# **CHRISTOPHER C. WIRTH**

Curriculum Vitae

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#### **EDUCATION**

Purdue University (relocated from Northern Arizona University, Fall 2019)

Ph.D. in Entomology, May 2022 Major Advisor: Aaron D. Smith

### Randolph-Macon College

B.S. in Biology, June 2013. Cum Laude, Phi Beta Kappa, with Honors

Minors: Chemistry and Classical Studies

#### PROFESSIONAL EMPLOYMENT

Collection Manager, Purdue Entomological Research Collection, Department of Entomology, Purdue University, June 2022–present

#### RESEARCH INTERESTS

Coleoptera Systematics, Insect Biodiversity and Conservation, History of Entomology

#### RESEARCH EXPERIENCE

# **Purdue University**

Research Assistant, Fall 2019–Fall 2020

Graduate Collections Assistant, Spring 2021-Fall 2021

# **Northern Arizona University**

Research Assistant, Summer 2017, Summer 2018—Summer 2019
Associate Curator of Coleoptera, Fall 2017—Summer 2019 (volunteer)

### **Parsons Corporation**

Wildlife Biologist, April 2015–August 2015 (contract)

# Biology Department, Randolph-Macon College

Museum Assistant, September 2009–May 2013

# Dr. C.B. Knisley, Randolph-Macon College

Field Research Assistant, July 2006–2013

# Virginia Department of Conservation and Recreation, Natural Heritage Program

Volunteer, May 2006-July 2009

### **TEACHING INTERESTS**

General Entomology, Insect Taxonomy, Phylogenetics, Biogeography, Field and Laboratory Techniques, Photography and Digital Illustration for Scientific Publications

### **TEACHING EXPERIENCE**

# **Northern Arizona University**

Co-Instructor, Wildlife Biology Techniques (new course, co-designed), Summer 2018 Teaching Assistant, Unity of Life II: Lives of Multicellular Organisms, Spring 2017–2018 Teaching Assistant, Phylogenetics, Spring 2016 Laboratory Instructor, General Entomology, Fall 2015–2017

# Randolph-Macon College

Latin Tutor, Classics Department, June 2011–January 2013

# STUDENT MENTORSHIP (14)

Abigail Vernon (BSc), Fall 2022-present

Sidney Bunch (BSc), Fall 2022-present

Isabelle Gilchrist (BSc), Fall 2021-Spring 2022

Steven Richardson (BSc), Fall 2021

Cassie Jackson (BSc), Fall 2021

Sol Carolina Parra Santos (BSc), Summer 2021

Isabella Sirit (BSc), Spring 2021, Fall 2021

Jessica Newton (BSc), Spring 2021

Samantha N. Hershauer (BSc), Fall 2018-Summer 2019

Angela Rincon (BSc), Fall 2017–Spring 2018

Kali L. Swichtenberg (BSc), Spring 2017

Mark Ecker (BSc), Spring 2017

Anya N. Metcalfe (MSc), Fall 2016–Spring 2017

Jenica Knaupp: (BSc), Fall 2015–Spring 2016

# **PUBLICATIONS**

- 9. Kamiński, M.J., Gearner, O.M., Raś, M., Hunsinger, E.T., Smith, A.L., Mas-Peinado, P., Girón, J.C., Bilska, A.G., Strümpher, W.P., **Wirth, C.C.**, Kanda, K., Swichtenberg, K., Iwan, D., and A.D. Smith. 2022. Female terminalia morphology and cladistic relations among Tok-Tok beetles (Tenebrionidae: Sepidiini). Cladistics 1–26. https://doi.org/10.1111/cla.12510
- 8. Kamiński, M.J., Kanda, K., Lumen, R., Ulmer, J.M., **Wirth, C.C.**, Bouchard, P., Aalbu, R.L., Mal, N., and A.D. Smith. A catalogue of the tribe Sepidiini Eschscholtz, 1829 (Tenebrionidae: Pimeliinae) of the world. 2019. Zookeys 844: 1–121. https://doi.org/10.3897/zookeys.844.34241
- 7. Aalbu, R.L. and **C.C. Wirth**. 2019. The status of *Triorophus punctatus* LeConte (Coleoptera: Tenebrionidae: Pimeliinae: Edrotini). Zootaxa 4604(1): 198–200. http://dx.doi.org/10.11646/zootaxa.4604.1.11

- 6. **Wirth, C.C.** 2018. Determining type locality habitat and historic land use at current sites of the Miami tiger beetle, *Cicindelidia floridana* (Cartwright) (Coleoptera: Carabidae: Cicindelinae). The Coleopterists Bulletin, 72(3): 427–432. https://doi.org/10.1649/0010-065X-72.3.427
- 5. Knisley, C.B., Gowan, C., and **C.C. Wirth**. 2018. Effects of soil moisture, vegetation and food on adult activity, oviposition and larval development in the tiger beetle, *Cicindela albissima* Rumpp. Journal of Insect Conservation, 22(3–4): 443–449. https://doi.org/10.1007/s10841-018-0072-x
- 4. **Wirth, C.C.** and A.D. Smith. 2017. Review of the genus *Trichiotes* Casey (Coleoptera: Tenebrionidae: Pimeliinae: Edrotini), with the description of a new species and a preliminary checklist of the Tenebrionidae from Cuatrociénegas, Mexico. Zootaxa 4347(3): 533–542. http://dx.doi.org/10.11646/zootaxa.4347.3.6
- 3. Smith, A.D. and C.C. Wirth. 2016. A new genus and species of stridulating Edrotini (Coleoptera: Tenebrionidae: Pimeliinae) from West Texas, with notes on stridulation within the tribe. Annales Zoologici, 66(4): 577–587. https://doi.org/10.3161/00034541ANZ2016.66.4.011
- 2. Knisley, C.B. and C.C. Wirth. 2013. Biological Studies of the Florida Tiger Beetle, *Cicindelidia floridana*, 2011–2013: Final Report. Report to the U.S. Fish and Wildlife Service, South Florida Ecological Services Office. 13pp.
- 1. Gibson, J.D. and **C.C. Wirth**. 2006. Field Notes: *Eumeces fasciatus* (Five-lined Skink). Catesbeiana. 26(1): 24–26. https://www.virginiaherpetologicalsociety.com/catesbeiana-pdf/cat26n1/cates26n1.pdf

# FIRST-AUTHOR MANUSCRIPTS IN PREPARATION

- **Wirth, C.C.** and A.D. Smith. A revision of the genus *Edrotes* LeConte (Coleoptera: Tenebrionidae: Pimeliinae). Target journal: Zoological Journal of the Linnean Society.
- Wirth, C.C. An annotated type catalog of the Coleoptera, Hemiptera, and Orthoptera described by Willis Stanley Blatchley (1859–1940). Target journal: Coleopterists Society Monographs.
- **Wirth, C.C.** and L.M. MacCabe. A History of entomology at Northern Arizona University: Personnel, research, and a list of type specimens in the Colorado Plateau Museum of Arthropod Biodiversity. Target journal: American Entomologist.
- Wirth, C.C. and C. Gowan. Description of the third instar larvae of *Cicindelidia abdominalis* F., *C. floridana* Cartwright, *C. highlandensis* Choate, and *C. scabrosa* Schaupp (Coleoptera: Carabidae: Cicindelinae). Target journal: Coleopterists Bulletin.

# GRANTS AND FELLOWSHIPS (\$40,601 TO DATE)

- 10. Travel Grant. \$1,000. Entomological Collections Network and Entomological Society of America. 2022
- 9. Bilsland Dissertation Fellowship. \$24,356. Purdue University Graduate School. 2021
- 8. Student Collections Study Award. \$970. Natural History Museum of Los Angeles County. 2019
- 7. Graduate Student Research Enhancement Award. \$5000. Coleopterists Society. 2019
- 6. Theodore Roosevelt Memorial Fund. \$1695. American Museum of Natural History. 2019
- 5. Travel Award. \$330. Monte L. Bean Life Science Museum, Brigham Young University. 2018
- 4. Student Travel Award. \$450. Graduate Student Government, Northern Arizona University. 2017

- 3. William Neal Cunningham Memorial Fund. \$2750. Biology Department, Randolph-Macon College. 2013
- 2. Schapiro Undergraduate Research Fellowship. \$3500. Randolph-Macon College. 2010
- 1. Youth Incentive Award. \$550. Coleopterists Society. 2006

### **PRESENTATIONS**

- **Wirth, C.C.** 2022. A preliminary phylogeny of the epitragine darkling beetles (Tenebrionidae: Pimeliinae: Epitragini). Annual Meeting, Entomological Society of America. Vancouver, BC, Canada. (Oral presentation)
- Gearner, O.M., Kanda, K., Kamiński, M.J., Swichtenberg, K.L., **Wirth, C.C.**, Lumen, R. and A.D. Smith. 2022. Taxonomic revisions of Sepidiini (Tenebrionidae: Pimeliinae) using phylogenomic analyses and morphology. Annual Meeting, Entomological Society of America. Vancouver, BC, Canada. (Oral presentation)
- Wirth, C.C. 2022. Beyond the label: Compiling a gazetteer of Willis S. Blatchley's collecting localities. Annual Meeting, Entomological Collections Network. Vancouver, BC, Canada. (Oral presentation)
- Kernen, H. and C.C. Wirth. 2022. Boiler-bees: The bees of the Purdue Entomological Research Collection. Annual Meeting, Entomological Collections Network. Vancouver, BC, Canada. (Oral presentation)
- Wirth, C.C. 2022. Preserving insects for entomological collections. Department of Biology, University of Indianapolis. (Invited oral presentation)
- Wirth, C.C. 2022. Blatchley the Entomologist: An enduring, evolving legacy. Blatchley Nature Study Club, Centennial Celebration. (Invited oral presentation)
- Gearner, O.M., Kamiński, M.J., Kanda, K., Swichtenberg, K.L., Lumen, R., Wirth, C.C., and A.D. Smith. 2021. Let's Tok about Tok-Tok beetles: Phylogenomic analyses reveal taxonomic problems within Sepidiini (Tenebrionidae: Pimeliinae). Annual Meeting, Entomological Society of America. (Oral presentation)
- Wirth, C.C., and A.D. Smith. 2021. Untangling Tenebs: Testing tribal concepts in the Edrotini and related lineages (Tenebrionidae: Pimeliinae) with morphological and phylogenomic data. Annual Meeting, Entomological Society of America. (Oral presentation)
- Smith, A.D., Kamiński, M.J., Kanda, K., Gearner, O.M., Swichtenberg, K.L., Wirth, C.C., Lumen, R., Bouchard, P., Flores G.E., Kergoat, G.J., Condamine, F.L., Aalbu, R.L., Lamb, T., and L. Purchart. 2021. Tribal relationships within the desert darkling beetles (Tenebrionidae: Pimeliinae). Annual Meeting, Entomological Society of America. (Oral presentation)
- **Wirth, C.C.** 2021. Preserving insects for entomological collections. Research and Extension Experiences for Undergraduates program, Division of Natural Sciences, Indiana Wesleyan University. (Invited oral presentation)
- Kergoat, G.J., Kanda, K., Soldati, L., Jourdan, H., Clamens, A.-L., Aalbu, R.L., Abbate, J.L., Bouchard, P., Flores G.E., Iwan, D., Johnston, M.J., Kamiński, M.J., Li, X.-M., Mas-Peinado, P., Merkl, O., Purchart, L., Ren, G.-D., Soldati, F. **Wirth, C.C.**, Zikri, G., Smith, A.D., and F.L. Condamine. 2021. Tackling the historical biogeography and evolution of a speciose family of Coleoptera. International Tenebrionoidea Virtual Symposium VI. (Oral presentation)
- Smith, A.D., Kamiński, M.J., Kanda, K., Gearner, O.M., Swichtenberg, K.L., Wirth, C.C., Lumen, R., Bouchard, P., Flores G.E., Kergoat, G.J., Condamine, F.L., Aalbu, R.L., Lamb,

- T., and L. Purchart. 2021. Phylogeny of Pimeliinae: progress and surprises. International Tenebrionoidea Virtual Symposium VI. (Oral presentation)
- Wirth, C.C., Swichtenberg, K.L., Gearner, O.M., and A.D. Smith. 2021. Tenebrionidae Research in the Smith Insect Biodiversity Lab. International Tenebrionoidea Virtual Symposium VI. (Oral presentation)
- Kamiński, M.J., Gearner, O.M., Raś, M., Hunsinger, E.T., Smith, A.L., Mas-Peinado, P., Girón, J.C., Bilska, A.G., Strümpher, W.P., **Wirth, C.C.**, Kanda, K., Swichtenberg, K.L., Iwan, D. and A.D. Smith. 2021. Evaluating informativeness of female terminalia morphology for reconstructing tok-tok beetle (Tenebrionidae: Sepidiini) phylogenies. International Tenebrionoidea Virtual Symposium VI. (Oral presentation)
- Wirth, C.C., Kanda, K., and A.D. Smith. 2021. Tribal relationships in the edrotine and tentyriine clades (Tenebrionidae: Pimeliinae): Preliminary findings from morphology and targeted enrichment sequencing. International Tenebrionoidea Virtual Symposium VI. (Oral presentation)
- Wirth, C.C. 2021. Revitalizing an overlooked collection of South American Coleoptera and other insects made by Willis Stanley Blatchley. Encontro de Coleoptera. (Oral presentation)
- Smith, A.D., Kaminski, M.J., Kanda, K., Gearner, O.M., Swichtenberg, K., **Wirth, C.C.**, and R. Lumen. 2020. Phylogeny of the desert darkling beetles (Coleoptera: Tenebrionidae: Pimeliinae) and its implications for biogeography and taxonomy within the subfamily. Annual Meeting, Entomological Society of America. (Oral presentation)
- Wirth, C.C., and A.D. Smith. 2020. Darkling beetles in a new light: Redefining tribal and generic concepts for the Edrotini (Coleoptera: Tenebrionidae: Pimeliinae). Annual Meeting, Entomological Society of America. (Oral presentation)
- **Wirth, C.C.** 2020. A virtual tour of the Purdue Entomological Research Collection. Annual Meeting, Entomological Collections Network. (Oral presentation)
- **Wirth, C.C.** 2020. The W.S. Blatchley Collection: History, status, and progress towards a catalog of type specimens. Annual Meeting, Entomological Collections Network. (Oral presentation)
- Smith, A.D., Kanda, K., **Wirth, C.C.**, Kaminski, M.J., Ulmer, J., Seltmann and I. Mikó. 2019. Preliminary phylogeny of the desert darkling beetles (Coleoptera: Tenebrionidae: Pimeliinae) using targeted enrichment, and the evolution of background matching through pruinescence. Annual Meeting, Entomological Society of America. St. Louis, MO, USA (Invited oral presentation)
- Wirth, C.C., and A.D. Smith. 2019. New generic concepts in Edrotini (Coleoptera: Tenebrionidae: Pimeliinae): Synthesizing targeted enrichment and morphological data. Annual Meeting, Entomological Society of America. St. Louis, MO. (Oral presentation)
- Wirth, C.C., Kanda, K., Aalbu, R.L., and A.D. Smith. 2018. Generic delimitation and phylogeny of Edrotini (Coleoptera: Tenebrionidae): Preliminary findings from targeted enrichment sequencing and morphology. Annual Meeting, Entomological Society of America. Vancouver, BC, Canada. (Oral presentation)
- **Wirth, C.C.** and A.D. Smith. 2018. Towards a revision of *Edrotes* (Coleoptera: Tenebrionidae). Fifth International Tenebrioniodea Symposium. Prague, Czech Republic. (Oral presentation)
- Aalbu, R.L. and C.C. Wirth. 2018. Assessing the current status of the Edrotini, Fifth International Tenebrioniodea Symposium. Prague, Czech Republic. (Oral presentation)

- **Wirth, C.C.** and A.D. Smith. 2017. A preliminary phylogeny of the Edrotini (Coleoptera: Tenebrionidae). Annual Meeting, Entomological Society of America. Denver, CO. (Invited oral presentation)
- Beresic-Perrins, R.K., Boothroyd, J., Wirth, C.C., Whitely, K., Greenawalt, T.L., Bain, B.A., Govedich, F.R., Wells, S.A., Heyborne, W.H., Shuster, S.M. Collection and identification of Macroinvertebrates in and around Montezuma Well. 2017. Society for Freshwater Science Annual Meeting. Raleigh, North Carolina. (Poster)
- **Wirth, C.C.** 2017. Photographing Terrestrial Arthropods. Flagstaff Photography Club. Flagstaff, AZ. (Invited oral presentation)
- **Wirth, C.C.** and A.D. Smith. 2016. A preliminary phylogeny of *Edrotes* LeConte (Coleoptera: Tenebrionidae). International Congress of Entomology. Orlando, FL (Poster)
- Wirth, C.C. and C. Gowan. 2013. Description of the third instar larvae of the *Cicindelidia abdominalis* complex. Biology Department Research Colloquium, Randolph-Macon College. Ashland, VA (Oral presentation)
- Wirth, C.C. and Knisley, C.B. 2012. Microhabitat preference and larval development in the Coral Pink Sand Dunes Tiger Beetle. Chi Beta Phi National Conference. Davis and Elkins College, Elkins, WV (Oral presentation)
- Wirth, C.C. and Knisley, C.B. 2010. Preliminary results: larval development in the Coral Pink Sand Dunes Tiger Beetle. Schapiro Undergraduate Research Fellowship Symposium, Randolph-Macon College. Ashland, VA (Poster)

#### WORKSHOPS AND CONFERENCES ATTENDED

Entomological Society of America. Vancouver, BC, Canada. November 13–16, 2022

Entomological Collections Network. Vancouver, BC, Canada. November 12–13, 2022

Entomological Collections Management Workshop. Tempe, AZ. June 20–22, 2022

Entomological Society of America, Annual Meeting. October 31–November 3, 2021 (virtual)

Entomological Collections Network Annual Meeting. October 25–27, 2021 (virtual)

International Tenebrionoidea Virtual Symposium VI. May 21–22, 2021

North American Tenebrionidae identification and classification virtual workshop. May 17–19, 2021

Encontro de Coleoptera. March 15–19, 2021 (virtual)

Entomological Society of America, Virtual Annual Meeting. November 11–25, 2020

Entomological Collections Network Annual Meeting. November 9–11, 2020 (virtual)

Coleopterists Society Annual Meeting. St. Louis, MO. November 19, 2019

Entomological Society of America Annual Meeting. St. Louis, MO. November 17–20, 2019

Entomological Collections Network Annual Meeting. St. Louis, MO. November 16–17, 2019

Coleopterists Society Annual Meeting. Vancouver, BC, Canada. November 13, 2018

Entomological Society of America. Vancouver, BC, Canada. November 11–14, 2018

Entomological Collections Network . Vancouver, BC, Canada. November 10-11, 2018

5<sup>th</sup> International Tenebrioniodea Symposium. Prague, Czech Republic. March 5–6, 2018

Coleopterists Society Annual Meeting. Denver, CO. November 7, 2017

Entomological Society of America Annual Meeting. Denver, CO. November 5–8, 2017

Entomological Collections Network Annual Meeting. Denver, CO. November 4–5, 2017

Coleopterists Society Annual Meeting. Orlando, FL. September 27, 2016

International Congress of Entomology. Orlando, FL. September 25–30, 2016

Entomological Collections Network Annual Meeting. Orlando, FL. September 23–24,2016

4th Bozeman Invitational Beetle Families Workshop. Bozeman, MT. June 12–21, 2016
Coleopterists Society Annual Meeting. Minneapolis, MN. November 16, 2015
Entomological Society of America Annual Meeting. Minneapolis, MN. November 15–18, 2015
Entomological Collections Network Annual Meeting. Minneapolis, MN. November 14–15, 2015
Eastern Branch Annual Meeting, Entomological Society of America. Charlottesville, VA. March 13, 2006

# SERVICE AND OUTREACH

Manuscript review: Anais da Academia Brasileira de Ciências, Annales Zoologici, PeerJ, Proceedings of the Entomological Society of Washington, The Coleopterists Bulletin, The Pan-Pacific Entomologist, ZooKeys, Zootaxa

Judge, Student 10-minute Paper Competition, Entomological Society of America Joint Annual Meeting. November 14, 2022

Judge, Indiana 4-H Insect Collection Competition, Indiana State Fair. July 31, 2022

Presenter ("Observation Zoo"), Bug Bowl, Purdue Department of Entomology. April 9, 2022

Judge, Indiana 4-H Insect Collection Competition, Indiana State Fair. August 1, 2021

Presenter (17-year periodical cicadas), Insect Biology Day, Purdue University. June 4, 2021

Interviewed for and featured in the Purdue Exponent's front-page story on 17-year periodical cicadas. June 1, 2021

Course assistant, North American Tenebrionidae identification and classification virtual workshop. May 17–19, 2021

Presenter ("Tour of the Purdue Entomological Research Collection" and "How to Pin an Insect"), 30<sup>th</sup> Annual Bug Bowl (virtual), Purdue Department of Entomology. April 12–17, 2021.

Pro-bono consulting on endangered and threatened insect species for Miami-Dade-area non-profit organizations. September–October 2020; September–October 2021

Proctor, Indiana 4-H Entomology Career Development Event, Purdue University. December 14, 2019

Organizer and moderator, Member Symposium: Systematics and Diversity of the Tenebrionoidea, Entomological Society of America Annual Meeting. November 20, 2019

Judge, Student 10-minute Paper Competition, Entomological Society of America Annual Meeting. November 18, 2019

Presenter (live arthropods), Purdue Entomology booth, Indiana State Fair. August 9, 2019

Judge, Student Poster Competition, Entomological Society of America Annual Meeting. November 12, 2018

Presenter (live local arthropods), Montessori School of Flagstaff (Preschool-K). April 6, 2018

Officer, Biology Graduate Student Association, Northern Arizona University. 2018–2019

Youth Incentive Award Committee Member, Coleopterists Society. November 2017–present

Presenter (booth and photograph display), Arizona Insect Festival, University of Arizona. October 1, 2017; October 21, 2018

Presenter (booth), Colorado Plateau Museum of Arthropod Biodiversity, Northern Arizona University Science and Engineering Day. October 1, 2016

Graduate Program Committee Representative, Biology Graduate Student Association, Northern Arizona University. 2016–2017

Graduate Student Selection Committee Representative, Biology Graduate Student Association, Northern Arizona University. 2016–2018

Judge, Annual Science Fair, Marshall Elementary School. February 13, 2016; February 13, 2017; March 4, 2019

Photographer, significant contributions to *Beetles of Eastern North America* (2014), *The Book of Beetles* (2014), *Beetles of Western North America* (2021); images in scientific articles, museum displays, field guides, and popular publications.

Presenter (importance of insects), Jamestown 4-H Educational Center. June 21, 2006

Presenter (photograph display), Public Outreach Program, Eastern Branch Annual Meeting, Entomological Society of America. Charlottesville, VA. March 13, 2006

Contributing editor for BugGuide.net. October 2005–present

# **PROFESSIONAL AFFILIATIONS**

Pacific Coast Entomological Society (2020–present)

Entomological Society of America (2015–present)

Entomological Collections Network (2015–present)

Cicindela: A quarterly journal devoted to Cicindelidae (2008–present)

Coleopterists Society (2006–present)

### SIGNIFICANT FIELD EXPERIENCE

\*Indicates survey of candidate, threatened, or endangered tiger beetle species/subspecies

Coleoptera photography and vouchering, central AZ. June 18 and 24–25, 2022

\*Miami-Dade County, FL. September 9–11, 2021

General insect sampling for the Purdue University Entomological Research Collection, Tippecanoe County, Indiana. May 25, 26, and 31, 2021; June 4 and 16, 2021; July 6 and 24, 2021; July 5 and 14, 2022; malaise traps, serviced monthly from July 17, 2021–present

Pimeliinae (Coleoptera: Tenebrionidae) sampling, northern Namibia, December 31, 2018 – January 15, 2019

Myrmecocystus (Hymenoptera: Formicidae) colony excavation for the Museum of Northern Arizona. Coconino County, AZ. October 22 and 29–30, 2016, June 3–4, 2018.

Edrotini (Coleoptera: Tenebrionidae: Pimeliinae) sampling, western US: AZ, CA, CO, ID, MT, NM, NV, OR, UT. May–June 2016; July 6–8, 2017; August 3–10, 2017; July 1–10, 2018; September 24–October 1, 2018

Montezuma Well Centennial BioBlitz. May 21–22, 2016

General Entomology trips to Walnut Creek Center for Education and Research, Prescott, AZ. September 11–13, 2015; September 9–11, 2016; September 8–10, 2017; September 21–22, 2018

Coleoptera photography and vouchering, southeastern AZ. August 2013

Belmead Bioblitz, Powhatan, VA, May 18–19, 2013

\*Miami-Dade County, FL. August 2010–2012, January 2013

Arthropoda inventory, Breaks Interstate Park, Breaks, VA. July 2008

\*Bethel Beach Natural Area Preserve, Mathews County, VA. July 2008

Coleoptera inventory, First Landing State Park. July 2007

\*Coral Pink Sand Dunes, Kanab, UT. May 2007, 2008, May 23 – June 17, 2010

\*Assateague Island National Seashore. July 2006, 2008, 2010–2013

Potomac Gorge Bioblitz, Glen Echo, MD, June 24–25, 2006

\*Calvert County, MD: June 2006, 2011–2013

# ENTOMOLOGICAL COLLECTIONS VISITED (28)

California Academy of Sciences. San Francisco, CA

California State Collection of Arthropods. Sacramento, CA

Colorado Plateau Museum of Arthropod Biodiversity. Northern Arizona University, Flagstaff, AZ Denver Museum of Nature and Science. Denver, CO

Dr. Antonio Gennaro Natural History Museum. Eastern New Mexico University, Portales, NM

Essig Museum of Entomology. University of California, Berkeley, CA

Field Museum of Natural History. Chicago, IL

Florida State Collection of Arthropods. Gainesville, FL

Frank M. Hasbrouck Insect Collection. Arizona State University, Tempe, AZ

Geier Collections and Research Center, Cincinnati Museum Center. Cincinnati, OH

Gobabeb Training and Research Center. Gobabeb, Namibia

Illinois Natural History Survey Insect Collection. Champaign, IL

Linnean Society. London, United Kingdom

Magyar Természettudományi Múzeum. Budapest, Hungary

Monte L. Bean Life Science Museum. Brigham Young University, Provo, UT

Museum für Naturkunde der Humboldt Universität. Berlin, Germany

Muséum National d'Histoire Naturelle. Paris, France

Museum of Northern Arizona. Flagstaff, AZ

Museum of Southwestern Biology. University of New Mexico, Albuquerque, NM

Namibian National Insect Collection, National Museum of Namibia. Windhoek, Namibia

National Museum of Natural History, Smithsonian Institution. Washington, D.C.

National Museum. Prague, Czech Republic

Naturhistorisches Museum. Basel, Switzerland

Oxford University Museum of Natural History. Oxford, United Kingdom

Purdue Entomological Research Collection, West Lafayette, IN

R.M. Bohart Museum of Entomology. University of California, Davis, CA

The Natural History Museum. London, United Kingdom

University of Arizona Insect Collection. Tuscan, AZ