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PREDATION OR SCAVENGING? PREY BODY CONDITION INFLUENCES DECISION-MAKING IN A FACULTATIVE PREDATOR, THE WOLVERINE

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What determines whether a predator scavenges or kills its own prey? Using data on wolverines (*Gulo gulo*) in Scandinavia, we studied variation in diet and feeding strategies along a gradient of environmental productivity, seasonality, density, and body mass of their main prey, semidomestic reindeer (*Rangifer tarandus*). Our results suggest that wolverine feeding strategies are flexible and influenced by seasonally dependent responses to prey body condition in combination with carrion supply. Predation was more pronounced in summer, when vulnerable reindeer calves are abundant, and individual kill rates were negatively related to local reindeer body mass. In winter, the probability of scavenging increased with decreasing reindeer body mass, likely as a response to increased carrion supply.



Photo 1. Female wolverine "Sivva" in Sarek National Park, northern Sweden. Wolverines are found in alpine and boreal forest across the Northern Hemisphere.
Photograph by Jon M. Arnemo used with permission.



Photo 2. Wolverines are well adapted to a cold and harsh environment. The wolverines' large feet, relative to its body size, gives the wolverine an advantage when traveling on snow. When snow conditions are just right, they can outrun prey several times their own size. Wolverine predation on reindeer in winter is not influenced by prey body mass but seems to be mostly opportunistic.

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Photo 3. Wolverines usually bite hard in the neck and over the back when killing large ungulate prey like reindeer. Photograph by Geir Rune Rauset.



Photo 4. Wolverine likes steep and rugged areas high up in the mountains not far from the calving grounds of the reindeer. Here are leftovers from a reindeer calf killed and fed upon by the wolverine.
Photograph by Jenny Mattisson.



Photo 5. Wolverines are very flexible in their feeding strategies and take advantage of whatever food resource is available. A moose carcass, frozen to the ground, can supply food for a wolverine during several months and help to fill its food caches for later use. Photograph used with permission from Norwegian Institute for Nature Research (viltkamera.nina.no).



Photo 6. A young wolverine digging into a domestic sheep carcass. Wolverines often take advantages of carcasses killed by other wolverines as well as other large carnivores (Eurasian lynx, wolves, brown bears). Photograph used with permission from Norwegian Institute for Nature Research (viltkamera.nina.no).

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