



New Mexico 4-H Greentop Project Guide



New Mexico 4-H Is A Program of New Mexico State University's Cooperative Extension Service

**400.J-3
New 2007**

ADVANCED ENTOMOLOGY

Advanced Project for Novice, Junior and Senior Members

(This unit may take more than one year to complete)

Welcome to the wonderful and amazing world of insects! This project will give you a more detailed look at insects and their kin. You will learn more about the close relatives of insects and what the main differences between the two are. You will also learn about how some insects evolved and what strategies they use to survive. Remember, insects are so numerous that you can observe and collect them almost anywhere – in the backyard, the garden, at the lake or in the open field.

What you will learn in this project

- How does the class Arachnida differ from Insecta
- How does the class Chilopoda differ from Insecta
- How does the class Diplopoda differ from Insecta
- How does the class Crustacea differ from Insecta
- Metamorphosis stages in each order
- Detailed information about the species in each order
- Is a career in entomology for you?

Materials that can be used

- *New Mexico 4-H Entomology* project book, 100 J-10 **Pages 1-174**
- Entomology Greentop, 400.J-3
- *Reference Material for 4-H Entomology Leaders*, 200 J-10
- *One Hundred Common Insects of New Mexico*, 200 J-11
- www.nmffa.org :Activities: State Career Development: Contest Rules and Test Banks
- Borror and White—Field Guide to the Insects, Peterson Field Guide series, Houghton-Mifflin, Boston
- Milne and Milne—Audubon Society, Field Guide to North American Insects and Spiders, Knopf, New York

Fair Exhibit

Make an insect collection consisting of 30 specimens from at least 10 different orders. Be creative and enter any kind of self determined project from this unit.

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Project Activities

- ✓ Make an collection of insect eggs
- ✓ Make a collection showing structural adaptability
- ✓ Make a poster or prepare and deliver illustrated talk on the following:
 - Construction and use of collection equipment
 - How to collect, pin, spread, and label an order or family of insects
 - Distinguishing moths, butterflies, and skippers
 - How insects eat
 - How the insect respiratory system functions
 - How the insect skeleton system functions
- ✓ Develop a written key for ten different insects
- ✓ Deliver a demonstration on any of the items listed in the “What You Will Learn in this Project” Section of this Greentop.

Ideas for Leadership and Community Service:

- Give a talk or presentation at a project/club meeting.
- Make a display for 4-H family night or a school science fair.
- Teach a friend how to collect and mount insects.
- Visit a preschool or Cloverbud group and show your collection or live, non-harmful insects.
- Help your adult or teen leader set up or clean up at a project meeting.
- Provide beneficial insects to a community garden, park, cemetery, etc.
- Lead a collection tour
- Help youth in Unit 1 and 2 with insect identification and collections
- Be a junior or teen leader for the Entomology project