



## **iDigPaleo**

Fossil insect discovery, research, and educational outreach

Christopher Norris & Susan Butts
Yale University
Peabody Museum of Natural History



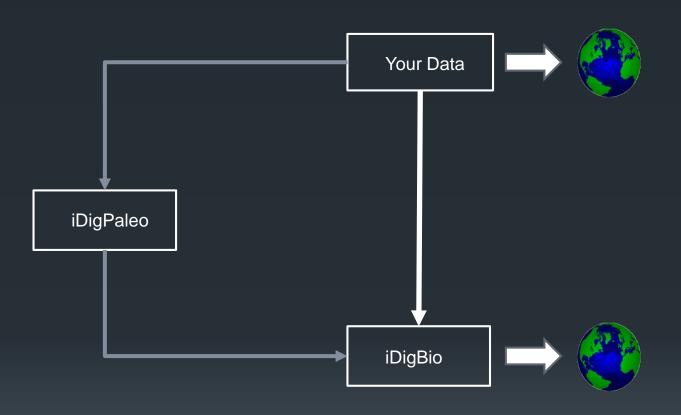




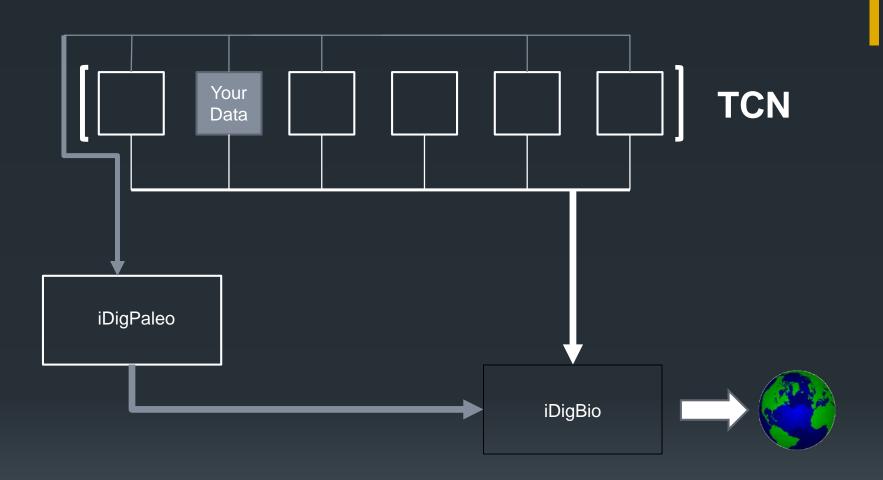


iDigPaleo \*\* "Paleontology version of iDigBio"

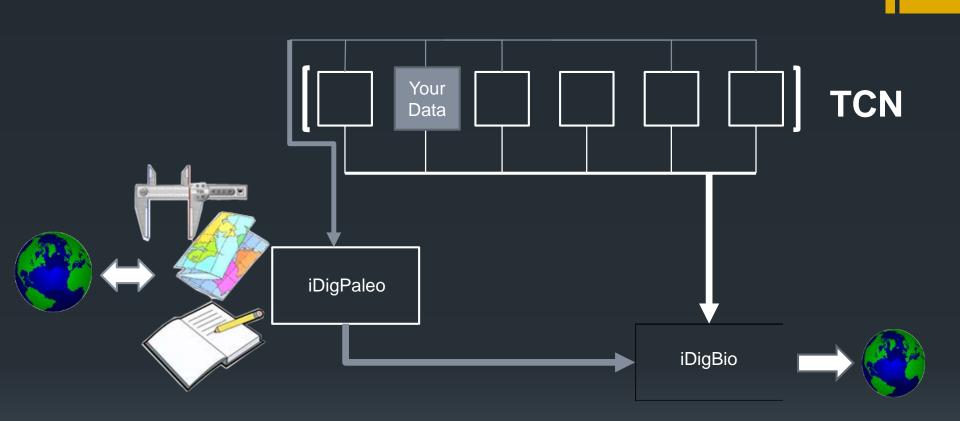


















TCN: Fossil Insect Collaborative: A Deep-Time Approach to Studying Diversification and Response to Environmental Change

- Lead: University of Colorado Museum of Natural History - Smith (also now STEPPE GSA) and Karim
- YPM: Butts and Norris











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

### Research Goals

- understand response to environmental change and patterns of biodiversity through time
- phylogenetic reconstruction, evolution of morphological characteristics, and studies of overall patterns of diversification in deep time

YPM-IP.1002 Dunbaria fasciipennis Holotype











**HARVARD UNIVERSITY** 

**Museum of Comparative Zoology** 















**National Park Service** 



Yale PEABODY MUSEUM
OF NATURAL HISTORY





- aggregate FIC data for iDigBio
- educational resources for fossil insects
- central resource to interact with bio and geo cyberinfrastructure initiatives



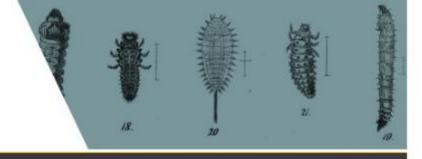












ABOUT NEWS BROWSE JOIN EDUCATION

Search

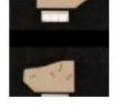
٩l

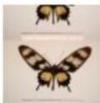




Society for the Preservation of Natural History Collections Annual Meeting











More





**ABOUT NEWS BROWSE** JOIN **EDUCATION** News

Society for the Preservation of Natural History Collections Annual Meeting







Curculionidae (CUMNH UCM 39414).







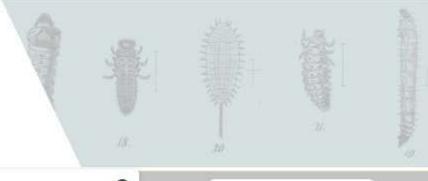


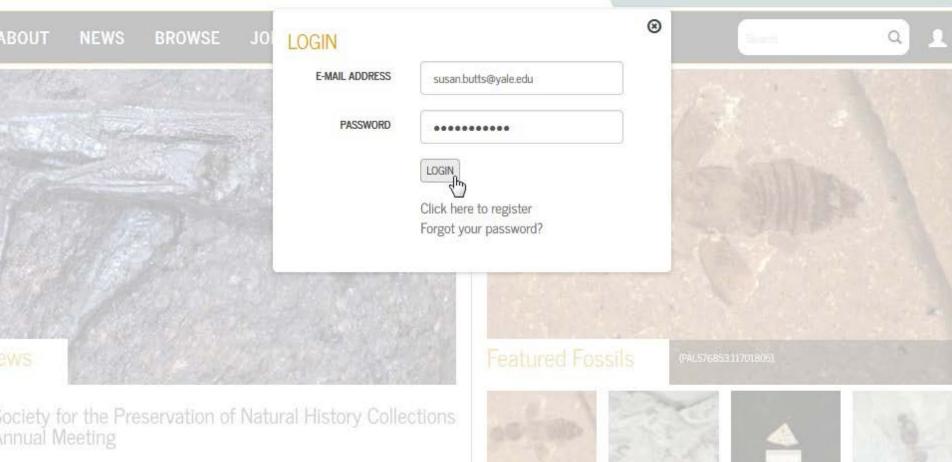




More

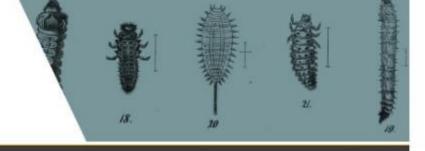






More





**ABOUT NEWS BROWSE** JOIN **EDUCATION** 



**Ⅲ □ ②** 



### 6292 SPECIMEN RESULTS \*

FOSSIL/MODERN: FOSSILS @ HAS MEDIA: HAS MEDIA @ SOURCE: YALE PEABODY MUSEUM OF NATURAL HISTORY @



YPM IP 223880 Urogomphus eximius



YPM IP 454216 undet. Zygoptera





YPM IP:793713 undet. Vespidae

### 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

Aphaenogaster

Apithanus

Artinska

and 92 more

#### CONTINENT

Europe



undet. Vespidae

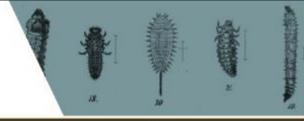




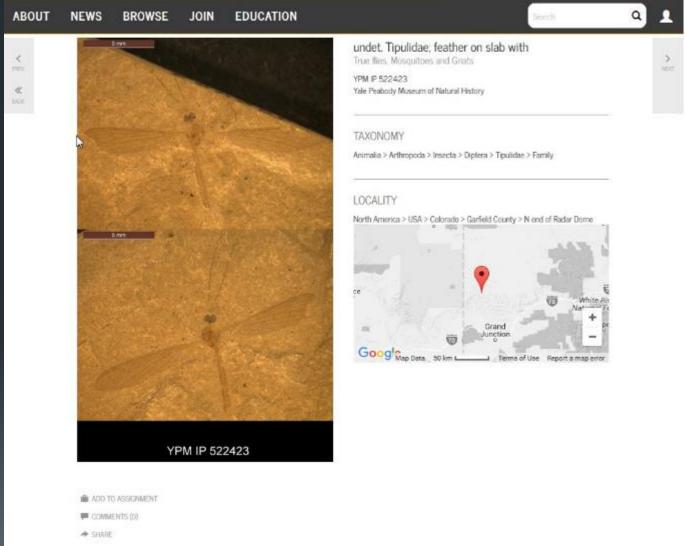


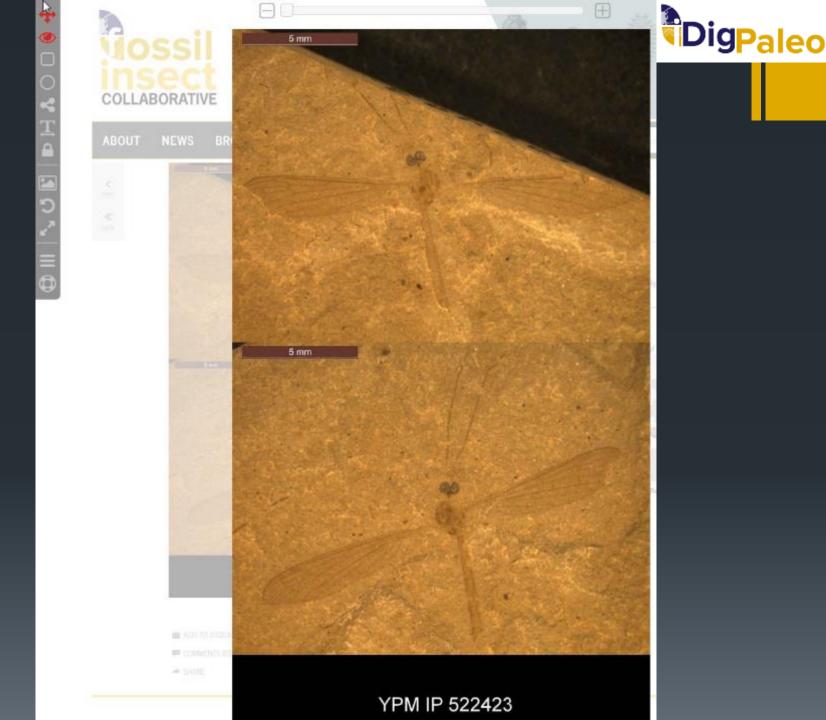






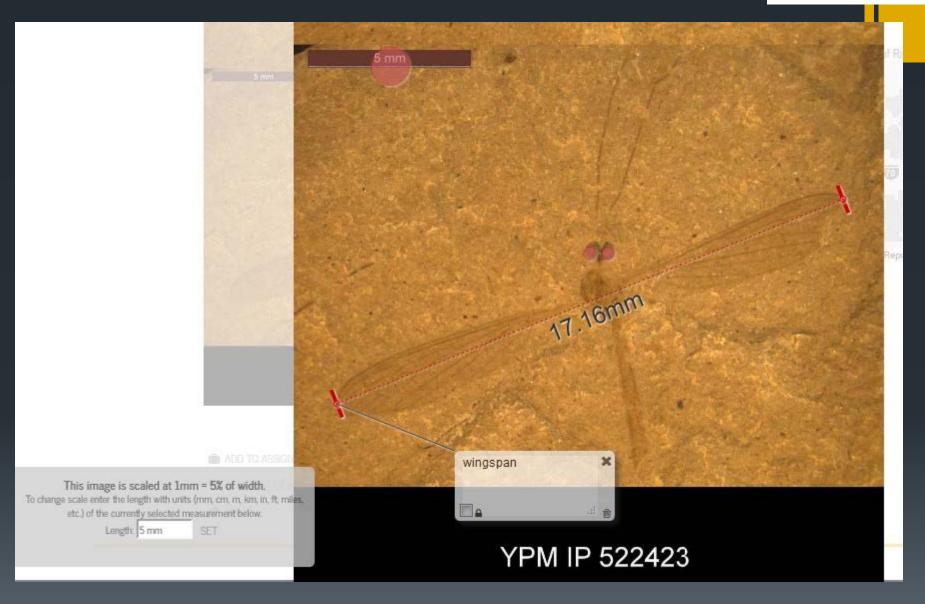








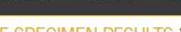












**NEWS** 







### 5 SPECIMEN RESULTS \*

SOURCE: YALE PEABODY MUSEUM OF NATURAL HISTORY @ HAS MEDIA: HAS MEDIA @ FOSSIL/MODERN: FOSSILS @ SERIES: EOCENE @



**ABOUT** 



BROWSE







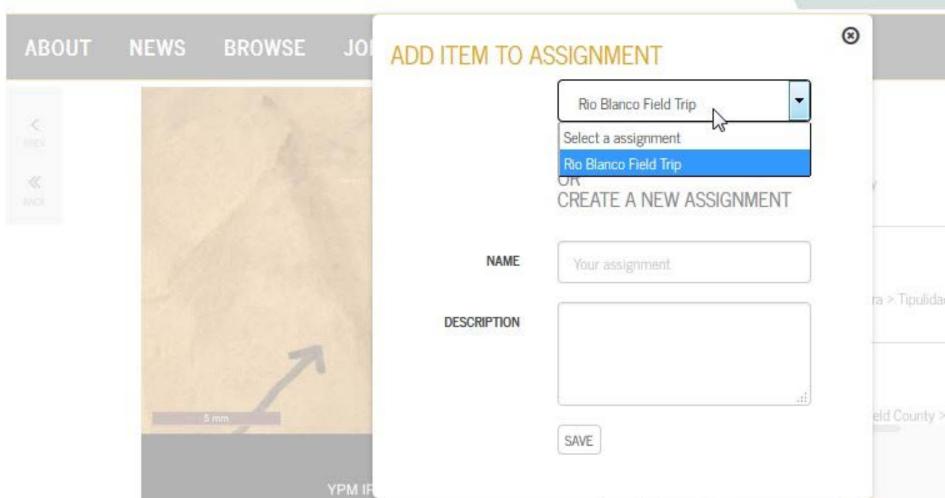
## FILTER BY

CONTINENT North America











YPM IP 79-4009 undet. Tipulomorpha

YPM IP 332735

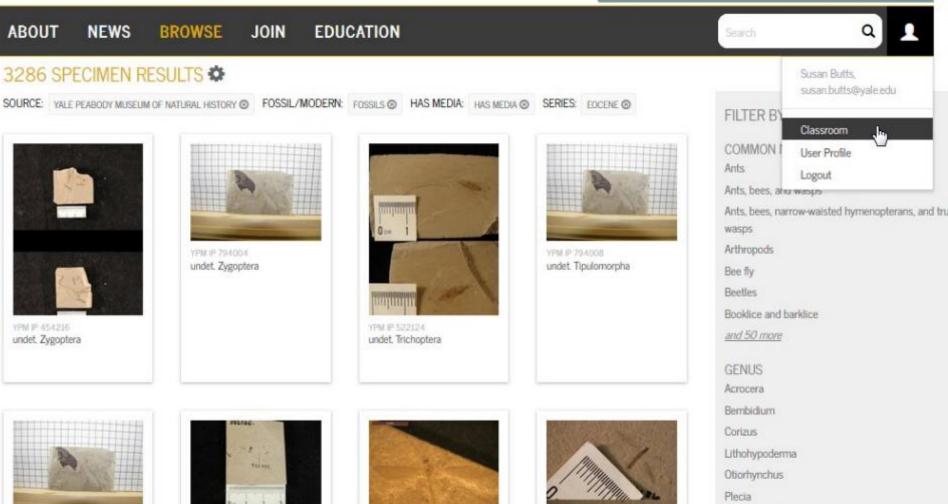
Making data and images of millions of insect specimens available on the web



Pronemobius

CONTINENT

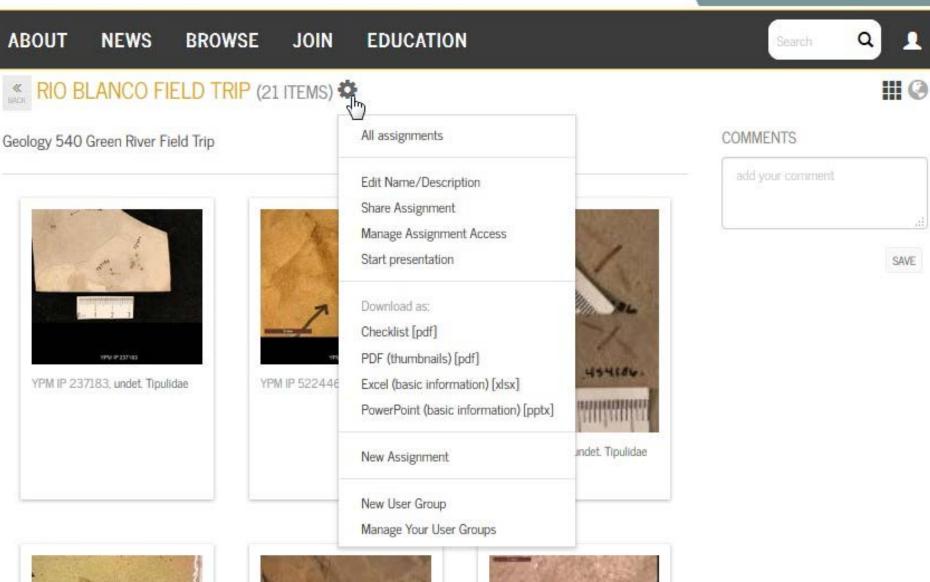
454186.





# millions of insect specimens available on the web









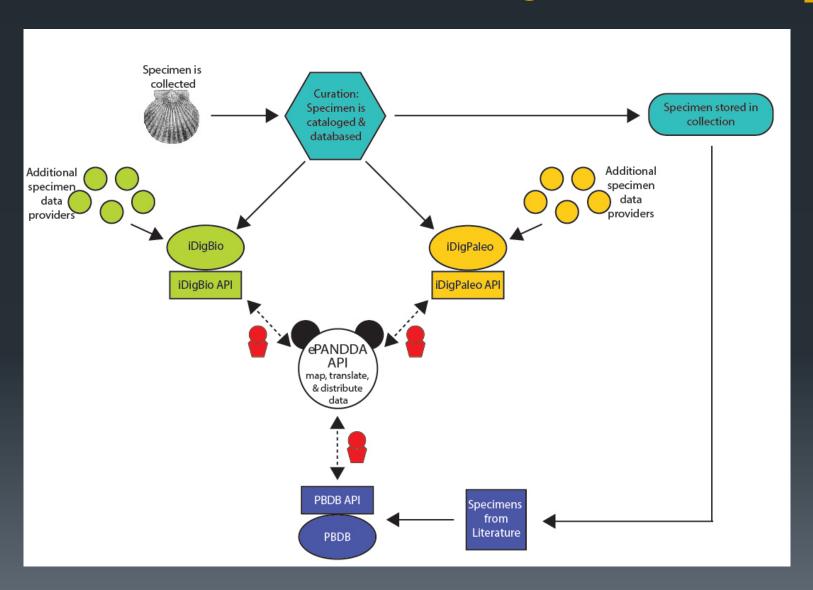
- Tools in development
  - Integrated mapping in geologic history (PBDB API, GPlates API)
  - Comments/annotations returned to institution (i.e. update taxonomy)
- Teacher workshop –directions and outcomes
  - Directions
    - critique of front end operation
    - provide curated collections (assignments)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



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

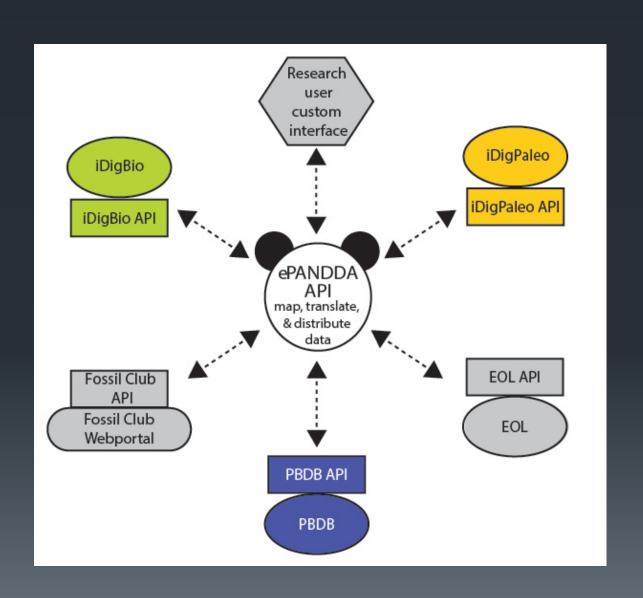


## **ePANDDA**

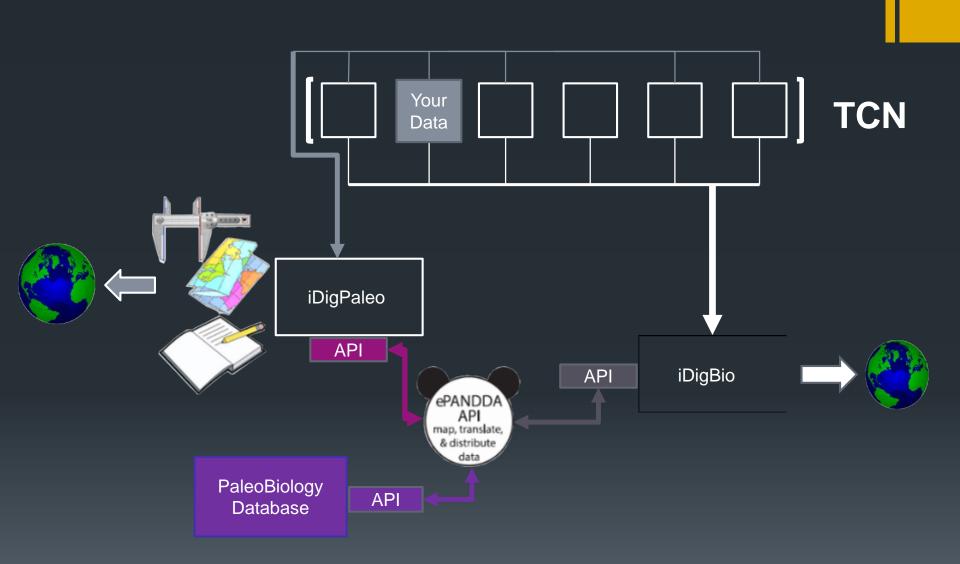




## **ePANDDA**









## 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













iDigPaleo:idigpaleo.org(in development)

Project web page: fossilinsects.colorado.edu



