

# Madagascar Hissing Cockroach

Insecta

Blattodea

Blaberidae

*Gromphadorhinini*

*G. portentosa*

**GEOGRAPHIC RANGE:** Madagascar Hissing Cockroaches lives only off the southeastern coast of Africa on the Island of Madagascar.

**HABITAT:** Madagascar Hissing Cockroaches live in large colonies on the floor of dry spiny forests of Madagascar.

**NICHE:** Madagascar Hissing Cockroaches live under bark, in leaf litter, or in tree cavities.

**DIET:** In nature, Madagascar Hissing Cockroaches are scavengers and feed on decaying matter such as fallen fruit and other organic material found in the leaf litter. In culture, Madagascar Hissing Cockroaches feed on Romaine lettuce, apples, oranges, mangos, carrots, dog kibble, and tetramin flakes.

## **PHYSICAL CHARACTERISTICS & ADAPTATIONS:**

**Description:** Madagascar Hissing Cockroaches are shiny brown and oval-shaped, with a dark head and legs.

They have no wings and a single pair of antennae. Males sport large horns, which they utilize during aggressive encounters with other cockroaches.

**Weight:** The weight of Madagascar Hissing Cockroaches range from .2 to .3 ounces.

**Habits and Adaptations:** Madagascar Hissing Cockroaches can make a hissing noise by expelling air through enlarged spiracles. MHC hiss when disturbed or alarmed, and they have pads and hooks on their feet that allow them to climb smooth surfaces. Females and nymphs hiss only when disturbed. A cockroach can move very fast, at approximately three miles per hour. Its sense of smell is so strong that it can recognize family and friends by distinct odors. Females produce an odor, called a pheromone, which attracts males for mating. The MHC moves away from light and, therefore, is nocturnal in activity. In the dark, they become more active and scavenge for meals.

**DENTITION:** Madagascar Hissing Cockroaches have chitinous teeth in their gizzard to help them digest food.

**SOCIAL BEHAVIOR:** Within a large colony of Madagascar Hissing Cockroaches, several smaller colonies exist. One male Madagascar will dominate and hold a territory with several females for up to three months, leaving only to feed. Aggressive hissing and posturing behaviors are used to warn away intruders. Females may come and go within these male dominated territories. Mating behavior is elaborate and involves posturing and hissing by the males to attract females.

**REPRODUCTIVE INFORMATION:** Madagascar Hissing Cockroaches are ovoviviparous, meaning that females produce eggs inside their body and give birth to live young. The female Madagascar Hissing Cockroach incubates the egg case for about 70 days, and up to 60 young are hatched over a two-day period. The young Madagascar Hissing Cockroach stays in close contact with the female for an extended time after birth. Nymphs undergo six molts in a span of approximately seven months before reaching the adult stage.

**LIFE SPAN:** The life span of Madagascar Hissing Cockroaches ranges from 2-3 years.

**MICELLANEOUS:** Unlike most cockroaches, Madagascar Hissing Cockroaches do not have wings. The Madagascar Hissing Cockroach is one of the largest species of cockroaches in the world, and is the only known insect species capable of hissing.

**SERC ANIMALS:** Madagascar Hissing Cockroaches

## Crickets

Class	Order	Family	Genus species
Insecta	Orthoptera	Gryllidae	Cricket

**Geographic Range:** All over the world, over 120 different species found in the US alone. They are found on every continent but Antarctica.

**Habitat:** Under logs and rocks in pastures, meadows, and sometimes along roadsides. Since plant material is essential to their diet they are most often found near dead or live plants.

**Niche:** Crickets can be a useful part of an ecosystem in that they renew minerals in the soil by eating and breaking down certain kinds of plants.

**Diet:** Organic materials, decaying plants, seedling plants, fungi, dead insects.

### **Physical Characteristics & Adaptations:**

Description: Most are brown but some are black or green with white wings, strong, large back legs, ears on their legs, rounded heads, long, thin antennae (extend from the head to the end of the abdomen), wings on either side of their body (front wings and hind wings that fold and hide underneath the front wings),

Weight: Due to their small size, there is little data on their actual, individual weight.

Habitats and Adaptations: Their hind legs are very large and cause the cricket to be able to jump far in the event of harmful external stimuli.

**Dentition:** Chewing mouthparts

**Social Behavior:** Males rub their forewings together to produce a chirping sound to attract females. This sound differs for each species and allows the crickets to find members of their own specific species. Their chirping is louder and more frequent when the temperature is warm.

**Reproductive Information:** After mating, females lay eggs in the soil (this can range from a few dozen to a few hundred eggs. Females have a part of their body toward the end of their abdomen called an ovipositor that is used to lay these eggs.

**Life Span:** One year or more, but usually cannot live through more than one winter.

**Miscellaneous:** Are often a source of food for other animals such as birds, spiders, certain wasps, beetles, lizards.

**SERC Animals:** Mealworms, crickets, rose-haired tarantula, Madagascar hissing cockroaches

## Mealworms

<b>Class</b>	<b>Order</b>	<b>Family</b>	<b>Genus species</b>
Insecta	Coleoptera	Tenebrionidae	Mealworms

### **Geographic Range:**

**Habitat:** Often found burrowing under logs, rocks, and in stored grains. When not found in the wild (sometimes in fields), they are most often found in grain storage facilities, barns, and areas of food preparation.

**Niche:** They break down excess materials in their environment.

**Diet:** Stored grains, decaying plant matter, and dead insects.

### **Physical Characteristics & Adaptations:**

**Description:** Can appear white/yellow/brown. They have smooth, worm-like bodies with 13-15 individual body segments. It has 6 legs.

**Weight:** 200 fully grown mealworms weigh 1 ounce.

**Habitats and Adaptations:** Rarely found in “natural” habitats, but have found their way into farms, grain storage facilities, and areas where food is produced.

**Dentition:** They possess mouth structures that allow them to eat.

**Social Behavior:** They respond to external stimuli in their environment.

**Reproductive Information:** No true reproductive information because mealworms are actually a part of the life cycle of the beetle. This life cycle goes from egg to larvae (commonly known as mealworm) to pupa to beetle.

**Life Span:** 90-115 days in the larval stage.

**Miscellaneous:** There are 20,000 species of mealworms in the world. They are the larval stage of the beetle.

**SERC Animals:** Mealworms, crickets, rose-haired tarantula, Madagascar hissing cockroaches

# Chilean Rose Tarantula

CLASS  
Arachnida

ORDER  
Araneae

FAMILY  
Theraphosidae

*Genus species*  
Grammostola G. Rosea

**GEOGRAPHIC RANGE:** Northern Chile, Bolivia, Argentina

**HABITAT:** Dry desert and scrub regions where they can burrow.

**NICHE:** Predators to tiny invertebrates such as grasshoppers, crickets, and moths. It is hunted by large mammals, reptiles, and other tarantulas.

**DIET:** Grasshoppers, crickets, moths, beetles, cockroaches, mealworms

## **PHYSICAL CHARACTERISTICS & ADAPTATIONS:**

Description: Two-part body. Hairy with two small claws. Brown with cream-colored and pink hairs. Generally grows to 4.5-5.5 inches.

Weight: 20-25 grams

Habits and Adaptations: Reproduce once a year. Maturation takes 3-10 years. Hunt by waiting for prey to wander by their burrows.

**DENTITION:** Small teeth at base of pedipalps which crush the exoskeleton of prey and inject digestive enzymes.

**SOCIAL BEHAVIOR:** Lives in solitude, can attack and eat other tarantulas.

**REPRODUCTIVE INFORMATION:** When male reaches maturity, it obtains sexual organs which are bulbs on the end of the pedipalps. The bulbs are used to transfer sperm from the sperm web to the female. In the weeks following fertilization, the female produces an egg sac and then the male dies.

**LIFE SPAN:** Females live up to 15 years, males live from 2-4 years

**MICELLANEOUS:** Desert creatures that do not require high humidity.

**SERC ANIMALS:** Chilean Rose Tarantula