

PHASMATODEA



Walkingsticks / Stick Insects / Leaf Insects / Phasmids

The name Phasmatodea, derived from the Greek "*phasm*" meaning phantom, refers to the cryptic appearance and behavior of these insects.

Classification	Life History & Ecology	Distribution
	Physical Features	Economic Importance
Major Families	Fact File	Hot Links

Life History & Ecology:

The leaf and stick insects are sometimes grouped as a family or suborder of Orthoptera. All species are herbivores. As the name "walkingstick" implies, most phasmids are slender, cylindrical, and cryptically colored to resemble the twigs and branches on which they live. Members of the family Timemidae (=Phyllidae) bear a strong resemblance to leaves: abdomens are broad and flat, legs have large lateral extensions, and coloration is primarily brown, green, or yellow. Most walkingsticks are slow-moving insects, a behavior pattern that is consistent with their cryptic lifestyle. In a few tropical species, the adults have well-developed wings, but most phasmids are brachypterous (reduced wings) or secondarily wingless. Stick insects are most abundant in the tropics where some

species may be up to 30 cm (12 inches) in length. Females do not have a well-developed ovipositor so they cannot insert their eggs into host plant tissue like most other Orthoptera. Instead, the eggs are dropped singly onto the ground, sometimes from great heights.

Distribution:

Common in tropical and subtropical climates where they are found living on their host plants.

	North America	Worldwide
Number of Families	2	3
Number of Species	32	>2500

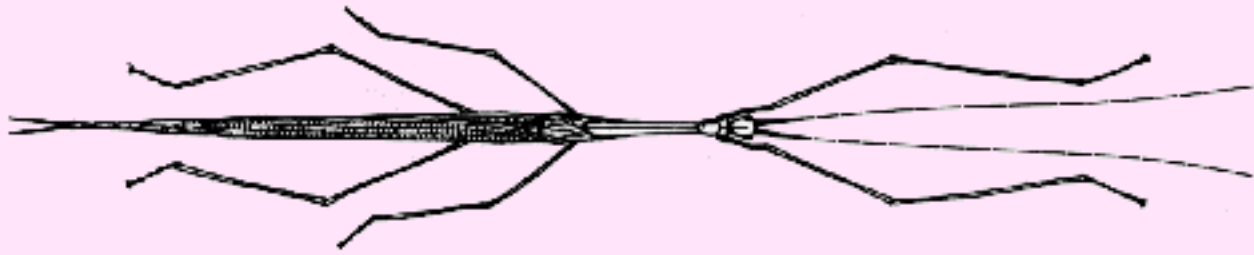
Classification:

Hemimetabola
incomplete development (egg, nymph, adult)

Orthopteroid
closely related to Orthoptera and Dermaptera

Physical Features:

Adults and Immatures



1. Antennae long, slender
2. Mouthparts mandibulate, prognathous
3. Body long, cylindrical
4. Prothorax shorter than meso- or metathorax

5. Leg segments long and slender
6. Tarsi 5-segmented
7. Wings often reduced or absent
8. Cerci short, unsegmented

Economic Importance:

In temperate zones, walkingsticks are seldom abundant enough to cause injury to their host plants. In the tropics, however, some species have been known to defoliate forest trees and cause economic losses to shrubbery and shade trees.

Major Families:

- **Phasmatidae (Walkingsticks)** -- mimic sticks and twigs
- **Timemidae (Leaf Insects)** -- mimic leaves and foliage

Fact File:

- Phasmid eggs often resemble seeds. The eggs may remain dormant for over a year before hatching.
- In some parts of the tropics, stick insects may be so abundant that eggs falling out of the trees may sound like rain on a tin roof.
- Some walkingsticks are sold as pets. They are easy to rear if kept in a warm environment with fresh foliage from their host plant.
- Glands located on the thorax of many species can produce a foul-smelling liquid that repels predators.
- When attacked by a predator, the legs of some phasmids may separate from the body (autotomy). Some species can even regenerate lost legs at the next molt. These are the only insects able to regenerate body parts.
- Several species produce offspring from unfertilized eggs (parthenogenesis). Males may be uncommon or unknown.
- Some phasmids change color with changes in temperature, humidity, or light intensity. Pigment granules in the epidermis disperse at night or on cool days, darkening the cuticle and absorbing more heat.

Hot Links and Illustrations:

- [Mark Watson's Stick Insect Page](#)
- [Gordon Ramel's Phasmida Page](#)

- [Ecowatch Phasmatodea Page](#)
- [Tree of Life Web Project - Phasmida](#)
- [Discover Life - Phasmatodea](#)

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