



North Central Washington
Audubon Society

North Central Washington Hummingbird Project

Welcome to North Central
Washington Audubon
Society's
Community Science Program



Photo: Bruce McCammon Female Anna's Hummingbird on nest with two nestlings,
Wenatchee WA, April 2021

North Central Washington Hummingbird Project

A Community Science Study Project designed to be conducted four times/year at solstices and equinoxes.

Unanswered questions about Anna's Hummingbirds in North Central Washington:

- Is there a persistent breeding population in North Central Washington?
- What nectar sources (feeders and/or plants) are utilized?
- Are the Anna's hummingbirds we see in winter the same as the Anna's that are here in the summer?
- Are Anna's elevational migrants?



Photo by Frank Cone, Wenatchee

Project Administrators: Bruce McCammon, Jenny Graevell and Susan Ballinger

For an electronic copy of this presentation, email: NCWAHummerProject@gmail.com

Available for download on www.NCWAudubon.org email: ncwaudubon@gmail.com

OVERVIEW

WHO: You! A free eBird account is required.

WHAT: 60-minute observation period, at either sunrise or sunset. Times provided in the instructions.

WHEN: Participation begins on Dec. 21, 2021

- 4 times/year, on each solstice and each equinox.
- A total of four species of hummingbirds are expected to be observed throughout the year, but only Anna's hummingbirds are anticipated to be observed for the December Solstice observation
- 2022 dates are: March 20, June 21, Sept. 22, & Dec. 21.

WHERE: North Central WA Audubon Society's 4 county area: Chelan, Douglas, Okanogan, & Ferry Counties

WHY: To provide data that scientists can use to answer questions about hummingbird distribution and seasonality

HOW: Register with project coordinators by sending an email to: NCWAHummerProject@gmail.com. Upon registration, instructions and a printable data tally sheet will be provided.

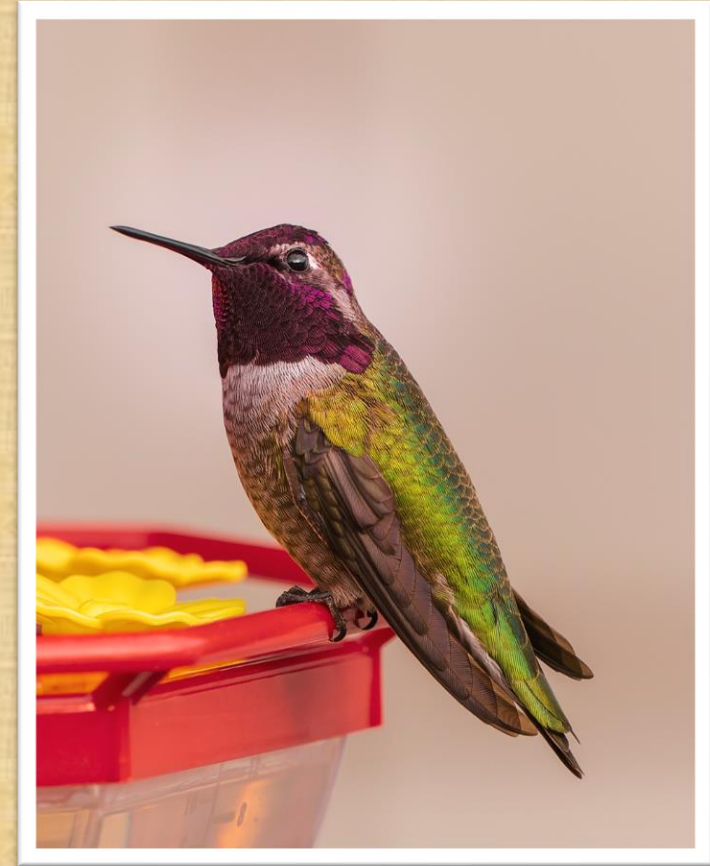


Photo: Frank Cone

How to participate as a Community Scientist in this project

Project participants are expected to:

- All winter, maintain a clean, heated feeder, ensuring that liquid nectar is available at all times.
- Undertake a 1-hour observation period at specified times for either dawn or dusk on specified date.
- Follow the project protocol (described in data tally sheet) & define your study area as the size of a ½-basketball court (50 ft. x 50 ft.) including a 50-foot airspace.
- Establishing and using your own free eBird account (<http://ebird.org/content/ebird/>)
- Record observations on our provided data tally worksheet and then transcribe the data into your own eBird account.
- Whenever possible, take photos of each observed individual, and upload photos into your eBird checklist.
- Share your completed checklist with our project's group eBird User name: NCWAHummers

Anna's Hummingbird life history

Source: Cornell Lab of Ornithology All About Birds, [Anna's Hummingbird](#) and *Cornell Lab of Ornithology Birds of North American Online*. <https://birdsna.org/>

Anna's hummingbirds feed on nectar from many species of flowers, taken from near ground level to tree tops. Small insects and spiders are taken in the understory, crevices, streambanks, spider webs, in the air, and from flowers. Individuals holding feeding territories will use perches within flower patches or within a few meters of food.

Anna's hummingbirds has expanded its range dramatically since the mid-1930s. It once nested only on the Pacific Slope of northern Baja California and California north to San Francisco Bay area. They currently breed as far as north as Vancouver Island, British Columbia eastward through Southern Arizona.

Different populations appear to behave differently post-breeding. Some populations used seasonal migration to woodlands and forests at higher elevations (up and over the CA Coast Range, following the flower bloom). Others showed post-breeding dispersal to local areas where food was abundant. Still other populations undertaking a longer east and south seasonal migration to Arizona, returning to coastal CA for breeding.

Increased numbers and range expansion is attributed to their effective use of widely cultivated urban and suburban exotic plants (landscaping) and human provided hummingbird feeders.

In Washington state, the year-round presence of Anna's hummingbirds on the east side of the Cascade Mountains is a fairly recent event. It is unknown if they are arriving over the Cascade Mountains, or traveling through the Columbia River Valley Gorge. It is unknown if birds are year-round resident or if they are in-coming individuals from another region.

All other Washington hummingbird species are migratory, present during breeding season and migrating south to wintering range.

Resources and Publications About Western North American Hummingbird Biology

eBird Science: [Global Patterns of Bird Abundance and Distribution Revealed for 1,009 Species](#)

By Kathi Borgmann November 17, 2021

John Alexander, Elizabeth Williams, Caitlyn Gillespie, Sarahy Contreas-Martinez, and Deborah Finch. [Effects of Fire and Restoration on Habitats and Populations of Western Hummingbirds: A Literature Review](#). USDA Forest Service, Rocky Mountain Research Station, GTR RMRS-GTR-408, March 2020.

USDA Forest Service. [Maintaining and Improving Habitat for Hummingbirds in Oregon and Washington – A Land Manager’s Guide](#). FS-1039a, August 2014.

Gillespie CR, Contreras-Martínez S, Bishop CA, Alexander JD. 2020. [State of the Rufous Hummingbird science and conservation](#). [Western Hummingbird Partnership](#), Boulder, CO

Winter range expansion of a hummingbird is associated with urbanization and supplementary feeding
[Emma I. Greig](#), [Eric M. Wood](#), and [David N. Bonter](#) Published: 05 April 2017. (see next page for article excerpts)
<https://royalsocietypublishing.org/doi/pdf/10.1098/rspb.2017.0256>

Greig, Emma, [Anna’s Hummingbirds Moving North](#), Focus on Citizen Science, Winter Bird Highlights from Project Feederwatch 2016-2017, Vol. 13 (see synopsis on next slide)

Campbell, Arthur, [Anna’s Hummingbirds](#), The Methow Naturalist, Vol. 26, No. 3, Fall 2021

Current Research Findings

Winter Bird Highlights from Project Feederwatch 2016-2017 (Focus on Community Science Vol 13)



Anna's Hummingbirds Moving North by Emma Greig, Cornell Lab of Ornithology

Read at: <https://feederwatch.org/wp-content/uploads/2017/09/WinterBirdHighlights2017.pdf>

Article excerpt, page 5: *during the past several decades Anna's Hummingbirds have expanded their winter range northward by more than 700 km... Anna's aren't moving north solely because the climate is warming and becoming more hospitable. Instead, they now live in colder locations than they did 20 years ago, and in these colder locations they are more associated with human-modified landscapes (specifically higher housing density) than in their warm historical range.*

Article excerpt, page 15: *Anna's Hummingbirds seem to be thriving in colder temperatures than ever before, and it may be in part because of the supplementary food that people are providing. Do these findings mean you should not feed hummingbirds in autumn because it will prevent their migration? No. Anna's Hummingbirds are not long-distance migrants. Unlike migratory species such as Ruby-throated Hummingbirds, Anna's Hummingbirds are especially inclined to stay put. Furthermore, there is a difference between helping a sedentary individual survive and preventing a migratory individual from making the decision to leave, a decision usually triggered by changing daylight and temperatures. If anything, bird feeders probably facilitate migration by helping migrants stock up for their journey. Your nectar feeders will not stop the passage of birds that have decided to go south. What your feeders might do, however, is help more sedentary individuals survive and pass their genes on to similarly inclined offspring.*

Research reported in the journal article: Greig, E.I., Wood, E.M., Bonter, D.N. 2017 [Winter range expansion of a hummingbird is associated with urbanization and supplementary feeding](#). Proceedings of the Royal Society B 284:20170256.

Myths and Facts about Hummingbirds and Feeders

- **Myth:** By keeping a hummingbird feeder out in the fall, it prevents hummingbirds from migrating.
Fact: A bird's migratory urge is primarily triggered by day length (photoperiod) and even an abundance of food at a feeder will not make a bird resist that urge.
- **Myth:** All hummingbirds in North Central Washington migrate south to wintering grounds.
• **Fact:** Rufous, Black-chinned, and Calliope hummingbirds that breed here do migrate to wintering grounds in the southern US, Mexico, and Central America. Anna's are a non-migratory species and are considered a year-round resident species.
- **Myth:** It is easy to maintain a liquid feeder for Anna's in the winter in North Central Washington
• **Fact:** It requires daily care to ensure that Anna's have access to unfrozen liquid nectar and use of a heated feeder is required. Every few days, the feeder needs to be scrubbed clean using a bottle brush with a mild soap and hot water. In winter, refill with new liquid every 3-4 days or when it appears cloudy. The recipe is 4 parts boiled water, mixed with 1 part white sugar. If you leave your heater on continuously, change your liquid more frequently.
- **Myth:** It is easy to identify sex and age in hummingbirds
• **Fact:** During certain times of year, it is difficult for even an expert to distinguish the sex of a juvenile and to differentiate juveniles from adult females. Only adult males are distinctly identified.

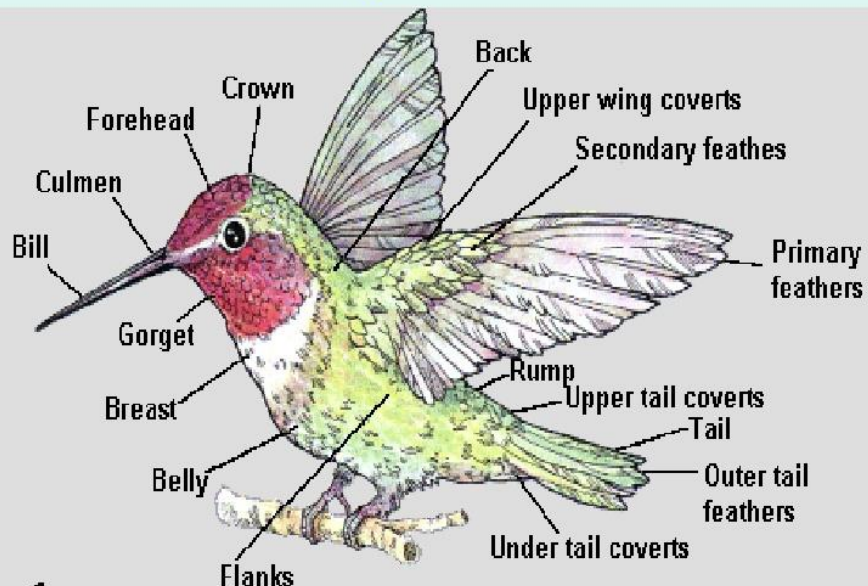


Getting to Know Anna's Hummingbird

Anatomy Vocabulary

- Medium length bill
- Flanks: "Dirty", gray-green flanks
- Overall, dusky gray and green coloration, with underparts from pale to dusky gray.
- Heavy bodied. Birds look plump when sitting – pot-bellied.
- Smudgy undertail coverts
- "Dirty" looking spotted flanks (sides)

Anatomy of Hummers



Source: <https://www.slideshare.net/haticeoncel/hummingbird-3203978>

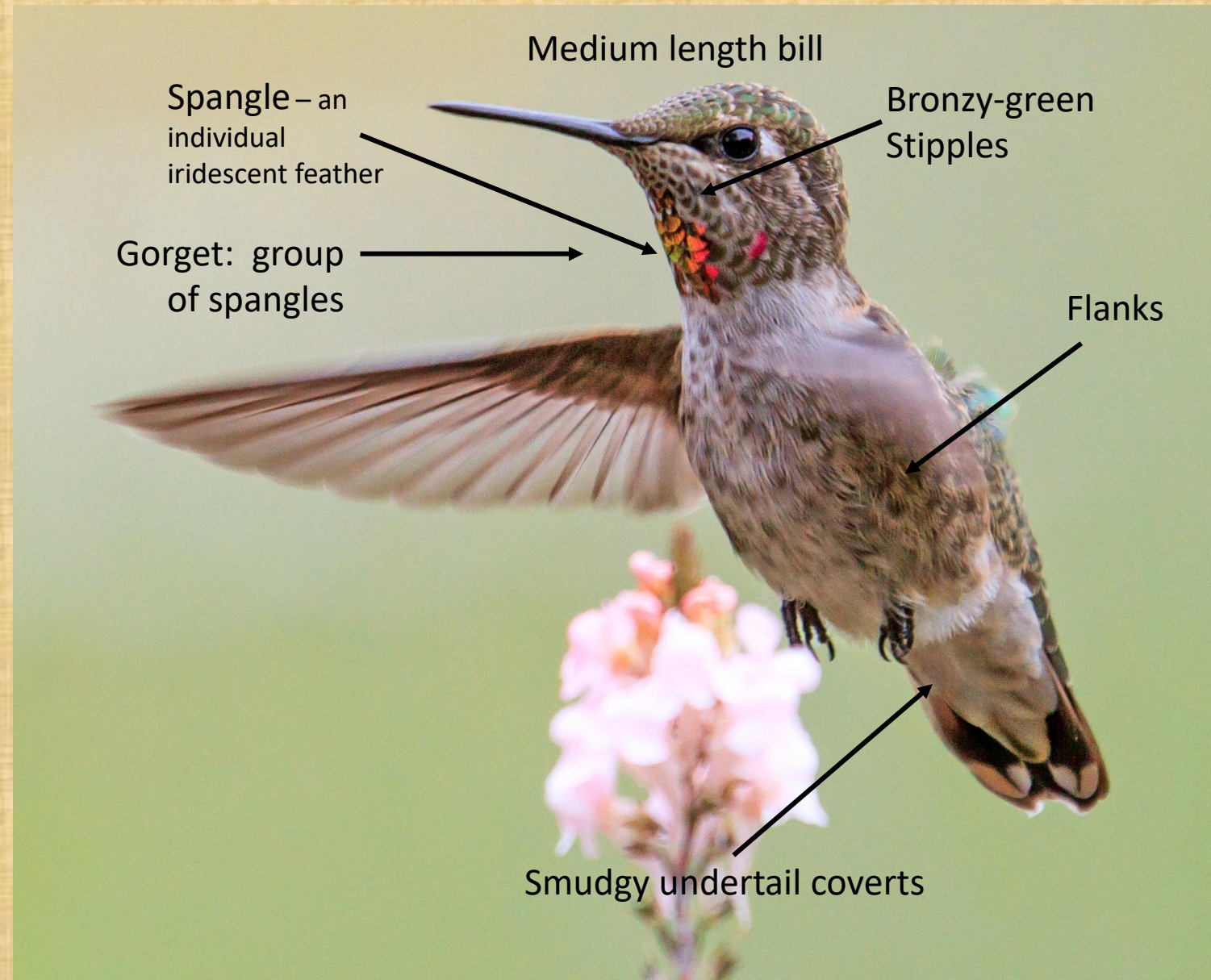
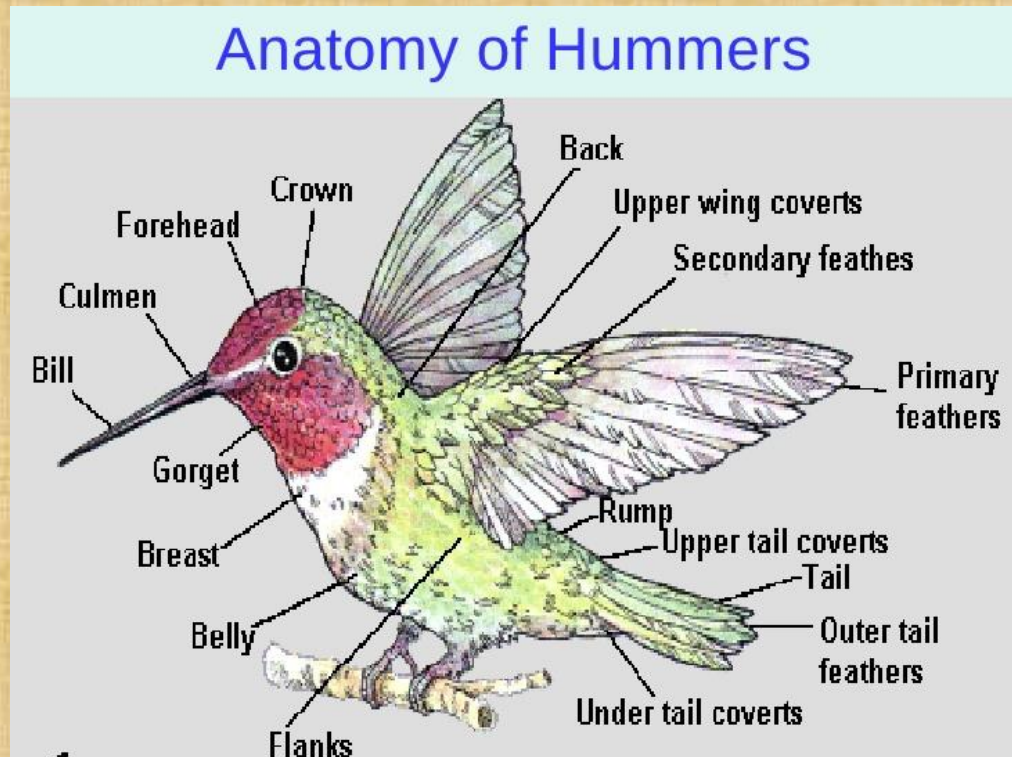


Photo: Dan Streiffert <http://danstreiffert.smugmug.com/>

Anna's Hummingbird, Adult Male

- **Crown & gorget:** pinkish-red- although the iridescent colors can look blackish in strong sunlight
- **Underparts (breast, belly, flanks, undertail coverts):** heavily marked with dusky green and gray, especially along the flanks



Source: <https://www.slideshare.net/haticeoncel/hummingbird-3203978>

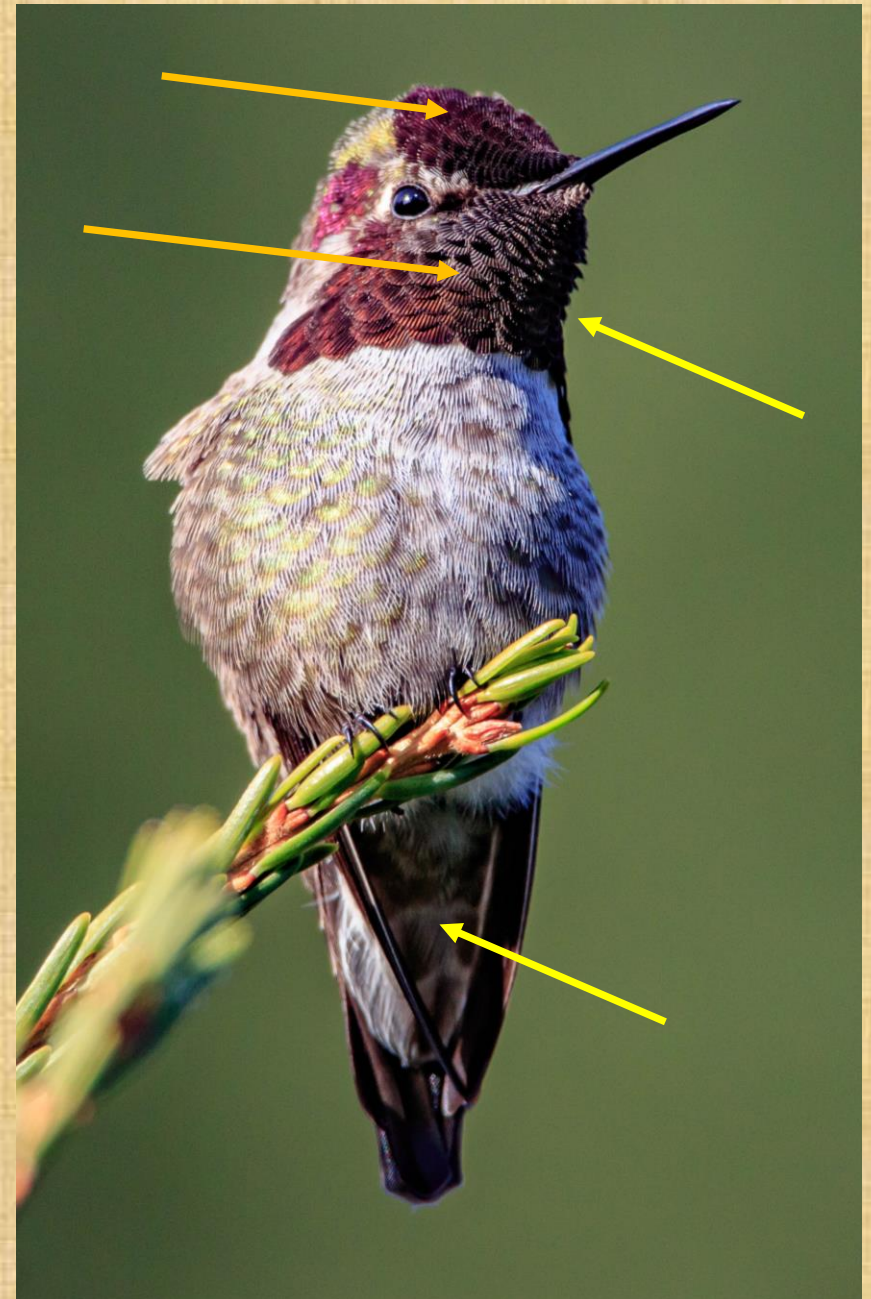


Photo: Dan Streiffert <http://danstreiffert.smugmug.com/>

Anna's Hummingbird, Adult female

Crown: grayish-green

Throat: Few to many reddish spangles in the center of their throat, that can look blackish in strong sunlight

Upperparts: Dull green

Underparts (breast, belly, flanks, undertail coverts): light to medium gray and dusky green (no rufous coloring), making the bird appear "dirty."

Outer tail feathers tipped in white



Identifying sex of Juvenile Anna's Hummingbird Is difficult and sometimes not possible, even by experts

All juveniles resemble adult females, however, juvenile male Anna's should be showing some iridescent spangles scattered on their head, crown, and gorget as their adult plumage grows in during winter.

For the North Central WA Hummingbird Project, our protocol for eBird data entry, under "Details" is to mark Sex unknown for all juvenile sightings. Sexing is optional, so only enter data if you are confident.

Try to take and submit photo for each observed individual bird into eBird!



Photo: Dan Streiffert <http://danstreiffert.smugmug.com/>

Enter your observations using this example eBird entry for “DETAILS” (See example entry at right)

SEX and AGE- This is OPTIONAL: Only adult males are easy to Sex.

M1: Male. Additional males to be notated as M2, M3, etc.

F1: Female. Additional females to be notated as F2, F3, etc.

J1: Juvenile. Additional juveniles to be notated as J2, J3, etc.

Important: Juvenile Sex is not discernable during the Winter Solstice observation. Enter “SEX UNKNOWN” for juveniles.

For each individual, describe the:

- food source
- observed perch location
- any heard song or call
- any behavior observed between individuals.

3 Anna's Hummingbird Change Species

Details: M1:nectaring at feeder and hawking insects, perching on grape arbor, singing then chasing female away from feeder with agitated call. F1: nectaring at feeder, chased away J1: perched on sumac

Media: Upload up to 10 files (JPG, PNG, GIF, MP3, WAV, or M4A). Max size: 10mb for images, 250mb for audio.

Drop Files Here...
or
Select

Whenever possible, upload a photo here!

Age & Sex:

	Juvenile	Immature	Adult	Age Unknown
Male				1
Female				1
Sex Unknown	1			


Add data... Age & Sex Breeding Code Oiled Birds Media Details

Example eBird Date and Effort

Enter "Comments" as shown in this example

- Project title
- Describe your observation area (a 50"x50" area)
- Describe your nectar source
- Temperature (F)
- Wind speed (see Beaufort wind chart, next page)
- Snow depth (inches)
- Precipitation type during observation
- Plants in bloom

1 2 3 **Date and Effort** 2009 Skyline Dr, Chelan County, Washington, US [Change](#)

* **Observation Date:** Dec ▾ 21 ▾ 2017 ▾  * = Required

* **Observation Type:**

<input type="radio"/> Traveling	You traveled a specific distance — walking a trail, driving a refuge loop, field birding.	▶ More Info...
<input checked="" type="radio"/> Stationary	You stayed at a fixed location — watching from a window, hawkwatching, seawatching.	▶ More Info...
<input type="radio"/> Historical	Birding was your primary purpose , but you cannot estimate start time, duration, and distance; use Traveling or Stationary if you can estimate these.	▶ More Info...
<input type="radio"/> Incidental	Birding was not your primary purpose — noting a bird while driving or gardening.	▶ More Info...
<input type="radio"/> Other	<input type="text" value="Choose..."/>	

* **Start Time (AM/PM):** 3 : 45 PM ▾ [Use 24-hour Clock](#)

* **Duration:** 1 hrs. min.

* **Party Size:** 1 Enter the total number of people in your birding party

Comments: North Central Washington Hummingbird Project . My observation area is my backyard, with 1 feeder hanging under the eaves at a picture window. Temperature: 34 degrees F; wind (12-18 mph), 3 inches of snow on ground, snowing during observation period. Plants in bloom: none.

[◀](#) [Continue ▶](#)

For Wind Conditions, use this Beaufort Scale

(source: <http://www.unc.edu/~rowlett/units/scales/beaufort.html>)

Beaufort Scale

FORCE	NAME	Miles/hr	WIND CONDITIONS
0	Calm	< 1	Smoke rises vertically.
1	Light Air	1-4	Smoke drifts and leaves rustle.
2	Light Breeze	5-7	Wind felt on face.
3	Gentle Breeze	5-11	Flags extended, leaves move.
4	Moderate Breeze	12-18	Dust and small branches move.
5	Fresh Breeze	19-24	Small trees begin to sway.
6	Strong Breeze	25-31	Large branches move, wires whistle.
7	Near gale	32-38	Whole trees in motion, inconvenience in walking.
8	Gale	39-46	Difficult to walk against wind. Twigs blown off trees.
9	Strong Gale	47-54	Minor structural damage occurs (shingles blown off)
10	Storm	55-63	Trees uprooted, structural damage likely.



...Neither snow nor rain nor heat nor gloom of night stays these couriers from the swift completion of their appointed rounds....

Check out how clever Wenatchee Valley residents have customized their own heated hummingbird feeders!



Tom Ettinger,
Cashmere,
Using a lightbulb
inside a styrofoam
cooler.



Susan
Ballinger,
Wenatchee
using
A reptile
heat bulb



Jenny
Graevell
Keeping the
snow and
rain
off the
heated
feeder



Bill Deters, using
pipe heater cable,
With electrical
tape, cable ties,
rubber bands

Future Plans for this Project

- Expand to include all of our region's hummingbird species: Rufous, Calliope, and Black-chinned
- Add information and resources for creating hummingbird friendly habitats in urban settings
- Scientific literature as available
- Project updates on the [NCWAS website](#) and newsletter
- Commercial sources to purchase heated hummingbird feeders