Versioned Archive and Review of Biotic Interactions and Taxon Names Found within millerse/Lara-C.-2006 hash://md5/0cfd1034eaced55900f638bd93983c59

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https://github.com/millerse/Lara-C.-2006/issues

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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 millerse/Lara-C.-2006, has fingerprint hash://md5/0cfd1034eaced55900f638bd93983c59, is 28.9KiB in size and contains 41 interactions with 1 unique type of association (e.g., visitsFlowersOf) between 8 primary taxa (e.g., Hylocharis leucotis) and 8 associated taxa (e.g., Penstemon roseus). This report includes detailed summaries of interaction data, a taxonomic review from multiple catalogs, and an archived version of the dataset from which the reviews are derived.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 :

> Sarah E Miller. 5/24/2016. Text gathered from Lara, C. (2006). Temporal dynamics of flower use by hummingbirds in a highland temperate forest in Mexico. Ecoscience, 13(1), 23-29. https://zenodo.org/records/258208/files/millerse/Lara-C.-2006-v1.0.zip 2026-01-24T10:55:28.626Z hash://md5/0cfd1034eaced55900f638bd93983c59

For additional metadata related to this dataset, please visit https://github.com/millerse/Lara-C.-2006 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	0.11.1
elton	0.16.1
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
mapserver	7.6.4

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

```
# get versioned copy of the dataset (size approx. 28.9KiB) under review
elton pull millerse/Lara-C.-2006

# generate review notes
elton review millerse/Lara-C.-2006\
 > review.tsv

# export indexed interaction records
elton interactions millerse/Lara-C.-2006\
 > interactions.tsv

# export names and align them with the Catalogue of Life using Nomer
elton names millerse/Lara-C.-2006\
 | nomer append col\
 > name-alignment.tsv
```

or visually, in a process diagram.

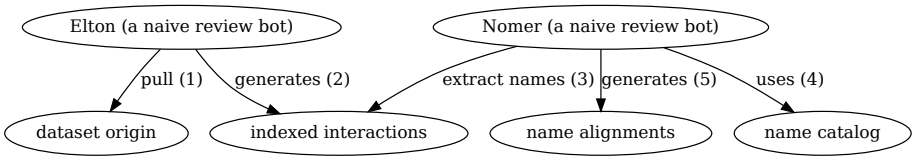


Figure 1: Review Process Overview

[1]Note that you have to first get the data (e.g., via elton pull millerse/Lara-C.-2006) before being able to generate reviews (e.g., elton review millerse/Lara-C.-2006), extract interaction claims (e.g., elton interactions millerse/Lara-C.-2006), or list taxonomic names (e.g., elton names millerse/Lara-C.-2006)

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

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
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)

[2]Disclaimer: 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-kingdom-col-kingdom.svg	network diagram showing the taxon kingdom to taxon kingom 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.png	species interaction claims indexed from the dataset under review plotted on a map
indexed-interactions.gpkg	species interaction claims indexed from the dataset under review in GeoPackage format
indexed-interactions-h3.gpkg	geospatially clustered h3 species interaction claims indexed from the dataset under review in GeoPackage 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

filename	description
indexed-names.tsv.gz	taxonomic names found in the dataset under review in gzipped tab-separated values format
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

filename	description
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
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

filename	description
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
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

filename	description
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
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

filename	description
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
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

filename	description
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
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

filename	description
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
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

filename	description
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)
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.

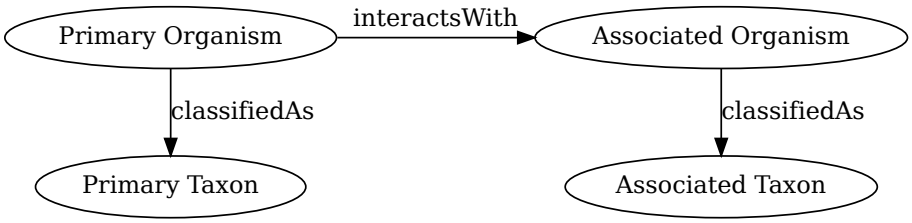


Figure 2: Biotic Interaction Data Model

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 millerse/Lara-C.-2006, has fingerprint hash://md5/0cfd1034eaced55900f638bd93983c59, is 28.9KiB in size and contains 41 interactions with 1 unique type of association (e.g., visitsFlowersOf) between 8 primary taxa (e.g., Hylocharis leucotis) and 8 associated taxa (e.g., Penstemon roseus).

An exhaustive list of indexed interaction claims can be found in gzipped csv, tsv, geopackage and parquet archives. To facilitate discovery, a preview of claims available in the gzipped html page at indexed-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
Hylocharis leucotis	visitsFlowersOf	Penstemon roseus	Lara, C. (2006). Temporal dynamics of flower use by hummingbirds in a highland temperate forest in Mexico. Ecoscience, 13(1), 23-29.

sourceTaxonName	interactionTypeName	targetTaxonName	referenceCitation
Hylocharis leucotis	visitsFlowersOf	Penstemon gentianoides	Lara, C. (2006). Temporal dynamics of flower use by hummingbirds in a highland temperate forest in Mexico. Ecoscience, 13(1), 23-29.
Hylocharis leucotis	visitsFlowersOf	Salvia elegans	Lara, C. (2006). Temporal dynamics of flower use by hummingbirds in a highland temperate forest in Mexico. Ecoscience, 13(1), 23-29.
Hylocharis leucotis	visitsFlowersOf	Salvia mocinoi	Lara, C. (2006). Temporal dynamics of flower use by hummingbirds in a highland temperate forest in Mexico. Ecoscience, 13(1), 23-29.

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

interactionTypeName	count
visitsFlowersOf	41

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

sourceTaxonName	count
Hylocharis leucotis	8
Eugenes fulgens	8
Archilochus colubris	5
Colibri thalassinus	4
Lampornis clemenciae	4
Selasphorus rufus	4
Selasphorus platycercurs	4
Selasphorus sasin	4

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

targetTaxonName	count
Penstemon roseus	8
Salvia elegans	8
Castilleja tenuiflora	6
Penstemon gentianoides	5
Bouvardia ternifiolia	5
Prunella vulgaris	5
Salvia mocinoi	2
Castilleja scorzonerifolia	2

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

sourceTaxonName	interactionTypeName	targetTaxonName	count
Hylocharis leucotis	visitsFlowersOf	Penstemon roseus	1
Hylocharis leucotis	visitsFlowersOf	Penstemon gentianoides	1
Hylocharis leucotis	visitsFlowersOf	Salvia elegans	1
Hylocharis leucotis	visitsFlowersOf	Salvia mocinoi	1
Hylocharis leucotis	visitsFlowersOf	Castilleja tenuiflora	1

sourceTaxonName	interactionTypeName	targetTaxonName	count
Hylocharis leucotis	visitsFlowersOf	Castilleja scorzonerifolia	1
Hylocharis leucotis	visitsFlowersOf	Bouvardia ternifiolia	1
Hylocharis leucotis	visitsFlowersOf	Prunella vulgaris	1
Eugenes fulgens	visitsFlowersOf	Penstemon roseus	1
Eugenes fulgens	visitsFlowersOf	Penstemon gentianoides	1
Eugenes fulgens	visitsFlowersOf	Salvia elegans	1
Eugenes fulgens	visitsFlowersOf	Salvia mocinoi	1
Eugenes fulgens	visitsFlowersOf	Castilleja tenuiflora	1
Eugenes fulgens	visitsFlowersOf	Castilleja scorzonerifolia	1
Eugenes fulgens	visitsFlowersOf	Bouvardia ternifiolia	1
Eugenes fulgens	visitsFlowersOf	Prunella vulgaris	1
Archilochus colubris	visitsFlowersOf	Penstemon roseus	1
Archilochus colubris	visitsFlowersOf	Penstemon gentianoides	1
Archilochus colubris	visitsFlowersOf	Salvia elegans	1

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

Geospatial Distribution

If geospatial information was extracted from the dataset under review, the map below will show their distribution.

Associated data can be found in the geopackage files at indexed-interactions.gpkg for point data and indexed-interactions-h3.gpkg for data clustered in



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

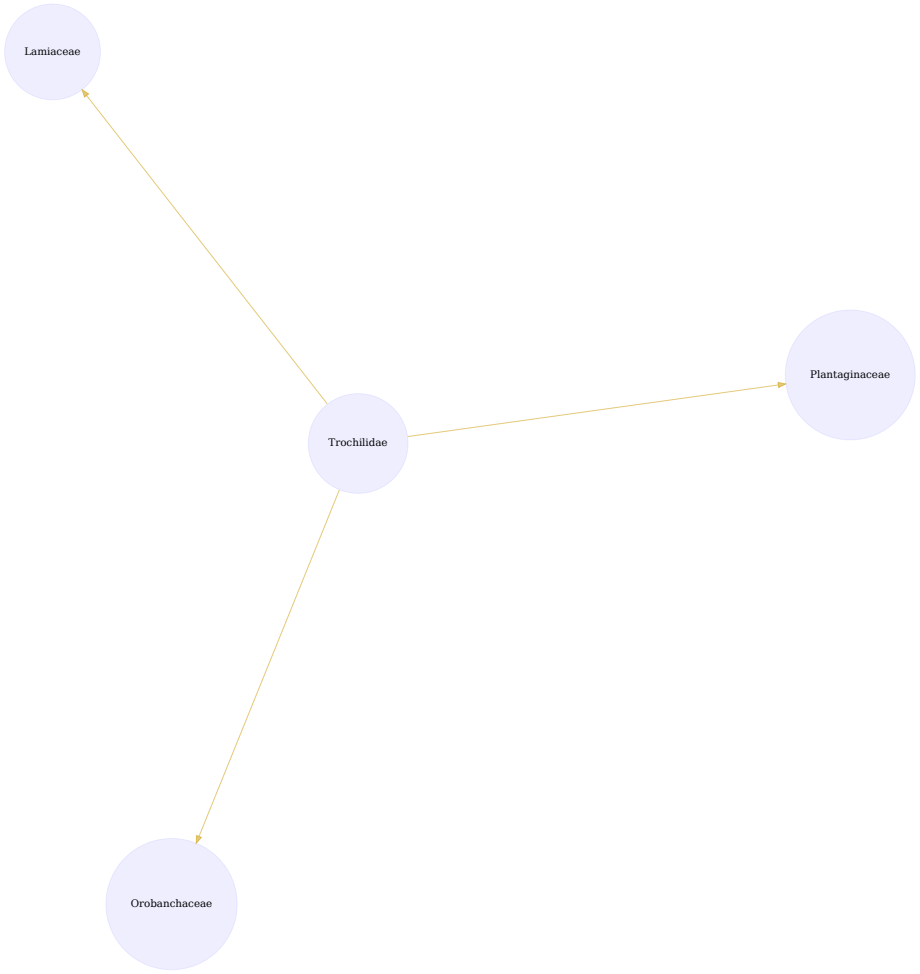


Figure 4: Interactions on the taxonomic family rank as interpreted by the Catalogue of Life. download svg



Figure 5: Hexagonal grid cells indicate that interactions claims are available for selected geospatial area: light yellow means relatively fewer claims, dark green relatively more claims.

geospatial h3 hexagonals.

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
Bouvardia ternifiolia	NONE	col	Bouvardia ternifiolia
Penstemon roseus	HAS_ACCEPTED_NAME	col	Penstemon roseus
Penstemon gentianoides	HAS_ACCEPTED_NAME	col	Penstemon gentianoides
Penstemon gentianoides	SYNONYM_OF	col	Penstemon hartwegii

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	2
col	species	14
discoverlife	NA	16
gbif	NA	2
gbif	species	14
itis	NA	5
itis	species	11
mdd	NA	16
ncbi	NA	2
ncbi	species	14
pbdb	NA	16
tpt	NA	9
tpt	species	7
wfo	NA	9
wfo	species	7
worms	NA	14
worms	species	2

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	NONE	2
col	HAS_ACCEPTED_NAME	13
col	SYNONYM_OF	2
discoverlife	NONE	16
gbif	NONE	2
gbif	HAS_ACCEPTED_NAME	14
gbif	SYNONYM_OF	2
itis	NONE	5
itis	HAS_ACCEPTED_NAME	10
itis	SYNONYM_OF	1

resolvedCatalogName	relationName	count
mdd	NONE	16
ncbi	NONE	2
ncbi	SAME_AS	14
pbdb	NONE	16
tpt	NONE	9
tpt	HAS_ACCEPTED_NAME	7
wfo	NONE	9
wfo	HAS_ACCEPTED_NAME	7
worms	NONE	14
worms	HAS_ACCEPTED_NAME	1
worms	SYNONYM_OF	1

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)
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.

Table 12: First few lines in the review notes.

reviewDate	reviewCommentType	reviewComment
2026-01-28T03:37:33Z	note	found malformed doi [doi:http://dx.doi.org/10.2980/1195-6860(2006)13[23:TDOFUB]2.0.CO;2]
2026-01-28T03:37:33Z	note	found malformed doi [doi:http://dx.doi.org/10.2980/1195-6860(2006)13[23:TDOFUB]2.0.CO;2]
2026-01-28T03:37:33Z	note	found malformed doi [doi:http://dx.doi.org/10.2980/1195-6860(2006)13[23:TDOFUB]2.0.CO;2]
2026-01-28T03:37:33Z	note	found malformed doi [doi:http://dx.doi.org/10.2980/1195-6860(2006)13[23:TDOFUB]2.0.CO;2]

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

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

reviewComment	count
found malformed doi [doi:http://dx.doi.org/10.2980/1195-6860(2006)13[23:TDOFUB]2.0.CO;2]	41

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 6: Picture of a GloBI Review Badge [3]

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

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 succesfully 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 7: 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 this review does *not* assess the quality of the dataset. Instead, it serves as an indication of the open-ness[6] 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 procesing by computers, enabling even naive review bots like Nomer and Elton to interpret the

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

[5] At time of writing (2026-01-28) the version of the GloBI dataset index was available at https://globalbioticinteractions.org/datasets

[6] According 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."

data effectively. This capability is crucial for not just automating the generation of reports, but also for facilitating seamless data exchanges, promoting interoperability.

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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.

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