

## 4-H Entomology

4-H Centennial Hall

Friday, September 9, 2016

Chair: Dale Weishaar, Sumner County Volunteer

Diane Mack, K-State Research and Extension, 4-H Youth Development

*(Red changes from 2015 rules)*

A 4-H member enrolled in the Entomology Project may exhibit in the ENTOMOLOGY COLLECTION, ENTOMOLOGY NOTEBOOK and/or EDUCATIONAL DISPLAY categories. Within each category, there are classes in Beginning, Intermediate or Advanced phases in which they enroll. An Introductory Entomology Collection Class exhibit is encouraged for county fairs (first year members only), but these may not be exhibited at the State fair. See class descriptions within categories for requirements.

We are transitioning from the taxonomy as listed in the "Insects in Kansas" book to the taxonomy listed on the "Insects in Kansas Book: 2016 Revised Taxonomy" which follows [www.bugguide.net](http://www.bugguide.net)

Resources for exhibiting can be found on the State Kansas 4-H Website:

<http://www.kansas4-h.org/projects/agriculture-and-natural-resources/entomology.html>.

### COLLECTION CLASSES

#### *General Guidelines*

1. All entries should be submitted in an 18 x 24 x 3.5 inch wooden display box with a clear plastic top (such as plexiglass). Boxes can be handmade or purchased as long as they are of the correct size.
2. During the transition, Orders & Family names should follow the taxonomy either
  - a) As printed in "Insects in Kansas" book or
  - b) As printed on the "Insects in Kansas Book: 2016 Revised Taxonomy", which follows [www.bugguide.net](http://www.bugguide.net)Project members are encouraged to progress towards option b by 2019 or as revised "Insects in Kansas" book is available.
3. Each exhibitor is required to identify each box with two identification labels bearing Exhibitor's name, county or district, the collection class 4-H'er is enrolled in and statement of taxonomy used:
  - a) "Insects in Kansas" book or
  - b) "Insects in Kansas Book: 2016 Revised Taxonomy", which follows [www.bugguide.net](http://www.bugguide.net)

One label goes in the upper left corner of the box (inside) and the other on the lower right corner of the box (outside). Arrange specimens in the box so the box can be displayed lengthwise.

4. The number of orders, specimens (and families where required) must be included on **both** of the exhibitor's box identification labels. Only adult specimens can be used in collection boxes; **however one female and one male of a species correctly identified can be displayed.**
5. Arrangement of specimens: The preferred method is to arrange the insects in groups or rows parallel to the short sides of the box. Arrangements that run lengthwise of the box are frequently downgraded in judging. Specimens are to be arranged by Order in the box, then Family where required. **The sequence arrangement of the Orders in the box will be left up to the member. It is suggested to put the Lepidoptera and Coleoptera in the center of the collection (for Intermediate and Advanced Classes to put these two orders in a box). Then work the other orders around them.**
6. For each collection class, two labels will be centered on the pin beneath each specimen. First (closest to the specimen) is the common name label and the second label should include date/locality. Full county name and state abbreviation on the second label are encouraged **for 2016 and will be required by 2019.** Collector's name **on the date/locality label is optional.**
7. The specimens should be collected by the exhibitor and should focus on Kansas insects. **Insects may be collected from one county into bordering states and labeled accordingly. Other specimens from the United States may be included as long as they are properly labeled and placed in a separate section of the box labeled "Out of State Insects". These specimens will not be included in the count for judging/scoring.** Emphasis in judging will be placed on the overall variety of insects represented in the collection, accuracy of identification, skill and technique acquired in mounting of specimens, and overall arrangement and appearance of the collection.
8. **Purchased insects are not to be exhibited in collections, but they may be used in educational displays.**
9. Specimens of soft bodied insects such as aphids, lice, termites, etc. should be exhibited in alcohol filled vials; however, the use of alcohol filled vials should be limited to only those specimens that lose their shape when pinned, since the vials pose a significant hazard to the rest of the collection if they become loose in transit.

#### **4900 BEGINNING I ENTOMOLOGY COLLECTION**

Display in one standard box a minimum of 50 and maximum of 125 species representing at least 7 orders. Follow the general guidelines listed for Collections. Members can exhibit in this class a

maximum of 3 years or until they receive a purple ribbon at the Kansas State Fair, whichever comes first.

#### **4901 BEGINNING II ENTOMOLOGY COLLECTION**

Display in one standard box a minimum of 75 and maximum of 150 species representing at least 9 orders. Follow the general guidelines listed for Collections. Members can exhibit in this class a maximum of 3 years or until they receive a purple ribbon at the Kansas State Fair, whichever comes first.

#### **4903 INTERMEDIATE ENTOMOLOGY COLLECTION**

Display a minimum of 100 and a maximum of 300 species representing at least 10 orders. Two standard boxes can be used. Follow the general guidelines listed for Collections. In addition, family identification is required for all insects in any two of the following six orders: (Only two will be counted for judging)

- a) "Insects in Kansas" book - Orthoptera, Hemiptera, Homoptera, Coleoptera, Hymenoptera, and/or Diptera or
- b) "Insects in Kansas Book: 2016 Revised Taxonomy ", which follows [www.bugguide.net](http://www.bugguide.net) - Odonata, Orthoptera, Hemiptera, Coleoptera, Hymenoptera, and/or Diptera

Members can exhibit in this class a maximum of 3 years. A 4-H'er may move up if they receive a purple ribbon.

#### **4905 ADVANCED ENTOMOLOGY COLLECTION**

Display a minimum of 150 and a maximum of 450 species representing at least 12 orders. Three standard boxes can be used. Follow the general guidelines listed for Collections. Family identification is required for all insects belonging to the six basic orders as outlined under the Intermediate phase. **Only families in the above six orders will be counted for judging.** Family identification of insects in the remaining orders is optional, but desirable as long as accuracy is maintained. **On a piece of paper list what you did to improve your collection during the current year. Examples: what insects did you add or replace; what orders and/or families you added; what Leadership you provided in this project; and/or what insects you have studied. Attach paper to the back of one of the display boxes.** Members may continue to exhibit in this class at the Kansas State Fair for an unrestricted number of years as long as they remain eligible for 4-H membership.

#### **NOTEBOOK CLASSES**

##### *General Guidelines*

1. Individual entries are to be placed for display in a three-ring notebook for competition.
2. **During the transition, Orders & Family names should follow the taxonomy either**

- a) as printed in "Insects in Kansas" book or
- b) as printed on the "Insects in Kansas Book: 2016 Revised Taxonomy", which follows [www.bugguide.net](http://www.bugguide.net)

Project members are encouraged to progress towards option b by 2019 or as revised "Insects in Kansas" book is available.

3. 4-Hers who have been previously enrolled in or are currently enrolled in the other phases of the Entomology project need to start with the Beginning Phase of Entomology Notebooks, not the Introductory phase.
4. Each exhibitor is required to identify the notebook by placing a Title Page in the front of the notebook bearing the exhibitor's name, county or district and class 4-H'er is enrolled in and statement of taxonomy used:
  - a) "Insects in Kansas" book or
  - b) "Insects in Kansas Book: 2016 Revised Taxonomy", which follows [www.bugguide.net](http://www.bugguide.net)

The number of orders, specimens and families (required in Intermediate and Advanced classes) must also be included on the Title Page.

5. Specimen pages should be grouped according to order and should include one page per species. If more than one insect is in the photo, an arrow to indicate identified insect should be used.
6. Date, common name, full county name and state abbreviation should be included for each species. Collector's name on the specimen page is optional.
7. Specimen pages should have two different views of the insect if possible. If pictures are taken on different dates/localities, include information for both.
8. A statement describing the habitat where found/host plant may be included and is encouraged and will be worth a bonus 10 points total, not per page. For Intermediate and Advanced notebooks, this is strongly encouraged.
9. A divider page is to be placed in front of each order of insects with the order name printed on the tab for the page as well on the front of the divider page.
10. For the Intermediate and Advanced classes, insects are also to be grouped by family behind each order divider.
11. If the exhibitor has been in the same class for more than one year, a separate sheet of paper needs to be added stating how many years the exhibitor has been in this class of the project and what the exhibitor did this year to improve their notebook. Place the paper just behind the Title Page in the front of the notebook.
12. A special project must be completed each year and included in the notebook. See project guideline materials for specifications.

#### **4907 INTRODUCTORY ENTOMOLOGY NOTEBOOK**

Display a minimum of 10 and a maximum of 30 insect species representing at least 6 different orders. Follow the general guidelines listed for Notebooks, including the Special project. A 4-H member must be of minimum age to compete at the Kansas State Fair. A 4-H member may exhibit in this class for a maximum of two years.

#### **4908 BEGINNING ENTOMOLOGY NOTEBOOK**

Display a minimum of 20 and a maximum of 60 insect species representing at least 7 different orders. Follow the general guidelines listed for all Notebooks, including the Special project. Members can exhibit in this class a maximum of 3 years or until they receive a purple ribbon at the Kansas State Fair, whichever comes first.

#### **4909 INTERMEDIATE ENTOMOLOGY NOTEBOOK**

Display a minimum of 60 and a maximum of 100 species representing at least 9 orders. Follow the general guidelines listed for Notebooks, including the Special project. In addition, family identification is required for all insects in any two of the following six orders: (Only two will be counted for judging)

- a. "Insects in Kansas" book - Orthoptera, Hemiptera, Homoptera, Coleoptera, Hymenoptera, and/or Diptera or
- b. "Insects in Kansas Book: 2016 Revised Taxonomy " which follows [www.bugguide.net](http://www.bugguide.net) - Odonata, Orthoptera, Hemiptera, Coleoptera, Hymenoptera, and/or Diptera

Members can exhibit in this class a maximum of 3 years. A 4-H'er may move up if they receive a purple ribbon.

#### **4910 ADVANCED ENTOMOLOGY NOTEBOOK**

Display a minimum of 100 and a maximum of 200 species representing at least 12 orders. Follow the general rules listed for Notebooks, including the Special project. Follow the general guidelines listed for Notebooks. Family identification is required for all insects belonging to the six basic orders as outlined under the Intermediate phase. Only families in the above six orders will be counted for judging. Family identification of insects in the remaining orders is optional, but desirable as long as accuracy is maintained. Members may continue to exhibit in this class for an unrestricted number of years as long as they remain eligible for 4-H membership.

## EDUCATIONAL DISPLAY CLASSES

### *General Guidelines*

1. All entries should be submitted in an 18 x 24 x 3.5 inch wooden display box with a clear plastic top (such as plexiglass). Boxes can be handmade or purchased as long as they are of the correct size. Arrange display in the box so the box can be displayed lengthwise.
2. Each exhibitor is required to identify each box by placing two identification labels bearing exhibitor's name, county or district and the class in the box. One label goes in the upper left corner of the box (inside) and the other on the lower right corner of the box (outside). Information on numbers and kinds of insects is not needed for educational exhibits.
3. Displays may consist of specialized groups of insects or their close relatives, or relate to any aspect of their behavior, biology or ecology.
4. Displays should be presented in a clear, concise, and interesting manner.
5. Displays should include only work performed during the current year.
6. Title of the exhibit should be indicated inside the box.
7. The purpose of the project is to learn more about the importance, life cycles, biology, ecology, diversity, etc. of insects and related arthropods. Subject matter can be as varied as the animals themselves.
8. Creativity is encouraged!

### **4902 BEGINNING EDUCATIONAL DISPLAY**

Class for individuals that are exhibiting in the Beginning I and II Collection or Beginning Notebook Classes. If only exhibiting in this category, then ages 9-12. Follow the general rules listed for the Educational displays.

### **4904 INTERMEDIATE EDUCATIONAL DISPLAY**

Class for individuals that are exhibiting in the Intermediate Collection or Intermediate Notebook Classes. If only exhibiting in this category, then ages 11-14. Follow the general rules listed for the Educational displays.

### **4906 ADVANCED EDUCATIONAL DISPLAY**

Class for individuals that are exhibiting in the Advanced Collection or Advanced Notebook Classes. If only exhibiting in this category, then ages 13 or older. Follow the general rules listed for the Educational displays.