

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

peculiar species pattern of incidence. There are numerous reports of the hoary bat (*Lasiurus cinereus*) and especially the red bat (*Lasiurus borealis*) being impaled on barbs of usually the top strand of a wire fence. Other than the lasiurine bats, an Indiana bat (*Myotis sodalis*) and a little brown bat (*M. lucifugus*) were reported impaled on barbs of the top strand of wire also. Impalement usually involved the piercing of the wing or interfemoral membranes.

This seems to question the effective detection of these structures by the echolocation system of the lasiurine bats as compared with other bats. Similarly, with future reporting of these occurrences in owls, incidences of species and number should be noted. Possibly, there are also varying degrees of efficiency within different owl species for avoiding wire structures that man utilizes in the environment.

I thank Drs. Millicent Ficken and Charles Weise for reviewing this note.—TIMOTHY McCARTHY, *Vertebrate Division, Milwaukee Public Museum, Milwaukee, Wisconsin 53233, 23 March 1973.*

Great Horned Owl impaled on barbed wire.—During the summer of 1972 I installed a barbed-wire fence along the south boundary of our 12½ acre property. On my regular morning walk on 20 February 1973 I found a Great Horned Owl (*Bubo virginianus*) impaled by its left wing on the top wire. Close examination indicated that it had caught a barb in the skin and feathers at the base of its left wing. This, apparently, caused the bird to flip over the top wire and become firmly hanged by the four barbs projecting from that point in the wire. The wing bone was broken and the wing was severed, except for a bit of skin. The bird was still alive.

Cornwell and Hochbaum (*Wilson Bull.*, 83:305–306, 1971) reported a large number of birds, particularly waterfowl, striking telephone and power lines, fences, and buildings. Barbed wire fences in the vicinity of marshes seem to be a particular hazard to water-loving birds.

This Horned Owl was a full grown male (testes 10 mm × 14 mm) seemingly in good health.—RALPH M. EDEBURN, *Box 42, R. D. 1, Mercer, Pennsylvania 16137, 23 March 1973.*

An observation of predation by native fire ants on nestling Barn Swallows.—During the period 26 May–4 August 1972 we studied nesting success of Barn Swallows (*Hirundo rustica*) inhabiting culverts in Brazos County, Texas. On 14 July we observed a column of about 5,000 native fire ants (*Solenopsis geminata*) attacking a Barn Swallow nest containing three newly-hatched nestlings and one unpipped egg. The nest was located 1.70 m above the ground and 4.35 m equidistant from the culvert openings.

By stinging and biting away small pieces of tissue, the ants killed the nestlings and carried away their bodies, except for the heads which were left uneaten in the nest. The egg was not attacked. The adult swallows deserted the nest, and the egg, which contained a fully developed, viable embryo, failed to hatch.

We observed more than 25 other swallow nests during this period; however, we saw no further predation by fire ants. The observed attack by ants occurred shortly after the water beneath the nest dried up, whereas the other nests were located over water throughout the study. Apparently, absence of water permitted attack by the fire ants.

Recently, there has been considerable discussion concerning the impact of imported fire ant predation on nestling birds (see Coon and Fleet, *Environment*, 12(10):28–38, 1971). There are no published records of predation by native fire ants on avian species