Superworms
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Introduction

Superworms, although small, are very interesting creatures. The Scientific name for superworms is *Zophobas Morio* (superworm fact sheet). These worms are not actually worms but *Moreso* or darkling beetles (superworm fact sheet).These creatures, before pupating can grow up to be over 2 inches long. They dwell underground or in grain. They live a few months before changing into the darkling beetle. They eat most stuff consisting of fruit all the way to dead animals! (superworm fact sheet)

Hypothesis

I predict the worms will prefer the deeper bedding to find cover, because I have observed that in shallow bedding they try their hardest to get as deep as possible and because superworms prefer dark environments including under logs and also in the ground (superworm fact sheet) to avoid danger.

Methods

To start, I got a clear tupperware about 4 by 8 inches to be able to see what is happening on the sides and the bottom. Next, I got a piece of paper and taped it to the middle across the short side as a divider (figure 1). Then I filled one side with about an inch of bedding and the other with a dusting of bedding that barely covered the bottom(figure 2). Once the habitat it was built, it was time to test it out. First, I had to mark the worms to know which one was being experimented at the time. Once they were marked I set only one at a time into one side of the experiment. I gave the worm 1 minute to acclimate to the new area and then began documenting its behavior for 3 minutes (figures 3a&b). I repeated this with all 4 worms on both sides.

Shallow Bedding 3 Minutes

Worm 1
- Tries to dive first thing
- Moves bedding by nuzzling head to find cover.
- Never stopped looking for cover

Worm 2
- Quickly dives head first to find deepest area
- This smaller worm not in as much of a rush once it could cover head

Worm 3
- Slowly observes surroundings but looks for more cover
- Slowly moves around once head is covered but keeps moving.

Worm 4
- Quickly finds deepest bedding
- Moves slow and but travels furthest distance of all 4 worms

Deep Bedding, 3 minutes

Worm 1
- Quickly digs midway through bedding
- Finds bottom 1:20 minutes in then back midway to look around

Worm 2
- Covers body within 20 seconds
- Never makes it to bottom

Worm 3
- 5 seconds to submerge whole body
- Hits bottom at 30 seconds
- Comes to middle then stays that depth for the rest of the time

Worm 4
- Covers body in 30 seconds
- Hits bottom 1:36 minutes in
- Stayed on the bottom

Results

The worms in the shallow area never stopped moving unless most of their body was submerged.The worms in the deep terrain immediately submerged themselves.

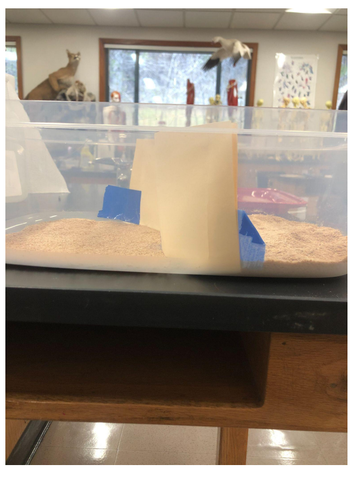
Discussion

I originally predicted the superworms would show discomfort in the shallow area because it is not their preferred depth. My data strongly supported my hypothesis, because the worms tried very hard to find the deepest part of the experiment as fast as possible in the shallow area. In the deeper terrain they became more content once they were fully submerged. For future research I believe using different beddings would be key. Possibly using a more natural bedding would help us really evaluate their preferences.

References

"Superworm Fact Sheet." www.crittersquad.com, 7 June 2018, retrieved April 28 2021.

Figure 1:
Side-view of the Setup



This figure shows how I divided the project set-up in half with paper and tape.

Figure 2:
Overhead view of the Set-up

This figure shows the depth on the bottom is more than the top.

Figure 3a, b: Tracks of Worms 3 and 4

These figures show the worms travel pattern when in the shallow bedding.