

Versioned Archive and Review of Biotic
Interactions and Taxon Names Found within
globalbioticinteractions/european-vertebrate-
flower-visitation
hash://md5/cfa79f58a14c49936c4eb6a3af50410c

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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/european-vertebrate-flower-visitation, has fingerprint hash://md5/cfa79f58a14c49936c4eb6a3af50410c, is 207KiB in size and contains 220 interactions with 1 unique type of association (e.g., visitsFlowersOf) between 19 primary taxa (e.g., *Podarcis lilfordi*) and 133 associated taxa (e.g., *Canarina canariensis*). This report includes detailed summaries of interaction data, a taxonomic review from multiple catalogs, and an archived version of the dataset from which the reviews are derived.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 :

Anneliese Magrath, Nick Balfour, Maria Clara Castellanos. 2026.
 Vertebrate Flower Visitation in Europe. Personal Communication.
<https://github.com/globalbioticinteractions/european-vertebrate-flower-visitation/archive/df272a518d91ed770515c01d8263693e38267abb.zip>
 2026-07-24T23:33:20.176Z hash://md5/cfa79f58a14c49936c4eb6a3af50410c

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	0.16.11
nomer	0.6.7
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. 207KiB) under review
elton pull globalbioticinteractions/european-vertebrate-flower-visitation

# generate review notes
elton review globalbioticinteractions/european-vertebrate-flower-visitation \
> review.tsv

# export indexed interaction records
elton interactions globalbioticinteractions/european-vertebrate-flower-visitation \
> interactions.tsv

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

or visually, in a process diagram.

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

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

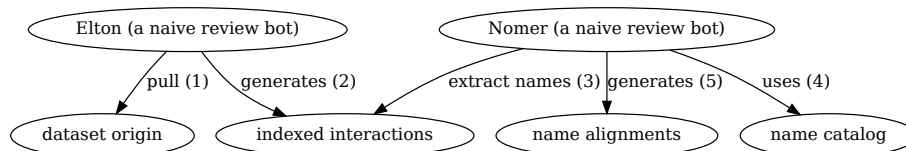


Figure 1: Review Process Overview

Results

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

Files

An extensive list of files produced as part of the review process can be found in Appendix A. Review Files.

Archived Dataset

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

Biotic Interactions

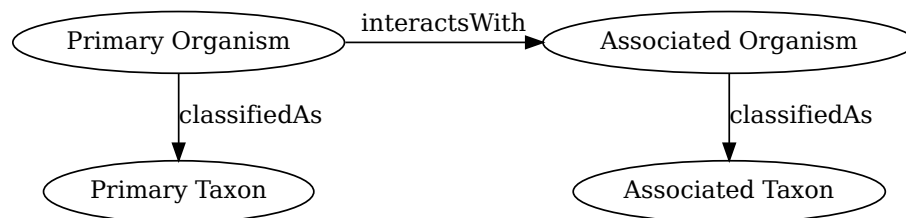


Figure 2: Biotic Interaction Data Model

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

The dataset under review, named *globalbioticinteractions/european-vertebrate-flower-visitation*, has fingerprint hash://md5/cfa79f58a14c49936c4eb6a3af50410c,

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

is 207KiB in size and contains 220 interactions with 1 unique type of association (e.g., visitsFlowersOf) between 19 primary taxa (e.g., Podarcis lilfordi) and 133 associated taxa (e.g., Canarina canariensis).

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 2: Sample of Indexed Interaction Claims

sourceTaxonName	interactionTypeName	targetTaxonName	referenceCitation
Serinus canarius	visitsFlowersOf	Aeonium arboreum	Valido, 2004
Phylloscopus collybita	visitsFlowersOf	Aeonium arboreum	Valido, 2004
Teira dugesii	visitsFlowersOf	Aeonium glutinosum	Camara, 2025
Gallotia atlantica	visitsFlowersOf	Aeonium lancerottense	Nelson, 2010

Table 3: Most Frequently Mentioned Interaction Types (up to 20 most frequent)

interactionTypeName	count
visitsFlowersOf	220

Table 4: Most Frequently Mentioned Primary Taxa (up to 20 most frequent)

sourceTaxonName	count
Podarcis lilfordi	67
Teira dugesii	51
Sylvia atricapilla	17
Sylvia melanocephala	16
Phylloscopus collybita	15
Phylloscopus canariensis	8
Sylvia borin	7
Sylvia cantillans	6
Serinus canarius	5

sourceTaxonName	count
<i>Sylvia communis</i>	5
<i>Sylvia conspicillata</i>	5
<i>Gallotia galloti</i>	5
<i>Cyanistes teneriffae</i>	3
<i>Tarentola delalandii</i>	3
<i>Cyanistes caeruleus</i>	3
<i>Gallotia atlantica</i>	1
<i>Phylloscopus trochilus</i>	1
<i>Gallotia stehlini</i>	1
<i>Parus caeruleus</i>	1

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

targetTaxonName	count
<i>Canarina canariensis</i>	10
<i>Isoplexis canariensis</i>	10
<i>Ferula communis</i>	8
<i>Malva arborea</i>	8
<i>Brassica incana</i>	6
<i>Echium simplex</i>	6
<i>Echium wildpretii</i>	6
<i>Scrophularia calliantha</i>	5
<i>Navaea phoenicea</i>	4
<i>Anagyris foetida</i>	3
<i>Azorina vidalii</i>	3
<i>Brassica oleracea</i>	3
<i>Crithmum maritimum</i>	3
<i>Echium decaisnei</i>	3
<i>Malva phoenicea</i>	3
<i>Musschia wollastonii</i>	3
<i>Scrophularia sambucifolia</i>	3
<i>Aeonium arboreum</i>	2
<i>Calendula arvensis</i>	2

Table 6: Most Frequent Interactions between Primary and Associate Taxa (up to 20 most frequent)

sourceTaxonName	interactionType	targetTaxonName	count
<i>Teira dugesii</i>	visitsFlowersOf	<i>Azorina vidalii</i>	3

sourceTaxonName	interactionType	targetTaxonName	count
Podarcis lilfordi	visitsFlowersOf	Calendula arvensis	2
Phylloscopus collybita	visitsFlowersOf	Canarina canariensis	2
Sylvia melanocephala	visitsFlowersOf	Canarina canariensis	2
Sylvia conspicillata	visitsFlowersOf	Canarina canariensis	2
Phylloscopus canariensis	visitsFlowersOf	Canarina canariensis	2
Podarcis lilfordi	visitsFlowersOf	Crithmum maritimum	2
Teira dugesii	visitsFlowersOf	Echium nervosum	2
Serinus canarius	visitsFlowersOf	Echium wildpretii	2
Phylloscopus collybita	visitsFlowersOf	Echium wildpretii	2
Podarcis lilfordi	visitsFlowersOf	Ephedra fragilis	2
Podarcis lilfordi	visitsFlowersOf	Euphorbia segetalis	2
Teira dugesii	visitsFlowersOf	Foeniculum vulgare	2
Teira dugesii	visitsFlowersOf	Hydrangea macrophylla	2
Phylloscopus canariensis	visitsFlowersOf	Isoplexis canariensis	2
Phylloscopus collybita	visitsFlowersOf	Isoplexis canariensis	2
Sylvia melanocephala	visitsFlowersOf	Isoplexis canariensis	2
Sylvia atricapilla	visitsFlowersOf	Isoplexis sceptrum	2
Podarcis lilfordi	visitsFlowersOf	Malva arborea	2

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.



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

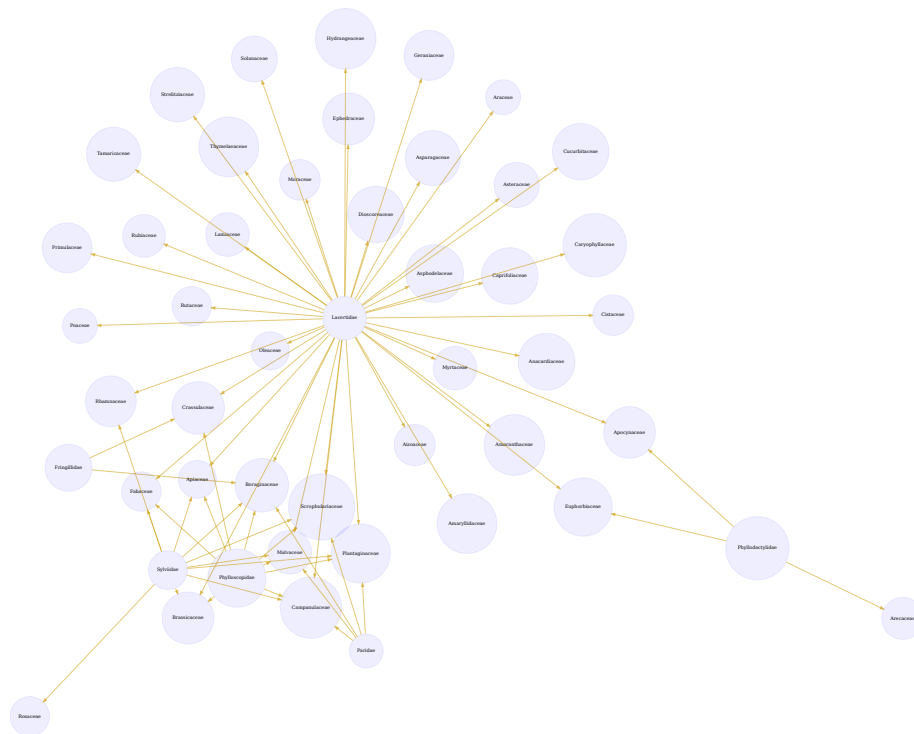


Figure 4: Interactions on the taxonomic family rank as interpreted by the Catalogue of Life. download svg

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. These maps were generated using MapServer (McKenna et al. 2025) tools configured via map configuration `indexed-interactions.map` :

```
MAP
  SIZE 1600 800
  EXTENT -180 -90 180 90
  PROJECTION
    "init=epsg:4326"
  END
  LAYER # MODIS WMS map from NASA
    NAME "modis_nasa"
    TYPE RASTER
    OFFSITE 0 0 0
    STATUS ON
    CONNECTIONTYPE WMS
    CONNECTION "https://gibs.earthdata.nasa.gov/wms/epsg4326/best/wms.cgi?"

  METADATA
    "wms_srs" "EPSG:4326"
    "wms_name" "OSM_Land_Water_Map"
    "wms_server_version" "1.1.1"
    "wms_format" "image/jpeg"
  END
  CLASS
    STYLE
      COLOR 232 232 232
      OUTLINECOLOR 32 32 32
    END
  END
END
LAYER
  NAME "indexed-interactions"
  TYPE POLYGON
  STATUS ON
  CONNECTIONTYPE OGR
  CONNECTION "indexed-interactions-h3.gpkg"
  DATA "indexed-interactions-h3"
  CLASS
    STYLE
```

```

        COLORRANGE 253.0 231.0 37.0 32.0 164.0 134.0
        DATARANGE 0.3010299956639812 1.8325089127062364
        RANGEITEM "log_number_of_records"
        OUTLINECOLOR 0 0 0
    END
END
END
END
END

```



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.

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 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, pbdb, worms, and wikidata). These alignments can help review name usage or aid in selecting of a suitable taxonomic name resource. Also, for each name, an alignment index is calculated where the alignment index for a specific name = $1 - (\text{number of catalogs without the name}) / (\text{total number of catalogs})$. So, if a name is not recognized by any catalog,

the alignment index value for that name is 0. Also, if a name is recognized by all catalogues, the alignment index value for that name is 1.

Table 7: Sample of Name Alignments

providedName	relationName	resolvedCatalogName	resolvedName
Aeonium	HAS_ACCEPTED	col	Aeonium
arboreum			arboreum
Aeonium	HAS_ACCEPTED	col	Aeonium
glutinosum			glutinosum
Aeonium	HAS_ACCEPTED	col	Aeonium
lancerottense			lancerottense
Agave attenuate	NONE	col	Agave attenuate

Table 8: Sample of Name Alignment Index (up to 20). Names successfully aligned with all catalog have index value 1.0, whereas names aligned with none of the used catalogs have index 0.0. Suspicious taxonomic names (e.g., a name with typo like *Homo sapienz*) with low or 0.0 alignment index values are listed first to facilitate review. Full copies of alignment index for names under review can be found in Appendix A. Review Files in gzipped html, csv, and tsv formats.

providedName	alignmentIndex
Agave attenuate	0.0
Anagalis arvensis	0.0
Capparis inermis	0.0
Capsicum annuum	0.0
Centrathus calcitrapae	0.0
Euphorbia pulcherrima	0.0
Melaleuca regnosa	0.0
Mesembrianthemum crystallinum	0.0
Pittosporum tobira	0.0
Schizogone sericea	0.0
Tracheolium caeruleum	0.0
Heliotropium sp	0.09999999999999998
Psidium cattleianum	0.30000000000000004
Echeveria atropurpurea	0.4
Malva phoenicea	0.4
Navaea phoenicea	0.4
Ononis crispa	0.4
Paronychia capitata	0.4
Aeonium glutinosum	0.5

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	13
col	family	4
col	genus	14
col	species	121
col	subspecies	5
discoverlife	NA	152
gbif	NA	12
gbif	family	4
gbif	genus	15
gbif	species	121
gbif	subspecies	8
gbif	variety	1
itis	NA	61
itis	family	4
itis	genus	14
itis	species	73
mdd	NA	152
ncbi	NA	17
ncbi	family	3
ncbi	genus	14
ncbi	species	118
pbdb	NA	136
pbdb	family	4
pbdb	genus	6
pbdb	species	6
wfo	NA	31
wfo	family	4
wfo	genus	14
wfo	species	103
wfo	subspecies	1
wikidata	NA	14
wikidata	WD:Q34740	14
wikidata	WD:Q35409	4
wikidata	WD:Q7432	120
worms	NA	107
worms	family	3
worms	genus	11
worms	species	31

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	128
col	NONE	13
col	SYNONYM_OF	58
discoverlife	NONE	152
gbif	HAS_ACCEPTED_NAME	173
gbif	NONE	12
gbif	SYNONYM_OF	68
itis	HAS_ACCEPTED_NAME	87
itis	NONE	61
itis	SYNONYM_OF	6
mdd	NONE	152
ncbi	SAME_AS	122
ncbi	NONE	17
ncbi	SYNONYM_OF	14
pbdb	NONE	136
pbdb	HAS_ACCEPTED_NAME	14
pbdb	SYNONYM_OF	2
wfo	HAS_ACCEPTED_NAME	117
wfo	NONE	31
wfo	SYNONYM_OF	22
wfo	HAS_UNCHECKED_NAME	7
wikidata	HAS_ACCEPTED_NAME	137
wikidata	NONE	14
wikidata	SYNONYM_OF	1
worms	NONE	107
worms	HAS_ACCEPTED_NAME	47
worms	SYNONYM_OF	4

Table 11: List of Available Name Alignment Reports

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

catalog name	alignment results
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)
pbdb	associated names alignments report in gzipped html, csv, and tsv)
worms	associated names alignments report in gzipped html, csv, and tsv)
wikidata	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
2026-07-27T13:39:17Z	note	found invalid location: [invalid (latitude, longitude) = (39.583333,,2.316667)]
2026-07-27T13:39:17Z	note	found invalid location: [invalid (latitude, longitude) = (NA,NA)]
2026-07-27T13:39:18Z	note	found invalid location: [invalid (latitude, longitude) = (39.583333,,2.316667)]

reviewDate	reviewCommentType	reviewComment
2026-07-27T13:39:18Z	note	found invalid location: [invalid (latitude, longitude) = (39.583333,,2.316667)]

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 invalid location: [invalid (latitude, longitude) = (39.583333,,2.316667)]	3
found invalid location: [invalid (latitude, longitude) = (NA,NA)]	2

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

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

GloBI Index Badge

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

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

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



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-ness⁶ and FAIRness (Wilkinson et al. 2016; Trekels et al. 2023) of the dataset: to perform this review, the data was likely openly available, **F**indable, **A**ccessible, **I**nteroperable and **R**eusable. The current Open-FAIR assessment is qualitative, and a more quantitative approach can be implemented with specified measurement units.

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

Acknowledgements

We thank the many humans that created us and those who created and maintained the data, software and other intellectual resources that were used for producing this review. In addition, we are grateful for the natural resources providing the basis for these human and bot activities. Also, thanks

⁵At time of writing (2026-07-27) the version of the GloBI dataset index was available at <https://globalbioticinteractions.org/datasets>

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

to <https://github.com/zygoballus> for helping improve the layout of the review tables.

Author contributions

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

Appendix A. Review 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)

filename	description
indexed-interactions-col-kingdom-col-kingdom.svg	network diagram showing the taxon kingdom to taxon kingdom interaction claims in the dataset under review as interpreted by the Catalogue of Life via Nomen 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.map	mapserver configuration to plot species interaction claims indexed from the dataset under review on a map
indexed-interactions.gpkg	species interaction claims indexed from the dataset under review in GeoPackage format
indexed-interactions.fgb	species interaction claims indexed from the dataset under review in FlatGeoBuf 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

filename	description
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.parquet	taxonomic names found in the dataset under review in Apache Parquet format
indexed-names-alignment-index.csv.gz	taxonomic names and their alignment index calculated using the Nomer Corpus of Taxonomic Resources (J. H. (ed.). Poelen 2024) in gzipped comma-separated values format
indexed-names-alignment-index.tsv.gz	taxonomic names and their alignment index calculated using the Nomer Corpus of Taxonomic Resources (J. H. (ed.). Poelen 2024) in gzipped tab-separated values format
indexed-names-alignment-index.html.gz	taxonomic names and their alignment index calculated using the Nomer Corpus of Taxonomic Resources (J. H. (ed.). Poelen 2024) in gzipped html 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

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

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

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

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

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

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

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

filename	description
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

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