Kids Ask Dr. Bug

Home to more than plants, kids ask Dr. Tamra Reall about the curious things found in the garden.

How do you make an insect collection? Christina, 14

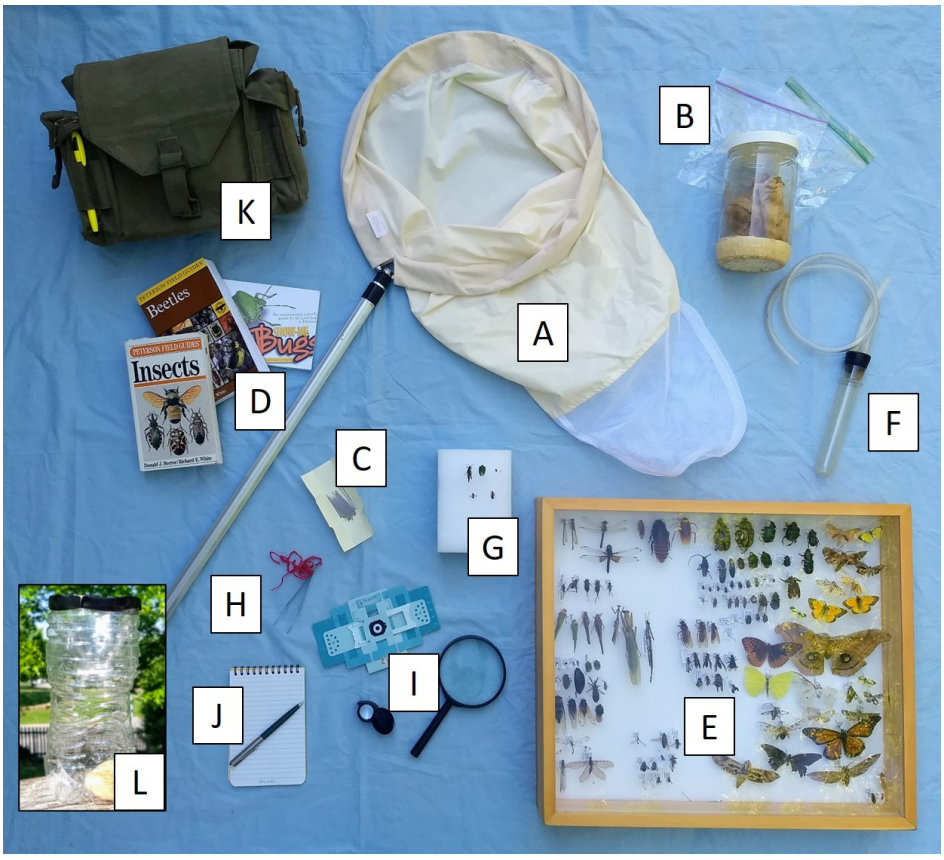
Collecting insects is a great way to study and learn about these fascinating, tiny animals. Depending on why you are making a collection – school, 4-H, FFA, or just 'cause – your collection could take different forms and may be various levels of complexity.

Photo collection

A photo collection has the advantages of not needing to capture and kill insects, and it can be easy to carry and share. However, keep in mind that insects are small and many are very fast. To get good pictures, you will need patience, perseverance, and a good camera with a macro lens or setting (many smart phones have this capability). Insects are not patient models, so you need to be fast(er). Make sure your image is clear so you can see the characteristics necessary to identify the insect.

Specimen collection

A specimen collection allows you to study insects in 3D. To capture insects, here are some helpful tools of the trade (see image): a net (A), collecting jar (B), insect pins (C), identification guide (D), and a box to store your collection (E). I also have a pooter to collect tiny insects (F), Styrofoam for pinning (G), featherweight entomology forceps (H), hand lens and/or microscope (I), notepad (J) and a bag (K).
You can find or make some of these supplies at home, and you can also purchase supplies at biological supply stores.



Capturing insects

Insects can be found in nearly every habitat – on and in plants, scurrying along the ground, under the ground, flying through the air, on and in the water, etc. A net is a great way to capture insects, either by swinging it over flying insects or sweeping the net back and forth through plants as you walk.

Traps let the insects come to you. A pitfall trap is made by placing a cup in the ground with the rim of the cup level with the soil, so insects walking along will fall into the cup. Another trap can be made using a plastic water bottle with the top cut off, turned upside down and placed back into the water bottle (L). Hang this trap in a tree to see what flies or crawls in. If you place food into either trap, you will start to see a diversity of insects visiting the traps. Visit your traps frequently and remove them when you have

Tamra Reall (@MUExtBugNGarden) is a horticulture specialist for MU Extension – Urban West Region. For free, research-based gardening tips, call 816-833TREE (8733), email Mggkc.hotline@gmail.com, or visit extension2.missouri.edu.

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Home to more than plants, kids ask Dr. Tamra Reall about the curious things found in the garden. the insects you need so that you don't unintentionally trap more than necessary. Another way to attract insects is by hanging up a white sheet and shining a black light on the sheet at night.

Captured insects are placed in a kill jar, or a bag that is placed in a freezer.

Please take care when collecting insects. Some insects sting or bite so you need to handle them carefully, especially if you could be allergic to insect stings.

Pinning insects
Most insects are pinned on the right side, although there are some exceptions, such as butterflies which are pinned in the middle with their wings spread. Some insects are too small to pin and so they are glued to a tiny piece of paper that is pinned. This site describes the process in more detail: bit.ly/3f4PdkM

After pinning, leave the insects to dry all the way before storing them. This can take a couple of weeks.

Identifying insects
How closely do you need to identify your insects? Order, family, genus or species? A dichotomous (2-way) key (example: http://www.knowyourinsects.org/step1.html) and good field guides are helpful. Label each insect with the date, location found, other interesting information, and your name.

Storing insects
An airtight box is best, ideally with a clear cover for viewing. Airtight is important so other insects don't get in and eat your collection.

An excellent free resource for creating a collection, called "How to make an awesome insect collection" is available from Purdue Extension (bit.ly/3ezHtZ7). 4-H also has entomology spin-clubs and you can submit your collection in your local county fair insect collection competition.

Done responsibly, collecting insects is not just a great hobby, but you can learn so much about insects' life histories and their habitats. As you learn about these tiny animals that are essential to our ecosystems, you can become an advocate for insect conservation.

Do you have questions for Dr. Bug? Send them to ReallT@Missouri.edu or bit.ly/KidsAskDrBug Please include your name and age. To help me learn what you learn from this column, consider filling out this survey: bit.ly/KidsAskDrBugSurvey

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