

***HIRUNDO RUSTICA RUSTICA* AT HERSCHEL ISLAND–QIKIQTARUK, YUKON— A BARN SWALLOW SUBSPECIES NEW TO CANADA**

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ABSTRACT: At least three of the 19 Barn Swallows recorded on Herschel Island–Qikiqtaruk, along the Arctic coast of the Yukon Territory, represent the white-bellied Old World subspecies *Hirundo rustica rustica*. The birds were photographed on 3 July 2010, 24 July 2015, and 19–20 June 2019. These first Canadian records are complemented by five from northern Alaska, west to Utqiagvik (Barrow). This subspecies breeds in Europe, Africa, and northwestern Asia, east to the Yenisei River. The lack of Alaska records of *H. r. rustica* to the west of Utqiagvik and of Canadian records east of Qikiqtaruk suggest that these vagrants reached the New World not by orienting or drifting at the wrong angle but by overshooting their normal spring migration path, following a nearly polar great-circle route.

Extralimital birds can reveal unexpected connections among disparate places, they can challenge presumptions as to how birds move around the globe, and they can signal wide-scale ecological change. Herschel Island–Qikiqtaruk (69.6° N, 139.1° W), a Yukon territorial park of 116 km² located 5 km off the Yukon's Arctic coast, in northwestern Canada, has been a site for many extralimital birds over the years (Sinclair et al. 2003, Cooley et al. 2012, Burn 2012). Here we report on occurrences of the Barn Swallow (*Hirundo rustica*) at Qikiqtaruk, including Canada's first records of nominate *H. r. rustica*.

Up to eight subspecies of the Barn Swallow are recognized (Dickinson and Christidis 2014), of which three are known from northwestern North America: *H. r. erythrogaster* (breeds North and South America), *H. r. rustica* (Europe), and *H. r. gutturalis* (Asia). These subspecies can be distinguished by the shape and color of the throat patch, ventral plumage color, breast-band width, and tail length (Turner and Rose 1989, Turner 2006, Robinson and DeCicco 2017, Brown and Brown 2019). Nominate *rustica* is white below, has a broad dark blue-black and generally unbroken breast band (which can variably show some rufous feathers), a relatively longer tail, and a more restricted rufous throat patch; *H. r. erythrogaster* is rufous below, has a narrower breast band restricted to the sides of the breast with a broad wash of rufous in the middle, a more extended rufous throat patch, and is shorter tailed; *H. r. gutturalis* appears somewhat intermediate but is usually notably paler below than *H. r. erythrogaster*. Extralimital individuals intermediate in features might not be identifiable to subspecies, and rufous-bellied birds are generally assumed to be *erythrogaster*. Genetic analyses have shown *erythrogaster* and *gutturalis* to be closely related, while nominate *rustica* is more distant genetically and was considered a distinct species by Turner (2006) and Zink et al. (2006). In identifying Barn Swallows at Qikiqtaruk we referred to the primary identification references (Turner and Rose 1989, Turner 2006, Robinson and DeCicco 2017,

HIRUNDO RUSTICA RUSTICA AT HERSCHEL ISLAND-QIKIQTARUK, YUKON

Brown and Brown 2019), as well as to the extensive catalog of georeferenced photos available through the Macaulay Library (<https://eBird.org>).

The Asiatic subspecies *gutturalis* occurs casually in coastal western Alaska (Kessel and Gibson 1978, Gibson and Withrow 2015, Lehman 2019) and bred at Nome in 2016 (Robinson and DeCicco 2017). There are no definitive records of *H. r. gutturalis* in northern Alaska, where *H. r. rustica* has been documented by two specimen records and two photographic records at Utqiagvik (Barrow), and one photographic record at the Colville River delta (Kessel and Gibson 1978, Gibson and Withrow 2015, Robinson and DeCicco 2017, <https://eBird.org>).

BARN SWALLOWS AT QIKIQTARUK

The Barn Swallow is a rare but regular wanderer to the Beaufort Sea region with records across the Yukon's north slope. Nesting has been confirmed at Clarence Lagoon (Johnson and Herter 1989, Sinclair et al. 2003). At Qikiqtaruk the species is a casual visitor with 19 records, of which six represent the American subspecies *erythrogaster*, two were confirmed to be of *H. r. rustica*, and one was suggestive of *H. r. rustica* (Table 1). In May 2015, Eckert exam-

TABLE 1 Records of the Barn Swallow at Herschel Island–Qikiqtaruk Territorial Park

Date	Subspecies ^d	Documentation	Observers	Source ^b
14 July 1987	unknown	sight record	D. Canning	S12050890
19 July 1996	unknown	sight record	C. Gordon, A. Tardiff	S60870391
15 July 1998	unknown	sight record	C. Gordon	S60870440
21 June 2001	unknown	sight record	P. Foisy	S60870752
29 June 2006	unknown	sight record	M. Boothroyd	S40121919
23 June 2007	<i>erythrogaster</i>	sight record	C. Eckert	S25927598
16 June 2008	unknown	sight record	R. Gordon	S60870792
3 July 2010	<i>rustica</i> ^c	photo	S. McLeod,	S60869695
			L. J. Meyook	
3 July 2010	unknown	photo	S. McLeod,	S60869695
			L. J. Meyook	
24 June 2015	<i>rustica</i>	photo	C. Eckert	S25690325
25 June 2015	<i>erythrogaster</i>	sight record	C. Eckert	S25690400
12–14 June 2016	<i>erythrogaster</i>	photo/specimen ^d	C. Eckert	S33927325
12 June 2016	uncertain	photo	C. Eckert	S33927325
28 May 2018	unknown	sight record ^e	S. Goeson, R. Joe	S60871680
10 June 2019	<i>erythrogaster</i>	photo	C. Eckert	S57551123
16–20 June 2019	<i>erythrogaster</i>	photo	C. Eckert	S57545349
19–20 June 2019	<i>erythrogaster</i>	photo	C. Eckert	S57542914
19–20 June 2019	<i>rustica</i>	photo	C. Eckert	S57542914

^aUnknown indicates records for which there is no note of subspecies, while uncertain indicates records for which photos exist but are inadequate to confirm the subspecies.

^bNumber of eBird checklist, accessible as "<https://eBird.org/checklist/S...>"

^cPhotos of this individual, though suggesting nominate *rustica*, left uncertainty in subspecies identification.

^dYukon College M-28-13.

^eTwo individuals.



FIGURE 1. A Barn Swallow at Qikiqtaruk 3 July 2010 with a solid dark breast band and long tail (shown in other photos), suggesting *H. r. rustica* though with some uncertainty.

Photo by Samuel McLeod and LeeJohn Meyook

ined photos taken 3 July 2010 of a pale-bellied bird with a complete thick blue-black neck band, a relatively long tail, and a relatively restricted rufous throat patch consistent with nominate *rustica* (Figure 1). However, the photos left some uncertainty in the identification and so this record is noted with question mark (Table 1). On 24 June 2015, Eckert saw a Barn Swallow that flashed a bright white belly, undertail, and wing lining. It had a thick and



FIGURE 2. Male Barn Swallow (*H. r. rustica*) at Qikiqtaruk on 24 June 2015 with bright white undersides, a broad dark and unbroken breast band, relatively small rufous throat patch, and very long tail streamers.

Photos by Cameron D. Eckert



FIGURE 3. This male Barn Swallow at Qikiqtaruk on 19 and 20 June 2019 was a typical example of *H. r. rustica*, having a bright white underside, thick dark breast band (with just a few scattered rufous feathers), and relatively long tail streamers (though not as long as the bird in Figure 1). See also this issue's inside front cover.

Photo by Cameron D. Eckert

solid blue-black neck band, a relatively limited deep rufous throat patch, and a very long tail (Figure 2). All features of this bird were consistent with nominate *rustica*. The next day, 25 June 2015, Eckert observed another Barn Swallow that flew through the settlement for less than 30 seconds, though enough time for him to get a good look at the rufous undersides and a broken



FIGURE 4. A pair of Barn Swallows at Qikiqtaruk on 12 June 2016 included one *H. r. erythrogaster* (left) and one individual of uncertain identity (right); the latter showed paler undersides and a slightly broken breast band.

Photos by Cameron D. Eckert

rufous-washed band identifying the bird as *H. r. erythrogaster* (Table 1). On 19 June 2019, Eckert spotted a white-bellied Barn Swallow along with two individuals of *H. r. erythrogaster* flying around the settlement (Table 1). The white-bellied swallow roosted for the night in one of the historic buildings and was seen with the other two birds flying around the settlement the following day. It showed pure white undersides, a thick, unbroken dark blue neck band with just a few rufous feathers, a relatively limited rufous throat patch, and a fairly long though uneven tail, which appeared to be in molt or worn, thereby confirming another occurrence of *H. r. rustica* at Qikiqtaruk (Figure 3).

Could Barn Swallows nest at Qikiqtaruk? Robinson and DeCicco (2017) noted that artificial structures provide nest sites for the Barn Swallow at the outer peripheries of its range, potentially leading to population shifts. Historic buildings at Qikiqtaruk offer suitable roosting and nesting sites, but when it snows in June or the fog rolls in off the sea ice, as often happens for days, it can mean the sad end for a wayward Barn Swallow. On 12 June 2016, a pair of Barn Swallows arrived at the settlement (Table 1) and flew around feeding for the afternoon; the male was typical *H. r. erythrogaster*, but the other (possibly female) appeared quite pale bellied and its subspecies is uncertain (Figure 4). Two days later Eckert found the male alive but fluttering in the grass. He went to collect maggots from a dead Glaucous Gull to feed it, but by the time he returned the swallow had perished (specimen preserved as catalog number M-28-13 at Yukon College, Whitehorse). So while Qikiqtaruk provides suitable nest sites, the climate on the outer Yukon still likely limits breeding.

BARN SWALLOWS IN THE CANADIAN ARCTIC

Barn Swallows have been recorded as casual visitants across arctic and subarctic Canada. The most northerly record is from Nasarvualik Island (75.8° N, 96.3° W) in the Canadian Arctic Archipelago (Richards and Gaston 2018). East of the Yukon and Northwest Territories, in Nunavut, Barn Swallows are not of regular occurrence (Richards and Gaston 2018). Across the Canadian Arctic there have been many sightings; the one specimen and four photo-documented records may be evaluated for subspecies (Table 2). Four of the birds are readily identified as *H. r. erythrogaster*. The one at Southampton Island, Nunavut, on 23 and 25 June 2019 (Table 2) appears to have a white belly but a rufous wash through the front of the breast band and a tail that is not especially long. It could be a female of *H. r. erythrogaster* but may be within the range of variation for *H. r. rustica* or *gutturalis* so we list it here as uncertain.

What route might nominate *H. r. rustica*, which winters in central-southern Africa and breeds in Europe and Iceland (Turner 2006, Brown and Brown 2019), take to reach Qikiqtaruk, some 4500 km beyond its range? Considering where vagrants of this subspecies have and have not been documented, we propose that they are extreme overshoots, having passed north of Greenland and the Canadian Arctic Archipelago on a polar route direct to the Arctic coast of the Yukon and Alaska (Figure 5). There are few locations along this route where records may be sought, though this hypothesis is supported by a photograph of *H. r. rustica* at Svalbard, Norway, 23 June 2017 (<https://eBird.org/checklist/S37753446>), and the complete absence of records to date from

TABLE 2 Specimen- and Photo-Documented Records of the Barn Swallow from the Canadian Arctic and Eastern Subarctic

Date	Subspecies	Location	Observers	Source ^d
24 June 1964	<i>erythrogaster</i>	Resolute Bay, Nunavut	J. E. Mason	ROM 105507
12 June 2013	<i>erythrogaster</i>	Pond Inlet, Nunavut	D.-J. Léandri-Breton, F. Senez-Gagnon	S15085271
15 June 2013	<i>erythrogaster</i>	Nasaruvaalik I., Nunavut	I. Pratte	S15247825
8 June 2017	<i>erythrogaster</i>	Paulatuk, Northwest Territories	A. Buckley	S37477760
23–25 June 2019	uncertain	Southampton I., Nunavut	W. English, A. Lenske, S. Neima	S58746341

^dROM, Royal Ontario Museum; otherwise, eBird checklist number accessible as “<https://ebird.org/checklist/S...>”

Newfoundland and Labrador (B. Mactavish pers. comm.). Documenting extralimital birds is a valuable contribution to understanding patterns of vagrancy and inspiring insights into migration and ecological change. The knowledge and tools available to document and share such observations, through <https://eBird.org>, the Macaulay Library, and www.iNaturalist.org, have never been better.

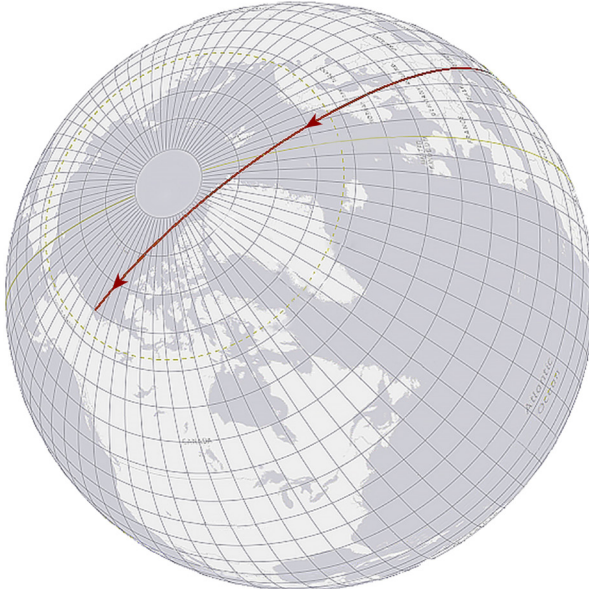


FIGURE 5. The polar route—potential flight path of *H. r. rustica* flying from its winter range in central Africa, overshooting northern Norway for another 4500 km to Qikiqtaruk off the Yukon’s Arctic coast.

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