

**The Insect Information Website.** A source for insect information, and links to the handouts and referred fact sheets used in Master Gardener training, is housed within the Department of Bioagricultural Sciences and Pest Management (soon to be Agricultural Biology) at Colorado State University. The link to this site is <https://agbio.agsci.colostate.edu/outreach-button/insect-information/>

### Some Ideas for Your Insect Library

*Garden Insects of North America, 2<sup>nd</sup> Edition.* 2017. Whitney Cranshaw and David Shetlar. Princeton University Press, Princeton, NJ. 704 pp. Price \$35.00 (paperback)

This is a new, and wholly revised edition of a book first published in 2004. Designed as a field guide to North American insects of garden plants, including vegetables, fruits, flowers, trees/shrubs and turfgrass. The most outstanding feature is the photographs, over 3100 in this edition; mention of some 1500 species is made with photographs for most and multiple images for key species.

*Kaufman Field Guide to Insects of North America.* 2007. E.R. Eaton and Kenn Kaufman. Houghton Mifflin Company. New York. Price: \$18.95

Developing a guide for insects is difficult given their incredible diversity but this new guide is the easiest to use and look at. It is extensively illustrated with photographs (ca 2,350 images) and well organized.

*Bugs Rule! An Introduction to the World of Insects.* W. Cranshaw and R. Redak. 2013. Princeton University Press. Price: \$55.00

A book designed for an introductory entomology class that tries to cram in everything-you-need-to-know-about-insects in one class. Lots of photographs.

*Life on a Little Known Planet.* H.E. Evans. 1993. Lyons and Burford Publishing, New York, NY. ISBN 1-55821-249-3. Price: \$14.95.

Probably the best introduction to the world of living insects available. Full of well-written, fascinating stories of common insects and a healthy dose of philosophy.

*Borror and DeLong's Introduction to the Study of Insects, 7th Edition.* C.A Triplehorn & N.F. Johnson. 2005. Thomson Brooks/Cole Publishing. Belmont, CA. Price: ca \$100-\$130.

This is the standard text for introductory college entomology courses that emphasize insect identification. Excellent keys to adult stages of all North American insect families. Illustrations are among the best for completeness and clarity. A brief description of the biology of each insect family is included. The use of a microscope is usually necessary for most identifications.

*A Guide to Common Freshwater Invertebrates of North America.* J. Reese Voshell, Jr. 2002. The MacDonald and Woodward Publishing Co. Price: ca \$25

A quite accessible field guide style book on this vast topic. Includes information on habits as well as basic biology.

*Common Spiders of North America.* 2012. Richard Bradley. University of California Press. Price: ca \$60 hardcover; \$35 Kindle version.

An identification guide to North American spiders containing hundreds of color drawings. The new standard for spider identifications.

*Dragonflies and Damselflies of the West.* 2009. Dennis Paulson. Princeton University Press. Price: \$29.95

In recent years some outstanding guides have been developed that allow one to learn the types of dragonflies and damselflies found in various regions of North America. This is an outstanding, very well illustrated, treatment of what one will find in Colorado.

*The Bees in Your Backyard: A Guide to North America's Bees.* 2015. Joseph S. Wilson and Olivia M. Carril. Princeton University Press. Price: \$29.95

Probably the best single source to help you try and figure out what types of bees you may be seeing in the neighborhood.

*Attracting Native Pollinators.* 2011. Eric Mader, Matthew Shepherd, Mace Vaughan, Scott Black, Gretche Lebuhn. *Farming for Native Beneficial Insects.* 2014. Eric Lee-Mäder, Jennifer Hopwood, Mace Vaughan, Scott Hoffman Black, and Lora Morandin. Storey Publishing. Price: ca \$25 for each publication.

These two books, produced through the Xerces Society, an organization dedicated to conservation of invertebrates (such as insects), are excellent treatments on how to improve habitat for pollinators and natural enemies of insect pests, respectively.

## Colorado State University Publications

There are two Extension Bulletins/booklets on insects available through the University Resource Center, Colorado State University, 115 General Services Bldg./Rm 4061, Ft. Collins, CO 80523. Phone: (970) 491-6198. Web address: <https://csuextstore.com/> Email: [ccs\\_resourcecenter@mail.colostate.edu](mailto:ccs_resourcecenter@mail.colostate.edu)

[Insects and Diseases of Woody Plants in Colorado.](#) 2014. Multiple authors. Colorado State University Cooperative Extension Publication 506A. Price: \$40.00.

[Turfgrass Insects of Colorado and Northern New Mexico.](#) 1996. W.S. Cranshaw and C. Ward. Colorado State Cooperative Extension Publication 560A. Price: \$8.00.

**Entomology Fact Sheets** from Colorado State University are available on the Web at: <https://extension.colostate.edu/topic-areas/insects/?target=publications>. A large number of publications are available on-line through the **Colorado State Insect Information Web Site** (<https://agbio.agsci.colostate.edu/outreach-button/insect-information/>). It is found within the **Department of Agricultural Biology** <https://agbio.agsci.colostate.edu/> (formerly Bioagricultural Sciences and Pest Management). If you go through the Department Home Page, click on "Entomology", then click on "Insect Information" in the pop-up menu. You will find links to sections such as Arthropods of Colorado Fact Sheets, Emerald Ash Borer, Japanese Beetle, Bed Bugs, Miscellaneous Publications, and sections where the powerpoints and handouts used in Master Gardener entomology programs are posted.

## Some Insect Museums

**The Butterfly Pavilion and Insect Center.** This is located at 6252 West 104<sup>th</sup> Ave in Westminster and is open every day except Monday. Special tours can be made by arrangement.

Phone: (303) 469-5441

Email: [www.butterflies.org](http://www.butterflies.org)

**The May Museum of Natural History.** This is located along the Highway 115 just outside Colorado Springs enroute to Penrose and Canon City - marked with a huge rhinoceros beetle at the side of the road. It is open from May 1-October 1. Special arrangements for large groups can be made at other times.

Phone: (719) 576-0450

Email: <https://coloradospringsbugmuseum.com/>

## Some Good Websites

**Colorado Insect Information Website** <https://agbio.agsci.colostate.edu/outreach-button/insect-information/>

A source for over 200 fact sheets on common/important insects of Colorado, and more.

**Entomological Society of America** (<http://www.entsoc.org/>)

Home page of the national association dedicated to entomological sciences. Links to other entomological associations and departments.

**BugGuide.net** (<http://bugguide.net/node/view/15740>)

A web site dedicated to posting and identifying images or insects and other arthropods.

**American Arachnological Society**

<http://www.americanarachnology.org/>

Home page of the national association dedicated to the study of arachnids. Several good links to information on spiders, scorpions, windscorpions and other arachnids

**Grasshoppers: Their Identification, Biology and Management**

[http://www.sidney.ars.usda.gov/grasshopper/ID\\_Tools/](http://www.sidney.ars.usda.gov/grasshopper/ID_Tools/)

This USDA site consolidates numerous grasshopper-related resources (including the excellent material from Wyoming).

**BugWood/IPM Images** (<http://www.ipmimages.org>)

A repository of insect images (including a great many by CSU personnel), particularly emphasizing those of economic importance. The use of these slides is allowed for all educational purposes; commercial uses do require permission, which is almost always freely given. Best source if you need insect images.

**Xerces Society for Invertebrate Conservation.** <https://xerces.org/>

The Xerces Society concerns itself with conservation of native North American “bugs” and has developed numerous (usually free) information sheets related to ways to conserve and enhance habitat for bees, butterflies....

... and if you are in Western Colorado don't forget to check out the **Western Colorado**

**Entomology Website** (<http://wci.colostate.edu/> or <https://wci.extension.colostate.edu/>) – a particularly good site for local insect issues affecting western Colorado!

## Suppliers of Insect Collecting Equipment

**Ben Meadows Company**

3589 Broad St.

Atlanta, GA 30341

Phone: (800) 241-6401

[www.benmeadows.com](http://www.benmeadows.com)

Carries sweep nets, pins, killing jar, pinning blocks and one size (12" x 16" x 2.5") of display case.

**Bio-Quip Products**

2321 Gladwick St.

Rancho Dominguez, CA 90220

Phone: (310) 324-0620

[www.bioquip.com](http://www.bioquip.com)

The most complete source for materials related to insect collection and preservation. BioQuip also carries a very extensive library of entomology-related books.

**Carolina Biological Supply**

2700 York Rd.

Burlington, NC 27215

Phone: (800) 334-5551

[www.carolina.com](http://www.carolina.com)

A large biological supply house, they carry #2 pins, a display box and an insect net.

**Forestry Suppliers, Inc.**

P.O. Box 8397

Jackson, MS 39284-8397

Phone: (800) 647-5368

[www.Forestry-Suppliers.com](http://www.Forestry-Suppliers.com)

Carries a good range of insect collecting and display items.

**Gempler's**

P.O. Box 270

Belleville, WI 53508

Phone: (800) 382-8473

[www.gemplers.com](http://www.gemplers.com)

Oriented towards pest management, Gempler's sells a variety of insect nets, pheromone other insect traps

**Great Lakes IPM**

7563 N. Crystal Rd

Vestaburg, 48891

Phone: (800) 235-0285

[www.greatlakesipm.com](http://www.greatlakesipm.com)

A company that carries an extremely wide variety of products related to insect trapping (e.g. pheromone traps) and sampling.

**Nebraska Scientific**

3823 Leavenworth St.

Omaha, NE 68105-1180

Phone: (800) 228-7117

[www.nebraskascientific.com](http://www.nebraskascientific.com)

Carries the basic supplies used in insect collection (sweep nets, pins, display boxes, killing jars)

**WARD'S Natural Science**

P.O. Box 92919

Rochester, NY 14692-9012

Phone: (800) 962-2660

[www.wardsci.com](http://www.wardsci.com)

A large biological supply house that carries a wide selection of basic insect collecting and display supplies. (Look under Entomology Supplies)