

ECBOL NEWSLETTER ISSUE 5 DECEMBER 2011

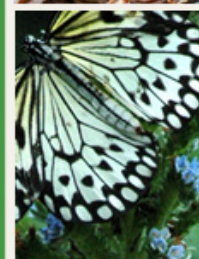
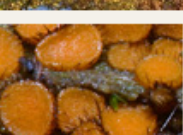
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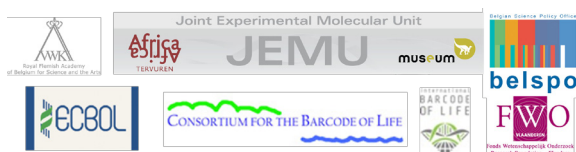




OUR FIFTH ISSUE

The newsletter for the European Consortium for the Barcode of Life (ECBOL) is aimed at all members of the ECBOL community and others that are interested in DNA barcoding and biodiversity in Europe. The aim of this newsletter is to keep these communities informed on all issues related to DNA barcoding and biodiversity research and application in Europe. Therefore, this newsletter will feature several short articles on various topics relevant to the ECBOL community. This will also include regular features to keep the community informed about the latest developments.

We would appreciate any contributions and comments regarding features in this newsletter as well as suggestions on improving the content and distribution of information made available in this newsletter. Feel free to contact us at barcode@cbs.knaw.nl or visit us at www.ecbol.org.



THIRD EUROPEAN CONGRESS FOR THE BARCODE OF LIFE, BRUSSELS, BELGIUM, 17-21 SEPTEMBER 2012

FIRST ANNOUNCEMENT

The European Consortium for the Barcode of Life (ECBOL), the Royal Belgian Institute of Natural Sciences (RBINS) and the Royal Museum for Central Africa (RMCA) invite you to join us for the 3rd ECBOL conference under the theme "Barcoding of organisms of policy concern". The congress will take place at the "Royal Flemish Academy of Belgium for Sciences and the Arts" which is located in the historical center of Brussels, next to the Royal Palace and within walking distance (10 min) of the Brussels Central Railway station. The congress will adopt the format and style of previous ECBOL congresses. The congress organisation is in the hands of the Joint Experimental Molecular Unit (JEMU), the shared DNA barcoding research team of RBINS and RMCA, funded by the Belgian Science Policy (BELSPO).

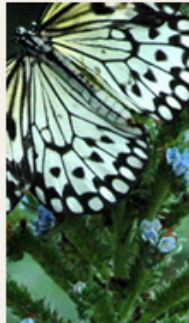
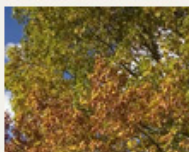
The congress is financially supported by BELSPO, through JEMU, and the Fund for Scientific Research – Flanders (FWO), through the "Belgian Network for DNA barcoding", a collaborative network of 21 Belgian research groups and laboratories that are involved in DNA barcoding activities, and are also ECBOL and CBOL members.

The congress is open for all contributions

in the field of DNA barcoding, and will comprise a papers session, plenary speakers, and a poster session with posters on display throughout the conference. The conference will run over three days during the week of 17-21 September (exact period has to be decided). It will start with an "icebreaker" at the Royal Belgian Institute of Natural Sciences (RBINS) which is within walking distance of the congress venue. The scientific presentations are then planned in sessions on the following two and a half days. During the poster presentation there will be a reception with typical Belgian appetizers and, of course,... a selection of Belgian beers! The conference dinner will be on the last evening of the congress at the Royal Museum for Central Africa (RMCA). The meeting will also include a half-day meeting of the Network of European Leading Laboratories (NELL).

The congress organisers will try to arrange favorable deals for hotel accommodation with selected hotels in the city center of Brussels as close as possible to the congress venue, but participants can make their own arrangements. The congress venue is close to the Brussels Central Railway station, with international train connections from France, Germany, Switzerland, The Netherlands and the UK. There are also regular train and bus (No. 21) shuttles to Brussels International Airport. The congress venue is 100 m from metro station "Troon/Trône".

Congress fees will include registration, abstract book, icebreaker, congress dinner, lunches, drinks and the poster reception. There will be reduced fees for students and early bird registrations.



The congress website will soon be activated, but here below we already list some websites that may be relevant so that you can already start planning your trip!

How to get to Brussels? Well, that is very easy....

By plane:

Brussels airport : <http://www.brusselsairport.be/index.cfm?lang=en>

Charleroi airport: <http://www.charleroi-airport.com/BSCA/siteEN.nsf/.Accueil?Readform>

Note : Brussels International Airport is the main international airport in Belgium, with a frequent bus and train connection to the city center of Brussels. From Charleroi (Brussels South) airport you can easily reach Brussels Central Railway station by train.

By train:

<http://www.b-rail.be/main/E/index.php>

By bus:

International bus connections to Brussels (Europe only):

<http://www.euolines.com/>

By car:

A route planner for if you come by car:

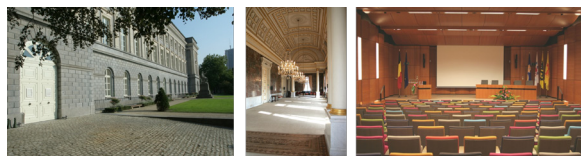
<http://www.viamichelin.com/viamichelin/gbr/tpl/hme/MaHomePage.htm>

THE CONGRESS VENUE....

The congress will be held at the "Royal Flemish Academy of Belgium for Sciences and the Arts".

a glance at the congress venue....

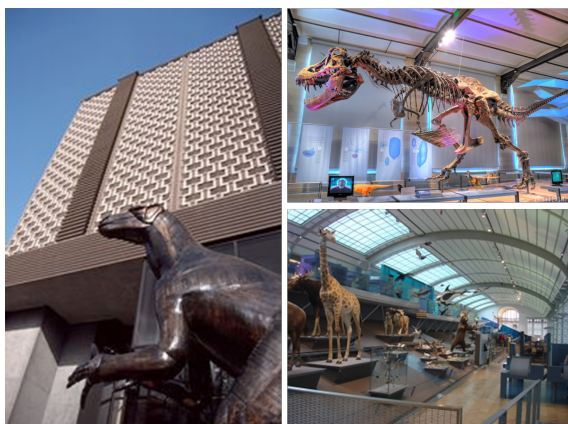
THE HOSTING INSTITUTIONS....



THE ROYAL BELGIAN INSTITUTE OF NATURAL SCIENCES (RBINS)

The Royal Belgian Institute of Natural Sciences will be the location for the

"icebreaker". For more information on the museum: <http://www.naturalsciences.be/>



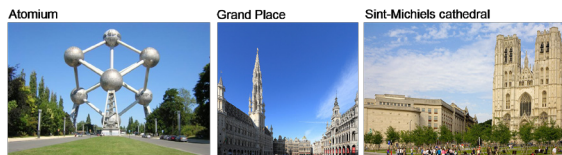
THE ROYAL MUSEUM FOR CENTRAL AFRICA (RMCA)

The Royal Museum for Central Africa will be the location for the congress diner. A bus shuttle will pick you up from the congress venue and will drop you off after the dinner. For more information on the museum: <http://www.africamuseum.be/>

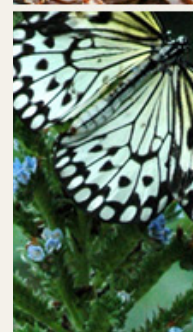
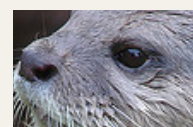


BRUSSELS....

No need to introduce Brussels... but anyhow, the capital of Belgium, home to the European Union Parliament and a central place in Europe. Easy to reach by plane, train, bus or car...

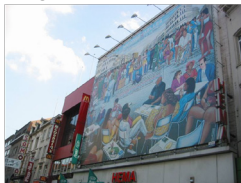


Brussels has a wealth of museums and is internationally known for its Art Nouveau architecture. You may already have had lunch in the upper sphere of the Atomium, had a good beer on the Grand Place or visited the Sint-Michiels cathedral, but...





Matonge



Les Marolles



Zavelkerk



... have you already experienced a nice meal at the Matonge quarter (located close to the congress venue), visited the flea market at 'Les Marolles' or strolled the Antique market near the Zavelkerk? If you already wish to update your knowledge on Brussels, visit the following websites:

About Brussels :

<http://www.brussels.be/>

<http://visitbrussels.be/bitc/front/home/display/lg/en/section/visiteur.do>

<http://www.trabel.com/brussels.htm>

<http://www.belgiumthelaceto.be/brussels.php>

SEE YOU IN BRUSSELS! !

The JEMU Team

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Germany launches the German Barcode of Life (GBOL)

By *Stephanie Pietsch**, *Jonas Astrin** and *Wolfgang Wägele**

**Zoologisches Forschungsmuseum Alexander Koenig, Bonn*



The GBOL (German Barcode of Life) project is a large-scale DNA barcoding initiative to capture the biodiversity of Germany. The initiative is triggered by alarming rates of global climate change and species extinction, requiring large-scale efforts to stop the loss of biodiversity. The German barcode initiative now joins the concerted international venture to monitor the distribution and diversity of life on planet Earth. It is also intended to strengthen the rapidly diminishing expertise of taxonomic diversity. Globally, new and faster methods for biodiversity monitoring are required. Molecular sequencing techniques have rapidly advanced over the last decade and now provide potentially automated, rapid and inexpensive tools for species identifications. The most powerful technique is "DNA Barcoding", which has transformed biodiversity science and its applications throughout society. On a national scale, Germany can now contribute to realize this global vision of a biodiversity inventory. In November 2011, GBOL has been granted a funding of approximately 5 million Euros by the German Federal Ministry of Education and Research (BMBF) for an initial period of 3.5 years.

Launching the GBOL project is a step towards extending laboratory and IT infrastructure, accumulating barcode data sets, and towards building photograph,



voucher and molecular collections required for routine species identification in Germany. GBOL is a national consortium of natural history museums and other research institutions, which will provide their professional taxonomic expertise and existing infrastructure (e.g. dry and wet collections, frozen tissue and DNA collections, data bases, and laboratories) to perform the German biodiversity inventory.

The GBOL project partners are assigned to subprojects according to their taxonomic expertise. Institutions involved in GBOL are:

ZOOLOGY:

- SMNK, Staatliches Museum für Naturkunde – Karlsruhe
- SMNS, Staatliches Museum für Naturkunde – Stuttgart
- ZSM, Zoologische Staatssammlung – München
- ZFMK, Zoologisches Forschungsmuseum Alexander Koenig – Bonn

BOTANY / MYCOLOGY:

- BGBM, Botanischer Garten und Botanisches Museum Berlin
- Universität Bonn, Nees-Institut
- Universität Göttingen
- Universität Münster

SOIL ORGANISMS:

- SMNG, Senckenberg Museum für Naturkunde Görlitz
- University Bielefeld

The involved institutions will strive to achieve a maximum coverage of groups in terms of species and specimen numbers from fresh samples and museum collections. They will establish a national network of professional taxonomists and qualified non-professional voluntary helpers, who will collect and identify specimens. The molecular laboratory of the ZFMK will establish a “barcode factory” to enhance high-throughput capacities and cost efficiency of DNA barcoding. Several DNA barcode application projects are planned in cooperation with users of species information (e.g. forestry, agriculture, fisheries). These exemplary applications will test whether precise species identifications can be efficiently obtained for a diverse fauna and flora. The planned application studies are of economic and ecological relevance (e.g.

water quality control, control of pest species in agriculture and forestry, fisheries and environmental samples).

A GBOL web portal will soon be launched to facilitate internal coordination and targeted collecting, to support networking activities and to share DNA barcoding data generated in Germany with the international community (iBOL and CBOL). The GBOL data will also flow into the global BOLD and GBIF databases. The GBOL web portal will be available online at www.bolgermany.de by January 2012.

In spring 2012, GBOL project partners will conduct regional workshops to train the associated GBOL collectors. Citizen scientists with extensive species knowledge will be invited to support the GBOL initiative and will be instructed regarding standardized collection and preservation of specimens. Citizen scientists have a long tradition of solid taxonomic and faunistic work in Germany, and many groups would be difficult to tackle without their help.

For further information contact Dr. Stephanie Pietsch (GBOL project coordinator) at s.pietsch.gbol@googlemail.com or visit the GBOL portal, www.bolgermany.de.

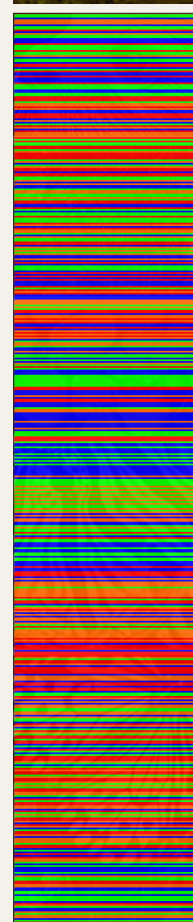
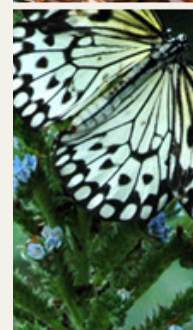
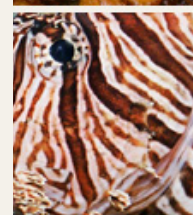
Barcoding Swiss Biodiversity

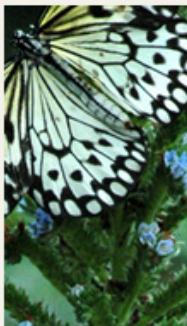
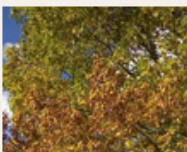
By Jan Pawlowski & Lorenzo Lombard

“Creating DNA-based identification systems for every species living in Switzerland and/or preserved in Swiss collections”

On 9 September 2011 the Barcoding Swiss Biodiversity meeting took place at the University of Geneva, Geneva, Switzerland to help establish “SwissBOL” as a National Node in iBOL. The meeting was attended by various Swiss scientists from universities, institutes and museums and government officials to debate whether the scientific community should form a coordinated DNA barcoding network to barcode Swiss biodiversity.

The meeting included three invited speakers, Paul Hebert (Scientific Director, iBOL), Gerhard Haszpunar (Barcoding Fauna Bavarica) and Lorenzo Lombard (ECBOL Coordinator), which provided an international, national and European perspective on DNA barcoding. This was followed by six presentations from Swiss





scientists illustrating the application of DNA barcoding in their respective research programmes.



Switzerland is not yet a member of iBOL and there is no governmental funding focusing specifically on barcoding activities. Only one Swiss institution (Agroscope Changins-Wädenswil ACW) is currently involved in an international barcoding project, i.e., the EU-FP7 project "Quarantine Barcoding of Life" (QBOL), and the few projects using barcoding that are conducted in Switzerland are based on individual initiatives. It is generally assumed that the Swiss biodiversity is well known and most of the species can be easily identified. In reality, genetic data are available for few well-studied taxonomic groups and very little is known about the genetic structure and diversity within most described species. Moreover, barcoding the species-rich collections (including a remarkable number of type specimens) preserved in Swiss Museums and Herbaria, would represent an added value to existing and ongoing taxonomic work.

The aims of SwissBOL are:

- to build up a comprehensive DNA barcode reference library for species present in Switzerland and/or preserved in Swiss collections;
- to create a Swiss biodiversity DNA bank, in which the DNA extracted from barcoded specimens will be deposited;
- to develop and stimulate projects of practical application of DNA barcoding in biodiversity surveys and environmental risk assessment;
- to extend DNA barcoding to multi-locus approaches that will be necessary to

identify cryptic species that have arisen in the past few million years and will be easily achievable with Next Generation Sequencing applications;

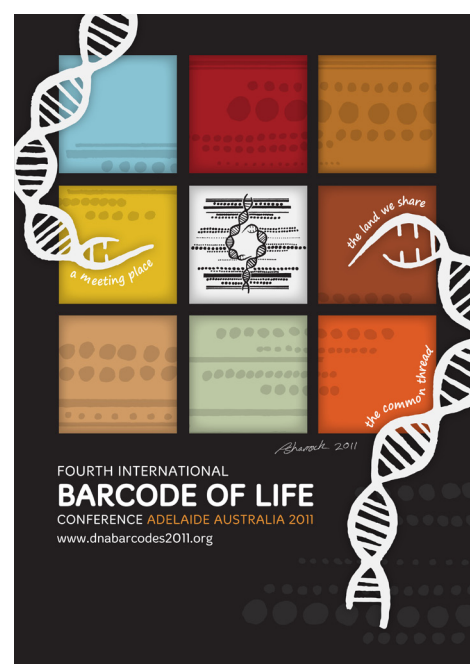
- that Switzerland joins iBOL as an official member and its projects are integrated within the iBOL system.

Thus far, the Swiss Federal Office for the Environment (FOEN) expressed their interest in the project. Details surrounding the formal structure and organisation of SwissBOL still need to be addressed and a final proposal will be submitted to the FOEN by March 2012.

The Fourth International Barcode of Life Conference, Adelaide, Australia – 28 November – 3 December 2011.

By Lorenzo Lombard

The Fourth International Barcode of Life Conference, hosted by the University of Adelaide, the Consortium for the Barcode of Life (CBOL), the International Barcode of Life Project (iBOL) and the South Australian Museum was recently held in the cultural heart of Adelaide, Australia on the campus of the University of Adelaide. The conference consisted of pre-conference workshops (28-29 November 2011), plenary-, parallel-, and poster sessions including various side meetings and was attended by 463 delegates from 61 countries, highlighting the growth of barcoding since the Mexico City Conference in November 2009.



Prior to the conference, two workshops were held designed for beginners and early users, and for technicians in laboratories, aimed at expanding their barcoding operations. The first training course on *Informatics* covered topics to help new users get started on BOLD and other databases as well as showcase new features available in BOLD 3.0. The second training course on *Lab Procedures* was organised by CBOL's Leading Labs Network and covered topics related to barcode activities in the laboratory.

The conference was opened with a reception hosted by the Adelaide Zoo followed the next morning by the first plenary session where all were welcomed by Andrew Lowe (Conference Chair) and Scott E. Miller (CBOL Chair). The keynote address was provided by Mike Wilkinson followed by various talks on topics which included barcoding applications, scientific findings and new approaches to generate reference barcodes. The second day of the conferences consisted of four parallel running taxon-based

plenary sessions followed by taxonomic and thematic parallel sessions on the third day. Thematic parallel sessions continued on the morning of the fourth day with a closing plenary session in the afternoon focused on the future of barcoding, and the status and future of major projects.

Several important announcements were made during the course of the conference which included the official DNA barcode for Fungi, DNA barcoding of the seafood industry approved by the United States Food and Drug Administration (FDA) in October 2011 and the ECBOL 3 conference to be held in Brussels, Belgium in 2012.

All presentations and posters will be made available online in PDF format as well as audio recording of the plenary sessions as podcast through Connect (<http://connect.barcodeoflife.net>). For more information on the conference, please visit <http://www.dnabarcodes2011.org/>.

UPCOMING MEETINGS:

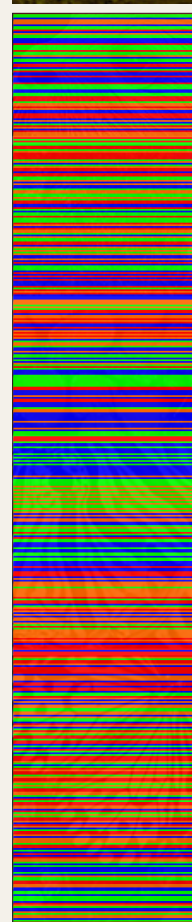
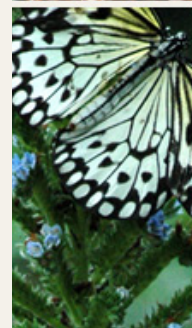
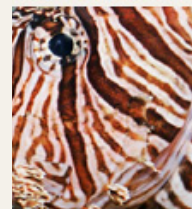
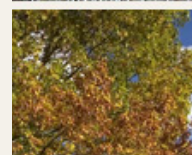
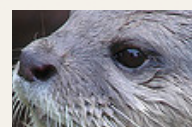
- [SYNTHESYS Advanced Training in Collections Management, third course: Information Networks: digitization, IT and related activities for database and collections management](#) – Tervuren, Belgium – 6-8 March 2012
- [DNA Barcoding course](#) – Paris, France – 19-23 March 2012
- [The CETAF31 General Meeting](#) – Brussels, Belgium – 17-18 April 2012
- [Basics of taxonomy: describing, illustrating and writing biodiversity](#) – Kristineberg, Sweden – 16-27 April 2012
- [QBOL-EPPO symposium on DNA barcoding and diagnostic methods](#) – Haarlem Zuid, The Netherlands – 22-25 May 2012
- [Biological Nomenclature](#) – Paris, France – 28 May-1 June 2012
- [Entomological research in protected areas](#) – Firenze, Italy – May-June 2010 (1 week)
- [Eco-ethological peculiarities and morphological taxonomy in defining uniqueness of island populations: Podarcis Lacertid lizards](#) – Aeolian Islands, Italy – June 2012 (1 week)

JOB OPPORTUNITIES:

If you know of or have any positions available regarding DNA barcoding or biodiversity and wish to advertise these positions in this newsletter or on the ECBOL website, please contact us at barcode@cbs.knaw.nl.

LATEST FROM ECBOL.ORG:

If you wish to contribute to or comment on any of these new features and other features or wish to have more information made available on www.ecbol.org, please contact Lorenzo Lombard at barcode@cbs.knaw.nl.



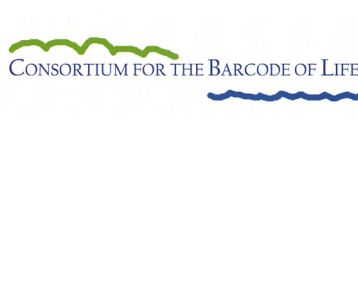


RECENT PUBLICATIONS:

- Galimberti A, Romano D, Genchi M, Paoloni D, Vercillo F, Bizzarri L, Sassera D, Bandi C, Genchi C, Ragni B, Casiraghi M. 2011. Data from: Integrative taxonomy at work: DNA barcoding of taeniids harbored by wild and domestic cats. *Dryad Digital Repository*. doi:10.5061/dryad.0p78hg7g
- Tavares ES, Concalves P, Miyaki, CY, Baker AJ. 2011. DNA barcode detects high genetic structure within neotropical bird species. *PLoS ONE* 6(12): e28543. doi:10.1371/journal.pone.0028543
- Jumawan JC, Vallejo BM, Herrera AA, Buerano CC, Fontanilla IKC. 2011. DNA barcodes of the suckermouth sailfin catfish *Pterygoplichthys* (Siluriformes: Loricariidae) in the Marikina River system, Philippines: Molecular perspective of an invasive alien fish species. *Philippine Science Letters* 4: 103-113.
- Hollingsworth PM. 2011. Refining the DNA barcode for land plants. doi:10.1073/pnas.1116812108
- Shufran KA, Puterka GJ. 2011. DNA barcoding to identify all life stages of holocyclic cereal aphids (Hemiptera: Aphididae) on wheat and other Poaceae. *Annals of the Entomological Society of America* 104: 39-42.

All these scientific publications and more are available on www.ecbol.org.

SPONSORS:



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