

## GBIF mentoring schemes announced

Three mentoring projects involving eight GBIF Participant countries will share expertise and experience across the network, helping to build capacity for publishing and use of information on biodiversity.

The following projects have been approved and funded under the 2013 GBIF Mentoring Programme.

- The [Information System for Colombian Biodiversity](#) (SiB Colombia) will help its counterpart [SiB Brazil](#) to accelerate the setting up a new Brazilian biodiversity information infrastructure, following the country's entry into GBIF last October.
- GBIF Belgium will mentor Participant nodes in Togo and Mauritania to improve their capacity to publish data. The project will also focus on the deployment of biodiversity information websites in Mauritania and Togo. The [Nodes Portal Toolkit Startup](#), a GBIF product, will be assessed as a candidate for this.
- In the final mentoring project, GBIF nodes in [Spain](#), [France](#) and [Portugal](#) will exchange their expertise in different areas, for mutual benefit. GBIF France will use its experience with a [website using crowdsourcing to digitize botanical specimen labels](#), to support a similar pilot project in Spain and Portugal. France will also support Spain and Portugal in developing a tool for visualizing data from their collections, based on tools developed for the [new French data portal](#). As part of the same project, GBIF Spain will help to set up an e-learning platform for GBIF France and an e-learning training package for GBIF Portugal.

Each of the three projects will receive between €8,000 and €15,000 from **GBIF's core funds**, which are provided by governments of [GBIF Voting Participant countries](#).

[Read the full story...](#)

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## INFORMATICS

### GBIF enables new national portals

Three GBIF Participant countries have released new or revised web portals giving citizens and scientists better access to information about their country's biodiversity.

Japan, Portugal and Colombia have all launched or enhanced their national biodiversity information websites using tools, codes and information sources developed by the GBIF community.

Since the last issue of GBits:

- The GBIF node for Portugal, based at the Tropical Research Institute (IITC) in Lisbon, has released a [bilingual portal](#). In its early stages, the site provides information for the Portuguese-speaking community on publishing and using biodiversity data through the GBIF network. In the future, the portal will display occurrence records in Portugal and data from Portuguese publishers, and help improve [discovery](#) and use of biodiversity data in the country. Open-source functionalities and tools developed within the GBIF network will be adapted and used for the portal. Read the [full story in English](#) and in [Portuguese](#).
- [GBIF Japan's portal](#) has been redesigned and now includes new features such as an online [request form for institutions interested in making data available through GBIF](#). It also offers a test to ensure that the data are compatible with the Darwin Core standard, [the principal means of organizing biodiversity data accessible through GBIF](#).
- GBIF Colombia released a new version of its [portal](#) following another round of improvements in its usability. The changes include an enhanced look and feel for the site, sortable tables and the use of a [GitHub repository](#), a software framework simplifying collaborative development. [Read the full list of enhancements...](#)

## NEW TOOLS AND RESOURCES

### Smartphone apps for plant identification from images ...

A France-based website has launched an [iPhone application](#) enabling amateur botanists to upload plant photos for identification by experts, and publication as occurrence records through the GBIF network. The images are sent to [iHerbarium](#), whose volunteer experts help identify the plant and send an email with the information back to the user.

The images and related information go into a central database, making future identifications

easier. Validated data are [published to GBIF](#) through the [Agoralogie](#) society which promotes scientific collaborations using the semantic web. The iHerbarium app is available in French and English, and the website also in Spanish and Portuguese. An Android application is promised shortly.

### ... and for keys to identify insects and invasive weeds

Users of Android mobile devices now have new tools to help identify insects and invasive plants in Australia. A team at The University of Queensland has developed a mobile version of the [Lucid software](#), [allowing identification tools or keys to be deployed as smartphone apps](#), initially for Android devices but with iPhone/iPad versions to follow shortly.

Two Lucid keys have already been made available on the Google Store – a free key to [Insect Orders](#), and a key to [Environmental Weeds of Australia](#).

The insect key is designed to help advanced secondary school students, undergraduates and others interested in entomology to identify the most common adult insects to Order level in Australia. The second key includes over 10,000 images helping users identify 1,020 plant species that are either significant or emerging weeds in Australia. It should be useful for researchers and anyone involved in weed control. While focused on Australia, the key is also an excellent resource for users in other countries.

### New Wiki site on thrips

An international group of taxonomists has launched a new website giving information on nearly 6,000 insect species belonging to more than 800 genera of the Order Thysanoptera, also known as thrips, thunderbugs or corn lice. [ThripsWiki](#) is supported by Australian Department of Agriculture, Fisheries and Forestry (DAFF), and builds on a checklist compiled in 2005 by Australia's science agency [CSIRO](#), with funding support from GBIF, to [check](#) data from major thrip collections in Frankfurt, London and Washington DC.

*Lichanothrips pastinus*, type specimen from the Australian National Insect Collection, Canberra





## SCIENCE AND POLICY

### GBits Science Supplement

As usual, GBits is accompanied by a Science Supplement featuring recent uses of GBIF-mediated data. The latest issue highlights research suggesting that invasive species shift their ecological 'niche' in their new environments; and a [special issue of the journal Biodiversity Informatics](#) focussing on demand-driven biodiversity data publication.

[Download GBits Science Supplement...](#)

## AROUND THE NETWORK

### Call to mobilize biodiversity data from sub-Saharan Africa

The Central African Biodiversity Information Network (CABIN) is calling for proposals for the mobilization and online publication of biodiversity data from sub-Saharan Africa. The aim is to preserve data belonging to institutions in the region, to improve technical capacity and to make the data visible through networks such as GBIF. The data will be [physically held](#) on a server located at the Royal Museum for Central Africa in Belgium, [with selected African scientists retaining full remote access and control as owners and administrators of the datasets.](#)

The deadline for applications is 31 August 2013.

[More details...](#)

### Grants awarded to digitize US biodiversity collections

Eight projects in the United States will receive grants under the latest phase of the Advancing Digitization of Biodiversity Collections (ADBC) programme, funded by the [National Science Foundation](#) (NSF). The awards involve 65 institutions in 29 states and one territory. The projects include a collaboration on fossil insect data to help understand the diversification of species and response to environmental change; [a centralized digital archive of vouchered animal communication signals](#); and a consortium accessing 150 years of specimen data on algae to understand changes in the marine/aquatic environment.

[Read full story....](#)

### New genomics centre in Canada to house DNA barcoding project

The University of Guelph in Ontario, Canada, has opened a new Centre for Biodiversity Genomics (CBG), focussed on discovering, identifying and [cataloguing species](#) using DNA barcoding technology.

The new centre is a \$16m expansion of the original Biodiversity Institute of Ontario, tripling [the size](#) of the former facility, and will house the secretariat of the [International Barcode of Life](#) (iBOL), a GBIF Associate Participant. [DNA barcoding allows scientists to identify animal and plant species using short, standardized regions of genetic material.](#)

[Read full story...](#)

## NEW DATA

### Belgium

The Flemish government's [Research Institute for Nature and Forest](#) (INBO) has published a number of datasets related to human impacts on the region's rivers and efforts to restore riverine habitats. The new data now available through GBIF include:

- Over [1,100 records of glass eels](#) from the river Yser, captured during their migration for a study on the species' distribution;
- [Juvenile and adult fish occurrences](#) from sampling of [contrasting habitats](#) along the river Yser to evaluate a restoration programme in an area degraded by human activities such as raising of banks and heavy shipping traffic;
- Data from [similar sampling of fish in the river Leie](#), to evaluate the impact of artificial banks;
- [5,800 occurrence records of ground beetles](#) (*Carabidae*) from the banks of the river Meuse. The dataset contains information on 109 species and comes from a monitoring study of the *Grensmaas* region, the stretch of the Meuse bordering Belgium and Holland. The records are among the data used in [studies](#) to measure the riverine habitat's health.

### Netherlands

The NGO [Reptile, Amphibian and Fish Conservation Netherlands](#) has published historical data on 3,700 fish observations extracted from reports by Dutch naturalists in the late nineteenth and early 20th centuries. They include records of fish in the Zuiderzee reported in [1890](#), [1907](#) and [1921](#), and from the [lower Rhine-Meuse delta reported between 1886 and 1896](#).

The [Natural History Museum of Rotterdam](#) has published [68,000 records of molluscs](#) from its collection of snails and slugs living in marine, land and freshwater environments. The museum has also shared [94,500 records](#) from its insect collection.

### France

The [Service du Patrimoine Naturel](#) of the [National Museum of Natural History in Paris](#) has published more than 30,000 marine data records from the seas

off the French Mediterranean, Atlantic and English Channel coastlines. They include:

- An [aerial survey of marine megafauna](#), including records of ocean sunfish, dolphins, fin whales, sperm whales, sharks, giant devil ray, long-finned pilot whale, leatherback turtle and seabirds;
- 190 observation records of [sea horses and pipefish](#);
- [8,700 records of seabed-dwelling organisms](#) such as starfish observed at marine stations; and
- [5,100 records from a biodiversity inventory](#) to help identify marine sites under the European Union's Natura 2000 network of protected areas.

The [University of Strasbourg](#) published [3,780 records](#) of herbarium specimens from Wallis and Futuna, a French island territory in the South Pacific.

## Germany

The [Bavarian Natural History Collection](#) (Staatliche Naturwissenschaftliche Sammlungen Bayerns) has published over 100,000 records, including:

- more than [20,000 microorganism records](#) from the [Jena Microbial Resource Collection](#);
- [8,000 records](#) from the diatom collection of Franz Josef Weinzierl, held at the Botanical museum in Munich;
- [48,400 records](#) from the fungus collections at the [State Museum of Natural History – Karlsruhe](#); and
- [27,000 records](#) of arthropods from the [Bavarian State Collection of Zoology](#).

A new publisher, the [University of Greifswald](#) has published over half a million records of nearly [2,500 plant species](#) from the Mecklenburg-Western Pomerania state in northern Germany, based on a floristic survey of eastern Germany. Members of the public can contribute **additional** information on the flora of the region at <http://www.flora-mv.de>.

## Ireland

The [National Biodiversity Data Centre](#) (NBDC), host of the GBIF national node for Ireland, has published 350,000 records to the network, including:

- [342,000 plant records](#) collected from county Wexford in southeast Ireland since the 18th century, by the county recorder of the [Botanical Society of the British Isles](#).
- [1,100 records of rare marine fish species](#), such as the critically endangered European sea sturgeon (*Acipenser sturio*), taken in Irish waters by fishing vessels and sea anglers from 1786 to 2008.
- Data on [breeding wading birds from surveys](#) in 1985 and 1996 of machair habitats, a type of low-lying grassy plain found on the northwest coast of Ireland;
- Records from a database under development for [caddisflies of Ireland](#), from a survey of [newt distribution in Ireland](#) since 2010, [records of aquatic worms](#) and of [freshwater fish in Irish lakes](#).

## Sweden

The [Swedish Museum of Natural History](#) published about [150,000 records](#) from its insect and paleontological collections. Observations from the Malaise Trap Project, a national insect inventory, are also among the published data. The project uses tent-like traps made from mosquito net fabric, devised by Swedish entomologist René Malaise in the 1930s. Such traps are standard equipment in insect surveys around the world today.

## United Kingdom

The [UK National Biodiversity Network](#), host of the GBIF national node, published 862,000 records from county surveys. Over half of these are from [Ecorecord](#), an ecological database covering Birmingham and the Black Country in the English Midlands. Other datasets include:

- [freshwater fish, cetaceans, butterflies](#) and [mammals](#) from Cheshire in the northwest of England;
- 15,100 records of [insects from Derbyshire](#);
- 7,800 records from a survey of [invasive Himalayan balsam](#) in Bedfordshire and Luton; and
- 95,000 records of [moths from Sussex](#).

## Canada

The [University of British Columbia](#) has published [20,800 records of mammals, reptiles and amphibians](#) from its [Cowan Tetrapod Collection](#). The collection contains specimens dating back to the early 1900s, including 7,000 bird eggs from 625 species. The dataset is hosted by the VertNet network.

## Colombia

Three institutions from Colombia have become new data publishers in the GBIF network:

- Oleoducto Bicentenario, an oil company set up to operate a private pipeline, has published [2,000 records of epiphytes](#), plants such as orchids and bromeliads that use trees for support. The plants were transferred to new locations during the construction of the pipeline between Araguaney in Casanare department and Banadia in Arauca department, in northern Colombia. This is the first of three phases in the construction of the pipeline, which will end in the port of Covenas.
- The environmental authority for the municipality of Bucaramanga - [Corporación Autónoma Regional Para la Defensa de la Meseta de Bucaramanga](#) - has published [6,800 records](#) from its collection of 2,300 plant species in the department of Santander.
- The non-governmental organization (NGO) [Calidris](#), set up to study and conserve the aquatic birds of Colombia, has published 1,700 records of [50 species of waterbirds](#). The dataset includes observations between 2007 and 2009 in the



Sanquianga national park and the Iscuandé estuary, on Colombia's Pacific coast, which hold some of the largest known concentrations of sea and shorebirds in the country. *Calidris* also published records of [22 prey species](#) found in the diet of the brown booby (*Sula leucogaster etesiaca*) in the Gorgona national park between June and December 2006. Information on the richness, composition and abundance of prey is included.

Brown booby (*Sula leucogaster*) perched on a floating tree trunk. © Luis Alejandro Bernal Romero



## TRAINING AND COLLABORATION

### E-learning course on generating data papers

[GBIF Spain](#) has developed an online Spanish-language course on publishing data papers for scientists and professionals working on collections, as well as administrators who compile biodiversity data for further sharing.

The course helps participants to author manuscripts for peer review, based on descriptions of biodiversity datasets (metadata), using the GBIF Integrated Publishing Toolkit (IPT). Data papers offer scholarly recognition for data publishers. The course is based on material from the [workshop on data paper publication](#) held in March in Madrid.

The course is self-guided and is free of charge. All material is in Spanish. Registration is at <http://elearning.gbif.es/>.

### Online forum for biodiversity information in Latin America and Spain

An [online forum](#) for discussions on biodiversity informatics has been started by the [IberoAmerican Infrastructure for Biodiversity Information](#) (I3B), a platform for collaboration among organizations in Latin America and Spain.

New users may register online to use the forum.

### Georeferencing training in South Africa

The 'train the trainers' approach is helping to build up expertise among professionals in South Africa on georeferencing biodiversity records – so improving the quality of data available for research and policy.

The [South African National Biodiversity Institute](#) (SANBI), which hosts the GBIF national node, coordinated and supported a training course in June for 17 participants from universities, research councils, museums, mining companies and from SANBI itself.

The trainers, from the KwaZulu Natal Museum, Eastern Cape Parks and Tourism Agency and the Agricultural Research Council, were themselves trained in 2011 at a workshop run by experts from the Museum of Vertebrate Zoology in Berkeley, California, who have helped to develop the informatics tools and standards used across the GBIF network.

The training helped participants to contribute more accurate descriptions of the location of biodiversity,

### ZooKeys journal

Two research teams have published datasets associated with taxonomic studies in ZooKeys journal, shared with the GBIF network through software installed by Pensoft, publishers of the journal.

The [first study](#) described a new species of burying beetle, *Nicrophorus efferens*, from Bougainville Island in the Solomon Islands archipelago of the Pacific Ocean. The authors from University of Alaska Museum made the discovery using six beetle specimens collected from the island in the 1960s and 70s and held in a museum in Hawaii. These are now type specimens (defining examples of a taxon) for the new species, and the details of their [collection dates and locations](#) are published through GBIF. Burying beetles get their name from their habit of burying the carcasses of small vertebrates such as birds and rodents as a food source for their larvae.

[Read a news story on the new species...](#)

In a [second study](#) in ZooKeys, researchers from San Diego State University reviewed the *Acuclavella* genus of harvestmen, relatives of spiders often known as daddy-long-legs. The authors collected 284 harvestmen specimens in 61 localities in Idaho, Montana and Washington states, and their analysis identified three new species within the genus. [Details of the specimens](#) associated with the study, including collection locations and dates, are now accessible as a dataset through the GBIF portal.

whether at the stage of collecting data, managing datasets or when publishing data.

This was the second workshop of its kind, with the first held at the Kwa-Zulu Natal Museum in November 2012.

[Read the full story...](#)

## GBIF IN THE NEWS

The announcement of the [2013 GBIF Ebbe Nielsen prize and Young Researcher Award winners](#) was covered in a number of newspapers and news websites in Mexico, Portugal, the United States and Denmark. Coverage included:

For Ebbe Nielsen Prize winner Miguel Bastos Araújo:

- the print edition of the Portuguese daily [Jornal de Notícias](#)
- print edition of a major Portuguese weekly, [Visão](#)
- [UEline](#) – online bulletin of the University of Evora
- [Ciência Hoje](#), a news portal on science, technology and entrepreneurship
- [Altinget](#), a Danish news portal on research and innovation

For GBIF Young Researchers Award winner Emma Gómez Ruiz:

- News website [Periódico El Planeta](#)
- News website [Mi Ambiente](#)
- [AgriLife Today](#), bulletin of the Texas A&M University
- [Reforma](#), a leading Mexican newspaper

GBIF was mentioned in several other online and print media outlets in June and July. Among these were a [Comment article in the weekly science journal Nature entitled Agriculture: Feeding the future](#). Arguing the need to mine biodiversity in seed banks to overcome food shortages, the article describes GBIF as a good example of an internationally accessible informatics infrastructure which “has changed how biodiversity is studied” – while noting that GBIF does not currently handle the complex genomic data necessary for the efforts needed to ‘feed the future’.

Other coverage in this period included an [article on invasive species in Tanzania](#), on the news site The Daily News. The Tanzanian Biodiversity Information Facility (TanBIF) and GBIF are mentioned in the article.

## UPCOMING EVENTS

### Meetings and workshops

**Biodiversity Informatics Horizons** 2013  
3-6 September 2013, Rome, Italy  
[More information...](#)

2nd Biodiversity Knowledge Conference  
24-26 September 2013, Berlin, Germany  
[More information...](#)

20th meeting of the GBIF Governing Board, new GBIF portal launch and Science Symposium  
8-10 October 2013, Berlin, Germany  
[More information...](#)

17th Meeting of the CBD Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA)  
14-18 October 2013, Montreal, Canada  
[More information...](#)

5th International Barcode of Life Conference  
27-31 October 2013, Kunming, China  
Abstract deadline: 16 August 2013  
[More information...](#)

### Training events

GB20 Nodes training course: building stronger GBIF Nodes  
4-5 October 2013, Berlin, Germany  
[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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