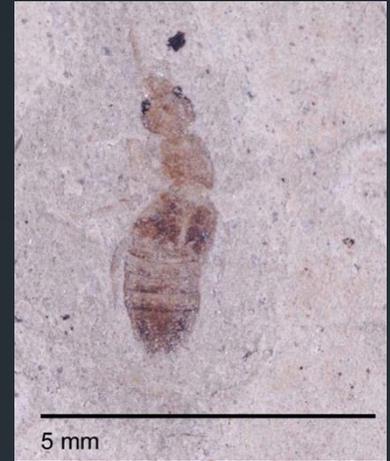




**fossil
insect**
COLLABORATIVE

Dena Smith & Talia Karim
University of Colorado
Susan Butts
Yale University





*Digitize and make available
all the major collections of
fossil insect specimens in
the United States*





HARVARD UNIVERSITY
Museum of Comparative Zoology





Digitization Goals:

- Database ~500,000 specimens
- ~77,000 digital images
- Data sharing
- iDigPaleo development

Research Goals:

- Examine insect response to environmental change in deep time
- Examine evolutionary history of fossil insect groups and patterns of diversity in deep time



YPM-IP.1002 *Dunbaria fasciipennis* Holotype

Project Oversight

Annual Meetings



Adobe Connect Virtual Meetings

- Started in Year 3
- Every four months

Amber Workshop - AMNH

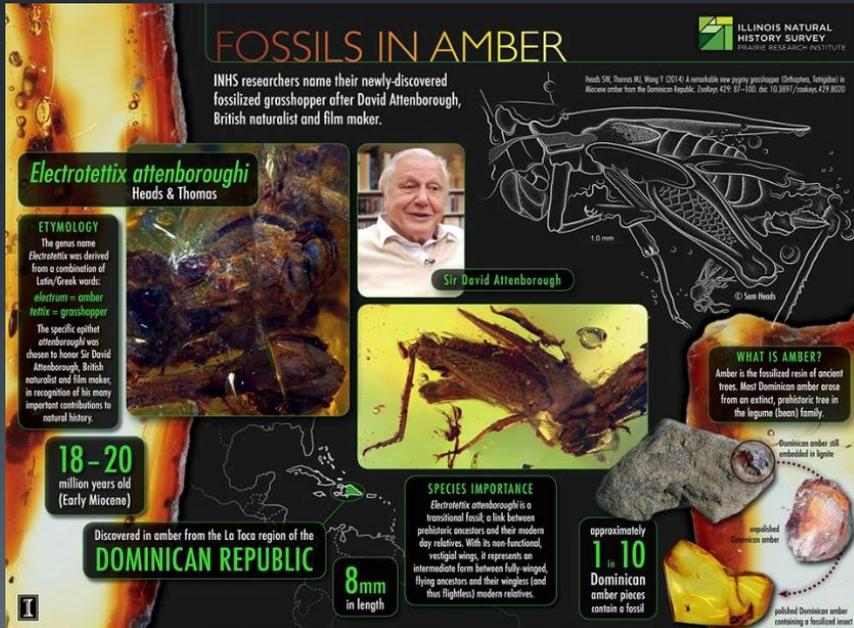


Amber Workshop - AMNH



Research

- Coordinating groups to work on broader questions using TCN data
- Individual Projects
- Fossil Insect Symposium- ESA 2014



FOSSILS IN AMBER

INHS researchers name their newly-discovered fossilized grasshopper after David Attenborough, British naturalist and film maker.

Electrotettix attenboroughi
Heads & Thomas

ETYMOLOGY
The genus name *Electrotettix* was derived from a combination of Latin/Greek words: *electrum* = amber, *tettix* = grasshopper. The specific epithet *attenboroughi* was chosen to honor Sir David Attenborough, British naturalist and film maker, in recognition of his many important contributions to natural history.

18-20 million years old (Early Miocene)

Discovered in amber from the La Toca region of the **DOMINICAN REPUBLIC**

8mm in length

SPECIES IMPORTANCE
Electrotettix attenboroughi is a transitional fossil, a link between prehistoric ancestors and their modern day relatives. With its non-functional, vestigial wings, it represents an intermediate form between fully-winged, flying ancestors and their wingless (and thus flightless) modern relatives.

WHAT IS AMBER?
Amber is the fossilized resin of ancient trees. Most Dominican amber arose from an extinct, prehistoric tree in the legume (boon) family.

Dominican amber still embedded in lignite

unpublished Dominican amber containing a fossilized insect

approximately **1 in 10** Dominican amber pieces contain a fossil

ILLINOIS NATURAL HISTORY SURVEY
PRAIRIE RESEARCH INSTITUTE

Wood, S.W., Barnes, R.A., Wang, Y. (2014) A remarkable new flying grasshopper (*Orthoptera*, *Orthoptera*) in Miocene amber from the Dominican Republic. *Evolution* 68(1): 11-19. doi: 10.1111/evo.12402

© Sam Heads



Data

- Data management
 - DarwinCore formatted data sent from providers via IPT
- Open access of data
 - All data and images available for public and researchers on iDigBio and iDigPaleo
- Management of the network
 - Yale to CU-Boulder

FIC on Social Media



A screenshot of the Facebook page for the Fossil Insect Collaborative-Digitization Project. The page header shows the name and a search bar. Below the header are navigation tabs for Page, Activity, Insights, and Settings. The main content area features a large banner image with the text "Having a Fossiliferous National Fossil Day!" and the project logo. Below the banner are interaction buttons for "Liked", "Following", and "Message". The page is divided into sections: "PEOPLE" (showing 240 likes and a list of users), "Find New Customers" (with a "Promote Page" button), and "ABOUT" (with an "Invite" button for users like Katie Fitzgerald and Matt Koontz). The main feed shows a post from the project with the text "What have you been up to?" and a link to a GSA Vancouver event. The post includes a "Session: Advancing the Digitization of Paleontology and Geoscience Collections: Projects,..." and a "GSA 2014" logo. The bottom of the page shows interaction options like "Like", "Comment", and "Share".

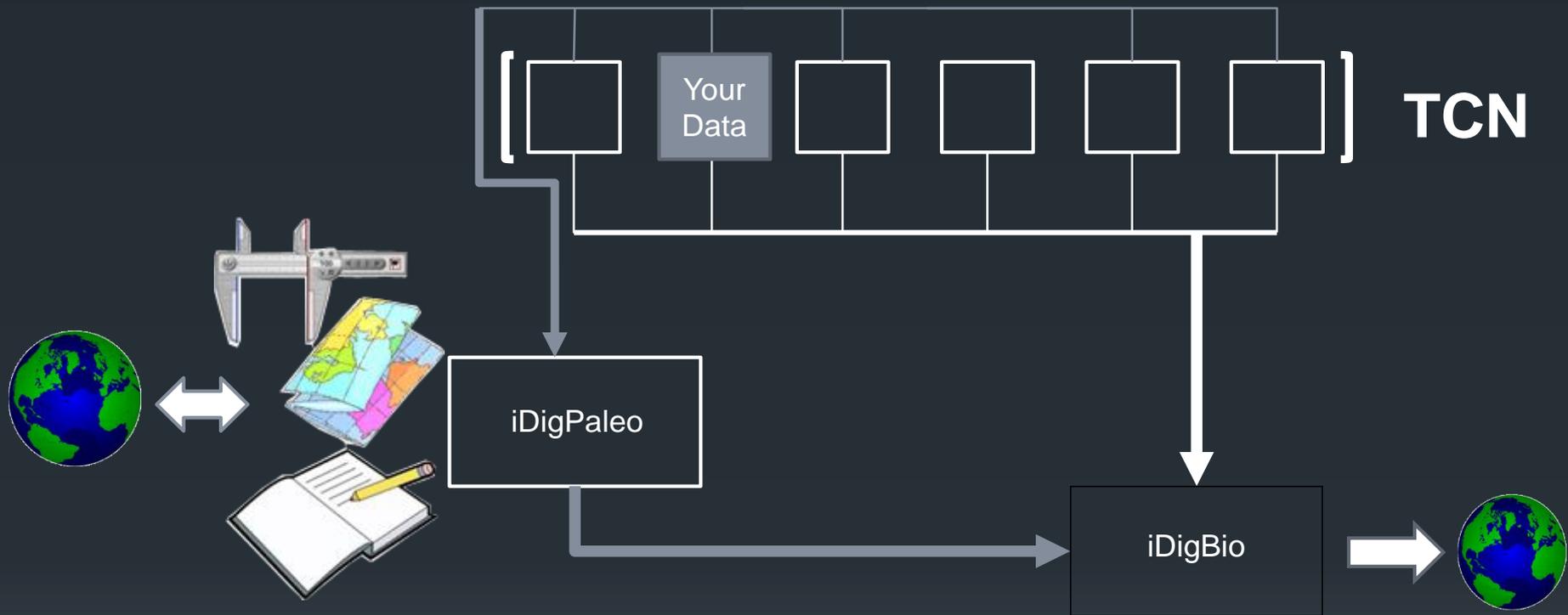
A social media graphic for the Fossil Insect Collaborative. It features the project logo at the top, followed by the text "Fossil Insect TCN" and "@FossilInsectTCN" in a smaller font. Below this, it says "FOLLOWS YOU". The background is a solid blue color.

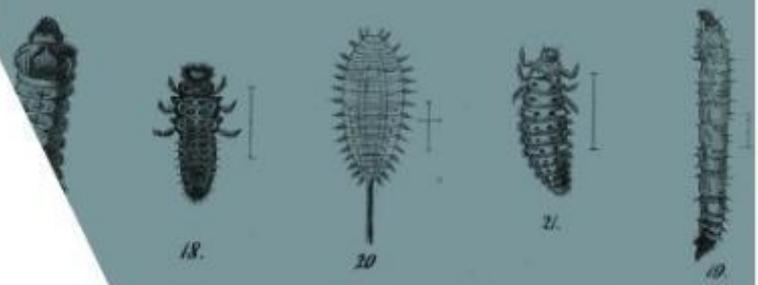
@FossilInsectTCN

The logo for DigPaleo features a stylized profile of a human head in blue and yellow, with a white circle representing an eye or a fossil. Below the head is a yellow and white pattern resembling a fossil or a network. The text "DigPaleo" is written in a bold, sans-serif font, with "Dig" in blue and "Paleo" in yellow.

DigPaleo

- Aggregate data from fossil insect project
- Provide tools for educational access to these data
- Central resource to interact with bio and geo cyberinfrastructure initiatives

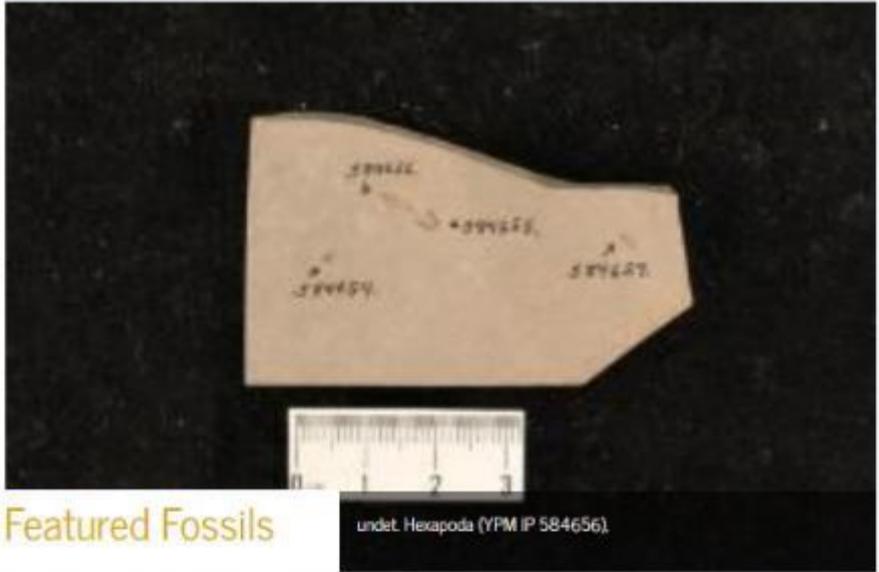




News

Society for the Preservation of Natural History Collections
Annual Meeting

More

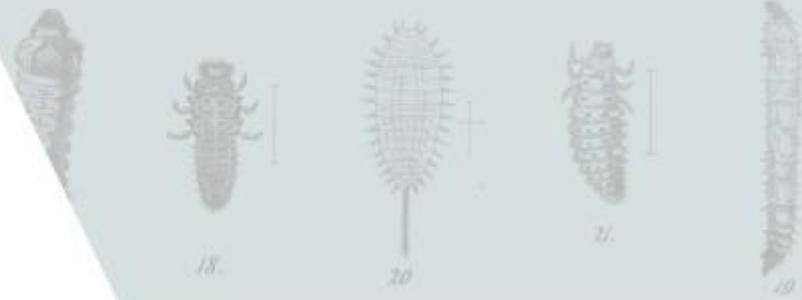


Featured Fossils

undet. Hexapoda (YPM IP 584656)



Making data and images of
millions of insect specimens
available on the web



LOGIN

E-MAIL ADDRESS

susan.butts@yale.edu

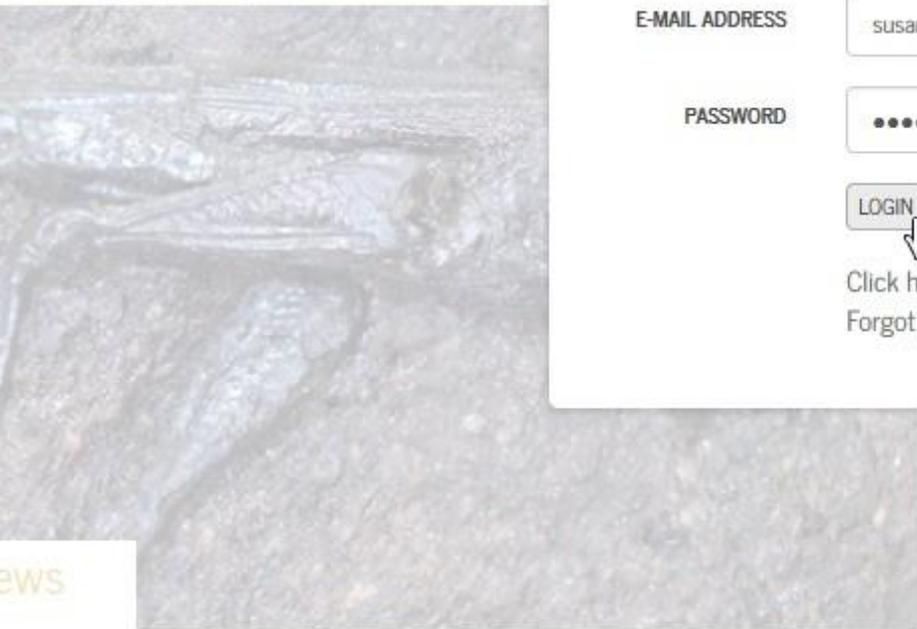
PASSWORD

••••••••

LOGIN

[Click here to register](#)
[Forgot your password?](#)

Search



Featured Fossils

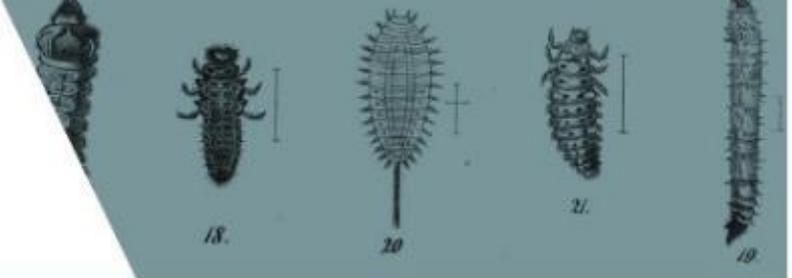
(PAL576853.11701805)

Society for the Preservation of Natural History Collections
Annual Meeting

More



LOGIN



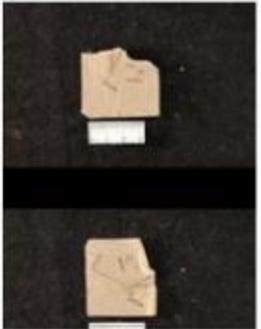
6292 SPECIMEN RESULTS 



SOURCE: FOSSIL/MODERN: HAS MEDIA:



YPM IP 223880
Urogomphus eximius



YPM IP 454215
undet. Zygoptera



YPM IP 794004
undet. Zygoptera



YPM IP 793713
undet. Vespidae



YPM IP 793298
undet. Vespidae



YPM IP 454356
undet. Trichoptera



YPM IP 454356
undet. Trichoptera



YPM IP 454356
undet. Trichoptera

FILTER BY

COMMON NAME

- Ants
- Ants, bees, and wasps
- Ants, bees, narrow-waisted hymenopterans, and true wasps
- Aphids
- Arthropods
- Bee fly
- Beetles
- [and 57 more](#)

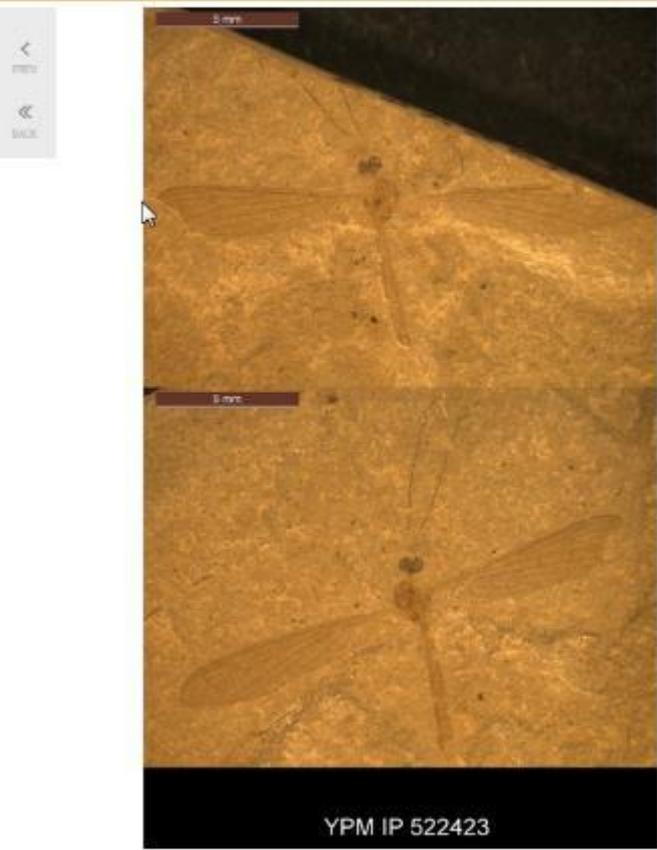
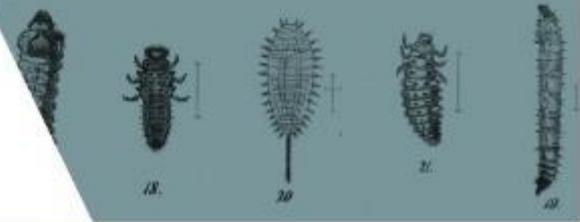
GENUS

- Acrocera
- Actea
- Anthracothremma
- Anthrakoris

CONTINENT

- Europe

BROWSE



undet. Tipulidae; feather on slab with
True flies, Mosquitoes and Gnats

YPM IP 522423
Yale Peabody Museum of Natural History

TAXONOMY

Animalia > Arthropoda > Insecta > Diptera > Tipulidae > Family

LOCALITY

North America > USA > Colorado > Garfield County > N end of Radar Dome

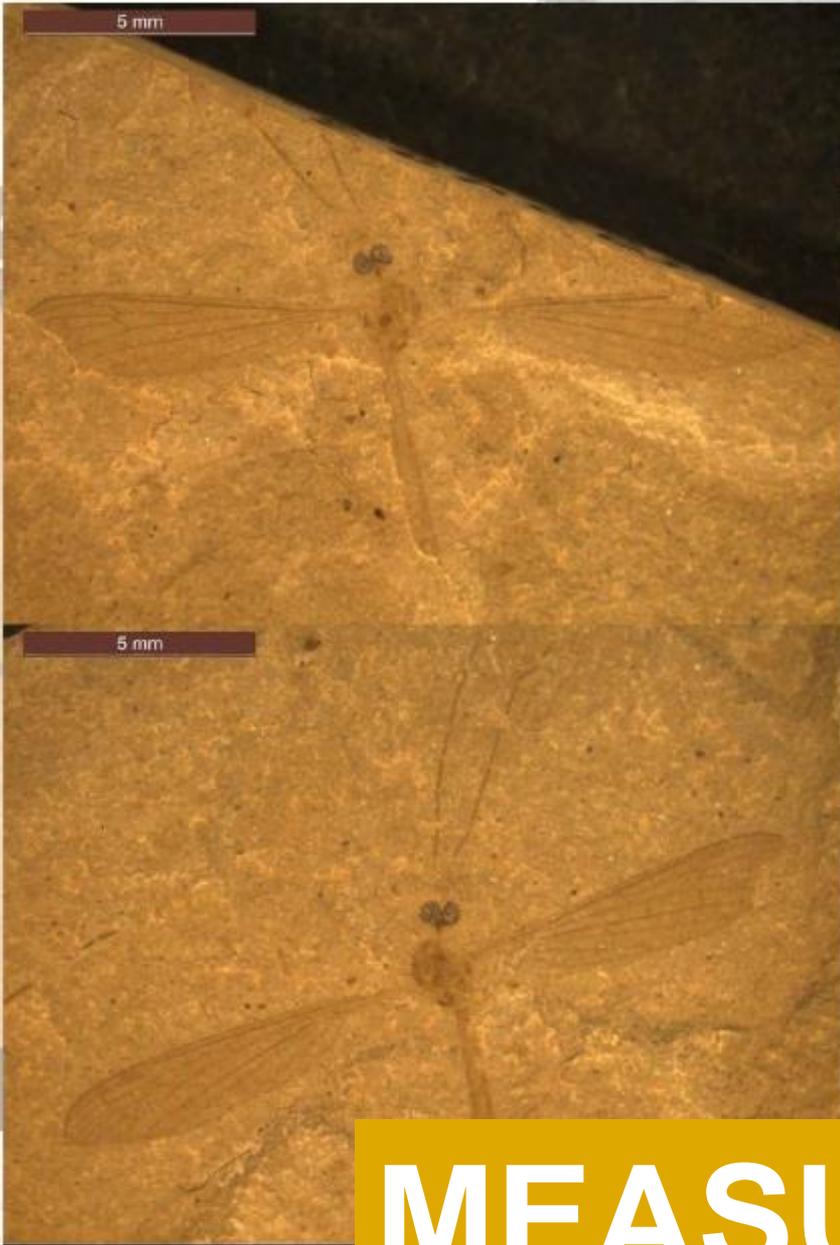


-  ADD TO ASSIGNMENT
-  COMMENTS (0)
-  SHARE

MAP



- ADD TO ASSIGNED
- COMMENTS BY
- SHARE



MEASURE

YPM IP 522423



ADD TO ASSIGNMENT

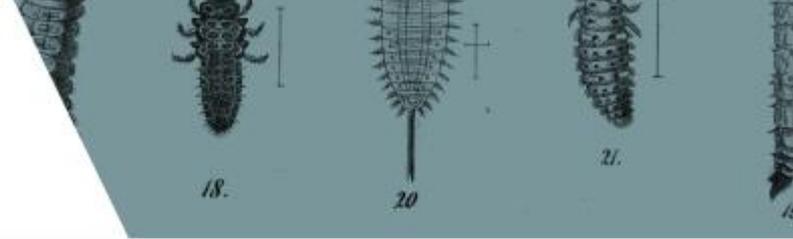
wingspan ✕

This image is scaled at 1mm = 5% of width.
To change scale enter the length with units (mm, cm, m, km, in, ft, miles, etc.) of the currently selected measurement below.

Length: SET

YPM IP 522423

NOTE



5 SPECIMEN RESULTS

SOURCE: HAS MEDIA: HAS MEDIA FOSSIL/MODERN: FOSSILS SERIES: EOCENE
COMMON NAME:

FILTER BY
CONTINENT
North America

YPM IP 454405
undet. Asilidae

YPM IP 584576
undet. Asilidae

YPM IP 584521
undet. Asilidae

YPM IP 454423
Asilidae?

YPM IP 454441

GROUP

Making data and images of
millions of insect specimens
available on the web



ABOUT

NEWS

BROWSE

JO

ADD ITEM TO ASSIGNMENT



Rio Blanco Field Trip

Select a assignment

Rio Blanco Field Trip

OR

CREATE A NEW ASSIGNMENT

NAME

Your assignment

DESCRIPTION

SAVE

SAVE



YPM IF



Geology 540 Green River Field Trip

- All assignments
- Edit Name/Description
- Share Assignment
- Manage Assignment Access
- Start presentation

- Download as:
 - Checklist [pdf]
 - PDF (thumbnails) [pdf]
 - Excel (basic information) [xlsx]
 - PowerPoint (basic information) [pptx]
- New Assignment
- New User Group
- Manage Your User Groups

COMMENTS

add your comment

SAVE



YPM IP 237183, undet. Tipulidae



YPM IP 522446



undet. Tipulidae

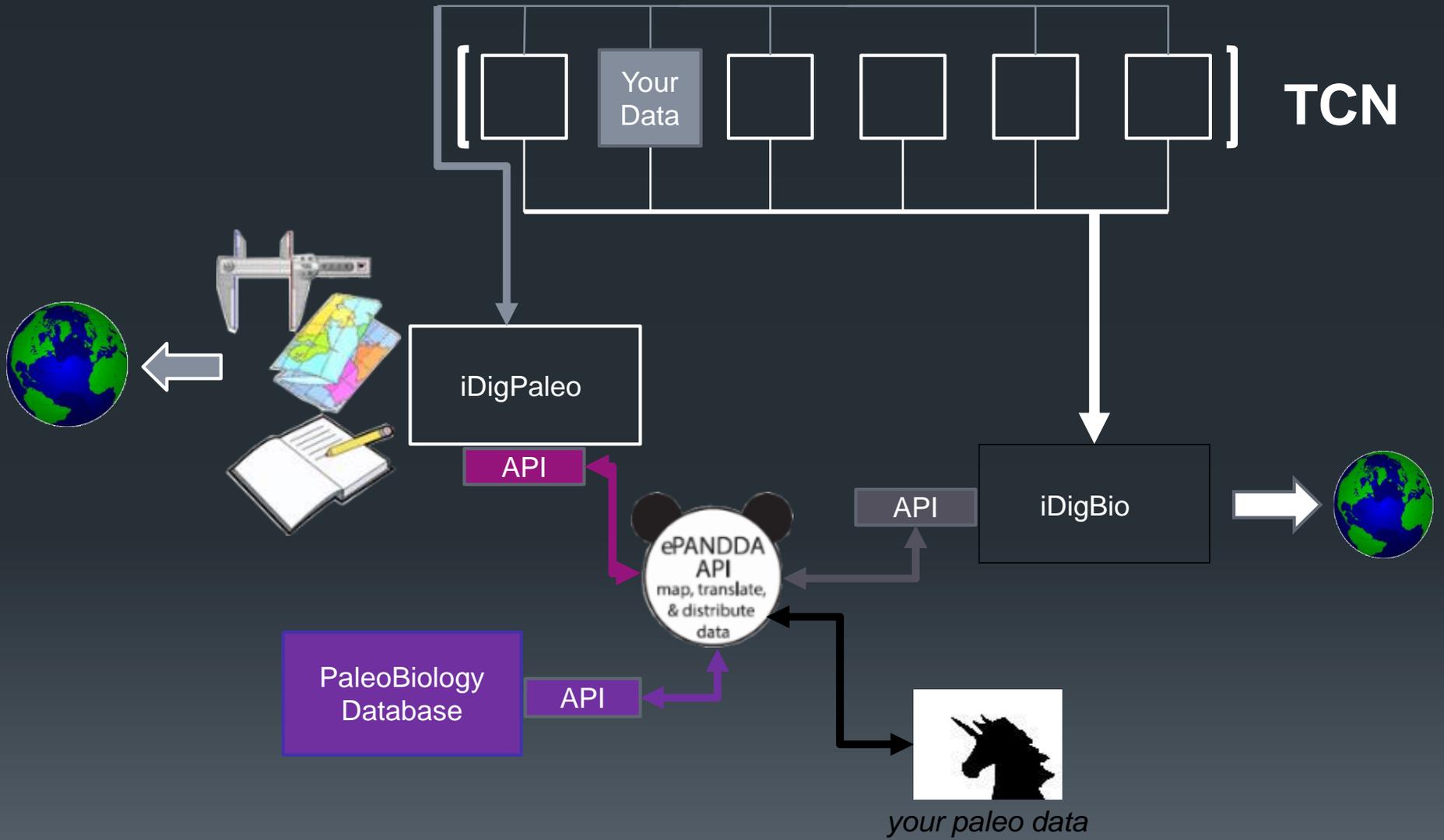
SHARE

iDigPaleo Teacher Workshop
Yale Peabody Museum
July 20-21, 2015



- Tools in development
 - Integrated mapping in geologic history (PBDB API, GPlates API)
 - Comments/annotations returned to institution (i.e. update taxonomy)
- Teacher workshop –directions and outcomes
 - Directions
 - critique of front end operation
 - provide curated collections (assignments)
 - provide background info
 - provide videos from collections/field
 - Outcomes
 - lesson plans based on NGSS

ePANDDA

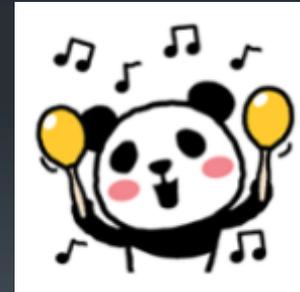


Potential for collaboration

Pass your data to us, have us aggregate it and serve it to iDigBio



Talk to us about turning your data into a dynamic resource for education and public use access



Acknowledgements

Development of iDigPaleo is supported through NSF EF 1305027: Digitization TCN: Collaborative Research: Fossil Insect Collaborative: A deep-time approach to studying diversification and response to environmental change

ePANDDA is supported through NSF ICER 1540984: EarthCube IA. Collaborative Proposal: ePANDDA: Enhancing Paleontological and Neontological Data Discovery API

