GLOBAL BIODIVERSITY INFORMATION FACILITY

free and open access to biodiversity data

GBits

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Preserving biodiversity knowledge from impact assessments

Professionals assessing the environmental impact of proposed large projects are being urged to share the biodiversity data they generate.

A new Best Practice Guide produced by GBIF and the International Association for Impact Assessment (IAIA) explains the straightforward steps required to ensure that biodiversity data remain accessible for future decision-making, scientific research and society as a whole.

Highway bridge and tunnels under construction in Andorra

The guide was prepared in response to concern that vital data on occurrence of species at and around a proposed project site, gathered in the preparation of environmental impact assessments (EIAs), are often discarded and lost at the end of the project planning process.

Pilot projects in South Africa and India have helped to develop tools to facilitate the publication of biodiversity data from EIA through the GBIF network, making them freely available via the Internet.

Publishing EIA-Related Primary Biodiversity Data: GBIF-IAIA Best Practice Guide (pdf file, 1.8 MB) and a summary version are now available for download.

It provides a step-by-step guide for environmental assessment professionals, explaining the process of selecting software tools, preparing datasets and publishing them according to agreed global standards and protocols.

Read more...

SCIENCE AND POLICY

GBIF data network helps map medicinal plants in Australia

Innovative use of data accessible through GBIF may help to identify areas of high cultural value, based on plants used in traditional medicine by Aboriginal people in Australia.

The Customary Medicinal Knowledgebase (CMKb), based at Macquarie University, is teaming up with the Atlas of Living Australia (ALA), which hosts the GBIF national node, to integrate medicinal knowledge with other information on Australian biodiversity.

A recent study modelled suitable ecological niches for more than 400 plant species that are of medicinal importance, using data accessed through the GBIF portal and Australia's Virtual Herbarium (AVH), one of the main resources contributing data to ALA.

The outcome of the study, published in the journal Ecological Modelling, was a map of potential "bio-cultural diversity hotspots", areas suitable for the occurrence of multiple species known to be used in traditional medicine.

Banksia integrifolia

The lead author, Jitendra Gaikwad of Macquarie University, said: "This methodology allows us to evaluate the cultural value of the land. We have used medicinal value, but we can use other socio-economic, traditional knowledge and biodiversity conservation aspects as well."

Read more…

Launch of new open access journal on invasive alien species

A new open-access journal specializing in invasive alien species, from GBIF partner Pensoft Publishers, was launched in early September. The journal NeoBiota continues the former NeoBiota Proceedings series, and provides automated cross-linking through the Pensoft Taxon Profile tool revealing all taxa published.

New Biodiversity Hub aims to integrate open access research, primary data and other species information

The Public Library of Science (PLoS), the nonprofit open-access scientific publishing project, has launched a Biodiversity Hub aiming to accelerate the discovery, dissemination and integration of biodiversity studies.

The Biodiversity Hub provides three general services. First, it builds on the idea of open access publication by aggregating selected open access journal articles focused on biodiversity science. Second, the Hub adds value to previously published content. Third, it provides a community forum for interaction around specific content. Commentary and links to research resources and community projects can attract users and broaden support for biodiversity initiatives.

INFORMATICS

New GBIF Data Portal developments available for testing

GBits subscribers are invited to test recent improvements to the GBIF Data Portal. They are aimed at providing richer taxonomic content, reducing errors and speeding up processing.

Key improvements include:
- reduced processing time from 3-4 days to around 36 hours, allowing for more frequent index updates, so reducing time lag between data being added or changed, and becoming visible on the portal;
- a complete reworking of the backbone taxonomy with up-to-date checklists and taxonomic catalogues enabling better-organized content;
- indexing of checklists published through the Global Names Architecture profile, an international standard for sharing taxonomic data based on the GBIF-endorsed Darwin Core Archive format;
- authorship and common names for higher taxa included where available; and
- enhanced data interpretation routines and plausibility checks, helping to flag data with apparently incorrect locations, dates, altitude, etc.

Please check out the results at http://testportal.gbif.org and send us your feedback. When viewing the test site, please make comparisons with the existing Data Portal, and consider whether the principal goal, improving the content available, has been achieved.

In this phase of development, our focus has been on improving existing processing routines. Future developments, to be rolled out next year, will see the index enriched with more content types, and the portal's functionality will be expanded.

GBIF COMMUNITY

Book on Tanzania species checklist to be launched soon

Tanzania Biodiversity Information Facility (TanBIF) is launching a book on its checklist of over 24,000 Tanzanian species, a major outcome of a GBIF capacity enhancement programme.

The book, which will also be available electronically, will be published on 10 November. The checklist it describes is the result of a €400,000 project under the GBIF Capacity Enhancement Programme for Developing Countries (CEPDEC), led by the Tanzania Commission for Science and Technology (COSTECH) and funded by the Danish Ministry of Foreign Affairs.

The project aimed to enhance access to and utilization of data on Tanzania's biodiversity, held in natural history museum databases within and outside the country.

Another of the main outcomes of the project was the development of the TanBIF portal which shares biodiversity information for policy, management, research and education.

The CEPDEC project also helped develop the QGIS-TanBIF decision-making tool, based on open source software. This tool enables analysis of primary biodiversity data to support biodiversity-related decision-making in activities such as land-use planning, design of protected areas, conservation and sustainable use strategies, risk assessments, climate change impact assessments, etc. Ninety-five people, including trainers, have been trained in the use of the tool in a series of workshops, and TanBIF has issued a call for showcases on the application of the tool in biodiversity decision-making.

A video that explains the uses of the tool and demonstrates its installation is available at http://www.gbif.org/orc/?doc_id=2970.

DanBIF website hosts information on over 31,000 Danish species

The Danish Biodiversity Information Facility has developed and houses a number of websites. One of them, www.allearter.dk, now lists more than 31,000 of the estimated 35-40,000 species occurring in Denmark. According to Isabel Calabuig, the Danish node manager, "The number of species listed increased by about 10,000 in the last month, and the lists are improved and are now downloadable". The site is expected to include information on some 35,000 species. With the help of experts, the site provides a platform to help avoid inconsistencies in the use of Danish and scientific names of species in scientific literature, municipal records and collections.

DanBIF has also launched a multimedia server – www.multimedia.danbif.dk – a space for presenting photographs, videos, sound files and literature on biodiversity. The system makes it possible to publish files with curatorial information and georeferences. As the GBIF Data Portal can only link its records to images, these files need to be stored on a webserver. DanBIF's multimedia server provides access to multimedia information according to GBIF guidelines. In September, two of the most important Danish botany journals were made available online through the multimedia server, to be included in the Biodiversity Heritage Library.

First meeting of GBIF Germany's IT commission

GBIF Germany's IT Commission held its first meeting on 23 September at the Botanic Garden and Botanical Museum (BGBM) in Berlin. A new image data server, installed at the BGBM, was presented at the meeting.

One of the functions of the IT Commission is to define the services provided by the German node institutions, and to coordinate common developments.

Eight nodes form GBIF Germany, each responsible for a range of taxonomic groups. Participants from each of the node institutions attended the meeting to discuss the use and processing of image data within the GBIF Germany research project Kompetenzzentren innovativer Datenmobilisierung (Competence centres for innovative data mobilization).

The main objective of the project is the mobilization of data from Germany's research community, focusing on species occurrence data. The funding has allowed investment in technical infrastructure such as a stable data hosting system and the image data server.

New Zealand Virtual Herbarium launched

The New Zealand Virtual Herbarium has been launched, providing free Internet access to about half the records held by 11 botanical collections across the country.

The eleven herbaria house nearly 1.5 million specimens of mosses, lichens, liverworts, ferns, algae and seed plants that have been collected in New Zealand from 1769 (Captain Cook´s first voyage) to the present day.

Some of the participating members of the Virtual Herbarium project, the Allan Herbarium and the National Fungal Herbarium, both operated by Landcare Research, publish their data through the GBIF data portal.

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EOL version 2 launched, incorporating updated GBIF species occurrence maps

The second edition of the free, online collaborative Encyclopedia of Life (EOL) is now available, with a redesign and new features making it easier to use, personalize, and to interact with fellow biodiversity enthusiasts worldwide.

EOL, an associate Participant of GBIF, includes maps of occurrence records published via the GBIF network on each of its 750,000 species pages. Thanks to the ongoing collaboration between GBIF and EOL, the new version is able to display data recently updated from the GBIF Data Portal, and software improvements will enable the information visible on the EOL data maps to be regularly refreshed.

With the new EOL interface, users can more easily find species of interest; create personal virtual collections of photos and information; find or upload pictures, videos and sounds; and share comments, questions and expertise with users who share similar interests.

Regional meeting of GBIF African nodes

Delegates from African GBIF nodes met on 13 and 14 September to identify priorities and actions required for advances in science and biodiversity informatics on the continent. This was the second regional meeting for Africa, part of the growing process of regional collaboration between GBIF Participants.

Twenty-eight delegates representing 18 country and organizational nodes attended the meeting at the National Botanical Gardens in Pretoria, South Africa. It was hosted by the South African Biodiversity Information Facility (SABIF) and funded by the Department of Science & Technology.

Three priority areas of work identified for regional collaboration and partnership over the next two years were capacity building, data publishing and regional node activities. Key outputs were identified and will be finalized by the relevant task teams and leaders established for each work area.

Selwyn Willoughby, Director of Biodiversity Information Management at SANBI, said: "We are working towards the practical implementation of actions that would ensure that the data we manage contributes towards initiatives beyond the GBIF community, such as the 2020 Aichi Biodiversity Targets."

Symposium on biodiversity informatics held in Bogotá

The Instituto de Ciencias Naturales of the Universidad Nacional de Colombia in Bogotá hosted a symposium entitled The Impact of Informatics on Biodiversity

Studies: Present and Future, on 8 August 2011. The main themes of the symposium were developments in the field of biodiversity informatics in Colombia and abroad, and the use of bibliometrics to analyse trends in biodiversity studies.

The symposium was part of a year-long programme of activities to commemorate the 75th anniversary of the Instituto de Ciencias Naturales.

New initiative to provide free access to Albertine Rift biodiversity data via web portal

Data and information from one of Africa's most significant and threatened areas for biodiversity will soon be fully available and freely accessible via the Internet.

The Albertine Rift Biodiversity Portal initiative, led by the Albertine Rift Conservation Society (ARCOS), aims to improve decision-making in this globally important region for biodiversity, which includes the Virunga National Park, home to mountain gorillas.

ARCOS has secured funding from the JRS Biodiversity Foundation, to establish a regional database-driven website and an informative, educational web portal. GBIF, which includes ARCOS as an Associate Participant, is providing expertise on the tools required to make species occurrence records accessible via the portal.

Mountain Gorilla, a species found in the Albertine Rift region

The Albertine Rift Biodiversity Portal will be developed in collaboration with a consortium of leading institutions in the field of data and information management in the region (national data centres in Uganda, Rwanda, DRC, Burundi and Tanzania; TanBIF and GBIF Uganda) and outside the region (National Museums of Kenya – NMK, GBIF Secretariat, UNEP-WCMC and UNEP-GRID Arendal). The project started in July 2011 and runs until June 2013.

DATA PUBLISHING NEWS

New publishers

Florabank, a database with more than three million records of Belgian plants, is now accessible via the GBIF data portal. Belgium's Research Institute for Nature and Forest (INBO), a scientific institute of the Flemish Government, published the database of distribution data on the wild flora of Flanders and the Brussels region. The records relate to the distribution of vascular plants from 1800 until today.

Florabank also contains an ecological database with data such as IUCN Red List category information, legal protection, global distribution, seed bank, etc. The database is an initiative of the Flo.Wer NGO, the Research Institute for Nature and Forest and the National Botanic Garden. (http://data.gbif.org/datasets/resource/13458)

Benin's Université d'Abomey-Calavi has published 7,397 records of plants from the National Herbarium of Benin, based at the university. (http://data.gbif.org/datasets/resource/13459)

The **Centre d'Observation de Surveillance et d'Information Environnementales (COSIE)**, Guinea's National Centre for Environmental Information Monitoring published 493 records of flowering plants from a 2008 inventory from the Mount Nimba area. (http://data.gbif.org/datasets/resource/13405)

Other datasets

The **UK's National Biodiversity Network** has published 36,031 records from the Scottish Wildlife Trust's Scottish Squirrel Database (http://data.gbif.org/datasets/resource/13407). This database is from an ongoing survey to monitor distributions of invasive grey and native red squirrels throughout Scotland, helping to identify areas where habitat management will benefit native populations.

Japan's National Museum of Nature and Science located in Tokyo has published 253,730 records from various prefectural, municipal and city museums.

RELATED NEWS

White House science advisers call for new eco-informatics body and strengthened links with GBIF

The United States President's Council of Advisors on Science and Technology (PCAST) has proposed a new national informatics facilitating body, with the suggested name of ecoINFORMA, closely co-operating with a strengthened GBIF and other global data initiatives.

In a report published in July, the advisers note: "The United States should continue to support and provide data and expertise to the Group on Earth Observations (GEO) and its Biodiversity Observation Network (GEO BON), the Global Ocean Observing System (GOOS), and the Global Biodiversity Information Facility (GBIF), among other initiatives", to strengthen international global-change research focused on ecosystem services and their sustainability.

The report also noted: "Global observing and informatics systems such as the Biodiversity Observation Network of the Group on Earth Observations (GEO BON) and the Global Biodiversity Information Facility (GBIF), as well as a revitalized global change research program, are required to supply the newly-established Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES)."

US$ 10 million grant from NSF to coordinate digitization of biodiversity collections in 45 US states

The National Science Foundation (NSF) has awarded a five-year, US$ 10 million grant to Florida State University and the University of Florida to coordinate 92 institutions in 45 states working to digitize the nation's biological collections.

Called Integrated Digitized Biocollections or iDigBio, the information in the digitized collections will include field notes, photographs, 3-D images and information on associated organisms, geographic distribution, environmental habitat and specimen DNA samples.

The natural history data will be available to anyone online.

Strategy for English biodiversity to 2020 launched

A plan to create better habitats and join up the habitats of some of England's most iconic wildlife has been published. 'Biodiversity 2020: A strategy for England's wildlife and ecosystem services' aims to halt the loss of England's habitats and species, and follows up the groundbreaking global agreement reached at the Convention on Biological Diversity (CBD) conference held in Nagoya, Japan, in October 2010.

The England Biodiversity Strategy and associated documents are available at http://www.defra.gov.uk/environment/natural/biodiversity/

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UPCOMING EVENTS

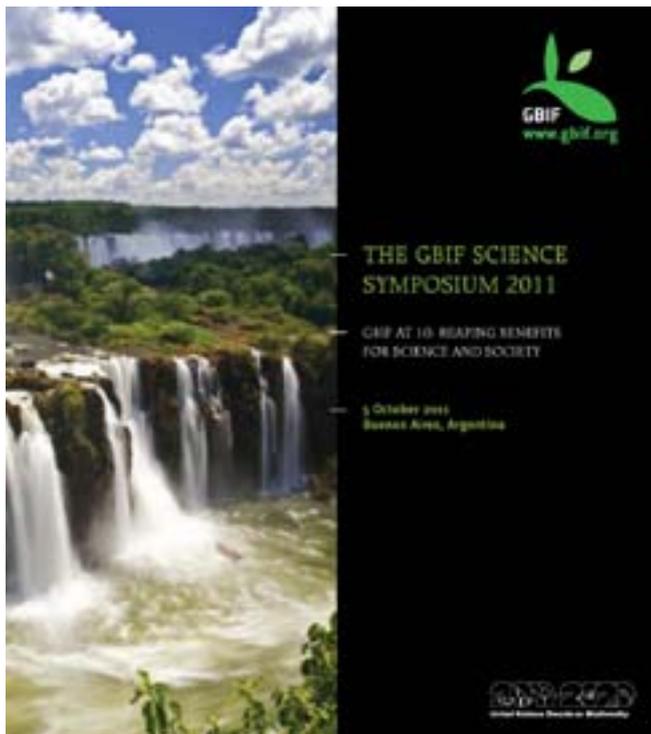### Training course on biodiversity data publishing and fitness for use in the GBIF network

Buenos Aires, Argentina, 28-30 September 2011
This training provides GBIF node managers with up-to-date information about new biodiversity data publishing options, building data discovery and publishing strategies and action plans, and data quality and fitness for use. This event will be held back-to-back with the global Nodes meeting associated with the 18th meeting of the GBIF Governing Board.

GBIF Science Symposium 2011

Buenos Aires, Argentina, 5 October 2011
The annual GBIF Science Symposium, including the Ebbe Nielsen Prize Winner Lecture, is being organized as part of the 18th GBIF Governing Board meeting

THE GBIF SCIENCE SYMPOSIUM 2011

GBIF AT 10: REAPING BENEFITS FOR SCIENCE AND SOCIETY

5 October 2011
Buenos Aires, Argentina

Click on image to download brochure (PDF, 891KB)

and associated events. The symposium is open to the public, and prior registration is required.

Biodiversity data and information management principles course by ARCOS

Kigali, Rwanda, November-December 2011
This workshop is being organized in the context of the project of the Albertine Rift Conservation Society (ARCOS), to build competence for biodiversity information systems in the region (read more on the initiative in the GBIF Community section on page 4). The workshop covers data integration, planning, design and testing.

More information...

Biodiversity data analysis and use workshop by GBIF France

Paris, France, November 2011
This workshop gives researchers, publishers, and others in charge of organizing biodiversity information networks an overview of the different ways to access GBIF-mediated data as well as various possible uses of such data.

More information...

Training course on persistent identifiers

February 2012
The workshop aims at increasing the knowledge of teams leading the development of biodiversity informatics tools on persistent Identifiers. The training looks specifically at issuing, using, publishing and resolving identifiers.

More information...