

the uropygial gland an equal number of times per session the duration of contact was longer in Canada Geese.

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Bald Eagle predation on domestic sheep.—Bald Eagles (*Haliaeetus leucocephalus*) feed on domestic sheep (*Ovis*) (see for example, Retfalvi, *Condor* 72:358–361, 1970; Platt, *Am. Birds* 30:783–788, 1976) which, in some areas, may be an important food item during winter (Hancock, *Wilson Bull.* 76:111–120, 1964). Both carcasses and afterbirths are eaten; but Hancock (1964) reports no incidences of predation by Bald Eagles even though sheep carrion was the eagle's most prominent food item. Most records of Bald Eagle predation on livestock (e.g., Oberholser, *USDA Biol. Surv. Bull. No. 27*, 1906; Herrick, *Auk* 41:389–422, 1924) are circumstantial. Only two records (Pirnie, *Jack-Pine Warbler* 24:105–107, 1946; Wiley and Bolen, *Southwestern Nat.* 16:151–169, 1971) appear to be authentic, and neither is a first-hand eyewitness account. In both, evidence of eagle predation was based on the presence of characteristic talon punctures accompanied with subcutaneous bleeding (O'Gara, pp. 206–213 in *Proc. 8th Vert. Pest Conf.*, 1978). Even in these cases, Bald Eagles could have displaced a Golden Eagle (*Aquila chrysaetos*) from a sheep the latter had killed. Sheep and calf predations by Bald Eagles have been reported to us by S. Crowe and B. O'Gara (pers. comm.), but these too are not eyewitness accounts. This note is the first documentation of eyewitness observations of Bald Eagles preying on live domestic sheep.

While studying Bald Eagle habitat during the winter of 1980–81 near Woodruff, Rich Co., Utah, we observed Bald Eagles preying on domestic sheep.

At about 11:00 on 10 February 1981 we saw an adult Bald Eagle perched on a fence post 60 m from a band of sheep and 200 m from a ranch house. At 12:50 the eagle flew to and attacked an apparently healthy lamb, estimated to be 4 days old, which was separated from its ewe. The lamb struggled a little, but died shortly. The ewe ran at the eagle once to within 2 m without effect. After about 40 sec the eagle flew off, but returned in about 5 min and began to feed while perched on the lamb's sacral region. At 13:23 the eagle left the carcass, landed in a puddle, wiped its beak, and cleaned its talons.

On 17 February, at 13:12, we observed an adult and an immature Bald Eagle perched near sheep in a pasture 400–500 m from a ranch house. A pregnant ewe had fallen down and was struggling to stand up but could not. Either she simply was unable to stand back up—as sometimes happens with apparently healthy sheep (E. Pearson, pers. comm.)—or she may have been ill. The struggles of the ewe soon attracted the adult eagle which flew from the fence post, landed on the ground, and then jumped on her. The eagle began plucking wool from the sacral area while perched. The ewe continued unsuccessfully to try to stand up. At 13:20 the eagle began to feed in the area it had plucked; it ceased feeding at 13:38 and moving away stood on the ground about 10 m from the ewe. At 13:42 the adult eagle flew

away to bathe and preen in a puddle in an adjacent pasture. At 13:57 it soared upward and then glided out of sight. At 14:05 the immature eagle began to feed on the ewe, but it flushed when we attempted to take photographs. At 14:20 a second adult fed on the still live ewe. At 14:40 a third adult eagle took its turn at feeding. The ewe died overnight. We estimate a total of 4.5 kg of the sheep was consumed by the four eagles; they ate most of one hind leg and parts of ribs and internal organs.

The extent of Bald Eagle predation on domestic sheep in this area of northeastern Utah and southwestern Wyoming is unknown. The scarcity of reliable published accounts suggests that Bald Eagles are not significant predators on domestic sheep. Only in recent years, however, has evidence been gathered to indicate that Golden Eagles may cause serious damage to sheep in certain areas (O'Gara 1978; Crowe, pers. comm.). An increase of Golden Eagle depredations during periods of diminished natural prey has been reported (O'Gara 1978). The amount of predation by Bald Eagles on sheep is likely influenced similarly. During the winter of 1980-81 we noted an abnormally low winter kill of mule deer (*Odocoileus hemionus*), a major food item of wintering Bald Eagles in the Woodruff area. This scarcity of deer carrion may have contributed to the predation on the sheep that we observed.

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