

EUROPEAN POLLEN DATABASE
NEWSLETTER N° 5
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INTRODUCTION

by Jacques-Louis de Beaulieu

The EPD Project has already experienced a long history and has now entered into its constructive phase.

As promised, the data that have been collected from the palynologists who wished to collaborate are henceforth accessible to the users (either restrictively or not).

On the occasion of the official opening of the EPD in March, Sheila Hicks recalled (p. 2) the main functions of the database. The list of sites already included in the database gives an idea of the work that has been completed but also shows that a great effort remains to be made for our project to attain its full achievement.

RETROSPECTIVE

The project 158 B of the IGCP was devoted to environmental changes in the northern hemisphere during the last 15,000 yrs. In 1986, a project catalogue was published (Ralska-Jasiewiczowa, 1986). This catalogue shows the type regions and reference sites for 17 countries. The selected sites, including radiocarbon dated pollen diagrams and other palaeoecological data, were prepared so that they could be used for

We hope that the free access of contributors to data and software will act as a trigger and will incite other colleagues to participate in this project, the purpose of which, however difficult it seems, is to promote communication between European palynologists and to make our results known to the larger community of scientists interested in global changes. With this prospect in view, after reinforcing the links between the EPD and our colleagues in Central Europe, we hope to establish firm connections with palynologists from countries of the ex USSR.

national and continental correlations of biotic and other environmental events.

When it was decided that European data should be archived in a database it was agreed that the IGCP reference sites should be dealt with first. The table below shows the pollen data collected by the European Pollen Database including those prepared for the project 158 B of the IGCP.

Country	Pollen diagrams	IGCP sites
Belgium	22	7
Bulgaria	13	11
Czechoslovakia	12	
Denmark	2	
Estonia	12	11
Faeroe Islands	3	
Finland	33	12
France	70	6
Germany	7	4
Greece	8	
Iceland	3	
Iran	2	
Ireland	15	
Italy	6	
Luxembourg	14	
Norway	10	5
Poland	15	10
Russia	7	
Spain	20	
Sweden	53	16
Switzerland	14	2
Syria	3	
Turkey	16	
United Kingdom	70	48

Opening workshop of the European Pollen Database

3-5 March 1994, Arles - France

by Sheila Hicks

We are happy to announce that the EPD is now officially open, which means that the data are available for use. This does not mean of course, that the contribution of material stops there, that must continue to provide as comprehensive and as useful a body of data as possible, but it does mean that the first comparisons and mapping of pollen data at a European scale can now be experimented with. To obtain the data on disks please write to the European Pollen Database. The data will also be accessible via FTP as soon as the Advisory Board has agreed on the procedure. For those who are interested in accessing the data

via FTP please let us know so that we can send you the procedure.

The opening of the database brings to a close the planning, standardising and development period which began way back in 1989, a period which has seen many ups and downs and during which there have, no doubt, been many occasions on which contributors have had cause for concern. So this seems a good point at which to take a step backwards and have a fresh look at all that has been achieved and what the EPD really is and how it functions.

The database itself is situated in Arles, France. During the compilation

phase of the past 4-5 years bits of it have been farmed out to other parts of Europe in order to spread the load of assembling data, e.g. the late-glacial has been dealt with in Durham and the Eastern Mediterranean, as a region, in Groningen. At the same time, the time period originally envisaged has been extended to cover not only the Holocene but to also include the Eemian and the Hoxnian/Holsteinian interglacials (Eemian data were already being compiled in Cambridge while the Hoxnian/Holsteinian material was included in order to have an opportunity to tap financial sources in a different way). However, all the data are now, or will very soon be co-ordinated in one place, in Arles. The stability of the database is still dependent upon the success of applications for future finance but hopes are relatively high in that respect.

The person who is daily involved with the database in Arles and who is the best person to explain all the practical details related to it is Rachid Cheddadi.

(European Pollen Database Centre, Universitaire d'Arles, Place de la République, 13200 Arles, France. Tel: (33) 90 96 18 18, Fax: (33) 90 93 98 03, E-mail EPD@FRMOP22.CNUSC.FR). He is supported by Joël Guiot who acts like a technical supervisor. They are backed up by a whole group of European palynologists, any of whom can, and should be, contacted with queries of policy, protocol etc. etc.. This group the 'Advisory Board' consists of 13 members, 3 of whom have the additional duty of forming the 'Executive Committee'. Whereas the Advisory Board, as its name suggests, draws up the guidelines along which the database functions, the smaller, Executive Committee, concentrates on securing finance and on ensuring that the day-to-day running of the database can progress smoothly – that the necessary facilities are available. The composition of the Advisory Board and Executive Committee has changed during the initial set-up period and now consists of the following:

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Sheila Hicks, Henry Lamb and Thomas Litt were co-opted to replace Marie-José Gaillard-Lemdale, Jim Ritchie and Karl-Ernest Behre. We thank these three colleagues very much for their efforts and the time they spent helping and developing the European Pollen Database. Jacques-Louis de Beaulieu is the Chairman of the Executive Committee. Living in

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Marseilles, he is physically closest to Arles and most able to deal with immediate problems. The Advisory Board has also elected a contact person, Sheila Hicks, whose main function is to distribute information, not only outwards from the EPD to all its contributors and users and inwards from contributors and users to the Advisory Board but also between the

Advisory Board and the Executive Committee members and Rachid Cheddadi, too. So please, do feel free, and even encouraged, to send in any comments, suggestions and problems or just queries. It is possible to contact Sheila Hicks directly or else to approach your nearest Advisory Board member – the geographical spread and range of special interests of the Board members is quite wide.

During the compilation period another very important group of people have gathered together and put in an enormous number of hours on standardising the pollen nomenclature. These are: Marie-José Gaillard, John Birks, Jacques-Louis de Beaulieu, Rachid Cheddadi, Ruth Drescher-Schneider, Annabel Gear, Jacqueline van Leeuwen, Sylvia Peglar, Lucia Wick.

They have now achieved a dictionary which the EPD can refer to as

data is compiled. This is an important tool for the smooth functioning of the database but it is certainly not intended as a 'standard list' for general distribution so please do not ask for it. Palynologists will and must continue to identify their pollen types to different levels of precision in keeping with the problems they are dealing with and the reference material they have available. The greater the precision of the identification the more precise the ecological interpretation that is possible. However, all of us surely wish to standardise our nomenclature and make comparisons between different workers and the work of data compilers easier. Therefore, the pollen nomenclature working group offers these general guidelines:

Use the terminology of one of the following publications and state which one.

- Northwest European Pollen Flora, Punt et al.
- Pollen Analysis, Moore, Webb and Collins
- Textbook of Pollen Analysis, Faegri and Iversen
- Leitfaden der Pollenbestimmung, Beug
- Identification of wild grass and cereal pollen, Andersen
- Pollen et Spores d'Europe et d'Afrique du Nord, Reille

Follow the nomenclature conventions outlined by Birks (1973), namely:

1. The pollen type has only one species.
Example: *Cladium mariscus*
2. Family determination certain, no further distinction.
Example: Gramineae
3. Genus determination certain.
Example: *Abies*
4. A pollen type represents two genera.
Example: *Alchemilla/Aphanes*
5. A pollen type represents two species.
Example: *Plantago major/P. media*
6. A pollen type represents more than two plant taxa.
Examples: Liliaceae-type
Anthemis-type
Gentiana pneumonanthe-type

The biggest difficulties are experienced with the extension '-type' or the prefix 'cf' when they are used in the sense that the identification is uncertain i.e. "I think it is this pollen type but, for some reason, I cannot be 100% sure". Please, if you use 'type' (other than in the instance of 6 above) and 'cf', add a little note to say precisely what you mean. You need not worry about obvious synonyms. Alternative names (e.g. Poaceae = Gramineae) are standardised to conform with Flora Europaea. Morphological synonyms (e.g. *Achillea* type = *Matricaria* type) are standardised to one of the pollen texts listed above.

The database has two aspects to its existence, both of them are equally important and both of them will grow and expand with time. The one is the contribution of data the other is the use of the assembled data. In order to establish the code of behaviour of both contributors and users a set of PROTOCOLS was drawn up in 1990 before any data were accepted. These protocols have been published before in the newsletter but are repeated here for completeness. The Advisory Board will be reviewing the protocols with a possible view to bringing them more into line with other databases with which the EPD may eventually be associated, so any comments, suggestions

Protocols for the European Pollen Database 22nd September 1990 - Wilhelmshaven

The following protocols for the database were discussed and agreed by the Advisory Board at its meeting in Wilhelmshaven. In the event that it becomes necessary to modify them in the future, all database contributors and users will be notified and the changes will be published in the Newsletter.

A. Data

1. Data must consist of the original counts, not percentages or digitized data.

or remarks on difficulties experienced so far would be welcome.

It is to be hoped that contributors will look on the database as a safe storage place for all their carefully assembled material, a place where their work will be preserved for posterity and from which they will always be able to recall it. For individual countries this can mean a great saving in both time and money since the database will store and assemble information from that country as part of the European network without that country having to go to the trouble of developing and running its own database and acquiring the necessary expertise and equipment.

Obviously a certain amount of discretion will be called for by users, particularly at this beginning stage. All of us who are contributing data are eager to see how our data fit into the general pattern and how individual aspects which we have been contemplating can be viewed at the European scale. However, the data so far are very patchy in their geographical coverage and interpolation between widely scattered points could lead to quite erroneous interpretations. It is obvious that contact and collaboration between the data user and the contributors of the data to be used is highly desirable if the database is to produce reliable results.

2. Database must contain the original taxonomic identifications, with exceptions of exact nomenclatural synonymy. Taxa will not be lumped into higher taxonomic groups in the database.

3. Data will be classified as unrestricted or restricted. All data will be available in the database. In other words, the central database will distribute all data, restricted and unrestricted. Thus, restricted data can be viewed by a user, but cannot be used except as provided below.

4. Unrestricted data are available for all uses.

5. Restricted data may be used only by permission of the data originator. Appropriate and ethical use of restricted data is the responsibility of the data user.

B. Contributors

1. Can declare data unrestricted or restricted.

2. Can ask to verify that data in the database are correct. As a matter of general policy, the central database should routinely return to the data originator a hardcopy printout of the data as they are entered in the database for optional verification by the originator.

3. May use any unrestricted data.

4. Can obtain copies of application software and the database itself for use on his/her own computer.

5. Should receive a periodic newsletter or report concerning the database.

6. Can ask at any time that his/her data be withdrawn from the database or that their status (unrestricted or restricted) be changed.

7. In the case of a dispute regarding inappropriate use of restricted data, the Advisory Board will serve as arbitrator.

C. Users

1. Must ask permission from the data originator for use of restricted data.

2. Should, as a matter of courtesy, inform data originators of the uses being made of their data.

3. If the contributor wishes, should show the contributor results of analyses and manuscripts for publication for critical comment.

4. Should cite, in any publication using data from the database, the contributors' original publications describing their data.

5. Should send contributors reprints of publications that use their data.

6. Should acknowledge contributors for use of unpublished data and for any advice they may have provided.

7. No user can pass data on to another party. All users must obtain data from the central database.

8. Normal ethics apply to co-authorship of publications. The contributor should be invited to be a co-author if a user makes significant use of a single contributor's data, or a single contributor's data comprise a substantial portion of a larger dataset analyzed, or a contributor makes a significant contribution to the analysis of the data or to the interpretation of the results. This guideline applies to unrestricted as well as to restricted data.

9. The data are available only to non-profit-making organizations and for research. Profit-making organizations may use the data, even for legitimate uses, only with the written consent of the Advisory Board, who will determine or negotiate the payment of any fee required.

D. Executive Committee and Database Coordinators

1. Should prepare a periodic newsletter or report about every six months for contributors, users, the Advisory Board, etc.

2. Must follow the same protocols that apply to all other users concerning the use of data.

3. Must closely cooperate with the data originator and/or relevant Advisory Board member(s), regional correspondents or taxonomic advisors when making taxonomic decisions.

4. Should assemble a mailing list of Quaternary palynologists in Europe and others associated with European data, and should inform them of the opportunity to contribute to and participate in the database development. In addition, should announce the development of the database in appropriate newsletters and publications.

5. Should incorporate all data into the database, subject to certain minimum requirements, without assignment of quality.

6. Should organize workshops on matters related to the database and should work to

facilitate acquisitions of hardware and software by laboratories not having access to these.

7. Should send the protocols to all potential contributors and users.

Accessing North American Pollen Data Via the Internet

By John Keltner, NAPD Data Manager

Through the use of "anonymous" ftp, data from the North American Pollen Database (NAPD), and soon the European Pollen Database (EPD), are freely available to anyone with access to the Internet. The National Geophysical Data Center (NGDC) in Boulder, Colorado (PAGES World Data Center-A) maintains computers for the public distribution of data, such as those collected by EPD and NAPD.

The procedure for retrieving data is quite simple. Below is an abbreviated transcript of an ftp session where the SiteSeer and ShowTime applications, in a compressed format, have been retrieved. (With ShowTime you can watch the

changes in distribution of, for example, *Picea* over the last 15k yrBP. With SiteSeer, you can click on an individual site and examine a summary pollen diagram and see what went on there after *Picea* left.)

You start a session by typing the ftp command followed by the internet name (or address) of the computer you want to access. The name of the computer we want is ftp.ngdc.noaa.gov (its IP address is 192.149.148.109).

Once ftp connects you to the NGDC computer, you must logon by typing "anonymous". Type your email address as the password.

```
denr1% ftp ftp.ngdc.noaa.gov
Name (ftp.ngdc.noaa.gov:keltner): anonymous
Password: keltner@denr1.igis.uiuc.edu
```

?not echoed~

Now change directories (please note the forward slash here).

```
ftp> cd /paleo/pollen/pdb/get-files
```

And use the dir command to see what files are in this directory.

```
ftp> dir      ?file size!~  ?file name~
-rw-r--r--   1 720      paleo  1124265 Mar 15 22:06 showt050.zip
-rw-r--r--   1 720      paleo   2223 Mar 15 22:06 ss-read.me
-rw-r--r--   1 720      paleo  1363386 Mar 15 22:06 ss100-d1.zip
-rw-r--r--   1 720      paleo   699027 Mar 15 22:06 ss100-d2.zip
```

Zip files are binary - you MUST tell ftp to transfer them in binary mode.

```
ftp> binary
```


I want 3 files, the SiteSeer readme file, and the SiteSeer and the ShowTime installation files.

```
ftp> get ss-read.me
```

```
150 Opening BINARY mode data connection for ss-read.me (2223 bytes).  
2223 bytes received in 0.26 seconds (8.3 Kbytes/s)
```

Now do the same for ss100-d1.zip and showt050.zip. And that's all there is to it! To find other data use the cd and dir commands. Many directories display messages on your first arrival and many contain index or other files describing their contents. You must "get" such files, and read them locally since ftp allows you to transfer files, but not to read them.

Last News

The project INTAS has finally been accepted. The purpose of the project INTAS is to encourage the extension of the European Pollen Database to the eastern countries of Europe and

Finally, to end the ftp session, just say bye.

```
ftp> bye
```

Now that you have some idea where to look and how get them, these data are all yours for the taking. Now if only you had a bigger hard disk!

the republics of the ex USSR. However, it should be mentioned that only one third of the funds have been allocated.