



# BUG BIZ

Pest Management and Insect Identification Series



## *Lepisma saccharina*, Common Silverfish (Zygentoma: Lepismatidae)

Ilgoo Kang, Forest Huval, Chris Carlton and Gene Reagan

### Description

The general anatomy of members of the order Zygentoma, which includes silverfish, is among the most archaic body forms represented in insects. Wingless ancestors of this group evolved early during the evolution of insects, at least 400 million years ago. The modern body forms retain many features that are similar to these early ancestors. The common name is derived from the shiny silvery color, fishlike body shape and rapid movements. Adults are wingless and about one-half inch (12 millimeters) in body length. The entire body is flattened, and the head bears a pair of long, thin antennae that are as long as the body. The eyes are small and widely separated. Three long, tail-like appendages extend from the end of the abdomen. The middle appendage extends straight back, and the other two extend sideways at sharp angles to the body. The body is covered by shiny silver scales. Immature stages of silverfish resemble miniature versions of adults. Other common names that reflect the appearance and habits of silverfish include silver louse, silver witch and sugar fish.



Common silverfish. Joseph Berger, Bugwood.org.

### Life Cycle

Body forms of most insects change as they mature in a transformation called metamorphosis. Insects lacking metamorphosis development gradually and are referred to as ametabolous. Silverfish and other members of the order Zygentoma are ametabolous insects, so immatures and adults differ only in size. Females deposit a few eggs at a time in narrow cracks and may produce up to 100 eggs during a normal life span. Immature silverfish hatch from the eggs within a few weeks and begin growing and molting. After several molts, the insects reach the adult stage and begin reproducing. Maturation times vary depending on temperature.

### Ecological Significance and Pest Status

The common silverfish is a well-known household pest that feeds on fabrics, paper, glue and other common dried household materials. Books can be extensively damaged by uncontrolled infestations of silverfish because they feed on paper and binding glues. Likewise, insect specimens are sometimes destroyed by silverfish. Although they have chewing mouthparts and sometimes feed on animal products, they do not bite people.

The common silverfish is a ubiquitous household pest worldwide. Several other species of zygentoman insects also occur as building or house pests. A similar species, the firebrat (*Thermobia domestica*) is a darker, mottled brown insect that prefers warm areas of buildings near facilities such as furnaces, hot water heaters and pipes. Their habits are similar to those of common silverfish. Both species occur in Louisiana, but the common silverfish is more frequently encountered.

### Control

Because silverfish prefer darkness and actively avoid lit areas, infestations can go undetected. Silverfish

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can often be seen scurrying for cover when lights are turned on suddenly or infested materials are moved for cleaning or rearranging. Nonchemical treatments, such as vacuuming, removing or sealing paper and fabric food sources, and sealing cracks are effective management strategies. Freezing for several days will kill silverfish in infested materials that are not damaged by such treatments. Common silverfish prefer moist areas, so dehumidification has been reported as an effective control method. If infestations are large or valuable materials are at risk, chemical control may be required. Products containing boric acid are approved for silverfish control and readily available. Always follow label directions when using any kind of chemical formulation, and make sure it is approved for the targeted pest.

## References

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Sweetman, H.L., 1939. Responses of the silverfish, *Lepisma saccharina* L., to its physical environment. Entomological Society of America 32: 698-700.

## Contact Us

For advice about arthropod identification or diagnosis, contact the LSU AgCenter Department of Entomology. Reach the department through the Contact Us webpage:

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