



# OFO News

NEWSLETTER OF THE ONTARIO FIELD ORNITHOLOGISTS

## HAWK COMMENTARY

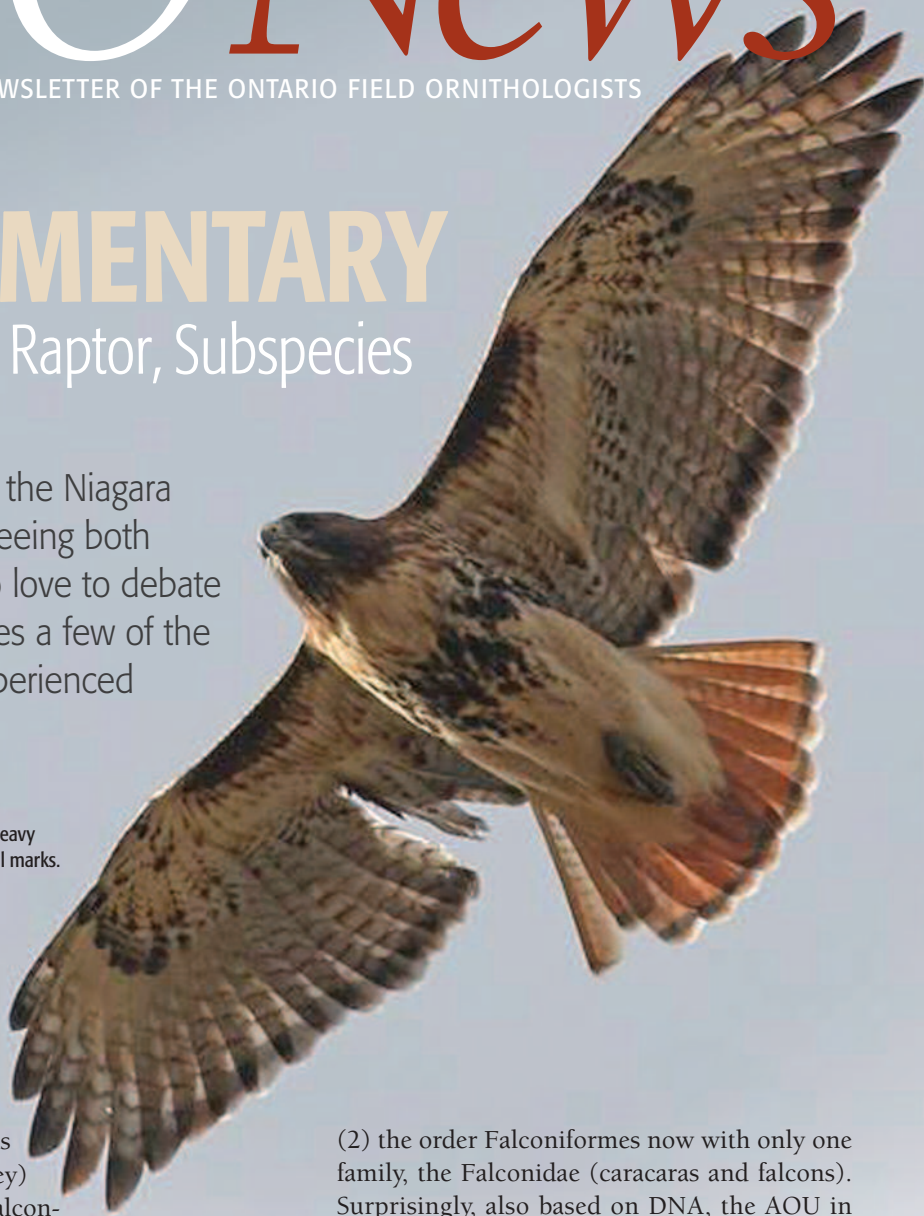
### DNA, Taxonomy, Hawk or Raptor, Subspecies

By Ron Pittaway

Very likely the main reason we go to the Niagara Peninsula Hawkwatch is the fun of seeing both hawks and longtime friends. We also love to debate hawk lore. This commentary discusses a few of the changes that hawkwatchers have experienced over the years.

Northern Red-tailed Hawk (*abieticola*) showing a heavy dark belly band, dark throat, and bold dark patagial marks.

Photo by Charmaine Anderson



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#### Taxonomic Changes and Checklist Order

Until 1998 all hawks (diurnal birds of prey) were in the order Falconiformes based historically on morphological similarities. That year the American Ornithologists' Union (AOU 1998), citing DNA studies, transferred the New World vultures and condors in the family Cathartidae out of the order Falconiformes into the order Ciconiiformes, which included storks and ibises. However, not long afterwards this decision was reversed and vultures/condors were returned to Falconiformes. Then in 2010, the AOU split Falconiformes into two orders: (1) Accipitriformes, which included the families Cathartidae (vultures and condors), Pandionidae (Osprey) and Accipitridae (accipiters, buteos, harriers, ospreys, kites, eagles), and

(2) the order Falconiformes now with only one family, the Falconidae (caracaras and falcons). Surprisingly, also based on DNA, the AOU in 2012 moved the order Falconiformes with its only family Falconidae (caracaras and falcons) to immediately before the New World Parrots in the family Psittacidae of the order Psittaciformes. Now falcons and caracaras are separated from other hawks by more than 150 pages in the new Sibley Guide (2014). Regardless of current phylogeny, I'd prefer that all hawks be kept together in field guides for practical convenience. Finally, the latest 56th supplement to the AOU (2015) list changed the sequence so that Rough-legged Hawk now precedes Ferruginous Hawk on the checklist.



Adult male American Kestrel.  
Photo by Barry Cherriere

### Hawk or Raptor

These two terms are often confused. They are not taxonomic categories and have different meanings. Hawk is the general term for the diurnal birds of prey which includes vultures, kites, accipiters, buteos, eagles, harriers, ospreys, caracaras and falcons. Raptor, however, includes both hawks and owls so these two terms are not synonymous. Over the years the meaning of raptor has become more and more associated with hawks and less so with owls. Also, older hawkwatches often have hawk in their official names such as Hawk Cliff, Hawk Mountain and the Niagara Peninsula Hawkwatch. Whereas many more of the recently established hawkwatches call themselves raptor watches, such as the Rosetta McClain Gardens Raptor Watch on Toronto's Scarborough Bluffs, but with rare exceptions these raptor watches do not count owls. Raptor sounds sexier than hawk and it seemingly increased in popularity after the release of the motion picture Jurassic Park in 1993 and possibly because modern birds are now known to be descended from a lineage of feathered dinosaurs.

### Juvenile or Immature

Older field guides and old-timers used immature for hawks in their first year of life. Now the more precise term juvenile is used in modern hawk handbooks. In most hawks, the juvenile plumage, which is acquired in the nest, is held for almost a year before the hawk undergoes a prolonged complete molt over the summer into its first adult plumage. Northbound juvenile hawks in spring at Beamer are wearing the same feathers that they migrated south with in the previous fall. Some spring hawks, particularly juvenile Broad-wingeds, show missing primaries in late April and May indicating they've begun their first annual molt.

### Morph or Phase

Morphs are different colour forms that coexist in the same interbreeding population. Just as juvenile has replaced immature, morph has replaced phase as the modern term used in ornithology. No authoritative publication since 1990 uses the outdated term phase. Morph is preferred because phase suggests changes over time such as the phases of the moon, whereas a hawk hatched as a light or dark morph remains the same morph its entire life. Juvenile and adult plumages have different appearances, but they are different



Juvenile light morph Rough-legged Hawk.  
Photo by Barry Cherriere

ages/ plumages, not morphs. Albinism, leucism and other aberrant colour variations are not true morphs. Unlike subspecies, morphs do not have scientific names. Morphs presumably arose as adaptations to local conditions. For example, the different colour morphs, particularly in buteos, may confuse mammalian prey making them more likely to be caught.

### Subspecies

Subspecies is the official term in ornithology for taxonomically distinct subpopulations of a species. Subspecies differ from morphs in having separate breeding ranges. They interbreed freely where their ranges meet and intermediates are called intergrades, not hybrids. Different subspecies mix together during migration and in winter. Subspecies, unlike morphs, have scientific names. Race is a less formal synonym whose present-day use now has a negative connotation.



Spring hawkwatching at Beamer starts Tuesday 1 March 2016.

For more information see <http://www.niagarapeninsulahawkwatch.org/>



Turkey Vulture or better named Turkey Condor to reflect its true relationship. Photo by Barry Cheriére

### Northern Red-tailed Hawk

There is an overlooked subspecies that is a common migrant at Beamer. It is the Northern Red-tailed Hawk (*Buteo jamaicensis abieticola*) that breeds mainly in the boreal forest. *Abieticola* means dweller of the fir. It was first described by W.E. Clyde Todd in 1950 in the *Annals of the Carnegie Museum, Pittsburgh*. However, Northern *abieticola* has not received much recognition until recently because it was poorly known, nesting in remote areas. Now more and more authors are recognizing it. Northerns are highly migratory whereas many of the Red-tails that breed locally are resident or short distance migrants. Adult Northerns migrate in March and April when local birds are at their nests. In my experience at Beamer, many of the adult Red-tailed Hawks passing Beamer are Northerns. Typical Northerns look like “heavily printed” versions of the Red-tails breeding in southern Ontario. Compared to more southern local birds, adult Northerns usually have a darker throat (more streaked), heavier belly band with large dark blotches, and they often have a buffy wash on the breast. Some Northerns are more richly marked and therefore more easily recognized. In the past, Northerns in the East were overlooked or confused with light morph Western Red-tailed Hawks (*calurus*).

Watch for Northern Red-tails at Beamer. Type the link below into your URL line. It is the best reference on Northern Red-tailed Hawks, authored by Jerry Liguori and Brian L. Sullivan (2014) and published in *North American Birds* 67(3):374-383. <http://bit.ly/1JS HqmE>

### Turkey Condor and Black Condor

Palmer (1998) in the *Handbook of North American Birds* wrote that “At least all of the dark species of Vultures might better be called Condors.” New World vultures in the family Cathartidae are unrelated to the true Old World vultures in the family Accipitridae, so calling our birds vultures is a misnomer. Their similarities are due to convergent evolution. Is it time for the AOU to change the names to Turkey Condor and Black Condor? This would correct the misleading name vulture used for our two Ontario condors. It also would be good public relations because vultures are considered ugly and looked down upon by many people. Imagine the increase in visitors coming to Beamer to see migrating condors.

### Hawk Specialty Books

Up until 1987, we used mainly general field guides to identify hawks. The illustrations and texts were often inadequate or misleading. The first authoritative hawk ID guide was *Hawks* in 1987 (revised 2001) in the Peterson guide series by Bill Clark and Brian Wheeler. *Hawks in Flight* came out soon afterwards in 1988 (revised 2012) by Pete Dunne, David Sibley and Clay Sutton. These two specialty guides revolutionized hawkwatching. They were followed by photographic guides by Wheeler and Clark in 1995, *Raptors* (Eastern and Western editions) by Wheeler in 2003, *Hawks From Every Angle* by Liguori in 2005, *Hawks At A Distance* by Liguori in 2011 and *The Crossley ID Guide: Raptors* in 2013 by Crossley, Liguori and Sullivan. More guides and apps are forthcoming.



## **Good News Story**

This article would have been a bad news story if written in 1934 when Maurice Broun first climbed Hawk Mountain in Pennsylvania to count migrating hawks and protect them from shooters. Back then most hawks were unprotected and considered vermin. They were shot at every opportunity. Golden Eagles were often poisoned when they accidentally ate strychnine placed in bait to kill wolves and coyotes. The pesticide DDT caused major declines in Bald Eagles, Ospreys, Peregrine Falcons and Merlins. The good news story today is that most hawk populations are doing well following the banning of DDT and strychnine, and because of protective laws, education, and a shift to greater public appreciation for birds of prey. The Niagara Peninsula Hawkwatch continues to play an important role in monitoring population trends in conjunction with other well-established hawk lookouts in North America.

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