Evaluation of a Scratchpad Template as an Online Database for the University of Guam Insect Collection

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Desirable Features for an Online Collection Database

Free and open source

Reliable data security / backup

Flexible data security (user permissions)

Web browser used for data entry and information delivery

Specimen records compliant with Darwin Core

Storage for images, bibliographic data, informal notes, etc.

Data shared via GBIF

LifeDesks and Scratchpads

LifeDesks is part of the Encyclopedia of Life Project.

ScratchPads is a project managed by the Natural History Museum, London.

Both are Drupal templates hosted for free.

My evaluation sites are at:

http://micronesianinsects.lifedesks.org/

http://guaminsects.myspecies.info/

Scratchpads

Virtual Research Environments

for taxonomic and biodiversity related data

so…

what are

the

Scratchpads?

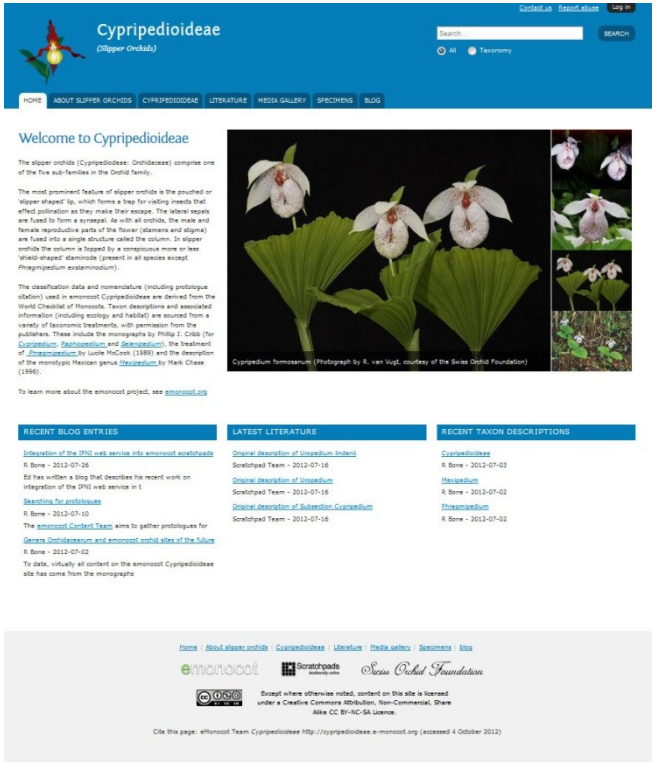
Where to find and how to cite this presentation

Scratchpads introductory presentation. Dimitrios Koureas, Laurence Livermore. figshare. 2013.

doi:10.6084/m9.figshare.640101

What are Scratchpads?

- Hosted websites for biodiversity data
- Virtual research & publication platform
- Completely open access & open source
- Modular & flexible



What are Scratchpads?

facilitate

development of online research communities

through

standardized environment of entering and curating data

that allow

sharing and interlinking

and

dissemination of research products

The Scratchpads concept

A Scratchpad is a website that holds data for you and your community

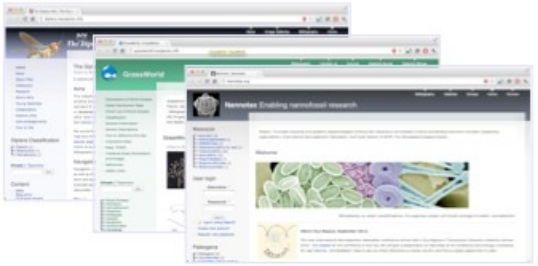
Scratchpads
biodiversity online

eMonocot
Encyclopedia of Life
GBIF
NCBI
WoRMS
World Register of Marine Species
Google scholar
BHL
Biodiversity Heritage Library

Your data

External data & services

Examples of use:



Taxa

(*Classifications, taxon profiles, specimens, literature, images, maps, phenotypic, genotypic & morphometric datasets, keys, phylogenies*)

Conservation

Projects

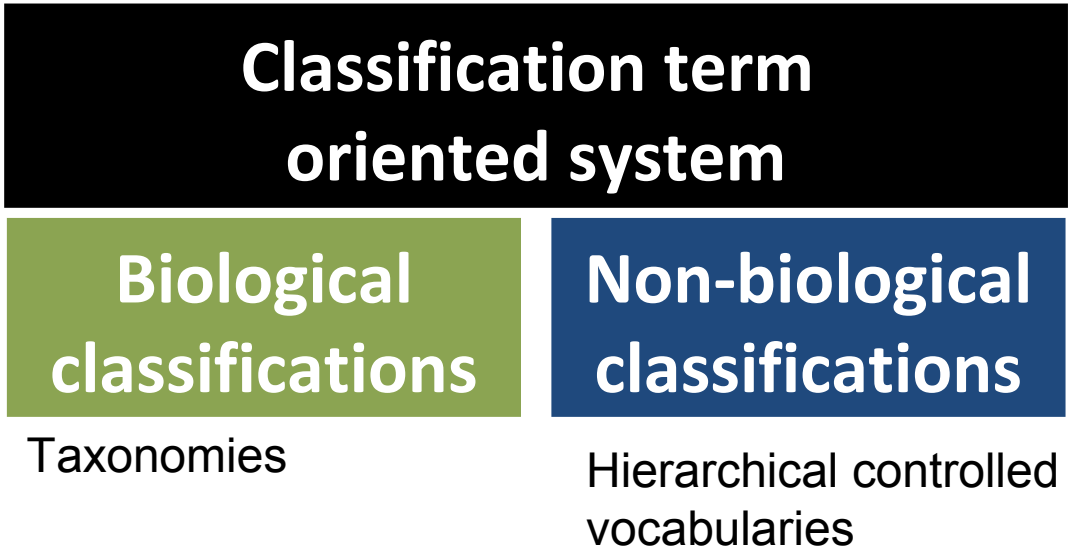
Regions

Societies

the main

features

The main features



The main features

Dynamic Biological Classifications

- Manually entered or imported
- Auto generated

Kew PLANTS PEOPLE POSSIBILITIES eol Encyclopedia of Life GBIF WoRMS World Register of Marine Species

The main features

Taxon pages

- Overview of data related to taxon
- Generated from tagged content

The main features

Bibliography management

Export selection as BibTex RTF XML RIS

FILTER BY CONTRIBUTOR:

maintainer (3)

Scratchpad Team (308)

TAXONOMIC NAME

There are no facets available to filter on.

TERMS

There are no facets available to filter on.

FILTER BY CONTENT TYPE:

Biblio (311)

BIBLIO: SECONDARY TITLE

Enter journal...

(37)

Literature

Authors	Year	Title
Couvet, D, Gouyon, PH, Kjellberg, F, Valdeyron, G	1985	La différénciation nucléocytoplasmique entre populations: une cause de l'existence de mâle-steriles dans les populations naturelles de Thym
Cruz, T, Jiménez, J, Zarzuelo, A, Cabo, MM	1989	The spasmolytic activity of the essential oil of Thymus baeticus Boiss in rats
Cuguen, J, Couvet, D, Thompson, JD, Tarayre, M, Saumitou-Laprade, P	1997	The spatial genetic structure of cytoplasmic (cpDNA) and nuclear (allozyme) markers within and among populations of the gynodioecious Thymus vulgaris (Labiatae) in southern France
Cuguen, J, Couvet, D, Thompson, JD, Tarayre, M, Saumitou-Laprade, P	1997	The spatial genetic structure of cytoplasmic (cpDNA) and nuclear (allozyme) markers within and among populations of the gynodioecious Thymus vulgaris (Labiatae) in southern France
Abu-Darwish, MS, Alu'datt, MH, Al-Tawaha, AR, Ereifej, K, Almajwal, A, Odat, N, Al Khateeb, W	2011	Seasonal variation in essential oil yield and composition from Thymus vulgaris L. during different growth stages in the south of Jordan

Clone of The effect of selected herb extracts on superoxide dismutase activity in Jurkat cells

Publication Type:	Journal Article
Year of Publication:	2007
Authors:	Testa, A, Testb, B, Testc, C
Journal:	Advances in Clinical and Experimental MedicineAdvances in Clinical and Experimental Medicine
Volume:	16
Issue:	3
Pagination:	361-364
Keywords:	Jurkat cells, Lamiaceae herbs, Polyphenols, Superoxide dismutase
Abstract:	Background: Numerous dietary and medicinal herbs containing high levels of polyphenolic compounds exert antioxidative properties which are beneficial in the prophylaxis of many diseases, including cancer and atherosclerosis. Superoxide dismutase (SOD) is an enzyme scavenging superoxide radicals. It is hypothesized that some antioxidative effects of polyphenols may occur through interaction with this enzyme. Objective: The aim of this study was to assess the influence of polyphenolic herb extracts on SOD activity in human leukemia cells. Material and Methods: Aqueous extracts comtaining polyphenolic fractions were prepared from Thymus serpyllum (Ts), Thymus vulgaris (Tv), Majorana hortensis (Mh), and Mentha piperita (Mp). The experiments were conducted on human Jurkat cells, which were exposed to the Ts, Tv, Mh, or Mp polyphenolic fractions at concentrations of 10-500 μg/ml for 0.5, 1, or 2 hours. SOD activity was measured spectrophotometrically using a modified RANSOD kit protocol. The results were analyzed using the Repeated Measures Analysis of Variance (ANOVA) design in Statistica version 6 software. All effects were regarded as significant at a significance level of $p < 0.05$. Results: The analysis of the results suggests a stimulatory effect of the extracts which was most evident at shorter incubation times (0.5 and 1 hour) and at concentrations of 50 and 500 μg/ml. However, in the case of Ts and Mh, 2-hour incubation at the highest concentration (500 μg/ml) also resulted in a significant increase in enzymatic activity. In contrast, the lowest concentration of the extracts (10 μg/ml) exhibited no significant effect on SOD. Conclusions: The stimulation of SOD activity in Jurkat cells under the influence of Lamiaceae herb polyphenolic fractions suggests that some antioxidative effects of polyphenols may result from direct interaction with the free radical-scavenging enzyme. © Copyright by Silesian Piasts University of Medicine in Wroclaw.
URL:	http://www.scopus.com/scopus/inward/record.url?eid=2-s2.0-34547133502&partnerID=40&rel=R6.5.0

Tue, 2013-01-29 11:26 -- maintainer

Add new comment Google Scholar BibTex RTF XML RIS

- An inbuilt Bibliography manager
- Faceted browsing
- Taxon tagging and free keywords
- Import from and export to all major formats

BibTex RTF XML RIS

The main features

Specimen/Observation data

Specimens

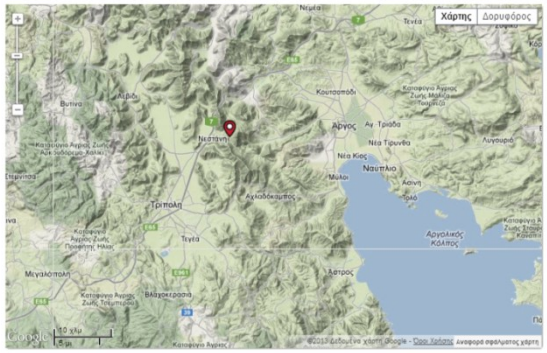
Required | Taxonomy | Collection | Miscellaneous | Location

Specimen	Basis of record	Catalogue number	Collection code	Institution code
View specimen	Preserved Specimen	8638	ATHU	ATHU
View specimen	Preserved Specimen	8652	ATHU	ATHU
View specimen	Preserved Specimen	866	ATHU	ATHU
View specimen	Preserved Specimen	8662	ATHU	ATHU
View specimen	Preserved Specimen	8684	ATHU	ATHU
View specimen	Preserved Specimen	9171	ATHU	ATHU
View specimen	Preserved Specimen	9664	ATHU	ATHU
View specimen	Preserved Specimen	9666	ATHU	ATHU
View specimen	Preserved Specimen	9756	ATHU	ATHU
View specimen	Preserved Specimen	9793	ATHU	ATHU
View specimen	Preserved Specimen	9817	ATHU	ATHU
View specimen	Preserved Specimen	9819	ATHU	ATHU
View specimen	Preserved Specimen	100320161	B	B
View specimen	Preserved Specimen	100320162	B	B

<< 2 of 6 >>

Basis of record:	Preserved Specimen
Institution code:	ATHU
Collection code:	ATHU
Catalogue number:	1191
Taxonomic name:	Thymus striatus (Checklist)
Date collected:	Wednesday, May 31, 2006

LOCATION

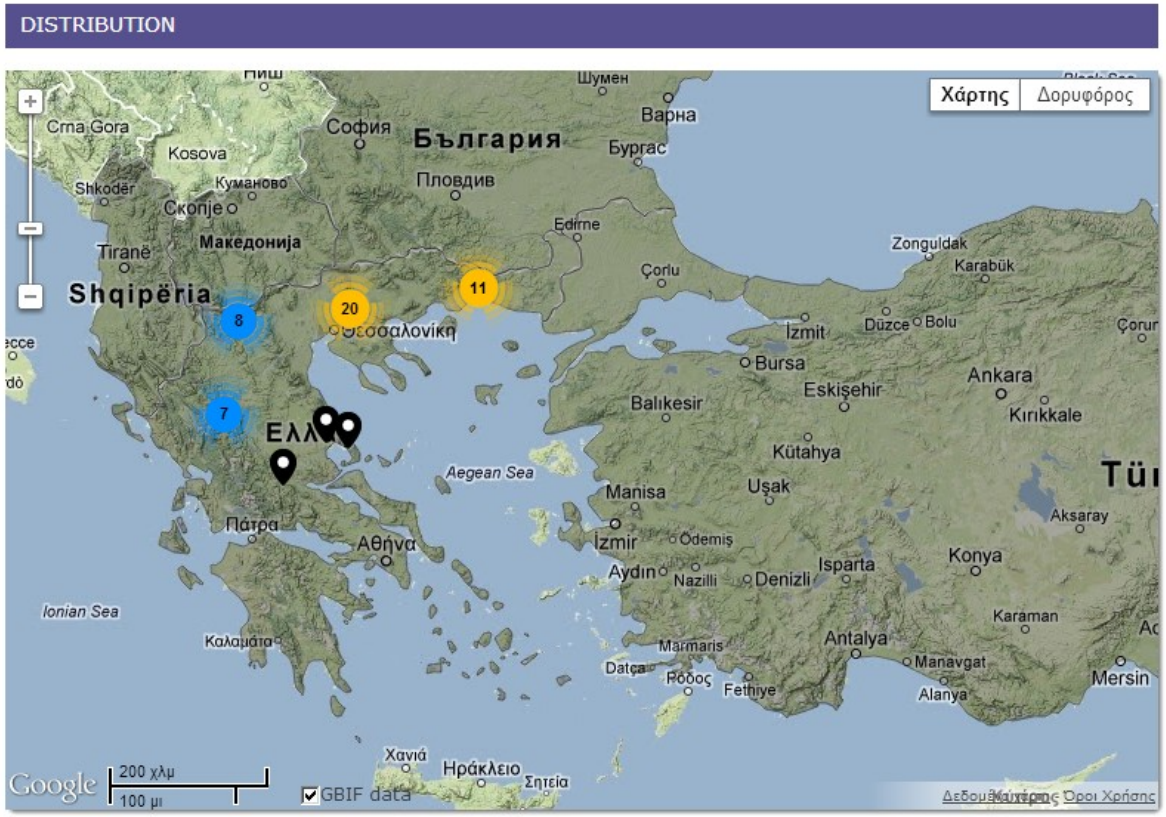


Continent/Ocean:	Europe
Country:	Greece
State/Province:	Argolis
County:	Eparchia Argous, Artemisio
Locality:	c. 11,8 km along the road that connects the village of Nestani with the village of Tourniki. The E medium and upper parts of the main summit, above the Abies cephalonica timberline. Rocks, stteep slopes and scree
Geodetic datum:	WGS84
Verbatim Coordinate System:	decimal degress
Maximum elevation:	1 750 m

- Annotated full specimen/observation records
- Linked to images and georeferenced

The main features

Distribution maps



- Google maps based
- Data layers
  - Occurrence data
  - Distribution data
    TDWG regions
  - GBIF data

The main features

Character matrices – Key construction

Section Serpyllum

TAXONOMIC NAME *

- THYMUS
  - HYPHODROMI
  - PSEUDOTHYMBRA
  - SERPYLLUM
    - THYMUS BULGARICUS
    - THYMUS COMPTUS
    - THYMUS DEGENII
    - THYMUS GLABRESCENS
    - THYMUS HETEROTRICHUS
    - THYMUS HIRSUTUS
    - THYMUS ILICIANUS
    - THYMUS LONGEDENTATUS
    - THYMUS LONGICAULIS
    - THYMUS OENIPONTANUS
    - THYMUS PANNONICUS
    - THYMUS PRAECOX
    - THYMUS PULEGIOIDES
    - THYMUS SERPYLLUM
    - THYMUS SIBTHORPII
    - THYMUS STOJANOVII

Section Serpyllum

Calyx

Classification	1	2	3	4
Thymus comptus	3.5			0
Thymus heterotrichus	3.4			1
Thymus longicaulis	2.8			
Thymus praecox	3.2			
Thymus pulegioides	3.2			
Thymus serpyllum	2.6			
Thymus sibthorpii	3			
Thymus thracicus	3.1			

Calyx lower teeth
Numeric character
Calyx lower teeth
Millimetre

- Quantitative or qualitative characters
- Auto generation of keys
- Taxon based matrices
  [Specimens based character matrices]

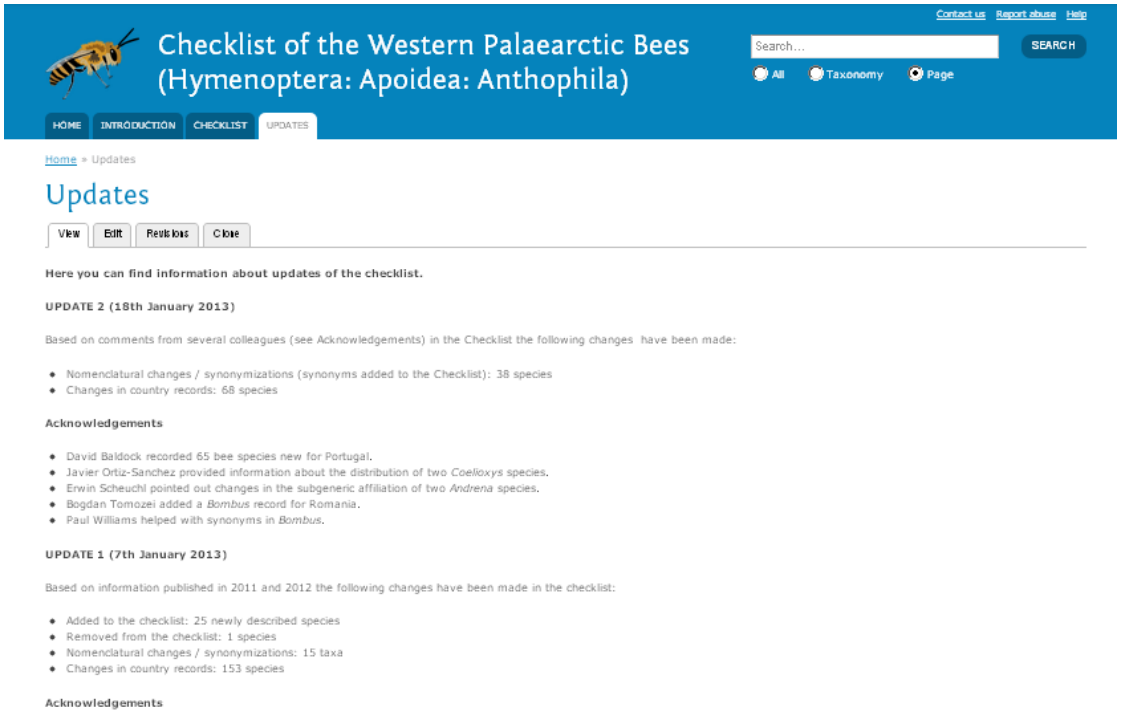
The main features

Media handling

- Bulk upload
- Metadata (incl. EXIF)
- Media galleries

The main features

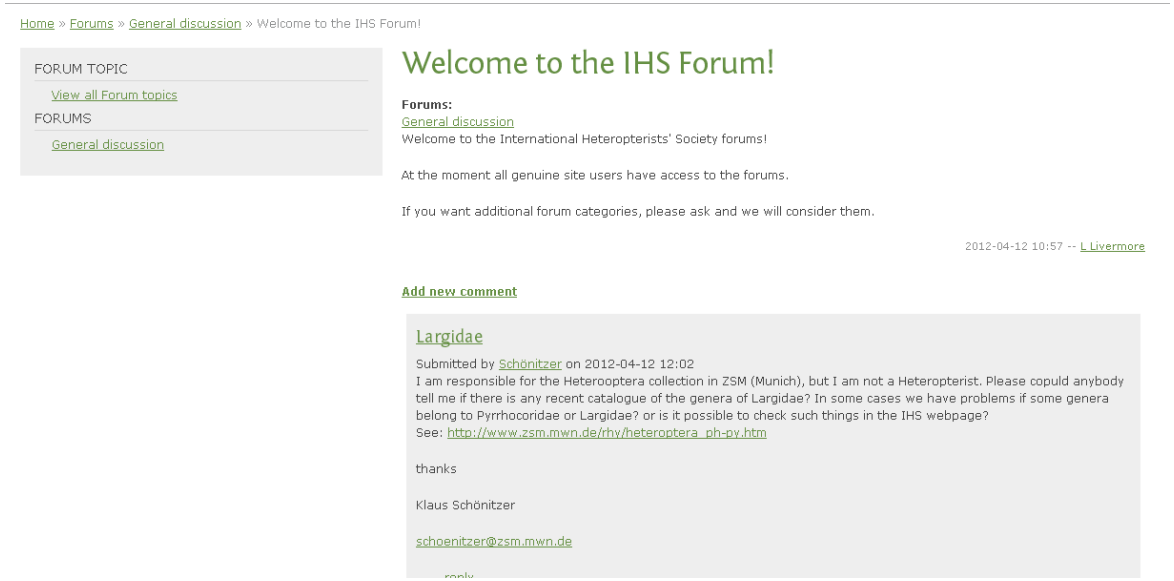
Generation of custom pages



- Tagged or not
- External RSS
- Twitter feeds
- Media files

The main features

Enhanced communication tools



- Working groups
- Forums
- Blog entries
- Webforms
- Newsletters
- RSS syndication
- Inbuilt comments

External services Integration

data

mobilisation

BRAHMS

GBIF

Google scholar

RED LIST

THE IUCN RED LIST OF THREATENED SPECIES

PENSOFT

eol Encyclopedia of Life

BHL Biodiversity Heritage Library

WoRMS World Register of Marine Species

more on the way…

The
Publication module

PENSOFT®

Open-access journal

Likes & Dislikes

- The Scratchpad template was not specifically designed as a collections database management system (DBMS)
- Missing features: label printer, loans forms, etc.
- Useful features not commonly found in collections DBMS:
  - Blogs and forums (for incidental observations, special projects)
  - Group pages with restricted access (bed bug reports, rare butterfly sightings)

Likes

Free hosting, backups, development

No installation: all interaction via web browser

Open source will allow me the option of "rolling my own" site if I choose to

Display of images at variable resolutions is good

Darwin Core data standards used for specimens and locations

Automatic discovery of associated data on the web via "Taxon Pages"

Dislikes

- Batch import of data is extremely slow
- Having problems merging imported data with existing data when importing taxonomic hierarchies
- No direct access to underlying MySQL database for ad hoc queries using SQL
  - Note: the Drupal Views Module can be used to do almost anything with the data, if you know how to use it

Dislikes

Scrachpads: the name is lame

Acknowledgments

Many thanks to the Natural History Museum and the Scratchpad Developers:

Simon Rycroft

Vince Smith

Irina Brake

And especially Dimitrios Koreas

Links to More Info

Scratchpads: a data-publishing framework to build, share and manage information on the diversity of life. BMC BioInformatics 2009 10(Suppl. 14). PDF

Streamlining taxonomic publication: a working example with Scratchpads and ZooKeys. ZooKeys 2010 (50) 17-28. **PDF**

Scratchpads Sand Box