

Husbandry Data Sheet

Common Name: Giant Prickly Stick / Mcleary's Spectre **Latin Name:** *Extatosoma tiaratum*

Family: Phasmatidae

Order: Phasmatodea

Class: Insecta

Phylum: Arthropoda

Natural History: Range: Australia and New Guinea; Habitat: Coastal forests; Wild diet: Eucalyptus and other leaves; Life span: About 1 year for females; males have a shorter life; Reproduction: They develop from eggs by incomplete metamorphosis.

Permits Required: Yes

Life Stage: Adult

Ease of Care: Easy

Housing:

Temp: 70 F

Humidity: 60%

Substrate: moist peat

of Animals per Exhibit: 12

Choose One: Group

Compatible Species:

Enclosure Description: 10 gallon tank vertical

Lighting/Photoperiod: natural light

Furniture/Props: eucalyptus perching

Escape Concerns:

Other Concerns/Precautions: This species drops eggs continuously so efforts should be made to collect every egg.

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Diet/Frequency of Feeding: continuous eucalyptus is available to them

Water Source/Frequency: always available

Care: Daily

Enrichment:

Medical/Health Concerns:

Treatment:

Keeper Safety:

Other Concerns/Precautions:

Education

Do you handle species directly with the guests? : Yes

If Yes or No how do you use the species with the guest: We only present females outside of their enclosures and present them both on hand or on a small branch. When we have young hatchlings we show them in large mason jars. Folks are fascinated to watch them move.

Conservation/Population Status:

Message: 1. As their name implies, stick insects look like sticks and leaves, and in the US they are often called walking sticks. They live and feed on plants and use their remarkably effective camouflage to avoid being eaten—hiding in plain sight! There are about 2,500 species in 3 families found mainly in warm regions. They vary in size from 1 inch (2.5 cm) to almost 1 foot (29 cm)—the Southeast Asian stick insect, *Pharnacia serratipes*, is the longest insect in the world.

2. The order and family name of the prickly stick insect comes from a Latin term that means "ghost"—a testament to the camouflage effectiveness of this species. The specific epithet *tiaratum* refers to the head, which is conical with spines on the top resembling a tiara.

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3. This species is large compared to many other species and in shape and color resembles dried leaves. They possess tiny spines on the head, body, and legs. The leaf-like appendages extend from the legs and abdomen. This species is clad in a range of hues, from light beige to somber mahogany, but the color can vary with humidity and temperature. In fact, some stick insects can expose or conceal pigment granules in their skin cells, making their colors lighter or darker. This helps to control body temperature—the insects remain pale in the sun, reflecting heat; as the temperature drops at night, they become darker to absorb heat.
4. Giant prickly stick insects show remarkable sexual dimorphism. Females are thicker and longer than males, and their wings are so small that they cannot fly. Males are more slender, with long wings capable of downward flight. Males have a smooth abdominal area; females are more spiny.
5. The males have an insatiable sex drive and will often mate or attempt to mate in lieu of eating. Most males and females will continue to eat while copulating, which is an extended affair lasting an hour or more, facilitated by claspers on the male's abdomen, and culminating with the male's transfer of a spermatophore to the female. The male will often remain mounted on the back of a female for days before and after copulation. This mate guarding has been shown to increase the number of offspring sired by the male in other insects and may perform the same function in this species. The offspring produced by sexual reproduction are both male and female.
6. These interesting insects do not have to undergo sexual reproduction. They may also reproduce asexually by a process known as parthenogenesis, which is fairly common among the stick insects. All the offspring produced parthenogenetically will be females identical to the mother.
7. Females lay about a dozen lentil-sized eggs at a time (during her lifetime, however, she may lay up to 1,000 eggs). Actually, laying doesn't describe the process properly: the female forcefully ejects the eggs, which fall to the forest floor. The eggs are mottled gray and brown and have a knob called a capitulum at one end surrounded by a dark brown to black collar. This knob is attractive to ants, which carry the eggs back to their underground nests, eat only the knob, and toss the egg into the rubbish dump inside the nest, where they can develop safe from predators and fire in 5-8 months.
8. Hatchlings, called nymphs, are black with red heads—perfect mimics of Australian stinging ants (*Leptomymex* spp.)—and move around at a frantic pace. One writer described them as having the energy of an Energizer Bunny with an auxiliary battery pack! They grow through successive molts to adult size, color, and slow motion. Legs lost in molting juveniles will regrow to some extent, but non-molting adults cannot regenerate limbs.
9. Giant prickly stick insects do most of their eating at night, when their main predators, birds, are not active. During the day they remain as still as possible, relying on camouflage to reduce their rate of predation. When threatened the female prickly stick insect—also called Macleay's Spectre—will curl her tail over her body and snap with the back legs in a defensive "scorpion posture," although there is no sting at the end of the tail. In fact, these vegetarians don't bite either, so camouflage and their spiny exoskeleton form their main means of defense. However, they can also release chemical irritants from glands in the abdomen and use the spiny hind legs as pincers.
10. The Malays believe that stick insects bring good luck and may rear them in their homes. The Chinese cultivate one species for its feces, which is believed to cure asthma, gastric upset, and (you guessed it) act as an aphrodisiac. In the USA, prickly stick insects are perceived as potential agricultural pests capable of becoming established in the warmer states, so possession of this species is restricted to institutions under strictly controlled guidelines. Private hobbyists regularly keep this species in other parts of the world, however.
11. These insects were used in the film *Indiana Jones and the Temple of Doom* as fake scorpions.

Personal Comments:

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Date: 13-Jan-06 **Name of Institution:** San