Status and Occurrence of Ferruginous Hawk *(Buteo regalis)* in British Columbia.
By Rick Toochin (Revised: April 2014).

Introduction and Distribution

The Ferruginous Hawk (*Buteo regalis*) is a colorful raptor species that has a limited breeding range in Canada confined to the Prairie Provinces of Alberta, Saskatchewan, and southern Manitoba (Dunn and Alderfer 2011). The Canadian population is only 10% of the world population for this species (COSEWIC 2008). The entire Canadian population is estimated to be no higher than about 1200 pairs (COSEWIC 2008). The Ferruginous Hawk is still found in Canada but it has lost over 48% of its historical range making it a threatened species (COSEWIC 2008). The Ferruginous Hawk is strongly dependent on native grasslands that have healthy populations of prairie dog colonies because they are the species primary source of food (COSEWIC 2008). This grassland habitat has been subject to fragmentation by urbanization and farming which has led to significant habitat loss over the past one hundred years (COSEWIC 2008). This habitat loss in turn has seen a large decrease in the population of Ferruginous Hawks across the Canadian and American Prairies (COSEWIC 2008). Because Ferruginous Hawks are so directly reliant upon non-cultivated grasslands, they are considered a native grassland specialist (COSEWIC 2008). The Canadian population of Ferruginous Hawks all migrate south to spend the winter in either the western United States or northern Mexico (COSEWIC 2008). In British Columbia, the Ferruginous Hawk is considered a vagrant species, but has been documented breeding twice in the Nicola Valley region in the interior of British Columbia (Campbell *et al*. 1990). In nearby Washington State in the United States, there is a small population of Ferruginous Hawks found east of the Cascade Mountains in the dry interior in the southern portion of the State (Wahl *et al*. 2005). Most records in British Columbia likely come from the Washington State population as spring overshoots to the Okanagan Valley (Cannings *et al*. 1987, Campbell *et al*. 1990). Birds found in the Kootenays could be birds that overshot the Rocky Mountains on their way to or from the Alberta breeding grounds (Campbell *et al*. 1990).

Identification and Similar Species

The Ferruginous Hawk is one of the most spectacularly plumaged raptors in North America. These graceful hawks are well represented in all modern standard field guides. There are light morph birds that represent about 90% of the population and rarer dark morph birds that represent less than 10% of the overall population (Sibley 2003). While most Provincial records are of light morph birds, there are a small number of dark morph records, and observers should be aware that either can occur in British Columbia (Please see Table 1). Adult Ferruginous Hawks are readily identified by their large size, strong dihedral in flight and unique plumage features (Wheeler 2003). Adults have dark rusty colored leg feathers as well as rusty edge axillaries; both are very noticeable in flight (Dunn and Alderfer 2011). The rusty axillaries have a

dark outer edge that highlights the rusty edged feathers of the underside of the wing (Sibley 2003). The adult birds have a bright white breast and secondary feathers in the open wings (Sibley 2003). The underside of the tail is pure white (Wheeler 2003). The trailing edge of the underside of the wing has a light dirty edge that wraps around the primary tips. The throat on adult birds is white (Sibley 2003). The head is recognized by the white supercilium and gray cheek-patch (Sibley 2003). The eyes are bright yellow in color (Dunn and Alderfer 2011). The bill is large with a distinctively thick large yellow gape that extends well back to the bill base and is a diagnostic field mark on all ages of Ferruginous Hawk (Wheeler 2003). The back feathers are rusty-rufous colored with dark centers to the feathers (Wheeler 2003). The secondaries are gray colored with white edges on the open wing creating a white pale crescent shape to shafts of the primaries which is distinctive and visible at great distance (Wheeler 2003). The rump is rusty on Ferruginous Hawks and the base of the tail is white with the tail tip light rusty-colored (Dunn and Alderfer 2011). The wing shape in flight is pointed and the wings are held in a distinct dihedral which helps eliminate all ages and plumages of Red-tailed Hawk (Wheeler 2003). Immature Ferruginous Hawks are much paler looking than the adults (Wheeler 2003). On the underside of the bird the under wings are mostly white with clean whitish remiges (Sibley 2003). There is a dark crescent shape at the edge of the axillaries (Sibley 2003). There is variable dark spotting in the actual axillary area of the wing (Sibley 2003). The leggings are mostly white, except for birds in their first spring who can have rusty patches on the leg feathers (Sibley 2003) (Wheeler 2003). The underside of the tail is all white (Sibley 2003). On the upper side the head has a large white supercilium and pale head that has some darkish streaking (Dunn and Alderfer 2011). The bill is large and has the large yellow gape which is the same as adult birds (Dunn and Alderfer 2011). The back of the immature bird is rusty, but darker than an adult, with light white spots (Dunn and Alderfer 2011). The secondaries are gray with dark bars (Sibley 2003). In flight, the white crescent is present in the upper wing at the base of the primaries which is the same as in adult birds (Sibley 2003). The upper side of the tail is white overall with dark bars that cross the tail to the tip (Sibley 2003). Immature plumage can be held into early summer of the following year from hatching (Wheeler 2003). Dark morph birds are rarely encountered in British Columbia and are covered in most standard field Guides. The adults are all dark colored on the breast except for some white streaks on the chest (Wheeler 2003). Where this species differs from dark Red-tailed Hawks is that the tail is pure white on the underside of the tail and lacks any type of dark bands (Wheeler 2003). Dark morph birds also have the large bill with a thick yellow gape that extends back to the base of the bill (Wheeler 2003). It is important to rule out Red-tailed Hawk and Rough-legged Hawk if a Ferruginous Hawk is thought to be encountered in British Columbia. The size and structure of Ferruginous hawk should rule out all forms of Red-tailed Hawks (Sibley 2003, Wheeler 2003). Rough-legged Hawks are smaller and light morph birds are completely different from Ferruginous Hawks with heavy barring in the undersides of the wing and tail (Wheeler 2003). Dark morph Rough-legged Hawks are similar to

dark morph Ferruginous Hawks, but have tail bands as well as bands in the remiges area of the under wing, and are significantly smaller in overall size (Sibley 2003, Wheeler 2003). Both Red-tailed and Rough-legged Hawks lack the large yellow gape on the bill that is found on Ferruginous Hawk (Sibley 2003, Wheeler 2003, Dunn and Alderfer 2011). As with any rarity, photographs should always be obtained whenever possible of any Ferruginous Hawks seen in British Columbia.

Occurrence and Documentation

On April 15, 2011 an adult light morph Ferruginous Hawk was found by the author at the corner of Gibson Road and Chilliwack Central Road in east Chilliwack (Toochin *et al*. 2013, Please see Table 1). The bird was photographed making this the first confirmed record of Ferruginous Hawk for the coastal British Columbia. The timing of this record fits well with past records of Ferruginous Hawks. In 2012 there were two separate observations of single Ferruginous Hawks that were both photographed at Hope Airport on April 13 and 18 (Toochin *et al*. 2013, Please see Table 1). Based on plumage patterns it was determined that these were separate birds (R. Toochin Pers. Comm.). This could represent a breeding pair heading up the Fraser Canyon to somewhere in the Cache Creek or Ashcroft area to nest. There is a recent summer record for Ashcroft of a single bird (Toochin *et al*. 2013, Please see table 1). There is some suitable habitat in this region for this species to successfully breed. Only through future observations and careful study of the area will it be known if Ferruginous Hawks are just vagrants to the Cache Creek / Ashcroft areas or if they actually breed in the region. When looking at past records there are 13 records out of 40 that fall in the month of April. The timing of these April records reflects perfectly the push of birds moving north in the western United States, especially in Washington State (Wahl *et al*. 2005). Of the 4 coastal records for Washington, 3 of them come from the month of April, with all of them coming from Cape Flattery on the west coast of Washington State (Wahl *et al*. 2005). The number of Provincial records for Ferruginous Hawk during the months of May through August is few in number, but likely reflect birds that are prospecting for or even could have a nesting site. The later summer records could be birds that have left the nest site and are just roaming around as part of the species post breeding dispersal. There are two well documented breeding records for Ferruginous Hawks in the Douglas Lake Ranch area of British Columbia which are in the Nicola Valley region (Toochin *et al*. 2013, Please see Table 1). Recent summer records of single adult birds seen in the Quilchena area could reflect adults hunting for chicks on a nest. It is impossible to know, without careful scrutiny given to the region, if this species has recently bred in the area. The recent records in the Kamloops area could be explained by local post breeding birds moving freely around the area from a nest site in the nearby Nicola region. Hopefully future records will provide clues as to what is actually happening with this species breeding in the Province. The other period where there are a few records is the month of September which is exactly when birds are

migrating south (Campbell *et al*. 1990, Wahl *et al*. 2005). Many have been recorded at Hawk Watches in the Kootenays where these birds are gone immediately after being observed. This suggests these birds are migrants moving south and not actually breeding in the area. It is hard to know if the Kootenay birds are anything but lost birds that were blown over the Rocky Mountains. Based on the past records, Ferruginous Hawks have been seen in the region in the spring and in the fall during migration. It is likely these birds were either displaced over the mountains and were forced to move by weather systems up the valleys in the spring on their way to Alberta, or were displaced over the Rocky Mountains by weather or wandering tendencies on their way in the fall, as they travel south to the United States for the winter. There are very few photo-documented records of Ferruginous Hawk in British Columbia. With the recent trend of observers using point and shoot digital cameras to photograph more unusual records, it is likely that future records will be photographed. Ferruginous Hawk is a bird that almost never stays in one spot for very long when they have been observed in British Columbia. This makes the species hard to chase and very fortunate for those observers that have bumped into them in the Province. Being a species that does overshoot in migration to British Columbia, it highly likely more of these beautiful hawks will be seen in British Columbia in the future.

Figure 1: Ferruginous Hawk adult light morph outside Kamloops on September 9, 2006. Photo © Don Cecile

Figure 2 & 3: Ferruginous Hawk adult in east Chilliwack on April 15, 2010.
Photos © Rick Toochin

Table 1: Records of Ferruginous Hawk in British Columbia:

1.(1) adult light phase adult April 28, 1922: Brooks: Osoyoos (Brooks 1923, (Campbell *et al*. 1990)
2.(1) dark phase bird May 22, 1922: Brooks: Hody's Bluff, Vaseux Lake (Brooks 1923, (Campbell *et al*. 1990)
3.(1) August 30, 1944: Okanagan Landing (Campbell *et al*. 1990)
4.(2) adults summer 1945: Anarchist Mountain, Osoyoos (Campbell *et al*. 1990)
5.(2) adults mid-June to July, 1968 [nest with 2 large young found]: Aspen Grove (Campbell *et al*. 1990)
6.(1) adult April 10, 1969: White Lake, Okanagan Falls (Campbell *et al*. 1990)
7.(1) adult April 29, 1971: Tappen (Campbell *et al*. 1990)
8.(1) adult August 12, 1972: Wapta Lake (McLaren and McLaren 1973, Campbell *et al*. 1990)
9.(1) adult May 15, 1977: Kelowna (Campbell *et al*. 1990)
10.(1) adult June 13, 1978: (Quilchena), Douglas Lake (Campbell *et al*. 1990)
11.(2) adults [with 1 fledgling] September 20, 1978: 16km south of Logan Lake (Campbell *et al*. 1990)
12.(1) January 10-16, 1979: mobs: Kelowna (Cannings *et al*. 1987)
13.(1) adult June 6, 1980: White Lake, Okanagan Falls (Campbell *et al*. 1990)
14.(1) adult June 8, 1980: Anarchist Mountain, Osoyoos (Campbell *et al*. 1990)
15.(1) adult June 10, 1980: Round Lake, Richter Pass (Campbell *et al*. 1990)
16.(1) adult May 13, 1983: Princeton (Campbell *et al*. 1990)
17.(2) adults May 1, 1984: 11km east of Douglas Lake (Quilchena) (Campbell *et al*. 1990)
18.(1) sub-adult April 19, 1987: Rick Toochin, Mark Wynja, and other observers: outside Okanagan Falls to Vaseux Lake Cliffs (R. Toochin Pers. Comm.)
19.(1) adult July 29, 1989: Syd Roberts (RBCM Photo 124) Tranquille (Campbell *et al*. 1990)
20.(1) adult light phase May 9, 1992: Gary Davidson (photo) Nakusp (Bowling 1992, (Davidson 1993)

21.(1) adult light phase June 4, 1993: Chris Charlesworth, Doug Brown et al: Mt. Kobau, near Osoyoos (Siddle 1993, Davidson 1994)
22.(1) adult light phase April 29, 2000: Hylda Mayfield: Douglas Lake Ranch (Yahoo message # 1691 bcintbird)
23.(1) adult light phase March 23, 2001: Chris Charlesworth: East of Winfield at 4km mark on Beaver Lake Road (Cecile 2001)
24.(1) adult light phase April 5, 2002: Doug Brown: along Wagon Wheel Road, Osoyoos (Cecile 2002)
25.(1) adult light phase April 13, 2002: Gary Davidson (photo) field south of Nakusp (Cecile 2002)
26.(1) immature light phase April 11, 2004: Jerry Pilny, Dr. Alan Froke: 4km south of Skookumchuk (Yahoo message #1224 ekootenaybirds)
27.(1) adult light phase September 3, 2004: Linda Van Damme: Creston (Yahoo message# 2538 wkbirds)
28.(1) adult light phase June 21, 2005: Rick Toochin, Corina Isaac: above Quilchena along Douglas Lake ranch Road (not June 26 as reported in Cecile 2005)
29.(1) dark phase adult October 14, 2005: Michael McMann: Castlegar Golf Course (Yahoo message #3247 wkbirds)
30.(1) adult light phase September 1-10, 2006: Chris Charlesworth, and many other observers (photo) Kamloops (Cecile 2007)
31.(1) adult light phase September 29, 2006: Guy Monty: Creston (Cecile 2007a)
32.(2) adult light phase & immature September 6, 2007: Ed and Hazel Beynon: north end of Bannock Creek in Valhallas (Yahoo message #4899 wkbirds)
33.(1) adult light phase October 9, 2007: Michael McMann: Castlegar Golf Course (Yahoo message #4988 wkbirds)
34.(1) adult light phase April 24, 2008: Alex Westman: south of Vernon near Highway 97 (Yahoo message #18780 bcintbird)
35.(1) adult light phase April 21, 2009: Chris Charlesworth, Ryan Tomlinson, Russ Cannings: Sutherland Hills in Kelowna (Yahoo message # 20949 bcintbird)
36.(1) adult light phase June 7, 2010: Mike Boyd: 10-20km south of Ashcroft (Charlesworth 2010)
37.(1) adult light phase September 1, 2010: *fide Dick Cannings*: along US/Canada birder just west of Similkameen River (Yahoo message #24098 bcintbird)
38.(1) adult light phase April 15-16, 2011: Rick Toochin, and many other observers (photo) Chilliwack (Charlesworth 2011a, Toochin 2012)
39.(1) adult light phase July 27, 2011: Thor Manson: Gallager Lake, Okanagan (Charlesworth 2011b)
40.(1) adult light morph April 13, 2012: Rick Toochin (distant photo) Hope (Toochin 2012)
41.(1) adult light morph April 18, 2012: Rick Toochin (distant documentation photo) Hope Airport (different bird!) (Toochin 2012)

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