

4-H ENTOMOLOGY & HONEY

Division 6026 – 4-H ENTOMOLOGY & HONEY

Blake Newton - Staff Consultant

See General Rules applying to all 4-H exhibitors and 4-H exhibits other than livestock listed previously in this catalog.

Each county may have one entry per class. An exhibitor may enter only one class in Entomology and no more than two entries in Honey (one extracted, one chunk).

ENTOMOLOGY

Specifications for Pinned-Insect Exhibits: 687A, 688A, 689A, 690A, and 691A and Insect Photography Exhibits: 687B, 688B, 689B, 690B, 691B

Pinned-Insect Exhibits:

1. Folding cardboard insect-collection boxes available through University of Kentucky (Martin-Gatton College of Agriculture, Food, and Environment Department of Entomology) should be used. Homemade or purchased cardboard or wooden exhibit boxes may be used instead, but must have protective lids that can easily be opened and that don't damage the specimens inside. They must be approximately 9 inches by 12 inches* (cardboard) or 18 inches x 24 inches (wooden) and approximately 3 ½ inches thick. All boxes must have foam bottoms (such as 8 millimeter or 3/8 inch thick EVA foam available at hobby shops). Wooden boxes should have Plexiglas or glass covers and boxes must be easily opened (for instance; if a screw is used to secure Plexiglas tops, use a thumbscrew fastener instead of a fastener that requires a tool). (*For cardboard boxes, any size with a footprint about the size of a standard sheet of printer paper or a little larger is acceptable.)
2. Specimens are to be arranged so the box can be exhibited horizontally. 4-Hers may attach wires to the back of wooden boxes to help make them easier to display.
3. Identification labels available from your County Extension Office must be used, or custom labels may be printed if they conform exactly to the font, font size, and font color of the official labels. Labels should be printed onto white cardstock. The exhibit identification card should be placed on the front of the box (each box). Instructions for pinning and labeling are included in your project literature.
4. One half of the specimens may be from the previous year's collection or from anywhere in the United States; one half or more must be Kentucky insects collected since the last Kentucky State Fair. No insects that were originally collected from countries outside of the United States will be judged.
5. For the first through fifth year projects, a display collection catalog must be in an envelope attached to the back of the display box. Envelopes should be attached to permit their being opened easily to remove catalogue from them without moving the exhibit.
6. Most specimens in the display cases should be pinned, and the use of vials is discouraged. If vials are used, they may account for no more than 2% of a collection. Vials must be securely wired or pinned to the pinning bottoms.
7. The inclusion of non-insect specimens (spiders, e.g.) is encouraged, but because this is primarily an insect collection, and because non-insects do not preserve well on insect pins, points will be deducted if there are more than one specimen from each non-insect class.
8. Pinned entomology exhibits are judged on the following categories: Orders, Species, Common Names, Labels, Condition of Specimens, Overall Appearance, Life Cycle Representation, Catalog of Specimens. Check with county 4-H Agent for point distribution on score sheet.

Cooperative Extension Service

Agriculture and Natural Resources
Family and Consumer Sciences
4-H Youth Development
Community and Economic Development

MARTIN-GATTON COLLEGE OF AGRICULTURE, FOOD AND ENVIRONMENT

Educational programs of Kentucky Cooperative Extension serve all people regardless of economic or social status and will not discriminate on the basis of race, color, ethnic origin, national origin, creed, religion, political belief, sex, sexual orientation, gender identity, gender expression, pregnancy, marital status, genetic information, age, veteran status, physical or mental disability or reprisal or retaliation for prior civil rights activity. Reasonable accommodation of disability may be available with prior notice. Program information may be made available in languages other than English. University of Kentucky, Kentucky State University, U.S. Department of Agriculture, and Kentucky Counties, Cooperating. Lexington, KY 40506



Disabilities
accommodated
with prior notification.

9. Exhibits will be penalized if they do not:
 - a. Use insect pins for pinning insects.
 - b. Use the 4-H entomology identification labels.
 - c. Use display boxes that are approximately 9 inches x 12 inches x 3½ inches cardboard boxes or wooden boxes that are approximately 18 inches x 24 inches x 3 ½ inches.
 - d. Fulfill the requirements of the particular exhibit under which it is entered.
 - e. Have the insects arranged so the box can be exhibited horizontally.
 - f. Have the display collection catalogue in an envelope attached to the back of the display box through fifth year projects.
10. No extra credit will be given for specimens exhibited beyond the numbers listed in the current project books.
11. 4-Hers entering fifth year cannot use the same exhibit that has been judged in any previous State Fair.

Insect Photography Exhibits:

1. Images will be submitted on a USB memory device (such as a “thumb drive”) with no other data except for the images and folders. The USB device must be identified externally with a tag or label, showing “4-Her’s last name-County-Lot Number-Class Number-Entry Number”. The single root folder will be labeled with the same information. Images will be contained inside this folder. Example folder name: Doe-Fayette-6026-687a-24531
2. Each image will be .jpg format, 1920 X 1080 pixels. Vertical or horizontal black bars may be present to allow for cropped images.
3. Each image will have a filename that matches the following: “lastname-county-#.jpg” where “#” indicates the number of the image inside the folder. Example filename: Doe-Fayette-1.jpg
4. Each image will include a 400 X 225 pixel (or larger if necessary) white notation box with important information about the photo. This notation field may be placed anywhere inside the image, including inside black bars (if present). Fonts may vary based on the 4-Her’s software, but we recommend Ariel, 18 pt, black, non-bold. The notation field will include the following information, with one space between each line:

[4-Her’s Name, County, Lot Number, Class Number]

[Date of original photograph]/[Location of original photograph. Location may be in the form of a street/city/zip code address or GPS coordinates.]

[Brand and type of camera or camera phone]

[Settings, including type of lens, relevant camera settings, and “flash” or “no flash”]

[Insect Order – Common Name]

5. First year entomology photography exhibits are judged on the following categories: Orders, Species, Common Names, Labels, Quality of Photograph. Check with county 4-H Agent for point distribution on score sheet.
6. Digital insect collections will be penalized if they:
 - a. Consist of images that were created by someone other than the 4-Her
 - b. Are not submitted and labeled according to guidelines
7. No extra credit will be given for photographs submitted beyond the numbers listed in the current project books.

4-H Entomology Pinned and Photography Exhibits will be divided into the following classes:

687A First year project: up to three cardboard boxes approximately 9 inches x 12 inches, or up to two 18 inches x 24 inches wooden boxes, with minimum of 25 insects, maximum 50 insects, from at least four orders. Identification beyond order is not necessary. All specimens must have date and locality label.

687B First year project: minimum of 25 insect photographs, maximum 50 photographs, from at least four orders. Identification

Cooperative Extension Service

Agriculture and Natural Resources
Family and Consumer Sciences
4-H Youth Development
Community and Economic Development

MARTIN-GATTON COLLEGE OF AGRICULTURE, FOOD AND ENVIRONMENT

Educational programs of Kentucky Cooperative Extension serve all people regardless of economic or social status and will not discriminate on the basis of race, color, ethnic origin, national origin, creed, religion, political belief, sex, sexual orientation, gender identity, gender expression, pregnancy, marital status, genetic information, age, veteran status, physical or mental disability or reprisal or retaliation for prior civil rights activity. Reasonable accommodation of disability may be available with prior notice. Program information may be made available in languages other than English.
University of Kentucky, Kentucky State University, U.S. Department of Agriculture, and Kentucky Counties, Cooperating.
Lexington, KY 40506



Disabilities
accommodated
with prior notification.

beyond order is not necessary. All photographs must have notation field.

688A Second year project: up to three cardboard boxes approximately 9 inches x 12 inches, or up to two 18 inches x 24 inches wooden boxes, with minimum of eight orders and not less than 50 insects, nor more than 100 insects. Half of the insects should be identified with a common name.

688B Second year project: 50-100 photographs total, minimum of 8 orders, at least one-half identified with a common name. Specifications for exhibits are the same as for 687B except that no images from the first-year photography project may be reused for this project.

689A Third year project: three cardboard boxes approximately 9 inches x 12 inches, or two 18 inches x 24 inches wooden boxes, with a minimum of 10 orders and 100 insects, a maximum of 150 insects.

689B Third year project: 100-150 photographs total, minimum of 10 orders, all identified with common names except immature stages. Photos of at least one arthropod egg, nymph, larva, and pupa—identified to order, no common name needed—should be included as a part of the 100-150 photos. Specifications for exhibits are the same as for 688B except:

Each image will include a 400 X 300 pixel (or larger if necessary) white notation box with important information about the photo. This notation field may be placed anywhere inside the image, including inside black bars (if present). Fonts may vary based on the 4-Her's software, but we recommend Ariel, 18 pt, black, non-bold, or larger. The notation field will include the following information, with one space between each line:

[4-Her's Name, County, Lot Number, Class Number]

[Date of original photograph]/[Location of original photograph. Location may be in the form of a street/city/zip code address or GPS coordinates.]

[Brand and type of camera or camera phone]

[Settings, including type of lens, relevant camera settings, and "flash" or "no flash"]

[Insect Order – Common Name (if applicable)]

[Life stage identified for all non-adult arthropods]

Third year entomology photography exhibits are judged on the following categories: Diversity, Inclusion of life stages, Identification, Labels, Quality of Photographs. Check with county 4-H Agent for point distribution on score sheet.

Identification to order (or class for non-insect arthropods) is necessary for any eggs, nymphs, larvae, pupae, and adult insects in the project; common name identification is necessary for all adult arthropods in the project.

No images from previous insect photography projects may be reused for this project.

690A Fourth year project: three 9 inches x 13 inches official cardboard boxes, or two 18 inches x 24 inches wooden boxes, with minimum of 12 orders and 150 insects, no maximum. An addition cardboard or wooden box with an example of insect damage, the stage of the insect causing the damage and any other stage of the insect that helps identify the problem. Include information in the display that tells how the insect is controlled. Life cycle of two insects may be displayed if desired.

690A Fourth year project: three cardboard boxes approximately 9 inches x 12 inches, or two 18 inches x 24 inches wooden



boxes, with minimum of 12 orders and 150 insects, no maximum. An addition cardboard or wooden box with an example of insect damage, the stage of the insect causing the damage and any other stage of the insect that helps identify the problem. Include information in the display that tells how the insect is controlled. Life cycle of two insects may be displayed if desired.

690C Junior Level Entomology Video Project: 1-3 minute entomology video submitted to social media platform (YouTube), focusing on one insect or insect relative (including arachnids, centipedes, millipedes, and crustaceans) that lives in Kentucky. Specifications:

- a. Video may be created on any video-editing platform and may include editing, cuts, text, special effects, filters, still images, music, and narration.
- b. The final video will be uploaded by the 4-Her onto YouTube, either to an account managed by local County Extension staff or to an account managed by the 4-Her. If the County Office is managing the account, they will provide a link to the video to blaken@uky.edu. If the 4-Her chooses to upload the video with privacy settings, the final video may be shared as a link to blaken@uky.edu (for YouTube videos) prior to St. Fair project submission deadlines.
- c. The video should begin with an introduction from the 4-Her which includes the following information: First Name, County Name, Name of Project (“Junior Level Kentucky 4-H Entomology Video Project”), Common Name of Insect (or insect relative), Scientific Order Name of Insect (or insect relative).
- d. The 4-Her may appear in the video if they elect to do so and if they have a H-328 photo consent form on file (<https://entomology.ca.uky.edu/file/photo-imageconsentformh328pdf>). The inclusion of 4-H logos (such as on a T-shirt, or on a County Extension sign) in the video is encouraged. Videos may be used by the University of Kentucky on websites or social media for education or entertainment purposes.
- e. The video should focus on a single kind of native or non-native insect or insect relative that lives wild in Kentucky. The video does not have to focus on a single species, but needs to be more specific than the Order level. For instance, a video on “wolf spiders” would be acceptable, but “spiders” would be too general for this project. Similarly, “lady beetles” would be an appropriate topic, but “beetles” is too general.
- f. The video may cover any factual information about the creature including: habitat, feeding strategies, defense, range, life cycle, impacts to humans, conservation status. Additional content, (such as folklore, humor, or personal experiences with the creatures) may be included, but should account for less than 50% of the content. Information may be delivered via narration (live or overdubbed), text/subtitles, or a combination.
- g. Any media used in the video must be generated by the 4-Her. Images, video clips, music or sound clips from other creators should not be used, with the exception of background music licensed for use by individual social-media platforms.

691 Fifth year project (may be repeated for successive years of eligibility but must be a different exhibit. No exhibit that has been judged in any previous State Fair may be entered): Any type of display that pertains to experiences beyond those of previous projects. Special collections of native and/or exotic butterflies, beetles to some other insect order; a study in depth of one insect or small group of insects: a display of insect camouflage: a display of plastic embedded insects: a collection of insect larvae and nymphs are examples. Charts, photographs, models or any other visual aids may be used. 4-Hers are encouraged to write a short (1 or 2 paragraphs) statement developing the theme of their fifth year display.

691B 4-Her may repeat the fourth year project with all new photographs, or submit a creative digital project that is different from the previous projects. Examples may include: a documentary on a beneficial or pest insect based on video footage and photos curated by the 4-Her; a webpage covering an aspect of entomology, featuring the 4-Hers digital photographs; a short online social-media course that teaches viewers about some aspect of entomology. This project may be repeated for successive years of eligibility but must be a different exhibit each year (or a repeat of the 4th year project with new photos).

Cooperative Extension Service

Agriculture and Natural Resources
Family and Consumer Sciences
4-H Youth Development
Community and Economic Development

MARTIN-GATTON COLLEGE OF AGRICULTURE, FOOD AND ENVIRONMENT

Educational programs of Kentucky Cooperative Extension serve all people regardless of economic or social status and will not discriminate on the basis of race, color, ethnic origin, national origin, creed, religion, political belief, sex, sexual orientation, gender identity, gender expression, pregnancy, marital status, genetic information, age, veteran status, physical or mental disability or reprisal or retaliation for prior civil rights activity. Reasonable accommodation of disability may be available with prior notice. Program information may be made available in languages other than English. University of Kentucky, Kentucky State University, U.S. Department of Agriculture, and Kentucky Counties, Cooperating.



Disabilities
accommodated
with prior notification.

Lexington, KY 40506

691C Senior Level Entomology Video Project: 1-3 minute entomology video submitted to social media platform (YouTube), focusing on one insect or insect relative (including arachnids, centipedes, millipedes, and crustaceans) that lives in Kentucky. Specifications: same as 690C except for Senior level.

HONEY

Honey will show better in oval, flat sided to square clear glass jars. 4-Hers must use standard honey jars purchased from a bee supply vendor. Wide-mouth honey jars may be used. The jars and lids must be clean. Fill jars to the "fill line". The "fill line" is the continuous ring that circles the jar and not necessarily the threads that help hold the lid. Note that jars must be glass, with the exception being the cut comb honey.

Note: Two jars must be submitted for the following classes.

Display cases for capped honey may be made by 4-Hers or bought from a store, but they must be bee-proof and have a removable top in order for the judge to check moisture. One frame per container.

Observation hives shall be secure from opening to the satisfaction of the Bees and Honey superintendent. This shall include the top of the observation hive and all holes and openings. Openings should be secure by screws or locks. Observation hives may be picked up after the end of judging (which is the Tuesday prior to the official first day of the State Fair).

- 692 Two one pound glass Queenline or Classic jars of white extracted honey**
- 693 Two one pound glass Queenline or Classic jars of light amber extracted honey**
- 694 Two one pound glass Queenline or Classic jars of amber extracted honey**
- 695 Two one pound glass Queenline or Classic jars of dark amber extracted honey**
- 696 Two wide mouth pints or Classic jars of chunk honey, any color.**
- 697 Any frame of capped honey suitable for comb honey (Light)**
- 698 Any frame of capped honey suitable for comb honey (Amber)**
- 699 Any frame of capped honey suitable for extraction (Light)**
- 700 Any frame of capped honey suitable for extraction (Amber)**
- 701 Best display of one-frame observation hive of honey bees consisting of worker bees, a properly marked queen, and brood.**

Note: The total weight of a one-pound jar includes the weight of the glass jar.

A Grand Champion and Reserve Champion will be selected for the Entomology Division and also for the Honey Division.

Cooperative Extension Service

Agriculture and Natural Resources
Family and Consumer Sciences
4-H Youth Development
Community and Economic Development

MARTIN-GATTON COLLEGE OF AGRICULTURE, FOOD AND ENVIRONMENT

Educational programs of Kentucky Cooperative Extension serve all people regardless of economic or social status and will not discriminate on the basis of race, color, ethnic origin, national origin, creed, religion, political belief, sex, sexual orientation, gender identity, gender expression, pregnancy, marital status, genetic information, age, veteran status, physical or mental disability or reprisal or retaliation for prior civil rights activity. Reasonable accommodation of disability may be available with prior notice. Program information may be made available in languages other than English. University of Kentucky, Kentucky State University, U.S. Department of Agriculture, and Kentucky Counties, Cooperating. Lexington, KY 40506



Disabilities
accommodated
with prior notification.