

## 2020 Texas 4-H Entomology Collection Contest

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!

### Objectives:

- Learn about the importance of insects to your everyday life
- Explore insects in their natural habitats
- Collect and identify insects to make an insect collection

### Entry details:

Online through Texas 4-H CONNECT by selecting the “Texas 4-H Entomology Collection Contest”. Entries may be made May 1 – May 22, 2020. Cost is \$10.

4-H members will need to make arrangements to have their physical collections in College Station, TX on Tuesday, June 9, 2020 to HEEP Center, room 411 (Ester Jackson) by 10am. After judging, you may pick up your collections in the same location.

For additional questions or information, please contact superintendent, Molly Keck at [mekeck@ag.tamu.edu](mailto:mekeck@ag.tamu.edu) or 210-631-0400.

### Age Divisions as of 9/1/2019:

Junior (3<sup>rd</sup> – 5<sup>th</sup> grades)

Intermediate (6<sup>th</sup>- 8<sup>th</sup> grades)

Senior (9<sup>th</sup> – 12<sup>th</sup> grades)



Award winners will be recognized during the Entomology Identification Awards ceremony the afternoon of Wednesday, June 10<sup>th</sup>. Results will also be posted online for those unable to attend in person.

### Prizes per division:

1<sup>st</sup> place - \$75

2<sup>nd</sup> place - \$50

3<sup>rd</sup> place - \$25

4<sup>th</sup> place - \$10



For help with pinning and spreading, visit [www.YouTube.com](http://www.YouTube.com) – Bexar Entomology channel.

Requirements for all 4-H Entomology Collection contestants are as follows:-

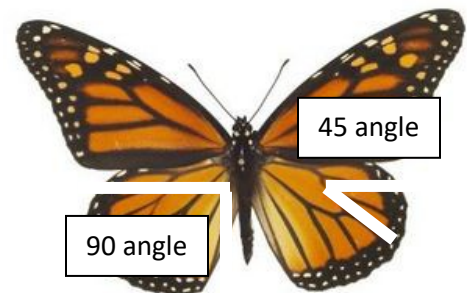
1. Be sure to include your name, county, and age group (Junior, Intermediate, Senior), email AND PHONE NUMBER on an index card or piece of paper attached to your collection.
2. All arthropods must be properly identified to Order. See <https://insects.tamu.edu/youth/4H/>
3. Insects you want judged to common name must be properly identified to the common names in 4-H Entomology Contest guidelines. See <https://insects.tamu.edu/youth/4H/> for common names. **Only use common names from the 4-H list.**
4. No duplication of insects/arthropods.
5. Only adult specimens.
6. Only insects collected in Texas allowed (no pets, store bought, or insects collected from other states).
7. You may only use insects collected within the last 2 years of the contest year.
8. Only 5% of your collection may be collected by others.
9. 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.
10. 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: <http://extension.entm.purdue.edu/401Book/pdf/SpecimenLabels.pdf>. Labels may be handwritten or typed.
  - a. 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

Bexar Co, TX.  
Eisenhauer Park  
X.20.2013 M. Keck

Roman numeral  
is month. Use  
this format.

11. Identification Labels – Order and Common Name labels (where applicable).
  - a. 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.
  - b. 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.
12. Insects must be mounted correctly and placed in an organized fashion in a collection box.
13. Spreading guidelines:
  - a. The bottom of the forewings should be at a 90° angle from the body. Hindwings should be at a 45° angle from the forewing.
  - b. 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.



**14. 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)

15. 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.**

16. Please see scoring cards for minimum and maximum insects allowed by age group.

17. 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 following page. Use this example as a guide. Seniors must type this list, intermediates and juniors may handwrite.

**EXAMPLE Insect List**

Order	Common Name*	Preservation Method	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 & pointed	6
Hymenoptera	Velvet ant	Pinned	1
Hymenoptera		Pinned	4
Siphonaptera		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 (3<sup>rd</sup> – 5<sup>th</sup> grade)

15 insects minimum

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 (6<sup>th</sup>-8<sup>th</sup> 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 (9<sup>th</sup> – 12<sup>th</sup> grade)

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).

**Collection Material Resources:**

**or supplies such as pins, pinning blocks, spreading boards, collection boxes, etc:**

BioQuip Products  
2321 Gladwick Street  
Rancho Dominguez, CA 90220  
PH: (310) 667-8800 FAX: (310) 667-8808  
<http://www.bioquip.com>

Carolina Biological Supply Co.  
2700 York Rd.  
Burlington, NC 27215-3398  
PH: (800) 334-5551  
<http://www.carolina.com>

NASCO Science Catalog  
901 Janesville Ave.  
Ft. Atkinson, WI 53538-0901  
PH: (800) 563-2446 FAX: (920) 563-8296  
<http://www.enasco.com>

Ward's Natural Science Establishment, LLC  
5100 West Henrietta Rd.  
P.O. Box 92912  
Rochester, NY 14692-9012  
PH: (800) 962-2660 FAX: (585) 334-6174  
<http://wardsci.com/>

**For locations for purchasing collection boxes:**

Hobby Lobby (shadow boxes)  
Michael's Crafts (shadow boxes)  
Office Depot (shipping boxes)  
Carolina Biological  
Wards Scientific  
Bioquip



### 4-H Entomology Score Card – Junior Level

	<b>Points Possible</b>	<b>Your Score</b>
<b>Total of at least 15 insects</b>	<b>15</b>	
<b>8 Insect Orders</b>	<b>16</b>	
<b>Orders correctly identified</b> (-2 for each incorrect ID)	<b>16</b>	
<b>8 Common names correctly identified</b> (-2 for each incorrect, missing)	<b>16</b>	
<b>Pinning and Spreading</b> Condition of insects All legs, antennae and other body parts intact Wings spread on appropriate insects and spread properly Pins in correct location on insects Insects uniform height on pins (see youtube video for guidelines) Legs positioned consistently Insects level on pins, pinned straight	<b>15</b>	
<b>Labels</b> Neat and accurate Uniform height Not twisted Not too large for the specimen Not too much white on the label	<b>15</b>	
<b>Arrangement in Boxes</b> Variety of insects No duplication of insects Grouping accurate, correct, and neat Spacing of insects neat, attractive Overall neatly arranged and attractive	<b>15</b>	
<b>TOTAL SCORE</b>	<b>108</b>	

#### 4-H Entomology Score Card – Intermediate Level

	Points Possible	Your Score
<b>Total of at least 34 insects</b>	<b>34</b>	
<b>Total of 13 orders</b>	<b>13</b>	
<b>Orders correctly identified</b>	<b>13</b>	
<b>16 Common names correctly identified</b>	<b>16</b>	
<b>Pinning and Spreading</b> Condition of insects All legs, antennae and other body parts intact Wings spread on appropriate insects and spread properly Pins in correct location on insects Insects uniform height on pins (see youtube video for guidelines) Legs positioned consistently Insects level on pins, pinned straight	<b>34</b>	
<b>Labels</b> Neat and accurate Uniform height Not twisted Not too large for the specimen Not too much white on the label	<b>17</b>	
<b>Arrangement in Boxes</b> Variety of insects No duplication of insects Grouping accurate, correct, and neat Spacing of insects neat, attractive	<b>15</b>	
<b>TOTAL SCORE</b>	<b>142</b>	

### 4-H Entomology Score Card – Senior Level

	Points Possible	Your Score
<b>Total of at least 60 insects</b>	<b>60</b>	
<b>Total of 18 orders</b>	<b>18</b>	
<b>Orders correctly identified</b> (-1 for each incorrect ID)	<b>18</b>	
<b>30 Common names correctly identified</b> (-1 for each incorrect, missing)	<b>30</b>	
<b>Pinning and Spreading</b> Condition of insects All legs, antennae and other body parts intact Wings spread on appropriate insects and spread properly Pins in correct location on insects Insects uniform height on pins (see youtube video for guidelines) Legs positioned consistently Insects level on pins, pinned straight	<b>30</b>	
<b>Labels</b> Neat and accurate Uniform height Not twisted Not too large for the specimen Not too much white on the label	<b>15</b>	
<b>Arrangement in Boxes</b> Variety of insects No duplication of insects Grouping accurate, correct, and neat Spacing of insects neat, attractive	<b>15</b>	
<b>TOTAL SCORE</b>	<b>186</b>	