



Tiny Science

Mantis Madness!



How big will they be?

Newly hatched mantises are about $\frac{1}{2}$ " long. They are not typically fast, though they can hurry for a few inches if they're scared. They can not hurt you (but you can hurt them!) and they are safe to hold. To safely acquire a mantis, do not pick it up! They will be crushed. Instead, put your hand or fingertip in front of them like a step and give them a gentle touch on the tail end. They will scurry onto your waiting finger and wait there. To get a mantis off of you, you can flick or blow it towards a safe landing zone.

What if my kid drops the cup?

The mantis egg case is fairly well protected from shock and will survive drops and gentle handling. It is ok (and recommended!) to hold the ootheca with your hand to observe it. It is durable and can withstand gentle examination. Children can hold them safely with adult guidance.

Can they hurt me?

No, mantises aren't equipped to hurt us. Their mouths are tiny. They capture prey with their front legs and hold them while they eat them. It's brutal, but fascinating to observe! Find out how to keep mantises as terrarium pets, complete tanks, and guidance from Tiny Science.

Can they hurt my pets?

No, mantises are safe to eat and can not hurt pets. Spiders, cats, birds, and sometimes dogs enjoy preying on mantises. (where's the sad trombone?)





WHAT IF THEY HATCH IN MY HOUSE???

Two of my favorite days were when mantises hatched in my house. Baby mantises are tiny, slow, and safe to handle. They don't roam far from their hatching place and are easy to round up. It is not a recommended practice. It is completely easy to avoid an "uncontrolled hatching event" but they are not the end of the world. Customers who have experienced this rare wild-in-home event report that it brought joy and stories to their family. Again, it's not recommended!

What if it's too cold outside? Will they freeze? Starve?

Mantis kits will not be available until the environment can support them. Keep in mind that they are wild animals that normally live in

climates that have a hard winter (eg. Eastern Washington, east coast). The real concern is adequate food source, but they often rely on siblings for this!

How long will I wait?

Now that's a good question. Mantises are exothermic, which means they are the same temperature as their surroundings. If it's cold, they move slowly. And not just move, but metabolize and grow. As the weather warms, their development will speed up. The temperature of your home has a direct impact on the speed of development! Colder homes have longer waits. It is unsafe to keep an egg case warmer than 80 degrees, but consider keeping it in a warmer part of the house (out of direct sun, not in contact with a warm surface).

To get back to the question, we're not sure how long you will wait. We expect to see hatching begin within three or four weeks of receiving the kit. The wait can be as long as 6 weeks! If you have them that long, it is recommended to give them a "rain treatment."

What do I need to do to take care of the ootheca? (What is a rain treatment?)

You only need to:

1. Keep the kit out of direct sun or heat and wait for the hatching! If you've been waiting for longer than 4 weeks, Jen advises that you:
2. Give it a rain treatment, to combat the very dry plastic cup environment they are in. Rain treatment means taking the egg case out of the cup kit, holding it with your hand, and passing it once or twice under cold water, then replacing it to the cup kit. The water will be absorbed by the ootheca material and become available to the eggs inside.



How are there 200 eggs in there??

The ootheca is like an apartment building for eggs. Ootheca are created, a mama mantis expresses a foam from the tip end of her abdomen, tapping the stick or surface over and over until a small cap of foam exists. She oviposits (“puts eggs”) in a semi-circle on the top of the cap, then begins with the foam again, another layer over the eggs. Then another layer of eggs in semi-circle, then cover that layer of eggs with a layer of foam! An ootheca can have 10-30 layers of eggs and foam! What a fantastic anatomical architecture. Water permeable, shock-resistant, temperature-buffering, durable, and contains hundreds of offspring in a small space.

Will they eat pollinators?

Yep. Praying mantises are indiscriminate predators and they will catch and eat bees and flies. They will not, however, consume enough pollinators to make a significant ecological difference. They have increased the number and variety of organisms in every place I’ve released them. If you have a garden reliant on pollinators, you may consider releasing the mantises away from there.

Do they eat hummingbirds?

Very rarely, and even more rarely outside of the tropics. Mantis start small and only reach full size in the last month or two of their lives. By then, it is unlikely they would even encounter a hummingbird. More hummingbirds die from unsanitary feeders and Halloween decorations than by mantis predation. If you see a mantis on your hummingbird feeder, do relocate it.

Are they native? Is it responsible for me to be releasing these?

These mantises are **non-invasive naturalized non-natives**. To clarify that, they are not originally from here. They were introduced in the 1800s to Pennsylvania from China (non-native). They are generalist predators and are preyed upon generally by a variety of predators. This means that they don’t compete directly with natives, and they contribute to the ecology as prey (non-invasive). Their range has integrated into a patchwork of ecologies across the US and have shown that they do not disrupt the local ecology in a significant or negative way. They do well in Eastern Washington but not as well in Western Washington (maybe because of our wet winters), rarely reproducing or leaving ootheca. Islands are a different story ecologically, as they have a very compromised population flow and are more vulnerable to non-natives. While the consequences are probably minor, Jen respects island ecology and does not recommend releasing praying mantises onto an island.

What should I expect on hatching day?

It’s my favorite surprise of the year! A cup, long empty but for a strange brown ball at the bottom, now filled with a galaxy of tiny insects all holding their predatory pose! If you are so lucky to catch the hatching as it happens, be patient and leave the cup on a flat and stable surface. It is best for the emerging babies if everything is motionless. Babies squirm out of vents in the center seam of the ootheca. It takes one baby many minutes to wriggle out of the egg case, at which point the legs and body parts unfold like a Transformer: a full predator upon birth.



Once hatched, the outer shell of these babies will take some time to harden. They need to find a safe place to perch and wait as their exoskeleton dries and hardens from translucent yellow to camouflage brown. As more hatch, older babies will move up the cup and fill the cup. It is important to release some of the babies if there is constant movement from crowding and touching, but as long as everyone has space to stand still, you can keep them to observe for a few hours. They do not get their appetite for at least 12 hours.

It is extremely important to release all the babies in one place. Spreading them out will deprive them of their primary sustenance and likely result in a total population crash. This advice comes from years of trials with the goal of maximizing the number of mantises from a brood. The simple fact is that the brood relies on each other for food and it is rare to get more than a few adults from one ootheca. That's the way it works. Otherwise we would have way too many mantises!! Mantises are a food source for spiders and birds and many other organisms. They contribute to a robust ecosystem.



Can I keep them as indoor pets?

You sure can! Mantises are awesome and fascinating pets that take a medium amount of attention and care for the summer months. It is always an option to release them if you get tired of the care. If you go out of town, neighbors are usually happy to watch your tank for you.

Jen offers full terrarium setups for purchase or lease that will take the mantis from hatching through 3 to 4 months of growth. Once the mantis is greater than 2 inches (typically 3 months old), you can release your mantis or trade your tank for a tall set up. Tank set up availability is limited!

For help with raising mantises indoors, [see this page](#).