



Project no. 018340

Project acronym: EDIT

Project title: Toward the European Distributed Institute of Taxonomy

Instrument: Network of Excellence

Thematic Priority: Sub-Priority 1.1.6.3: "Global Change and Ecosystems"

C5.157 Integration testing of various external data sets with the mapViewer tool

Due date of Component: Month 56

Actual submission date: Month 56

Start date of project: 01/03/2006

Duration: 5 years

Organization name of lead contractor for this component: 14 RMCA, 15 NBGB

Project co-funded by the European Commission within the Sixth Framework Programme (2002-2006)		
Dissemination Level		
PU	Public	X
PP	Restricted to other programme participants (including the Commission Services)	
RE	Restricted to a group specified by the consortium (including the Commission Services)	
CO	Confidential, only for members of the consortium (including the Commission Services)	

This report provides a description of possibilities of integrating and using external data with the EDIT Geoplatform tools, especially the EDIT mapViewer. It was compiled by Marcin Gašior with generous input from Patricia Mergen, James Davy, and Franck Theeten and the colleagues from the EDIT developer mailing list.

Introduction

The EDIT Geoplatform comprises of two main components – map REST service and mapViewer. Both are operational although they are still undergoing development in order to improve their functionality and stability. That is why thorough and structured integration and usability testing was not yet performed. Nevertheless, this report presents Geoplatform tools operating and functioning with external data.

The EDIT mapViewer is meant to be an easy to use mapping tool for taxonomists working with their own data. Its main purpose is to deliver means for preparing maps of the quality appropriate for publications. On the other hand, the EDIT map REST service was designed to provide means for automated access map generation. It exposes a rich API enabling users to take full advantage of available functionality.

The main advantage of the mapViewer is a set of additional functions (modules) which can be enabled after user data has been uploaded. This data must be in simple .csv (comma separated values) format and have at least latitude and longitude in WGS84 datum and a field (genus, species). This feature enables the mapViewer to make use of various external data sets if supplied in correct format. User can upload any point data provided that coordinates are in decimal degrees format.

The following sections present how external data can be integrated into the EDIT Geoplatform tools. The selection of datasets is mainly based on the report *C5.43 Report on test data for the EDIT Geoplatform tools*.

ATBI+M – All Taxa Biodiversity Inventories and Monitoring

Currently (November 2010) the dataset contains 10728 records (8012 – Mercantour/Alpi Maritime; 2714 – Gemer). The ATBI+M websites utilize mainly the map REST service to automatically present location of collected specimens (compare Fig. 1 and Fig. 2 in Annex). The datasets can be easily exported to .csv format and adjusted for being used in mapViewer. The tool smoothly imports even several thousand of occurrence points. MapViewer functionalities (described wider in the report *C5.111: MapViewer version 3*) than can be used to analyze data and prepare a map (compare Fig. 3, Fig. 4, Fig. 5).

IBSAS – *Institute of Botany, Slovakian Academy of Sciences*

The datasets are available as comma delimited or tab delimited text files. Geographical positions are provided in decimal degrees as most part of the data was collected using GPS. That is why the datasets are easily usable with mapViewer for visualization and simple analysis purposes (compare Fig. 6).

MIIZPAN – *Museum and Institute of Zoology, Polish Academy of Sciences*

Most of data is created by user for species distribution maps or distribution modeling. For that reason files are in generic format and can be prepared for the mapViewer without difficulty. Example of occurrence data is presented in Fig. 7.

GNOSIS – *Generalized Natural Sciences Online Spatial Information System*

The GNOSIS project has started in 2004 and is carried out in the framework of the ‘Multi-annual Information Society Support Programme’ of the Belgian Federal Science Policy Office. It provides an access to various datasets ranging from meteorological data and zoological collections to geological datasets supplied by three Belgian federal scientific institutes: the Royal Belgian Institute of Natural Sciences (RBINS), the Royal Museum for Central Africa (RMCA) and the Royal Meteorological Institute of Belgium (RMI). The services are developed by GIM - Geographic Information Management nv with the software of IONIC Software.

The initial postulation was to display data and layers from GNOSIS in the mapViewer instead of original system which could not be maintained any longer due to high license fees. At this moment the GNOSIS map service is down and geographical data are not presented. Therefore it is not achievable to display and GNOSIS data or WMS services in the mapViewer. As the datasets consolidated under the project are valuable, it is reasonable to reactivate the geographical part and base it on open source components under the ‘beyond the EDIT project’.

Conclusions

The EDIT mapViewer is able to easily operate with user supplied data. The only condition is to provide data in proper text format. The tool smoothly imports even several thousand occurrence points and allows to visualize data and to perform simple analysis. Moreover, predefined or custom WMS data can be displayed as background layer to enhance cartographic effect analysis capabilities.

Annex: External data operated by The EDIT Geoplatform Tools

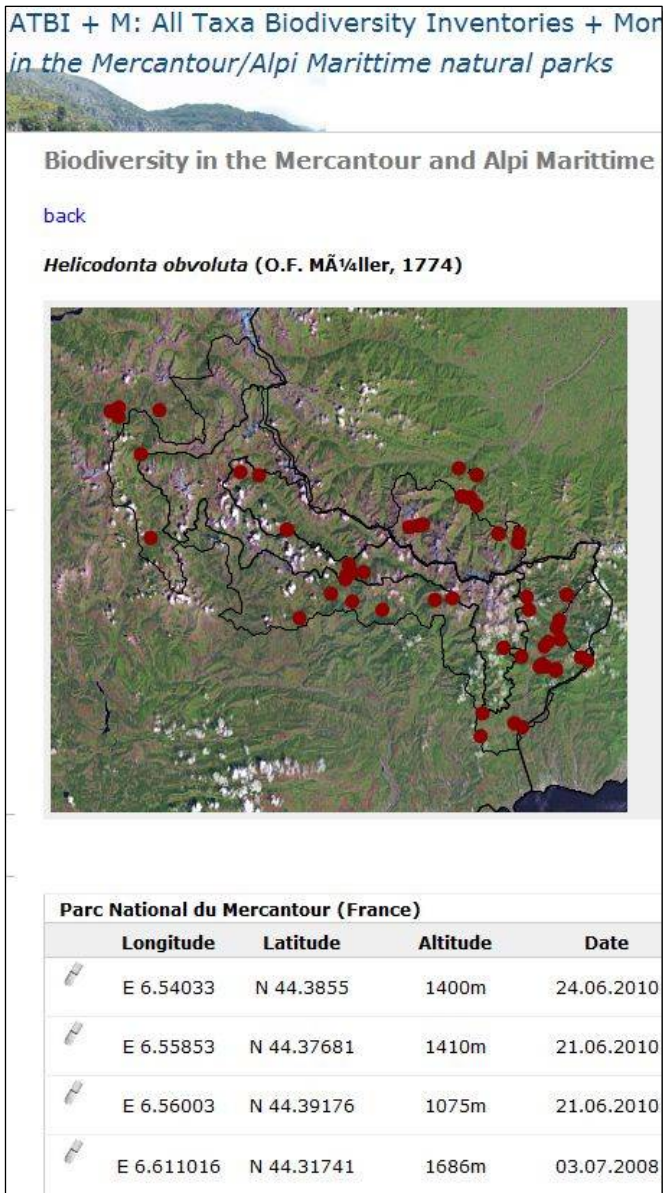


Fig. 1 ATBI+M data integrated with the map REST service. (Extract from ATBI+M in the Mercantour/Alpi Marittime website)

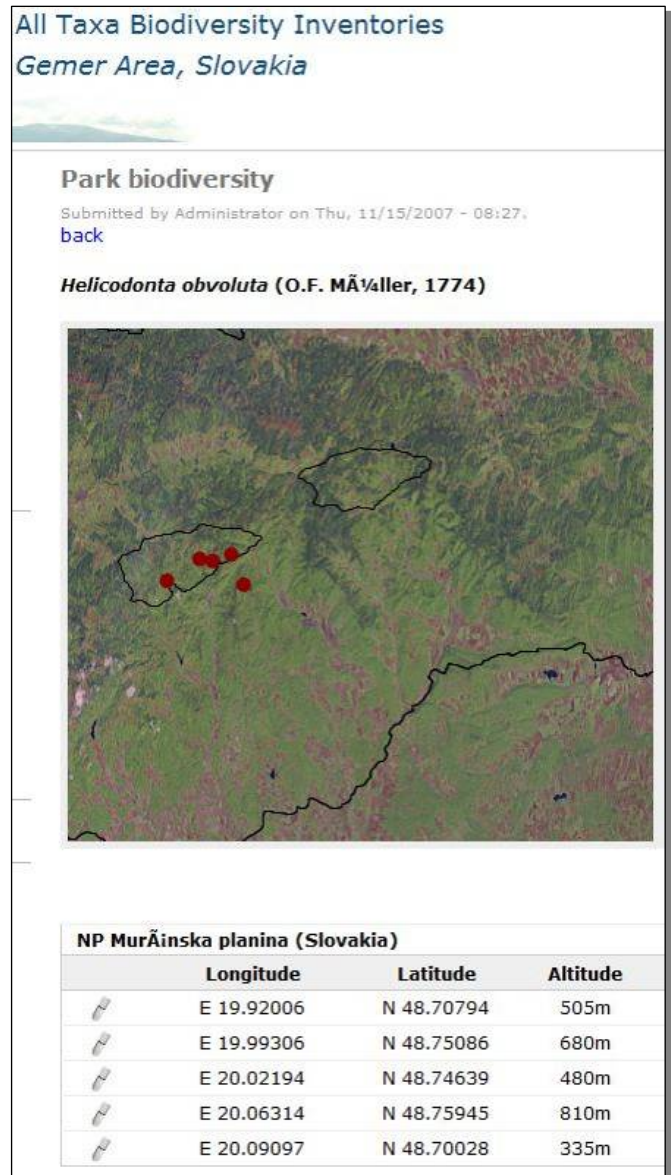


Fig. 2 ATBI+M data integrated with the map REST service. (Extract from ATBI+M in the Gemer Area website)

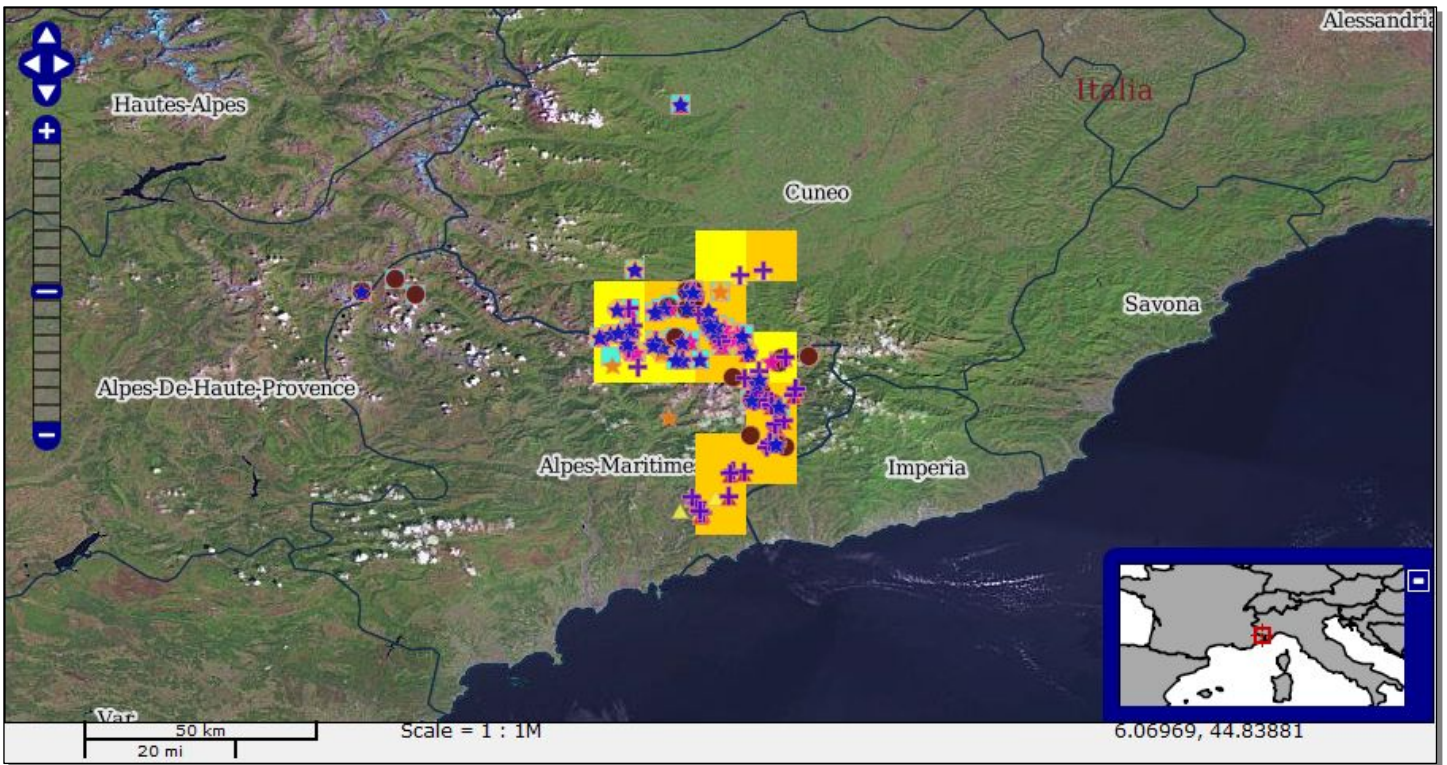


Fig. 3 ATBI+M data (several genera of *Lepidoptera*) utilized in the mapViewer. Points symbolization applied and GBIF data visualized.

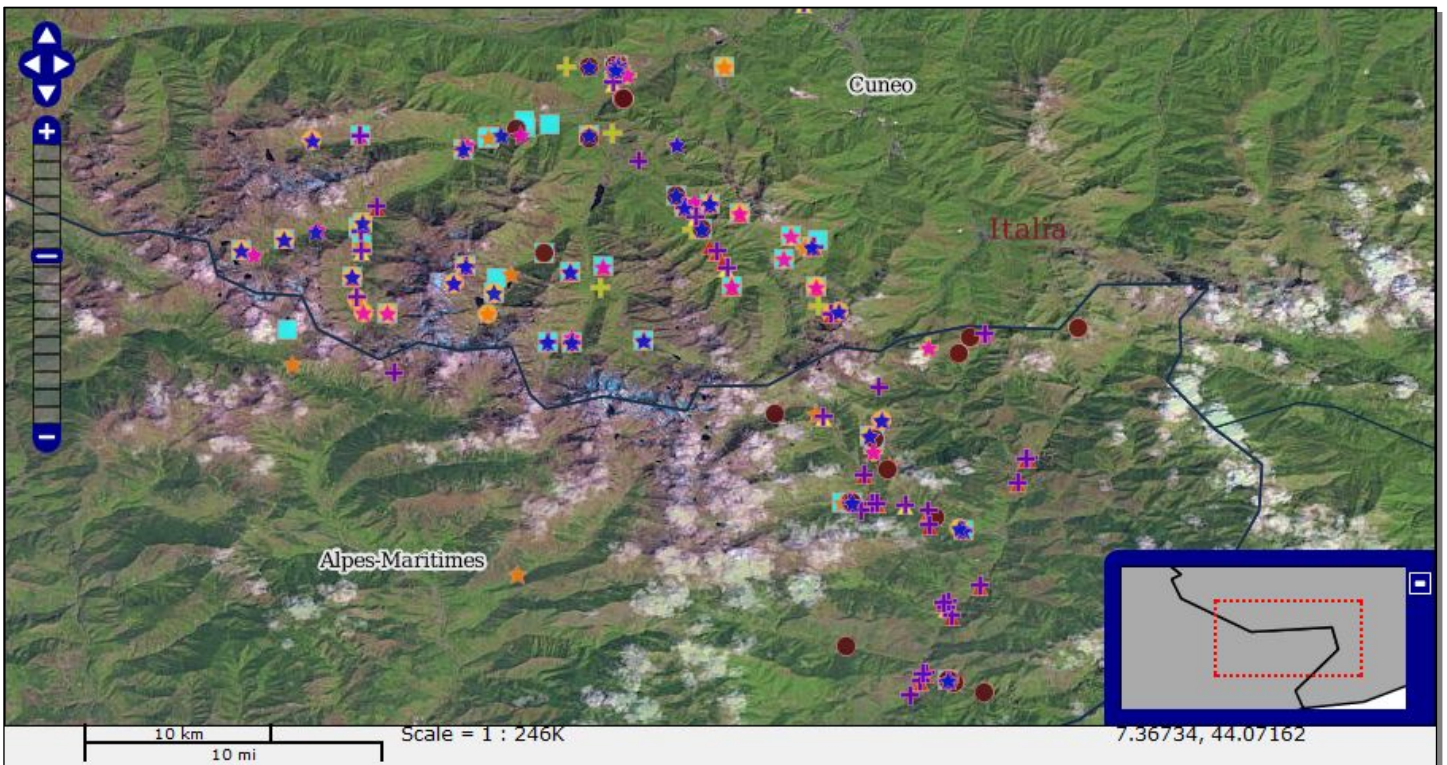


Fig. 4 ATBI+M data (several genera of *Lepidoptera*) utilized in the mapViewer –finer scale.

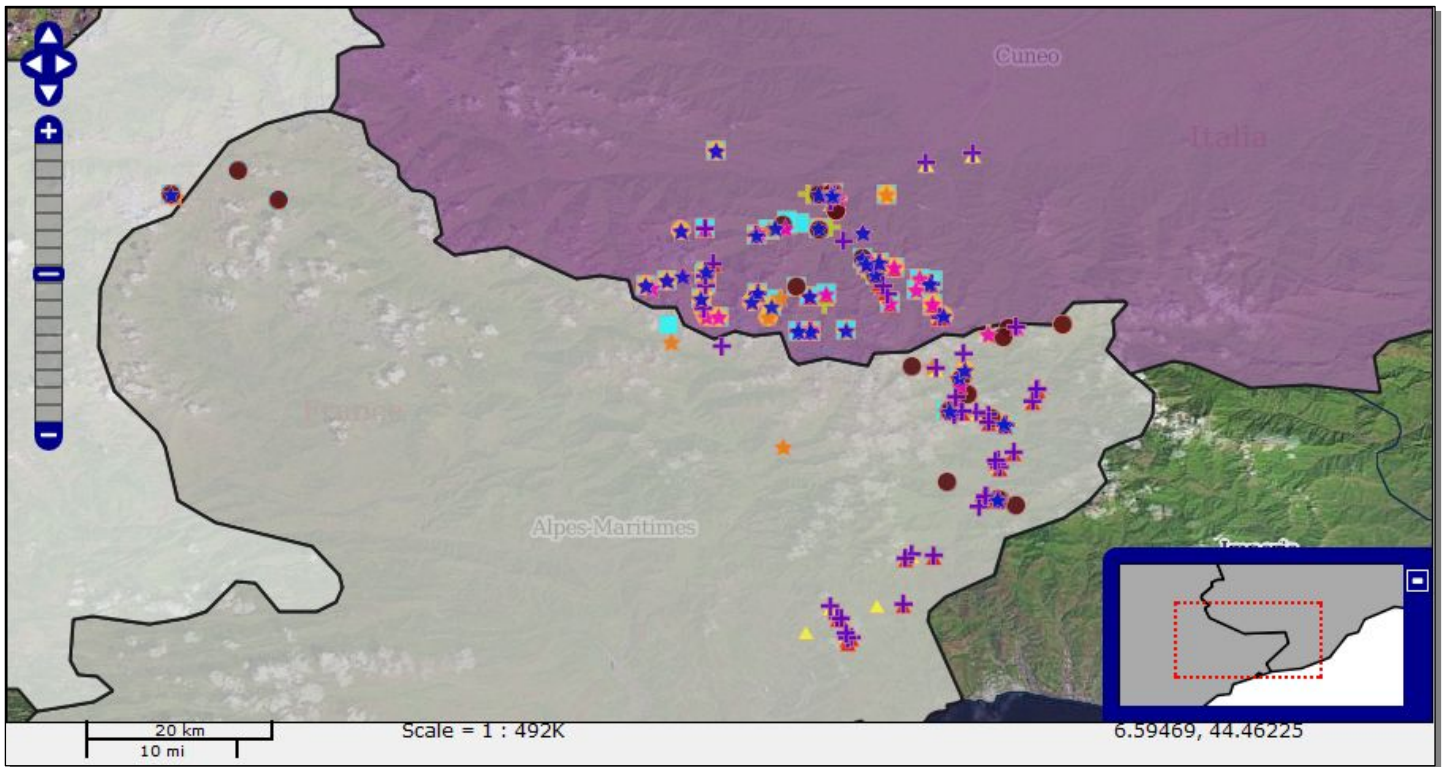


Fig. 5 ATBI+M data (several genera of *Lepidoptera*) utilized in the mapViewer – spatial analysis module working.

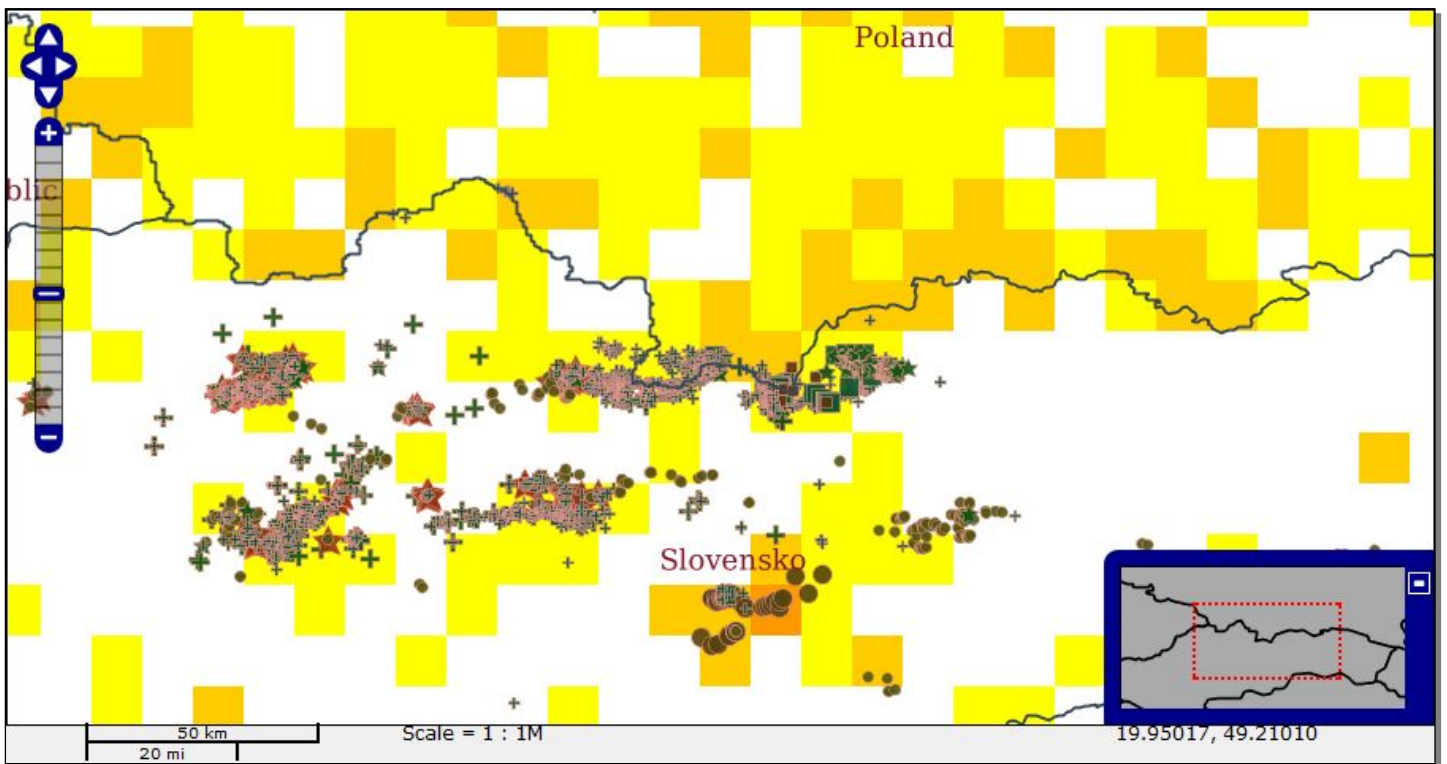


Fig. 6 IBSAS plant data visualization in the mapViewer together with GBIF layer.

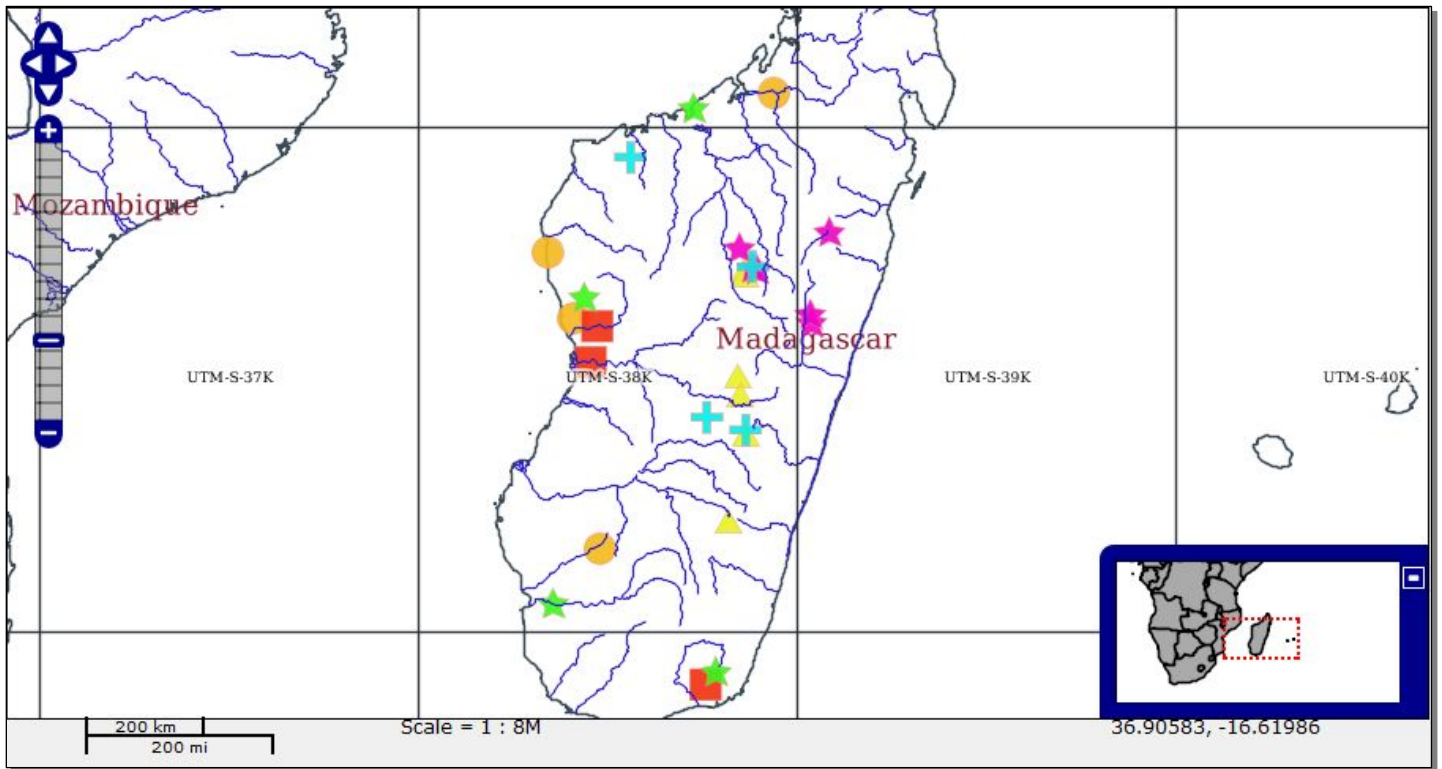


Fig. 7 MIZPAN data of species occurrences from *Hemiptera* order at Madagascar.