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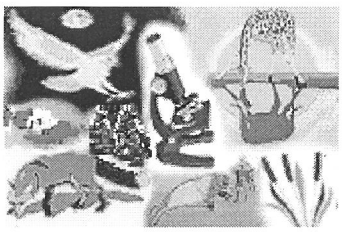

International Working Group on Taxonomic Databases

International Union of Biological Sciences
Taxonomic Database Working Group (TDWG)

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IUBS Taxonomic Databases Working Group **Number 9 / March 1999**

TDWG Web page: http://www.tdwg.org

Communications

TDWG Web site:
This is currently being updated and reorganised after the introduction of the new url: http://www.tdwg.org so please be patient! If you have any comments or queries, please contact Peter Stevens or Francisco Pando.

TDWG Listserver:
A listserver has been set up for the use of TDWG members by Francisco Pando in Madrid, with address TDWG-List@csic.es - contact pando@ma-rjb.csic.es for further information on joining this list. It has been set up to further communication among TDWG members so please use it.

TDWG Meetings

TDWG 1999

The 1999 TDWG Annual Meeting will be held on Saturday and Sunday, 30-31 October 1999. Registration will be on Friday, 29 October from 12:00-5:30 in the Harvard University Herbaria, 22 Divinity Avenue, Cambridge, Massachusetts 02138. A major theme of the meeting will be the implications surrounding the use of comparative descriptive data sets in biology.

There will be a Mixer evening on the Friday evening from 5:30-7:30, in the Harvard University Herbaria. The Meeting Dinner will be on Saturday evening at 6.30 pm. Friday afternoon, October 29, will be open for committee meetings and computer demonstrations, and these will also be scheduled as needed for the Saturday and Sunday afternoons.

The registration fee (including mixer and dinner) has not yet been finalized, but will be approximately $50.00; the cost for guests at the dinner will be approximately $25-30.

For further information, offers to give talks, lead discussions, or give demonstrations, contact either Dave Boufford (boufford@oeb.harvard.edu) or Peter Stevens (peter.stevens@mobot.org).

Further announcements will be made on the web site, and through mailing lists such as the TDWG list and Taxacom.

TDWG 1998 - The Highlights

TDWG98 was held at the Centre for Plant Diversity & Systematics, University of Reading, UK, on the 12th - 15th September. During these days over 45 people from 10 countries met to discuss, and progress developments in the field of biodiversity data exchange management and use. For a full report, please see the TDWG web site at http://www.tdwg.org.

Keynote Speeches:

Professor Frank A. Bisby (University of Reading) talked about "Global Taxonomic Systems - how do the various initiatives fit together?" He emphasised that it was an important time for TDWG and database standards, as many current initiatives are finally realising the basic need for the kind of systems we had all been working on, and that some funding may be available. He went on to briefly explain these initiatives and others including the Clearing House mechanism, DIVERSITAS, SBSTTA, GTI. He then moved on to projects such as Species 2000, LITCHI, ITIS and the Tree of Life.

Dr. Eimear Nic Lughadha & Dr. Sally Hinchcliffe (Kew) presented "The International Plant Names Index (IPNI)". This project is aimed at producing a reliable reference file that would hopefully be accepted by the community. It is promoted by The Australia National Herbarium, Harvard University and Kew Botanic gardens. The project is conceptually very advanced, makes use of the latest technology (Java, peer to peer replication mechanisms,...) and is envisaged as a "Community Effort" where source code and data is available on the web site. A pilot project - authors of plant names - is being used to test the model. More info at: http://pnp.huh.harvard.edu/ (and later article).

Professor Frederick Grassle & Karen Stocks (Institute of Marine and Coastal Sciences, NJ, USA) presented "Towards an On-line Atlas of Marine Benthos". They provided a powerful case on how to integrate data from different sources at a global scale. They illustrated the need for standards in order to provide meaningful views. The system relied on latitude and longitude for georeference data. A discussion on extending the Geography standard followed the talk. More info at: http://marine.rutgers.edu/OBIS. Subgroups: **Standards for zoological databases** were discussed several times during the meeting. It was perceived that some areas where botanists have well-stabilised standards (journal abbreviations, authors of plant names) are neither developed nor needed. On the

other hand, some areas where standards or guidelines would be welcome were mentioned: collection acronyms, biotopes, etc. Gail Kampmeier (IL Natural History Survey; gkamp@uiuc.edu) leads a subgroup aimed at identifying these needs.

In any case, standards currently under preparation (e.g. Names of organisms) as well as other to develop (habitats) should cover the zoological as well as the botanical world.

Geography Standard
Dick Brummitt (Kew) reported that the 2nd Edition of the Geography Standard would not be published in 1998 as scheduled. It is likely to be published on a web site before the paper edition is released in 1999.

DELTA
Gregor Hagedorn (Berlin; g.hagedorn@bba.de) reported that the new features proposed for Delta II would mean that new files could be incompatible with old formats. He pointed out that a major drawback with Delta II is that it is not mappable onto a relational model. He made it clear that Delta II is something quite different from the previous Delta and needs to be submitted for endorsement as a "new" standard. Delta version 3.x was the version initially endorsed, and the subsequent version 4.x was automatically endorsed, since the changes were minor and it was compatible with previous versions. A subgroup to work on the **Structure of Descriptive Data** was proposed by Gregor Hagedorn, who volunteered to convene it.

TL-2
Richard Pankhurst (Edinburgh; richard@rbge.org.uk) reported on ongoing work of the TL-2 abbreviation database, a joint project between IAPT and USDA. This database will be freely available.

Descriptors
Richard Pankhurst summarised the position with the Descriptors Subgroup, saying that he had proposed many descriptors at the Toronto meeting but they had been rejected in favour of very few. However, many people had problems with that, so he would like to reopen the debate. This is a much needed standard in view of the multiplication of "descriptive standards" - DELTA, LUCID, CABIKEY.

Economic Botany
Frances Cook (Kew; f.cook@rbgkew.org.uk) acknowledged the input received from users of the Economic Botany Data Collection standard. She agreed to convene a subgroup to prepare a 2nd version of this standard.

[Please contact her direct if you would like to participate in this subgroup.]

Future Meetings

Definite arrangements have yet to be made, but offers have been made for TDWG 2000 to be held in Berlin, and for TDWG 2001 in Sydney.

The International Plant Names Index, a distributed data source of general accessibility.

The Plant Names Project (PNP) is a collaboration between the Royal Botanic Gardens, Kew, the Harvard University Herbaria, and the Australian National Herbarium. The Index Kewensis, the Gray Cards Index, and the Australian Plant Names Index - all lists of plant names varying in geographic, taxonomic and temporal coverage - are being combined and the data edited to produce the International Plant Names Index (IPNI). IPNI will consist of the names and associated basic bibliographical details - places and dates of publications of names - of all seed plants. Users can tap into this information, basic to synonymies in floras or monographs, creating links to indicate hierarchy and synonymies, but the most tedious and often most costly portions of database projects and conventional floras, that is, the task of finding this information, will be eliminated. These names will be presented in a distributed database, freely available and with the data standardised against authority data and ultimately verified. IPNI will be a dynamic resource, globally current, continually improving in accuracy, and allowing, indeed encouraging, direct contributions by all members of the botanical community. For this, communication architecture to manage and edit data across continents is being developed, and it will provide transparent access in real time to these data to a variety of users, both individuals and institutions. The data will appear to the users as continuously updated and available local authority files.

For a project such as this, authority data and standards are essential, and that is what we emphasize here (for further details, see Croft et al. 1999; http://pnp.huh.harvard.edu). For each element in the citation of a name we can develop authority data, in all cases basing them on already available TDWG standards for botanical literature or authors of plant names. Further authority data about where authors lived and worked, and names of countries (for example) can be linked to such standards (see http://www.tdwg.org for one of a set of alternative geographic descriptors).

The Authority Data System (ADS), the system as a whole, is currently a network of three database servers; each of the linked computers stores and serves these authority data.The ADS is designed to provide authority data to the user community in a transparent, consistent and robust fashion, whether a Mac, a PC, or a UNIX machine is being used to access the data source. In the rapidly-changing world of distributed object computing, the issue of standards is important. The ADS has been designed in a modular fashion, allowing us to create plug-ins for existing standards and for new distributed object technologies as they develop. Because a truly international community of users is involved, our system uses Unicode for character encoding. Unicode is widely accepted and is really the only universal character encoding scheme available; it

allows the storage and display of (almost) any character set allowing diacritics, and potentially Cyrillic, Greek, Kanji and other non-roman scripts. By developing authority data that are constantly available on the ADS, we can ensure consistency and accuracy in the use of author's names (e.g., distinguishing between the many authors called Smith and Gray), publication abbreviations, and the like. The standardisation ensured by the use of authority data will be central to checking the data in IPNI, and will also allow new names and publications to be added in a consistent and economical fashion.

IPNI will reside on the web, and its content will differ almost every time it is queried. For each item of authority data there will be a submissions history, where additions and corrections - attributed to the individual who made them - become an integral part of that item. However, IPNI will also periodically need to be archived. One inexpensive way of doing this would be to produce copies on CDs for archival purposes only; new copies could be produced every six months to document changes and additions. The authority data will be available on-line in a continuously updated form; the important issues of ensuring continuity in their editing and of producing new numbered versions of these standards are being addressed. The authority data will of course be available for other applications.

The structure of IPNI encourages the participation of institutions in addition to the three currently involved as well as that of members of this community at whatever level of involvement they select, so it is a true community project. This will facilitate the spread and adoption of the standards it incorporates. Furthermore, each authority data object in IPNI is a point of reference to which many other kinds of systematic data, such as images of types and protologs, and additional data on authors and collectors (see above: already added to many names of authors) can be attached. All these associated data become variously standards and/or metadata that the users of plant names will be able to access.

Croft, J., Cross, N., Hinchcliffe, S., Nic Lughahda, E., Stevens, P. F., West, J. G., & Whitbread, G. 1999. Plant names for the 21st century: The International Plant Names Index, a distributed data souce of general accesssibility. Taxon 48, accepted.

News on Standards

News on standards already endorsed by TDWG can be seen on the TDWG web site. But during the 1998 meeting it was suggested that we look at adopting standards emerging elsewhere, since there is much work to be done and not enough resources to repeat the effort involved.

CIMI Dublin Core Testbed Project Enters Phase II

Over the last year, the consortium that makes up CIMI (Computer Interchange of Museum Information) has been testing the feasibility of using Dublin Core metadata records to make the discovery of museum objects easier, particularly for the non-expert. Natural

history interests on the project are represented by Jim Beach from The University of Kansas Natural History Museum and Neil Thomson from The Natural History Museum in London.

Dublin Core is a set of 15 metadata elements originally intended to facilitate the discovery of networked resources by increasing the precision of responses to enquiries in comparison to the catch-all approach of the large search engines. It has caught the interest of communities such as museums, libraries, government agencies and commercial organisations in over 20 countries, and is now also being applied to non-electronic or "offline" resources such as museum objects.

The Natural History Museum intends to make use of this emerging international standard to create a cross-domain enquiry system for its own collections of specimens, literature, artwork and archives, by harvesting Dublin Core records from the various rich-description systems that are used to manage these collections. The perceived advantage of using standards is that the system should be able to mesh with enquiry systems that are based on the same standards and also span institutional and geographic boundaries.

The CIMI project aims include the production of an expanded version of the standard Dublin Core User Guide. This will offer guidance to museums and galleries on which elements should contain which pieces of information, so that the chances of interoperability are enhanced. A second aim is the creation of a pool of Dublin Core records in XML (eXtensible Markup Language) so that the problems associated with record creation and subsequent retrieval can be assessed.

Neil Thomson, Head of Systems & Central Services
Natural History Museum, London, UK
Email: N.Thomson@nhm.ac.uk

The full version of this article can be seen on the web site at http://www.tdwg.org/nhmart.html. For more details, see http://www.cimi.org.

ICSTI Life Science Web Search Tool

Seven members of ICSTI, the International Council for Scientific and Technical Information, are currently undertaking a project to make life science data more readily accessible. The aim of the project is to produce a web based 'look up' tool which provides high level subject access for users who need help in deciding which life science database is most appropriate for their needs. Such users might include scientists, the public, non specialist subject librarians, national/local government officials, planners, conservationists or university students - anyone who is unfamiliar with where to find life science related data.

The prototype tool is temporarily located at www.dtic.mil/icsti/ and consists of a matrix of five broad subject categories covering the

entire life sciences - Biology, Chemistry, Environment, Food & Agriculture and Medicine - and the names of the seven contributing services/providers. Each of the broad categories is divided into about 30 more specific topics which cover all the major subsets of that category e.g. 'Environment' includes Atmosphere, Energy, Natural Resources, Pollution and Wildlife management; 'Biology' includes such topics as Anatomy & morphology, Behaviour, Genetics, Parasitology and Systematics. Selecting a specific topic leads to a usage definition for that topic and the option to go (directly or indirectly) to data about that topic on the provider's site.

The tool will be made publicly available through the ICSTI web site (www.icsti.org) with links to and from the home pages of member services, as soon as possible. The ICSTI life science group hopes that the site will serve as a model for other organizations to use and eventually provide fully comprehensive subject access to ICSTI databases in a variety of disciplines.

ICSTI draws together creators, disseminators and users of information, and seeks to reduce barriers to information transfer. ICSTI also enables members to keep abreast of new technologies, and develop common approaches to international standards and legal aspects of information management.

ICSTI Life Science Group
Chairman: Joan Thorne
Email: jthorne@york.biosis.org
BIOSIS,U.K., Zoological Record,
54 Micklegate, York, YO1 6WF

The above text is based on an article 'ICSTI Members Cooperate on Life Science Web Tool' published in the ICSTI Newsletter No 29, January 1999 which can be viewed at http://www.icsti.org/icsti/forum/fo9901.html.

Membership

Use the form included, or contact John Wiersema, TDWG Treasurer, c/o USDA, ARS, SBML, Building 011A, Room 304, BARC-West, Beltsville, MD 20705-2350 USA, or jwiersema@ars-grin.gov for details.

Annual membership fees are under review, and it is likely to be a topic at the 1999 meeting. Further details will appear on the web site when available.

Newsletter

Please send your contributions and ideas to the Newsletter Editor:
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