A Review of Biotic Interactions and Taxon Names Found in globalbioticinteractions/wis-ih-wirc hash://md5/420521d44c7622582cde4eff8a1f0997

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https://globalbioticinteractions.org/contribute
https://github.com/globalbioticinteractions/wis-ih-wirc/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 globalbioticinteractions/wis-ih-wirc, has fingerprint hash://md5/420521d44c7622582cde4eff8a1f0997, is 17.2MiB in size and contains 25,115 interaction with 6 unique types of associations (e.g., hasHost) between 1,898 primary taxon (e.g., Cediopsylla simplex) and 2,403 associated taxon (e.g., ex. rotten banana-brown sugar BAIT). This report includes detailed summaries of interaction data, a taxonomic review from multiple catalogs, and an archived version of the dataset from which the reviews are derived.

Contents

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:

> WIRC / University of Wisconsin Madison WIS-IH / Wisconsin Insect Research Collection https://github.com/globalbioticinteractions/wis-ih-wirc/archive/b486a8c34b00ac686637d6dc11ecf86087e2f58c.zip 2025-04-26T07:05:09.867Z hash://md5/420521d44c7622582cde4eff8a1f0997

For additional metadata related to this dataset, please visit https://github.com/globalbioticinteractions/wis-ih-wirc 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	0.15.9
nomer	0.5.13
globinizer	0.4.0
mlr	6.0.0
jq	1.6
yq	4.25.3
pandoc	3.1.6.1

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

```
# get versioned copy of the dataset (size approx. 17.2MiB) under review
elton pull globalbioticinteractions/wis-ih-wirc

# generate review notes
elton review globalbioticinteractions/wis-ih-wirc\
 > review.tsv

# export indexed interaction records
elton interactions globalbioticinteractions/wis-ih-wirc\
 > interactions.tsv

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

or visually, in a process diagram.

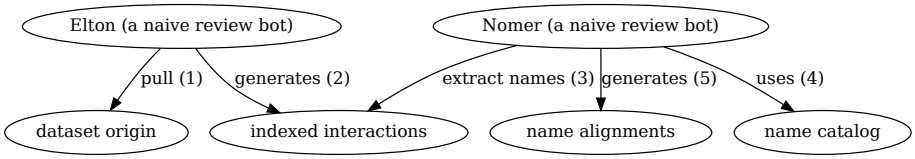

Figure 1: Review Process Overview

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

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

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 Preston (Elliott et al. 2025) 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-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
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

filename	description
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-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
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-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

filename	description
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-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-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-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-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

filename	description
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-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
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-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

filename	description
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-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-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

filename	description
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.

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

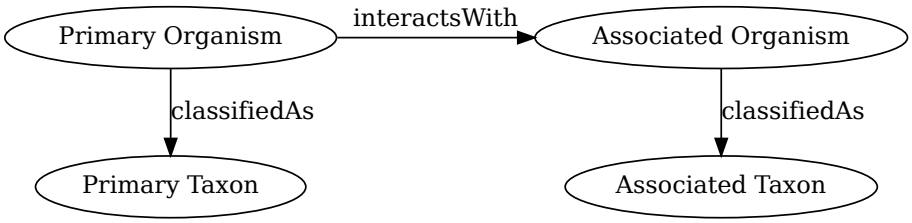

Figure 2: Biotic Interaction Data Model

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/wis-ih-wirc, has fingerprint hash://md5/420521d44c7622582cde4eff8a1f0997, is 17.2MiB in size and contains 25,115 interaction with 6 unique types of associations (e.g., hasHost) between 1,898 primary taxon (e.g., Cediopsylla simplex) and 2,403 associated taxon (e.g., ex. rotten banana-brown sugar BAIT).

An exhaustive list of indexed interaction claims can be found in gzipped csv and tsv 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
Acmaeodera pulchella	hasHost	Flowers of Achillea millefolium	https://scan-bugs.org:443/portal/collections/individual/index.
Acmaeodera pulchella	hasHost	Flowers of Achillea millefolium	https://scan-bugs.org:443/portal/collections/individual/index.
Acmaeodera pulchella	hasHost	Flowers of Achillea millefolium	https://scan-bugs.org:443/portal/collections/individual/index.
Acmaeodera pulchella	hasHost	Flowers of Achillea millefolium	https://scan-bugs.org:443/portal/collections/individual/index.

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

interactionTypeName	count
hasHost	16049
adjacentTo	5487
interactsWith	3440
eats	136
visits	2
ectoparasiteOf	1

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

sourceTaxonName	count
Cediopsylla simplex	1895
Haemaphysalis leporispalustris	669
Psocodea	348
Lithophane hemina	301
Mythimna unipuncta	298
Choristoneura rosaceana	262
Odontopsyllus multispinosus	251
Lithophane innominata	242
Eupsilia morrisoni	240
Ceratopogonidae	222
Sunira bicolorago	215
Lithophane grotei	200
Lithophane pexata	199
Peridroma saucia	195
Eupsilia schweitzeri	187
Agrotis ipsilon	180
Eupsilia tristigmata	178
Lithophane antennata	170
Phyllonorycter	166

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

targetTaxonName	count
ex. rotten banana-brown sugar BAIT	7780
Mearns Cottontail	2313

targetTaxonName	count
ex. shrubs/trees BAITED with rotten banana-brown sugar	913
ex. house lights	625
ex. BAIT TRAP set with rotten bananas	421
ex. building lights	303
cacao	231
Mearns Cottontail Male	224
Mearns Cottontail Female	205
ex. trees BAITED with rotten banana-brown sugar	187
Pinus banksiana	130
: P. leucopis	96
bark of dead Quercus alba	90
ex. cabin yellow lights	88
Quercus velutina	83
Quercus ellipsoidalis	83
Quercus agrifolia	82
bark of dead oak	82
ex. shrubs BAITED with rotten banana-brown sugar	81

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

sourceTaxonName	interactionTypeName	targetTaxonName	count
Cediopsylla simplex	adjacentTo	Mearns Cottontail	1472
Haemaphysalis leporispalustris	adjacentTo	Mearns Cottontail	628
Lithophane hemina	hasHost	ex. rotten banana-brown sugar BAIT	234
Mythimna unipuncta	hasHost	ex. rotten banana-brown sugar BAIT	201
Cediopsylla simplex	adjacentTo	Mearns Cottontail Female	168
Lithophane innominata	hasHost	ex. rotten banana-brown sugar BAIT	160
Ceratopogonidae	adjacentTo	cacao	156
Cediopsylla simplex	adjacentTo	Mearns Cottontail Male	152

sourceTaxonName	interactionTypeName	targetTaxonName	count
Eupsilia schweitzeri	hasHost	ex. rotten banana-brown sugar BAIT	148
Peridroma saucia	hasHost	ex. rotten banana-brown sugar BAIT	147
Sunira bicolorago	hasHost	ex. rotten banana-brown sugar BAIT	145
Agrotis ipsilon	hasHost	ex. rotten banana-brown sugar BAIT	142
Eupsilia morrisoni	hasHost	ex. rotten banana-brown sugar BAIT	136
Lithophane antennata	hasHost	ex. rotten banana-brown sugar BAIT	114
Lithophane lanei	hasHost	ex. rotten banana-brown sugar BAIT	113
Lithophane grotei	hasHost	ex. rotten banana-brown sugar BAIT	108
Odontopsyllus multispinosus	adjacentTo	Mearns Cottontail	104
Lithophane semiusta	hasHost	ex. rotten banana-brown sugar BAIT	102
Lithophane bethunei	hasHost	ex. rotten banana-brown sugar BAIT	100

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

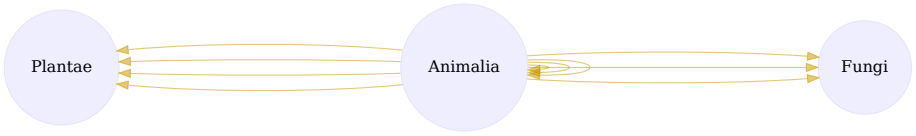

Figure 3: Interactions on taxonomic kingdom rank as interpreted by the Catalogue of Life download svg

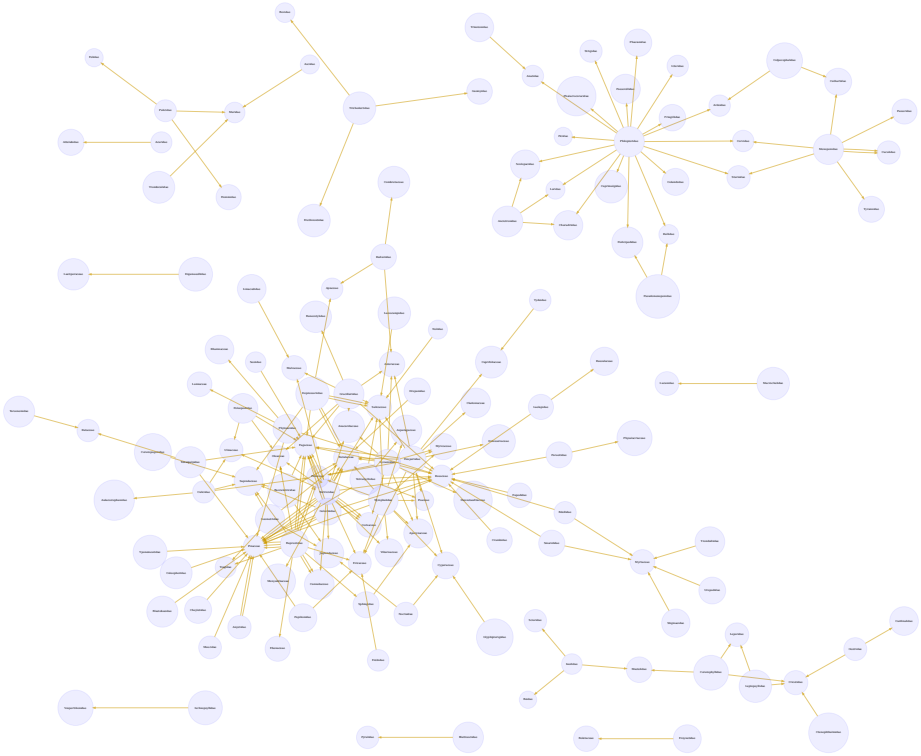

Figure 4: Interactions on the taxonomic family rank as interpreted by the Catalogue of Life. download svg

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
Blattisocius dentriticus	HAS_ACCEPTED_NAME	col	Blattisocius dentriticus
Brevipalpus californicus	HAS_ACCEPTED_NAME	col	Brevipalpus californicus
Brevipalpus obovatus	HAS_ACCEPTED_NAME	col	Brevipalpus obovatus
Brevipalpus ogmus	HAS_ACCEPTED_NAME	col	Brevipalpus ogmus

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	1498
col	family	68
col	genus	224
col	infraorder	1
col	kingdom	2
col	order	6
col	species	1718
col	subclass	1
col	subfamily	5
col	subgenus	13
col	subspecies	22
col	superorder	1
col	tribe	1

resolvedCatalogName	resolvedRank	count
col	variety	6
discoverlife	NA	3536
gbif	NA	1315
gbif	class	1
gbif	family	70
gbif	genus	263
gbif	kingdom	3
gbif	order	5
gbif	species	1859
gbif	subspecies	39
gbif	variety	11
itis	NA	2027
itis	family	67
itis	genus	143
itis	infraorder	1
itis	kingdom	2
itis	order	7
itis	phylum	1
itis	species	1265
itis	subclass	1
itis	subfamily	5
itis	subspecies	12
itis	superfamily	1
itis	superorder	1
itis	tribe	1
itis	variety	4
mdd	NA	3535
ncbi	NA	1588
ncbi	class	1
ncbi	family	67
ncbi	genus	220
ncbi	infraorder	1
ncbi	kingdom	1
ncbi	order	4
ncbi	species	1634
ncbi	subfamily	4
ncbi	subgenus	7
ncbi	subspecies	12
ncbi	superfamily	1
ncbi	superorder	2
ncbi	tribe	1
pbdb	NA	3270
pbdb	class	2
pbdb	family	42

resolvedCatalogName	resolvedRank	count
pbdb	genus	100
pbdb	informal	1
pbdb	kingdom	2
pbdb	order	7
pbdb	species	105
pbdb	subfamily	4
pbdb	suborder	3
pbdb	superfamily	1
pbdb	superorder	1
pbdb	tribe	1
pbdb	unranked clade	3
tpt	NA	3087
tpt	family	12
tpt	genus	60
tpt	order	1
tpt	species	377
tpt	subspecificepithet	2
wfo	NA	3297
wfo	genus	64
wfo	phylum	1
wfo	species	169
wfo	subsection	1
wfo	subspecies	6
wfo	variety	2
worms	NA	3180
worms	class	1
worms	family	50
worms	genus	104
worms	infraorder	1
worms	kingdom	2
worms	order	5
worms	species	188
worms	suborder	1
worms	subspecies	2
worms	superfamily	1
worms	superorder	1
worms	tribe	1
worms	variety	1

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	2207
col	SYNONYM_OF	430
col	NONE	2003
discoverlife	NONE	4301
gbif	HAS_ACCEPTED_NAME	2603
gbif	SYNONYM_OF	714
gbif	NONE	1813
itis	HAS_ACCEPTED_NAME	1683
itis	NONE	2539
itis	SYNONYM_OF	79
mdd	NONE	4246
mdd	HAS_ACCEPTED_NAME	34
mdd	SYNONYM_OF	1
ncbi	SAME_AS	2078
ncbi	NONE	2122
ncbi	SYNONYM_OF	111
ncbi	COMMON_NAME_OF	4
pbdb	NONE	3876
pbdb	HAS_ACCEPTED_NAME	399
pbdb	SYNONYM_OF	26
tpt	HAS_ACCEPTED_NAME	475
tpt	NONE	3808
tpt	SYNONYM_OF	233
wfo	NONE	3840
wfo	HAS_ACCEPTED_NAME	409
wfo	SYNONYM_OF	114
wfo	HAS_UNCHECKED_NAME	69
worms	NONE	3866
worms	HAS_ACCEPTED_NAME	409
worms	SYNONYM_OF	47

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
2025-04-30T20:23:23Z	note	found unsupported interaction type with name: [Taken from flowers of]
2025-04-30T20:23:23Z	note	found unsupported interaction type with name: [Taken from flowers of]

reviewDate	reviewCommentType	reviewComment
2025-04-30T20:23:23Z	note	found unsupported interaction type with name: [Taken from flowers of]
2025-04-30T20:23:23Z	note	found unsupported interaction type with name: [Coll.]

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 unsupported interaction type with name: [8]	5627
found unsupported interaction type with name: [9]	5276
found unsupported interaction type with name: [10]	3998
found unsupported interaction type with name: [2]	3395

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 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.

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

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

[5] At time of writing (2025-04-30) 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, re-used and redistributed by anyone - subject only, at most, to the requirement to attribute and sharealike."

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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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