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Attacks on fawns, pigs, and other young or weakened mammals by American Crows.—The following observations were made by my wife and I while studying American Crows (*Corvus brachyrhynchos*) at Hendrie's cattle ranch, 24 km south of Lake Placid, Highlands County, Florida, between January 1981 and May 1983 (total observation time 1500 h). The crows and other animals there were relatively tame owing to years of protection and being fed corn. In April 1982, we watched attacks by crows on two spotted deer fawns (*Odocoileus virginianus*) in a pasture over 200 m wide that lay between swamps and contained the nest tree of a group of cooperatively breeding crows (Kilham in prep). On 18 April I observed a fawn 35 cm high and weak on its legs coming toward me. Although accompanied at varying distances by its mother, it was under constant attacks by five crows, two breeding adults and three yearlings. One crow usually clung to the back of the fawn as it ran, while others kept swooping and striking. After running 8-10 m, the fawn collapsed on the grass as if its legs could not hold up any longer. The crows then crowded around, striking the fawn heavily about the head, eyes and other parts. I could not tell whether their bills were closed or slightly open, as I have noted for crows attacking an otter's (*Lutra canadensis*) tail (Kilham 1982, Fla. Field Nat. 10:39-40). The doe seemed to me to be surprisingly unconcerned. She approached repeatedly, head and neck outstretched, to lick her fawn at one end while the crows attacked it at the other. The fawn's only moments of protection were when it nursed under its mother. After fifteen bouts of running, collapsing and being attacked, the fawn reached the edge of a swamp. Walking to within 3 m and using 8 x 40 binoculars, I could perceive no damage done to the fawn's eyes or other parts, in spite of what must have been hundreds of blows. My wife (pers. comm.), 9 days previously, witnessed similar attacks on a slightly larger fawn that, in one of its periodic collapses, struck at its assailants with its forefeet while sitting back on its haunches.

The crows at the ranch were quick to notice any animal that looked young or weak. On one occasion they attacked a young raccoon (*Procyon lotor*) that was rescued by its mother and on another, a suckling feral pig (*Sus scrofa*), both animals being the smallest of their litters. On 11 February 1981, in a more intense attack, a crow rode for 20 m on the back of a suckling pig, the animal running fast with the crow flapping its wings while pounding the pig's head with its bill. A second crow hovered overhead. These attacks were made before the crows had started to nest.

Two other attacks, made on young pigs that were moribund from causes unknown, but still moving, were of interest in revealing behavioral differences between American Crows and Black Vultures (*Coragyps atratus*). On 20 March 1982 I discovered four vultures standing around a dying pig, keeping crows away, but doing nothing, as though waiting for the creature to die. The vultures left when I walked up to within 15 m. Five crows flew in immediately to attack the pig's mouth and anus with their bills, feeding on the pig's still living tissues. On 6 March 1983 I noticed another greatly weakened pig moving about, followed by a train of eight or more vultures, none of them attacking. When the pig came near where I was sitting, the vultures left. A crow then alighted on the pig's flank as it lay down, pecked a hole in front of its ear and, indifferent to the movements of the pig, fed on underlying tissues. A second crow fed on the pig later in the same manner. The pig was still living when I arrived the next morning but died soon afterward.

Crow behavior can be difficult to interpret. One could say that the crows described were defending their nests, but this seems unlikely to us because feral sows with litters commonly passed where crows were nesting without causing any disturbances, and 2 of 7 of the young mammals attacked were attacked before nesting began. When two adult raccoons passed within 15 m of a nest on 12 April 1982, three crows came for a look but only one remained to watch until the animals were gone. An alternate interpretation is that American Crows are not limited to being scavengers of such items as roadside kills, but can, on occasion, be opportunistic predators, attacking young or weakened mammals larger than themselves. This is, apparently, a way of testing whether they can further disable or bring them down. In this they resemble wolves (*Canis lupus*) (Mech, 1970. The wolf. New York, Nat. Hist. Press) that regularly search for deer or other prey that are weak enough to be run down successfully. Since I wrote this note initially, Chadwick (1983, Nat. Geog. 163: 344-385) has published an account, illustrated by photographs, of a Pied Crow (*C. albus*) that, in repeated attacks on the kit of a Bat-eared Fox (*Otocyon megalotis*), several times seized the animal by the tail and attempted to fly off with it. Attacks by American Crows on smaller vertebrates, the young of cotton rats (*Signodon hispidus*), snakes, frogs, and walking catfish (*Clarius batrachus*) have been described elsewhere (Kilham 1984. Fla. Field Nat. 12: 25-31).

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