Thermoregulatory Patterns of *Anolis occulatus* and *Ameiva fuscata*

by

Brian Fontenot

6/7/99

their thermoregulatory habits.

Results

Ten *A. occulatus* specimens were used to obtain body temperature data. The results for these specimens can be seen in Table 1(Appendix). The average body temperature for the ten *A. occulatus* specimens was 30.7 degrees Celsius. The average ambient temperature of the areas where the specimens were found was 29.5 degrees Celsius. The average difference between body temperature and ambient temperature among the ten specimens was 1.2 degrees Celsius. The *A. occulatus* used in the cooling and heating rate experiment had an initial body temperature of 29.2 degrees Celsius. After three minutes in a freezer, the specimen's body temperature had gone down to 20.5 degrees Celsius. The specimen's cooling rate was 2.9 degrees Celsius per minute. The specimen was completely immobile at a body temperature of 20.5 degrees Celsius. After three minutes in the sun, the specimen's body temperature rose 6.8 degrees Celsius to 27.3 degrees Celsius. The specimen's heating rate was 2.3 degrees Celsius per minute. *A. fuscata* is a heliothermic, terrestrial predator and observations of foraging behavior revealed three distinct variations among different sizes. The three size classes were defined as small juveniles, medium-sized adults, and large adults. The three size classes all inhabited the leaf litter while foraging for prey items, but the three size classes occupied areas with differring levels of sunlight. The small juveniles were a tan color and occupied leaf litter with large amounts of sunlight reaching the ground. The medium-sized adults were an olive color and occupied areas with tall grass and moderate amounts of sunlight. The large adults were a bluish-black color and inhabited the denser, forested areas with little or no sunlight filtering through.

Discussion

All of the *A. occulatus* specimens were found in shaded areas elevated off of the ground. Seven were found in trees of varying sizes and three were found on man-made structures. All of the specimens found had body temperatures with little variation and all maintained body temperatures slightly higher than ambient temperatures. This suggests that *A. occulatus* maintains a fairly constant body temperature slightly higher than that of ambient temperature by adjusting its position from shaded to non-shaded portions of its habitat. By shuttling back and forth between shaded and non-shaded areas and employing an energy-efficient, sit-and-wait predatory behavior, these lizards are able to precisely hold their body temperatures within optimum performance limits. The size and color variation present among *A. fuscata* specimens appears to be extremely

REFERENCES

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Table 2 *Ameiva fuscata* Size Class Variation

	Coloration	Habitat	Sunlight
Small Juveniles	Tan	Open Leaf Litter	Large Amounts
Medium-sized Adults	Olive	Tall, Grassy, Leaf Litter	Moderate Amounts
Large Adults	Bluish-black	Dense Forest Leaf Litter	Small Amounts