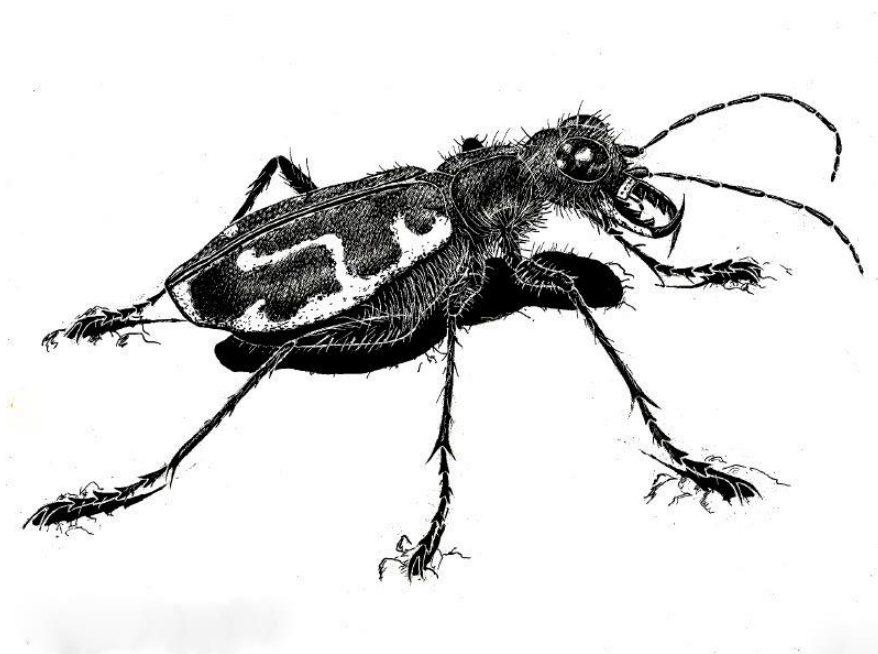


Natural History Museum
at the Tom Ridge Environmental Center

Annual Report for 2017



Collection Growth

The Natural History Museum at the Tom Ridge Environmental Center (NHM) continued to grow in 2017, with the addition of specimens acquired through field collecting trips and donations. 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:

21 collection objects (38 specimens) representing 21 species were collected in 2017. Two species are ranked S1 (Critically Imperiled) by the Pennsylvania Natural Heritage Program *Lonicera oblongifolia* (Swamp Fly Honeysuckle) and *Symphotrichum dumosum*, (Rice Button Aster).

Insects:

30 collection objects, representing 23 species. Of these species, 3 are new to the collection. 11 collection objects were collected at Presque Isle State Park. A large number of beetles were collected at Erie Bluffs State Park that have not yet been identified.

Spiders:

81 collection objects were accessioned in 2017 which includes 34 species new to the museum. Three specimens of the orb-weaver *Zygiella atrica*, collected from Lake Erie Community Park, represent new Pennsylvania state records. Specimens of the anyphaenid spider *Arachosia cubana* collected at Presque Isle in the 1990's were accessioned. This species was once fairly common at the park, but now appears to be extirpated. No specimens have been collected at the park since the initiation of the museum's spider collection in 2014, including areas where they were relatively abundant in the past.

Mollusks:

Two collection objects of land snails were accessioned.

Crustaceans:

1 specimen of the invasive White River Crayfish (*Procambarus acutus*) from Erie County accessioned, the second known occurrence in the county.

Fishes:

33 collection objects (88 specimens) of 28 species. Two species are new to the collection – Bluebreast Darter (*Etheostoma camurum*) and Longhead Darter (*Percina macrocephala*).

Amphibians:

8 collection objects (33 specimens) of 6 species accessioned.

Reptiles:

1 Northern Watersnake (*Nerodia sipedon*) collected at Erie Bluffs State Park.

Birds:

6 specimens of 3 species accessioned. Additional birds acquired are not yet processed.

Collection Holdings as of December 2017

Group	Species	Collection Objects	Specimens
Plants	680	1,215	1,816
Mollusks	61	397	780
Fishes	99	450	2787
Amphibians	25	153	281
Reptiles	29	143	286
Birds	85	164	164
Mammals	24	43	43
Spiders	102	211	284
Insects	1,714	6,191	11,000+
Lepidoptera	588	2,623	
Trichoptera	197	920	
Plecoptera	47	98	
Coleoptera	420	970	
Odonata	105	534	
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.
- Arachnologist Jim Buchkovich is continuing an inventory of spiders at Erie Bluffs State Park.
- 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. New species have been recorded for the watershed, and the distribution of several Species of Concern have been elucidated.
- A beetle survey of Erie Bluffs State Park is continuing. Penn State-Behrend undergraduate student Stephanie Snyder received \$300 from the Regional Science Consortium's mini-grant program to operate a drift fence-pitfall trap array sampling study at the Park.
- Bait trapping surveys for butterflies and moths at Presque Isle continued during the year.
- Tissue samples of short-headed gartersnakes (*Thamnophis brachystoma*) were collected for a genetic study of this Pennsylvania Species of Concern by Ohio State University.

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 Plain Grove Fens preserve (Western Pennsylvania Conservancy) in Lawrence County. Provided recruitment presentations, record verification, and volunteer liaison services for the project. Collected skin swab samples from red-spotted newts for a PARS-led survey of the distribution of infectious chytrid fungus.

Displays/Educational Materials

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

- Bird Migration (during Festival of the Birds)
- Pollinators (during Pollinator Week)
- Moths (National Moth Week)

Other materials produced:

- Riker mount displays of feathers constructed
- A variety of bird skulls were prepared for display

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 (June)- *display, garden tour*
- Allegheny River Sojourn (River of the Year Celebration) (23 June) - *talk*
- Discover Presque Isle (29-31 July) - *booth*
- Hidden Gems – Herpetology (29 July) *field trip*
- Western Pennsylvania Mushroom Club at Presque Isle (26 August) – *hosted field trip*
- A Walk in Penn’s Woods (Headwaters Park) (1 October) – *field trip*
- Environment Erie Youth Training (10 October) - *class*
- Regional Science Symposium (2-4 November) - *booth, tours, poster*

Tours

Approximately 45 tours of the NHM facilities were conducted, serving over 900 people.

Loans

NHM materials (specimens, books, and equipment) were loaned out for educational purposes 37 times.

Meetings Attended

- French Creek Watershed Conservation Consortium meeting (9 March) – Saegertown.
- Pennsylvania Amphibian and Reptile Survey Annual meeting (25 March) – Fort Indiantown Gap.
- Cleveland Museum of Natural History Symposium – “Natural History Collections” (8 September)
- AIS Rapid Response Workshop at TREC (15 November)

Presentations

Insect curator Jerry McWilliams presented “Lepidoptera of Presque Isle State Park, Moth and Butterfly Sampling Showing a Decline in Butterflies” at the Regional Science Symposium (2 November).

Publications

Gray, B.S. 2017. Book review: Snakes of the Eastern United States, by Whit Gibbons. Bull. Chicago Herpetol. Soc. 52(7):113-115.

Gray, B.S. 2017. Book review: Amphibians and reptiles of the Great Lakes Region, by James Harding and David Mifsud. Bull. Chicago Herpetol. Soc. 52(9):162-164.

Gray, B. S. and M. Lethaby. 2017. The Herpetology of Erie County, Pennsylvania: A Bibliography. 2nd Revised edition. Special Publication of the Natural History Museum at the Tom Ridge Environmental Center, Number 1. Erie, Pennsylvania. 20 pp.

Gray, B. S. and M. Lethaby. 2017. Preliminary morphometrics, growth, and natural history observations of the Short-headed Gartersnake, *Thamnophis brachystoma* at two urban sites in Erie County, Pennsylvania, USA. Herpetological Bulletin 141 (2017):1-6.

Misc.

- Facebook page maintained.
- Hosted student job shadow, Mason Bennett.
- Assisted PA Sea Grant with invertebrate sampling in Sevenmile Creek for restoration monitoring.
- Established a dermestid beetle colony for cleaning bones.
- Assisted Regional Science Consortium with fish sampling and identification.
- Led a field trip for Gannon University Vertebrate Field Zoology class (Dr. Steve Ropski) at Erie Bluffs State Park.
- Led (with TREC garden coordinator Jen Salem) a TREC volunteer training field trip at Erie Bluffs.
- Radiotracked Blanding's turtles, a Candidate for Endangered Species listing in Pennsylvania, on Presque Isle for the Pennsylvania Fish and Boat Commission.

Volunteers

NHM volunteers logged over 483 hours of work for the museum. We acknowledge the dedication and generosity of the following volunteers:

James Buchkovich
Jeanette Girosky
Brian Gray
Bob Harris
Brandon Hunsberger
Ed Masteller
Jessica McDuff
Jerry McWilliams

Chris Roth
Dave Roth
Tim Schloss
Stephanie Snyder
John Tautin
Nancy Ware
Georgia Wahl
Bob Wellington

Submitted by:

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