

Jen Hunter

Title of Project: The current utility of aposematic signaling in striped skunks
Mephitis mephitis.

Research summary

The stark black and white coloration of striped skunks is perhaps the best known example of warning coloration, or aposematism, in mammals. Such conspicuous, contrasting coloration is thought to warn potential predators that the bearer possesses some noxious quality and should be avoided. However, little is known about how, and even if, skunk coloration functions as a predator deterrent. The focus of my research is to evaluate whether potential skunk predators use black and white coloration as an indicator of unpalatability or if this signal is only effective when coupled with the familiar skunk-shape. I am also interested in whether predator behavior differs according to the local abundance of striped skunks, that is, if potential predators are more likely to recognize and appreciate the warning aspects of skunk coloration if they have previously been, and perhaps frequently are, exposed to skunk defenses. Aposematically colored carnivores tend to be small, relative to co-occurring species, slow moving and active during the same hours as most of their potential predators. Accordingly, there is a near total reliance on the strength of their warning signal to avoid being killed by larger species; circumstances where signal quality or meaning is lost could be dire for population persistence. While striped skunks are not of conservation concern, several other aposematic carnivores are imperiled and the results of my study will both elucidate the importance of aposematic coloration as an anti-predator adaptation and will explore the circumstances under which such signals are most effective.

Bio:

I am currently a PhD candidate in the Graduate Group in Ecology at the University of California, Davis. I was born and raised in Redmond, Washington. As an undergraduate I attended the University of Washington (UW) where I received a B.S. in Wildlife Science. During my tenure at UW I participated in study abroad programs to Namibia and Madagascar which helped to develop my interest in ecology and conservation. Since 2001 I have served as the teaching assistant to the field portion of a tropical marine ecology course in Honduras taught through the State University of New York. In my free time I enjoy woodworking, gardening and spending time with my family.