Ruddy Ducks colliding with wires.—Cornwell and Hochbaum (Wilson Bull., 83: 305–306, 1971) remarked that anatid strikes on wires (fence, communications, and power) occur commonly on the northern prairie breeding grounds, but go largely unnoticed and unreported. The following observations, made near Minnedosa, Manitoba, during May–August 1971 are offered in response to comments made by Cornwell and Hochbaum.

Incidental to carrying out weekly surveys of waterfowl breeding on potholes along roads regularly used as a transect route, I recorded all dead birds encountered while walking around ponds and while travelling by car. I noted the state of freshness of the carcasses and their locations, before gathering them up for removal. I covered the same 250 km of road every week; some 50 km of road served as a route for overhead lines.

Ten weekly three-day censuses were carried out, and freshly dead waterfowl were observed during the course of seven of these. I recorded a total of 16 dead birds; eight Ruddy Ducks (*Oxyura jamaicensis*); four Am. Coot (*Fulica americana*); two Blue-winged Teal (*Anas discors*); one Mallard (*Anas platyrhynchos*); and one Pintail (*Anas acuta*). Apart from the Pintail, the carcasses were located on the ground within 75 meters of the nearest pond edge and within 30 meters (mean of 10 meters) of overhead wires. The Pintail (an adult male) was found impaled on the top strand of a barbed wire fence standing in water 30 cm deep.

Three Ruddy Ducks were found between 15 May and 15 June, and five were found after 15 June. The Mallard and Pintail were found in mid-May, and the two Blue-winged Teal in the first week of June. The Coots were found in June. Apart from the Coots, which were aged but not sexed, all of the dead birds were adult males. Since the surveys were terminated before the end of August, the absence of juvenile birds is not so surprising.

Of a total of 50 adult Ruddy Ducks (24 females, 26 males) collected during my study two males with defective wings were taken, and three crippled females were taken in May. The crippled birds' injuries were consistent with the type expected as a result of colliding with wires. The birds were located on ponds close to overhead wires.

Stout (The nature and pattern of non-hunting mortality in fledged North American waterfowl. Unpubl. M.S. thesis, Virginia Polytech. Inst., 1967) used information from questionnaires and band recoveries to suggest that dabbling ducks are most often involved in wire strikes and that males may be more vulnerable than females; perhaps because of the "reckless" nature of pursuit flights. A comparison of absolute densities of all anatids on ponds near overhead wires and generally in the study area, showed the Ruddy Duck to be second to the Blue-winged Teal (Siegfried, unpubl.). However, the ratios favoring the Ruddy Duck were nowhere near as high as the 67 per cent (Coot excluded) for relative mortality as recorded here. While Stout (op. cit.) suggested that dabbling ducks are most often involved in wire strikes, he does state, too, that next to the Mallard the Ruddy Duck is most susceptible to mortality caused by striking overhead wires. Apparently, then, a factor other than mere relative abundance of species is involved. Further, since the Ruddy Duck does not perform pursuit flights, or any other kind of aerial courtship, this behavior cannot be evoked as contributing to the disproportionate mortality.

A time and motion study of the Ruddy Duck's daily behavior showed that, once on the breeding grounds, the birds very seldom flew by day and that aerial movement was virtually restricted to late evening twilight, starting just before darkness. During late May, June, and July these flights were observed to involve only males, flying at low altitude from one pond to another. In the study-area generally, there were more males than females, but the sex ratio was too close to parity to account for the disproportionate kill of males.

Apparently, females are most often involved in wire strikes early in the season during

and shortly after arrival on the breeding grounds. Males, on the other hand, suffer collisions throughout the season, apparently because they move around much more. The fact that Ruddy Ducks normally fly only during and after dusk, and that they do not climb steeply after taking wing, but rather perform one or two low and wide circles while gaining altitude, adds to their risk of striking wires.

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A note on Golden Eagle talon wounds.—The recent slaughter of Golden Eagles (*Aquila chrysaetos*) in Wyoming has again focused attention on the subject of eagle–livestock relationships. The problem has been variously studied in many parts of the world including the United States (Spofford, 1965, 1969; McGahan, 1968; Mollhagen et al., 1972), Scotland (Brown and Watson, 1964), and Australia (Leopold and Wolfe, 1970). An important aspect of these and related studies is the determination of whether the eagle foods—especially lambs—have indeed been freshly killed (i.e. outright predation) or secondarily secured as carrion.

Hence, emphasis has been placed on the field identification of wounds and other features present on carcasses alledgedly killed by eagles. In Australia, Rowley (1970) thoroughly examined the damage inflicted by Wedge-tailed Eagles (*Aquila audax*) and other carnivores on lambs whereas a similar but less exhaustive study was also undertaken in the southwestern United States where Golden Eagles nest and overwinter (Wiley and Bolen, 1971; Boeker and Bolen, 1972).

Talon punctures, coincident with extensive subcutaneous hemorrhages, are a priori indications of eagle predation despite the contrary opinion of some stockmen that talon wounds are more often absent on eagle-killed lambs (and hence, in their view, that the frequent absence of talon punctures on dead lambs does not preclude assigning the cause of death to eagles). Lambs are instead killed, according to some stockmen, by the impact of an eagle attacking with its feet closed in a "fist" or in some other way that does not involve the use of their talons.

We wish to cite an instance where deep talon punctures were indeed made by a Golden Eagle attacking decoys set at Muleshoe National Wildlife Refuge in Bailey County, Texas, on 23 January 1971. The decoy attacked was one of 24 female Pintail decoys set at Paul's Lake immediately within the refuge's eastern boundary. The attack occurred at 10:15 when the eagle flew across the lake and approached the decoys at an altitude of about 15 yards; the bird suddenly dropped onto the back of the decoy. The impact of the attack, even without the advantage of a long stoop, drove the eagle's talons deeply into the back and side of the plastic-bodied decoy leaving ample—and obvious!—evidence of puncture (Fig. 1). Later in the day, after the decoys had been left untended for several hours, another decoy was discovered with a fouled anchor cord; examination of this decoy showed that it, too, had deep punctures similar to the earlier "wounds" inflicted by the Golden Eagle. Sperry (1957) also described the attack of a Golden Eagle ". . . with distended talons" on a male Pintail decoy, although the eagle in this instance approached the decoy by wading.