United States Fish and Wildlife Service and Enviroment Canada. 1986. North American Waterfowl Management Plan. Pp. 19. Minister of Supply and Services: Ottawa.

Peter J. Ewins, Canadian Wildlife Service (Ontario Region), Environment Canada, Canada Centre for Inland Waters, P.O. Box 5050, Burlington, Ontario L7R 4A6

Recognizable Forms

Merlin

by
Ron Pittaway

Introduction

Three distinct forms of the Merlin (*Falco columbarius*) breed in North America: (1) Taiga Merlin (*F. c. columbarius*), a medium dark bird of the boreal forest (taiga is a Russian word for boreal or northern forest); (2) Richardson's Merlin (*F. c. richardsonii*), a very pale bird of the northern prairies and aspen parklands; and (3) Black Merlin (*F. c. suckleyi*), a very dark bird of the West Coast. See Figure 1 and Map 1. These forms are also illustrated in Clark and Wheeler (1987), Scott (1987) and Peterson (1990). Note that the illustrations in the latter are mislabelled; from left to right they should read *suckleyi, columbarius,* and *richardsonii.* Also see the excellent paintings by Paul Donahue, including adult males and females of all three forms, in the Fall 1987 issue of *American Birds* 41: 369. In this note I discuss the taxonomy, occurrence, and identification of the recognizable forms of the Merlin in Ontario.

Taxonomy

The American Ornithologists' Union (1957) and Godfrey (1986) list four subspecies of the Merlin as breeding in North America: (1) *F. c. columbarius*; (2) *F. c. bendirei*; (3) *F. c. richardsonii*; (4) *F. c. suckleyi.* See Godfrey (1986) for ranges of the subspecies (races) and areas of intergradation.

Many authorities do not recognize *bendirei* (western taiga population) as a valid subspecies because it is similar to *columbarius* (eastern taiga population) in phenotype (appearance) and ecology (Swarth 1935, Taverner 1937, Rand 1946, Temple 1972a, Beebe 1974, Palmer 1988, Sodhi *et al.* 1993). Here I follow

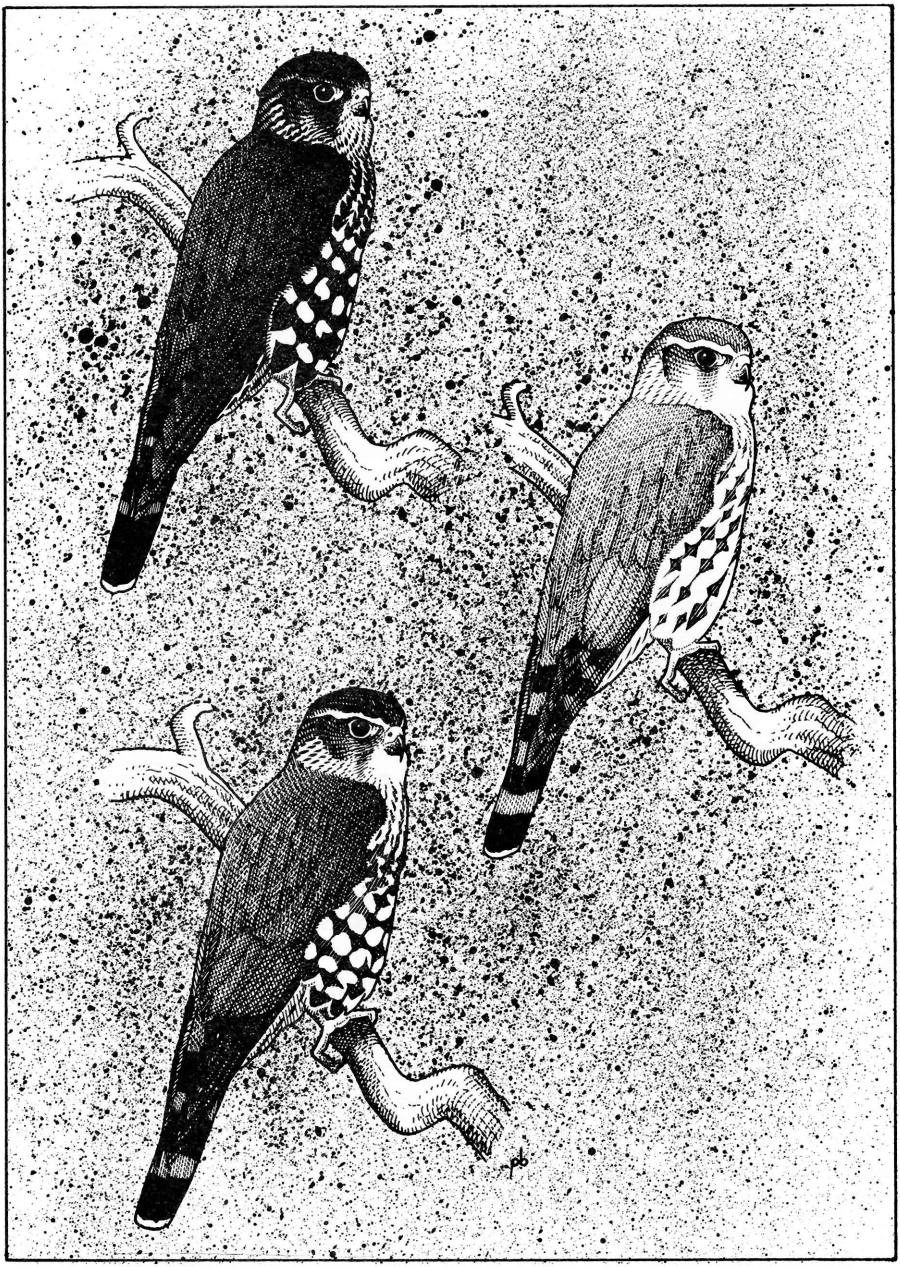


Figure 1: Adult male Merlins: *F.c. suckleyi* (top); *F.c. richardsonii* (middle); and *F.c. columbarius* (bottom). Drawing by *Peter Burke.*

Temple (1972a) who concluded that *bendirei* should be merged with *columbarius* as one subspecies *F. c. columbarius* because "Phenotypically no basis exists for separating the taiga population geographically in the manner the present subspecies designations indicate. The clinal nature of the geographic variation in these populations makes it clear that any attempts at dividing the taiga populations will be arbitrary and not reflect accurately either phenotypic or phylogenetic differences...".

Swarth (1935) questioned the validity of the subspecies *suckleyi*, suggesting that it may be a dark morph (phase) of *columbarius* (*bendirei*). However, Temple (1972a) concluded that "Merlins breeding in the coastal forest biome are markedly different from those of the adjoining taiga, and an exclusive range for this phenotype is indicated".

Plumages, Molts and Ageing

The sexes of adult (definitive basic) Merlins differ in coloration and size. Males vary from pale blue-gray to bluish black on the upperparts. Females are brown-backed (light to dark) with a hint of gray on the rump and uppertail coverts, although this is next to impossible to see in the field. Males are on average noticeably smaller than females.

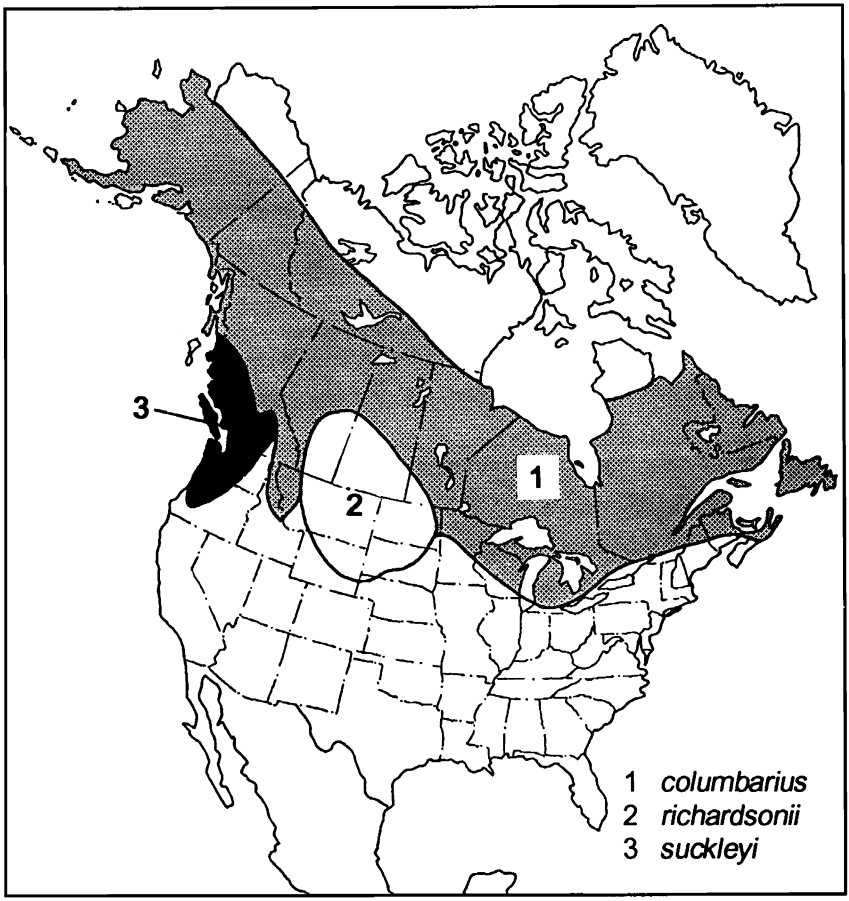
Immature (juvenile) male and female Merlins are brown-backed and are normally inseparable from adult females in the field. The full juvenile plumage is worn from the time the birds leave the nest until the next spring when the gradual molt to adult plumage begins.

Merlins (adults and year-old juveniles) undergo one complete molt annually, extending from mid-April to late September (Temple 1972b). After a juvenile has completed its first annual molt it is in adult plumage. Fall migrants consist of adults and juveniles in fresh plumage. By the following summer, some birds (especially juveniles) can become quite faded.

Taiga Merlin (*F. c. columbarius*)

The Taiga or Boreal Merlin breeds across the northern forests of Canada and Alaska (Sodhi *et al.* 1993). See Map 1. Taiga populations from Manitoba westward are classified as the subspecies *F. c. bendirei* by some authorities. In Ontario, Taiga Merlins breed from the tree line south regularly to Manitoulin Island and Algonquin Park (James 1991). Like Richardson's Merlin on the prairies, Taiga Merlins have adapted to breeding in groves of spruce (*Picea* spp.) in cities and towns such as Thunder Bay (Escott 1986) and Arnprior (Mike Runtz, pers. comm.). Following the discontinued widespread use of DDT, Taiga Merlins have increased and migrants are now seen more regularly in southern Ontario (Duncan 1993) and reports of wintering birds have also increased in recent years.

In the Checklist of Recognizable Ontario Bird Forms (Pittaway 1991), I listed the Eastern race (*columbarius*) and the Bendire's race (*bendirei*) as separate forms. I now believe that many *bendirei* are inseparable from *columbarius* (Temple 1972a, Palmer 1988). In a revision of the checklist I will combine the two, and rename the form as the Taiga Merlin (*F. c. columbarius*) after Clark and Wheeler (1987).



Map 1: Breeding ranges of Merlin subspecies.

Richardson's Merlin
(*F. c. richardsonii*)
The Richardson's or Prairie Merlin is a very pale subspecies breeding on the northern prairies and aspen parklands (Godfrey 1986). See Map 1. The population includes both resident and migrant birds. This form was named after Sir John Richardson, Arctic explorer and naturalist, who collected the first specimen near Carlton, Saskatchewan, on 14 May 1827 (Bent 1938).

Richardson's Merlins have been reported east to southern Ontario (Wormington 1986, Palmer 1988), and there is a report by George Meyers of a male from Grimsby on 6 January 1989 that was accepted by the Hamilton Bird Records Committee (Dobos 1990). James (1991) questioned Wormington's (1986) sight record at Point Pelee because "There are a number of pale-

coloured migrants in ROM collections conforming to *F. c. bendirei*". Wormington did not compare *richardsonii* with *bendirei* in his note; however, his description agrees closely with classic Richardson's in my opinion. Interestingly, expert hawkwatcher Frank Nicoletti (pers. comm.) reports Richardson's Merlins close to Ontario in each of the last three autumns at Hawk Ridge located on the west end of Lake Superior near Duluth, Minnesota. In addition, Rob Dobos (pers. comm.) observed a juvenile or female Richardson's Merlin near Rainy River on 28 August 1988.

Earl Godfrey (pers. comm.) considers the Richardson's Merlin to be a "very well-marked subspecies". In October 1992, I observed several Richardson's Merlins in Saskatoon, Saskatchewan. Perched adult males were very distinctive with pale blue-gray upperparts, and much paler crowns than *columbarius*. See Figure 1. Adult females and juveniles (immatures) were much paler than *columbarius* and in flight the underwings were not dark like the latter. In flight at a distance, the sandy-brown females and juveniles can be very reminiscent of female American Kestrels (*F. sparverius*), or they can appear like miniature Prairie Falcons (*F. mexicanus*)!

Some Merlins are intermediate between *columbarius* and *richardsonii* (Brian Wheeler, pers. comm.). They may be treated either as intergrades or as *F. c. bendirei* of some authorities (AOU 1957, Godfrey 1986, James 1991).

Black Merlin (*F. c. suckleyi*)
This very dark subspecies breeds mainly in western British Columbia (Sodhi *et al.* 1993). See Map 1. See also the full page painting of an adult male in Beebe (1974). Black Merlins are not highly migratory but some move as far as southern California and New Mexico (Sodhi *et al.* 1993), and Palmer (1988) cites a record east to Wisconsin. Interestingly, there is a specimen of a very dark female Merlin in the Canadian Museum of Nature (CMN #8588) that was collected in Ottawa on 23 March 1923 (Michel Gosselin, pers. comm.). I have examined this specimen and found it to be very similar to several specimens of *suckleyi* from British Columbia in the collection. P.A. Taverner wrote on the specimen label in 1939 "This bird so strongly resembles *suckleyi* that the temptation to call it so is very strong". According to Earl Godfrey (pers. comm.) "Whether it is genetically a Black Merlin is unknown". There are two possibilities: it is either a far-wandering individual of the subspecies *suckleyi*, or an extreme variant of *columbarius*. Rand (1948) stated that doubtful cases such as this are best treated as local variants, and suggested that on annotated checklists "it is not desirable to suppress the facts of their occurrence; under subspecies "A" a line might follow stating that occasional individuals approaching (or similar to, or identical with) subspecies "B" occur, as the data may require".

Clark and Wheeler (1987) state that "Characteristics of some individual Merlins are intermediate between those of Black and Taiga". In addition, Brian Wheeler (pers.

comm.) and Frank Nicoletti (pers. comm.) also report that very dark individuals suggestive of Black Merlins occur occasionally in the East. They believe these intermediate and dark birds are most likely variants of the Taiga form. More recently, Alan Wormington (*in litt.*) reported a dark Merlin wintering at Pelee in 1993-94. When observed closely on 13 and 14 April, it was "an exceptionally dark bird suggesting *suckleyi*". He believes it was probably a very dark *columbarius*.

Summary

Three recognizable forms of the Merlin breed in North America: Taiga, Richardson's, and Black. The Taiga Merlin is the usual form found in Ontario. Richardson's Merlins have been reported in southern Ontario, and they may be regular migrants in northwestern Ontario. As well, intermediates between Taiga and Richardson's Merlins are seen from time to time. Occasionally, very dark Merlins suggestive of the Black form occur in the East.

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Literature cited

American Ornithologists' Union. 1957. Check-list of North American Birds, 5th edition. American Ornithologists' Union, Washington, D.C.

Beebe, F.L. 1974. Field Studies of the Falconiformes of British Columbia. Occasional Papers No. 17. British Columbia Provincial Museum, Victoria.

Bent, A.C. 1938. Life Histories of North American Birds of Prey. Part 2. United States National Museum Bulletin 170. Washington, D.C.

Clark, W.S. and B.K. Wheeler. 1987. A Field Guide to Hawks. Houghton Mifflin Company, Boston.

Dobos, R. 1990. Hamilton Bird Records Committee, 1989 Annual Summary. Wood Duck 44(1): 3-6.

Donahue, P. 1987. The art of Paul Donahue. American Birds 41: 368-369.

Duncan, B. 1993. Merlins in Ontario: population changes. Birders Journal 1: 48-60.

Escott, N.G. 1986. Thunder Bay's nesting Merlins. Ontario Birds 4: 97-101.

Godfrey, W.E. 1986. The Birds of Canada. Second Edition. National Museum of Canada, Ottawa.

James, R.D. 1991. Annotated Checklist of the Birds of Ontario. Second Edition. Life Sciences Miscellaneous Publications, Royal Ontario Museum, Toronto.

Palmer, R.S. 1988. Handbook of North American Birds, Volume 5, Diurnal Raptors (Part 2). Yale University Press, New Haven and London.

Peterson, R.T. 1990. A Field Guide to Western Birds. Houghton Mifflin Company, Boston.

Pittaway, R. 1991. Checklist of recognizable Ontario bird forms. Ontario Birds 9: 49-55.

Rand, A.L. 1946. List of Yukon Birds and those of the Canol Road. Bulletin 105, Biological Series 33, National Museum of Canada.

Rand, A.L. 1948. Probability in subspecies identification of single specimens. Auk 65: 416-432.

Scott, S.L. (ed.). 1987. Field Guide to the Birds of North America. National Geographic Society, Washington, D.C.

Sodhi, N.S., L.W. Oliphant, P.C. James, and I.G. Warkentin. 1993. Merlin (*Falco columbarius*). *In* A. Poole and F. Gill (Eds.). The Birds of North America. Number 44. The Academy of Natural Sciences, Philadelphia, and The American Ornithologists' Union, Washington, D.C.

Swarth, H.S. 1935. Systematic status of some northwestern birds. Condor 37: 199-204.

Taverner, P.A. 1937. Birds of Canada. The National Museum of Canada. Ottawa.

Temple, S.A. 1972a. Systematics and evolution of the North American Merlins. Auk 89: 325-338.

Temple, S.A. 1972b. Sex and age characteristics of North American Merlins. Bird-Banding 43: 191-196.

Wormington, A. 1986. An observation of a "Richardson's Merlin" in Ontario. Ontario Birds 4: 62-64.

Ron Pittaway, Box 619, Minden, Ontario K0M 2K0

Notes

Gyrfalcon Harassing a Snowy Owl

by
Don Shanahan

On 7 March 1993, three companions and I were driving a concession road on the west end of Amherst Island, near Kingston. Suddenly, a low-flying dark phase Gyrfalcon (*Falco rusticolus*) flew directly at a Snowy Owl (*Nyctea scandiaca*) perched on a large rock in a pasture, 60 to 70 m south of us. Although no contact was made, the Gyrfalcon came very close to the owl. As a result, the Snowy fluttered awkwardly into the air and then landed again on its rock perch. The Gyrfalcon flew away.

Backtracking east, we looked for the Gyrfalcon, and stopped ten minutes later overlooking another pasture. A second Snowy Owl perched on a two metre pole some 60 to 70 m south of our position. Suddenly, the Gyrfalcon appeared, again flying close to the ground, and flew directly at the Snowy Owl. This owl didn't flinch, and at the last second the Gyrfalcon veered slightly upward to miss the owl. The Snowy remained perched, and the Gyrfalcon flew away and was lost from sight. No vocalizations were heard in either episode.

Wondering if this was a common interaction between these dominant Arctic raptors, I referred to the literature. I found no information on confrontations between Gyrfalcons and Snowy Owls either on the breeding or wintering grounds. However, one article (Cade 1953)