

Which Carnivores Kill Other Carnivores

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Ecologists used to think of prey as the most important factor governing the structure of predator communities. However, over the past twenty years, they have increasingly recognized the importance of interspecific killing – carnivores killing carnivores – in determining ecology and behavior.

A new study by Emiliano Donadio and Steven W. Buskirk (University of Wyoming), forthcoming from *The American Naturalist*, explores which carnivores are most likely to participate in these interactions, and why.

"Although food exploitation is influential in predisposing carnivores to attack each other, relative body size of the opponents appears to be overwhelmingly important," write the authors.

In theory, explain the authors, carnivore species of similar body size would be most likely to compete for similar prey, increasing the likelihood of lethal encounters. However, they found that attacks from carnivores on other carnivores were most frequent when body sizes were moderately different and diet overlap extensive.

When the difference in body size was small, they were less likely to attack, no matter how much the diet of the two species overlapped, because the risks of an attack were high.

When the difference in body size was intermediate, then the larger species of carnivore was much more willing to attack and kill the smaller carnivore species. Explain the authors, "The larger carnivore perceives

the opponent as large enough to be a competitor, yet small enough to be defeated with low risk."

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