

Entomology is the study of insects and all six-legged creatures. Getting to know insects can be a fun way to get outside and see what is there. There are insects everywhere on Earth, even in the coldest Arctic!

## Entry

• Enter as an individual.

# **County Entries**

• There is no limit in the number of entries per county.

# Contest

- This contest is a drop off & go event.
- 4-H members will need to make arrangements to have their physical collections at Cross Brand Cowboy Church in Tyler no later than 12:00 pm (noon) on Thursday, April 28, 2022. After judging, on Day 3, you may pick up your collections in the same location. Collections not picked-up will be sent to local Extension offices.

## **Requirements for Entomology Collection**

- Be sure to include your name, county, and age group (Junior, Intermediate, Senior), email AND PHONE NUMBER on an index card or piece of paper attached to your collection.
- All arthropods must be properly identified to Order. See <u>https://entomology.tamu.edu/extension/youth/4-h/4h-contest/</u>
- Insects you want judged to common name must be properly identified to the common names in 4-H Entomology Contest guidelines.
- No duplication of insects/arthropods.
- Only adult specimens.
- Only insects collected in Texas allowed (no pets, store bought, or insects collected from other states).
- You may only use insects collected within the last 2 years of the contest year.
- Only 5% of your collection may be collected by others.
- Only 25% of your collection may have been submitted in previous years. All collections are sprayed with florescent paint; insects used in previous years can be identified by judges.
- Insects must have a collection label on the pin and placed at the proper height on the pin. For a sheet of labels, you may use: <u>http://extension.entm.purdue.edu/401Book/pdf/SpecimenLabels.pdf</u>
- Labels may be handwritten or typed.
  - Labels should show as little white as possible. Try to keep your label smaller than your insect, if possible. You may use more or less lines than shown in the examples.

County, State Specific location Date Collector



- Identification Labels Order and Common Name labels (where applicable).
  - Order Labels –Group/arrange insect orders together. Use header labels to identify insects in the same order to keep your labels from cluttering under the insect.
  - Common Name labels place the common name label above your insects attached by a pin or glue. Use a font smaller than your order label.
- Insects must be mounted correctly and placed in an organized fashion in a collection box.
- Spreading guidelines:
  - The bottom of the forewings should be at a 90° angle from the body. Hindwings should be at a 45° angle from the forewing.
  - Insects required to be spread:
    - Butterflies and moths (Lepidoptera)
    - Dragonflies and damselflies (Odonata)
  - You can spread any insect you would like; you will not be penalized for spreading insects, but if spreading is not correct, you may be penalized.
- Insects/Arthropods that should be preserved in vials and at least 70% alcohol. Vials should be able to be removed easily for viewing. BE SURE VIALS ARE SECURED IN BOXES TO AVOID THEM ROLLING AND DESTROYING YOUR COLLECTION.
  - Silverfish (Thysanura)
  - Springtails (Collembola)
  - Scales & Mealybugs (Hemiptera)
  - Fleas (Siphonaptera)
  - Thrips (Thysanoptera)
  - Lice (Phthiraptera)
  - White Flies (Hemiptera)
  - Spiders (Aranae)

- Ticks (Acarina)
- Small Earwigs (Dermaptera)
- Scorpion (Scorpiones)
- Sulfugids (Sulifugae)
- Caddisflies (Trichoptera)
- Mayflies (Ephemeroptera)
- Booklice (Psocoptera)
- Termites (Isoptera)
- Collection display boxes should be neat and the proper size requirements for your level (see table below). There are no requirements for type of boxes for junior and intermediates. Texas 4-H, Texas A&M AgriLife Extension and Judges are NOT responsible for collections damaged during transit.
- Please see scoring cards for minimum and maximum insects allowed by age group.
- Provide a list of insects submitted in your collection with Order, common name, preservation method, and number of specimens included. An example insect list is on the following page. Use this example as a guide. Seniors must type this list, intermediates and juniors may hand write.

## **EXAMPLE Insect List**

Order	Common Name*	<b>Preservation Method</b>	Number of Specimens
Odonata	Green Darner Dragonfly	Pinned	1
Orthoptera	Field cricket	Pinned	2
	Differential grasshopper	Pinned	
Hemiptera		Pinned and pointed	7
Hemiptera	Giant water bug	Pinned	1
Hemiptera	Flower thrips	Alcohol	1
Hemiptera	Big eyed bug	Pointed	1
Coleoptera		Pinned and pointed	6
Hymenoptera	Velvet ant	Pinned	1
Hymenoptera		Pinned	4
Siphanaptera		Alcohol	1
Scorpiones	Scorpion	Alcohol	1

\*Only include the common names of the insects you wish to be judged. If you include more common names than is required for your common name, points will be deducted for not following instructions.

• Collections will be judged on aesthetics, identification, mounting and labeling. Please review the score card for weight of judging.

### **Specific Level Requirements**

- Junior Level Requirements (3rd 5th grade)
  - 15 insects minimum
  - $\circ$  Of those 15+ insects:
    - 8 different insect/arthropod orders
    - 8 different insects identified to common name
  - All arthropods must be identified to proper order. There must be a total of at least 8 different insect orders and 8 arthropods identified to common name based on the Texas 4-H common names.
  - Arthropods must contain the proper labels. Insects must be pinned correctly and placed in an organized fashion in a collection box.
  - Intermediate Level Requirements (6th-8th grades)
    - 34 insects minimum
    - Of those 34+ insects:
      - 13 different insect/arthropod orders
      - 16 different insects identified to common name
    - All arthropods must be identified to proper order. There must be a total of at least 13 different insect orders and 16 arthropods identified to common name based on the Texas 4-H common names.
    - Arthropods must contain the proper labels. Insects must be pinned correctly and placed in an organized fashion in a collection box.
- Senior Level Requirements (9th 12th grade)
  - o 60 insects
  - Of those 60+ insects:
    - 18 different insect/arthropod orders
    - 30 different insects identified to common name
  - All arthropods must be identified to proper order. There must be a total of at least 15 different insect orders and 30 arthropods identified to common name based on the Texas 4-H common names.
  - Arthropods must contain the proper labels. Insects must be pinned correctly and placed in an organized fashion in a collection box. Collection boxes must have a glass cover and dimensions 18x24, 16.5x19, 16x20, 14x21 or 19.5x16.5. Multiple boxes may be submitted, however, if multiple boxes are used, they must be the same dimension (you may not use two different sized boxes).

### Scoring

• See the 4-H Entomology scorecard in the Appendix for scoring criteria.

### **Study Guide and Resources**

• See the resources for additional information on this contest at <u>http://entomology.tamu.edu/wp-content/uploads/2020/09/Entomology-Collection-Guidelines-2021.pdf</u>