



## Yellow Sac Spiders

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### What You Should Know

- The yellow sac spider has a necrotic bite and is of concern in Utah.
- These spiders are bright-yellow to bright-green in color with darkened "feet."
- Yellow sac spiders are nocturnal, and spend the day in white, flattened sacs; indoors they can be found in the corners of walls and ceilings.
- Control options include both exclusion from the house and cultural practices to minimize habitat near the exterior of the house.

Most Utahns are familiar with the hobo spider (*Tegenaria agrestis*) and its potentially harmful bite. However, most Utahns don't know that there is another spider commonly entering homes that may have a similar, but less toxic bite than the hobo—the yellow sac spider *Chiracanthium inclusum* (Fig. 1). This fact sheet discusses the biology of the yellow sac spider common to Utah, the effects of its venom, and more importantly, how to exclude them from your house.

### Description

Yellow sac spiders vary in length, but average 6mm (about the size of a nickel). They have no distinctive markings except a brownish tint to the mouth and eyes. Their legs are slightly longer than the body, and the first two legs are longer than the others. All the legs appear to have dark "feet," which is caused by an aggregation of dark, dense hairs toward the tip of their legs. Except for sex characters, males and females appear similar, with males being a little smaller. Scientists observed that the spider varied in color according to the food it ingested. After eating a bright-green lepidopteran caterpillar (moth or butterfly larvae), the spider became noticeably green. Immature spiders that fed on red-eyed fruit flies assumed a rosy hue, and those that fed on common house flies became gray.<sup>2</sup>



Fig. 1. Adult female yellow sac spider (*Chiracanthium inclusum*).<sup>1</sup>

Members of the spider family Clubionidae, or the sac spiders, are hunters that spend most of their time on the ground under rocks, logs, debris, etc. Spiders in the genus *Chiracanthium* (longlegged sac spiders), however, have large tufts of specialized hairs (scopulae) on their "feet" (tarsi) that allow them to readily climb. Because of this adaptation, yellow sac spiders are often found hunting in grasses, shrubs, and trees. Accordingly, they may also be found on walls and ceilings of homes.

### Life Cycle

The yellow sac spider life cycle begins with egg hatch. On average, males take 119 days to reach maturity, and females take about 134 days. Developmental times can range from 65 to 273 days depending on environmental factors such as temperature, humidity and photoperiod. Females produce egg sacs about 14 days after mating, and stay with the eggs and immature spiders for about 17 days. Females can lay another egg mass about 2 weeks after the immatures disperse. On average, this cycle occurs two times, but can range from one to five times. There is one generation per year in Utah, but overlapping generations are common.

Adults may be found outside from April to October with an increasing population of both mature and immature spiders throughout the summer. They are suspected to overwinter primarily as sub-adults.

Their ideal habitat is in trees and shrub-weed borders surrounding open expanses, but are common in homes. They are nocturnal, meaning they are most active at night. During the day, they retreat in small (3/4"), white "cocoon" that may be completely closed, or open on one or both ends. These sacs are most frequently seen in the corners of rooms, or where the ceiling meets the walls, and can be constructed in 10 to 15 minutes. Outside they may be found rolled up in leaves

## Life Cycle Continued

or other debris. They are also common anywhere there are small, tight places that offer protection from predators. Not only are these sacs used for daytime retreat, but for other functions such as molting (shedding their outer "skin" in order to grow larger), mating, egg-laying, and hibernating.

Immatures and adults can disperse by ballooning with silken threads. When spiders reach the top of vegetation or structures, they excrete a long strand of silk that may contact and stick to another plant or object. The spiders can use this silk as a "bridge" between the structures. If the silk does not hit another structure it eventually becomes long enough that the spider becomes buoyant in the air, and is carried by the wind to a new destination.

## Medical Importance

Yellow sac spiders may be responsible for most alleged spider bites. Because of their nocturnal activity and climbing ability they can accidentally come into contact with humans at night. These spiders show more aggression than other spiders, and may bite repeatedly if kept in contact with the skin, either by rolling over on one in bed, or by having one stuck inside your clothing next to the skin. The bite is cytotoxic, meaning it can cause skin death, much like a hobo or brown recluse (*Loxosceles reclusa*), but much less severe.

Initially, bites may be associated with sharp pain, or be painless. Burning at the bite location may occur for 30 to 60 minutes. Occasionally, systemic reactions such as nausea, fever, malaise, stomach cramps, or skin necrosis may occur, but are rare.<sup>3</sup> Within 8 hours of the initial bite, a reddened area filled with puss may develop. A noticeable eschar (dead skin tissue that may slough off naturally) may form. In most cases it will come off naturally and the wound will heal in a few weeks. It is important that this wound does not become contaminated with bacteria, causing infection. Most yellow sac spider bites only form a hardened red bump,

which heals in a few weeks.

If you are bitten by a yellow sac spider (or any spider) it is critical to capture the spider so that it can be identified. An ice compress should be applied to bite area to reduce swelling. Clean and sterilize the bite wound and monitor the symptoms. If systemic reactions occur, or an open sore develops, contact a physician immediately.

There is still some controversy concerning the toxicity of a yellow sac spider bite. Some claim that it can cause necrotic lesions, while others believe that necrotic lesions attributed to yellow sac spiders are caused by bites from other organisms, health problems, disease, etc.

## Control Options

To control yellow sac spiders (and other spiders and insects that commonly enter the home), the following exclusion and sanitation techniques are recommended:

- Remove spider webs, egg sacs, leaf litter and vegetation adjacent to the house foundation.
- Store wood piles away from the house.
- Frequently clean inside closets, attics, basements, and other storage areas.
- Vacuum behind furniture, under baseboard heaters or radiators, in closets, and in other undisturbed areas.
- Remove harborages, such as clutter, that provides hiding places for spiders and insects.
- Reduce possible food sources (other insects).
- Turn off exterior lights at night.
- Use caulk to seal cracks or crevices in the foundation or where pipes, etc., enter the house.
- Install seals (weather stripping) around doors and windows that have large gaps.
- Repair broken screens or windows.
- Reduce moisture content in the house.
- Reduce your chance of being bitten in bed by removing the bedskirt and moving the bed 8 inches away from the wall.

<sup>1</sup> Image courtesy of Joseph Berger, Bugwood.org.

<sup>2</sup> Peck, W.B., and W.H. Whitcomb. 1970. Studies on the Biology of a Spider, *Chiracanthium inclusum* (Hentz). Agricultural Experiment Station, Bulletin 753.

<sup>3</sup> Hedges, S.A., and M.S. Lacey. 1995. PCT Field Guide for the Management of Urban Spiders. Pest Control Technology.

**Precautionary Statement:** All pesticides have benefits and risks, however following the label will maximize the benefits and reduce risks. Pay attention to the directions for use and follow precautionary statements. Pesticide labels are considered legal documents containing instructions and limitations. Inconsistent use of the product or disregarding the label is a violation of both federal and state laws. The pesticide applicator is legally responsible for proper use.

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