

Hymenopus coronatus

(Orchid Mantis)



Size

Males: 1 – 1.5 inches Females: 2.5 - 3.5 inches

Distribution

Indomalaysian humid rainforests, Java north to China.

Difficulty

Medium

Humidity

60 – 80%

Temperature

73 – 84F / 23 – 29C

Total Lifespan (From Hatchling through Adulthood)

Males: 5 – 7 months

Females: 10 – 16 months

Color Variations

White with yellow or pink accents, rarely entirely yellow or greenish.
Young nymphs have a red-ish body with black appendages & head.

Introduction

Hymenopus coronatus is the famous orchid mantis, well-known for its amazing mimicry which both lures prey and protects the mantis from predators. This species also exhibits incredible sexual dimorphism:

Males are $\frac{1}{3}$ – $\frac{1}{2}$ the length of adult females. This adaptation helps reduce competition for nectar-feeding insects between males and females. Females hunt larger prey in order to lay more eggs, while the tiny males both need to eat less and can travel further. In captivity they can be sensitive when young, but become surprisingly hardy as they age, and females are very long-lived.

This pollinator specialist employs three very effective techniques which add to its mimicry. The first is its distinctive lobes and body proportions, which mimic the petals and shape of the orchid flowers. The second, which is invisible to us, is its ability to reflect UV light. This makes it an attractive “feeding site,” but unfortunately for the prey, they don’t realize that the mantis isn’t a flower until too late. Third, nymphs release a chemical from their mouth which is very close to a honeybee pheromone. These tools are used in deadly combination to trick *H. coronatus*’s preferred prey into flying right to it.

Sexing

As with all mantises, males have 8 external sternites, and females have 6. With strong magnification, orchids can be sexed this way as early as second instar. In this species however, several other characteristics can be used to help distinguish them. A female’s body size and leg lobes are much larger, she has a crest or horn that rises between her eyes (this appears around instar 4/5 and increases in size with every molt), and the bottom margin of the pronotum is typically colored green; though sometimes it may be brown as it is in males. In males this “necklace” is almost never green.



Keeping

H. coronatus should typically be kept individually. In complex, spacious setups though, same-sex groups may be kept together for most of their lives. However, it is important to note females are very territorial and require a sizable amount of space to feel comfortable. Cagemates will readily be eaten if the group isn't provided ample food, and smaller individuals are at risk even when food is plentiful. Orchid mantises need regular water to prevent mismolts, so daily misting is suggested.

Recommended space is as follows:

Females

Instar 1 – 4: 8 oz Deli Cup
Instar 4 - 7: 32 oz Deli Cup
Instar 8 – Adult: 80oz Cup or Bigger

Males

Instar 1 – 5: 8 oz Deli Cup
Instar 6 - Adult: 32 oz Deli Cup

Using the metric above, an appropriate amount of space should be provided for communal setups to minimize cannibalism.

Feeding

Instar 1 - 3 – *Drosophila* fruit flies (*D. melanogaster* works best at i1)

Instar 3 – 6 – Houseflies, Bluebottle Flies, Moths, Roaches

Instar 6 – Adult – Bluebottle Flies, Moths, Roaches, Honeybees

Females eat substantially more than males, beginning at about instar 4.

Highly fatty prey, such as mealworms, increase the risk of indigestion-related illness. *H. coronatus* is also vulnerable to disease from crickets, even banded crickets (*Gryllodes sigillatus*.)



Breeding

Getting Hymenopus to pair is a simple task, however timing the two sexes is somewhat difficult. Given the much smaller size of the males and the fact that they have two fewer molts, they will become adults in under 3 months if fed frequently. Females, on the other hand, take over 4 months and an additional 4 – 6 weeks in order to become sexually mature. Adult males only live 3 – 4 months at most (and frequently less,) so it helps to get individuals from different broods. With careful rationing of food and cooler temperatures, males can be slowed down enough to mate with female siblings who are kept warm and fed heavily.

Hand-pairing is easy with orchid mantises: simply coax the male to walk onto the female's back slowly. If she is receptive and has been releasing pheromones, the male will detect this and climb on and be interested in mating. At this point, the male will begin to drum on the female's wings with his forelimbs, rapidly smacking the wings to court her. He will do this throughout the mating process. It is not uncommon for the male to remain on the female after mating; he will guard the female and may mate with her again several times for up to two weeks. Provide food for both of them, he may catch food while on her back when hungry. If saving the male is very important, he can be removed when he has disconnected and moved to the upper part of her wings.

Once mated, females will lay 4 or more oothecae (depending on feeding and mating frequency) around every 3 weeks. After 4 – 6 weeks of incubation at 80 – 90% humidity, 40 – 80 black and red nymphs will hatch at once. Begin feeding after 36 hours, and mist the walls of their enclosures at least every other day.

