

Spring Semester Insect Collecting Tips

Feb. 7, 2007

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Insects are generally scarce in the winter. Many of them are hidden away in over-wintering sites in life stages capable of surviving freezing and cooler weather. As weather warms up, adult insects begin to appear and become active almost predictably. A lot of information about insects in Central Texas can be found in "A Field Guide to Common Texas Insects" (Drees and Jackman 1998) available at local and on-line book stores and it can be viewed on <http://insects.tamu.edu>. An accompanying web site, <http://bughunter.tamu.edu>, provides tips and techniques for collecting, preserving and observing insect and related arthropods. Additional publications on Texas insects are posted on the insect web site and on <http://tcebookstore.org>. **Note:** Some insects bite and sting. Be careful when handling them. Be careful with rubbing alcohol.

January

- Find over-wintering true bugs (**Hemiptera**) and roaches (**Blattaria**) by flooding cracks in pavement around the home or bunch grasses like Pampas grass with a hose and looking for insects crawling out. Collect in a jar, kill by freezing and thaw to mount on a pin.
- Look in light fixtures around the home for dead assorted insects from previous year. They will be dry and brittle. Either preserve in rubbing alcohol or relax in a jar with water-soaked tissue for a day or two before mounting on pins.
- Late January, crane flies (**Diptera**) that look like very large mosquitoes will emerge and can be collected in a jar, frozen and either pin-mounted or preserved in rubbing alcohol.
- Look at evergreen shrubs and trees (arborvitae, cypress) for bagworms produced last fall by caterpillars (**Lepidoptera**). Some bags contain eggs that will hatch in spring and remnants of the adult female stage that is a moth that never develops wings or leaves the bag.

February

- On yaupon hollies (under-story shrubs with red berries common among oak trees) look for distorted leaves which are the galls formed by immature stages of yaupon psyllids (**Hemiptera**, previously Homoptera). When plants flower (very small yellow flowers) adult stages less than ¼ inch in length that look like tiny cicadas will emerge and can be caught in a jar and mounted.
- On ornamental holly bushes, look for white spots on leaves that are the adult female stage of the Florida wax scale insect (**Hemiptera** previously Homoptera). Mount infested leaf on a pin.
- Red imported fire ants (**Hymenoptera**) can be collected at almost anytime of the year on warm days from their mounds. Be aware of where you are standing and move away from mounds if ants crawl on your shoes. This must be done carefully so you do not get stung. Dust baby powder on dishwashing gloves and wear them because the ants can not crawl up dusted surfaces (hold hands up-right) and have adult supervision. Place rubbing alcohol in a vial and stick it into the top of an undisturbed mound. Worker ants will climb up and drop into the vial and drown. Quickly remove the vial and cap it with gloved hands and rub off ants by rolling vial in grass.
- Look under eaves of homes or other structures where you find dry dusty fine soil look for cone-shaped pits. Dig up soil and sift in a colander to collect immature stages (larvae or pupa in a soil-coated cocoon) of ant lions (**Neuroptera**).

March

- When oak leaves emerge, spring caterpillars (**Lepidoptera**) hatch from eggs and develop over a period of several weeks. Common species include spring cankerworms (inchworms), forest tent caterpillars (caterpillars with a row of white "keyhole"-shaped dots along the

back), and oak leaf rollers (translucent green larvae that often hang from the tree on a silk thread). Tent caterpillars can be found on hawthorn, peach and plum trees at this time. Caterpillars can be collected in a jar. To preserve, boil them in water and then keep them in rubbing alcohol. The larger stages can be placed in a plastic bag with some leaves and may form a cocoon and pupate inside. They may emerge as moths several weeks later.

- When wildflowers bloom, beat them on a piece of paper. “Walking dashes” are thrips (**Thysanoptera**) (Note: thrips is singular). Adults have wings kept over the back of the body. Immature stages have no fully-developed wings. Collect with fine paint brush dipped in rubbing alcohol and preserve in vial.
- Dragonflies and damselflies (**Odonata**) are in their immature stages and can be collected from streams or ponds by sifting through mud and debris removed from the bottom of these water bodies. Collect with tweezers and preserve in rubbing alcohol.

April - May

- Place meat such as canned pet food, tuna, raw hamburger outside but where dogs or other animals can not reach it. Adult blow flies (**Diptera**) will lay eggs on the decomposing meat and soon maggots can be observed. In a week or so, maggots leave the meat to form a puparium. Preserve immature stages in alcohol and pin frozen adult flies. If you put out fruit like melon slices in a pan outdoors, it will be colonized by fruit flies (**Diptera**) and possibly attract other insects like sap beetles (**Coleoptera**)
- Collect cockroaches (**Blattaria**) in jar traps made by rubbing the inside upper surface with petroleum jelly (Vaseline) thinned with a little mineral oil to keep roaches from crawling out and putting peanut butter and banana in the jar as an attractant. Place jars around the garage or other locations in and around the home. Check in a day or so. Cap, freeze and pin.
- Look under potted plants, under rocks, logs and other debris around the home for millipedes, earwigs (**Dermaptera**), ants (**Hymenoptera**), termites (**Isoptera**), etc. Collect using tweezers and a jar. Freeze and mount.
- Peel bark from dead trees or logs and look for immature stages of beetles (**Coleoptera**), termites (**Isoptera**), but watch out for scorpions! Collect insects with tweezers. Kill and store immature insect stages in rubbing alcohol.
- Dig in soil in garden or flowerbed and look for white grubs, the immature stages of May beetles (**Coleoptera**). Kill and store immature insect stages in rubbing alcohol.
- Collect rotting leaves and soil. Place on paper plate under light bulb. Collect anything crawling away from the heated up and drying sample using a fine paint brush dipped in rubbing alcohol and preserve in a vial. Chances are you will collect springtails (**Collembola**), mites (**Acarina**) and other small arthropods. A Berlese funnel can also be used for this extraction. See directions for making one on <http://bughunter.tamu.edu>.
- In later spring, many insects occur and can easily be collected with a net or drop cloth. Sweep net through tall grasses or weedy areas and place collected material in a plastic bag. Freeze, sort and pin assorted insects including grasshoppers (**Orthoptera**), beetles (**Coleoptera**), leafhoppers (**Hemiptera**), etc. Lay a sheet under trees and shrubs and beat branches with a stick. Collect insects that fall onto the sheet in a jar. Freeze and pin.
- Check around lights at night and collect assorted insects like moths (**Lepidoptera**) in a jar. Freeze and pin.
- Make a moth-attracting bait (with parents supervision) from beer and bananas mixed into a paste and smeared on tree trunks. Observe moths (**Lepidoptera**) and beetles (**Coleoptera**) attracted to it at night. Collect specimens with tweezers or jar. Freeze and pin. To make a trap, place the bait mixture in a milk jug with a large hole cut in the top cut to allow insects to enter. When hung in a tree insects attracted will drown in the mixture. Wash specimens and pin.
- Allow a bucket of rainwater to sit outdoors and it will soon be filled with mosquito larvae and pupae (**Diptera**).