

# EDIT ATBI+M NEWSLETTER 03

July 2010

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The views expressed in the newsletter are those of its correspondents, and do not necessarily reflect the policy of EDIT.

Please send us your contributions for the next edition of our newsletter (November 2010) the latest by October 15th, 2010

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**Team Leader:** Lars Krogmann (SMNS Stuttgart)  
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SIXTH FRAMEWORK PROGRAMME



## **NOTE FROM THE EDIT WP7 Leader**

Welcome to our next ATBI+M newsletter and many thanks to all contributors!

With the end of the EC funding for EDIT coming in sight, it is becoming our main concern to sustain the ATBI+M operations, for which we pursue several options for the different pilot sites. As presented below, the Mercantour and Alpi Marittime Parks have been successful in securing a large grant from another EU programme allowing them to continue supporting the ATBI+M efforts, which we regard also as a big success of our ATBI+M concept and approach. We are hopeful to find additional support for other pilot sites in the future, and in any case will strive to have ATBI+M operations continue for all established sites after the end of EDIT's funding, at least at the level of voluntary participation. As also reported in this newsletter, we are currently in the process of reviewing our concept and working model, with the goal to present a concrete business plan for an ATBI+M case to interested partners and stakeholders, indicating what results can be expected for a certain minimum investment for a given site. We call upon anybody interested to contribute to this exercise, and also to help to sustain our ATBI+M operations in the future.

For any questions or suggestions concerning ATBI+M matters, please feel free to approach the EDIT WP7 team. My best wishes to you all for a continuing fruitful cooperation, and a successful summer field season.

**Christoph L. Häuser**

## **ATBI+M NEWS**

In the middle of this year's vegetation period, field activities at the ATBI+M sites are well underway. More than 60 scientists will have visited the sites by the end of July. Data delivery from 2009 has also progressed well and we can state an increase in the number of recorded species from 4078 in November 2009 to 5735 at present for Mercantour / Alpi Marittime, and from 1360 to 2417 for the Gémère Region in the same period. A detailed report will be presented in our next newsletter.

## **Grant from EU-Programme "Integrated Transboundary Action Plan" to ATBI+M site Mercantour/Alpi Marittime**

The history of cooperation between the Parc National du Mercantour and the Parco Naturale Alpi Marittime was inaugurated with an important event in the International Year of Biodiversity 2010: Both approved to the "Plan integer transfrontalier / Piano Integrato Transfrontaliero (PIT)" (Integrated Transboundary action Plan) and awarded financial support within the framework of the "Alcotra 2007-2013" programme. Alcotra is a European Commission programme, part of the INTERREG plan. The plan is mainly focused on improving the cooperation along the French-Italian border with the aim of creating long-lasting networks among different subjects and ameliorating dialogue strategies through social, economical, environmental and cultural cooperation. Part of this large Plan concerns the "Inventaire Biologique Generalise / Inventario Biologico Generalizzato" (Generalised Biological Inventory) which will integrate and widen the All Taxa Biodiversity Inventory + Monitoring started by EDIT in 2006, and will benefit from the collaboration of the Muséum National d'Histoire Naturelle in Paris (MNHN), and the Museo Regionale di Scienze Naturali in Turin (MRSN). The IBG will continue all activities aimed at improving our knowledge on animal and vegetal diversity in the Marittime/Mercantour territory. However this is only one of the six projects developed for the PIT, which will once integrated represent an important source of information for all actions concerning land use and management: From agro-pastoral activities to a "Transboundary Ecological Network", to the evaluation of the actions planned for a Protected Area. Moreover, it will be useful for giving indications and technical support during the planning phase and for the development of mobility systems for touristic purposes along the transboundary territory, with the aim of assuring environmental sustainability. The financial support for the IBG will last for 2 years (while other projects will last 3 years), and throughout this time several education and divulgation activities will be promoted together with scientific research activities, aimed at specialised public as well as the wider public. It

may thus appear even more relevant for the collaboration with the two scientific museums.

For more information:

[http://www.interreg-alcotra.org/2007-2013/?pg=tipo\\_progetti](http://www.interreg-alcotra.org/2007-2013/?pg=tipo_progetti)

### **THIRD EUROPEAN ATBI+M SITE LAUNCHED: SPREEWALD**

We are happy to announce that a third European ATBI+M pilot site has now been established: a Memorandum of Understanding was signed with the authorities of the nature conservation office of the Brandenburg state on May 2010, to jointly undertake efforts towards an All Taxa Biodiversity Inventory and Monitoring (ATBI+M) project in the area of the Spreewald Biosphere Reserve in northwest Germany.

#### **UNESCO-Biosphere Reserve Spreewald: Like a park in a labyrinth of streams**

The Spreewald (German for "Spree forest") is situated about 100 km south-east of Berlin and is considered as a unique cultural landscape in Central Europe. The 484 km<sup>2</sup> area is known for its traditional irrigation system which was shaped during the ice age and today consists of more than 200 small channels (total length: 1,300 km). Alder forests on wetlands and pine forests on sandy dry areas are characteristic for the region, however, also grasslands and fields can be found. In 1991 the Spreewald was designated as a UNESCO Biosphere Reserve. Twenty percent of the Biosphere Reserve has been declared as a nature protection area, the remaining parts were designated as landscape conservation area.

#### **Biodiversity of species and habitats**

Many species that are threatened or already extinct elsewhere live in the Spreewald Biosphere Reserve, e.g., the White-tailed Eagle, the Osprey, the Black Stork, cranes and otters. Diversity of flora and fauna is high in the Reserve: More than 500 plants from the Red List of endangered species grow in the waterways or at the water's edge, on the meadows and in the forests. The Spreewald Biosphere Reserve is characterized by its high diversity of habitats such as grassland and forested low moor landscape with ramose system

of water bodies, inland dune pine forest, old fruit plantations, and agro-ecosystems with cucumber and cabbage.

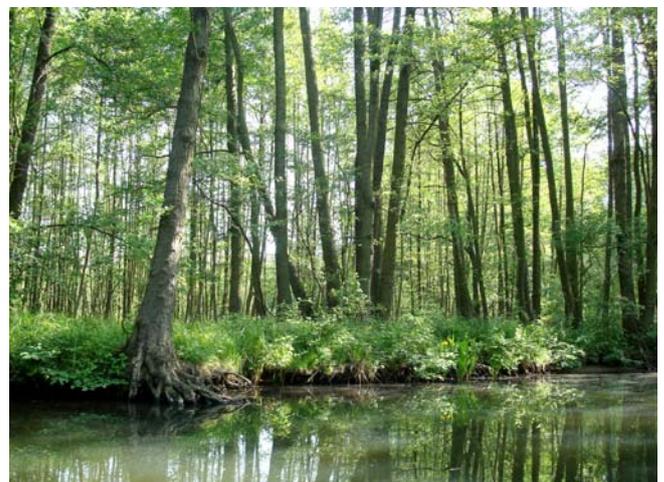


#### **Invitation to participate in the new ATBI+M Spreewald**

We would like to invite all taxonomists to consider our third European ATBI+M pilot site in the Spreewald Biosphere Reserve in Germany for their next species inventory. Please contact us if you are interested to do a species inventory here. General information about this ATBI+M pilot site can be found on the page [www.atbi.eu/spreewald/](http://www.atbi.eu/spreewald/).

#### **How to participate?**

As for the other ATBI+M sites, the principle remains simple: any taxonomist, professional or



amateur, can register on the forum at [www.atbi.eu/forum](http://www.atbi.eu/forum), and then needs to agree with and sign the Terms of Reference for active

participation. For field work, participants will then receive financial support for travel and subsistence costs according to the terms defined in the financial guidelines, as well as logistical support from the administration of the biosphere reserve. In return, their data must be shared with the local authorities and EDIT, in a pre-defined form that allows us to compile and compare it. The data will be presented online on the EDIT database, but will also be shared via the Global Biodiversity Information Facility (<http://data.gbif.org>).

### Contact

Please do not hesitate to contact us for further information about the area, logistics, and planned or ongoing activities. Of course you are also welcome to visit the ATBI+M sites in France/Italy ([www.atbi.eu/mercantour-maritime/](http://www.atbi.eu/mercantour-maritime/)), and Slovakia ([www.atbi.eu/gemer/](http://www.atbi.eu/gemer/)).

### Contact persons:

- Juan Carlos Monje [carlos.monje@smns-bw.de] for ATBI+M Mercantour/Alpi Marittime
- Anke Hoffmann [anke.hoffmann@mfn-berlin.de] for ATBI+M Gemer and ATBI+M Spreewald.

## FLASHLIGHTS ON DIVERSITY

### 1st BioBlitz in Mercantour/Alpi Marittime

There is more and more curiosity and enthusiasm in the general public for biodiversity. But how do we make people experience an actual taxonomic inventory, and get involved in the tremendous effort they require? Such was the challenge of the first French GEO bioblitz. And it was a resounding success. On the 22 May 2010, in the Mercantour National Park in France, 190 people made the trek up the mountains, on short notice, just to get closer to the living species in this beautiful region of the Southern Alps. They were split into eleven groups; each led by a professional or amateur expert, and covered all living groups: rare plants, lichens, ants, macro-fauna, butterflies...



Then each group started to systematically inventory a particular spot in the Vésubie valley. Overall, more than 180 species were recorded across taxonomic groups in little more than three hours of trekking. Then, at 2000m above the Mediterranean Sea, everyone was brought together to sample local delicacies and enjoy a summary of the morning's efforts. They also learned about EDIT's ATBI+M project and its early results (<http://atbi.eu/mercantourmaritime/>), which include more than 5600 species recorded over three years, more than 10 brand-new species discovered and undergoing description, and dozens of species never before recorded in the area.

At the same time, on the Italian side, the Parco Naturale delle Alpi Marittime brought together more than 20 scientists for its own more research-



oriented bioblitz. Of course, all of the data collected during the day will go on to feed the inventory database. This is an unprecedented success in getting members of society at large to get involved in taxonomic surveys and identification.

For ten years, the magazine GEO has been collaborating with the German government to organise Biodiversity Action Days. This year, the International Year of Biodiversity, events took place in 35 countries on the 22<sup>nd</sup> of May. EDIT is happy to have contributed to the first of these events in France, and is proud of the enthusiasm and involvement it created. Thank you to all those who participated!

## RESEARCH IN THE PODOCARPUS NATIONAL PARK, ECUADOR

### Structure, diversity and distribution of ant communities

M. Leponce, T. Delsinne, T. Arias Penna, J. Jacquemin  
*Royal Belgian Institute of Natural Sciences.*

In the framework of the EDIT All Taxa Biodiversity Inventories and Monitoring (ATBI+M) activities, a research programme (2007-2012) focusing on ants has been initiated in the Podocarpus National Park. The main goals are: **(1)** to understand which factors promote high ant diversity at different spatial scales (from regional to local and micro-scale); **(2)** to study the effects of nutrient fertilization on ants as top predators of the leaf-litter decomposition food web; **(3)** to study the effects of modified climatic conditions on ants.

To characterize the ant diversity, a standardized sampling protocol was used in 16 sites corresponding to various altitudes (from 1000 to 3000m a.s.l.) and rainfall regimes. Ants are



identified according to morphological and molecular criteria (DNA barcoding). A digital collection of specimens with high resolution images (see picture) will be available on the internet. Nutrient addition follows the NUMEX protocol. Preliminary results indicate that ants are found up to 3000m a.s.l. (n=8 species in Cajanuma). Diversity is inversely correlated to altitude: 41 species at 2000m (ECSF) and 90 at 1000m (Bombuscaro) [128 spp. in total for the 3 sites]. Species density can be very high: up to 26 species per m<sup>2</sup>. Species composition seems to vary considerably among sites.

### Beetles on tree barks

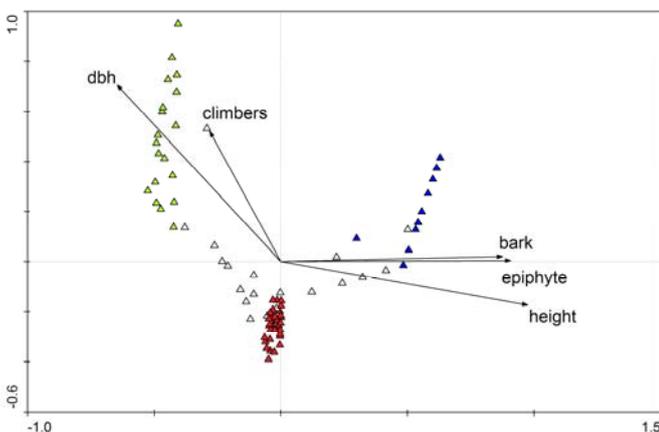
Jürgen Schmidl  
*Research associate RBINS Brussels, Department for Biology, University of Erlangen-Nürnberg*

The MACAG-Project (“Monitoring of Arthropods along Climate and Altitude Gradients”) aims at monitoring and evaluating climate change and altitudinal gradient driven impacts on the arthropod faunas on undamaged tree barks in primeval and near-to-nature forests. In Ecuador it is done within the EDIT-network and in cooperation with the RU. This spatial (altitudinal) and temporal (time-scale) quick assessment is so far carried out in several global diversity hotspots like Panama (San Lorenzo National Park), Australia (Queensland), Vanuatu, Ecuador (Podocarpus National Park), but also in European mountain forests. Our standardized barkspray protocol has been shown to be a solid sampling tool (Schmidl et al. 2009) and especially beetles proved to be suited as indicators of ecological shifts and gradients (Schmidl 2009, Lauke & Schmidl 2009), since this mega-diverse insect group is a dominant component of the bark fauna, integrated in complex food-webs and synecological relations.

In Ecuador we sampled from 2007 until 2009 at Podocarpus NP. Our analyses focus on the patterns of bark arthropod diversity between trees, plots, altitudinal levels (Bombuscaro 1000 m, ECSF 2000 m, Cajanuma 3000 m) and environmental gradients, evaluating diversity and monitoring performance (application suitability) esp. of the beetle fauna.

## Endless beetle diversity?

The samples of 2007 and 2008 (116 trees) contained a total of 1514 beetle specimens, 503 morphospecies and 45 families. In average, every third individual is a new morphospecies. High species diversity is also indicated by a strict, highly significant positive correlation of individual and species numbers per family. Highest densities of species and individuals (per cm dbh) are found on an altitudinal level of 2000 m, followed by 3000 m and 1000 m. A rarefaction (25 samples each) reveals that the species accumulation curve of beetles on barks is highest on 2000 m (160 spp.) and lower at 1000 m and 3000 m (each 110 spp.), with no saturation at any level. Another 180 samples from 2009 will give more details. DCA reveals a strict ordination of the trees (samples), plots and species along the altitudinal gradient, with congruence of the 2007 and 2008 samples. In CCA, height and altitude level dependent factors significantly explain the variation of beetle abundance and diversity patterns (see figure). Species are almost confined to one altitudinal level, only 21 out of 503 species showed intermittent distribution (Schmidl & Homeier, in prep.).



Canonical Correspondence Analysis axis 1 vs. 2 of 503 beetle species from 116 trees barks sampled at 1000m, 2000m and 3000m and five environmental parameters (dbh: trunk diameter at breast height; climbers: c. cover of bark; epiphyte: e. cover of bark; bark: bark roughness in intervals 1-5; height: altitudinal level). 482 species were found only at a single altitude (in ordination often with congruent positions): green 1000m, red 2000m, blue 3000m. From Schmidl & Homeier, in prep.).

## References:

Lauke S. & Schmidl J (2009): Corticolous mite (Acari) distribution in a tropical rainforest in Ecuador following structural,

altitudinal and climatic gradients – Abstract GfÖ-Symposium Bayreuth

Schmidl J. (2009): MACAG - Monitoring of Arthropods along Climate and Altitude Gradients – Abstract GfÖ-Symposium Bayreuth

Schmidl J., Flemming B. & Bittner T. (2009): Altitudinal patterns of corticolous beetle diversity in Lamington NP, Queensland, AU – Abstract INTECOL-Symposium Brisbane

Schmidl J. & Homeier J. (in prep.): Corticolous beetles communities reflecting altitudinal and structural gradients in a tropical mountain forest.

## CONSERVATION STAKEHOLDER WORKSHOP Berlin (15-17 June)

### „Taxonomy meets nature conservation”

The aim of the Conservation Stakeholder Workshop was to present the ATBI+M concept and first results to conservation managers and stakeholders. Contributions and feedback of the participants were of high value for reviewing the ATBI+M concept.

**Background:** One of the main goals of EDIT is creating liaisons between the taxonomic community and the biodiversity and conservation community so that taxonomy can better address the needs of the European citizens. In this sense EDIT has started and operates three European ATBI+M pilot sites in France/Italy, Slovakia and Germany as a model of collaboration between these two communities.

**Aim of the workshop:** The aim was to review the benefits and possibilities of applying the ATBI+M scheme as a tool for biodiversity conservation through the collaboration with the taxonomic community. Important was to show the value of all taxa inventories for management and conservation of protected areas and trying to overcome the still existing traditional philosophy of “protecting without knowing what is being protected”.

### Agenda:

Both results from EDIT ATBI+M pilot sites and from previous ATBI initiatives were presented (e.g. Great Smokey Mountains ATBI in the USA), as well as other conservation activities that are taking place worldwide.

The workshop included six sessions in two days:

- Introductions to the EDIT ATBI+M approach
- Experiences from established EDIT-ATBI+M sites
- Experiences from other biodiversity projects
- ATBI+M expectations, experiences and results
- Working groups with focus on:
  - Management and coordination
  - Data generation and scientific outputs
  - Data utilization and benefits for conservation
- Reporting and discussion

The detailed workshop programme and the results of the working groups (the latter with restricted access to participants only) can be found on the webpage: [www.atbi.eu/wp7/?q=node/3511](http://www.atbi.eu/wp7/?q=node/3511)



Welcome of participants in the main hall of the Museum für Naturkunde Berlin (photo Valdis Pilats)

**Participants:** For this workshop we brought together 35 people from ten countries in Europe and outside working on the management of nature conservation. That included responsible persons of conservation offices, national authorities, governments, national/nature parks, museums and universities.



Participants of the Conservation Stakeholder Workshop (photo Hwa Ja Götz)

## ATBI+M CONCEPT REVIEWED

Berlin (17 June)

### “EDIT ATBI+M concept and cost model”

Following the Stakeholder Workshop a closed meeting of six participants took place to review the EDIT ATBI+M concept and cost model, both with regard to its success in providing inventory / monitoring data, the data’s availability and usefulness, as well as for cost-efficiency. A document has been developed by the review team, which evaluates the approach of the ATBI+M concept. This document will serve as basis for developing a booklet / brochure on experiences gained and guidelines for establishing an ATBI+M site to be released at the end of 2010.

## NEWS ON THE FIELDWORK MANUAL

The Manual on “Field Recording Techniques and Protocols for All Taxa Biodiversity Inventories” is in print at present and will be published after the summer break. It will also be available online at the publisher’s website:

[www.abctaxa.be/volumes/](http://www.abctaxa.be/volumes/)

## UPCOMING WORKSHOPS AND EVENTS

### Scoping and planning workshop “ATBI of the Pondoland centre of endemism (PCE) in South Africa”

A workshop for the development of an All Taxa Biodiversity Inventory (ATBI) for the Pondoland Centre of Endemism (PCE) will be held from 30 August - 3 September 2010 on the South Coast of KwaZulu-Natal. The workshop is a collaboration of the South African National Biodiversity Institute (SANBI), the European Distributed Institute for Taxonomy (EDIT), and the Global Biodiversity Information Facility (GBIF).

Aims of the joint workshop:

- Establish a strategic framework for the further development and implementation of the project, including sourcing funding
- Conduct a taxonomic gap analysis and identify priority taxa and associated expertise
- Establish a phased, achievable approach to conducting (an) ATBI(s)
- Decide on the (sensible) geographic delimitation of the PCE-ATBI study area
- Discuss involvement and expectations of local communities
- Discuss involvement and expectations of NGOs, and identify other participants and stakeholders
- Decide on a strategy and mechanism for the dissemination of information gathered during the ATBI as a contribution to the ongoing decision-making on sustainable development options for the Eastern Cape in general and Pondoland in particular.

### DGS Annual Meeting

The 84th Annual Meeting of the German Society for Mammalian Biology (Deutsche Gesellschaft für Säugetierkunde - DGS) will take place in Berlin, 12-16 September 2010. The programme can be found at [www.mammalianbiology.org/](http://www.mammalianbiology.org/).

### EDIT General Meeting, year 5

EDIT's next general meeting will take place in Paris, 17-19 January 2011. The meeting will include a policy conference, a scientific meeting, side-events, and training sessions for all tools and methodologies EDIT has developed over five years. More information will soon be available on the main EDIT website: <http://e-taxonomy.eu>

### BioSystematics Berlin 2011

This conference includes:

- 7<sup>th</sup> International Congress of Systematic and Evolutionary Biology (ICSEB VII)

- 12<sup>th</sup> Annual Meeting of the Society of Biological Systematics (Gesellschaft für Biologische Systematik, GfBS)
- 20<sup>th</sup> International Symposium "Biodiversity and Evolutionary Biology" of the German Botanical Society (DBG).

Major conference topics:

- Trends in Taxonomy
- Evolution of Organisms in Time and Space
- The Evolutionary Thought: History, Philosophy and Society
- Evolution of Form and Function
- Inventorying and Managing Biodiversity

More information is available on the webpage:

[www.biosyst-berlin-2011.de/](http://www.biosyst-berlin-2011.de/)

➔ **BYSE**  
- Biodiversity Year Schedule of Events -

Please find more events of 2010 on the webpage:

[www.countdown2010.net/byse/](http://www.countdown2010.net/byse/)

### IMPORTANT: REIMBURSEMENT

**As the present phase of EDIT will end in February 2011, please be aware that reimbursement of costs for field activities at ATBI+M sites will only be possible until November 2010.**

### CHANGES OF ADDRESS

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