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BLACK WIDOW SPIDERS

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The black widow spider² has earned an evil reputation in parts of the United States, where its bite has caused a number of deaths. Canadians may be disconcerted or even alarmed to find that one or more near relatives of this spider, also called black widows, are common in some parts of the country. But there is little cause for alarm, as in this country no deaths have been recorded, and only a few cases of severe reaction from a suspected bite of a black widow are known.

In Western Canada, black widows are found in southern Alberta, southwestern Saskatchewan, and the dry parts of southern British Columbia, including the eastern shore of Vancouver Island and the Gulf Islands. In Ontario they occur only in the southwestern part of the province near the shores of Lake Erie and Lake Huron, including the Bruce Peninsula.

DESCRIPTION

The spiders vary greatly in their markings at different stages and in different regions. The one unchanging feature is the general blackness of the body and legs, and the hourglass-shaped red mark on the underside of the abdomen. For this reason any shiny black spider should be treated with caution. Black widows never appear to be "hairy" or "furry", and they are almost always found on cobwebs.

All the early stages have various white, or pale yellow and red markings on the upper surface. These may be a central line of spots, or a single bar, which may have slanting bars on either side. On the underside there is usually a red patch shaped like an hourglass.

The adult male has the same markings as the early stages, but the female has few or none. The red hourglass may be reduced to two triangles or dots in both species found in Canada.

¹ Retired 1969

² *Latrodectus hesperus* Chamberlin X Ivie in Western Canada and *Latrodectus variolus* Walckenaer in Ontario

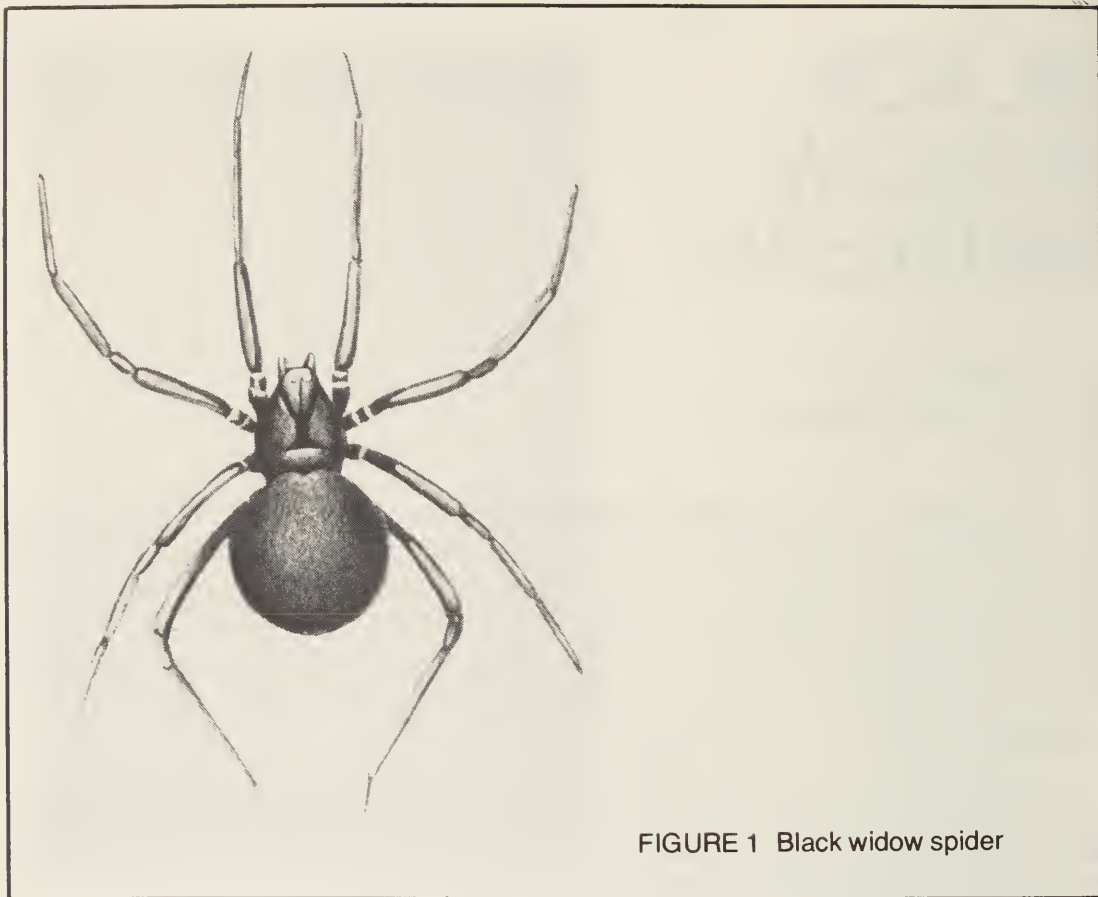


FIGURE 1 Black widow spider

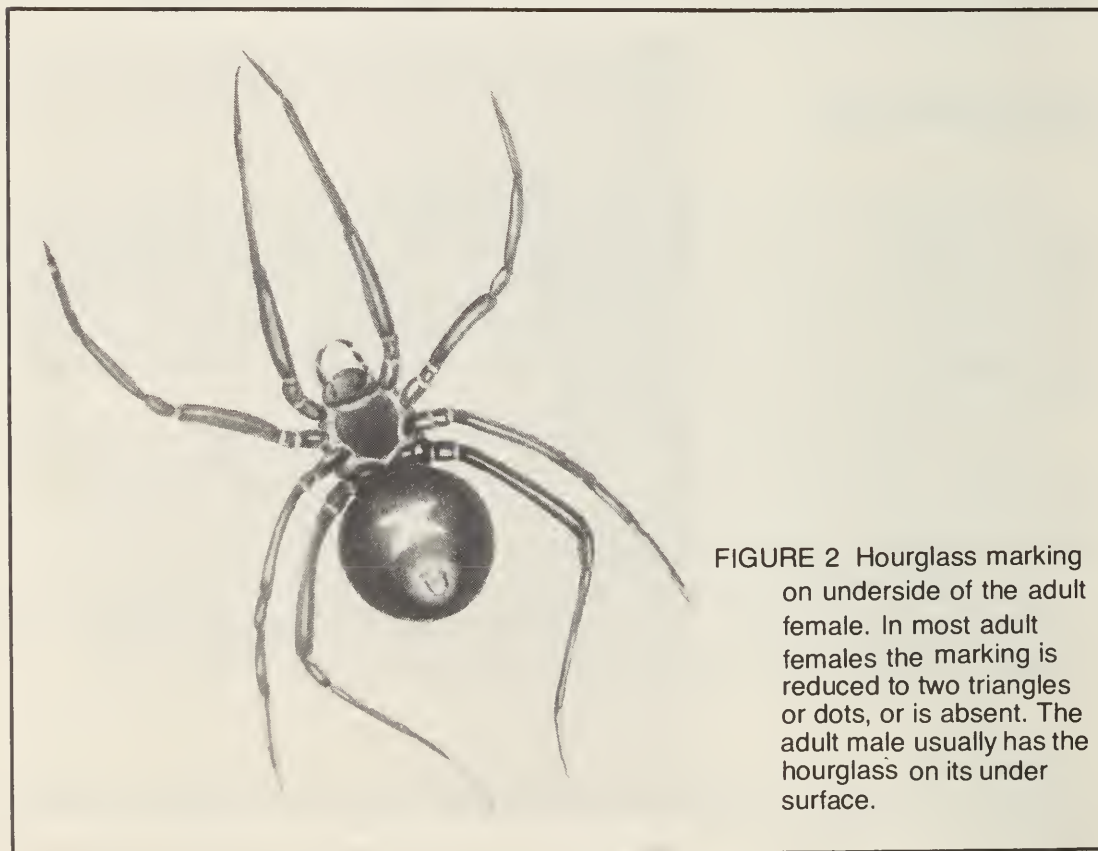


FIGURE 2 Hourglass marking on underside of the adult female. In most adult females the marking is reduced to two triangles or dots, or is absent. The adult male usually has the hourglass on its under surface.

LIFE HISTORY

The black widow is so named because it is commonly believed that the female devours the male after mating. This sometimes happens, but males have been observed to survive several matings.

The female lays several batches of eggs in a season (6 to more than 20). Each batch may consist of 200 to 250 eggs, and is enclosed in a waterproof silken bag that hangs from the web by threads. The eggs hatch 2 weeks to a month after being laid, depending on the temperature.

The young spiders feed on the tissues and blood of any available small insects or their own brothers and sisters. They molt, or shed their skins, seven to nine times before becoming adults. The period of development from egg to adult may extend to a year.

The adult female, with the legs extended, may be as long as 32 mm. The body is about 6 mm wide. The male is slightly smaller, being about 30 mm long.

Black widows are most common in country districts, but are often found on the outskirts of towns and in new subdivisions. They usually spin their webs in dark, dry places such as empty rodent burrows, woodpiles, outdoor privies, and the corners of basements. They are most commonly seen in late summer and fall, when they may move into houses for winter shelter. When they have entered homes, black widows like to get into warm bedding or into clothing removed for the night. They are therefore a hazard in beds, and when trapped between the clothing and the skin on dressing.

The web is a shapeless collection of silken threads strung in a generally horizontal fashion across a convenient space. The species cannot be identified from the shape of the web. The spider rests in a corner ready to rush out and attack any small insect that disturbs the web. If the web is violently disturbed, as by a human, it will retreat and hide. They are, however, especially dangerous under the seats of outdoor privies. The female avoids light, and during the day she hides under objects, or in her retreat. The black widow attacks any object that touches her web, but feeds mainly on insects. When spiders feed they inject a predigestive liquid into the wounds of their prey and then suck up the digested food.

CONTROL

The best control is prevention. Since the spiders enter homes from their outdoor haunts, keep them away from the house by clearing up all possible shelter near the walls.

- Burn all unnecessary litter, and tear down unused outbuildings.
- If you have a woodpile, stack it away from the house.
- Surround the house with a cultivated border, or plant grass close to the foundation and keep it short.

- Keep a brush or short-handled broom in outdoor privies, and sweep away webs from under the seat frequently.

Chickens are said to relish the spiders, and if allowed to range will clean them up in short order.

If the spiders have established themselves indoors, chemical control may be necessary. Spray the webs and their immediate surroundings with a residual household insecticide. Apply a coarse droplet spray, but stop before it begins to run off. In outdoor privies, spray under the seat. In basements, paint the solution around the window frames and along the woodwork adjoining the foundation walls with a small brush.

To find out which insecticides may be used in your province, ask officials of your provincial departments of health, agriculture or environment.

CAUTIONS: Follow closely all the directions and cautions listed on the insecticide label. Keep insecticides out of the reach of children and pets, and store them only in properly marked containers. If any insecticide gets on your skin, wash it off at once with soap and warm water.

SYMPTOMS AND TREATMENT OF THE BITE

Not all black widows can pierce the human skin, and the people bitten are not equally susceptible to the poison. The severity of the bite depends mainly on the following factors:

- Age, size, and condition of the person bitten. Babies and aged persons are more susceptible than healthy adults.
- Age and condition of the spider.
- Amount of poison injected. This depends on how recently she has used her fangs.
- Location of the bite on the victim. Bites on hands or feet are less dangerous than those on the trunk or head.
- Susceptibility of the victim.
- Promptness of treatment.

Symptoms

The bite may not be felt when it occurs, and the only evidence may be a pair of tiny red spots where the fangs have pierced the skin. Pain may soon develop, spreading throughout the body, but being most intense in the abdomen. The abdominal muscles become cramped and rigid. The patient may feel chills and sometimes fever. The pain is at its worst at about the third hour, and can be expected to pass away gradually in 18 to 48 hours. There may also be increased blood pressure, profuse perspiration, and nausea. Other symptoms may include a burning sensation of the skin, constipation, urinary retention, and hyperactive reflexes.

Treatment

- Call a doctor immediately.³
- Reassure the patient, and keep him lying down and warmly covered. Put a hot-water bottle or heating pad on the abdomen.
- Wash the area of the wound with soap and water, stroking away from the bite, not to wash any of the venom into it. Apply an antiseptic to prevent secondary infection.
- Put an ice bag on the wound, to slow down the spread of the poison.
- Give the patient plenty of water or weak, sweet tea to drink. Do not give alcohol, as this will hasten the spread of the poison.
- If no doctor is available, continue the ice on the wound and warmth on the abdomen until the pain passes away.

If at all possible, catch the offending spider so that it can be identified. Put it into a vial or jar, and do not make holes in the lid; a black widow once bit a boy severely through such a hole. If denatured or rubbing alcohol is available, the specimen may be preserved in that. Send the specimen or any request for more information to your local health officer, your provincial entomologist, or Information Services, Agriculture Canada, Central Experimental Farm, Ottawa, Ontario, K1A 0C7.

³ Most doctors give intravenous calcium gluconate (10 mL of a 10% solution) or an antivenom, and may give morphia to relieve pain.

