Taylor Hartman Department of Organismal Biology, West Liberty University, West Liberty West Virginia, 26074. Incubation Temperature Effects on Hatchling False Water Cobras

In herpetoculture (the keeping of reptiles in captivity), there are often discrepancies between breeders for which incubation temperature for eggs of different snake species is most effective. It is believed by some breeders that warmer temperatures cause eggs to hatch faster and colder temperatures will cause the eggs to incubate longer but produce more robust babies. This study looks at false water cobra (FWC; *hydrodynastes gigas*) hatchlings housed in two temperatures to determine the effects of incubation temperatures upon hatching. Clutches of eggs were split as evenly as possible between a warm temperature of 82F (27C) and a cold temperature of 77F (25C). Upon hatching, individuals were measured from snout-to-vent (SVL) and weighed for mass.

The experiment is still ongoing with other snake species, but results have been calculated for *H. gigas*. The warmer incubation temperature produced snakes that were lighter in mass than cold incubated eggs, but both temperatures produced snakes of the same SVL. Results were found using an unpaired t-test, which suggested that the mass difference of 3.4 grams between the incubator's hatchlings' weight was significant. However, a difference of 0.9 centimeters in length was not significant.

Those incubated in the warmer temperature hatched at a faster rate than those in the cold temperature. Fungal infections on the eggs and deformities were more apparent in the warmer eggs, while no fungi or deformities were found in the colder temperatures, despite the incubation substrate and accommodating materials coming from the same source.