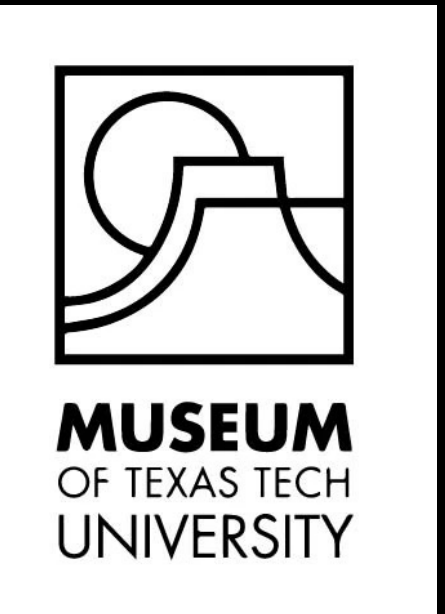




Generating a Comprehensive Arachnid Catalogue for the Virgin Islands: A Literature and Specimen-Based Approach

Trier Hodge^{1,2}, James Cokendolpher², Jennifer C. Girón²

1. Biology Department, 2. Invertebrate Zoology Collection, Natural Science Research Laboratory, Museum of Texas Tech



Background

The Virgin Islands are a group of islands located in the Caribbean Sea, to the east of Puerto Rico. They consist of two main areas, the United States Virgin Islands and the British Virgin Islands.

Arachnids are a class of joint-legged invertebrates that include spiders, scorpions, ticks, and mites. Arachnids are characterized by their two main body parts, the cephalothorax (head and thorax fused together) and the abdomen, as well as their eight legs.

Based on the literature and specimen-based approaches the Virgin Islands suggest a diverse and rich arachnid fauna in the region.

Optimizing Data Management with Organization and Digitization

Efficient organization and digitization of data is critical for building a precise inventory of the arachnids from the Virgin Islands. We have utilized the following data management practices:

- Conducting literature searches and organizing data using the World Arachnid Catalogue and Zotero as our reference manager
- Digitizing specimen data using SCAN (Symbiota Collections of Arthropods Network (a specialized platform for biodiversity data))

These methods have resulted in the following benefits:

- Improved accuracy and completeness of data collection
- Reduced risk of data loss or duplication

Links of interest



Invertebrate Zoology Collection
Museum of Texas Tech



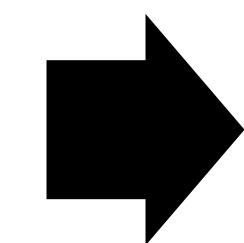
SCAN database,
Invertebrate Zoology Collection,
Museum of Texas Tech



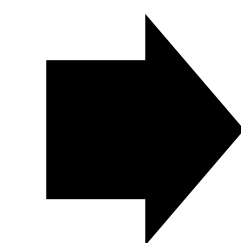
World
Arachnid Catalogue

Literature:

Identify relevant sources of information



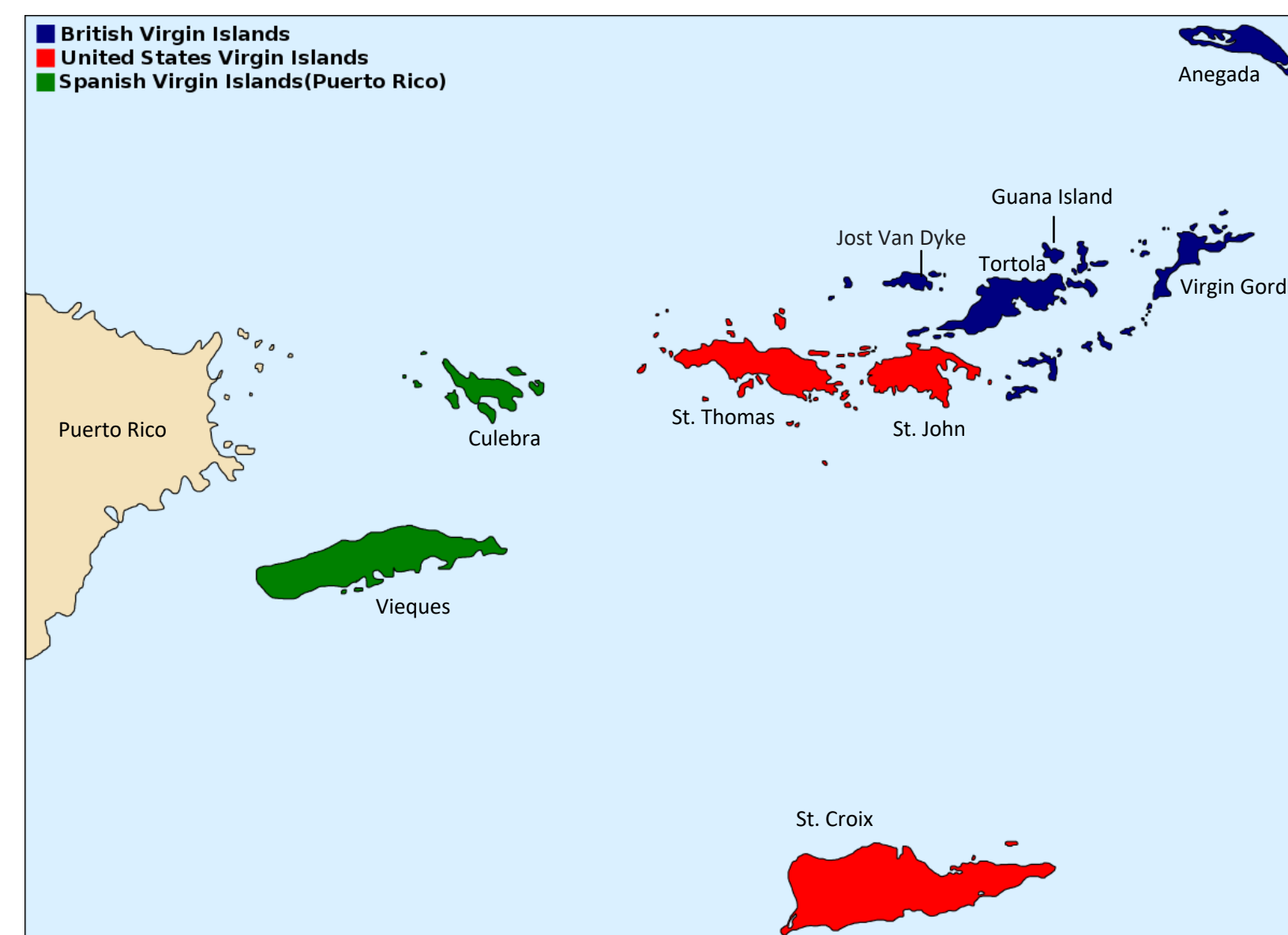
Review existing data



Compile and organize the sources using Zotero



Centruroides by Tomas Castelazo
Wikimedia Commons



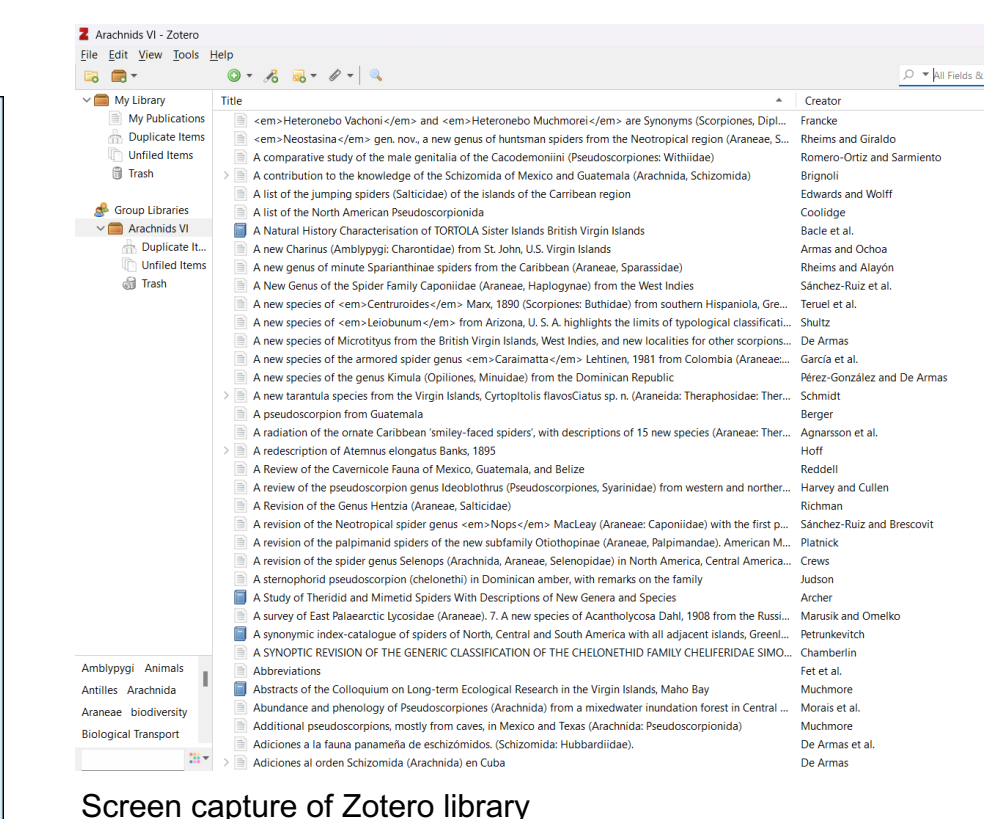
Map from Wikimedia Commons by かめま



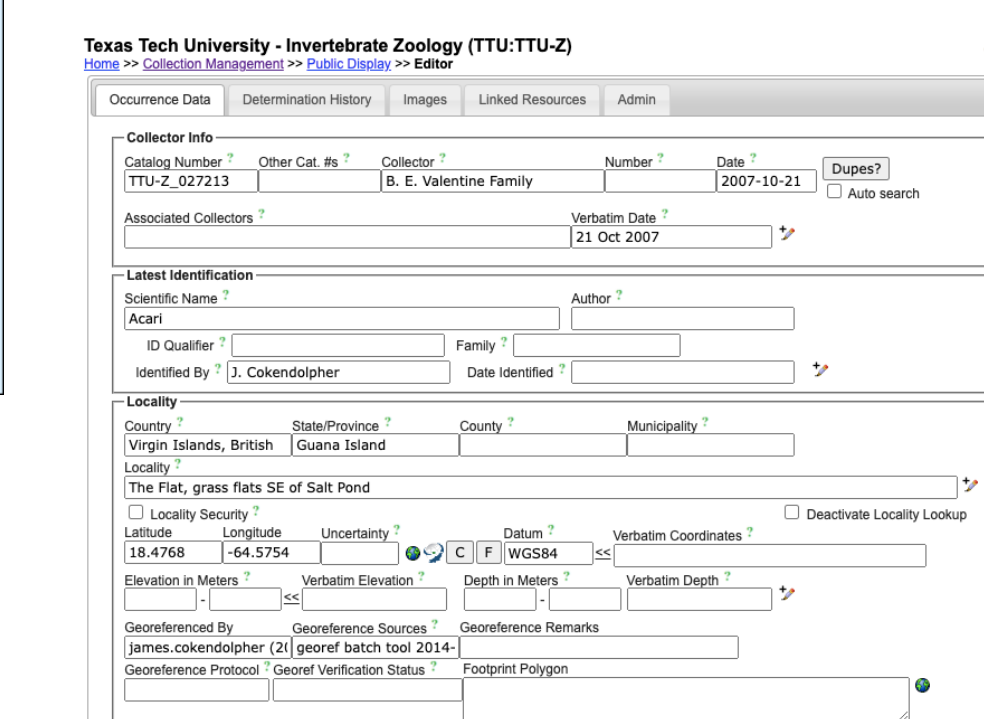
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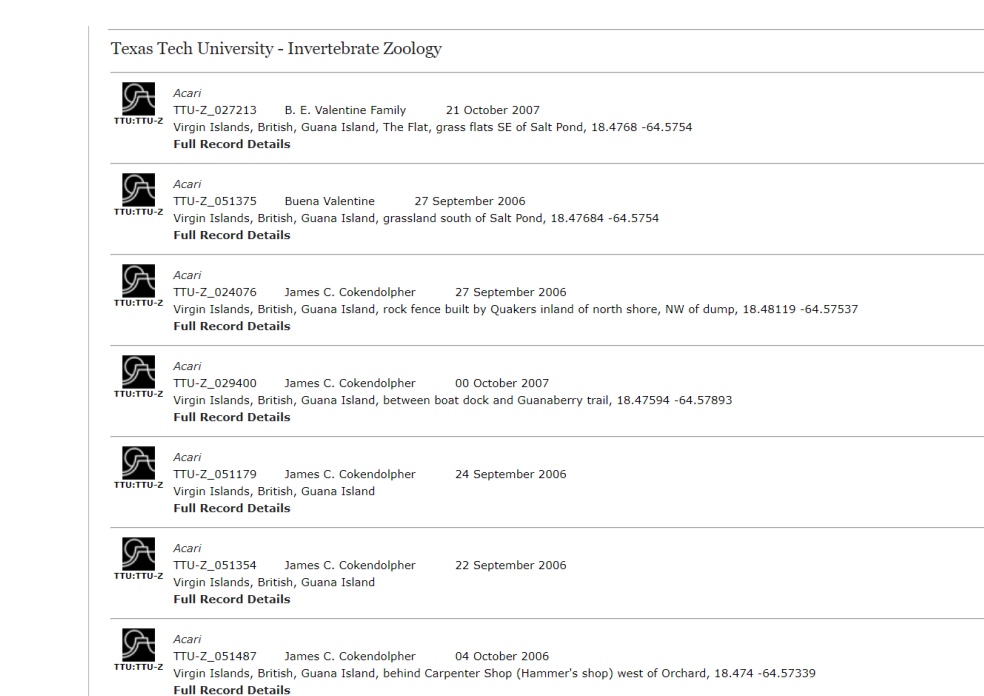
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Screen capture of Zotero library



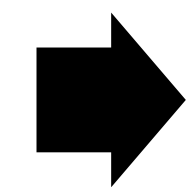
Screen capture of part of the specimen form in SCAN



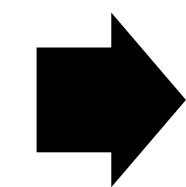
Screen capture of specimen records from SCAN

Specimen:

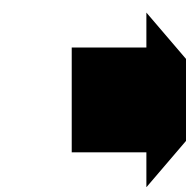
Collect arachnid specimens from various locations in Virgin Islands



Preserve specimen



Record locality data including coordinates



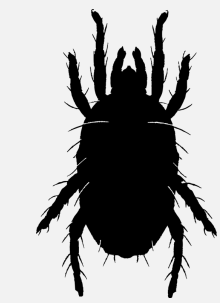
Digitize specimen data using SCAN

Arachnid Diversity

Arachnids were documented from 9 orders, with representation from 65 families across these orders.

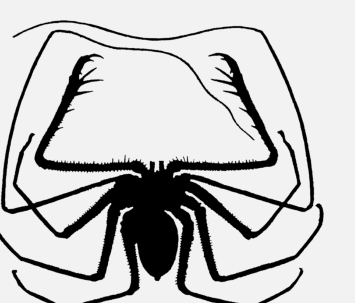
Order Acarina (Mites & Ticks)

- Families: 4
- Genera: 3
- Species: 8



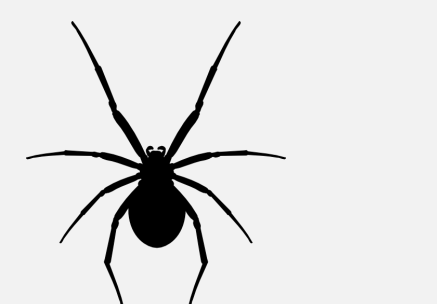
Order Amblypygi (Tailless whip scorpions)

- Families: 2
- Genera: 3
- Species: 11



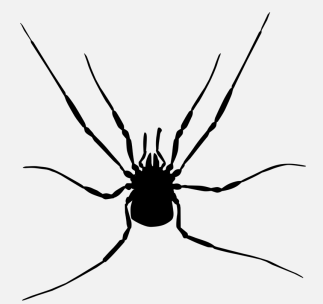
Order Araneae (Spiders)

- Families: 40
- Families: 3
- Genera: 2
- Species: 6



Order Opiliones (Harvestmen)

- Families: 3
- Genera: 2
- Species: 6



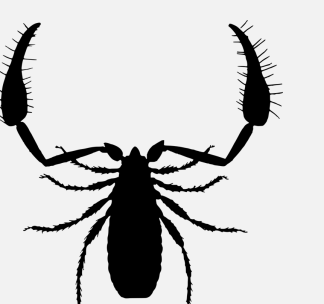
Order Palpigradi (Microscorpions)

- Families: 1
- Genera: 1
- Species: 1



Order Pseudoscorpiones (Pseudoscorpion)

- Families: 12
- Genera: 25
- Species: 27



Order Schizomida (Schizomids)

- Families: 1
- Genera: 2
- Species: 10



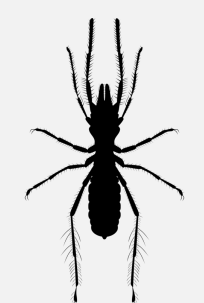
Order Scorpiones (Scorpions)

- Families: 2
- Genera: 8
- Species: 35



Order Solifugae (Sun spiders)

- Families: 1
- Genera: 1
- Species: 1



Acknowledgements

We are grateful to Dr. Joseph Manthey, Morgan Hyman, and Austin Bidy at the Department of Biological Sciences. Organism silhouettes were retrieved from <https://www.phylopic.org/>.