AGOUTIS ON THE ALERT!
RHONDA CARSON AND ENZO ALIAGA-ROSSEL
DEPARTMENT OF BIOLOGY, UNIVERSITY OF CENTRAL OKLAHOMA, EDMOND, OK

Abstract
The expression of anti-predation behavior can be the difference between life and death. The signs of anti-predation behavior can be expressed by auditory, visual, tactile, and olfactory cues. Agoutis (Dasyprocta punctata) for an example are mammals that use auditory cues to avoid predation. These mammals are a key component to the Neotropical forest as seed dispersals, seed predators, and prey for several species. They spend the day defending their territory from invading agoutis, searching for food, looking for potential mates, and watching for predators. The objective of the research was to study the alert behavior of agoutis in two different habitats at the Las Cruces Biological Station located in Las Cruces, Costa Rica. A group of agoutis from the Wilson botanical garden and the secondary forest was studied to see which group would express more signs of anti-predation behavior. One group has grown accustomed to the presence of humans and hearing disturbances while the other group lives in a less disturbed area where there is a less influence with people. To test how alert the agoutis can be in the presence of a predator test calls from an ocelot. The calls started at a distance far away and will advance the longer it takes the agoutis to respond. Observation notes will be taken after every test call to note the agoutis' reaction. With one group having fewer interactions versus another group that is used to everyday disturbances, the expected conclusion will be for the agoutis in the secondary forest to be more alerted than the agoutis in the garden.

Introduction
Anti-predation behavior is an important aspect of an organism’s life. An organism’s fitness can be directly affected by predation. Organisms are able to detect predators in different ways such as olfactory, auditory, visual, and tactile cues (Feldhamer et al. 2007). Mammals are able to use auditory cues in order to detect predators rather than using chemicals (Feldhamer et al. 2007). Agoutis (Dasyprocta punctata) for an example are mammals that use auditory cues to avoid predation. Agoutis are a key component to the Neotropical forest as seed dispersals, seed predators, and prey for several species. They are medium sized mammals that are found throughout the forests usually in areas with heavy brush, and near streams, rivers, and ponds (Smythe 1978). The nature of the agouti is to be on alert of its surrounding at all times. They are preyed upon by larger predators throughout the forest such as jaguars, ocelots, and even sometimes people (Smythe 1978, Aliaga-Rossel et al. 2006). Agoutis are territorial

Methods
Sampling Design
When studying the agouti's behavior, I focused the research to be in two different habitats at the Las Cruces Biological Station located in Las Cruces, Costa Rica. There are two agoutis groups here, the garden agoutis and the secondary forest agoutis. The secondary forest agoutis were first used at a faraway distance (~fifteen meters). Observation notes of the agoutis were taken every five minutes on the four-hour playback tests. Agoutis are routine animals meaning they patrol their territory around the same time on different days. Thus, we were able to study the agoutis' reactions to the calls. I took observation notes for five minutes on the four-hour playback test. When the agouti was laying on all fours, usually with forelegs folded, it was when there was more than one agouti together in the same area <15 m apart. When the agouti was lying down on the centrum, usually with forelegs folded, it was when the agouti was sitting on its hind legs. Lying was when the agouti was lying on all fours. The agouti putting fruits and seeds into its mouth, eating, and chewing or gnawing. When the agouti was hidden from view behind trees, bushes, etc.

Graphs:

Sources Cited:
3) Smythe, R. M., and others (1978). The expression of anti-predation behavior can be the difference between life and death. The signs of anti-predation behavior can be expressed by auditory, visual, tactile, and olfactory cues. Agoutis (Dasyprocta punctata) for an example are mammals that use auditory cues to avoid predation. These mammals are a key component to the Neotropical forest as seed dispersals, seed predators, and prey for several species. They are medium sized mammals that are found throughout the forests usually in areas with heavy brush, and near streams, rivers, and ponds (Smythe 1978). The nature of the agouti is to be on alert of its surrounding at all times. They are preyed upon by larger predators throughout the forest such as jaguars, ocelots, and even sometimes people (Smythe 1978, Aliaga-Rossel et al. 2006). Agoutis are territorial