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## INTRODUCTION FROM THE EDITOR

Welcome to the third edition of the Euro+Med PlantBase newsletter. First of all we must apologise for the lack of newsletters over the past months. Various other elements of the Secretariat's work took over, and the main priority over the first year has been to get all aspects of the project up and running smoothly, and according to schedule. However, we appreciate the importance of communicating the latest information on the project to all of those involved, and hope that this newsletter will be the first of more regular bi-monthly newsletters about the project.

The newsletters will be produced in Reading, by the project Secretariat, but we welcome contributions from all involved in the project, so please let us

know if there is anything you would like to contribute in the future, or if there is anything else you would like us to include in a future newsletter.

*L. Caddick*

## RECENT EVENTS

### Euro+Med 1<sup>st</sup> Annual Report

October was a busy month for the Secretariat, producing our annual report and cost statements for the European Commission. Thanks to the help and contributions received from all our partners, the report was sent to the EC on time. We are now awaiting review of the report, and hope to receive details of our EC funding for the forthcoming year shortly.

The annual report to the EC included detailed reports on progress and future planning from all the project work packages, excerpts from which are included below. It was encouraging to see how much work has been undertaken in the first year of the project, with the majority of milestones and deliverables being achieved on time. A summary of publications and talks given on Euro+Med PlantBase was also presented to the EC, and is included at the end of this newsletter.

*L. Caddick*

### Executive and Project Partners meeting, September 12, 2001, Palermo

Taking advantage of the presence of many members at the X OPTIMA meeting on 13-19 September, 2001 in Palermo, a meeting of the Euro+Med Executive Committee and Project Partners was arranged. It was held in the Old Library of the Faculty of Sciences,

through the courtesy of Professor F.M. Raimondo, President of the Faculty.

Much of the meeting was taken up with two major items – the establishment of Family Editorial Panels and the detailed process of Checklist review. A critical component of the Project is the revision of selected taxonomic groups to demonstrate how the system will operate. Accordingly, after a great deal of discussion, decisions were made on which families/genera would be revised in the first phase of the Project and Co-ordinators, Editors and Authors for these were proposed. Invitations will be sent out to the specialists concerned.

The second main item was the detailed process and methodology for the critical review of the initial Euro+Med Checklist by National and Territorial Centres, once the appropriate merging software for PANDORA is in place and tested, and a start has been made in outputting the initial list. A document had been produced by the Secretariat detailing the protocol that has been developed and this was carefully reviewed and modified where appropriate.

*V. Heywood*

#### **Euro+Med PlantBase Round-Table, organised within the scientific Programme of the X OPTIMA Meeting, Palermo (Italy), September 18, 2001**

The Round-Table was organised to inform delegates at the OPTIMA meeting about the Euro+Med Project. The programme was as follows:

1. B. Valdés. Introduction.
2. V. H. Heywood. Presentation of the Euro+Med Project.
3. S. Jury. Presentation of Phase 1 of the project. Workpackages.
4. B. Valdés. Preparation of the Initial Checklist.
5. G. A. Domina. Output formats of the Synonymic Checklist.
6. P. Uotila. Mapping data.
7. G. Kamari. Karyological data.
8. S. Jury. Prospects for future development.

Each speaker gave a 5-10 minute presentation, and these were followed by a lively and constructive discussion on different aspects of the project.

*B. Valdés*

#### **Computer Working Group (CWG) meeting, July 18, 2001, Berlin**

During the last CWG meeting in Berlin, a system sketch was drawn up to show present and future system modules within Euro+Med PlantBase, to identify information flow and missing components. This was important in providing direction for future work, including development of the central database system, maintenance software (for data merging and editing), and a public interface.

The main focus of the meeting was then the clarification of technical requirements for the Euro+Med central database server, in particular its technical specifications and data structure. The system used needs to be one that is widely used, relational, with defined integrity and SQL compliant interfaces, as well as something that is both affordable and scalable.

The central database system will exist on several levels:

- Presentation level (i.e. user interface)
- Business level (taxonomic integrity and operations)
- Database level (tables and low level integrity implementation)

Since the meeting, a data structure for the central database has been drawn up and circulated amongst the group for review. In particular, it was important to check compliance with other database applications being used for the project, i.e. BIBMASTER and PANDORA. PANDORA is currently being used for data capture of Euro-Mediterranean floristic information published since *Flora Europaea*, and data from countries not included in *Flora Europaea*. BIBMASTER will be used in Madrid for editing taxonomic revisions.

Data capture for Euro+Med bead data sets was also discussed, and progress was reported as follows:

- Conservation data for most of the European red list vascular plants has been captured and provisionally mapped to *Flora Europaea* names. Links with other conservation-related Euro-Mediterranean databases are also being established. A draft output format for the conservation bead was presented to the project executive.

- An access database containing karyological data from Patras has been delivered to the beads co-ordinators, and a draft output format for the karyological bead was presented to the project executive. Mapping of the Patras database to *Flora Europaea* names is under discussion.
- Discussion between the beads co-ordinators and the University of Helsinki (*Atlas Florae Europaeae* Project; AFE) is in progress to determine technical requirements for linking AFE data with Euro+Med. A computer program has been developed to convert data from old AFE volumes for Euro+Med use, and version 1.0 of the AFE data editor (developed for collecting data from AFE vol. 13 onwards), is being improved and modified to fit with Euro+Med territories.

*L. Caddick & F. Bisby*

### **Euro+Med General Meeting, April 20-22, 2001, Palermo**

The general meeting held earlier this year was a great success, enabling the exchange of ideas and reports by numerous European and Mediterranean scientists involved in the project. In addition to various committee meetings (Steering Group, Executive and Partners, Computer Working Group), much of the meeting was taken up with presentations on different aspects of the project, and on other related issues, for example:

- The future of Euro-Mediterranean plant diversity
- The Euro+Med response to present day plant information needs
- Euro+Med computing issues
- Databasing European national red lists
- Mapping the European and Mediterranean floras
- Chromosome data and Euro+Med
- The Fauna Europaea project
- The MEDUSA project
- The European Nature Information System
- Floristic research in Palestine, Spain, Portugal, Germany and Northern Europe
- Taxonomic research on *Cardamine*

Abstracts of conference presentations are on the Euro+Med website (<http://www.euromed.org.uk>).

*L. Caddick*

### **New members of Staff**

The last few months have seen the addition of several new members of staff to the Euro+Med project. We would like to welcome them all to the project, and wish them luck with their future work with us. New members of staff are as follows:

|                             |  |
|-----------------------------|--|
| <i>Mr. Tarik el Atechi</i>  | IT co-ordinator (part time) for the Euro+Med Secretariat at the University of Reading.   |
| <i>Dr. Belén Albertos</i>   | Euro+Med post doc at CSIC Madrid, working on circulation of manuscripts, automated editions of taxonomic accounts and database management. |
| <i>Mr. George Mitsainas</i> | Data input for the Patras Karyology database.  |
| <i>Ms. Eleni Kriemadi</i>   | Data input for the Patras Karyology database.  |
| <i>Dr. Iva Hodalova</i>     | Data input for Euro+Med database at Bratislava.  |

### **PROGRESS WITH THE EURO+MED DATABASE**

The four Euro+Med Data Input Centres (DIC's) and the Euro+Med Secretariat (Reading) began a new timetable of data input and appending on the 29<sup>th</sup> October 2001, to speed up the upgrading of the Euro+Med Database. Under this cycle the time between the completion of a Family Block by one DIC and the commencement of the same Family Block by another DIC has been reduced from eight weeks to two weeks. Within two weeks each DIC must send their new data to the Secretariat, the Secretariat will append the four Family Blocks received, and a new Nomenclator with the four Family Blocks appended will to be redistributed to the DIC's.

The Secretariat has now employed a new member of staff, Mr Tarik El Atechi (currently being trained by Judith Heald), to append the data provided by the DIC's and to distribute the new Nomenclators.

#### *Checklist Review*

The Appending software was designed for PANDORA by Richard Pankhurst to assist in producing the Nomenclator for use by the DIC's. However, this software takes no account of conflicts between the status of names in different databases

and thus is unsuitable for production of the database to be used in the Checklist Review process. New Merging software has been developed by Richard Pankhurst, which identifies conflicts between names as an incoming dataset is merged with an existing one. This software was delivered to the Secretariat at the end of October and is currently being tested.

#### *Data Enhancements*

Richard Pankhurst has successfully used the Merging software to merge the database of *Flora of Macaronesia Checklist of Vascular Plants* 4<sup>th</sup> revised edition, Sommerfeltia (1993) to the Euro+Med Database. This has resulted in an additional 3590 names and 23809 distribution records being added to the database. Richard has also converted *MedChecklist* Volumes 1 & 3 into PANDORA format, and merging to the Euro+Med database will take place over the next few weeks.

*J. Heald*

## REPORTS ON WORKPACKAGES

### **Workpackage 1: Scientific overview, planning and international co-operation**

Project management and co-ordination has been greatly facilitated by the establishment of electronic mailing lists, a website, and by regular meetings between groups. The Secretariat aim to respond to concerns regarding communication to a wider range of participants by resuming production of bi-monthly newsletters during year 2.

Consolidation of a network of centres of taxonomic expertise throughout the Euro+Med region has been highly successful. The majority of institutes contacted have been enthusiastic and willing to review taxonomic outputs from the project, in exchange for access to Euro+Med data. The few remaining contacts required are currently being sought. The high levels of interest during establishment of the Euro+Med network support the need for such a consensus taxonomic information resource in the Euro-Mediterranean region.

Strict data standards and guidelines have been produced for standardised presentation of taxonomic information, developed by consensus agreement of a number of senior botanists involved in taxonomy and bioinformatics within the Euro-Mediterranean region. These data standards, which follow those

advocated by the Taxonomic Databases Working Group (TDWG), may provide a useful guideline for other electronic floristic outputs produced within Europe and the Mediterranean.

*L. Caddick*

### **Workpackage 2: Software development**

The PANDORA software, which has been modified and extended to serve as a taxonomic data input tool at the four Data Input Centres, is installed and running at the DIC's. Novel software to merge datasets produced by separate DIC's, and to highlight conflicts, has been designed and is being tested.

Tools (MS Access, Visual Basic) have been implemented to automate data import from the first stable checklist when it becomes available (PANDORA export format) to the IOPI database, running as much as possible at the Berlin server. These tools can also be used to detect integrity problems within the source data set and will be used at a later stage of the project to feed the database needed as a backbone for the remote editor.

The compliance of the taxonomic databases in use (data entry system, revision system, remote editor backbone database, and central information system, the latter not yet provided for) will be crucial for the project as a whole. To achieve compatibility, a common data structure will be developed, and import/export procedures from and to this (virtual) structure will be implemented. The sound relational data model developed by the Berlin partners as an underlying data structure for the editor backbone database will provide the basis for this central data structure. To ensure that this structure is compliant with all other databases involved in the Euro+Med editing process, the proposed data structure and relational model were carefully documented and distributed to the computer working group. A three-week email discussion confirmed the compliance and adequacy of this model.

*A. Güntsch*

### **Workpackage 3: Preparation of an initial Euro+Med PlantBase checklist**

After one year of EC-funding, work package 3 is more than halfway complete in fulfilling one of

the main aims of the project: the preparation of a synonymic checklist of vascular plants for Europe and the Mediterranean.

A list of Standard Floras containing data to be incorporated into the Euro+Med database, was produced. Standard flora lists were widely circulated and discussed before being finalised, to ensure complete and up to date coverage of the European and Mediterranean floras. Standard floras were assigned to Data Input Centres according to taxonomic and linguistic expertise in each of the centres.

Plant families included in the ESFEDS (*Flora Europaea*) database were divided into 28 blocks for input into the database. Each new family block has been *appended* to the latest version of the database as it was completed, and before the DIC's began work on the next family block. This organisation allows DIC's to work more efficiently as regular database updates prevented repeated entry of information by different centres.

*B. Valdés*

#### **Workpackage 4: Taxonomic revision of components of the checklist**

A "Guide for Contributors of Taxonomic Accounts" was produced in collaboration with the Secretariat, and approved by the Executive, in which details of the taxonomic accounts are explained with examples. This document is available on the Euro+Med website, under "Documents".

A list of agreed genera for taxonomic revision was produced, and work on some of these taxa (e.g. Geraniaceae and *Cardamine*) is already in progress. Authors and advisers for taxonomic revisions will be invited at the beginning of year 2.

*S. Castroviejo*

#### **Workpackage 5: preparation of a synonymic catalogue of the plants of Europe**

Editorial guidelines for the Synonymic Catalogue of the Plants of Europe were drawn up, and a number of alternative draft output formats for the catalogue were presented to the Executive committee at the

end of the first year.

*G. Domina*

#### **Workpackage 6: Developing methods for producing information summaries, and linkages with satellite databases**

The web pages containing Euro+Med data summaries ("beads") will be hosted by VIM on a high-performance, high-available SUN Microsystems NETRA T1 web-server, using the SOLARIS 8 operating system, Apache server software and Tomcat servlet engine. This machine is installed with MySQL and php4, and has a direct connection to another SUN server running Oracle 9i.

The pages containing summary information will be produced dynamically from the database and linked at species level to the core database. The user of the core database web interface will not recognise that the "bead" data are produced by another machine.

Where the responsible institutions have agreed to cooperate, there will be direct links from species information in the "bead" web pages to corresponding species information in other relevant web based databases.

*C. Köppel, K. Ammann, P. von Ballmoos*

#### **Workpackage 7: Recording distribution and mapping data and linking these with Euro+Med PlantBase**

The list of agreed European and Mediterranean territories to be used by Euro+Med PlantBase has been used to replace the old *Flora Europaea* Gazetteer in the Euro+Med database Nomenclator, so that Data Input Centres can update taxon territory level presence/absence data and status information from standard floras during the data input process.

In preparation for the addition of more detailed distribution data from AFE (*Atlas Florae Europaeae*) into the database, data from old AFE volumes were prepared for territory level groupings, and a computer program has been developed to convert the AFE data.

Version 1.0 of the AFE Data Editor (Lahti, T., July

2000), developed for collecting data from AFE vol. 13 onwards, is being improved and modified to fit with Euro+Med territories in Europe. With some further modification, the data editor can be used for collecting and updating data (from 50x50 km<sup>2</sup> grid information or territory only information) throughout the whole Euro+Med area.

*P. Uotila*

### **Workpackage 8: preparing summaries of conservation and genetic resources information**

During year 1, work has focussed on developing methodologies for preparing summaries of conservation and genetic resource data, and designing an output format for these data. The information contained within the conservation data summary will include species name, distribution, endemism, distribution maps, legal status overview, threat status within Europe, listing in international conventions, conservation measures and recommendations, relevant literature regarding conservation and occurrence in protected areas. Much of these data are already available, and the bulk of the future work will involve processing of the data into a suitable format.

A draft output format for the conservation data summaries has been produced: for each species the web page will show a distribution map, summary conservation and status information, and electronic links to other relevant data sources.

Much work was devoted to collating information planned for inclusion in the “bead”, concerning the national Red Lists of European countries. This information will be used by both the EuroRedlist project and Euro+Med Plant Base. Each Red List is now available in a standard format, and the resulting single database is being scrutinised for consistency.

*C. Köppel, K. Ammann, P. von Ballmoos*

### **Workpackage 9: Preparing information summaries on karyological data**

A draft output format for the karyological summary has been produced. This will include information from the Patras chromosome database on chromosome number, country of origin of the data and reference citation. Each of the records visualised in the Euro+Med summary table will be directly

linked to the Patras karyological database. By clicking on any of the records, a new window will open showing the original data for the corresponding specimen listed in the Patras database.

The main karyological database at Patras has already been constructed and it is being continuously updated with new karyological data. During the first year the database has been filled with 24212 total records, corresponding to 6866 taxa. Of these 24212 records, 7600 have full details.

*G. Kamari*

### **FORTHCOMING EVENTS**

*Meeting of Euro+Med Computer Working Group*  
Slovak Academy of Sciences, Bratislava, Slovakia  
November 27-28, 2001

*Meeting of Euro+Med Executive Committee and Project Partners*  
Slovak Academy of Sciences, Bratislava, Slovakia  
November 28-29, 2001

*Fauna Europaea project meeting on information dissemination and exploitation*  
Linnean Society, London, UK, November 29, 2001

*Meeting of the Euro+Med Steering Committee*  
Museum National d'Histoire Naturelle, Paris, France,  
March 8-9, 2002

*Meeting of Euro+Med Executive Committee and Project Partners*  
University of Patras, Greece, during 9-16 September, 2002 (precise date yet to be decided)

## EURO+MED INFORMATION DISSEMINATION AND EXPLOITATION IN YEAR ONE

### Euro+Med project meetings in months 0-12

| Date                       | Meeting   | Location  |
|----------------------------|---|---|
| 31 August-1 September 2000 | PANDORA Computing Issues                                    | University of Reading, UK   |
| 25-27 October 2000         | Work Package Leaders (Partners) and Executive Committee     | Real Jardín Botánico, Madrid, Spain                               |
| 25-27 October 2000         | Executive Committee   | Real Jardín Botánico, Madrid, Spain                               |
| 30-31 October 2000         | Pandora Training Workshop                                   | Botanischer Garten und Botanisches Museum, Berlin-Dahlem, Germany |
| 16 January 2001            | Computer Working Group                                      | University of Reading, UK   |
| 1 February 2001            | Executive Committee   | University of Reading, UK   |
| 20-22 April 2001           | Euro+Med General Meeting                                    | Università degli studi di Palermo, Sicily                         |
| 19 April 2001              | Euro+Med Executive and Project Partners meeting             | Università degli studi di Palermo, Sicily                         |
| 21 April 2001              | Euro+Med Computer Working Group meeting                     | Università degli studi di Palermo, Sicily                         |
| 22 April 2001              | Euro+Med Steering Committee meeting                         | Università degli studi di Palermo, Sicily                         |
| 22 April 2001              | Euro+Med PANDORA users group meeting                        | Università degli studi di Palermo, Sicily                         |
| 18 July 2001               | Euro+Med Computer Working Group meeting                     | Botanischer Garten und Botanisches Museum, Berlin-Dahlem, Germany |
| 31 August 2001             | Meeting between Euro+Med Secretariat and Bead co-ordinators | Botanical Garden, Bern, Switzerland                               |
| 12 September 2001          | Euro+Med Executive and Project Partners meeting             | Università degli studi di Palermo, Sicily                         |
| 18 September 2001          | Euro+Med round table organised by B. Valdés                 | OPTIMA meeting, Università degli studi di Palermo, Sicily         |

### Lectures/talks/posters in months 0-6

| Date              | Person              | Presentation title   | Meeting   |
|-------------------|---------------------|--|---|
| 3 July 2000       | S. Jury & M. Carine | Poster - Euro+Med PlantBase: a new initiative in plant systematics | Taxonomy Today: Diversity & the tree of life conference, Reading University, UK |
| 18 September 2000 | M. Carine           | Poster - Euro+Med PlantBase: a new initiative in plant systematics | European Commission Conference on Research Infrastructures, Strasbourg, France  |
| 23 March 2001     | V. Heywood          | Presentation on Euro+Med   | Conseil Scientifique of the Conservatoire Botanique de Bailleul, France         |
| 25 June           | S. Jury             | Introduction to Euro+Med project                                   | Planta Europa conference, European Red List session, Pruhonice, Czech Republic  |

### Meetings in which Euro+Med was communicated in months 0-6

| Date             | Person     | Meeting  | Location                        |
|------------------|------------|--|---------------------------------|
| 11 February 2001 | V. Heywood | Presentation on the Future of Mediterranean Floristics, given at the Clara Heyn Memorial Symposium | Jerusalem, Israel               |
| 30 May 2001      | S. Jury    | Involvement of EU accession countries in Euro+Med  | EU partners day, Warsaw, Poland |

### Publications in which Euro+Med was communicated in months 0-6

Condé, S. (2000). L'Europe en quête consensus. *La Recherche* 333: 46-47.

Secretariat - Euro+Med PlantBase Newsletter, October 2000

Secretariat - Euro+Med PlantBase Newsletter, December 2000

Secretariat - Euro+Med PlantBase, the Information Resource for Euro-Mediterranean Plant Diversity – A5 Leaflet

Marhold, K. (2000). The international project Euro+Med PlantBase. In: 4<sup>th</sup> Hieracium Workshop, Niederspree, Germany, 31 May – 5 June 2000, Abstracts of Lectures and Posters. - *Abh. Ber. Naturkundemus. Gortitz* 72 (Suppl.): 9.

Köppel, C., Schnittler, M., Rennwald, E. & Hirneisen, N. (2000): A database of European Red Lists as a tool for risk assessment in endangered Vascular Plants. - *Zeitschrift für Ökologie und Naturschutz*, 9: 119-126.

Carine, M., V. Heywood, S. Jury (2000). Euro+Med PlantBase: a new Mediterranean initiative in plant systematics. *OPTIMA Newsletter* no.25, pp.21-23.

Heywood, V. (2001). Floristics and Monography – an uncertain future? *Taxon* 50: 361-380.

Frodin, D. (2001). Guide to standard floras of the world, Cambridge University Press

Yena, A. (2001). Euro+Med PlantBase: a botanical project of the 21<sup>st</sup> Century. *Priroda* 2: 31 (A Ukrainian popular scientific and natural history journal)