Resource Identification for a Biological Collection Information Service in Europe

Contact: BioCISE Secretariat, Botanical Garden and Botanical Museum Berlin-Dahlem, Koenigin-Luise-Str. 6-8, 14191 Berlin, Germany.
Email: biocise@zedat.fu-berlin.de WWW: http://www.bgbm.fu-berlin.de/biocise/

The Vision:

A common electronic access system facilitating queries across the hundreds of millions of specimens and monitoring or mapping records held by institutions, projects and individual researchers in the EU and partner countries.

Biological collection information

Biological collections are a critical but often under-exploited resource for research in many scientific disciplines. Collections can contribute by directly providing research materials as well as by the provision of information, e.g. on the natural occurrence of organisms. Preserved collections also ensure that the results of scientific research are reproducible by safeguarding the long term availability of vouchers of investigated organisms.

The term "Biological collection" is here understood to include the following main categories:

- Living collections (e.g. botanical and zoological gardens, microbial strain collections)
- Natural history collections (mainly in museums and universities)
- Data collections used in faunistic and floristic mapping projects

A previous EU project (CDEFD) has produced a detailed information model of biological collection information. Existing information systems mostly cover only one of the above categories, and, in addition, they are often specialized taxonomically. The findings of CDEFD indicate that this information may be integrated, thus providing potential users with a much wider scope of access.

Scope and framework

Access by taxon name (via a taxonomic gateway system such as being set up by Species 2000 and its partners)
Access by geographical or geoecological location
Access by information on uses
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Collection information represents one of the key components of the Global Biodiversity Information Facility (GBIF) proposed by the OECD Megascience Forum working group on biological informatics.

The users' side

Potential users of a BioCISE include public or private companies and institutions conducting environmental impact studies, faunistic and floristic monitoring and mapping projects, landscape planning, and taxonomic or ecological research.
Decision-makers involved in the formulation of programs on nature conservation or environmental management will thus be provided with a firmer base for planning.
Clients in agriculture, pharmacy and biotechnology will primarily seek access to materials for their research.

User benefits of a common service:
Single access point reduces costly custom analysis, time consuming literature searches and enquieries at individual information providers
Access to data-rich label information will (at least in some types of collections) open a wide scope of applications for data mining. The BioCISE project makes a point of including access to holdings of smaller institutions, which are today often not readily accessible.

The data providers' side

Publicly funded collections, at least, will see information dissemination as part of their mission, and some commercial collections have objects for sale. A BioCISE will serve them by

- Providing a medium to publicise their holdings
- Fostering of co-operation, division of labour, and specialisation
- Opening possibilities for the joint organisation of administrative tasks
- Inclusion of smaller collections in funding efforts
- PR for collections in general

Institutions holding collections are mostly also conducting research, so they benefit on the user's side as well.

Project phases

1993 - 1996
Phase I: Theoretical base

EU-DG XII Concerted Action Project "A Common Datastructure for European Floristic Databases (CDEFD)".
Produces a general information model (data structure) for biological collections.
The idea for "The BioCISE" is born.

1997 - 1999
Phase II: Resource identification

The ongoing EU-DG XII Concerted Action Project "BioCISE". The core of this multidisciplinary project is formed by 18 scientists from 10 EU states and Israel.
It should result in one or more project proposals leading to the next phases.

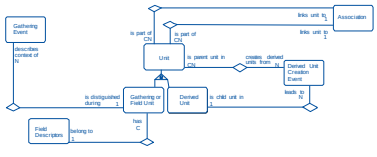
2000 - 2003
Implementation of "The BioCISE"

(to be proposed)
A cluster of projects leading towards the implementation and demonstration of a European Biological Collection Information Service.

2002 + X
Phase IV: System maintenance

Further integration into the Global Biodiversity Information infrastructure. The functionality of The BioCISE should be maintained without external funding.

Core of the CDEFD Model



See http://www.bgbm.fu-berlin.de/CDEFD/default.htm

Aims of the current project phase

Identify and analyse biological collection information resources available in electronic form
Catalogue interdisciplinary biodiversity database expertise
Identify potential users and their demands on a Biological Collection Information Service
Publish the results of the survey on a constantly updated WWW site
Develop partnerships and formulate proposals for the implementation of such a service. Liaison with organisations, groups and projects following similar (though perhaps more focussed) aims is an important priority.

Call for co-operation

Institutions and individuals who have biological collections or survey data-bases are asked to participate in the survey, i. e. fill in the questionnaires. Currently, versions in English, French and German are available, either from our WWW site or in printed form on request from the secretariat.
Help us to define a user interface that serves you! Your comments as a potential user of "The BioCISE" would be highly appreciated.

Members of the Concerted Action:
Anastasios **Anagnostopoulos**, The Goulandris Natural History Museum,14562 Athens, Greece, ttcouple@hol.gr; Dr. Walter **Berendsohn** (Project co-ordinator), Freie Universität Berlin, ZE Botanischer Garten und Botanisches Museum Berlin-Dahlem, 14191 Berlin, Germany, wgb@zedat.fu-berlin.de; Pedro **Fernandez**, I nstituto Gulbenkian de Ciencia, 2781 Oeiras Codex, Portugal, pfern@pen.gulbenkian.pt; Gregor **Hagedorn**, Biologische Bundesanstalt für Land- und Forstwirtschaft, Institut für Mikrobiologie, 14195 Berlin, Germany, g.hagedorn@bba.de; Dr. Jasmin **Jakupovic** (personal member), Technische Universität Berlin, Germany, jaku@wap0107.chem.tu-berlin.de; Prof. Dr. Jacques **Lebbe**, Université Paris VI, Laboratoire Organisation & Evolution des Systèmes, 75252 Paris Cedex 5, France, lebbe@ccr.jussieu.fr; Dr. Wouter **Los**, Institute for Systematics and Population Biology / Zoological Museum Amsterdam, Amsterdam, The Netherlands, los@bio.uva.nl; Prof. Dr. Jos **van der Maesen**, Agricultural University Wageningen, Dept. of Plant Taxonomy, 6700 ED Wageningen, The Netherlands, Jos.vanderMaesen@algem.pt.wau.nl; Prof. Dr. Pier Luigi **Nimis**, University of Trieste, Department of Biology, 34127 Trieste, Italy, nimis@univ.trieste.it; Dr. Richard J. **Pankhurst**, Royal Botanic Garden Edinburgh, Taxonomic Computing, Edinburgh EH3 5LR, United Kingdom, richard@rbge.org.uk; Dr. Louis **Rechaussat**, INSERM, Coordination Internet, 75654 Paris Cedex 13, France, rechauss@tolbiac.inserm.fr; Dr. Jarmo **Saarikko**, Finnish Forest Research Institute, EMIT-laboratory, 00170 Helsinki, Finland, jarmo.saarikko@metla.fi; Dr. Karsten **Siems**, Analyticon AG, Research Department, 13355 Berlin, Germany, KSiems@analyticon-ag.com; Prof. Dr. Benito **Valdés**, University of Sevilla, Depto. de Biologia Vegetal y Ecologia, 41012 Sevilla, Spain, bvaldes@cica.es; Besher **Wattar**, Novo Nordisk A/S, Scientific Computing, 2880 Bagsvaerd, Denmark, bw@novo.dk; Dr. Richard **White**, University of Southampton, Biodiversity & Ecology Research Division, Southampton SO16 7PX, United Kingdom, r.j.white@soton.ac.uk; Dr. Linda **Olsvig-Whittaker**, Nature Reserves Authority, Science and Management Division, Jerusalem 94467, Israel, linda@bgumail.bgu.ac.il

Secretariat: Walter Berendsohn, Birgit Felinks, Anton Güntsch & Sylvia Steinmann