Improving Captive Management Strategies for Conservation of Dendrobates auratus

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The global amphibian extinction crisis necessitates the diligence of conservation practices. This project was designed to improve husbandry conditions for captive Dendrobates auratus, commonly known as the Green and Black Poison Dart Frog. Ideal husbandry is designed to mimic a naturalistic environment while providing the essentials for optimal animal welfare. The hypothesis is that by inhibiting the frogs from seeing outside their vivarium, via a privacy film, their psychological welfare will be enhanced demonstrated by increased activity. Two bioactive vivariums were assembled and newly metamorphosed Dendrobates auratus were used to collect the results. Vivarium A was the control housing six frogs with no privacy film, while vivarium B had the addition of a reflective, one-way privacy film on the outside. An ethogram was formulated with clearly defined behaviors, and nine exhaustive and mutually exclusive behaviors were quantified within two functional categories. Observations were documented twice a day using scan sampling. Data analysis showed that 60% of frogs in control Tank A exhibited positive welfare behaviors compared to 48% of frogs in Tank B. Frogs in Tank B exhibited the behavior of “Not Seen” 10% more than any other behavior in both tanks. A graphic display of the individual behaviors indicates that factor(s) other than the visibility of human activity accounted for decreased activity in Tank B. The hypothesis that a privacy film would allow Dendrobates auratus freedom of inhibited movement and correlate with improved welfare was not supported by the results. Further experimentation using privacy film with different opacity and minimal reflectiveness would be advantageous.

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