C.A. Triplehorn Insect Collection | Arts & Sciences | Evolution, Ecology & Organismal Biology
1315 Kinnear Road, Columbus, OH 43212-1157 | Phone (614)-292-2730 | Fax (614)-202-7774
insects.osu.edu | osuc-curator(*symbol for 'at'*)osu.edu

Insect Voucher Specimens

A "voucher" is a representative of the organism dealt with in a biological study. Insect voucher specimens, properly preserved and deposited at recognized and publicly accessible research collections, are the only reliable means to verify the identity of the taxon/taxa studied if and when questions arise.

In addition to their role as permanent reference of the organisms in a particular study, voucher specimens are also valuable resources for other collections-based scientific studies, particularly in the field of taxonomy and systematics.

We strongly recommend the deposition of vouchers for all insect research studies at the organismal level, independent of the nature or the objective of the project. In general, a short series of males and females of each species should be deposited as vouchers, but the number of vouchers will depend on the type and scope of the original study.

The C. A. Triplehorn Insect Collection (OSUC) invites faculty, students and staff at The Ohio State University to deposit voucher specimens of their target taxa in the collection. We also welcome voucher depositions from researchers that are not affiliated with OSU and the deposition of relevant personal collections.

Vouchering requires careful planning and preparation. Researchers developing a new study project are strongly encouraged to contact the Curator of the Triplehorn collection to receive specific information on voucher preparation and deposition.

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A-B-C to Voucher Deposition at the Triplehorn Insect Collection:

Voucher specimens should be in good condition, properly preserved and labeled. Applicable collecting documentation (voucher deposition form, include collecting permits, export and import permits) is required for the deposition of vouchers.

Voucher Preparation:

Insect vouchers specimens should be pin or point-mounted, unless recommended otherwise by the Curator. Ideally, we recommend 6-10 voucher specimens of each sex per taxon for each of the treatments, populations, collecting localities, but will consider longer series depending on the nature of the study, space availability in the collection and interest of the taxa. In the case of long series of specimens of the same species or of a very common species, we might accept only a subset of the specimens.

All voucher specimens should be a) in good condition, i.e., with all or most appendages intact and b) properly prepared and labeled prior to deposition. Label data for recently collected specimens should contain: collecting locality (including GPS coordinates, country, state, municipality), date of collection (preferably with day, month and year), collector(s) name(s), method of collection and other pertinent details (habitat, host, etc.) as available. Specimens should bear a determination label with taxon name and author, name of determiner and year of determination. All labels should be clearly legible, preferably printed in font Arial or equivalent, 4-point font, in heavy-weight, acid-free, 100% rag paper. Single label size should not exceed 19 mm x 6 mm (see labeling instructions in *Triplehorn & Johnson, 2005, pg. 762-764).

In addition to collecting and determination labels, we recommend that each voucher specimen receives a unique specimen identifier **prior to publication**. Ideally this **unique id** should become part of the specimen information and be reported in every publication (traditional or electronic) where the vouchers are cited. The Triplehorn collection uses a small plastic barcode label with the unique specimen id. Upon request, barcode labels will be made available to scientists depositing their specimens in the collection.

*Triplehorn, C.A. & Johnson, N.F. 2005. Borror and Delong's Introduction to the Study of Insects. 7th Edition. Brooks/Cole. 880 pp.

Contact the Curator for more information on voucher preparation and unique specimen identifiers.

Voucher specimens are incorporated into the general collection, according to the taxonomic determination. Each voucher receives a green “voucher specimen” label, containing the name of the researcher and the year of the deposition to facilitate finding the specimens in the future. Label data

for all voucher specimens are recorded into our specimen database and made freely available online to the public.

As the depository for the vouchers, the Triplehorn collection should be clearly identified on all traditional and electronic publications citing or resulting from the study of the vouchers, including databases and web pages. Citation should be as follows: "**C.A. Triplehorn Insect Collection (OSUC), The Ohio State University.**"

The following documentation/information is required for all voucher deposition:

1. **Voucher deposition form** (see below)
2. Copy of **Collecting Permits** (if applicable)
3. Copy of **Export/Import Permits** (if applicable)
4. Copy of publications citing the vouchers (if available)

Sample of recent studies with vouchers deposited at the Triplehorn collection:

- **Perry, K.I., Riley, C.B., Fan, F., Radl, J., Herms, D.A. & Gardiner, M.M. 2022**. The value of hybrid and non-native ash for the conservation of ash specialists is limited following late stages of emerald ash borer invasion. ***Agricultural and Forest Entomology*** 24(3), 355-370.
- **Turo, K. J. & Gardiner, M. M. 2021**. Effects of urban greenspace configuration and native vegetation on bee and wasp reproduction. ***Conservation Biology*** 35:1755-1765.
- **Cardenas CR, Luo AR, Jones TH, Schultz TR, Adams RMM. 2021.** Using an integrative taxonomic approach to delimit a sibling species, *Mycetomoellerius mikromelanos* sp. nov. (Formicidae: Attini: Attina). ***PeerJ.*** 2021 Jun 24;9:e11622. *DOI: 10.7717/peerj.11622*
- **Chordas III, Stephen W., and Chris T. McAllister. 2019**. Seven Novel Hemiptera (Miridae; Pentatomidae; Reduviidae; Rhyparochromidae) Records from Southeastern Oklahoma. ***Proc. Okla. Acad. Sci.*** 99:84-88.
- **Bicha, W. and Schiff, N.** 2019. A New Species of Scorpionfly from the Bluegrass Region of Kentucky (Mecoptera: Panorpidae). ***Entomological News*** 128(4): 356-364.
- **Lumen, R, Kamiński, MJ, Crowley, J, & Smith, AD. 2019**. Revision of the Genus *Ulus* Horn, 1870 (Coleoptera: Tenebrionidae: Opatrini: Blapstinina). In ***Annales Zoologici*** (Vol. 69, No. 4, pp. 827-856). Museum and Institute of Zoology, Polish Academy of Sciences.
- **Kautz, AR, & Gardiner, MM. 2019**. Agricultural intensification may create an attractive sink for Dolichopodidae, a ubiquitous but understudied predatory fly family. ***Journal of insect conservation***, *23*(3), 453-465.
- **Dean, DH & Flechsig, B. 2019**. A New Record Mayfly *Ephemerella subv*aria McDunnough (Ephemeroptera, Ephemerellidae) from Ohio, USA. ***Ohio Journal of Science*** 119(2): 75-78.