

Breeding Status and Nest Site Selection of Turkey Vulture in Ontario

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In the late 1800s, the Turkey Vulture (*Cathartes aura*) was uncommon in Ontario and had been observed only in the southwest of the province, particularly in the counties of Essex, Kent, and Middlesex (McIlwraith 1894). In western Ontario, its early occurrences were listed by Snyder (1953), and the most northerly of these was at Sydney Lake, nearly 60 miles north of Kenora, in 1948.

Although nesting has never been recorded north of the Red Lake area of Kenora District, summer occurrences had been noted in the northeast at Moose Factory in June 1898 (Fleming 1903), in the northwest at Fort Severn where a bird was collected in August 1931 (Norris-Elye 1932), and at Winisk where a non-breeding bird was observed in 1983 (Cadman 1987).

Highway development and an increasing number of road kills by motor cars has undoubtedly contributed to the steady northward expansion of the species into Ontario. Although birds may be observed almost anywhere during the warmer months in southeastern Ontario and the southern part of western Ontario, they are particularly prevalent in southern Ontario along the 725 kilometre length of the Niagara Escarpment, to which they are attracted by its thermals and the ready accessibility of numerous nest

sites in woodlands, cliff ledges, and caves and crevices.

No documented nesting records of Turkey Vulture exist for Ontario before 1900 (Peck and James 1983). There are undocumented reports of nests found in Middlesex County at Kerwood in 1890 and 1891, and at Coldstream in 1919 (Wood 1920). Two young Turkey Vultures were reported to have been raised in captivity in Lambton County in the early part of the 1900s (Williams 1918). Another early nest was reported at Poplar Bay, Kenora District in 1911 (Snyder 1953), but the first documented nest, also in Kenora District, was found in 1919 (Baillie and Harrington 1936).

Since these early records, the database of the Ontario Nest Records Scheme (ONRS) with 125 nest records, confirms that nesting has now been recorded in 36 provincial regions (see Figure 1). The eastern and western breeding populations are obviously disjunct, which may be due to the lack of agricultural areas between Sudbury and Rainy River Districts, and the resulting absence of open country in which to forage.

Of 60 traditional nest sites of Turkey Vulture in Ontario, prior to 1989, 41 nests (68%) were in rocky sites (see Figure 2), and 19 nests (32%) were typically in woodlands (see Figure 3). The use of aban-

doned buildings as nest sites (see Figure 4) began to be recorded after 1989 in Ontario (Peck and James 1993). The former uniqueness of these sites is evident upon examination of the literature. Nuttall (1832) described one nest site in a chimney in a deserted house; Bent (1937) referenced only two nest sites in buildings, one in a pig sty in 1903, and one other in a neglected barn in 1927; and Palmer (1988) noted that only 5% of 418 nests, east of longitude

100° W, were in buildings.

Since 1989, in Ontario, of 54 nest records, 25 nests (46%) were in buildings, 19 nests (35%) were in rock sites, and 10 nests (19%) were in logs/stumps in woodlands. The continuing and increasing use of building nest sites is borne out in the period from 1999 to 2003, where a total of 18 nests consisted of 9 nests (50%) in buildings, 6 nests (33%) in rock sites, and 3 nests (17%) in woodlands.

Nidiology

RECORDS 125 nests representing 36 provincial regions (Figure 1). Breeds on cliff ledges, crevices, caves, and among boulders on talus slopes and rocky outcroppings of shield and escarpment areas; in deciduous and mixed woodlands where nests were situated in standing hollow trees and stumps, in hollow fallen logs, and on the ground beside logs and piled wood; and in abandoned buildings (barns, houses, sheds, sugar shacks, stills, and cottages), in both agricultural lands and woodlands.

The rock sites (60 nests) overall outnumbered both the woodland sites (29 nests), and the deserted building sites (25 nests). However, as noted previously, these site numbers have shown a marked proportional change since 1989.

Nests were in various locations from near the tops of cliffs to near the bottom of talus slopes in rock sites, and one was in a crevice, 2 m above water; five nests in cavities in standing hollow trees and stumps were at the base of the cavity on the ground, and one other was 40 cm above ground level; and nests in buildings were on or under floor boards, and one was under a cottage porch. The eggs were placed usually on bare rock or ground or boards, and occasionally on wood chips, grain residue, hay, straw (see Figure 5), dead grasses and weeds. No nests were built, but scrapes or depressions were sometimes formed in the substrate.

EGGS 102 nests with 1 to 2 eggs; **1E** (18N), **2E** (84N).

Although 3E clutches are known, none have been reported in Ontario. In a barn loft in Kawartha Lakes in 2003, two nests, one with 2 eggs and one with 1 egg, were situated within 2 m of each other. Differences in markings and measurements seemed to indicate laying by two females. Both nests were deserted. *Average clutch range* 2 eggs (84 nests).

INCUBATION PERIOD 4 nests, at least 29 days, at least 31 days, at least 33 days, and at least 37 days.

Although the period is known to be variable in length, the longest period is the most convincing.

EGG DATES 51 nests, 1 May to 20 July (71 visit dates); 25 nests, 20 May to 3 June.

The rapidly increasing use of deserted building nest sites since 1989 would appear to coincide with the decreasing use of rock and woodland sites because of forest fragmentation and more human encroachment of these nesting areas. The exodus from farming in recent years has resulted in a proliferation of abandoned barns and other farm buildings. Because the requirements of this species' nest sites are darkness and some seclusion from predators and humans (Kirk and Mossman 1998), these necessities are often better realized through the choice of abandoned buildings where nests usually are located under floorboards, or in dark lofts.

When any nest sites are undisturbed and nesting is successful, the birds show a marked tenacity to use these same sites annually, or intermittently, often for a number of years. From a nest site in a cavity at the base of a cliff in Bruce County, young were successfully fledged in seven nesting seasons, between 1981 and 1994. Another in the hollow stump of a Sycamore (*Platanus occidentalis*) in Kent County was occupied for six seasons, from 1947 to 1952.

Data from 12 nest records showed that nestlings (see Figure 6)

remained in or near the nest over a period ranging from at least 52 days to 70 days. The early times indicate the age at which some nestlings moved on foot away from the actual nest site, prior to their first flight, which usually occurred at 60 to 70 days of age. Nests located inside buildings appeared to keep young from leaving their nest site as soon as those that were in hollow logs or among rocks and in caves, where there was no physical barrier pre-



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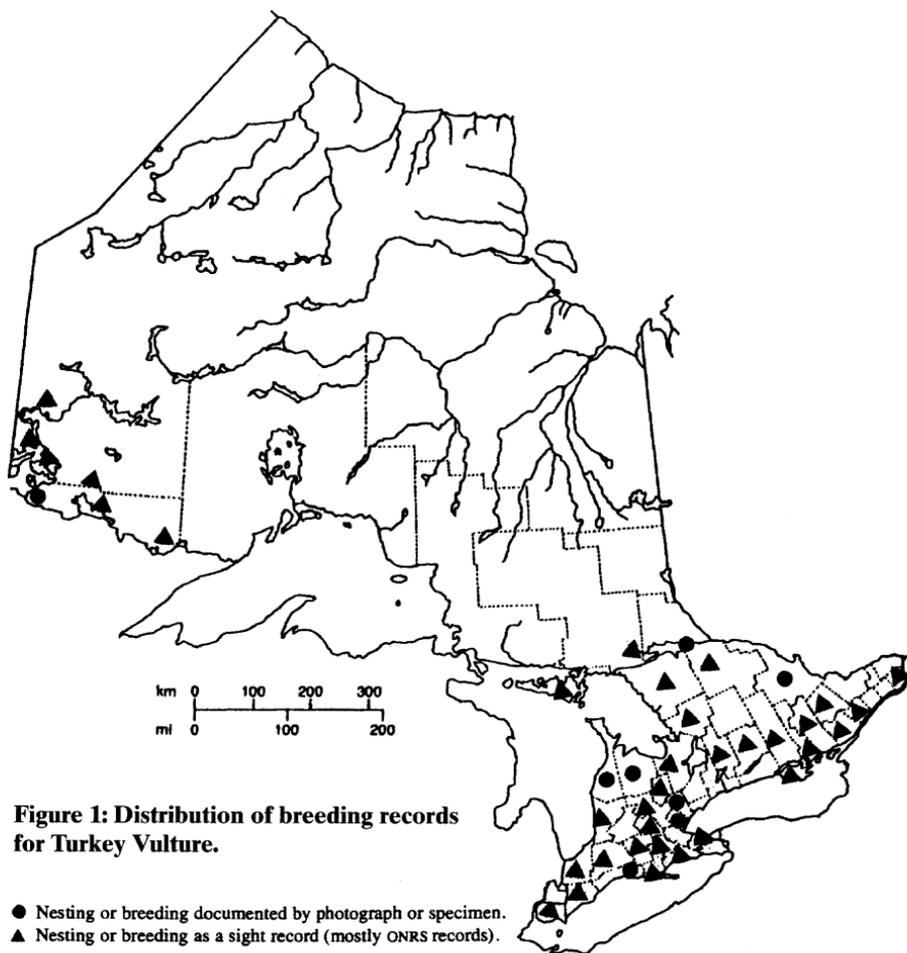


Figure 1: Distribution of breeding records for Turkey Vulture.

- Nesting or breeding documented by photograph or specimen.
- ▲ Nesting or breeding as a sight record (mostly ONRS records).

venting departure. For example, two young remained in a barn loft in Grey County for 77 days, although they were flying about inside the barn from at least 70 days of age (see Figure 7). The entrance through which the adult entered this barn was located about 5 m above the level where the young were raised.

In the ONRS database, of 46 nests where the outcome was known, 31 nests (67.4%) were successful.

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The 15 unsuccessful nests (32.6%), variously, were preyed upon by raccoons, had eggs and young collected, had adults shot, or were nests deserted for unknown reasons.

Despite the deleterious effects of predation, collisions with automobiles, habitat loss, and human encroachment on nest sites, breeding populations of this beneficial scavenger continue to increase in Ontario.



Figure 2: Turkey Vulture nest site in cave on Niagara Escarpment, Nassagaweya Township, Halton County, Ontario, 16 June 1966. Photo by *George K. Peck*.



Figure 3: Nest site of Turkey Vulture in tree cavity in farm woodlot, Haldimand County, Ontario, 15 May 1971. Photo by *George K. Peck*.



Figure 4: Turkey Vulture nest site in abandoned farm building, Rainy River District, Ontario, 13 June 2001. Photo by *George K. Peck*.



Figure 5: Nest and eggs of Turkey Vulture in barn loft, Epping, Grey County, Ontario, 26 June 2002. Photo by *George K. Peck*.



Figure 6: Nestling Turkey Vultures, 4 and 5 days of age, in barn nest, Epping, Grey County, Ontario, 25 July 2002. Photo by *George K. Peck*.



Figure 7: Two fledged young Turkey Vultures, 10 weeks of age and still in nest barn, although flying about, Epping, Grey County, Ontario, 29 September 2002. Photo by *George K. Peck*.

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