7 funded institutions, 2 federal collaborators and 1+ PEN
Digitize and make available all the major collections of fossil insect specimens in the United States
Digitization Goals

Project Dates: 2013 - 2017

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

YPM-IP.1002 Dunbaria fasciipennis Holotype
News

Society for the Preservation of Natural History Collections
Annual Meeting

Featured Fossils

undet. Hexapoda (YPM IP 584656)

Newest Comments

Featured Institution
ePANDDA: Enhancing PAleontological and NEontological Data Discovery API
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
Fossil Insect Localities

modified from Zachos et al. (2001)

Cashion & Donnell (1972); Donnell (2010); Duncan (1997); O’Sullivan & Hail (1987); Smith et al. (2008)
Predictions

Decrease in species richness

Shifts in relative abundance

Compositional changes (turnover)
**Richness**

As global climate cooled, did the # of spp. change?

- All beetles pooled by locality
- Individual-based rarefaction

**Total richness did not decrease.**

Walker et al., in prep
Body Size

- Image J
- Elytron area

Predictions

Decrease in body size.

Latitudinal trends in body length distributions of European darkling beetles (Tenebrionidae)

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4 Chair of Ecology and Biogeography, Nicolaus Copernicus University in Toruń,ewniska 1, 87-100 Toruń, Poland
Body Size

- **Elytron (wing) measurements**
  Mean body size ↓ 30%

- **ANOVA**
  site $P = 0.0408$
  family $P < .0001$

Walker et al., in prep
Modified from Zachos et al. (2001)