eagle had positioned itself. The ground squirrel was standing next to an isolated burrow entrance (inside another clump of grass, ca. 39 cm height), fully erect on hind legs in a highly vigilant antipredator posture, facing the carcass and with its back to the eagle. The eagle remained motionless, facing the ground squirrel, but with its head held low and its body flat on the ground behind the tuft of grass. They remained in these positions for 16 min, until, at 1102 H, the ground squirrel suddenly dashed away from the eagle and bolted down a burrow entrance in the next-nearest cluster of burrows, ca. 6 m away. As soon as the ground squirrel ran, the eagle immediately raised its head but kept its body flat on the ground. The eagle remained in this position for the following 20 min, constantly looking around but retaining its covert positioning, low behind the clump of grass. During these 20 min, a foraging flock of >400 Daurian Jackdaw (*Corvus dauuricus*) moved across the site, using short, low flights and walking. The flock passed close to the eagle (<3 m) but the eagle made no apparent response. At 1122 H, a second ground squirrel appeared, to the east of the eagle ca. 10 m away. The ground squirrel was running towards the eagle, but its attention appeared to be focused on the scavengers still present at the carcass. When the ground squirrel reached the clump of grass 2.1 m from the eagle, the eagle suddenly pounced towards it. The ground squirrel ran around the grass clump and the eagle ran after it with its wings outstretched and flapping. The ground-chase continued for ca. 45 sec before the ground squirrel was able to escape down the burrow. The eagle stood at the burrow entrance for approximately 1 min before flying away out of view.

We suggest that our observation may demonstrate a sophisticated foraging strategy by this Steppe Eagle. First, it appears that the eagle used the scavenger activity at the nearby carcass as a diversionary tactic, knowing that its potential prey (the ground squirrel) would be distracted by the presence of potential predators at the carcass. This supposition is supported by the alert posture of the ground squirrel as it watched the scavengers at the carcass and by the positioning of the eagle behind the burrow and in direct line-of-sight of the carcass. Secondly, it appears the eagle used covert tactics to ambush the prey. This is supported by the positioning of the eagle behind the grass clump and its motionless, 'incubating' posture, lying flat on the ground and out of view. Although it is possible that the eagle was merely waiting for an opportunity to feed at the carcass and its position near the ground squirrel burrow was accidental, we do not believe that to be the case because the eagle was so far from the carcass and probably was unable to see the carcass from its low position behind the clump of grass. It is not known whether the eagle deliberately selected an isolated burrow (thereby minimizing the opportunities for the ground squirrel to escape) or whether the isolation was coincidental, or whether the eagle selected this burrow because it had already seen the ground squirrel. Once the eagle's attack had failed, we surmise it left the site because its covert position had been exposed.

We suggest this is a potentially novel eagle foraging technique, previously unrecorded in the literature. However, as our hypothesis is limited to one observation, we would encourage further exploration and documentary evidence to improve our understanding of the range of eagle foraging behaviors.

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RECORD MASS FOR NORTH AMERICAN GOLDEN EAGLE (*AQUILA CHRYSAETOS CANADENSIS*)

KEY WORDS: *Golden Eagle*; Aquila chrysaetos; *mass*; *size*.

Golden Eagles (*Aquila chrysaetos*), like most birds of prey, exhibit reverse sexual size dimorphism (RSSD). For example, of 31 male and 18 female Golden Eagles found moribund in Idaho, mean mass was 3477 ± 101 g and 4913 ± 164 g, respectively, demonstrating that females were roughly 40% heavier than males (Edwards and Kochert 1986, *Auk* 57:317–319). As a result of this RSSD, body size measurements and mass have been used to determine the sex of eagles with a high degree of accuracy (e.g., Bortolotti 1984, *J. Field Ornithol.* 55:54–66). For North American Golden Eagles (*A. c. canadensis*), a widely accepted method of determining sex utilizes a discriminant function analysis involving footpad and mass measurements (Edwards and Kochert 1986). Mass can also be an important determinant of health in birds and has been used in conjunction with a structural body part measurement to create a relative body mass index (e.g., Griebel and Savidge 2003, *Wilson Bull.* 115:477–480). It is important to know the range of sizes

Table 1. Maximum structural body measurements of adult North American Golden Eagles. Maximum measurements in different categories may represent different individuals from one study. All measurements reported in mm and sample sizes in parentheses.

SOURCE	LOCATION	MASS (g)[b]	WING CHORD	TAIL LENGTH	BILL DEPTH	HALLUX LENGTH	FOOTPAD
Record mass female	WY	7200	663	355	32	58.6	153
Bortolloti (1984)	Western U.S.A., Canada	—	685 (129)	375 (119)	31.8 (109)	63.4 (126)	—
Edwards and Kochert (1986)	ID	6124	—	—	—	—	153 (49)
P. Bloom (unpubl. data)	CA	6050	650 (53)	368 (66)	—	64.5 (67)	—
R. Domenech and D. Bittner (unpubl. data)	MT	5700	665 (96)	398 (96)	—	57.5 (96)	148 (59)
A. Harmata (unpubl. data)[a]	MT	6010	664 (40)	387 (39)	33 (39)	59.3 (17)	—

[a] Adult females only.
[b] Adjusted for crop contents.

of any species for general information and for valid comparisons among studies.

We captured Bald (*Haliaeetus leucocephalus*) and Golden eagles as part of an ongoing study of heavy metal concentrations in the Greater Yellowstone Ecosystem. For all Golden Eagles captured, we measured mass, footpad, wing chord, tail length, hallux length, and bill depth. Mass was measured using a 10 kg spring scale (Pesola®, Switzerland) and footpad, hallux, and bill depth were measured using digital calipers.

On 13 November 2006, we captured an adult Golden Eagle near the Blackrock Forest Service Station in Bridger-Teton National Forest just outside of Grand Teton National Park, Wyoming, U.S.A. The eagle weighed 8400 g. We determined that this individual was a female by its footpad size (153 mm; Edwards and Kochert 1986). We also estimated the crop of this eagle to be full. In a study on captive Golden Eagles, female crops were estimated to hold roughly 1200 g of food when full (Ellis 1979, *Wildl. Monogr.* 70:15). Using this estimate and subtracting the weight of the food in its crop, the bird we captured weighed an estimated 7200 g. Because of the unusual mass, we confirmed the accuracy of the Pesola® scale with an Adam CPWplus-6 digital bench scale (Danbury, CT).

The mass we measured for this individual is greater than any record we have been able to find for North American Golden Eagles. The heaviest females measured in two studies in Idaho weighed 6124 g and 5280 g (Edwards and Kochert 1986; Kochert et al. 2002, *in* A. Poole and F. Gill [EDS.], The birds of North America, No. 684. The Academy of Natural Sciences, Philadelphia, PA and the American Ornithologists' Union, Washington, DC U.S.A.). Further, of 97 Golden Eagles captured during migration in central Montana, the largest mass recorded after accounting for crop contents was 5700 g (R. Domenech pers. comm.) and 6010 g was the heaviest eagle recorded of an additional 283 captured in Montana (A. Harmata pers. comm.). Finally, of 170 Golden Eagles captured in California, the largest mass recorded was 6050 g after accounting for crop contents (P. Bloom pers. comm.). Among other subspecies studied, the largest recorded mass we found was 6700 g in *A. c. chrysaetos* (Ferguson-Lees and Christie 2001, Raptors of the world, Houghton Mifflin Co., Boston, MA U.S.A.).

Although the other measurements taken on this female were not the largest on record, all measurements were near the upper end of the range for other Golden Eagles measured (Table 1). In Golden Eagles, hallux length has been shown to positively correlate with age (Bortolotti 1984), suggesting this eagle may have been old, as well as heavy. As this record suggests, there is still much to learn about the natural history of even this well-studied raptor.

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