



How quickly can new accessions generate citations of a collection?

A collection manager's perspective

Tommy McElrath, Illinois Natural History Survey, Champaign IL, 61820, USA



@INHSInsects



@monotomidae

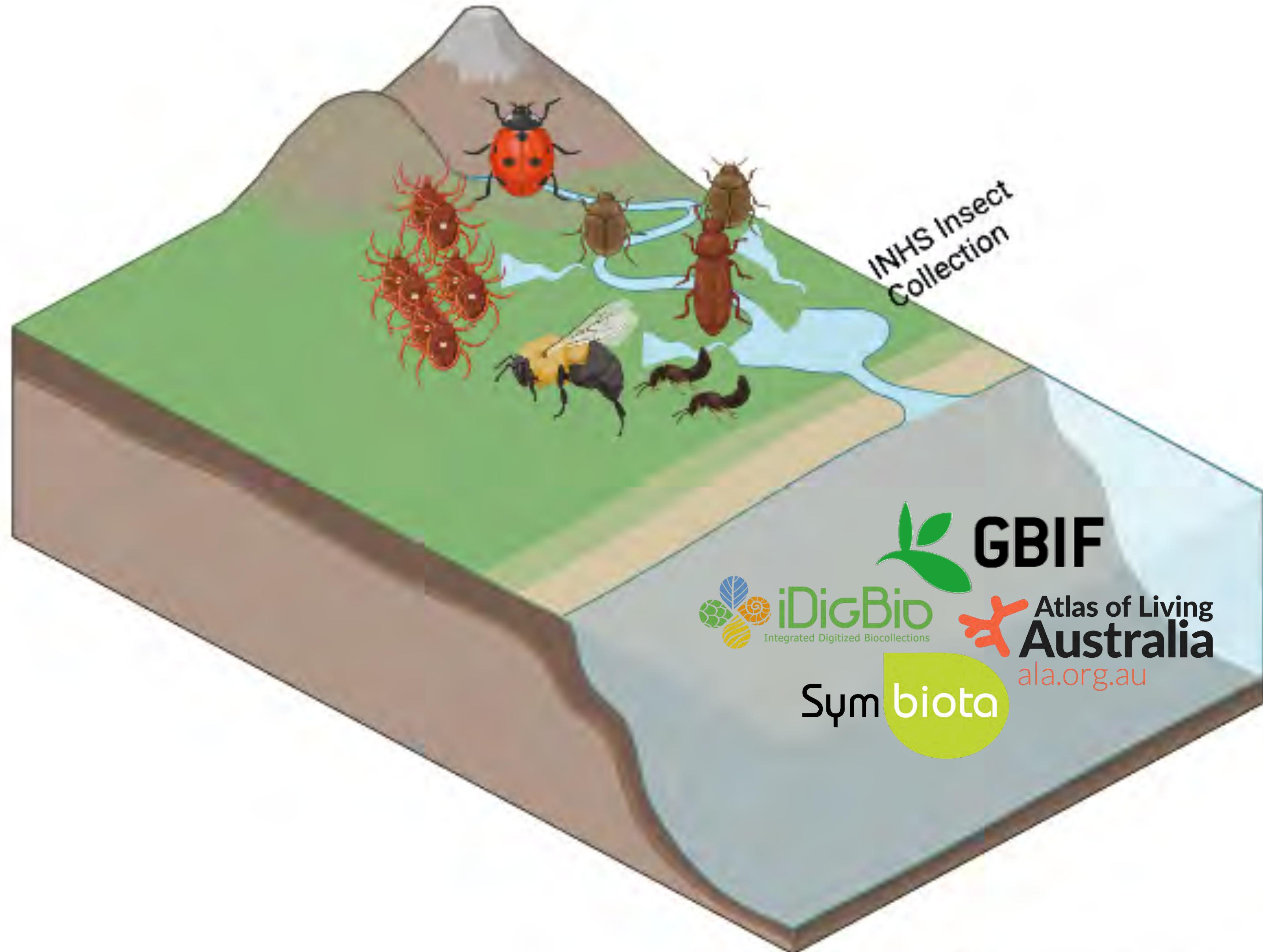


0000-0003-0390-4227



Social Media
Coverage

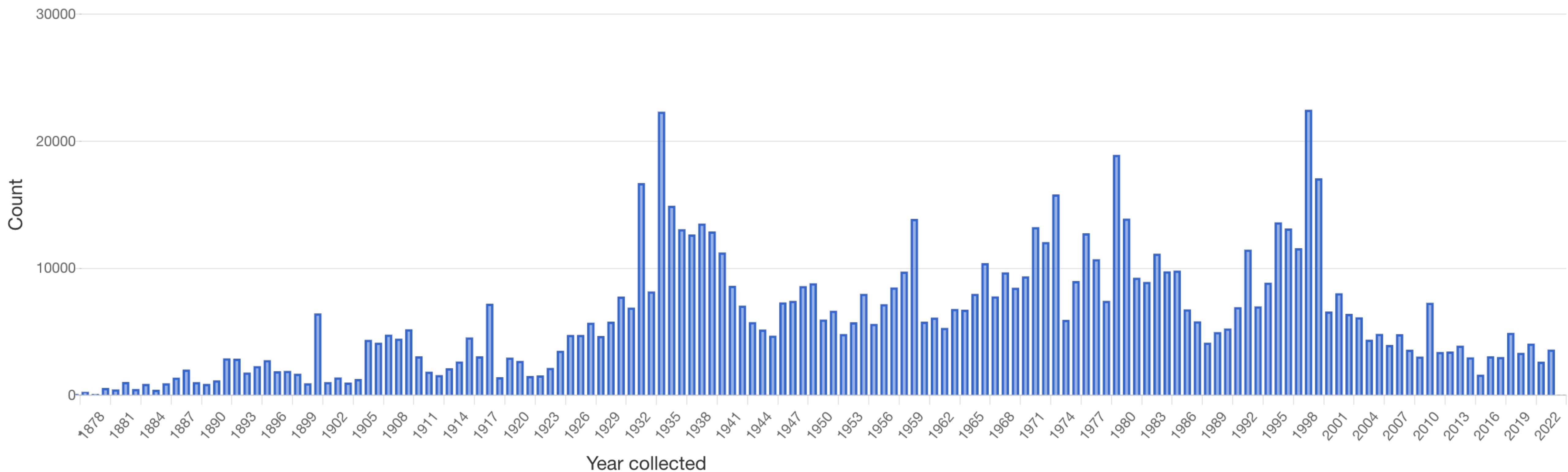
Before I try to answer that question ...



INHS Insect Collection - our watershed

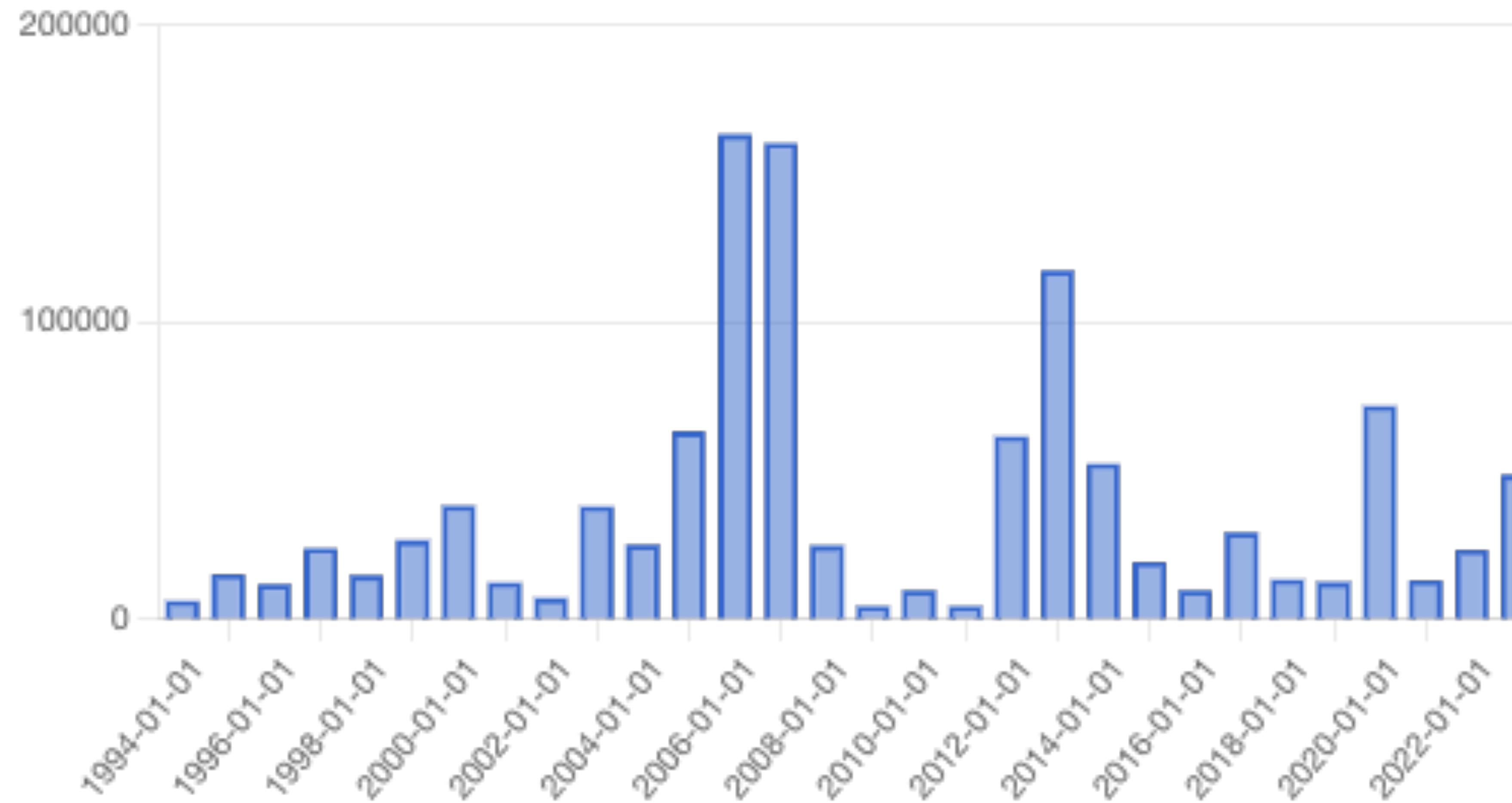
1,133,456 collection objects (digitized)

2,756,380 specimens (digitized)



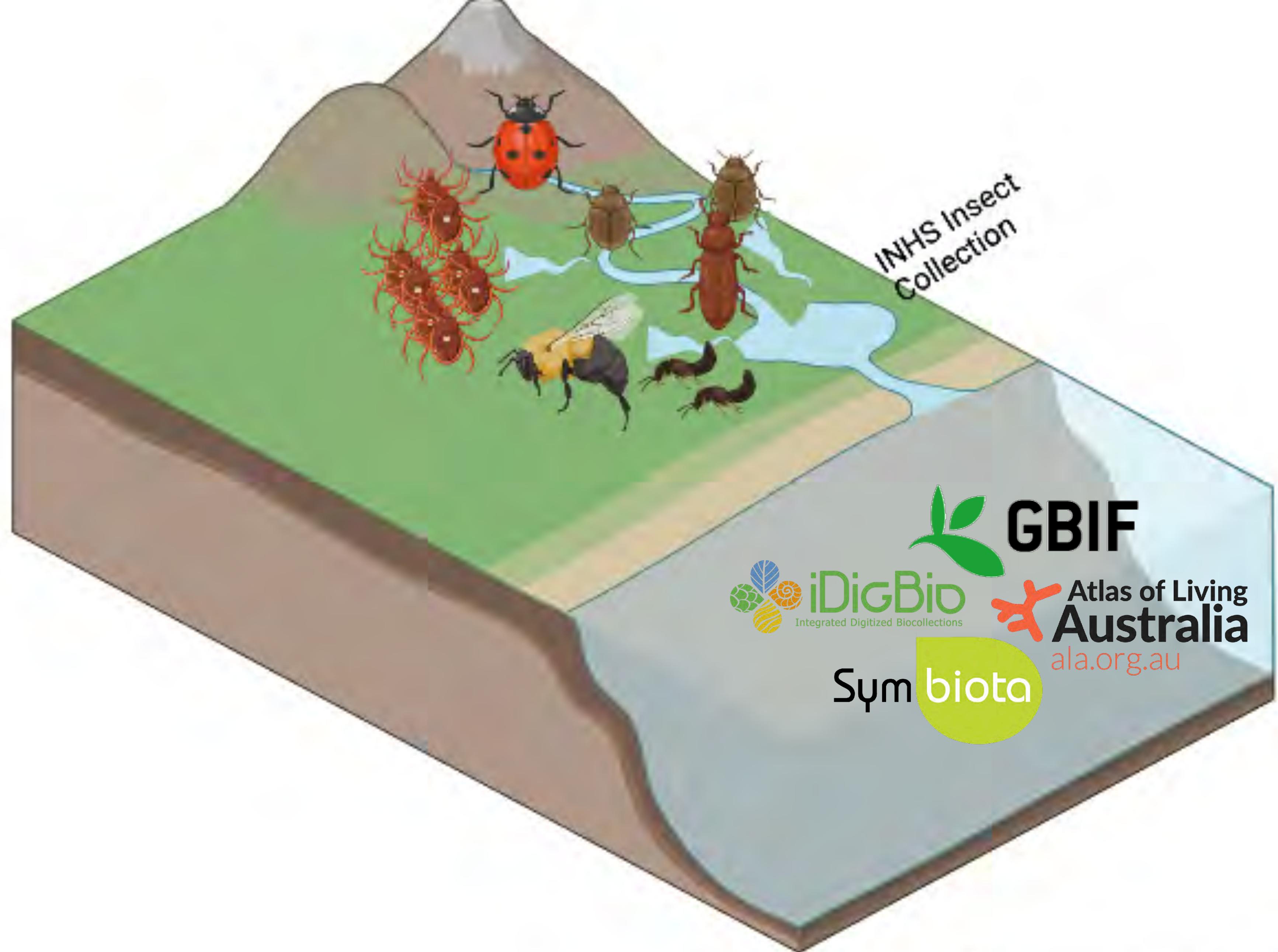
InHS Insect Collection - the streams

Collection objects created by all project members



Big picture





Dams/bottlenecks - Part 1

Created in BioRender.com 

Original Paper | [Published: 19 August 2019](#)

Growing or dormant season burns: the effects of burn season on bee and plant communities

[Brenna L. Decker](#)  & [Alexandra N. Harmon-Threatt](#)

[Biodiversity and Conservation](#) **28**, 3621–3631 (2019) | [Cite this article](#)

1316 Accesses | **16** Citations | **14** Altmetric | [Metrics](#)

Dams/bottlenecks - Part 1

TaxonWorks

What tools do we have right now?



TaxonWorks: Tools - removing stream debris

Digitizing specimens faster (what collections people think about)



TaxonWorks: Tools - removing stream debris

Digitizing specimens faster (what collections people think about)

TaxonWorks v0.32.3 Issues

INHS Insect Collection

Filter staged images

Filter Append History

Back Next 1689 1690 1691 1692 1693 1694 ... « First Last » 84600 - 84650 of 84663 records. 50

Housekeeping —none—

Target Both Created at Updated at

Date range Start date: End date: mm / dd / yyyy mm / dd / yyyy Now

Local Identifiers Both With Without

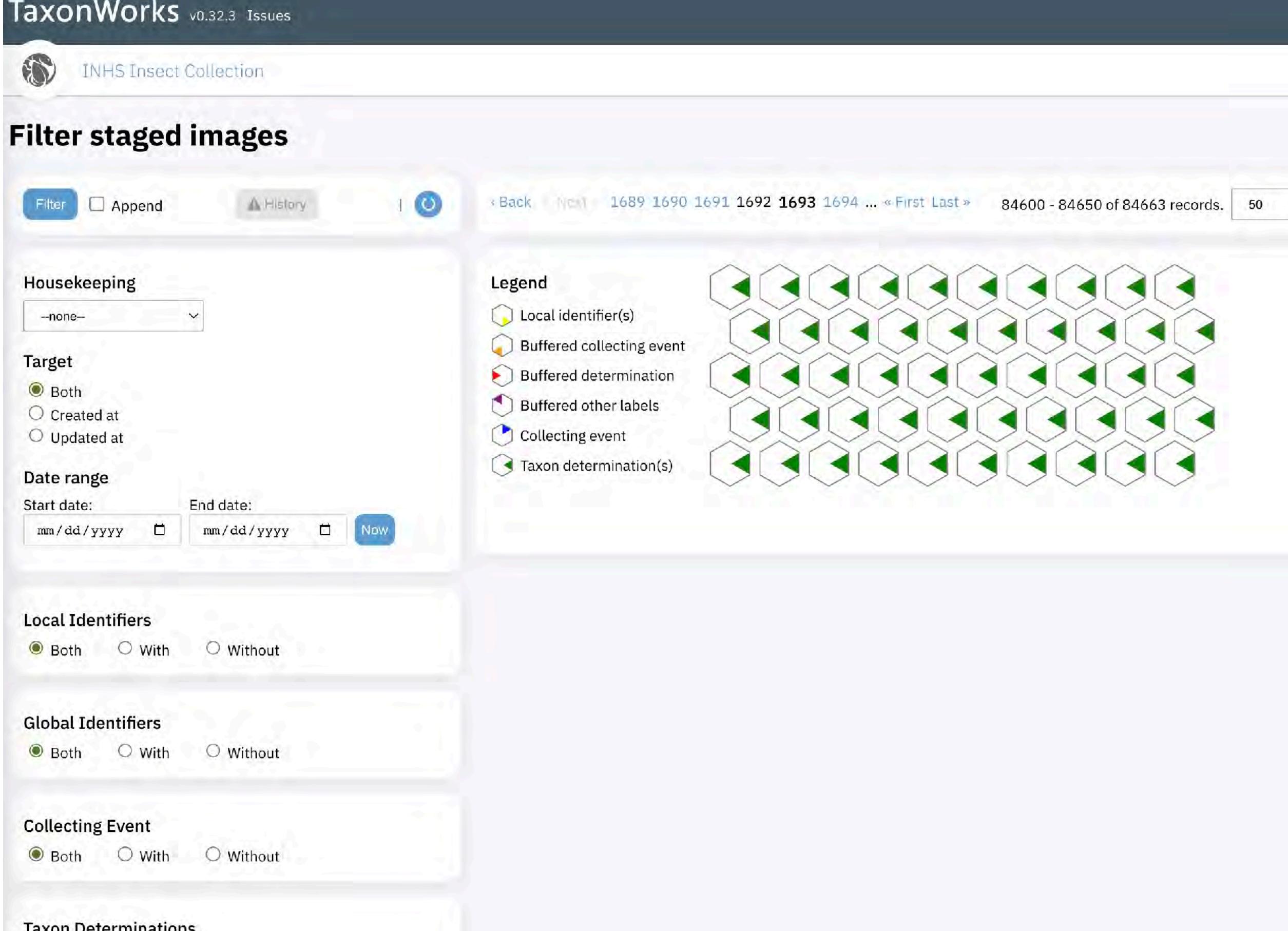
Global Identifiers Both With Without

Collecting Event Both With Without

Taxon Determinations

Legend

- Local identifier(s)
- Buffered collecting event
- Buffered determination
- Buffered other labels
- Collecting event
- Taxon determination(s)



TaxonWorks: Tools - removing stream debris

Import data faster

Created imports

| | | |
|------------------------|-----------------------------------|--|
| montelongo g... | Download original | |
| DwC-A Occurrences | | |
| Status: Ready | | |
| Imported | 16 | |
| Ready | 0 | |
| NotReady | 0 | |
| Errored | 0 | |
| Failed | 0 | |
| Unsupported | 0 | |

| | | |
|----------------------|-----------------------------------|--|
| ticks | Download original | |
| DwC-A Occurrences | | |
| Status: Ready | | |
| Imported | 43 | |
| Ready | 0 | |
| NotReady | 0 | |
| Errored | 2 | |
| Failed | 0 | |
| Unsupported | 0 | |

| | | |
|------------------------|-----------------------------------|--|
| morgan bees ... | Download original | |
| DwC-A Occurrences | | |
| Status: Ready | | |
| Imported | 317 | |
| Ready | 0 | |
| NotReady | 0 | |
| Errored | 0 | |
| Failed | 0 | |
| Unsupported | 0 | |

| | | |
|------------------------|-----------------------------------|--|
| Decker Burn ... | Download original | |
| DwC-A Occurrences | | |
| Status: Ready | | |
| Imported | 2134 | |
| Ready | 0 | |
| NotReady | 0 | |
| Errored | 29 | |
| Failed | 0 | |
| Unsupported | 0 | |

TaxonWorks v0.32.3 Issues

INHS Insect Collection

DwC-A Workbench

Decker Burn Dataset
2163 records. [Reset filters](#)

Imported: **2134** Ready: **0** NotReady: **0** Errored: **29** Failed: **0** Unsupported: **0**

[Download table](#) [Settings](#)

Back Next - 1

| Options | Status | occurrenceID | institutionID | institutionCode | collectionCode | catalogNumber | datasetName | basisOfRecord | nomenclature |
|------------------------|----------|-------------------------------|-----------------------------------------|-----------------|-------------------|---------------|----------------|-------------------|--------------|
| Browse | Imported | INHS Insect Collection 825401 | http://grbio.org/institution/illinoi... | INHS | Insect Collection | 825401 | DeckerBurnData | PreservedSpecimen | ICZN |
| Browse | Imported | INHS Insect Collection 826096 | http://grbio.org/institution/illinoi... | INHS | Insect Collection | 826096 | DeckerBurnData | PreservedSpecimen | ICZN |
| Browse | Imported | INHS Insect Collection 826097 | http://grbio.org/institution/illinoi... | INHS | Insect Collection | 826097 | DeckerBurnData | PreservedSpecimen | ICZN |
| Browse | Imported | INHS Insect Collection 826099 | http://grbio.org/institution/illinoi... | INHS | Insect Collection | 826099 | DeckerBurnData | PreservedSpecimen | ICZN |
| Browse | Imported | INHS Insect Collection 826100 | http://grbio.org/institution/illinoi... | INHS | Insect Collection | 826100 | DeckerBurnData | PreservedSpecimen | ICZN |
| Browse | Imported | INHS Insect Collection 825910 | http://grbio.org/institution/illinoi... | INHS | Insect Collection | 825910 | DeckerBurnData | PreservedSpecimen | ICZN |
| Browse | Imported | INHS Insect Collection 825911 | http://grbio.org/institution/illinoi... | INHS | Insect Collection | 825911 | DeckerBurnData | PreservedSpecimen | ICZN |
| Browse | Imported | INHS Insect Collection 825912 | http://grbio.org/institution/illinoi... | INHS | Insect Collection | 825912 | DeckerBurnData | PreservedSpecimen | ICZN |
| Browse | Imported | INHS Insect Collection 825913 | http://grbio.org/institution/illinoi... | INHS | Insect Collection | 825913 | DeckerBurnData | PreservedSpecimen | ICZN |
| Browse | Imported | INHS Insect Collection 826145 | http://grbio.org/institution/illinoi... | INHS | Insect Collection | 826145 | DeckerBurnData | PreservedSpecimen | ICZN |
| Browse | Imported | INHS Insect Collection 827345 | http://grbio.org/institution/illinoi... | INHS | Insect Collection | 827345 | DeckerBurnData | PreservedSpecimen | ICZN |
| Browse | Imported | INHS Insect Collection 825496 | http://grbio.org/institution/illinoi... | INHS | Insect Collection | 825496 | DeckerBurnData | PreservedSpecimen | ICZN |

TaxonWorks: Tools - increasing river size to the delta

Export data faster

TaxonWorks v0.32.3 Issues Project Account Sign out Tommy McElrath

INHS Insect Collection

DwC Dashboard

Download Darwin Core Archive
Includes only records stored as DwC occurrences.

All (1115731)

Past
Day (537) Week (3961) Month (18075) Year (1093158)

Create DwC Archive by filtered collection object result

DwC occurrence record freshness

| Category | Freshness Category | Count |
|--------------------|--------------------|-----------|
| Index | Never | 0 |
| | One day | 1,000,000 |
| Collection objects | Never | 0 |
| | One day | 1,000,000 |

DwC occurrence record version

Total collection objects

| Date | Count |
|------------|-----------|
| 2023-04-03 | 1,000,000 |

Recently created DwC Archives

| Created at | Expires | Total records | Times downloaded | Is public | Action |
|--------------------------|--------------------------|---------------|------------------|--------------------------|---------------------------|
| 2023-05-11T15:08:41.620Z | 2023-05-13T15:08:41.588Z | 127 | 0 | <input type="checkbox"/> | <button>Download</button> |
| 2023-05-10T17:18:29.501Z | 2023-05-12T17:18:29.471Z | 10 | 0 | <input type="checkbox"/> | <button>Download</button> |

Health

| | |
|--------------------------------------------------------------------|-------------------------------------|
| Kingdom rank present | <input checked="" type="checkbox"/> |
| DwcOccurrence records without occurrenceID (on collection objects) | 0 |
| Total collection objects | 1111733 |
| Collection objects without UUids | 1 |
| Collection objects without Dwcoccurrence records | 0 |

Collector global ids

With Without

Collector

- Alrutz, Robert William
- A Philips, Christopher
- Ashmead, William Harris
- Balduf, Walter Valentine
- Beatty, Joseph A.
- Bequaert, Joseph Charles

TaxonWorks: Tools - trace elements

Linkages → DarwinCore

TaxonWorks v0.32.3 Issues Project Account Sign out Tommy McElrath

INHS Insect Collection

DwC Dashboard

Download Darwin Core Archive
Includes only records stored as DwC occurrences.

All (1115731)
Past Day (537) Week (3961) Month (18075) Year (1093158)
Create DwC Archive by filtered collection object result

DwC occurrence record freshness

| Category | Freshness Category | Count |
|--------------------|--------------------|------------|
| Index | Never | 0 |
| | One day | ~1,000,000 |
| Collection objects | Never | 0 |
| | One day | ~1,000,000 |

DwC occurrence record version

Total collection objects

| Date | Count |
|------------|------------|
| 2021-10-12 | 0 |
| 2021-10-15 | 0 |
| 2021-11-04 | 0 |
| 2021-11-08 | 0 |
| 2021-11-30 | 0 |
| 2022-01-21 | 0 |
| 2022-03-31 | 0 |
| 2022-04-28 | 0 |
| 2023-04-03 | ~1,150,000 |
| 2023-05-12 | 0 |

Recently created DwC Archives

| Created at | Expires | Total records | Times downloaded | Is public | Action |
|--------------------------|--------------------------|---------------|------------------|--------------------------|--------------------------|
| 2023-05-11T15:08:41.620Z | 2023-05-13T15:08:41.588Z | 127 | 0 | <input type="checkbox"/> | Download |
| 2023-05-10T17:18:29.501Z | 2023-05-12T17:18:29.471Z | 10 | 0 | <input type="checkbox"/> | Download |

Health

| | |
|--------------------------------------------------------------------|---------|
| Kingdom rank present | ✓ |
| DwcOccurrence records without occurrenceID (on collection objects) | 0 |
| Total collection objects | 1111733 |
| Collection objects without UUids | 1 |
| Collection objects without Dwcoccurrence records | 0 |

Collector global ids

| With | Without |
|--------------------------|---------|
| Collector | |
| Alrutz, Robert William | |
| A Philips, Christopher | |
| Ashmead, William Harris | |
| Balduf, Walter Valentine | |
| Beatty, Joseph A. | |
| Bequaert, Joseph Charles | |

TaxonWorks: Tools - trace elements

Linkages → Global Identifiers

INHS Insect Collection 906388 det. *Cercyon praetextatus* (Say, 1825) ✓ by Archangelsky [Lot] CollectionObject

object

The diagram consists of a central green circle labeled 'Identifiers' with a blue outline, surrounded by eight segments. The segments are: 'Notes' (notepad icon), 'Verifiers' (thumb-up icon), 'Tags' (tag icon), 'Citations' (quotation mark icon), 'Depictions' (camera icon), 'Confidences' (checkmark icon), 'Protocol relationships' (list icon), and 'Data attributes' (document icon). The segments are arranged clockwise starting from the top-left.

Identifiers

| Identifier | Type | Actions |
|--------------------------------------|---------------------------------------------------|-----------------------------------------|
| INHS Insect Collection 906388 | Identifier::Local::CatalogNumber | Delete |
| bfbbf3ea-fe84-4073-be43-beab71a9aee3 | Identifier::Global::Uuid::TaxonworksDwcOccurrence | Delete |

TaxonWorks: Tools - trace elements

Linkages → Global Identifiers

| Darwin core | | | | | |
|-------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|--|
| Term | Source (TaxonWorks) | Original (GBIF) | Interpreted (GBIF) | Remarks | |
| associatedMedia | https://sfg.taxonworks.org/api/v1/images/7eda965762fa28b0ed3a0f7ec24dd10f | https://sfg.taxonworks.org/api/v1/images/7eda965762fa28b0ed3a0f7ec24dd10f | | Excluded | |
| basisOfRecord | PreservedSpecimen | PreservedSpecimen | PRESERVED_SPECIMEN | Altered | |
| catalogNumber | INHS Insect Collection 868734 | INHS Insect Collection 868734 | INHS Insect Collection 868734 | INHS Insect Collection 868734 | |
| class | | Arachnida | Arachnida | | |
| coordinateUncertaintyInMeters | 10.0 | 10.0 | 10 | | |
| country | United States | United States | United States of America | Altered | |
| county | Piatt | Piatt | Piatt | | |
| dateIdentified | 2018 | 2018 | 2018-01-01T00:00:00 | Altered | |
| day | 11 | 11 | 11 | | |
| decimalLatitude | 39.998473 | 39.998473 | 39.998473 | | |
| decimalLongitude | -88.636857 | -88.636857 | -88.636857 | | |
| dwcClass | Arachnida | | | | |
| endDayOfYear | 131 | 131 | 131 | | |
| eventDate | 2018-05-11/2018-05-11 | 2018-05-11/2018-05-11 | 2018-05-11T00:00:00 | Altered | |
| family | Ixodidae | Ixodidae | Ixodidae | | |
| footprintWKT | | POINT Z (-88.636857 39.998473 0) | POINT Z (-88.636857 39.998473 0) | | |
| genus | Ixodes | Ixodes | Ixodes | | |
| georeferenceProtocol | A geospatial point translated from verbatim values recorded on human-readable media (e.g. paper specimen label, field notebook). | A geospatial point translated from verbatim values recorded on human-readable media (e.g. paper specimen label, field notebook). | A geospatial point translated from verbatim values recorded on human-readable media (e.g. paper specimen label, field notebook). | A geospatial point translated from verbatim values recorded on human-readable media (e.g. paper specimen label, field notebook). | |

TaxonWorks: Tools - making more clouds

Linkages → GBIFFERENCE

| Original (GBIF) | Interpreted (GBIF) | Remarks |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|----------|
| https://sfg.taxonworks.org/api/v1/images/7eda965762fa28b0ed3a0f7ec24dd10f | | Excluded |
| PreservedSpecimen | PRESERVED_SPECIMEN | Altered |
| INHS Insect Collection 868734 | INHS Insect Collection 868734 | |
| Arachnida | Arachnida | |
| 10.0 | 10 | |
| United States | United States of America | Altered |
| Piatt | Piatt | |
| 2018 | 2018-01-01T00:00:00 | Altered |

TaxonWorks: Tools - making more clouds

Linkages → Global Identifiers

Identifiers

- Q26494089
- <https://orcid.org/0000-0003-0390-4227>

Data attributes

- Email: tcm@illinois.edu
- Address: Illinois Natural History Survey; Prairie Research Institute; 1816 South Oak Street, MC 652; Champaign, IL 61820
- Honorific: Dr.
- PeopleID: 1672
- Country: U.S.A.

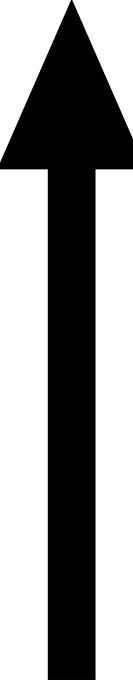
Alternate values

- "T." alternate spelling of "Thomas Christian"
- "Thomas C." alternate spelling of "Thomas Christian"
- "Thomas" alternate spelling of "Thomas Christian"
- "TC" abbreviation of "Thomas Christian"
- "T.C." abbreviation of "Thomas Christian"
- "Tommy" alternate spelling of "Thomas Christian"
- "T.C." alternate spelling of "Thomas Christian"

Small picture

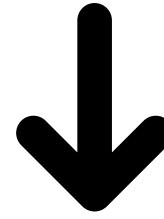


GUID: 2396f952-69ab-4bea-9a4b-22e96fecad4f



USA: IL: Piatt Co: Willow Branch: Allerton Park:
nr. Sangamon Rv.: 39.998473° -88.636857° ±15m;
ex. pant leg; 11MAY2018 TC McElrath/DA Hennen

Ixodes
scapularis 1♂
det ED Struckhoff 2020



Emily Struckhoff

ED Struckhoff; Emily Dolores Struckhoff; E Struckhoff

<https://orcid.org/0000-0002-3806-9770>

Help Attribute Refresh stats Refresh

Thomas McElrath

Thomas C. McElrath; Tommy McElrath; TC McElrath; T McElrath;
Thomas McElrath

Taxonomist

<https://orcid.org/0000-0003-0390-4227>

Illinois Natural History Survey, Champaign, IL, US

United States



Derek Hennen

Derek Alan Hennen; D. A. Hennen; Derek A Hennen; D. Hennen
Diplopoda, Chilopoda, Millipedes, Centipedes, Entomology

<https://orcid.org/0000-0001-7005-1151>

United States

GUID: 2396f952-69ab-4bea-9a4b-22e96fecad4f

USA: IL: Piatt Co: Willow Branch: Allerton Park:
nr. Sangamon Rv.: 39.998473° -88.636857° ±15m;
ex. pant leg; 11MAY2018 TC McElrath/DA Hennen

Ixodes
scapularis 1♂
det ED Struckhoff 2020

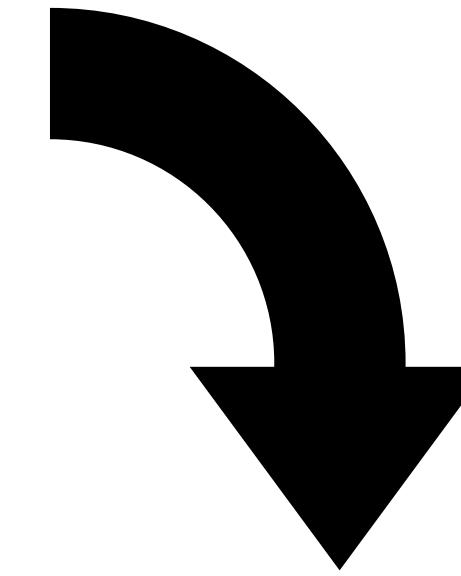
TNHS
Insect Collection
868,734



TaxonWorks
Image Importer &
Transcriber Tool



TaxonWorks
DWC Exporter



OCCURRENCE | 11 MAY 2018

Ixodes scapularis Say, 1821

Black Legged Tick In English Collected in United States of America

Animalia > Arthropoda > Arachnida > Ixodida > Ixodidae > *Ixodes*

Collected By

Thomas McElrath  <https://orcid.org/0000-0003-0390-4227>

Derek Hennen  <https://orcid.org/0000-0001-7005-1151>



GUID: 2396f952-69ab-4bea-9a4b-22e96fecad4f

USA: IL: Piatt Co: Willow Branch: Allerton Park:
nr. Sangamon Rv.: 39.998473° -88.636857° ±15m;
ex. pant leg; 11MAY2018 TC McElrath/DA Hennen

Ixodes
scapularis 1♂
det ED Struckhoff 2020

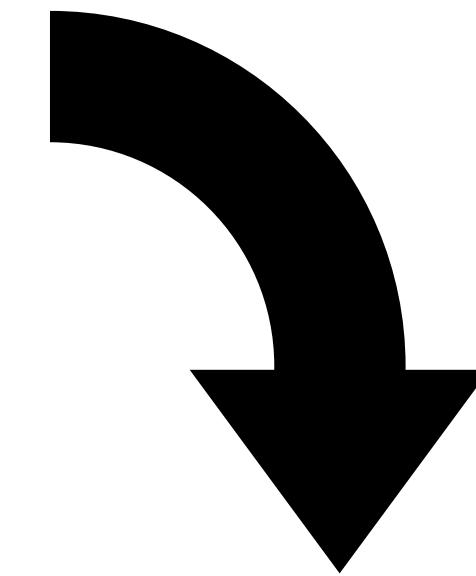
TNHS
Insect Collection
868,734



TaxonWorks
Image Importer &
Transcriber Tool



TaxonWorks
DWC Exporter



OCCURRENCE | 11 MAY 2018

Ixodes scapularis Say, 1821

Black Legged Tick In English Collected in United States of America

Animalia > Arthropoda > Arachnida > Ixodida > Ixodidae > *Ixodes*

Collected By

Thomas McElrath <https://orcid.org/0000-0003-0390-4227>

Derek Hennen <https://orcid.org/0000-0001-7005-1151>

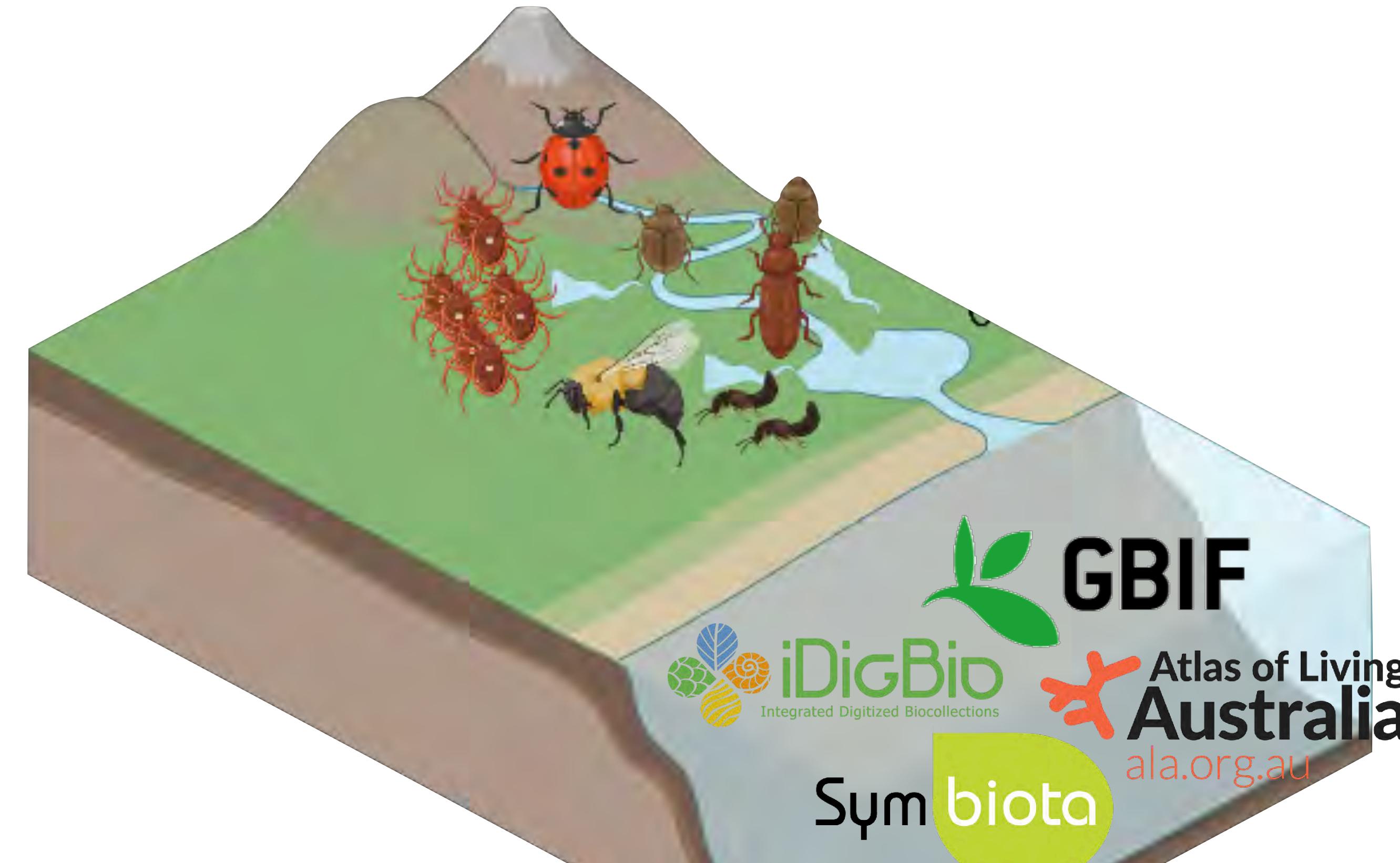
As far as collections boat travels



Cleaning the river

Getting to the ocean

- Importers, importers, importers
- Integrate G UID management & creation into software
- More tools to link persistent identifiers with objects
 - 50-100 people w/GUIDS
 - 1000s without
- Make dataset -> aggregator workflow more seamless (1 button, not multiple)
- Data Validation & Cleaning tools



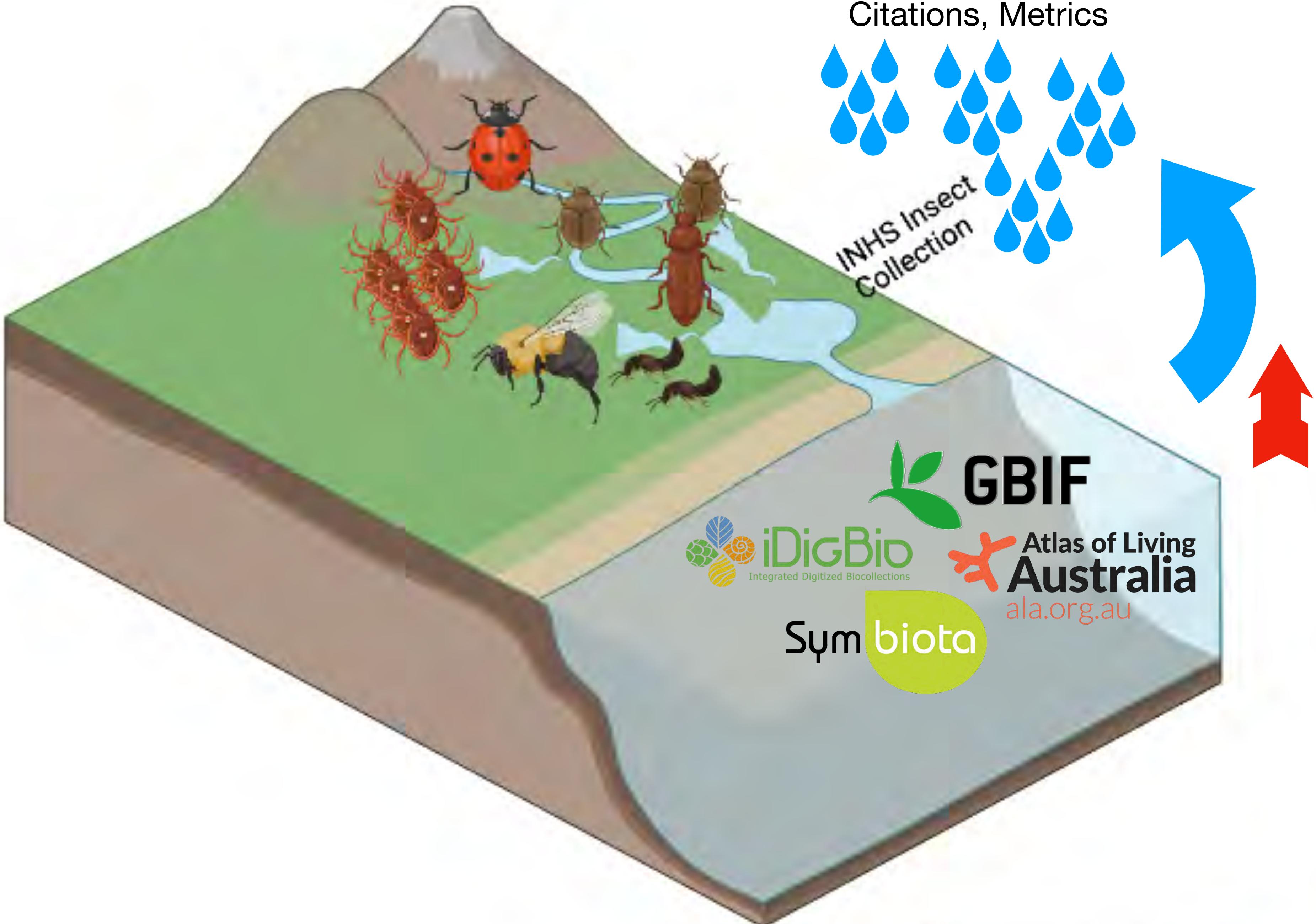
Original Paper | Published: 19 August 2019

Growing or dormant season burns: the effects of burn season on bee and plant communities

Brenna L. Decker & Alexandra N. Harmon-Threatt

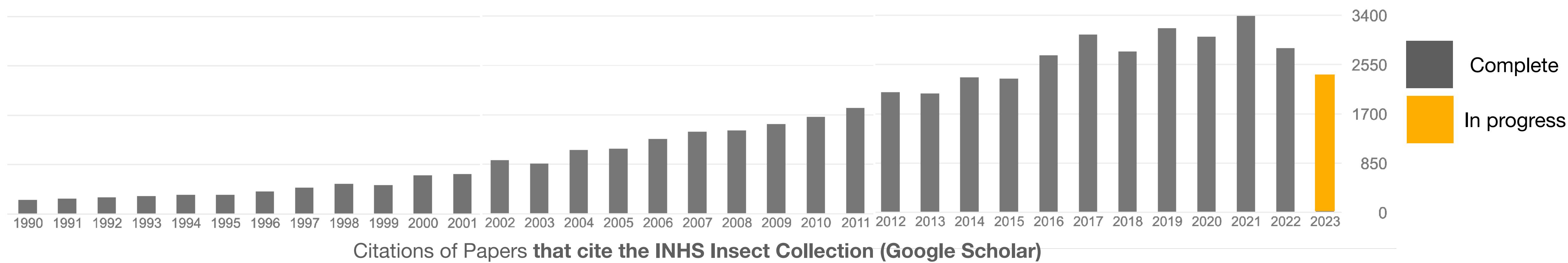
Biodiversity and Conservation 28, 3621–3631 (2019) | Cite this article

1316 Accesses | 16 Citations | 14 Altmetric | Metrics



How to follow the rain?

INHS Insect Collection - the rain



Collected



Databased/
sent for loan

559810

Buffered

Collecting event

Vancouver B.C.
29.4.6
K.F. Auden
Collection

Determinations

Araeopus
monachus
Lec.
Araeopidius
monachus Lec.
Det. K.F. Auden.

Returned/reidentified,
Updated on GBIF



25MAR2022

Image % Univ. of Alaska Museum

29APR1906

10NOV2021

Author emails
copy/published



Article

A Review of *Araeopidius monachus* (LeConte, 1874) (Coleoptera: Dryopoidea: Ptilodactylidae), with Main Emphasis on Its Biology and Ecology

William D. Shepard^{1,*} and Robin Kundrata^{2,*}



24JAN2023

Citations, Metrics



INHS Insect Collection - the rain

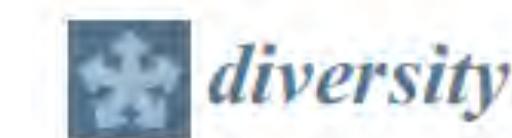
- Time from digitization to citation
 - 1 year, 2 months!
 - Required physical loan
 - Ignored local identifiers, GBIF DOI
- Specimen used previously?
- Can't track individual specimens
- Limited by loan process/researcher time
- 9 such papers in 2022
 - Citations will increase, but indirectly
 - Could be improved if researchers cite general dataset GBIF DOI directly

Collected



Image % Univ. of Alaska Museum

29APR1906



Article

A Review of *Araeopidius monachus* (LeConte, 1874) (Coleoptera: Dryopoidea: Ptilodactylidae), with Main Emphasis on Its Biology and Ecology

William D. Shepard ^{1,*} and Robin Kundrata ^{2,*} 

INHS Insect Collection - the rain



Query: dataset ID

1 Record
(already found
by GBIF)



Query:
INHS [https://
biocoll.inhs.illinois.edu/portal](https://biocoll.inhs.illinois.edu/portal)

9 records, only 1
insect collection
record

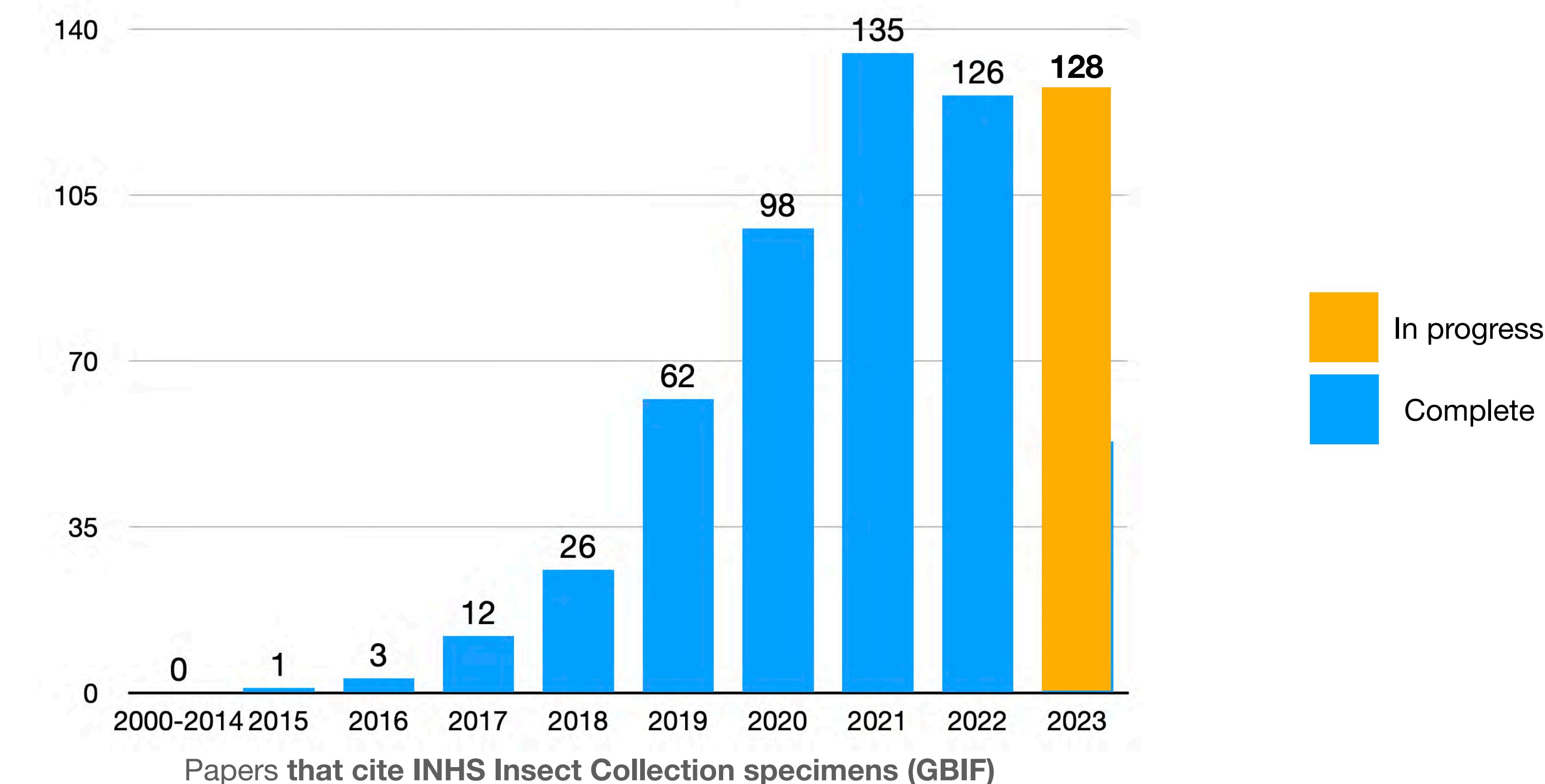


Query: scan-bugs.org INHS

2 non-GBIF
tracked insect
collection records

Manual or Google Scholar tracked

INHS Insect Collection - the rain



INHS Insect Collection - the rain



Thomas McElrath

Thomas C. McElrath; Tommy McElrath; TC McElrath; T McElrath;
Thomas McElrath
Taxonomist

[ID](https://orcid.org/0000-0003-0390-4227) <https://orcid.org/0000-0003-0390-4227>
 [Illinois Natural History Survey, Champaign, IL, US](#)
 [United States](#)

[Public Profile](#) [Refresh stats](#) [Refresh](#) [Settings & Integrations](#)

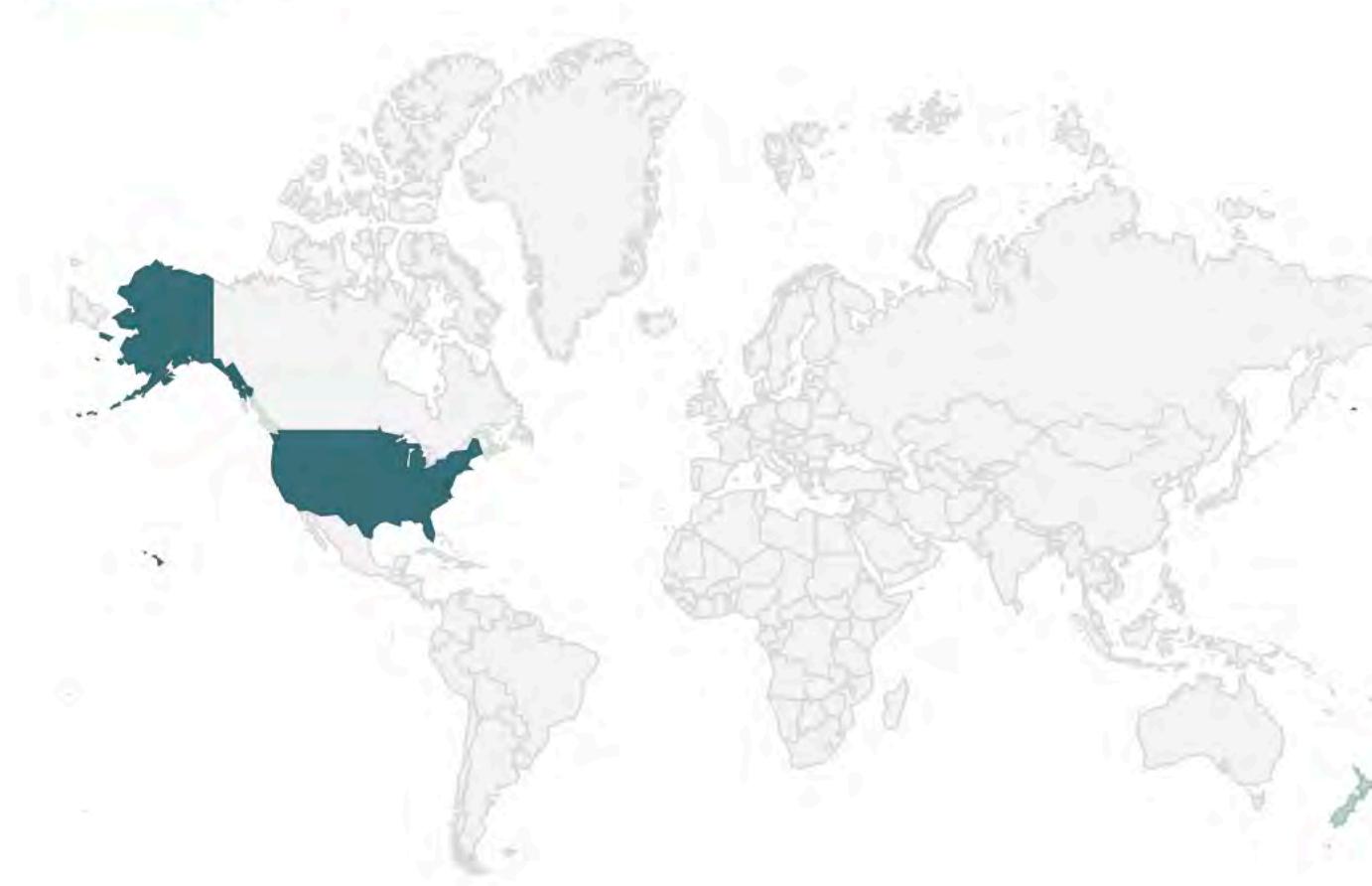
Overview Specimens 8 People Helped Science Enabled

3,841 specimens collected from at least 2 countries
10,822 specimens identified from at least 60 countries
43,326 specimens attributed to 23 people
37 specimens used in 9 works

Progress 99%

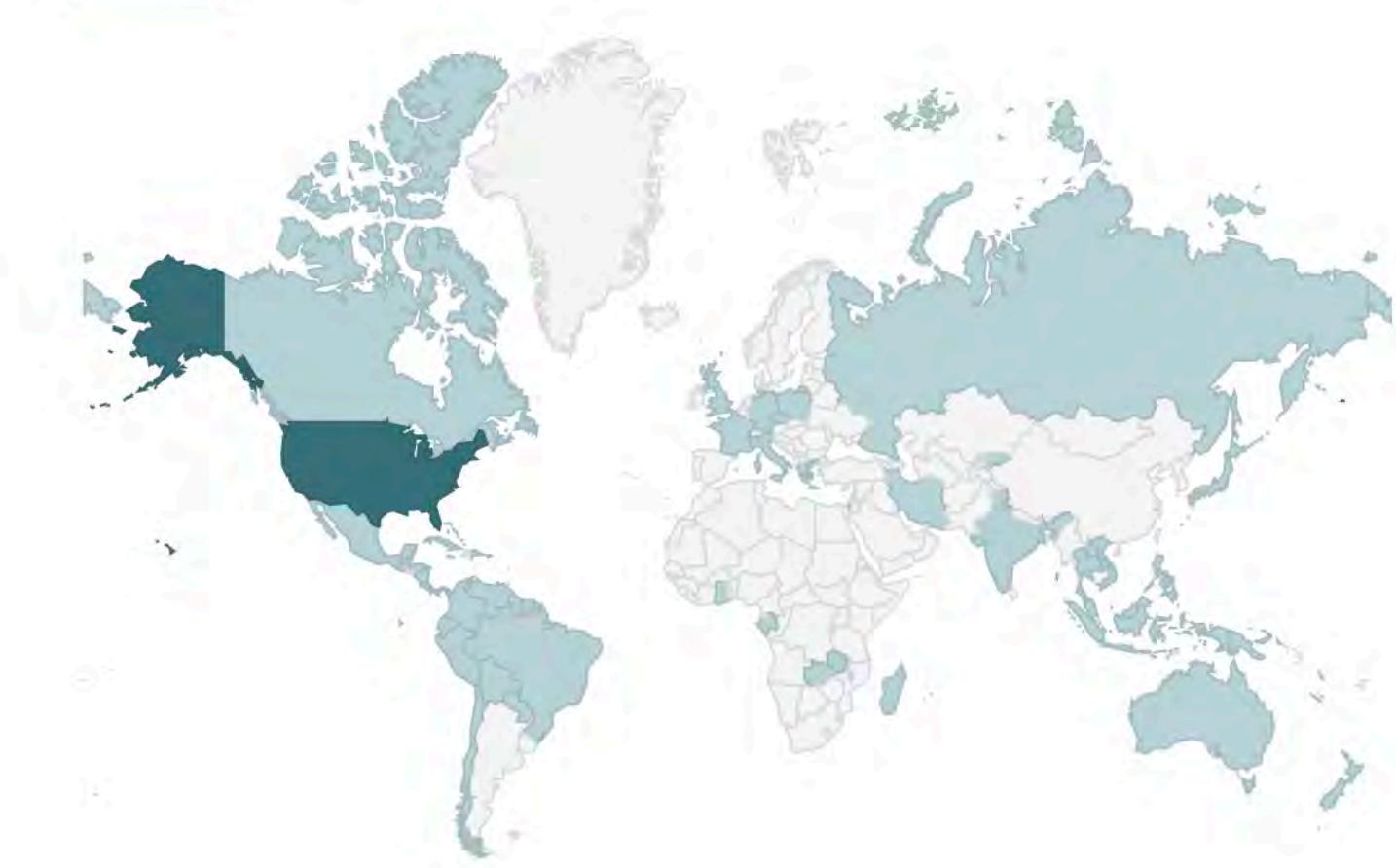
Collected From

[Map](#) [List](#)



Identified From

[Map](#) [List](#)



The screenshot shows a user profile for Thomas McElrath on iNaturalist. At the top right, there is a green circular icon with a white lightning bolt symbol. Below it is a small thumbnail image of a landscape. The main profile area features a large green header with the name "Thomas McElrath". Underneath, there is a list of names (Thomas C. McElrath; Tommy McElrath; TC McElrath; T McElrath) and the title "Taxonomist". Below this is a row of links: "Public Profile", "Refresh stats", "Refresh ID", and "Settings & Integrations".

The navigation bar at the top includes tabs for "Overview", "Specimens" (with a count of 8), "People Helped", and "Science Enabled". The "Science Enabled" tab is highlighted with a red box.

A summary box displays statistics: 3,841 specimens collected from at least 2 countries, 10,822 specimens identified from at least 60 countries, 43,326 specimens attributed to 23 people, and 37 specimens used in 9 works. To the right, a progress bar shows "99%".

Two world maps are shown: one for "Collected From" and one for "Identified From", both highlighting the United States in dark blue.

Below the main profile, there is a secondary section for "Thomas McElrath" with a "Choose" button followed by "collected", "identified", or "Both". A "CSV" download link is also present.

The "Specimens Used In" section lists a publication: Kopsco, H. L., P. Gronemeyer, N. Mateus-Pinilla, and R. L. Smith. 2023. Current and Future Habitat Suitability Models for Four Ticks of Medical Concern in Illinois, USA. *Insects* 14: 213. <https://doi.org/10.3390/insects14030213>

The "Bulk Assignment" table has columns for "Scientific Name", "Collected By", "Identified By", "Date Collected", "Date Identified", "Institution", "Catalog Number", "Type Status", and "Basis Of Record". An example row is shown for *Ixodes scapularis* Say, 1821, collected by McElrath, Thomas Christian | Hennen, Derek, identified by McElrath, Thomas Christian | Hennen, Derek, on 2018-05-11/2018-05-11, 2018, at INHS, catalog number INHS Insect Collection 868734, type PRESERVED_SPECIMEN, basis Not me.

Current and Future Habitat Suitability Models for Four Ticks of Medical Concern in Illinois, USA

by  Heather L. Kopsco ^{1,*} ,  Peg Gronemeyer ²,  Nohra Mateus-Pinilla ^{1,2}  and  Rebecca L. Smith ^{1,3} 

¹ Department of Pathobiology, College of Veterinary Medicine, University of Illinois Urbana-Champaign, Urbana, IL 61802, USA

² Illinois Natural History Survey, Prairie Research Institute, University of Illinois Urbana-Champaign, Urbana, IL 61802, USA

³ Institute for Genomic Biology, University of Illinois Urbana-Champaign, Urbana, IL 61802, USA

* Author to whom correspondence should be addressed.

Insects **2023**, *14*(3), 213; <https://doi.org/10.3390/insects14030213>

Received: 23 November 2022 / Revised: 11 February 2023 / Accepted: 13 February 2023 /

Published: 21 February 2023

(This article belongs to the Special Issue **Surveillance and Control of Vectors of Zoonotic Agents**)

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44. Global Biodiversity Information Facility (**GBIF**). [gbif.org](https://doi.org/10.15468/dl.dva6ha). **GBIF** Occurrence Download. Available online: <https://doi.org/10.15468/dl.dva6ha> (accessed on 9 June 2022).

DOWNLOAD | 9 JUNE 2022

391 occurrences included in download

DOI 10.15468/dl.dva6ha

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INCLUDES RECORDS FROM 7 DATASETS DOWNLOAD AS TSV

| | |
|--------------------------------------------------------------------------------------------|-----|
| Harold W. Manter Laboratory of Parasitology Collection (HWML) Parasite Collection (Arctos) | 4 |
| New Mexico State Collection of Arthropods | 2 |
| Canadian Museum of Nature Parasite Collection | 1 |
| CHAS Entomology Collection (Arctos) | 2 |
| iNaturalist Research-grade Observations | 262 |
| INSDC Host Organism Sequences | 7 |
| Illinois Natural History Survey Insect Collection | 113 |

GUID: 2396f952-69ab-4bea-9a4b-22e96fecad4f

USA: IL: Piatt Co: Willow Branch: Allerton Park:
nr. Sangamon Rv.: 39.998473° -88.636857° ±15m;
ex. pant leg; 11MAY2018 TC McElrath/DA Hennen

Ixodes
scapularis 1♂
det ED Struckhoff 2020

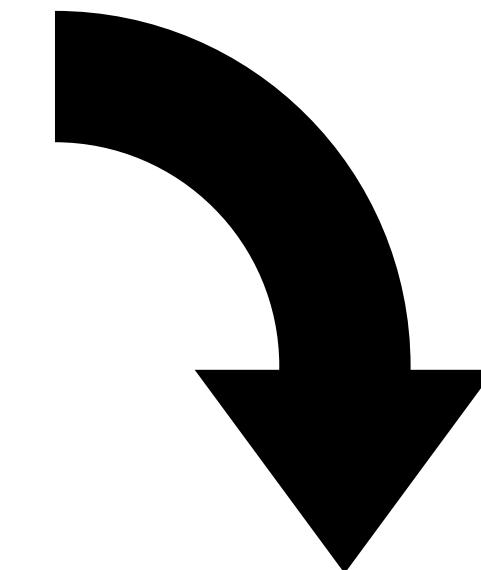
TNHS
Insect Collection
868,734



TaxonWorks
Image Importer &
Transcriber Tool



TaxonWorks
DWC Exporter



OCCURRENCE | 11 MAY 2018

Ixodes scapularis Say, 1821

Black Legged Tick In English Collected in United States of America

Animalia > Arthropoda > Arachnida > Ixodida > Ixodidae > *Ixodes*

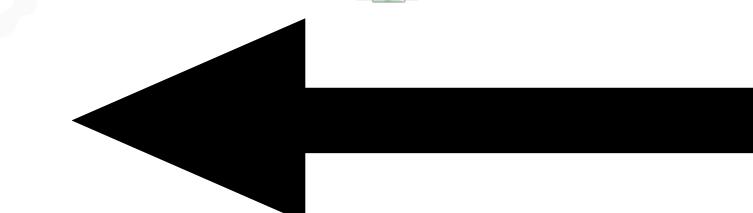
Collected By

Thomas McElrath <https://orcid.org/0000-0003-0390-4227>

Derek Hennen <https://orcid.org/0000-0001-7005-1151>



DOI



Current and Future Habitat Suitability Models for Four Ticks of Medical Concern in Illinois, USA

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11MAY2018

Ixodes
scapularis 1♂
det ED [redacted]
Struckhoff 2020



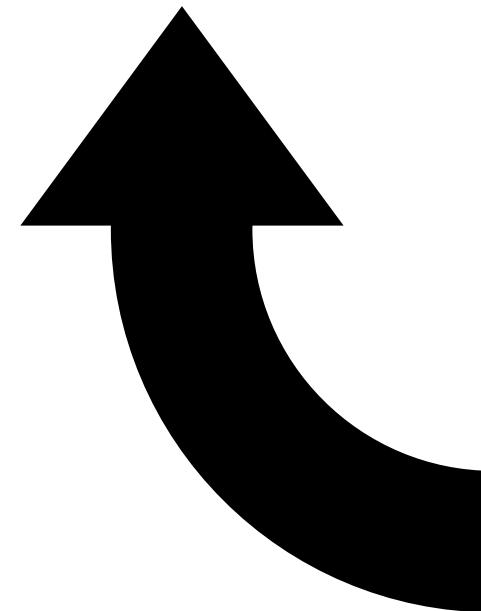
13MAR2020



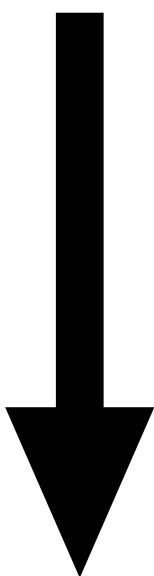
07JAN2021



9JUN2022



Total time from collection to citation:
~4 years, 10 months



Discovered/linked via Bionomia/GBIF



~01MAR2023

Paper Published

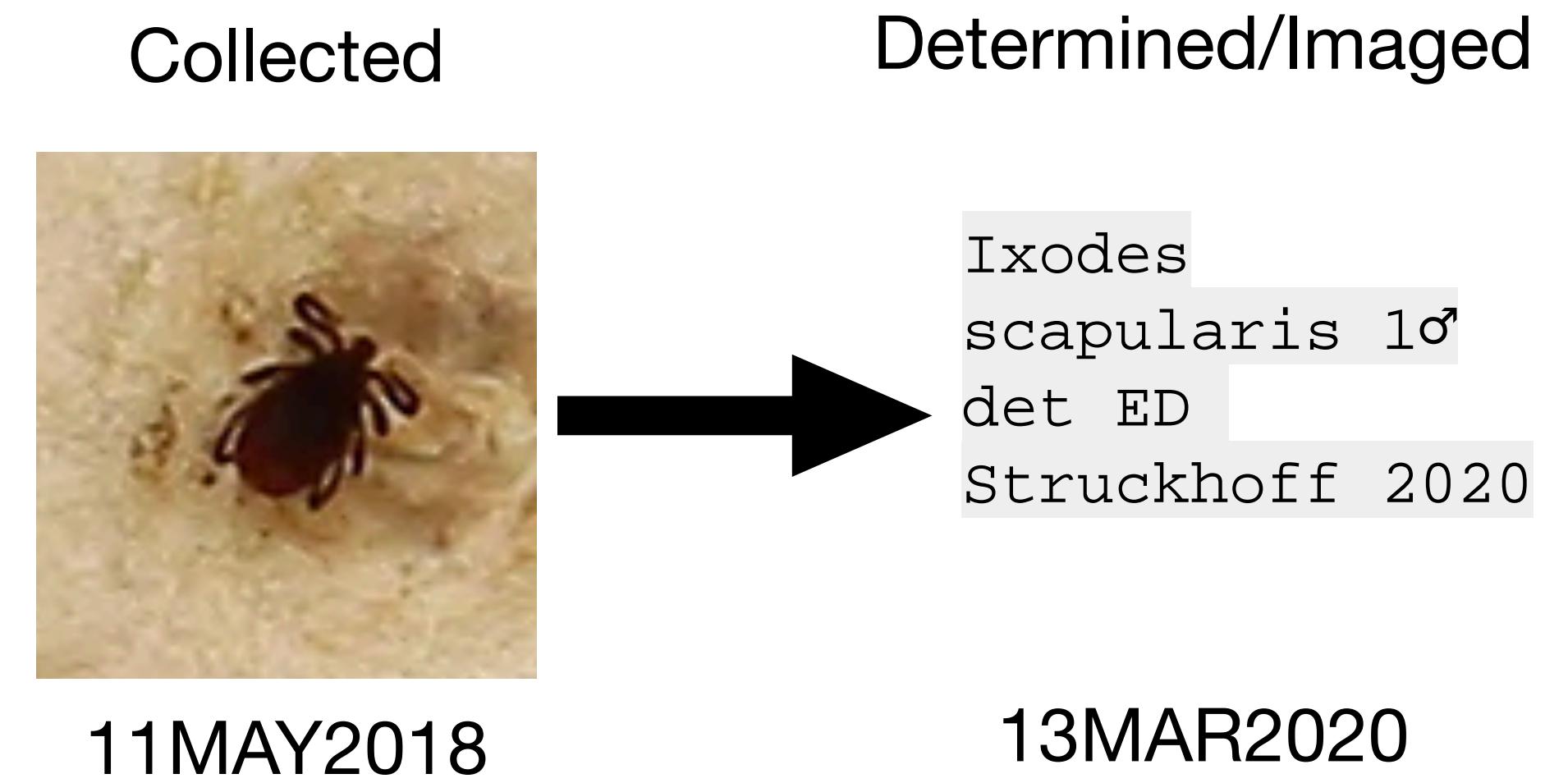
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21FEB2023



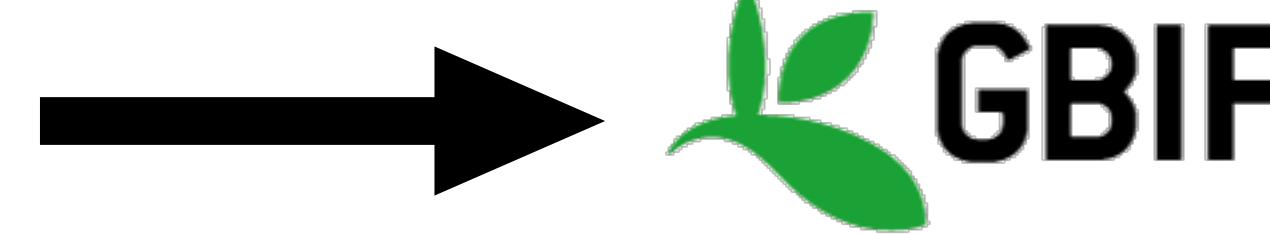
Bottleneck: Taxonomic impediment & Digitization Funds
+ 1 year, 10 months

Determined/Imaged

Ixodes
scapularis 1♂
det ED [REDACTED]
Struckhoff 2020

13MAR2020

Uploaded



07JAN2021

Bottleneck: TaxonWorks Development of DWC Exporter
Fixed!
- 8 months

Uploaded

Downloaded



07JAN2021

9JUN2022

Bottleneck: none! hypothetically <1 day
- 1 year six months

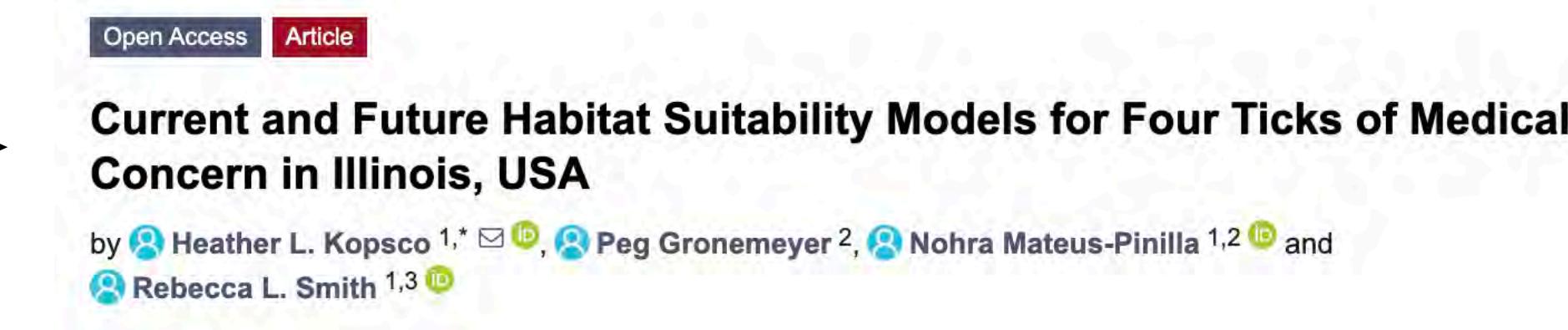
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9JUN2022

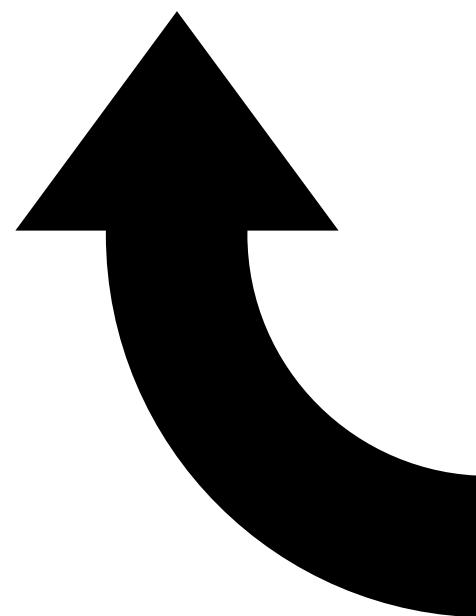
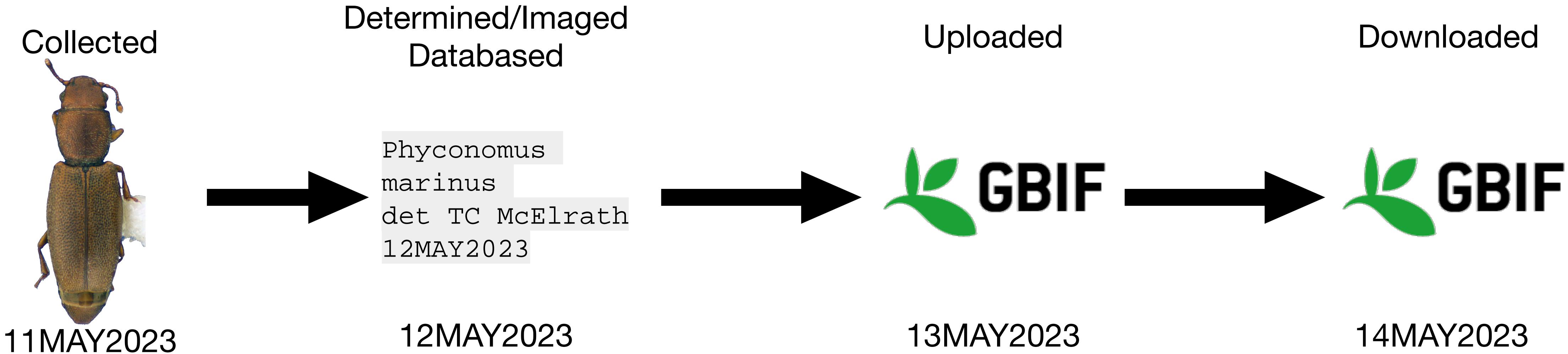


Paper Published

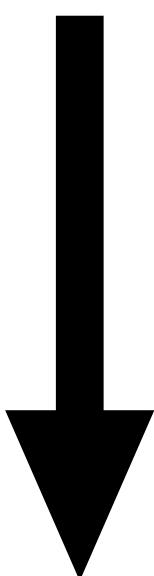


21FEB2023

Bottleneck: publishing
Not within purview of this talk



Total hypothetical time from collection
to citation:
~6.5 months



Discovered/linked via Bionomia/GBIF



~14DEC2023

Paper Published

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by Heather L. Kopsco 1,* Peg Gronemeyer 2, Nohra Mateus-Pinilla 1,2 and Rebecca L. Smith 1,3



01DEC2023

Total hypothetical time from collection
to citation:

~6.5 months

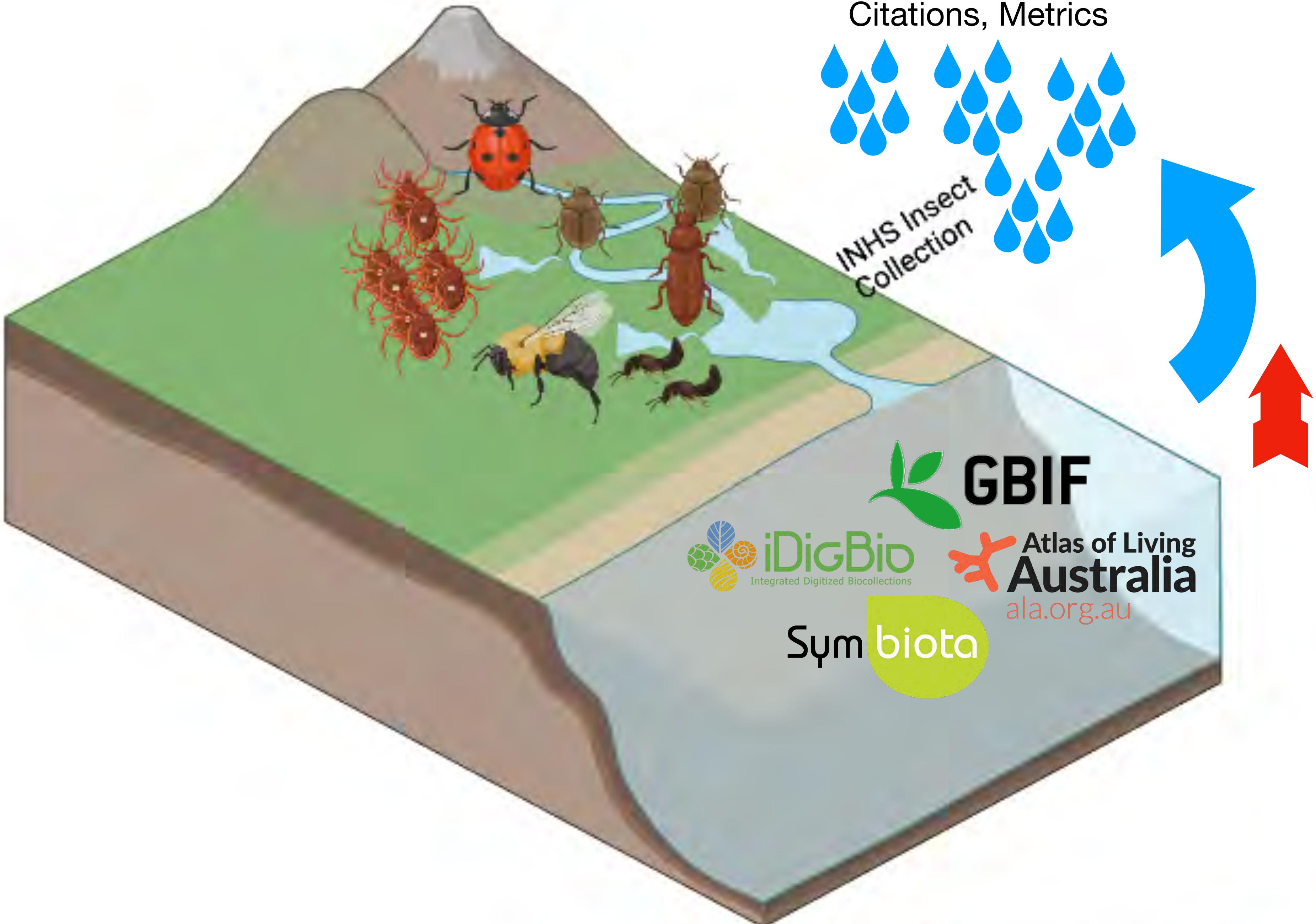
And all it took was:

- solving the taxonomic impediment
- writing & publishing a paper in <6 months
- persistent identifiers with frictionless data

INHS Insect Collection - the rain

- Exponential growth of use of specimens
- Specimen used previously can be tracked
- Individual specimen can be tracked
- Not limited by collection manager time - only researcher
- 53(54) papers in 2023 so far
 - On track to exceed 2022 by 15 papers
 - Collection Managers do NOTHING to get citations of specimens





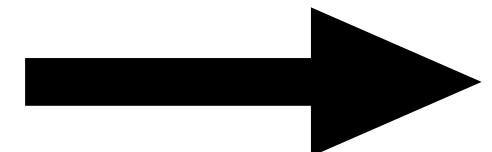
Collected



11MAY2023

Determined/Imaged

Phyconomus
marinus
det TC McElrath
12MAY2023



12MAY2023

Uploaded

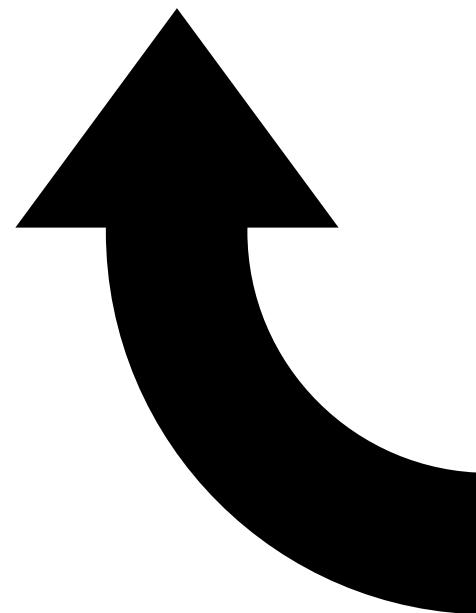


13MAY2023

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by Heather L. Kopsco ^{1,*} Peg Gronemeyer ², Nohra Mateus-Pinilla ^{1,2} and Rebecca L. Smith ^{1,3}



01DEC2023

Collected



11MAY2023

Determined/Imaged

Phyconomus
marinus
det TC McElrath
12MAY2023

12MAY2023

Uploaded

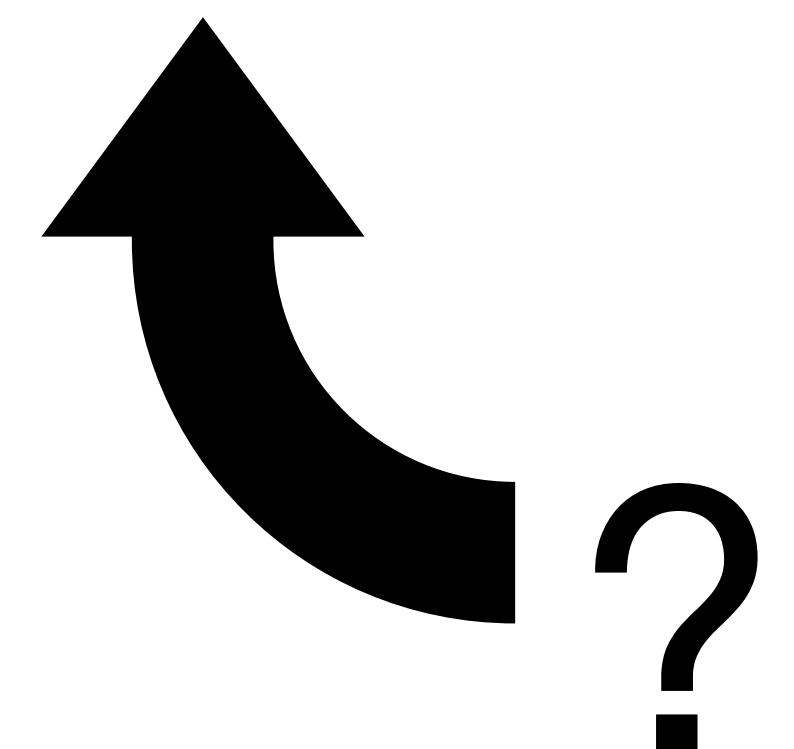
OTHER
AGGREGATOR

13MAY2023

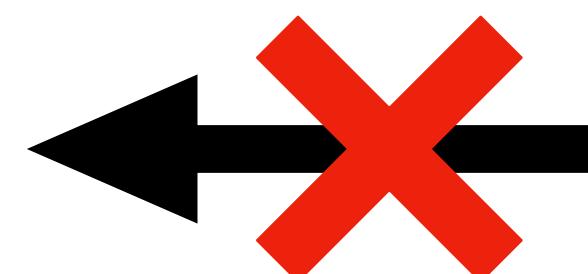
Downloaded

OTHER
AGGREGATOR

14MAY2023



No DOI to connect specimens to
paper
Manual tracking
Time to discovery? 1 day - years
Back to old system



Paper Published

Open Access Article

Current and Future Habitat Suitability Models for Four Ticks of Medical
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by Heather L. Kopsco 1,* Peg Gronemeyer 2, Nohra Mateus-Pinilla 1,2 and
Rebecca L. Smith 1,3

01DEC2023

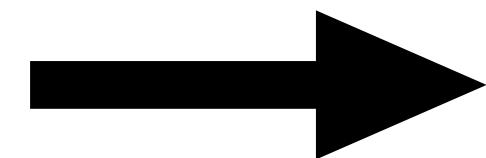
Collected



11MAY2023

Determined/Imaged

Phyconomus
marinus
det TC McElrath
12MAY2023



12MAY2023

Uploaded

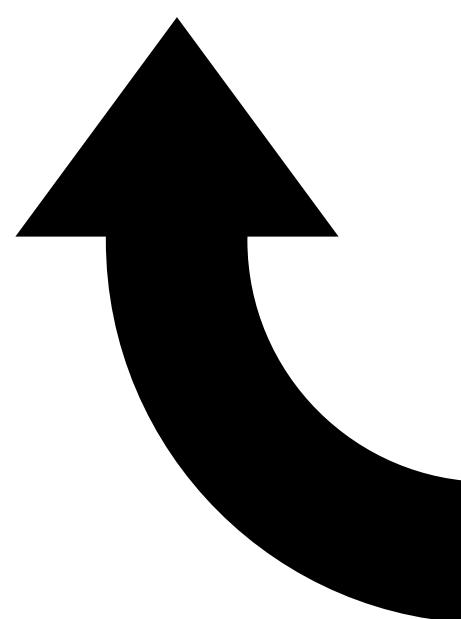


13MAY2023

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Collected



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Determined/Imaged

Phyconomus
marinus
det TC McElrath
12MAY2023

12MAY2023

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13MAY2023

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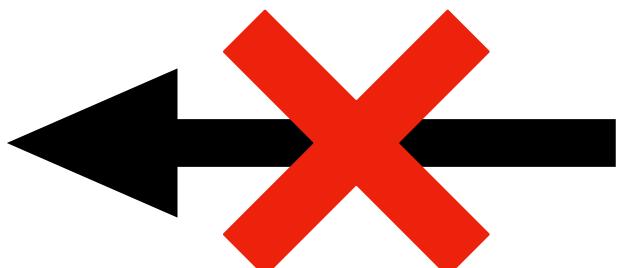


14MAY2023

Collections/Datasets buried in:

- Materials/Methods (okay, but not great)
- Acknowledgments (worse, but still in main paper)
- Supplemental files (groan)
- Completely stripped (inexcusable)

NO GBIF DOI Cited



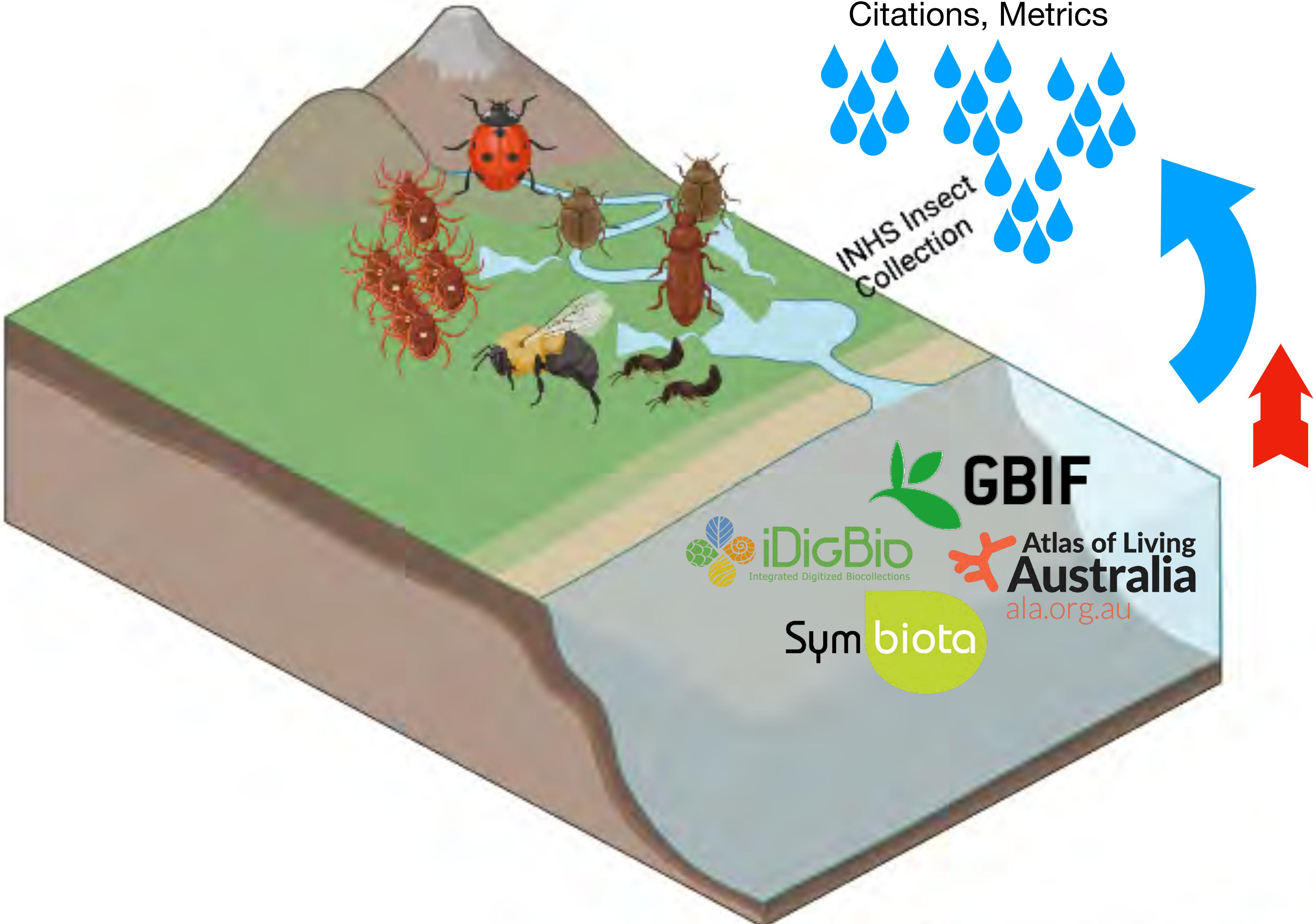
Paper Published

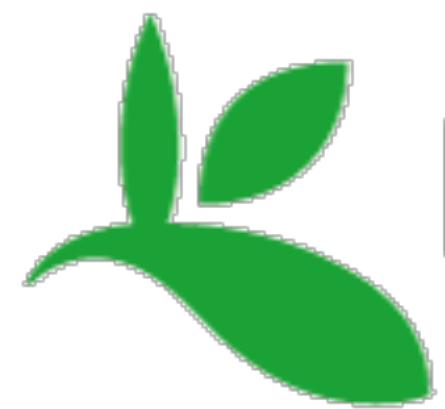
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by Heather L. Kopsco 1,* Peg Gronemeyer 2, Nohra Mateus-Pinilla 1,2 and Rebecca L. Smith 1,3

01DEC2023





GBIF **Atlas of Living
Australia**
ala.org.au



iDigBio
Integrated Digitized Biocollections



| | | | | |
|-----------------------------------------|---------------|--------------|---------------------|--------------|
| DOI Tracking? | Yes | Yes | No | No |
| Global vs. local | Global | Local | Global/Local | Local |
| Specimen level tracking? | Yes | Yes | No | No |

Replenish the water table

Keep the cycle going

- CMs provide citation link alongside loaned specimens
- Publishers REQUIRE data management plan
- Grounds for Rejection/Revision
 - “data on request from the authors”
 - ONLY aggregator cited, not individual datasets
 - No verbatim data anywhere (not repeatable!)
 - Identifiers stripped from primary data everywhere

Data is not available upon request

Ian Hussey

Many journals now require data sharing and require articles to include a Data Availability Statement. However, several studies over the past two decades have shown that promissory notes about data sharing are rarely abided by, and that data is generally not available upon request. This has negative consequences for many essential aspects of scientific knowledge production, including independent verification of results, efficient secondary use of data, and knowledge synthesis. Here, I assessed the prevalence of data sharing upon request in articles employing the Implicit Relational Assessment Procedure published within the last 5 years. Of 52 articles, 42% contained a Data Availability Statement, most of which stated that data was available upon request. This rose from 0% in 2018 to 100% in 2022. Only 25% of articles' authors actually shared data upon request. Among articles stating that data was available upon request, only 17% shared data upon request. The presence of Data Availability Statements was not associated with higher rates of data sharing ($p = .80$). Results replicate those found elsewhere: data is generally not available upon request, and promissory Data Availability Statements are typically not adhered to. Issues, causes, and implications are considered.

<https://psyarxiv.com/jbu9r/>



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Keep the cycle going

ECOLOGICAL
MONOGRAPHS
ECOLOGICAL SOCIETY OF AMERICA

ARTICLE |  Open Access |  

Do Nearctic hover flies (Diptera: Syrphidae) engage in long-distance migration? An assessment of evidence and mechanisms

C. Scott Clem , Keith A. Hobson, Alexandra N. Harmon-Threatt

First published: 19 July 2022 | <https://doi.org/10.1002/ecm.1542> | Citations: 2

A century of Illinois hover flies (Diptera: Syrphidae): museum and citizen science data reveal recent range expansions, contractions, and species of potential conservation significance

C. Scott Clem , Lily V Hart, Thomas C McElrath

Journal of Insect Science, Volume 23, Issue 4, July 2023, 13,
<https://doi.org/10.1093/jisesa/iead051>

Published: 03 August 2023 Article history ▾



Replenish the water table

Caveats

- Building infrastructure costs \$\$
 - GBIF DOI registry
 - Server time/space costs \$\$
 - Data infrastructure development
- Data infrastructure not perfect
 - still not seeing my paper that cited three different GBIF DOIs on GBIF website
- More aggregators = more exposure

Acknowledgements

- Species File Group
 - Matt Yoder
 - Debbie Paul
 - Hernán Lucas Pereira
 - José Luis Pereira
 - Debbie Paul
- Funding:
 - Species File Group
 - Ed DeWalt
 - TaxonWorks community
 - Michelle Kohler
 - Lily Hart
 - Brian Fisher
 - Kojun Kanda
 - Gareth Powell
- Matt Gimmel
- Heidi Hopkins
- Chris Grinter
- Student workers
- Volunteers
- Symbiota Community
- Katie Pearson
- Jenn Yost

Provide & Cite DOIs

Let the water flow

