

# FOCAL CONCENTRATION: A POSSIBLE CAUSE OF MORTALITY IN THE GREAT GRAY OWL

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Great Gray Owls frequently are killed or injured through accidental collision with motor vehicles, the cause generally being ascribed to the owl's long, slow flight; the failure of sitting birds to move out of the path of approaching vehicles; or their apparent lack of awareness.<sup>2,7,8</sup>

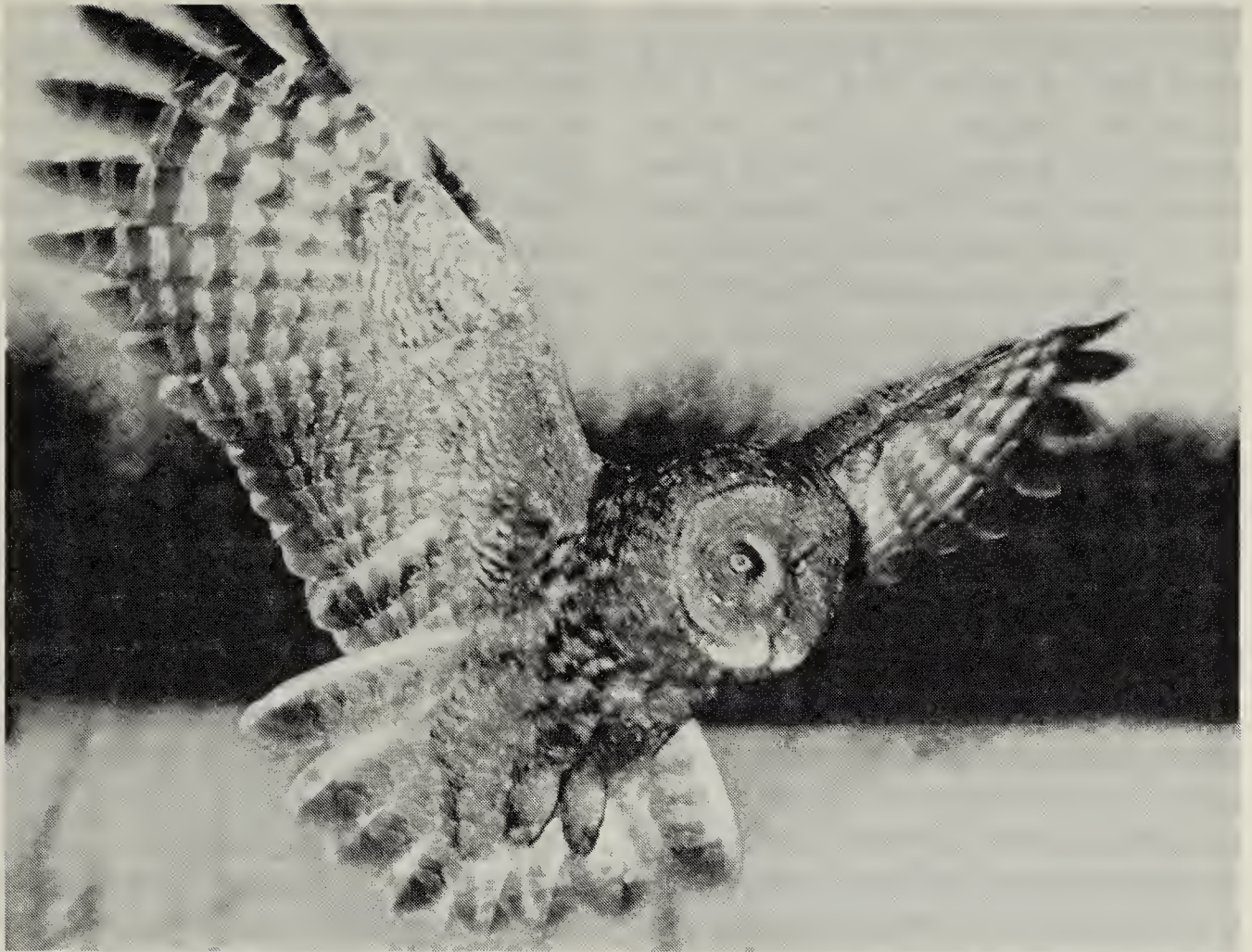
It has been noted that some Great Gray Owls "fly low across even busy highways, ignoring passing vehicles, gliding slowly, clearly unaware of any danger. Apologetic drivers have brought in dead or crippled owls that flew into their vehicles 'as if they were blind'.<sup>5</sup> Another writer noted that the Great Gray Owl "loses all awareness of its surroundings and can fly into the path of oncoming cars. It has been observed to fly directly into the side of a car, killing itself instantly."<sup>2</sup> Upon query, Bruce DiLabio said that in at least two cases owls were so intent on prey on the other side of a road that they hit the side of cars intersecting their flight path (pers. comm., November 1990).

The late Don Follen, Sr., published an observation of such an incident involving a related species.<sup>4</sup> Follen described how a Barred Owl flew into a motionless car in the daytime. Just as Follen and two companions drove up to retrieve two traps baited with live prey, the owl launched forth. They quickly braked to a stop, but the owl, which kept coming even after their car had blocked its line of sight, hit the car, stunning itself. Follen concluded that the owl collided with the car owing to

"focal concentration...a possible reason why so many Barred Owls are traffic victims across the nation's highways."

A recent case of a Great Gray Owl striking a vehicle may have resulted from similar focal concentration. On 16 February 1989, at about 9:30 a.m. on a bright morning, Rene Daoust was driving north behind a van on Highway 59, about 60 km northeast of Winnipeg. Suddenly an owl headed across the highway from east to west, with the sun at its back. According to Daoust, the owl flew into the upper front corner of the high van as if it had not seen it approaching; it was dead but had both eyes intact when he stopped to examine it. The driver of the car admitted that he hadn't seen the bird, but he knew that he had hit something. The owl, which I examined later, was an adult female.

Follen created the phrase "focal concentration" to describe the focussed attention of a bird or mammal on a prey object, to the extent that it becomes oblivious to all else. In the case of the Great Gray Owl this may lead to collisions and loss of the owl's life. Follen's "focal concentration" is an apt expression for certain, but not all, situations. Occasionally the Great Gray Owl shows a fearlessness or boldness (or "stupidity") that may bring it into close proximity of humans, even when it is not particularly focussed on a prey object.



*Great Gray Owl, near Lac du Bonnet, MB*

*Robert R. Taylor*

On 23 March 1989, Robert R. Taylor and I were photographing a Great Gray Owl near Lac du Bonnet, Manitoba. More than eight times this owl came down from a hydro pole and attempted to capture a live laboratory mouse which was in a clear plastic box. Each time when it approached or grappled with the box the owl seemed unaware of the electronic flash from Taylor's motor-driven camera, which at times was being rapidly fired directly at it from less than 5 feet (Taylor was crouching beside the box). Yet, on at least one occasion when the owl hopped onto the snow a few feet away and turned to look back at Taylor, the sudden flash made the bird flinch. It seemed to us that when the bird was concentrating on trying to get the mouse nothing bothered it. This bird, which James R. Duncan and I captured and banded the next day, was an adult female.

In January 1984, while Taylor was

photographing three daytime-hunting Barred Owls at Toronto, one especially bold bird, lured by a live gerbil in a plastic box, repeatedly came to within a few feet of him. On one occasion the owl slid in across the snow so fast and low it got wedged between a large wide-angle lens on his movie camera and the surface of the snow. Within a few minutes after being set free it again began attacking the boxed gerbil.

Raptors in pursuit of prey often exhibit a kind of tunnel vision, or focal concentration, seemingly ignoring factors that would ordinarily be avoided, such as the presence of man. Ed Jones, in describing a capture technique for the Northern Hawk-Owl using a live mouse and a banding net, notes that "this demonstrates...its concentration on the prey target."<sup>6</sup> For a hungry raptor, the sight of prey—especially once engaged in the pursuit—must be a powerful stimulus. Many years ago a

migrant American Kestrel took a House Sparrow off a rabbit coop only a few feet from where I was standing. And I once had a good, long look at a Goshawk pursuing a Ruffed Grouse through an aspen thicket about three metres from me. Both diurnal and nocturnal raptors are notorious for taking or attempting to take domestic fowl in farmyards. There is even a record of a Great Gray Owl going inside a henhouse in search of prey.<sup>10</sup> Bent records an observation by G.N. Wilkinson of a Great Horned Owl that was struggling to kill a striped skunk; Wilkinson stated: "neither the bird nor his victim paid any attention to me, though I stood quite close".<sup>1</sup>

At times, owls have landed in front of us or flown between and around us, seemingly without fear. We have also repeatedly taken Northern Hawk-Owls, and an occasional Great Horned Owl and Barred Owl in this fashion. In both Finland and Canada, under exceptional circumstances with concentrations of hungry Great Gray Owls, several birds learned to fly to people and pluck mice from their fingers!<sup>5,9</sup>

Focal concentration in owls may be an important adaption for obtaining prey, but where roads and vehicles are involved, it may be a handicap. Even in areas remote from man, focal concentration may lead to an occasional fatal accident. An owl's response to prey may occasionally lead to reckless pursuit involving natural obstacles. One cold morning (25 February 1978) Herb Copland and I watched a Great Gray Owl risk possible injury—or at least damage to its flight feathers—by plunging through the branches of a tree instead of flying around or over it. In its haste to get to the lure, the owl snapped off several large twigs. James R. Duncan (pers. comm.) has recorded two incidents where radio-marked Great Gray Owls died after getting a wing caught in a fork of a low branch, presumably while in pursuit of prey. An unmarked Great Gray Owl with one

eye missing, was captured by Jim and Patricia Duncan; it may have injured itself under similar circumstances. Such concentration on prey may also partly explain the vulnerability of the Great Gray Owl to predation by Great Horned Owls.<sup>3</sup> Under natural conditions, focal concentration is not likely a major mortality factor, but where these birds are hunting along highways it may be significant.

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