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NORTHERN BLACK WIDOW, SOUTHERN BLACK WIDOW SPIDER, *LATRODECTUS VARIOLUS, LATRODECTUS MACTANS*, FAMILY THERIDIIDAE

Southern Black Widow juvenile, *Latrodectus mactans*.
Photo by Jim Thompson

The Connecticut Agricultural Experiment Station (CAES) has received several reports of northern and southern black widow sightings in Connecticut during June, 2013. In the recent past, any black widow spiders brought to the station were mostly from bags of South American grapes purchased in local grocery stores.

The northern black widow spider can be found in the eastern U.S. from Florida to southern Canada. The southern black widow spider is found from the central U.S. south into South America. While Connecticut lies in the middle of the range for the northern black widow spider, we are at the edge of the northern range for the southern black widow. Historically, CAES has had a few specimens of the northern black widow brought into our offices. It was apparently not common and rarely seen, due in part, to being found mainly in woodland settings. The southern black widow can be found outdoors as well as indoors. It is more common in and around human habitations. Kaston does mention that both species have been found in Connecticut. It is possible that these spiders may become more abundant and will increasingly be detected by residents.

Black Widow female, *Latrodectus* spp.
Photo by Karin DiMauro

Females of both species are not likely to bite unless disturbed, but all species have venom that is toxic to humans. The powerful venom attacks the human nervous system. However, their bite dispenses such a small amount of the venom that fatalities are rare. The male and juvenile widows do not bite humans.

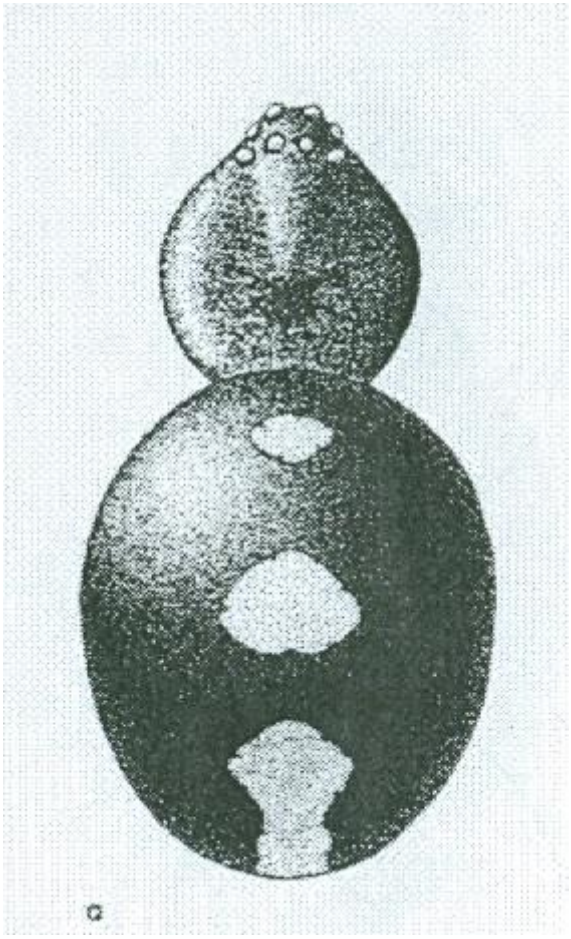

Fig. 1. *L. variolus* female, upper
Likely illustrators M.H. Steward / B. R. Burnett

Description: Female *L. variolus* are a shiny smooth black with a series of red to orange markings on the upper side of the abdomen along the midline (Fig. 1). The red to orange hourglass is found underneath the abdomen. In the northern black widow the hourglass is divided in the middle at the narrowest point (Fig. 2). In the southern black widow, *L. mactans*, the hourglass is complete. These markings can be quite variable in color and shape. Female *L. variolus* go through eight or nine molts and her body can range in size from 9 – 11 mm or up to a half inch long. She can live up to 180 days after the final molt to adulthood. Female *L. mactans* (Fig. 3, 4) are smaller, averaging from 8 – 10 mm.

The smaller males are brownish with a row of red to orange spots on the upper side of the abdomen along the midline. On either side of this row are white lines that go down toward the underside of the body (Fig. 5).

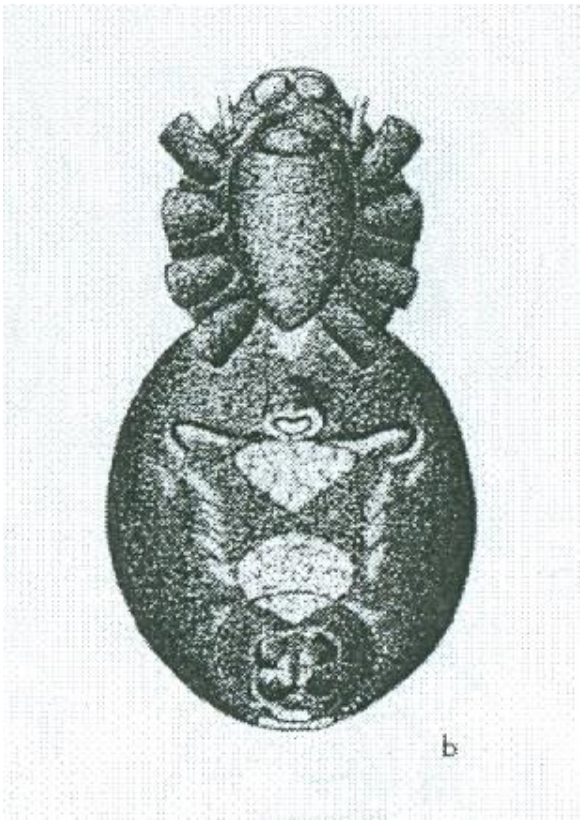

Fig. 2. *L. variolus* female, lower
Likely illustrators M. H. Steward / B. R. Burnett

Males go through seven or eight instars and range in size from 5.5 – 6.5 mm. Males live 70 days after reaching adulthood. Male *L. mactans* are also smaller, averaging from 3 – 4 mm.

Immature forms or juveniles of both species are lighter in color but get darker with each molt. Late instars will have lighter colored spots along the midline.

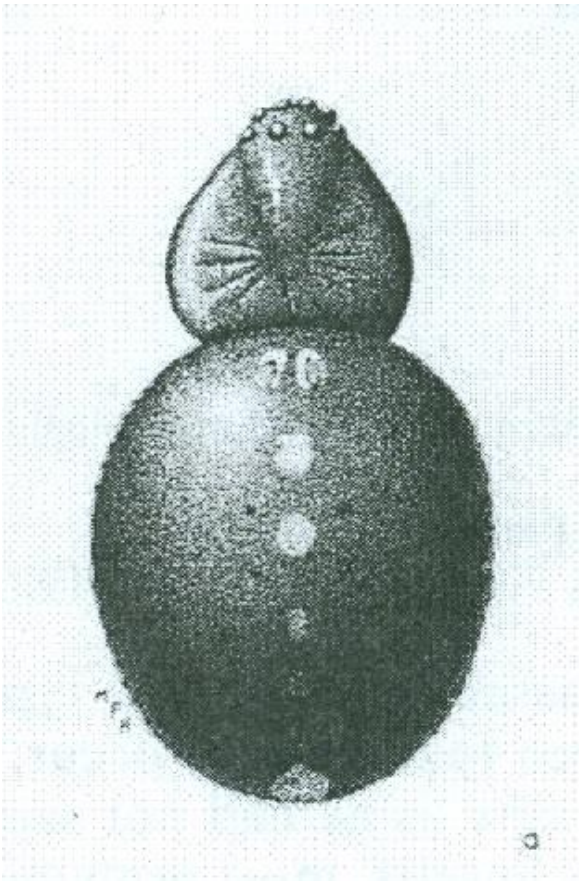

Fig. 3. *L. mactans* female, upper
Likely illustrators M. H. Steward / B. R. Burnett

The pear-shaped egg sac of *L. variolus* is white initially but turns gray and paper-like at maturity. Females can lay multiple sacs during the summer with an average of 164 to 200 eggs per sac. *L. mactans* produces a more spherical egg sac that is gray even initially and has a nipple on the top.

Cobwebs are irregular structures and found in dark, undisturbed areas near the ground. In homes, they would be found in crawl spaces, basements, or garages and sheds that are not used or cleaned frequently. Outdoors, they nest in stone walls, undisturbed woods or stumps. During the day, females hide in an area of dense silk to one side of the nest. At night she hangs upside down in the center of the nest waiting for prey. Cockroaches, beetles and other insects are caught in the web, paralyzed by the spider's bite, wrapped in silk and eaten.

Life Cycle:

Outdoors, these spiders mate during spring or summer. Inside homes, the life cycle can continue year round uninterrupted by cold weather.

The egg sac is suspended within the nest and guarded by the female. Depending on temperatures, eggs usually hatch in four weeks.

Juveniles can mature in two to four months, going through several instars or molt before becoming reproductively active adults.

Management:

Preventing interactions between these spiders and humans involves awareness of nesting sites and taking precautions.

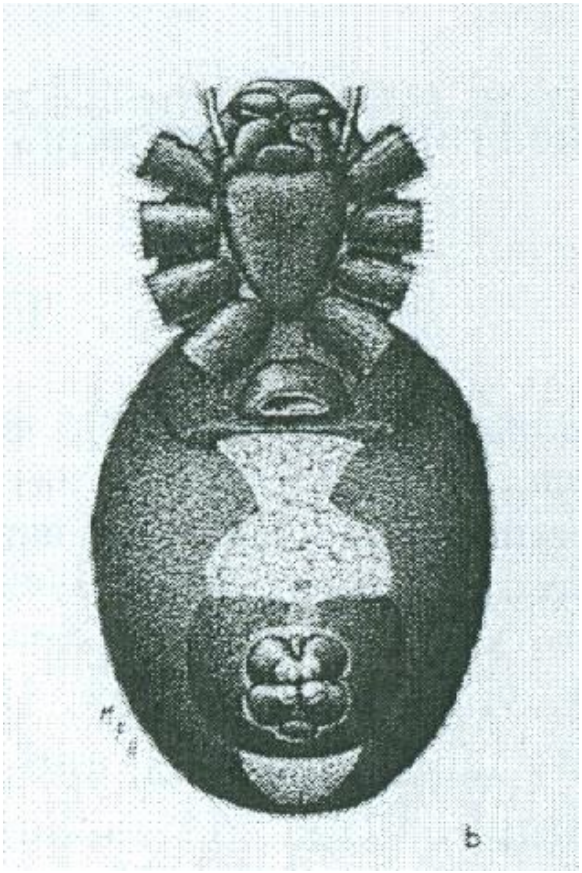

Fig. 4. L. mactans female, lower
Likely illustrators M. H. Steward / B. R. Burnett

When working in basements or outbuildings that have been undisturbed for some time, wear long sleeves, long pants and gloves. Do not reach into boxes or under items without first examining for spider webs.

If bitten, try to catch the spider. Even a part of the spider can help in identification. The culprit cannot be identified from the bite. Contact a doctor immediately. The severity of the bite and symptoms are variable depending upon age and health of the victim; location of the bite; and amount of venom introduced. Pain associated with the bite begins quickly and generally increases over several hours, lasting up to 24 hours.

Interior and exterior insect sprays can reduce the number of spiders in and around the home. However, there is no guarantee of complete control.

Remember that spiders eat other insects, so whatever you do to reduce the number of insects in and around your home will also reduce the likelihood that spiders will take up residence in your home.

REFERENCES:

Kaston, B. Spiders of Connecticut, 1981. State Geological and Natural History Survey of Connecticut.

Kaston, B. Comparative Biology of American Black Widow spiders. 1970. Transactions of the San Diego Society of Natural History. Illustrators M. H. Steward and B. R. Burnett.