

THE WAGNER FREE INSTITUTE OF SCIENCE

Fall 2018
ZOOLOGY SERIES
Entomological Musings: The Wondrous World of Insects
Professor Greg Cowper

This course will be held at the **Fishtown Community Branch of the Free Library of Philadelphia**, 1217 E. Montgomery Avenue (just north of Girard Avenue), Philadelphia.

Dates: 6 Mondays from September 24 – November 5, 2018

Time: Classes meet from 6:15 to 7:45 PM

Course Description

This new course will introduce Entomology, the study of insects, and continue discussion of the Insect Orders, the groups in which insects are divided. Students will learn about the evolution of insect groups across geologic time, classification, morphology, diversity, and behavior. Each week will look at specific insect orders ranging from Lepidoptera (butterflies and moths) to Siphonaptera (fleas).

The class builds on the Urban Entomology class taught in 2016 but that class **is not** a prerequisite. This new course is designed as a standalone entomology course that also builds knowledge for students who participated in the past.

Course Schedule

1. Monday, September 24, 2018 – Introduction to Insects

Development and Metamorphosis, Classification, Discussion of the Insect Orders: Archaeognatha (jumping bristletails), Zygentoma (silverfish), and Odonata (dragonflies)

2. Monday, October 1, 2018 – Discussion of the Insect Orders

Ephemeroptera (mayflies), Zoraptera (angel insects), and Plecoptera (stoneflies)

NO CLASS – Monday, October 8, 2018 (Columbus Day holiday)

3. Monday, October 15, 2018 – Discussion of the Insect Orders

Notoptera (rock crawlers and mantophasmids), Embioptera (webspinners), and Phasmatodea (stick and leaf insects)

4. Monday, October 22, 2018 – Discussion of the Insect Orders

Thysanoptera (thrips), Psocodea (bark lice and true lice), and Raphidioptera (snakeflies)

5. Monday, October 29, 2018 – Discussion of the Insect Orders

Megaloptera (alderflies and dobsonflies), Neuroptera (net-winged insects), and Trichoptera (Caddisflies)

6. Monday, November 5, 2018 – Discussion of the Insect Orders

Lepidoptera (moths and butterflies), Siphonaptera (fleas), and Mecoptera (scorpionflies)

Suggested Readings

Borror, Donald J. and Richard E. White. 2001. *Peterson Field Guide to Insects: America North of Mexico*. Houghton Mifflin Co., 404 pps.

Eaton, Eric R. and Ken Kaufman. 2007. *Kaufman Field Guide to North American Insects*. Houghton Mifflin Co., 391 pps.

Misof, Bernhard, *et. al.* *Phylogenomics resolves the timing and pattern of insect evolution*. Science, 07 Nov 2014: Vol. 346, Issue 6210, pp. 763-767.

About the Professor

Greg Cowper is an Entomologist at the Academy of Natural Sciences of Drexel University where he is currently working on the National Science Foundation funded project *OrthopNet: Connecting Grasshoppers to Field Notes*. He continues to study the evolution and speciation of the flightless grasshopper genus *Eremidium* endemic to the forest patches and sky islands of South Africa. Other interests include Urban Entomology and the systematics, evolution, and biogeography of Heteroptera, the True Bugs. He has been a member of the Wagner's faculty since 2014, where he has taught classes on Urban Entomology and Extinction.

The course is presented by the Wagner Free Institute of Science. Founded in 1855, the Wagner is dedicated to providing free science education. All classes are free and open to the public. To attend, please complete a registration form at the class. For more information about the Wagner Free Institute of Science and its programs, please visit www.wagnerfreeinstitute.org or call 215-763-6529.
