

News, Notes, Comments

Fall-Winter Temperature Tolerance of a Record Late Rufous Hummingbird (*Selasphorus rufus*) at a Feeder in East Arlington, Vermont

I banded a hatching-year female Rufous Hummingbird at East Arlington, VT, on 22 Nov 2011 at the feeder of Sharon and Pat Derosia. This bird remained at this feeder through 15 Jan 2012, enduring many days of sub-freezing temperatures down to 4°F on 15 Jan, and was last seen to feed late that afternoon. It failed to appear on 16 Jan after a morning low of -8°F and was presumed to have perished. This note summarizes some of the climate conditions this bird endured over a 2.5-month period of late fall and early winter, establishing a new late-date record for the state.

The Derosia feeder located on Warm Brook Road, East Arlington, Bennington County, VT, was at an elevation of 747 ft (228 m) at latitude/longitude of 43° 03.590' N and 073° 08.829' W (National Geographic 2001). Thinking the bird to be a leftover summering Ruby-throated Hummingbird (*Archilochus colubris*) and concerned about the onset of cold weather, Sharon Derosia on 20 Nov 2011 contacted Randy Schmidt, owner of The Bird Shop & Skywatch in Manchester Center, VT, seeking advice. He posted the sighting that day on the VT BIRD website (VTBIRD@LIST.UVM.EDU), causing birders to come and recognize it as a *Selasphorus* species, suspected Rufous.

On 22 Nov, I banded the bird at 1007 on a sub-freezing morning (29° F) with ice in the sugar water feeder (26° F earlier that morning, Sharon Derosia, pers. comm.), and released the bird at 1040 after several feedings in hand. It returned to the feeder at 1047 and thereafter. The bird vigorously defended the yard near its feeder by attacking Black-capped Chickadees (*Poecile atricapillus*) and other small passerines visiting sunflower seed feeders 20-25 ft (6-8 m) from its feeder. Detailed data confirming species, age and sex were filed with the Vermont Bird Records Committee (Judith Peterson and Allan Strong, co-chairs, astrong@uvm.edu). The bird appeared healthy, weighing 3.79 g at fat class 1 (0-3 scale).

Climate data were accessed online from the National Weather Service (2012) from the William H. Morse State Airport west of Bennington, VT, located 12.7 mi (20.4 km) SSW of the banding site at 797 ft (243 m) elevation at latitude/longitude of 42° 53.386' N and 073° 14.861' W (National Geographic 2001). Table 1 summarizes certain climate data for Oct 2011 through Jan 2012 and Table 2 presents a summary of daily data for those days when daily minima were at or below 28°F. Table 3 shows wind and temperature data for 14-17 Jan, when the bird was last observed.

Table 1. National Weather Service preliminary Monthly Climate Data for Bennington, VT, for Oct 2011 through Jan 2012.

	Month				
	Oct	Nov ¹	Dec ¹	Jan ²	Jan ³
Monthly Average °F	49.7	43.5	32.2	27.8	28.3
Departure from Historical Average, °F	+2.2	+4.9	+4.6	-	+7.2
Average Daily High, °F	59.4	56.0	41.9	36.4	37.8
Average Daily Low, °F	40.0	31.1	22.6	17.3	18.8
Highest/Lowest Daily Temperature, °F	78/23	71/9	53/9	50/-4	53/-4
Number of Days High Temp. at or Below 32° F	0	0	3	6	10
Number of Days Low Temp. at or Below 32° F	7	14	13	14	27

¹Temperature data were missing from 23 Nov to 14 Dec; therefore, data here are for the first 22 days of Nov and last 17 days of Dec.

²Since the bird did not appear at the feeder on 16 Jan or thereafter, data only for the 15 days, 1-15 Jan are included here.

³These data are for the entire month of Jan.

Table 2. Periods of extreme sub-freezing temperatures (daily minima at or below 28° F)¹ recorded at Bennington, VT, from Oct 2011 to Jan 2012; all temperatures in °F as recorded.

Dates	Max.	Min.	Ave.	Departure ²	Dates	Max.	Min.	Ave.	Departure ²
28 Oct	42	24	33	-11	26 Dec	37	24	31	7
29 Oct	38	27	33	-11	27 Dec	53	23	38	14
30 Oct	45	28	37	-6	28 Dec	52	20	36	13
31 Oct	49	23	36	-7	29 Dec	24	13	19	-4
4 Nov	48	27	38	-4	30 Dec	43	18	31	8
5 Nov	48	21	35	-7	2 Jan	46	24	35	13
6 Nov	58	20	39	-2	3 Jan	25	5	15	-7
7 Nov	60	24	42	1	4 Jan	20	1	11	-11
18 Nov	40	25	33	-5	5 Jan	31	18	25	4
19 Nov	54	26	40	2	6 Jan	46	22	34	13
21 Nov	49	22	36	-1	7 Jan	50	25	38	17
22 Nov	42	19	31	-6	8 Jan	39	18	29	8
17 Dec	36	16	26	-1	9 Jan	39	18	29	8
18 Dec	22	9	16	-11	10 Jan	41	26	34	13
19 Dec	43	10	27	1	11 Jan	44	22	33	12
20 Dec	41	23	32	6	13 Jan	43	24	34	13
21 Dec	53	26	40	14	14 Jan	28	7	18	-3
24 Dec	27	13	20	-4	15 Jan	11	0	6	-15
25 Dec	39	13	26	2	16 Jan	30	-4	13	-8

¹ Temperature data were missing from 23 Nov to 14 Dec; therefore, data here are for the first 22 days of Nov and the last 17 day of Dec. All data beyond 16 Jan are excluded.

² Represents the difference between the daily Ave. and the historical average temperature.

Table 3. National Weather Service daily wind and temperature data at Bennington, VT, for the period immediately before and after the East Arlington Rufous Hummingbird disappeared, 14-17 Jan 2012.

Date	Temperatures, °F				Wind, mph		
	Max.	Min.	Ave.	Departure ¹	Ave. Speed	Max. Speed	Direction °
14 Jan	28	7	18	-3	8.9	21	280 (WNW)
15 Jan	11	0	6	-15	5.0	14	280 (WNW)
16 Jan	30	-4	13	-8	4.1	17	190 (SSW)
17 Jan	50	28	39	18	4.5	20	190 (SSW)

¹ Represents the difference between the daily average and the historical daily average temperature.

The first reports of daily minima below freezing at Bennington occurred on 28 Oct 2011 and from that date until 16 Jan 2012, except for the 22-day period 23 Nov-14 Dec when no temperatures were reported, there were:

22 days with daily minima 20-28°F

Ten days with daily minima 10-19°F

Five days with daily minima 0-9°F

One day with daily minimum <0°F, and

Five days with daily maxima 20-28°F

One day with daily maximum 10-19°F

Eventually, despite monthly temperatures above average, a Vermont winter prevailed. The weather at the time of the bird's last sighting, 14-16 Jan, was especially harsh. The morning minima at the Derosia's house on 15-16 Jan were 4°F and -8°F, respectively (Sharon Derosia, pers. comm.) while on those same days Bennington was 0°F and -4°F, respectively. Wind was also a factor as seen in the information in Table 3. Strong WNW wind blew on 14-15 Jan, gusts to 14-21 mph. On 16 Jan, after a morning low of -8°F, the day the bird did not appear at the feeder, the wind shifted to the SSW (190°) and ironically warmed the air next day to 50°F, after a morning low of 28°F. Data in Table 1 show that late Jan was milder than early Jan.

The Vermont Bird Records Committee acknowledges eight prior records for this species, 1991-2002 (Allan Strong, pers. comm.), latest date 30 Aug 1997. Three of them (27-28 Jul 1995, 10 Jul 1997 and 10 Jul 1998) originated from West Arlington, also in Bennington County in the Batten Kill Valley, only 4.4 mi (7.1 km) NW of the Derosia site. The eight records, equally split between July and August consisted of five single-day sightings, and one each of two, nine and ten days. This East Arlington Rufous sets not only a new state late date, and longest stay, but a truly remarkable record of endurance to cold.

Winter records for this species beyond the winter solstice, which varies annually from 20 to 22 Dec, at high northerly latitude are scarce. As of 2006, Healy and Calder (2006) cited a single record of an

adult female surviving until late Feb in British Columbia, Canada. Campbell et al. (1990), who published this original record, cited two such winter records as follows: An adult male was at a feeder 8-9 Jan 1983, temperature 2°C and snowing in Victoria, BC, at about 48° 25'43" N latitude and 123° 21'56" W longitude nearly at sea level (Google Earth 2012); and an adult female "died of cold" 28 Feb 1988 in North Vancouver, BC, at about 49° 19'11" N latitude and 123° 04'06" W longitude at an elevation of about 350 ft (106 m) (Google Earth 2012). It is not certain whether this latter bird overwintered or was an early returned migrant.

I conducted a search for Rufous Hummingbird reports in *North American Birds* for the "winter" period of 1 Dec to 28/29 Feb for the years 2004/2005 through 2010/2011. I used the latitude of the Vermont-Massachusetts border, 42° 45' N, as a southerly limit and sought confirmed Rufous reports north of that latitude across the northern tier of U.S. states and southern Canadian provinces. Excluded were reports of *Selasphorus* or "Rufous/Allen's" birds. Also excluded were Oregon, Washington and British Columbia reports of newly arrived migrants well ahead of traditional norms in late January and February (Mlodinow 2006, Mlodinow et al. 2005, Cecile 2007).

Only one further winter record was found of a lingering adult female through 29 Dec 2009 in Genesee County, MI (Byrne 2010). A specific location in the county was not given, but the southern boundary of this county is at 42°46'52" N approximately 83°37' W, and the county is generally at 700-800 ft (213-244 m) elevation (Google Earth 2012). There were two "near-miss" records of birds just a few days shy of the winter solstice. One was a female banded at a feeder 2 Dec 2004 at Niagara Falls, NY, found dead there 18 Dec 2004 (Currie 2005) at about 43°05'46" N and 79°02'16" W, elevation 583 ft (178 m) (Google Earth 2012); and the other was an immature at a Sitka, AK feeder through "mid-Dec" 2004 (Tobish 2005) at about 57°03'14" N and 135°19'52" W at 145 ft (44 m) elevation (Google Earth 2012).

Based on this search, this East Arlington, VT, female Rufous Hummingbird appears to establish a new record farthest north, late date for the Northeast on 15 Jan 2012.

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Encounter with a Senior Citizen Red-tailed Hawk

On 30 Nov 2010 a banded (877-89819) adult Red-tailed Hawk (*Buteo jamaicensis*) was brought to The Raptor Trust avian rehabilitation center in Millington, NJ. The bird had been found on Route 17N near Monroe, NY, by a passing motorist and Good Samaritan, who stopped, picked it up from the roadway, and set out to find help. Ultimately, it was taken to wildlife rehabilitator Suzie Gilbert in Garrison, NY, who brought it to The Raptor Trust. The Trust is a large, well-known, professionally staffed all-species facility, specializing in raptors. Since its founding nearly 30 years ago, over 81,000 wild birds have been admitted for care, including over 8,000 raptors. A complete examination by the Trust's medical staff showed the bird to be a female with a fractured radius, a bacterial infection in both feet, and noticeable signs of head trauma. Quite amazing that it was alive at all.

After a call to the Bird Banding Laboratory and a thorough check of my own records, more amazing information about Red-tail 877-89819 surfaced. It had been banded as a FLY by one of my subpermittees at the Kittatinny Mountains Raptor Banding Station in Sussex County, NJ, (a research station I began in 1970 that is still in operation) on 15 Oct 1983. It had lived in the wild 27.5 years. Banding Laboratory records also showed that it was