

## The ATBI+M pilot site Mercantour/Alpi Marittime – Establishing the taxonomic baseline for nature conservation

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### Background

EDIT aims to strengthen the input of taxonomic expertise for biodiversity conservation. Therefore it organizes and supports the participation of taxonomists and other experts in biodiversity inventory and monitoring efforts in protected areas through its Workpackage 7, "Applying Taxonomy to Conservation". The mechanism for achieving this objective is the establishment of "All Taxa Biodiversity Inventories + Monitoring" (ATBI+M) sites for selected protected areas and other areas of specific conservation concern. ATBI+Ms are intensive, large-scale efforts to record, identify, and document the entire biodiversity of a given area.

### The ATBI+M site Mercantour/Alpi Marittime

Following the signing of a Memorandum of Understanding between representatives of the Mercantour and Alpi Marittime Natural Parks and EDIT, activities at this bi-national ATBI+M site started in 2007. Since then, participation has greatly increased (Fig. 1), especially if one considers the number of institutions having sent experts to the field. This is a clear indication that the ATBI+M programme has transcended the EDIT boundaries and has received increasing perception by non-EDIT institutions.

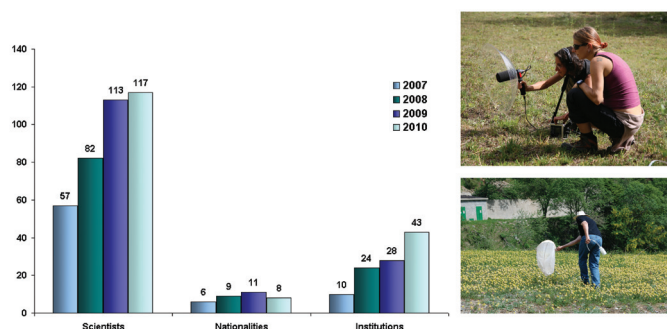


Fig. 1: Number of scientists, nationalities and institutions having participated between 2007 and 2010 at ATBI+M activities in Mercantour/Alpi Marittime (pictures by Marta de Biaggi (upper right) and Anke Hoffmann (bottom right))

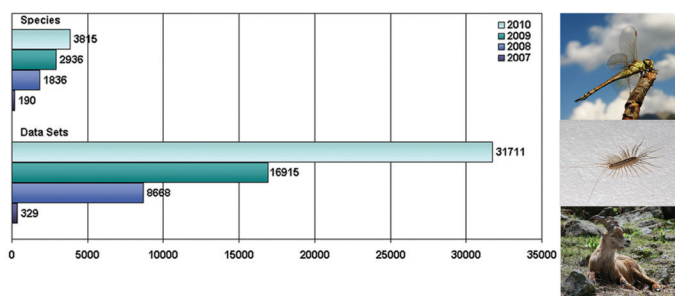


Fig. 2. Number of recorded species and number of datasets on species distribution between 2007 and 2010 (Pictures by Matteo Elio Siesa (upper right), Jean-Claude Streito (middle right) and Anke Hoffmann (bottom right)).

Between 2007 and 2010, more than two hundred and fifty scientists carried out surveys in the region in some two thousand three hundred field days. As a result, about eight thousand species of animals, plants, and fungi were collected, observed or recorded. More importantly, about five thousand seven hundred datasets on their distribution were delivered (Fig. 2). As the identification process has not been completed yet, these numbers will still increase. The obtained data will help to accurately map species distributions, to develop probability range maps and are basic for attempts to understand the complex ecological processes that drive habitat dynamics.

### Enhancing knowledge on biodiversity

Important additions to the knowledge on the flora and fauna of this ATBI+M pilot site have been achieved so far: two hundred thirty seven new species records for the region Mercantour / Alpi Marittime, thirty five new species records for France / Italy. One of these examples is the cuckoo wasp *Philoctetes helveticus* (Linsenmaier, 1959) (Hymenoptera: Chrysididae, Figure 3, right). Paolo Rosa, identifier of the species, comments: "One of the last mysterious European species. Probably distributed throughout the Alps, but only three specimens from Switzerland were known until now!"



Fig. 3: *Philoctetes helveticus* (Linsenmaier, 1959), collected at Le Pra, Coll de la Bonette in Mercantour by Christian Schmid-Egger (Pictures by Christian Schmid-Egger (left) and Michele Zilioli (right))

At least twenty species new for science have been discovered so far and are in the process of description. One example is the cave dwelling mite *Troglocheles lanai* (Arachnida, Acari: Rhagidiidae), recently described in the Journal of Natural History. Marco Isaia, one of the scientists involved, comments: "The cave also hosts several other amazing organisms, like *Troglohyphantes konradi* (a rare subterranean spider, previously only known from another cave), or *Duvalius carantii* (a rare cave beetle). They all show the incredible process of how life fits to environmental conditions, resulting in a perfect adaptation of an organism to its environment."



Fig. 4. *Troglocheles lanai* (Acari: Rhagidiidae), collected in the cave Barun Litrun near Gesso Valley in Alpi Marittime by Marco Isaia. (Pictures by Francesco Tomasinelli)

### Data use for conservation management

The higher the number of species inventoried, the more information the park management staff has gained on habitats and ecosystem conditions. The Mercantour National Park could benefit from the data collected for the definition of a list of its natural heritage (endemic, rare and/or protected species). This list was included in the Charta, an official document which defines the major orientations of the institution for the next fifteen years. As a result, the future land management actions could be defined as efficiently as possible.

### Moving forward

Funding additional to the resources provided by EDIT was and still is essential to sustain the ATBI+M activities on the long term. Grants from the French Ministry of Environment (230000 €) and from the Prince Albert II Foundation, Monaco (45000 €) were received by the Mercantour national park. A joint project proposal submitted by both parks to the Integrated Transboundary action Plan IV Programme of the European Union awarded financial support within the framework of the "Alcotra 2007-2013" programme.

Part of this large plan concerns the "Generalised Biological Inventory" (GBI) which will integrate and widen the ATBI+M activities started by EDIT, 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 GBI will continue all activities aimed at improving the knowledge on animal and plant biodiversity in the Mercantour / Alpi Marittime territory.

### FACT BOX

Detailed information about this ATBI+M site can be found at: <http://www.atbi.eu/mercantour-maritime>

- including how to participate.

Summarized facts as of December 2010:

- Activities started in 2007.
- More than 250 scientists have participated;
- More than 8000 species of animals, plants and fungi have been recorded;
- More than 57000 datasets on their distribution have been delivered;
- 237 new species records for the region;
- 35 new species records for the countries;
- At least 20 species new for science;
- Additional funding through the Integrated Transboundary action Plan IV Programme of the European Union until 2012.