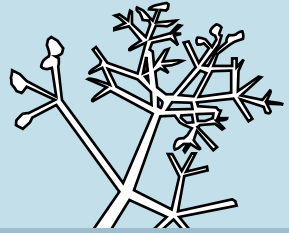


Newsletter #7

February 2008



<http://www.e-taxonomy.eu>



EDIT
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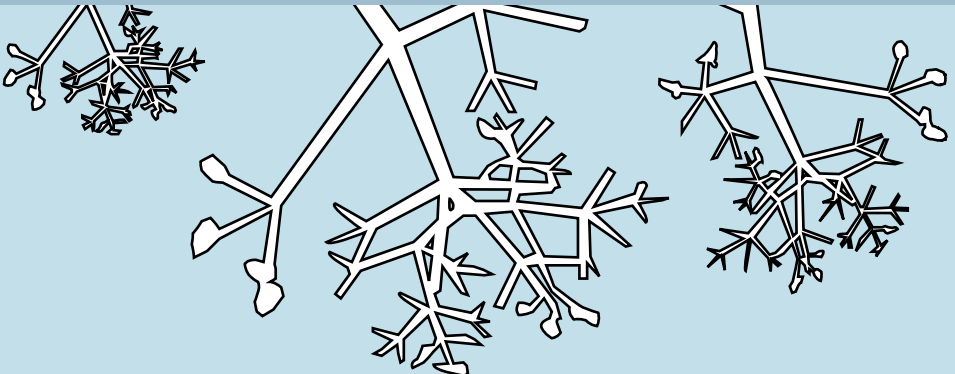
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Recent news

SYNTHESYS

SYNTHESYS Project funding is available to provide scientists based in European Member and Associated States to undertake short visits to utilize the infrastructure at one of the 20 partner institutions for the purposes of their research. The final call is now open - Deadline **28th March 2008**.

See: <http://www.synthesys.info>
Contact: synthesys@nhm.co.uk

Framework Programme 7

The European Commission has put out a call for proposals for projects supported by the Research and Development Framework Programme 7 under the Environment domain. The deadline for application is **25th February 2008**.

Here are a few of the topics which are available for funding and could be of interest to taxonomists:

- Impacts of climate variability, extreme events and increasing atmospheric greenhouse gas concentrations on terrestrial carbon storage, exchange flows and soil carbon dynamics
- New, improved and validated biomarkers to investigate longterm health impacts of exposure to environmental pollutants
- Groundwater systems
- Clustering River Basins Twinning Initiatives and knowledge transfer
- Assessing the ecological status of water

- bodies
- Assessment of methods to combat desertification
- Improving the capacity to protect and manage the biodiversity of continental waters
- Rehabilitation of data from biodiversity-related projects funded under previous framework programmes
- Increasing the integration of biodiversity research results into policy making
- Scale dependency of sustainable use of biodiversity
- Development of adaptive forest management models
- Monitoring and evaluation of Spatially Managed Areas (SMA)
- Deep-sea ecosystems
- Ecosystem approach to marine environment and resource
- Development and application of methodologies, technologies, models and tools for damage assessment, monitoring and adaptation to climate change impacts (excluding extreme events)
- Enhancing connectivity between research and policy-making in sustainable development
- Development of a methodology to exploit the results and enhance impacts of EU environment research activities

More information at:
<http://www.cordis.europa.eu/fp7/dc/index.cfm>
Or your FP7 National Contact Point

Newsletter (European Distributed Institute of Taxonomy)
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UK House of Lords Inquiry

The House of Lords Science and Technology Committee, chaired by Lord Sutherland of Houndwood, is carrying out a follow-up **inquiry on systematic biology research and taxonomy**. The inquiry will provide an assessment on the state of the field five years after the Committee's last report ('What on earth? The threat to the science underpinning conservation') in the context of new scientific, technological and policy developments.

They have now issued a call for evidence, which is attached here and also available on the Committee's website.

EDIT has sent a response to the inquiry, detailing the current changes in taxonomic research.

*Last report is at: <http://tinyurl.com/27os3d>
Call for evidence: <http://tinyurl.com/22eapo>*

Biodiversity Collections Index

A new project, the **Biodiversity Collections Index**, has just been launched.

BCI aims to facilitate the understanding, conservation and utilisation of global biodiversity by creating a single annotated index of all collections of biodiversity materials used in research. BCI intends to do this by collaborating with the organisations and individuals who curate these collections and the information about them.

Note that this is an index to every collection containing specimens, not every specimen.

You can visit the initial project website to read more about the project. There is a page for you to register your interest. If you do this you will be kept informed of developments up to the launch of the system in the summer. Importantly there is also an FAQ page as many people have similar questions on first hearing about the project.

A kick-off meeting was held in Washington DC at the **end of January**. You can read more about this on the associated TDWG NCD wiki page.

Project website:

<http://www.biodiversitycollectionsindex.com>

Kick-off meeting minutes:

<http://wiki.tdwg.org/wiki/bin/view/NCD/BiodiversityCollectionsIndexKickOffMeeting>



NEW EDIT FELLOWSHIPS



The Gender Action Plan of EDIT works towards achieving gender balance in all activities; it will promote women in science and consider family-friendly policies.

Two types of fellowships are offered; the "Women in Science" fellowship and the "Work-Life Balance" programme.

Fellowships for women scientists in early career

5 fellowships each 2000 euros
Application deadline: 31st of March 2008

Selection criteria

- Young women scientists from EDIT
- For visiting other EDIT institutions outside own country
- For training and/or research
- Length of visit from 10 days to 3 months
- Travel, subsistence and training/research costs

Work/Life Balance Travel Grants

Open call: childcare options while attending EDIT meetings and courses

Selection criteria

- *Option 1*: bring your child to the meeting
 - Children under 6 years
 - Max. 75 €/day and 300 €/grant
 - Childcare options provided by meeting organizers
- *Option 2*: arrange childcare at home
 - Children under 6 years
 - Max. 50 €/day and 300 €/grant
 - Babysitters or equivalent

Information and application forms:

<http://www.e-taxonomy.eu/page.php?optim=GAP>

Applications to: editgenderactionplan@mnhn.fr

FORTHCOMING EVENTS

IPR and the web: challenges for taxonomy

20th February 2008, Royal Botanical Gardens, Kew, London



Areas to be explored

- The distinction between IPR and copyright.
- What is covered by copyright?
- How long does copyright last?
- Finding out who owns copyright.
- What rights are being protected, i.e. what can you do with the information?
- What is the difference between legal systems for data being served to the web?
- Does it make any difference, in terms of copyright, where the work is done?
- Why is the mechanism (using web tools vs traditional synthesis) different in copyright terms?
- What are the risks associated with data management? UK law asserts that breach of copyright is a civil matter and that damage (normally financial) has been suffered by the copyright holder.
- What level of abstraction or atomisation makes the work sufficiently different to be independent of the copyright on the original?
- How can we credit data contributors?
- Can this be a mechanism to lend authority to a data set?
- How do we allow attribution to a dynamic web page?
- How can we encourage openness of data?
- Do we need to protect the rights on our databases?
- Can we manage a "mixed economy", with different rights being asserted in different areas? What would be the implications for the CDM?

Conference website:
[http://www.editwebrevisions.info/
content/ipr-and-web](http://www.editwebrevisions.info/content/ipr-and-web)

Consequences of Climate Change on Tropical Ecosystems

18-22 February 2008, University of Hohenheim, Stuttgart

The tropics strongly impact global climate. From tropical rainforests to subtropical desert belts tropical ecosystems affect continent-wide precipitation and temperature, vice versa they respond to "Global Changes". The conference intends to gather knowledge on all past, actual and future changes in the tropics or initiated by the tropical regions with special focus on all aspects of life including, biodiversity, bio fuel production and human biology.

Topical sections

- I Bio Fuel and Consequences for Climate and Tropical Ecosystems
- II Semi-arid to Semi-humid Ecosystems
- III Tropical Aquatic Ecosystems
- IV Emerging Infectious Diseases in Tropical Ecosystems
- V Free topics
- VI Tropical Mountains

Conference website:
[https://www.uni-hohenheim.de/
botanik/gtoe2008/](https://www.uni-hohenheim.de/botanik/gtoe2008/)

The Biodiversity Year Special Events (BYSE) 2010 in Europe

EDIT Public Awareness
Workshop, March 13-14, 2008,
Brussels



The biodiversity year 2010 is the opportunity to highlight the importance of taxonomy and to demonstrate the marvellous capacity of museums, botanical gardens, and universities of communicating biodiversity to the public.

The workshop will assemble the public awareness staff of EDIT, as well as the European expertise in this field to perform an

FORTHCOMING EVENTS

integrated approach for 2010.

The output will be the catalogue of BYSE as a consensus to promote taxonomic activities in Europe in 2010. Moreover the workshop will allow exchange of best practices and initiate long term collaborations.

If you want to benefit from accommodation support during the workshop, please sign up before **February 15**.

For more information:
Kristina.articus@naturalsciences.be

Biodiversity Informatics and Climate Change Impacts on Life 5-6 April 2008, University of Aarhus

The role of past and present climate as determinants of biodiversity and the potential impacts of future climate on biodiversity are the topics that this conference will focus on. These issues are the kind of complex large-scale problems that are very difficult to study by the traditional experimental approach to science. Instead an informatics approach is necessary, and this conference will provide the best possible insight into results, possibilities, and challenges to biodiversity informatics studies of climate change impacts of life. The conference will run over two days and will present a series of leading scientists in biodiversity informatics studies of climate change impacts and related fields.

Conference website:
<http://www.danbif.dk/conference2008/>

Convention on Biodiversity 19-30th May 2008, Bonn

The governing body of the Convention on Biological Diversity will have its ninth meeting («COP 9») in Bonn (Germany) May 19-30, 2008. To channel results and needs of biodiversity research into the political discussion, the associated scientific meeting «Biodiversity Research - Safeguarding the Future» will take place from May 12 -- 16, 2008 in Bonn.

Presentations and activities:

-Three Symposia:

I. Acceleration of Biodiversity Assessment and Inventorying

II. Biodiversity: Functions and Uses

III. Biodiversity Change - The 2010 Target and Beyond

-Invited Speakers for all three symposia

-Open poster session

-Discussion groups to formulate recommendations for the COP9

-Final discussion, presentation of recommendations, press conference.

Conference website:
<http://www.precop9.org>

XXth International Congress of Zoology

26-29 August 2008, Université Paris 6, MNHN, Université Paris 11, Paris

The programmes includes plenary lectures and the following symposia:

S1-Contemporary approaches in Systematic Zoology.

S2-Mechanisms of speciation.

S3-Animal genitalia in evolution-in honour of William G.Eberhard.

SYSTEMA NATURAE 250. The International Commission on Zoological Nomenclature.

*S4-Plenary Session: The Linnean Ark-250 years of animal names

*S5-Current issues in animal nomenclature

S6-Paleozoology and comparative anatomy: exceptional conservations.

S7-Paleontology and Evolution.

S8-Biodiversity and ecology of protists.

S9-Genomics and cell biology of protists.

S10-Sex differentiation in vertebrates.

S11-A/B-Evolution and development.

S12-Transitions from clonal to sexual reproduction: key variations of a key process.

S13-Comparative Immunology.

S14-Venomous animals and their venoms.

S15-Integrative biology of acoustic communication.

FORTHCOMING EVENTS

S16-Genes, individuals, societies: current trends in social insects.

S17-Phenotypical plasticity and behavior.

S18-Interdisciplinary approaches in ecology: from individuals to populations and communities

S19-Animals ecotoxicology.

S20-Marine organisms and symbiotic systems in extreme environments.

S21-The ecological and evolutionary consequences of global climate evolution on population, species and ecosystem

S22-Studies of invasive animal species.

S23-Comparative organogenesis in Animals.

S24-Lamarck's Philosophie Zoologique: 200 years.

S25-A tribute to Darwin.

S26-Diversity in teaching Zoology.

Conference website:

<http://ic2008.snv.jussieu.fr/>

Climate Change and Systematics

1st – 3rd September 2008, Trinity College, Dublin

This meeting, organised on behalf of the Systematics Association and the Linnean Society, will provide a forum for systematists to present and discuss their research as it relates to the critical issue of Global Climate Change. The conference is open to everyone, whatever their chosen discipline within systematics.

The meeting will examine the problems posed by Global Climate Change and will centre on three themes: 1. Climate change and speciation/extinction; 2. Climate change and biogeography; 3. Climate change: documenting and conserving biodiversity.

If you wish to submit an oral paper or poster then please fill in the form at the end of the 'First Circular and Form' document – available at <http://www.tcd.ie/botany/> and return no later than **20th February 2008**.

Contact email:

climate@tcd.ie

IV Congress of the Society of Parasitologists, Russian Academy of Sciences

Parasitology in XXI century: challenges, technology, solutions

20 – 25 October, 2008, Zoological Institute RAS, Society of Parasitologists of the Russian Academy of Sciences, Saint-Petersburg

The Official Congress language is Russian, but for the invited English-speaking lecturers the Congress' participants will provide translation.

Congress topics:

1. Modern conceptions in general parasitology (invited lectures)
2. Ecological and evolution parasitology
3. Morpho-functional research in parasitology
4. Immune response in parasitic infections
5. Biological principles of the medical parasitology
6. Parasites of water-inhabiting organisms
7. Ectoparasites and vectors
8. Epidemics, epizootics, epiphytotic
9. Parasitic consequences of the global climatic changes
10. Databases on parasitic organisms and the parasites-caused diseases.
11. The history of Parasitology in XX century.
12. Problems in Parasitology teaching.

Mini-Symposia in frames of the Congress:

1. Challenges of Cestodology
2. Trematodes as components of the host-parasite systems
3. Ixodid ticks - parasites and vectors of the infleotional diseases
3. Problems of Nematology

Deadlines:

Participant Registration Form and the abstracts submission – February 15, 2008.

Second Information Letter – April 2, 2008.

Registration Fee payment – May 1, 2008 r.

Third Information Letter – September 7, 2008.

Conference website:

http://www.zin.ru/conferences/2008_Cong4_PO_RAN/index.html

Carvoeiro 2008: the next steps

Daphné Duin, Gaël Lancelot (EDIT)

Taxonomy in a Time of Changes

EDIT Science Symposium & General Meeting

On 21-24 January 2008, EDIT held a Science Symposium and its second General Meeting in Carvoeiro (Portugal). This was the first time since the kick-off of the network that a large-scale meeting of all involved participants was held, at all levels from individual researchers to institution directors. Considerable progress took place in a very short time. The general meeting was the occasion to hold them to the standards of a rapidly-changing discipline.

A vision for the future

Many of the discussions were guided by a vision of the short- and long-term future of taxonomy. There have been several ways to articulate such a vision, including considerable work from an EDIT Future Scoping Group. This body was composed of senior voices in taxonomy and younger cutting-edge researchers; their report should form the basis of a wide-ranging debate.

The EDIT Science Symposium showcased 25 European taxonomists from 12 countries and put to light the extremely diverse challenges that taxonomy is now facing. New technologies can make taxonomy more efficient, but a broader access to standard techniques is also needed for amateurs and for capacity building in developing countries.

With the democratisation of sequencing and the digitising of natural history collections, access to data becomes a crucial question, and standardisation is essential to this access. Scientific rigour requires that some principles

are retained, such as the vital place of specimens or consensus on higher taxa. Perhaps more importantly, new technologies now allow and require human efforts on a much larger, almost industrial scale.



In any case, the meeting was dominated by a sense that this is a time of opportunities. Activities in taxonomy will undergo radical changes in the coming years, driven by technology, by societal demands, and by scientific interest in now understudied groups. It is now clear that this change must be channelled, mastered, and put to use to make taxonomy into modern, reliable and visionary science.

Taking stock

Against this background of a rapidly changing field, EDIT's plans and achievements were drawn up and measured. There has been very significant progress. Several useful tools are now available for researchers. Scratchpad websites have mushroomed with more than 40 websites already in use, totalling 100.000 of taxonomic information in use by researchers (<http://www.editwebrevisions.info/scratchpads>). A catalogue of taxonomy courses in Europe has been developed, giving a clear picture of strengths and gaps in the training of the next generation (<http://www.e-taxonomy.eu/trainingresources>). Projects have been launched, such as the thorough inventory

of two national parks in which taxonomists of EDIT member institutions are invited to participate (<http://www.atbi.eu/mercantour-maritime>). Cybertaxonomy has progressed, both in its core processes and its immediate practical tools. This allows, for example, a researcher to upload his georeferenced data and run statistical analyses of biodiversity values (see “*Upload and display of user point data*”, p.12).

On a deeper, more structural level, integration of infrastructure has made great strides with the Pan-European Species-directory Infrastructure, launched by EDIT within the European Commission’s Framework Programme 7.

Of course, some major challenges remain crucial. The coordination of research can now benefit from in-depth strategy decisions. The role of taxonomic institutions becomes vital now: research opportunities and working models are taking shape, and they must now be converted into a large-scale, sustainable, successful way to make taxonomy reach its full potential. For this reason, a directors’ workshop on institutional vision elaborated just such guidelines (see “*Towards a Sustainable Infrastructure*”, p.9).

Science and society

The general meeting’s organisation was itself a reflection of modern taxonomy, with its recent achievements, its challenges and its opportunities. In particular, the growing importance of users of taxonomic knowledge in our scientific choices and practice was ever-present in the meeting.

This is one major aspect of modern taxonomy which informed many of the presentations and conversations. More and more people, in fields ranging from conservation to bio-security to biological research, depend on taxonomic knowledge. In turn, taxonomists are more and more looking to contribute to societal change and policy decisions that are the logical outcome of their own research.

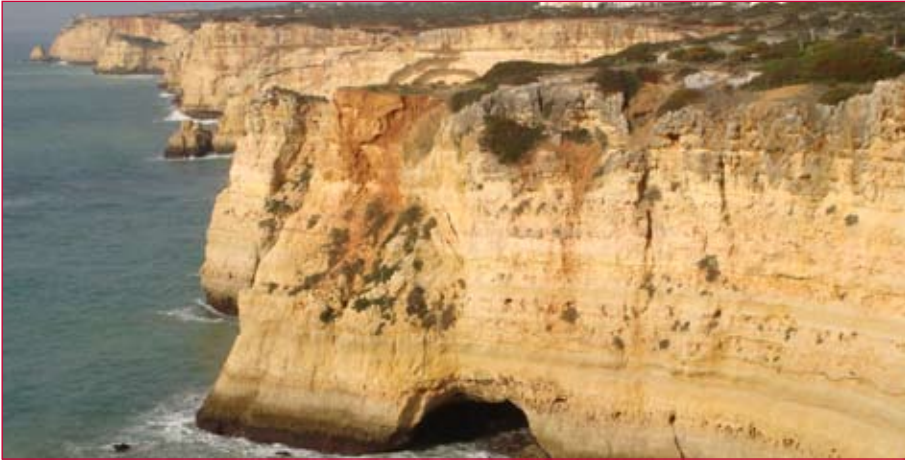
In a workshop, during the General Meeting, three representatives of the taxonomic user community were invited to give a presentation about their work (plant health & pest management, conservation management and archaeology impact assessments). They explained how they use taxonomic information for their own profession, what challenges they face and how they try to solve them. One of the concrete issues that became clear in the three presentations was the existence of an information gap, more than a knowledge gap. The users said they had problems finding the right taxonomic information. Because taxonomy is just one kind of the information they use in their work, they had difficulties keeping up to date with the latest information tools and other taxonomic services. Here, a good communication infrastructure between the academic taxonomic community and the users could solve an important part of the problem.

In general the subject led to a vivid discussion about how to work together: what is the desirable extent of interaction? What should common decisions bear on? What are the limits of contributions between the communities of users and producers of knowledge – keeping in mind that most scientists are both at the same time?

A special place for taxonomy

Taxonomy, as a field, has retained a tradition of academic freedom, perhaps more than any other discipline. Like all freedoms, this one carries an enormous weight of responsibility. We are free to study what we choose, and that means we must choose well. Our research is useful, and that means we must develop new ways to work, to create more knowledge, more relevant descriptions of the world.

The seed has germinated. Now it needs to grow.



The Carvoeiro coastline, location of the 2008 EDIT General Meeting

Bertrand-Pierre Galey (MNHN)
Leo Kriegsman (NMN/Naturalis)

Towards a Sustainable Infrastructure

EDIT Director's Workshop

On January 25th, 2008, the directors of EDIT member institutions, representing major European taxonomic facilities, participated in a workshop on the vision and requirements for a sustainable common infrastructure beyond the EDIT project. It was the first fundamental discussion of this kind and scale, gathering directors or representatives of 26 institutions: museums, universities, major societies and foundations.

Three vision documents were made available prior to the workshop: one by the Future Scoping Group on foreseeable scientific developments; one produced by a smaller Directors Working Group in Paris two weeks earlier, focussing on possible legal and institutional frameworks; and one by the EDIT Network Steering Committee on the network's current vision. There was a high consensus on

the vision and overall direction of EDIT. In the BoD meeting the next day it was agreed to submit this vision to a high-ranking journal.

There was a strong consensus on integrating collections and related ICT infrastructure, and taxonomic databases. Hence, the best way forward may be to speed up integration for those issues, implementing standards designed by the Taxonomic Databases Working Group (TDWG), and initiating a Collections Management Working Group (CMWG) to design and implement collections standards, partly building on SYNTHESYS results. EDIT intends to hold a workshop for directors of collections in Leiden, June 2008, to define the scope, tasks and mandate of such a CMWG. The assembly was also favourable towards the idea of establishing a Lab Facilities Working Group and an Archives & Libraries Working Group. The general feeling was that institutional integration also needs interaction and collaboration at the middle management level.

The assembly further agreed that EDIT's successor must be relevant both at academic and at societal level. A third issue, commercial relevance, was deemed of lesser importance. Demarcation was next on the list: what are the limits of a Distributed Institute of Taxonomy, and what should be left out? Clearly, if some fields covered by natural history museums (e.g., mineralogy, anthropology) are omitted, then only partial integration can be achieved. It was therefore deemed worthwhile to transcend the boundaries of the current EDIT project and at least consider integrating entire natural history museums. The discussion on demarcation obviously needs further refinement and must lead to common strategic decisions soon (starting at the next EDIT board of directors), with considerable emphasis on research strategy.

A basic roadmap for the EDIT project includes (i) first infrastructure design (vision, desired products, integration with requirements from users, research and cyberplatform) leading to decisions on tasks (research, curation, etc.) and components (collections, databases, labs, libraries, human resources); (ii) practical design options (organisational models, finances, etc.) leading to decisions on organisation; and (iii) implementation (MoUs, etc.) leading to decisions on partners involved. This scheme could follow a flexible timeframe, as some issues may be resolved faster than others.

Common bodies for EDIT beyond 2011 could include a BoD, with an "Executive Committee" including some directors and specialised subcommittees, an Advisory Council which could be a new SAC or (more likely) a larger Reference Group with stakeholders and users of taxonomy. Flexibility will be the main criterion for the rest of the organisation and legal structure of the cooperations. Member institutions should not be supposed to participate in every cooperation, and different organisations could exist for different tasks. The choice is roughly between a dedicated structure supported by the network, a collaborative network, delegation to one

member or subcontracting.

Different existing types of legal status could fit, depending on future decisions on what needs to be supported. Examples include the Belgian "international association", used by CETAF; the French "scientific cooperation foundation", or a new legal form dedicated to scientific cooperation which is under study in the EU administration, and probably others in several national legal systems.

The idea that we may share a common facility goes a big step further than the notion of common strategy, practices and standards, and is likely to require devolving some power to a centralised body. We should thus allow an open phase for institutions stepping out of or joining the EDIT successor, and go on checking the existing legal tools and the constraints imposed by our different legal statuses.



Yves Samyn, Didier VandenSpiegel, Jérôme Degreef and Jackie Van Goethem

Abc Taxa

A new series of manuals dedicated to capacity building in taxonomy and collection management

Almost all of the World's Governments have ratified the umbrella Convention on Biological Diversity (CBD), a treaty that works via thematic and cross-cutting issues. One of the latter is the Global Taxonomy Initiative (GTI) that was installed to ensure a worldwide critical taxonomic capacity needed to under build effective sustainable exploitation and in turn conservation of biological diversity.

The GTI changed the face of taxonomy forever as detection, description, naming and classification of life became of interest not longer solely to the taxonomic but also to policy making community. It leaves little doubt that this revived interest in taxonomy.

Recently several ambitious programs such as the *Partnerships for Enhancing Expertise in Taxonomy* of the US National Science Foundation or, more recently, Europe's EDIT network, were set up. The ultimate aim of these programs is to considerably revive taxonomy by installing new cohorts of well-trained and well equipped taxonomists that can then further the discovering, collecting, identifying, describing, naming and classifying all of biodiversity's units and this across the world.

However, augmenting taxonomic capacity is no simple endeavour and demands long-term teacher-apprentice relationships to adequately transfer taxonomic skills and knowledge. To speed up this process the Belgian GTI NFP has set up *Abc Taxa*, a series of manuals that aims to be a toll-free taxonomic information highway between experts and novices. In addition, *Abc Taxa* also aims to be a speaker's corner for those experts who have the skills to communicate on good practices in taxonomic research.

Abc Taxa is conceived as the joint product of the complete Be-TAF (the Royal Belgian Institute of Natural Sciences, the Royal

Museum for Central Africa, and the National Botanic Garden of Belgium) ensuring that both zoological and botanical taxa can be tackled.

The series is open to contributions of experts worldwide but preference is given to contributions that result directly from Belgian capacity building initiatives and adhere closely to the philosophy of the GTI (more info on the rationale and modus operandi of the Belgian GTI National Focal Point is available in the second *News Bulletin of the CDB NFP*, available on <http://www.biodiv.be/newsbulletin>).

Hard copies of volumes are distributed through the GTI and CHM (Clearing-House Mechanism) network of the CDB and can, on motivated demand, be obtained free of charge by interested parties from developing countries. For the interested public of non-developing countries copies will be charged at publication and distribution cost. Each volume can also freely be downloaded on the journal's website.

The following volumes are now available:

- Samyn Y., VandenSpiegel D. & Massin Cl. 2006. *Taxonomie des holothuries des Comores*. *Abc Taxa* Vol 1. i-iii, 1-130.
- De Prins R. & Rour E. (translation). 2007. *Détérioration des collections de coquilles*. Causes, conséquences et traitement. *AbcTaxa* Vol 2: i-iii, 1-60.



The editorial board of *Abc Taxa* invites you to its website (<http://www.abctaxa.be>) for further information. More ad hoc information on the series can also be obtained by mailing the editorial board (abctaxa@naturalsciences.be).

Pere Roca Ristol, Pablo Sastre Olmos, Jorge Miguel Lobo

Upload and Display of User Point Data in the EDIT Geoplatform

An essential part of EDIT Work Package 5.4 (Geospatial Component) is the development of a freely available and easy-to-use tool which can produce maps for those taxonomists not experienced in the use of GIS programs. Geographic information is nowadays an important part of the information associated with any collected or observed specimen, and this information constitutes an important source of data for basic and applied purposes. At present, this web based application is freely available in the EDIT Geoplatform mapViewer (http://edit.csic.es:8080/edit_geo/prototype/edit.html) for the use of the entire taxonomist community.

Map your data

The current system allows the insertion of user information (point species data) in a comma-separated-values text file format (CSV extension) and must contain at least Latitude and Longitude fields in decimal degrees, with datum WGS 84 (the GBIF standard). To upload a data file, user should: i) explore her computer to find and select the data file, ii) choose the desired context/extent (World, Europe, Iberian Peninsula, ...), iii) write a user identification code (user name, for example), and iv) indicate the total number of fields in the data file, and the position of the Latitude and Longitude fields. More information and some examples can be downloaded from EDIT Geoplatform web available at http://edit.csic.es:8080/edit_geo/prototype/edit.html (see Figure 1).

Once the data file is uploaded, the user can compose their own map selecting the desired map projection within each context/extent (for example, a conic projection for the case of Europe), the GIS layers to be

displayed as background (surface units and/or environmental variables), and then choose the symbol size, type and colour of the user points.

Studying the data: uncertainty and completeness

This application is under constant development and we hope to offer as soon as possible the possibility of applying a taxonomic filter (for example: "show me only X and Y Genera"). This functionality is already shown in the Demo currently available (Sample Point Data). The following next steps to develop have been detailed in the report entitled Do we need to estimate inventory completeness? *Utility and drawbacks of modelling techniques for biodiversity databases mining*, available at <http://edit.csic.es/web/docs.html>.

As most of the available distributional and taxonomical information is scarce and predictive models need good data, further extensions of the application will try to include a tool to assess the completeness of inventories



Figure 1: Interface for uploading user point data

and another one to design the environmental and spatial coverage of the territories that need to be surveyed to optimize the coverage of data on biodiversity patterns. To give an idea of these functions a Demo can be seen at http://edit.csic.es:8080/edit_geo/prototype/edit.html (Figure 2).

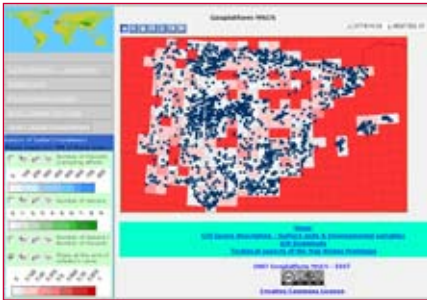


Figure 2: Analysis of spatial completeness of biodiversity data (Demo)

Simple calculations such as the «number of records per region» may give an idea of how much information has been collected in certain areas. If such information is included in a map the message becomes clearer. The comparison between the number of records and the taxonomic richness (number of different taxa) in each region gives a first measure of inventory uncertainty in each polygon: the simple ratio number of taxa / number of records.

Collector's curves

More complex measures of inventory uncertainty in each polygon are calculated from the collector's curves (also called accumulation curves or rarefaction curves). The collector's curve represents the number of taxa (S , at y -axis) that is obtained when the number of records (n , at x -axis) increases. This type of measures are based not only on the total number of taxa (S_t) and the total number of records (N_t), but also on the relative frequencies of the different taxa (FS : from F_1 to F_{S_t} , being $FS = NS / N_t$). Thus, the collector's curve is calculated with the

following equation:

$$S(n) = S_t - \sum S \{ [(N_t - N_s)! * (N_t - n)!] / [(N_t)! * (N_t - N_s - n)!] \}$$

The slope value at the end of the curve is a suitable measure of inventory uncertainty, representing the mean effort dedicated to discover the last taxon found in each surface unit. A graphic of the complete collector's curves, corresponding to the data used in the Demo about analysis of spatial completeness mentioned before, can be found at: http://edit.csic.es:8080/edit_geo/prototype/editcurves.html (Figure 3).

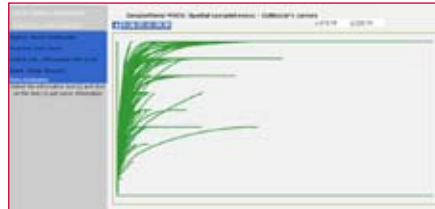


Figure 3: Graphic of collector's curves with the same data used for Figure 2

The maps of inventory uncertainty indicates the "red" surface units where it is necessary to carry on additional surveys in order to recover the spatial variation of the area, or where data on absences should be recorded. A review of the available scientific information on the possibilities and usefulness of the compiled species distribution data for basic and applied purposes is available for download at: http://wp5.e-taxonomy.eu/blog/files_edit_wp5/2007-07-26_D5.35_&_D5.38.doc

We invite you to visit regularly the EDIT Geoplatform Viewer (http://edit.csic.es:8080/edit_geo/prototype/edit.html) and test the developed tools. Any comments or suggestions will be welcome.

More information at: <http://edit.csic.es>

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