

The Semantic Underpinnings of EOL TraitBank

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Who am I?

- Naturalist
- Mycologist
- Software Professional
- Director of Biodiversity Informatics for EOL



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Encyclopedia of Life

Nathan
EOL Director of Biodiversity Informatics
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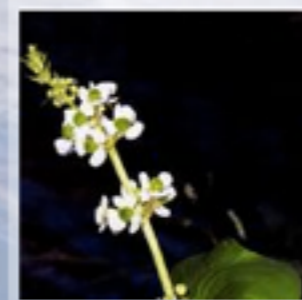
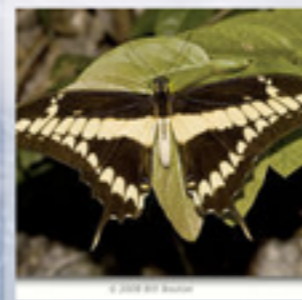
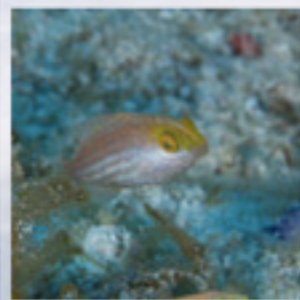
Global access to knowledge about life on Earth

Search EOL ...

GO



Paspalum fimbriatum
Panama Paspalum



EOL News

[see more](#)

[One Species at a Time Podcast: Chinook Salmon](#)

Freshwater fishes are an integral component of our environment, yet large gaps persist in our scientific knowledge of their diversity, distribution, and ecology. Several conservation groups recently joined forces to announce the first "... [more](#)

Community Activity

[see more](#)



[Peter Mangiafico](#) set "[Image of *Canis familiaris*](#)" as an exemplar on "[Canis lupus familiaris Linnaeus, 1758](#)".

ABOUT 2 HOURS AGO

Scientific Names

- **Homonyms**



Aotus



- **Synonyms:**

Lepista nuda, *Rhodopaxillus nudus*,
Tricholoma nudum, *Cortinarius*
nudus, *Clitocybe nuda*, *Tricholoma*
personatum, *Agaricus nudus*



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Changing Definitions



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TraitBank Search Results

[download data](#)

758 results for *Cell shape* within [Bacillariophyta](#)

Select an attribute

Cell shape ▾

[Show search options](#)

search

Selected search options—Taxon group: Bacillariophyta

Cell shape

The approximate three dimensional shape of a cell, described as one or more geometric solids.

http://purl.obolibrary.org/obo/OBA_0000052

[explore full data glossary](#)

Displaying 1 – 30 of 758 records on EOL

[see next 30](#)



Hannaea arcus

Cell shape ▶ sickle-shaped prism

Leblanc et al, ...



Diploneis

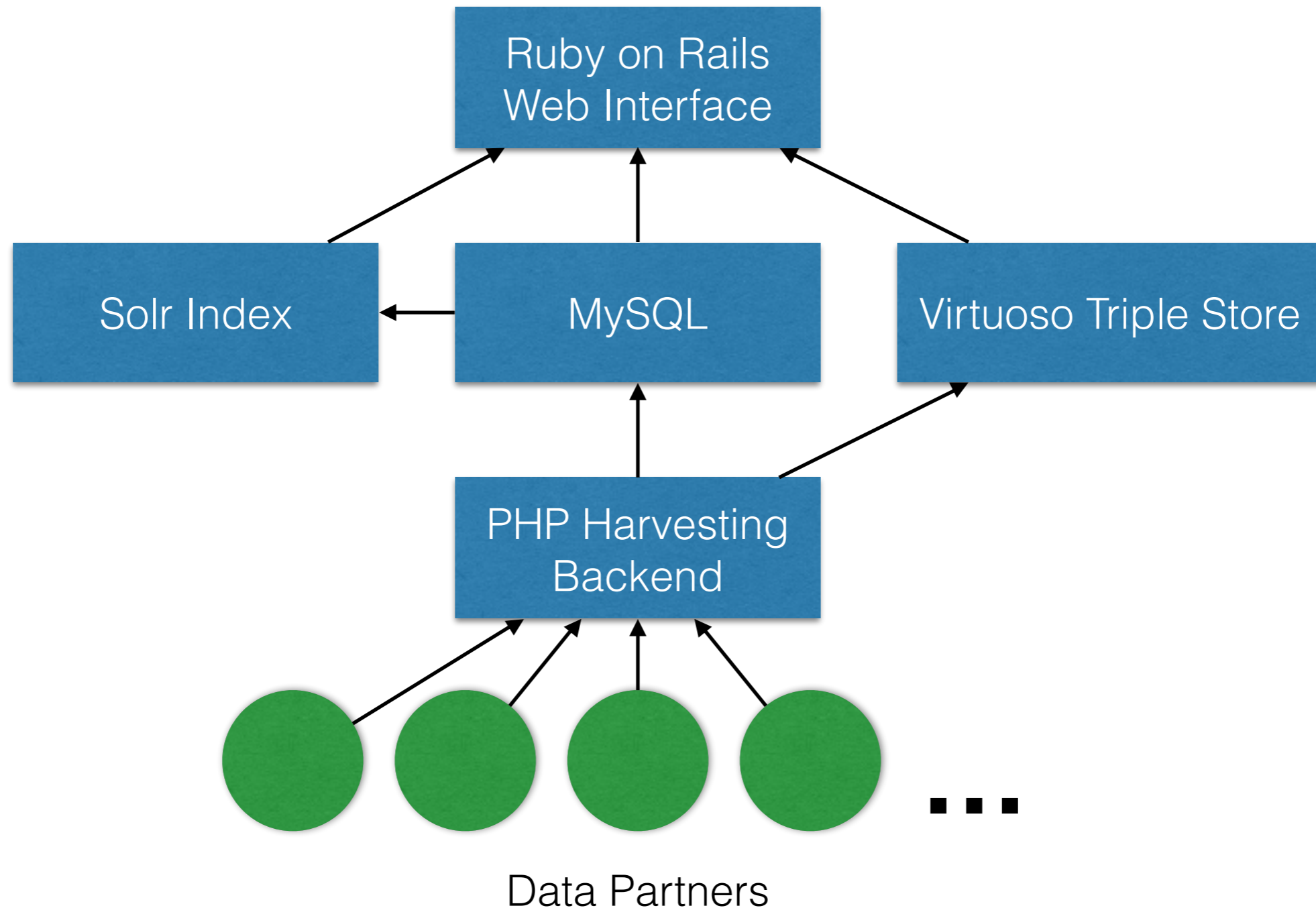
Cell shape ▼ rotational ellipsoid

Olenina et al, ...

Data about this record

Source	http://epic.awi.de/30141/1/bsep106.pdf
Citation	Olenina, I., Hajdu, S., Edler, L., Andersson, A., Wasmund, N., Busch, S., Göbel, J., Gromisz, S., Huseby, S., Huttunen, M., Jaanus, A., Kokkonen, P., Ledaine, I. and Niemkiewicz, E. 2006. Biovolumes and size-classes of phytoplankton in the Baltic Sea. HELCOM Balt.Sea Environ. Proc. No. 106, 144pp.
Individual Count	>=25
Locality	Baltic Sea
Event Date	1980-2006
Sampling Protocol	standard HELCOM (1988) methods. HELCOM, 1988. Guidelines for the Baltic Monitoring Programme for the third stage. Part D. Biological determinands. Balt. Sea Environ. Proc. 27 D, 161 pp.
Link to this record	http://eol.org/pages/11733/data#data_point_2966128

TraitBank Architecture



Demo

- Overview Tab
- Data Tab
- Reverse Relationships
- Known URI Tool

TraitBank Ontologies

- Environment Ontology - <http://purl.obolibrary.org/obo/envo.owl>
- Plant Trait Ontology - <http://purl.obolibrary.org/obo/to.owl>
- Phenotypic Quality Ontology - <http://purl.obolibrary.org/obo/pato.owl>
- Units of Measure - <http://purl.obolibrary.org/obo/uo.owl>
- Terms from Darwin Core - <http://www.tdwg.org/standards/450/>
- Custom EOL - e.g., <http://eol.org/schema/terms/FruitSeedColor>

Contributing

- Names, Images, Text: <http://eol.org/info/contribute>
- Semantic Data:
http://eol.org/contact_us?subject=Contribute
- Darwin Core Archive Format

Getting Data

- UI for exploration
- Data Downloads
 - Preferred by current scientific community
 - Easy to cache

Future Development

- Keep Focus on Downloads
 - All Attributes for a Taxon
 - Multiple Selected Attributes
- User Added Data Later

Thanks!

- Sloan Foundation
- Marine Biological Laboratory
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