**Evolutionary Transitions from Camouflage to Aposematism: Hidden Signals Play a Pivotal Role**

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In nature, predation is ubiquitous, with nearly all animals being at risk of being preyed upon at some point in their lifecycle. The selection that this generates has led to the evolution of various adaptations that mitigate this risk. One of the most common of these is crypsis, in which animals have coloration that resembles the background, reducing the probability of detection by predators. However, some chemically defended animals employ an antithetical strategy, displaying conspicuous warning coloration that advertises their toxicity. The initial evolution of warning coloration, termed aposematism, is often seen as a paradox because any new conspicuous mutant would be easier to detect than its cryptic conspecifics and not readily recognized by naïve predators as defended. One possibility is that permanent aposematism first evolved through species that use hidden warning coloration, that is only exposed to would-be predators on encounter. Here, we performed large-scale phylogenetic analysis of evolutionary transitions in amphibian and elapid snake antipredation coloration and demonstrate that evolutionary transitions from camouflage to aposematism often involve an intermediary stage, namely cryptic species that facultatively reveal conspicuous coloration. Accounting for this intermediate step can resolve the paradox and thereby advance our understanding of the evolution of aposematism.