EntoExchange

Mosquito BEACONS
2022 Workshop
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EntoExchange

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“...to name a thing has always been to make it familiar and therefore a little less dangerous to us...the abstract may harbor some evil until it has a name, but once having a name one can cope with it.”

John Steinbeck & E.F. Ricketts- The Sea of Cortez (1941)
What's In A Name?

In the realm of mosquito surveillance, identification of a particular species can set off a cascade of events from vector management treatments, to scientific publications, to newsworthy headlines. Identification is everything.
Why Does It Matter?

NEW CLASSIFICATION FOR THE COMPOSITE GENUS Aedes (Diptera: Culicidae: Aedini), ELEVATION OF SUBGENUS OCHLEROTATUS TO GENERIC RANK, RECLASSIFICATION OF THE OTHER SUBGENERA, AND NOTES ON CERTAIN SUBGENERA AND SPECIES

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ABSTRACT. The composite genus Aedes is divided into 2 genera, Aedes and Ochlerotatus, on the basis of consistent primary characters of the female and male genitalia. Ochlerotatus is separated into 2 sections. Additional supplemental features of the female and male genitalia, 4th-stage larvae, and pupae are provided for the separation of the genera and sections as well as a discussion of exceptions and comparisons. This classification is based on a morphological examination of specimens of over 65% of the currently recognized species and all subgenera previously included in Aedes and representative material of all subgenera and genera of tribe Aedini. Published literature was examined and evaluated. All currently recognized subgenera are assigned to the appropriate genus. The proposed new generic classification provides better defined genera and a more natural arrangement of included taxa. Armigerini is formally recognized as a synonym, in part, of Aedini.

KEY WORDS Aedes, Ochlerotatus, Aedini, Armigerini, taxonomy

Making Mosquito Taxonomy Useful: A Stable Classification of Tribe Aedini that Balances Utility with Current Knowledge of Evolutionary Relationships

Richard C. Wilkerson, Yvonne-Marie Linton, Dina M. Fonseca, Ted R. Schultz, Dana C. Price, Daniel A. Strickman

https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0133602
Why Do We Collect?

Wonderful book by Stephen A. Marshall

Flies: The Natural History and Diversity of Diptera

“...species are the working units of biodiversity, and species-level identification provides the link between specimens and the knowledge linked to those species names.” (pg 559)

In discussing Hover flies, he states, “Syrphidae have for years been the most widely collected of all Diptera” (pg 306)

I’m hard pressed to think of an insect family that is purposefully targeted and systematically collected at a greater rate than Culicidae.

In the end, this isn’t a contest. We all have an appreciation for pollinators, mosquito ecology and the utility of vector and nuisance mosquito surveillance.

We collect a lot of mosquitoes!
What To Do With Our Surveillance Collections?

Collate
Count
Curate
Report
Discard

(Feed Gambusia mosquito fish)

Maybe we can find an additional outlet...
Fulfilling A Need

Welcome to the EntoExchange Mosquito ID and Specimen Network.

Collaboration when encountering a new or unknown specimen through vector surveillance can be very helpful.

Neighboring mosquito control districts and other mosquito management entities can be alerted and on the lookout for mosquitoes of concern and members of the network can assist with identification when the need arises.

You may find yourself in need of specimens for teaching, training, or research. This is an excellent resource for acquiring material for working collections and making professional connections with colleagues on current and future work.
Early Beginnings

This project started from a series of conversations with Florida mosquito control personnel.

Wade Brennan from Sarasota County
Mike Riles from Beach MCD in Panama City
Mike Hudon from Indian River MCD
Jason Stuck from Pinellas County
Beth Carey-Kovach from Charlotte County

Open discussions about forming a mosquito specimen exchange group.

This idea materialized previously as a project by Wade Brennan and Mike Hudon known as the Mosquito Adult & Larvae Traders (MALT) group.

2/1/10

Got Mosquito reference specimens?

I’ll trade you six Culex restuans for one Orthopodomyia signifera!

The “Mosquito Adult & Larvae Traders” (MALT) is gathering momentum. When you attend meetings bring your extra pinned adult mosquitoes or slide preserved larvae and exchange them for ones that are not in your collection. We can trade non-target species as well.

How it works:

1) Send an email with your contact information to Wade Brennan w Brennan@Sco.gov or Michael Hudon m.hudon@irmosquito2.org and ask to be added to the MALT email distribution list. You will be added to the list and provided a spreadsheet that has information on who has extras of each species.

2) Update the spreadsheet with your extras that can be shared, and email that back to Wade or Mike.

3) Contact whoever has what you need prior to the next meeting and have them bring you what you requested.

4) Prior to major meetings like Dodd and FMCA we will send and email blast to all with the updated spreadsheet and a suggested time and date to have our MALT meeting. Something like a 10 minute get together at the end of classes or presentations.
How To Make Version 2.0 Succeed

It is suggested that each member of the network provide a list of mosquitoes in your area that you would be willing and able to provide if requested (adults, larvae, and eggs).

Additionally, provide a calendar of when those specimens are available for exchange.

There is a website discussion board, forum, and a photo gallery to assist with specimen identification and requests.

If your duties prohibit field collection efforts, that is perfectly fine. This is simply a semi-formal way of exchanging information and specimens with one another.

This is a volunteer network. No fees. No dues.

Over time the network will grow. Please feel free to invite colleagues to be a part of the exchange. The more the merrier.

The website is available for scrutiny. Please feel free to contact me with any questions, suggestions, concerns, or ideas you may have. Any level of critique or criticism about the format, accessibility, interface, etc is welcomed. This project needs to be as user friendly and helpful as possible.
EntoExchange Website...entoechange.net
Mosquito Specimen Identification Inquiry

When posting an inquiry about an unidentified specimen to the forum, please indicate the ecological setting the specimen was acquired in (sunlit pool, tree hole, etc.), method of collection (e.g., CDC light trap with dry ice), time of day and region of the country (the more specific the better). Posting quality images from multiple angles is also beneficial. Thank you. (send message below)
Specimen ID Request or General Message

Get In Touch. Send a Message.

Name

Email

Phone

Address

Subject

Type your message here...

Submit

Members Chat
Specimen Shipping Information

We want everyone to have a positive experience with EntoExchange. Curating specimens for shipping is an important part of the process. Please let us know if there are any suggestions, questions, or concerns that you feel need to be brought to our attention to ensure quality specimens. Thank you.
How to Subscribe

EntoExchange
Mosquito Identification and Specimen Network

We want everyone to have a positive experience with EntoExchange. Curating specimens for shipping is an important part of the process. Please let us know if there are any suggestions, questions, or concerns that you feel need to be brought to our attention to ensure quality specimens. Thank you.

Subscribe Form

Email Address

Submit
Welcome to the EntoExchange!

**Proper Mailing Procedures**

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Thanks for Subscribing!

We'll send news to your inbox.
Specimen Shopping

EntoExchange
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Specimen Availability

Aedes  Anopheles  Coquillettidia  Culex  Culiseta  Deinocerites
Out of stock
EntoExchange Forum

Welcome!

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EntoExchange Forum
EntoExchange Forum
Mosquito collecting in winter
What species and life stages to expect in cold weather

Mosquito Ecology 101
Site conditions to consider when targeting a particular species
EntoExchange
Data Management and Security

Data management is supported by EarthSoft EQuIS Alive commercial software which is used extensively to manage biological, ecological, survey, and taxonomic data.

All data will be securely hosted on Microsoft Azure databases.

Data is entered through spreadsheets, tablets, or EntoExchange web portals.

Named logins are required with security protocols in place.
Inventory Management
Images to Represent Specimens
Collector Specific Images
Specimen Calendar of Availability
Notifications for Specimens Back in Stock

Back in Stock Requests
Collect requests and notify customers when products are back in stock. Learn more

Send automated notifications
Save time with automatic emails to quickly notify customers when a requested product is back in stock.

Activate Automation

Requests will show up here.
Customers can send notification requests for out of stock products. You can view and respond to requests when products are available.

Learn more
Thank you for your time and the opportunity to present. Please reach out with any questions, concerns, critiques, or ideas to help make this project a success.

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