

CETAF / EDIT Web service

Enhanced WMS for ecological data

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CETAF ISTC (on-line)

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Concepts

- OGC WMS (*Web Map Server*) enhanced with specific instructions to style on-line ecological maps
 1. Distribution maps
 2. Choropleth maps (areas with elaborated color patterns)
 3. Legends

Technical

1. Additional style parameters are passed to the service in HTTP GET format
2. An intermediate PHP script :
 - generates an OGC SLD file in the fly (*Styled Layer Descriptor => XML file for map styles legend*)
 - Forwards the request and SLD URL to GeoServer WMS
 - Sends back JSON with WMS query or raw image
3. The maps are produced and displayed by JavaScript/AJAX GIS clients (*OpenLayers, Leaflet*)

Technical components

- Proven open-source components :
 1. PostGIS (base layers)
 2. GeoServer (Java OGC WMS/WFS server)
<http://geoserver.org/>
 3. PHP script
 4. Ubuntu
Apache and Tomcat (threaded for parallelism)

SLD Styling

This section discusses styling of geospatial data using “Style Layer Descriptor” XML files.

- [Introduction to SLD](#)
 - [SLD Concepts](#)
 - [Types of styling](#)
 - [A basic style example](#)
- [Working with SLD](#)
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 - [Troubleshooting](#)
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 - [StyledLayerDescriptor](#)
 - [Layers](#)
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Architecture

- Service hosted at RMCA
 - <https://edit.africamuseum.be/geoserver>
 - http://edit.africamuseum.be/edit_wp5/v1.4_dev/areas.php (script end point)
- Client integration on website
 - Actively used by 2 Platforms
 - EDIT CDM for botanical data, BGBM Berlin
 - DNTNT (*DataBase To Names and Taxa*), MNHN Paris

Examples

- <http://portal.cybertaxonomy.org/flora-greece/>
- <http://www.europlusmed.org>
- <http://www.flora-of-cyprus.eu>
- <https://hemiptera-databases.org/flow/>
 - (e.g. 12 websites DBTNT project : MNHN-Paris)

- B. multivittatum
- B. nordicum
- B. simplex
- B. virginianum
- ▣ Ophioglossum
- ▣ Psilotales

External links

Images

[Search Google Images...](#)

[Search flickr...](#)

Specimens/Occurrences

[Search GBIF...](#)

Classification

[Search IPNI...](#)

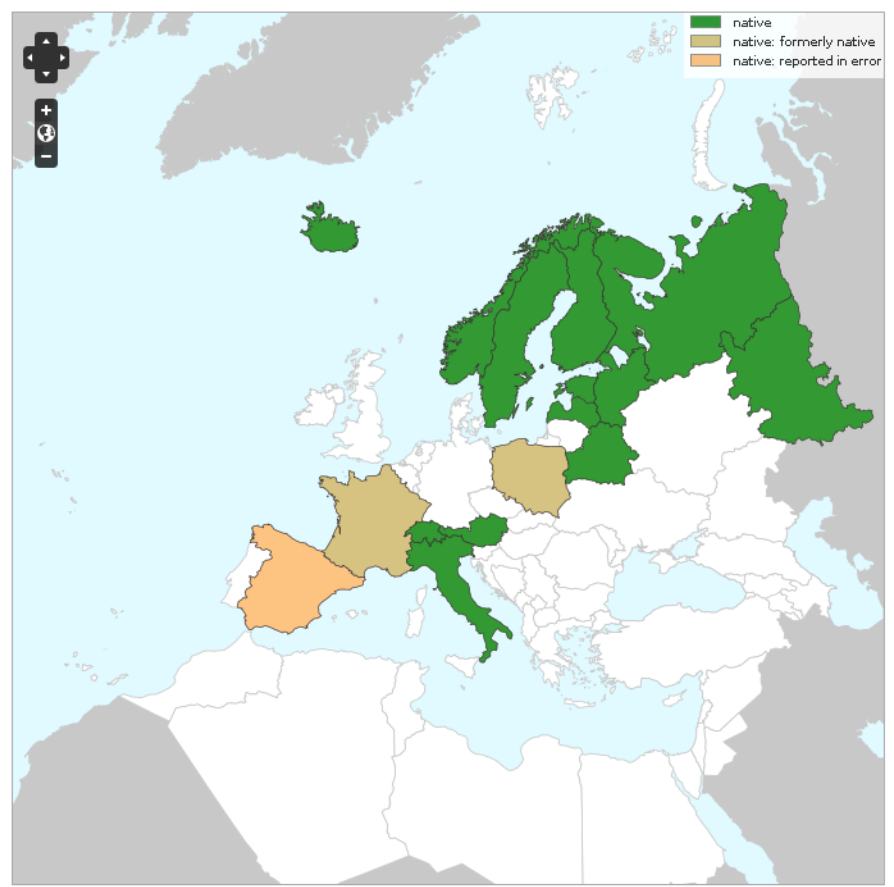
User login

Username *

Password *

[Request new password](#)

DISTRIBUTION



Au(A) By Es Fe †Ga(F) He -Hs Is It La No †Po Rf(E N NW) Su

Euro+Med:^A Austria, with Liechtenstein^{B,C} (Austria)^D; Belarus^E; Estonia^{F,G}; Finland^{A,B,C,H}; France, with

Search taxa

Misapplied names

[Advanced Search](#)

Classification

- L. tetragonolobus ▲
- ▣ Lupinus
- ▣ Medicago
- ▣ Melilotus
- ▣ Onobrychis
- ▣ Ononis
- ▣ Ornithopus
- ▣ Paraserianthes
- ▣ Parkinsonia
- ▣ Pisum
- ▣ Prosopis
- ▣ Robinia
- ▣ Scorpiurus

Editor login

Username *

Password *

[Request new password](#)

Lotus tetragonolobus



Content

- [Status](#)
- [Endemism](#)
- [Distribution](#)
- [Altitudinal range](#)

Status

Indigenous (IN)

Endemism

not endemic

Distribution



Division 1^{A,B}
Division 3^{B,C,D,E}

- Request new password

Log in

Distribution



GR(Pe NC NE)

Greece (North Central Greece present; North-East Greece present; Peloponnisos present)

Status

Native / Non Range-Restricted

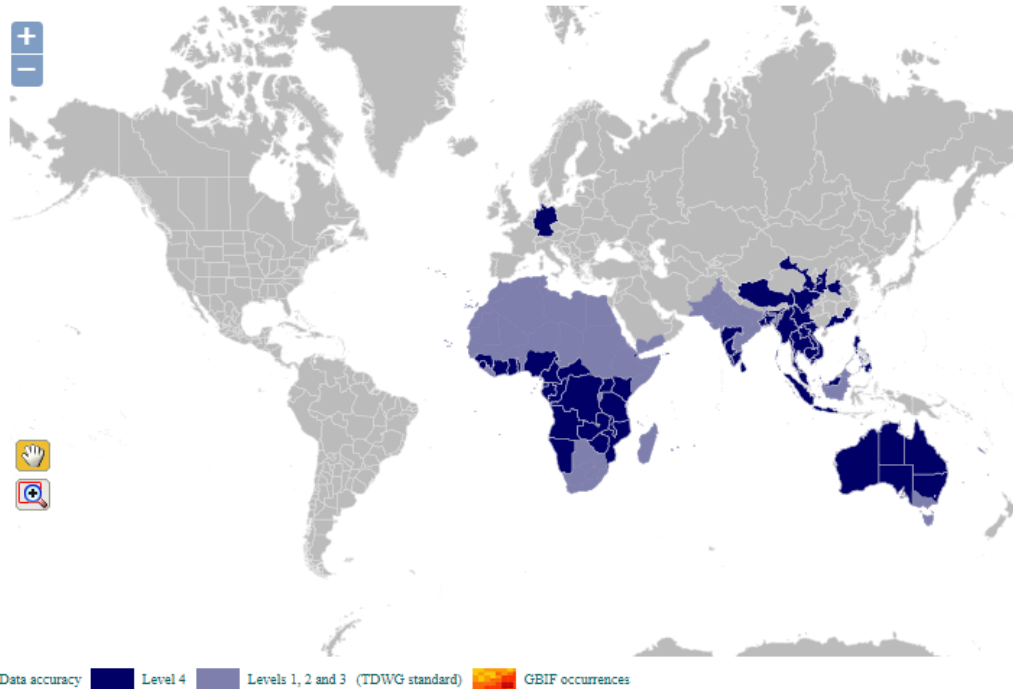
Chorology

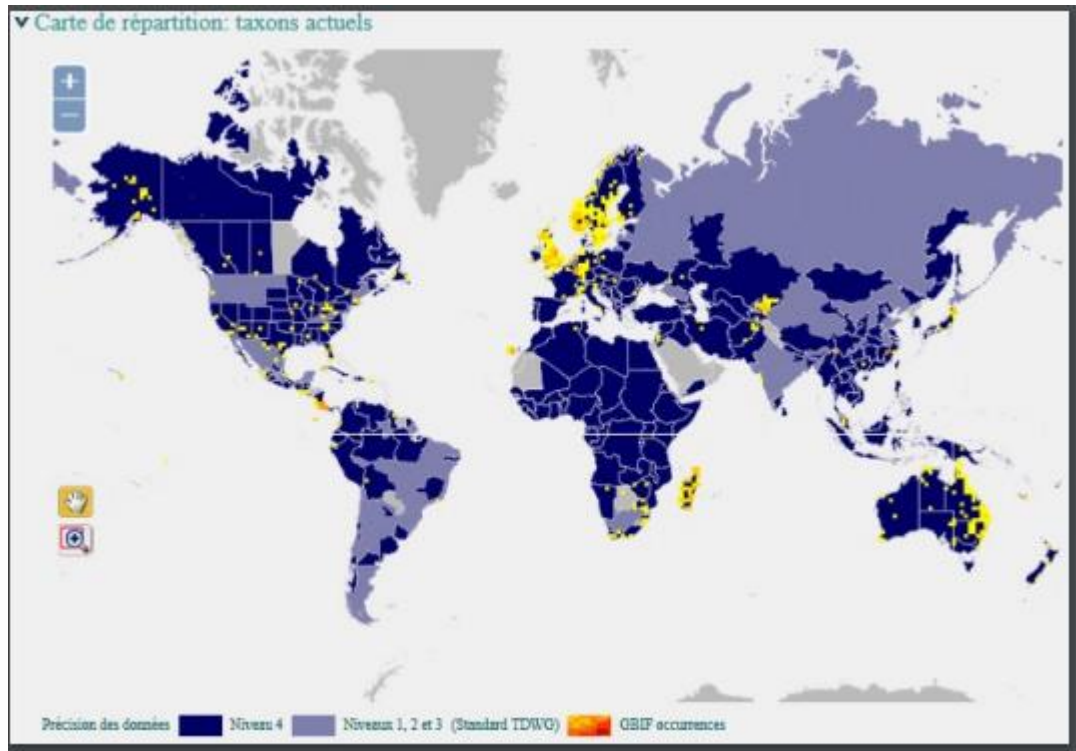
European-SW Asian

Eurybrachydium Stål, 1862 transferred from [Homoptera, Fulgorida] to [Homoptera, Fulgoridae] according to Stål (1866): 129
Eurybrachydida Stål, 1862 transferred from [Homoptera, Fulgoridae] to [Homoptera, Fulgoridae] according to Distant (1906): 176 📖
Eurybrachydinae Stål, 1862 transferred from [Homoptera, Fulgoridae] to [Fulgoromorpha, Fulgoroidea, Issidae] according to Kirkaldy (1906): 298 📖
Eurybrachyinae Stål, 1862 transferred from [Fulgoromorpha, Fulgoroidea, Issidae] to [Fulgoromorpha, Fulgoroidea] according to Muir (1923): 231

▶ 252 taxa (41 genera, 202 species)

▼ Distribution map: extant taxa





<https://hemiptera-databases.org/flow/> (with GBIF occurrences)



by Adeline Soulier-Perkins



Accueil

Projet

La base de données
Clés d'identification
Réalisation technique
L'initiative humaine
Collaborations
Comment citer
Remerciements

Cercopoidaea

Cercopoidaea
Eco éthologie
Quel âge?
Intérêt économique
Phylogénie
Références

Perspectives

Liens

Recherche dans la base de données

Nom scientifique

Liste des themes

- ◀ Cercopidae Leach, 1815 ▶
- ◀ Abidama Distant, 1908 ▶
- ◀ Abidama liuensis Metcalf, 1961 ▶

Espèce

Abidama liuensis Metcalf, 1961

Publication originale

Metcalf Z. P. 1961 - Part 2. Cercopidae.. In: Metcalf Z. P. 1963 - *General Catalogue of the Homoptera. Fascicule VII.*, North Carolina State College, Raleigh (United States of America). p. 1-607.

▼ Historique

Abidama sexmaculata Liu, 1942 *nomen praeoccupatum* remplacé par *Abidama liuensis* Metcalf, 1961 *nomen novum*, selon Metcalf (1961): 20

▼ Usage(s) (chrésonymie)

Abidama sexmaculata Lallemand, 1927 homonyme de *Abidama sexmaculata* Liu, 1942 selon Metcalf (1961): 20

- ▶ Représentation graphique de l'historique
- ▶ Répartition géographique (partiel)
- ▼ Carte de répartition: taxons actuels



It is important to assign, for each style, a title, otherwise cause error.

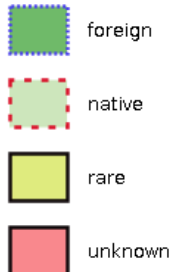
The map legend position can be:

- 1: outside of the map, up left
- 2: outside of the map, up
- 3: outside of the map, up right
- 4: outside of the map, below left
- 5: inside of the map, below right
- 6: inside of the map, below left
- 7: inside of the map, up right



```
areas.php?l=tdwg_level_1&legend=1&mlp=3&title=a:foreign|b:native|c:rare|d:unknown&ad=tdwg4:code:c:MXEDU||tdwg4:code:b:MXETA||tdwg3:code:a:MXC,CUB||tdwg3:code
```

A separate service generating legend is working, so you can put the legend wherever you want on your html.



Example of url

- Map

- https://edit.africamuseum.be/edit_wp5/v1.4_dev/areas.php?l=tdwg4&ad=tdwg4:c:MXEDU|b:MXETA|d:NICOO||tdwg3:a:MXC,CUB|b:MXE,MXG|c:MXS,MXT&as=b:d7add2,,3,|a:d7add2,ab899F,1,1_2|c:,,,10_5|d:&ms=500&images_url=a,c:edit.csic.es/v1/hatch_images|b:maps.massgis.state.ma.us/images&symbols=a,c:cow,10,gif|b:med_green_cross_hatch,30,gif&&bbox=-115,6.78,-75.19,29.8&recalculate=false

- Legend

- https://edit.africamuseum.be/edit_wp5/v1.4_dev/legends.php?title=a:foreign|b:native|c:rare|d:unknown&as=a:329d2a,483eef,2,2_2|b:ab8dc9F,da1029,2,5_7|c:d2e347|d:f7555d&ms=60,50

Example of url

- Map (call)

- https://edit.africamuseum.be/edit_wp5/v1.4_dev/areas.php?l=tdwg4&ad=tdwg4:c:MXEDU|b:MXETA|d:NICOO||tdwg3:a:MXC,CUB|b:MXE,MXG|c:MXS,MXT&as=b:d7add2,,3,|a:d7add2,ab899F,1,1_2|c:,,,10_5|d:&ms=500&images_url=a,c:edit.csic.es/v1/hatch_images|b:maps.massgis.state.ma.us/images&symbols=a,c:cow,10,gif|b:med_green_cross_hatch,30,gif&&bbox=-115,6.78,-75.19,29.8&recalculate=false

Layers and zone identifiers (delimited by "|" and ",")

Styles : RGB Codes+ thickness

Map Size

BBOX (can be auto-calculated)

+

Possibility to pass ESPG projection

Example of URL

- Result of the call is either :
 - The map image directly (in png)
 - A JSON page containing the query URL to GeoServer (with the generated SLD)
 - Linkable to OpenLayers or Leaflet as standard WMS layer

Service endpoints

- Service

- <https://edit.africamuseum.be/geoserver>
- http://edit.africamuseum.be/edit_wp5/v1.4_dev/areas.php

- Documentation, syntax and examples

- <https://dev.e-taxonomy.eu/redmine/projects/edit/wiki/MapRestServiceApi>
- <https://dev.e-taxonomy.eu/redmine/projects/edit/wiki/MapRestServiceExamples>
- https://dev.e-taxonomy.eu/redmine/projects/edit/wiki/MapRestServiceApi_20_Discussion

History

- Initial release ca. 2009-2010
- September 2020 upgrade
 - Ubuntu 20
 - PHP 7.+
 - PostgreSQL 12
 - PostGIS 2.5
 - OpenJDK 11
 - Tomcat 9
 - Apache 2.4 (threaded)

Usage

- Easily possible to upload shapefile
- Secured GeoServer workspace available for the project (with search engine)
- Possibility to disable download of sensitive information (rewrite rules limiting WFS to specific sites)

Conclusions

- Conclusions
 - Sustainability of the service
 - Other interested user(s) ?
 - Integration within current CETAF activities ?
 - Mirroring hosting / redundancy
 - Technical evolution (e.g. link with INSPIRE, 3D)