



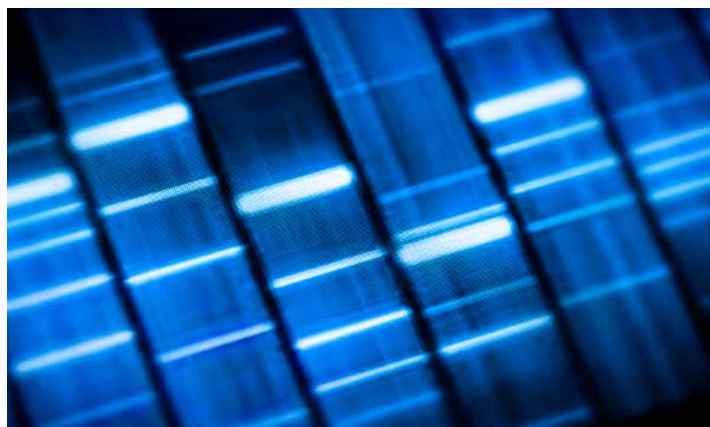
Genomic data in GBIF moves a step closer

An international technical collaboration has opened up new possibilities for including genomic-level data in the information made freely available through GBIF.

Successful alignment of informatics standards for recording species occurrences and gene-sequence descriptions has enabled the first steps to be taken towards integrating the different types of data.

An experimental programme aims to bring data from several repositories of genomic information into the GBIF network, using adaptations of the Darwin Core (DwC) standard for sharing biodiversity data.

The mapping of three standards was completed at a GBIF-led workshop in Oxford, United Kingdom bringing together experts from Europe, the United States, China and Japan.



The workshop, hosted by Oxford University's e-Research Centre, continued the collaboration between GBIF and the [Genomics Standards Consortium \(GSC\)](#), an international community promoting mechanisms to standardize descriptions of genomes and the environmental context in which they occur.

The developments will fulfill an objective of GBIF's Strategic Plan 2012-16, which calls for the network to accommodate new types of data, in order to give access to information on the estimated 90 per cent of the world's biodiversity still to be discovered – the currency of which will largely be genomic information.

[Read more ...](#)



SCIENCE AND POLICY 2

GBits Science Supplement

GBIF contributes marine data to D4Science project

DATA PUBLISHING NEWS . . . 2

Paraguay plant checklist breaks new ground in publishing

A seven-step guide to publishing data through GBIF

GBIF checklist guide available for public review

NEW DATASETS 2

GBIF COMMUNITY 3-4

Results of GBIF regional training call announced

GBIF regional meetings

Taiwanese Encyclopedia of Life to be established

Norway's species map service upgrade

GBIF partner ARCOS wins award for effective institutions

Taxonomic and field identification workshops in Ireland

GBIF Strategic Plan now available in traditional Chinese

GBIF SECRETARIAT NEWS . . 5

New Executive Secretary starts at GBIF

UPCOMING EVENTS 5

Global Biodiversity Informatics Conference (GBIC)

Other events

SCIENCE AND POLICY

GBits Science Supplement

GBits subscribers may wish to know we are offering a new service to keep you abreast of the increasing number of scientific studies making use of data accessed through GBIF. A GBits Science Supplement will be published alongside each new edition of this newsletter.

To find details of 50 research papers using GBIF-mediated data, published since the New Year, see the first edition of the supplement [here](#). We hope you find it useful, and would very much appreciate your feedback.

GBIF contributes marine data to D4Science project

Biodiversity data accessed through GBIF have been used in a project to generate high-resolution maps on the distribution of fish species. GBIF was one of the three sources of information for the D4Science project, with earth observation data contributed by the [GENESI – Digital Earth Community](#) and the Fisheries Global Information System FIGIS.

The D4Science project was launched by a consortium of universities, research institutes, companies and the UN Food and Agriculture Organization (FAO) to develop an 'e-infrastructure ecosystem', enabling the aggregation and sharing of diverse data, computing and software resources.

[Read more ...](#)

DATA PUBLISHING NEWS

Paraguay plant checklist breaks new ground in publishing

A checklist of [vascular plants of the Department of Ñeembucú, Paraguay](#) consisting of more than 4,100 taxon names, was converted from text into Darwin Core Archive format and published simultaneously as both a traditional publication and machine-readable data.

The process is described in the paper [From text to structured data: Converting a word-processed floristic checklist into Darwin Core Archive format](#), published in *Phytokeys* journal.

The checklist was published through the GBIF Integrated Publishing Toolkit (IPT) and significant portions of the text of the journal article were used for the metadata describing the dataset, which will become available through the GBIF infrastructure.

A seven-step guide to publishing data through GBIF

A Canadian network dedicated to unlocking the country's biological collections has published a guide on how to publish biodiversity data to GBIF, using seven simple steps.

The Canadensys repository uses its own instance of the GBIF Integrated Publishing Toolkit (IPT) to enable several plant, insect and citizen science collections to publish data without installing additional software.

Although the new guide targets Canadian data owners, it can be adapted for use by other publishers.

The data publishing guide is available at <http://www.canadensys.net/publication/data-publication-guide>.

GBIF checklist guide available for public review

A new *Best practice guide for compiling, maintaining, disseminating national species checklists*, is now available for public review.

The document is intended to provide guidance on policy and procedures for accessing and capturing information for national checklists. Feedback and suggestions are invited from the community, via <http://community.gbif.org/pg/file/read/22498>, by 6 April 2012.

NEW DATASETS

Denmark - [The Danish biodiversity information facility DanBIF](#) published nearly two million records of vascular plants, recorded under a nationwide monitoring programme. The NOVANA programme, carried out by the Danish Ministry of the Environment, aims to assess the environmental pressures, such as sources of pollution, on aquatic and terrestrial environments. <http://data.gbif.org/datasets/resource/13989>

United Kingdom - [The UK National Biodiversity Network](#) has published 19 new datasets totalling nearly 1.3 million records. They include surveys of woodland plants and marine data from Wales, as well as datasets of threatened lichens, otters and bats. <http://data.gbif.org/datasets/provider/172>

United States - [The Cincinnati Museum Center's Museum of Natural History and Science](#) has published more than 1,200 records from its genomic resource collection for ornithology. The collection consists mainly of vouchered frozen tissues kept at -80 degrees Celsius, as well as blood samples from banded birds, isolated genomic DNA and other materials for use in molecular genetic and other biomolecular studies. <http://data.gbif.org/datasets/resource/13990>



GBIF COMMUNITY

Results of GBIF regional training call announced

Four regional training events organized by Participants will receive funding support in 2012, following a call for proposals.

Sixteen GBIF Participants will directly benefit from these support grants, and they will provide outreach opportunities to nine countries that are not yet members of GBIF. The events are:

- [2012 Asia-Pacific workshop on sharing biodiversity information and the Integrated Publishing Toolkit \(IPT2\)](#) by TaiBIF. Taipei City (Chinese Taipei), May 2012. Partners: ASEAN Centre for Biodiversity (ACB), Chinese Taipei, the International Centre for Integrated Mountain Development (ICIMOD), India, Pakistan and Republic of Korea.
- [Biodiversity information standards and protocols workshop](#) by UgaBIF. Kampala (Uganda), July 2012. Partners: The Albertine Rift Conservation Society (ARCOS), Kenya, Republic of Congo, South Africa, Tanzania and Uganda.
- [Biodiversity data publishing in the Hindu Kush-Himalayas: platform, prospect and progress](#) by ICIMOD. Kathmandu (Nepal), July 2012. Partners: Chinese Taipei, ICIMOD, India and Pakistan.
- [Biological collections 3.0](#) by GBIF Colombia. Bogotá (Colombia), October 2012. Partners: Argentina, Colombia, Spain and Uruguay.

Information related to the call for support is at <http://www.gbif.org/participation/training/plans/regionaltraining/>.

GBIF regional meetings

Two regional meetings of GBIF national and organizational nodes took place in March, continuing the process of collaboration at regional level to support access to biodiversity information.

The **second Asian regional nodes meeting** was held in Tokyo on 1 and 2 March. It was organized by GBIF Japan, and funded by the Japanese ministry of environment. The meeting involved four country nodes (Korea, Japan, India and Indonesia) and four other associates (ACB, Chinese Taipei, ICIMOD, World Federation for Culture Collections - WFCC).

The Tokyo meeting discussed a preliminary strategy for developing regional collaboration between Asian Participants on the scientific use of GBIF-mediated data, and a regional work programme. Sheila

Vergara from the ACB was elected as Asian regional representative. A draft outcome of the meeting has been circulated to the Nodes Steering Group for ratification.

The **fourth meeting of European nodes** was held from 27 to 29 March at the Botanic Garden and Botanical Museum Berlin-Dahlem and the Museum für Naturkunde, Berlin. It involved 55 participants from 13 countries and three organizations.



Participants at the European nodes meeting

The European meeting included presentations on:

- [GBIF Spain's biodiversity data quality hub](#);
- [The reBiND infrastructure to rescue at-risk databases](#), (see the [January GBits](#));
- [GBIF Germany's data annotation system AnnoSys](#);
- [GBIF UK's online data capturing system Indicia](#) and [data cleaning tool Record Cleaner](#).

The European nodes discussed and agreed on an action plan to boost collaboration with the [BioFresh Initiative](#), an EU-funded project to build a global platform for databases on freshwater biodiversity. The focus of the regional collaboration will be a demonstration project on mobilizing data, including checklists, on freshwater invasive species.

The meeting in Berlin was attended by three observers from Italy, which is not currently a GBIF Participant. The 2013 European nodes meeting will be hosted by GBIF Finland.

Taiwanese Encyclopedia of Life to be established

The GBIF node for Chinese Taipei, TaiBIF, has received a three-year government grant to establish a new Taiwanese database and website for the Encyclopedia of Life (EOL).

TaiEOL aims to have species information pages on 16,000 Taiwanese native species, including more than 8,000 endemic species. These pages will include taxon descriptions and images.

Photo by Colin Kuo-Chang Wen



Oncorhynchus formosanus, an endemic species from Taiwan

The national Chinese Taipei e-Learning and Digital Archives Program (TELDAP), which aims to promote national digital archives and e-learning applications for the development of Chinese Taipei, has already accumulated a large amount of biodiversity information from various databases, and this will feed into TaiEOL. The Forestry Bureau will also provide information on 4,000 native vascular plants.

In addition, scholars, experts and citizen scientists will be invited to contribute content to the pages.

Norway's species map service upgrade

Norway's map-based species portal (<http://artskart.artsdatabanken.no>) has been given a significant upgrade, including smarter quality control features and an English interface.

The *Artskart* portal was set up in 2007 by GBIF Norway in cooperation with the Norwegian biodiversity information centre [Artsdatabanken](http://artsdatabanken.no). It is used widely in Norway's land use planning, roads administration, water and energy agencies, as well as by forestry and other industries based on natural resources. Researchers, consulting firms and schools also use the facility.

The upgrade allows users to narrow their searches to include only species occurrences with high geographical precision; to sort data according to species group; and to run statistics showing the number of species for which there is georeferenced information in a limited geographic area, such as a municipality or county.

The service has also added a new feature that eliminates obvious georeferencing mistakes when they are uploaded from the source databases, for example where coordinates lie outside Norway's borders. In such cases, the records are blocked and returned to the data owner for correction.

The map service provides access to nearly 13 million records, with occurrence data for more than 26,000 species, from 30 source institutions and nearly 100 databases. Most of the data are published globally via the GBIF network.

For further information, contact:

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GBIF partner ARCOS wins award for effective institutions

The [Albertine Rift Conservation Society \(ARCOS\)](http://www.artsdatabanken.no), a GBIF Associate Participant, has won the MacArthur Award for Creative and Effective Institutions, recognizing its achievements in mobilizing partners for conservation in the region, and in environmental governance.

The award money will go towards building a headquarters for ARCOS in Kigali, Rwanda, which will also act as a regional information and training centre for NGOs and other institutions. The Albertine Rift region is a biodiversity hotspot, rich in flora and fauna and home to three of the world's great ape species.

ARCOS was one of 15 organizations from six countries to be recognized by the MacArthur foundation.

A four-day training event organized by ARCOS in December helped build expertise in data publishing and geographic information systems (GIS) in the Albertine Rift region. Twenty-six professionals from ARCOS' partner institutions based in Rwanda, Burundi, Uganda, the Democratic Republic of Congo and Tanzania were trained in the Kigali event.

The information systems manager for ARCOS, Zac Maritim, led the training, with contributions from the GBIF Secretariat and GBIF nodes in Kenya, Uganda and Cameroon. The training was part of a project to build a regional biodiversity portal with partial funding from the JRS Biodiversity Foundation.

Taxonomic and field identification workshops in Ireland

The National Biodiversity Data Centre, which hosts the GBIF node in Ireland, has announced its annual programme of taxonomic and field identification workshops. They provide training on species identification and field survey techniques, building capacity within the recording and research community in Ireland. The programme of workshops is run in collaboration with partner organizations to make use of their existing expertise. The full programme of events is available at the [Centre's website](http://www.biodiversityireland.ie).

For further information, contact:

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GBIF Strategic Plan now available in traditional Chinese

The GBIF Strategic Plan 2012-2016 has been translated into traditional Chinese by the Taiwanese biodiversity information facility TaiBIF. The document can be accessed at http://links.gbif.org/sp2012-2016_tc.pdf

GBIF SECRETARIAT NEWS

New Executive Secretary starts at GBIF

The new Executive Secretary of GBIF, Donald Hobern, has taken up his post and set out his vision for the direction of the organization in coming years. Hobern, former director of the Atlas of Living Australia (www.ala.org.au), succeeds Nicholas King as director of the GBIF Secretariat based in Copenhagen. Speaking on video (<http://vimeo.com/gbif/hobern>)

Donald Hobern says: "GBIF has achieved a great deal in its first ten years of existence, and anything we do now is continuing to build on those foundations." Among the most exciting aspects, adds Hobern, is the emergence of many of the GBIF national Participants as leaders in their regions, mobilizing very significant quantities of biodiversity data and having plans to digitize large amounts of their collections.

UPCOMING EVENTS

Global Biodiversity Informatics Conference (GBIC)

Copenhagen, Denmark, 2-4 July 2012

Around 100 invited experts from around the world will gather in Copenhagen in July 2012 for the Global Biodiversity Informatics Conference (GBIC), to discuss how informatics can best meet the challenges posed by biodiversity science and policy.

The conference, to be hosted in Copenhagen University beside the headquarters of the GBIF secretariat, will focus on the practical steps needed to provide the information needs of global commitments such as the Aichi 2020 targets to halt biodiversity loss.

GBIC will bring together experts in the fields of biodiversity informatics, genomics, earth observation, natural history collections, and biodiversity research and policy. Attendance at GBIC will be by invitation only.

The outcome will be published in the form of a Global Biodiversity Informatics Outlook (GBIO), intended as the main background document for the e-Biosphere 2013 conference that will take place in London on 11-13 March 2013. An advanced draft of GBIO will be circulated at the IUCN World Congress and CBD Conference of Parties in September/October 2012.

[Read more ...](#)

Other events

Intergovernmental Platform on Biodiversity & Ecosystem Services (IPBES), second session of plenary

Panama City, Panama, 16-21 April 2012

[More information ...](#)

Sixteenth meeting of the CBD's Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA 16)

Montreal, Canada, 30 April - 4 May 2012

[More information ...](#)

Rio+20, United Nations Conference on Sustainable Development

Rio de Janeiro, Brazil, 20-22 June 2012

[More information ...](#)

VISION OF GBIF: A world in which biodiversity information is freely and universally available for science, society, and a sustainable future.

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MISSION OF GBIF: To be the foremost global resource for biodiversity information, and engender smart solutions for environmental and human well-being.

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