

# EXTREME ANIMALS

## Are elephants really afraid of mice?



There is a widely-circulating story on the Internet about an episode on the Discovery channel's TV show 'Mythbusters', wherein the hosts find it plausible that elephants might really be "afraid" of mice. On the website, you'll find a video of the episode where experiments were conducted using real elephants and a real mouse.

The urban legend about the [largest animals on land \(eg. elephants\)](#) being afraid of one of the smallest (mice) has been perpetuated in cartoons, as well as popular animated films, such as Disney's 'Dumbo'. It's not clear

where the idea came from, but many people have theorized that elephants might be afraid of mice because they fear that the tiny creatures will crawl inside their trunks, irritating or blocking them. Elephants in captivity have been exposed to mice because they are frequently found in and around the elephants' feed (hay). Many caretakers have observed mice crawling on the trunks and faces of (awake) elephants and observed that the elephants take absolutely no notice of the mice, much less express fear or anxiety in their presence. Based on observations of interactions between elephants and mice, and the apparent peaceful coexistence, it's unclear where the myth may have originated.

Which brings us to the episode in question - how to explain the response of the elephant in the Mythbusters experiment? There's a number of things going on with this experiment that make it just plain bad science (but still fun). Here are some of the issues that need to be addressed in this type of investigation before any reasonable conclusions can be drawn;

1) Definition of 'fear' response - while the elephant in the experiment clearly responds to the presence of the mouse in front of it, it can be argued that the elephant's response is not one of fear, but of surprise. This elephant only stops in its tracks when it sees the mouse and then sidesteps, avoiding coming any closer to the mouse as it scurries across the elephant's path. It may even be argued that the elephant notices the mouse, recognizes it as another living creature, and is merely moving around to avoid stepping on it.

That begs the question; was the elephant startled by the sudden appearance of the mouse from under the ball of dung, or was it startled by the fact that there was a mouse in its path?

2) Holding conditions constant - not enough controls were implemented to determine if the presence/existence of the mouse caused the elephant to respond the way it did. What if the mouse had been a different color, other than white? Or a rat, a gerbil, rabbit, a snake, turtle, remote-controlled toy car, etc? What if the mouse/rat/gerbil was introduced to the elephant from different angles, so the elephant could see it approaching through its peripheral vision, at ground level, or up in a tree? I'd be curious to see if that same

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elephant would have responded the same way to a wind-up ladybug toy suddenly appearing from under a ball of dung in its path.

3) Pre-existing conditions - had this elephant been exposed to mice before? Was this a wild elephant in its natural habitat, or a domesticated elephant released into the field for purposes of this test? Are domesticated elephants living in captivity used to the presence of mice in their feed and, therefore, unafraid of them, while wild elephants are unaccustomed to seeing mice? What was the previous lifetime experience/exposure of this particular elephant to mice specifically, and to small(er) animals, in general? Was this animal put in a trailer and driven to this location to be filmed for this experiment? If so, has it traveled this way before? Was it amongst strange elephants, or was there something about the presence of the film crew that made it anxious before the experiment began?

4) Sample size - most importantly, guys, an experiment with a sample size of one does not a 'scientific' study make! In order to draw the conclusion, 'Elephants are afraid of mice', it would be necessary to experiment with a representative sample size of elephants, so that a normal distribution of an elephant population is represented in your study.

Conclusion: More study is needed (more subjects and better controls).

