



The Academy of
Natural Sciences
of DREXEL UNIVERSITY

Carrying the Historic Academy of Natural Sciences of Drexel University Entomology Collection Through the Ages

*Isa Betancourt*¹, *Jon K. Gelhaus*^{1,2}, *Jason Weintraub*¹, *Greg Cowper*¹, *Stephen Mason*^{1,2} and *Daniel Otte*¹,
¹The Academy of Natural Sciences of Drexel University, Philadelphia, PA, ²Drexel University, Philadelphia, PA

Sunday, March 10, 2019

03:05 PM - 03:25 PM

ESA Eastern Branch Meeting, Blacksburg, Virginia

How does one carry a collection through the ages?

- **Data Preservation**
 - Archival housing
 - Care when Handling
 - **Data Accessibility**
- Digitization**
-
- ```
graph LR; A[Data Preservation] --> D[Digitization]; B[Data Accessibility] --> D;
```
- The diagram illustrates the relationship between data preservation and accessibility in the context of digitization. Two main bullet points, 'Data Preservation' and 'Data Accessibility', are listed on the left. 'Data Preservation' includes sub-points 'Archival housing' and 'Care when Handling'. Two teal arrows point from these two main bullet points towards the word 'Digitization' on the right, which is written in a large, bold, white font.

# Carrying the Historic ANSP Entomology Collection Through the Ages

1. About the Collection
2. The 7 Digitization Projects
3. Challenges
4. Looking to the Future

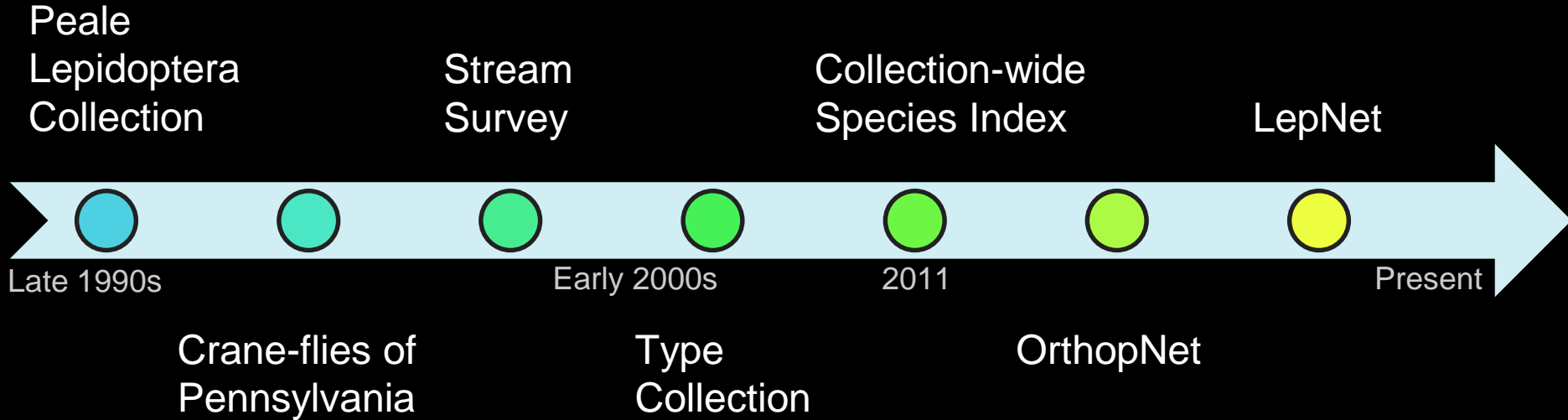


# The ANSP Entomology Collection

- 4 million specimens and about 100,000 species
- 13,000 types
- Some of the oldest insect specimens in North America
- Best Orthoptera collection in the world
- Strong in Diptera, Odonata, Hymenoptera, aquatic insect groups, entomofauna of Mongolia
- 1 Curator, 1 Collection Manager  
2 Curatorial Assistants  
1 Curator Emeritus



# ANSP Entomology Digitization Projects



(Timeline Not to scale)

# The Titian Peale Collection



COLLECTION  
T. R. PEALE,  
Ac. Nat. Sci. Phila.  
*Parides*  
*cuiva*



.SPECIES  
[Illegible text]





# Titian Peale Collection

Peale boxes in numerical order:

- [Box 1](#)  "Pennsylvania Papilion [sic Papilios]; 1; 7. *P. turnus*, *Troilus*. [sic troilus] & c."  
Contents: Specimens pinned to corks  
USA (PA)
- [Box 1A](#)  "Pennsylvania; A; 8. *Papilio Exlaucas* [sic glaucus] ~-Astorias [sic asterius] & c."  
Contents: Specimens pinned to corks, including a Say type specimen.  
USA (NH, PA)
- [Box 2](#)  "Pennsylvania Diurn.; 2; *Vanessa. Pieris* & c."  
Contents: Specimens pinned to corks  
USA (PA)
- [Box 3](#)  "Pennsylvania Nocturni; 3; *Saturnia Prom.ohelia* [sic promethea] & c."  
Contents: Specimens pinned to corks  
USA (PA)
- [Box 4](#)  "Pennsylvania Nocturnal; 4; 13. *Catocala* & c."  
Contents: Specimens pinned to corks  
USA (PA)
- [Box 5](#)  "Pennsylvania Nocturnal; 5; 15. *Sphingidae*"  
Contents: Specimens pinned to corks  
USA (PA)
- [Box 6](#)  "Pennsylvania Nocturnal; 6; 16. *Sphingoidae* [sic Sphingidae] & c."  
Contents: Specimens pinned to corks

# Titian Peale Collection



The Titian Peale Butterfly and Moth Collection



[ANSP](#) > [Entomology](#) > [Peale Collection](#) > [Search](#) > Box 2 Specimen 25



**Pieridae** *Colias philodice* Godart [det. J.D. Weintraub]

**From:** USA Pennsylvania **Original Locality Data:** Pennsylvania: vic. Philadelphia, 1833 [leg. T.R. Peale]

**Peale's Identification:** *Colias philodice*

**Measurements:** FWL = 24.6 mm **Comments:** [1833]

Specimen 25 in [Peale Box 2](#).

**Box 2 data:** "Pennsylvania Diurn.: 2; Vanessa. Pieris & c."

Collected in the vicinity of Philadelphia by T.R. Peale 1833.

**Mounted:** 1833

[The Peale Collection](#) [Geographic list](#) [Taxonomic List](#) [Search](#) [Using this site](#)

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Peale Box 2

Spine Label: "Pennsylvania Diurn.: 2; Vanessa. Pieris & c."

Index Header: Collected in the vicinity of Philadelphia by T.R. Peale 1833.

Contents: Specimens pinned to corks

USA (PA)

Mounted 1833

Collected in the vicinity of Philadelphia by T.R. Peale 1833.

- |                                                                                                                                   |                                                                                                                  |
|-----------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| 1. <i>Xanthidia Nicippe</i> ♂. Fab.                                                                                               | 27. <i>Colias Pelidne</i> ♀. <small>Boisd &amp; LConte. pl 21 p 66.</small>                                      |
| 2. <i>Xanthidia Nicippe</i> ♂                                                                                                     | 28. <i>Colias hyale</i> ♂.                                                                                       |
| 3. <i>Xanthidia Nicippe</i> ♀                                                                                                     | 29. <i>Colias hyale</i> ♂.                                                                                       |
| 4. <i>Xanthidia Nicippe</i> (-var.)                                                                                               | 30. <i>Agaristes octomaculata</i> ♂ <small>New York City</small>                                                 |
| 5. <i>Xanthidia Lisa</i> ♂. <small>Boisd.</small>                                                                                 | 31. <i>Agaristes octomaculata</i> ♀. <small>Allypia</small> <small>Smk Abb.</small> <small>by R. Haines.</small> |
| 6. <i>Xanthidia Lisa</i> ♀                                                                                                        | 32. <i>Polyommatus Tarquinus</i> (Fab.) ♀.                                                                       |
| 7. <i>Pieris Herminieri</i> ♂. <small>Boisd.</small> <small>Enc meth. v 9. Westwoods her of India. p 42 pl 27.</small>            |                                                                                                                  |
| 8. <i>Pieris Herminieri</i> ♂. <small>Boisd.</small>                                                                              | <small>with a false head. See Case 27.</small>                                                                   |
| 9. <i>Pieris Herminieri</i> ♀. <small>Boisd.</small>                                                                              |                                                                                                                  |
| 10. <i>Pieris Protodice</i> ♀. <small>Boisd.</small>                                                                              |                                                                                                                  |
| 11. <i>Pieris Protodice</i> ♀                                                                                                     |                                                                                                                  |
| 12. <i>Pieris protodice</i> ♂                                                                                                     | <small>from Ohio, by Dr McMurtrie.</small>                                                                       |
| 13. <i>Vanessa (Pyranis) cardui</i> . ♂. <small>(feeding on Holyhock July 1833.)</small>                                          |                                                                                                                  |
| 14. <i>Vanessa cardui</i> .                                                                                                       |                                                                                                                  |
| 15. Parasite of <i>V cardui</i> , came out June 29 <sup>th</sup> 1833.                                                            |                                                                                                                  |
| 16. <i>Chrysalis</i> of <i>V. cardui</i> .                                                                                        |                                                                                                                  |
| 17. <i>Vanessa (Pyranis) H.</i> <i>fluntera</i> . Fab.                                                                            |                                                                                                                  |
| 18. <i>Vanessa fluntera</i> .                                                                                                     |                                                                                                                  |
| 19. <i>Vanessa fluntera</i> . (var. - from limited food T.R.P.)                                                                   |                                                                                                                  |
| 20. <i>Vanessa</i> <sup>(grapta)</sup> <i>albura</i> . (Boisd & LConte)                                                           |                                                                                                                  |
| 21. <i>Vanessa</i> (grapta) <sup>anthracina</sup> <i>acuticornis</i> Boisd & LConte pl 57. (came out July 24 <sup>th</sup> 1833.) |                                                                                                                  |

# Titian Peale Collection



The Titian Peale Butterfly and Moth Collection



[ANSP](#) > [Entomology](#) > [Peale Collection](#) > [Search Form](#)

## Peale Box Search

Taxon name:

Locality:

Date range:  to

[The Peale Collection](#) [Geographic list](#) [Taxonomic List](#) [Search](#) [Using this site](#)

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The Titian Peale Butterfly and Moth Collection



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Peale specimens are in the following insect families:

| Order       | Family (specimens)                         | Common Name                          |
|-------------|--------------------------------------------|--------------------------------------|
| Unknown     | <a href="#">Unknown</a> (685)              | [including empty corks]              |
| Blattodea   | <a href="#">Blattellidae</a> (1)           | [Blattellid roaches]                 |
| Coleoptera  | <a href="#">Chrysomelidae</a> (1)          | [Leaf Beetles]                       |
| Diptera     | <a href="#">Asilidae</a> (3)               | [Robber flies]                       |
| Diptera     | <a href="#">Tabanidae</a> (2)              | [Horse and deer flies]               |
| Diptera     | <a href="#">Tipulidae</a> (18)             | [Crane flies]                        |
| Homoptera   | <a href="#">Cicadellidae</a> (1)           | [Leafhoppers]                        |
| Homoptera   | <a href="#">Homoptera indet.</a> (1)       | [Cicadas, leafhoppers, aphids etc.]  |
| Hymenoptera | <a href="#">Apidae</a> (8)                 | [Bees]                               |
| Hymenoptera | <a href="#">Ichneumonidae</a> (5)          | [Ichneumon wasps]                    |
| Lepidoptera | <a href="#">Acrolepiidae</a> (7)           | [Acrolepiid moths]                   |
| Lepidoptera | <a href="#">Arctiidae</a> (255)            | [Tiger moths]                        |
| Lepidoptera | <a href="#">Arctiidae: Arctiinae</a> (1)   | [Tiger moths]                        |
| Lepidoptera | <a href="#">Arctiidae: Ctenuchinae</a> (4) | [Tiger moths]                        |
| Lepidoptera | <a href="#">Arctiidae: Pericopinae</a> (4) | [Tiger moths]                        |
| Lepidoptera | <a href="#">Arctiidae: Syntomini</a> (2)   | [Tiger moths]                        |
| Lepidoptera | <a href="#">Bombycidae</a> (1)             | [Silkworm or silk moths]             |
| Lepidoptera | <a href="#">Castniidae</a> (3)             | [Castniid moths]                     |
| Lepidoptera | <a href="#">Cossidae</a> (12)              | [Carpenterworm and leopard moths]    |
| Lepidoptera | <a href="#">Crambidae</a> (271)            | [Crambid moths]                      |
| Lepidoptera | <a href="#">Dipteridae</a> (3)             | [Dipterid moths]                     |
| Lepidoptera | <a href="#">Drepanidae</a> (6)             | [Hooktip Moths]                      |
| Lepidoptera | <a href="#">Endromidae</a> (2)             | [Kentish Glory]                      |
| Lepidoptera | <a href="#">Gelechiidae</a> (5)            | [Gelechiid moths]                    |
| Lepidoptera | <a href="#">Geometridae</a> (374)          | [Inchworm, looper or geometer moths] |
| Lepidoptera | <a href="#">Hepialidae</a> (4)             | [Ghost moths]                        |
| Lepidoptera | <a href="#">Hesperiidae</a> (194)          | [Skippers]                           |
| Lepidoptera | <a href="#">Lasiocampidae</a> (31)         | [Tent caterpillars and lappet moths] |
| Lepidoptera | <a href="#">Lepidoptera indet.</a> (41)    | [Moths and Butterflies]              |
| Lepidoptera | <a href="#">Limacodidae</a> (25)           | [Slug caterpillar moths]             |
| Lepidoptera | <a href="#">Lycaenidae</a> (135)           | [Gossamer-winged butterflies]        |
| Lepidoptera | <a href="#">Lymantriidae</a> (12)          | [Tussock moths]                      |
| Lepidoptera | <a href="#">Megalopygidae</a> (3)          | [Flannel moths]                      |
| Lepidoptera | <a href="#">Noctuidae</a> (772)            | [Owlet moths]                        |
| Lepidoptera | <a href="#">Noctuidae: Agaristinae</a> (3) | [Owlet moths]                        |
| Lepidoptera | <a href="#">Noctuidae: Ophiderinae</a> (1) | [Owlet moths]                        |
| Lepidoptera | <a href="#">Notodontidae</a> (39)          | [Prominents]                         |
| Lepidoptera | <a href="#">Nymphalidae</a> (556)          | [Brush-footed butterflies]           |
|             | <a href="#">Nymphalidae: Brassolinae</a>   |                                      |



The Titian Peale Butterfly and Moth Collection



[ANSP](#) > [Entomology](#) > [Peale Collection](#) > [Search](#) > Places

Peale specimens came from the following countries:

| Geographic List                                    | Alphabetic List                                    |
|----------------------------------------------------|----------------------------------------------------|
| <a href="#">Africa</a> (17)                        | <a href="#">Africa</a> (17)                        |
| <a href="#">Asia</a> (6)                           | <a href="#">Asia</a> (6)                           |
| <a href="#">Australia</a> (25)                     | <a href="#">Australia</a> (10)                     |
| <a href="#">New South Wales?</a> (15)              | <a href="#">Austria</a> (5)                        |
| <a href="#">Austria</a> (5)                        | <a href="#">Bolivia</a> (1)                        |
| <a href="#">Bolivia</a> (1)                        | <a href="#">Bosnia-Herzegovina</a> (3)             |
| <a href="#">Bosnia-Herzegovina</a> (3)             | <a href="#">Brazil</a> (36)                        |
| <a href="#">Brazil</a> (71)                        | <a href="#">California (USA)</a> (12)              |
| <a href="#">Rio Grande do Sul</a> (11)             | <a href="#">China</a> (9)                          |
| <a href="#">Santa Catarina</a> (24)                | <a href="#">Colombia</a> (82)                      |
| <a href="#">China</a> (29)                         | <a href="#">Columbia</a> (12)                      |
| <a href="#">Guangdong</a> (11)                     | <a href="#">Connecticut (USA)</a> (3)              |
| <a href="#">Guangdong Prov</a> (6)                 | <a href="#">Cuba</a> (48)                          |
| <a href="#">Guangzhou</a> (3)                      | <a href="#">Cuba or Dominican Republic</a> (11)    |
| <a href="#">Colombia</a> (82)                      | <a href="#">Cuba?</a> (1)                          |
| <a href="#">Columbia</a> (12)                      | <a href="#">Delaware? (USA)</a> (4)                |
| <a href="#">Cuba</a> (48)                          | <a href="#">Delaware (USA)</a> (88)                |
| <a href="#">Cuba or Dominican Republic</a> (11)    | <a href="#">District of Columbia? (USA)</a> (14)   |
| <a href="#">Cuba?</a> (1)                          | <a href="#">District of Columbia (USA)</a> (101)   |
| <a href="#">Dominican Republic</a> (1)             | <a href="#">Dominican Republic</a> (1)             |
| <a href="#">Europe</a> (41)                        | <a href="#">Europe</a> (41)                        |
| <a href="#">France</a> (95)                        | <a href="#">Florida (USA)</a> (1)                  |
| <a href="#">Germany</a> (286)                      | <a href="#">France</a> (95)                        |
| <a href="#">Germany</a> (1)                        | <a href="#">Georgia (USA)</a> (2)                  |
| <a href="#">Guinea</a> (13)                        | <a href="#">Germany</a> (286)                      |
| <a href="#">Hispaniola, Dominican Republic</a> (4) | <a href="#">Hispaniola, Dominican Republic</a> (1) |
| <a href="#">India</a> (14)                         | <a href="#">Guanajuato (Mexico)</a> (70)           |
| <a href="#">West Bengal</a> (1)                    | <a href="#">Guangdong Prov (China)</a> (6)         |
| <a href="#">Indonesia</a> (12)                     | <a href="#">Guangdong (China)</a> (11)             |
| <a href="#">Jawa Barat</a> (2)                     | <a href="#">Guangzhou (China)</a> (3)              |
| <a href="#">Jawa Timur</a> (1)                     | <a href="#">Guinea</a> (13)                        |
| <a href="#">Italy</a> (11)                         | <a href="#">Hispaniola, Dominican Republic</a> (4) |
| <a href="#">Jamaica</a> (8)                        | <a href="#">India</a> (13)                         |
| <a href="#">Malay Archipelago</a> (3)              | <a href="#">Indiana (USA)</a> (1)                  |
| <a href="#">Malaysia</a> (1)                       | <a href="#">Indonesia</a> (9)                      |
| <a href="#">Mexico</a> (85)                        | <a href="#">Italy</a> (11)                         |
| <a href="#">Guanajuato</a> (70)                    | <a href="#">Jamaica</a> (8)                        |
| <a href="#">Sinaloa</a> (2)                        | <a href="#">Jawa Barat (Indonesia)</a> (2)         |
| <a href="#">N. America</a> (4)                     | <a href="#">Jawa Timur (Indonesia)</a> (1)         |
| <a href="#">Neotropical</a> (18)                   | <a href="#">Kwazulu-Natal (South Africa)</a> (3)   |
| <a href="#">Palearctic</a> (59)                    | <a href="#">Malay Archipelago</a> (3)              |

# Crane Flies of Pennsylvania





# Stream Survey

Secure | streamsurvey.ansp.org/search.php?country=&state=&county=&name=odonata&submitbut=Searc... ☆

## Stream Survey

THE ACADEMY OF NATURAL SCIENCES

- Home
- Search Collection
- Gallery

### Search Collection

Taxon:  Country:  State/Province:  County:

Page 3 of 191 ( 4762 records )

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| Lat.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Long.   | Coord. Source   | Collector                                             | Date            | Conservation State                   |      |  |  |                 |  |        |                        |  |  |                                                       |  |       |         |  |                |        |  |                  |               |  |              |     |  |                                      |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-----------------|-------------------------------------------------------|-----------------|--------------------------------------|------|--|--|-----------------|--|--------|------------------------|--|--|-------------------------------------------------------|--|-------|---------|--|----------------|--------|--|------------------|---------------|--|--------------|-----|--|--------------------------------------|
| 40.11                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | -122.14 | Google Earth    | Roback, Selwyn S.                                     | 1956, August    | ethanol (full, not topped off)       |      |  |  |                 |  |        |                        |  |  |                                                       |  |       |         |  |                |        |  |                  |               |  |              |     |  |                                      |
| <table border="0"> <tr> <td colspan="3">Name</td> <td colspan="2">Higher Taxonomy</td> <td>ANSP #</td> </tr> <tr> <td colspan="3">Aeshna umbrosa umbrosa</td> <td colspan="2">Aeshnidae Odonata Insecta Arthropoda Animalia Eukaria</td> <td>14306</td> </tr> <tr> <td colspan="2">Country</td> <td>State/Province</td> <td colspan="2">County</td> <td>Locality Details</td> </tr> <tr> <td colspan="2">Canada</td> <td>Ontario</td> <td colspan="2"></td> <td>Nipissing Junction</td> </tr> </table>                                  |         |                 |                                                       |                 |                                      | Name |  |  | Higher Taxonomy |  | ANSP # | Aeshna umbrosa umbrosa |  |  | Aeshnidae Odonata Insecta Arthropoda Animalia Eukaria |  | 14306 | Country |  | State/Province | County |  | Locality Details | Canada        |  | Ontario      |     |  | Nipissing Junction                   |
| Name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |         |                 | Higher Taxonomy                                       |                 | ANSP #                               |      |  |  |                 |  |        |                        |  |  |                                                       |  |       |         |  |                |        |  |                  |               |  |              |     |  |                                      |
| Aeshna umbrosa umbrosa                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |         |                 | Aeshnidae Odonata Insecta Arthropoda Animalia Eukaria |                 | 14306                                |      |  |  |                 |  |        |                        |  |  |                                                       |  |       |         |  |                |        |  |                  |               |  |              |     |  |                                      |
| Country                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |         | State/Province  | County                                                |                 | Locality Details                     |      |  |  |                 |  |        |                        |  |  |                                                       |  |       |         |  |                |        |  |                  |               |  |              |     |  |                                      |
| Canada                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |         | Ontario         |                                                       |                 | Nipissing Junction                   |      |  |  |                 |  |        |                        |  |  |                                                       |  |       |         |  |                |        |  |                  |               |  |              |     |  |                                      |
| 46.27                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | -79.37  | Google Earth    | ANSP Limnology Dept. Staff                            | 1971, August    | ethanol (full, not topped off)       |      |  |  |                 |  |        |                        |  |  |                                                       |  |       |         |  |                |        |  |                  |               |  |              |     |  |                                      |
| <table border="0"> <tr> <td colspan="3">Name</td> <td colspan="2">Higher Taxonomy</td> <td>ANSP #</td> </tr> <tr> <td colspan="3">Aeshna umbrosa umbrosa</td> <td colspan="2">Aeshnidae Odonata Insecta Arthropoda Animalia Eukaria</td> <td>14307</td> </tr> <tr> <td colspan="2">Country</td> <td>State/Province</td> <td colspan="2">County</td> <td>Locality Details</td> </tr> <tr> <td colspan="2">Canada</td> <td>Ontario</td> <td colspan="2"></td> <td>Near North Bay</td> </tr> </table>                                      |         |                 |                                                       |                 |                                      | Name |  |  | Higher Taxonomy |  | ANSP # | Aeshna umbrosa umbrosa |  |  | Aeshnidae Odonata Insecta Arthropoda Animalia Eukaria |  | 14307 | Country |  | State/Province | County |  | Locality Details | Canada        |  | Ontario      |     |  | Near North Bay                       |
| Name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |         |                 | Higher Taxonomy                                       |                 | ANSP #                               |      |  |  |                 |  |        |                        |  |  |                                                       |  |       |         |  |                |        |  |                  |               |  |              |     |  |                                      |
| Aeshna umbrosa umbrosa                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |         |                 | Aeshnidae Odonata Insecta Arthropoda Animalia Eukaria |                 | 14307                                |      |  |  |                 |  |        |                        |  |  |                                                       |  |       |         |  |                |        |  |                  |               |  |              |     |  |                                      |
| Country                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |         | State/Province  | County                                                |                 | Locality Details                     |      |  |  |                 |  |        |                        |  |  |                                                       |  |       |         |  |                |        |  |                  |               |  |              |     |  |                                      |
| Canada                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |         | Ontario         |                                                       |                 | Near North Bay                       |      |  |  |                 |  |        |                        |  |  |                                                       |  |       |         |  |                |        |  |                  |               |  |              |     |  |                                      |
| 46.27                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | -79.39  | Google Earth    | ANSP Limnology Dept. Staff                            | 1971, August    | ethanol (full, not topped off)       |      |  |  |                 |  |        |                        |  |  |                                                       |  |       |         |  |                |        |  |                  |               |  |              |     |  |                                      |
| <table border="0"> <tr> <td colspan="3">Name</td> <td colspan="2">Higher Taxonomy</td> <td>ANSP #</td> </tr> <tr> <td colspan="3">Aeshna umbrosa umbrosa</td> <td colspan="2">Aeshnidae Odonata Insecta Arthropoda Animalia Eukaria</td> <td>14295</td> </tr> <tr> <td colspan="2">Country</td> <td>State/Province</td> <td colspan="2">County</td> <td>Locality Details</td> </tr> <tr> <td colspan="2">United States</td> <td>Pennsylvania</td> <td colspan="2">Elk</td> <td>Ca. 1.2 mi downstream from Instanter</td> </tr> </table> |         |                 |                                                       |                 |                                      | Name |  |  | Higher Taxonomy |  | ANSP # | Aeshna umbrosa umbrosa |  |  | Aeshnidae Odonata Insecta Arthropoda Animalia Eukaria |  | 14295 | Country |  | State/Province | County |  | Locality Details | United States |  | Pennsylvania | Elk |  | Ca. 1.2 mi downstream from Instanter |
| Name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |         |                 | Higher Taxonomy                                       |                 | ANSP #                               |      |  |  |                 |  |        |                        |  |  |                                                       |  |       |         |  |                |        |  |                  |               |  |              |     |  |                                      |
| Aeshna umbrosa umbrosa                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |         |                 | Aeshnidae Odonata Insecta Arthropoda Animalia Eukaria |                 | 14295                                |      |  |  |                 |  |        |                        |  |  |                                                       |  |       |         |  |                |        |  |                  |               |  |              |     |  |                                      |
| Country                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |         | State/Province  | County                                                |                 | Locality Details                     |      |  |  |                 |  |        |                        |  |  |                                                       |  |       |         |  |                |        |  |                  |               |  |              |     |  |                                      |
| United States                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |         | Pennsylvania    | Elk                                                   |                 | Ca. 1.2 mi downstream from Instanter |      |  |  |                 |  |        |                        |  |  |                                                       |  |       |         |  |                |        |  |                  |               |  |              |     |  |                                      |
| 41.59                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | -78.56  | Diatom Database | Dolan, Thomas, IV                                     | 1951, September | ethanol (full, not topped off)       |      |  |  |                 |  |        |                        |  |  |                                                       |  |       |         |  |                |        |  |                  |               |  |              |     |  |                                      |

ANSP 11805  
*Hydropsyche bifida*  
Clarion River Survey Sta. 3  
Pennsylvania 41.33° - 79.18°  
1951, September

ANSP 11805  
*Hydropsyche bifida*  
Clarion River Survey Sta. 3  
Pennsylvania 41.33° - 79.18°  
1951, September

ANSP 11805  
*Hydropsyche bifida*  
Clarion River Survey Sta. 3  
Pennsylvania 41.33° - 79.18°  
1951, September

ANSP 11805  
*Hydropsyche bifida*  
Clarion River Survey Sta. 3  
Pennsylvania 41.33° - 79.18°  
1951, September

Academy of Natural Sciences of Philadelphia  
Survey  
Location *Ridley Creek, Pa., inc*  
*West Chester, Pa. station*



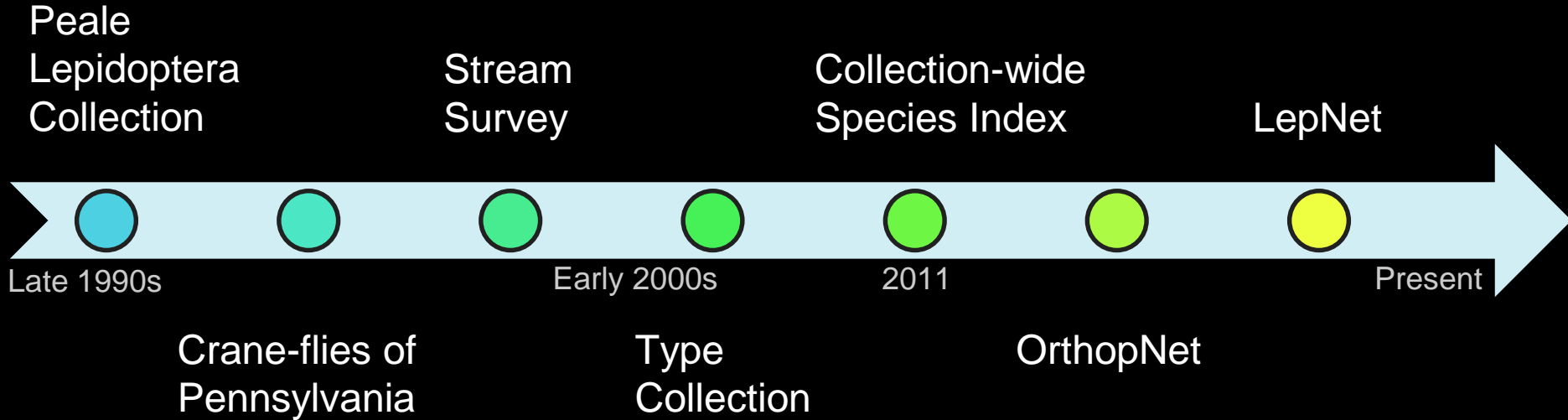
ANSP 22856  
*Hydropsyche bifida*  
Clarion River Survey Sta. 3  
Pennsylvania 41.33° - 79.18°  
1951, September

ANSP 11805  
*Hydropsyche bifida* complex  
Conestoga Creek Basin 20.  
Pennsylvania 40.09° - 76.5  
1948, October

IV  
Date 11-10-57  
*Hydropsyche bifida*  
Station 4

*Hydropsyche bifida*  
Station 4

# ANSP Entomology Digitization Projects



(Timeline Not to scale)



# Type Collection



*Trimerotropis acta* Hebard

## Search

|                 |                                                                            |
|-----------------|----------------------------------------------------------------------------|
| Current Family: | <input type="text"/>                                                       |
| Original Genus: | <input type="text"/>                                                       |
| Species:        | <input type="text"/>                                                       |
| Subspecies:     | <input type="text"/>                                                       |
| Author:         | <input type="text"/>                                                       |
| Country:        | <input type="text"/>                                                       |
|                 | <input type="button" value="Search"/> <input type="button" value="Clear"/> |

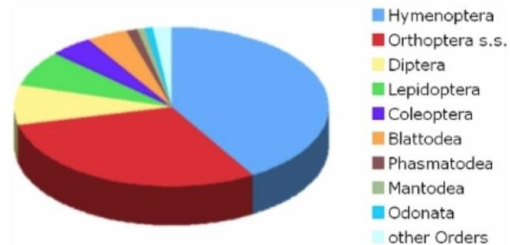
## Entomology Type Collection

at The Academy of Natural Sciences

### Welcome

Key scientists whose primary types are represented in the ANSP Entomology Type Collection include James B. Clemens (1829-1867), Samuel H. Scudder (1837-1911), Ezra T. Cresson, Sr. (1838-1926), Lawrence Bruner (1856-1937), Joseph L. Hancock (1864-1922), Philip P. Calvert (1871-1961), James A.G. Rehn (1881-1965), Morgan Hebard (1887-1946), Annette F. Braun (1884-1978), and Daniel Otte (1939-). In addition, the only surviving lepidopteran type of Thomas Say (1787-1834) survives at ANSP as part of the historic [Titian R. Peale Collection](#).

The George H. Horn (1840-1897) collection of Coleoptera (including many primary types) was originally deposited at ANSP but in the mid-1960s was transferred to the Museum of Comparative Zoology (MCZ), Harvard University as part of a major exchange of specimens. During this same time period, the type-rich Lepidoptera collection of Henry Skinner (1861-1926), originally deposited at ANSP, was transferred to the Carnegie Museum as part of an exchange of specimens.



The ANSP Entomology Type Collection is particularly rich in Hymenoptera and the orthopteroid Orders. The above pie chart shows the taxonomic composition of the 11,000+ primary types of insects. Hymenoptera and Orthoptera (*sensu strictu*) represent more than 70% of the total.

The Entomology Type Collection database includes only primary types (Holotypes, Lectotypes, Neotypes and Syntypes). Paratypes are distributed throughout the main Entomology Collection and have not traditionally been segregated. The database was constructed as part of a rehousing/databasing project supported by the National Science Foundation\*.

If you are unable to locate a specific type you seek in the above database, please read some [search suggestions](#).

\*Re-housing and Database Development of the Primary Type Specimens in the Entomological Collection of the Academy of Natural Sciences. \$92,432. NSF-Biological Research Collections Award #0138649, awarded April 1, 2002 - March 31, 2004 to Jon Gelhaus.

# Type Collection

[Type Collection Home](#) | [Entomology Home](#) | [ANSP Home](#)



*Trimerotropis acta* Hebard

## Entomology Type Collection

at The Academy of Natural Sciences

### *Leucorrhinia proxima*

Type Number: 9262

Genus: *Leucorrhinia*

Species: *proxima*

Subspecies:

Author: Calvert, 1890

Sex: male

Country: United States

State / Province: Maine

County: Kennebec County

Collector: Wadsworth, M.

Date Collected: July, 1888

Family: Libellulidae

Order: Odonata

#### Search

Current Family:

Original Genus:

Species:

Subspecies:

Author:

Country:

# Creating a Collection-wide Species Index



Goal: Achieve a species level index (SpIndex) of all the curated specimens in our collection. Note their location, number of specimens, preservation, and serve this information on the web.




# SpIndex

Not Secure | symbiont.ansp.org/entomology/

The Academy of Natural Sciences  
Of Drexel University

## Entomology Department

- Home
- Search Collection
- Browse Collection
- Collections
- Gallery



### Entomology Collection at the Academy of Natural Sciences

The Academy of Natural Sciences of Drexel University holds one of the larger and taxonomically complete entomological collections in North America. It includes some of the earliest North American insect specimens, and some of the collection, such as the Orthoptera and related orders (grasshoppers, crickets, katydids, cockroaches, etc) ranks among the best in the world. The collection is used by scientists worldwide in systematic and ecological research, in the education of students at Drexel University, and in public programming at the Academy throughout the year.

#### Search Collection

[Login](#)

Taxon:  [Search](#) [Clear](#)

*An added note for searches of type specimens in Coleoptera and Lepidoptera:*

The Academy exchanged portions of its Lepidoptera and Coleoptera collections, including some types, with the Carnegie Museum (Lepidoptera) and Museum of Comparative Zoology (Coleoptera) in the 1960-1970 period. If a type is listed for ANSP in the original description but is not found in a search of our database, it may be that the type is now at the Carnegie (Pittsburgh, PA) or the MCZ, Harvard University (Cambridge, MA). Please be aware though that we still have substantial holdings of Coleoptera and Lepidoptera, including primary types.

[< Back to Search Results](#)

**ANSP Entomology Collection Species Index Search Specimens**

[New Search >](#)

## *Actias luna*

| <b><i>Actias luna</i> (Linnaeus)</b> |                                  | <b>CABINET #</b> | <b>Peale#7</b> | <b>UNIQUE #</b>    | <b>12071</b> |
|--------------------------------------|----------------------------------|------------------|----------------|--------------------|--------------|
| CURATION                             | <b>Peale Box</b>                 | ORDER            |                | <b>Lepidoptera</b> |              |
| PREPARATION                          | <b>Pinned</b>                    | FAMILY           |                | <b>Saturniidae</b> |              |
| TYPE_STATUS                          | <b>No</b>                        | SUBFAMILY        |                |                    |              |
| TYPE_COMMENT                         | <b>No</b>                        | TRIBE            |                |                    |              |
| PARATYPE_COUNT                       | <b>0</b>                         | GENUS            |                | <b>Actias</b>      |              |
| SPECIMENS_COUNT                      | <b>1</b>                         | SUBGENUS         |                |                    |              |
| COMMENTS                             | <b>Peale Collection. Box #71</b> | SPECIES_GROUP    |                |                    |              |
| INPUT_BY                             | <b>SCD</b>                       | SPECIES          |                | <b>luna</b>        |              |
|                                      |                                  | SUBSPECIES       |                |                    |              |
|                                      |                                  | AUTHOR           |                | <b>(Linnaeus)</b>  |              |

| <b><i>Actias luna</i> (Linnaeus)</b> |                                  | <b>CABINET #</b> | <b>Peale#7</b> | <b>UNIQUE #</b>    | <b>12072</b> |
|--------------------------------------|----------------------------------|------------------|----------------|--------------------|--------------|
| CURATION                             | <b>Peale Box</b>                 | ORDER            |                | <b>Lepidoptera</b> |              |
| PREPARATION                          | <b>Pinned</b>                    | FAMILY           |                | <b>Saturniidae</b> |              |
| TYPE_STATUS                          | <b>No</b>                        | SUBFAMILY        |                |                    |              |
| TYPE_COMMENT                         | <b>No</b>                        | TRIBE            |                |                    |              |
| PARATYPE_COUNT                       | <b>0</b>                         | GENUS            |                | <b>Actias</b>      |              |
| SPECIMENS_COUNT                      | <b>1</b>                         | SUBGENUS         |                |                    |              |
| COMMENTS                             | <b>Peale Collection. Box #72</b> | SPECIES_GROUP    |                |                    |              |
| INPUT_BY                             | <b>SCD</b>                       | SPECIES          |                | <b>luna</b>        |              |
|                                      |                                  | SUBSPECIES       |                |                    |              |
|                                      |                                  | AUTHOR           |                | <b>(Linnaeus)</b>  |              |

| <b><i>Actias luna</i> Linnaeus</b> |                                           | <b>CABINET #</b> | <b>27.5.C</b> | <b>UNIQUE #</b>    | <b>12267</b> |
|------------------------------------|-------------------------------------------|------------------|---------------|--------------------|--------------|
| CURATION                           | <b>ANSP Drawer</b>                        | ORDER            |               | <b>Lepidoptera</b> |              |
| PREPARATION                        | <b>Pinned</b>                             | FAMILY           |               | <b>Saturniidae</b> |              |
| TYPE_STATUS                        | <b>No</b>                                 | SUBFAMILY        |               |                    |              |
| TYPE_COMMENT                       | <b>No</b>                                 | TRIBE            |               |                    |              |
| PARATYPE_COUNT                     | <b>0</b>                                  | GENUS            |               | <b>Actias</b>      |              |
| SPECIMENS_COUNT                    | <b>11</b>                                 | SUBGENUS         |               |                    |              |
| COMMENTS                           | <b>Pinned immature stages collection.</b> | SPECIES_GROUP    |               |                    |              |
| INPUT_BY                           | <b>KJR</b>                                | SPECIES          |               | <b>luna</b>        |              |

SpIndex

# SpIndex

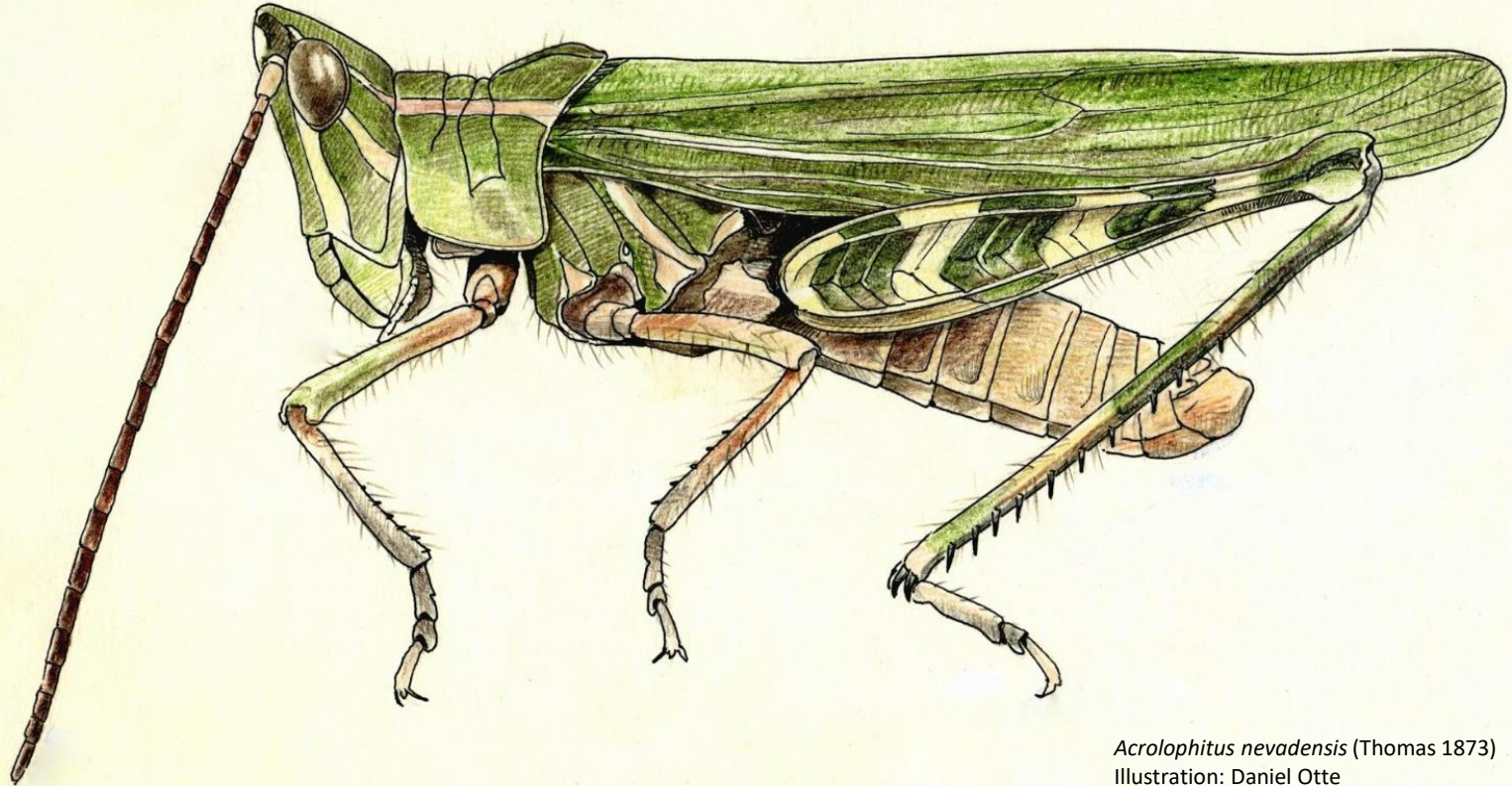


## Results

- We have a complete list of species in the collection
- Researchers and the public may search our holdings from anywhere in the world.
- We know where specimens are located
- The process helped identify types that were still in the main collection



# OrthopNet *Connecting Field Notes to Digitized Specimens*



*Acrolophitus nevadensis* (Thomas 1873)  
Illustration: Daniel Otte



# OrthopNet

James Rehn & Morgan Hebard surveyed the Orthoptera of the western U.S. in the early twentieth century.



ANSP Archives Collection 734 B

Field Site circa early 1900s Arizona.

# OrthopNet

## Field Note Photography

Specimen level data capture driven by James Rehn's Expedition Field note entries.

The Field Notes are hosted by the Biodiversity Heritage Library.



Greenfield Center in the Academy's Library

# OrthopNet

1. Transcribe Field Notes from page photographs.
2. Locate genera & species listed in the field notes in the research collection.
3. Capture label data by key boarding the information into the Symbiota live data template portal.

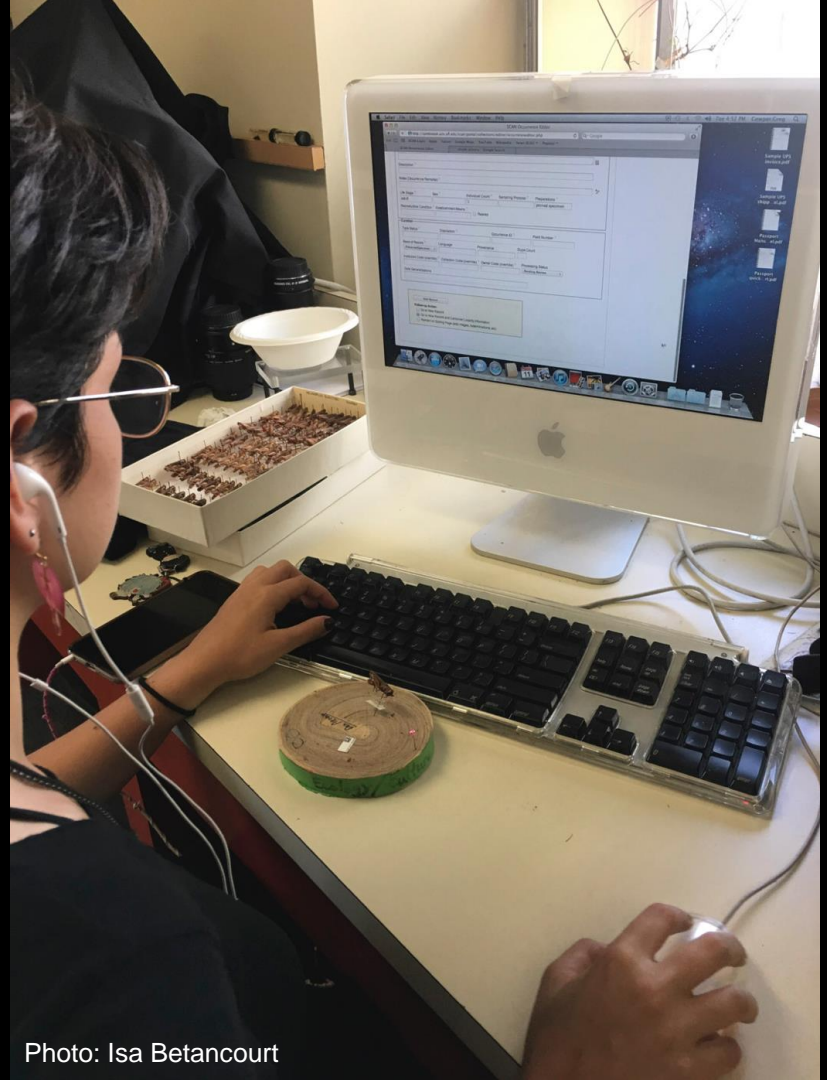


Photo: Isa Betancourt



Lepidoptera of  
North America  
N E T W O R K

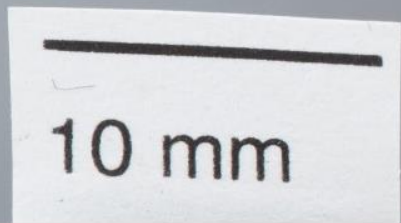
- The label data of 52,000 North American Lepidoptera transcribed and digitized
- 6,700 images specimens, including their data labels



# Label Transcription and Imaging for LepNet



| D              | E              | F                 | G     | H      | I            | J               | K                                                         | L       | M    | N  | O  | P   | Q   | R    | S             | T             | U            | V                     | W                              | AF  | AG |                                                    |                                           |              |                    |
|----------------|----------------|-------------------|-------|--------|--------------|-----------------|-----------------------------------------------------------|---------|------|----|----|-----|-----|------|---------------|---------------|--------------|-----------------------|--------------------------------|-----|----|----------------------------------------------------|-------------------------------------------|--------------|--------------------|
| catalogNumber  | catalogNumber  | recordedBy        | life  | prepa  | eventDate    | verbatimEv      | Date Inference                                            | remarks | year | mo | da | END | End | End  | country       | stateProv     | county       | municipa              | locality                       | mir | m  | Provenance                                         | Other Lab                                 | Ider         |                    |
| ANSP-ENT-69193 | ANSP-ENT-69193 | [Guidry]          | Adult | Pinned | 15 Aug. 1989 |                 |                                                           |         | 1989 | 08 | 15 | 15  | 08  | 1989 | United States | Texas         |              |                       | Davis Mtns., 2.8 mi E. N       |     |    | ex Lee Guidry Coll'n. (gift of Ryan Bridg Am       |                                           |              |                    |
| ANSP-ENT-69194 | ANSP-ENT-69194 | [Guidry]          | Adult | Pinned | 1988-07-03   | 3 July 1988     |                                                           |         | 1988 | 07 | 03 | 03  | 07  | 1988 | Mexico        | Sonora        |              |                       | Sierra Madre 7.2 mi. W. Yecora |     |    | ex Lee Guidry Coll'n. (gift of Ryan Bridg Am       |                                           |              |                    |
| ANSP-ENT-80239 | ANSP-ENT-80239 | [A.G. Goodridge]  | Adult | Pinned | 1980-07-11   | VII-11-80       | [Date Inference: A.G. Goodridge (b.19                     |         | 1980 | 07 | 11 | 11  | 07  | 1980 | United States | Ohio          |              |                       | Shaker Hts                     |     |    |                                                    | ex A.G. Goodridge Coll'n.; ANSP-Entomolog |              |                    |
| ANSP-ENT-80240 | ANSP-ENT-80240 | [A.G. Goodridge]  | Adult | Pinned | 1980-07-11   | VII-11-80       | [Date Inference: A.G. Goodridge (b.19                     |         | 1980 | 07 | 11 | 11  | 07  | 1980 | United States | Ohio          |              |                       | Shaker Hts                     |     |    |                                                    | ex A.G. Goodridge Coll'n.; ANSP-Entomolog |              |                    |
| ANSP-ENT-80241 | ANSP-ENT-80241 |                   | Adult | Pinned | --           |                 | [Date inference: old specimen, probably before 1930]      |         | 0    | 0  | 0  | 0   | 0   | 0    |               |               |              |                       |                                |     |    |                                                    | ex A.G. Goodridge Coll'n.; ANSP-Entomolog |              |                    |
| ANSP-ENT-80242 | ANSP-ENT-80242 | [J.W. Gruber, G.] | Adult | Pinned | 2008-06-28   | 28-29-June-2008 |                                                           |         | 2008 | 06 | 28 | 29  | 06  | 2008 | United States | Arizona       | Cochise      |                       |                                |     |    | Coronado NF, Chiricahuas Rustler Park overlook     |                                           | Eup          |                    |
| ANSP-ENT-80243 | ANSP-ENT-80243 | [J.W. Gruber, G.] | Adult | Pinned | 2008-06-28   | 28-29-June-2008 |                                                           |         | 2008 | 06 | 28 | 29  | 06  | 2008 | United States | Arizona       | Cochise      |                       |                                |     |    | Coronado NF, Chiricahuas Rustler Park overlook     |                                           | Eup          |                    |
| ANSP-ENT-80244 | ANSP-ENT-80244 | [J.W. Gruber, G.] | Adult | Pinned | 2010-07-07   | 07-July-2010    |                                                           |         | 2010 | 07 | 07 | 07  | 07  | 2010 | United States | New Mexico    | Otero        |                       |                                |     |    | vic. High Rolls, Lincoln Nat. Forest West Side Rd. |                                           | Eup          |                    |
| ANSP-ENT-80245 | ANSP-ENT-80245 | [J.W. Gruber, G.] | Adult | Pinned | 2010-07-07   | 07-July-2010    |                                                           |         | 2010 | 07 | 07 | 07  | 07  | 2010 | United States | New Mexico    | Otero        |                       |                                |     |    | vic. High Rolls, Lincoln Nat. Forest West Side Rd. |                                           | Eup          |                    |
| ANSP-ENT-80246 | ANSP-ENT-80246 | [J.W. Gruber, G.] | Adult | Pinned | 2010-07-07   | 07-July-2010    |                                                           |         | 2010 | 07 | 07 | 07  | 07  | 2010 | United States | New Mexico    | Otero        |                       |                                |     |    | vic. High Rolls, Lincoln Nat. Forest West Side Rd. |                                           | Eup          |                    |
| ANSP-ENT-80247 | ANSP-ENT-80247 | [J.W. Gruber, G.] | Adult | Pinned | 2010-07-07   | 07-July-2010    |                                                           |         | 2010 | 07 | 07 | 07  | 07  | 2010 | United States | New Mexico    | Otero        |                       |                                |     |    | vic. High Rolls, Lincoln Nat. Forest West Side Rd. |                                           | Eup          |                    |
| ANSP-ENT-80248 | ANSP-ENT-80248 | [J.W. Gruber, G.] | Adult | Pinned | 2010-07-07   | 07-July-2010    |                                                           |         | 2010 | 07 | 07 | 07  | 07  | 2010 | United States | New Mexico    | Otero        |                       |                                |     |    | vic. High Rolls, Lincoln Nat. Forest West Side Rd. |                                           | Eup          |                    |
| ANSP-ENT-80249 | ANSP-ENT-80249 | [J.W. Gruber, G.] | Adult | Pinned | 2008-06-28   | 28-29-June-2008 |                                                           |         | 2008 | 06 | 28 | 29  | 06  | 2008 | United States | Arizona       | Cochise      |                       |                                |     |    | Coronado NF, Chiricahuas Rustler Park overlook     |                                           | Eup          |                    |
| ANSP-ENT-80250 | ANSP-ENT-80250 | [H.A. Kaeber]     | Adult | Pinned | 1903-07-04   | VII.4.03        | [Date inference: old specimen, proba                      |         | 1903 | 07 | 04 | 04  | 07  | 1903 | United States | Arizona       |              |                       |                                |     |    | Huachu. Mts                                        | F. Haimbach Coll. Lot 72                  |              |                    |
| ANSP-ENT-80251 | ANSP-ENT-80251 | [Philip Laurent]  | Adult | Pinned | 0000-09-20   | IX20            | [Date Inference: Old specimen, Philip                     |         | 0000 | 09 | 20 | 20  | 09  | 0000 | United States | Pennsylvania  | Philadelphia | Philadelphia Mt. Airy |                                |     |    |                                                    |                                           |              |                    |
| ANSP-ENT-80252 | ANSP-ENT-80252 | [Philip Laurent]  | Adult | Pinned | 0000-08-04   | 8.4             | [Date Inference: Old specimen, Philip                     |         | 0000 | 08 | 04 | 04  | 08  | 0000 | United States | Pennsylvania  | Philadelphia | Philadelphia Mt. Airy |                                |     |    |                                                    |                                           |              |                    |
| ANSP-ENT-80253 | ANSP-ENT-80253 | [Philip Laurent]  | Adult | Pinned | 0000-07-22   | VII.22          | [Date Inference: Old specimen, Philip                     |         | 0000 | 07 | 22 | 22  | 07  | 0000 | United States | Pennsylvania  | Philadelphia | Philadelphia Mt. Airy |                                |     |    |                                                    |                                           |              |                    |
| ANSP-ENT-80254 | ANSP-ENT-80254 | [E.T. Learned]    | Adult | Pinned | 1933-08-18   | Aug. 18, '33    | [Date Inference: Elmer Turell Learned                     |         | 1933 | 08 | 18 | 18  | 08  | 1933 | United States | Massachusetts |              |                       | Fall River                     |     |    |                                                    |                                           |              |                    |
| ANSP-ENT-80255 | ANSP-ENT-80255 | [E.T. Learned]    | Adult | Pinned | 1925-06-10   | VI-10-25        | [Date Inference: Elmer Turell Learned                     |         | 1925 | 06 | 10 | 10  | 06  | 1925 | United States | Massachusetts |              |                       | Fall River                     |     |    |                                                    |                                           |              | ang                |
| ANSP-ENT-80256 | ANSP-ENT-80256 |                   | Adult | Pinned | --           |                 | [Date Inference: Old specimen, probably from before 1930] |         | 0    | 0  | 0  | 0   | 0   | 0    |               |               |              |                       |                                |     |    |                                                    | Coll. Of Acad. Nat. Sci. Phil             | 2579         |                    |
| ANSP-ENT-80257 | ANSP-ENT-80257 | [E.P. Darlington] | Adult | Pinned | 1931-10-28   | Oct 28 1931     |                                                           |         | 1931 | 10 | 28 | 28  | 10  | 1931 | United States | New Jersey    |              |                       | New Lisbon                     |     |    |                                                    |                                           |              | 3554               |
| ANSP-ENT-80258 | ANSP-ENT-80258 | [E.P. Darlington] | Adult | Pinned | 1938-03-17   | March 17-1938   |                                                           |         | 1938 | 03 | 17 | 17  | 03  | 1938 | United States | Florida       |              |                       | R. Palm Park                   |     |    |                                                    |                                           |              | 3808               |
| ANSP-ENT-80259 | ANSP-ENT-80259 |                   | Adult | Pinned | --           |                 | [Date Inference: Old specimen, probably from before 1930] |         | 0    | 0  | 0  | 0   | 0   | 0    | United States | Florida       |              |                       | Ent'prise                      |     |    |                                                    |                                           |              |                    |
| ANSP-ENT-80260 | ANSP-ENT-80260 | [R.T. Allen]      | Adult | Pinned | 2004-05-14   | 14 May, 2004    |                                                           |         | 2004 | 05 | 14 | 14  | 05  | 2004 | United States | MS            | Jackson      |                       | Hollytree                      |     |    | Bingham Mtn Area                                   |                                           | RTA-04-21    | Palt               |
| ANSP-ENT-80261 | ANSP-ENT-80261 |                   | Adult | Pinned | --           |                 | [Date inference: old specimen, probably before 1930]      |         | 0    | 0  | 0  | 0   | 0   | 0    | United States | Pennsylvania  |              |                       |                                |     |    |                                                    |                                           | Seeber Coll. |                    |
| ANSP-ENT-80262 | ANSP-ENT-80262 | [L. Knobel]       | Adult | Pinned | 1931-10-13   | Oct. 13, '31    | [Date inference: [19]31]                                  |         | 1931 | 10 | 13 | 13  | 10  | 1931 | United States | Arkansas      |              |                       | Hope                           |     |    |                                                    |                                           |              | Slide No. 17: Palt |
| ANSP-ENT-80263 | ANSP-ENT-80263 | [M. Hebard]       | Adult | Pinned | 1916-08-14   | VIII.14 1916    |                                                           |         | 1916 | 08 | 14 | 14  | 08  | 1916 | United States | Virginia      |              |                       | Hot Springs                    |     |    |                                                    |                                           |              |                    |
| ANSP-ENT-80264 | ANSP-ENT-80264 | [M. Hebard]       | Adult | Pinned | 1916-07-18   | VII. 18 1916    |                                                           |         | 1916 | 07 | 18 | 18  | 07  | 1916 | United States | Virginia      |              |                       | Hot Springs                    |     |    |                                                    |                                           |              |                    |
| ANSP-ENT-80265 | ANSP-ENT-80265 |                   | Adult | Pinned | 1892-06-11   | June 11 1892    |                                                           |         | 1892 | 06 | 11 | 11  | 06  | 1892 | United States | New York      |              |                       | New Windsor                    |     |    |                                                    |                                           |              |                    |
| ANSP-ENT-80266 | ANSP-ENT-80266 | [Philip Laurent]  | Adult | Pinned | 0000-07-21   | 7.21            | [Date Inference: Old specimen, Philip                     |         | 0000 | 07 | 21 | 21  | 07  | 0000 | United States | Pennsylvania  | Philadelphia | Philadelphia Mt. Airy |                                |     |    |                                                    |                                           |              |                    |
| ANSP-ENT-80267 | ANSP-ENT-80267 | [Philip Laurent]  | Adult | Pinned | 0000-07-23   | 7.23            | [Date Inference: Old specimen, Philip                     |         | 0000 | 07 | 23 | 23  | 07  | 0000 | United States | Pennsylvania  | Philadelphia | Philadelphia Mt. Airy |                                |     |    |                                                    |                                           |              |                    |



ANSP-ENT-56091 *Acronicta albarufa* dorsal



10 mm



EXEMPLAR  
LepNet Imaging  
Project(2017-19)

Lakehurst, N. J.  
June 21-30e  
Frdk. Lemmer, Coll.

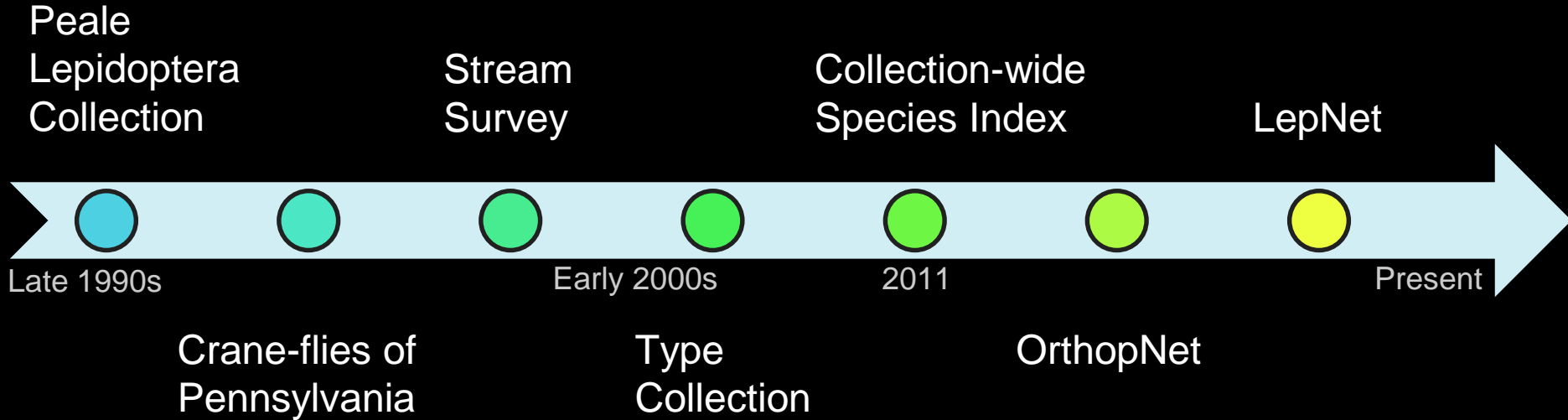


*Acronycta*  
*albarufa*  
2432 ♂

ANSP-ENT-56091

Photographed by Isa S. Betancourt  
October 25, 2018

# ANSP Entomology Digitization Projects



(Timeline Not to scale)



# Digitization Challenges

- Collection Size & availability of manpower
- Funding
- Updates
- Digital Collections Need a Home
- Database Support
  - Image collection management
- Historic nature of the collection





10 mm



EXEMPLAR  
LepNet Imaging  
Project (2017-19)

TENN.  
8.11



F. Haimbach  
Coll. Lot 72

ANSP-ENT-56096

Photographed by Isa S. Betancourt  
October 25, 2018



10 mm



EXEMPLAR  
LepNet Imaging  
Project(2017-19)

Near Hot Springs,  
Las Vegas, N.M.  
7000 ft. Aug., '82.  
F. H. Snow.



ANSP-ENT-56098

Photographed by Isa S. Betancourt  
October 25, 2018

67



10 mm



EXEMPLAR  
LepNet Imaging  
Project (2017-19)

ANDES  
7.3.99 N.Y.



F. Haimbach  
Coll. Lot 72

ANSP-ENT-56101

Photographed by Isa S. Betancourt  
October 25, 2018



10 mm



EXEMPLAR  
LepNet Imaging  
Project (2017-19)

Martha's Vine-  
Yard, Mass. ✓  
F. M. Jones 26



2436.  
*ovata* Gu

ANS. Lot  
No. 781

ANSP-ENT-56109

Photographed by Isa S. Betancourt  
October 25, 2018



10 mm



EXEMPLAR  
LepNet Imaging  
Project (2017-19)

New York



ANSP-ENT-56113

Photographed by Isa S. Betancourt  
October 25, 2018



10 mm



EXEMPLAR  
LepNet Imaging  
Project (2017-19)

107.



ANSP-ENT-56107

Photographed by Isa S. Betancourt  
October 25, 2018

# Future

Carry on

Prioritize

One stop portal for all digitized data

And beyond...





# *Thank you!*

NSF, IMLS

Symbiota, SCAN,

iDigBio

LepNet, OrthopNet



Academy Database Programmer: Steven Dilliplane

Volunteers and Students workers, especially significant recent contributions from Vaughn Shirey, Lois Kuter, Dominique Galluscio, Kacy Reitnauer, Chyenne Witmer



The Academy of  
Natural Sciences  
of DREXEL UNIVERSITY

# Carrying the Historic ANSP Entomology Collection Through the Ages

*Isa Betancourt*<sup>1</sup>, *Jon K. Gelhaus*<sup>1,2</sup>, *Jason Weintraub*<sup>1</sup>, *Greg Cowper*<sup>1</sup>, *Stephen Mason*<sup>1,2</sup> and *Daniel Otte*<sup>1</sup>,  
<sup>1</sup>The Academy of Natural Sciences of Drexel University, Philadelphia, PA, <sup>2</sup>Drexel University, Philadelphia, PA

Sunday, March 10, 2019

03:05 PM - 03:25 PM

ESA Eastern Branch Meeting, Blacksburg, Virginia