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# ASSESSING DIFFERENCES IN BOLDNESS, AN EVOLUTIONARILY IMPORTANT PERSONALITY TRAIT, AMONG RURAL AND URBAN BOX TURTLES

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Personality is not unique to humans, but also occurs in a wide range of animal species. In some species, individuals that display bold behavior may be more alert to feeding and social opportunities or may be better at warding off predators. As a trade-off, boldness may expose them to higher risk of being detected by predators or other potentially dangerous situations. Depending on the cost-benefit trade-offs in different environments, natural selection may favor boldness over timidity or vice-versa. We investigated boldness in two populations of box turtles in St. Louis, Missouri; “rural” turtles at the Tyson Research Center and “urban” turtles in Forest Park. We hypothesized urban turtles would be bolder than rural turtles due to their increased exposure to human-induced disturbances. During summer 2016, we searched for box turtles at each site. On finding a turtle, it was immediately placed in a black nylon bag for three minutes, after which the turtle was set free. Two observers hid from the turtle and recorded the time the turtle took to 1) expose its head and 2) begin walking. The behavior before handling, size, and sex were recorded, as well as each turtle’s behavior inside the bag. We found no difference in boldness by site, however, females exhibited significantly greater boldness than males at both sites. We conclude that the selective pressures that influence boldness are likely consistent across sites, despite the demonstrably higher likelihood of traumatic injury in the urban site. Differences in boldness related to sex are harder to explain, but could be related to differences in reproductive strategies between sexes. Female turtles have the ability to store sperm from multiple males to ensure genetic diversity for their clutch. The desire to mate with multiple males makes females bolder, but further research is needed to explore this hypothesis.