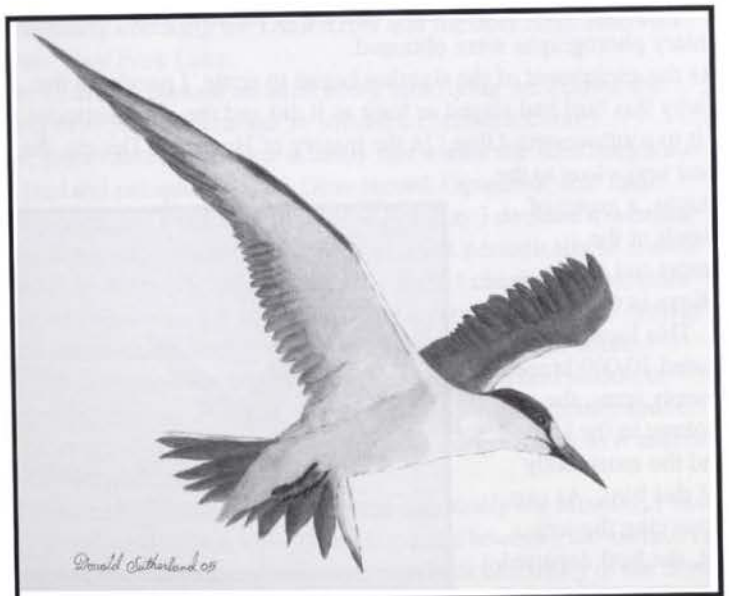
*There has previously been only one recorded report of a potential sooty tern for Ohio, in 1945. Bill Whan has provided me with the following information regarding that report and records from surrounding states:

"On 5 August 1945, several observers reported having observed a tern on Mogadore Reservoir in Portage Co. The bird was studied for an hour with scopes and binoculars, and a report published in Audubon magazine 47(5):48, where Ludlow Griscom remarked that it left "no room for reasonable doubt" that it was "one of the two tropical oceanic dark-backed terns" [i.e., sooty or bridled]. Ohio authorities, however, have been unable to locate the documentation, and while this bird was quite possibly a sooty tern, it might have been a bridled tern, and in any event better evidence would probably be required for a first state record. No hurricane is likely to have affected Ohio significantly on this date, according to Weather Service records. All adjacent states and provinces except Michigan already have records of this species; Indiana's sole record is of a dead bird, while Pennsylvania, West Virginia, Ontario, and Kentucky have multiple records."



Drawing by Donald Sutherland.

How Common are Wintering Long-eared Owls in Ohio?

Bill Whan
223 E. Tulane Rd. Columbus, OH 43202
billwhan@columbus.rr.com

How can we know if a bird species is genuinely rare, or just rarely seen? Ohio seems to lie in known migratory pathways for yellow rails and Le Conte's sparrows, birds much sought after here, but we don't have the faintest idea how many pass through the state. We benefit from many ways of estimating birds' numbers: surveys, counts, and censuses, hawk-watches, reports from banding stations, and data from an army of other observers collected, compiled, and recorded in any number of other ways, including in this journal, but they only scratch the surface, and the local abundances of many secretive species are unknown. Near the top of anyone's list of such birds are the owls, and among regularly-occurring Ohio ones the most difficult to detect are long-eared owls *Otus asio*.

Peterjohn & Rice (1991) estimated their statewide population in summer as "probably fewer than five pairs" if the very few nesters found during the *Ohio Breeding Bird Atlas* period accurately reflected their status, but noted that their true numbers could be larger. Many more are noticed in winter, when an influx of birds from the north presumably occupies the state. Peterjohn (2001) calls them "casual to rare and very locally distributed winter residents throughout Ohio," but Wheaton (1882), writing when the deforestation of the state was more extensive than it is today, found it "at times [an] abundant visitor," though he too called it "rare in summer." Trautman (in preparation) reports finding 1-16 birds daily during many consecutive winters in a single stand of cedars in Ottawa County; while fewer were present in other seasons, he nevertheless regarded the long-eared owl as "an uncommon migrant and rather uncommon nesting species" in the western Lake Erie region since 1930. Published Ohio records of the long-eared owl involve 62 counties, the great majority of them coming from the northern third of the state December through March. Many forested counties in the unglaciated southeast lack records from any time of year. Setting aside breeding records, there are among more than 600 records only nine from October, fewer than 30 from November, and not many more than that from April. Studies near our latitude indicate northbound movements from mid-March to mid-April, and southbound in October and November, with 90% of birds moving between 16 October and 24 November at Cape May, N.J. (Marks et al. 1994). While most authorities agree in regarding it as a rare nester in Ohio, details are often difficult to come by. In the modern era the hobby of egg collecting, which often led collectors to seek out nests of rare

species, is no longer legal, and finders of nests are not always inclined to inspect or report them lest observers disturb the birds.

Many nocturnal species are most easily detected by ear during courting and nesting seasons. Long-eared owl vocalizations, however, are varied and infrequent, and probably the least-recognized owl sounds among local birders, even experienced ones. Learning from popular guides can be difficult. Bent (1937) devotes 62 lines of text to descriptions of various utterances of long-eared owls. Sibley has *wooip*, *sheoof*, *bwah-bwah-bwah*, and *wee-ee*; Peterson (1980) offers *hooooo*, and a "catlike whine"; Robbins et al. (1983) describe "a variety of low hoots, whistles, and shrieks"; the National Geographic guide (1999) has "one or more long *hooo*'s"; Farrand (1983) relates "soft, cooing, mellow low-pitched hoots; also shrieks, whines, meows, and *weck-weck-weck* alarm notes; at winter roosts, soft twitters before dawn." Got that?

Vocalizing owls want to be heard, even though predators will be among the audience. Still, there must be aspects of the ecology of this species that make hooting less important than it is for more demonstrative owls. Having accepted this, most likely we'll often have to use our eyes, poor as our vision is in comparison to that of nocturnal hunters. Unfortunately, long-eared owls don't want to be seen. Our other owls also take care to hide of course, but they don't seem to resent nearly so much being found. Long-eareds seem to hate being discovered, and eye contact with an observer is often the final signal to flee. In the winter of 2003-2004 a big roost of up to twenty birds was found along a busy trail in northwestern Ohio; they had persisted while joggers passed close by daylong, but when birders discovered them and actively observed them they grew more skittish and prone to retreat into the woods. Here perhaps is another argument for angled eyepieces on spotting scopes—the askance look. Long-eareds prefer dense dark cover, and in winter this means conifer stands, or deciduous trees like oaks that retain foliage. Unlike our other owls, they have a habit of furling themselves up umbrella-style to the dimensions of a wine bottle; the resulting stick-like profile makes them very overlookable.

In winter they frequently lurk communally (2-20 individuals), often in shorter trees 8-15 feet tall whose dense leafage makes eye-level views difficult. Marks et al. (1994) state that winter roosts vary from .5 to 5 m. above ground level, and that small groves, thickets, or shelterbelts seem to be preferred; roosts in large woodlots tend to be on their edges. Resident great horned owls are likelier to inhabit stands of taller trees with a more open understory, giving long-eareds another reason to avoid such spots. When flushed during the day in such situations, they generally leave cover as briefly as possible. A single observer looking for them will often miss a roost entirely, as they flush on silent wings, off on the far side of dense trees, quickly veering back into the most distant parts of the cover.

Many observers have seen most of their Ohio long-eared owls at one location: a pine plantation in Killdeer Plains Wildlife Area, where they have been reliable for around 30 years, and sought on the Christmas Bird Count there

since the late 80s. These observers may disagree with much of what is said in the previous paragraph. At Killdeer, they will say, these owls may be seen in relatively open stands of pines up to 40 feet tall. Perhaps because of the comparatively scant cover in the open understory, they seem accustomed to eye contact with visitors, and flush only with additional provocation. They can even be good photographic subjects. Attentive observers with the leisure to search for them often leave the "Owl Grove" in winter having had good looks at several of these birds. The Killdeer roost has been unique in the state recently, reliably allowing views of this species year after year for multitudes of owl-seekers, though there were signs in 2004-2005 that it may be in the process of abandonment.

While their presence was shared among only a few in the1970s, over the years the number of observers has increased steadily. Despite concerns about pressure on the owls and even deterioration of the habitat caused by crowds, the numbers of owls reported at the site, while varying from year to year, fluctuated but did not diminish overall for decades. Importantly, it has not been merely the presence of owls in this publicly accessible area that has attracted the attention of so many birders from Ohio and neighboring states, but what appears to be their uncharacteristic equanimity.

It seems possible this population of wintering owls has, over a number of generations, learned to put up with the pressure of eager but otherwise non-threatening human observers. Alternatively or additionally, perhaps the more open grove itself makes a difference. In dense cover, initial eye contact with a potential predator can occur at arm's length; when an interloper can be observed at a more comfortable distance, on the other hand, precipitate flight is not the owl's only option. Whatever the cause, in a state where less disturbed grasslands have grown scarce, Killdeer's rodents are a magnet for wintering raptors, and the cost of admission is being ogled by human visitors. Birders are tempted by the birds' disinclination to flee to violate at times the ethics of their pastime, but they have probably never directly harmed an owl. Certainly flushing at the approach of every human would be an intolerable waste of energy, especially when humans are spread out daylong over the entire grove. Those, like the author, who made dire predictions that we'd eventually drive the owls off, have been proved wrong year after year. When in 2000 the roost began to pass the day in an isolated red cedar only a few feet off the closest roadway, sometimes allowing the approach of "cautious" birders within a few feet, it seemed an ultimate level of tolerance of humans had been reached. But later they continued to roost even after utility maintenance crews had hacked off the top third of the tree, reducing their cover still more. Interesting in this regard was a communication from Jason Larson, who wrote to the author as follows:

When the Brown Family Environmental Center Birding Club did a field trip to Killdeer Plains on February 02/22/04, Sherrell Campbell and I had 26 Long-eared Owls in the cedar tree along the road...yes...the one out in front of the barn without a top!...Normally, you can walk right under the tree

to get a look at the birds...as there are normally 2-5 or so birds in the tree and they normally stay put for a great close look. I spied one bird as I walked under the tree and as I turned to motion Sherrell over to take a look...and I heard a WHOOSH! Twelve birds went in the first flock and then another nine...I thought they were all gone, but another four flew out one by one over the next few minutes. To my amazement...one bird remained and refused to budge for the remainder of the afternoon. All of the birds headed for the barn and seemed to disappear into the brush behind the barn. We did not see any back in the pines, so they must have stopped in the heavy brush directly behind the barn. Anyway...pretty unusual...considering before they flew I only saw one!

Previously during this winter, in multiple reports the high count of this species at this spot in Killdeer never surpassed a dozen. Why 26 birds on this occasion? Peterjohn (2001), while conceding we know very little about local migration by this species, states that "[b]ased on the abandonment of their winter roosts, Long-eareds may initiate their northward migration during the last week of February." Thus, it seems a reasonable surmise that in this case the Killdeer-wintering owls accustomed to human disturbance had been joined by migrants from elsewhere, and the Larson party was lucky enough to witness the overlapping presence of the winter roost and a migrating contingent, and their different reactions to close approach.

The winter of 2004-2005 at Killdeer produced very few owls in the traditional grove, but a roost of 4-8 wintered several hundred yards away in a patch of more typical long-eared habitat. Killdeer includes at least three more evergreen islands that have more or less regularly harbored long-eared owls in recent winters. It is possible the traditional "Owl Grove" has matured to a stage where taller trees and a more open aspect have attracted great horned owls, which have been known to make short work of a long-eared roost.

We do not know for sure how common these owls are in Ohio, but there are several reasons to regard them as more numerous than we once thought. Because of the relative ease with which they may be been seen at Killdeer, fewer birders look for them elsewhere, or at least seldom report them when found. This may paradoxically make them seem all the more rare and local statewide. Observers are understandably reluctant to jeopardize other roosts by publicizing them when the Killdeer owls are so accommodating. An old rural tradition of shooting owls on sight has not died out, and birders and especially photographers tend to risk disturbing them for their own gratification.

The Killdeer phenomenon, while in a sense it enhances the privacy of long-eared owls elsewhere, also tends to diminish searching and reporting that might give us a clearer idea of this species' abundance. While their numbers at any given location may fluctuate with the availability of prey, the most consistent factors influencing the number of observations reported are observer effort and skill at identifying potential habitat.

Evidence for the latter factor comes not from Ohio, where little systematic research has been undertaken, or at least published, but from

Minnesota, where Hertzel & Hertzel (2000) studied local roosts of the species over two winters. Long-eared owl winter roosts had previously seldom been reported in Minnesota (as in Ohio): reports averaged fewer than four per year, rating an abundance of "rare but regular" in the state. The authors first spent 34 hours searching 16 southern Minnesota counties during one winter season, finding 27 owls at 17 different roosts in 14 counties. Three of these counties had no previous published reports of long-eareds at all, and six had only one. The next winter they spent 30 hours searching just one of those counties, which had had a poor record of the species in previous years, and found 20 owls at eight roosts.

They concluded from these studies that wintering long-eareds deserved a change in abundance status all the way from "rare" to "common" in suitable habitat in the southern third of the state. Hertzel & Hertzel learned to search in stands of conifers immediately adjacent to open fields attractive to rodent prey. They found that dense pockets of eastern red cedar situated in otherwise semi-open habitat on sloping ground often produced roosts; additionally, remote plantings of spruces and long-needled pines close to hunting fields were just as productive if the trees were of intermediate height (10-20 feet) accompanied by little or no understory. They found enough fresh sign (whitewash, pellets) to induce them to conclude they had probably actually seen and counted only about 50% of the owls actually present in the sites inspected.

The researchers reported that nearly all the owls flew off upon being approached, and that a single observer would have missed many of them. A second witness standing outside the grove was able to see these more easily. Owls tolerated a closer approach in the somewhat more open pine habitats than among cedars. The authors concluded that these habitats are fragmented and often remote, situated far from roads and frequently on private property. Mid-winter conditions in Minnesota were also likely to discourage any but the most dedicated searches for owls by birders, especially in vegetation difficult to negotiate at any season because so dense and impenetrable.

It seems reasonable to speculate that many of these conditions and findings would hold true for Ohio. The first prerequisite must be food for the owls, especially open fields of sufficient size with vegetation inviting to lots of rodents, especially voles *Microtus* spp. Here such hunting grounds may be found in many places, especially in glaciated Ohio. Those in public areas are easier to visit, but many are on private land and often go unexplored, or at least unreported. The extensive grasslands of certain reclaimed strip mines in Ohio's unglaciated region have proved inviting to long-eared owls in some instances. Also required seem to be dense clumps of red cedar or islands of the longer-leafed pines nearby for day roosts. Given the right conditions roosts can form in trees in the front yards of farmhouses.

A third factor is observers' ability to distinguish long-eared owls from short-eared owls in flight, not always an easy task. Short-eareds only rarely roost in conifers, generally preferring to spend the night roosting in grassy terrain, something long-eareds apparently never do. Flushed from roosts, long-

eareds usually don't hide in grass, but return to trees. In flight, both owls are superficially alike, but their colorations—warm buff and brown for short-ears and darker, colder tones for long-ears—match their roost habitats. Flying long-eareds show barring on the underparts down through the belly, white highlight stripes on the upperwings, as well as bright orange on the face and on the leading edge of the wings; the "ears" are usually tucked in and invisible in flight. Because short-eareds are more often seen by day or at twilight, birders tend to regard them as more common than their nocturnal cousins, and misidentification tends to favor the more familiar species. Long-eared owls may well be more numerous in Ohio than short-eareds.

In the winter of 2003-2004 long-eared owl reports came to this publication from sixteen Ohio counties, and totaled more than 100 individuals. We have a unique situation: the Killdeer owls allow close scrutiny, and this allows reporters of other owl roosts to feel comfortable keeping their exact locations confidential. We hope this will encourage more reporting, and hence more accurate overall numbers. The chances seem good that further study will reveal that long-eared owls, at least as wintering birds, are considerably more common, and widespread, than the evidence has enabled us to conclude thus far.

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A mounted long-eared owl at the Ohio State University's Museum of Biological Diversity