

This study was supported by N.S.F. Grant GB-21255 to R. G. Wiegert. We thank Nancy Kuenzel for assistance in the field and laboratory.—WAYNE J. KUENZEL, *Department of Poultry Science, Cornell University, Ithaca, New York 14850*, AND RICHARD G. WIEGERT, *Department of Zoology, University of Georgia, Athens, Georgia 30601, 15 March 1973*.

Electrocution of birds by an electric fence.—In passing the farm of W. J. Whitehead a short distance west of Scotland Neck, North Carolina, on 20 January 1973, I saw a dead Screech Owl (*Otus asio*) hanging, head downward, from the top of a post of an electric fence (Fig. 1). The bird's left tarsus was between the wire and the post, thus grounding the fence wire on the steel post. The tarsus was burned so the foot fell free from it when I removed the dead bird from the fence. Mr. Whitehead advised me that he finds as many as 25 birds killed by his fence at one time when Brown-headed Cowbirds (*Molo-*

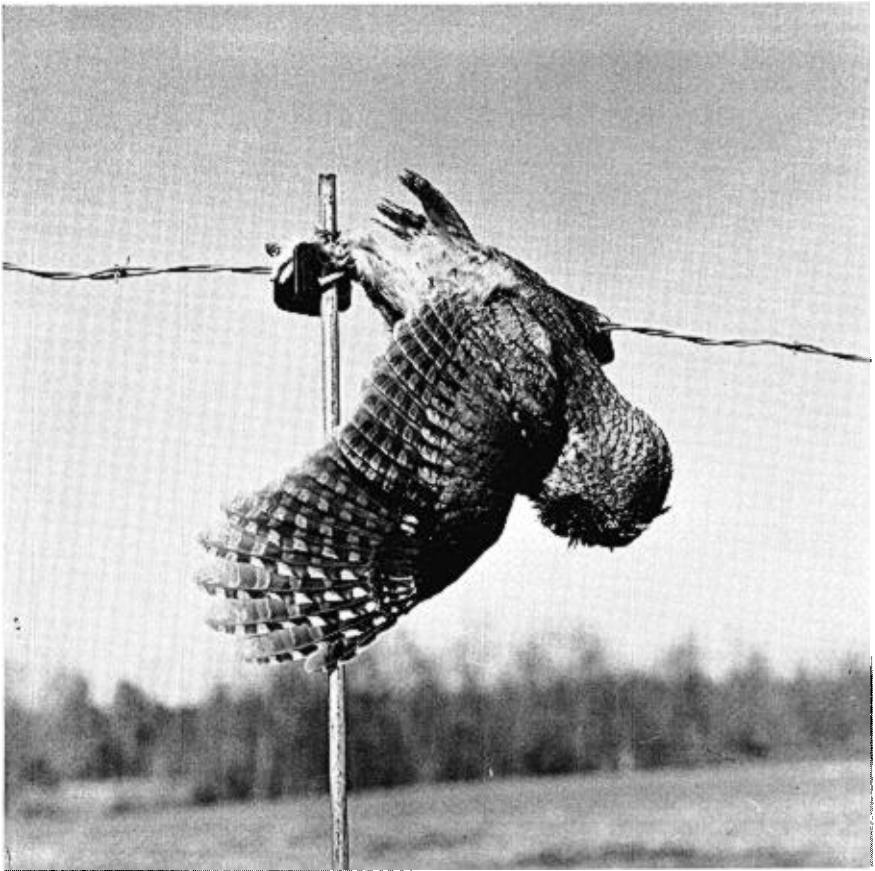


FIG. 1. Dead Screech Owl on electric fence.

thrus ater) gather and perch on the wire. He estimated that the fence kills as many as 200 birds of various species in a year.

The wire of the fence was attached to an electric fencer lacking a "chopper," a device providing alternate breaks in the current going to the fence wire. Also, the fencer was not equipped to reduce the voltage delivered to the fence. Thus, being attached to a 110-volt line, 110 volts was delivered to the fence when it was grounded. Mr. Whitehead purchased his fencer about ten years ago, but fencers of the same type are currently (5 February 1973) being sold in the hardware stores at Scotland Neck.

Because of the quick coagulation of muscle protein by electrocution, birds often remain attached to the wire after being electrocuted.—PAUL A. STEWART, 203 Mooreland Drive, Oxford, North Carolina 27565, 20 February 1973.

Ocular impalement of a Great Horned Owl.—There are a number of features in the structure and function of the owl eye which aid survival. The large tubular-shaped eye of many owls is capable of discerning objects in light which is one-tenth to one-hundredth of the intensity minimal for man (Dice, *Amer. Naturalist*, 79:385-416, 1945). Maneuverability during nocturnal foraging is further enhanced by the frontally directed position of the eyes. Considering the visual adaptation of the strigiform for its nocturnal predatory behavior, it thus seems surprising that impalement would occur and especially ironic for an incident to involve the eye itself.

At noon, on 24 July 1972, accompanied by Gerald McCarthy, I found a mature Great Horned Owl (*Bubo virginianus*) firmly impaled on the top strand of a double barbed wire arrangement. It was located in a forested area, predominately *Quercus* and *Carya*, approximately 3 miles southwest of St. Elizabeth, Miller Co., Missouri.

The bird was found alive and facing away from the highway, about 10 feet away. Each of the four barbs was enveloped in membranes of the right eye. It was initially hoped that the eye itself was intact. A portion was cut out of the wire strand, freeing the bird but leaving the wire embedded. Upon its removal by the local veterinarian, it was discovered that the eye was destroyed. The bird was found dead two mornings later, prior to its intended release.

Since there appeared to be no other damage and since the bird was alive when found, the chance of it being purposely hung out by someone was eliminated.

It appears that the bird was in flight, towards the highway, when it struck a barb. The momentum of flight no doubt allowed it to swing up and over the fence, impaling it on all the possible barbs. Struggling had occurred and the situation was apparently intensified. The cause of such an accident can only be conjectured: poor health, harassment, frenzied predatory behavior or perhaps the limited accommodation present in owl vision. It might be significant that the first substantial rainfall of an otherwise dry summer had occurred during the night.

Cornwell and Hochbaum (*Wilson Bull.*, 83:305-306, 1971) discussed collisions with wires as a definite source of mortality in ducks. Investigation of published reports of owl mortality produced no information on the importance of wire fencing. Fleay (*in Night watchman of brush and plain*: p. 73, 1968) mentioned an Australian Barking Owl (*Ninox connivens*) that had broken its wing following the spiking of its shoulder on a barbed wire fence. No other records of ocular impalement were located.

Although it is likely that this was a freak accident, I am still curious about past unreported occurrences of owl impalements or collisions with wires. In another group of flying animals, the bats, which are also well adapted for nocturnal activities, there is a