

# Southwest Collections of Arthropods Network (SCAN) A Data Portal Built to Visualize, Manipulate, and Export Species Occurrences

July 2012 to July 2015









# Symbiota Collections of Arthropods Network (SCAN) A Data Portal Built to Visualize, Manipulate, and Export Species Occurrences

July 2012 to 2020





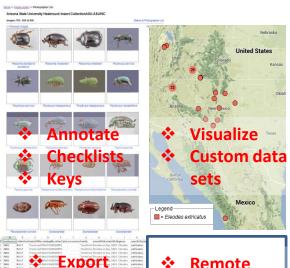


### **Symbiota**



Input, Visualize, **Manipulate, and Export Species Occurrences** 





Import

Remote

access





Data Portal

#### **SCAN Data Portal** Home

SCAN Project Website

Background

Search Collections

Map Search

**Summary Statistics** 

Image Search

Image Browser

Dynamic Checklist

Weevils of North America

Calendar

Symbiota

#### Symbiota Collections of Arthropods Network (SCAN): A Data Portal Built to Visualize, Manipulate, and Export Species Occurrences

The Symbiota Collections of Arthropods Network (SCAN) grew from the Southwest Collections of Arthropods Network TCN (Thematic Collections Network) funded by the National Science Foundation. The data portal houses arthropod occurrence records from the original Southwest Collections of Arthropods Network as well as an evergrowing number of collections. These additional collections are drawn from a much wider selection of geographic locations and arthropod taxa. We expect that eventually SCAN will include data for all arthropod taxa and from anywhere in North America, SCAN is built on Symbiota, a web-based collections database system that is used for other taxonomic data portals, including (Symbiota Portals).

#### Important features of all Symbiota databases include:

- 1. Easy web-based data entry.
- 2. Download entire datasets in two clicks.
- Map georeferenced records in two clicks.
- 4. Upload high-resolution images & create species profile pages.
- 5. Design custom species lists for any locality at multiple scales.
- 6. Develop educational games with data
- 7. Create taxonomic keys.

The key organizational feature is that each museum or project is listed as a separate collection, so that one database group does not interfere with another. End users can select all "collections", or just a subset. We are incorporating Filtered Push to enhance the capacity of far-flung experts to contribute identifications and annotations

of data that may be shared across the network. This website is the central data portal for SCAN: all other project information can be found at



Navigation

Forums

Home

Symbiota Collections of Arthropods Network (SCAN): A Model for Collections Digitization to Promote Taxonomic and Ecological Research

The Symbiota Collections of Arthropods Network (SCAN) project brings together resources from 15 small to large sized arthropod collections located in the megadiverse but



### **SCAN Digitization Goals**

- Digitize 750,000 records for southwestern ground-dwelling arthropods
- Produce 16,000 high-resolution images of species; promote identifications
- Broader Impacts: Symbiota upgrades, Filtered Push, outreach, new museums

#### **SCAN Progress**

- 1. On target to digitize specimens (684,219) 76% georeferenced, 64% identified
- 2. **76,000** Images (**7,693** high-res images, 68,306 specimen/label low-res images)
- 3. Filtered Push implemented (annotation)
- 4. Education-outreach program launched (Basham, Demo at this meeting)
- 5. First sustainable SCAN museum (Colorado State) is 52% of expected.
- 6. Significant incorporation of new museums and orphan data sets





## **Five Focal SCAN Taxa: Encouraging Outlook**

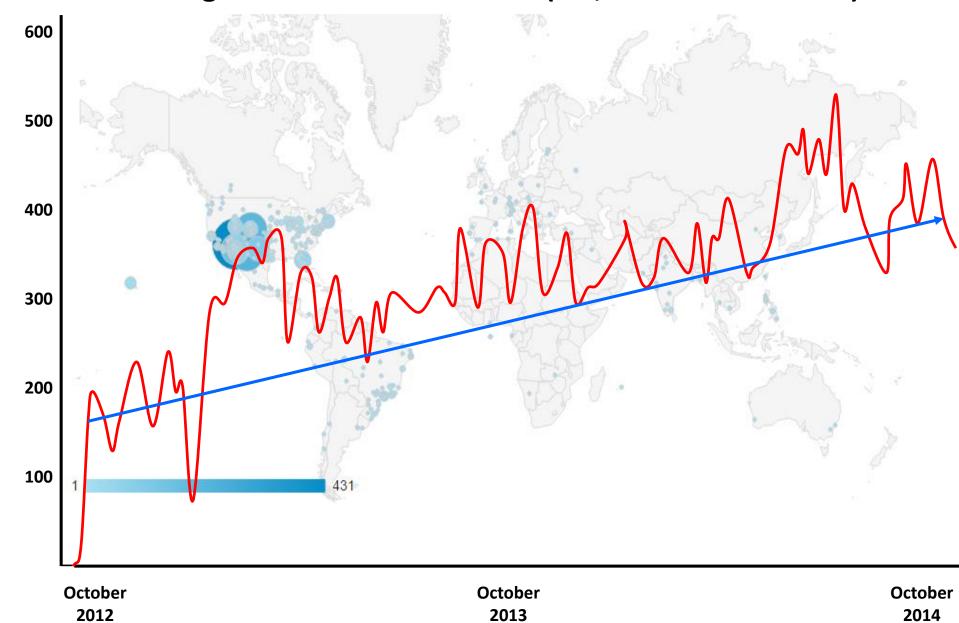
	SCAN+	SCAN PEN <sup>1</sup>	GBIF & iDigBio	TOTAL
Carabidae <sup>2</sup>	90,558	11,000	212,360	313,918
Acrididae	74,874	66,300	51,111	192,285
Formicidae <sup>2</sup>	53,026	97,600	75 <i>,</i> 358	225,984
Tenebrionidae <sup>2</sup>	41,734	97,000	8,974	147,708
Araneae	34,220	0	35 <i>,</i> 055	69,275
TOTAL	294,412	271,900	382,858	949,170

<sup>&</sup>lt;sup>2</sup> Specimens are 62%, 28%, and 50% identified to species for non-PEN specimens



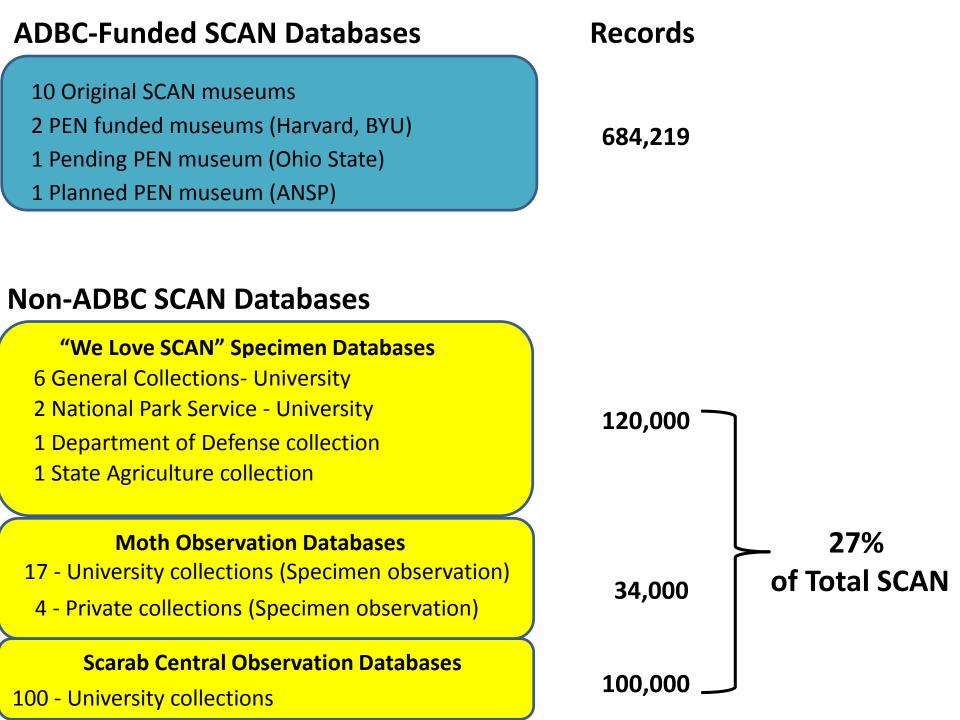
<sup>&</sup>lt;sup>1</sup>Harvard, BYU (Funded); Ohio State (Pending); Academy of Natural Sciences (Planned)

## **Doubling of SCAN Portal Sessions (i.e., Moderate Growth)**



**SCAN Portal Sessions per Week (Google Analytics)** 





## **Goals: Final Year and Beyond**

Symbiota Collections of Arthropods Network

- 1. Extensive data cleaning & annotation in all SCAN collections.
- 2. Achieve 90% identification of specimens digitized to species within five years of project end.
- 3. Develop nine more sustainability plans for remaining SCAN collections.
- 4. Continue supporting digitization of non-ADBC collections and PEN grants.
- 5. Advertise "research-ready" data (i.e., 30 records per species) for 1,000s of target taxa

#### Climate Change Impacts on Wolf Spiders (Pardosa)

