## Contrasts in the languages of wolves and black bears.

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## Abstract:

Differences in wolf (Canis lupus) and black bear (Ursus americanus) diets coincide with other differences in their lives. Although both species are members of the superfamily Canoidea in the order Carnivora, wolves cooperatively hunt large ungulates, while black bears generally forage for small items (berries, nuts, greens, and insect larvae) in food patches too small to support group living. In wolf packs, social communication includes snarls, growls, dominant and submissive postures, and biting behaviors that look and sound ferocious—all of which are unlike anything seen among black bears. Bites used as communication among pack members are typically inhibited; pack members rely on each other for survival. The more solitary black bear also uses inhibited bites in communication at times, but without the accompanying vocalizations and facial expressions typical of wolves. Black bears do not snarl or growl except in taxidermy, artist renditions, or TV programs that add computer-generated growls to videos of trained bears quietly opening their mouths on command for food rewards. In reality, instead of showing their teeth, stressed black bears narrow their muzzles, extend their lips, and blow as they lunge, slap the ground or trees, or clack their teeth. These common, ritualized displays by black bears are defensive expressions of anxiety that have not turned into attacks in hundreds of instances during our 46 years of study. Black bears have no long-range vocalizations like howling or barking.