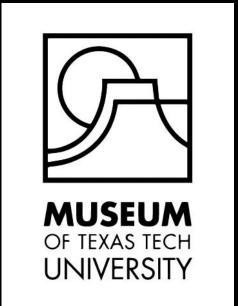


Generating a Comprehensive Arachnid Catalogue for the Virgin Islands: A Literature and Specimen-Based Approach



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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:

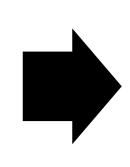
- Conducting literature searches and organizing data using the World Arachnid Catalogue and Zotero as our reference manager
- Digitizing specimen data using SCAN (Symbiota Collections of Arthropods Network (a specialized platform for biodiversity data)

These methods have resulted in the following benefits:

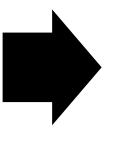
- Improved accuracy and completeness of data collection
- Reduced risk of data loss or duplication

Literature:

Identify relevant sources of information

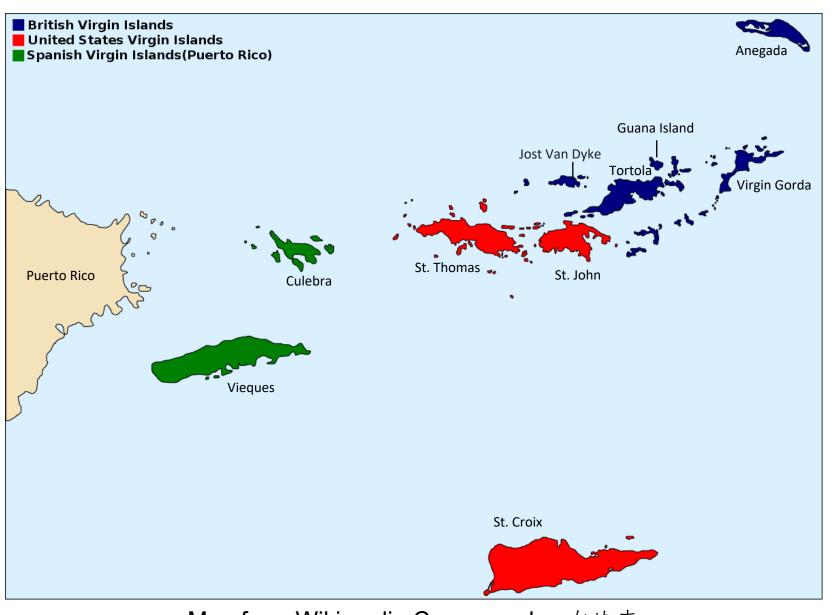


Review existing data



Compile and organize the sources using Zotero



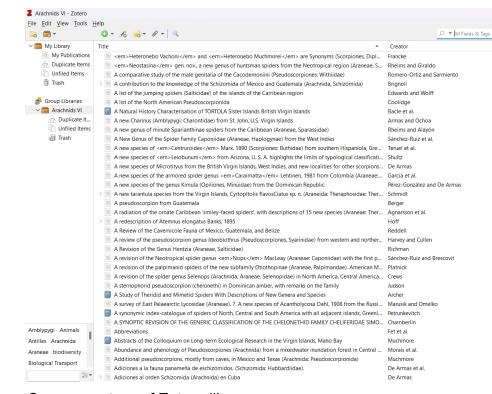


Map from Wikimedia Commons by かぬま



Wikimedia Commons





Texas Tech University - Invertebrate Zoology (TTU:TTU-Z

Catalog Number ? Other Cat. #s ?	Collector ?	Number ?	Date ?	Oupes?
TTU-Z_027213	B. E. Valentine Family		2007-10-21	Auto search
Associated Collectors ?		Verbatim Date ?		Auto scaron
		21 Oct 2007	" →	
Latest Identification				
Scientific Name ?		Author?		
Acari				
ID Qualifier ?	Family ?			
Identified By ? J. Cokendolpher	Date Identified ?		*	
Locality				
•	2 2 2		2	
Country [?] State/Province Virgin Islands, British Guana Island		Municipality		
Locality?				
The Flat, grass flats SE of Salt Pond				+
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exas Tech University - Invertebrate Zoology	
Acari	∠
TTU-Z_027213 B. E. Valentine Family 21 October 2007	
TU:TTU-Z Virgin Islands, British, Guana Island, The Flat, grass flats SE of Salt Pond, 18.4768 -64.5754	
Full Record Details	
Acari	∠
TTU-Z_051375 Buena Valentine 27 September 2006	
TU:TTU-Z Virgin Islands, British, Guana Island, grassland south of Salt Pond, 18.47684 -64.5754	
Full Record Details	
Acari	✓
TTU-Z_024076 James C. Cokendolpher 27 September 2006	
TÜ:TTÜ-Z Virgin Islands, British, Guana Island, rock fence built by Quakers inland of north shore, NW of dump, 18.48119 -64.57537	
Full Record Details	
Acari	⊘
TTU-Z 029400 James C. Cokendolpher 00 October 2007	
ти:тти-z Virgin Islands, British, Guana Island, between boat dock and Guanaberry trail, 18.47594 -64.57893	
Full Record Details	
CA Acari	⊘
TTU-Z_051179 James C. Cokendolpher 24 September 2006	
TU:TTU-Z Virgin Islands, British, Guana Island	
Full Record Details	
Acari	⊿
TTU-Z 051354 James C. Cokendolpher 22 September 2006	
TU:TTU-Z Virgin Islands, British, Guana Island	
Full Record Details	
Acari	≥
TTU-Z 051487 James C. Cokendolpher 04 October 2006	
TU:TTU-Z Virgin Islands, British, Guana Island, behind Carpenter Shop (Hammer's shop) west of Orchard, 18.474 -64.57339	
Full Record Details	

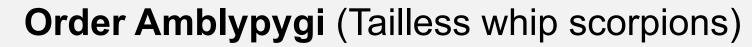
Screen capture of specimen records from SCAN

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



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



Order Araneae (Spiders)

Families: 40

Order Opiliones (Harvestmen)

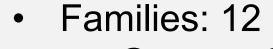
- Families: 3
 - Genera: 2
 - Species: 6

Order Palpigradi (Microscorpions)



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

Order Pseudoscorpiones (Pseudoscorpion)



- Genera: 25
 - Species: 27





• Genera: 2

• Species: 10

Order Scorpiones (Scorpions)



Genera: 8

• Species: 35

Order Solifugae (Sun spiders)

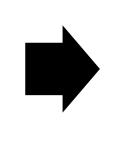
Families: 1



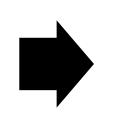
Genera: 1 Species: 1

Specimen:

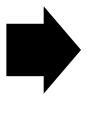




Preserve specimen



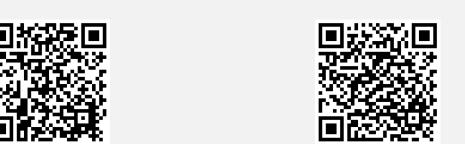
Record locality data including coordinates



Digitize specimen data using SCAN

Acknowledgements

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



Invertebrate

Zoology Collection

Museum of Texas Tech

SCAN database. Invertebrate Zoology Collection, Museum of Texas Tech

Links of interest



Arachnid Catalogue