

Silver-Spotted Skipper; *Epargyreus clarus* (Cramer) (Insecta: Lepidoptera: Hesperidae: Pyrginae) ¹

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Introduction

The silver-spotted skipper, *Epargyreus clarus* (Cramer), characterized by a large white spot on the underside of each hind wing, is one of our largest, most widespread and most recognizable skippers.

Distribution

The silver-spotted skipper is found throughout most of the United States and into southern Canada (Scott 1986). In the West, it is more restricted to mountainous areas (Brock and Kaufman 2002).

Description

Adult: The wing spread is 1.75 to 2.40 inches (Daniels 2003). The upper-side of the wings is brown with a median row of yellowish-gold spots on the forewing that is also visible from beneath. The wing fringe is dashed with white. The under-side of the wings is brown with a large median irregular-shaped white patch on each wing and a short rounded tail. The Butterflies of America web site (Warren et al. 2007) has excellent photographs of pinned male and female adults.



Figure 1. An adult silver-spotted skipper, *Epargyreus clarus* (Cramer), feeding at a flower. Credits: Photograph by: J.F. Butler, University of Florida

Egg: The eggs are green with a red top.

Larva: The larva is up to 2.0 inches in length. The head is dark reddish brown with large yellow eye patches. The prothoracic shield is brown. The abdomen is yellow with darker transverse stripes and spots. Prolegs are bright orange.

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Figure 2. Larva of the silver-spotted skipper, *Epargyreus clarus* (Cramer), in opened leaf-shelter on false indigo. Credits: Photograph by: J.F. Butler, University of Florida

Pupa: The pupa is dark brown with black and white markings.

Life Cycle and Biology

Adults have the jerky flight typical of many skippers. They frequent edges of forests, swamps, brushy areas, and other open areas where nectar plants are found. Adults have long "tongues" and feed on nectar from a variety of flowers (Ifter et al. 1992, Tooker et al. 2002.), mud (Scott 1986, Brewer and Winter 1986), and occasionally on animal feces.

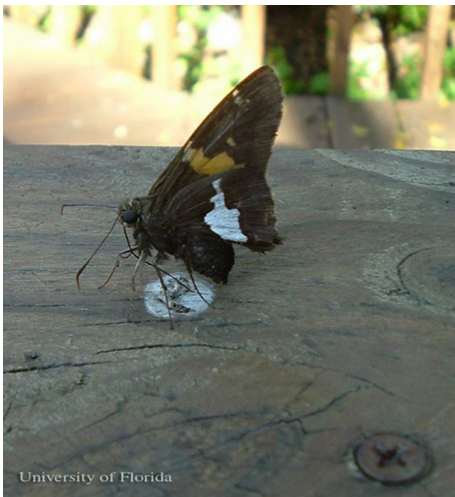


Figure 3. An adult silver-spotted skipper, *Epargyreus clarus* (Cramer), feeding at bird dropping. Credits: Photograph by: D.W. Hall, University of Florida

Adult males rest on tree limbs or other tall vegetation and fly out to investigate flying objects — including females. Adult females are reported to lay their eggs directly on the host plants or occasionally on nearby non-host plants (Cech and Tudor 2005, Daniels 2003, Minno and Minno 1999, Opler and Krizek 1984).

Like most skippers, silver-spotted skipper larvae live in leaf shelters. First instar larvae make shelters on the apical halves of leaves by cutting a flap on the leaf margin, folding it over and attaching it with silk. Larger larvae often silk several leaves together to form shelters. During development, the larvae make four distinct types of shelters (Lind et al. 2001, Weiss et al. 2003). They leave the shelters only to feed or to make larger shelters. Presumably a major function of the shelters is protection from predators. However, *Polistes* (Vespidae) wasps learn to recognize the shelters to find the larvae and then extract them from the leaf nests (Jones et al. 2002, Weiss et al. 2004). The sphecid wasp, *Stictia carolina* (Fabricius), also sometimes provisions its nests with silver-spotted skipper larvae (Hook 1981).

When disturbed, larvae regurgitate a greenish, bitter-tasting, defensive chemical (Minno et al. 2005).

Insect frass may provide chemical cues for parasitic wasps to the location of prey insects (Weiss 2006). Many caterpillars that live in leaf nests, including the silver-spotted skipper, forcibly eject their frass for considerable distances to eliminate these chemical cues. Silver-spotted skipper larvae utilize their anal comb to throw their frass a distance up to 38 body lengths (Weiss 2003).

In addition to predation and parasitism by insects, the larvae are susceptible to a *Baculovirus* (nuclear polyhedrosis virus) infection (Nordin 1975).

When mature, the larvae pupate inside the leaf nest. The pupal stage is the overwintering stage (Allen 1997, Minno et al. 2005). There are three or more over-lapping generations in Florida — fewer in more northern parts of the distribution (Glassberg et al. 2000, Minno et al. 2005, Wagner 2005).

Hosts

The larvae feed on leaves of herbs, vines, shrubs, and trees in the pea family (Fabaceae) including false indigobush (*Amorpha fruticosa* L.), American hogpeanut (*Amphicarpaea bracteata* [L.] Fernald), Atlantic pidgeonwings or butterfly pea (*Clitoria mariana* L.), groundnut (*Apios americana* Medik.), American wisteria (*Wisteria frutescens* [L.] Poir.) and

the introduced Dixie ticktrefoil (*Desmodium tortuosum* [Sw.] DC.), kudzu (*Pueraria montana* [Lour.] Merr.), black locust (*Robinia pseudoacacia* L.), Chinese wisteria (*Wisteria sinensis* [Sims] DC.) and a variety of other legumes (Minno et al 2005, Scott 1986). Females will oviposit on least snoutbean (*Rynchosia minima* [L.] DC.) and coralbean (*Erythrina herbacea* L.) but the larvae will not feed on these species (Scott 1986).



Figure 4. American hogpeanut, *Amphicarpaea bracteata* [L.] Fernald, a host plant for the silver-spotted skipper, *Epargyreus clarus* (Cramer). Credits: Photograph by: D.W. Hall, University of Florida



Figure 5. Dixie ticktrefoil, *Desmodium tortuosum* [Sw.] DC., a host plant for the silver-spotted skipper, *Epargyreus clarus* (Cramer). Credits: Photograph by: D.W. Hall, University of Florida



Figure 6. Kudzu, *Pueraria montana* [Lour.] Merr., a host plant for the silver-spotted skipper, *Epargyreus clarus* (Cramer). Credits: Photograph by: D.W. Hall, University of Florida



Figure 7. Black locust, *Robinia pseudoacacia* L., a host plant for the silver-spotted skipper, *Epargyreus clarus* (Cramer). Credits: Photograph by: D.W. Hall, University of Florida



Figure 8. Chinese wisteria, *Wisteria sinensis* [Sims] DC., a host plant for the silver-spotted skipper, *Epargyreus clarus* (Cramer). Credits: Photograph by: D.W. Hall, University of Florida

Economic Importance

Although it is reported to feed on soybean (*Glycine max* [L.] Merr.) (Minno and Minno 1999) and kidney bean (*Phaseolus vulgaris* L.) (Scott 1986), the silver-spotted skipper is never sufficiently common to be of economic importance and control measures are not required.

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