

Versioned Archive and Review of Biotic
Interactions and Taxon Names Found within
globalbioticinteractions/ecdysis
hash://md5/1eb9f1b706eef2ac25114f3e382a157b

by Nomer, Elton and Preston, three naive review bots
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<https://globalbioticinteractions.org/contribute>
<https://github.com/globalbioticinteractions/ecdysis/issues>

2025-06-27

Abstract

Life on Earth is sustained by complex interactions between organisms and their environment. These biotic interactions can be captured in datasets and published digitally. We present a review and archiving process for such an openly accessible digital interactions dataset of known origin and discuss its outcome. The dataset under review, named globalbioticinteractions/ecdysis, has fingerprint hash://md5/1eb9f1b706eef2ac25114f3e382a157b, is 498MiB in size and contains 659,189 interaction with 10 unique types of associations (e.g., interactsWith) between 83,704 primary taxon (e.g., *Augochlora pura*) and 34,716 associated taxon (e.g., *Prunus*). This report includes detailed summaries of interaction data, a taxonomic review from multiple catalogs, and an archived version of the dataset from which the reviews are derived.

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Introduction

Data Review and Archive

Data review and archiving can be a time-consuming process, especially when done manually. This review report aims to help facilitate both activities. It automates the archiving of datasets, including Darwin Core archives, and is a citable backup of a version of the dataset. Additionally, an automatic review of species interaction claims made in the dataset is generated and registered with Global Biotic Interactions (J. H. Poelen, Simons, and Mungall 2014).

This review includes summary statistics about, and observations about, the dataset under review:

AHAB | Adam Haberski Research Collection https://ecdysis.org/content/dwca/AHAB_DwC-A.zip 2025-06-21T00:26:38.116Z ANSP-ENT | Academy of Natural Sciences Entomology Collection https://ecdysis.org/content/dwca/ANSP-ENT_DwC-A.zip 2025-06-21T00:26:38.116Z ANSP-ORTH | Academy of Natural Sciences Entomology Collection – OrthopNet https://ecdysis.org/content/dwca/ANSP-ORTH_DwC-A.zip 2025-06-21T00:26:38.116Z ASU-ASUCOB | Arizona State University Charles W. O’Brien Collection https://ecdysis.org/content/dwca/ASU-ASUCOB_DwC-A.zip 2025-06-21T00:26:38.116Z ASU-ASUHIC | Arizona State University Hasbrouck Insect Collection https://ecdysis.org/content/dwca/ASU-ASUHIC_DwC-A.zip 2025-06-21T00:26:38.116Z ASU-ROLS | Rick Overson and Laura Steger Invertebrate Observations https://ecdysis.org/content/dwca/ASU-ROLS_DwC-A.zip 2025-06-21T00:26:38.116Z AZDA-AZDA-ENT | Arizona Department of Agriculture Entomology Collection https://ecdysis.org/content/dwca/AZDA-AZDA-ENT_DwC-A.zip 2025-06-21T00:26:38.116Z BP-BLM | Butterfly Pavilion’s Colorado Invertebrate Surveys https://ecdysis.org/content/dwca/BP-BLM_DwC-A.zip 2025-06-21T00:26:38.116Z BROW-BCIC | Broward College Insect Collection [2](https://ecdysis.org/content/dwca/BROW-</p>
</div>
<div data-bbox=)

BCIC_DwC-A.zip 2025-06-21T00:26:38.116Z BYU-BYUC |
 Brigham Young University Arthropod Museum [https://ecdysis.org/content/dwca/BYU-](https://ecdysis.org/content/dwca/BYU-BYUC_DwC-A.zip)
 BYUC_DwC-A.zip 2025-06-21T00:26:38.116Z CAES-CAES |
 Connecticut Agricultural Experiment Station Arthropod Collection
https://ecdysis.org/content/dwca/CAES-CAES_DwC-A.zip 2025-
 06-21T00:26:38.116Z CMNH-IZ | Carnegie Museum Invertebrate
 Zoology Collection [https://ecdysis.org/content/dwca/CMNH-](https://ecdysis.org/content/dwca/CMNH-IZ_DwC-A.zip)
 IZ_DwC-A.zip 2025-06-21T00:26:38.116Z CPSLO-PSEC | Califor-
 nia Polytechnic State University, San Luis Obispo Plant Sciences
 Entomology Collection [https://ecdysis.org/content/dwca/CPSLO-](https://ecdysis.org/content/dwca/CPSLO-PSEC_DwC-A.zip)
 PSEC_DwC-A.zip 2025-06-21T00:26:38.116Z CSEB-CSEB
 | California State University East Bay Insect Collection
https://ecdysis.org/content/dwca/CSEB-CSEB_DwC-A.zip 2025-
 06-21T00:26:38.116Z CSU-CSUC | C.P. Gillette Museum of Arthro-
 pod Diversity [https://ecdysis.org/content/dwca/CSU-CSUC_DwC-](https://ecdysis.org/content/dwca/CSU-CSUC_DwC-A.zip)
 A.zip 2025-06-21T00:26:38.116Z CU-CUAC | Clemson University
 Arthropod Collection [https://ecdysis.org/content/dwca/CU-](https://ecdysis.org/content/dwca/CU-CUAC_DwC-A.zip)
 CUAC_DwC-A.zip 2025-06-21T00:26:38.116Z DBG-DBGA | Den-
 ver Botanic Gardens Collection of Arthropods [https://ecdysis.org/content/dwca/DBG-](https://ecdysis.org/content/dwca/DBG-DBGA_DwC-A.zip)
 DBGA_DwC-A.zip 2025-06-21T00:26:38.116Z DCH-DCEC | The
 Davidson College Entomology Collection [https://ecdysis.org/content/dwca/DCH-](https://ecdysis.org/content/dwca/DCH-DCEC_DwC-A.zip)
 DCEC_DwC-A.zip 2025-06-21T00:26:38.116Z DDPC-DDPC | Da-
 vide Dal Pos Research Collection [https://ecdysis.org/content/dwca/DDPC-](https://ecdysis.org/content/dwca/DDPC-DDPC_DwC-A.zip)
 DDPC_DwC-A.zip 2025-06-21T00:26:38.116Z DMNS-Arac | Den-
 ver Museum of Nature & Science - Arachnology [https://ecdysis.org/content/dwca/DMNS-](https://ecdysis.org/content/dwca/DMNS-Arac_DwC-A.zip)
 Arac_DwC-A.zip 2025-06-21T00:26:38.116Z DMNS-Ento | Denver
 Museum of Nature & Science - Entomology [https://ecdysis.org/content/dwca/DMNS-](https://ecdysis.org/content/dwca/DMNS-Ento_DwC-A.zip)
 Ento_DwC-A.zip 2025-06-21T00:26:38.116Z DUGWAY-DUG-
 ENT | Dugway Proving Ground Natural History Collection
[https://ecdysis.org/content/dwca/DUGWAY-DUG-ENT_DwC-](https://ecdysis.org/content/dwca/DUGWAY-DUG-ENT_DwC-A.zip)
 A.zip 2025-06-21T00:26:38.116Z ERWC-ERWC | Ethan Richard
 Wright Collection [https://ecdysis.org/content/dwca/ERWC-](https://ecdysis.org/content/dwca/ERWC-ERWC_DwC-A.zip)
 ERWC_DwC-A.zip 2025-06-21T00:26:38.116Z EWIC-EWIC | Evan
 Waite Invertebrate Collection [https://ecdysis.org/content/dwca/EWIC-](https://ecdysis.org/content/dwca/EWIC-EWIC_DwC-A.zip)
 EWIC_DwC-A.zip 2025-06-21T00:26:38.116Z FSCA | Florida State
 Collection of Arthropods [https://ecdysis.org/content/dwca/FSCA_DwC-](https://ecdysis.org/content/dwca/FSCA_DwC-A.zip)
 A.zip 2025-06-21T00:26:38.116Z GMNH-UGCA | University of Geor-
 gia Collection of Arthropods [https://ecdysis.org/content/dwca/GMNH-](https://ecdysis.org/content/dwca/GMNH-UGCA_DwC-A.zip)
 UGCA_DwC-A.zip 2025-06-21T00:26:38.116Z HNU-HNUSEL
 | Hannam University Systematic Entomology Laboratory
https://ecdysis.org/content/dwca/HNU-HNUSEL_DwC-A.zip
 2025-06-21T00:26:38.116Z IAW-IAW-US | Ian Watkinson Lepi-
 doptera Collection [https://ecdysis.org/content/dwca/IAW-IAW-](https://ecdysis.org/content/dwca/IAW-IAW-US_DwC-A.zip)
 US_DwC-A.zip 2025-06-21T00:26:38.116Z IIBZ | Insectos asoci-
 ados a las sabanas de montañas altas de República Dominicana
https://ecdysis.org/content/dwca/IIBZ_DwC-A.zip 2025-06-

21T00:26:38.116Z IKBC-IKBC | Ilgoo Kang Braconid Collection
https://ecdysis.org/content/dwca/IKBC-IKBC_DwC-A.zip 2025-06-21T00:26:38.116Z KY-UKIC | University of Kentucky Insect Collection
https://ecdysis.org/content/dwca/KY-UKIC_DwC-A.zip 2025-06-21T00:26:38.116Z LCDI-LERC | Luther Entomological Research Collection
https://ecdysis.org/content/dwca/LCDI-LERC_DwC-A.zip 2025-06-21T00:26:38.116Z MAJC-INDD | Insect Diversity and Diagnostics Lab
https://ecdysis.org/content/dwca/MAJC-INDD_DwC-A.zip 2025-06-21T00:26:38.116Z MAJC-MAJC | M. Andrew Johnston Research Collection
https://ecdysis.org/content/dwca/MAJC-MAJC_DwC-A.zip 2025-06-21T00:26:38.116Z MEPN-INV | Escuela Politécnica Nacional, Quito, Ecuador
https://ecdysis.org/content/dwca/MEPN-INV_DwC-A.zip 2025-06-21T00:26:38.116Z MHNU-E-MHNU | Museo de Historia Natural Unillanos-Entomology
https://ecdysis.org/content/dwca/MHNU-E-MHNU_DwC-A.zip 2025-06-21T00:26:38.116Z MISSA-MEM | Mississippi Entomological Museum
https://ecdysis.org/content/dwca/MISSA-MEM_DwC-A.zip 2025-06-21T00:26:38.116Z MSU-MSUC | The Albert J. Cook Arthropod Research Collection
https://ecdysis.org/content/dwca/MSU-MSUC_DwC-A.zip 2025-06-21T00:26:38.116Z MUCR-MI-CIPROC | Museo de Insectos, Centro de Investigaciones en Protección de Cultivos (CIPROC), Escuela de Agronomía, Universidad de Costa Rica
https://ecdysis.org/content/dwca/MUCR-MI-CIPROC_DwC-A.zip 2025-06-21T00:26:38.116Z MWLR-NZAC | New Zealand Arthropod Collection - Symbiota
https://ecdysis.org/content/dwca/MWLR-NZAC_DwC-A.zip 2025-06-21T00:26:38.116Z NARO | Uganda National Insect Collection
https://ecdysis.org/content/dwca/NARO_DwC-A.zip 2025-06-21T00:26:38.116Z NAU-NAAC | Northern Arizona University - Arthropod Collection
https://ecdysis.org/content/dwca/NAU-NAAC_DwC-A.zip 2025-06-21T00:26:38.116Z NAU-NAUFEC | Forest Entomology Collection - Northern Arizona University
https://ecdysis.org/content/dwca/NAU-NAUFEC_DwC-A.zip 2025-06-21T00:26:38.116Z NAU-WACA | Northern Arizona University - Walnut Canyon National Monument Collection
https://ecdysis.org/content/dwca/NAU-WACA_DwC-A.zip 2025-06-21T00:26:38.116Z NMDG-NMDG | Nathaniel Green Research Collection
https://ecdysis.org/content/dwca/NMDG-NMDG_DwC-A.zip 2025-06-21T00:26:38.116Z NMSU-NMSU | New Mexico State Collection of Arthropods
https://ecdysis.org/content/dwca/NMSU-NMSU_DwC-A.zip 2025-06-21T00:26:38.116Z NPRC-NPRC | Northern Plains Research Collection
https://ecdysis.org/content/dwca/NPRC-NPRC_DwC-A.zip 2025-06-21T00:26:38.116Z NTSC-EFIC | University of North Texas Elm Fork Insect Collection
https://ecdysis.org/content/dwca/NTSC-EFIC_DwC-A.zip 2025-06-21T00:26:38.116Z OSAL-spiders | Ohio State University Spider Collection
https://ecdysis.org/content/dwca/OSAL-spiders_DwC-A.zip

A.zip 2025-06-21T00:26:38.116Z PSUC-ENTO | Frost Entomological Museum https://ecdysis.org/content/dwca/PSUC-ENTO_DwC-A.zip 2025-06-21T00:26:38.116Z RUAC_ENT | Rutgers University Entomological Museum https://ecdysis.org/content/dwca/RUAC_ENT_DwC-A.zip 2025-06-21T00:26:38.116Z SBMNH-SBMNHENT | Santa Barbara Museum of Natural History Entomology Collection https://ecdysis.org/content/dwca/SBMNH-SBMNHENT_DwC-A.zip 2025-06-21T00:26:38.116Z SCAN-ARTSYS | Collection of Externally Processed Specimens (Arthropod Systematics Research) https://ecdysis.org/content/dwca/SCAN-ARTSYS_DwC-A.zip 2025-06-21T00:26:38.116Z SCFS-ENTO | Sagehen Creek Field Station (UC-Berkeley) – Insects https://ecdysis.org/content/dwca/SCFS-ENTO_DwC-A.zip 2025-06-21T00:26:38.116Z SDNHM-SDMC | San Diego Natural History Museum Entomology Department https://ecdysis.org/content/dwca/SDNHM-SDMC_DwC-A.zip 2025-06-21T00:26:38.116Z SDSU-TAC | San Diego State University - Terrestrial Arthropods Collection https://ecdysis.org/content/dwca/SDSU-TAC_DwC-A.zip 2025-06-21T00:26:38.116Z SLRC-SLRC | Sangmi Lee Research Collection https://ecdysis.org/content/dwca/SLRC-SLRC_DwC-A.zip 2025-06-21T00:26:38.116Z SOVT-FBL | State of Vermont Forest Biology Lab https://ecdysis.org/content/dwca/SOVT-FBL_DwC-A.zip 2025-06-21T00:26:38.116Z SSAC-SSAC | Salvatore S. Anzaldo Collection https://ecdysis.org/content/dwca/SSAC-SSAC_DwC-A.zip 2025-06-21T00:26:38.116Z TJHC-THJC | Tyler J. Hedlund Collection https://ecdysis.org/content/dwca/TJHC-THJC_DwC-A.zip 2025-06-21T00:26:38.116Z TTU-TTU-Z | Museum of Texas Tech University Invertebrate Zoology Collection https://ecdysis.org/content/dwca/TTU-TTU-Z_DwC-A.zip 2025-06-21T00:26:38.116Z UA-RLMC | University of Arizona Insect Collection RL Minckley Insect Collection https://ecdysis.org/content/dwca/UA-RLMC_DwC-A.zip 2025-06-21T00:26:38.116Z UA-RLMPC | RL Minckley Plant Collection https://ecdysis.org/content/dwca/UA-RLMPC_DwC-A.zip 2025-06-21T00:26:38.116Z UASD-IIBZ-ENT | Colección Entomológica del Instituto de Investigaciones Botánicas y Zoológicas/ Insect Collection IIBZ https://ecdysis.org/content/dwca/UASD-IIBZ-ENT_DwC-A.zip 2025-06-21T00:26:38.116Z UA-UAIC | University of Arizona Insect Collection https://ecdysis.org/content/dwca/UA-UAIC_DwC-A.zip 2025-06-21T00:26:38.116Z UCD-BMEC | R. M. Bohart Museum of Entomology https://ecdysis.org/content/dwca/UCD-BMEC_DwC-A.zip 2025-06-21T00:26:38.116Z UCONN-INV | UConn Biodiversity Research Collection https://ecdysis.org/content/dwca/UCONN-INV_DwC-A.zip 2025-06-21T00:26:38.116Z UCRG-UCRG | Colección Entomológica de la Carrera de Agronomía de la UCR Sede Guanacaste https://ecdysis.org/content/dwca/UCRG-UCRG_DwC-A.zip 2025-06-21T00:26:38.116Z UCSB-IZC | Univer-

sity of California Santa Barbara Invertebrate Zoology Collection
https://ecdysis.org/content/dwca/UCSB-IZC_DwC-A.zip 2025-06-21T00:26:38.116Z UCSC-RMIC | Kenneth S. Norris Center for Natural History, University of California Santa Cruz, Insect Collection
https://ecdysis.org/content/dwca/UCSC-RMIC_DwC-A.zip 2025-06-21T00:26:38.116Z UF-SPDR | Spider Parasite Digital Research Collection
https://ecdysis.org/content/dwca/UF-SPDR_DwC-A.zip 2025-06-21T00:26:38.116Z UHIM-UHIM | University of Hawaii Insect Museum
https://ecdysis.org/content/dwca/UHIM-UHIM_DwC-A.zip 2025-06-21T00:26:38.116Z UI-WFBM | William F. Barr Entomological Museum
https://ecdysis.org/content/dwca/UI-WFBM_DwC-A.zip 2025-06-21T00:26:38.116Z UMNH-ENT | Entomology Collection at the Natural History Museum of Utah
https://ecdysis.org/content/dwca/UMNH-ENT_DwC-A.zip 2025-06-21T00:26:38.116Z UM-WRME | J. B. Wallis / R. E. Roughley Museum of Entomology
https://ecdysis.org/content/dwca/UM-WRME_DwC-A.zip 2025-06-21T00:26:38.116Z UNACHI-MUPADI | Colección Entomológica del Museo de Peces de Agua Dulce e Invertebrados de la Universidad Autónoma de Chiriquí
https://ecdysis.org/content/dwca/UNACHI-MUPADI_DwC-A.zip 2025-06-21T00:26:38.116Z USNM-USNMENT | United States National Museum, Entomology Collections
https://ecdysis.org/content/dwca/USNM-USNMENT_DwC-A.zip 2025-06-21T00:26:38.116Z UTAH-PIPR | Price Institute of Parasite Research, School of Biological Sciences, University of Utah
https://ecdysis.org/content/dwca/UTAH-PIPR_DwC-A.zip 2025-06-21T00:26:38.116Z UTC-UTCI | University of Tennessee at Chattanooga Insect Collection
https://ecdysis.org/content/dwca/UTC-UTCI_DwC-A.zip 2025-06-21T00:26:38.116Z UVM-VTZT | University of Vermont Zadock Thompson Zoological Collection-Invertebrates
https://ecdysis.org/content/dwca/UVM-VTZT_DwC-A.zip 2025-06-21T00:26:38.116Z UWSP-PARA | University of Wisconsin-Stevens Point
https://ecdysis.org/content/dwca/UWSP-PARA_DwC-A.zip 2025-06-21T00:26:38.116Z VPI-VTEC | Virginia Polytechnic Institute and State University Insect Collection
https://ecdysis.org/content/dwca/VPI-VTEC_DwC-A.zip 2025-06-21T00:26:38.116Z WILK-ENT | Wilkes University Entomological Collection
https://ecdysis.org/content/dwca/WILK-ENT_DwC-A.zip 2025-06-21T00:26:38.116Z WSU-WSUC | Washington State University Collection
https://ecdysis.org/content/dwca/WSU-WSUC_DwC-A.zip 2025-06-21T00:26:38.116Z hash://md5/1eb9f1b706eef2ac25114f3e382a157b

For additional metadata related to this dataset, please visit <https://github.com/globalbioticinteractions/ecdysis> and inspect associated metadata files including, but not limited to, *README.md*, *eml.xml*, and/or *globi.json*.

Methods

The review is performed through programmatic scripts that leverage tools like Preston (Elliott et al. 2025), Elton (Kuhn, Poelen, and Leinweber 2025), Nomer (Salim and Poelen 2025), globinizer (J. Poelen, Seltmann, and Mietchen 2024) combined with third-party tools like grep, mlr, tail and head.

Table 1: Tools used in this review process

tool name	version
preston	0.10.1
elton	0.15.13
nomer	0.5.17
globinizer	0.4.0
mlr	6.0.0
jq	1.6
yq	4.25.3
pandoc	3.1.6.1
duckdb	1.3.1

The review process can be described in the form of the script below ¹.

```
# get versioned copy of the dataset (size approx. 498MiB) under review
elton pull globalbioticinteractions/ecdysis

# generate review notes
elton review globalbioticinteractions/ecdysis\
> review.tsv

# export indexed interaction records
elton interactions globalbioticinteractions/ecdysis\
> interactions.tsv

# export names and align them with the Catalogue of Life using Nomer
elton names globalbioticinteractions/ecdysis\
| nomer append col\
> name-alignment.tsv
```

or visually, in a process diagram.

You can find a copy of the full review script at `check-data.sh`. See also GitHub and Codeberg.

¹Note that you have to first get the data (e.g., via `elton pull globalbioticinteractions/ecdysis`) before being able to generate reviews (e.g., `elton review globalbioticinteractions/ecdysis`), extract interaction claims (e.g., `elton interactions globalbioticinteractions/ecdysis`), or list taxonomic names (e.g., `elton names globalbioticinteractions/ecdysis`)

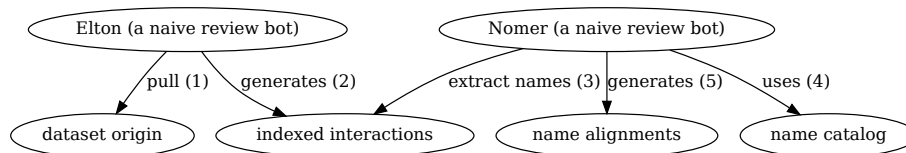


Figure 1: Review Process Overview

Results

In the following sections, the results of the review are summarized ². Then, links to the detailed review reports are provided.

Files

The following files are produced in this review:

filename	description
biblio.bib	list of bibliographic reference of this review
check-dataset.sh	data review workflow/process as expressed in a bash script
data.zip	a versioned archive of the data under review
HEAD	the digital signature of the data under review
index.docx	review in MS Word format
index.html	review in HTML format
index.md	review in Pandoc markdown format
index.pdf	review in PDF format
indexed-citations.csv.gz	list of distinct reference citations for reviewed species interaction claims in gzipped comma-separated values file format
indexed-citations.html.gz	list of distinct reference citations for reviewed species interactions claims in gzipped html file format
indexed-citations.tsv.gz	list of distinct reference citations for reviewed species interaction claims in gzipped tab-separated values format

²Disclaimer: The results in this review should be considered friendly, yet naive, notes from an unsophisticated robot. Please keep that in mind when considering the review results.

filename	description
indexed-interactions-col-family-col-family.svg	network diagram showing the taxon family to taxon family interaction claims in the dataset under review as interpreted by the Catalogue of Life via Nomer Corpus of Taxonomic Resources (J. H. (ed.). Poelen 2024)
indexed-interactions-col-kingdom-col-kingdom.svg	network diagram showing the taxon kingdom to taxon kingdom interaction claims in the dataset under review as interpreted by the Catalogue of Life via Nomer Corpus of Taxonomic Resources (J. H. (ed.). Poelen 2024)
indexed-interactions.csv.gz	species interaction claims indexed from the dataset under review in gzipped comma-separated values format
indexed-interactions.html.gz	species interaction claims indexed from the dataset under review in gzipped html format
indexed-interactions.tsv.gz	species interaction claims indexed from the dataset under review in gzipped tab-separated values format
indexed-interactions.parquet	species interaction claims indexed from the dataset under review in Apache Parquet format
indexed-interactions-sample.csv	list of species interaction claims indexed from the dataset under review in gzipped comma-separated values format
indexed-interactions-sample.html	first 500 species interaction claims indexed from the dataset under review in html format
indexed-interactions-sample.tsv	first 500 species interaction claims indexed from the dataset under review in tab-separated values format
indexed-names.csv.gz	taxonomic names indexed from the dataset under review in gzipped comma-separated values format
indexed-names.html.gz	taxonomic names found in the dataset under review in gzipped html format
indexed-names.tsv.gz	taxonomic names found in the dataset under review in gzipped tab-separated values format

filename	description
indexed-names.parquet	taxonomic names found in the dataset under review in Apache Parquet format
indexed-names-resolved-col.csv.gz	taxonomic names found in the dataset under review aligned with the Catalogue of Life as accessed through the Nomer Corpus of Taxonomic Resources (J. H. (ed.). Poelen 2024) in gzipped comma-separated values format
indexed-names-resolved-col.html.gz	taxonomic names found in the dataset under review aligned with the Catalogue of Life as accessed through the Nomer Corpus of Taxonomic Resources (J. H. (ed.). Poelen 2024) in gzipped html format
indexed-names-resolved-col.tsv.gz	taxonomic names found in the dataset under review aligned with the Catalogue of Life as accessed through the Nomer Corpus of Taxonomic Resources (J. H. (ed.). Poelen 2024) in gzipped tab-separated values format
indexed-names-resolved-col.parquet	taxonomic names found in the dataset under review aligned with the Catalogue of Life as accessed through the Nomer Corpus of Taxonomic Resources (J. H. (ed.). Poelen 2024) in Apache Parquet format
indexed-names-resolved-discoverlife.csv.gz	taxonomic names found in the dataset under review aligned with Discover Life bee species checklist as accessed through the Nomer Corpus of Taxonomic Resources (J. H. (ed.). Poelen 2024) in gzipped comma-separated values format
indexed-names-resolved-discoverlife.html.gz	taxonomic names found in the dataset under review aligned with Discover Life bee species checklist as accessed through the Nomer Corpus of Taxonomic Resources (J. H. (ed.). Poelen 2024) in gzipped html format

filename	description
indexed-names-resolved-discoverlife.tsv.gz	taxonomic names found in the dataset under review aligned with Discover Life bee species checklist as accessed through the Nomer Corpus of Taxonomic Resources (J. H. (ed.). Poelen 2024) in gzipped tab-separated values format
indexed-names-resolved-discoverlife.parquet	taxonomic names found in the dataset under review aligned with Discover Life bee species checklist as accessed through the Nomer Corpus of Taxonomic Resources (J. H. (ed.). Poelen 2024) in Apache Parquet format
indexed-names-resolved-gbif.csv.gz	taxonomic names found in the dataset under review aligned with GBIF Backbone Taxonomy as accessed through the Nomer Corpus of Taxonomic Resources (J. H. (ed.). Poelen 2024) in gzipped comma-separated values format
indexed-names-resolved-gbif.html.gz	taxonomic names found in the dataset under review aligned with GBIF Backbone Taxonomy as accessed through the Nomer Corpus of Taxonomic Resources (J. H. (ed.). Poelen 2024) in gzipped html format
indexed-names-resolved-gbif.tsv.gz	taxonomic names found in the dataset under review aligned with GBIF Backbone Taxonomy as accessed through the Nomer Corpus of Taxonomic Resources (J. H. (ed.). Poelen 2024) in gzipped tab-separated values format
indexed-names-resolved-gbif.parquet	taxonomic names found in the dataset under review aligned with GBIF Backbone Taxonomy as accessed through the Nomer Corpus of Taxonomic Resources (J. H. (ed.). Poelen 2024) in Apache Parquet format

filename	description
indexed-names-resolved-itis.csv.gz	taxonomic names found in the dataset under review aligned with Integrated Taxonomic Information System (ITIS) as accessed through the Nomer Corpus of Taxonomic Resources (J. H. (ed.). Poelen 2024) in gzipped comma-separated values format
indexed-names-resolved-itis.html.gz	taxonomic names found in the dataset under review aligned with Integrated Taxonomic Information System (ITIS) as accessed through the Nomer Corpus of Taxonomic Resources (J. H. (ed.). Poelen 2024) in gzipped html format
indexed-names-resolved-itis.tsv.gz	taxonomic names found in the dataset under review aligned with Integrated Taxonomic Information System (ITIS) as accessed through the Nomer Corpus of Taxonomic Resources (J. H. (ed.). Poelen 2024) in gzipped tab-separated values format
indexed-names-resolved-itis.parquet	taxonomic names found in the dataset under review aligned with Integrated Taxonomic Information System (ITIS) as accessed through the Nomer Corpus of Taxonomic Resources (J. H. (ed.). Poelen 2024) in Apache Parquet format
indexed-names-resolved-mdd.csv.gz	taxonomic names found in the dataset under review aligned with the Mammal Diversity Database as accessed through the Nomer Corpus of Taxonomic Resources (J. H. (ed.). Poelen 2024) in gzipped comma-separated values format
indexed-names-resolved-mdd.html.gz	taxonomic names found in the dataset under review aligned with Mammal Diversity Database as accessed through the Nomer Corpus of Taxonomic Resources (J. H. (ed.). Poelen 2024) in gzipped html format

filename	description
indexed-names-resolved-mdd.tsv.gz	taxonomic names found in the dataset under review aligned with Mammal Diversity Database as accessed through the Nomer Corpus of Taxonomic Resources (J. H. (ed.). Poelen 2024) in gzipped tab-separated values format
indexed-names-resolved-mdd.parquet	taxonomic names found in the dataset under review aligned with Mammal Diversity Database as accessed through the Nomer Corpus of Taxonomic Resources (J. H. (ed.). Poelen 2024) in Apache Parquet format
indexed-names-resolved-ncbi.csv.gz	taxonomic names found in the dataset under review aligned with the NCBI Taxonomy as accessed through the Nomer Corpus of Taxonomic Resources (J. H. (ed.). Poelen 2024) in gzipped comma-separated values format
indexed-names-resolved-ncbi.html.gz	taxonomic names found in the dataset under review aligned with the NCBI Taxonomy as accessed through the Nomer Corpus of Taxonomic Resources (J. H. (ed.). Poelen 2024) in gzipped html format
indexed-names-resolved-ncbi.tsv.gz	taxonomic names found in the dataset under review aligned with the NCBI Taxonomy as accessed through the Nomer Corpus of Taxonomic Resources (J. H. (ed.). Poelen 2024) in gzipped tab-separated values format
indexed-names-resolved-ncbi.parquet	taxonomic names found in the dataset under review aligned with the NCBI Taxonomy as accessed through the Nomer Corpus of Taxonomic Resources (J. H. (ed.). Poelen 2024) in Apache Parquet format

filename	description
indexed-names-resolved-pbdb.csv.gz	taxonomic names found in the dataset under review aligned with the Paleobiology Database as accessed through the Nomer Corpus of Taxonomic Resources (J. H. (ed.). Poelen 2024) in gzipped comma-separated values format
indexed-names-resolved-pbdb.html.gz	taxonomic names found in the dataset under review aligned with Paleobiology Database as accessed through the Nomer Corpus of Taxonomic Resources (J. H. (ed.). Poelen 2024) in gzipped html format
indexed-names-resolved-pbdb.tsv.gz	taxonomic names found in the dataset under review aligned with Paleobiology Database as accessed through the Nomer Corpus of Taxonomic Resources (J. H. (ed.). Poelen 2024) in gzipped tab-separated values format
indexed-names-resolved-pbdb.parquet	taxonomic names found in the dataset under review aligned with Paleobiology Database as accessed through the Nomer Corpus of Taxonomic Resources (J. H. (ed.). Poelen 2024) in Apache Parquet format
indexed-names-resolved-tpt.csv.gz	taxonomic names found in the dataset under review aligned with the Terrestrial Parasite Tracker (TPT) Taxonomic Resource as accessed through the Nomer Corpus of Taxonomic Resources (J. H. (ed.). Poelen 2024) in gzipped comma-separated values format
indexed-names-resolved-tpt.html.gz	taxonomic names found in the dataset under review aligned with the Terrestrial Parasite Tracker (TPT) Taxonomic Resource as accessed through the Nomer Corpus of Taxonomic Resources (J. H. (ed.). Poelen 2024) in gzipped html format

filename	description
indexed-names-resolved-tpt.tsv.gz	taxonomic names found in the dataset under review aligned with the Terrestrial Parasite Tracker (TPT) Taxonomic Resource as accessed through the Nomer Corpus of Taxonomic Resources (J. H. (ed.). Poelen 2024) in gzipped tab-separated values format
indexed-names-resolved-tpt.parquet	taxonomic names found in the dataset under review aligned with the Terrestrial Parasite Tracker (TPT) Taxonomic Resource as accessed through the Nomer Corpus of Taxonomic Resources (J. H. (ed.). Poelen 2024) in Apache Parquet format
indexed-names-resolved-wfo.csv.gz	taxonomic names found in the dataset under review aligned with the World of Flora Online as accessed through the Nomer Corpus of Taxonomic Resources (J. H. (ed.). Poelen 2024) in gzipped comma-separated values format
indexed-names-resolved-wfo.html.gz	taxonomic names found in the dataset under review aligned with the World of Flora Online as accessed through the Nomer Corpus of Taxonomic Resources (J. H. (ed.). Poelen 2024) in gzipped html format
indexed-names-resolved-wfo.tsv.gz	taxonomic names found in the dataset under review aligned with the World of Flora Online as accessed through the Nomer Corpus of Taxonomic Resources (J. H. (ed.). Poelen 2024) in gzipped tab-separated values format
indexed-names-resolved-wfo.parquet	taxonomic names found in the dataset under review aligned with the World of Flora Online as accessed through the Nomer Corpus of Taxonomic Resources (J. H. (ed.). Poelen 2024) in Apache Parquet format

filename	description
indexed-names-resolved-worms.csv.gz	taxonomic names found in the dataset under review aligned with the World Register of Marine Species (WoRMS) as accessed through the Nomer Corpus of Taxonomic Resources (J. H. (ed.). Poelen 2024) in gzipped comma-separated values format
indexed-names-resolved-worms.html.gz	taxonomic names found in the dataset under review aligned with the World Register of Marine Species (WoRMS) as accessed through the Nomer Corpus of Taxonomic Resources (J. H. (ed.). Poelen 2024) in gzipped html format
indexed-names-resolved-worms.tsv.gz	taxonomic names found in the dataset under review aligned with the World Register of Marine Species (WoRMS) as accessed through the Nomer Corpus of Taxonomic Resources (J. H. (ed.). Poelen 2024) in gzipped tab-separated values format
indexed-names-resolved-worms.parquet	taxonomic names found in the dataset under review aligned with the World Register of Marine Species (WoRMS) as accessed through the Nomer Corpus of Taxonomic Resources (J. H. (ed.). Poelen 2024) in Apache Parquet format
indexed-names-sample.csv	first 500 taxonomic names found in the dataset under review in comma-separated values format
indexed-names-sample.html	first 500 taxonomic names found in the dataset under review in html format
indexed-names-sample.tsv	first 500 taxonomic names found in the dataset under review in tab-separated values format
interaction.svg	diagram summarizing the data model used to index species interaction claims
nanopub-sample.trig	first 500 species interaction claims as expressed in the nanopub format (Kuhn and Dumontier 2014)

filename	description
nanopub.trig.gz	species interaction claims as expressed in the nanopub format (Kuhn and Dumontier 2014)
process.svg	diagram summarizing the data review processing workflow
prov.nq	origin of the dataset under review as expressed in rdf/nquads
review.csv.gz	review notes associated with the dataset under review in gzipped comma-separated values format
review.html.gz	review notes associated with the dataset under review in gzipped html format
review.tsv.gz	review notes associated with the dataset under review in gzipped tab-separated values format
review-sample.csv	first 500 review notes associated with the dataset under review in comma-separated values format
review-sample.html	first 500 review notes associated with the dataset under review in html format
review-sample.tsv	first 500 review notes associated with the dataset under review in tab-separated values format
review.svg	a review badge generated as part of the dataset review process
zenodo.json	metadata of this review expressed in Zenodo record metadata

Archived Dataset

Note that *data.zip* file in this archive contains the complete, unmodified archived dataset under review.

Biotic Interactions

In this review, biotic interactions (or biotic associations) are modeled as a primary (aka subject, source) organism interacting with an associate (aka object, target) organism. The dataset under review classified the primary/associate organisms with specific taxa. The primary and associate organisms The kind of interaction is documented as an interaction type.

The dataset under review, named `globalbioticinteractions/ecdysis`, has finger-

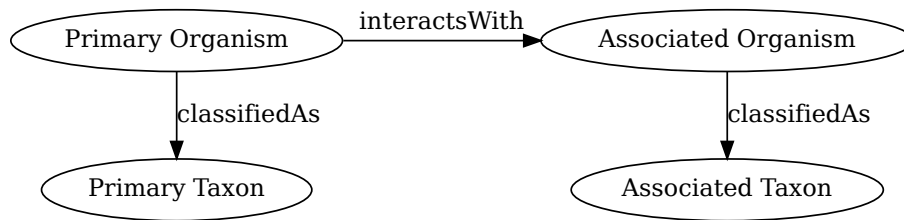


Figure 2: Biotic Interaction Data Model

print hash://md5/1eb9f1b706eef2ac25114f3e382a157b, is 498MiB in size and contains 659,189 interaction with 10 unique types of associations (e.g., interactsWith) between 83,704 primary taxon (e.g., *Augochlora pura*) and 34,716 associated taxon (e.g., *Prunus*).

An exhaustive list of indexed interaction claims can be found in gzipped csv, tsv and parquet archives. To facilitate discovery, a preview of claims available in the gzipped html page at [indexed-interactions.html.gz](https://index-interactions.html.gz) are shown below.

The exhaustive list was used to create the following data summaries below.

Table 3: Sample of Indexed Interaction Claims

sourceTaxonName	interactionTypeName	targetTaxonName	referenceCitation
Aeoloplides tenuipennis tenuipennis	interactsWith	Atriplex torreyii	https://ecdysis.org/collections/individual/index .
Aeoloplides tenuipennis tenuipennis	interactsWith	Atriplex torreyii	https://ecdysis.org/collections/individual/index .
Stinga morrisoni	adjacentTo	blossoms wpl Moorberry	https://ecdysis.org/collections/individual/index .
Atalopedes campestris campestris	hasHost	ex Buklleia	https://ecdysis.org/collections/individual/index .

Table 4: Most Frequently Mentioned Interaction Types (up to 20 most frequent)

interactionTypeName	count
interactsWith	517504
hasHost	91976
adjacentTo	47508

interactionTypeName	count
visits	1493
eats	464
killedBy	143
hostOf	48
visitsFlowersOf	43
hasParasite	9
parasiteOf	1

Table 5: Most Frequently Mentioned Primary Taxa (up to 20 most frequent)

sourceTaxonName	count
Augochlora pura	12834
Ceratophyllus	8310
Lasioglossum	7887
Ceratina calcarata	7248
Apis mellifera	6885
Eucera hamata	6579
Heterodoxus spiniger	5604
Aetheca wagneri	5177
Taenia pisiformis	5040
Andrena	5014
Bombus impatiens	4277
Meringis parkeri	4255
Arthropoda	4241
Lasioglossum pilosum	3191
Bombus vagans	3039
Melissodes bimaculatus	2853
Alaria marcianae	2701
Phthiraptera	2652
Agapostemon virescens	2644

Table 6: Most Frequently Mentioned Associate Taxa (up to 20 most frequent)

targetTaxonName	count
Prunus	31529
none	28861
Malus	23709
host	16661

targetTaxonName	count
Canis latrans (Canidae)	11333
Peromyscus maniculatus	9054
CLSW	8749
N/A	4654
ex. snags	3086
Dipodomys ordii	3035
Larrea tridentata	2593
male	2548
Neotoma lepida	2411
Oak	2261
Agastache Blue Fortune	2233
Eriogonum fasciculatum	2074
Sycamore	1930
Daucus carota	1861
Salix	1816

Table 7: Most Frequent Interactions between Primary and Associate Taxa (up to 20 most frequent)

sourceTaxonName	interactionType	targetTaxonName	count
Ceratophyllus	interactsWith	CLSW	8301
Augochlora pura	interactsWith	Malus	7160
Eucera hamata	interactsWith	Prunus	6279
Augochlora pura	interactsWith	Prunus	4327
Ceratina calcarata	interactsWith	Malus	3463
Aetheca wagneri	hasHost	Peromyscus maniculatus	3455
Ceratina calcarata	interactsWith	Prunus	3335
Heterodoxus spiniger	interactsWith	Canis latrans (Canidae)	2825
Lasioglossum pilosum	interactsWith	Prunus	2642
Taenia pisiformis	interactsWith	host	2345
Heterodoxus spiniger	interactsWith	male	2276
Agapostemon virescens	interactsWith	Prunus	2174
Melissodes bimaculatus	interactsWith	Prunus	2100
Meringis parkeri	hasHost	Dipodomys ordii	1745

sourceTaxonName	interactionType	targetTaxonName	count
Bombus vagans	interactsWith	Malus	1714
Taenia pisiformis	interactsWith	Canis latrans (Canidae)	1672
Apis mellifera	interactsWith	Prunus	1612
Anomiopsyllus amphibolus	interactsWith	Neotoma lepida	1565
Alaria marcionae	interactsWith	Canis latrans (Canidae)	1476

Interaction Networks

The figures below provide a graph view on the dataset under review. The first shows a summary network on the kingdom level, and the second shows how interactions on the family level. It is important to note that both network graphs were first aligned taxonomically using the Catalogue of Life. Please refer to the original (or verbatim) taxonomic names for a more original view on the interaction data.

You can download the indexed dataset under review at [indexed-interactions.csv.gz](#). A tab-separated file can be found at [indexed-interactions.tsv.gz](#).

Learn more about the structure of this download at GloBI website, by opening a GitHub issue, or by sending an email.

Another way to discover the dataset under review is by searching for it on the GloBI website.

Taxonomic Alignment

As part of the review, all names are aligned against various name catalogs (e.g., col, ncbi, discoverlife, gbif, itis, wfo, mdd, tpt, pbdb, and worms). These alignments can help review name usage or aid in selecting of a suitable taxonomic name resource.

Table 8: Sample of Name Alignments

providedName	relationName	resolvedCatalogName	resolvedName
Distichlis spicata	HAS_ACCEPTED_NAME	col	Distichlis spicata
Viii	NONE	col	Viii
Arrenodes minutus	HAS_ACCEPTED_NAME	col	Arrenodes minutus
Asaphococcus agninus	HAS_ACCEPTED_NAME	col	Asaphococcus agninus

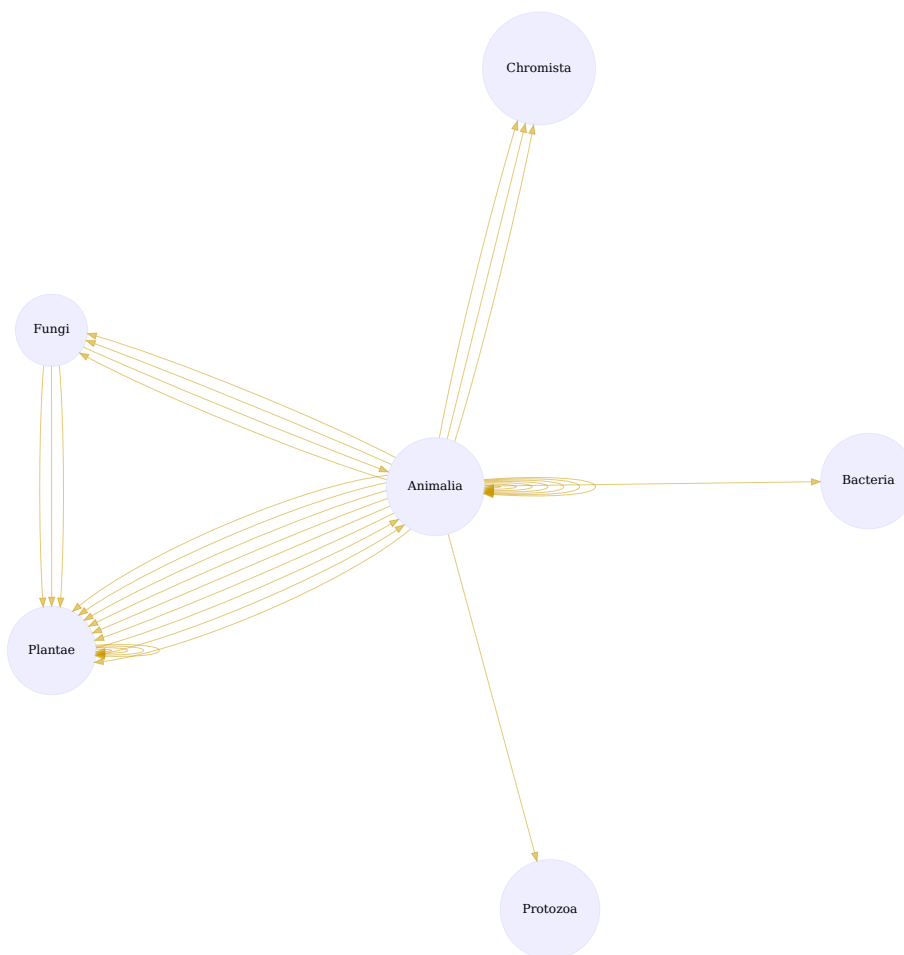


Figure 3: Interactions on taxonomic kingdom rank as interpreted by the Catalogue of Life download svg

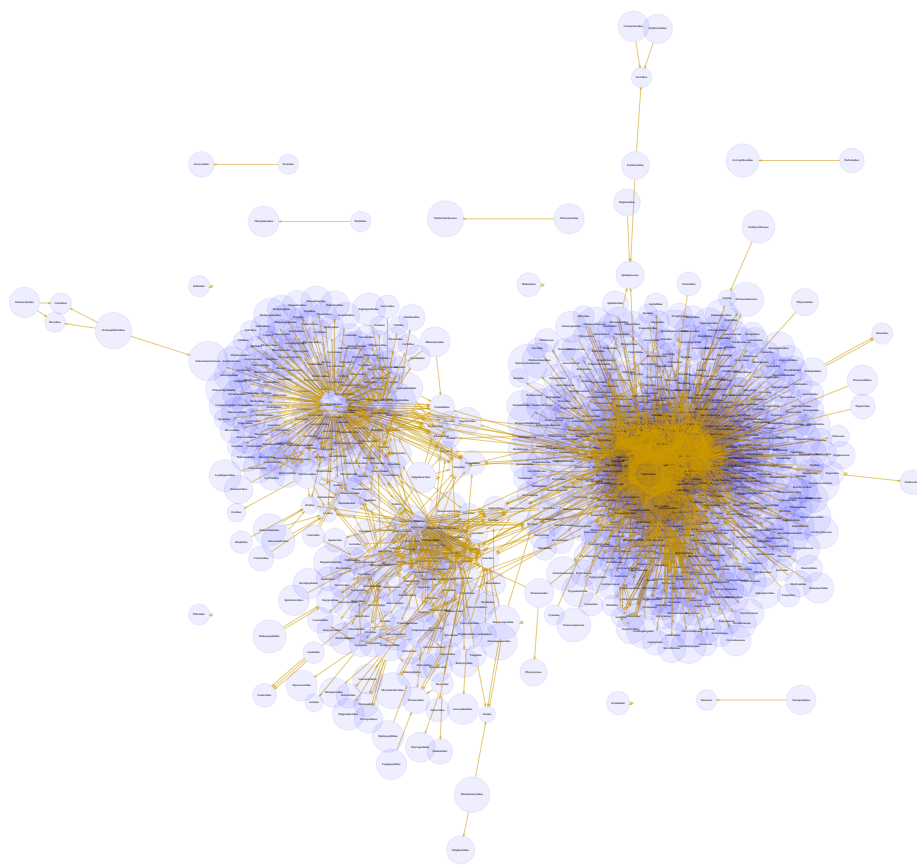


Figure 4: Interactions on the taxonomic family rank as interpreted by the Catalogue of Life. [download svg](#)

Table 9: Distribution of Taxonomic Ranks of Aligned Names by Catalog. Names that were not aligned with a catalog are counted as NAs. So, the total number of unaligned names for a catalog will be listed in their NA row.

resolvedCatalogName	resolvedRank	count
col	NA	82147
col	class	13
col	family	499
col	genus	3653
col	gigaclass	1
col	infraspecific name	6
col	kingdom	3
col	nanorder	2
col	order	48
col	other	1
col	parvorder	1
col	phylum	7
col	section	1
col	species	20017
col	subclass	2
col	subfamily	99
col	subgenus	155
col	suborder	6
col	subspecies	1131
col	subterclass	1
col	subtribe	5
col	superfamily	16
col	superorder	2
col	tribe	42
col	variety	109
discoverlife	NA	105886
discoverlife	species	1637
gbif	NA	79027
gbif	class	15
gbif	family	566
gbif	form	7
gbif	genus	4087
gbif	kingdom	4
gbif	order	47
gbif	phylum	7
gbif	species	22431
gbif	subspecies	1492
gbif	variety	225
itis	NA	88138

resolvedCatalogName	resolvedRank	count
itis	class	13
itis	division	2
itis	family	494
itis	genus	2770
itis	infraorder	3
itis	kingdom	3
itis	order	53
itis	phylum	6
itis	section	1
itis	species	14641
itis	subclass	4
itis	subfamily	120
itis	subgenus	4
itis	subkingdom	2
itis	suborder	26
itis	subphylum	1
itis	subspecies	1091
itis	subtribe	1
itis	superclass	1
itis	superfamily	15
itis	superorder	4
itis	tribe	30
itis	variety	124
mdd	NA	107522
ncbi	NA	87914
ncbi	clade	5
ncbi	class	12
ncbi	cohort	1
ncbi	family	503
ncbi	genus	3439
ncbi	infraorder	5
ncbi	kingdom	2
ncbi	order	50
ncbi	phylum	6
ncbi	section	4
ncbi	series	1
ncbi	species	14882
ncbi	species group	1
ncbi	subclass	4
ncbi	subfamily	144
ncbi	subgenus	64
ncbi	suborder	15
ncbi	subphylum	1
ncbi	subspecies	442

resolvedCatalogName	resolvedRank	count
ncbi	subtribe	2
ncbi	superclass	1
ncbi	superfamily	17
ncbi	superorder	4
ncbi	tribe	33
ncbi	varietas	23
pbdb	NA	103871
pbdb	class	16
pbdb	family	426
pbdb	genus	1390
pbdb	informal	1
pbdb	infraclass	1
pbdb	infraorder	7
pbdb	kingdom	3
pbdb	order	58
pbdb	phylum	6
pbdb	species	1545
pbdb	subclass	4
pbdb	subfamily	130
pbdb	subgenus	1
pbdb	suborder	24
pbdb	subspecies	6
pbdb	subtribe	4
pbdb	superclass	1
pbdb	superfamily	18
pbdb	superorder	2
pbdb	superphylum	1
pbdb	tribe	34
pbdb	unranked clade	14
tpt	NA	102553
tpt	family	30
tpt	genus	405
tpt	order	9
tpt	species	4525
tpt	specific epithet	1
tpt	subspecific epithet	3
wfo	NA	102093
wfo	family	43
wfo	genus	1098
wfo	order	1
wfo	phylum	1
wfo	section	1
wfo	species	4164
wfo	subfamily	1

resolvedCatalogName	resolvedRank	count
wfo	subsection	1
wfo	subspecies	109
wfo	subtribe	1
wfo	tribe	1
wfo	variety	81
worms	NA	102729
worms	class	12
worms	family	350
worms	genus	1464
worms	gigaclass	1
worms	infraorder	3
worms	kingdom	3
worms	order	43
worms	phylum	5
worms	phylum (division)	2
worms	species	2816
worms	subclass	5
worms	subfamily	10
worms	subgenus	2
worms	suborder	16
worms	subphylum	1
worms	subspecies	57
worms	subterclass	1
worms	subtribe	1
worms	superfamily	5
worms	superorder	2
worms	tribe	2
worms	variety	21

Table 10: Name relationship types per catalog. Name relationship type “NONE” means that a name was not recognized by the associated catalog. “SAME_AS” indicates either a “HAS_ACCEPTED_NAME” or “SYNONYM_OF” name relationship type. We recognize that “SYNONYM_OF” encompasses many types of nomenclatural synonymies (ICZN 1999) (e.g., junior synonym, senior synonyms).

resolvedCatalogName	relationName	count
col	HAS_ACCEPTED_NAME	38678
col	NONE	91265
col	SYNONYM_OF	10323
discoverlife	NONE	129235

resolvedCatalogName	relationName	count
discoverlife	HAS_ACCEPTED_NAME	3470
discoverlife	SYNONYM_OF	1040
discoverlife	HOMONYM_OF	148
gbif	HAS_ACCEPTED_NAME	46168
gbif	NONE	87325
gbif	SYNONYM_OF	15047
itis	HAS_ACCEPTED_NAME	31817
itis	NONE	98425
itis	SYNONYM_OF	3194
mdd	NONE	131300
mdd	HAS_ACCEPTED_NAME	1258
mdd	SYNONYM_OF	62
ncbi	NONE	98081
ncbi	SAME_AS	33299
ncbi	SYNONYM_OF	2124
ncbi	COMMON_NAME_OF	82
pbdb	NONE	123162
pbdb	SYNONYM_OF	787
pbdb	HAS_ACCEPTED_NAME	9201
tpt	NONE	125561
tpt	SYNONYM_OF	1682
tpt	HAS_ACCEPTED_NAME	6986
wfo	HAS_ACCEPTED_NAME	10445
wfo	NONE	120776
wfo	HAS_UNCHECKED_NAME	997
wfo	SYNONYM_OF	2529
worms	HAS_ACCEPTED_NAME	10904
worms	NONE	121542
worms	SYNONYM_OF	1442

Table 11: List of Available Name Alignment Reports

catalog name	alignment results
col	associated names alignments report in gzipped html, csv, and tsv)
ncbi	associated names alignments report in gzipped html, csv, and tsv)
discoverlife	associated names alignments report in gzipped html, csv, and tsv)
gbif	associated names alignments report in gzipped html, csv, and tsv)

catalog name	alignment results
itis	associated names alignments report in gzipped html, csv, and tsv)
wfo	associated names alignments report in gzipped html, csv, and tsv)
mdd	associated names alignments report in gzipped html, csv, and tsv)
tpt	associated names alignments report in gzipped html, csv, and tsv)
pbdb	associated names alignments report in gzipped html, csv, and tsv)
worms	associated names alignments report in gzipped html, csv, and tsv)

Additional Reviews

Elton, Nomer, and other tools may have difficulties interpreting existing species interaction datasets. Or, they may misbehave, or otherwise show unexpected behavior. As part of the review process, detailed review notes are kept that document possibly misbehaving, or confused, review bots. An sample of review notes associated with this review can be found below.

reviewDate	reviewCommentType	reviewComment
------------	-------------------	---------------

Table 12: First few lines in the review notes.

reviewDate	reviewCommentType	reviewComment
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2025-06-27T15:37:34Z	note	[] Caused by: org.eol.globi.data.StudyImporterException: failed to read archive [https://ecdysis.org/collections/misc/collprofiles.php?co at org.eol.globi.data.DatasetImporterForDwCA.importStu at org.eol.globi.util.DatasetImportUtil.importDataset(Dat at org.eol.globi.util.DatasetImportUtil.importDataset(Dat at org.eol.globi.util.DatasetImportUtil.importDatasets(Da at org.eol.globi.util.DatasetImportUtil.indexDatasetWithF at org.eol.globi.util.DatasetImportUtil.resolveAndImportD at org.eol.globi.data.DatasetImporterForRSS.importStudy at org.eol.globi.util.DatasetImportUtil.importDataset(Dat at org.globalbioticinteractions.elton.cmd.CmdReview.revie at org.globalbioticinteractions.elton.cmd.CmdReview.revie at org.globalbioticinteractions.elton.cmd.CmdReview.doRu at org.globalbioticinteractions.elton.cmd.CmdDefaultParam at org.globalbioticinteractions.elton.cmd.CmdTabularWrit at pico- cli.CommandLine.executeUserObject(CommandLine.java: at picocli.CommandLine.access1300(<i>CommandLine.java</i>: 145)<i>atpicocli.CommandLineRunLast.executeUserObjec</i> at picocli.CommandLineRunLast.handle(<i>CommandLine</i>. 2352)<i>atpicocli.CommandLineRunLast.handle</i>(<i>Command</i> at picocli.CommandLineAbstractParseResultHandler.ex 2179)<i>atpicocli.CommandLineRunLast.execute</i>(<i>Comm</i> at pico- cli.CommandLine.execute(<i>CommandLine.java</i>:2078) at org.globalbioticinteractions.elton.Elton.run(<i>Elton.java</i>:1 at org.globalbioticinteractions.elton.Elton.main(<i>Elton.java</i> Caused by: java.io.IOException: failed to read [file:/tmp/dwca4790424870104248827tmp.zip]
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reviewDate	reviewCommentType	reviewComment
2025-06-27T15:37:35Z	note	[] Caused by: org.eol.globi.data.StudyImporterException: failed to read archive [https://ecdysis.org/collections/misc/collprofiles.php?co at org.eol.globi.data.DatasetImporterForDwCA.importStu at org.eol.globi.util.DatasetImportUtil.importDataset(Dat at org.eol.globi.util.DatasetImportUtil.importDataset(Dat at org.eol.globi.util.DatasetImportUtil.importDatasets(Da at org.eol.globi.util.DatasetImportUtil.indexDatasetWithF at org.eol.globi.util.DatasetImportUtil.resolveAndImportD at org.eol.globi.data.DatasetImporterForRSS.importStudy at org.eol.globi.util.DatasetImportUtil.importDataset(Dat at org.globalbioticinteractions.elton.cmd.CmdReview.review at org.globalbioticinteractions.elton.cmd.CmdReview.review at org.globalbioticinteractions.elton.cmd.CmdReview.doRu at org.globalbioticinteractions.elton.cmd.CmdDefaultParam at org.globalbioticinteractions.elton.cmd.CmdTabularWrit at pico- cli.CommandLine.executeUserObject(CommandLine.jav at picocli.CommandLine.access1300(<i>CommandLine.java</i>: 145)<i>atpicocli.CommandLineRunLast.executeUserObject</i> at picocli.CommandLineRunLast.handle(<i>CommandLine</i>. 2352)<i>atpicocli.CommandLineRunLast.handle</i>(<i>Command</i> at picocli.CommandLineAbstractParseResultHandler.ex 2179)<i>atpicocli.CommandLineRunLast.execute</i>(<i>Comm</i> at pico- cli.CommandLine.execute(CommandLine.java:2078) at org.globalbioticinteractions.elton.Elton.run(Elton.java:1 at org.globalbioticinteractions.elton.Elton.main(Elton.java Caused by: java.io.IOException: failed to read [file:/tmp/dwca2091397650674758656tmp.zip] at org.globalbioticinteractions.dataset.DwCAUtil.archiveF at

reviewDate	reviewCommentType	reviewComment
2025-06-27T15:37:53Z	note	[] Caused by: org.eol.globi.data.StudyImporterException: failed to read archive [https://ecdysis.org/collections/misc/collprofiles.php?co at org.eol.globi.data.DatasetImporterForDwCA.importStu at org.eol.globi.util.DatasetImportUtil.importDataset(Dat at org.eol.globi.util.DatasetImportUtil.importDataset(Dat at org.eol.globi.util.DatasetImportUtil.importDatasets(Da at org.eol.globi.util.DatasetImportUtil.indexDatasetWithF at org.eol.globi.util.DatasetImportUtil.resolveAndImportD at org.eol.globi.data.DatasetImporterForRSS.importStudy at org.eol.globi.util.DatasetImportUtil.importDataset(Dat at org.globalbioticinteractions.elton.cmd.CmdReview.review at org.globalbioticinteractions.elton.cmd.CmdReview.review at org.globalbioticinteractions.elton.cmd.CmdReview.doRu at org.globalbioticinteractions.elton.cmd.CmdDefaultParam at org.globalbioticinteractions.elton.cmd.CmdTabularWrit at pico- cli.CommandLine.executeUserObject(CommandLine.jav at picocli.CommandLine.access1300(<i>CommandLine.java</i>: 145)<i>atpicocli.CommandLineRunLast.executeUserObject</i> at picocli.CommandLineRunLast.handle(<i>CommandLine</i>. 2352)<i>atpicocli.CommandLineRunLast.handle</i>(Command at picocli.CommandLineAbstractParseResultHandler.ex 2179)<i>atpicocli.CommandLineRunLast.execute</i>(Comm at pico- cli.CommandLine.execute(CommandLine.java:2078) at org.globalbioticinteractions.elton.Elton.run(Elton.java:1 at org.globalbioticinteractions.elton.Elton.main(Elton.java Caused by: java.io.IOException: failed to read [file:/tmp/dwca5112787931735347811tmp.zip] at org.globalbioticinteractions.dataset.DwCAUtil.archiveF at

reviewDate	reviewCommentType	reviewComment
2025-06-27T15:37:53Z	note	[] Caused by: org.eol.globi.data.StudyImporterException: failed to read archive [https://ecdysis.org/collections/misc/collprofiles.php?co at org.eol.globi.data.DatasetImporterForDwCA.importStu at org.eol.globi.util.DatasetImportUtil.importDataset(Dat at org.eol.globi.util.DatasetImportUtil.importDataset(Dat at org.eol.globi.util.DatasetImportUtil.importDatasets(Da at org.eol.globi.util.DatasetImportUtil.indexDatasetWithF at org.eol.globi.util.DatasetImportUtil.resolveAndImportD at org.eol.globi.data.DatasetImporterForRSS.importStudy at org.eol.globi.util.DatasetImportUtil.importDataset(Dat at org.globalbioticinteractions.elton.cmd.CmdReview.review at org.globalbioticinteractions.elton.cmd.CmdReview.review at org.globalbioticinteractions.elton.cmd.CmdReview.doRu at org.globalbioticinteractions.elton.cmd.CmdDefaultParam at org.globalbioticinteractions.elton.cmd.CmdTabularWrit at pico- cli.CommandLine.executeUserObject(CommandLine.jav at picocli.CommandLine.access1300(<i>CommandLine.java</i>: 145)<i>atpicocli.CommandLineRunLast.executeUserObject</i> at picocli.CommandLineRunLast.handle(<i>CommandLine</i>. 2352)<i>atpicocli.CommandLineRunLast.handle</i>(<i>Command</i> at picocli.CommandLineAbstractParseResultHandler.ex 2179)<i>atpicocli.CommandLineRunLast.execute</i>(<i>Comm</i> at pico- cli.CommandLine.execute(CommandLine.java:2078) at org.globalbioticinteractions.elton.Elton.run(Elton.java:1 at org.globalbioticinteractions.elton.Elton.main(Elton.java Caused by: java.io.IOException: failed to read [file:/tmp/dwca1040859268717128705tmp.zip] at org.globalbioticinteractions.dataset.DwCAUtil.archiveF at

In addition, you can find the most frequently occurring notes in the table below.

reviewComment	count
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Table 13: Most frequently occurring review notes, if any.

reviewComment	count
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[] Caused by: org.eol.globi.data.StudyImporterException: failed to read archive [https://ecdysis.org/collections/misc/collprofiles.php?collid=151] at org.eol.globi.data.DatasetImporterForDwCA.importStudy(DatasetImporterForDwCA.java:356) at org.eol.globi.util.DatasetImportUtil.importDataset(DatasetImportUtil.java:71) at org.eol.globi.util.DatasetImportUtil.importDataset(DatasetImportUtil.java:42) at org.eol.globi.util.DatasetImportUtil.importDatasets(DatasetImportUtil.java:141) at org.eol.globi.util.DatasetImportUtil.indexDatasetWithResolvedDependencies(DatasetImportUtil.java:97) at org.eol.globi.util.DatasetImportUtil.resolveAndImportDatasets(DatasetImportUtil.java:88) at org.eol.globi.data.DatasetImporterForRSS.importStudy(DatasetImporterForRSS.java:45) at org.eol.globi.util.DatasetImportUtil.importDataset(DatasetImportUtil.java:71) at org.globalbioticinteractions.elton.cmd.CmdReview.review(CmdReview.java:248) at org.globalbioticinteractions.elton.cmd.CmdReview.reviewLocal(CmdReview.java:201) at org.globalbioticinteractions.elton.cmd.CmdReview.doRun(CmdReview.java:159) at org.globalbioticinteractions.elton.cmd.CmdDefaultParams.run(CmdDefaultParams.java:223) at org.globalbioticinteractions.elton.cmd.CmdTabularWriterParams.run(CmdTabularWriterParams.java:12) at pico- cli.CommandLine.executeUserObject(CommandLine.java:1939) at picocli.CommandLine.access1300(<i>CommandLine.java</i> : 145)<i>atpicocli.CommandLineRunLast.executeUserObjectOfLastSubcommandWithSameParent</i>(CommandLine at picocli.CommandLineRunLast.handle(<i>CommandLine.java</i> : 2352)<i>atpicocli.CommandLineRunLast.handle</i>(CommandLine.java:2314) at picocli.CommandLineAbstractParseResultHandler.execute(<i>CommandLine.java</i> : 2179)<i>atpicocli.CommandLineRunLast.execute</i>(CommandLine.java:2316) at pico- cli.CommandLine.execute(CommandLine.java:2078) at org.globalbioticinteractions.elton.Elton.run(Elton.java:103) at org.globalbioticinteractions.elton.Elton.main(Elton.java:94) Caused by: java.io.IOException: failed to read [file:/tmp/dwca4790424870104248827tmp.zip] at	1
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reviewComment	count
[] Caused by: org.eol.globi.data.StudyImporterException: failed to read archive [https://ecdysis.org/collections/misc/collprofiles.php?collid=153] at org.eol.globi.data.DatasetImporterForDwCA.importStudy(DatasetImporterForDwCA.java:356) at org.eol.globi.util.DatasetImportUtil.importDataset(DatasetImportUtil.java:71) at org.eol.globi.util.DatasetImportUtil.importDataset(DatasetImportUtil.java:42) at org.eol.globi.util.DatasetImportUtil.importDatasets(DatasetImportUtil.java:141) at org.eol.globi.util.DatasetImportUtil.indexDatasetWithResolvedDependencies(DatasetImportUtil.java:97) at org.eol.globi.util.DatasetImportUtil.resolveAndImportDatasets(DatasetImportUtil.java:88) at org.eol.globi.data.DatasetImporterForRSS.importStudy(DatasetImporterForRSS.java:45) at org.eol.globi.util.DatasetImportUtil.importDataset(DatasetImportUtil.java:71) at org.globalbioticinteractions.elton.cmd.CmdReview.review(CmdReview.java:248) at org.globalbioticinteractions.elton.cmd.CmdReview.reviewLocal(CmdReview.java:201) at org.globalbioticinteractions.elton.cmd.CmdReview.doRun(CmdReview.java:159) at org.globalbioticinteractions.elton.cmd.CmdDefaultParams.run(CmdDefaultParams.java:223) at org.globalbioticinteractions.elton.cmd.CmdTabularWriterParams.run(CmdTabularWriterParams.java:12) at pico- cli.CommandLine.executeUserObject(CommandLine.java:1939) at picocli.CommandLine.access1300(<i>CommandLine.java</i> : 145)<i>atpicocli.CommandLineRunLast.executeUserObjectOfLastSubcommandWithSameParent</i>(CommandLine at picocli.CommandLineRunLast.handle(<i>CommandLine.java</i> : 2352)<i>atpicocli.CommandLineRunLast.handle</i>(CommandLine.java:2314) at picocli.CommandLineAbstractParseResultHandler.execute(<i>CommandLine.java</i> : 2179)<i>atpicocli.CommandLineRunLast.execute</i>(CommandLine.java:2316) at pico- cli.CommandLine.execute(CommandLine.java:2078) at org.globalbioticinteractions.elton.Elton.run(Elton.java:103) at org.globalbioticinteractions.elton.Elton38main(Elton.java:94) Caused by: java.io.IOException: failed to read [file:/tmp/dwca2091397650674758656tmp.zip] at org.globalbioticinteractions.dataset.DwCAUtil.archiveFor(DwCAUtil.java:29) at org.eol.globi.data.DatasetImporterForDwCA.importStudy(DatasetImporterForDwCA.java:329)	1

reviewComment	count
[] Caused by: org.eol.globi.data.StudyImporterException: failed to read archive [https://ecdysis.org/collections/misc/collprofiles.php?collid=172] at org.eol.globi.data.DatasetImporterForDwCA.importStudy(DatasetImporterForDwCA.java:356) at org.eol.globi.util.DatasetImportUtil.importDataset(DatasetImportUtil.java:71) at org.eol.globi.util.DatasetImportUtil.importDataset(DatasetImportUtil.java:42) at org.eol.globi.util.DatasetImportUtil.importDatasets(DatasetImportUtil.java:141) at org.eol.globi.util.DatasetImportUtil.indexDatasetWithResolvedDependencies(DatasetImportUtil.java:97) at org.eol.globi.util.DatasetImportUtil.resolveAndImportDatasets(DatasetImportUtil.java:88) at org.eol.globi.data.DatasetImporterForRSS.importStudy(DatasetImporterForRSS.java:45) at org.eol.globi.util.DatasetImportUtil.importDataset(DatasetImportUtil.java:71) at org.globalbioticinteractions.elton.cmd.CmdReview.review(CmdReview.java:248) at org.globalbioticinteractions.elton.cmd.CmdReview.reviewLocal(CmdReview.java:201) at org.globalbioticinteractions.elton.cmd.CmdReview.doRun(CmdReview.java:159) at org.globalbioticinteractions.elton.cmd.CmdDefaultParams.run(CmdDefaultParams.java:223) at org.globalbioticinteractions.elton.cmd.CmdTabularWriterParams.run(CmdTabularWriterParams.java:12) at pico- cli.CommandLine.executeUserObject(CommandLine.java:1939) at picocli.CommandLine.access1300(<i>CommandLine.java</i> : 145)<i>atpicocli.CommandLineRunLast.executeUserObjectOfLastSubcommandWithSameParent</i>(CommandLine at picocli.CommandLineRunLast.handle(<i>CommandLine.java</i> : 2352)<i>atpicocli.CommandLineRunLast.handle</i>(CommandLine.java:2314) at picocli.CommandLineAbstractParseResultHandler.execute(<i>CommandLine.java</i> : 2179)<i>atpicocli.CommandLineRunLast.execute</i>(CommandLine.java:2316) at pico- cli.CommandLine.execute(CommandLine.java:2078) at org.globalbioticinteractions.elton.Elton.run(Elton.java:103) at org.globalbioticinteractions.elton.Elton39main(Elton.java:94) Caused by: java.io.IOException: failed to read [file:/tmp/dwca5112787931735347811tmp.zip] at org.globalbioticinteractions.dataset.DwCAUtil.archiveFor(DwCAUtil.java:29) at org.eol.globi.data.DatasetImporterForDwCA.importStudy(DatasetImporterForDwCA.java:329)	1

reviewComment	count
[] Caused by: org.eol.globi.data.StudyImporterException: failed to read archive [https://ecdysis.org/collections/misc/collprofiles.php?collid=178] at org.eol.globi.data.DatasetImporterForDwCA.importStudy(DatasetImporterForDwCA.java:356) at org.eol.globi.util.DatasetImportUtil.importDataset(DatasetImportUtil.java:71) at org.eol.globi.util.DatasetImportUtil.importDataset(DatasetImportUtil.java:42) at org.eol.globi.util.DatasetImportUtil.importDatasets(DatasetImportUtil.java:141) at org.eol.globi.util.DatasetImportUtil.indexDatasetWithResolvedDependencies(DatasetImportUtil.java:97) at org.eol.globi.util.DatasetImportUtil.resolveAndImportDatasets(DatasetImportUtil.java:88) at org.eol.globi.data.DatasetImporterForRSS.importStudy(DatasetImporterForRSS.java:45) at org.eol.globi.util.DatasetImportUtil.importDataset(DatasetImportUtil.java:71) at org.globalbioticinteractions.elton.cmd.CmdReview.review(CmdReview.java:248) at org.globalbioticinteractions.elton.cmd.CmdReview.reviewLocal(CmdReview.java:201) at org.globalbioticinteractions.elton.cmd.CmdReview.doRun(CmdReview.java:159) at org.globalbioticinteractions.elton.cmd.CmdDefaultParams.run(CmdDefaultParams.java:223) at org.globalbioticinteractions.elton.cmd.CmdTabularWriterParams.run(CmdTabularWriterParams.java:12) at pico- cli.CommandLine.executeUserObject(CommandLine.java:1939) at picocli.CommandLine.access1300(<i>CommandLine.java</i> : 145)<i>atpicocli.CommandLineRunLast.executeUserObjectOfLastSubcommandWithSameParent</i>(CommandLine at picocli.CommandLineRunLast.handle(<i>CommandLine.java</i> : 2352)<i>atpicocli.CommandLineRunLast.handle</i>(CommandLine.java:2314) at picocli.CommandLineAbstractParseResultHandler.execute(<i>CommandLine.java</i> : 2179)<i>atpicocli.CommandLineRunLast.execute</i>(CommandLine.java:2316) at pico- cli.CommandLine.execute(CommandLine.java:2078) at org.globalbioticinteractions.elton.Elton.run(Elton.java:103) at org.globalbioticinteractions.elton.Elton4main(Elton.java:94) Caused by: java.io.IOException: failed to read [file:/tmp/dwca1040859268717128705tmp.zip] at org.globalbioticinteractions.dataset.DwCAUtil.archiveFor(DwCAUtil.java:29) at org.eol.globi.data.DatasetImporterForDwCA.importStudy(DatasetImporterForDwCA.java:329)	1

For additional information on review notes, please have a look at the first 500 Review Notes in html format or the download full gzipped csv or tsv archives.

GloBI Review Badge

As part of the review, a review badge is generated. This review badge can be included in webpages to indicate the review status of the dataset under review.



Figure 5: Picture of a GloBI Review Badge ³

Note that if the badge is green, no review notes were generated. If the badge is yellow, the review bots may need some help with interpreting the species interaction data.

GloBI Index Badge

If the dataset under review has been registered with GloBI, and has been successfully indexed by GloBI, the GloBI Index Status Badge will turn green. This means that the dataset under review was indexed by GloBI and is available through GloBI services and derived data products.



Figure 6: Picture of a GloBI Index Badge ⁴

If you'd like to keep track of reviews or index status of the dataset under review, please visit GloBI's dataset index ⁵ for badge examples.

Discussion

This review and archive provides a means of creating citable versions of datasets that change frequently. This may be useful for dataset managers, including natural history collection data managers, as a backup archive of a shared Darwin Core archive. It also serves as a means of creating a trackable citation for the dataset in an automated way, while also including some information about the contents of the dataset.

This review aims to provide a perspective on the dataset to aid in understanding of species interaction claims discovered. However, it is important to note that

³Up-to-date status of the GloBI Review Badge can be retrieved from the GloBI Review Depot

⁴Up-to-date status of the GloBI Index Badge can be retrieved from GloBI's API

⁵At time of writing (2025-06-27) the version of the GloBI dataset index was available at <https://globalbioticinteractions.org/datasets>

this review does *not* assess the quality of the dataset. Instead, it serves as an indication of the open-ness⁶ and FAIRness (Wilkinson et al. 2016; Trekels et al. 2023) of the dataset: to perform this review, the data was likely openly available, **F**indable, **A**ccessible, **I**nteroperable and **R**eusable. The current Open-FAIR assessment is qualitative, and a more quantitative approach can be implemented with specified measurement units.

This report also showcases the reuse of machine-actionable (meta)data, something highly recommended by the FAIR Data Principles (Wilkinson et al. 2016). Making (meta)data machine-actionable enables more precise processing by computers, enabling even naive review bots like Nomer and Elton to interpret the data effectively. This capability is crucial for not just automating the generation of reports, but also for facilitating seamless data exchanges, promoting interoperability.

Acknowledgements

We thank the many humans that created us and those who created and maintained the data, software and other intellectual resources that were used for producing this review. In addition, we are grateful for the natural resources providing the basis for these human and bot activities. Also, thanks to <https://github.com/zygoballus> for helping improve the layout of the review tables.

Author contributions

Nomer was responsible for name alignments. Elton carried out dataset extraction, and generated the review notes. Preston tracked, versioned, and packaged, the dataset under review.

References

- Elliott, Michael, Jorrit Poelen, Icaro Alzuru, Emilio Berti, and partha04patel. 2025. “Bio-Guoda/Preston: 0.10.5.” Zenodo. <https://doi.org/10.5281/zenodo.14662206>.
- ICZN. 1999. “International Code of Zoological Nomenclature.” The International Trust for Zoological Nomenclature, London, UK. <https://www.iczn.org/the-code/the-code-online/>.
- Kuhn, Tobias, and Michel Dumontier. 2014. “Trusty URIs: Verifiable, Immutable, and Permanent Digital Artifacts for Linked Data.” In *The Semantic Web: Trends and Challenges*, edited by Valentina Presutti, Claudia d’Amato,

⁶According to <http://opendefinition.org/>: “Open data is data that can be freely used, reused and redistributed by anyone - subject only, at most, to the requirement to attribute and sharealike.”

- Fabien Gandon, Mathieu d’Aquin, Steffen Staab, and Anna Tordai, 395–410. Cham: Springer International Publishing.
- Kuhn, Tobias, Jorrit Poelen, and Katrin Leinweber. 2025. “Globalbioticinteractions/Elton: 0.15.1.” Zenodo. <https://doi.org/10.5281/zenodo.14927734>.
- Poelen, Jorrit H. (ed.). 2024. “Nomer Corpus of Taxonomic Resources Hash://Sha256/ B60c0d25a16ae77b24305782017b1a270b79b5d1746f832650 F2027ba536e276 Hash://Md5/17f1363a277ee0e4ecaf1b91c665e47e.” Zenodo. <https://doi.org/10.5281/zenodo.12695629>.
- Poelen, Jorrit H., James D. Simons, and Chris J. Mungall. 2014. “Global Biotic Interactions: An Open Infrastructure to Share and Analyze Species-Interaction Datasets.” *Ecological Informatics* 24 (November): 148–59. <https://doi.org/10.1016/j.ecoinf.2014.08.005>.
- Poelen, Jorrit, Katja Seltmann, and Daniel Mietchen. 2024. “Globalbioticinteractions/Globinizer: 0.4.0.” Zenodo. <https://doi.org/10.5281/zenodo.10647565>.
- Salim, José Augusto, and Jorrit Poelen. 2025. “Globalbioticinteractions/Nomer: 0.5.15.” Zenodo. <https://doi.org/10.5281/zenodo.14893840>.
- Trekels, Maarten, Debora Pignatari Drucker, José Augusto Salim, Jeff Ollerton, Jorrit Poelen, Filipi Miranda Soares, Max Rünzel, Muo Kasina, Quentin Groom, and Mariano Devoto. 2023. “WorldFAIR Project (D10.1) Agriculture-related pollinator data standards use cases report.” Zenodo. <https://doi.org/10.5281/zenodo.8176978>.
- Wilkinson, Mark D., Michel Dumontier, IJsbrand Jan Aalbersberg, Gabrielle Appleton, Myles Axton, Arie Baak, Niklas Blomberg, et al. 2016. “The FAIR Guiding Principles for Scientific Data Management and Stewardship.” *Scientific Data* 3 (1). <https://doi.org/10.1038/sdata.2016.18>.