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C5.109 : Map REST Services version 2: The EDIT Map Web Services for occurrence and distribution data with enhanced functionality available

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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 describes the 2nd version of the EDIT mapViewer REST services, with enhanced functionality.

Introduction

The EDIT mapViewer is an online toolbox for taxonomists, offering data visualisation and analysis in preparation of their publications. There are two sides to this :

- an online tool (the mapViewer tool), available on the web at : http://edit.csic.es/geo/mapviewer/edit_test.html The functions of the latest version (v2) of this tool are described in *C5.108 MapViewer version2 with enhanced functionality available*.
- a set of REST (stateless) webservices, that can be used to integrate (certain chosen parts of) the EDIT mapViewer tool into other webpages or online tools.

In version 1 of the mapViewer tool (Mapbuilder implementation), the mapViewer and geoREST services had separate coding and development cycles, demanding double work and difficult coordination. Since the move to the OpenLayers framework, the same code base can be used for both, so development is now simultaneous and demands less work.

Using the geoREST services

Incorporation of the geoREST services in a website is quite straightforward, and any developer who has worked with webservices (such as WMS/WFS) or HTTP GET request parameters will feel at ease with it.

The basis for this is the formal technical description (the API definition if you like) of the various URL parameters needed for calling the service. This description can be found at: <http://dev.e-taxonomy.eu/trac/wiki/MapRestServiceApi>

Calling the webservice URL with the appropriate parameters will yield a map interface directly in the newly constructed website. Here is an example of such a call :

```
http://edit.csic.es/v1/areas.php?l=earth&ad=tdwg3:a:PHI,VAN,BAN,SRL,VIE,MOL,CHC,CRL,JA  
W,FIJ,SUM,MYA,MLY,NWG,MRN,AND,CHH,BOR,IND,CHS,THA,TAI,LAO,SUL,BIS,CB  
D,SOL,ASS&as=a:8dd3c7,,1&ms=400&bbox=-180,-90,180,90
```

This draws a map of the earth with a defined size and the named TDWG Areas filled in with colour. But of course all this is hidden from the end user : he only sees the end result as a map in the webpage that calls the service. For further examples see:

<http://dev.e-taxonomy.eu/trac/wiki/MapRestServiceExamples>

Current implementations of the geoREST services

The geoREST webservices offering the functionality also available in the mapViewer have been implemented in several EDIT websites. For example, the EDIT exemplar group's CDM (Common Data Model) Dataportals use the REST services to provide maps for their species distributions (for background information on the CDM Dataportal see also: <http://dev.e-taxonomy.eu/trac/wiki/CdmDataportal>):

The Palmweb site: <http://dev.e-taxonomy.eu/dataportal/palmae/>

The Cichoriae portal: <http://wp6-cichorieae.e-taxonomy.eu/portal/>

The Diptera portal: <http://dev.e-taxonomy.eu/dataportal/diptera/>

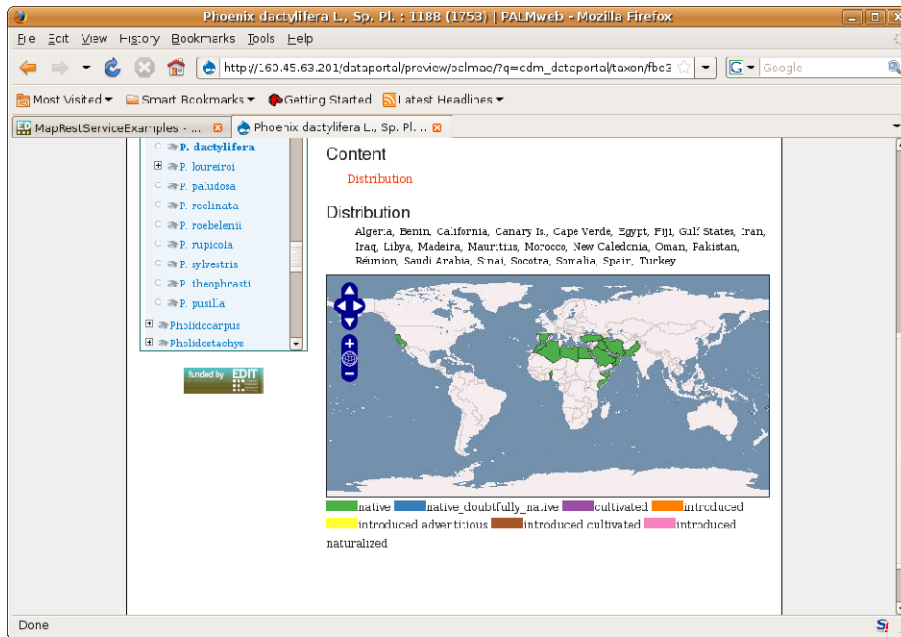


Fig 1: The Palmweb portal : the map comes directly from the geoREST services.

Applying a similar system, also point data can be visualized just using a URL that basically contains latitude and longitude parameters:

http://edit.csic.es/v1/points2_raster.php?l=v:atbi_e_provincias&od=1:48.70794,19.92006|48.70028,20.09097|48.74972,20.14028&os=1:c/8B0000/10/Macrogastera%20tumida&ms=400,350&bbox=19.6,48.4,21.0,49.0&recalculate=false&legend=0&raster=gemer. This generates the following image in your browser:



This makes possible browsing taxonomic data stored on different databases and visualize in form of maps the data that is georeferenced. It's currently used on these ATBI sites:

-Gemer ATBI site: <http://www.atbi.eu/gemer/?q=node/38>

-Mercantour ATBI site: <http://www.atbi.eu/mercantour-maritime/?q=node/481>