



NATURAL SCIENCE
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The Importance Behind the Identification and Digitization of the Butterflies and Moths of the Invertebrate Zoology Collection, Museum of Texas Tech

Alan Ramirez

Biological Sciences Department &
Invertebrate Zoology Collection, Natural Science Research Laboratory, Museum of Texas Tech University

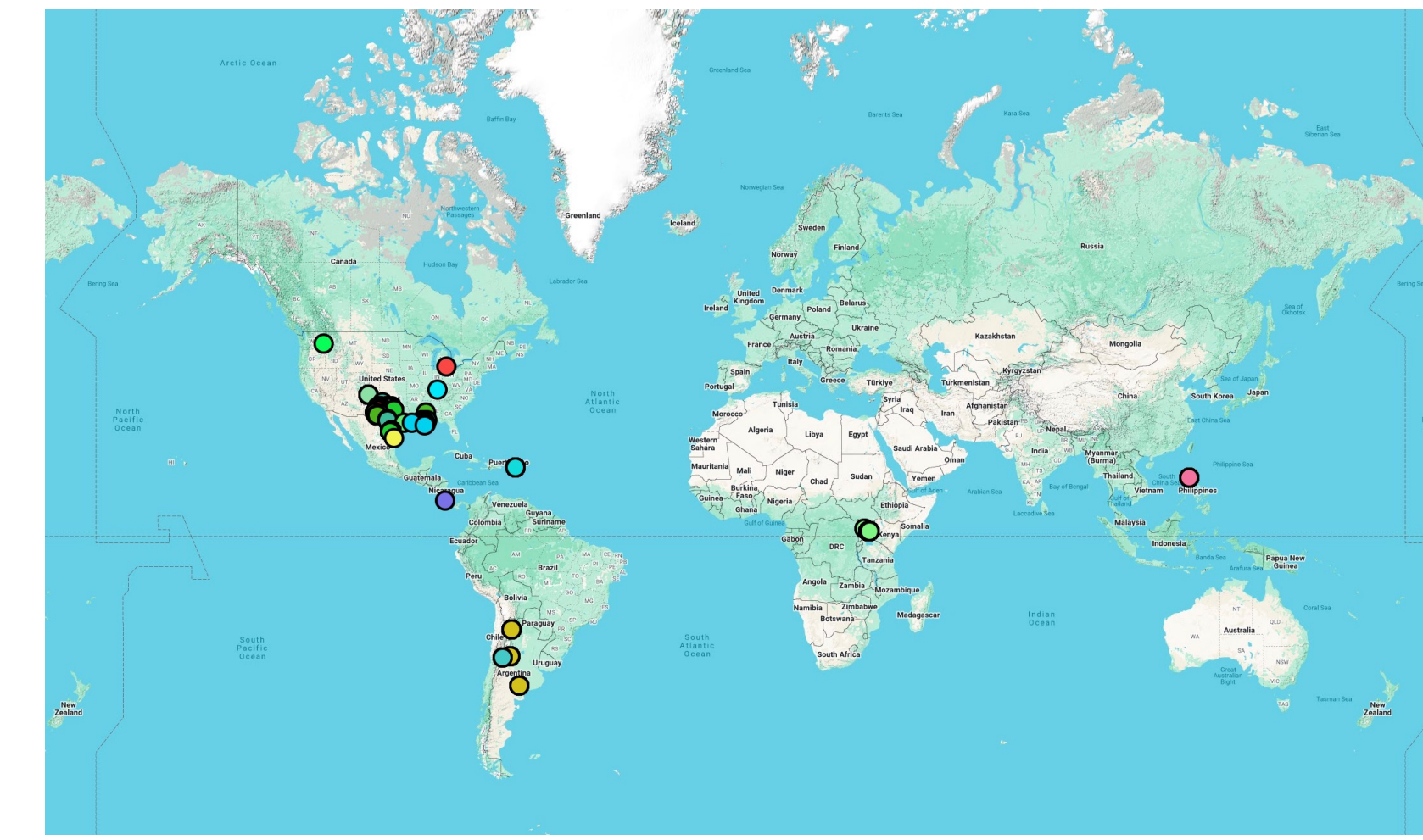
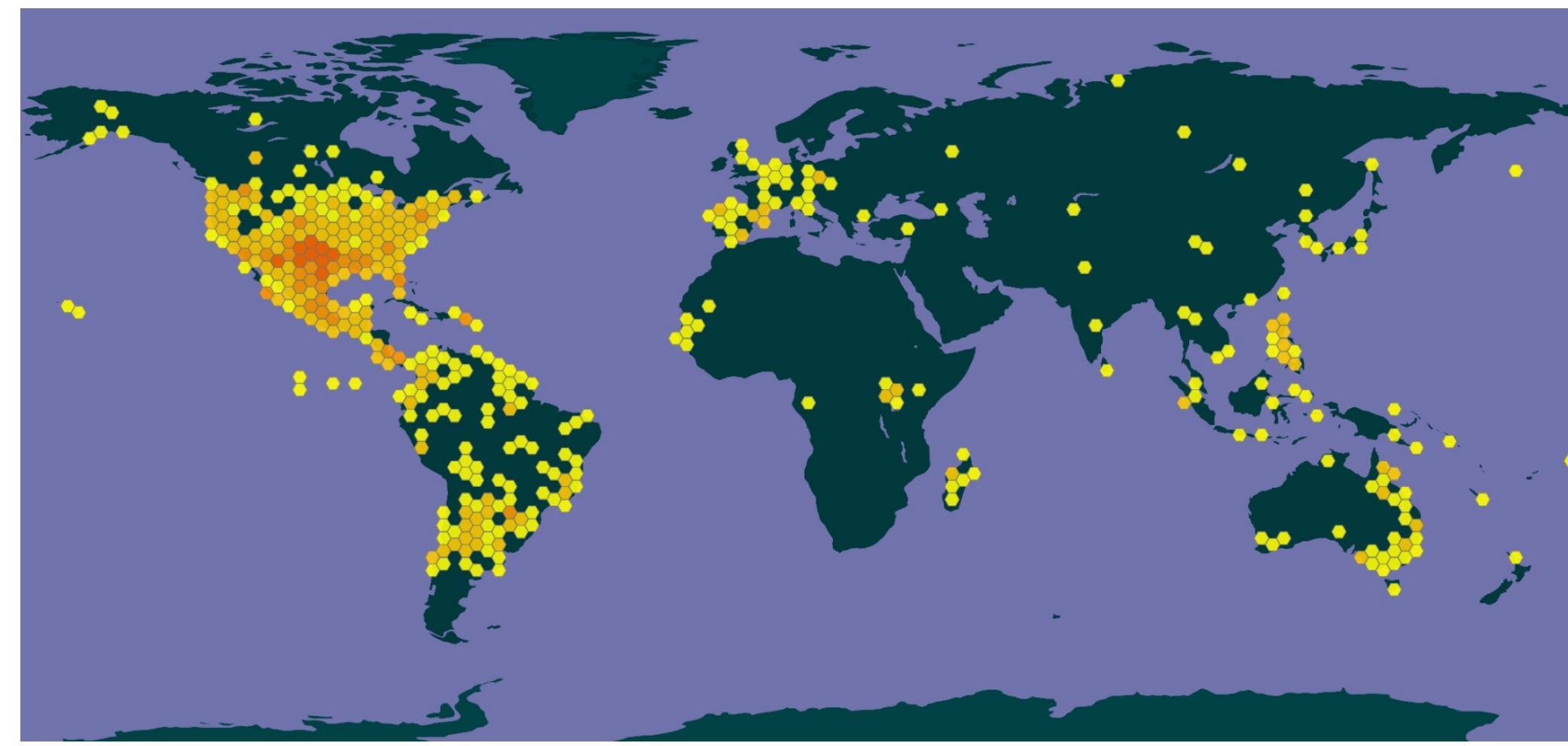
Background

Butterflies and Moths belong to the insect order Lepidoptera because of their tiny, overlapping scales that cover their wings. They are essential to the health of many environments where they live and migrate to, and play crucial roles in pollination, plant reproduction, and helping maintain biodiversity.

The Invertebrate Zoology Collection of the Natural Science Research Laboratory, Museum of Texas Tech University holds about 4.6 million specimens. The collection is international in scope, with most specimens coming from North America.

The Lepidoptera collection is estimated at 4500 spread specimens. It contains 28 families, including economically important species and a sample of the biodiversity of moths and butterflies, primarily from across the southwestern United States.

This project aims to update and digitize the general Lepidoptera Collection.

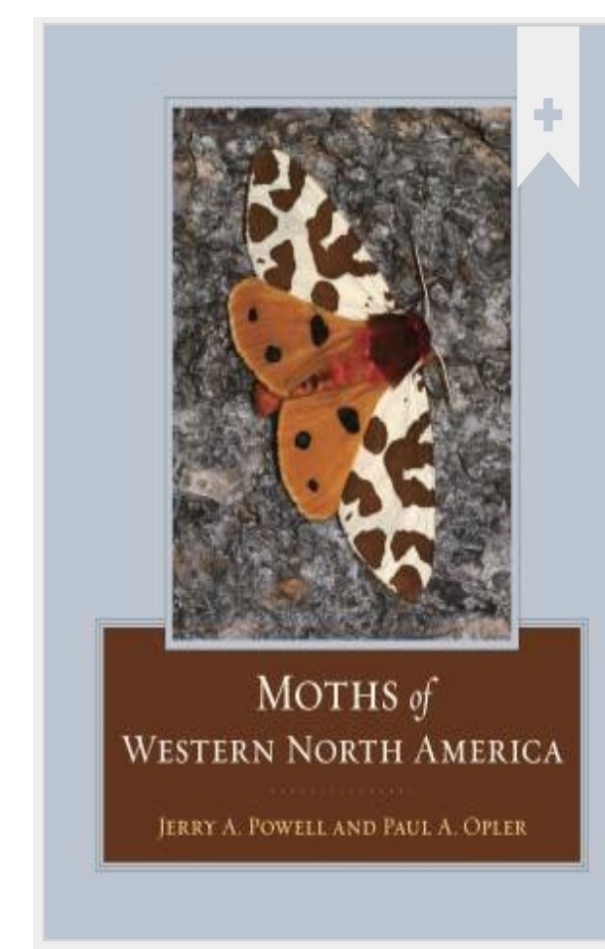


Organize trays in alphabetical order

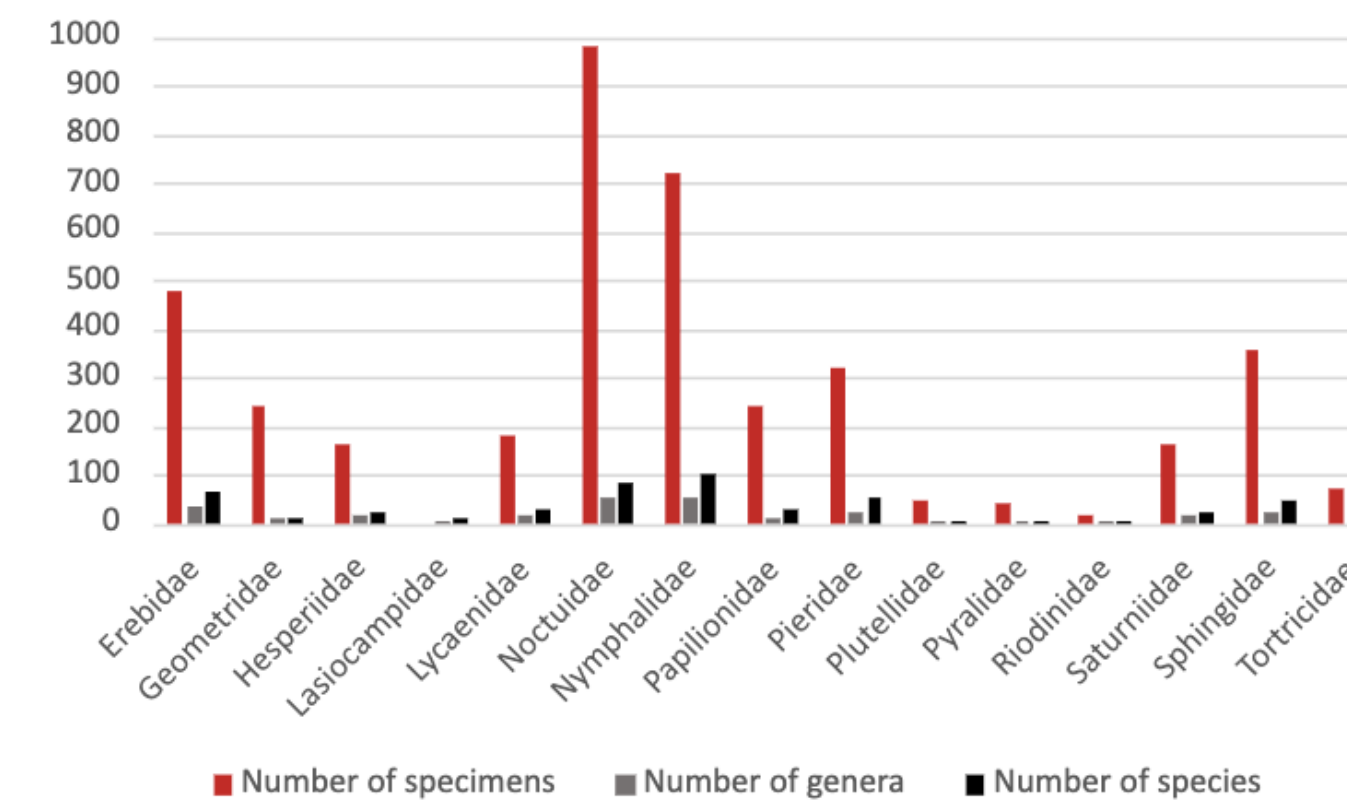
Identify specimens and organize in alphabetical order

Align into trays with labels

Document into online spreadsheet



Drawer	Family	Genus	Species	Author	Year
1184	Apateleodidae	Libytheana	carinenta	(Cramer)	
1210	Castniidae	Artace	cribraria	(Ljungh)	1825
1230	Cochylidae	Euploea	dufresne		
1230	Cochylidae	Idea	Leuconoe		
1232	Cossidae	Oxydia			
1175	Crambidae	Diaphania	halinata	(Linnaeus)	1767
1175	Crambidae	Apodemia	virgulti	(Behr)	1865
1175	Crambidae	Homoeosomma	electellum	(Hulst)	1887
1175	Crambidae	Pyralis	farinalis	(Linnaeus)	1758
140	Erebidae	Alabama	argillacea	(Hubner)	1823
140	Erebidae	Allotria	elonympha	(Hubner)	1818
140	Erebidae	Apantesis	arge	(Drury)	1773
140	Erebidae	Apantesis	nevadensis	(G. & R.)	1866
140	Erebidae	Apantesis	phalerata	(Harr.)	1972
140	Erebidae	Apantesis	proxima	(Guerin-Meneville)	1844
140	Erebidae	Apantesis	vittata	(Fabricius)	1787
140	Erebidae	Arachnis	picta	Packard	1864
1197	Erebidae	Ascalapha	odorata	(Linnaeus)	1758
1198	Erebidae	Ascalapha	ororata	(Linnaeus)	1758
1198	Erebidae	Bertholdia	trigona	(Grote)	1879
1198	Erebidae	Bulia	deducta	(Morrison)	1875
1191	Erebidae	Caenurgina	crassiuscula	(Hawth)	1809
1191	Erebidae	Caenurgina	erectea	(Cramer)	1780



Museum of Texas Tech University Invertebrate Zoology Collection (TTU-TTU-Z)

Catalog # TTU-Z_26985

Occurrence ID: ce755e80-985b-4a74-9d6d-d6dc769894

Accession Number: TTU2022-003

Taxon: Colorado Springs, 1902

Family: Noctuidae

Determiner: J. Girón

Date Determined: 2022

Collector: Aaron D. Pan

Date: 2021-09-03

Verbatim Date: 3-6 IX 2021

Locality: United States, New Mexico, Mora, Sangre de Cristo Mountains, La Mesa, Sierra Bonita

Latitude/Longitude: 36.19697, -105.27199, 46284

Verbatim Coordinates: N 36°11'41.88", W 105°13'04.22"

Elevation: 2555 meters Verbatim Elevation: 2550-2555 m

Habitat: Colorado Rockies forest; Volcanic mid-elevation forest

Life Stage: Adult

Individual Count: 1

Sampling Protocol: UV light trap

Preparations: Dried/pinned

Specimen Media

<http://www.invertebratecommons.org/licenses/by-nc/4.0/>

Rights Holder: Museum of Texas Tech University

For additional information about this specimen, please contact: Jennifer C. Girón, Curator of Invertebrate Zoology (Lacifer.Giron@ttu.edu)

Do you see an error? If so, errors can be fixed using the [Documentation Editor](#).

Identification, Curation and Digitization

Identified specimens are sorted and organized in drawers labeled by family, containing unit trays labeled by genus and species in alphabetical order.

Unidentified specimens are identified using online and bibliographical sources.

Taxonomic information is verified, updated, and entered into a spreadsheet.

Once the collection has been organized, the collection data on each specimen will be entered into our database in the specialized platform ecdysis, where anyone can view the information about the specimens in our collection. These records will be accompanied by images of the specimens.




Methods

The project involves three phases:

1. Update the taxonomic classification and identify specimens.
2. Organize specimens alphabetically by families and within families.
3. Digitize specimen data to make all the information available online.



Links of interest

- Natural Science Research Laboratory 
- Invertebrate Zoology Collection 
- Lepidoptera specimens in ecdysis 

Acknowledgement

I would like to thank my advisor and curator of the Invertebrate Zoology Collection, Dr. Jennifer Girón.