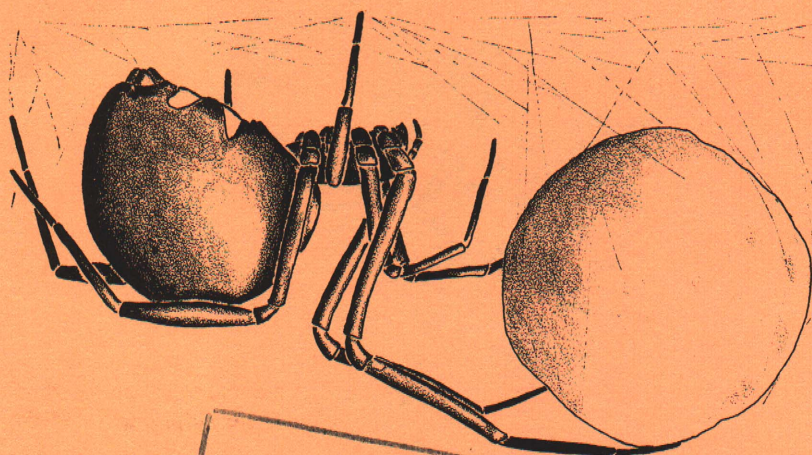


POISONOUS SPIDERS of Michigan

identification
bite symptoms
and treatment



BY RICHARD J. SAUER
Assistant Professor of Entomology

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SPIDERS, AS A GROUP, have long been looked upon with rather widespread fear as loathsome and venomous beasts. Perhaps no other organism, except maybe a snake or a mouse, so easily frightens so many people. "Old wives' tales" would have us believe that all spiders are deadly poisonous. The facts are that most spiders are quite harmless, indeed even beneficial to man, since their main food is insects. They are all equipped with "jaws" and venom for capturing and subduing prey, but the great majority either cannot effectively pierce man's skin or never have the opportunity. Even if they do (which is quite rare), the venom most often causes no reaction or just minor transient pain.

Only two dangerous groups of venomous spiders—the widow spiders, and the Brown Recluse (fiddleback or violin spider) and its kin—are of medical importance in the United States.

The Northern Widow spider can be collected in certain parts of Michigan, and it or other species of widow spiders are found throughout the rest of the continental United States.

The Brown Recluse spider has not yet been collected in Michigan though it is recorded from as far north as Indiana, Ohio, and Illinois.

It occurs in marginal land where the vegetation is rather sparse, often hiding in old stumps, hollow logs, under fallen fence posts, abandoned animal burrows or piles of dead tree branches and other debris. It prefers these outdoor situations to buildings, whereas the Black Widow of the southern United States can be found in both habitats.

The poisonous female is about ½ inch long at maturity (excluding legs) and is shiny black or brownish-black (Figs. 1, 2). With the 8 long legs extended, the

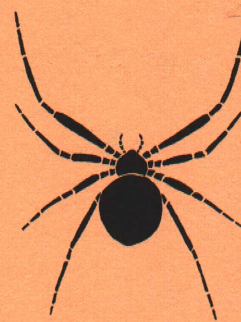


Fig. 1—NORTHERN WIDOW SPIDER (*Latrodectus variolus*) adult female, actual size.

THE NORTHERN WIDOW

In Michigan the Northern Widow, (*Latrodectus variolus*), can be collected throughout the Lower Penin-

overall length is up to 1½ inches. On the underside of the spherical abdomen are 2 red triangular-shaped marks (Fig. 3) instead of the typical hourglass which occurs on the true Black Widow (*L. mactans*) of more

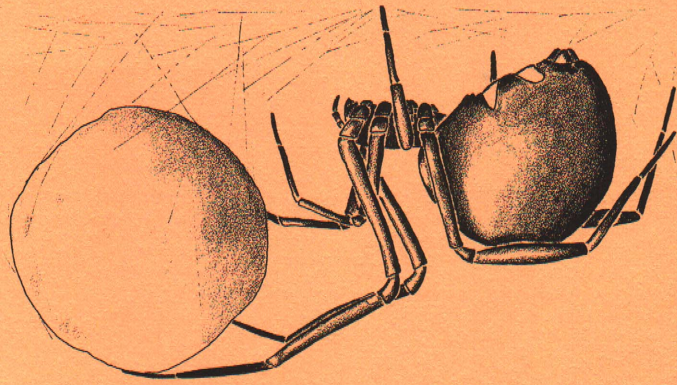


Fig. 2—Northern widow spider in web with egg sac.

southern states. The top of the abdomen often has a median longitudinal row of red spots.

The smaller non-poisonous male is little more than $\frac{1}{4}$ inch in length (excluding legs). It has several light streaks on the sides of the abdomen, but no red markings. The juveniles, both male and female, have similar markings and are harmless.

The female spins a tangled web of rather coarse silk in dark, undisturbed places. She encloses her eggs in a spherical off-white silken egg sac and guards it until the young hatch. She is shy and nocturnal in habit and does not leave her hidden web voluntarily. She is not at all aggressive and can be subjected to extreme provocation without attempting to bite. She may, however, rush out and attack when the web is disturbed or when she is accidentally trapped in clothing or shoes.

Bite and Symptoms — The bite of the female is slight, and it may not be felt at all. It is usually followed by a burning sensation, local swelling and red-

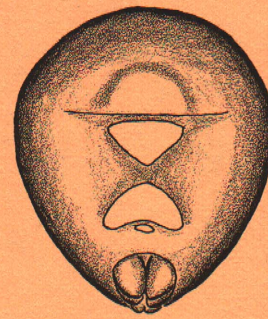


Fig. 3—Northern widow spider, underside of abdomen bearing two triangles ("split hourglass").

ness. Pain may become intense in 1 to 3 hours and last up to 48 hours. The person may experience cramps in the legs, arms, and chest. The abdominal muscles may become rigid. Other symptoms may be headache, nausea, tremors, speech defect, and a slight rise in body temperature. The degree of severity of the symptoms depends a great deal on the sensitivity and age of the victim, with small children being most severely affected.

What To Do — First aid measures other than application of a mild antiseptic (such as iodine or hydrogen peroxide) on the site should not be given. The person should be kept calm and under observation. If the symptoms begin to appear, take the victim to a doctor or hospital. The doctor may give calcium gluconate to relieve the symptoms. A specific antivenin may also be given. Complete rest for a day or two will usually see the disappearance of pain and symptoms. Fatalities are extremely rare (maybe non-existent) and the healthy person usually recovers quickly and completely.

THE BROWN RECLUSE

The Brown Recluse spider (*Loxosceles reclusa*) occurs in most southern states east of the Rockies. It has been collected in Ohio, Indiana, and Illinois (including 2 or 3 specimens from Chicago), but it is most abundant in the southern part of the country. It has not yet (February 1970) been found in Michigan.

Males and females of this species are equally toxic and very similar in appearance. They range from slightly over $\frac{1}{4}$ inch to $\frac{1}{3}$ inch in length (Fig. 4). Coloration varies from orangish-yellow to rather dark brown. The body is evenly covered with short hairs. The legs are quite long and somewhat darker than the body. The most distinguishing characteristics are: (1) six eyes, arranged as three pairs (diads) in a semicircle

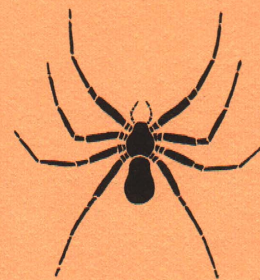


Fig. 4—BROWN RECLUSE SPIDER (*Loxosceles reclusa*) adult female, actual size. (Male is similar in appearance.)

(Fig. 5), and (2) a guitar- or violin-shaped marking on the cephalothorax (Fig. 6). (This section of the body is comprised of head and thorax and bears the mouth-

parts and legs.) The latter characteristic has resulted in the vernacular name of "fiddleback" or "violin" spider.

This spider is usually found indoors, in all types of buildings. It often hides in clothes hanging or stored in rather undisturbed areas. The web is irregular and used as a resting place rather than as a snare. The spider is a "hunter" and leaves its web in search of prey.

Bite and Symptoms — Like most spiders, the Brown Recluse is shy and avoids danger. Bites usually occur when the spider has crawled onto a bed and is squeezed by a person rolling in his sleep, or when a person is putting on his clothes or shoes in which the spider is hiding.

The amount of venom injected by the spider and the sensitivity of the person are both factors in determining the seriousness of the bite. The victim may not have any reaction at first, or he may feel a stinging and painful sensation immediately. Intense pain may last from 2 to 8 hours. A small blister forms at the bite and a large area around the bite becomes red and swollen. Some victims experience nausea, stomach cramps, stiffness of joints, and fever. The tissue in the infected area usually sloughs away, resulting in an ulcerous area that gradually fills with scar tissue. Wounds heal slowly, sometimes taking 6 to 8 weeks, and a deep, round scar may remain permanently.

What To Do — If bitten by a Brown Recluse or a spider that you think may be one, see a doctor immediately. If possible, the spider that caused the bite should be brought along so positive identification can be made. Injections of corticosteroids may be given to curtail necrotic response and systemic reactions to the bite of the Brown Recluse.

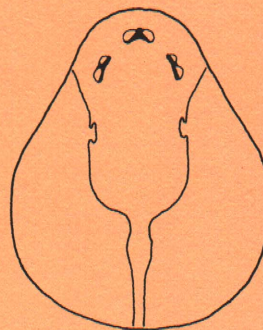


Fig. 5—Brown recluse spider, eye arrangement—six eyes in three pairs.

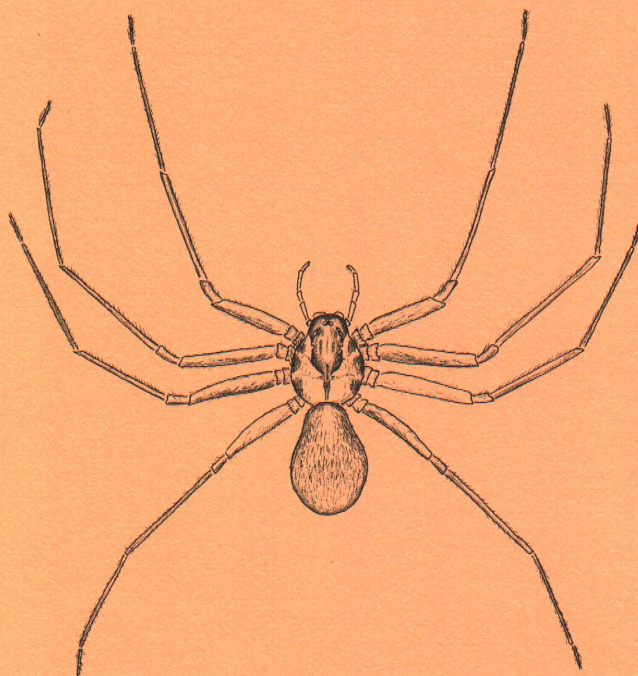


Fig. 6—Brown recluse spider, dorsal view showing fiddle-shaped marking.

CONTROL MEASURES

Anyone wanting to control spiders in dwellings should refer to the control measures in Extension Bulletin E-652, *Casual Home-Invading Pests*.

CORRECT IDENTIFICATION

When spider bites occur, the spider should be cap-

tured if possible and sent to the Department of Entomology at Michigan State University, East Lansing, for identification. Much information of this type is needed before control measures for dangerous spiders can be worked out and better spider bite treatments developed. If the spider responsible for a bite is not correctly identified other potentially dangerous spiders may go undetected.

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