



Three Amigos and Seasons with the Hummingbirds

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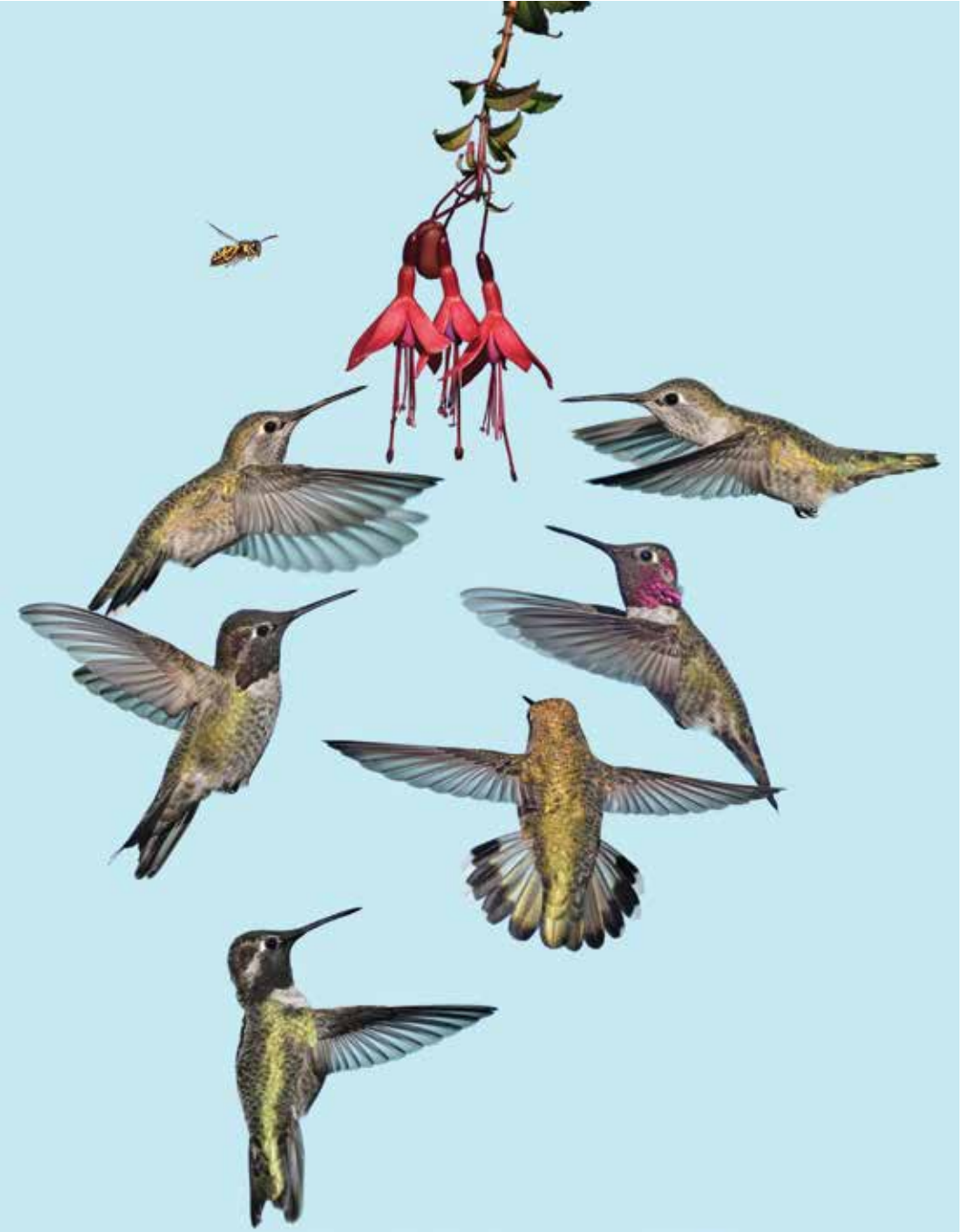
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Of all the bird species in the province, hummingbirds are a constant source of conversation and joy year-round. This is a story about three hummingbird lovers who met by chance, became friends, and regularly shared their experiences over

the past decade or so. But when their experiences and notes were brought together, a unique collection of information on the life of Anna's and Rufous hummingbirds emerged, especially for southern Vancouver Island (Figure 1).



Figure 1. The Northern range expansion of Anna's Hummingbird (next page) from California in the 1950s was viewed by some hummingbird lovers on southern Vancouver Island as a threat to the common Rufous Hummingbird (above). In 2004, data were gathered to assess the concern. *Photos by Mark Nyhof.*



Focused interest in hummingbirds started in 2004 when BCFWS members first reported a possible decline of Rufous Hummingbirds at feeders, which they attributed to expanding populations of the larger and resident Anna’s Hummingbird. About the same time, **Wayne** was beginning to amass various species’ databases to prepare more comprehensive accounts than were published as general overviews in *The Birds of BC* project. The hummingbird databases started with unique information from the mid-1940s, when Anna’s Hummingbird first showed up in BC, and the database entry continues today. Since it was first found breeding in the province in 1958,¹¹ Anna’s Hummingbird records (including occurrence) have increased greatly as the species expanded its range on southern Vancouver Island. The significant increase in Rufous Hummingbird records, especially breeding, is mostly due to the personal research by Mark Nyhof (Table 1).

Although the databases cover the entire province, the majority of records come from southern Vancouver Island where Anna’s Hummingbird has been rapidly expanding in locations and numbers over the past decade. The databases are unique because they have been established by archival information and added to by three friends who have regularly shared their common interest in old-fashioned natural history – lots of field time with note-taking.

Wayne (Figure 3) met **Mark Nyhof** (Figure 2), a wildlife artist, in 1980, while soliciting information for *The Birds of BC*. Mark was also a consistent contributor to the BC Nest Record Scheme at this



Figure 2. There are few experienced nest finders active today in British Columbia. In this photo, Mark is checking a Northern Flicker cavity with his “nest snoopers.” Photo by R. Wayne Campbell, near Oliver, BC, May 27, 1998.

Table 1. Number of records for Anna’s and Rufous hummingbird used for *The Birds of BC* (1890 to 1990)⁸ with updated numbers in the Biodiversity Centre for Wildlife Studies (BCFWS; 1890 through 2017) databases in preparation for future, more comprehensive, species accounts.

Database	Anna’s Hummingbird ¹			Rufous Hummingbird ¹		
	No. Records ²	Breeding	Total	No. Records ²	Breeding	Total
<i>The Birds of BC</i>	1,462	5	1,467	10,309	751	11,060
BCFWS	102,843	313	103,156	191,613	2,606	194,219
% Increase	6,934	6,610	6,932	1,759	247	1,656

¹Total occurrence records and confirmed breeding records for Anna’s Hummingbird and Rufous Hummingbird.

²Not including breeding records.

time. In 2009, he joined the BCFWS team as a Director, an Associate Editor of *Wildlife Afield*, and as an author of the annual nest record scheme reports. He currently continues to design and format the latter two publications.

Mark is one of several remaining experienced nest finders in the province and is responsible for about half of all nests for the province that are listed in Table 1. Each year he personally locates and monitors up to 48 Anna's Hummingbird nests (Table 2) and between 20 and 195 Rufous Hummingbird nests (Table 3). Over 12 years of record-keeping, Mark has provided detailed notes for 1,415 nests for the two species.

Table 2. Number of Anna's Hummingbird nests located and monitored by Mark Nyhof on southern Vancouver Island, 2009-2018.

Year	Total Nests		
	Active	Old	Total
2009	1	0	1
2010	1	0	1
2011	1	0	1
2012	4	0	4
2013	7	0	7
2014	27	21	48
2015	28	4	32
2016	23	3	26
2017	21	2	23
2018	19	0	19
Total	132	30	162

Table 3. Number of Rufous Hummingbird nests located and monitored by Mark Nyhof on southern Vancouver Island, 2009-2018.

Year	Total Nests		
	Active	Old	Total
2009	12	8	20
2010	15	10	25
2011	33	28	60
2012	53	56	109
2013	123	57	180
2014	123	50	173
2015	172	23	195
2016	155	19	174
2017	160	30	190
2018	113	13	126
Total	959	294	1,253

To put Mark's efforts in perspective, over half of the world's Rufous Hummingbird population breeds in British Columbia and much of the breeding information summarized for North America, updated in *The Birds of North America*,¹² is from *The Birds of BC*.⁸ Since that time, Mark has doubled the number of breeding records for the province and with far more details than previously known.

With timely visits he also determined the full breeding period for Anna's Hummingbird in British Columbia, from the first spider web being added to the nest to the maiden flight of young, was determined:

- Nest-building – 5 days
- Laying – 1 day (24 hours)
- Incubation – 15 days
- To fledging – 23 days
- Total cycle – **44 days**

Mark also noted that in some cases the next nest is begun only a few days after young fledge.

Fascinating facts were also noted for Rufous Hummingbird. Most early nests are built on a nest from the previous year in as little as 3-4 days and the species appears to nest twice in a season.

While conducting research in the Arctic in the early 1970s, Wayne was aware of Renewable Resources Consulting Services Ltd., a company established by **Ron Jakimchuk**. The two never met until 2008 when Ron announced in *Bioline*, the newsletter of the Association of Professional Biologists of BC, that he was purging his extensive library of journals and reports. Wayne and Ron met for lunch and a week later, wheelbarrows of material were being transferred to the BCFSW for archiving. It turned out they had a deep rooted interest for marsh-nesting birds and enjoyed hummingbirds.



Figure 3. Wayne Campbell's research interests include colonial waterbirds nesting in fresh-water and marine environments. *Photo by Eileen C. Campbell, Tunkwa Lake, BC.*

Ron's waterfront property on Coles Bay in North Saanich is surrounded by mixed mature woods and has extensive gardens of many flowers and shrubs. He plans the garden so something is in flower at all seasons. He feeds hummingbirds year-round at several feeders and attracts both species. In the early spring and summer, evenings provide a spectacle of activity.

Mark and Wayne live near Cadboro Bay, about 22 km southeast of Coles Bay. Although they live less than a kilometer apart, the hummingbird activity is quite different. Mark's yard and environs is more enclosed with mixed mature trees and small gardens while Wayne's yard abuts onto an open school yard with mature mixed trees and includes remnants of an orchard. Even though Mark has recorded as many as 50 birds at his feeders at one time, he has found only one Anna's Hummingbird nest on his property and rarely sees young visiting his feeders. A short distance away, Wayne's feeders are not quite as busy and he has not found a nest in his garden but does get 8-12 newly fledged Anna's Hummingbirds broods at his feeders each year! Both rarely see any Rufous Hummingbirds in their yards so when one appears at their feeders it is notable.

Part of the intense feeder activity is attributed to a recent change in sugar-water utilized. The long-held conventional hummingbird food mixture is 1 part of sugar to four parts water. Two studies on southern Vancouver Island 20 years apart determined a different concentration is preferred by the hummingbirds. In 1996, an undergraduate student was the first to study feeding preferences of Anna's Hummingbird and she determined an increased concentration of 1 part water to 1 part sugar was preferred.⁹ This was confirmed by another study in 2015. The latter research was published as the lead article in *Wildlife Afield*.¹⁵

About five years ago Ron and Mark changed sugar-water concentrations and the difference in the numbers of hummers attracted was immediate. Xisa Huang, Ron's partner, kept track of how much sugar they use. Initially a 10 kilogram bag (22.5 pounds) lasted 17 days. However, consumption increased when young hummers appear. Based on 2 feeders, the consumption rate at Coles Bay is 5 cups of sugar daily at a 1:1 ratio or 2.25 pounds (by weight) of sugar per day!

Seasonal highlights from the notes of the three amigos follow.

Winter – There is little down time for Anna’s Hummingbird nest finders. In mild winters, before the New Year, male Anna’s are performing their spectacular courtship dives. They fly vertically high into the air, sometimes as much as 37 m (121 ft.), then fall toward the ground to a watching female, making high-pitched noises as air whips through their tail feathers. When she is enamoured, the pair fly to a nest site but the relationship is short because there is no pairing. Shortly after the courtship displays are noticed nest-searching begins, which is challenging and requires previous experience. Over the years Mark has learned the nesting behavior of females and with patience may watch and see them fly to a nest site. His earliest nest with eggs is January 25 but an adult with a newly-fledged young of February 13 suggests nest-building would have begun January 1 or earlier.

In the meantime, Ron and Wayne are putting out fluffy flower spikes of cattails (Figure 4) and the dense flowers of pampas grass as nesting material. By mid-spring, the stalks are bare!

Early nests are often built 9-12 m (30-40 ft.) above ground saddled on a Douglas-fir branch. During January and February Mark may have already located several nests which he will continue to monitor in spring for success. The earliest nest under construction noticed in Cadboro Bay is January 15⁴

Spring – The focus turns to spotting the first returning Rufous Hummingbird from its wintering grounds in southern Texas and Mexico. In early spring and summer, when both species are present in large numbers, hummers provide a constant spectacle of activity. The male arrives first and Ron starts looking in early March. He has seen one as early as March 12 but March 19 is the average arrival date at Coles Bay. Females arrive from 1-6 days later (Table 2). In Cadboro Bay, single males are seen 4-7 days later, the earliest date being March 19 (Table 4). The earliest returning date for southern Vancouver Island is March 6.



Figure 4. Anna’s Hummingbirds readily use the flower spikes of cattails (shown) and pampas grass as nesting material if set out in winter near feeders. *Photo by R. Wayne Campbell.*

Table 4. First arrival dates for male and female Rufous Hummingbirds at Coles Bay (North Saanich) and Cadboro Bay (Saanich) for selected years.

Year	Coles Bay		Cadboro Bay	
	Male	Female	Male	Female
1999	March 21	March 22	March 26	March 30
2000	March 14		March 20	March 24
2004	March 22	March 23	March 27	April 1
2005	March 12		March 19	March 25
2011	March 29	April 4	April 2	April 6
2016	March 14		March 20	March 25
2018	March 20		March 24	March 27

The dusk feeding frenzy at Coles Bay is intensified as Rufous arrive, with both species, now 30-40 birds in all, vying for a final evening fill-up. This intense feeding late in the day lasts throughout the season and into the early summer. One might think that competition for a feeding port (flower) would be extreme but both species sit on the round perch together and on several occasions Ron has seen

the two species sharing the same port (Figure 5)!

In Cadboro Bay, the first Rufous may not be seen for up to a week later but Mark is already out looking for the first Rufous nests. His earliest nest, with 2 young 10 days old, was found on April 10. Back calculating suggests nest-building would have begun around March 13 and incubation on March 17. (Figure 6). By the end of a single season, Mark will have found



Figure 5. Male Rufous Hummingbird and female Anna's Hummingbird (right) sharing a feeding port at the same time. *Photo by Ronald D. Jakimchuk.*



Figure 6. In late March, soon after the first migrant Rufous Hummingbirds appear on southern Vancouver, Mark is checking old nest sites and finding new ones. *Photo by Mark Nyhof.*

and checked over 100 Rufous Hummingbird nests. In one year that number was 195 (Table 3)!

As the nesting season progresses, newly hatched young Anna's are at feeders with adult females at Cadboro Bay. In mid-April, Wayne reported that the most hummers ever (8) on one feeder with only four feeding ports. They were all Anna's (3 males, 4 females and a newly fledged young). The fledgling was the third separate brood of the year and it was only mid-April (Figure 7).

Occasionally, incidental to daily activities, Wayne or Ron may stumble on a Rufous nest. Ron was delighted to find such a nest in 2000, ten feet over his driveway, in an ornamental large Cedar of Lebanon (*Deodora* sp.) evergreen (Figure 8). It was saddled on a drooping branch under a rain protective drooping branch above. Ron followed the use and success of the nest for six years. The history follows:

- 2000 – Nest built and fledged 2 young.
- 2001 – Two young fledged.
- 2002 – Two young fledged.
- 2003 – Incubation of 2 eggs noted on April 25 but determined as abandoned (infertile) on May 16. Second clutch laid and incubating on June 5. Nest and 2 eggs abandoned on July 4 (infertile). In December the nest fell down and was misshapen after heavy rains. The damaged nest was kept dry in the garage until spring. The nest was reformed to shape and reattached to the exact site of the previous location on the tree branch using Sikaflex, a marine adhesive.
- 2004 – Two young fledged in the re-attached nest.
- 2005 – One young fledged, one infertile egg buried within nest cup and not visible without digging through the lining. Nest dilapidated and no longer in use.



Figure 7. Fledglings are dependent on parents for 1-2 weeks after developing for at least 23 days in the nest. By mid-April, three separate families may have already visited feeders. *Photo by Mark Nyhof.*



Figure 8. Ron Jakimchuk locating the site of a Rufous Hummingbird nest he monitored for six years from 2000 through 2005. *Photo by R. Wayne Campbell, North Saanich, BC, February 28, 2008*

In the six years, nine young were added to the Rufous population! Rufous Hummingbird nests may be reconditioned by the female for a second year⁴ but a nest that is repaired and repositioned for a total of six years of use is remarkable. The oldest Rufous Hummingbird is recorded as 8 years 11 months,¹² so Ron felt it was possible that the same female may have returned each year to the *Deodora* site.

Summer – Mark continues his hummingbird nest-finding and rechecking nests but spends more time searching for other species. By August, southern Vancouver Island is like a nesting doldrums but it is also a time of exodus. While new broods of the resident Anna's are still coming to feeders Rufous' are departing. Most males leave from mid-June to early July and move to higher elevations where flowering plants are blossoming. Females leave soon after their young fledge (Figure 9); most have departed by early August.



Figure 9. By late July most young have fledged from active Rufous Hummingbird nests on southern Vancouver Island. *Photo by Mark Nyhof.*

Autumn – The tail end of breeding may extend into this season but it is mostly a time for reflection, rest, and keeping feeders full. But, there can still be surprises. At the time *The Birds of BC* was published¹⁷ the breeding period for Anna's extended from 15 February through 10 August or 177 days. Gradually the breeding period was being extended and on September 2 [2009] Wayne watched a large nestling fluttering its wings on the edge of a nest. The following day the young bird was seen at the feeder being pumped with sugar-water and the female fed the young bird until September 14, 12 days after leaving its nest. The new breeding period for Anna's



Figure 10. Nest sites for Anna's Hummingbird in North America are notably all on plants, mostly a variety of trees. The nest built on the wings of a dragon fly wind chime under the eaves of a house near Victoria was the first nest site reported on a human structure.¹⁰ (Photo by Lance Bull, Royal Oak, BC, January 19, 2008. BC Photo 3631c.

Hummingbird in BC spans 231 days (7.7 months) which is second only to Mallard at 261 days.^{4,7} The autumn fledging date is also the latest for Anna's in North America.

Over the 15 years, hummingbird stories and experiences were frequently shared and all were added to the BCFWS databases. Ron was also kept busy writing two books,^{14,13} surveying fresh-water and marine bird colonies, planning for the secure future of the BCFWS, and spending personal time fishing and gardening. Mark produced 17 issues of *Wildlife Afield*, many annual nest record scheme reports, and helped publish his books. Wayne continued to develop the provincial hummingbird archives and serve as associated editor of the journal that also included soliciting and publishing noteworthy observations related to hummingbirds. The latter included articles with new information on topics of life history of the two species such as unusual nest sites (Figure 10),² reuse of nests,¹ mortality (Figure 11),¹⁶ predation,^{6,3} and longevity.⁵ †



Figure 11. Male Rufous Hummingbird with a Bald-faced Hornet on the tip of its bill which could not be opened to feed. Photo by Arthur Schoeddert, Burton, BC, 29 August 2005.

References Consulted

- ¹Barnard, G.W. and R.W. Campbell. 2008. Re-use of Rufous Hummingbird nest by Anna's Hummingbird in British Columbia. *Wildlife Afield* 4:256-259.
- ²Bull, A. 2008. Observations of an Anna's Hummingbird nesting on a wind chime in Victoria, British Columbia. *Wildlife Afield* 5:26-30.
- ³Campbell, R.W. 2009a. Potential for Rufous Hummingbird nest failure in British Columbia from the introduced Eastern Gray Squirrels. *Wildlife Afield* 6: 23-24.
- ⁴Campbell, R.W. 2009b. Autumn fledging of Anna's Hummingbird in British Columbia. *Wildlife Afield* 6:147-148.
- ⁵Campbell, R.W. 2017. New longevity record for an Anna's Hummingbird from British Columbia. *Wildlife Afield* 14:160-163.
- ⁶Campbell, R.W. and G.R. Ryder. 2005. Field observations of Bullfrog (*Rana catesbeina*) prey in British Columbia. *Wildlife Afield* 1:61-62.
- ⁷Campbell, R.W., N.K. Dawe, I. McT.-Cowan, J.M. Cooper, G.W. Kaiser, and M.C.E. McNall. 1990a. The birds of British Columbia – Volume 1: Nonpasserines (Introduction, loons through waterfowl). Royal British Columbia Museum, Victoria, BC. 535 pp.
- ⁸Campbell, R.W., N.K. Dawe, I. McT.-Cowan, J.M. Cooper, G.W. Kaiser, and M.C.E. McNall 1990b. The birds of British Columbia – Volume 2: (Diurnal birds of prey through woodpeckers). Royal British Columbia Museum, Victoria, BC. 632 pp.
- ⁹Campbell, T.N. 1996. Taste preferences of the Anna's Hummingbird (*Calypte anna*). Bachelor of Science (Honours) Thesis, University of Victoria, Department of Biology, Victoria, BC. 48 pp.
- ¹⁰Clark, C.J. and S.M. Russell. 2012. Anna's Hummingbird (*Calypte anna*), version 2.0. *In* The birds of North America (A. F. Poole, Ed.). Cornell Lab of Ornithology, Ithaca, NY. <https://doi.org/10.2173/bna.226>.
- ¹¹Guiguet, C.J. 1978. The birds of British Columbia: (11) Goatsuckers, swifts, hummingbirds, and swallows. British Columbia Provincial Museum Handbook No. 37, Victoria, BC. 57 pp.



Male Anna's Hummingbird, Photo by Mark Nyhof

- ¹²Healy, S. and W.A. Calder. 2006. Rufous Hummingbird (*Selasphorus rufus*), version 2.0. *In* The Birds of North America (A.F. Poole, Ed.). Cornell Lab of Ornithology, Ithaca, NY. <https://doi.org/10.2173/bna.53>.
- ¹³Jakimchuk, R.D. 2017. Ron's favorite recipes and family photos. Published by the author, North Saanich, BC. 198 pp.
- ¹⁴Jakimchuk, R.D., R.W. Campbell and D.A. Demarchi. 2015. Ian McTaggart-Cowan: The legacy of a pioneering biologist, educator and conservationist. Harbour Publishing, Madeira Park, BC. 399 pp.
- ¹⁵Schoedert, A. 2006. Unusual mortality of a male Rufous Hummingbird in Burton, British Columbia. *Wildlife Afield* 3:21-22.