

Making parasite-host associations visible in TPT

Kathryn Sullivan, Katja Seltsmann, Jorrit Poelen, & Jennifer Zaspel




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- Data transcription guidelines
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- Examples of association data entry by platform
- Interaction terms and GloBI mapping
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- Global Biotic Interactions (GloBI) is a data integration tool that indexes existing species interaction datasets, literature, and specimen records from collections
- Searches can be done on taxa, for either hosts or parasites, the type of interaction, and the data source
- Results show instances of support for that interaction between two taxa, including links to specimen records in natural history collections
- Specimen citations contain links to full specimen occurrence records available online

What is GloBI: A Review




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Example query: [What do sea otters \(*Enhydra lutris*\) eat?](#) or [What do honey bees \(*Apis*\) pollinate?](#)


What kind of do interacts with

organisms
interacts with... plenty of things according to <http://arctos.database.museum/guid/MSB:Para:9572!>


Missing some results? Have suggestions? [Let us know](#). Like a different view? [Open results in interaction browser](#) , or [list the references](#).




Banner-tailed Kangaroo Rat, Bannertail,
Phillips's Kangaroo Rat
(*Dipodomys spectabilis*)



has parasite



Lice
(Phthiraptera)



Supported by:

<http://arctos.database.museum/guid/MSB:Para:9572!> [link show](#) Provider: MSB Parasite Collection (Arctos) - Version 32.37.
Accessed at <http://ipt.vertnet.org:8080/ipt/archive.do?r=msb_para> on 27 Apr 2020.


<http://arctos.database.museum/guid/MSB:Para:13689> [link show](#) Provider: MSB Parasite Collection (Arctos) - Version 32.37.
Accessed at <http://ipt.vertnet.org:8080/ipt/archive.do?r=msb_para> on 27 Apr 2020.

<http://arctos.database.museum/guid/MSB:Para:9454> [link show](#) Provider: MSB Parasite Collection (Arctos) - Version 32.37.
Accessed at <http://ipt.vertnet.org:8080/ipt/archive.do?r=msb_para> on 27 Apr 2020.

<http://arctos.database.museum/guid/MSB:Para:13888> [link show](#) Provider: MSB Parasite Collection (Arctos) - Version 32.37.
Accessed at <http://ipt.vertnet.org:8080/ipt/archive.do?r=msb_para> on 27 Apr 2020.

<http://arctos.database.museum/guid/MSB:Para:13882> [link show](#) Provider: MSB Parasite Collection (Arctos) - Version 32.37.
Accessed at <http://ipt.vertnet.org:8080/ipt/archive.do?r=msb_para> on 27 Apr 2020.

What is GloBI: A Review



Division of Parasites
Museum of Southwestern Biology

SearchPortalsMy StuffAbout/Help

usernamepassword
Log InorCreate Account

MSB:Para:9572
Phthiraptera
[<< Return to results](#)
[expand all] [collapse all]


Sevilleta National Wildlife Refuge, Five Points Larrea, Web 2
North America, United States, New Mexico, Socorro County, Sevilleta National Wildlife Refuge
1991, season 1, trapnight 1 (1991-06-04)


whole organism

Comment or report bad data [0][0]
[MSB Parasites](#)

Identifications
Phthiraptera
Animalia; Arthropoda; Insecta; Phthiraptera; Phthiraptera
Identified by Wade D. Wilson on 2000-01-01
Nature of ID: unknown
Remarks: IDs made by Murray Daily, Wade Wilson, Michael Patrick and others.; Former nature_of_id: legacy.

Media

Location (1 Events)

[BerkeleyMapper](#)

highlight linked components
Determination Type: collection
assigned by Mariel L. Campbell on 2012-11-15
Higher Geography: [North America, United States, New Mexico, Socorro County, Sevilleta National Wildlife Refuge](#)
[more](#)
Verbatim Locality: 5plarrea, web 2, trap 70
Specific Locality: Sevilleta National Wildlife Refuge, Five Points Larrea, Web 2
Event Remarks: mlc: some trap numbers have been truncated from original value; check locality, date, and trap number against MSB Mammal host record
Locality Remarks: mlc: georeference from LTER database refers to center stake of sampling web
Collecting Source: wild caught
Event Date: 1991-06-04
Verbatim Date: 1991, season 1, trapnight 1
Verification Status: [unverified](#) Define
Coordinates: 34.331126 / -106.732365
Error: 100 m
Georeference Source: Sevilleta LTER website metadata
Georeference Protocol: not recorded

map key/tools

Collector(s)
[Sevilleta Long-term Ecological Research Project](#)

Identifiers
NK: 24070

Relationships [Find All] [Find parasite of]
(parasite of) [MSB:Mamm:67785](#)
family@2020-03-14: Heteromyidae
identification@2020-03-14: Dipodomys spectabilis
locality@2020-03-14: North America, United States, New Mexico, Socorro County: SEVILLETA NATIONAL WILDLIFE REFUGE, 5 POINTS LARREA

Links
[GBIF Occurrence](#)
[iDigBio Occurrence](#)
[GloBI](#)

Parts

Part Name	Condition	Disposition	Qty	Remarks
whole organism	unchecked	unknown	10	

Attributes
location in host: body surface
unknown, 1991-06-04
verbatim host ID: *Dipodomys spectabilis*
unknown, 1991-06-04
verbatim host sex: female
unknown, 1991-06-04

Remarks: na

Accession
[View 2012.003.Para](#)

Usage
Contributed By Project: [Sevilleta Long Term Ecological Research](#)

Bidirectional links between GloBI and specimen records

Specimen-level Data Transcription and Interpretation Facilitated by GloBI

Label Data Transcription

Enter verbatim data - notes field
or other depending on
platform/workflows

Collections Assessment (Start Here)

Develop workflows for
collections with (or
without)
association/multi taxon
label data

*Optional Step in Transcription Process: Data interpretation for GloBI mapping

Interpret
association data
using terms and
definitions from
translation tables.
Document usage in
a notes field and
add new terms to
TPT document if
needed

Use, Data Review and Use



Collection managers,
Students, Ecologists,
Evolutionary Biologists,
Agencies
...many more

Data Aggregation and Sharing

SCAN,
Institutional IPTs,
GBIF, iDigBio,
GloBI, etc.

Data transcription to delivery feedback cycle

1. Use guidelines presented here to assess collections and determine collection specific workflow for entering data. **(Collections Assessment)**
2. Enter data into database, verbatim field is essential, but controlled vocabularies may also be used in some data platforms. Follow current document for entering additional property data. **(Data Transcription)**
3. Optional step in transcription process: Using the tables provided, characterize the type of association from specimen label data and transcribe it into an appropriate data field depending on the platform you are using. See the examples provided for possible fields for interaction data; this process may vary by database platform. **(Data Transcription)**

*Alternatively, linkages to GloBI can be established from verbatim data as long as the fields where data are being stored are kept consistent **(Data interpretation for GloBI mapping)**

4. Aggregate and deliver data to SCAN in order to provide GloBI index endpoints. **(Sharing Data)**
5. TPT will review submitted data to GloBI and provide reviews to data providers to refine mapping to terms as more data become available. **(Use, Review and Use Data)**

Data Transcription Guidelines

Objective - Gain a better understanding of why we are interpreting association data for the TPT project

GloBI classifies association data by separating interaction types into discrete categories. There is added research value to characterization of the association data we are encountering on specimen labels for downstream linkages with GloBI.

1) Always write what you see on the labels (might not have an interaction term) as verbatim somewhere. It is important not to make up terms, but just use what is found on the label.

a) *Multiple associations-* You can and should allow for a specimen record to have multiple associations. These can be mapped separately in GloBI.

b) *What to do with “Blank” associations (Meaning a vertebrate taxon name is listed on a parasite specimen label with little or no other information.)*

If there is an association type field, this should be left blank, but the associatedTaxa field should contain the taxon name.

2) Interpreted Data in Databases (optional)

Some databases have the ability to apply interpreted terms from a controlled vocabulary list to association data in the record. Use guidelines stated here to create a controlled vocabulary for your database in addition to recording all association data as verbatim.

a) If using an interpreted interaction term from our translation table please use notes to reference this document in the specimen record. If new terms and/or definitions are used in a controlled vocabulary please add to the document.

Example 1

Label



Generalized
Database

Verbatim Interaction field:

Host: Columba fasciata juv.

Associated Taxa:

Columba fasciata

Association type/Relationship:

has host

Additional Properties:

hostLifestage=juvenile

hostType=paratype

GloBI index

Term from either verbatim or association type: host = parasiteOf (http://purl.obolibrary.org/obo/RO_0002444)

Physconelloides spenceri is parasite of Columba fasciata

Cite: FMNH-INS0000028854

Example 2

Label



Generalized
Database

Verbatim Interaction field: On whitetail deer
Associated Taxa: *Odocoileus virginianus*
Association type/Relationship: On
Additional Properties: N/A

GloBI index

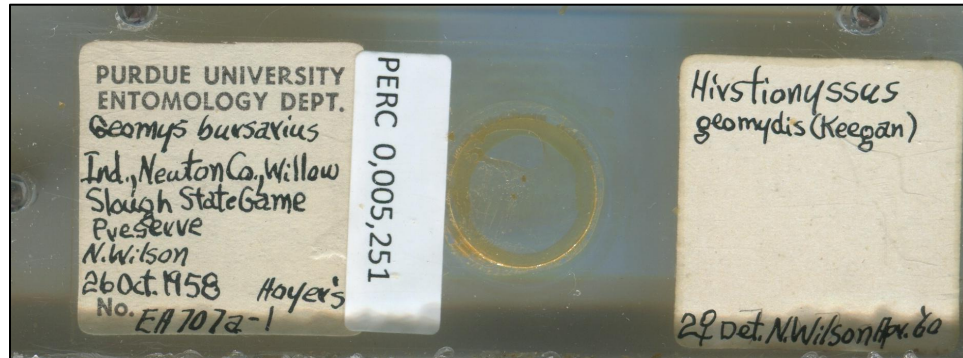
Term from either verbatim or association type: on = adjacent to (http://purl.obolibrary.org/obo/RO_0002220)

Hippoboscidae is adjacent to *Odocoileus virginianus*

Cite: VTEC000002246

Example 3

Label



Generalized
Database

Verbatim Interaction field: Associated Taxa:
Geomys bursarius

Association type/Relationship: Additional Properties:

GloBI index

Default mapping

Term from either verbatim or association type:
“blank” = biotically interacts with
(http://purl.obolibrary.org/obo/RO_0002437)

Hirstionyssus geomydis interacts with Geomys bursarius

Cite: PERC 0005251

Alternate mapping from PERC

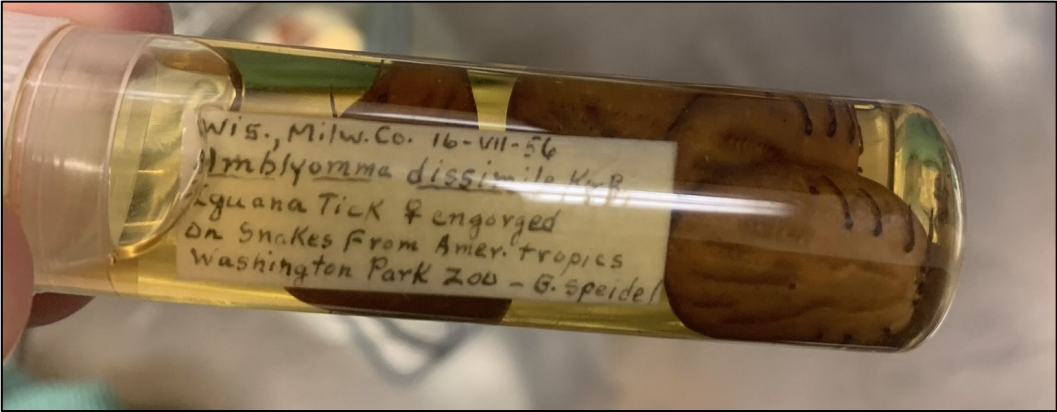
Term from either verbatim or association type:
“blank” = parasiteOf
(http://purl.obolibrary.org/obo/RO_0002444)

Hirstionyssus geomydis is parasite of Geomys bursarius

Cite: PERC 0005251

From Workshop #4

Label



Generalized
Database



Verbatim Interaction field:	Associated Taxa:	Association type/Relationship:	AdditionalProperties:
Amblyomma dissimile, Iguana Tick [female] engorged on snakes from Amer. Tropics, Washington Park Zoo	Snakes/Serpentes	on	in captivity, sex=females, behavior=engorged on snakes, nonnative snakes/snakes from Amer. tropics

GloBI index



Term from either verbatim or association type: on = adjacent to
(http://purl.obolibrary.org/obo/RO_0002220)

Amblyomma dissimile is adjacent to Serptentes

Additional Properties

- Additional interaction data is useful to capture. This can be captured in a verbatim interaction field or may be recorded elsewhere in your database. Follow current workflows for entering this data.

Additional Property	Definition	Possible DwC fields
Verbatim Interaction	A biotic interaction as written on the specimen label without interpretation.	occurrenceRemarks, other fields as previously used
collectorNumber, field number, othercatalognumber	One or more identification number associated with the host specimen. This number could be a catalog number, field number or other unspecified number.	otherCatalogNumbers, dynamicProperties
locationOnHost	The location of the interaction between the specimen and another organism on the host.	dynamicProperties, occurrenceRemarks
habitat/precise location	Additional biotic entities related to the location of the specimen (i.e. in nest).	Habitat, dynamicProperties, occurrenceRemarks
verbatimHostSex	Sex of the target from a biotic interaction.	associatedOccurrences, dynamicProperties
experimentalCondition	Experimental condition of the recording of a biotic interaction.	occurrenceRemarks
hostNumber; hostCatalogNumber	One or more identification number associated with the host specimen. This number could be a catalog number, field number or other unspecified number.	associatedOccurrences, dynamicProperties
in captivity/reared	Denotes the specimen was either bred or collected in captivity.	occurrenceRemarks
specimenunitNumber/count/ DarIndividualCount	The number of specimens involved in interaction (could apply to either parasite or host).	individualCount, dynamicProperties
host Lifestage	Lifestage of target taxon (juvenile, adult, egg).	associatedOccurrences, dynamicProperties
interaction event date/time	Date and time specific to interaction. Example: host collection time vs. parasite emergence time	verbatimEventDate, occurrenceRemarks
specimen taxon sex	Male, female, or mixed if multiple individuals in record, etc.	Sex, occurrenceRemarks
associatedOccurrences	Identifiers of other Occurrence records and their associations to this Occurrence.	associatedOccurrences, dynamicProperties

Symbiota - Part 1 - As a live collection

Museum of Southwestern Biology Division of Parasitology - ParasiteTracker (MSB:PARA)

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Occurrence Data	Determination History	Images	Linked Resources	Admin
-----------------	-----------------------	--------	------------------	-------

Collector Info
Catalog Number ? MSB:Para:10262 Other Cat. #s ? NK=33800 Collector ? Collector(s): Sevilleta Long-term Number ? Date ? 1995-10-03 Dupes? ☐ Auto search
Associated Collectors ? Verbatim Date ? 1995, season 3, trapnight 1

Latest Identification
Scientific Name ? Siphonaptera Author ?
ID Qualifier ? A Family ?
Identified By ? Wade D. Wilson Date Identified ? 2000-01-01

Locality
Country ? United States State/Province ? New Mexico County ? Socorro County Municipality ?
Locality ? Sevilleta National Wildlife Refuge, Five Points Larrea, Web 2
Location Remarks ?
mlc: georeference from LTER database refers to center stake of sampling web
☐ Locality Security ? ☐ Deactivate Locality Lookup
Latitude ? 34.331126 Longitude ? -106.732365 Uncertainty ? 100 Datum ? C F Verbatim Coordinates ?
Elevation in Meters ? Verbatim Elevation ? Depth in Meters ? Verbatim Depth ?
Georeferenced By ? Mariel L. Campbell Georeference Sources ? Sevilleta LTER website r Georeference Remarks ?
Georeference Protocol ? not recorded Georef Verification Status ? unverified Footprint Polygon ?

Misc
Habitat ?
Substrate ?
Associated Taxa ? {"parasite of": "Perognathus flavus"}
Description ?
Occurrence Remarks ?
mlc: some trap numbers have been truncated from original value; check locality, date, and trap number against MSB
Field Notes ?
Dynamic Properties ?
verbatim host ID=Perognathus flavus ; verbatim host sex=male ; location in host=body surface
Life Stage ? Sex ? Individual Count ? 1 Sampling Protocol ? Preparations ? whole organism
Phenology ? Establishment Means ? wild caught ☐ Cultivated

Curation
Type Status ? Disposition ? Occurrence ID ? http://arctos.database.i Field Number ?
Basis of Record ? Language ? Label Project ? Dupe Count ?
PreservedSpecimen ? en
Institution Code (override) ? Collection Code (override) ? Owner Code (override) ? Processing Status ? No Set Status
Data Generalizations ?
Key: 41632648 Modified: 2020-02-23 20:59:21 Entered by: not recorded [2020-02-23 20:58:47]

Museum of Southwestern Biology Division of Parasitology - ParasiteTracker (MSB:PARA)

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Occurrence Data	Determination History	Images	Linked Resources	Admin
-----------------	-----------------------	--------	------------------	-------

Duplicate Specimens
Search for Records to Link
No Linked Duplicate Records

Genetic Resources
Add New Resource
Name:
Identifier:
Locus:
URL:
Notes:
Add New Genetic Resource

Associated Occurrences
(parasite of) MSB:Mamm http://arctos.database.museum/guid/MSB:Mamm:260041 x
Add row Update Associated Occurrences

Symbiota - Part 2 - A snapshot collection

Uploads data directly to SCAN using the Data Upload Module. The fields associatedTaxa, associatedOccurrences and dynamicProperties are mappable for upload.

behavior	behavior
establishmentmeans	establishmentmeans
occurrencestatus	Select Target Field
preparations	preparations
disposition	disposition
associatedreferences	Select Target Field
associatedsequences	Select Target Field
associatedtaxa	associatedtaxa
othercatalognumbers	othercatalognumbers
occurrenceremarks	occurrenceremarks
organismid	Select Target Field
organismname	Select Target Field
organismscope	Select Target Field
associatedoccurrences	associatedoccurrences
associatedorganisms	Select Target Field
previousidentifications	Select Target Field
organismremarks	Select Target Field
materialsamplid	Select Target Field
eventid	Select Target Field
parenteventid	Select Target Field
fieldnumber	fieldnumber
eventdate	eventdate
eventtime	Select Target Field
startdayofyear	startdayofyear
enddayofyear	enddayofyear

kEmu-Relationship data intermediate workflow

The screenshot shows a web application window titled "Catalogue (2) - Display". The breadcrumb trail is "Insects (Diptera) : Diptera : Hippoboscidae : FMNHINS 4114776". The window contains several sections: "Is Parent?" with radio buttons for "Yes" and "No" (selected); "Child Parent Object:" with an empty text field; "Child Objects" with an empty list; "Related Objects" with a table showing a relationship of "Ectoparasite Of"; and "Notes" with a text area containing metadata. At the bottom, there are tabs for "Associations", "Location", "Condition (1)", "Storage", "Multimedia", "References", and "Tasks". The status bar at the bottom indicates "Display Object 11 of 32" and includes user roles "kwebbink", "Admin", and "emufmnh".

Object	Relationship
1	Ectoparasite Of
*	

Notes: Count: NULL | ObjURI: NULL | RecordedByIRN: NULL | RecordedBySummary: NULL | TaxonIRN: 357279 | TaxonSummary: Cyanocitta cristata | Notes: host: Ecto; Ap 11275 A - Bluejay

Currently most use Notes fields to capture verbatim interaction data. Intermediate workflow targets future fields in EMu which map to the Resource Relationship extension in DwC.

Specify-add new fields for association data with suggested Darwin Core mapping

Collection Object

Catalog Number: Accession: Alt Cat Number:

Cataloger: Cataloged Date: Project Number:

☐ on Loan (legacy) ☐ Do Not Publish ☐ Sensitive

Determinations

Taxon: Qualifier: Addendum: Preferred Taxon: Name Usage:

Determined Date: Determiner: Type Status:

Remarks:

Collecting Information

Field Number: Method:

Start Date: End Date:

Verbatim Date: second date:

Locality:

Locality and Habitat Notes:

Collecting Event Attribute

MONTH: Day: Year:

Last Name	First Name	Remarks
<input style="height: 40px;" type="text"/>		

Preparations

Prep Type	Is On Loan	Preparation Attachments	Count	Prepared By	Storage	Sample Number	Contact
<input style="height: 40px;" type="text"/>							

Col Obj Attribute

Sex: Study Voucher: Stage:

Genitalia No.: Tissue Sample: Sound Record: Record Type:

Remarks:

Host ID: Host Catalog No.: Host Sex :

Host Class: Host Order: Host Family:

Host Genus: Host Species: Host Subspecies:

Attachments

Collection Object Attachments

Modified By Agent: Modified Date: 02/14/2020 ☐ Generate Label on Save

GUID: 21917a15-642a-4ed0-860e-e1d4259df2f3

SPECIFY Category	SPECIFY fields	NOTE	TDWG Fields
<i>Collection Object Attribute</i>	<i>Host ID</i>		<i>dynamicProperties</i>
<i>Collection Object Attribute</i>	<i>Host Catalog No.</i>	<i>*NEW*</i>	<i>associatedOccurrences</i>
<i>Collection Object Attribute</i>	<i>Host Sex</i>	<i>*NEW*</i>	<i>dynamicProperties</i>
<i>Collection Object Attribute</i>	<i>Host Class</i>	<i>*NEW*</i>	<i>associatedTaxa</i>
<i>Collection Object Attribute</i>	<i>Host Order</i>	<i>*NEW*</i>	<i>associatedTaxa</i>
<i>Collection Object Attribute</i>	<i>Host Family</i>	<i>*NEW*</i>	<i>associatedTaxa</i>
<i>Collection Object Attribute</i>	<i>Host Genus</i>	<i>*NEW*</i>	<i>associatedTaxa</i>
<i>Collection Object Attribute</i>	<i>Host Species</i>	<i>*NEW*</i>	<i>associatedTaxa</i>
<i>Collection Object Attribute</i>	<i>Host Subspecies</i>	<i>*NEW*</i>	<i>associatedTaxa</i>
<i>Collection Object Attribute</i>	<i>Relationship</i>	<i>*NEW*</i>	<i>dynamicProperties</i>

Provided by Erika Tucker, University of Michigan

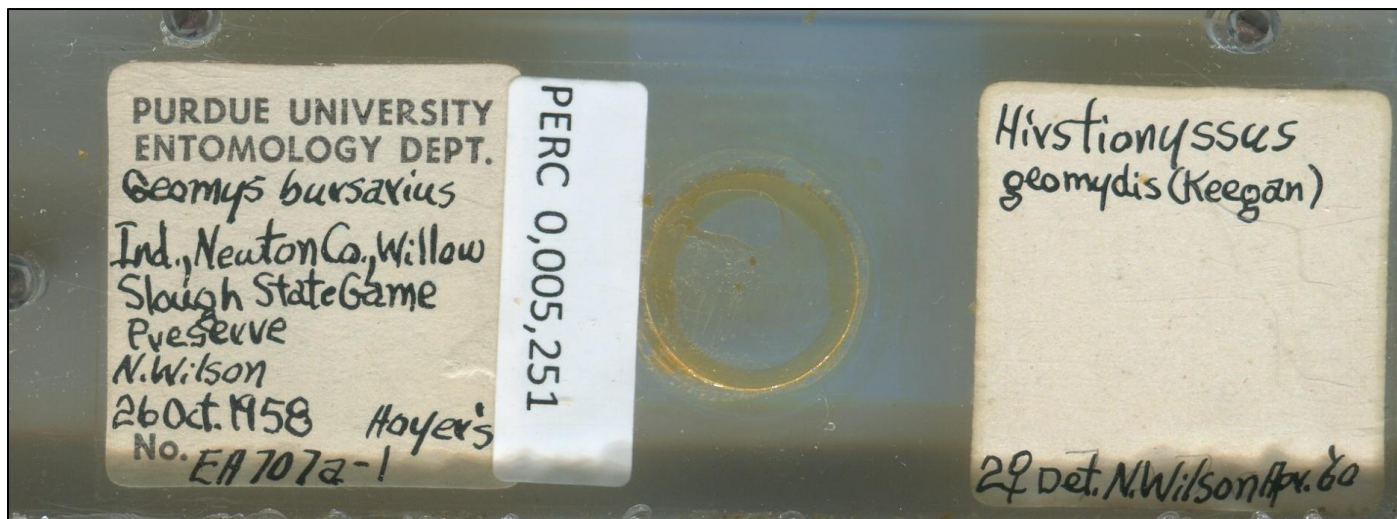
Tables of Interaction Terms and GloBI Mapping

Objective: Learn what the default translations are in GloBI of interaction terms

*Translations can be thought of as interpretations....

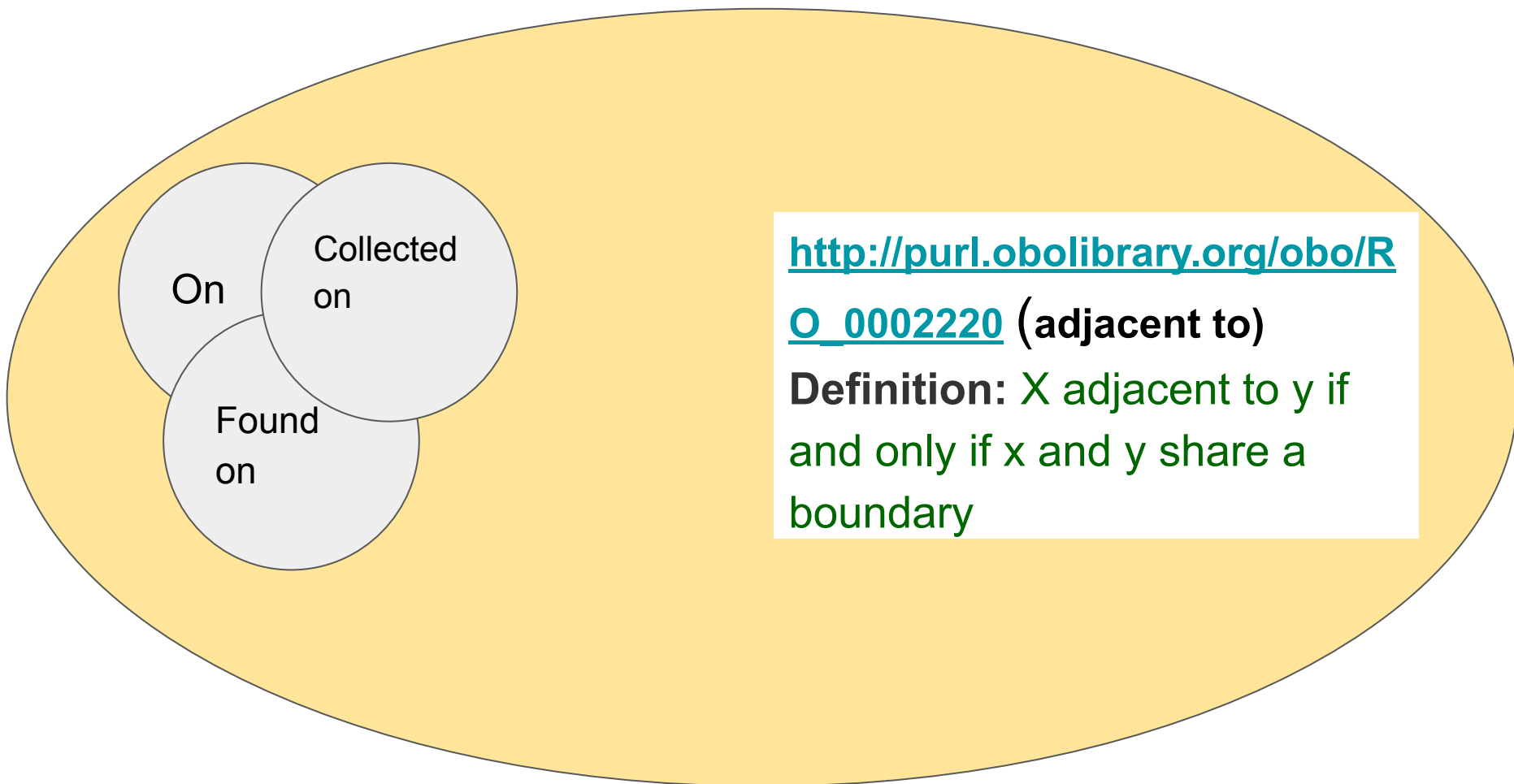
Objective: Understand how to change the default translation

Objective: Continue discussing data review



Example specimen: no specific interaction listed

Relations Ontology classes are for **Grouping Things**, so records in GloBI can be found together without changing the meaning.



Explanation of interaction term tables

We have provided an updated translation* table specific to Terrestrial Parasite Tracker for GloBI that includes common verbatim association terms, common interpreted terms, and additional terms that may come up from different databases. We have defined these terms in the context of collected parasite specimens, and each of these terms has been mapped to a Relations Ontology (RO) class as a default, with a link provided. It is expected that collections will have different interpretations and definitions of similar verbatim terms, so some alternative RO classes have been provided as examples. The RO classes will be used in GloBI to group similar interaction terms together across datasets.

How to map terms

1. This table will serve as the default translation table for all TPT interaction data indexed by GloBI.
2. Individual collections can and should adjust these translations as needed. Adjustments can be made at anytime during the digitization process, and they can be applied to subsets of data from a collection by request.

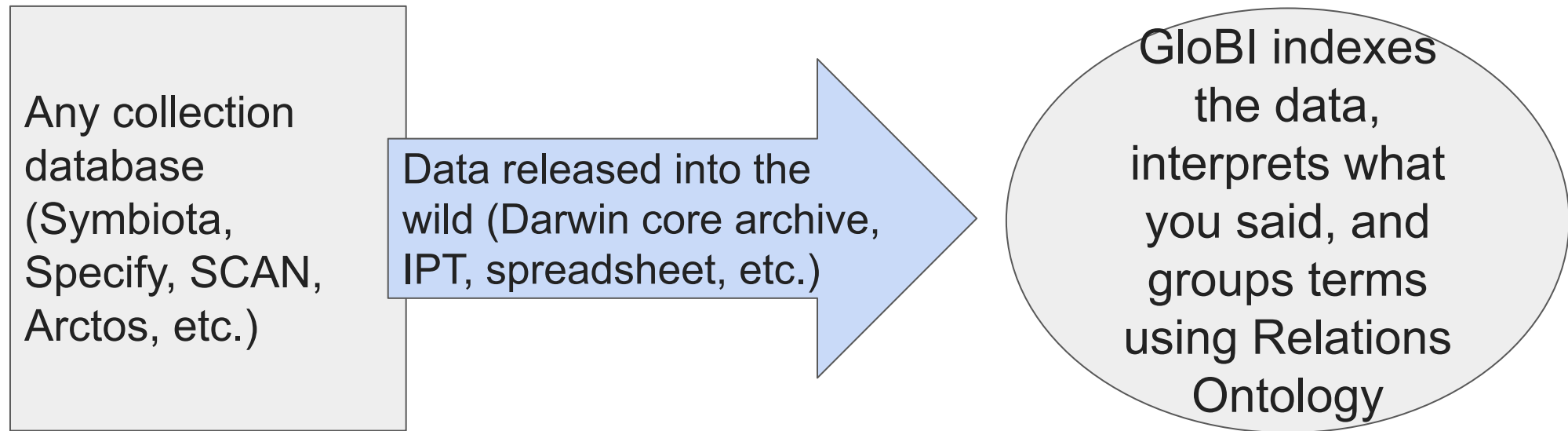
*Translations can be thought of as interpretations.

<i>Literal Terms Written on Labels</i>	Definition	Default RO Classes	Alternative RO Classes
collected on; on; found on	Specimen found touching an associated organism.	http://purl.obolibrary.org/obo/RO_0002220	
parasite of	"Feeds on host tissue, causes damage, or reduces fitness" - Barry OConnor	http://purl.obolibrary.org/obo/RO_0002444	
host (or has host)	"Feeds on host tissue, causes damage, or reduces fitness" - Barry OConnor	http://purl.obolibrary.org/obo/RO_0002454	
found near; near	An interaction relationship describing organisms that occur together at the same time and space or in the same environment.	http://purl.obolibrary.org/obo/RO_0008506	
nothing on label	The specimen is associated with another organism in some way, but the biology of the particular interaction is unknown.	http://purl.obolibrary.org/obo/RO_0002437	Parasite of: http://purl.obolibrary.org/obo/RO_0002444 ; ecologically co-occurs with: http://purl.obolibrary.org/obo/RO_0008506
from; pulled from	Specimen found touching an associated organism.	http://purl.obolibrary.org/obo/RO_0002220	
ex	<i>Similar to blank labels, ex can vary widely in its accepted usage and should be clarified if used as an interaction term.</i> One sample definition from RO class interacts with is "an interaction relationship in which at least one of the partners is an organism and the other is either an organism or an abiotic entity with which the organism interacts." Stronger or weaker interaction classes may apply and are listed in the alternative RO classes field.	http://purl.obolibrary.org/obo/RO_0002437	Parasite of: http://purl.obolibrary.org/obo/RO_0002444 ; ecologically co-occurs with: http://purl.obolibrary.org/obo/RO_0008506

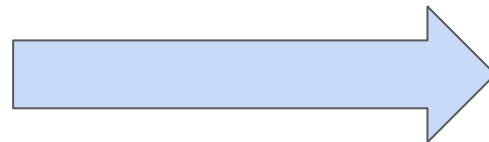
<i>Additional Terms You Might Encounter</i>	Definition	Default RO Classes	Alternative RO Classes
collected with	An interaction relationship describing organisms that occur together at the same time and space or in the same environment.	http://purl.obolibrary.org/obo/RO_0008506	
attached to	Specimen found touching associated organism.	http://purl.obolibrary.org/obo/RO_0002220	
biting	Specimen found touching associated organism.	http://purl.obolibrary.org/obo/RO_0002220	
co-occurred with	An interaction relationship describing organisms that occur together at the same time and space or in the same environment.	http://purl.obolibrary.org/obo/RO_0008506	
feeding on	An interaction relationship in which the partners are related via a feeding relationship.	http://purl.obolibrary.org/obo/RO_0002438	Adjacent to http://purl.obolibrary.org/obo/RO_0002220
in	An interaction relationship describing organisms that occur together at the same time and space or in the same environment.	http://purl.obolibrary.org/obo/RO_0008506	
reared from	From; with the property of "in a controlled environment".	http://purl.obolibrary.org/obo/RO_0002220	
ectoparasite	A sub-relation of parasite-of in which the parasite lives on or in the integumental system of the host.	http://purl.obolibrary.org/obo/RO_0002632	

<i>Interpreted Terms</i>	Definition	Default RO Classes	Alternative RO Classes
associates with	An interaction relationship describing organisms that occur together at the same time and space or in the same environment.	http://purl.obolibrary.org/obo/RO_0008506	
interacts with	An interaction relationship in which at least one of the partners is an organism and the other is either an organism or an abiotic entity with which the organism interacts.	http://purl.obolibrary.org/obo/RO_0002437	
localized to	An interaction relationship describing organisms that occur together at the same time and space or in the same environment.	http://purl.obolibrary.org/obo/RO_0008506	

Translations can occur in the collection database



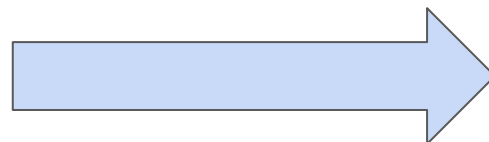
Associated Taxa:
Geomys bursarius



interacts with:

http://purl.obolibrary.org/obo/RO_0002437

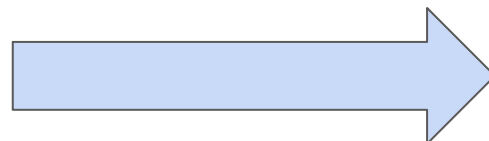
Associated Taxa:
parasiteOf: Geomys
bursarius



parasite of:

http://purl.obolibrary.org/obo/RO_0002444

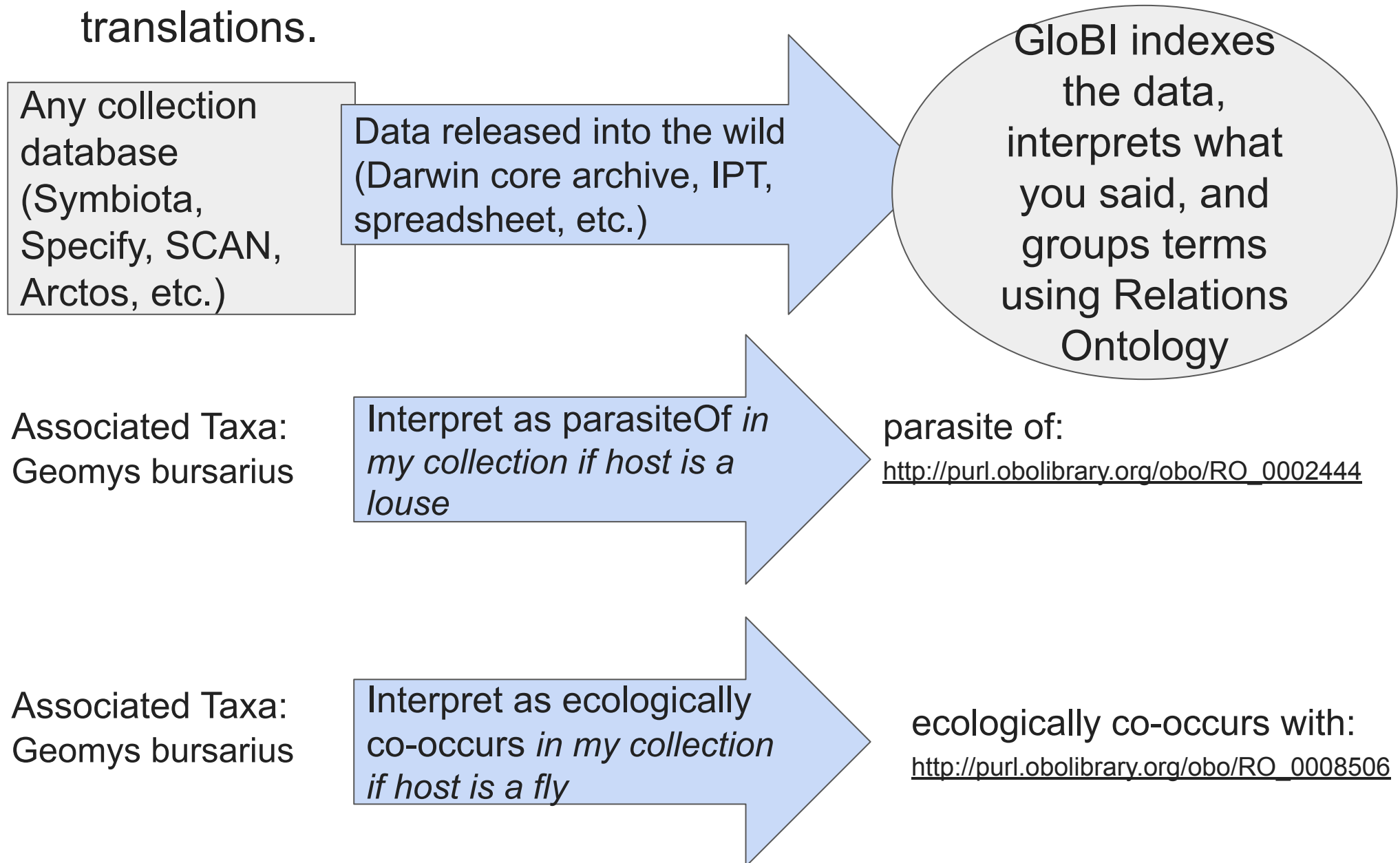
Associated Taxa:
associatesWith: Geomys
bursarius



ecologically co-occurs with:

http://purl.obolibrary.org/obo/RO_0008506

Or translations can occur by changing how GloBI interprets your data based on your collection. These are collection specific term translations.



****Altering GloBI interpretation will not affect data as it is recorded in databases.**

Example from INHS - Collection specific translation table

globalbioticinteractions / inhs-insects

Unwatch

2

Star

0

Fork

0

<> Code

Issues 0

Pull requests 0

Actions

Projects 0

Wiki

Security 0

Insights

Settings

Branch: master

inhs-insects / interaction_types_mapping.csv

Find file

Copy path

jhpoele

update mapping

d8e2895

on Feb 22

1 contributor

9 lines (9 sloc) | 618 Bytes

Raw

Blame

History

Search this file...

	provided_interaction_type_label	provided_interaction_type_id	mapped_to_interaction_type_label	mapped_to_interaction_type_id
1	Host of		hostOf	http://purl.obolibrary.org/obo/RO_0002453
2	Parasite		hasParasite	http://purl.obolibrary.org/obo/RO_0002445
3	Pollinating		pollinates	http://purl.obolibrary.org/obo/RO_0002455
4	Predator		preyedUponBy	http://purl.obolibrary.org/obo/RO_0002458
5	Prey		preysOn	http://purl.obolibrary.org/obo/RO_0002439
6	Reared from		hasHost	http://purl.obolibrary.org/obo/RO_0002454
7	Parasite of		parasiteOf	http://purl.obolibrary.org/obo/RO_0002444
8	Host		hasHost	http://purl.obolibrary.org/obo/RO_0002454
9				

Use and Review Data: Simple Review

TPT Collections Status

Click on badges to browse/download indexed records or inspect automated reviews.

[edit collection list](#)

GloBI BPBM / GloBI BYU / GloBI CAS / GloBI CUAC / GloBI FMNH / GloBI INHS / GloBI MSU / GloBI MPM / GloBI HWML / GloBI OSAL / GloBI PSU / GloBI PERC / GloBI TAMUIC / GloBI BRTC / GloBI ANSP / GloBI USNM / GloBI UCSB-IZC / GloBI UHIM / GloBI UMMZ / GloBI UMSP / GloBI UNHC / GloBI MSB-PARA / GloBI MSB-HOST / GloBI PIPER / GloBI WIRC / GloBI UWSP / GloBI VB /

status	institution/collection	platform	contact
 	BPBM / Bishop Museum / Gressitt Entomology Collection	Specify	Jim Boone, Neal Evenhuis
 	BYU / Brigham Young University Arthropod Museum / Monte L. Bean Museum of Life Science Museum Insects and Arachnids	SymbSCAN	Michael Whiting
 	CAS / California Academy of Sciences / Entomology Collection	Institutional	Chris Grinter, Michelle Trautwein
 	CUAC / Clemson University / Clemson University Arthropod Collection	Specify	Michael Caterino
 	FMNH / Field Museum of Natural History / FMNH Insects, Arachnids, and Myriapods	EMu	John Bates, Maureen Turcatel, Petra Sierwald
 	INHS / Illinois Natural History Survey, University of Illinois at Urbana-Champaign / INHS Insect Collection	TaxonWorks	Dmitry A Dmitriev, Matt Yoder
 	MSU / Michigan State University / Albert J. Cook Arthropod Research Collection	SymbSCAN	Anthony Cognato, Sarah Smith
 	MPM / Milwaukee Public Museum / MPM Zoology	EMu	Kat Sullivan, Alyssa Caywood, Christopher Tyrrell, Jennifer Zaspel , Julia Colby

You can interact directly with GloBI through the TPT GloBI webpage.
<https://www.globalbioticinteractions.org/parasitetracker/>

The buttons next to your collection name are clickable and they indicate if:

GloBI has indexed your collection data and it shows up on the GloBI website



A list of all the interaction records in your data



GloBI knows how to find your data



Use and Review Data: Simple Review



reviewId	reviewDate	reviewer	namespace	reviewCom	reviewComment	archiveURI	referenceUrl
d46686a2-cc39-4573-9bdc-2fff27608586	2020-04-29T06:15:41Z	GloBI automated	local	summary	file:///home/travis/build/globalbioticinteractions/ucsb-izc/./		
d46686a2-cc39-4573-9bdc-2fff27608586	2020-04-29T06:15:41Z	GloBI automated	local	summary	1368 interaction(s)		
d46686a2-cc39-4573-9bdc-2fff27608586	2020-04-29T06:15:41Z	GloBI automated	local	summary	0 note(s)		
d46686a2-cc39-4573-9bdc-2fff27608586	2020-04-29T06:15:41Z	GloBI automated	local	summary	1756 info(s)		



Platycotis	http://purl.obolibrary.org/obo/RO_0002437	interactsWith	Sequoia
Cyrtolobus	http://purl.obolibrary.org/obo/RO_0002437	interactsWith	Sequoia
Ceresa	http://purl.obolibrary.org/obo/RO_0002437	interactsWith	Baccharis
Ceresa	http://purl.obolibrary.org/obo/RO_0002437	interactsWith	Avena
Platycotis	http://purl.obolibrary.org/obo/RO_0002437	interactsWith	Quercus agrifolia
Oncopeltus fasciatus	http://purl.obolibrary.org/obo/RO_0002437	interactsWith	Asclepius
Philya	http://purl.obolibrary.org/obo/RO_0002437	interactsWith	Baccharis pilularis
Philya	http://purl.obolibrary.org/obo/RO_0002437	interactsWith	Avena
Oncopeltus fasciatus	http://purl.obolibrary.org/obo/RO_0002437	interactsWith	Asclepias
Cyrtolobus	http://purl.obolibrary.org/obo/RO_0002437	interactsWith	Sequoia
Platycotis	http://purl.obolibrary.org/obo/RO_0002437	interactsWith	Quercus agrifolia
Platycotis	http://purl.obolibrary.org/obo/RO_0002437	interactsWith	Quercus agrifolia
Issidae	http://purl.obolibrary.org/obo/RO_0002437	interactsWith	Acnispion glaber
Agapostemon texanus	http://purl.obolibrary.org/obo/RO_0002622	visitsFlowersOf	Calystegia macrostegia subsp. macrostegia
Meinertellidae	http://purl.obolibrary.org/obo/RO_0002437	interactsWith	Baccharis pilularis
Meinertellidae	http://purl.obolibrary.org/obo/RO_0002437	interactsWith	Avena
Miridae	http://purl.obolibrary.org/obo/RO_0002437	interactsWith	Baccharis pilularis
Miridae	http://purl.obolibrary.org/obo/RO_0002437	interactsWith	Avena sp
Lygus	http://purl.obolibrary.org/obo/RO_0002437	interactsWith	Baccharis salicifolia
Miridae	http://purl.obolibrary.org/obo/RO_0002454	hasHost	Baccharis salicifolia
Miridae	http://purl.obolibrary.org/obo/RO_0002437	interactsWith	Salvia mellifera
Miridae	http://purl.obolibrary.org/obo/RO_0002437	interactsWith	Baccharis salicifolia
Hemiptera	http://purl.obolibrary.org/obo/RO_0002437	interactsWith	Eriogonum

Our Future? Even better reviews and tracking through data publication to help improve data sharing and interpretation

review_summary

distinctReviewCommentCount	type	comment
1374	info	likely describes biotic interaction
15	issue	source taxon name missing
16	info	no biotic interaction detected
1	issue	found unsupported interaction type with name: [centromadia parryi subsp. australis]

Count	interactionTypeNameVerbatim	interactionTypeNameInterpreted
1	In	interactsWith
1305	associated with	interactsWith
2	ex	hasHost
2	inside	interactsWith
3	interactsWith	interactsWith
7	on	adjacentTo
6	under	interactsWith
12	visits	visits
30	visitsFlowersOf	visitsFlowersOf

All of the TPT datasets are archived each reporting period

February 24, 2020

Dataset

Open Access

Terrestrial Parasite Tracker indexed biotic interactions and review summary

<http://doi.org/10.5281/zenodo.3685365>

April 30, 2020

Dataset

Open Access

Terrestrial Parasite Tracker indexed biotic interactions and review summary

<https://doi.org/10.5281/zenodo.3778773>

Webinar: Wednesday, June 10th, 1:00 PM CST

GloBI: <https://www.globalbioticinteractions.org/>

GloBI: [github https://github.com/globalbioticinteractions](https://github.com/globalbioticinteractions)