



Wildlife Trackers Lab Group

We are very excited about this citizen science project and think you will be too! Our 6th-8th Grade Young Scientists were curious about how the changing seasons (higher temperatures) and human activity were impacting the animals in their neighborhoods and communities. If you are eager to get started, jump straight to the second page. But we appreciate you considering the thinking of our young scientists that follows below. Here are the questions that the Wildlife Trackers were interested in answering:

How does the amount of traffic affect the behavior of animals in my neighborhood?

How does the presence of people affect the behavior of animals in my neighborhood?

How does habitat affect the flight response of animals?

How does habitat (urban vs rural/desert vs suburban) affect the flight response of animals?

After considering these questions, the Wildlife Trackers Lab Group decided to test the flight or escape response of animals and compare that to geographic location and local habitat. In other words, will animals in rural areas respond differently than animals in urban or suburban areas? Flight response distance will be measured in this study. Flight response distance is defined as the distance that the human investigator is from the focal animal when that animal flees or moves away. The Wildlife Trackers made some predictions of what they might see.

Predictions of possible outcomes:

In urban settings the animals will have the shortest flight response distance, because they are used to being around people and do not see them as a threat.

In rural areas, animals will have the greatest flight response distance because they feel threatened by people

In rural areas, animals will have greatest flight response because they encounter larger predators more often than urban.

In rural areas, there are more trees/more cover and less open than in urban therefore will have a shorter (lesser) flight response because the animals feel protected and hidden.

In rural areas, more cover will prevent the animals from seeing a human and will have shorter flight response distance.

There could be no difference between urban and rural habitats, animals in both will have the same response

Behavior may vary depending the kind of animal and its response to predators. Cryptically colored animals will respond differently than those that do blend into their environment,

Let's Get Started: Materials and Protocols for this study

Materials needed:

Rock: to mark spot on ground where you were standing when the focal animal fled

Tape measure: to measure (meters) the distance from your location (rock) to where focal animal was

Camera (phone): to take picture of focal animal for identification & iNaturalist

Data collection sheet & pen/pencil

Protocol:

1. Locate a focal animal (rabbit, lizard, bird)

2. Stop moving when you find your focal animal.

3. Make a mental note of a physical feature (a rock, a leaf, a stick) **near the animal that will help you visually mark its current location**. Make your physical feature obvious and easy to remember.

4. Walk purposefully but not rapidly toward the animal. You are not sneaking up on the animal; you are approaching it normally.

5. When the animal flees/flies/runs/moves away, drop the rock to mark your location.

6. Using your physical feature to remember that location of the focal animal. Measure the distance from your location to where the focal animal was with either of the following methods:

A. Use a measuring tape to measure the distance from the rock to the location from which the focal animal fled.

B. Walk heel-to-toe from the rock to the location where the focal animal ran from. Record the number of heel-to-toe steps. Measure the length of your shoe in cm. to convert footsteps to distance (m).

Please try to get a representative photo of the animals that you test. You can take the photo after you determine the flight response distance. You do not have to photograph the same individual if you are certain of the species and have the opportunity to photograph a different individual. If you have clear, well focused photos of animals, please upload them to the SARSEF Project on iNaturalist

<https://www.inaturalist.org/projects/sarsef-social-distancing-project>

Measure the flight response distance of 15 animals. You may repeat the same species more than once but not the same individual animal.

Print off the data collection sheet below and record your data on it! Have fun! One of our young scientists said this study like a game! When you have collected all your data, please enter it into the Excel Data Collection Sheet provided

Habitat Descriptions:

Urban area: City blocks bordered by paved streets, mostly manmade environment

Suburban area: Mostly natural areas with some paved roads

Rural area: Few or no paved roads, mostly desert or natural area

Sample Data Table: Data collected by Nature Watcher Young Scientist Ben

Date	Time of day	Name of animal	Flight distance (meter)	Temperature °F	Rural / Urban/Suburban location	Vegetation description
May 5	8:31	Whiptail lizard	2.8	78	Rural	Rocky, under a tree
May 5	8:51	Zebra-tailed lizard	3.63	84	Urban	Gravel path
May 5	8:57	Quail	7.23	84	Rural	Rocky, sunny
May 5	9:00	Zebra-tailed lizard	3.73	84	Urban	Gravel
May 5	9:09	Gray Dove	8.6	85	Urban	Shaded, dirt
May 5	9:15	Hummingbird	0.91	86	Urban	Fountain, Front of house
May 5	9:34	Whiptail lizard	0.63	86	Urban	By trash can, sidewalk
May 6	9:05	Cactus Wren	6.7	90	Urban	Sidewalk
May 6	9:21	Cactus Wren	3.35	86	Urban	Sidewalk
May 6	9:27	Quail	5.0	85	Rural	Dirt path
May 6	9:37	Whiptail	3.3	87	Urban	Shaded, on rocks
May 6	9:42	Vermilion Flycatcher	4.9	88	Urban	Shaded, on medium sized rocks
May 6	10:05	Rabbit	4.95	92	Urban	Rocks, in the shade
May 6	9:52	Canyon spotted whiptail	5.0	89	Rural	Sun, on gravel

