications of their trip. The plenary and concurrent sessions will address different aspects of biodiversity and how humans fit into the new century of management. On Tuesday, October 17, Dr. Jerry Franklin, Professor of Ecosystem Analysis at the University of Washington in Seattle, Washington, will speak about "Bridging Science and Management." Wednesday morning, Dr. Peter Raven, Director of the Missouri Botanical Garden, will address "Opportunities and Problems of Biodiversity." Following him, Dr. William Burch, Professor at Yale University, will speak about "Finding the natural synergy between human diversity and global biodiversity." Excellent field trips will highlight the tremendous natural diversity found in Missouri. Pre-conference and Conference trips include opportunities to tour the Missouri Mines State Historic Site, hike the Sunklands Conservation Area, and visit the Missouri Ozark Forest Ecosystem Project research center. Participants will have their choice of viewing native flora and fauna on a trip to Danville Glades and Graham Cave State Park, spelunking in Fisher and Mushroom Caves, learning about geologic features at St. Francois Mountains Natural Area, floating the Mississippi River, or a number of other opportunities.

Contact: Kate Leary, Conference Coordinator, Missouri.

Department of Conservation, P.O. Box 180, Jefferson City, MO 65102-0180; Phone: (573) 751-4115 ext. 183; E-mail: learyk@mail.conservations.state.mo.us. <http://www.conservations.state.mo.us/nac/>.

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25-27 October 2000

Third Ecuadorian Botanical Congress. Quito, Ecuador.

FUNBOTANICA (Ecuadorian Foundation for Research and Development in Botany) and Herbario Nacional del Ecuador QCNE will host the Third Ecuadorian Botanical Congress from 25 - 27 October 2000 in Quito. For more information or to submit titles of presentations, go to the FUNBOTANICA web site (<http://pagina.de/funbotanica>) and select "Congresos" from the menu or e-mail inquiries to funbotanica@pagina.de.

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28 January – 2 February 2001

XVIIth International Seaweed Symposium. "Seaweeds: Science and technology for sustainable industry". University of Cape Town, South Africa.

The International Seaweed Symposium is held every three years under the auspices of the International Seaweed association. It is the foremost international meeting on seaweed research and utilisation. This is the first to take place in Africa.

The Scientific programme includes plenary sessions, mini symposia, posters sessions, mid-symposium excursions and pre- and post-symposium tours. The following mini symposia are planned: Algal biotechnology;

Algal pigments; Biological interactions in seaweed mariculture; Integrated aquaculture and bioremediation; Coalescent seaweeds, Low-volume, high-value algal products.

Further information: The Secretariat. XVIIth International Seaweed Symposium. P.O. Box 34098, Rhodes Gift 7707, South Africa. Tel.: +27 824687504; Fax: +27 21 650 4041; E-mail: ISS2001@botzoo.uct.ac.za; <http://www.uct.ac.za/conferences/iss>; <http://www.butbn.cas.cz/alga.extrem/>

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12-16 February 2001

Ecology of Insular Biotas - Victoria University of Wellington, New Zealand.

The conference will focus on ecological patterns and processes of particular importance to isolated biotas, including true islands, natural habitat islands (e.g. ponds) and artificial habitat islands (e.g. reserves). Examples of suitable topics for papers include: dispersal and gene flow within and among isolated populations; ecology of small populations; ecological consequences of disharmonic floras and faunas; the relevance of island biogeography principles in conservation; islands as model ecosystems; comparative ecology of true islands vs. habitat islands.

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2-6 July 2001

Legumes Downunder — The Fourth International Legume Conference. Canberra, Australia

The Fourth International Legume Conference will be held from 2-6 July 2001 on the campus of Australian National University in Canberra, Australia. The scientific program includes

symposia on systematics, utilization, infra-specific genetics, land rehabilitation, symbiosis, phytochemistry and electronic resources. Field trips throughout Australia are being planned in conjunction with the meeting. Co-organizers are Mike Crisp, Australian National University, Jim Grimes, RBG Melbourne, Joe Miller, Centre for Plant Biodiversity Research, and David Morrison, University of Technology, Sydney. For further details and to express interest in attending the conference please check the website at <http://www.science.uts.edu.au/sasb/legumes.html>.

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23-26 July 2001

Fern Flora Worldwide: Threats and Responses. University of Surrey, Guildford, U.K.

This symposium is being organized by the British Pteridological Society and the IUCN Species Survival Commission Specialist Group for Pteridophytes. The sessions will

include a status report, conservation techniques, networking, action plans and programmes, and education.

Contact: The British Pteridological Society, Dept. of Botany, Natural History Museum, Cromwell Road, London SW7 5BD, U.K.

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24-28 September 2001

First International Orchid Conservation Congress. Perth, Australia.

Kings Park & Botanic Garden in conjunction with the Orchid Specialist Group of the Species Survival Commission of IUCN-The World Conservation Union, Botanic Gardens Conservation International, and the Australian Network for Plant Conservation are pleased to announce: The 1st International Orchid Conservation Congress (Incorporating the 2nd International Orchid Population Biology Conference) Perth, Western Australia. The Congress will bring together for the first time,

orchid conservation specialists, researchers and practitioners, to develop an understanding of global issues in orchid conservation. The Congress will cover topics including phylogeny of the Orchidaceae, population biology, pollination biology, propagation science, germplasm storage, conservation genetics and taxonomy with opportunities for specialist workshops in orchid conservation techniques and orchid recovery programs. Pre- and post-conference tours will explore the incredible diversity of orchids and remarkable wildflowers of south-west Western Australia. The first circular will be available in April 2000 and a call for papers will follow soon after.

Contact: The Congress Secretariat Dr Kingsley Dixon Kings Park & Botanic Garden West Perth 6005 Western Australia Tel: ++61 (0)8 9480 3614 Fax: ++61 (0)8 9480 3641 Email: orchidcongress@kpbg.wa.gov.au

NOTICES OF PUBLICATIONS*

edited by WERNER GREUTER

Cryptogamae

1. **Julio AFONSO CARRILLO & Marta SAN-SÓN – Algas, hongos y fanerógamas marinas de las Islas Canarias. Clave analítica.** [Materiales Didácticos Universitarios, Biología, 2.] – Universidad de La Laguna, Santa Cruz de Tenerife, 1999 (ISBN 84-7756-478-7). 254 pages, figures, map; paper.

Don't expect to find dinophytes or marine diatoms mentioned: although the title fails to say so and a corresponding statement is hidden away in the introduction, the treatment restricts itself to pluricellular benthic (or more precisely, anchored) organisms. In spite of this restriction, the book fills a real gap, being the first comprehensive aid for identifying marine flowering plants, macroalgae, and fungi of the Canary Islands.

The authors have produced a practical key, yet not of a kind that would be suited for amateurs or for use in the field. Identification must almost invariably rely on microscopic characters requiring dissection. The key is however well suited for students, including undergraduates, as it uses obvious characters whenever possible and describes them with simple, consistent terms that are moreover explained in a glossary. Also, all final and some intermediary key leads are illustrated by artless but useful little drawings in the margin. No less than 645 species are keyed out, 23 blue-green algae, 370 red algae, 118 brown algae, 110 green algae, 3 flowering plants, and 21 fungi. Only few of them (17 to be exact) are reputed endemic, but in time 89 taxa, including 78 species, have first been described based on Canarian material, most of which have since been synonymised. An appendix accounts for each of them, with indication of type, original locality, iconography, taxonomic disposition, and critical

remarks. This appendix adds a theoretical aspect to a book that is otherwise destined primarily to practical use by marine biologists, also providing valuable advice on specimen sampling and preservation techniques. W.G

2. **Giovanni FURNARI, Mario CORMACI & Donatella SERIO – Catalogue of the benthic marine macroalgae of the Italian coast of the Adriatic Sea.** [*Bocconeae*, 12.] – Herbarium Mediterraneum Panormitanum, Palermo, "1999" [2000] (ISBN 88-7915-012-x). 214 pages, map; paper.

The present inventory of the benthic red, brown, and green algae known to occur along the Italian coast of the Adriatic sea lists 556 species (642 taxa) in all. It is based on a painstakingly thorough compilation of published literature data, but no new, original sampling of the area has apparently occurred, nor have unpublished herbarium records been taken into account. Every effort has been made to correlate literature data published under various names with the currently accepted taxonomic categories, but verification of the correct identity of the actual material was carried out only in a few exceptional cases.

When one accepts these limitations, one will find this to be a useful summary of present-day knowledge of the inventory and distribution of algae in the Adriatic sea. Its practical value is somewhat impaired, however, by a far from user-friendly presentation of the data. The index, by epithets only, has no page references, nor is there an index to generic names that would expedite the finding of relevant entries. The inclusion of a kind of synonymy in the enumeration of localities and sources leads to redundancy (especially as the same name, when its author citation varies, or when it is absent, is treated as if it were distinct).

* Please send all items for review directly to the editor of this column: Prof. W. Greuter, Botanischer Garten & Botanisches Museum Berlin-Dahlem, Königin-Luise-Str. 6-8, D-14191 Berlin.

The nomenclature has been revised and updated, to conform with modern standards, but some spellings appear to be ill advised (*Cladostephus* is masculine not neuter, and *arbuscula*, used as an epithet, is a noun in apposition, not a three-ending adjective). Finally, individual checklists are appended at the end for each of the 8 recognised geographic regions, an arrangement that is extremely wasteful of space: these 8 lists might usefully have been combined into a single, informative tabular disposition.

Some nomenclatural novelties (awkwardly listed in the middle of the text, on p. 158, and not mentioned to in the summary) have been proposed by Furnari within the catalogue. There are three infraspecific new combinations under *Ceramium siliquosum*, one new species in *Gelidium* (I could not check the validity of its name), and one alleged new combination in *Zanardinia*. The latter is unfortunately invalid, as full reference to the basionym is missing. It is here validated as *Zanardinia typus* (Nardo) P. C. Silva, **comb. nov.** (*Stiffia typus* Nardo, *Consid. Alg.*: 13. 1835) [Paul Silva's extensive information on this subject is gratefully acknowledged]. W.G

Dicotyledones

3. **María BOSCH I DANIEL – Biología de la reproducción de la tribu *Delphinieae* a la Mediterrània occidental.** [*Institut d'Estudis Catalans, Arxius de les Seccions de Ciències*, 120.] – Institut d'Estudis Catalans, Secció de Ciències Biològiques, Barcelona, 1999 (ISBN 84-7283-451-4). 375 pages, figures, tables, graphs, maps, 4 extra plates of colour photographs; paper with dust jacket. Price: 3,500 Pta.

In this nicely produced and tightly edited volume, Maria Bosch presents us with a multidisciplinary study in reproductive biology of the western Mediterranean representatives of the tribe *Delphinieae*. The work is a corollary of the in-depth study of this tribe carried out by César Blanché and his co-workers in Barcelona (see OPTIMA-Newsletter 30: (3)-(4). 1996) The underlying research has been conducted primarily in the field, where no less than 39 populations in 30 different localities have been studied, then partly

in the greenhouses and in the lab. The aspects considered range from the analysis of flower morphology and correlated functional traits (e.g., nectar production) through life cycle and phenology studies, pollination surveys, classical biosystematic investigations such as chromosome studies, experimental crosses and self-incompatibility tests, to the assessment of genetic variability within and genetic distances between populations by means of electrophoretic isoenzyme analysis.

The West Mediterranean area has been defined in a wide sense, ranging from the Macaronesian islands to the Alps and Tunisia inclusive. Within this area, 30 species of *Aconitum*, *Consolida*, and *Delphinium* (33 taxa if subspecies are included) are known to occur, of which 20 (22) have been studied, i.e., exactly two thirds. According to my count, 19 of the 30 species (not 21 as the author has it) are endemic to the area, of which 14 have been investigated: a very satisfactory coverage in view of the wide methodological range and of accessibility constraints for in situ studies. Field work extended to four different countries (Spain, France, Tunisia, and Morocco), with Algeria (understandably) and Portugal (surprisingly) being left out.

This is a truly impressive work. It deepens considerably our knowledge of the background against which evolution in this tribe has taken place. Let me point out a few among the many interesting results. Most of the species investigated are either strict outcrossers or show a low self-pollination rate (which is not surprising in a group in which the flowers show marked insect pollination syndromes), but selfing outweighs cross-pollination in the annual *Delphinium* subg. *Staphisagria*. Reproductive barriers between species belonging to different subgenera are close to absolute, and they are rather high (less than 34 % seed set) between different *Consolida* species, but fairly low (50 % on average) within *Delphinium* subgenera. Field studies demonstrated that pollination efficiency is not the result of specialisation of the plant on a particular insect species (depending on composition of the local fauna, various bumblebees, and also some other insects such as butterflies, may act as pollinators), but rather of the faithfulness of pollinators to one particular kind of flowers. When one considers the fact that *Delphinieae* flowers are

elaborate structures, with a complex arrangement of highly specialised perianth segments, nectaries, and stamens, it is rather surprising to find that targeted cross pollination, after all, is left to the “judgement” of the animals.

The book is well presented, nicely illustrated, and most extensively referenced (it includes no less than 35 pages of bibliography). Many readers will appreciate the informative, extensive English summary. The author has been awarded the Bofill i Poch prize for her work – a well deserved recognition on which she is to be heartily congratulated.

W.G.

- 4. Joan SIMON PALLISÉ & Josep VICENS FANDOS – Estudis biosistemàtics en *Euphorbia* L. a la Mediterrània occidental.** [Institut d'Estudis Catalans, *Arxius de les Seccions de Ciències*, 122.] – Institut d'Estudis Catalans, Secció de Ciències Biològiques, Barcelona, 1999 (ISBN 84-7283-482-4). 704 pages, figures, tables, graphs, maps; paper with dust jacket.

This book is a kind of Siamese twin. It consists of two distinct works by separate authors, subsequently patched together into a single co-authored volume in such a way that it is now far from obvious who was responsible for which part. The studies concern the western Mediterranean representatives of two natural groups of spurges, both belonging to *Euphorbia* subsect. *Galarrhaei* (the perennial members of *E.* sect. *Helioscopiae*), and were conducted in parallel by two young researches at the Botanical Laboratory, Faculty of Pharmacy, Barcelona University: the *E. flavicoma* group was dealt with by Simon Pallisé and the *E. squamigera* group, by Vicens Fandos. For the purpose of publication, their two treatments were clamped together with a common introductory chapter (pp. 15-76) and a combined bibliography (pp. 677-704).

The work was carried out basically on live plants sampled in the natural populations and transplanted into the greenhouse, and secondarily, on populations represented by herbarium material only. The study is broadly based, impressively so for that kind of biosystematic approach, as numbers will confirm: for the *Euphorbia flavicoma* group, 80 populations from 59

different localities were considered, and for the *E. squamigera* group, 43 populations from 38 localities. The treatment comprises an in-depth morphological analysis of vegetative and flowering parts, a micro-morphological study of leaf surfaces, pollen grains, and seeds, and careful caryogram analyses. The taxonomic conclusions appear to be solidly founded. They are laid down in formal treatments including full specimen citations and distribution maps. In the *E. flavicoma* group, 9 species are recognised (or 13 taxa, if the subspecies level is included); in the *E. squamigera* group, 7 species (12 taxa) were retained.

There are some notable differences between two treatments, concerning both the plants themselves and the way in which they were studied. The *Euphorbia flavicoma* group is European to sub-Mediterranean in distribution, does not reach N. Africa nor the Balearic islands, and all populations sampled grow on the European mainland (from Portugal to S.E. France, with one locality in the border zone of Italy). The *E. squamigera* group is genuinely Mediterranean, being absent from France and most of Italy; the populations studied are from the Maghreb countries, Malta, Sicily, the Balearic Islands, Portugal, and Spain. In his analysis of the *E. squamigera* group, Vicens has used a biometric and statistical approach, by principal component analysis and UPGMA phaenograms, based on 62 morphological, chromosomal and ecological characters. No such analysis is present in the *E. flavicoma* treatment. Also, Vicens appears to be a freak of nomenclature, as he has carefully typified all names and synonyms, whereas Simon carefully bypasses nomenclatural complexities (much more numerous in his group), neglects synonym typification, and dismisses the oldest name, *E. verrucosa* L. (in our opinion, the correct name for *E. brittingeri*) without even the slightest attempt at typifying the Linnean binomial. (As has long been known, the obligate lectotype of *E. verrucosa* is specimen XVI(2): 38 in Burser's herbarium at UPS, probably from Ingolstadt in Bavaria; which is the same as *E. brittingeri*.)

In a general way, and this nomenclatural drawback notwithstanding, both treatments are excellent samples of skilful, modern taxonomic work done with great enthusiasm and extreme application. The two authors have, most deservedly, been awarded jointly the Pius Font i Quer

Prize for 1996. The usefulness of their work for those not familiar with the Catalan language is unfortunately impaired by the absence of an English summary (in fact, there is no summary at all). Another sorry fact is the poor readability of graphs and maps, due to a low-quality scanning procedure. In the *Euphorbia squamigera* treatment in particular, where different diminutive distribution symbols are used, the maps are almost unintelligible. W.G.

5. **Tomás RODRÍGUEZ-RIAÑO, Ana ORTEGA-OLIVENCIA & Juan A. DEVESA – Biología floral en Fabaceae** [Ruizia, 16.] – Real Jardín Botánico, Consejo Superior de Investigaciones Científicas, Madrid, 1999 (ISBN 84-00-07823-3). 176 pages, figures, tables, graphs, maps; flexible cover.

The title is overly ambitious and somewhat misleading: This booklet does not of course deal with the legumes of the world, but only with a small selection: about three quarters of the papilionoid flora growing in the Estremadura region, in the south-western part of the interior of peninsular Spain. But even with this limited scope enough was left to see and find, and the wealth of information here presented is truly impressive.

The authors have examined the features relevant for pollination in 168 of the 215 known wild taxa of the area, represented by almost 500 different populations. Their data include biometry (flower size and pollen measurements), androecium and gynoecium morphology, reward types, flower colour, pollen presentation mechanism, pollen-ovule ratio, and reproductive system.

The first chapter is a terse, informative and utterly readable review of what has been published on the subject in a widely scattered literature. No textbook could do better. Next follows the core of the work, the detailed characterisation of the features studied. The author uses extant and also some newly developed typological categories to describe, e.g., the various kinds of androecium configuration and their correlation with nectar production, filament shape, anther insertion types, shape and position of stigma and style, and the well known tripping mechanisms (valvular, pump, brush, or explosive) of pollen presentation. The data proper are presented in tabular form in an appendix, a perhaps not very

user-friendly but extremely space-economic arrangement. An extensive and intelligently written discussion examines possible correlation between the various parameters studied and their functional interdependency.

The present study could not possibly cover every aspect of floral biology. For example, ω -rolla architecture and nectar composition are scarcely touched upon. Even so, the variety of features studied is astounding. One may perhaps regret the limitation to a restricted area, obviously caused by considerations of practicability. However, a majority of the taxa have wide distributional ranges, some occurring throughout the Mediterranean area if not beyond, so that the book is of obvious practical interest for all Mediterranean botanists. One might perhaps have wished more copious and more refined illustrations, but then, an artless sketch can often illustrate a concept quite as adequately as a sophisticated drawing by a professional. W.G.

Monocotyledones

6. **Robert PORTAL – Festuca de France.** – Published by the author, 16 rue Louis Brioude, F-43750 Vals-près-Le Puy, 1999. 371 pages, figures, maps; flexible cover.

Fescue grasses are a nightmare for field botanists, professionals and amateurs alike, except for a few cracks. *Festuca* systematics is an area in which taxon splitting has, some will feel, caused a difficult problem to become impossible – while others maintain that thanks to sensible splitting, leading to sharper and less ambiguous taxon definitions, the subject has at last grained contours. Whether it be for the better or worse one may dispute, but the splitting trend is real. Just look at some figures: Bonnier & Layens recognised a dozen *Festuca* species in France, (discounting those that are now placed in *Vulpia*); Coste and Fournier raised the number to 28 and 26, respectively; Kerguelen & Plonka in 1989 had already 69, and now we stand at 75.

Three years before, the same Portal had published a precursor of the present book, restricted to the fescues of the Massif Central (see OPTIMA Newslett. 32: (4)-(5). 1997). He then treated 40 recognised taxa (30 species). Now that the frame

has been widened to the whole of France, the number of taxa is 107. The treatment is still essentially the same, with the figures of 1996 reused, when appropriate, in a slightly reduced size to fit the now format. An original, endearing feature of the book is its introductory potpourri of critical, humorous or helpful sketches by nine fellow amateur botanists struggling with fescue grasses, under the common header “Ce qu’ils en pensent” (what they think of it).

When presenting Portal’s first *Festuca* booklet three years ago, I wrote: “It may function as the diving-board for anyone who has the courage to jump into the cold water of fescue identification”. Honestly, I did not find the time as yet for a dip, but with the present extended treatment at hand, I should guess that the water has now warmed by a few degrees. Portal’s precise terminology, his elaborate descriptions and, first and foremost, his skilful and accurate drawings both of general habit and analytical detail, are invaluable helps for identification. The single disadvantage of the book is the alphabetical arrangement of species (in which it follows its scientifically more ambitious model, Kerguelen & Plonka’s 1989 revision), as it makes it difficult to compare closely related and easily confused taxa. W.G.

7. **Hans-Jörg RHEINBERGER, Barbara RHEINBERGER & Peter RHEINBERGER – Orchideen des Fürstentums Liechtenstein.** 2. verbesserte und nachgeführte Auflage. [Naturkundliche Forschung im Fürstentum Liechtenstein, 13 [ed. 2].] – Regierung des Fürstentums Liechtenstein, Vaduz, 2000 (ISBN 3-9521855-0-7). 269 pages, colour photographs, tables, maps; paper.

Ever heard of Liechtenstein? Perhaps as a tax paradise, or as a curiously atavistic political construct? Hardly will it ever have been mentioned to you as a botanical highlight, though. This small independent principality in the heart of Europe, squeezed in between Switzerland, with which it shares its currency, and Austria, which it is about to follow into the European Union, renowned for its beautiful post stamps, is also we now learn a natural Garden of Eden.

No less than 48 species of the orchid family have so far been recorded for Liechtenstein. In other words, the orchid flora of the state com-

prises exactly 75 % of the Swiss orchid flora! This is a remarkable score, when one compares the ecological, latitudinal and altitudinal amplitude of Switzerland with that of the tiny area of Liechtenstein. Two species (*Ophrys sphegodes* and *Spiranthes aestivalis*) have disappeared from the territory 40 and 60 years ago, but on the reverse, two supplementary ones are here first recorded (*Epipactis muelleri*) or for the first time definitely confirmed (*E. purpurata*).

What is remarkable about this book is not so much the abundant and beautiful photographic documentation it includes (orchid books have been spoiling us lately by the quality and variety of their illustration), but the extremely thorough and detailed documentation of orchid occurrences. This documentation is based, not only on field studies by the author, his family and numerous correspondents, but also on an exhaustive search of literature and collections, including photographing archives. Every species is mapped, and the maps do not only show the exact locations, including of extinct populations, but also population size. Since 1985, the known stands are being monitored recurrently, year by year.

This is not a new book. A first edition of it has been published in 1991, in the same serial and with the same volume number, and has sold so well that a new, updated edition has become possible. The 15 % increase in page number is largely due to the updating of localities and monitoring results, but also to the addition of one newly discovered species (mentioned above) and to the welcome addition of an index. The most encouraging message of the second edition is the report that the decline of orchid habitats and orchid populations, which had been described as alarming in edition 1, has now apparently come to a hold. This obviously results from the recent, keen public awareness of the value of our natural heritage and of the need to protect the natural biological diversity in terms of species and habitats – an awareness to which books like the present one have substantially contributed. W.G.

8. **C. A. J. Kreutz – Die Orchideen der Türkei.** Beschreibung, Ökologie, Verbreitung, Gefährdung, Schutz. – Privately published Landgraaf [orders: B. J. Seckel, Langkampweg 1 NL-8101 AR Raalte], 1998 (ISBN 90-

Publications

9011307-x). 768 pages, photographs and maps in colour; cloth with dust jacket. Price: 293 DM.

This is a great book, not only in sheer size; a heavy one, in contents as well as in physical weight. To start with its most immediately striking feature, the illustrations, it likely beats all quality records so far – which in the field of orchid photo-documentation, where standards are incredibly high anyway, really means a lot. You can leaf through the book from one end to the other and will not find a single flower close-up, habit or habitat photograph, or landscape, that is not technically perfect and beautiful at the same time. There is also the sheer quantity to consider: I did not attempt a count, nor are the photographs numbered, but there are over 1300 of them, by about 30 different people but mostly by the author himself. Yet, those selected for publication are just a tiny fraction of the 60,000-plus slides in Kreutz's slide archive! Add that the scale of reproduction is generous (many of the pictures are full page size, c. 30 × 22 cm), and that the quality of print and paper is excellent, and you may guess what marvels to expect.

From the above, you might think of the volume as a first-rate picture book, as the ultimate iconography of Turkish orchids – which indeed it is. But it is much more. It is an most accurate and detailed taxonomic survey, by the top expert of the subject. While lacking keys for identifying the species, it has everything else you would expect from a full-scale monographic treatment, including synonymies, descriptions, discussion of diagnostic features, indication of habitat, phenology and distribution, and ample critical notes. Particularly useful, and indeed a major achievement, are the computer generated distribution maps for all species, in which old and new records appear in different colours. Naturally in a group like the orchids, the pictures themselves are the most helpful device for species identification. The fact that several flowers from different plants and usually different populations are represented for each species, giving an impression of its natural variation, is thus a major asset.

It is of interest to compare Kreutz's treatment with that published 14 years earlier by Renz & Taubenheim in Davis's *Flora of Turkey*. The number of genera (24), and that of monotypic genera (15), has remained the same, yet the total number of species has increased by far more than half, from 93 to 143. Most of the increase concerns the two large genera, *Ophrys* with now 59

species (+ 32) and *Orchis* with 28 species (+ 8). Among the medium-sized to small genera there have been changes regarding *Dactylorhiza* with 12 species (+ 3), *Epipactis* with 9 species (+ 2), *Serapias* with 6 species (+ 3), *Platanthera* and *Himantoglossum*, each with 3 (+ 1) species. Only *Cephalanthera* (6 species) and *Listera* (2 species) have remained unchanged. The raise in species numbers has been partly caused by floristic additions, but for the largest part, by the splitting tendencies now prevailing, in particular, in the genus *Ophrys*. There are polymorphic groups in that genus which have been pulverised into swarms of ill defined microspecies that will hardly stand the test of time – the *Ophrys fusca* group being the most prominent example. Yet, an attempt at a formal treatment of the observed variability it is far preferable to permitting that variation to be lost and hidden from sight by sheer neglect. By bringing out into the open the problems of *Ophrys* systematics, Kreutz's book will predictably lead to a proliferation of further binomials and species descriptions. Yet in the long term it may permit a sensible synthesis reflecting an improved understanding of the evolutionary background of the observed morphological patterns.

This book, which by its many merits leaves the reviewer in search for appropriate superlatives, presents many other positive aspects that cannot all be mentioned in a review but must be left for the user to discover. The inclusion of 20 additional species, whose presence in Turkey is questionable or which were reported in error, all of them illustrated by photographs from outside Turkey, is among such welcome additional features. There are introductory chapters on Turkey as a whole, and distressing data on the loss of orchid habitats and depletion of their populations. The single most important feature that many will miss is an index to scientific names – a minor drawback in a work which, otherwise, sets a worthy final crown on 20th-century literature on orchids. W.G.

Floras

9. Mohamed FENNANE, Mohamed IBN TATTOU, Joël MATHEZ, Aï cha OUYAHYA & Jalal EL-OUALIDI (ed.) – *Flore pratique du Maroc*.

Manuel de détermination des plantes vasculaires. Volume 1, *Pteridophyta*, *Gymnospermae*, *Angiospermae* (*Lauraceae-Neuradaceae*). [Travaux de l'Institut Scientifique, Série Botanique, 36.]— Institut Scientifique, Université Mohamed V, Agdal, Rabat, 1999 (ISBN 9954-0-1456-X). XIV + 558 pages, map, drawings, cloth with dust-cover.

Of all peri-Mediterranean countries Morocco has the third largest number of endemic species, and the second largest rate of endemism after Anatolia; but so far it was also the single country that was lacking its own national flora. Therefore, the publication of the present book is not only gratifying but is a truly major event. The new *Practical Flora* is the result of the combined efforts of 10 different authors of which no less than 7 are Moroccan – a most remarkable rate. The five editors, among which Joël Mathez from Montpellier aptly personifies the traditional scientific and political link of Morocco with France, can take justified pride in their achievement.

Not for nothing does the word “pratique” appear in the title. The Flora is in essence an extended key for identification, in which each last lead serves to diagnose a terminal taxon. The book uses a simple language, the technical slang is reduced to the essential minimum, which is well explained in a generously illustrated glossary at the end. Non-taxonomists, including students, amateurs and practitioners, will therefore be able to use the Flora with relative ease. The presentation is very condensed, not only due to conciseness of the diagnostic (rather than descriptive) matter but also thanks to the use of standardised abbreviations for corollary data (life form, flowering period, ecology, distribution, degree of endemism) and the almost complete absence of literature references. Distribution within Morocco is given by territories that are based, by generalisation, on those used in Sauvage & Vindt's torso of a Flora of Morocco. Synonymy has been reduced to the bone (i. e., to names adopted in either Maire's *Flore*, or Jahandiez & Maire's *Catalogue*, or *Med-Checklist*) but endeavours to make the essential distinction between homotypic, heterotypic and misapplied names. The single feature that will likely cause initial difficulties to most users is the fact that the key appears to pervade the generic treatments. This mode of

presentation, frequently used in the past but now largely obsolete, is a corollary of the space-economic style of the Flora; and in fact, once you get used to it, you will find it quite handy. It would be even more easily assimilated by the user if there were a clear typographical distinction between the normal key leads and the entries for the taxa.

The editors modestly admit possible imperfections of their book, asking for feedback. At a cursory glance I did note a few details (mostly real minutiae) that might perhaps be improved, including the following ones. The term “gynophore”, correctly defined in the glossary, was misapplied in silenoid *Caryophyllaceae* in the sense of “anthophore”, which term was omitted from the glossary. In the initial list of abbreviations, “sched.” stands for herbarium labels, not herbarium specimens. The principles of synonymy, as they were clearly and correctly spelled out in the introduction, have not been consistently followed. For instance, “*Cheilanthes pteridioides*” in the sense of *Med-Checklist*, and as to the type variety or form in the two other basic reference works as well, should be listed as a misapplied name under *C. acrostica*. *Polypodium vulgare* is obviously circumscribed so as to include *P. cambricum*, accepted as distinct in *Med-Checklist* and as a separate subspecies, *P. vulgare* subsp. *serratum*, by Maire, but neither synonym is mentioned. “*Dryopteris aculeata* subsp. *aculeata*”, cited under *Polystichum setiferum* as a heterotypic synonym, is in fact a misapplication by Maire (and is also a homotypic synonym of the accepted name of a different species, *P. aculeatum*).

The flora is expected to be complete in three volumes. Of these, vol. 1, with 1204 numbered species out of an estimated total of 4200, will be the smallest. It comprises the pteridophytes, gymnosperms, and the first part of the dicots, up to and including *Rosaceae*. It is very carefully edited, neatly printed on good quality paper, solidly bound, and generously illustrated by 75 plates of drawings of excellent craft, often showing relevant analytical details. With the exception of two plates of *Cistaceae* which are due the tragically deceased Christian Raynaud, all are by a local artist, Kamal Hormat.

This book, and even more so the whole Flora once it will be complete, will be a monument to

the glory of Moroccan science. Most of the credit goes, as must be emphasised, to the botanists of the Institut Scientifique in Rabat, who not only supervised the editing but wrote most of the family and genus treatments. Contributions from outside include the *Fagaceae* by Zine El Abidine (Salé), the already mentioned *Cistaceae* by Raynaud (ex Montpellier), and a number of co-authorships by Salvo Tierra (Malaga: *Pteridophyta*), Mathez (Montpellier: *Gymnospermae*, *Aizoaceae*, *Potentilla*, *Loeflingia*) and Fatima El Alaoui Faris (Science Faculty, Rabat: *Crassulaceae*). Most appropriately, Maire's spiritual heir and nestor of North-Africa-based French botanists, Pierre Quézel, wrote the preface.

Many are those who await impatiently the two volumes yet to come!
W.G.

10. Santiago CASTROVIEJO (gen. ed.), S. TALLAVERA, C. AEDO, S. CASTROVIEJO, C. ROMERO ZARCO, L. SÁEZ, F. J. SALGUEIRO & M. VELAYOS (vol. ed.) – *Flora iberica*. Plantas vasculares de la Península Ibérica e Islas Baleares. Vol. VII (I), *Leguminosae* (partim). – Real Jardín Botánico, Consejo Superior de Investigaciones Científicas, Madrid, 1999 (ISBN 84-00-07821-7). XLV + 578 pages, map and drawings, cloth with dust-cover.

When I last wrote on *Flora iberica* in this column (in OPTIMA Newsletter 34: (2)-(3). 1999), I noted that “volume 7 on the legume family ... may now be expected any time”. The considerable size of that family has prevented my prediction to become fully true. It is now the second half of the legume treatment that “may be expected any time”.

As I wrote a very full review of volume 6, the present one can be somewhat more concise. First as to contents. Full treatment is given to 36 genera and 275 species, representing the subfamily *Mimosoideae* and *Caesalpinioideae* (neither of which has native representatives in Spain, with the arguable exception of *Ceratonia siliqua*) and the first half of the *Papilionoideae*. The latter make up the bulk of the volume, especially their three large tribes *Cytiseae* (16 genera, 116 species), *Astragaleae* (6 genera, 57 species), and *Fabeae* (4 genera, 78 species). I was pleasantly surprised to find that, perhaps for the first time in

a major publication on the subject, the tribe that includes the type of the family name is designated by its correct name, *Fabeae*, rather than by the widely but incorrectly used *Vicieae*. For two other tribes, *Cytiseae* (usually known as *Genisteae*) and *Astragaleae* (more often, *Galegeae*), the adopted nomenclature is, I believe, still subject to caution.

The *Cytiseae* pose particularly arduous problems of generic delimitation, which each author tends to answer in a different, individual way. This tribe has its main centre of diversity on the Iberian peninsula, so that the *Flora iberica* treatment will probably have signal function for many. It adopts a narrow generic concept in the *Genista* group, where *Chamaespartium*, *Pterospartum* and *Teline* are accepted as distinct – the latter becoming even less natural than usual, in the reviewer's mind, through inclusion of a section with two species normally assigned to *Cytisus*. On the reverse, *Chamaecytisus* (a largely non-Iberian group) is included in *Cytisus*. Even when severed of some of its components, *Genista* remains by far the largest genus, with 39 species, followed by *Ulex* (15), *Cytisus* (14), and *Adenocarpus* (10). The major genus in *Astragaleae* is of course *Astragalus* itself, with 41 species, of which one (*A. gines-lopezii*) – same as *Galega cirujanoi* – has been published just ahead of the *Flora* treatment. The major genus in the *Fabeae*, *Vicia*, happens to have the same species number as *Astragalus* (41), mainly due to its author's very narrow species concept in, e.g. the *Vicia sativa* and *Vicia villosa* complexes. The second largest genus of the last-named tribe is *Lathyrus*, with 32 species.

At the risk of repeating myself (an obvious danger when a multi-volume work is concerned), let me state that this is perhaps the most complete, most thoroughly edited and best standardised flora that has ever been produced, at least in Europe. One gets the impression that every detail has been checked and rechecked. To mention just one ancillary point, the Appendix giving the etymology of the many plant epithets appearing in the text has been very thoroughly researched and is full to the brim of interesting and obviously reliable information. Santiago Castroviejo and his team are, once more, to be heartily congratulated on their achievement.
W.G.

11. Karl Heinz RECHINGER † (ed.) – *Flora iranica*. Flora des iranischen Hochlandes und der umrahmenden Gebirge. Persien Afghanistan, Teile von West-Pakistan, Nord-Iraq, Azerbaidjan, Turkmenistan. Lfg. 174, *Papilionaceae* III, *Astragalus* [I], by Dietrich PODLECH. – Akademische Druck- und Verlagsanstalt, Graz, “1999” (ISBN 3-201-00728-5, the whole work). 350 pages, 227 extra plates of photographs, paper. Price: DM 903.

Alas, the founder, editor and main author of *Flora iranica*, Karl-Heinz Rechinger, is no longer with us: he died at the end of 1998, aged 92 (see Lack in *Taxon* 48: 419-426. 1999). It was his dream to see his monumental work completed, and one may easily imagine the joy with which he would have saluted the present volume. It is a book of great strategic importance for the work's completion, as it denotes a first and substantial step towards the accomplishment of an almost superhuman last effort, tackling the huge genus *Astragalus* which, in the study area, is represented by about 1000 species.

The whole generic treatment is now planned to span four volumes, three devoted to the description of the individual taxa, followed by “the general part with detailed information about characters of the genus, full synonymy, literature, a survey and a determination key for all represented species” – as the author, Podlech, tells us. The first *Astragalus* volume includes the treatment of the annual representatives (12 sections with 40 species) and the first part of the perennials with basifixed hairs (18 sections, 271 species). Almost three-quarters of the species are illustrated by high-quality photographs of representative herbarium specimens. Generous illustration is essential in this large and polymorphic genus, yet it would have been more than welcome if drawings of analytical details, e.g. flower dissections, could have been added.

All annual sections, and all the medium-sized or large perennial ones here treated, had been previously monographed by either Podlech himself or one of his pupils. Therefore, the major task for the author has been of an editorial nature, and it would be unrealistic to expect many innovative features in this book. By far the largest section is *A. sect. Caprini*, with no less than 171 species digested in 4 subsections and numerous informal

species groups. This section had been revised by Podlech in 1988.

The book, regrettably, lacks an index of new combinations and newly described taxa. On cursory screening I found one newly described section (most appropriately dedicated to Karl-Heinz Rechinger), one new subsection, and two explicit transfers to subsectional rank. Another, implicit and as it seems unintentional such transfer (*Astragalus* subsect. *Chlorostachys*) is found on p. 68. Podlech appears to assume that subsectional names repeating the sectional epithet as their final epithet are autonyms – but they are not. A parallel case is *A. subsect. Caprini* (DC.) Podlech, inadvertently validated in Podlech's earlier monograph.

Apart from these details, the treatment of nomenclatural aspects, including typification, is exemplary. It is one of the traditional and, to me, positive traits of this Flora that specific and sub-specific epithets are capitalised were appropriate – not a very popular policy nowadays, but a useful and informative one (if you dislike it, you can easily decapitalise those epithets; but the appropriate use of capitals is a skill now largely lost among younger plant taxonomists). At the recent International Botanical Congress in St Louis a proposal to abolish that option and make lower-case epithets obligatory caused lively debate and eventually failed by an incredibly narrow margin. The prominent example of *Flora iranica* shows how fortunate that failure has been.

The present treatment includes full identification keys under each section, but no such key for identifying the sections themselves. This is a decidedly bad point, considerably reducing the usefulness of the book up to the time when the last, forth portion of the generic treatment will be published. There is not even a complete overview of the sections, or of other possible major subdivisions of the genus (on p. 63, an “*Astragalus* subg. *Astragalus*” suddenly appears, that is not mentioned elsewhere nor has a counterpart under which the preceding annual sections could be placed).

Publication is stated on the cover to have occurred in September 1999, but must in fact have taken place around the turn of the year (review copies were mailed on 19 January 2000). The publisher's rather loose handling of publication dates is not, however, a new fact to be lamented.

More worrying is the pricing policy. If the publisher's indication of sales price, quoted above, is correct, then the latest volumes of *Flora iranica* will be unaffordable to many, even to institutional libraries. (Note, however, that in Koeltz's online catalogue the book is offered for DM 630, still a high price, but a somewhat more reasonable one.) At least in the two copies seen by me, the inside back cover, where the first half of the family digest should appear, is left blank – not a very disturbing omission, since the information on that page would not have changed since last time (see OPTIMA Newsletter 33: (4)-(5). 1998), but perhaps indicative of a certain neglect, by the publisher, of a work which should be among those in which he takes high pride.

The bottom line of this review is an urgent and sincere wish: That the few steps remaining for completion of this Flora not be missed; that Podlech as the author of most of the still wanting portions, the publisher as an important actor in the background, and first and foremost, Wilhelmina Rechinger, the soul and motor of the whole enterprise, join their efforts and make completion happen. W.G.

12. M. ASSADI, M. KHATAMSAZ, V. MOZAFARIAN & A. A. MAASSOUMI (ed.) – Flora of Iran. No. 25: *Primulaceae*, by Z. JAMZAD (ISBN 964-473-079-8); No. 26: *Nyctaginaceae*, by F. FADAIE (ISBN 964-473-078-X); No. 27: *Guttiferae*, by R. AZADI (ISBN 964-473-060-7). – Research Institute of Forests and Rangelands, [Tehran], 1999. 93 + [2], 16 + [2], 62 + [2] pages, drawings, maps, paper.

One small and two medium-sized fascicles of this new national Flora of Iran (see OPTIMA Newsletter 34: (4). 1998) have been published during the last year. This looks like a substantial slowing down of the production rate, unless, as one may hope, it is indicative of some sizeable morsel that obstructs the pipeline. The high quality standards of the taxonomic treatments, illustrations and distribution maps have been maintained. The delimitation of genera has remained remarkably stable when compared with Rechinger's *Flora iranica*, ensuring continuity of treatments at least within Iran: even the numbering of genera has remained unaltered. This means that Wendelbo's inclusion of *Asterolinon*

within *Lysimachia*, never properly explained and hardly followed by anyone, has been maintained.

The *Primulaceae* treatment, the first in order and in size, is also the most innovative, which is partly explained by the fact that the *Flora iranica* treatment of that family, by Wedelbo in 1965, was among the first published and the need for an update was particularly obvious. Also, the largest genus, *Dionysia*, consists mainly of rare, local endemics, several of which were discovered but recently. To the 19 species of *Dionysia* known from Iran in 1965, no less than 11 have since been added: 5 described by Wendelbo himself, one by Grey-Wilson in 1974, and 5 authored or co-authored by Ziba Jamzad who authored the present treatment. Another new, endemic taxon described since 1965 is *Corthusa matthioli* subsp. *iranica*, whose discovery added the whole genus as new to the country's flora. Floristic additions are *Androsace armeniaca* and *Anagallis arvensis* subsp. *foemina*. Last, the placement of *Primula capitellata* in the synonymy of *P. algida* is a taxonomic innovation.

The *Guttiferae*, which should better be known as *Hypericaceae* (as the tropical *Clusiaceae* are now generally considered as a distinct family), consist of the single genus *Hypericum*, now counting 19 species in Iran. Since the *Flora iranica* treatment was published by Robson in 1968, Robson himself had revised the nomenclature and classification of what is now *H.* sect. *Hirtella*, adding two species and two subspecies in the *H. hyssopifolium* group. Also, Assadi discovered and described an exciting new endemic species, *H. dogonbadanicum*, whose sectional placement was unclear to him and which is here assigned to *H.* sect. *Campylopermum*. The account duly incorporates all these changes plus one floristic addition, *H. elongatum* subsp. *microcalycinum*.

Finally, the *Nyctaginaceae* account also adds one species to the country's flora, *Commicarpus helenae*, previously known from adjacent areas in Pakistan. W.G.

Flower books

13. Walter STRASSER – Pflanzenwelt von Zypern als Ergänzung zum Buch Pflanzen des Peloponnes. Jan. 2000. 2. erweiterte Auflage

Mai 2000. – Privately published, [Steffisburg], 2000. 78 pages + 1 + 13 sheets, numerous drawings, map; paper, plastic front cover sheet.

When looking at this pamphlet you would hardly expect to find it reviewed among the “Flower books”, and indeed it would fit much better under the heading “Excursions”. The reason I have placed it here is that it is an avowed complement to the German edition of Strasser’s “Plants of the Peloponnese”, earlier presented here (see OPTIMA Newsletter 32 (12). 1997, and, for the English edition, 34: (5)-(6). 1999). The new booklet, which bibliographically is rather a nightmare, places itself in the context of two consecutive group excursions to Cyprus, to which Strasser served as botanical guide: the first by the Berne Botanical Society, from 25 March to 5 April 2000, the second by the “Baumeler hiking group”, from 8 to 22 April.

The cover page, quoted above, gives a double date and declares the book to be a second edition. The first edition (not seen by me) must be assumed to have been published on the first date, in January 2000, and apparently consisted of pages 1-48 plus an early version of the indices, now on pages 63-78. It is a safe guess that it was produced for the benefit of the excursion participants – among whom it may, as a side effect, have promoted the sale of the Peloponnese book. Pages 49-62 appear under the subtitle “Ergänzungen im Mai 2000”, so they belong to the second edition. A third part is appended at the end which, bibliographically, might best be treated as an independent publication, with its own title page plus 13 sheets printed recto only, with a title that reads “Wanderungen für Blumenfreunde in West-Zypern. Ende März - Ende April 2000. Botanische Leitung: W. Strasser. Pflanzenlisten”. This was published in Steffisburg in May 2000 and includes chorological data on plants found during the group excursions, or the preparatory excursions made either by the author alone or with Cypriot resident Charlotte Schmid. The data are presented in Strasser’s usual tabular style (see OPTIMA Newsletter 30: (26). 1996) and are based mostly if not exclusively on field notes: voucher specimens, if they exist, are not mentioned.

The first portion of the booklet (pp. 4-62) is devoted exclusively to Strasser’s own, somewhat sketchy but very useful plant drawings. There are 314 of them, 232 in the first portion and 82 in the “Ergänzungen” (complements), representing almost as many different species. They are digested among the same 9 practical groups, based on plant habit or flower colour, as the Peloponnese book (q.v.). When, as happens exceptionally, a species shows notable variation in flower colour, its drawing will appear twice in different groups; *Ranunculus asiaticus*, flowering white, yellow or red, beats the record by a triple portrait. Adding these 300+ species to the almost 1100 Peloponnese plants that were portrayed earlier and also occur in Cyprus, you get the impressive total of 1400, the near total of the island’s flora. This is, needless to say, an impressive score and results in an unprecedented Cypriot botanical iconography.

I can confirm by and large the positive impression that I conveyed in my reviews of the Peloponnese books with regard to the quality and usefulness of Strasser’s drawings. There are rare exceptions. *Minuartia picta* is an unusually bad portrait, especially in its vegetative parts which are also erroneously characterised in the caption: the leaves of this species are neither whorled nor fleshy (there is a good photograph of *M. picta* in “Wild flowers of Cyprus”, by George Sfikas, p. 133, where it is misnamed *M. sintenisii*).

On practical trial, one will likely find that having to use of the two picture sets of this booklet along with the third, major set of the Peloponnese book is cumbersome. It would be welcome, and would come as no surprise, if a consolidated edition for Cyprus alone were soon to be published. We wish Strasser good success, should he so decide. W.G.

14. Friederike SORGER – Einige Endemiten aus der türkischen Pflanzenwelt im Bild [*Stapfia*, 54.] – Biologiezentrum des Oberösterreichischen Landesmuseums, Linz, 1998. 110 pages, numerous colour and one black-and-white photographs, map; paper.

Friederike Sorger has travelled through Anatolia like few other botanists, gathering incredible treasures in terms of plant specimens and photographs all along. Some of her data she has pub-

lished. A series of her colour photographs of plants, including 34 endemic ones (not again reproduced here), appeared in *Stapfia* (34: 103-271. 1994), but many remain hidden in her files.

The present fascicle consists almost entirely of 169 photographs representing 126 different plant taxa, all endemic to Turkey and often exceedingly rare, plus a few of the landscapes in which they were found. Some of the pictures are of herbarium specimens, including the single black-and-white photograph (of *Centaurea φ -pendicigera*). Mostly, however, the plants are portrayed alive in their native habitat. How many of these species had never been illustrated before in a publication, perhaps never photographed by anyone, the reader is left to guess – they must certainly be many. But rarity is not the only criterion that makes this booklet unique: there is beauty, too, that counts. Not every photograph is technically perfect, as the author herself modestly admits, but a majority of them meets professional standards of quality.

Apart from endemic status, the author has been guided by two other criteria in her selection, both showing her scientific mind: in all cases, the identity of the plant has been verified by a specialist; and of each a voucher specimen exists. Data on these vouchers are regrettably missing in the figure captions which serve as explanatory text. Writing is not Mrs. Sorger's main passion, for sure! But in hunting, sampling and photographing her plants she is not easily surpassed. W.G.

15. Sadık ERÝK, Galip AKAYDIN & Ayhan GÖKTA – **Baþkent'in doðal bitkileri.** – An-ÇeVa & Ankara Üniversitesi Basımevi, 1998 (ISBN 975-482-436-3). IX + 195 pages, numerous colour photographs; hard cover. Price: 7,000,000 TrL.

"The native plants of the Capital" [in translation] is a promising title for a Turkish book. From the short English preface, we learn that no less than 1115 species of flowering plants have been recorded as growing in the native state within the residential parts of Ankara, and that no less than 16 % of them are Turkish endemics. This is an impressive record and fully justifies the authors' declared intent to preserve as much as possible of this natural diversity. Achieving this goal obviously presupposes public awareness and political goodwill. To that effect, the authors have

contributed a picture book with 342 colour photographs (not counting some insets) illustrating as many species of Ankara's city flora. Most of the photographs are of pretty good quality, although inevitably a few are less than satisfactory, being overexposed, or out of focus, or otherwise technically defective.

As the authors claim, their nicely printed book "serves a touristic and an educational function". They are likely correct if by education they mean, teaching respect for and appreciation of the multiformity and beauty of plants. I am less convinced of the educational value in a botanical sense, as errors of form (spelling of names) and fact are far too numerous. You need not be a specialist of the flora of Anatolia to perceive that a substantial proportion of the identifications are unreliable. Some errors are due to mere transposition of photographs (of which there are four on each right-hand page, with corresponding descriptive and explanatory text on the preceding left-hand page). Sometimes left and right pictures have been reversed, e.g. between *Hypocoum imberbe* and *Fumaria officinalis*, *Silene subconica* and *S. conoidea*, *Lonicera etrusca* and *L. nummulariifolia*. In one case the switch is diagonal (*Bromus tectorum* and *B. sterilis*), and in another case it carries over several pages (*Anthemis tinctoria* on p. 88-89 and *Picris strigosa* on p. 102-103). More numerous are plain misidentifications, of which I cannot of course provide an exhaustive list but will mention examples. "*Cerastium perfoliatum*" is *Stellaria media*, already represented in the foregoing photograph; "*Geranium rotundifolium*" is certainly not that species, but most likely, *G. asphodeloides*; "*Cirsium arvense* subsp. *vestitum*" looks rather like some species of *Centaurea*; "*Carlina oligocephala*" is *Scolymus hispanicus*; "*Sonchus asper* subsp. *glaucescens*" is *S. oleraceus*; "*Convolvulus arvensis*" is likely *C. althaeoides*; "*Veronica hederifolia*" represents *V. persica*; "*Prunella orientalis*" is *Ajuga reptans*; "*Ornithogalum narbonense*" is a species of *O.* sect. *Ornithogalum*; "*Gagea peduncularis*" is *G. bohemica*; "*Orchis anatolica*" is *O. pallustris*, and "*O. laxiflora*", *Dactylorhiza iberica*; and "*Melica ciliata*" is, most likely, a relative of *Pennisetum*.

Don't get me wrong. My aim is not to criticise the authors, and certainly not discourage

them, but to enable them to correct the present shortcomings of their book for the desirable and not unlikely case that it might be re-edited. Also, in the same time, I hope by these stray remarks to help the user, and to encourage him or her to look at the book with a similarly critical but also benevolent mind. W.G.

Botanical calendars

- 16. Dêmêtrês K. HRISTODOULAKËS – Endêmika kai spania futa tês Samou. Êmerologio 2000 / Endemic and rare plants of Samos. Calendar 2000.** – Mouseio Fusikês Istorias Aigaiou, Palaiontologiko Mouseio Mutiniôn Samou & Idrima Kônstantinou & Marias Zêmalê, [1999]. 15 boards with colour photographs.

While not usually a friend of ephemera like calendars, I cannot resist mentioning the present one in view of the high quality of its photographs and also, principally, of the interest and rarity of the plants portrayed. By the selection of its subjects this is much more than a nice adornment for your office: it is a genuine piece of botanical iconography, not to be lightly discarded.

Thirteen species growing naturally on the island of Samos, many endemic, are represented. *Carlina tragacanthifolia* is on the cover, and the individual months feature *Cynoglossum aucheri*, *Fritillaria forbesii* (flower and fruit), *Datisca cannabina*, *Erodium vetteri*, *Scutellaria orientalis* subsp. *alpina*, *Asperula samia*, *Alyssum samium*, *Anthemis rosea* subsp. *rosea*, *Centaurea rechingeri*, *Atraphaxis billardiërei*, *Silene urvillei*, and *Centaurea xylobasis*. Needless to say, the quality of the print, on glossy, heavy cardboard, is excellent. An bilingual introductory text (in Greek and English) draws attention to the riches of the Greek flora, to the phenomenon of endemism, and to the threat of immediate loss that many rare species now face. The calendar itself is an excellent means of spreading the message among those concerned, thereby assisting Greek nature conservancy in its valuable efforts. W.G.

Floristic inventories and checklists

- 17. Giôrgos SFËKAS – Ta futa tou Umêttou.** – Privately assembled/duplicated, [Athens, 1999]. [14] sheets, paper, plastic front cover sheet.

The Hymettus ridge, bounding the Greek Capital towards the east, is one of the hot spots of Greek botany, from where several plants first became known. Its flora is notoriously rich and varied, and one is surprised to find that the present inventory of its vascular plant taxa, mainly based on Sfikas's personal collections but also on a cursory literature survey, should list no more than 410 species and subspecies. The author himself is aware of the fragmentary nature of his checklist, as he estimates the actual number of plant taxa present to be close to or even in excess of 600.

The author's interest in Mt Hymettus stems from his involvement with the reconstruction of the old botanical garden, situated on the western slopes close to the Kaisariani Monastery. His efforts have naturally concentrated on the area of the "Aesthetic Wood" of Kaisariani, but they also extended to all other parts of the mountain, east and west, north and south, and to the summit ridge. Thus, his list includes indication of the distribution of each taxon in terms of 7 discrete areas of the Hymettus range, except for species that are either "widespread" or "non-located".

Curiously, Sfikas was unaware of the catalogue of the flora of Mt Hymettus published by Zerlenti in 1965. That list comprises 601 species, many more than the new one, and demonstrates that Sfikas's numerical estimate is on the low side. Comparing the two lists, one finds that several taxa listed by Sfikas are additional to those known to Zerlenti, so that the number of taxa so far recorded from Mt Hymettus probably approaches 650. W.G.

- 18. Ori FRAGMAN, Uzi PLITMANN, David HELLER & Avi SHMIDA – Checklist and ecological data-base of the flora of Israel and its surroundings,** including Israel, Jordan, the Palestinian Autonomy, Golan Heights, Mt. Hermon and Sinai. – Herbarium Mediterraneum Panormitanum, Mifalot "Yeffe

Nof" & the Middle East Nature Conservation Promotion Association, Jerusalem, 1999 (ISBN 965-90245-0-9). 107 + (69) pages, two folded insets, flexible cover.

This new and fully up-to-date checklist for the vascular flora of Israel and environs was generated, as a selective printout, directly from a database held by the Israel Plant Information Centre (Rotem) and the National Herbarium of the Hebrew University. It consists of an essentially English part, paginated 1-107, and a primarily Hebrew part whose pagination, running back-to-front according to usual standards, is (1)-(69); both meet somewhere in the middle. The main checklist in the first (English) part is arranged alphabetically by Latin plant names, and its counterpart in the Hebrew portion, alphabetically by Hebrew vernaculars. There is also a third arrangement, by modern English plant names, which is however incomplete as only about half of the taxa bear an English designation. For each species listed, the family assignment, abundance in Israel, growth form, and rough distribution within the territory and among its main climatic zones are indicated. As the subtitle clarifies, the inventory is not limited to the national boundaries of Israel but includes Jordan and a number of neighbouring territories, essentially those that are or have been under Israeli military administration.

An important complement to the core lists are 5 appendices (again in two distinct language versions) enumerating species believed to be extinct, casual occurrences, taxa of doubtful systematic status, a few that in the field are easily confused with similar ones, and those of which the occurrence in Israel is doubtful. The second longest of these lists is, distressingly, that of assumed extinctions on which 46 binomials appear. If I read this correctly, it only refers to extinctions on the national territory of Israel, which would mean that one of the two endemics on the list, *Plantago maris-mortui*, while extinct in Israel proper, would still survive in Jordan and the Sinai peninsula. The second listed endemic, however, *Silene telavivensis*, is thought to be definitely extinct as it has never been collected outside of Israel.

This list is useful as a working tool. Apparently it was produced in some haste, without much time for proof-reading. There is a list of

corrigenda at the beginning, which in turn includes a misprint ("*Acer monspessulatum*"), followed by a statement to the effect, that "minor spelling mistakes will be corrected in the next edition". Such minor mistakes include a misprint in the main title as it appears on the cover (but not on the title page), and, in the list itself, "*Azolla filicaulis*" instead of *A. filiculoides*. Of course, the really important message one is to retain is that there will soon be a next edition. We look forward to it. W.G.

Excursions

19. Salvatore BRULLO & Giovanni SPAMPINATO – Società Italiana di Fitosociologia. Escursione sociale in Aspromonte, 28 Maggio - 2 Giugno 1999. Guida-itinerario. – Edimedia, Reggio Calabria, 1999 (ISBN 88-86046-12-X). 86 pages, maps, tables, graphs, paper. Price: 16,000 Lit.

Aspromonte is a mountain massif situated at the very tip of the Italian boot: a geologically varied area, reaching almost 2000 m of altitude, now for the most part included in the Aspromonte National Park. The Italian Phytosociological Society studied the massif and surrounding coastal areas during five days in summer 1999, under the expert leadership of Brullo and Spampinato, who wrote most of the present account.

The first 36 pages of the booklet are devoted to a description of the area, of the physical environment as well as the various vegetation types. This portion includes a special chapter on pedology, authored by Buscolo & Sidari. In the second, somewhat larger part the results of the excursion are outlined, starting with a brief description of the itinerary. At the core there are 52 phytosociological relevés in tabular form. Finally, there is a critical revision, by Rossi & Foggi, of the *Festuca* material collected during the excursion, in which 7 taxa are recognised.

This is no cheaply produced grey literature item, but a nicely printed, well illustrated, informative botanical monograph of a little known area of southernmost Italy. Three pages of bibliography list vegetation studies along with floristic and taxonomic contributions. W.G.

- 20. Ina DINTER – “Europas schönste Küste”.**
Algarve. Portugal. Botanische Exkursion vom 13.-24. März 1999. Nachtrag zum Exkursionsskriptum. – Privately assembled/duplicated, D-74348 Lauffen, 1999. 22 sheets, drawings; paper, plastic front cover sheet.

- 21. Ina DINTER – Griechenland Euböa Sporaden. Insel Euböa.** Botanischer Studienaufenthalt auf einer wenige bekannten Insel, 8.-21. Mai 2000. – Privately assembled/duplicated, D-74348 Lauffen, 2000. [2] + 43 sheets, several black-and-white and 2 colour illustrations and maps; paper, plastic front cover sheet.

Indefatigably busy in working out ever new Mediterranean excursion routes for her guided naturalistic tours, Mrs Dinter has, this time, discovered the island of Euboea. The present “tour companion” version of the corollary document incorporates the results of her preparatory excursion to the places to be visited, which took place from 1 to 11 May 1999.

The Euboea guide booklet follows the same general pattern as its immediate predecessors (see OPTIMA Newsletter 34: (8)-(9). 1999), again mentioning herbarium voucher numbers when specimens exist. It is a new, welcome addition to a series which, by now, has reached an impressive size and variety.

The other item mentioned above belongs to the category of post-excursion “elaborations” and links with the excursion guide booklet reviewed last time as item No. 12. It is of a novel style: not a kind of second updated edition as used to be the case, but a complement to the “tour companion” version. Its essential part is a cumulative list, with locality numbers, of the plants observed and sometimes collected by the excursion participants. The second half (fol. 12-20) brings the label texts of the 35 specimens newly collected by the author; 17 of the corresponding taxa are represented by a drawing (16 reproduced from Valdés & al.’s *Flora vascular de Andalucía occidental*, one from *Flora iberica*). Finally U. Barth, a participant to the excursion, has contributed a list of 83 bird species that were noted. W.G.

- 22. Rita EISENBLÄTTER & Eckhard WILLING – Kurzbericht über unsere Sammelreisen 1995 und 1996 nach S-Griechenland für die Flora hellenica. Teil 1: Fundorte.** – Privately duplicated, Berlin, 1996. 35 sheets, stapled.
- 23. Rita EISENBLÄTTER & Eckhard WILLING – Kurzbericht über unsere Sammelreisen 1997 nach S- und NW-Griechenland für die**

Flora hellenica. Teil 1: Fundorte. – Privately duplicated, Berlin, 1997. 44 sheets, stapled.

- 24. Rita EISENBLÄTTER & Eckhard WILLING – Kurzbericht über unsere Sammelreisen 1999 nach SO-Griechenland für die Flora hellenica.** Fundorte und Artenliste. – Privately duplicated, Berlin, 1999. [64] unpaginated sheets, 1 colour photograph, stapled.

Since I reviewed Eisenblätter & Willing’s 1998 report and locality list for their Greek journeys (see OPTIMA Newsletter 34: (9)-(10). 1999) I received three more fascicles of the same kind: two for the three preceding years and one for 1999. Together, and including the 1998 account, they convey a detailed and comprehensive picture of the activities of these two collectors over the last five years. From 1995 to 1999 inclusive, they undertook 8 expeditions to Greece, 5 in spring (March-April) and 3 in summer (June-July). They spent 167 days collecting in the field, i.e., 5 ½ months, during which time they collected 41,084 specimens (not counting a few duplicates), or 246 per collecting day on average. I can only reiterate what I stated last time: that they are certainly the most assiduous and productive team ever to collect Greek plants. Their methodical way of gathering, described last time, ensures that their harvest represents a balanced and equally spaced inventory of the flora of the territories visited, thus providing an ideal, unbiased basis for distribution mapping. It should be noted, however, that they have so far covered only part of the national territory of Greece: they have not visited a single island during these five years, nor have they explored northern and north-eastern Greece apart from the Pindus range, which means that the whole of Thrace and most of Macedonia and Thessaly have been left for the future.

One may of course ask if such extensive collecting is compatible with present-day ethics of nature conservancy and with the need to safeguard plant diversity. As a reaction to my previous review I received an outraged letter from the Presidency of the Hellenic Society for the Protection of Nature, expressing shock at the number of specimens collected and concern at “the continuous and systematic depletion of the plants of Greece, in a predatory manner”. This reaction is understandable, and I should have foreseen it. It seems to me that it does not only reflect a genu-

ine concern (which I will try to dispel) but also, regrettably, the lingering mistrust of many nature conservationists against the scientist, especially taxonomist, in whom they should, rationally, see their closest ally. Let me quote from my reply, which raises points that are of general significance beyond the concrete case at hand.

“By his investigation activities, Dr. Willing is rendering excellent services to the knowledge of the Greek flora, the distribution and variability of its constituent taxa (especially of the common ones!), and he is thereby ultimately providing that knowledge upon which rational conservation policies must build. Never has he depleted any critically small population, and his entire plant collections over many years would probably be insufficient to feed a single Greek sheep through more than a week. It is my sincere hope that the feelings voiced, which I of course respect, are not an expression of hostility of those concerned about the conservation of nature towards the scientist and investigator. I am convinced that only if these two parties join their efforts can the common goal of safeguard of our natural heritage be achieved.”

When I wrote these lines I had not yet received the latest (1999) account of Eisenblätter & Willing, which for the first time includes a specimen inventory in addition to the locality lists. When perusing that inventory, one will find full confirmation of my previous statements, even beyond what I would have expected. There is not a single threatened, rare Greek endemic on the list, and even the widespread and common endemic element is poorly represented. Let me give you a sample of the most often collected species, those most often represented among the c. 5300 specimens collected in spring 1999 in Sterea Hellas: there are 75 sheets of *Geranium molle*, 66 of *Scandix pecten-veneris*, 64 of *Capsella rubella*, 62 of *Senecio vulgaris*, and between 54 and 58 of each *Bunias erucago*, *Cardamine hirsuta*, *Anemone pavonina*, *Crepis sancta*, *Erodium cicutarium*, and *Euphorbia helioscopia*. Extrapolating these figures to the five spring excursions, one can estimate that each of the above common spring annuals or geophytes has been collected between 250 and 400 times. Yet, no one could reasonably claim that their Greek populations have, in any significant way, been depleted by such collecting! W.G.

25. Walter STRASSER – W- und S-Peloponnes 1998 mit Baumeler. – Privately duplicated, Steffisburg, 1999. [1] + 39 sheets, maps, 2 drawings; stapled, plastic front cover sheet.

26. Walter STRASSER – Kreta 1999, botanische Studien, z.T. unterwegs mit Baumeler. – Privately duplicated, Steffisburg, 1999. [1] + 48 sheets, map, drawing; stapled, plastic front cover sheet.

There is a three-years gap, in my series of Strasser's annual excursion reports, between that for 1994 (the last to be reviewed: see OPTIMA Newsletter 30: (26). 1996) and the two present ones. Perhaps, for whatever reason, no such lists exist for 1995 to 1997. The two new issues are true to the traditional Strasserian style, differing only in minor respects. The formerly traditional extras such as identification keys for critical groups are lacking. In compensation, the Cretan list includes a welcome innovation: the presence of herbarium vouchers or photographic documents (indicated by the letter F, nowhere explained) is now given separately by localities or locality groups, not merely at the end in the cumulative species list. It is of note that Strasser, rather than travelling on his own, now often serves as a botanical guide to excursions of the “Baumeler hiking group”. This he did for part of his 1998 and 1999 excursions, from 19 April to 1 May and 18 to 30 April, respectively, when his total field activities in Peloponnesos lasted from 28 March to 5 May 1998 and in Crete, from 28 March to 30 April 1999.

As usual Strasser, being a keen observer, includes some new and interesting reports in his lists. For the Peloponnesos, the major feat is the discovery of a presumably new *Consolida* species related to the rare Greek endemic *C. tuntasiana*, but unfortunately still in bud. The Cretan list brings its records by UTM grid squares that coincide with the mapping units of Turland, Chilton & Press's *Flora of the Cretan area*. Strasser is careful to mention new square records – of which there are plenty – and has entered the additions in his own copy of the *Flora*, of which he kindly let me have a photostat copy: few of the pages with maps remain unaltered. The Cretan report also includes two alleged new discoveries for the island's flora, unfortunately neither of them substantiated by a specimen or at least

photograph. One is "*Coronilla emeroides*" (i.e., *Hippocrepis emerus* subsp. *emeroides*), seen near Zaros south-east of the Psiloritis range. This is not an unlikely find and, if correct, would confirm an earlier, dubious record of the same taxon, by Gandoger from the Akrotiri peninsula near Hania. The second, *Chrysosplenium alternifolium*, is almost certainly wrong, as that species in Greece is not known to occur south of the Pindus range. Most likely the observed plant was *Sibthorpia europaea*, which can indeed be confused with *Chrysosplenium* in the field and is not listed elsewhere in Strasser's reports. *S. europaea* is known from western Crete; Strasser's find, if confirmed, would extend its known range to the central part of the island. W.G.

27. Gabriel ALZIAR, Werner GREUTER, Francesco Maria RAIMONDO & Benito VALDÉS (ed.) – Results of the Fourth "Iter Mediterraneum" in Cyprus, April 1991. [*Bocconeae*, 11.] – Herbarium Mediterraneum Panormitanum, Palermo, "1999" [2000] (ISBN 88-7915-011-1). 169 pages, photographs, drawings, maps, tables; paper.

When the Itinera Mediterranea were created under the impulsion of Benito Valdés, the understanding was that each expedition would have its account published as a volume of the Palermo serial, *Bocconeae*. This functioned beautifully, with a still tolerable three-years' delay, for the first two Itinera: the one to S.E. Spain in 1988, published as *Bocconeae* vol. 1 in 1991, and that to Israel in 1989, published as *Bocconeae* 3 in 1992. Then the system got stuck. The proceedings volume for Iter Mediterraneum 3, to Sicily in 1990, may rest somewhere in a drawer. The 4th Iter, to Cyprus in 1991, has produced its account belated by almost 9 years. Even if some of the subsequent Itinera have been cancelled, it is difficult to see how the accumulated backlog can be caught up.

It would however be a pity if the tradition were to be discontinued, since the excursion accounts published so far are quite valuable and informative. The present one, which dispenses with the usual introductory chapters on physical geography, geology, and climate, consists of five individual papers. The first, by Alziar who organised the expedition, is the customary full

account of localities visited and vascular plant specimens collected, numbered 1 to 1704 and enumerated by genera and species, in alphabetical order. Next follows the description of a new species related to *Bromus intermedius*, *B. optima* H. Scholz (the second species so far to commemorate our Organisation, the first being *Limonium optima* Raimondo, from Sicily). Oberprieler & Vogt contributed notes on Cypriot *Antemisia* taxa, of which the two related endemics, *A. plutonina* and *A. tricolor*, pose problems of variation and delimitation. Tzanoudakis presents a cytological study on 13 of the 22 *Allium* species known from the island. Last, Vogt & Aparicio prepared a long list of chromosome counts, some made on flower buds fixed in the field during the excursion, others on germinated seeds, representing 112 taxa in all. Regrettably, no lists of the collected lichen and bryophyte material, c. 800 specimens in either case, have been included. Such cryptogam inventories would have added considerably to the interest of a report which, even so, was certainly worth publishing. W.G.

Chorology

28. Jaakko JALAS, Juha SUOMINEN, Raino LAMPINEN & Arto KURITTO – Atlas florae europaeae. Distribution of vascular plants in Europe, **12, Resedaceae to Platanaceae.** – Committee for Mapping the Flora of Europe & Societas Botanica Fennica Vanamo, Helsinki, 1999 (ISBN 951-9108-12-2). 250, pages, maps; paper.

The newest issue of the *Atlas florae europaeae* not only makes the dozen full, it also completes the coverage of taxa treated in the first volume of *Flora europaea*. One fifth of the project having thus been successfully completed, the two persons who were the driving force behind the *Atlas* for its whole early life, and still acted as chairman and secretary of the Helsinki secretariat of the Committee for Mapping the Flora of Europe, decided that the moment had come for them to hand over their duties to the next generation: a sorry but understandable decision, now additionally saddened by the fact that Jaakko Jalas, the nestor of the team, died in December 1999. His many friends will sadly miss his calm, jovial, and utterly knowledgeable personality.

The main families in this issue are *Crassulaceae* and *Saxifragaceae*, not among the most tricky ones of the European flora, yet not devoid of problems. They have been tackled in the usual, well considered and fully documented style that characterises the *Atlas*, in which the full synonymies and literature surveys almost equal the maps themselves in importance. True, not all will be happy with every taxonomic decision taken. I for one regret that Henk 't Hart's often idiosyncratic taxon concept in *Sedum* has been followed too closely, by recognising some taxa that are extremely hard to discriminate but merging others that are perfectly well characterised – *S. praesidis* being a prominent example. The circumscription adopted for genera is among the many positive aspects of the work. The editors have resisted the temptation to recognise the recently proposed splits and dismember the large genus *Sedum*, with the well founded exception of the *S. maximum* group, accepted as *Hylotelephium*.

The world of botany, especially its European segment, owes a debt of gratitude to the many people who have devoted time and labour to the advancement of this marvellous work, and in particular to the institutions in Helsinki that have invested and keep investing considerable resources in the project. W.G.

29. Oriol de BOLÒS I CAPDEVILA, Xavier FONT I CASTELL & Josep VIGO I BONADA (ed.) – Atlas corològic de la flora vascular dels Països Catalans. Volum 9 [ORCA: *Atlas corològic*, 9]. – Institut d'Estudis Catalans, Secció de Ciències Biològiques, Barcelona, 1999 (ISBN 84-7283-484-0). [606] pages, maps 1816-2106; paper.

The volumes of the chorological atlas of the Catalan flora keep appearing with an almost chrometric regularity. The 9th of the series comprises the *Umbelliferae* as the largest family treatment, the amentiferous groups, the *Urticaceae*, *Euphorbiaceae*, and finally *Buxaceae*: 291 maps in total, arranged in the order of the *Flora manual dels Països Catalans* and corresponding to the numbered species 1144-1396 of that *Flora*. Judging from the figures available, the *Atlas*, with volume 9, is complete for exactly 39 %.

A comparison of the *Atlas* with the corresponding portions of the *Flora* reveals few yet

significant differences. One new endemic species has been described since the *Flora* was published in 1990: *Thapsia gymmesica* Roselló & Pujadas 1991. The following are additions through floristic discovery: *Ferulago granatensis*, *Torilis arvensis* subsp. *elongata*, *T. webbii*, *Euphorbia dracunculoides* (with subsp. *inconspiqua*), and *E. baetica*. Conversely, an number of species given in the *Flora* as very rare, and perhaps sometimes doubtfully present, have been omitted due to the absence of reliable, modern data: *Pimpinella peregrina*, *Petroselinum segetum*, *Salix repens*, *Euphorbia taurinensis*, *E. esula*, *E. spinosa*, and *E. duvalii*. Also omitted are two species given as locally naturalised in the *Flora*, but have obviously disappeared: *Hydrocotyle bonariensis* and *Levisticum officinale*. Cultivated taxa such as *Pastinaca sativa* subsp. *sativa*, *Daucus carota* subsp. *sativus*, and *Salix alba* subsp. *vitellina* were not mapped. No separate maps were provided for the two subspecies of each *Scandix pecten-veneris*, *Chaerophyllum hirsutum*, and *Foeniculum vulgare*. However, two unnumbered taxa mentioned in the *Flora* have been included in the *Atlas*: *Ricinus communis*, now widely naturalised, and *Quercus cerrisoides*, now a distinct species when in the *Flora* it was considered a hybrid. There have been as few as three name changes: the Catalan representatives of *Salix lapponum* are now referred to subsp. *ceretana*, *Quercus ilex* subsp. *ballota* has replaced the former subsp. *rotundifolia*, and *Euphorbia flavicomma* subsp. *mariolensis* is now treated as subsp. *flavicomma*. A forth, more important name change has unfortunately not been effected: the now rejected, unfamiliar *Quercus humilis* should have been replaced by the universally known *Q. pubescens*, nom. cons. W.G.

Regional studies of flora and vegetation

30. Josep A. CONESA I MOR – Plantes vasculares del quadrat UTM 31T BF89 Aitona [ORCA: *Catàlegs floristics locals*, 9]. – Institut d'Estudis Catalans, Secció de Ciències Biològiques, Barcelona, 1999 (ISBN 84-7283-468-9). 58 pages, maps, graphs, table; paper.

Same as the chorological atlas with which it is correlated (see the previous item), this series of grid square inventories has also reached its 9th

issue. In contrast, however, 9 issues correspond to just over 1 % of the total, since there are 848 grid squares potentially to be treated. The Aitona square comprises an area of low hills that extend on either side of the middle course of the Rio Segre, and is adjacent to the square treated as No. 5 of the series, Sarroca de Segrià. The two squares show great similarity in their topography and geology: the altitudes are comprised between 100 and 250-300 m, and the substratum is either alluvial or composed of limestone and sandstone. One would therefore expect their flora and vegetation to be similar in composition and degree of diversity, which indeed appears to be the case. There is a tabular inventory of plant associations in the present fascicle, which refers to both squares (there is no such list in issue No. 5), which shows that 63 different plant communities are found in the present square and 61 in its neighbour, 54 (77 % of the total) being common to both. No similarity analysis of flora composition is presented, but the numbers of taxa present differ only marginally, and certainly not significantly: 719 species and subspecies of vascular plants in the Aitona area, as compared to 727 such taxa in the Sarroca de Segrià square. Should you be looking for a good example of constant species / area ratios under comparable environmental conditions: there you have it! W.G.

31. Josep Maria NINOT – Mapa de vegetació de Catalunya 1: 50 000. Esterri d'Àneu 181 (33-9). – Institut Cartogràfic de Catalunya & Direcció General del Medi Natural, Barcelona, 1998 (ISBN 84-7283-415-8 & 84-393-4584-4). 89 pages, graphs, tables, colour legend, with folded colour map by Empar CARRILLO & Josep MARIA NINOT; flexible cover and twin plastic pouch.

32. Ignasi SORIANO & Josep VIGO – Mapa de vegetació de Catalunya 1: 50 000. la Jonquera 220 (39-10), Portbou 221 (40-10). – Institut Cartogràfic de Catalunya & Direcció General del Medi Natural, Barcelona, 1998 (ISBN 84-7283-449-2 & 84-393-4763-4). 71 pages, graphs, tables, map, colour legend, with folded colour map by Jordi CARRERAS, Empar CARRILLO, Javier FONT, Ramon M. MASALLES, Ignasi SORIANO, Josep VIGO, Lluís VILAR & Xavier VIÑAS; flexible cover and twin plastic pouch.

The beautiful series of vegetation maps and correlated explanatory texts, obviously intended to eventually cover the whole of Catalonia, continues with two new items (see also OPTIMA Newsletter 33: (12). 1999). I have not yet been able to see a plan of the work or a list of its published parts; it is possible that the series presently consists only of the 5 items reviewed in this column (maps No. 181, 215, 217, 220/221, 254) plus No. 255 of 1994 which I have not seen. The style, layout, and mode of presentation remains identical throughout the series, which is a good thing since it is hard to see how they could be improved. I will refrain from repeating what I wrote earlier, and shall confine myself to a brief characterisation of the areas concerned.

Like all previous maps, the two new ones pertain to the northern, Pyrenean fringe of Spanish Catalonia. They lie, however, at its opposite ends, and are so different in climate and geomorphology that their respective vegetation has barely any traits in common.

The hamlet Esterri d'Àneu lies close to the eastern margin of the sheet named after it, in the valley of the Noguera Pallaresa, which is the only part of the area that lies slightly below 1000 m of altitude. The whole remainder is high mountain, with several peaks approaching and a few exceeding 3000 m of altitude. The central, high massif is granitic, but at the periphery of the area, at lower altitudes, sedimentary rocks also occur. Pine woods prevail in the forest belt. Above, there are vast areas of alpine heaths, rock and scree vegetation.

The combined areas of la Jonquera and Portbou are situated at the extreme eastern tip of Catalonia and indeed Spain. This is a hilly region reaching down to the Mediterranean coast, in which only one small mountain area along the French border exceeds the 1000 m line, peaking at 1257 m. The substrate is acidic, consisting of schists and igneous rocks, and the climate is decidedly Mediterranean. There is some maquis vegetation along the coast, but the predominant potential vegetation type is evergreen oak forest.

Mapping the vegetation of the whole of Catalonia at this scale is an ambitious project, but provided the support continues it is probably feasible, thanks to the large number of competent field botanists that are working at it. Its completion would confer to Catalonia, already the Me-

diterranean country with the best studied flora, definite leadership in the field of vegetation study, too. W.G.

33. Pedro MONTSERRAT RECORDER – La flora de Aragón. – Caja de Ahorros de la Inmaculada de Aragón [Publicación No. 80-51], [Jaca], [2000] (ISBN 88-95306-26-3). 94 pages, illustrations and maps, mostly in colour; paper.

A tiny booklet, so small in size that it fits easily into any pocket – yet in many respects a jewel. It is written for the layman by the botanical Nestor of Aragon, Pedro Montserrat, one of the most knowledgeable Pyrenean botanists. It explains in plain language, and with the aid of carefully chosen photographs in colour or black-and-white, how the vegetation and flora of Aragon are structured, how their multififormity (Aragon has arguably the richest flora of the whole of Spain) came about, may be put to use, enjoyed, maintained. To counteract any possible risk of monotony, chapters by Montserrat's pupils and friends are built in, dealing with special subjects: presentation of a national park area, an essay on saprophytic and parasitic plants, or on medicinal and toxic plants, and others.

This booklet is public relations at its best. Being part of a popular series of informative pamphlets published by a bank, it will reach a wide local public, promoting public awareness of the value of our green heritage, of the importance of passing it on intact to future generations. W.G.

34. Silvano MARCHIORI, Piero MEDAGLI & Livio RUGGIERO – Guida botanica del Salento. [*Le Grandi Guide Verdi*, 1.] – Mario Congedo, Galatin (Lecce), 1998 ISBN 88-8086220-0. [2] + 237 pages, colour illustrations, maps, drawings; hard cover with dust jacket.

Ever heard of Salento? It is the wide, flat peninsula that forms the tip of Apulia, the heel of the Italian boot. As defined for the purpose of this book, Salento is the southern part of that peninsula, being coextensive with the province of Lecce: a region of wide landscapes with low, tabular hills of Cretaceous limestones, but in spite of its geophysical uniformity, hosting a surprisingly rich flora of c. 1300 vascular plant species,

including 8 endemic taxa (*Dianthus japygicus*, *Vicia giacomini*, *Limonium japygicum*, *Centaurea deusta* subsp. *tenacissima*, *C. japygica*, *C. leucadea*, *C. nobilis*, and *Iris revoluta*). The present, gorgeously produced, heavy folio volume prizes the glory of Salento's flora, vegetation, and landscape. It consists of rather short, popular texts on the flora, natural and man-made vegetation, and on 12 selected botanical itineraries all around the Salentine coast; texts that are embedded and almost hidden among 401 colour photographs illustrating the plants, landscapes, and some architecture of the area. These mostly half- or even full-page, brilliantly coloured photographs make up the main bulk of the book and are mostly of good technical quality (except a few that are out of focus). They illustrate no less than 264 different species, i.e., over 20 % of the wild vascular flora of the region.

On the introductory pages and cover-board several coloured engravings are reproduced whose source is cited as "Dizionario delle Scienze Naturali, Firenze 1837-1849": a rare work, virtually unknown outside of Italy, on which I could find no bibliographic data, but which in all likelihood is an Italian edition of the famous *Dictionnaire des sciences naturelles* published in Paris by Cuvier and of which the botanical plates appeared in 5 volumes between 1816 and 1829.

The main purpose of this book, as of many similar, mostly less sumptuous ones, is to promote the awareness of natural beauty, of its interest and value, among local people. By bearing witness to that beauty, this volume will also appeal to flower lovers world-wide, including professional botanists. W.G.

35. Miloje R. SARIĆ & Olga VASIĆ (ed.) – Vegetacija Srbije II. Šumske zajednice 1. – Srpska Akademija Nauka i Umetnosti, Beograd, 1997. [16] + iv + 474 pages, black-and-white photographs, tables; cloth.

When reviewing the second volume of a work, it may help if one knows what the first volume was about. Surprisingly, there is no mention of an earlier volume anywhere in the present book, except of its individual chapters (but not the whole) included in the final bibliography. I had to make a dip into our library to find out. Here is the result.

Volume 1 appeared under the title *Vegetacija SR Srbije*, with an alternative title in French *Végétation de la République Socialiste de Serbie, 1. Partie générale*. It consists of five chapters covering general aspects of vegetation, each with an English (but no French) summary, and dealing in sequence with: vegetation history and general characteristics (by Jankoviæ); the fossil record (by Pantiaë); refuge areas (by Mišiæ); life forms and biological spectra (by Dikliæ); and floristic elements (by Gajiæ); The book was published in Belgrade in 1984 by the same publisher.

The present volume, which came to light 14 years later, is the first of a twin treatise on the forest communities. It has an alternative title in English, and again, English summaries at the end (or sometimes in the middle) of the individual chapters. There are seven such chapters, each describing in some detail the features of a basic vegetation type, of which the appropriate titles might have been: oak forests (by Jovanoviæ), riverine woods (again by Jovanoviæ), beech forests (by Mišiæ), ash-and-maple woods (by Jovanoviæ), hornbeam woods (by Diniaë), woods with lilac (by Mišiæ), and šibljak scrub (by Dikliæ & Vukiæeviaë). Illustration is rather scant, with some habitat photographs but not distribution maps. The English summaries are of very unequal length and detail.

The editors have attempted to overlay a syn-taxonomic hierarchy on the basic structure outlined above, with the result that the book now looks utterly chaotic. For instance, the chapter on oak forests has received the general title "The class of Eurosiberian deciduous forests" and the running title "*Quercetalia pubescentis*", both equally inappropriate. The same running title appears later, in the 6th chapter which has been titled "The order of downy oak forests", although it treats only of woods that include *Syringa vulgaris*. The *Quercetalia pubescentis* appear a third time, as one of the subtitles in the chapter on šibljak. These pseudo-hierarchical titles have been used throughout the book, often defying common sense. They are confusing even for the reader familiar with the Serbian language, but to a much higher degree for those who depend on English: they will be tempted to use the English version of the table of contents – to find that it is not, as one might think, a translation of the Serbian conspectus but an index to English

summaries; and that these summaries are even more haphazardly titled than the chapters to which they refer.

On the positive side, let me mention the careful and thorough indexing, with separate registers not only of scientific plant and plant community names, but also of place designations. The very exhaustive and well presented list of bibliographic references extends over no less than 34 pages and comprises more than 520 entries.

The second volume will hopefully include a full, hierarchical conspectus of forest vegetation units found in Serbia, with cross references to the individual chapters where they are treated. Such an overview will greatly facilitate the use of the work and will highlight its merits as a basic treaty on Serbian vegetation. W.G.

36. Hossein AKHANI – Plant biodiversity of Golestan National Park, Iran. [*Stapfia*, 53.] – Biologiezentrum des Oberösterreichischen Landesmuseums, Linz, 1998. [4] + v + 412 pages, colour photographs, drawings, graphs, maps, tables; paper.

Golestan: the land of flowers! This telling designation was chosen by the Custodians of the Iranian Revolution when they renamed the national park that formerly commemorated the last Shah. The park culminates at 2411 m and extends over more than 90,000 ha. It includes a great variety of vegetation types, from closed lowland forest to mountain steppe, heathland and semi-desert. The author explored the area during several years, collected over 3500 vascular plant specimens, and prepared 570 phytosociological relevés following the Braun-Blanquet method to document the various vegetation types. This in-depth study is to result in a three-part botanical monograph of the park, the present volume being the first part: the basic study of plant diversity and its patterns. The second part will be an illustrated identification manual, and the third, a phytosociological study with a vegetation map.

The book starts with the usual introductory chapters on the physical environment and general vegetation structure, followed by an annotated, semi-tabular list of the 1302 vascular plant species known so far from the area. After a discussion and statistical analysis of the results, with considerations of endemism and human impact, there follows a large chorological section

with computer-generated distribution maps for 880 species. They are grid maps using a fine mesh, with indication of abundance (in terms of maximum percent covering) for each unit square. The maps are not only based on herbarium specimens (in addition to his own, the author has studied c. 5000 sheets by other collectors) but also on the author's phytosociological relevés. The work includes 18 plates of colour photographs illustrating the main vegetation types, a selection of plants, as well as human influence; and two pages of original plant drawings, mostly analytical details of umbel fruits and floral parts of *Cynoglossum kandavanense* ('kandavanensis'), newly combined here..

The book impresses not only by the wealth of information it contains and the thoroughness of the author's approach, but also by a clear, elegant presentation and by the remarkably fluid English of the text. It is the result of the author's PhD studies in Munich, funded by the German Academic Exchange Service (DAAD), and bears testimony of the excellent results that are often obtained by this kind of bilateral co-operation. The DAAD, who also contributed to the printing cost for the volume, can rest assured that their money was well spent. W.G.

Conservation topics, red data books

37. Pedro L. PÉREZ DE PAZ, Antonio GARCÍA GALLO & Andreas HEENE – Control y erradicación del “rabo-gato” [*Pennisetum setaceum*] en la isla de La Palma. – Excmo. Cabildo Insular de La Palma & Departamento de Biología Vegetal, Universidad de La Laguna, 1999 (ISBN 84-8766414-8). 124 pages, colour photographs and maps, graphs; flexible cover.

The cat-tail grass, in Spanish rabo de gato, originates from the Sahel zone of tropical Africa but has become an established, often aggressive weed throughout the tropics and subtropics of the world. The island of La Palma in the Canaries is no exception. Well, perhaps the threat to the vineyards and hillsides was even particularly heavy on that island, or, as the island's Governor claims in the preface, awareness of the Palmeros of the value of their natural patrimony and of the delicate balance between nature and man is par-

ticularly keen. However this may be, it was decided on La Palma, apparently for the first and so far only time, that something had to be done.

The present, rather luxuriously printed report tells the result of a two-seasons' action plan. It also shows the pride that local people take in its success. The degree of invasion is documented by numerous colour photographs and detailed maps. *Pennisetum setaceum* being a large, showy grass, forming deeply rooted tufts up to 1 m high and 1 m across, mapping its distribution is relatively easy. In late summer 1997, at the beginning of the action plan, the species was present in 724 squares of 250 × 250 m (a total surface of over 45 km²) scattered all around the island, from sea level up to an altitude of 1000 m, being particularly abundant where human settlements are dense. Some quick-and-dirty experimental research, done in parallel with the action plan, showed that burning provides no solution as the grass is fire resistant, and did not yield any promising biological control strategy. So manual uprooting, a brachial technique, was applied during the first winter season, after which *Pennisetum villosum* still occurred in almost 400 squares (25 km²). During the second winter, mechanical action was complemented and in part replaced by chemical methods, as some herbicides were found that proved to be very efficient, also to eliminate the re-growth in manually cleared areas. At the end of phase two, in February 1999, only 50 of the squares remained affected, so cat-tail grass populations had been reduced to 7 % of the original bulk.

The action will have to go on, as the species is known to reproduce easily by seed, and the seed bank in the soil remains intact. With some perseverance, however, it is realistic to expect that cat-tail grass, if not completely eradicated, will soon be reduced to insignificance on La Palma. This will have been achieved by the hard, unsophisticated way, by determined manual action. The book, apart from being a thorough documentation of what was undertaken and achieved, conveys just that message: strong will and energy are the base of success, in nature conservancy as elsewhere; or, as the German say goes: “Es gibt nichts Gutes, außer man tut es”. W.G.

38. Luis VILLAR (ed.) – Espacios naturales protegidos del Pirineo. Ecología y carto-

grafía. [*Publicaciones del Consejo de la Protección de la Naturaleza de Aragón, Serie: Conservación, 2.*] – Consejo de la Protección de la Naturaleza de Aragón, [Huesca], 1999 (ISBN 84-89862-08-7). 167 pages, figures, graphs, maps, tables; 3 folded maps, 16 simple maps, 7 plates of photographs, all in colour, loose, in pouch; hard cover.

This is a complex book to understand and explain, probably because it had a complex genesis. It is stated to be a Spanish translation, or perhaps better a remake, of a twin volume edited by Dendaletche under the title “Pyrénées, pays d’hommes et de hautes altitudes”, published in 1996 as vol. 11-12 of the *Acta biologica montana*; a work that synthesises the results of four years of group-wise efforts involving researchers of several institutions and presented at a series of annual meetings. I do not have the French original at hand for comparison, but it must differ substantially from the Spanish version, where several chapters have been omitted or shortened and new ones added instead.

The book essentially covers two aspects, of which the second, documentary one is particularly important: it presents a complete inventory of areas protected by law throughout the Pyrenees, each with its name, date, surface area, mapped contours, and other characteristics. Taking together France, Spain and Andorra, the protected surfaces sum up to an impressive total of 700,000 ha, of which more than $\frac{3}{4}$ are situated in Spain – but then, 60 % of the Spanish protected surfaces are “hunting preserves”, and you may be hard put to convince a botanist that restriction of hunting has to do with nature conservancy! It is a pity that the chapters dealing with the legal and administrative characteristics of the various types of protected areas, present in the French original, have been omitted from the Spanish version: obviously the differences in this respect, both within and between countries, are enormous.

A generous cartographic documentation of the protected areas of the Pyrenees is provided, formed of loose maps in a pouch at the end of the volume: 3 folded overview maps illustrating various aspects (one of them, bird protection); 8 maps at the scale 1 : 400,000 which together cover the whole area, with considerable overlap; and 8

complementary maps at the scale of 1 : 250,000 (1) or 1 : 100,000 (7), showing particular sectors. Unfortunately, these maps are neither numbered nor situated on the overview maps, so that they are fairly difficult to consult.

Preceding the documentary portion is a collection of essays on various topics, some general and some quite special. A red thread running through these chapters, if it indeed exists, is difficult to discern. The general chapters include one by the father of modern Pyrenean botany, Pedro Montserrat, on mountain landscapes and ecology, which causes me a feeling of déjà-vu. Of the more special chapters, let me mention the thorough analysis of the Pyrenean high-mountain flora (stated to summarise a manuscript by Ferrández and Sesé), which includes interesting statistical data on the rate of decrease of species number with altitude and on the altitudinal limits of high-mountain species (with an 8-page tabular overview of highest known occurrences of the various taxa).

At the very end, sadly hidden away at the bottom of the pouch, there are 7 loose sheets with beautiful landscape photographs with bilingual (French and Spanish) captions. They are preceded by a title sheet “Imágenes del Pirineo, del Atlántico al Mediterráneo” and have no stated authorship or reference to a source, but at the bottom bear a pagination (150-156) that is unrelated to that of the book itself. They were presumably reproduced from the *Acta biologica montana*, vol. 12. W.G.

39. Vladimir STEVANOVIĆ (ed.) – Crvena knjiga flore Srbije 1. Išezli i krajnje ugroženi taksoni. [The red data book of flora of Serbia 1. Extinct and critically endangered taxa.] – Ministarstvo za Životnu Sredinu Republike Srbije, Biološki Fakultet Univerziteta u Beogradu & Zavod za Zaštitu Prirode Republike Srbije, Beograd, 1999 (ISBN 86-7078-012-7). [20] + 566 pages, colour maps, colour photographs, graphs; hard cover with dust jacket.

Publication of the Serbian Plant Red Data Book is a landmark event for Balkan botany – and also, in a more general way, for threat assessment methodology. The full range of sophisticated criteria that serve to define the new IUCN stan-

dards for threat evaluation – a combination of parameters such as area size, number of populations and individuals, fragmentation, rate of decrease and estimated extinction probability over time – have perhaps never before been consistently applied on such a large scale. The author team had to evaluate hundreds of critical populations according to these criteria, databasing the results and using a novel software application for threat estimation. The new data are as detailed and objectively reliable as is presently possible, and they have the great advantage of ensuring full comparability with other data sets – on the sole condition that data of equivalent quality become available for other countries as well.

As is often the case with red data lists featuring a particular country, the sole criterion for inclusion of a taxon was its threatened status on a national level, irrespective of whether it has a wide overall distribution and is perhaps common in other parts of its area. There is one plausible argument for this policy: scattered, isolated outposts on the fringe of the range of a widespread species may present biological peculiarities and perhaps genetic differences making it worth while to protect them. In my opinion, however, one should not place such fringe populations on the same footing as the last known stand of a whole taxon. Species threatened (or perhaps extinct) on a world scale would appear to warrant particular prominence, which they were denied in the presentation here chosen. In compensation, I will make special mention of them in this review.

As the title indicates, this is the first of several planned volumes of Serbian Plant Red Data Books. It includes those taxa that are either extinct or critically endangered in Serbia, or presumed to be so: 171 taxa in all, arranged alphabetically by name within narrowly defined threat categories (a rather impractical arrangement, if I may say so, which makes it mandatory to use the index to locate an entry, as taxa will shift from one category to the next whenever there is a slight change). Of these 171 taxa, 50 are of the extinct category (4 globally extinct; 23 definitely and 23 probably extinct in Serbia). The remaining 121 are critically endangered, either world-wide (11) or in Serbia, where 96 are assigned to one of seven threat subcategories but 14, for which no adequate information is available, are “supposedly critically endangered”.

Which, then, are the globally extinct species? One of them is of little if any taxonomic value, belonging to the countless fruit morphs of *Trapa natans* that have been assigned specific status by some authors. Two others, both of the genus *Althea*, are critical taxa, closely related, respectively, to the widespread *A. cannabina* and *A. officinalis* but differing in morphological details. As they are both gone, it will hardly ever be possible to experimentally assess the degree of their distinctness. The 4th extinct species, *Scabiosa achaeta*, was discovered by Panëië in 1856 and last collected by him in 1866, then never seen again. To these four cases we have alas to add a fifth, hidden among the 23 taxa presumed extinct in Serbia: *Lathyrus pancicii*, which has obviously disappeared from its locus classicus in Serbia since Panëië’s time, and also became extinct in its two additional localities in Bulgaria. This leaves us with two undisputed and two arguably distinct species of the Serbian flora that are lost forever.

Of the 11 taxa (9 species, 2 subspecies) listed as critically endangered on a global scale, only 6 are, strictly speaking, endemic to Serbia; 4 extend to N.E. Albania (*Dianthus behriorum*, *Gentiana pneumonanthe* subsp. *nopcsae*, *Silene nikolicii*, and *Solenanthes krasniqii*), and a fifth to N. Macedonia (*Crocus rujanensis*). These five taxa may or may not be at risk also in their extra-Serbian localities: this remains to be verified. Of the six remaining taxa of this category, one is in all likelihood a synonym: *Campanula calycialata*, described on the basis of a hereditary, teratological feature (corolline calyx appendages) but in all other respects indistinguishable from its Bulgarian counterpart, *C. trojanensis*. One species must however be added to the list, *Aristolochia merxmülleri*, an endemic of the Metohia province that is listed among the uncertain taxa because no recent information on its only known population is available.

In summary, four members of the Serbian flora must be considered extinct and six of the strictly endemic ones are in immediate danger of extinction. This is an alarmingly high number, if one considers that only 59 taxa are known to be Serbian endemics.

As to the book itself, let me point out that it is of outstanding quality regarding print, paper and binding. Great care has been used in questions of layout and scientific editing of the text.

The illustration, partly of new, original drawings, partly of colour photographs (including of herbarium specimens, in the case of extinct taxa) is generous and of exquisite beauty. The distribution maps, in which dots of different colours indicate populations of various size categories, are very informative. It is worth mentioning that the English “summary”, which extends over 140 printed pages, approaches a full translation; in particular, the taxon treatments, except for descriptive matter and (regrettably) general distribution, are rendered almost unabridged. In addition, the captions for the photographs, in the main text, are bilingual. This makes the book easy to consult for botanists throughout Europe.

It is a most positive aspect of the research programme for this Red Data Book series, that it has amalgamated all Serbian plant taxonomists into an author team. No less than 30 of them, young and experienced alike, have participated in the venture. Every page of this volume is pervaded by their common enthusiasm and their love for the plant world of their country. Let this enthusiasm be contagious and spread to their readers, too. W.G.

40. Adel JALILI & Ziba JAMZAD – Red data book of Iran. A preliminary survey of endemic, rare & endangered plant species in Iran. [*Research Institute of Forests and Rangelands Publication No. 1999-215.*] – Research Institute of Forests and Rangelands, Tehran, 1999 (ISBN 964-473-061-5). v + 748 pages, 68 colour plates, map, tables; hard cover.

When a Red Data Book is produced for the flora of a country like Iran, the order of magnitude of the task will differ substantially from what we are used to in Europe. Entries will be counted not by the dozen or hundred but by the thousand. The tabular overview at the beginning of the book accounts for precisely 2405 such entries, nearly four per printed page of text on average. Needless to say, the information provided, and indeed available, cannot be very detailed. Even so, the achievement of producing such a book is quite fantastic.

The presentation follows a rigorous, parsimonious standard. Nomenclature and delimitation of taxa are, with a few exceptions, those of

Rechinger’s *Flora iranica*. For each taxon, the threatened status, life form, Iranian distribution (by provinces and localities, but without collectors or dates), and habitat are indicated. These data are taken from herbarium specimens. Many of the locality records, and even some country records, are new and so far unpublished.

Only four threat categories have been recognised, reflecting the scarcity of data: endangered, vulnerable, low-risk, and data deficient. The endangered category has been used sparingly (21 cases in all), whereas as many as 432 taxa are rated vulnerable. No counts exist for the two remaining categories, yet upon closer investigation many of those for which data are wanting will likely turn out to be threatened. The authors have refrained from using the “extinct” and “critically endangered” categories, which does not mean that they left off their list the corresponding taxa, but rather reflects their conviction that, based on available data, it is premature to consider any Iranian plant to be extinct or on the verge of extinction (although in reality such cases must doubtless exist).

Of a total estimated spermatophyte flora of 8000 species (note that pteridophytes are not covered) 1727 are stated to be endemic. This figure is on the high side, as it includes infra-specific taxa thought to be endemic. There are over 120 of them on the list: subspecies, varieties, and even one form. Even taking this into account, there is still an impressive 20 % rate of species endemism. An amazing fact is that 45 % of the endemic taxa have a very narrow distributional range, being only known from a single Iranian province. The taxonomic weight of the endemic taxa varies greatly: at one end there is the odd case of an “endemic” variety of a naturalised alien from the New World (*Amaranthus blitoides*), but on the other hand there are no less than 20 monotypic genera that are endemic to Iran, including one that is endangered (the gorgeous labiate shrub *Zhumeria*) and 8 that are vulnerable.

Obviously, exhaustive coverage of all endemic taxa was among the aims of this book, but in addition a large number of non-endemic taxa have been listed, for which the criteria of inclusion are not stated, nor can they easily be inferred.

A nice selection of the species treated, 85 in total, have been illustrated on 68 colour plates. Most of these illustrations reproduce coloured

drawings or paintings, others are photographs (of very unequal quality). Unfortunately, the colour printing is often fairly defective, so that a few pictures, especially among the photographs, are of little use. Overall, however, the illustrations are a nice extra bonus in a book which, otherwise, mainly impresses by its methodical layout and the bulk of its data. Although the subtitle states modestly, and realistically, that the work is a preliminary survey, it is a giant step towards a reliable assessment of the incredible riches that Iran holds with respect to its flora. As every first step, it calls urgently for the next ones to follow. W.G.

Gardens and gardening

- 41. Svetlana KOPYSTIANSKY – El jardí.** – Institut de Cultura, Ajunament de Barcelona, Barcelona, 1999 (ISBN 84-7609819-7). 54 pages, black-and-white photographs; paper.

Barcelona's botanic garden was founded by Font Quer in 1930 and comprises an area of 4 ha. It lies in two former quarries in the Parque de Montjuïc. When Barcelona prepared for the Olympic Games to be held in 1992, it became apparent that there was no future for the garden in its present location. A new botanical garden, with an associated research institute, was then planned on the northern slopes of Mt Montjuïc, for which the detailed design has been presented in public many years later, in February 2000. Meanwhile, the old botanic garden had remained closed to the public for a period of about 8 years.

The present booklet is a curious document, rather hard to place. It is associated with the reopening of the old garden to the public through a kind of exhibit, or rather event, by which "the entire space of the botanical garden and all the activities were considered an artwork". This event was planned and conceived by Russian born and Berlin resident artist Svetlana Kopystiansky, who features as the author of the book although she does not appear to be responsible for any of its texts.

Apart from some photographs lacking captions, to be accepted as works of art, the booklet consists of two independent texts that are of botanical interest as they provide a concise introduction to the history of botanical sciences in Barcelona. The first, in Castilian, is authored by

the director of the Institute, Josep Maria Montserrat, and describes the genesis of the Botanical Institute and associated garden, mainly during the 20th century, i.e., from the time of Pius Font Quer up to the present. The second contribution is in Catalan, by Josep Camarasa, and introduces the 18th to 19th century Salvador dynasty, with reference to their natural history cabinet and library, which became part of the Institute in 1938 to form the core of its old historical holdings. This second contribution is a reprint of an article in a non-scientific journal, published in 1988, which by means of this booklet becomes better accessible to the botanical world. W.G.

- 42. Franco Maria RAIMONDO (ed.) – Giardini di Sicilia.** [*La Sicilia Ricercata*, 3.] – Bruno Leopardi, Palermo, 2000 (ISBN 88-87135-16-9). 91 pages, black-and-white and colour photographs; paper. Price: 7,000 Lit.

The fourth issue of Leopardi's new quarterly on Sicilian culture (which started with No. 0 in July 1999) is devoted in its entirety to the island's gardens. Naturally, as this is a cultural magazine and not a compendium, the 14 included contributions, some by renowned botanists such as Franco Raimondo and Pietro Mazzola, are written in an essayistic rather than factual style. Yet, be it only by the variety and sheer beauty of its photographic images, this issue is apt to provide unique insights into a domain that botanists have so far shamefully neglected: the history and art of gardening in the heart of the Mediterranean. In many old gardens throughout the island, treasures of sculptural, architectural and landscaping art exist that are part of Sicily's cultural heritage. Some of the garden's portrayed are now in ruins, others are still impeccably kept: Some are private and not generally accessible, others, such as the university botanic gardens of Palermo and Catania, are in the public domain. Some, even among the private ones, house unique botanical rarities such as the giant bromeliad *Puya berteroniana* from Chile, shown as it flowers in the garden of Villa Piccolo at Capo d'Orlando.

Botanists and gardening fans alike must be grateful to the publisher for having made this issue possible, and to Franco Raimondo for making it happen. Publications such as this can do a lot for plant sciences by creating goodwill among

many readers who would otherwise scarcely be aware of the subject. W.G.

43. Enzo INGA SIGURTÀ – *Buxus. I bossi surreali.* – Parcogiardino Sigurtà, Valeggio sul Mincio (Verona), 1999. 132 pages, black-and-white and colour illustrations, map, table; paper.

44. Enzo INGA SIGURTÀ – *Buxus. Die surrealen Buchsbäume.* – Parcogiardino Sigurtà, Valeggio sul Mincio (Verona), 1999. 132 pages, black-and-white and colour illustrations, map, table; paper.

The garden park to which the present proprietors (the author and his uncle) gave their name covers an area of 56 ha by the river Mincio south of the Garda Lake. This had been a park area for centuries, recorded as such as early as 1792, and has historical significance as it includes the hill-top whence the leaders of the time, Franz Josef I of Austria and Napoleon III, in turn surveyed the battle of Solferino, where Henry Dunant became inspired of the idea of the Red Cross. Now most of the park, being considered one of Europe's foremost garden monuments, is open daily to the visiting public.

The present simultaneous twin edition, in Italian and German, is not merely one of the usual visitors' guides. It is the product of the owners love, not devoid of luxury. Its first portion is mainly anecdotal and artistic, being illustrated by drawings and watercolours of a contemporary artist, Luciano Cottini. In the second half, master photographer Arrigo Giovannini's beautiful pictures guide us through the park's amenities, along the 7 km long visiting route.

The park lies on essentially flat land and is beautifully designed, with a knowing alternation of trees and shrubbery, green spaces, ponds and flower beds. It varies through several flowering peaks around the turn of the year, the early tulips being relayed by irises, then roses, water-lilies, and finally chrysanthemums. Its main attraction and genuinely original feature, however, are its countless box trees – not really countless: having been carefully inventoried, there turned out to be over 31,000 of them, a steadily growing number as they reproduce naturally on the site. What makes them the leitmotiv in a surrealist landscape is the special pruning technique that has been ap-

plied to them for more than half a century now, that Sigurtà equates with “caressing”: not the trimming into regular and geometrical shapes that has characterised the Roman gardens since classical antiquity, but the underlining of their natural, idiosyncratic shapes by just eliminating the salient twigs, rendering the crowns compact and smooth-surfaced to the eye.

The author and present owner is a neuropsychiatrist, but it is obvious that his heart does not only beat for his patients. It is generous of him to let the public share the joy of his leisurely hours. Let us hope with him that the chore he has assigned to his children and willed to them in the dedication of the book, that they continue his work and care after him, may be fulfilled in the same serene and loving way that is his own and must have been that of his predecessor. W.G.

Historical subjects

45. H. Walter LACK – *Ein Garten für die Ewigkeit. Der Codex Liechtenstein.* – Benteli, Bern, 2000 (ISBN 3-7165-1205-2). 344 pages, illustrations in black-and-white and colour; cloth with dust jacket, in case. Price: 198 DM.

Last time, remember, I had the pleasure and privilege to present Lack's *Flora graeca story* in this column (OPTIMA Newsletter 34: (22)-(23) 1999), a heavy book, a beautiful one, and full to the brim of historical facts and data. This time, again a book by Lack: twice the former's size and more than twice its weight, gorgeously illustrated, superb in every way, and less than half its price. A quick first conclusion we might be tempted to draw, then, could read: publish cheaply in Switzerland rather than in expensive Britain. (The story is not, of course, quite as simple: the Swiss publisher could avail himself of very generous sponsorship.)

“A garden for eternity” is a beautiful title, and an appropriate one. The book is written to the glory of an unknown but priceless botanical jewel, henceforth to be known as the “Codex Liechtenstein”, which consists of 14 bound volumes of original plant illustrations, assembled between 1775 and 1804 by a man whose memory has long since faded: Norbert Boccius, prior of the Hospitallers' monastery in Feldsberg (now

Valtice in Moravia, Czech Republic) from 1766 to 1781, and later the order's provincial. A dedicated medical man and brilliant organiser, Boccius was also a passionate and knowledgeable botanist, even though he left no trace in botanical literature. Upon completion of his unique collection of 2748 painted plates, he offered it to Alois I Joseph Prince of Liechtenstein, in whose family it remains to the present day. What Lack brings to light and what this book is centred on, is the authorship of these paintings: in their large majority, they represent the early work of the Bauer brothers, famous in their time and up to the present day as perhaps the most genial flower painters ever. This early period of their work, starting at a time when they were merely 12 to 16 years old, was so far undocumented. No one could be better qualified than Lack, already familiar with Ferdinand Bauer through his involvement with Sibthorp, to write the present book.

Lack is a thoroughbred historian, and he has a marked gift for dramaturgy. He starts in epic breadth, weaving his threads together to form a colourful canvas, carefully orchestrating his plot up to the epilogue, the adventurous and almost miraculous saving of the books at the conclusion of World War II. Lack is also Viennese in his soul and heart, so naturally he would centre his narrative on the capital of the Austro-Hungarian Empire. When he mentions Paris as the "Mecca of Botany" this is just an excuse for explaining how some of the most valuable botanical artwork there produced came to end up in Vienna. When he devotes a chapter to Linnaeus he looks at him through Jacquin's eyes. Because, with Boccius and the Bauer brothers, his third major hero among the "dramatis personae", as he aptly calls them, is Jacquin. One of the book's major chapters is in fact a fully fledged biography of Jacquin, and a special appendix is devoted to the bibliography of his works.

This is a book you can read almost like a novel. Yet it is based on thorough, painstaking research down to the original sources in the archives in Vienna, Vaduz and Moravia; on an incredible wealth and diversity of published and unpublished texts and data. All sources are carefully documented, but not obtrusively so, not to disturb the flux of reading. You will find much technical information carefully arranged in 8 appendices, three of which were designed to pro-

vide the key to the Codex Liechtenstein through its own, original index. Curiously two of the latter have, perhaps in the last minute, been omitted from the printed book, even though they are repeatedly referred to as if they were present. They are discretely replaced by a Web address, and under that URL they are indeed fully accessible and searchable on the Internet. My advice to all those who concur that the book is likely to outlive our present, rapidly evolving online information access systems: print out these appendices immediately, having reformatted them in a space-economic way, and store the paper version together with the book. (This is, naturally, what I myself did.)

A major asset of the book are its illustrations, both the figures in the main text and the block of colour plates following it. Among the many interesting documents illustrated by the black-and-white text figures are samples from Boccius's curious herbarium, which survives in three bound volumes in Brno, and some early printed plates from Jacquin's works of which a substantial number of the Bauer paintings were copies (a normal and accepted practice at that time). The 88 superb colour plates reproduce 13 of the 14 title pages of the "Codex", some landscapes, and 64 selected items from among the botanical illustrations. Incidentally, two of the latter were misnamed (even though Lack checked the identity of the reproduced plants and updated the nomenclature): plate 66 shows *Hirschfeldia incana* not *Raphanus raphanistrum*, and plate 77 is of *Euphorbia cyparissias* not *E. characias*. But then, botany was never intended to be at the forefront of this book, and no attempt at a critical revision of the identity of the thousands of plant portraits in the "Codex" has been made: this would have been an impossible task.

With this remarkable volume, Lack has contributed a major monument to the glory of Viennese botany and culture, not neglecting his own. He has unearthed the past for us, shown up its connections and cultural undercurrents. While the book was written by a botanist on a botanical subject, it is not only for botanists to read. W.G.

46. Rodolfo E. G. PICHI SERMOLLI – Contributo alla storia della botanica in Toscana. I precursori dell'esplorazione floristica delle Alpi Apuane. [Museologia Scientifica, vol.

15, n. 2, Suppl.]. – Associazione Nazionale Musei Scientifici Orti Botanici Giardini Zoologici Acquari, Verona, 1999. v + 289 pages, 3 folded insets, black-and-white illustrations, map in colour; paper.

As one of the authors of the recent *Prodromus* of the flora of the region of Apuania, by Ferrarini & al. (1994-1997), Pichi Sermolli had undertaken to investigate the role of early botanists in the exploration of the Apuan Alps. Not surprisingly for those who know Pichi's meticulous care and ferreting talent, his study grew far beyond its original purpose, so that its results did not, for the most part, find a proper place the *Prodromus*. Instead, they form the basis of the present volume, which is much more than just a contribution to the history of floristics in N.W. Tuscany, but rather, a full monograph of early botany and botanists of peninsular Italy.

The core of the book consists of 15 chapters, each featuring one botanist (except that in one case two brothers are treated jointly). It is limited to botanists who visited the Apuan Alps prior to 1832, the year in which Bertoloni's Flora of the area, the first ever written, was completed by the publication of its supplement. Thus the lifetime of the persons considered spans roughly four centuries, from the 16th to the 19th. When looking at the table of contents, one will miss few Italians botanists of any renown. Botanical exploration of the Apuan Alps started earlier than in most other mountain areas of mainland Italy, with many 16th century botanists venturing to follow the tracks of those quarrying the famous Carrara marble. Most have been there: Ghini, Anguillara, Cesalpino, Aldrovandi. The 17th century is represented by Boccone plus some less well known names, the 18th by Micheli, Targioni Tozzetti, and Vitman; and for the 19th century, mainly its 1st half, we find Viviani, Bertoloni, his son, and two more.

For each of these personalities a succinct biography and a full bibliography of documentary sources are presented, often with extensive explanatory notes to illustrate particular problems, gaps of knowledge, or historical connotations. Several of the works mentioned are exceedingly rare, some scarcely known, having been omitted or wrongly attributed in Stafleu & Cowan's masterly botanical bibliography, *TL-2*. The text is

illustrated by portraits and reproductions of relevant title pages. The facsimile of a hitherto unpublished early plan of the Genoa Botanical Garden, dated 1837, forms one of the folded insets – one example of many demonstrating that the book is not regionally constrained in scope, even though lists of Apuan plants collected or mentioned by early botanists, with their modern taxonomic placements and correct names, remind the original context in which the study is rooted. The first historical record for the flora of the region, *Hypericum coris* from Mt Pania della Croce, was based on an early 16th century observation by Luca Ghini, reputedly the inventor of herbaria (although his own herbarium, sadly, has not been preserved).

Among the appendices there is one that one would not normally expect, considering the title of the book: Pichi's summary of Tertiary Mediterranean geology and palaeogeography, an updated and slightly extended version of his earlier account published in 1991 in the *Acta botanica malacitana* – a journal that, he believes, is “scarcely known in Italy”. W.G.

47. Hellmut BAUMANN – Pflanzenbilder auf griechischen Münzen. – Hirmer, München, 2000 (ISBN 3-7774-8350-8). 79 pages, black-and-white illustrations, map; cloth with dust jacket. Price: 58 DM.

Greek resident Swiss amateur botanist Hellmut Baumann is well known to the fans of Greek plants and culture through his book on *Greek wild flowers and plant lore in ancient Greece* (see OPTIMA Newsletter 30: (18)-(19). 1996), of which the original German version has just seen its 4th edition published. Here, Baumann again offers to his readership a book linking botany and a Greek antiquity, this time with special emphasis on numismatics. It is a slim quarto volume, devoting one page of text, and opposite to it one of photographs, to each plant considered. Some of the photographs are of ancient coins (mostly of the rich collection of casts in the numismatic cabinet of the city museum of Winterthur, Switzerland); others, of their live vegetal models as they now grow in Greece. The short explanatory texts, mainly devoted to mythological and cultural aspects, are arranged alphabetically by German plant names. 27 plants are presented, in order:

anemone, date-palm, dittany, ivy, oak, fig, barley, bellflower, pomegranate, flax, lily, laurel, poppy, myrtle, olive-tree, pine-tree, plane-tree, quince, rose, celery, the mythical now extinct sylphium, cane, storax-tree, fir, grape-vine, dwarf palm, and cypress.

It has always puzzled me how historians, and sometimes botanists, dare assign names to vegetal patterns and emblems as they appear in artwork of all kinds. Effigies on coins make no exception. Many of the plant representations on the ancient Greek coins are so utterly stylised, or so badly preserved, or both, that you can hardly recognise them as being of botanical origin. Perhaps the most abstract of all is a late Minoan gem said to feature “a prostrate lion in front of a palm tree” – which would be a worthy title if this were a quizzical abstract painting of Picasso. There are, however, exceptions in which reliable interpretations are possible. One such case is the flower in fig. 4 of the book, which Baumann newly, and to my mind correctly, interprets as *Anemone coronaria*. Some of the grapes, poppy heads, pomegranate fruits, and the marvellously accurate barley seeds of fig. 46 are other examples. Equally accurate, so much so as to permit identification by a modern key, is the spikelet of emmer wheat (*Triticum dicoccum*) represented in fig. 44, which in the caption is misinterpreted as a “germinating barley grain” (note that fig. 43, of a modern wheat ear, is also misidentified as barley). Other cases are less clear, and many leave me baffled. Why the twig with lanceolate, (mostly) opposite leaves in fig. 72 should be laurel when it closely resembles an olive branch, I cannot guess. On the same page, fig. 74 shows a very naturalistic head of Apollo with a wreath, in which the long-pedicelled, round fruits clearly indicate myrtle, yet the fact that Apollo is supposed to be associated with laurel caused it to be placed among the laurels. But then, what if the artist misidentified his model plant? After all, the fact that Canadian mint intended to show their national maple leaves on their one-cent coins does not turn the plane twig appearing on these coins into a maple twig, does it?

I was a bit disappointed at Baumann’s repeating the old legend, long proven wrong, of the Cretan date palm (*Phoenix theophrasti*) not maturing its fruits and having been introduced by man from North Africa. Otherwise, his rich knowl-

edge of Greek mythology and classical history, and the anecdotal style of his narrative, make this a book that is both easy to read and worth while being read. W.G.

48. H. Walter LACK – *The Flora graeca story*.

Oxford’s finest botanical treasure. Sibthorp, Bauer, and Hawkins in the Levant, an exhibition at the Bodleian Library, 19 July 1999 - 25 September 1999. – Bodleian Library, Oxford, 1999 (ISBN 1-85124-061-6). [6] + 50 pages, illustrations in black-and-white and colour; flexible cover.

You may remember my eulogy of Lack’s splendid book titled *The Flora graeca story*, last time in this column (OPTIMA Newsletter 34: (22)-(23). 1999). Later that same year, an exhibition with the same title was presented at the Bodleian Library in Oxford to further illustrate the subject by presenting mostly those items that were available in Oxford. A very nicely printed and illustrated booklet was published as a guide to the exhibition, with the same text author as the book: Walter Lack of Berlin.

In the notes following his introduction, Lack writes among other things: “The present catalogue is essentially an extract from this work [i.e., his earlier book]”. This I cannot confirm. The booklet is an item-by-item description of the exhibit, and while perhaps some of the wording of the great book may have been re-used, the present context is an entirely different one. It, too, has its charm – the simple, unsophisticated charm of the exhibit’s linear arrangement. It starts with Sibthorp’s travel preparations, amply documents the first, great voyage itself, barely skims the Oxford interlude and Sibthorp’s ill-documented second voyage, to devote its final third to the great work itself, the *Flora graeca*.

This is not therefore the small brother of the big book, but rather, its humbler companion and complement. It highlights selected points of the *Flora graeca* saga, lining them up like beads on a thread but avoiding the complex, carefully structured, many-layered pattern of the main volume. Among its illustration, incidentally, there are about ten that are not shown in the earlier publication, mostly reproductions in colour of *Flora graeca* plates. W.G.

Herbaria and Libraries

- 49. Vincent PONCET – L’herbier Dominique Villars (1745-1814).** Préface du professeur G. G. Aymonin. [*Série Inventaire des Collections du Muséum de Grenoble*]. – Muséum d’Histoire Naturelle de la Ville de Grenoble, Grenoble, 1999 (ISBN 2-906098-05-1). 200 pages, illustrations, graph and map in colour and black-and-white; flexible cover. Price: 150 FF.

If we look up *TL-2* to find out what is known of Villars’s herbarium, we find the following statement: “Villars’s library and collections were offered to the University of Strasbourg by Dominique Villars Jr. [...] The French government declined the offer and the collections may have been split afterwards. [...] At least part of the herbarium reached Grenoble again (or remained there).”

This book will tell you the full story, and much more. The city of Grenoble did indeed acquire Villars’s herbarium in 1827, paying exactly half the price that Strasbourg had been asked to pay. As far as is known, this was the complete herbarium, consisting of 4000 specimens and, originally, 2732 of the 2744 species listed in Villars’s main work, the *Histoire des plantes du Dauphiné* – as Villars himself noted in a letter to Lapeyrouse. Following repeated restructuring and rearrangement, and after some undocumented losses, the herbarium now comprises 2675 sheets (often with multiple specimens on each) representing 2644 vascular plant species.

The book, in its core, provides a full and complete account of the herbarium’s contents, with specimen data, plus a list of the 157 species from Dauphiné (including over 50 newly described by Villars) that are now lacking. Also, at the end, there is a list of Villars specimens that have been traced in other herbaria. Sadly, there is virtually no overlap between two lists, the single exception being *Astragalus depressus* L. which is lacking in Grenoble but present in P-JU.

Even if it were limited to the mentioned items, this would be an invaluable book. There is much more to it, however: detailed data on Villars himself, his life and work, his contemporaries and correspondents, and those who subsequently worked on his collections. These data are based,

not only on an exhaustive search of a widely scattered literature, but also on letters and unpublished manuscripts in the archives of the Natural History Museum in Grenoble, of which several samples have been reproduced in facsimile. There is an extensive discussion of the annotations found in the Villars herbarium and of their many authors, with ample photographic documentation of handwritten notes by early French and Italian botanists. There is also a generous sample of colour plates reproducing a selection of c. 40 of Villars’s herbarium sheets, two dozen more being shown in black-and-white. Among the documented rare literature items is the 1864 edition, in 60 copies, of an extract of a Bérard manuscript dated 1654 (still extant in full), which publication appears to have been ignored so far by botanical bibliographers.

In short, this book is a mine of information, of data well presented and suitably arranged for easy consultation. It fills a real gap in our knowledge, being a major contribution to the study of early French and Central European botany. Yet, as all works of its kind and importance, it raises many more questions than it can answer. Many details regarding the original state and subsequent re-shapings of Villars’s herbarium are still unknown and may well remain so forever. The quoted documents mention substantial Villars collections of lower cryptogams, bryophytes in particular, but nothing is written (nor perhaps known) of their fate and present whereabouts. Also, there is a number of other historical collections at Grenoble that appear to be unworked at present, and whose contents and importance are scarcely known. It is my hope and wish that the present book may mark the start of renewed interest and action centred on these old botanical treasures, of which many more may exist in various parts of France. W.G.

- 50. Piero CUCCUINI & Chiara NEPI – Herbarium Centrale Italicum (phanerogamic section): the genesis and structure of a herbarium.** The main collections, the collectors, the handwriting samples and the personnel in its 150-year history. – Sezione Botanica “F. Parlatore”, Museo di Storia Naturale, Università di Firenze, Firenze, 1999. 466 pages, black-and-white illustrations, facsimiles, graphs; hard cover. Price: 80,000 Lit.

Basically, this book is an “adult” version of a 1992 publication by the same author team (see OPTIMA Newsletter 30: (51). 1996). At the core of both is an enumeration of collectors represented in the phanerogam section of the general herbarium at FI, arranged first alphabetically by collectors’ names then geographically by areas of collecting; and both include facsimile reproductions of hand-written label texts. Also, the description of the major and some of the minor individual herbaria that were acquired by or donated to FI en bloc is present in both. The new book is, however, greatly expanded and improved in several respects over its predecessor. Also, it is a nicely bound hardcover volume printed on good quality paper, not just a cheap brochure.

The introductory and explanatory matter has been much expanded and Italian summaries have been added to the individual chapters. There is an extensive historical section, in which the growth of the herbarium over time in terms of accessions, the estimated specimen numbers and number of different collectors, are discussed and represented graphically; and in which the succession of directors, technical and curatorial staff is laid out, jointly with the changing affiliation within the University, its botanical institute and natural history museum, reflecting the herbarium’s ups and downs in terms of credit, function, and funding.

The complex methodology used to compile the data is described in some detail. The basic sample used to compile the collectors’ data comprised a careful selection of 150 species (55 genera) with c. 10,000 specimens. Extant databases relating to specific families (*Ranunculaceae*) or local floras of Tuscany (e.g. Monte Argentario, Giglio Island) were screened for further collectors. Also, some literature searches were performed, mostly of recent floristic publications relating to Italy. Finally, those collectors that had not been so spotted but were listed in Parlatores’ 1874 inventory (see OPTIMA Newsletter 30: (59). 1996) were added. Except for additions from the last source, which is unspecific as to specimens involved and includes the cryptogamic collections as well, the relevant labels were checked and documented, which was from the beginning the deliberate aim and policy of the authors. This explains why an obvious potential data source was not used, which would have filled many

present gaps but would not have permitted direct label verification: the herbarium’s accession books and acquisition records.

The collectors’ list now comprises 1564 names. It does not cover the separately kept Webb Herbarium (for which an independent list exists, compiled by Steinberg in 1977), nor the Tropical (formerly Colonial) Herbarium kept at the same location but administratively independent (FT), nor as I just said the cryptogamic sections except for the early collectors mentioned by Parlatores in 1874. Even so, the list is obviously far from complete. This is true to an even higher degree for geographical coverage: for example, Antonio Baldacci (of whom FI has one of the best specimen sets) is given as having collected in Albania, but neither in Greece nor Crete. Also, the list has some inexplicable errors, such as A. Cunningham consistently misspelled “Cummingham”, with even Parlatores’ correct entry mis-corrected. Such shortcomings should be borne in mind by the user, but do not detract substantially from the work’s obvious merits.

The most important, immensely useful part of the book are however the facsimile reproductions of hand-written labels. They of much better printing quality than in the earlier version, and are reproduced in full not only as cuttings limited to the collector’s own handwriting (now foreign annotations are maintained but flagged as such). In addition, and most importantly, their number has very substantially increased: from 20 to no less than 483, corresponding to 465 different collectors. This is probably now the richest single botanical handwriting documentation in existence – a most valuable tool for any herbarium taxonomist. W.G.

51. Paola LIVI & Andrea DE PASQUALE – Il fondo antico della biblioteca del Museo Civico di Storia Natuzrale di Milano. Catalogo delle edizioni die secoli XV-XVII. [*Natura (Milano)*, 89(1)]. – Società Italiana di Scienze Naturali, Milano, 2000. 112 pages, black-and-white and colour illustrations; paper.

The old books collection of the Natural History Museum in Milano is not impressively rich – presumably for two reasons. First, the Museum’s origin is fairly recent, as it was founded as late as 1838. Second, the library was severely depleted

by war events, perhaps not so much by the fire that destroyed the Museum in 1943, as most of the library had been evacuated, but mainly because when the war was over only part of the books came safely back to their shelves, the remainder having mysteriously disappeared. The list of the old books no longer extant, officially considered as “burnt”, is given at the end of the present booklet and comprises 89 entries, including the two oldest books the library ever possessed: two Venice editions of Pliny’s *Natural history*, both in Italian, dated 1469 and 1489.

What now remains or has been newly acquired totals 113 items, published between c. 1497 (a *Hortus sanitatis* printed in Strasbourg) and 1699 (the *Auctuarium rariorum* of Jacobaeus, in Copenhagen). They extend well beyond natural history but for the major part are zoological, with some valuable botanical items that include the editio princeps of Fuch’s *Historia*, of 1542, as well as works of Aldrovandi, Boccone, Daléchamps, Durante, Clusius, and Mattioli. Each item is presented in thorough bibliographic style. Some of the plates or frontispieces are reproduced in 16 facsimile plates of which 5 are botanical: two from Fuchs, both coloured, including the famous portraits of the artists and engraver; one from Aldrovandi’s *Dendrologia* of 1668; and two from the 1684 edition of Durante’s *Herbario nouo*.
W.G.

52. Hans Joachim CONERT (ed.) – Index collectorum herbarii Senckenbergiani. [*Courier Forschungsinstitut Senckenberg*, 217]. – Senckenbergische Naturforschende Gesellschaft, Frankfurt a.M., 1999 (ISBN 3-929907-59-3). [8] + 201 pages, illustrations in black-and-white and colour, facsimiles; paper.

The herbarium of the Senckenberg Research Institute (FR), with c. 700,000 phanerogamic and 300,000 cryptogamic specimens, is one of the major plant collections in Germany. Even though it did not exist before 1817, the year in which the Senckenberg Natural History Society was founded, it includes several valuable, partly historical collections, of which from a Mediterranean-Oriental point of view Ruppell’s original material of N.E. African and Arabian plants described by Fresenius and a few others is the most important.

The present book is not what the title suggests, a plain straightforward index to collectors represented in the FR herbarium. It is more and also less than that. It is an assemblage of 6 papers by different authors, all in German with short English summaries, as follows. (1) Conert, the volume editor, has written a short introduction, giving a concise overview of the fates, development and governance of the FR botanical collections. The next following papers give full accounts of the two early important accessions and the persons responsible for them. (2) Ruppell and his plants, mentioned above, are presented by Lobin who enumerates 116 new species based partly or totally on that material, with their (potential) nomenclatural types and presently correct names. (3) Baumann contributes an account of the *Oekonomisch-technische Flora der Wetterau* by Gärtner, Meyer & Scherbius (1799-1802), with biographical notes on these three botanists and a concise tabular overview of the nearly complete FR set of voucher specimens for that Flora. (4) Next the collectors in the lichen, bryophyte and fungal sections are dealt with by Schöller & Kalthoff. Their paper includes an 18-page tabular overview of historical (but undated) lichen specimens from Germany, an utterly unpalatable item in the given context, which only makes one wonder why in the two herbaria inventoried (Metzler’s and Will’s), less than 1300 of the c. 10,500 specimens are of German origin. (5) Redeker presents a rather haphazard selection of what he considers to be the 100 most important collectors represented in FR, each with biobibliographical data and indication of the material present, and for each, with the facsimile reproduction of a characteristic, often printed or typed label. This list is an curious mixture, ranging from donors of whole personal herbaria (which may include many “secondary” collectors), such as Hupke’s with its 90,000 specimens, to bought sets of universally known exsiccata series like Billot’s “*Flora Galliae et Germaniae exsiccata*” or Schultz’s “*Herbarium normale*”. (6) At the end, compiled by Döring, there is the collectors’ index proper, or what remains of it once (most of) the names mentioned under (4) or (5) have been eliminated.

Please don't misunderstand: this is a valuable source of information, and I am sure I will often use it; also, there is much tedious and thankless work behind this book, for which we must all be grateful – yet it leaves one with a feeling of irritation. To start with, it is unusable without the personal name index at the end, as a given collector may be listed in any or all of the three last papers. At a second look, one will find unaccountable gaps in the lists: not the inevitable ones due to incomplete screening, but collectors mentioned as being represented in a given herbarium (take Hupke's as an example) but not listed separately, nor even indexed. One has a constant feeling of a disorderly and partly redundant presentation, even though there have been obvious efforts to keep redundancy at a minimum. Well, at least Gärtner, Meyer, and Scherbius are honoured each by two full biographies, under (3) and (5), and as if to demonstrate that these are independent texts and do not result from plagiarism, Scherbius is credited with two different dates of birth, one month apart. The stepmotherly treatment of algae is particularly awkward, when one knows that until quite recently there was a special algal curator appointed at FR. His name, Mollenhauer, appears nowhere in the book except among the literature references. Yet there are algal collections at FR, and important ones (some collectors such as Agardh, Brébisson, Kützing, Lyngbye, and Meneghini are given in the list, but obviously only based on secondary literature sources, with no concrete FR collections being mentioned). W.G.

Symposium proceedings

53. Dieter WALOSSEK (ed.) – Systematik im Aufbruch. Tagungsband zur ersten Jahrestagung der Gesellschaft für Biologische Systematik in Bonn vom 17.-19. September 1998. [*Courier Forschungsinstitut Senckenberg*, 215]. – Senckenbergische Naturforschende Gesellschaft, Frankfurt a.M., 1999 (ISBN 3-929907-57-7). [8] + 238 pages, illustrations in black-and-white and colour; paper.

“Systematics setting off” is a slogan well chosen to characterise the mood of the audience at the first annual meeting of the Association for

Biological Systematics. The society had been founded at the end of 1997 in Berlin, with the aim of bringing together taxonomists working in the various biological disciplines – botanical, zoological, microbiological, palaeontological – not only to exchange their experience and stimulate each other's research but also, and perhaps principally, to join forces so as to confer an improved public image and enhanced political standing to what in modern terms we like to call “biodiversity research”. The Association still has a predominantly German membership but is international in scope, and intends to publish a new high-quality international journal, “Organisms Systematics and Evolution”, entirely in English and starting its quarterly publication at the beginning of 2001. Let me – outside of the agenda proper – encourage all OPTIMA members with a more than local research interest to join the Association, on which details (including an application form) can be found on the Internet (<http://biosys-serv.biologie.uni-ulm.de/gfbs/stgfbs/stgfbs.html>).

Let us then turn back to the first annual meeting of the Association. There were over 200 persons in attendance, and the scientific programme consisted of 90 oral or poster presentations. 32 of these, having been submitted for publication and positively reviewed, form the present volume – a skilfully edited, well printed book that strikes by the variety of its subjects even more than by the high quality of its contents. Botanical papers make up for slightly more than one third of the total. They include contributions from mycology, lichenology, bryology, and phycology in addition to those on higher plants or on general topics. Among the latter, the opening keynote lecture by the Director of the Rijksherbarium in Leiden, Peter Baas, must be highlighted: “Biodiversity research – from convention via lip service to action?” Another noteworthy contribution (in German, the language that is still used in a majority of the papers, only 10 being in English) is Barthlott's on global species diversity and its uneven distribution, the one paper to be illustrated in colour (both maps and photographs). In conformity with the Association's declared goal, many of the zoological contributions are worth reading for anyone working on the systematics and phylogeny of organisms. W.G.

54. Bruno RAGONESE (ed.). – Flora e vegetazione degli Iblei. Atti del Convegno su “Flora e Vegetazione degli Iblei”, Noto, 26-27 ottobre 1996. [*Phoenix Collana di Ecologia*, 7]. – Accademia Gioenia di Scienze Naturali, Catania, 1998. 446 pages, black-and-white illustrations, graphs, maps, tables; paper. Price: 30,000 Lit.

The Hyblean region corresponds to the S.E. angle of Sicily: a loosely defined territory including the Provinces of Syracuse and Ragusa plus some adjoining areas, with at its core a high tableland also known as the Hyblean mountains, which are in fact rather hills, not quite reaching 1000 m of altitude in Mt Lauro. A project has been formed to protect parts of this area by declaring it a National Park, and in this context the Fauna of Sicily Corporation (Ente Fauna Siciliana) sponsored a twin symposium, the first in 1995 on the fauna and the second in the following year on flora and vegetation of the region. The present volume, with the proceedings of the 1996 conference, is altogether a kind of botanical monograph of the whole area.

The symposium was dominated by the botanists of the University of Catania, to whom most of the authors belong. There are two introductory papers on physical geography and climate, plus 16 botanical papers, some of them on special topics but others quite general in scope. Among the latter are a survey of phytogeography, by Brullo & al., that includes an enumeration of the vascular flora; an overview of the vegetation with a syntaxonomic digest, also by Brullo & al.; a presentation of the 19 species and subspecies endemic to the area, by Bartolo & al.; and contributions on the bryophytes (by Puglisi), macrofungi (by Buda), lichens (by Grillo), and seaweeds (by Giaccone & Di Martino), the three latter again with species lists. Other papers deal with special areas (e.g. Mt Lauro) or vegetation types (e.g. woodlands) or with particular taxa (e.g. orchids, the recently discovered Sicilian *Zelkova*, and the long famous Sicilian occurrence of *Cyperus papyrus*). W.G.

55. Anonymous (ed.). – Ellênikê Botanikê Etaireia. 7° Panellênio Epistêmoniko Sunedrio. Praktika. 1-4 Oktôbriou 1998, Alexandroupolê, Dêmotiko Theatro. [Hellenic Botanical

Society. 7° Panhellenic Scientific Conference. Proceedings. 1-4 October 1998, Alexandroupolis, Municipality Theatre.] – Ellênikê Botanikê Etaireia, Thessalonikê [1999?]. 359 pages, black-and-white illustrations, graphs, tables; paper.

This is the Proceedings volume for the 7th National Symposium of the Greek Botanical Society, held in Alexandroupolis in October 1998. The 184 participants were offered 37 oral and 52 poster presentations, of which 28 and 42, respectively, are included in this volume in the form of either summaries or short papers. The Greek language dominates, only one out of 70 texts being in English, but an English version of the abstract is present in a most of the contributions. The volume is undated and may have been published in 1999, although I received my copy only this year.

The lectures were presented in 5 sessions: Cell biology (6), Systematics, floristics and vegetation science (8), Ecophysiology and education [!] (5), Aquatic botany (3), and Ecology (6). The poster presentations are arranged in a thematic sequence but without subtitles. A complete survey is not possible here, so I will limit myself to mentioning some items which, I believe, are of general interest.

In Session 2, Maloupa & al. present the project of a new botanical garden with research facilities in Nomos Kilkis, Central Macedonia, where on an area of 30 ha the indigenous flora of the Balkan Peninsula is to be shown; the “Balkan Botanical Garden of Pontokerasia” is presently under construction, being funded by an EU grant and the Greek Ministry of Agriculture. Chitos announces the discovery, in Epirus, of three species new to the Greek flora, including the shrub *Petteria ramentacea*. Kypriotakis & al. survey the chasmophytic vegetation of Crete, foreshadowing the formal recognition of 5 new associations – curiously without mentioning Zaffran’s seminal work of 1982 in which several associations are described that partly overlap with the newly proposed ones. Tan & Iatrou (in the volume’s sole English paper) announce the publication of a three-volume treatise on the Greek endemic flora (c. 760 species, or 1280 taxa), of which vol. 1 will be devoted to the endemics found in the Peloponnese.

Among the posters there are two on taxonomic subjects, both only in the form of summaries: a revision of Greek *Aethionema* by Kamari & Constantinidis (6 species, of which five are local; *A. polygaloides* is relegated to synonymy); and a synopsis of *Limonium* taxa on the islands of Kithira and Andikithira, by Artelari & Georgiou (9 species, two of which have yet to be described). Of several contributions to floristics and phytogeography I will mention three: Arampatzis & al. give new N. Greek locality data, with specimen citations, for 14 rare or critical taxa (including *Cistus albanicus* which, due to lack of consideration for Balkan botanists by the pertinent nomenclature committee, will now have to become known as *C. sintenisii*); Strid & Tsanoudakis enumerate 68 phanerogamic taxa that are new records for the Island of Samothraki, without locality data; and Konstantinou & al. present an account of the endemic element of the flora of Mt Athos. W.G.

56. Anonymous (ed.). – Second Balkan Botanical Congress. Abstracts. İstanbul, Turkey, May 14-18, 2000. – Tübitak, İstanbul, 2000. [4] + 249 pages; paper.

The Second Balkan Botanical Congress, held earlier this year in İstanbul under the motto "Plants of the Balkan Peninsula: into the next millennium", followed upon the first such congress in Salonica in 1997 (see OPTIMA Newsletter 34: (26). 1999) and renewed its success story. Judging from the 454 abstracts reproduced in the present volume the attendance was overwhelmingly large, even though not all lectures and posters were eventually presented as announced. The scientific programme consisted of 7 thematic Sections (1 and 2 twinned) plus 3 plenary lectures and a common, concluding panel discussion, each Section including both oral and poster presentations; the former being delivered in three parallel sessions. The Section of major interest in an OPTIMA context is the twin one, No. 1 & 2, on "Balkan flora, vegetation and conservation; taxonomy, geobotany and evolution", to which 116 intended presentations (33 oral, 83 posters) pertain, plus Heywood's keynote lecture on the assessment, conservation and sustainability of Balkan plant diversity. As it is the organisers' intention to publish the proceedings in full, I will

not even attempt at going into any detail here. Let me just mention as a general fact that for the purpose of the present Symposium the Balkans have, for once, been extended to include the whole of Anatolia plus, marginally, Azerbaijan. W.G.

57. G. NAKHUTSRISHVILI & O. ABDALADZE (ed.) – Plant life in high-mountains. Proceedings of Kazbegi IV International Symposium (9-14 June, 1996). – Tbilisi, Institute of Botany, Georgian Academy of Sciences, 1998. 144 pages, tables, maps, graphs; paper.

There are a few places where Georgia reaches northward beyond the main watershed line of the Caucasus. One of them is the upper part of the Terek River valley, along which the main classical route crossing the Central Caucasus runs. Here lies Kazbegi, in an area already explored in the second half of the 18th century by early Russian botanists such as Gueldenstaedt and Marschall von Bieberstein. The Institute of Botany of the Georgian Academy of Sciences has a Mountain Ecology Station there, in which international symposia on (various?) high mountain subjects were organised in 1977, 1984, 1990, and now again in 1996. With the new Regional Centre of Ecological Education now available, thanks to funding by the World Wide Fund and the German Ministry for Technical Co-operation, it is planned to hold such symposia on an almost yearly basis.

The 1996 Symposium was devoted to plant ecology and was attended by 19 botanists of five different countries: besides Georgia, Germany, France, Italy and the USA were represented. The 16 papers delivered at the symposium are included, plus 7 brief reports contributed subsequently. All are written in English except one, which is in German, and all have Grusinian abstracts so that the reader can admire the country's beautiful if exotic script. The subjects treated range from classical vegetation studies to reproductive biology, population dynamics, ecophysiology, and history of the vegetation. Four of the papers are by foreign guests and present studies carried out in various parts of the Alps; the remainder, by local botanists, concern the Caucasus. W.G.

