Southwest Collections of Arthropods Network (SCAN)
A Data Portal Built to Visualize, Manipulate, and Export Species Occurrences
July 2012 to 2016 and onward to 2024
Symbiota Collections of Arthropods Network (SCAN)
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SCAN Digitization Goals

1. 10 museums digitize **750,000 records** for Southwest ground-dwelling arthropods, >1,100,00 with 4 existing PEN projects.
2. Produce **16,000 high-resolution images** of species

SCAN Progress

1. Exceeded target (**2,650,764** digitized records) 80% georeferenced, 53% identified to species
2. **65** non-ADBC funded collections, **1,040,293** digitized records
3. **267,858** images **55,858** high-res images, **212,000** specimen/label low-res images
4. 1 PEN grant funded 2017, 2 PEN proposals in review, 9/10 of original TCNs sustaining effort.
5. SCAN primary aggregator of North American arthropod data, InvertEBase primary aggregator of non-Arthropod data. Allows SCAN to provide framework for all Entomology data providers in North America.
Opportunities to Use Digitized Data for Arthropod Research:

- **Focus on North America – United States > Mexico > Canada**

- **14 million total arthropod records, > 50,000 records per week**
  
  Only 242 million more to go!!!
  
  At least 10 million “Climate Change” reference records sitting in drawers

- **Five Target Groups: 4,920 species can be modeled today!**
  
  (30 records per species)

  - **Formicidae (Ants)** - 1,476 taxa
  - **Araneae (Spiders)** – 937 taxa
  - **Acrididae (Grasshoppers)** – 355 taxa
  - **Carabidae (Ground beetles)**- 1,476 taxa
  - **Tenebrionidae (Darkling beetles)** 486 taxa
SCAN 2017-2018 Priorities

1. Increase efficiency
   A. Universal “Rapid digitization of incoming material”
   B. Solutions for robotic digitization, beyond the “Beyond the Box”

2. Data Quality: Integrate GBIF & iDigBio data flags, taxonomy tables, genetic linking, > images

3. Promote more digitization
   A. 103 US Entomology museums not serving data (66%)
   B. Support new TCNs: Arthropod Vertebrate Parasites TCN (Zaspel)

4. Connect Paleontology-Neontology taxa & the general Entomological Community beyond the United States