ENTOMOLOGY NOTES
No. 12
PUBLISHED AS A SERVICE OF
THE MICHIGAN ENTOMOLOGICAL SOCIETY

Headlighting for Spiders

Collecting spiders and insects during the day can be fun, but collecting them at night is a different and fascinating experience. Blacklights and 'sugaring' catch night flying insects like moths and beetles, while the wandering and web building spiders can be collected with the help of headlights.

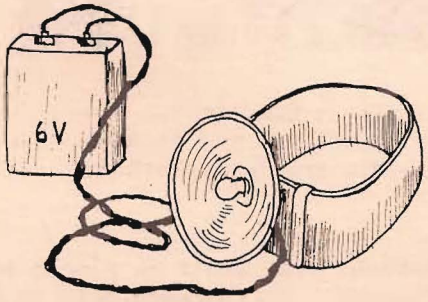

Figure 1. A headlight which runs on a six volt battery.

Headlights like the one in Figure 1 may be purchased at most sporting goods stores. A battery case which attaches to your belt is usually a part of the outfit and helps keep your hands free to catch what you see. Do not collect around street lights or other light sources if you just want spiders because the lights usually make it more difficult to spot them.

Wandering spiders like the wolf spiders (Lycosidae) (Figure 2) and fisher spiders (Pisauridae) may be spotted with the headlights. The beam should be aimed at the ground or toward low vegetation about fifteen feet ahead of you. Move the beam very slowly until you see a small shining spot resembling a tiny star--the spider's eyes. Move toward the spot carefully, making sure not to lose it. The spider seems to be blinded and will not move as actively as when you approach one during the day. When close enough, capture the spider in a bottle. The easiest way is to invert the bottle and quickly place it over the creature.

Wandering spiders such as the sac spiders (Clubionidae) will also appear as light spots in the headlight beam as they wander over trees, herbs, the ground or as they hang in the air on their draglines.

The shining spot, which is a reflection of the light from the eyes of the spider, is called 'eye shine' and usually appears greenish. You may be fooled by a whitish shine which could turn out to be a drop of a dew or rain. A reddish or orangish eye 'shine' may turn out to be a moth hanging beneath a leaf or a June beetle that is molting. Or, if you decide to collect near a swamp in Florida and see two big orange eyes, be careful, they may belong to an alligator.

Web-building spiders too may be spotted with the headlight even though they do not have 'eye shine'. They appear as a light spot suspended in the air when the light touches them. Some webs appear as delicate white threads in the light, and you can follow them to see where the spider is. The spider may be in it's retreat, a thickly woven 'home' beneath a branch or under a leaf. Most spiders will drop to the ground on their silk dragline when disturbed, so be sure to hold

Figure 2. *Lycosa gulosa* is a common wolf spider that may be collected at night because its eyes will reflect light from a headlight.

Figure 3. Collecting web building spiders with a headlight. The geometrical web shown is called an orb web and is made by members of the families araneidae and tetragnathidae.

the collecting bottle beneath them. The shiniest silk is that in a tangled web close to the ground which belongs to the widow spiders. There are several species scattered throughout the United States. The best known is the black widow. All widow spiders are poisonous so learn to identify them. The female widow spiders all have reddish hour-glass or double half-moon markings in the center of the underside of the abdomen and their bodies are shiny black. Their webs are irregular, very stiff, and difficult to break when touched.

If you catch spiders and want to put them in your collection, you'll have to preserve them because they can't be pinned and dried like insects. It is preferable to kill and preserve them in alcohol, seventy percent ethanol being the best, though isopropyl (70 to 80 percent) will work.

Learn your spiders before you start collecting them. Some useful references that are helpful include: Levi, H. W. and L. R. Levi 1968. Spiders and Their Kin. Golden Press, New York; and Kaston, B. J. 1972. How to Know the Spiders. Second edition. Wm. C. Brown Co., Dubuque.

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