



TaxonWorks as a Collection Management Tool

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INHS, University of Illinois

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Outline

Motivation

Species File Group

TaxonWorks

Use cases

Frost Odonates

INHS Collection Data

Moving forward

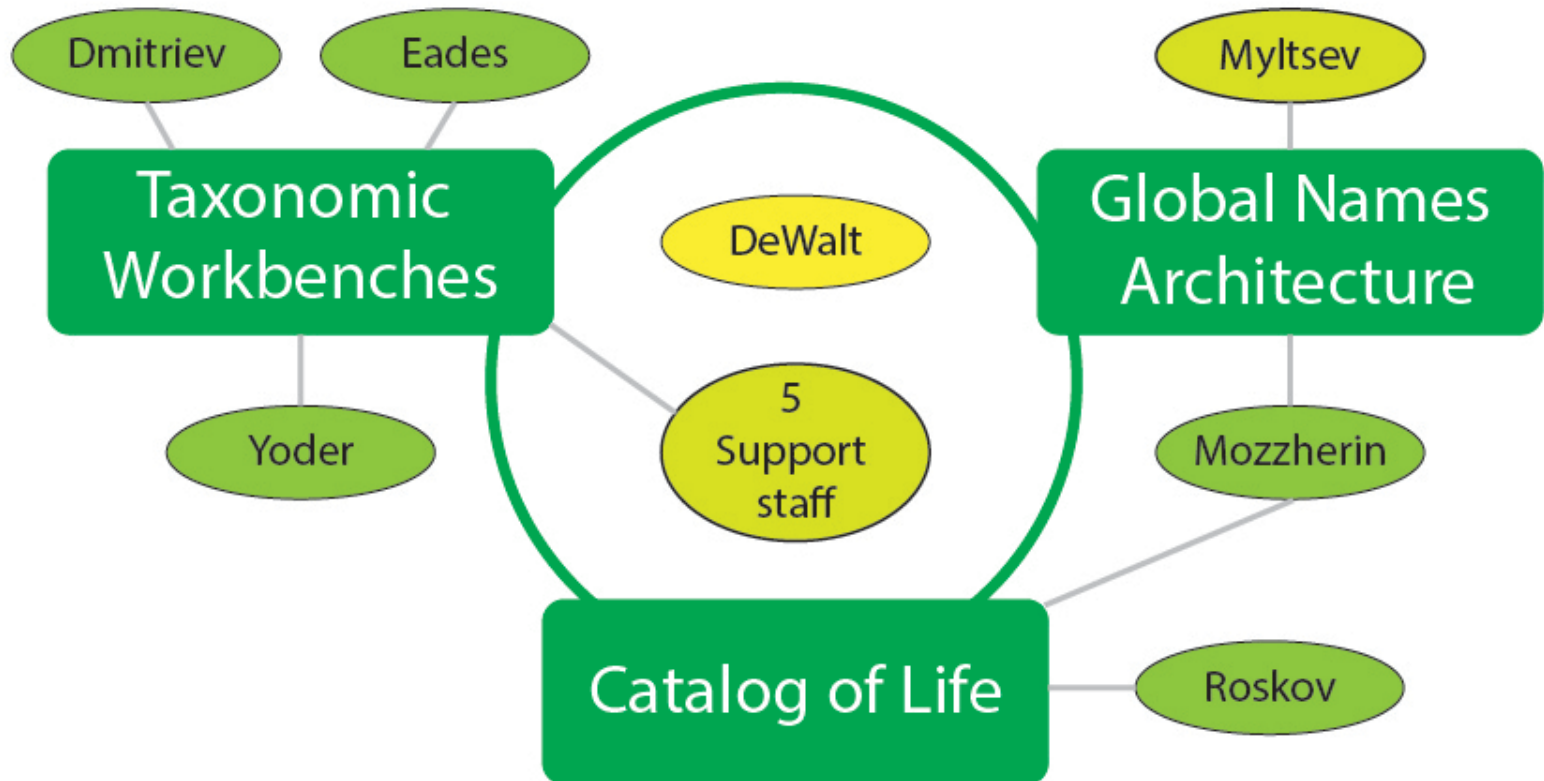
a FAQ for collection managers:

Now

Soon

In a while

Species File Group



endowed, long term funding

Taxonomic Workbenches

mx

SpeciesFiles

3i

deprecated languages, desktop constraints, loose semantics

TaxonWorks

TaxonWorks

from insight to archive

comprehensive, hard core taxonomy

web based

data and tasks

tokenized API

open source

Core/basic data

taxonomists

Specimens
Taxon names
Collecting events
Descriptions
References
Images
Identifiers

+

collections

Loans
Collection profiles
Biocuration
categories
Preparation types

Advanced data

Core Data



Georeferencing

Data Attributes

Labels

Notes, Tags

Interactive Keys

Matrices

Citations

Identifiers

Alternate
Classifications

Data- import and exposure

In

Scaffolded forms

"Task" forms

DwC A

JSON API

Both

CSV

Console scripts

DB Dumps

Out

JSON API

DwC A

Symbiota

IPT

Coupling projects and developmnet

Securing Several Large Donations
and Orphaned Collections of
Alcohol Preserved Insects and
Spiders and Improving Storage of
Wet Types at the INHS

Simple, staged, digitization



Simple, staged, digitization

tape off a stage

position metadata

position specimen, labels
take picture

batch load all images

transcribe verbatim

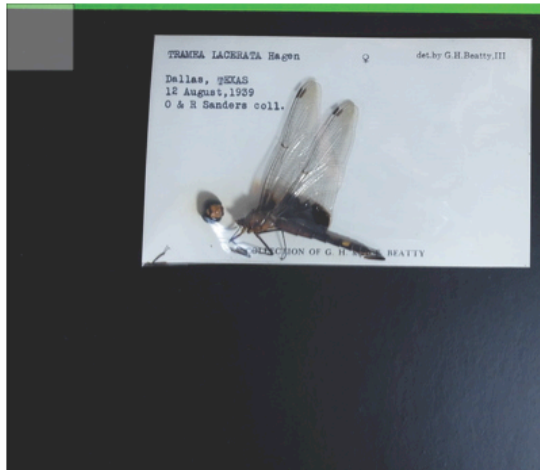
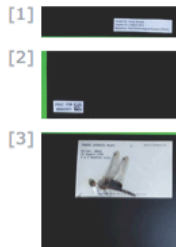
match/parse verbatim

specimen
image
depiction
depiction metadata

Task - transcribe depiction

Task: Transcribe depiction

sqed depiction: [8](#) | [original image](#)



Drag box to ocr.

Append [q], Replace [w]

Curator metadata [Use \[a\]](#)

Created By: Emily Sandall Created On:
6 March 2015 Repository: Frost
Entomological Museum (PSUC)

Identifier [Use \[s\]](#)

PSUC FEM ""
000042831

Annotated specimen [Use \[d\]](#)

TEAMEA LACERATA Hagen '
chthvGIIBmvh HI Dallas, TEXAS 12
August,1959 O & R Sanders 0011'

Identifiers

Namespace

lock

Identifier

Taxon Determinations

Name

Buffered collecting event

Buffered determinations

Buffered other labels

Total

Note

Tag with

[Save changes](#)

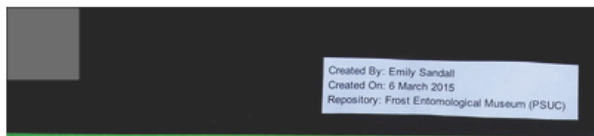
[Save and next \[n\]](#)

[Skip to next](#)

Task - transcribe depiction

Task: Transcribe depiction

sqed depiction: 8 | [original image](#)



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Created By: Emily Sandall Created On:
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Buffered collecting event

Buffered determinations

Taxon Determinations

Name

Buffered other labels

Total

Note

Tag with

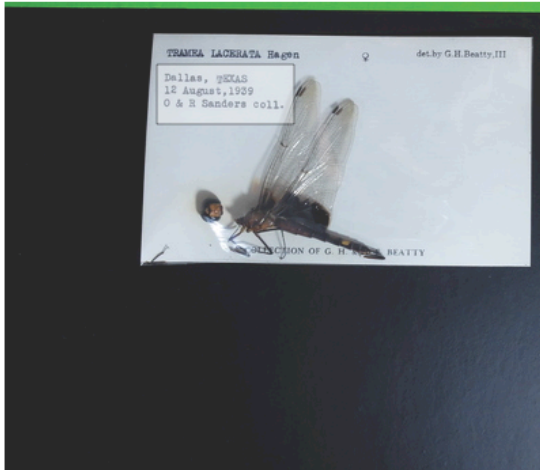
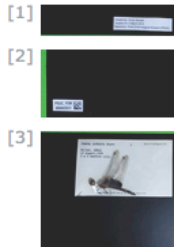
[Skip to next](#)

Drag box to ocr.

Task - transcribe depiction

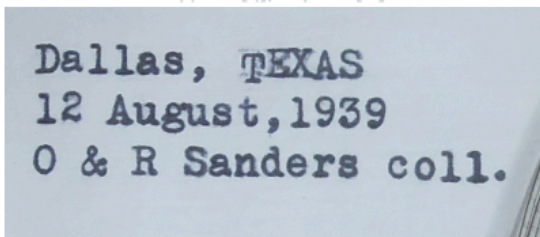
Task: Transcribe depiction

sqed depiction: [8](#) | [original image](#)



Dallas, IFEMS 12 August,1939 O 8: R Sanders c011./ A

Append [q], Replace [w]



Curator metadata [Use \[a\]](#)

Created By: Emily Sandall Created On: 6 March 2015 Repository: Frost Entomological Museum (PSUC)

Identifier [Use \[s\]](#)

PSUC FEM ♀
000042831

Annotated specimen [Use \[d\]](#)

TEAMEA LACERATA Hagen ' chthvGII Bmvh HI Dallas, TEXAS 12 August,1959 O & R Sanders 0011'

Identifiers

Namespace

Frost Entomology Collection lock

Identifier

000042831

Taxon Determinations

Name

Select a otu

Buffered collecting event

Dallas, TEXAS
12 August, 1939
O & R Sanders coll.

Buffered determinations

TRAMEA LACERATA Hagen
[Female] det. by
G.H.Beatty III

Buffered other labels

Created By: Emily Sandall
Created On: 6 March 2015
Repository: Frost
Entomological Museum
(PSUC)

Total Note Tag with

[Save changes](#) [Save and next \[n\]](#) [Skip to next](#)

INHS Insect Collection: Overview

- One of the oldest and most comprehensive insect collections in North America (established in 1858)
- 9th largest collection in the USA (~7 million prepared specimens)
- >13,000 primary type specimens



Digitized material

- Specimen-level electronic database, since 1990's
- NSF funded projects
 - Digitize label data
- Retrospective georeferenced localities
 - Accessible via iDigBio and GBIF portals
 - Ephemeroptera, Plecoptera, Trichoptera
 - Hymenoptera
 - Central Asian grassland fauna
 - Hemiptera
 - Orthoptera



pinned specimens



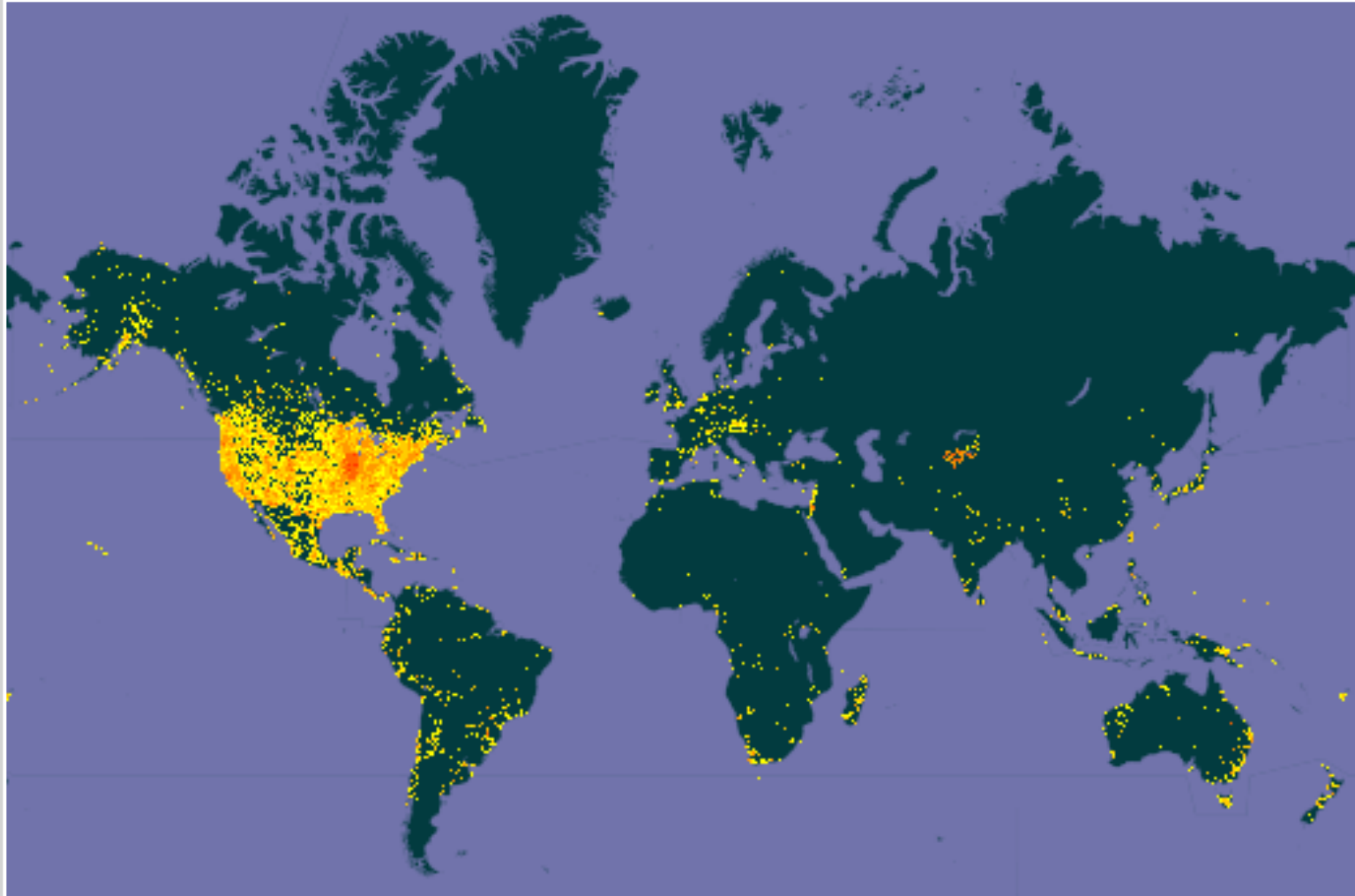
slide mounted specimens



ethanol-preserved specimens



Collection Digitization: Global Coverage



GBiF

Today, ~900,000 records (2 million specimens)

<http://data.gbif.org/datasets/provider/75>

INHS Insect Collection Database

Original sources

- Insect collection database: File Maker Pro
- TCN specimen records: SQL database
- NEON specimen records: Excel file
- Collection profile database: MS Access database

Intermediate processing

- MS Access database, Tab delimited txt files

Imported to

- TaxonWorks PostgreSQL database using Ruby script

INHS Insect Collection Database: Taxonomy

66,110 (76547 in TaxonWorks) records

The image shows a web browser window displaying the INHS Insect Collection Database Taxonomy page. The page title is "Taxonomy" and it shows the taxon code "1,598" for "Ephoron leukon Williamson 1802". The taxonomic hierarchy is as follows:

- Kingdom: Animalia
- Phylum: Arthropoda
- Class: Insecta
- Order: Ephemeroptera
- Suborder:
- Superfamily:
- Family: Polymitarcidae
- Subfamily:
- Tribe:
- Genus: Ephoron
- Subgenus:
- Specific epithet: leukon
- Subspecific epithet:
- Author & year: Williamson 1802
- Parents?: Yes No Unknown
- Authority: Williamson 1802

Buttons for "New record" and "Dup. record" are visible. The "Illinois Status" field is empty. The "Created" field is empty, and the "Modified" field shows "1.284 8/14/2014 14:56".

Overlaid on the page is a TaxonWorks window titled "Listing taxon names". It displays a table of taxon names with columns: Name, Parent, Cached name, Source, Year of publication, Verbatim author, Rank, Type, Updated by, and Last updated. The table lists 151-175 of 76547 total taxon names.

Name	Parent	Cached name	Source	Year of publication	Verbatim author	Rank	Type	Updated by	Last updated
Araneidae	Araneae	Araneidae				family	Protonym	Dmitriev, Dmitry	7 days
Acacesia	Araneidae	Acacesia	1895		(Simon)	genus	Protonym	Hedlund, Tyler	7 days
foliata	Acacesia Simon, 1895	Acacesia foliata	1895		(Simon)	species	Protonym	Hedlund, Tyler	7 days
hamata	Acacesia Simon, 1895	Acacesia hamata	1997		(Scharff & Coddington)	species	Protonym	Hedlund, Tyler	7 days
Acanthepeira	Araneidae	Acanthepeira				genus	Protonym	Dmitriev, Dmitry	7 days
cherokee	Acanthepeira	Acanthepeira cherokee	1976		(Levi)	species	Protonym	Nunez, Sylvia	7 days
stellata	Acanthepeira	Acanthepeira stellata	1805		(Walckenaer)	species	Protonym	Dmitriev, Dmitry	7 days
Allepeira	Araneidae	Allepeira				genus	Protonym	INHS Insect Collection Import	7 days
lemniscata	Allepeira	Allepeira lemniscata	1944		(Chamberlin & Ivie)	species	Protonym	Hedlund, Tyler	7 days
Alpaida	Araneidae	Alpaida				genus	Protonym	INHS Insect Collection Import	7 days
calix	Alpaida	Alpaida calix	1972		(Levi)	species	Protonym	Hedlund, Tyler	7 days
Araneus	Araneidae	Araneus				genus	Protonym	Dmitriev, Dmitry	7 days
adiantus	Araneus	Araneus adiantus	1997		(Mcheidze)	species	Protonym	Hedlund, Tyler	7 days
apache	Araneus	Araneus apache	1975		(Levi)	species	Protonym	Nunez, Sylvia	7 days
bicentenarios	Araneus	Araneus bicentenarios	1888		(McCook)	species	Protonym	Nunez, Sylvia	7 days
bonsallae	Araneus	Araneus bonsallae	1894		(McCook)	species	Protonym	Nunez, Sylvia	7 days
cavaticus	Araneus	Araneus cavaticus	1881		(Keyserling)	species	Protonym	Dmitriev, Dmitry	7 days
cornutus	Araneus	Araneus cornutus	1958		(Braendegaard)	species	Protonym	Hedlund, Tyler	7 days
crassipes	Araneus	Araneus crassipes	1897		(Rainbow)	species	Protonym	Hedlund, Tyler	7 days
detrimentosus	Araneus	Araneus detrimentosus	1889		(O.P.-Cambridge)	species	Protonym	Nunez, Sylvia	7 days

INHS Insect Collection Database: People

1,688 records

INHSinsects (bug.inhs.illinois.edu)

Browse

Layout: People

Record: 1

Found: 4

Total: 1688

Unsorted

People

Welcome

ID number 111 **Dr. Thomas C. Barr, Jr.**

Comments: Thomas C. Barr, Jr.

Last name: Barr, Jr.

First names: Thomas C.

Honorarium: Dr. Supervisor ID:

Address: Department of Biology
Tennessee Polytechnic Institute
Cookeville TN 38501

Country: U.S.A.

email: tcbarr@comcast.net

Phone:

Mailing label:
Dr. Thomas C. Barr, Jr.
Department of Biology
Tennessee Polytechnic Institute
Cookeville TN 38501

Set loan recipient ID Print mailing labels Go to loans

100 Browse

INHS Insect Collection Database: Localities

60,876 locality, 75,905 ledger, 20,115 collecting event

INHSinsects (bug.inhs.illinois.edu)

Browse

Layout: Localities

Record: 1

Total: 60876

Unsorted

Country: U.S.A.

State: Illinois

County: Champaign

Locality: Urbana

Other descriptor:

Body of water: Boneyard Creek

Drainage basin, greater: Vermilion River

Elevation: 40 feet / 88 meters

Latitude: 40.11056

Longitude: -88.20722

Meters elevation

New record

Dup. record

Created: 11/1/2002

Modified: 1.031 11/11/2014

INHSinsects (bug.inhs.illinois.edu)

Welcome

Record: 90

Total: 75905

Unsorted

Country: U.S.A.

State: Illinois

County:

Locality: Pekin

Collector:

Date collected (beginning & ending): 6/15 (beginning & ending) 15 Ju

Description: Scapholibins

Remarks:

Locality code: 23431

Special Ledgers

INHS Ledgers Collection 91

Ledger number: 0

Created:

Insect order:

Insect family:

Accession	LocalityLabel	Country	State	County	Locality	OtherDescriptor	DateCollected	Collector	Code
2182_7380	MEXICO, Baja California, Sierra San Pedro Martir, 48.3 km E San Telmo, 20 567' -115 707' 899m, 9-V-1997, malaise trap, M.E. Iwain, E. Schlinger	Mexico	Baja California		Sierra San Pedro Martir		6/8/1997	M.E. Iwain, E. Schlinger	Maia
2182_7382	MEXICO, Baja California, Sierra San Pedro Martir, 48.3 km E San Telmo, 20 567' -115 707' 899m, 9-V-1997, malaise trap, M.E. Iwain, E. Schlinger	Mexico	Baja California		Sierra San Pedro Martir		6/8/1997	M.E. Iwain, E. Schlinger	Maia
2179_7384	MEXICO, Baja California, Sierra San Pedro Martir, east base, Double Canyon, 21 564' -115 561' 871m, 9-V-11-1997, malaise trap, M.E. Iwain, E. Schlinger	Mexico	Baja California		Sierra San Pedro Martir		6/9/1997	M.E. Iwain, E. Schlinger	Maia
2189_7384	MEXICO, Baja California, Sierra San Pedro Martir, 88.6 km E San Telmo, 21 343' -115 525' 1029m, 9-V-11-1997, malaise trap, M.E. Iwain, E. Schlinger	Mexico	Baja California		Sierra San Pedro Martir		6/11/1997	M.E. Iwain, E. Schlinger	Maia
2282_7387	MEXICO, Baja California, Sierra San Pedro National Park, Sierra San Pedro Martir, 1 km W Observatory, 21 022' -115 490' 2500m, 9-V-10-VI-1997, malaise trap, M.E. Iwain, E. Schlinger	Mexico	Baja California		Sierra San Pedro National Park		6/9/1997	M.E. Iwain, E. Schlinger	Maia
2282_7388	MEXICO, Baja California, Sierra San Pedro National Park, Sierra San Pedro Martir, 1 km W Observatory, 21 022' -115 490' 2500m, 9-V-10-VI-1997, malaise trap, M.E. Iwain, E. Schlinger	Mexico	Baja California		Sierra San Pedro National Park		6/11/1997	M.E. Iwain, E. Schlinger	Maia
2282_7391	MEXICO, Baja California, Sierra San Pedro National Park, Sierra San Pedro Martir, 20.9 km E San Telmo, 20 345' -115 519' 189m, 9-VI-1997, malaise trap, M.E. Iwain, E. Schlinger	Mexico	Baja California		Sierra San Pedro National Park		6/8/1997	M.E. Iwain, E. Schlinger	Maia
2284_7390	MEXICO, Baja California, Sierra San Pedro National Park, 21 032' -115 545' 2469m, 9-V-10-VI-1997, malaise trap, M.E. Iwain, E. Schlinger	Mexico	Baja California		Sierra San Pedro National Park		6/8/1997	M.E. Iwain, E. Schlinger	Maia
2284_7396	MEXICO, Baja California, Sierra San Pedro National Park, 21 032' -115 545' 2469m, 9-V-10-VI-1997, malaise trap, M.E. Iwain, E. Schlinger	Mexico	Baja California		Sierra San Pedro National Park		6/10/1997	M.E. Iwain, E. Schlinger	Maia
2284_7397	MEXICO, Baja California, Sierra San Pedro National Park, 21 032' -115 545' 2469m, 9-V-10-VI-1997, malaise trap, M.E. Iwain, E. Schlinger	Mexico	Baja California		Sierra San Pedro National Park		6/11/1997	M.E. Iwain, E. Schlinger	Maia
2286_7385	MEXICO, Baja California, Sierra San Pedro National Park, Sierra San Pedro Martir, 80.5 km E San Telmo, 20 568' -115 536' 1676m, 9-VI-1997, malaise trap, M.E. Iwain, E. Schlinger	Mexico	Baja California		Sierra San Pedro National Park		6/9/1997	M.E. Iwain, E. Schlinger	Maia
2286_7393	MEXICO, Baja California, Sierra San Pedro National Park, Sierra San Pedro Martir, 80.5 km E San Telmo, 20 568' -115 536' 1676m, 9-VI-1997, malaise trap, M.E. Iwain, E. Schlinger	Mexico	Baja California		Sierra San Pedro National Park		6/9/1997	M.E. Iwain, E. Schlinger	Maia
2287_4039	MEXICO, Baja California, Sierra San Pedro National Park, Sierra San Pedro Martir, 88.5 km E San Telmo, 21 343' -115 525' 1029m, 9-V-11-1997, malaise trap, M.E. Iwain, E. Schlinger	Mexico	Baja California		Sierra San Pedro National Park		6/9/1997	M.E. Iwain, E. Schlinger	Maia
2288_7389	MEXICO, Baja California, Sierra San Pedro National Park, Sierra San Pedro Martir, 88.6 km E San Telmo, 21 343' -115 525' 1029m, 9-VI-1997, malaise trap, M.E. Iwain, E. Schlinger	Mexico	Baja California		Sierra San Pedro National Park		6/10/1997	M.E. Iwain, E. Schlinger	Maia
2294_13330	MEXICO, Baja California, Sierra San Pedro National Park, Sierra San Pedro Martir, Vallecitos meadow, 21 022' -115 490' 2500m, 9-V-10-VI-1997, malaise trap, M.E. Iwain, E. Schlinger	Mexico	Baja California		Sierra San Pedro National Park		6/11/1997	M.E. Iwain, E. Schlinger	Maia
229_24300	SOUTH AFRICA, Western Cape, 11 km SW Wilderness, Hay 109, 13 073' 23 411' 800m, 20-VI-1999, malaise trap, M.E. Iwain, E. Schlinger	South Africa	Western Cape		11 km SW Wilderness		10/20/1999	M.E. Iwain, E. Schlinger	Maia
229_24725	SOUTH AFRICA, Western Cape, 12 - 13 km ENE Cinnamon, Pothrus Pass, 13 022' 16 025' 600-700m, 16-VI-1996, malaise trap, M.A. Metz, M. Houser	South Africa	Western Cape		12 - 13 km ENE Cinnamon		11/16/1996	M.A. Metz, M. Houser	Maia
240_24724	SOUTH AFRICA, Western Cape, 13.5 km ENE Cinnamon, Pothrus Pass, 13 022' 16 025' 600-700m, 16-VI-1996, malaise trap, M.A. Metz, M. Houser	South Africa	Western Cape		13.5 km ENE Cinnamon		11/16/1996	M.A. Metz, M. Houser	Maia
241_27927	SOUTH AFRICA, Western Cape, 13.6 km ENE Cinnamon, Pothrus Pass, 13 022' 16 025' 600-700m, 16-VI-1996, malaise trap, M.A. Metz, M. Houser	South Africa	Western Cape		13.6 km ENE Cinnamon		11/14/1996	M.A. Metz, M. Houser	Maia
242_27930	SOUTH AFRICA, Western Cape, Cedarberg Mountains, 19 km ENE Cinnamon, Elsiefontein, 12 075' 19 565' 400-500m, 13-IV-1996, malaise trap, M.A. Metz, M. Houser	South Africa	Western Cape		Cedarberg Mountains		10/13/1996	D.W. Webb, M.A. Metz, M. Houser	Maia
241_24312	SOUTH AFRICA, Western Cape, 24 km W Worcester, Hay 11, 13 703' 19 230' 100m, 15-VI-25-VI-1999, malaise trap, M.E. Iwain, E. Schlinger	South Africa	Western Cape		24 km W Worcester		11/16/1999	M.E. Iwain, E. Schlinger	Maia
245_24415	SOUTH AFRICA, Western Cape, 3 km W Yorkfontein, 13 033' 18 150' 4100m, 1-VI-10-VI-1999, malaise trap, M.E. Iwain, E. Schlinger	South Africa	Western Cape		3 km W Yorkfontein		11/15/1996	M.E. Iwain, E. Schlinger	Maia
245_24308	SOUTH AFRICA, Western Cape, 3 km S Unadaba, 13 075' 23 445' 600m, 20-VI-1999, malaise trap, M.E. Iwain, E. Schlinger	South Africa	Western Cape		3 km S Unadaba		11/20/1999	M.E. Iwain, E. Schlinger	Maia
214_27946	SOUTH AFRICA, Western Cape, Gouanema Nature Reserve, 10 km SW Kroyana, Buffelsbaai, 14 073' 20 269' 10m, 20-VI-25-VI-1999, malaise trap, M.E. Iwain, E. Schlinger	South Africa	Western Cape		Gouanema Nature Reserve		12/01/1999	M.E. Iwain, E. Schlinger	Maia
2452_27957	BOLIVIA, Santa Cruz, 11 km N Boyaile, 12 0 29' 43 373' 884m, 8-III-1999, malaise trap, M.E. Iwain, F. D. Parker	Bolivia	Santa Cruz		11 km N Boyaile		3/6/1999	M.E. Iwain, F. D. Parker	Maia
2822_27874	BOLIVIA, Santa Cruz, 11 km N Boyaile, 12 0 29' 43 373' 884m, 8-III-1999, malaise trap, M.E. Iwain, F. D. Parker	Bolivia	Santa Cruz		11 km N Boyaile		3/6/1999	M.E. Iwain, F. D. Parker	Maia
2822_27921	BOLIVIA, Santa Cruz, 11 km N Boyaile, 12 0 29' 43 373' 884m, 8-III-1999, malaise trap, M.E. Iwain, F. D. Parker	Bolivia	Santa Cruz		11 km N Boyaile		3/6/1999	M.E. Iwain, F. D. Parker	Maia
2822_27928	BOLIVIA, Santa Cruz, 11 km N Boyaile, 12 0 29' 43 373' 884m, 8-III-1999, malaise trap, M.E. Iwain, F. D. Parker	Bolivia	Santa Cruz		11 km N Boyaile		3/6/1999	M.E. Iwain, F. D. Parker	Maia
2822_27963	BOLIVIA, Santa Cruz, 12 km N Camé, 13 946' 43 023' 860m, 8-III-1999, malaise trap, M.E. Iwain, F. D. Parker	Bolivia	Santa Cruz		12 km N Camé		3/6/1999	M.E. Iwain, F. D. Parker	Maia
2824_27962	BOLIVIA, Santa Cruz, 16 km S Pedro Lopez, 13 767' 43 13' 17 000m, 20-VI-1999, malaise trap, M.E. Iwain, M. Houser	Bolivia	Santa Cruz		16 km S Pedro Lopez		3/4/1999	M.E. Iwain, M. Houser	Maia
2826_27968	BOLIVIA, Santa Cruz, 20 km S Camé, 12 0 17' 43 476' 1600m, 14-III-1999, malaise trap, M.E. Iwain, F. D. Parker	Bolivia	Santa Cruz		20 km S Camé		3/4/1999	M.E. Iwain, F. D. Parker	Maia
2826_27969	BOLIVIA, Santa Cruz, 20 km S Camé, 12 0 17' 43 476' 1600m, 14-III-1999, malaise trap, M.E. Iwain, F. D. Parker	Bolivia	Santa Cruz		20 km S Camé		3/7/1999	M.E. Iwain, F. D. Parker	Maia
2826_4141	BOLIVIA, Santa Cruz, 17 km N Braxito, 11 8 14' 43 170' 533m, 8-III-1999, malaise trap, M.E. Iwain, F. D. Parker	Bolivia	Santa Cruz		17 km N Braxito		3/8/1999	M.E. Iwain, F. D. Parker	Maia
2827_27965	BOLIVIA, Santa Cruz, 11 km N Boyaile, 12 0 29' 43 373' 884m, 8-III-1999, malaise trap, M.E. Iwain, F. D. Parker	Bolivia	Santa Cruz		11 km N Boyaile		3/6/1999	M.E. Iwain, F. D. Parker	Maia
2830_27743	BOLIVIA, Santa Cruz, 17 km N Braxito, 11 8 14' 43 170' 533m, 8-III-1999, malaise trap, M.E. Iwain, F. D. Parker	Bolivia	Santa Cruz		17 km N Braxito		3/8/1999	M.E. Iwain, F. D. Parker	Maia
2832_27957	BOLIVIA, Santa Cruz, 12 km N Camé, 13 946' 43 023' 860m, 8-III-1999, malaise trap, M.E. Iwain, F. D. Parker	Bolivia	Santa Cruz		12 km N Camé		3/6/1999	M.E. Iwain, F. D. Parker	Maia
2834_27961	BOLIVIA, Santa Cruz, Rio Seco, 13 664' 43 246' 610m, 18-VII-21XII-2000, malaise trap, M.E. Iwain, M. Houser	Bolivia	Santa Cruz		Rio Seco		8/18/2000	M.E. Iwain, M. Houser	Maia
3024_24710	GUATEMALA, Zacapa, 2 km S San Agustin, Tenecé, 16 439' 89 901' 400m, 25-VI-1997, malaise trap, M.E. Iwain, S. D. Gammon, M. A. Metz	Guatemala	Zacapa		2 km S San Agustin		5/20/1997	M.E. Iwain, S. D. Gammon, M. A. Metz	Maia
3025_7364	GUATEMALA, Zacapa, 14 568' 49 963' 400m, 25-VI-1997, malaise trap, M.E. Iwain, M. A. Metz, Schlinger Foundation, Guatemala Expedition	Guatemala	Zacapa		near La Trinidad		5/29/1997	F. H. Parker, K. C. Holston, M. A. Metz	Maia
3025_7365	GUATEMALA, Zacapa, 14 568' 49 963' 400m, 25-VI-1997, malaise trap, F. H. Parker, K. C. Holston, L. Yang, Schlinger Foundation, Guatemala Expedition	Guatemala	Zacapa		near La Trinidad		5/27/1997	M.E. Iwain, D. W. Webb, S. D. Gammon, M. A. Metz	Maia
3026_11109	GUATEMALA, Zacapa, near La Trinidad, 15 06' 49 933' 1600m, 25-VI-1997, malaise trap, M.E. Iwain, D. W. Webb, S. D. Gammon, M. A. Metz	Guatemala	Zacapa		near La Trinidad		5/26/1997	M.E. Iwain, D. W. Webb, S. D. Gammon	Maia
3026_11110	GUATEMALA, Zacapa, near La Trinidad, 15 06' 49 933' 1600m, 25-VI-1997, malaise trap, M.E. Iwain, D. W. Webb, S. D. Gammon, M. A. Metz	Guatemala	Zacapa		near La Trinidad		5/26/1997	M.E. Iwain, D. W. Webb, S. D. Gammon	Maia
3026_12220	GUATEMALA, Zacapa, near La Trinidad, 15 06' 49 933' 1600m, 25-VI-1997, malaise trap, M.E. Iwain, M. A. Metz, K. C. Holston, L. Yang, S. L. Guatemala	Guatemala	Zacapa		near La Trinidad		5/26/1997	M.E. Iwain, M. A. Metz, K. C. Holston, L. Yang, S. L. Guatemala	Maia
3027_1097	GUATEMALA, Zacapa, near La Trinidad, 15 07' 49 933' 2000m, 26-VI-1997, malaise trap, M.E. Iwain, D. W. Webb, S. D. Gammon, M. A. Metz	Guatemala	Zacapa		near La Trinidad		5/20/1997	M.E. Iwain, D. W. Webb, S. D. Gammon	Maia
3027_2789	AUSTRALIA, New South Wales, Gibraltar Range National Park, 2.5 km N Woodshed, Browns Creek, 129 533' 142 212' 17 01 1996, malaise trap, D. N. York, Australia	Australia	New South Wales		Gibraltar Range Natl		10/17/1996	D. N. York, C. L. Lamb, M. A. Metz	Maia
3027_1385	AUSTRALIA, New South Wales, Warrumbungle National Park, 2.5 km N Woodshed, Browns Creek, 129 533' 142 212' 17 01 1996, malaise trap, Australia	Australia	New South Wales		Warrumbungle Natl		10/17/1996	M.E. Iwain	Maia
3027_1387	AUSTRALIA, New South Wales, Warrumbungle National Park, 2.5 km N Woodshed, Browns Creek, 129 533' 142 212' 17 01 1996, malaise trap, Australia	Australia	New South Wales		Warrumbungle Natl		10/17/1996	M.E. Iwain	Maia

INHS Insect Collection Database: Index cards

1,499 cards

GL 13 KANSAS Clayton, June 27, 1954, Ross & Ross		
Grasses on open limestone slopes--grazed but never ploughed. Bunchy grass dominant.		
<i>Flexamia pectinata</i>	GL 11 COLORADO	
<i>F. albida</i>	Hartzel, June 7, 1954, Ross & Ross	
<i>F. abbreviata</i>	Grasses in open flat floodplain, including much <i>Eleocharis</i> ?	
<i>F. flexuosa</i>		
8♂♀ <i>Exitiarius exitiar</i>	GL 12 COLORADO	
	Sapinero, June 8, 1954, Ross & Ross	
	2N <i>Lemellus bima</i>	
	1N, 30 ♂♀ <i>Psamm</i>	
	Grasses along open marsh around small pond--badly grazed.	
	5♂♀ <i>Laevicephalus monticola</i>	
	3N, 2♂ <i>Lemellus bimaculatus</i>	
	28♀ <i>Hebecephalus occidentalis</i>	
	19N, 37 ♂♀ <i>Psammotettix lividellus</i>	
	3N, 6♂♀ <i>Amblysellus darstj</i>	
	7♂♀ <i>Psammotettix alienus</i>	
	6♂ <i>Amblysellus grey</i>	

TaxonWorks: GeoLocate

TaxonWorks
hub geo_locates

Project Account Sign out INHS Insect Collection Import

New geo locate georeference

Iframe response
40.11642|-88.243383|73

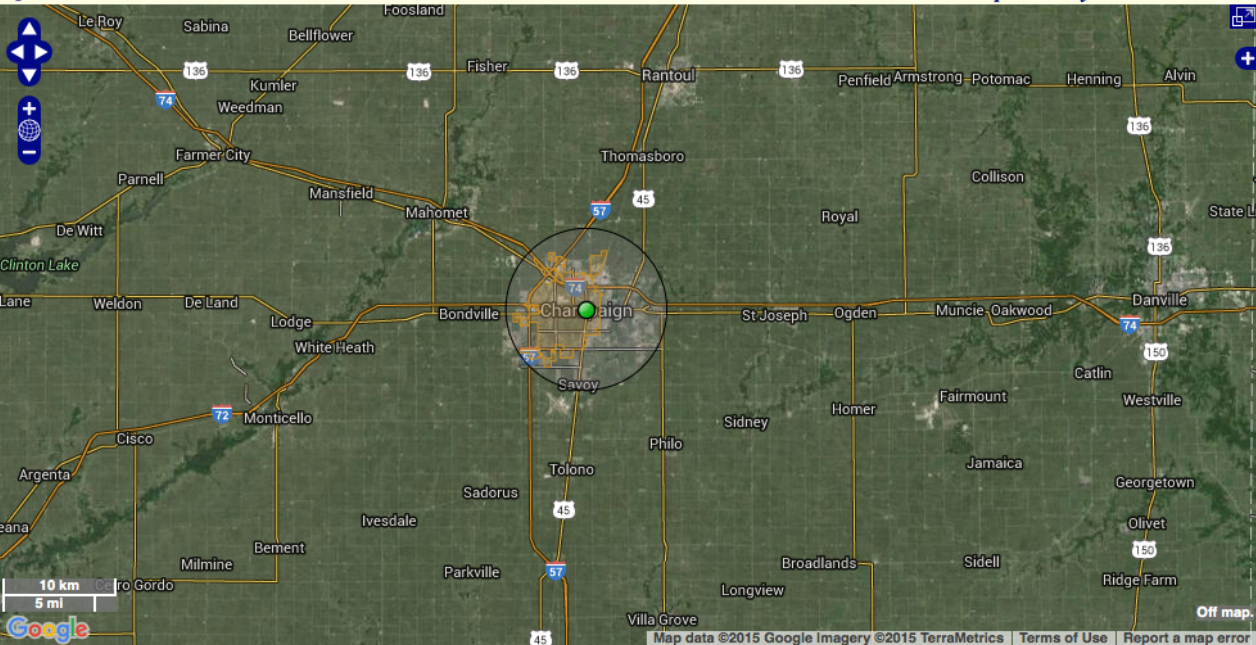
Collecting event
Select a collecting event

Source
Select a source

Is public

Create Geo locate

1 possible location found. powered by: **GEOLocate**



Workbench **1 possible location found**

Georeference Options | Clear Polygon Draw polygon Place marker Measure

Locality String: Champaign

Country: UNITED STATES OF AMERICA

State: Illinois

County:

latitude: 40.11642 longitude: -88.243383 uncertainty: 7338 m error polygon

```
40.11642 -88.243383 7338 40.1379180207,-88.2699379175,40.1375100207,-88.2694189175,40.1374060207,-88.2694509175,40.1372730207,-88.2690329175,40.1373630207,-88.2689819175,40.1375880207,-88.2689439175,40.1401300207,-
```

Save To Your Application

INHS Insect Collection Database: Specimens

661,111 records

INHSinsects (bug.inhs.illinois.edu)
INHS Insect Collection Database: Specimens
Welcome

Browse

Layout: Specimer

Record: 2

Total: 661111

Unsorted

Specimens

Checked Yes No

Make Excel file

Prefix **Amber** Catalog **749**

Amber 00749

Type _____

TypeName _____

Preparation Type **Amber**

AdultMale larva/nymph

AdultFemale Pupa

AdultUnsexed Exuvium

AgeUnknown Other

IndividualCount _____

SpecialCollection _____

Other labels _____

LocalityCode **2,837** Country Dominican Republic

State Santiago

County _____

Elevation _____

Locality North of Santiago, Palo Alto de la Cumbre Region, below Pico Diego de

Latitude 0

Longitude 0

Precision code _____

Body of water _____

Drainage basins: L _____ G _____

Taxon code **15,406** Taxonomy Animalia

Stream Size 1-seep 2-1-2 m 3-3-10 m 4-10-30 m 5-30-60 m 6->-60 m 7-large lake

DNA Barcode _____

ScientificNameAuthor _____

DeterminationLabel _____

IdentifiedBy _____

Determination year _____

LocalityLabel **Dominican Republic north of Santiago Palo Alto de la Cumbre Region below Pico Diego de Ocampo near Pedro Garcia May 1959 1220 m**

KaskCTAP _____

Habitat# _____

AccessionNumber/Field # _____

DateCollectedBeginning **5/1/1959** DateCollectedEnding **5/31/1959**

1 May 1959 31 May 1959

Year 1959 Month 5 Day Julian Day

Collector **M. W. Sanderson**

CollectionMethod _____ Habitat _____

Associated specimen number	Association type	Taxon code
Depository	Depository accession number	

Remarks _____

Date collected beginning _____ Date collected ending _____

Collector _____ Description _____

AccessionSource _____

DeaccessionRecipient **1,164 Dr. Sam Heads**

DeaccessionDate **1/1/2015**

DeaccessionCause **Transferred**

sort prev next

Send these records to the loan file

Country State State State

Created	6/26/1996	0:00	
Modified	1,664	4/28/2015 16:31	Christopher C. Grinter
		6/26/1996 0:00:00	4/28/2015 16:31:39
DateLastModified	2015-4-28	InstitutionCode	BarSORecord S Sex

Specimen returned This record is on loan on invoice Group returned

Illinois Status

100 Browse

Parsing verbatim labels

- Matching with existing parsed records (~40% match)
- RegEx date extraction (~80% records)
- RegEx coordinate extraction (~95% records with coordinates)
- Finding collector (~70% records)
- Student parsing
- Crowd-sourcing (have not been tested yet).

INHS Insect Collection Database: SQL database


231,109 records

Анатолий Шарий - YouT... Вести.Ru: Специальный Postgres database - Goog 31 Illinois Natural History Sur


inhsinsectcollection.speciesfile.org/InsectCollection.aspx

[Sign in](#)

Illinois Natural History Survey: Insect Collection

 **ILLINOIS NATURAL HISTORY SURVEY**
PRAIRIE RESEARCH INSTITUTE

Search INHS Insect database
(also incl. Arachnida, Myriapoda, Onychophora, & Xiphosurida)



Search Term: Vespa Where: Genus Partial Search: Whole field Sort: Unsorted

And Species Whole field Unsorted

And -Catalog Number- Whole field Unsorted

And -Select- Whole field Unsorted

Results per page: 25 [Add a line](#) [Clear the form](#) Search

Found records: 42 (Page: 1 of 2)

Catalog Number	Class	Order	Suborder	Superfamily	Family	Subfamily	Tribe	Genus	Subgenus	Species	Subspecies	Author	Year	Country	State	County	Locality	Other Descriptor	Body of
Insect Collection 213496	Insecta	Hymenoptera	Apocrita	Vespoidea	Vespidae	Vespinae		Vespa		crabro		Linnaeus	1758	Unknown					
Insect Collection 213510	Insecta	Hymenoptera	Apocrita	Vespoidea	Vespidae	Vespinae		Vespa		crabro		Linnaeus	1758	Unknown					
Insect Collection 213517	Insecta	Hymenoptera	Apocrita	Vespoidea	Vespidae	Vespinae		Vespa		crabro		Linnaeus	1758	Unknown					
Insect Collection 213520	Insecta	Hymenoptera	Apocrita	Vespoidea	Vespidae	Vespinae		Vespa		crabro		Linnaeus	1758	Unknown					
Insect Collection 213521	Insecta	Hymenoptera	Apocrita	Vespoidea	Vespidae	Vespinae		Vespa		crabro		Linnaeus	1758	Unknown					
Insect Collection 213518	Insecta	Hymenoptera	Apocrita	Vespoidea	Vespidae	Vespinae		Vespa		crabro		Linnaeus	1758	Unknown					
Insect Collection 213498	Insecta	Hymenoptera	Apocrita	Vespoidea	Vespidae	Vespinae		Vespa		crabro		Linnaeus	1758	United States	Illinois	Pope			
Insect Collection 213499	Insecta	Hymenoptera	Apocrita	Vespoidea	Vespidae	Vespinae		Vespa		crabro		Linnaeus	1758	United States	Illinois	Pope			
Insect Collection 213500	Insecta	Hymenoptera	Apocrita	Vespoidea	Vespidae	Vespinae		Vespa		crabro		Linnaeus	1758	United States	Illinois	Pope			
Insect Collection 213501	Insecta	Hymenoptera	Apocrita	Vespoidea	Vespidae	Vespinae		Vespa		crabro		Linnaeus	1758	United States	Illinois	Pope			
Insect Collection 213502	Insecta	Hymenoptera	Apocrita	Vespoidea	Vespidae	Vespinae		Vespa		crabro		Linnaeus	1758	United States	Illinois	Pope			
Insect Collection 213503	Insecta	Hymenoptera	Apocrita	Vespoidea	Vespidae	Vespinae		Vespa		crabro		Linnaeus	1758	United States	Illinois	Pope			
Insect Collection 213491	Insecta	Hymenoptera	Apocrita	Vespoidea	Vespidae	Vespinae		Vespa		crabro		Linnaeus	1758	United States	New York				
Insect Collection 213519	Insecta	Hymenoptera	Apocrita	Vespoidea	Vespidae	Vespinae		Vespa		crabro		Linnaeus	1758	Japan					
Insect Collection 213525	Insecta	Hymenoptera	Apocrita	Vespoidea	Vespidae	Vespinae		Vespa		crabro		Linnaeus	1758	United States	Illinois	Cumberland	Roslyn		
Insect Collection 213492	Insecta	Hymenoptera	Apocrita	Vespoidea	Vespidae	Vespinae		Vespa		crabro		Linnaeus	1758	United States	Illinois	Massac			
Insect Collection 213504	Insecta	Hymenoptera	Apocrita	Vespoidea	Vespidae	Vespinae		Vespa		crabro		Linnaeus	1758	United States	Illinois	Massac			
Insect Collection 213505	Insecta	Hymenoptera	Apocrita	Vespoidea	Vespidae	Vespinae		Vespa		crabro		Linnaeus	1758	United States	Illinois	Massac			

TaxonWorks: Collection Objects

912,593 records, with 23,136 type material records

The screenshot displays the TaxonWorks web interface. The main page shows a collection object record for ID 570815, which is a Trichoptera specimen (Catalog number 14151) determined as *Limnephilus sitchensis* (F Kolenati, 1859) on Do 2015. The record includes fields for Total (1), Ranged lot category, Type (Specimen), Preparation type, Collecting event (INDEPENDENCE), and various buffered values. A 'Record housekeeping' section lists creation and update details.

An inset window titled 'Listing type materials' is open, showing a table of 23 type material records. The table columns are Material, Type type, Protonym, Source, Last modified, and Updated by. The records include various specimens of *Bambara* and *Tiganogona* species, along with holotypes of *Dinochilurus reus*, *Uroblaniulus sandersoni*, *Ethojulus illinoensis*, *Spathiulus elegantulus*, *Striaria antica*, *Petaserpes mutabilis*, and *Venezueneptus liber*.

Material	Type type	Protonym	Source	Last modified	Updated by
Coleoptera 6153 (Catalog number) determined as <i>Bambara testacea</i> (Dybas) on 2001	paratypes	<i>Bambara testacea</i> (Dybas)		2015-11-04 21:27:58 UTC	INHS Insect Collection Import
Coleoptera 6054 (Catalog number) determined as <i>Bambara frosti</i> (Dybas) on 2001	paratypes	<i>Bambara frosti</i> (Dybas)		2015-11-04 21:28:31 UTC	INHS Insect Collection Import
Coleoptera 6062 (Catalog number) determined as <i>Bambara fusca</i> (Dybas) on 2001	paratypes	<i>Bambara fusca</i> (Dybas)		2015-11-04 21:28:34 UTC	INHS Insect Collection Import
Coleoptera 6063 (Catalog number) determined as <i>Bambara contorta</i> (Dybas) on 2001	paratypes	<i>Bambara contorta</i> (Dybas)		2015-11-04 21:28:34 UTC	INHS Insect Collection Import
Coleoptera 6068 (Catalog number) determined as <i>Bambara wagneri</i> (Dybas) on 2001	paratype	<i>Bambara wagneri</i> (Dybas)		2015-11-04 21:28:40 UTC	INHS Insect Collection Import
Coleoptera 6120 (Catalog number) determined as <i>Bambara intricata</i> (Dybas) on 2001	paratypes	<i>Bambara intricata</i> (Dybas)		2015-11-04 21:29:07 UTC	INHS Insect Collection Import
Lot	paratypes	<i>Dinochilurus reus</i> (Christiansen and Bellingier, 1980)		2015-11-04 21:29:57 UTC	INHS Insect Collection Import
Diplopoda 1 (Catalog number) determined as <i>Uroblaniulus sandersoni</i> (Causey, 1950) on 2000	holotype	<i>Uroblaniulus sandersoni</i> (Causey, 1950)		2015-11-04 21:30:01 UTC	INHS Insect Collection Import
determined as <i>Tiganogona ladymani</i> (Causey, 1952) on 2000	paratype	<i>Tiganogona ladymani</i> (Causey, 1952)		2015-11-04 21:30:02 UTC	INHS Insect Collection Import
determined as <i>Tiganogona ladymani</i> (Causey, 1952) on 2000	paratype	<i>Tiganogona ladymani</i> (Causey, 1952)		2015-11-04 21:30:02 UTC	INHS Insect Collection Import
Diplopoda 3 (Catalog number) determined as <i>Ethojulus illinoensis</i> (Causey, 1950) on 2000	holotype	<i>Ethojulus illinoensis</i> (Causey, 1950)		2015-11-04 21:30:02 UTC	INHS Insect Collection Import
Diplopoda 4 (Catalog number) determined as <i>Spathiulus elegantulus</i> (Causey, 1950) on 2000	holotype	<i>Spathiulus elegantulus</i> (Causey, 1950)		2015-11-04 21:30:02 UTC	INHS Insect Collection Import
Diplopoda 5 (Catalog number) determined as <i>Striaria antica</i> (Causey, 1952) on 2000	holotype	<i>Striaria antica</i> (Causey, 1952)		2015-11-04 21:30:03 UTC	INHS Insect Collection Import
Diplopoda 6 (Catalog number) determined as <i>Petaserpes mutabilis</i> (Causey, 1951) on 2000	holotype	<i>Petaserpes mutabilis</i> (Causey, 1951)		2015-11-04 21:30:03 UTC	INHS Insect Collection Import
Diplopoda 7 (Catalog number) determined as <i>Venezueneptus liber</i> (Causey, 1954) on 2000	holotype	<i>Venezueneptus liber</i> (Causey, 1954)		2015-11-04 21:30:04 UTC	INHS Insect Collection Import
Diplopoda 8 (Catalog number) determined as <i>Venezueneptus liber</i> (Causey, 1954) on 2000	paratype	<i>Venezueneptus liber</i> (Causey, 1954)		2015-11-04 21:30:04 UTC	INHS Insect Collection Import
determined as <i>Trichopetalum orientalis</i> (Causey) on 2000	paratype	<i>Trichopetalum orientalis</i> (Causey)		2015-11-04 21:30:05 UTC	INHS Insect Collection Import
determined as <i>Trichopetalum orientalis</i> (Causey) on 2000	paratype	<i>Trichopetalum orientalis</i> (Causey)		2015-11-04 21:30:05 UTC	INHS Insect Collection Import

INHS Insect Collection Database: Loans

3,112 records, loan items: 56,689 records (1:1 in TaxonWorks)

The screenshot displays the INHS Insect Collection Database interface. The main window shows a loan record for Recipient ID 111, Dr. Thomas C. Barr, Jr., Department of Biology, Tennessee Polytechnic Institute, Cookeville TN 38501. The loan is for Specimen number 449, Loan Invoice 449, dated 20 November 1959. The loan is for Cynipidae specimens.

An invoice titled "INVOICE OF SPECIMENS" is overlaid on the record. It is from the Illinois Natural History Survey, Natural Resources Building, Urbana, IL. The invoice is dated 1989 and is for Dr. J. D. Shorthouse, Department of Biology, University of Saskatchewan, Saskatoon, Saskatchewan, CANADA. The invoice lists the following specimens:

Specimen	Quantity
<i>Diplolepis amphora</i> Weld	-
*D. arefacta (Gill.)	8
D. bassetti (Beut.)	-
D. bicolor (Harris)	13
D. Californica (Beut.)	4
D. dichlocera (Bar.)	17
D. eglanteriae (Htg.)	2
D. fulgens Gillette	-
*D. fusiformans	-
var. mendocinensis Kinsey	-
D. fusiformans (Ashm.)	7
D. gracilis (Ashm.)	3
D. ignota (O. S.)	7
D. multipinosa (Gill.)	7
D. nebulosa (Bass.)	-
D. nodulosa (Beut.)	2
*D. oregonensis (Beut.)	2

The TaxonWorks interface shows the loan details for ID 523, beetle@dpu.lv. The loan was requested on 2002-05-21 and received on 2002-10-02. The recipient is the Baltic Institute of Coleopterology, University of Daugapils, Vienibas Str. 13, Daugapils, LV-5401; Latvia. The loan items are listed as follows:

- 63: Insect Collection 6066 (Catalog number) determined as *Notiophilus sylvaticus* (Eschscholtz, 1833) on 2003
- 62: Insect Collection 6065 (Catalog number) determined as *Notiophilus sylvaticus* (Eschscholtz, 1833) on 2003
- 61: Insect Collection 6064 (Catalog number) determined as *Notiophilus sylvaticus* (Eschscholtz, 1833) on 2003
- 60: Insect Collection 6063 (Catalog number) determined as *Notiophilus sylvaticus* (Eschscholtz, 1833) on 2003
- 59: Insect Collection 6062 (Catalog number) determined as *Notiophilus sylvaticus* (Eschscholtz, 1833) on 2003
- 58: Insect Collection 6061 (Catalog number) determined as *Notiophilus sylvaticus* (Eschscholtz, 1833) on 2003
- 57: Insect Collection 6060 (Catalog number) determined as *Notiophilus sylvaticus* (Eschscholtz, 1833) on 2003
- 56: Insect Collection 6059 (Catalog number) determined as *Notiophilus sylvaticus* (Eschscholtz, 1833) on 2003
- 55: Insect Collection 6058 (Catalog number) determined as *Notiophilus bipartitus* (Fabricius, 1799) on 2003
- 54: Insect Collection 6057 (Catalog number) determined as *Notiophilus substriatus* (Waterhouse, 1833) on 2003
- 53: Insect Collection 6056 (Catalog number) determined as *Notiophilus substriatus* (Waterhouse, 1833) on 2003
- 52: Insect Collection 6055 (Catalog number) determined as *Notiophilus novemstriatus* (LeComte, 1848) on 2003
- 51: Insect Collection 6054 (Catalog number) determined as *Notiophilus semistriatus* (Say, 1823) on 2003
- 50: Insect Collection 6053 (Catalog number) determined as *Notiophilus semistriatus* (Say, 1823) on 2003
- 49: Insect Collection 6052 (Catalog number) determined as *Notiophilus semistriatus* (Say, 1823) on 2003
- 48: Insect Collection 6051 (Catalog number) determined as *Notiophilus semistriatus* (Say, 1823) on 2003
- 47: Insect Collection 6050 (Catalog number) determined as *Notiophilus aeneus* (Herbst, 1806) on 2003
- 46: Insect Collection 6049 (Catalog number) determined as *Notiophilus semistriatus* (Say, 1823) on 2003
- 45: Insect Collection 6048 (Catalog number) determined as *Notiophilus semistriatus* (Say, 1823) on 2003
- 44: Insect Collection 6047 (Catalog number) determined as *Notiophilus semistriatus* (Say, 1823) on 2003
- 43: Insect Collection 6046 (Catalog number) determined as *Notiophilus semistriatus* (Say, 1823) on 2003
- 42: Insect Collection 6045 (Catalog number) determined as *Notiophilus aeneus* (Herbst, 1806) on 2003
- 41: Insect Collection 6044 (Catalog number) determined as *Notiophilus semistriatus* (Say, 1823) on 2003
- 40: Insect Collection 6043 (Catalog number) determined as *Notiophilus semistriatus* (Say, 1823) on 2003

Collection profiling (following Favret et al. 2007)

16,449 records

Form1 : Form

ID: Person:

Room: Taxon Code:

Label 1

Line 1:

Line 2:

Line 3:

Line 4:

Label 2

Line 1:

Line 2:

Line 3:

Line 4:

Notes:

Collection Type:

Conservation Status:

Processing State:

Container Condition:

Condition of Labels:

Identification Level:

Arrangement Level:

Data Quality:

Computerization Level:

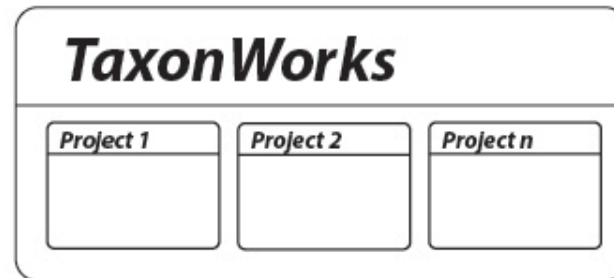
Number of Specimens: Print label 1: Print label 2:

Number of Vials / Slides:

Created: Modified:

Record: of 6392

Accessing a TaxonWorks project



Self managed

Local Server

Desktop
(development)

Remotely managed

Institutional
Server

Cloud

iPlant?

TaxonWorks as a basic CM tool: TODO

TW Deployment
Strategy

Optimized
Loan Form

Loan
Completion Form

Loan
Letter

DwC A Export

Things to do!

Use a
TaxonWorks VM

Provide
Feedback

Poke at
Sandbox

SFG
Hackathons

Masters Student!

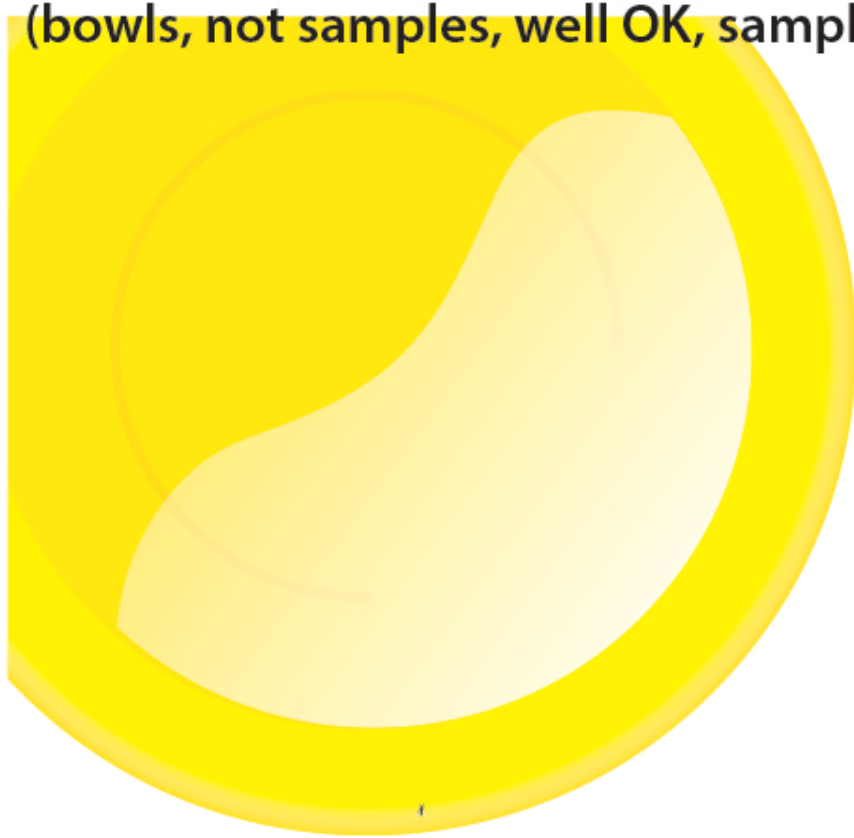
Summer
Internships

Draw a
Wireframe

Hack on
TaxonWorks!

Wanted: YPTs

(bowls, not samples, well OK, samples too, but for now, bowls)



How? Where?

**Combined,
custom order?**

Thank you

NSF-CSBR-1458285, and prior support
INHS collorators and museum support
C. Dietrich, T. Schuh, C. Bartlet, S. Heads,
B. Morris, A. Bader, J. Zahniser, many undergrads!

Frost currators and staff

Species File Staff

Jim Tucker, Marilyn Beckman,
Rich Flood, Mike Maehr, Beth Frank

NSF-DBI-1356515