

# Blue Death Feigning Beetles

## Quick Facts

Range	Deserts of South Western United States and Northern Mexico
Life Span	About 8 years, one in captivity lived to be 15 years old.
Wild Diet	Omnivorous scavengers, rotting plants, animals and seeds
Zoo Diet	Fruit, particularly apples
Conservation Challenges	No current threats
Size	18 to 21 mm (just under 1 inch)
Predators	Tarantulas and other desert spiders

## Anatomy & Life Cycle

- Blue Death Feigning Beetles (BDFBs), like all beetles, have three body parts: head, thorax and abdomen and have two antennae.
- Blue Death Feigning Beetles cannot fly (their wings are fused under their hard exoskeleton shell) and cannot climb vertical, smooth walls since they don't have tarsal pads on their feet.
- It can be incredibly hard for BDFBs to reproduce successfully in captivity.
- BDFBs are very picky when it comes to the substrate, the ground, in which they lay their eggs. They won't lay eggs if the ground composition or humidity levels aren't just right.
- Females will dig an inch or two down and will lay hundreds of eggs, usually in spring to summer. In the wild the female beetle would wander over a wide area to lay her eggs but in a small container they are highly concentrated.
- Eggs are very tiny so hard to see, 1 mm or less.
  - Like all beetles, the BDFBs go through complete metamorphosis with four distinct life stages: egg, larva, pupa and adult.



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## Fun Facts

- They have strong jaws but don't bite because they don't use their jaws in defense
- These beetles are very hardy: they can dart across the desert floor in full, hot sun and can survive colder temperatures as well.
- BDFBs are a type of Darkling Beetle, the same category of beetles that mealworms grow into. Many people know mealworms from feeding them to their pet lizards! One big difference between mealworm darkling beetles and the Blue Death Feigning Beetles is that mealworms reproduce easily and quickly in captivity while BDFBs do not.
- BDFBs are also called Ironclad Beetles because of how strong their exoskeletons are. Their bumpy exoskeletons also resemble the sides of the Ironclad battle ships used during the American Civil War.



## Playing Dead

### Playing Dead

- One of the major predators of the BDFBs are spiders; desert tarantulas. To avoid these predators the beetles roll over and play dead rather convincingly.
- They do this for two reasons: 1) Spiders don't see very well and rely on vibrations from spider movement to be able to find their prey. If the beetles are rolled up on their backs and not moving, there are no vibrations to help the spider location the beetle and make a meal out of it. 2) Spiders don't like to eat stuff that is already dead. They want to hunt and kill their own prey so they know exactly how it died and that it didn't die of any mysterious disease.
  - BDFBs can play dead for a few minutes or a few hours, only rolling back over to a normal standing position once they think the coast is clear again.



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## Beetle Sunscreen!?

- When you live in the desert one of your top priorities is finding water and not drying out. To accomplish this goal Blue Death Feigning Beetles create a special wax that they excrete through the bumps on the back of their abdomens.
- This wax covers the whole beetle and keeps the water inside their bodies from evaporating in the hot desert sun.
- You can think of this wax like homemade sunscreen the beetle uses to protect itself.
- This wax is also responsible for the light blue color of the BDFBs. The darker spots you see on a Blue Death Feigning Beetle are areas that the wax has worn away. You'll see more spots like these on older beetles.



## Frequently Asked Questions

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"If I show a BDFB a picture or model of a tarantula, will it get scared and flip over?"

- We get this one a lot but have never seen a BDFB get scared of any models or pictures of tarantulas.

"How long do they play dead?"

- They can play dead for 30 seconds up to many hours. We once had a volunteer here that was afraid she had killed a beetle while working with it. In reality, it was just a very convincing actor and rolled back over about 4 hours later. The record for longest fake death would go to a beetle we were returning to it's larger terrarium after a stint at the Encounter Cart. As he went back into this terrarium it played dead and when we opened the terrarium again the next day, over 14 days later, it was in the same spot, still playing dead! He rolled over as if nothing had happened and went about his day!



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## Frequently Asked Questions

“How many Blue Death Feigning Beetles do you have?”

- We have about two dozen, 24, beetles that live in the Insectarium’s lab. These beetles are very popular at our Encounter Cart and are there often. We don’t want to over work our little beetles so we have many beetles so they can take turns being held by visitors and school groups. They are also fairly friendly beetles and live happily together in a big group like that.

“How can you tell which ones are male and which ones are female?”

- It is actually really hard to tell which beetles are male and which are female. Common clues of size, shape and color aren’t helpful with this species. Unless the beetles are in the act of mating (when the male will be on top of the female) it is almost impossible to tell the sex of the beetle.

“How long will they play dead”

- These beetles will play dead for as long as they feel they need to and will roll over again once the danger has passed. We have seen them play dead for only a few moments or minutes but some have played dead for a few hours!

