

The EDIT Platform for Cybertaxonomy – an integrated software environment for biodiversity research data management

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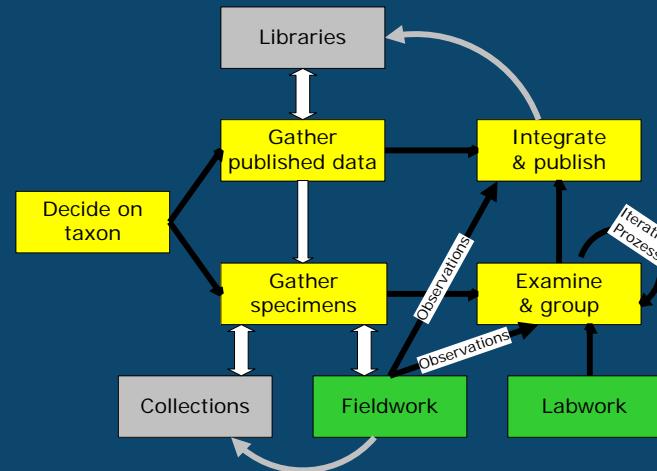
Platform for Cybertaxonomy

- A collection of **open source** tools and services which together cover all aspects of the taxonomic workflow.
- Started in the context of the EU Network of Excellence EDIT (2006 – 2011).
- A joint taxonomic research infrastructure.



EDIT Platform: the original idea (2006)

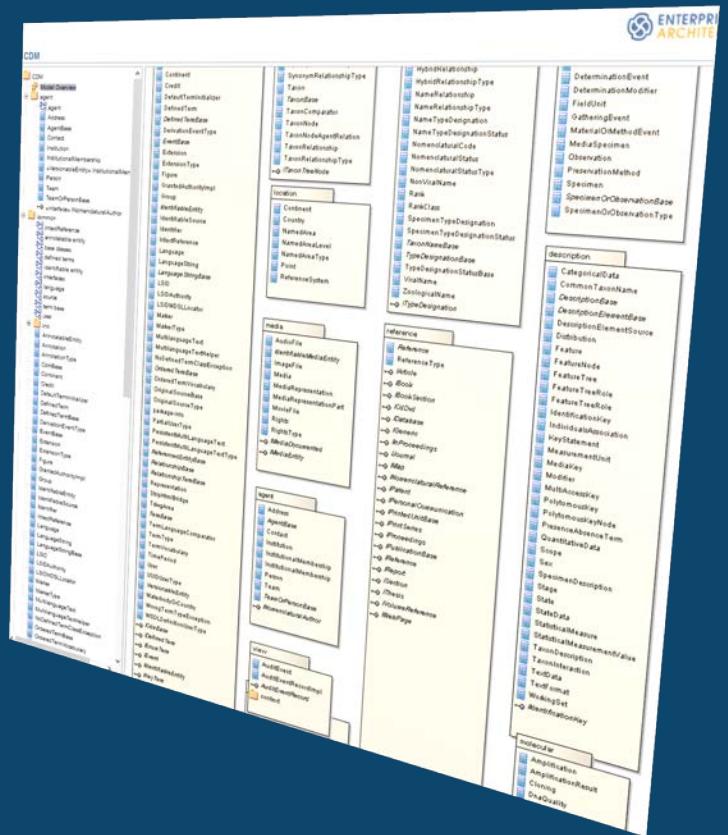
- Tools
- Sharing
- Networking
- Integration
- Workflows



The Common Data Model (CDM)

A solid foundation for taxonomic data processing and storage.

- Comprehensive (11 modules, > 100 classes)
 - Standards aware
 - Represents the essence of 25 years of taxonomic data modelling.

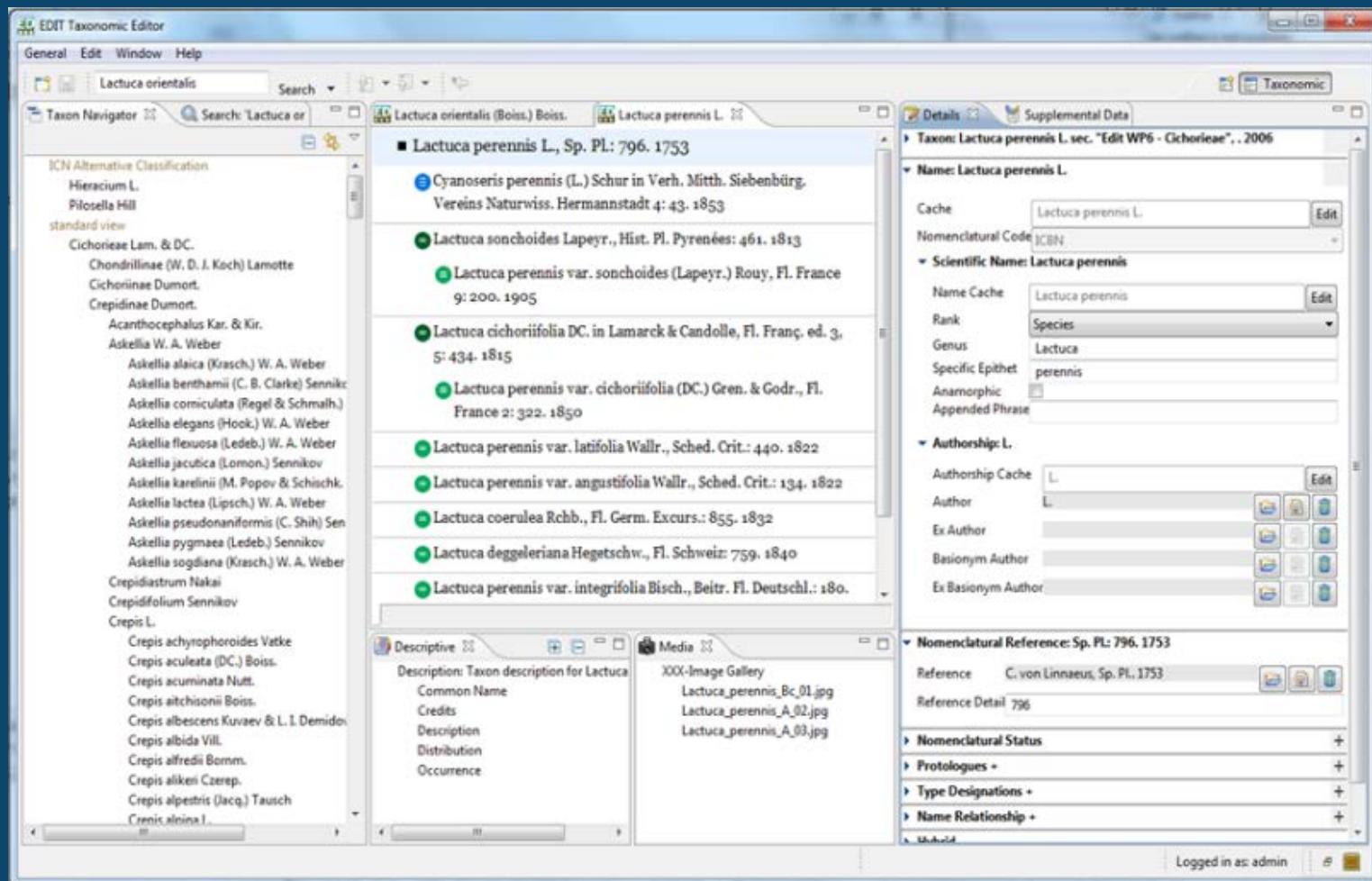


Architecture

Biodiversity related apps & services and generic tools



Software: remote EDITor



Software: (Drupal- based) Data Portal

The screenshot displays the homepage of the Flora of Greece web portal. The header features a logo with purple flowers, the title "Flora of Greece web", a map of Greece, and logos for the Botanischer Garten & Botanisches Museum Berlin, Hellenic Botanical Society, and University of Patras. Below the header is a navigation bar with links: Introduction, Content, Annotations, Botanical Exploration, Credits, Bibliography, and Contribute. A search bar is present, along with a checkbox for "Misapplied names" and a "Search" button. The main content area shows the taxon *Polypodium cambricum L. subsp. cambricum*. To the right of the species name is a list of six items: Synonymy, Distribution, Status, Chorology, Life-form, and Habitat. Below the species name is a section titled "Synonymy". At the bottom is a map of Greece and surrounding regions, with green areas indicating the presence of the species. Labels on the map include NE, NC, NAE, EC, SPi, and NPi.



Software: tools

Distribution maps, import/export, integrity checker, print publication, reference management, ..

The collage includes:

- A map of Europe showing distribution patterns with color-coded regions: purple (cultivated), orange (introduced), and yellow (introduced: adventitious). A legend and a scale bar are visible.
- A screenshot of a web-based application interface titled "utis-controller : Utis Controller". It shows a search bar, a sidebar with "Implementation Notes", and a code editor containing API documentation for "search" and "Request" methods.
- A screenshot of a file explorer window showing a tree structure of files and folders, likely related to taxonomic data.
- A screenshot of a database interface showing tables for "Illustrations" and "Taxon". A modal dialog box is open, asking "Delete any illustrations" with options "Yes" and "Cancel".
- A screenshot of a "Joint EDIT/PESI Page for Taxonomic Integrity Rules". It features logos for EDIT and PESI, and a table titled "Taxonomic integrity rule levels explained". The table lists three rules (1, 2, 3) with their respective levels (1), domains (All), sources (FaEu / E+M), objects (Taxon name), rules (Name elements, GenusOrUninomial, InfraGenericEpithet, SpecificEpithet, InfraSpecificEpithet), and implementations (directly on fields in NonViralName).
- A screenshot of a "Sort results by:" dropdown menu with options "Choose field", "Options", and "Add".



Software: service layers

1. Full API
2. Streamlined endpoints for integration into external infrastructures and workflows

The screenshot shows the 'CDM remote API' documentation page from the EDIT (European Distributed Institute of Taxonomy) website. The top navigation bar includes links for Catalogue Services, Data export, Generic REST API, LSID authority services, OAI-PMH, Web Portal Services, and a 'Finished Loading Resource' button. Below the navigation is a search bar labeled 'Information, Rendering Swagger UI...'. The main content area is titled 'Generic REST API' and contains a detailed description of the API's purpose and usage. It states that the API is a RESTful interface to resources stored in the CDM, currently supporting only read operations (HTTP GET). It also mentions the architecture directly exposing domain model entities and provides a link to the service's homepage. A table below lists various API endpoints categorized by controller:

Controller	Endpoint	Method
agent-controller	/agent/{uuid}	doGet
	/agent/{uuid}/*	doGetMethod
	/agent/{uuid}/taxonNodeAgentRelations	doGetTaxonNodeAgentRelations
	/agent/{uuid}/titleCache	doGetTitleCache
agent-list-controller	/agent	doPage
	/agent/findByIdentifier	doFindByIdentifier
	/agent/findByMarker	doFindByMarker
	/agent/findByTitle	doFindByTitle
	/agent/uuidAndTitleCache	doGetUuidAndTitleCache

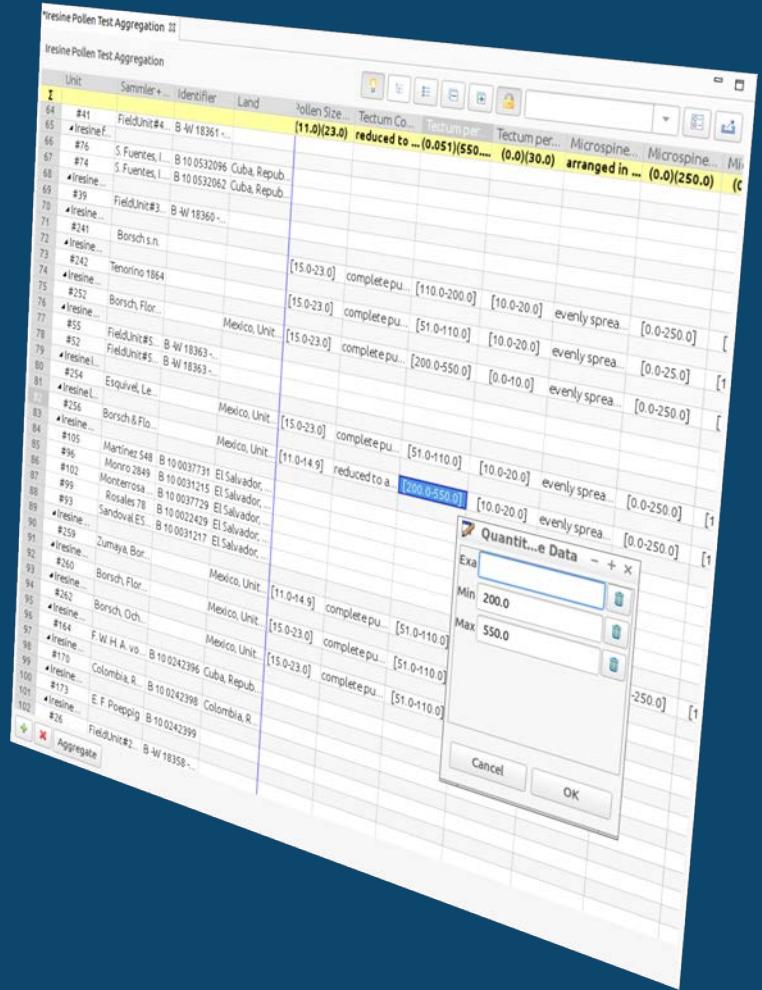


Today: ~ 40 platform instances

- Taxon-centric portals
- Regional portals (eg. floras)
- International infrastructures
 - Euro+Med plantbase
 - Fauna Europaea
 - Pan European Species Directories Infrastructure (PESI, part of EU Inspire directive)
 - EU BON taxonomic backbone

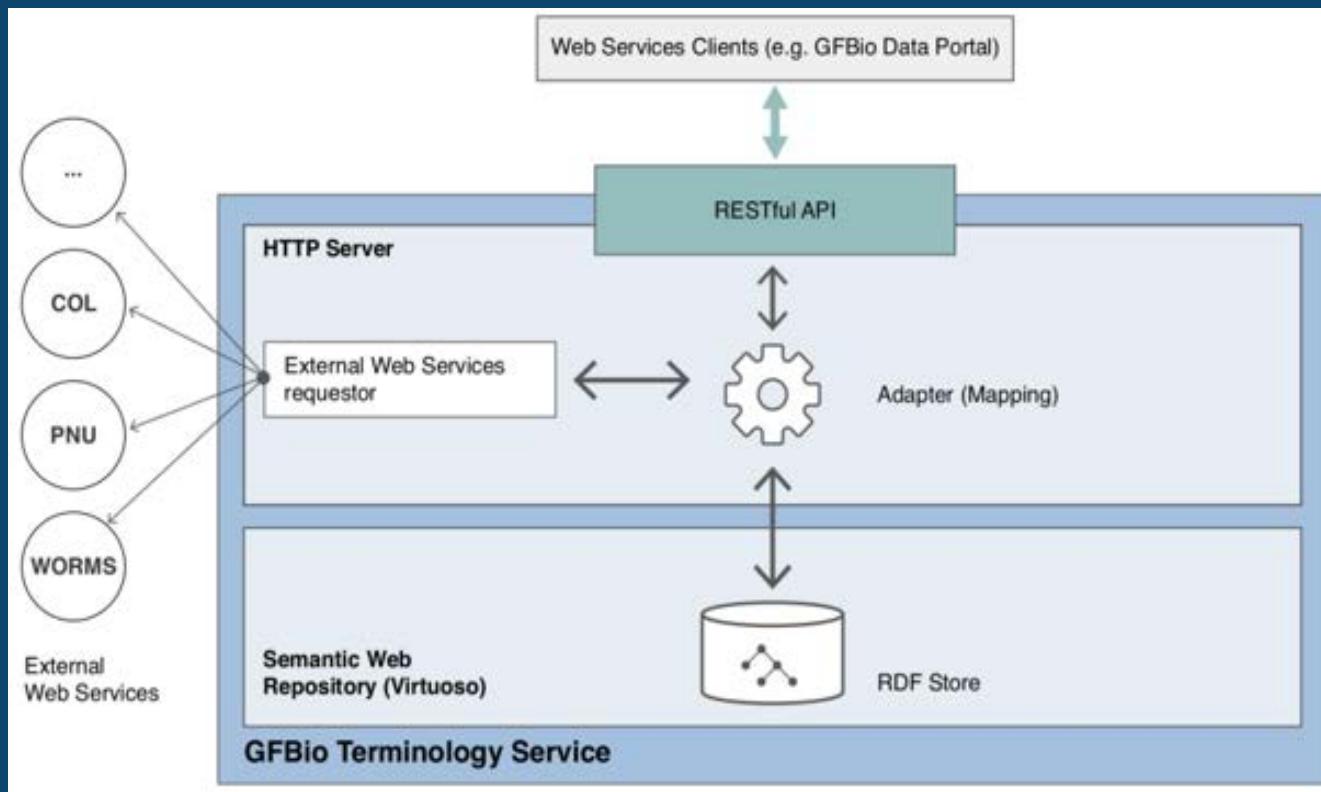
New component for descriptive data

- Automated calculation of taxon descriptions based on specimen descriptions.
- Requires well-defined vocabularies provided by ontologies.



GFBio Terminology Services

Unified access to a wide range of internal and external ontologies.



Character-Editor

*Character Editor

Structures Properties Characters

Indumentum Type

Type

>>

- Inflorescence
 - Flower
 - Nectary
 - Calyx
 - Gymnoecium
 - Embryo
 - Ovary
 - Ovule
 - Carpel
 - Pistill
 - Stigma
 - Style
 - Androeceum
 - Corolla
 - Leaf
 - Indumentum
 - Blade
 - Petiole
 - Emergences
 - Stipule
 - Cuticle
 - Midrib
 - Leaflet
- Symmetry
- Length
- Division
- Width
- Outline shape
- Colour
- Folding
- Number
- Frequency
- Number
- Density
- Shape
- Height
- Placement
- Form
- Diameter
- Size
- Completeness

Descriptive data entry and aggregation

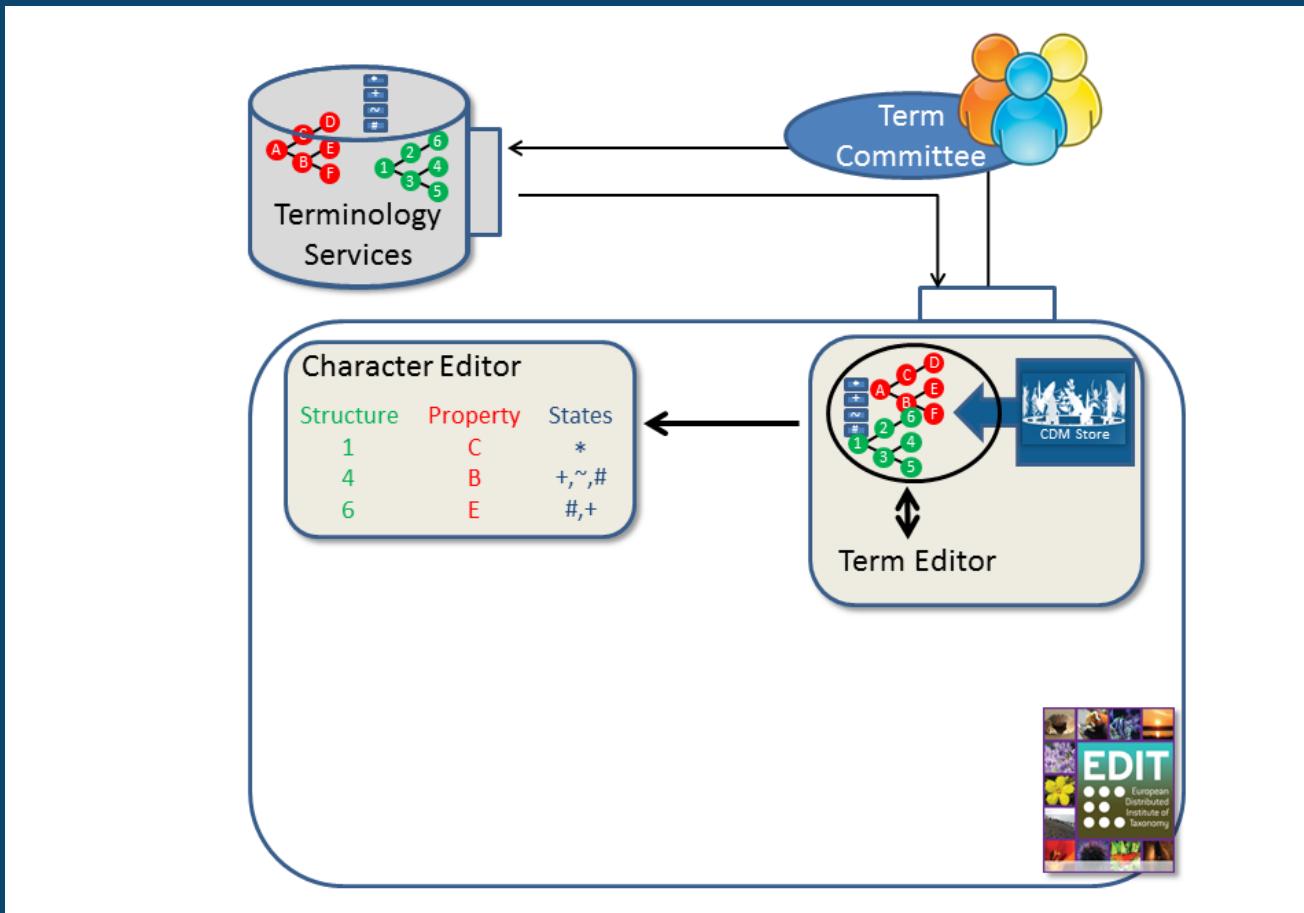
*Iresine Pollen Test Aggregation

Iresine Pollen Test Aggregation

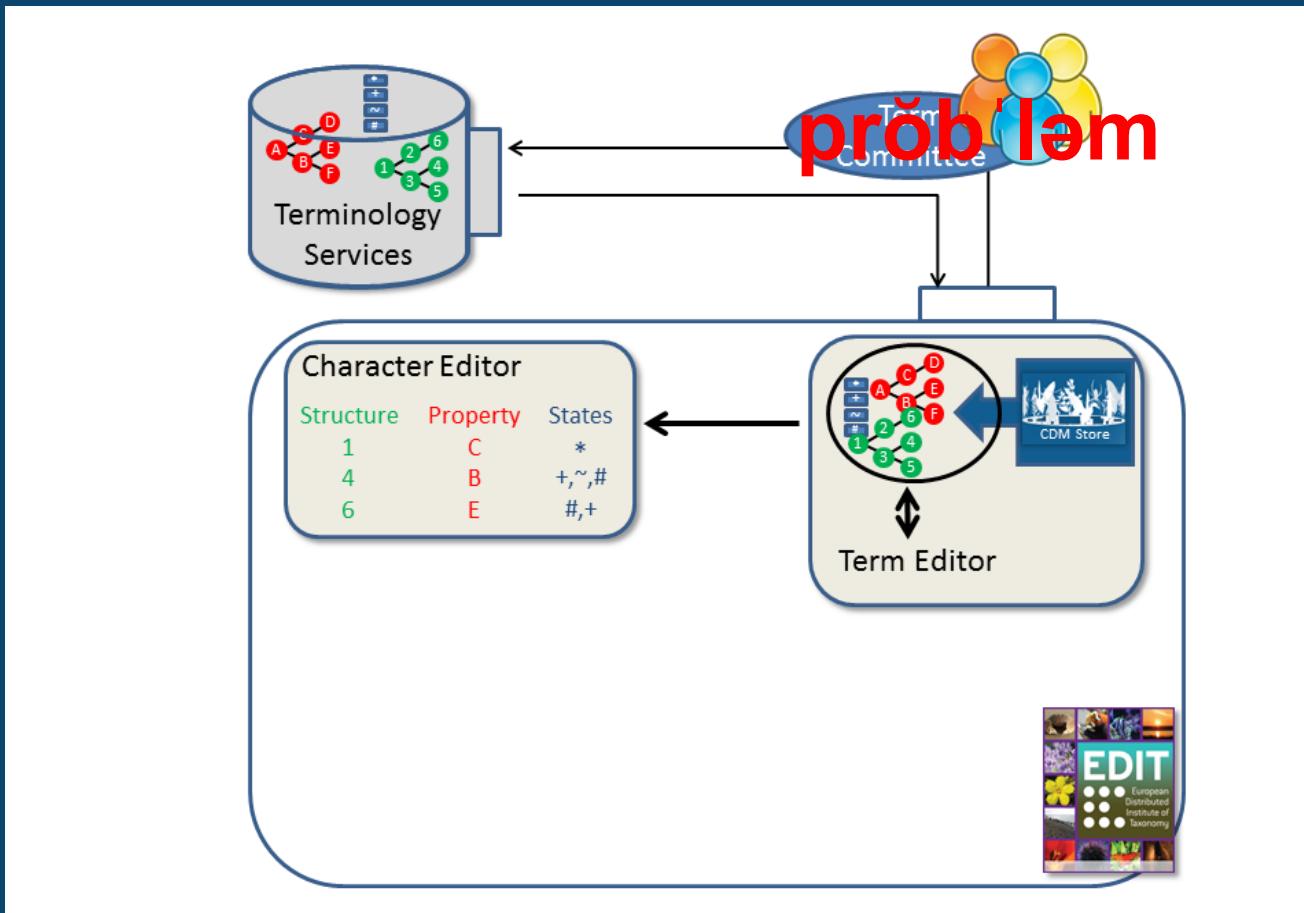
	Unit	Sammler + ...	Identifier	Land	Pollen Size... (11.0)(23.0)	Tectum Co... reduced to ...	Tectum per... (0.051)(550....)	Tectum per... (0.0)(30.0)	Microspine... arranged in ...	Microspine... (0.0)(250.0)	Mi...
Σ											
64	#41	FieldUnit#4...	B-W 18361 -...								
65	►Iresine f...										
66	#76	S. Fuentes, I...	B 10 0532096	Cuba, Repub...							
67	#74	S. Fuentes, I...	B 10 0532062	Cuba, Repub...							
68	►Iresine...										
69	#39	FieldUnit#3...	B-W 18360 -...								
70	►Iresine...										
71	#241	Borsch s.n.			[15.0-23.0]	complete pu...	[110.0-200.0]	[10.0-20.0]	evenly sprea...	[0.0-250.0]	[1
72	►Iresine...										
73	#242	Tenorino 1864			[15.0-23.0]	complete pu...	[51.0-110.0]	[10.0-20.0]	evenly sprea...	[0.0-25.0]	[1
74	►Iresine...										
75	#252	Borsch, Flor...		Mexico, Unit...	[15.0-23.0]	complete pu...	[200.0-550.0]	[0.0-10.0]	evenly sprea...	[0.0-250.0]	[1
76	►Iresine...										
77	#55	FieldUnit#5...	B-W 18363 -...								
78	#52	FieldUnit#5...	B-W 18363 -...								
79	►Iresine i...										
80	#254	Esquivel, Le...		Mexico, Unit...	[15.0-23.0]	complete pu...	[51.0-110.0]	[10.0-20.0]	evenly sprea...	[0.0-250.0]	[1
81	►Iresine l...										
82	#256	Borsch & Flo...		Mexico, Unit...	[11.0-14.9]		[200.0-550.0]	[10.0-20.0]	evenly sprea...	[0.0-250.0]	[1
83	►Iresine...					<input checked="" type="checkbox"/> reduced to a distal band					
84	#105	Martínez 548	B 10 0037731	El Salvador, ...							
85	#96	Monro 2849	B 10 0031215	El Salvador, ...							
86	#102	Monterrosa ...	B 10 0037729	El Salvador, ...							
87	#99	Rosales 78	B 10 0022429	El Salvador, ...							
88	#93	Sandoval ES...	B 10 0031217	El Salvador, ...							
89	►Iresine...										
90	#259	Zumaya, Bor...		Mexico, Unit...	[11.0-14.9]	complete pu...	[51.0-110.0]	[10.0-20.0]	arranged in ...	[0.0-250.0]	[1
91	►Iresine...										
92	#260	Borsch, Flor...		Mexico, Unit...	[15.0-23.0]	complete pu...	[51.0-110.0]	[10.0-20.0]	evenly sprea...		
93	►Iresine...										
94	#262	Borsch, Och...		Mexico, Unit...	[15.0-23.0]	complete pu...	[51.0-110.0]	[10.0-20.0]	evenly sprea...		
95	►Iresine...										
96	#164	F. W. H. A. vo...	B 10 0242396	Cuba, Repub...							
97	►Iresine...										
98	#170	Colombia, R...	B 10 0242398	Colombia, R...							
99	►Iresine...										
100	#173	E. F. Poeppig	B 10 0242399								
101	►Iresine...										
102	#26	FieldUnit#2...	B-W 18358 -...								

Buttons: +, -, Aggregate

The EDIT / GfBio pipeline



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cybertaxonomy.eu
terminologies.gfbio.org
www.gfbio.org

