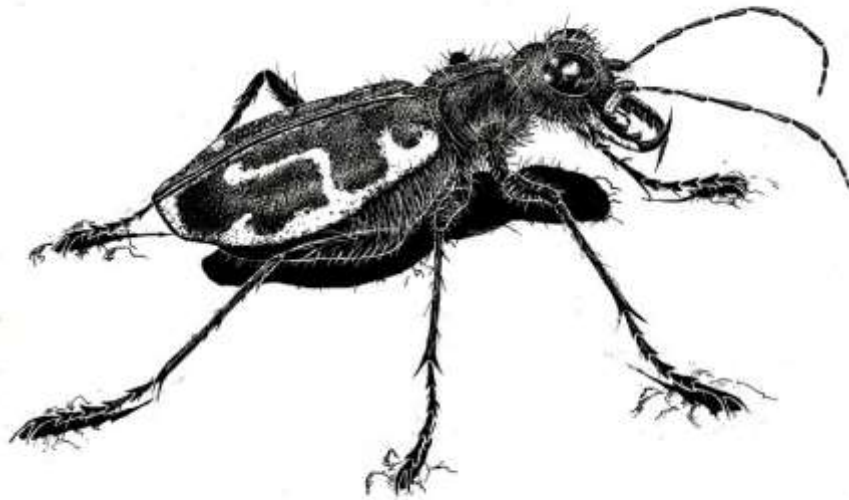


Natural History Museum
at the Tom Ridge Environmental Center

Annual Report for 2016



Collection Growth

The Natural History Museum at the Tom Ridge Environmental Center (NHM) continued to grow in 2016, with the addition of specimens acquired through field collecting trips and donations. A focus of collecting activity during the year was completing teaching collections of fish, amphibians, and reptiles for use in college level courses. Below is a summary of material accessioned into the collection during the year. A collection object is defined as all of the individual specimens collected at a locality on one date by a single collector (or team of collectors). The numbers don't include specimens not yet identified or processed.

Plants:

13 collection objects (27 specimens) representing 13 species were collected in 2016. 2 species are ranked S1 (Critically Imperiled) by the Pennsylvania Natural Heritage Program (*Solidago erecta*, Showy Goldenrod, *Conioselinum chinense*, Hemlockparsley).

Insects:

64 collection objects, representing 54 species. Of these, 6 are new to the collection. 17 collection objects were collected at Presque Isle State Park. 1 new Erie County record was submitted to the Butterflies and Moths of North America database. 2 species of Tiger Beetles (Carabidae: Cicindelinae) from Taiwan were added to the Tiger Beetle Specialty Collection. A specimen of a syrphid (flower fly), *Eristalis saxorum*, representing a new Pennsylvania state record, was accessioned. An Erie County record Imperial Moth caterpillar (*Eacles imperialis*) was donated by a member of the public.

Spiders:

62 collection objects consisting of 28 spider species new to the museum were accessioned in 2016. 25 collection objects are from Erie Bluffs State Park, 9 are from Presque Isle State Park, and 28 are from other Erie County locations. The museum's spider holdings now stand at 67 species for Erie County, PA. 42 species have been recorded for Erie Bluffs State Park and 7 species have been recorded for Presque Isle State Park since the initiation of the spider collection in 2014. 10 are from the Lake Pleasant Conservation Area (Western Pa. Conservancy), and 2 are from Lake Erie Community Park in Girard Twp.

Mollusks:

1 specimen of *Euchemotrema leai* (Lowland Pill Snail) from Clarion County was accessioned. This species is listed as a Species of Greatest Conservation Need, and is ranked S2 (Imperiled).

Fishes:

29 collection objects (133 specimens) of 25 species. 1 new species for the collection.

Amphibians:

31 collection objects (38 specimens) of 15 species accessioned.

Reptiles:

19 collection objects of 7 species. 1 new species for the collection.

Birds:

8 individual specimens of 8 species were acquired. 4 new species for the collection.

Collection Holdings as of December 2016

Group	Species	Collection Objects	Specimens
Plants	672	1,194	1,778
Mollusks	61	393	774
Fishes	97	417	2,715
Amphibians	25	144	249
Reptiles	30	141	284
Birds	84	160	160
Mammals	23	42	42
Spiders	67	126	141
Insects	1,713	6,157	11,000+
Lepidoptera	587	2,591	
Trichoptera	197	920	
Plecoptera	47	98	
Coleoptera	420	970	
Odonata	105	532	
Hymenoptera	95	259	
Ephemeroptera	37	95	
Hemiptera	27	58	
Diptera	167	531	

Field Research

- Numerous collecting trips were made targeting insects, plants, spiders, amphibians, reptiles, and fish throughout northwestern Pennsylvania.
- The NHM continued to collaborate on a survey of the fishes of Cussewago Creek (a French Creek tributary) in Crawford County, a private initiative of researcher John Tautin.
- A beetle survey of Erie Bluffs State Park was initiated.
- Bait trapping surveys for butterflies and moths at Presque Isle continued during the year.
- Assisted PA Sea Grant with pre-restoration fish survey at Sevenmile Creek.

Citizen Science

Pennsylvania Amphibian and Reptile Survey (PARS). The NHM provided regional coordination of this statewide, 10 year citizen science atlas project. A 'Herpblitz' group survey event was held at the Lake Pleasant Conservation Area (Western Pennsylvania Conservancy). Provided recruitment presentations, record verification, and volunteer liaison services.

Data/specimens supplied to agencies, organizations

- Plant data supplied to Allegheny College.
- Data supplied to Pennsylvania iMapinvasives Program.
- Data supplied to Pennsylvania Game Commission for State Game Land 109 management plan.
- Data supplied to Pennsylvania Natural Heritage Program for use in developing a Conservation Opportunity Areas (COA) Tool.
- "The Fishes of Pennsylvania," the new standard reference on the subject, was published by Cichlid Press, and incorporates data supplied by the NHM.

Displays/Educational Materials

Displays were constructed for the NHM display case on the first floor of TREC:

- Ice fishing
- Bird Migration (during Festival of the Birds)
- Pollinators (during Pollinator Week)
- Fish specimens displayed in History of Commercial Fishing display on the second floor of TREC.

Events

NHM personnel participated in the following events:

- Erie Outdoor Show (4-6 March) - *booth*
- Festival of the Birds (8-10 May) - *booth, field trip, display*
- National Pollinator Week - *display, garden tour*
- Discover Presque Isle (29-31 July) - *booth*
- Hidden Gems – Herpetology (29 July) *field trip*
- Regional Science Symposium (2-4 November) - *booth, tours, poster*

Publicity

Interviewed for Erie Times-News article on salamanders, published on 24 April.

Tours

Approximately 16 tours of the NHM facilities were conducted, serving over 200 people.

Loans

NHM materials (specimens, books, and equipment) were loaned out for educational purposes 33 times.

Meetings Attended

Pennsylvania Amphibian and Reptile Survey (PARS) statewide meeting, Elk County. (March).

Collection maintenance

Insect collection reorganized for more intuitive use.

Publications

Gray, B. S. 2016. Associations between Dekay's Brownsnake, *Storeria dekayi*, and invertebrates. Bull. Chicago Herpetol. Soc. 51(2):25-28.

Lethaby, M. and B. S. Gray. 2016. Natural history notes: *Thamnophis brachystoma* (Short-headed Gartersnake). Movements and site fidelity. Herpetological Review 47(3):485.

Misc

- Facebook page maintained.
- Presque Isle bird report posted weekly on the 'Birding Update' board at TREC entrance.
- Freeze dryer used by Allegheny College student to prepare fish tissue samples for analysis.
- Peer-reviewed "A Checklist And Distributional Synthesis Of Amphibian And Reptile Species In Columbia County, Pennsylvania. Journal of the Pennsylvania Academy of Science 90(1):7-12 (2016).
- Assisted Gannon University with collection of amphibian chytrid fungal disease samples.

- Reviewed species accounts for PA Sea Grant Mid-Atlantic Field Guide to Aquatic Invasive Species.
- Assisted with field trips with DCNR Home School Day at Erie Bluffs State Park.
- Curator took electrofishing course offered by the Regional Science Consortium.
- Volunteer taxidermist Tim Schloss is preparing mounts of osprey and great horned owl specimens for display at TREC.
- Plant committee established to coordinate and expand plant collection activities among plant collecting volunteers.

Volunteers

NHM volunteers logged over 600 hours of work for the museum. We acknowledge the dedication and generosity of the following volunteers:

James Buchkovich
 Jeanette Girosky
 Brian Gray
 Bob Harris
 Kyle Lambing
 Ed Masteller
 Jerry McWilliams
 Chris Roth

Dave Roth
 Carolyn Ruth
 Tim Schloss
 Stephanie Snyder
 Nancy Ware
 Georgia Wahl
 Bob Wellington

The following taxonomic experts generously donated their time to identify specimens:

Oliver S. Flint, Jr. (Smithsonian Institution) - *Trichoptera (caddisflies)*
 Martin Hauser (California Department of Food and Agriculture) - *Syrphidae (Hover Flies)*

Submitted by:

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