

BREEDING BIRDS OF ONTARIO: NIDIOLOGY AND DISTRIBUTION

Volume 1: Nonpasserines (FIRST REVISION - PART A: Loons to Ducks)

by
George K. Peck and Ross D. James

A decade has elapsed since the publication of Volume 1 of Breeding Birds of Ontario (Peck and James 1983) dealing with the nonpasserines, and during that period a number of changes and additions to their distribution and nidiology has occurred. For example our largest data base, the Ontario Nest Records Scheme (ONRS) has expanded to over 104,000 nest cards, and our file of provincial breeding records has also substantially increased. In addition to ONRS contributors, some of the sources responsible for these increases include: *American Birds*; Ontario Atlas nest cards (1981-5); more historical records from field notes of L.H. Beamer, R.C. Brooman, O.E. Devitt, J.A. Morden, P. Harrington, and W.E. Saunders; *CWS Progress Notes*; MNR district nest cards; ROM files (over 1100 nest records since 1984); and University of Guelph 1964 project (400 nest cards).

Some changes and additions to Volume 1 were published in Volume 2: Passerines (Peck and James 1987) as Appendix A of that volume. In this, the first part of our planned revision of Breeding Birds, we will outline more significant new information for those species for which we have acquired such data. Most of these changes and additions are current, but some reveal past information that has only recently been reported. The term "nesting" implies the finding of an active nest, whereas "breeding", a less exact designation, usually refers to the observation of an adult with flightless or recently-fledged young away from the nest. For colonial species the record (nest card) numbers indicate the number of cards of colonies, rather than nests. In non-colonial species, where more than one nest is listed on cards, the actual nest total is given in brackets after the record (nest card) number. New early and late egg dates are given if they have been acquired. The revision will incorporate the order and new nomenclature as given in the current American Ornithologists' Union Check-list (AOU 1983) and its four supplements dating to 1 March 1991 (AOU 1985, 1987, 1989, 1991).

Although some provincial regions, for political expediency, have recently been grouped together (eg. Leeds/Grenville, Stormont/Dundas/Glengarry), we have continued to list the 52 regions as mapped and described in both volumes of Breeding Birds. The four symbols used to qualify records on the breeding distribution maps of both volumes still apply, and it is understood that these revisional changes may add symbols, or alter existing symbols if documentation has been received with the record.

BREEDING BIRD SPECIES

Red-throated Loon, *Gavia stellata*

5 nests representing 2 provincial regions. A nest was found 32 km (20 mi) south of Cape Henrietta Maria in 1984, and 2 nests in 1985 on the Cape itself, all in Kenora District. The details of these three nests are given in Appendix A, Volume 2.

EGG DATES 5 nests, 30 June to 3 August.

Pacific Loon, *Gavia pacifica*

20 nests representing 1 provincial region. Additional nests have all been confined to the Hudson Bay coast in Kenora District, with the most recent (1991) nest in a large slough near the mouth of the Brant River.

EGG DATES 20 nests, 19 June to 14 July.

Common Loon, *Gavia immer*

490 nests representing 29 provincial regions. Historical records from Kent and Lambton counties and a 1983 nest in Lennox & Addington were additions for southern Ontario.

Pied-billed Grebe, *Podilymbus podiceps*

439 nests representing 31 provincial regions. Nests were reported from Essex (1983), Grey (1986), and Niagara RM (1990). In 1983 a breeding record was noted at Wavy Creek, Cochrane District. The Niagara nest had an outside diameter of 44 cm (17.3 inches), inside diameter 13 cm (5.1 inches), outside depth 7 cm (2.8 inches), and inside depth 4 cm (1.6 inches).

EGG DATES 23 April to 22 August.

Red-necked Grebe, *Podiceps grisegena*

88 nests representing 8 provincial regions.

EGG DATES 12 May to 17 September

American White Pelican, *Pelecanus erythrorhynchos*

38 records (colonies) representing 2 provincial regions. By 1991 the Lake of the Woods colony had increased to ca 7500 pairs. A second provincial colony (3 nests) was found on Pretty Island, Lake Nipigon, Thunder Bay District, in 1991 (Bryan, 1991). In 1992 a third colony (10 nests) and a fourth (4 nests) were found, also on Lake Nipigon, but in the northern portion of the lake.

Double-crested Cormorant, *Phalacrocorax auritus*

346 records (colonies) representing 15 provincial regions. Nesting populations have been increasing on the Great Lakes in the last 15 years and 4,698 nests were counted on Lakes Erie and Ontario in 1990 (Blokpoel and Tessier 1990). New nesting regions were Haldimand-Norfolk RM and Simcoe, both in 1983.

American Bittern, *Botaurus lentiginosus*

255 nests representing 37 provincial regions. An historical nest record from Grey (1937), and nests from Nipissing (1982) and Peterborough (1987) were recent additions.

EGG DATES 4 May to 10 August.

Least Bittern, *Ixobrychus exilis*

344 nests representing 27 provincial regions. A nest was reported from Hamilton-Wentworth RM in 1983.

Great Blue Heron, *Ardea herodias*

594 records (colonies) representing 40 provincial regions. Earlier nestings for Lennox & Addington (1967) and Perth (1969) have been added.

EGG DATES 4 April to 30 June.

Great Egret, *Casmerodius albus*

37 records (colonies) representing four provincial regions. This species continues to nest in Simcoe County on Nottawasaga Island where there were 10 nests in 1991 and 8 nests in 1992, with most nests in dead or partially-dead White Cedar. Nesting reported on Chantry Island, Bruce County in 1990, provided a new provincial region and suggested a continuing northward expansion.

EGG DATES 28 April to 24 June.

Green-backed Heron, *Butorides striatus*

216 records (colonies) representing 32 provincial regions. Nesting was reported from Ottawa- Carleton RM in 1986.

Black-crowned Night-Heron, *Nycticorax nycticorax*

407 records (colonies) representing 17 provincial regions. Earlier nestings in Hamilton-Wentworth RM(1975 and Nipissing(1961) have been acquired and a 1984 nesting in Manitoulin.

EGG DATES 28 April to 9 September.

Tundra Swan, *Cygnus columbianus*

8 nests representing 1 provincial region. All nests and breeding records have been near the Hudson Bay coast in Kenora District. Three nests were on wet, sedge tundra; three were on the shores of coastal sloughs; and one was on an islet in a large, shallow slough.

One nest was a mound of vegetation in standing sedge. Another was formed of moss, and had an outer diameter of 2.4 m (7.8 ft), inner diameter of 45 cm (17.7 inches), outer depth of 75 cm (29.5 inches), and inner depth of 20 cm (7.8 inches).

EGGS 2 nests: 1 with 5 eggs, 1 with 1 egg and 2 young.

EGG DATES 2 nests, 6 June and 25 June.

Trumpeter Swan, *Cygnus buccinator*

Recent attempts to return this species to Ontario (Lumsden 1984) have resulted in sightings of free-flying birds, but as yet no nests from the wild have been reported.

Mute Swan, *Cygnus olor*

282 nests representing 8 provincial regions. A breeding record from Grey (1990) and nest records from Kent (1989) and Northumberland (1990) have been added. A dramatic increase in the number of nests in the past decade was largely due to the field work and contributions of H. G. Lumsden, and the resulting data is given below.

Most nests were formed of cattails, but other materials in order of preference were sticks and twigs including willow and alder; down and feathers; mud and bottom debris; sedges and grasses; loosestrife stems; leaves; and plant debris and stalks including beggar-ticks and pondweed. Outside diameters of 10 nests ranged from 1 to 2.4 m (3.3 to 7.9 ft); inside diameters from 30 to 60 cm (11.8 to 23.6 inches); and outside depths of 10

to 60 cm (3.9 to 23.6 inches). Inside depths of 5 nests ranged from 0 to 45 cm (0 to 17.7 inches).

EGGS 220 nests with 1 to 11 eggs; 1E(2N), 2E(5N), 3E(8N), 4E(16N), 5E(41N), 6E(76N), 7E(40N), 8E(21N), 9E(8N), 10E(2N), 11E(1N).

Average clutch range 5 to 7 eggs (157 nests). Eggs were laid at 48 hour intervals. Re-nestings occurred if first clutch failed, and third clutches were reported twice. Second clutches were usually smaller.

INCUBATION PERIOD 3 nests: 1 of 34 days, 2 of at least 35 days.

EGG DATES 187 nests, 4 April to 7 July (314 dates); 94 nests, 25 April to 13 May.

Snow Goose, *Chen caerulescens*

13 records (colonies) representing 2 provincial regions. Three nests in 1983 and 2 nests in 1984 were reported from the Fort Severn area in Kenora District. The most southerly nest to date was found at Longridge Point, Cochrane District in 1991.

EGG DATES 2 June to 27 June.

Canada Goose, *Branta canadensis*

885 nests representing 27 provincial regions. Earlier records from Lambton (1968) and Northumberland (1953) have been added; as well as more recent records from Ottawa-Carleton RM (1990) and Sudbury (1988). In 1992 a Durham RM nest contained 10E.

Wood Duck, *Aix sponsa*

156 nests representing 26 provincial regions. Added nesting records are from Durham RM (1984), Middlesex (1944), Niagara RM (1991), Nipissing (1983), and Ottawa Carleton RM (1985). The Lennox & Addington record in Appendix A was a breeding record, not a nesting record.

Green-winged Teal, *Anas crecca*

26 nests representing 12 provincial regions. New breeding records from Opinnagau Lake in Kenora (1984), and from south of Gogama in Sudbury (1986) have been reported. There was also a nest found at the mouth of the Shagamu River, Kenora District (1990).

American Black Duck, *Anas rubripes*

363 nests representing 39 provincial regions. Old nest records for Lincoln County (1937) and Middlesex (1941) were recently added. A 1983 nest record was received from Prince Edward County.

Mallard, *Anas platyrhynchos*

1379 nests representing 46 provincial regions. Lanark (1987) and Renfrew (1991) were recently added as nesting regions. Inside diameters of two nests were 24 and 25.4 cm (9.4 and 10 inches).

Northern Pintail, *Anas acuta*

61 nests representing 22 provincial regions. A new breeding record from Grey (1985), and nesting records from Carleton (1964), Renfrew (1991), Victoria (1986), and Welland (1969) are recent additions.

Blue-winged Teal, *Anas discors*

324 (332 nests) representing 31 provincial regions. A 1938 nest record (2 nests) from Whitefish Lake, Thunder Bay District has been included (Dear, 1940).

Cinnamon Teal, *Anas cyanoptera*

1 nest representing 1 provincial region. In Appendix A of Volume 2 of Breeding Birds the 1984 nesting date given should have been 24 June 1983; the nest, containing 8 eggs was found at the Amherstburg sewage ponds (Essex). The nesting was unsuccessful.

Northern Shoveler, *Anas clypeata*

13 nests representing 7 provincial regions. Reports of breeding have been received from Grey (1985) and Oxford (1988), and also nests from Haldimand-Norfolk RM (1977) and from Attawapiskat (1983) and Shagamu (1990) rivers in Kenora.

American Wigeon, *Anas americana*

22 nests representing 8 provincial regions. Breeding records have been added from Hamilton-Wentworth

(1989) and Opinnagau Lake in Kenora (1984); and a nesting record from Haldimand-Norfolk RM (1976).

Ring-necked Duck, *Aythya collaris*

31 nests representing 9 provincial regions. Additions were a breeding record from Bruce (1985), and nesting records from Carnarvon Tp., Manitoulin (1983), and Parry Sound (1986).

Greater Scaup, *Aythya marila*

5 nests representing 1 provincial region. A breeding record was reported from Opinnagau Lake in Kenora (1984), and a nest with 9 eggs at the Brant River, Kenora (1991).

EGG DATES 2 July to 14 July.

Lesser Scaup, *Aythya affinis*

10 nests representing 5 provincial regions. Breeding records from Haldimand-Norfolk RM (1986) and Opinnagau Lake in Kenora (1984) have been added. Two nests with 3 and 8 eggs were found at the Shagamu River, Kenora (1990), and a nest with 2 eggs at Kiruna Lake, Kenora District in 1981.

Common Eider, *Somateria mollissima*

6 records (colonies) (109 nests) representing 1 provincial region and 2 islands, one in James Bay and one in Hudson Bay, geographically in Ontario but administered by the Northwest Territories (NWT).

On Little Bear Island, NWT, near Ontario's Hudson Bay coast in Kenora, a total of 79 nests was recorded on 26 June 1981 (Cadman, *et al.* 1987).

EGG DATES 26 June to 16 July.

Oldsquaw, *Clangula hyemalis*

5 (7 nests) representing 1 provincial region and an adjacent island in James Bay (NWT).

EGG DATES 26 June to 25 July.

Common Goldeneye, *Bucephala clangula*

125 nests representing 7 provincial regions. Because of nesting box studies, the number of nests for this species has more than tripled in the decade. A historical nest record for Missinaibi River, Algoma (1926), and a 1983 nest at Sioux Lookout in Kenora represent regional additions.

Bufflehead, *Bucephala albeola*

2 nests representing 2 provincial regions. Another undocumented sight record of a female entering a tree cavity near Winisk, Kenora District (1983) was received.

Hooded Merganser, *Lophodytes cucullatus*

137 nests representing 19 provincial regions. Nest box projects have added considerably to nest numbers in this species. Hastings (1984), Ottawa-Carleton RM (1983), Peterborough (1984), south of Gogama in Sudbury (1985), and Waterloo RM (1986), were all new nesting regions.

Red-breasted Merganser, *Mergus serrator*

37 nests representing 15 provincial regions. The map for this species in Volume 1 (p.98) omitted to indicate a nest for Muskoka District. Two historical nest records, Abitibi River in Cochrane (1860), and Leeds (1896) have now been added.

EGG DATES 16 May to 6 August.

Literature cited

American Ornithologists' Union. 1983

Check-list of North American Birds, 6th edition, American Ornithologists' Union, Washington, D.C.

American Ornithologists' Union. 1985

Thirty-fifth supplement to the American Ornithologists' Union Check-list of North American Birds. Auk 102: 680-686.

American Ornithologists' Union. 1987.

Thirty-sixth supplement to the American Ornithologists' Union Check-list of North American Birds. Auk 104: 591-596.

American Ornithologists' Union. 1989.

Thirty-seventh supplement to the American Ornithologists' Union Check-list of North American Birds. Auk 106: 532-538.

American Ornithologists' Union. 1991.

Thirty-eighth supplement to the American Ornithologists' Union Check-list of North American Birds. Auk 108: 750-754.

Blokpoel, H. and G.D. Tessier. 1991

Distribution and abundance of colonial waterbirds nesting in the Canadian portions of the lower Great Lakes system in 1990. Technical Report Series No. 117. Canadian Wildlife Service, Ontario Region.

Bryan, S. 1991. Pelicans nesting on Lake Nipigon. Ontario Birds 9: 58-63.

Cadman, M.D., P.F.J. Eagles, and F.M. Helleiner, (comps.). 1987. Atlas of the breeding birds of Ontario. University of Waterloo Press, Waterloo, Ontario.

Dear, L.S. 1940. Breeding birds of the region of Thunder Bay, Lake Superior, Ontario. Transactions of the Royal Canadian Institute 23: 119-143.

Lumsden, H.G. 1984. A swan song with a difference. Seasons 24(2): 18-23, 39.

Peck, G.K. and R.D. James. 1983. Breeding Birds of Ontario: Nidology and Distribution. Volume 1: Nonpasserines. Life Sciences Miscellaneous Publications, Royal Ontario Museum, Toronto.

Peck, G.K. and R.D. James. 1987. Breeding Birds of Ontario: Nidology and

Distribution. Volume 2: Passerines. Life Sciences Miscellaneous Publications, Royal Ontario Museum, Toronto.

**Breeding Birds of Ontario:
Nidology and Distribution
Volume 1: Nonpasserines
(FIRST REVISION - PART B: Vultures to Phalaropes)**

by
George K. Peck and Ross D. James

Breeding Bird Species

Turkey Vulture, *Cathartes aura*

71 nests representing 24 provincial regions. Nest records have more than doubled, primarily in southern Ontario, and suggest that the northward expansion of this species is continuing. Recent new nesting regions were Dufferin (1989), Essex (1988), Grenville (1991), Parry Sound (1992), Peterborough (1986), and Wellington (1992).

Several recent nests have been in or under deserted farm buildings.

INCUBATION PERIOD 1 nest, at least 36 days.

Osprey, *Pandion haliaetus*

893 nests representing 25 provincial regions. The huge increase in nest records was due primarily to the submission of 392 cards from the Lindsay branch of the Ministry of Natural Resources. These cards covered the years from 1978-86 and were mainly from the counties of Northumberland, Peterborough and Victoria.

Bald Eagle, *Haliaeetus leucocephalus*

489 (837 nests) representing 21 provincial regions. Many records have come in from the Lake of the Woods and Red Lake/Lac Seul areas of Kenora District, where the species currently appears to be doing well. Early nest records have been obtained from Bruce (1937), Lambton (1947), and Nipissing (1929). A recent first nesting from Algoma (1986), and an active nest in Grey (1992) have been reported.

Outside diameters of 22 nests ranged from 0.8 to 3 m (2.5 to 10 ft), with 11 averaging 1.5 to 1.9 m (5 to 6.3 ft); inside diameters of 16 nests ranged from 0.5 to 1.2 m (1.7 to 4 ft), with 8 averaging 0.9 to 1.1 m (3 to 3.7 ft); outside depths of 19 nests ranged from 0.5 to 3 m (1.5 to 10 ft), with 9 averaging 0.9 to 1.2 m (3 to 4 ft). Nest measurements varied from year to year depending on the extent of additions and subtractions over the period of use.

INCUBATION PERIOD 1 nest, at least 36 days.

EGG DATES 27 nests, 26 February to 28 June (28 dates); 14 nests, 3 April to 28 April.

Breeding Distribution

In southwestern Ontario, along Lake Erie in Essex, Kent, Elgin, and Haldimand-Norfolk, the Bald Eagle had almost disappeared in the 1960s and 1970s. Only a few scattered pairs nested, mostly unsuccessfully, in Elgin, Essex and Kent during the 1970s, and by 1980 only three non-producing pairs remained in the area. Nest reports from Grey in the 1960s (Goodwin, 1966; D. Linn, pers. comm.) were the only other breeding evidence from southern Ontario at this time. Since 1980, due to re-establishment efforts by the OMNR and others, the species is apparently making a slow recovery. By 1992, 11 nests produced 15 young in southern Ontario.

Northern Harrier, *Circus cyaneus*

252 nests representing 39 provincial regions. Nest records have been added from Haldimand-Norfolk (1988), Shagamu River in Kenora (1990), Lanark (historical-1888), Manitoulin (1986), Muskoka (1954), Parry Sound (1985 - not 1986 as in Appendix A), Renfrew (1984), and south of Gogama in Sudbury

(1992).

A 1992 nest from Winisk, Kenora District, had an outside diameter of 25.4 cm (10 inches) and an inside diameter of 15.2 cm (6 inches).

Sharp-shinned Hawk, *Accipiter striatus*

79 nests representing 23 provincial regions. A 1977 nest record erroneously designated as Halton, was actually in Wellington. New nest records have been received from Brant (1989), Moosonee in Cochrane (1987), Elgin (1984), and Haldimand-Norfolk (1986). An early (1938) nest record from Keezhik Lake, Kenora District has come to light.

A rather small nest had an outside diameter of 40.6 cm (16 inches); inside diameter, 14 cm (5.5 inches); outside depth, 24.1 cm (9.5 inches); inside depth, 7cm (2.8 inches).

EGGS 44 nests with 3 to 6 eggs; **3E**(5N), **4E**(16N), **5E**(22N), **6E**(1N)

Average clutch range 4 to 5 eggs (38 nests).

EGG DATES 43 nests, 30 April to 30 June (49 dates); 21 nests, 30 May to 8 June.

Cooper's Hawk, *Accipiter cooperii*

109 nests representing 29 provincial regions. Early nest records from Elgin (1950), and Northumberland (1902) have been acquired, as well as more recent nests in Haldimand-Norfolk (1985), Nipissing (1991), Oxford (1983), Victoria (1981), and Waterloo (1985).

Outside diameters of 4 nests ranged from 48.3 to 76 cm (19 to 29.9 inches); inside diameters of 5 nests ranged from 15.2 to 40.5 cm (6 to 16 inches); outside depths of 2 nests were 20.3 and 27.9 cm (8 and 11 inches); inside depths of 3 nests ranged from almost flat to 6.4 cm (2.5 inches).

EGGS 62 nests with 2 to 7 eggs; **2E**(3N), **3E**(22N), **4E**(19N), **5E**(17N), **7E**(1N).

Average clutch range 3 to 4 eggs (41 nests).

INCUBATION PERIOD 1 nest, ca 38 days.

EGG DATES 66 nests, 19 April to 8 July (80 dates); 33 nests, 15 May to 31 May.

Northern Goshawk, *Accipiter gentilis*

148 nests representing 29 provincial regions. In 1988 a nest in Haldimand-Norfolk, a nest record in Oxford (1992), plus other recent nests (see Appendix A, Volume 2) indicate that this species continues to nest in southern Ontario despite decimation of many forested areas. Nest numbers have more than tripled in the past decade.

Outside diameters of 12 nests ranged from 43 to 106.5 cm (17 to 42 inches); inside diameters of 4 nests ranged from 23 to 53.5 cm (9 to 21 inches); outside depths of 5 nests ranged from 20 to 70 cm (7.9 to 27.6 inches); inside depths of 2 nests were both 7.6 cm (3 inches).

EGGS 61 nests with 1 to 5 eggs; **1E**(2N), **2E**(10N), **3E**(40N), **4E**(10N), **5E**(1N).

Average clutch range 3 eggs (40 nests).

INCUBATION PERIOD 1 nest, at least 36 days.

EGG DATES 43 nests, 1 April to 10 June (51 dates); 22 nests, 25 April to 6 May.

Red-shouldered Hawk, *Buteo lineatus*

389 nests representing 34 provincial regions. Old nest records have been added from Elgin (pre-1936), Essex (pre-1936), Haliburton (1941), Hastings (1912), Prescott (1966), and Timiskaming (1956). Recent nests were reported from Haldimand-Norfolk (1985), Manitoulin (1989), and Nipissing (1990).

Broad-winged Hawk, *Buteo platypterus*

188 nests representing 33 provincial regions. Additional nest records have been acquired from Elgin (1984) and Haldimand-Norfolk (1976) in south-western Ontario where this hawk is not a common

breeding species.

Red-tailed Hawk, *Buteo jamaicensis*

1030 nests representing 42 provincial regions. Recently nests have been reported from Haliburton (1989), and near Gogama in Sudbury (1987).

Rough-legged Hawk, *Buteo lagopus*

6 nests representing 1 provincial region.

One nest had an outside diameter of 65 cm (26 inches); inside diameter, 25 cm (9.8 inches); outside depth, 50 cm (19.7 inches); inside depth, 3 cm (1.2 inches).

Golden Eagle, *Aquila chrysaetos*

8 nests representing 1 provincial region. In 1981 at a new site near Kiruna Lake, Kenora, 2 unoccupied nests were found, near each other on a rock face. The eighth provincial record was at Sutton Gorge, Kenora in 1991, where the site has been at least intermittently occupied since the 1950s.

Three nests had outside diameters ranging from 150 to 200 cm (59 to 78.7 inches); outside depths, 30 to 300 cm (11.8 to 118 inches).

American Kestrel, *Falco sparverius*

341 nests representing 41 provincial regions. Recently-added nesting regions were Bruce (1982), and Waterloo (1985).

Merlin, *Falco columbarius*

81 nests representing 11 provincial regions. Nests have been reported from Ekwan Point in Kenora (1990), north of Sudbury in Sudbury District (1984), and near Gogama also in Sudbury (1991).

Outside diameters of 5 nests ranged from 30.5 to 89 cm (12 to 35 inches); outside depths of 4 nests, 12.5 to 30 cm (4.9 to 11.8 inches); inside diameters of 2 nests were 25 and 26.7 cm (9.8 to 10.5 inches); inside depths of 2 nests were 3.8 and 5 cm (1.5 and 2 inches).

EGGS 39 nests with 1 to 5 eggs; 1E(2N), 2E(1N), 3E(8N), 4E(14N), 5E(14N).

Average clutch range 4 to 5 eggs (28 nests).

EGG DATES 30 nests, 16 May to 5 July (33 dates); 15 nests, 30 May to 15 June.

Peregrine Falcon, *Falco peregrinus*

66 nests representing 13 provincial regions. Recently more historic breeding and active nest records have come to light. Nests were at Eugenia Falls (1940) and Kimberley (1930) in Grey; Diamond Lake (1957) in Hastings; South Lake (1938) in Leeds; Elk Lake (1936) in Muskoka; Hogan Lake (1910) in Nipissing; Clear Lake (1937) in Renfrew; and the earliest provincial nest was at St. Ignace Island (1849) in Thunder Bay. New regional breeding records without nest data were from Bon Echo Lake in Lennox and Addington and from Scarborough Bluffs in York.

All nests were on cliffs except the 1983 nest of a released pair at Arnprior in Renfrew, which was on a church tower.

EGGS 35 nests with 2 to 5 eggs; 2E(7N), 3E(8N), 4E(18N), 5E(2N)

Average clutch range 4 eggs (18 nests).

EGG DATES 29 nests, 20 April to 12 June (33 dates); 15 nests, 1 May to 20 May.

Gray Partridge, *Perdix perdix*

18 nests representing 9 provincial regions. Old nest records have been obtained from Glengarry (1958), and Wellington (1960).

Willow Ptarmigan, *Lagopus lagopus*

30 nests representing 1 provincial region. In 1990 2 nests were found near the mouth of the Little Shagamu River, Kenora, and in 1991 near the mouth of the Brant River, Kenora, 6 nests were found.
EGGS 30 nests with 1 to 12 eggs; 1E(2N), 2E(2N), 4E(2N), **5E(2N)**, **6E(3N)**, **7E(6N)**, **8E(6N)**, **9E(5N)**, **11E(1N)**, 12E(1N).

Average clutch range 7 to 9 eggs (17 nests).

EGG DATES 30 nests, 8 June to 17 July (37 dates); 15 nests, 26 June to 14 July.

Ruffed Grouse, *Bonasa umbellus*

344 nests representing 45 provincial regions. In Appendix A, Volume 2, we stated that our breeding record for Prescott County was an error. We now have a 1966 nest record from Prescott.

Sharp-tailed Grouse, *Tympanuchus phasianellus*

2 nests representing 2 provincial regions. An adult with 6 young at Winisk, Kenora (1984), was the first breeding record for the north coast (Weir, 1984), and other northern breeding records (see Appendix A) have been noted. The Twin Falls record in Appendix A was on the Abitibi River and not the Albany. A recent breeding record (adult with 8 young) was reported in 1993 from Gore Bay, Manitoulin (Bailey, pers. comm.).

Wild Turkey, *Meleagris gallopavo*

11 nests representing 5 provincial regions. A 1972 nest record from Simcoe County, and 7 nests from Haldimand-Norfolk (1984), have been added. All these nests are from released birds, which in a few areas are reported to be currently expanding.

EGGS 8 nests, 10 to 14 eggs; 10E(1N), 12E(3N), 13E(1N), 14E(3N).

EGG DATES 9 nests, 7 May to 11 August.

Northern Bobwhite, *Colinus virginianus*

15 nests representing 4 provincial regions. Breeding records have been reported from Haldimand-Norfolk (1972), and Middlesex (1986).

Yellow Rail, *Coturnicops noveboracensis*

4 nests representing 4 provincial regions. On 29 May 1982 the fourth Ontario nest, containing 6 eggs, was found near Richmond, Ottawa-Carleton. The nest was located in a fen and situated in a clump of dried grasses.

EGG DATES 4 nests, 29 May to 30 June.

King Rail, *Rallus elegans*

14 nests representing 6 provincial regions. An early nest record from Middlesex (1942), and a breeding record from Grey (1987) have been obtained.

Virginia Rail, *Rallus limicola*

213 nests representing 28 provincial regions. The Lennox & Addington and Renfrew records reported in Appendix A were breeding records. A nest record has been added from Waterloo (1986).

Sora, *Porzana carolina*

250 nests representing 31 provincial regions. Nest records from Bruce (1984) and Welland (1962) have been added.

More incubation periods (2 nests of ca 20 days, 1 of at least 19 days) have been reported. Because incubation commences before clutch completion, many erroneous periods have been reported in the literature for this species (Nice, 1954).

Common Moorhen, *Gallinula chloropus*

491 nests representing 25 provincial regions. An early (1938) nest record for Bruce County, and a 1962 nest in Welland County have been added for this southern Ontario breeding species.

American Coot, *Fulica americana*

451 (462 nests) representing 19 provincial regions. The nesting record for Oxford County referred to in Appendix A was actually a breeding record. Bruce (1938), Essex (1982), and Welland (1969) are recently-added nest records.

The largest egg clutches (12 to 18 eggs) may be the product of 2 or more females.

Sandhill Crane, *Grus canadensis*

8 nests representing 3 provincial regions. In the past decade a nest near Cochrane in Cochrane District (1983), 2 nests near Winisk in Kenora (1992), and a nest near Sandfield in Manitoulin District (1982) have been added to the ONRS files. Breeding records from Spohn Tp. in Rainy River (1989), Russell (1988), Nakina in Thunder Bay (1992), and Waterloo (1992) have been received. A report, as yet not in ONRS files, of nesting and breeding in southern Algoma in 1978-9 (Tebbel and Ankney, 1982), has been published.

One nest was on a mat of vegetation over a floating bog, another was raised 12.7 cm (5 inches) above water, and a third was in leatherleaf above water with a depth of 15.2 to 30.5 cm (6 to 12 inches). One nest was described as very flat. Outside diameter of 1 nest was 122 cm (48 inches); inside diameter, 76 cm (29.9 inches); outside depth, 30 cm (11.8 inches); inside depth, 29 cm (11.4 inches).

EGGS 6 nests, each with 2 eggs.

EGG DATES 7 nests, 7 May to 12 June.

American Golden-Plover (Lesser Golden-Plover), *Pluvialis dominica*

6 nests representing 1 provincial region. Since 1978 there have been 4 more nests found near Radar Site 415, Polar Bear Provincial Park, Kenora. The nests were on dry, heath/lichen tundra, and each contained 4 eggs.

Inside diameters of 5 nests ranged from 10 to 12.5 cm (3.9 to 4.9 inches); inside depths of 3 nests ranged from 4 to 5 cm (1.6 to 2 inches).

EGG DATES 6 nests, 23 June to 8 July.

Semipalmated Plover, *Charadrius semipalmatus*

47 nests representing 2 provincial regions and an island in James Bay (NWT). A historical record (1860) of a nest at Moosonee, Cochrane District (Todd, 1963) has come to light, and nests were recently found near the mouths of the Brant (1991) and Shagamu (1990) rivers, both in Kenora District. Since nest records have more than doubled, additional new data is summarized below.

Outside diameters of 5 nests ranged from 9 to 11 cm (3.5 to 4.3 inches); inside diameters of 9 nests ranged from 6.5 to 9.9 cm (2.6 to 3.9 inches); inside depth of 1 nest was 1 cm (0.4 inches).

EGGS 40 nests, 1 to 4 eggs; 1E(1N), 2E(1N), 3E(6N), 4E(32N).

Average clutch range 4 eggs (32 nests).

EGG DATES 43 nests, 4 June to 30 July (57 dates); 22 nests, 22 June to 1 July.

Breeding Distribution

Although it was stated in Volume 1 that breeding was first substantiated in 1947 and that the first nests were found in 1948, nests were actually found at the mouth of the Moose River (1860), at Fort Severn (1940), Cockspenny Point (1942), at the mouth of the Kabiskaubakau River (1942), and Big Piskwamish Point (1947).

Piping Plover, *Charadrius melodus*

120 (121 nests) representing 12 provincial regions. An early (1934) nest record from Wentworth has been added. No nests have been reported since 1987 when 2 nests each with 4 eggs and 2 empty scrapes were located on Sable Island, Lake of the Woods, Rainy River District.

Killdeer, *Charadrius vociferus*

1356 nests representing 48 provincial regions. New nests along our provincial coasts were at Longridge Point in Cochrane (1991), and at Ekwan Point (1990) and the mouth of the Shagamu River (1990), both in Kenora.

Lesser Yellowlegs, *Tringa flavipes*

3 nests representing 1 provincial region. The first Ontario nest (1938) has now been discredited (James, 1992), and the actual first nest is the one found in 1990 at the mouth of the Shagamu River, Kenora. In 1992 the second and third provincial nests were found near Winisk, Kenora. Thus all records, including the 1940 breeding record (collection of flightless young) at Fort Severn in Kenora, are near the Hudson Bay coast.

The 3 nests were in open black spruce ridge areas with a lichen ground cover. All nests were depressions in the lichen, and 1 was at the base of a small tamarack, and another at the base of a burnt spruce. Two of the nests were in a recent burn.

EGGS 3 nests, each with 4 eggs.

EGG DATES 3 nests, 9 June, 9 June, 23 June.

Spotted Sandpiper, *Actitis macularia*

749 nests representing 46 provincial regions. Nests were reported from the Little Abitibi River in Cochrane (1985), and the mouth of the Shagamu River in Kenora (1990).

Upland Sandpiper, *Bartramia longicauda*

62 nests representing 20 provincial regions.

EGGS 55 nests with 1 to 4 eggs; 1E(1N), 2E(2N), 3E(7N), 4E(45N),

Average clutch range 4 eggs (45 nests).

INCUBATION PERIOD 3 nests: 1 of 20 days, 1 of 21 days, 1 of at least 21 days.

Eggs were laid at daily intervals.

EGG DATES 53 nests, 7 May to 9 July (72 dates); 26 nests, 28 May to 8 June.

Whimbrel, *Numenius phaeopus*

10 nests representing 1 provincial region. In 1990 3 nests were found just east of the mouth of the Little Shagamu River, Kenora.

Nests were depressions on the ground, usually on hummocks and in grasses or moss. Nest materials if any, were of dead sedge stalks and coarse grasses. Nests were unlined or were sparsely lined with fine grass stems and a few leaves.

EGGS 9 nests with 2 to 4 eggs; 2E(2N), 3E(2N), 4E(5N).

Average clutch range 4 eggs (5 nests).

EGG DATES 10 nests, 8 June to 17 July (13 dates); 5 nests, 26 June to 28 June.

Hudsonian Godwit, *Limosa haemastica*

1 nest representing 1 provincial region. On 10 June 1992 the first Ontario nest containing 1 egg was found and photographed near Winisk, Kenora (55 28'N & 85 46'W) by G. Moraal during a MNR goose survey.

The nest was located in a wet, grassy meadow with a few tamarack trees. The nest was a circular depression in moss and grass.

Semipalmated Sandpiper, *Calidris pusilla*

16 nests representing 1 provincial region. A nest was found on Cape Henrietta Maria in 1985, and 3 others near the mouth of the Brant River in 1991, in Kenora District.

EGGS 16 nests with 3 to 4 eggs; 3E(3N), 4E(13N).

Average clutch range 4 eggs (13 nests).

EGG DATES 16 nests, 12 June to 2 July (19 dates); 8 nests, 24 June to 29 June.

Least Sandpiper, *Calidris minutilla*

9 nests representing 1 provincial region. A nest was found near the mouth of the Brant River, Kenora, in 1991.

EGGS 9 nests with 3 to 4 eggs; 3E(3N), 4E(6N).

Average clutch range 4 eggs (6 nests).

INCUBATION PERIOD 1 nest, 19 days.

EGG DATES 9 nests, 19 June to 21 July (10 dates); 5 nests, 26 June to 1 July.

Dunlin, *Calidris alpina*

10 nests representing 1 provincial region. Recent nests were on the coast just southwest of East Pen Island, and near the mouth of the Brant River, both in Kenora.

Outside diameter of 1 nest was 9 cm (3.5 inches), and it was situated on a sedge hummock that had a diameter of 40 cm (15.7 inches).

EGGS 8 nests with 2 to 5 eggs; 2E(1N), 4E(6N), 5E(1N).

Average clutch range 4 eggs (6 nests).

The 5 egg clutch was most unusual (Cramp and Simmons, 1983), and may or may not have been the product of more than 1 female; it was being incubated.

EGG DATES 9 nests, 13 June to 21 July (13 dates); 5 nests, 25 June to 27 June.

Stilt Sandpiper, *Calidris himantopus*

An undocumented first nest of this species found by R.I.G. Morrison on 20 June 1976 near radar site 415, Kenora District, has been reported (Cadman *et al.* 1987). Confirming detailed data of this record has been requested by the ONRS, but has yet to be received.

Short-billed Dowitcher *Limnodromus griseus*

1 nest representing 1 provincial region. On 10 June 1992 the first Ontario nest containing 4 eggs was found and photographed near Winisk, Kenora (55 27'N & 85 47'W) by G.J. Soulliere during a MNR goose survey.

The nest was in a wet, open fen between spruce ridges, and was placed on a sedge hummock having a height of 0.3 m (1 ft). The nest was formed entirely of sedge stalks.

Common Snipe, *Gallinago gallinago*

88 nests representing 29 provincial regions. Recent new nestings were reported from Huron (1989), north of Ekwan Point in Kenora (1990), and near Winisk in Kenora (1992).

Outside diameters of 3 nests ranged from 12 to 15.2 cm (4.7 to 6 inches); inside diameters of 7 nests ranged from 9 to 13.5 cm (3.5 to 5.3 inches); outside depth of 1 nest was 5 cm (2 inches); and inside depths of 4 nests ranged from 3 to 7.6 cm (1.2 to 3 inches).

EGGS 81 nests with 1 to 4 eggs; 1E(2N), 2E(2N), 3E(7N), 4E(70N).

Average clutch range 4 eggs (70 nests).

INCUBATION PERIOD 1 nest, 19 days.

EGG DATES 80 nests, 24 April to 26 July (91 dates); 40 nests, 22 May to 14 June. All late egg dates (July) were from northern Ontario nests.

American Woodcock, *Scolopax minor*

290 nests representing 41 provincial regions. The most northerly Ontario nest was found in 1981 at Little Abitibi Lake, Cochrane (49 24'N and 80 33'W). Other nest additions were from Manitoulin (1988), and Muskoka (1983).

Outside diameters of 3 nests ranged from 10 to 14 cm (3.9 to 5.5 inches); inside diameter of 1 nest was 10 cm (3.9 inches); and inside depth of 1 nest was 2 cm (0.8 inches).

INCUBATION PERIOD 3 nests: 1 of at least 20 days, 2 ca 20 to 21 days. Eggs were laid at daily intervals.

Wilson's Phalarope, *Phalaropus tricolor*

56 nests representing 11 provincial regions. Nest numbers have more than tripled in the decade, due in large part to the delayed contribution in 1984 of 32 cards by V. L. Sinclair from North Point and Big Piskwamish Point, Cochrane, covering the years 1976-7.

EGGS 50 nests with 1 to 5 eggs; 1E(1N), 3E(7N), 4E(42N), 5E(1N). The 5 egg clutch is highly unusual.

Average clutch range 4 eggs (42 nests).

EGG DATES 51 nests, 18 May to 4 July (67 dates); 25 nests, 4 June to 14 June. Eggs were usually laid at daily intervals.

Red-necked Phalarope, *Phalaropus lobatus*

7 nests representing 1 provincial region. Nests found at Radar Site 415 (1984) and on Cape Henrietta Maria (1985) (see Appendix A) in Kenora, provided some of the following information.

Inside diameter of 1 nest was 7 cm (2.8 inches); inside depth, 3.5 cm (1.4 inches).

EGGS 7 nests, each with 4 eggs.

EGG DATES 7 nests, 22 June to 4 July (10 dates).

Literature cited

Note: The applicable nomenclature changes set out in the Thirty-ninth Supplement of the AOU Checklist (A.O.U. 1993) have been incorporated.

American Ornithologists' Union. 1993.

Thirty-ninth supplement to the American Ornithologists' Union Checklist of North American Birds. Auk 110:3.

Cadman, M.D., P.F.J. Eagles, and F.M. Helleiner (comps.). 1987.

Atlas of the breeding birds of Ontario. University of Waterloo Press, Waterloo, Ontario.

Cramp, S. and K.E.L. Simmons (eds). 1983. The Birds of the Western Palearctic. Volume III. Oxford University Press, New York.

Goodwin, C. E. 1966. The nesting season. Ontario - western New York region. Audubon Field Notes 20: 565-566.

James, R. D. 1992. Cliff Hope at Favourable Lake Mine in 1938. Ontario Birds 10:17-23.

Nice, M. M. 1954. Problems of incubation periods in North American birds. Condor 56: 173-197.

Peck, G.K. and R.D. James. 1983. Breeding Birds of Ontario: Nidology and Distribution. Volume 1, Nonpasserines. Life Sciences Miscellaneous Publication. Royal Ontario Museum, Toronto.

Peck, G.K. and R. D. James. 1987. Breeding Birds of Ontario: Nidology and Distribution. Volume 2, Passerines. Life Sciences Miscellaneous Publication. Royal Ontario Museum, Toronto.

Tebbel, P.D. and C.D. Ankney. 1982. Status of Sandhill Cranes, *Grus canadensis*, in central Ontario. Canadian Field-Naturalist 96: 163-166.

Todd, W.E.C. 1963. Birds of the Labrador Peninsula and Adjacent Areas. University of Toronto Press, Toronto.

Weir, R.D. 1984. The nesting season. Ontario region. American Birds 38: 1013-1017.

.....

George K. Peck, Department of Ornithology, Royal Ontario Museum, 100 Queen's
Park, Toronto, Ontario M5S 2C6.

Ross D. James, Department of Ornithology, Royal Ontario Museum, 100 Queen's
Park, Toronto, Ontario M5S 2C6.

ONTARIO BIRDS DECEMBER 1993

**Breeding Birds of Ontario:
Nidology and Distribution**

**Volume 1: Nonpasserines
(FIRST REVISION - PART C: Jaegers to Woodpeckers)**

by
George K. Peck and Ross D. James

Parasitic Jaeger, *Stercorarius parasiticus*

4 nests representing 1 provincial region. During the past decade 2 more nests have been found, both near the Hudson Bay coast in Kenora District. One nest containing 2 eggs was found 23 June 1991 near the mouth of the Brant River, and the other contained 1 egg when it was located on 16 June 1992, just west of Winisk. Both nests were in grass/sedge meadows and 1 was on a mound 46 cm (18 inches) high and 91 cm (36 inches) in diameter.

Little Gull, *Larus minutus*

23 records (9 colonies, 3 isolated nestings, 28 nests) representing 5 provincial regions. The 9 colonies ranged from 2 to 5 nests and averaged more than 2 but less than 3 nests. In addition to the 1984 nesting and breeding records from Kenora District outlined in Appendix A, Volume 2 (Peck and James, 1987) the Little Gull continued to nest on North Limestone Island, Georgian Bay, Parry Sound District, with 2 nests in 1981, 1 in 1983, 2 in 1984 and 2 nests in 1989.

EGGS 23 nests with 1 to 3 eggs; 1E (2N), 2E (2N), 3E (19N).

Average clutch range 3 eggs (19 nests).

EGG DATES 23 nests, 27 May to 21 July (39 dates); 12 nests, 12 June to 19 June.

Bonaparte's Gull, *Larus philadelphia*

11 records (40 nests) representing 4 provincial regions. A usually solitary nester, pairs of this gull may sometimes nest in loose proximity to each other, thus approximating coloniality. New nest records have been received from near the mouth of the Shagamu River in Kenora (1990), and the Ogoki Reservoir in Thunder Bay (1976).

A high nest in a black spruce was 15 m (49 ft) above ground. This same nest had an outside diameter of 22 cm (7 inches); inside diameter of 12 cm (4.7 inches); outside depth of 10 cm (3.9 inches); and inside depth of 6 cm (2.4 inches).

EGGS 8 nests with 2 to 3 eggs; 2E (3N), 3E (5N).

Average clutch range 3 eggs (5 nests).

Ring-billed Gull, *Larus delawarensis*

476 records (196 colonies, 15 single nestings, ca 829,549 nests) representing 32 provincial regions. The Ontario population of this larid has increased dramatically and more and larger colonies are being reported. The average size of 148 colonies totalling 730,224 nests, was 4,934 nests. New nesting regions are Halton (1990), Hamilton-Wentworth (1986), Lambton (1987), Lennox and Addington (1985), Peel (1989), Prescott (1983), Sudbury (1988), and Timiskaming (1985). A mixed colony at Lake of the Woods, Kenora, also contained American White Pelican, Double-crested Cormorant, and Common Tern.

Unusual colony sites were on the flat roof of a building at Owen Sound in Grey in 1985-7 (Blokpoel and Smith 1988), and in a fenced zoo enclosure at Toronto in 1989. In one island colony some nests were in the branches of dead and fallen trees.

Outside diameters of 6 nests ranged from 25 to 32 cm (9.8 to 12.6 inches); inside diameters from 12.5 to 20 cm (4.9 to 7.9 inches); outside depths from 2 to 7.5 cm (0.8 to 3 inches).

EGG DATES 9 April (Niagara) to 30 July.

Herring Gull, *Larus argentatus*

1024 records representing 37 provincial regions. Nest records have been obtained from near the Little Shagamu River in Kenora (1990), Lennox and Addington (1964), Middlesex (1983), Peel (1989), and Stormont (1976).

Colony nesting on the flat roofs of buildings was reported in Bruce and Grey in 1985-7 (Blokpoel and Smith 1988).

Great Black-backed Gull, *Larus marinus*

32 records (6 colonies, 24 single nestings, 43 nests) representing 9 provincial regions. In the past decade this species has continued to nest in Ontario along the St. Lawrence River and the Great Lakes, with new nest sites at Bruce (1988-9), Durham (1981), Haldimand-Norfolk (1991), Manitoulin (1991), Prince Edward (1986), and Stormont (1988). The 6 colonies ranged from 2 to 5 nests with an average just over 3.

EGGS 31 nests with 1 to 3 eggs; 1E (6N), 2E (12N), 3E (13N).

Average clutch range 2 to 3 eggs (25 nests).

EGG DATES 23 nests, 28 April to 29 June; 11 nests, 14 May to 24 May. The 19 July egg date given in Volume 1 (Peck and James, 1983), was an error.

Caspian Tern, *Sterna caspia*

108 records (68 colonies, 11 single nestings, ca 11,093 nests) representing 12 provincial regions. The breeding population of the Caspian Tern in Ontario has continued to increase in the past decade. The average size of 62 colonies totalling 10,677 nests, was 172 nests. A total of 21 provincial nesting sites have been reported, about half of which are in current use.

The first 4-egg clutches (a total of 7) were reported from two colonies in 1991.

EGG DATES 53 colonies, 6 May to 12 August, (66 dates); 27 colonies, 6 June to 24 June.

Common Tern, *Sterna hirundo*

665 records representing 32 provincial regions. Nest records have been obtained from Glengarry (1976), Grenville (1981), Grey (1936), and Hamilton-Wentworth (1985).

Outside diameter of 1 nest was 23 cm (9 inches); inside diameter was 10 cm (3.9 inches); outside depth was 4 cm (1.6 inches).

Arctic Tern, *Sterna paradisaea*

18 Records (10 colonies, 1 single nesting, ca 89 nests) representing 1 provincial region and an island in each of Hudson and James bays (NWT). Essentially a colonial species, about 8 nests were noted spread out over a 4 km strip of Hudson Bay coast in 1990. The average size of 8 colonies totalling 82 nests was 10 nests.

One nest had 20 cm (7.9 inches) twigs in the exterior; and twig pieces, grass stalks and rootlets in the lining. The diameter of this nest was 13 cm (5 inches); inner depth was 2 cm (0.8 inches).

EGGS 19 nests, with 1 to 3 eggs; 1E (4N), 2N (14N), 3E (1N).

Average clutch range 2 eggs (14 nests).

EGG DATES 14 records, 16 June to 21 July, (19 dates); 7 records, 26 June to 5 July.

Forster's Tern, *Sterna forsteri*

49 records (16 colonies, ca 771 nests) representing 3 provincial regions. The average size of 13 colonies totalling 767 nests, was 59 nests. Colonies were loosely-knit and often consisted of well-separated single nests and groups of nests.

EGG DATES 14 colonies, 19 May to 6 July, (17 dates); 7 colonies, 29 May to 11 June.

Rock Dove, *Columba livia*

210 (212 nests) representing 31 provincial regions. We now have a nest record from Evansville, Manitoulin (1982).

Mourning Dove, *Zenaida macroura*

2000 (2213 nests) representing 40 provincial regions. An old nest record has been received from Thunder Bay (1958), and more recent ones from Haliburton (1991), and Parry Sound (1991).

A nest was found in a balcony flower planter in Grey (1991).

EGG DATES 12 March (Elgin) to 28 September.

Black-billed Cuckoo, *Coccyzus erythrophthalmus*

443 nests representing 41 provincial regions. A photograph of a Manitoulin nest in 1991 furnished documentation.

Five more 5E nests and one 6E nest have been reported.

EGG DATES 16 May (Middlesex) to 8 September. The number of late dates suggests re-nesting.

Yellow-billed Cuckoo, *Coccyzus americanus*

113 nests representing 25 provincial regions. Early nest records have been obtained from Elgin (1885), and Frontenac (1951).

We now have three 5E clutches on file.

EGG DATES 13 May (Simcoe) to 7 August. An Essex nest contained 2 small young on 30 August, indicating a later egg date than 7 August. The number of August egg dates suggests at least occasional re-nesting.

Barn Owl, *Tyto alba*

39 nests representing 8 provincial regions. A 1985 nest record was obtained from Haldimand-Norfolk (McCracken, 1987), and an old breeding record from Carleton (1937).

INCUBATION PERIOD K. McKeever (pers. comm.) found the period in wild-obtained captives to be ca 26 days.

EGG DATES An active 1989 Niagara nest with 5 eggs was observed on 16 September, and established our latest actual egg date.

Eastern Screech-Owl, *Otus asio*

106 nests representing 25 provincial regions. Old nest records from Simcoe (1918) and Waterloo (1928) were missed in Volume 1. New nest records have come in from Dundas (1987), Grey (1986), and Perth (1987).

Great Horned Owl, *Bubo virginianus*

643 nests representing 44 provincial regions. Recent new nest records were reported from Lennox and Addington (1988) and Sudbury (1989),

Northern Hawk Owl, *Surnia ulula*

5 nests representing 3 provincial regions. The account of the third Ontario nest in Kenora in 1981 appears in Appendix A. A fourth nest, apparently recently-vacated and with agitated parents nearby, was found near the Little Shagamu River in Kenora on 23 June 1990. The nest was in the hollowed-top of a black spruce stump at a height of 2 m (6.6 ft). An occupied nest cavity of a Northern Flicker was situated in the stump 20.3 cm (8 inches) below the owl's nest. The fifth nest was found NNE of Red Lake, Kenora in 1993, and was in an old Pileated Woodpecker cavity in a dead poplar at a height of 10 m (33 ft); it contained 3 young.

INCUBATION PERIOD In wild-obtained captives the period was 28 days (K. McKeever, pers. comm)

Barred Owl, *Strix varia*

17 nests representing 8 provincial regions. Of the 3 regions listed in Appendix A, Muskoka (1981) was a breeding record, and Bruce (1984) and York (1983) were nest records. Another new nest record has come in from Waterloo (1983).

Great Gray Owl, *Strix nebulosa*

9 nests representing 3 provincial regions. A probable breeding record involving the observation of flying young with an adult, was made in 1989 near Round Island Lake, Algonquin Park, Nipissing (Forbes *et al*,

1992). Five nests were reported in 1993 from the Red Lake area of Kenora, suggesting that the Ontario breeding population is much greater than our few nests indicate.

Four of the 1993 nests were in poplars (3 in broken-off stubs, 1 in a crotch), and the fifth was in the crotch of a jack pine. Nest heights were 5.6, 6, 10+, 20, and 18 m (18, 20, 33, 65, and 60 ft).

INCUBATION PERIOD In wild-obtained captives the period was 31 to 32 days (K. McKeever, pers. comm.).

Long-eared Owl, *Asio otus*

123 nests representing 27 provincial regions. First nest records have been received from Haldimand-Norfolk (1985), Manitoulin (1993), Peterborough (1962), and a breeding record from Bruce (1988).

EGGS 82 nests with 2 to 6 eggs; **2E** (9N), **3E** (13N), **4E** (26N),

5E (28N), **6E** (6N).

Average clutch range 4 to 5 eggs (54 nests).

EGG DATES 19 March to 2 June.

Short-eared Owl, *Asio flammeus*

28 nests representing 14 provincial regions. A historic nest record from Haldimand (1885-90) and old nest records from Kent (1944) and Middlesex (1946) have been obtained. Recent nests have been reported from Grey (1993), Lennox and Addington (1988), Victoria (1993), and, as well, breeding records for Bruce (1988) and Ottawa-Carleton (1987).

Outside diameters of 3 nests ranged from 22 to 29 cm (8.7 to 11.4 inches); inside diameters from 12.7 to 16 cm (5 to 6.3 inches); and inside depths from 3 to 5 cm (1.2 to 2 inches). One of these nests was a substantial mound of dried grasses with an outside depth of 7.6 cm (3 inches).

EGGS 23 nests with 1 to 9 eggs; **1E** (1N), **3E** (1N), **4E** (3N), **5E** (4N), **6E** (4N), **7E** (7N), **8E** (1N), **9E** (2N). Average clutch range 5 to 7 eggs (15 nests).

EGG DATES 20 nests, 14 April to 1 August (26 dates); 10 nests, 7 May to 24 May.

Boreal Owl, *Aegolius funereus*

2 nests representing 2 provincial regions. The second Ontario nest (see Appendix A) was found near Atikokan, Rainy River in 1984. It contained 1 or more young and was in the old nest cavity of a Pileated Woodpecker in a quaking aspen at a height of 10.7 m (35 ft).

Northern Saw-whet Owl, *Aegolius acadicus*

22 nests representing 12 provincial regions. An old breeding record from Norfolk (1927) involving the collection of a juvenile not long out of the nest (Snyder, 1931), has been added.

Common Nighthawk, *Chordeiles minor*

288 nests representing 36 provincial regions.

A **1E** clutch was incubated and a young hatched in a recently reported nest.

Whip-poor-will, *Caprimulgus vociferus*

76 nests representing 24 provincial regions. Old nest records have been obtained from Haliburton (1936), Muskoka (1936), Parry Sound (1904), and Prince Edward (1911). Other new nest records were from Lambton (1974), Niagara (1992), and Victoria (1986).

EGGS 63 nests with 1 to 2 eggs; **1E** (2N), **2E** (61N).

Average clutch range 2 eggs (61 nests).

INCUBATION PERIOD 4 nests; 1 less than 19 days, 1 of 19 days, 1 of at least 20 days, and 1 of 21 days.

EGG DATES 48 nests, 21 May to 21 July (67 dates); 24 nests, 5 June to 20 June. Re-nestings and second broods were both reported in Leeds in 1984.

Chimney Swift, *Chaetura pelagica*

132 (150 nests) representing 32 provincial regions. An old nest record from Northumberland (1902) and a recent one from Lambton (1985) have been added.

One chimney site contained 15 nests (at least several were active), and 2 nests (each with 4 eggs) were noted on the wall of a silo.

EGG DATES 24 May to 7 August.

Ruby-throated Hummingbird, *Archilochus colubris*

178 nests representing 41 provincial regions. Two old nest records (1935-6) from Norfolk County have been obtained.

In the second paragraph of the species account in Volume 1, the nest branch diameter should read "1 to 6.5 cm" (not metres).

One nest in a sugar maple was 7 m (23 ft) away from the tree trunk.

Outside diameters of 5 nests ranged from 3.5 to 5 cm (1.4 to 2 inches); inside diameters of 4 nests from 2 to 2.5 cm (0.75 to 1 inches); outside depths of 3 nests from 2 to 4 cm (0.8 to 1.6 inches); inside depths of 3 nests from 1.8 to 2.3 cm (0.7 to 0.9 inches).

A 1993 nest in Elgin contained 3 eggs and was the second ONRS record of this extremely rare clutch size - the probable result of laying by 2 females (Tyrrell, 1984).

Belted Kingfisher, *Ceryle alcyon*

395 (396 nests) representing 43 provincial regions. New nest records are from Essex (1986), Haliburton (1991), and Huron (1983).

Red-headed Woodpecker, *Melanerpes erythrocephalus*

250 nests representing 36 provincial regions. We now have old nest records from Elgin (1949), Muskoka (1962), and Russell (1966).

EGGS 41 nests with 1 to 7 eggs; 1E (2N), 2E (2N), 3E (4N), 4E (16N), 5E (12N), 6E (2N), 7E (3N).

Average clutch range 4 to 5 eggs (28 nests).

EGG DATES 37 nests, 14 May to 21 July (38 dates); 18 nests, 31 May to 15 June. A second instance of 2 broods from a nest was reported from Elgin in 1993.

Red-bellied Woodpecker, *Melanerpes carolinus*

24 (25 nests) representing 9 provincial regions. A report of a 1989 nesting in Oxford (Weir, 1989) was noted, but details of an actual nest have not yet been received.

Nest cavities were in dead or partially dead, deciduous trees. Selected trees were elm (2 nests), beech (2 nests), maple spp. (2 nests), and 1 nest each in basswood, oak sp., white ash, and hickory sp.

EGGS 5 nests with 2 to 7 eggs; 2E (2N), 4E (1N), 5E (1N), 7E (1N).

EGG DATES 5 nests, 1 May to 29 May.

Yellow-bellied Sapsucker *Sphyrapicus varius*

497 nests representing 37 provincial regions. A 1972 nest record symbol for Dundas was omitted from the map in Volume 1. Early nest records for Long Portage (1926), Mattice (1926), and Moosonee (1934), all in Cochrane District, have been added. A recent nest record came in from Haldimand-Norfolk (1988).

The use of a bird house as a nest in Ottawa-Carleton (1979) should have been included in Volume 1.

Downy Woodpecker, *Picoides pubescens*

290 nests representing 37 provincial regions.

Hairy Woodpecker, *Picoides villosus*

319 nests representing 43 provincial regions. Nest records have been received from Durham (1981), Grey (1984), and Huron (1983).

In Volume 1, a minimum nest hole diameter of 2.5 cm (1 inch) was undoubtedly an error on a nest card, since reported diameters are larger (Bent, 1939; Terres, 1980). Diameters of 24 holes ranged from 3.8 to 6.4 cm (1.5 to 2.5 inches), with 12 averaging 4.4 to 5.1 cm (1.8 to 2 inches).

Three-toed Woodpecker, *Picoides tridactylus*

18 nests representing 6 provincial regions. A nest record has been obtained from Algonquin Provincial Park, Nipissing (1964).

Nest trees were more often dead (11 nests) but occasionally living (3 nests). Black spruce (8 nests) were preferred to jack pine (3 nests), tamarack (1 nest), birch (1 nest), and poplar (1 nest). Heights of 16 nests ranged from 1.2 to 8 m (4 to 26 ft), with 8 averaging 3 to 6 m (10 to 20 ft).

Hole diameters of 5 nests ranged from 3.8 to 7.5 cm (1.5 to 3 inches). Diameter of 1 nest cavity was 9.5 cm (3.7 inches).

Black-backed Woodpecker, *Picoides arcticus*

108 (109 nests) representing 13 provincial regions. We now have an old nest record from Swastika, Timiskaming (1955).

EGGS 21 nests with 2 to 6 eggs; **2E** (2N), **3E** (11N), **4E** (6N), **5E** (1N), **6E** (1N).

Average clutch range 3 to 4 eggs (17 nests).

Northern Flicker, *Colaptes auratus*

1039 nests representing 50 provincial regions. An early nest record has been obtained for Hastings (1912).

A 1990 Kenora nest was in the same tree as the nest of a Northern Hawk Owl.

Pileated Woodpecker, *Dryocopus pileatus*

142 nests representing 30 provincial regions. New nest records were from Elgin (1992), and Kearns in Timiskaming (1985). The most northerly nest record for the province was reported at Moosonee, Cochrane (1991).

Acknowledgements

Thanks are due to P. Ewins and D.V. Weseloh, Canadian Wildlife Service, for unpublished details of the nesting of Little Gull, Great Black-backed Gull, and Caspian Tern; and also to K. McKeever, Owl Rehabilitation Research Foundation in Vineland, Ontario, for the incubation periods of some wild-obtained captive owl species.

Literature cited

Bent, A.C. 1939. Life histories of North American woodpeckers. United States National Museum Bulletin 174. Washington, D.C.

Blokpoel, H. and B. Smith. 1988. First records of roof nesting by Ring-billed Gulls and Herring Gulls in Ontario. Ontario Birds 6: 15-18.

Forbes, G., M. Runtz and R. Tozer. 1992. New breeding record for Great Gray Owl: most southerly in Canada. Ontario Birds 10:117-118.

McCracken, J.D. 1987. Annotated Checklist to the birds of Haldimand-Norfolk. Part 5. Pp 1-52 in M.

E. Gartshore, D. A. Sutherland and J. D. McCracken. The Natural Areas Inventory of the Regional Municipality of Haldimand-Norfolk. Vol. II: Annotated Checklists. The Norfolk Field Naturalists, Simcoe.

Peck, G.K. and R.D. James. 1983. Breeding Birds of Ontario: Nidology and Distribution. Volume 1: Nonpasserines. Life Sciences Miscellaneous Publications, Royal Ontario Museum, Toronto.

Peck, G.K. and R.D. James. 1987. Breeding Birds of Ontario: Nidology and Distribution. Volume 2: Passerines. Life Sciences Miscellaneous Publications, Royal Ontario Museum, Toronto.

Snyder, L.L. 1931. The birds of Long Point and vicinity. Pp. 139-227 in L.L. Snyder, and E.B.S. Logier (eds). A faunal investigation of Long Point and vicinity, Norfolk County, Ontario. Transactions of the Royal Canadian Institute 18: 117-236.

Terres, J.K. 1980. The Audubon Society encyclopedia of North American birds. Alfred A. Knopf, New York.

Tyrrell, E.Q. 1984. Hummingbirds: Their life and Behaviour. Crown Publishers, Inc., New York.

Weir, R.D. 1989. The nesting season. Ontario region. American Birds 43: 1310- 1313.

George K. Peck, Department of Ornithology, Royal Ontario Museum,
100 Queen's Park, Toronto, Ontario M5S 2C6.

Ross D. James, Department of Ornithology, Royal Ontario Museum,
100 Queen's Park, Toronto, Ontario M5S 2C6.

ONTARIO BIRDS APRIL 1994

Breeding Birds of Ontario: Nidology and Distribution

Volume 1: Nonpasserines (Additions and Revisions)

George K. Peck and Ross D. James

Appendix C: *Additions to Volume 1 (Peck and James 1983) since Appendix A in Volume 2 (Peck and James 1987), and the 1993 and 1994 revisions in Ontario Bird (Peck and James 1993a, 1993b, 1994).*

In the list below, common and scientific names follow the 7th edition of the American Ornithologists' Union Check-list (AOU 1998). Changes in the listing sequence of species also conform with the 7th edition of the Check-list, and involve the families *Cathartidae*, *Anatidae*, and *Phasianidae*. Common names in parentheses were those used in previous revisions.

During the past six years, a considerable volume of new information has driven the desire to present this appendix. A new breeding species (Eared Grebe), population increases and decreases, new clutch sizes, additional incubation periods, new egg dates, breeding range extensions, and additional provincial nesting regions, all serve to indicate the ever-changing aspects of provincial ornithology.

For this appendix we have counted the total number of nests and colonies in order to determine the average colony size for each of the 15 nonpasserine colonial species. In the Ontario Nest Records Scheme (ONRS) the number of nests of these colonial species was 1,733,693.

Red-throated Loon, *Gavia stellata*

An early observation (1944) of young with an adult on James Bay at Cape Henrietta Maria, Kenora, was recently acquired.

Pacific Loon, *Gavia pacifica*

Additional breeding records from 1944 on James Bay, Kenora, have been received of two broods of young with adults, one at Cape Henrietta Maria and the other 40 km (25 miles) to the south. An adult with two chicks was observed 3-5 July 1995 on an interior pond on Akimiski Island, NWT, James Bay, an island geographically but not politically part of Ontario (unpublished data, Ministry of Natural Resources); this breeding record is the most southerly to date.

Common Loon, *Gavia immer*

A 1995 nest record was submitted from Akimiski Island, NWT.

Pied-billed Grebe, *Podilymbus podiceps*

An early nest record from Elgin (1951), and recent nests from Lennox and Addington (1997), Sudbury (1991), and Waterloo (1993) have been received. The regional nesting total is now 35.

An incubation period of ca 22 days was reported from a 1994 Durham nest, and the hatching period was at least four days; incubation commenced before the last egg was laid. A second period of ca 22 days was obtained from a Lennox and Addington nest.

An early egg date of 26 April was submitted from Durham. In Grey, an adult was observed feeding 5 young late in the season on 5 September 1995.

Red-necked Grebe, *Podiceps grisegena*

After an absence of almost 50 years, the species has again been reported nesting in Halton on the Lake Ontario shoreline in 1991, 1994, 1997 (Dobos and Edmondstone 1998), 1998 and again in 1999. An adult was observed on the 1998 nest in Bronte harbour on 13 April and young were

subsequently hatched. An adult was observed on this same nest presumably incubating eggs on 7 September, and was observed with two small young on 20 September (C. Peck, pers. comm.). The first of these nestings would appear to provide our earliest egg date. In 1999 two pairs nested in this location.

A historical record of two 1903 nests in Simcoe was recently determined to be incorrect, and the species has been removed as a breeding bird from that county (Peck 1999).

Eared Grebe, *Podiceps nigricollis*

The first provincial nesting of this western grebe occurred in 1996 on a sewage lagoon in Emo, Rainy River District, when an adult was observed, 7 and 14 June, on a nest from which two young later fledged. In 1997, two more nests in the same location, each fledged two young.

In Lambton, a courting pair was seen in June 1994, and in 1996 a possible breeding occurred there, since an adult was observed feeding a young bird.

American White Pelican, *Pelecanus erythrorhynchos*

49 records representing 2 provincial regions. The 93 reported colonies total 77,719 nests, and the average colony size is 836 nests.

Double-crested Cormorant, *Phalacrocorax auritus*

389 records representing 17 provincial regions. The records are comprised of 14 single nests, 233 colonies and a total of 40,243 nests. The average colony size is 173 nests.

New provincial nesting regions were Sudbury (1996) and Toronto (1993). After decades of low numbers due to lake pollution and human persecution, populations on the Great Lakes are currently increasing, and in 1998 the Canadian Wildlife Service tallied 6,697 nests in Lake Ontario's largest colony at Presque Isle Provincial Park, Northumberland.

American Bittern, *Botaurus lentiginosus*

Early nest records from Bruce (1933), and Halton (1933) have been obtained, together with a current record from Haliburton (1994). Forty nesting regions are now represented. An early (1944) breeding record was received of a flightless young at Lake River, Kenora.

Least Bittern, *Ixobrychus exilis*

Previous nest records were recently obtained for Manitoulin (1981) and Waterloo (1949), increasing the regional total to 29.

Great Blue Heron, *Ardea herodias*

699 records representing 43 provincial regions. Currently, a total of 19,966 nests are made up of 24 single nests and 468 colonies. The average colony size is 43 nests.

Nest records from Grenville (1997), Peel (1994), and Victoria (1992) have been added. The most northerly record for Cochrane District was the report of three nests at Moosonee in 1996 (Ridout 1996).

Great Egret, *Ardea alba*

42 records representing 8 provincial regions. These records list six single nestings, 31 colonies and a total of 465 nests. Average colony size is 15 nests.

An undocumented 1984 sighting of an adult at a nest in Wellington County (Peck 1987), has

been added. Haldimand-Norfolk became the sixth provincial nesting region with the finding of a nest in Backus Woods in 1988, and again in 1997 when another nesting was photographically documented. The seventh provincial nesting region was Kent (1997), and the eighth was Northumberland (1999) with a single nest noted on High Bluff Island, Presqu'le Provincial Park.

The Nottawasaga Island colony in Simcoe has ranged from 12 to 27 nests in the years 1993 through 1999, with 18 active nests in 1998 (Peck 1999), and 20 nests all containing young counted in 1999. Ten nests were reported on Chantry Island, Bruce County, in 1999.

Snowy Egret, *Egretta thula*

No new nests have been reported since the 1986 nest in Hamilton-Wentworth, noted in Appendix A (Peck and James 1987).

Cattle Egret, *Bubulcus ibis*

34 records representing 5 provincial regions. Nine single nests, 8 colonies and a total of 57 nest have been reported. The average colony size was 6 nests. No new reports of provincial nesting have been received since 1977.

Green Heron (Green-backed Heron), *Butorides virescens*

No pertinent new information has been received. Because nesting is most often solitary, colonial nesting counts have not been considered for this species.

Black-crowned Night-Heron, *Nycticorax nycticorax*

395 records representing 17 provincial regions. The records list 7 single nestings, 136 colonies and a total of 22,401 nests. Average colony size is 165 nests.

Turkey Vulture, *Cathartes aura*

Nest records were obtained from Glengarry (1999), Huron (1994), Nipissing (1991), and Victoria (1994), bringing the regional nesting total to 28.

Snow Goose, *Chen caerulescens*

17 records representing 2 provincial regions. The records list 7 single nests, 6 colonies, and a total of 21,030 nests. Average colony size is 3,505 nests. It should be noted that due to the straggling, spread-out colonies along the Hudson Bay coast of Ontario, accurate and meaningful colony counts have been difficult to ascertain, and the numbers of nests, undoubtedly, were far greater than these listed numbers.

Nest records were received in 1993 and 1996 from Akimiski Island, NWT, in James Bay.

Canada Goose, *Branta canadensis*

Nest records from Glengarry (1997), Grenville (1997), Grey (1998), Renfrew (1994), and Victoria (1985) were added to bring the regional total to 33.

Mute Swan, *Cygnus olor*

Nests from Grey (1994) and Haldimand-Norfolk (1982) increased the regional total to 10.

[Trumpeter Swan], *Cygnus buccinator*

Nests of free-flying birds have now been reported from Durham (1995, 1997), Kenora (1994,

1995, 1997), Leeds (1996-8), Simcoe (1993-7), Toronto (1996-7), York (1996-7), and a 1999 breeding record from Haldimand-Norfolk was also noted. Formerly believed to breed in Ontario (Lumsden 1984), reintroduced birds are apparently close to re-establishing the species in Ontario (H.G. Lumsden pers. comm.).

Wood Duck, *Aix sponsa*

Recently-added nest records from Haliburton (1977), Muskoka (1996), Thunder Bay (1995), Victoria (1997), and Waterloo (1959) increased the nesting regions to 31.

A 28 day incubation period was recorded in a 1999 York nest.

Gadwall, *Anas strepera*

A 1981 nest record made Manitoulin the 17th nesting region; and breeding records from Sudbury (Ridout 1994) and Thunder Bay (Weir 1987) were noted.

American Wigeon, *Anas americana*

A 1996 nest record was submitted for Durham (the ninth provincial nesting region), and an early report of seven broods seen in 1944 on the west James Bay coast of Kenora was received.

American Black Duck, *Anas rubripes*

Early nest records for Lambton (1940) and Waterloo (1951) were obtained, and 41 nesting regions are presently represented. An early report of eight broods seen in 1944 on the west coast of James Bay in Cochrane and Kenora was noted.

Mallard, *Anas platyrhynchos*

Glengarry (1997) and Prescott (1996) were two new regions for which nest records were received, and the regional total is now 48. A breeding record involving a female with eight young was submitted for 1996, on Akimiski Island, NWT, in James Bay.

Blue-winged Teal, *Anas discors*

A 1994 nest record for Rainy River and earlier nests from Peel (1979), and Waterloo (1957) have increased the provincial nesting regions to 34.

Northern Shoveler, *Anas clypeata*

Breeding records in 1994 have been noted from Hamilton in Hamilton-Wentworth, and Mud Lake in Niagara (Ridout 1994). A 1944 sighting of two broods on the west shore of James Bay, Kenora, was noted.

Northern Pintail, *Anas acuta*

A female with young in Hamilton-Wentworth (1994) was evidence of breeding (Ridout 1994); and a nest record was submitted in 1995 from Akimiski Island, NWT, in James Bay. An early report from 1944 of 19 broods on the west coast of James Bay, Kenora, was obtained.

A 1992 nest from Winisk in Kenora had an inside diameter of 24 cm (9.4 inches), and an inside depth of 4 cm (1.6 inches).

Green-winged Teal, *Anas crecca*

Nesting records were submitted for Niagara (1993), Timiskaming (1995), and York (1985),

increasing the regional total to 14. A female with two downy young, 18 July 1997, at Lakefield, Peterborough, was a noted breeding record (Ridout 1997). The Niagara and Timiskaming nests both held clutches of 10 eggs. Observations of three broods on the west shore of James Bay, Kenora, in 1944, were received.

Canvasback, *Aythya valisineria*

In addition to the breeding records from Dufferin and Kenora (Peck and James 1987), two other regions where probable breeding occurred are Kent and Lambton, both in 1983 (Weir 1983).

In July 1999, adults with two broods were observed and photographed in Toronto at the Leslie St. Spit, to establish the most recent new breeding record.

Redhead, *Aythya americana*

A 1994 nest record was received from Dufferin County (the eighth nesting region), and a 1998 breeding record from Hamilton-Wentworth was reported (Ridout 1998).

Ring-necked Duck, *Aythya collaris*

Nest records for Haliburton (1980) and Nipissing (1988) were submitted, and a probable breeding was reported from Norwich, Oxford (Ridout 1996). The regional nesting total is 11.

Greater Scaup, *Aythya marila*

In 1944, eight broods were observed at or just south of Cape Henrietta Maria, Kenora.

King Eider, *Somateria spectabilis*

No new breeding evidence has been obtained since 1983.

Common Eider, *Somateria mollissima*

10 records representing 1 provincial region, and three islands in James and Hudson Bays, NWT. These records list 3 single nestings, 6 colonies, and a total of 130 nests. The average colony size is 23 nests.

An early breeding record was received of a brood at Cape Henrietta Maria, Kenora, in 1944.

EGGS 40 nests, 1 to 6 eggs; 1E (2N), 2E (3N), 3E (4N), 4E (13N), 5E (8N), 6E (10N).

Average clutch range 4 to 6 eggs (31 nests).

EGG DATES 10 records, 23 June to 16 July (11 dates); 5 records, 26 June to 3 July.

Oldsquaw, *Clangula hyemalis*

In 1944, 12 broods were observed at or just south of Cape Henrietta Maria, Kenora.

No nests have been reported since 1981.

Bufflehead, *Bucephala albeola*

A 1998 sight record of four young on Lake Timiskaming, Timiskaming District, was submitted and is the first evidence of a probable breeding since 1983.

Common Goldeneye, *Bucephala clangula*

A female, observed on 10 July 1994 with 11 young, was a reported breeding record from Gananoque, Leeds (Ridout 1994).

Hooded Merganser, *Lophodytes cucullatus*

Nest records for Grey (1993), Lanark (1993), and Muskoka (1994) increased the provincial nesting regions to 22. A breeding record of an adult with 11 downy young in 1996 in Hamilton-Wentworth was noted (Ridout 1996).

Common Merganser, *Mergus merganser*

A 1992 nest record from Grey has been received, and the regional nesting total is now 18.

Ruddy Duck, *Oxyura jamaicensis*

Breeding records were received by the ONRS in 1989 from Essex, and in 1989 and 1990 from Grey. Additionally, probable breeding records were noted in 1989 from Huron (Weir 1989), in 1993 from Oxford (Ridout 1993), and a female with six young was observed in 1988 in Russell (Weir 1988). This species is continuing to expand its breeding range in Ontario.

Three ducklings, six to seven days old, with a female, were observed on 23 May 1997 at Lake St. Clair, and indicated a much earlier egg date than our previous earliest of 24 May.

Osprey, *Pandion haliaetus*

Nest records have been received from Bruce (1987), Grenville (1997), Grey (early 1980s), Haldimand-Norfolk (1998), Hamilton-Wentworth (1998), Lanark (1997), Timiskaming (1985), and Wellington (1994), and the regional nesting total has been increased to 33.

Protection of known nests and the use of nesting platforms have been an additional help in the continued provincial breeding success of this widespread raptor. Nest records in the ONRS total 977 as of 1998.

Bald Eagle, *Haliaeetus leucocephalus*

Records were received for 1996 nestings from Manitoulin and Northumberland, and the species has now been recorded nesting in 23 provincial regions. In 1999, 7 of 11 active nests produced young, along the Rainy River in Rainy River District; and, also in 1999 in southern Ontario, 17 active nests fledged 24 young. One of the latter nests was located on an island in the St. Lawrence River, Leeds County and was the first nest in that region in more than three decades.

As was indicated in Part B of the revision of Volume 1 (Peck and James 1993b), the Bald Eagle is continuing slowly to recover its former status in southern Ontario. Nest records in the ONRS files now total 695 (1,075 nests).

An incubating adult, 20 February 1999, in Elgin, provided our earliest egg date.

Northern Harrier, *Circus cyaneus*

Essex (1989) and Glengarry (1999) were new nesting regions, raising the regional total to 41.

Another incubation period of ca 32 days was submitted.

Sharp-shinned Hawk, *Accipiter striatus*

Grey (1985) and Niagara (1993) were recently submitted nesting regions, which now total 25.

Cooper's Hawk, *Accipiter cooperii*

Kenora (1995), Ottawa-Carleton (1994), and Prince Edward (1995) were the most recently-added nesting regions, which now total 32. By 1998 there were 150 nest records in the ONRS.

Northern Goshawk, *Accipiter gentilis*

Nest records have been submitted from Glengarry (1995), Haliburton (1977), Sudbury (1997), and Wellington (1995). Nesting regions total 33, and by 1998 there were 182 nest records in the ONRS.

Red-shouldered Hawk, *Buteo lineatus*

A 1993 nest record for Algoma was only the fourth from northern Ontario. The nesting region total is now 35.

Broad-winged Hawk, *Buteo platypterus*

Nest records were received for Bruce (1982), Glengarry (1996), and Lennox and Addington (1998), increasing the regional nesting total to 36.

Red-tailed Hawk, *Buteo jamaicensis*

A 1997 nest record for Grenville and a 1998 nest record from Russell have been added. The Red-tailed Hawk nests in 44 provincial regions and is the most commonly reported nesting Ontario raptor with 1,150 nest records in the ONRS.

Golden Eagle, *Aquila chrysaetos*

All 24 known nestings of Golden Eagle up to 1997 are in ONRS files. All nests were in Kenora and were recently updated from files submitted by the Ministry of Natural Resources, who have requested that their exact locations not be revealed.

American Kestrel, *Falco sparverius*

Parry Sound (1994) was the latest of the 42 nesting regions recorded. In 1993, the most northerly nest record to date involved a nest found near Hudson Bay at Fort Severn in Kenora.

Merlin, *Falco columbarius*

Haliburton (1994), Renfrew (1997), and Timiskaming (1985) were the most recent new nesting regions. The present total of 105 nests, 14 nesting regions, plus numerous recent sightings suggest that this falcon is increasing in Ontario.

Peregrine Falcon, *Falco peregrinus*

Almost 48 new nest records have been received in the ONRS since 1993 (Peck and James 1993b), with 17 nests in 1997, and another 18 reported in 1998 (Ridout 1998). These records are the result of the re-introduction of captive-raised birds to new as well as former nesting sites in the province. Some of these sites were on ledges of tall buildings in urban centres. In 1998 a pair nested successfully on a cliff-ledge in Niagara Gorge. New nesting regions were Algoma (1997), Hamilton-Wentworth (1995), Manitoulin (1995), Middlesex (1996), Niagara (1998), Ottawa-Carleton (1996), Timiskaming (1997), and Toronto (1995). The nesting region total is 21.

In 1999, urban nests continue to be reported from Hamilton, London, Ottawa, and Toronto.

Ring-necked Pheasant, *Phasianus colchicus*

An early nest record (1953) has been obtained for Waterloo County, as has a 1977 nest record from Peel. The most recent nest record of this species was submitted, in 1990, for Durham. The regional nesting total is 17.

Ruffed Grouse, *Bonasa umbellus*

Glengarry (1995) was the 46th regional nesting, and a 1978 nest in Haliburton was the 47th.

A short incubation period of 20 days was submitted.

Spruce Grouse, *Falcipennis canadensis*

34 nests representing 7 provincial regions.

EGGS 32 nests with 1 to 8 eggs; 1E (1N), 2E (1N), 3E (1N), **4E** (5N), **5E** (10N), **6E** (7N), **7E** (5N), **8E** (2N).

Average clutch range 5 to 6 eggs (17 nests).

EGG DATES 30 nests, 9 May to 25 June (37 dates); 15 nests, 29 May to 10 June.

Willow Ptarmigan, *Lagopus lagopus*

The most southerly breeding record in Ontario was a 1996 sighting of a female with six young on the James Bay coast, 100 km (60 mi) north of Attawapiskat, Kenora.

Sharp-tailed Grouse, *Tympanuchus phasianellus*

Although no new nests have been reported, the species continues to breed on Manitoulin Island as evidenced by its 'lek' activities each spring at Gore Bay airfield.

Wild Turkey, *Meleagris gallopavo*

New nest records have been received from Dufferin (1996), Grey (1997), Hamilton-Wentworth (1994), Northumberland (1997), and Victoria (1997), and nesting regions have increased to 10. Breeding records have also been noted from Brant (1998), Bruce (1987), and Elgin (1993), as released birds continue to propagate in southern Ontario.

A Grey nest contained 16 eggs and a Hamilton-Wentworth nest contained 18 eggs.

Yellow Rail, *Coturnicops noveboracensis*

In Volume 1, page 157, line 3, the regions in parentheses should read "(Cochrane and Kenora Districts and Simcoe County)".

No new nests have been reported since the fourth in Ottawa-Carleton in 1982.

King Rail, *Rallus elegans*

The breeding record from Grey (1987) mentioned in the Volume 1 revision (Peck and James 1993b), was considered questionable by the Grey-Bruce Bird Records Committee and has been discarded.

No new nests have been recorded since 1977.

Virginia Rail, *Rallus limicola*

A Bruce (1991) nest was the 29th regional nesting and a Nipissing (1999) nest was the 30th.

Sora, *Porzana carolina*

A nest record for Sudbury (1996) has been submitted, and was the 32nd regional nesting.

Common Moorhen, *Gallinula chloropus*

An early (1953) nest record from Waterloo and 1997 nest records from Lennox and Addington

have been obtained, and the nesting region total is 27.

A late egg date of 26 July has been obtained from a Lennox and Addington nest.

American Coot, *Fulica americana*

An early (1949) nest record has been obtained from Waterloo County, which was the 20th nesting region. It is worthy of note that no current nests of this marsh-dwelling species have been received since 1992.

Sandhill Crane, *Grus canadensis*

Many current sightings and reports of breeding would appear to indicate a marked population increase of this species in Ontario. In 1996 breeding was documented in Haldimand-Norfolk (Ridout 1996), and in 1998 breeding was reported in Lanark (Ridout 1998). Nest records from Peterborough (1998) and Thunder Bay (1993) have been submitted, bringing the regional nesting total to 6.

The 1988 breeding record for Russell (Peck and James 1993b) was actually in Ottawa-Carleton; the observation of a pair with two young (Weir 1988) occurred at Navan, on the northeast side of the Mer Bleue Bog.

American Golden-Plover, *Pluvialis dominica*

No new nests have been reported since 1984.

Semipalmated Plover, *Charadrius semipalmatus*

Two nests were found on Akimiski Island, NWT, in James Bay on 11 and 14 June 1995.

Piping Plover, *Charadrius melodus*

Single nest records have been submitted in 1992, 1995, 1996, 1997, and two in 1998, all from Lake of the Woods, Spohn Tp., Rainy River District, where this species is making its last stand in the province.

Lesser Yellowlegs, *Tringa flavipes*

A 1996 nest record was submitted from an islet near Akimiski Island, NWT, in James Bay, and is the most southerly nest to date.

Solitary Sandpiper, *Tringa solitaria*

In 1994 a record was received of the second Ontario nest of this species, found on Manitoulin Island in 1992.

Marbled Godwit, *Limosa fedoa*

A breeding record of two adults with four downy young was recorded on 6 June 1994 at the Rainy River sewage lagoons, Rainy River District (Elder 1994).

Common Snipe, *Gallinago gallinago*

Nest records from Glengarry (1996) and Victoria (1996) increased the regional total to 31.

American Woodcock, *Scolopax minor*

The 42nd region from which a nesting has occurred was Lanark (1996), and the 43rd was Glengarry (1998).

A fifth incubation period of 20 days was reported from a York nest in 1999.

Wilson's Phalarope, *Phalaropus tricolor*

A 1981 breeding record for Bruce has been obtained.

Little Gull, *Larus minutus*

No nests have been reported since 1989.

Bonaparte's Gull, *Larus philadelphia*

Timiskaming became the 5th provincial nesting region with the submission of a 1997 nest record, near Kirkland Lake. This is the most southerly nest record for Ontario.

Ring-billed Gull, *Larus delawarensis*

482 records representing 33 provincial regions. These records list 24 single nestings, 298 colonies, and a total of 1,363,179 nests. The average colony size is 4,574 nests.

Nipissing became the 33rd provincial nesting region with the submission of a 1996 nesting. Later, an early (1909) nest record for Nipissing was recently obtained.

Herring Gull, *Larus argentatus*

1,105 records representing 37 provincial regions. These records list 111 single nestings, 566 colonies, and a total of 120,227 nests. The average colony size is 212 nests.

A breeding record of three half-grown young was submitted for 1996 on Akimiski Island, NWT, in James Bay.

Great Black-backed Gull, *Larus marinus*

Nest records have been received for Hamilton-Wentworth (1995) and for Niagara (1995-6), and nesting regions now total 11.

Caspian Tern, *Sterna caspia*

111 records representing 13 provincial regions. These records list 13 single nestings, 77 colonies, and a total of 11,981 nests. The average colony size is 155 nests.

Rainy River (1996) was the 13th provincial nesting region. New nesting sites were reported from Half-moon Island in Georgian Bay, Bruce County (1980-91), and from an islet in Spider Bay, Parry Sound District (1990). In 1998 the colony in Hamilton Harbour totalled 433 nests (Ridout 1998).

Another incubation period of at least 21 days was reported from Toronto (M of M) in 1998.

Common Tern, *Sterna hirundo*

620 records representing 32 provincial regions. These records list 72 single nestings, 336 colonies, and a total of 52,907 nests. The average colony size is 157 nests.

In 1998 the Hamilton Harbour colonies totalled 261 nests.

Arctic Tern, *Sterna paradisaea*

The 19 nest records in the ONRS, all from Kenora District, describe eight single nestings and 11

colonies making up a total of 87 nests. The average colony size is 7 nests.

No nests have been reported since 1993 when three nests in a small colony were observed and photographed on a small island south of Akimiski Island, James Bay, NWT.

Forster's Tern, *Sterna forsteri*

51 records representing three provincial regions. These records list 9 single nestings, 22 colonies, and a total of 739 nests. The average colony size is 33 nests.

The most recent nest record was from Kent in 1997.

Black Tern, *Chlidonias niger*

1,066 records representing 32 provincial regions. These records list 142 single or isolated nestings, 216 colonies, and a total of 1,912 nests. The average colony size is 8 nests. It should be noted that because the small colonies of this species are usually loose and spread-out, resulting in some nests being missed, the number of single nests may be fewer than listed and the average colony size may be a little greater.

A nest record for Algoma (1996) increased the provincial nesting regions to 32.

A 1994 Durham nest was positioned on top of an abandoned Canada Goose nest, still containing two goose eggs.

Black Guillemot, *Cepphus grylle*

On an islet just off the northwest coast of North Twin Island, NWT, in central James Bay, 11 nests (18 eggs) were found on 18 and 22 July 1973 (Manning 1981). This is the only other record of nesting near Ontario since the initial record in 1957 (Peck and James 1983).

Rock Dove, *Columba livia*

Nest records were received for Brant (1994), Essex (1978), Haliburton (1999), and Muskoka (1995), and 35 provincial regions are now represented by nestings.

The inside diameter of a York nest was 14.8 cm (5.8 inches).

Incubation periods in 9 nests ranged from 17 to 21 days, with 5 nests averaging 18 to 20 days.

Mourning Dove, *Zenaida macroura*

Glengarry (1999), Muskoka (1995), and Sudbury (1994) nests increased the regional total to 43.

A late egg date of 4 October 1997 was submitted from Grey County.

Passenger Pigeon, *Ectopistes migratorius*

Omitted from Volume 1 was Bruce County where two dated nestings occurred. The first of these was in Amabel Tp., 28 April 1876, and the second, also in Amabel Tp., Lot 13, Con. D., 24 May 1878 (Mitchell 1935).

Black-billed Cuckoo, *Coccyzus erythrophthalmus*

A 14 day incubation period was reported from a York nest in 1999.

Yellow-billed Cuckoo, *Coccyzus americanus*

A 1997 nest made Haldimand-Norfolk the 26th nesting region.

Barn Owl, *Tyto alba*

Sault St. Marie is mentioned in the distribution of this species in Ontario (Campbell and Campbell 1984) and is far north of its breeding range in southern Ontario. It is doubtful if the species breeds at such a latitude.

No new nests have been reported since 1989.

Eastern Screech-Owl, *Otus asio*

A Haldimand-Norfolk nest in 1998 increased the nesting regions to 26.

An incubation period of ca 24 days was reported in a 1999 York nest containing 4 eggs, and hatching was completed in two days. Two other incubation periods of 25 and 27 days were submitted. In each instance incubation was arbitrarily assumed to have begun with the laying of the second egg.

Great Horned Owl, *Bubo virginianus*

Muskoka (1995) was the 45th provincial nesting region. A 1994 Niagara nest held 3 young and 1 egg and is the only reported clutch of four for Ontario.

Northern Hawk Owl, *Surnia ulula*

Manitoulin (1997) became the 4th provincial nesting region when the sixth nest reported to date was discovered on 29 March 1997 and photographed (ROM PR 2090), on Barrie Island, part of Manitoulin Island. Three of the 4 hatched young, later fledged successfully (Campbell, Cosby and Whitelaw 1998). This nest was the second most southerly found in Ontario.

A breeding record of an adult with 3 young was reported in 1997 from Black Sturgeon Lake, Thunder Bay (Ridout 1997). In 1998 the seventh and eighth provincial nests were found in this same area. The 1998 nests were 3.5 km (2.2 miles) apart in a recent burn and were situated in burned poplars; one nest with four young was on top of a stub at a height of 12 m (39 ft), and the other with five young was in a hollow in the trunk at a height of 9 m (29.5 ft).

Barred Owl, *Strix varia*

28 nests representing 13 provincial regions.

Haliburton (1980), Manitoulin (1987), Muskoka (1997), Nipissing (1999), and Victoria (1996) nest records recently increased the provincial nesting regions to 13. A 1999 Durham RM nest was the second for the region. In 1987 a Manitoulin nest provided an early egg date of 23 March, and a latest egg date of 22 May was reported from a 1982 Haliburton nest.

EGGS 16 nests with 2 to 3 eggs; **2E** (8N), **3E** (8N).

EGG DATES 11 nests, 23 March to 22 May (16 dates); 6 nests 18 April to 15 May.

Great Gray Owl, *Strix nebulosa*

A photograph made on Manitoulin in 1997, of a fledged juvenile still with traces of down, has been received at the Royal Ontario Museum (ROM PR 2089); it provides documentation of the second most southerly breeding record for this species in Ontario (Whitelaw 1998).

Boreal Owl, *Aegolius funereus*

In 1994, the third Ontario nest was reported from the third provincial region, Thunder Bay.

Northern Saw-whet Owl, *Aegolius acadicus*

Two nest records have made Parry Sound the 13th provincial nesting region; one of these nests

was an early record from 1928, and the other was a nest discovered in 1981. A nest in a bird box in 1998 made Brant the 14th nesting region. A 1998 breeding record from Peterborough was reported (Ridout 1998).

Common Nighthawk, *Chordeiles minor*

Two nest records from Toronto both had incubation periods of 19 days.

Whip-poor-will, *Caprimulgus vociferus*

Lively, Sudbury (1994) was the site of the 25th provincial nesting region and the most northerly nest location yet recorded for the species in Ontario.

Chimney Swift, *Chaetura pelagica*

Niagara (1995) was the 33rd provincial nesting region.

In Haliburton two complete clutches of two eggs each were incubated and young successfully fledged.

Incubation periods of 19 and 20 days were reported also from two Haliburton nests.

Belted Kingfisher, *Ceryle alcyon*

Lambton became the 44th provincial nesting region when a 1940 nest record was submitted.

INCUBATION PERIOD 6 nests; 3 of 22 days, 1 of no more than 23 days, 1 of 26 days, 1 of at least 26 days, and 1 of ca 28 days. The last three periods are longer than usual (Bent 1940, Nice 1954, Hamas 1994).

Red-headed Woodpecker, *Melanerpes erythrocephalus*

Bruce (1996) was the 37th provincial nesting region.

Incubation periods of 11 days and 12 days were reported from two York nests.

Red-bellied Woodpecker, *Melanerpes carolinus*

Brant (1994) was the 10th provincial nesting region. In 1996, 1997, and 1998 probable breeding records were reported from Leeds (Ridout 1996, 1997, 1998).

A 1995 nest from Haldimand-Norfolk was in a cavity in a dead beech at a low height of 7.6 m (25 ft); the cavity was 25.5 cm (10 inches) in depth, and had a diameter of 8.2 cm (3.2 inches).

Yellow-bellied Sapsucker, *Sphyrapicus varius*

Nest records were submitted for Brant (1985) and Glengarry (1995), and 39 nesting regions are now represented.

New incubation periods: 1 nest, 13 days; 3 nests, 14 days.

Downy Woodpecker, *Picoides pubescens*

Glengarry (1995), Grey (1993), and Haliburton (1996) nests increased the regional total to 40.

INCUBATION PERIOD 12 nests, 12 to 14 days; 6 of 12 days, 5 of 13 days, and 1 of 14 days.

Hairy Woodpecker, *Picoides villosus*

Nest records for Essex (1994), Glengarry (1999), Lennox and Addington (1995), and Prince Edward (1994), increased the provincial nesting regions to 47.

Two more incubation periods of 12 days, and one of 13 days were recorded.

Three-toed Woodpecker, *Picoides tridactylus*

Nest records have been obtained from Frontenac (1981) and Haliburton (1984). Eight provincial nesting regions are now represented. There are 28 nest records on file.

Black-backed Woodpecker, *Picoides arcticus*

Lanark (1994) was the 14th provincial nesting region.

An incubation period of ca 14 days was submitted.

Northern Flicker, *Colaptes auratus*

In Volume 1 (Peck and James 1983), under the sub-heading EGGS, the number of nests should read 235 and not 245.

A 1998 nest record for Russell was submitted and the regional total is all but complete at 51.

INCUBATION PERIOD 17 nests, 11 to 15 days; 9 nests averaged 12 to 13 days. In at least one nest incubation commenced before the clutch was complete.

Pileated Woodpecker, *Dryocopus pileatus*

Haldimand-Norfolk (1997), Haliburton (1996), and Waterloo (1994) nests increased the regional total to 33. Photographic documentation of a 1992 Elgin nesting has been received.

INCUBATION PERIOD 3 nests: 1 of 15 days, 1 of 16 days, and 1 of 20 days. The variation in length may indicate that incubation commenced before the clutch was complete, as often happens (Bull and Jackson 1995).

Acknowledgements

The newly-presented 1944 waterfowl breeding records from James and Hudson Bays were taken from an unpublished report of observations made by R. H. Smith of the United States Fish and Wildlife Service.

Thanks are due to K. Abraham for allowing us access to unpublished Ministry of Natural Resources material dealing with avian breeding on Akimiski Island (NWT) and environs, in James Bay.

C. Peck related follow-up information on the hatching of a Red-necked Grebe in Bronte harbour in 1998, which we appreciated.

Literature Cited

American Ornithologists' Union. 1998.

Check-list of North American Birds. 7th edition. American Ornithologists' Union, Washington, D.C.

Bent, A.C. 1940.

Life histories of North American cuckoos, goatsuckers, hummingbirds and their allies. United

- States National Museum Bulletin 176. Washington, D.C.
- Bull, E.L. and J.A. Jackson.** 1995.
Pileated Woodpecker (*Dryocopus pileatus*). In The Birds of North America, No. 148. A Poole and F. Gill (eds.). Academy of Natural Sciences, Philadelphia, PA, and The American Ornithologists' Union, Washington, D.C.
- Campbell, E.C. and R.W. Campbell.** 1984.
Status report on the Barn Owl, *Tyto alba* in Canada. Committee on the Status of Endangered Wildlife in Canada, Ottawa.
- Campbell, R.S., F.C. Cosby and C.J. Whitelaw.** 1998.
Nesting of the Northern Hawk Owl on Manitoulin Island in 1997. Ontario Birds 16: 5-10.
- Dobos, R.Z. and G. Edmondstone.** 1998.
Recent nestings of Red-necked Grebe on Lake Ontario. Ontario Birds 16: 32-37.
- Elder, D.H.** 1994.
Marbled Godwit breeding record at Rainy River, Ontario. Birder's Journal 3: 154.
- Hamas, M.J.** 1994.
Belted Kingfisher (*Ceryle alcyon*). In The Birds of North America, No. 84. A. Poole and F. Gill (eds.). Academy of Natural Sciences, Philadelphia, PA, and The American Ornithologists' Union, Washington, D.C.
- Lumsden, H.G.** 1984.
The Pre-settlement Breeding Distribution of Trumpeter, *Cygnus buccinator*, and Tundra Swans, *C. Columbianus*, in Eastern Canada. The Canadian Field-Naturalist 98 (4): 415-424.
- Manning, T.H.** 1981.
Birds of the Twin Islands, N.W.T., Canada. Syllogeus No. 30. National Museums of Canada, Ottawa.
- Mitchell, M.H.** 1935.
The Passenger Pigeon in Ontario. Contributions of the Royal Ontario Museum of Zoology 7: 1-181.
- Nice, M.M.** 1954.
Problems of incubation periods in North American birds. Condor 56(4): 173-97.
- Peck, G.K.** 1987.
Great Egret *Casmerodius albus*. Pp. 52-53 in Atlas of the Breeding Birds of Ontario (Cadman, M.D., P.F.J. Eagles, and F.M. Helleiner, compilers). University of Waterloo Press, Waterloo, Ontario.
- Peck, G.K.** 1999.
ONRS 30: Ontario Nest Records Scheme Thirtieth Report (1956-1998).
Ornithology/Centre for Biodiversity and Conservation Biology, Royal Ontario Museum, Toronto.
- Peck, G.K. and R.D. James.** 1983.
Breeding Birds of Ontario: Nidology and Distribution. Volume 1: Nonpasserines. Life Sciences Miscellaneous Publications, Royal Ontario Museum, Toronto.
- Peck, G.K. and R.D. James.** 1987.
Breeding Birds of Ontario: Nidology and Distribution. Volume 2: Passerines. Life Sciences Miscellaneous Publications, Royal Ontario Museum, Toronto.
- Peck, G.K. and R.D. James.** 1993a.
Breeding Birds of Ontario: Nidology and Distribution. Volume 1: Nonpasserines (first Revision - part A: loons to ducks). Ontario Birds 11: 18-22.

Peck, G.K. and R.D. James. 1993b.

Breeding Birds of Ontario: Nidology and Distribution. Volume 1: Nonpasserines (first revision - part B: vultures to phalaropes). Ontario Birds 11: 83-91.

Peck, G.K. and R.D. James. 1994.

Breeding Birds of Ontario: Nidology and Distribution. Volume 1: Nonpasserines (first revision - part C: jaegers to woodpeckers). Ontario Birds 12: 11-18.

Ridout, R. 1993.

The Summer Season. Ontario Region. American Birds 47: 1104-1106.

Ridout, R. 1994.

Summer Season. Ontario Region. Field Notes 48: 938-941.

Ridout, R. 1996.

Summer Season. Ontario Region. Field Notes 50: 946-948.

Ridout, R. 1997.

Summer Season. Ontario Region. Field Notes 51: 991-993.

Ridout, R. 1998.

The nesting season. Ontario region. Field Notes 52: 451-453

Weir, R.D. 1983.

The Nesting Season. Ontario Region. American Birds 37: 982-985.

Weir, R.D. 1987.

The Nesting Season. Ontario Region. American Birds 41: 1429-1432.

Weir, R.D. 1988.

The Nesting Season. Ontario Region. American Birds 42: 1281-1286.

Weir, R.D. 1989.

The Nesting Season. Ontario Region. American Birds 43: 1310-1313.

Whitelaw, C.J. 1998.

Northern owls in Sudbury and Manitoulin Districts: High numbers, out of season occurrences and breeding. Ontario Birds 16: 1-4.

George K. Peck, ONRS/Ornithology, CBCB, Royal Ontario Museum, 100 Queen's Park,
Toronto, Ontario M5S 2C6

Ross D. James, R.R. # 3, S1480, Conc. 7, Sunderland, Ontario LOC 1H0

ONTARIO BIRDS December 1999