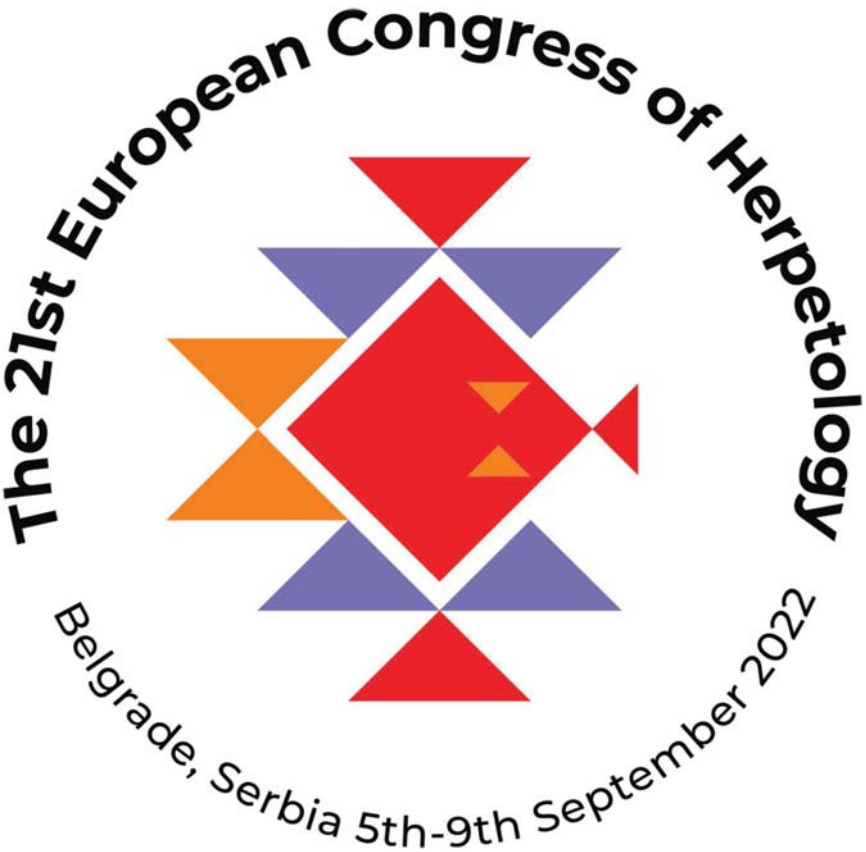

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Drop dead gorgeous: death feigning behaviour in three distinct colour morphs of dice snakes

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Prey animals have developed a wide array of antipredator behaviours to confront, dissuade or escape a predator. Death feigning (DF), where prey animals get in a tonic immobile state and resemble dead animal, is a sort of a last-ditch attempt to escape consumption. Even if this behaviour works, it is vitally important that the prey chooses the right time to escape: a quick decision may attract the predators' attention, while waiting too long might prolong exposure. In the field, we measured both the occurrence and the duration of DF in three distinct colour morphs of dice snakes; the most common dice morph, uniformly green, and melanistic individuals. We sampled only adult individuals and considered factors such as sex, size, body temperature, injuries, and presence of food, gravidity as well as absolute crawling speeds on the occurrence and duration of DF. Our results suggest that females DF more often than males and that gravid females DF the least often. Snakes that crawled faster were less likely to DF, but interestingly, gravid females that crawled faster were more likely to DF. Diced and green gravid snakes spent far less time in DF than nongravid individuals, while in melanistic snakes gravidity did not affect DF duration. These differences are especially pronounced in the uniformly green snakes. Additionally, colder, bigger and faster snakes DF for longer intervals. Larger snakes cannot be immediately consumed and thus can afford to try a risky strategy such as DF, which is supposedly used as a hard reset in a predator-prey interaction. Gravidity undoubtedly imposes significant constraints on snakes and probably limits escape options and makes DF too risky. However, melanism can offer certain advantages to gravid individuals, notably thermal benefits and in turn a higher metabolic rate and locomotor capacity which can prove beneficial in a DF situation.