Understanding Biotic Interaction Data and Natural History Collections

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TPT Data Life Cycle

How can GloBI help share your data?
A biotic interaction is an interaction between 2 organisms.

We know a lot because we have 2 taxon names and a relationship.
Data Life Cycle

Sharing Data

SCAN, VertNet - IPT and Darwin Core, spreadsheets, anything!

TPT Collections
(Start Here)

Data Users
Collection managers, Graduate Students, Ecologists, Evolutionary Biologists, Agencies, NGOs ...many more

GBIF, GloBI, iDigBio
Users interact with the data through these services...

Services obtain datasets from many sources..

Ability to examine across datasets
Only indexes records with biotic interactions

You want all TPT occurrence records?
GloBI

- GloBI indexes lots of data about biotic interactions (over 4 million)
- TPT collection data is combined with other sources (other research and digitization projects, literature, many other taxa, many other sources...)

Every specimen creates a citation in GloBI and is evidence for a biotic interaction.
house mouse louse
(Polyplax serrata)
interacts with... plenty of things!

https://www.globalbioticinteractions.org/
TPT specimen records will add more lines of evidence

**Biotic Interaction**

**Citations**

**Supported by:**


**Refuted by:**

None.
Collection data contains a lot of evidence on labels of biotic interactions

Not filtered for vertebrate parasites*
Many challenges:

Old names
Bad handwriting
Volunteer and unskilled labor
Curation challenges
Incomplete information
Complex data!
We do not know what interaction terms we will encounter along the way.
Biotically Interacts With

According to GloBI
Feb. 22, 2020

on = interactsWith
http://purl.obolibrary.org/obo/RO_0002437

found on = interactsWith
http://purl.obolibrary.org/obo/RO_0002437

parasite of = parasiteOf
http://purl.obolibrary.org/obo/RO_0002444

has host = hasHost
http://purl.obolibrary.org/obo/RO_0002454

ex = hasHost
http://purl.obolibrary.org/obo/RO_0002454

Interaction from collection labels
Feb. 22, 2020

on

found on

parasite of

Host

ex
According to TPT? (Future date)

GloBI allows us to learn from our data

**Biotically Interacts With**

foundOn (preferred term)
“specimen found in contact with surface of another organism”
synonymous_with on

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

hasHost (preferred term)

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

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

synonymous_with ex

subproperty_of InteractsWith
http://purl.obolibrary.org/obo/RO_0002437
Please share data quickly

Interested in your terms

Biotically Interacts With
Important Links

1. Parasite Tracker and GloBI information page [https://www.globalbioticinteractions.org/parasitetracker/](https://www.globalbioticinteractions.org/parasitetracker/)

How can GloBI help share your data?

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<tr>
<th>status</th>
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<th>contact</th>
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<tr>
<td>review</td>
<td>BPBM / Bishop Museum / Gressitt Entomology Collection</td>
<td>Specify</td>
<td>Jim Boone, Neal Evenhuis</td>
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<td>index</td>
<td>BYU / Brigham Young University Arthropod Museum / Monte L. Bean Museum of Life Science Museum Insects and Arachnids</td>
<td>SymbSCAN</td>
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