A Review of Biotic Interactions and Taxon Names Found in globalbioticinteractions/bpbm-ent hash://md5/7d8a51c342eb3f0b4c8bd61bff8196bd

by Nomer, Elton and Preston, three naive review bots
review@globalbioticinteractions.org
https://globalbioticinteractions.org/contribute
https://github.com/globalbioticinteractions/bpbm-ent/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/bpbm-ent, has fingerprint hash://md5/7d8a51c342eb3f0b4c8bd61bff8196bd, is 151MiB in size and contains 26,438 interaction with 3 unique types of associations (e.g., adjacentTo) between 8,301 primary taxon (e.g., Fungi) and 14,743 associated taxon (e.g., rocks). This report includes detailed summaries of interaction data, a taxonomic review from multiple catalogs, and an archived version of the dataset from which the reviews are derived.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:

> Bernice Pauahi Bishop Museum, J. Linsley Gressitt Center for Research in Entomology https://github.com/globalbioticinteractions/bpbm-ent/archive/c085398dddd36f8a1169b9cf57de2a572229341b.zip 2025-04-04T23:27:14.882Z hash://md5/7d8a51c342eb3f0b4c8bd61bff8196bd

For additional metadata related to this dataset, please visit https://github.com/globalbioticinteractions/bpbm-ent 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

tool name	version
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.  151MiB) under review
elton pull globalbioticinteractions/bpbm-ent

# generate review notes
elton review globalbioticinteractions/bpbm-ent\
 > review.tsv

# export indexed interaction records
elton interactions globalbioticinteractions/bpbm-ent\
 > interactions.tsv

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

or visually, in a process diagram.

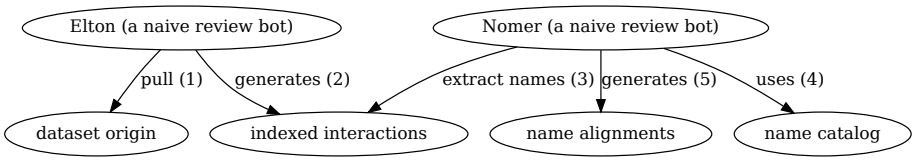

Figure 1: Review Process Overview

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/bpbm-ent) before being able to generate reviews (e.g., elton review globalbioticinteractions/bpbm-ent), extract interaction claims (e.g., elton interactions globalbioticinteractions/bpbm-ent), or list taxonomic names (e.g., elton names globalbioticinteractions/bpbm-ent)

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

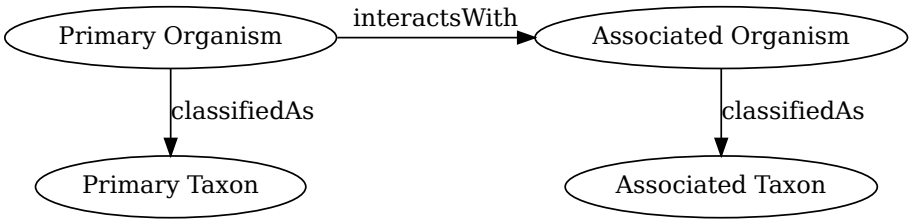

Figure 2: Biotic Interaction Data Model

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/bpbm-ent, has fingerprint hash://md5/7d8a51c342eb3f0b4c8bd61bff8196bd, is 151MiB in size and contains 26,438 interaction with 3 unique types of associations (e.g., adjacentTo) between 8,301 primary taxon (e.g., Fungi) and 14,743 associated taxon (e.g., rocks).

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
Portulaca pilosa subsp. pilosa	adjacentTo	rock wall	704fb80e-c15a-4740-b8cf-0007cb58bb00
Pneophyllum minutula	adjacentTo	Valonia	dac03d2c-b339-4bf3-a451-0007d1720242
Neraudia ovata	adjacentTo	dry scoria.	6aba83fd-07a5-4b43-b590-000919dfde70
Morinda latibractea	adjacentTo	islet cliffs	3bc0f2b6-75b2-43f9-8f17-000b77fd5c55

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

interactionTypeName	count
adjacentTo	25094
interactsWith	1203
hasHost	141

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

sourceTaxonName	count
Fungi	320
Bryophyta	175
Korthalsella complanata	149
Padina	110
Halimeda opuntia	100
Gracilaria salicornia	92
Lepisorus thunbergianus	81
Sargassum	80
Turbinaria ornata	79
Pandanus tectorius	72
Hydroclathrus clathratus	72
Cassytha filiformis	71
Psilotum complanatum	60
Polypodium pellucidum	59
Lobophora variegata	58
Asplenium nidus	58
Psilotum nudum	57
Dictyota	57
Sida fallax	55

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

targetTaxonName	count
rocks	359
rocks.	237
ground	180
tree trunk	178
trees	176

targetTaxonName	count
rocks in the subtidal zone.	137
dead coral rock.	135
tree	128
Metrosideros	125
reef	112
rock	105
tree trunks	90
mossy tree trunk	88
ridge	81
shaded	73
shrub	72
coral	60
rocks in the lower tidal zone.	59
aa	56

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

sourceTaxonName	interactionTypeName	targetTaxonName	count
Bryophyta	adjacentTo	shrub	65
Canarium harveyi	interactsWith	a mature tree 8-20 m tall.	30
Turbinaria ornata	adjacentTo	reef.	27
Coccodiella nuda	hasHost	Cibotium chamissoi	19
Padina	adjacentTo	reef	18
Bryophyta	adjacentTo	branch of tree	16
Sargassaceae	adjacentTo	granitic rock.	15
Korthalsella complanata	adjacentTo	Acacia koa	14
Stypopodium	adjacentTo	reef	13
Lyngbya	adjacentTo	volcanic rocks	11
Pteris warburghii	adjacentTo	streambed.	11
Fungi	adjacentTo	leaves.	11
Korthalsella remyana	adjacentTo	Metrosideros	10
Gracilariopsis longissima	adjacentTo	rocks in sand.	10
Ulva compressa	adjacentTo	coral in shallow water	10

sourceTaxonName	interactionTypeName	targetTaxonName	count
Halimeda opuntia	interactsWith	reef with sandy-muddy substratum near shore to sandy-rocky at the reef edge.	10
Metrosideros polymorpha var. incana	adjacentTo	aa lava flow.	10
Joinvillea plicata	adjacentTo	bank above small stream	10
Hepaticae	adjacentTo	lichen	9

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
Rock	NONE	col	Rock
Ft vertical rocks	NONE	col	Ft vertical rocks

providedName	relationName	resolvedCatalogName	resolvedName
Ft flat rocks covered Odonthalia or more usually Rhodomela	NONE	col	Ft flat rocks covered Odonthalia or more usually Rhodomela
Boulders	NONE	col	Boulders

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	13459
col	class	7
col	family	81
col	genus	993
col	gigaclass	1
col	kingdom	2
col	order	2
col	phylum	9
col	section	1
col	species	5000
col	subfamily	3
col	subgenus	1
col	subkingdom	1
col	subspecies	99
col	tribe	1
col	variety	50
discoverlife	NA	19655
gbif	NA	11964
gbif	class	8
gbif	family	88
gbif	form	5
gbif	genus	1018
gbif	kingdom	2
gbif	order	2
gbif	phylum	10
gbif	species	6359
gbif	subspecies	119
gbif	variety	191
itis	NA	15716

resolvedCatalogName	resolvedRank	count
itis	class	6
itis	division	7
itis	family	84
itis	genus	704
itis	infrakingdom	1
itis	kingdom	2
itis	order	3
itis	phylum	4
itis	species	3026
itis	subclass	1
itis	subkingdom	1
itis	subspecies	81
itis	superclass	1
itis	variety	23
mdd	NA	19654
ncbi	NA	14102
ncbi	clade	3
ncbi	class	6
ncbi	family	79
ncbi	forma	1
ncbi	genus	942
ncbi	kingdom	1
ncbi	order	3
ncbi	phylum	9
ncbi	section	2
ncbi	series	1
ncbi	species	4484
ncbi	subgenus	6
ncbi	subspecies	11
ncbi	superclass	1
ncbi	varietas	9
pbdb	NA	19112
pbdb	class	9
pbdb	family	71
pbdb	genus	382
pbdb	informal	1
pbdb	kingdom	2
pbdb	order	3
pbdb	phylum	9
pbdb	species	62
pbdb	subclass	1
pbdb	superclass	1
pbdb	superphylum	1
pbdb	tribe	1

resolvedCatalogName	resolvedRank	count
pbdb	unranked clade	5
tpt	NA	19646
tpt	genus	5
tpt	species	3
wfo	NA	14613
wfo	family	60
wfo	form	3
wfo	genus	630
wfo	order	1
wfo	phylum	1
wfo	section	1
wfo	species	4274
wfo	subspecies	45
wfo	variety	43
worms	NA	18219
worms	class	5
worms	family	66
worms	genus	580
worms	gigaclass	1
worms	kingdom	2
worms	order	3
worms	phylum	4
worms	phylum (division)	6
worms	species	754
worms	subclass	1
worms	subfamily	1
worms	subgenus	1
worms	subkingdom	1
worms	subspecies	11
worms	variety	7

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	16427
col	HAS_ACCEPTED_NAME	5289

resolvedCatalogName	relationName	count
col	SYNONYM_OF	2249
discoverlife	NONE	23044
gbif	NONE	14867
gbif	HAS_ACCEPTED_NAME	7514
gbif	SYNONYM_OF	3662
itis	NONE	18669
itis	HAS_ACCEPTED_NAME	4013
itis	SYNONYM_OF	509
mdd	NONE	23002
ncbi	NONE	17083
ncbi	SAME_AS	5366
ncbi	SYNONYM_OF	676
pbdb	NONE	22240
pbdb	HAS_ACCEPTED_NAME	784
pbdb	SYNONYM_OF	56
tpt	NONE	22992
tpt	HAS_ACCEPTED_NAME	10
wfo	NONE	17662
wfo	HAS_ACCEPTED_NAME	4187
wfo	SYNONYM_OF	1320
wfo	HAS_UNCHECKED_NAME	299
worms	NONE	21344
worms	HAS_ACCEPTED_NAME	1648
worms	SYNONYM_OF	273

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)

catalog name	alignment results
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
2025-04-10T07:43:55Z	note	found unsupported interaction type with name: [associates]
2025-04-10T07:43:55Z	note	found unsupported interaction type with name: [associates]
2025-04-10T07:43:55Z	note	found unsupported interaction type with name: [WNW aspect. Red-brown clay loam on basalt. Low closed foest]
2025-04-10T07:43:55Z	note	found unsupported interaction type with name: [WNW aspect. Red-brown clay loam on basalt. Low closed foest]

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

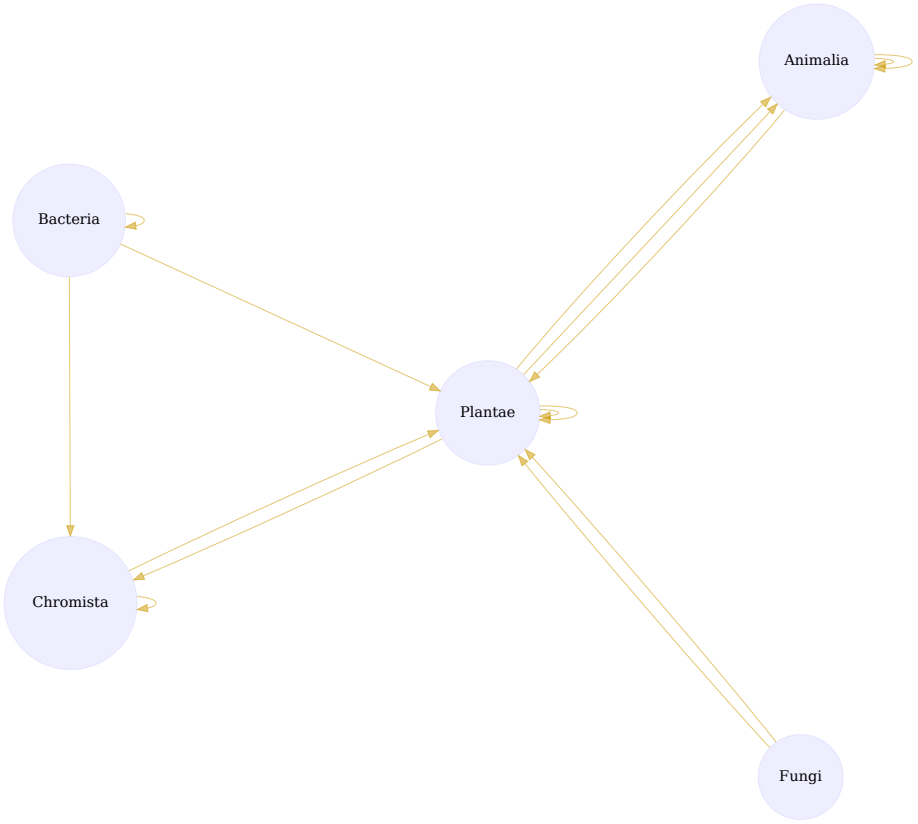

Figure 3: Interactions on taxonomic kingdom rank as interpreted by the Catalogue of Life download svg

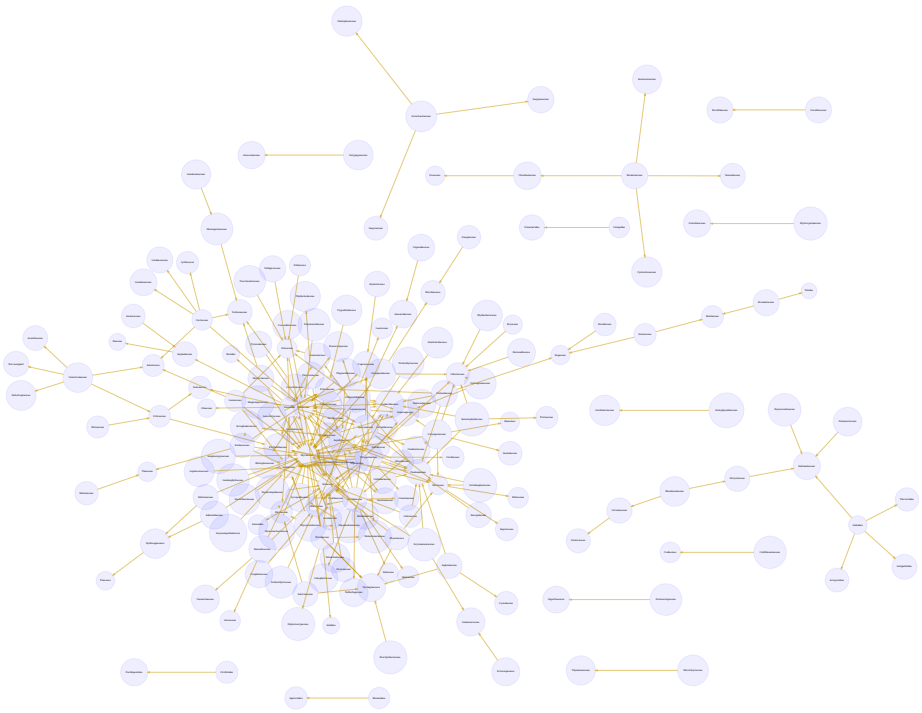

Figure 4: Interactions on the taxonomic family rank as interpreted by the Catalogue of Life. download svg

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

reviewComment	count
found unsupported interaction type with name: [Vegetation]	1708
found unsupported interaction type with name: [associates include]	503
found unsupported interaction type with name: [Associated vegetation]	375
found unsupported interaction type with name: [Common plants]	208

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.

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.

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

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

[5] At time of writing (2025-04-10) the version of the GloBI dataset index was available at

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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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.

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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