Short Note (短 報)

The Record of a Probable Wild *Branta canadensis parvipes*
from Japan

Marie-Jo Ikawa* and Hiroshi Ikawa*

Abstract. A vagrant individual *Branta canadensis* visited Hokkaido on migration in spring 2006. We present details of its eventual identification as *Branta canadensis parvipes* and our observations of this rare visitor, which has not been formally described from Japan. We describe its staging at two separate locations in southern and northern Hokkaido, its association with other geese, and its length of stay.

Key words: *Branta canadensis parvipes*, Canada Goose, Hokkaido, Staging area
キーワード: チュウカナダガン, シジュウカラガン, 北海道, 中継地.

The larger and the smaller forms of the Canada Goose were long considered as one species, *Branta canadensis* (e.g. Mayr & Cottrell 1979, OSJ 2000, Mowbray *et al.* 2002). In 2004, however, after many years of discussion and based on new genetic studies, the American Ornithologist's Union (AOU), recognized that the Canada Goose *Branta canadensis* consists of two distinct species (Banks *et al.* 2004): the large-bodied *Branta canadensis* comprising seven subspecies (*canadensis*, *interior*, *maxima*, *moffitti*, *parvipes*, *fulva* and *occidentalis*), and the small-bodied *Branta hutchinsii* comprising four subspecies (*hutchinsii*, *leucopareia*, *taverneri* and *minima*). Though the partition and the scientific names of the two species are generally and widely accepted, for example by the British Ornithologist's Union Records Committee (Sangster *et al.* 2005) and the IUCN (IUCN 2007), the English names given to these taxa have not yet been unanimously adopted, being called Canada Goose and Cackling Goose by the AOU (Banks *et al.* 2004), and Greater Canada Goose and Lesser Canada Goose by the BOU (Sangster *et al.* 2005). In this communication, we have, therefore, adopted the general, and in inverted commas 'Canada goose' to designate both species, new scientific binomials to designate each species, and established trinomials to designate each subspecies in order to avoid confusion.

Two 'Canada goose' taxa, *B. h. leucopareia* and *B. h. minima*, are well known and have been long documented in Japan (e.g. Brazil 1991, 2009). The Check-List of Japanese Birds of the Ornithological Society of Japan qualifies the former as rare visitor to Japan, the latter as accidental visitor, and mentions no other 'Canada goose' (OSJ 2000). Additionally, escapees of large 'Canada goose' subspecies have been noted from central Japan (Japanese Association for Wild Geese Protection 2008), including pairs of *B. c. canadensis* or *B. c. moffitti*, which bred at Lake Tanzawa in Kanagawa Prefecture in 1995, 2000 and 2005 (Kato 2009). Various observations suggest that wild 'Canada geese', larger

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* 1-8-8-604, Hiragishi, Toyohira-ku, Sapporo 062-0931, Japan. E-mail: ikawa@pop07.odn.ne.jp

than *B. h. leucopareia*, have been sighted a number of times at wintering sites or in autumn and spring at staging sites in Japan (Japanese Association for Wild Geese Protection 2008), but no formal report has been published.

We have made many incidental observations in Hokkaido of small *B. h. leucopareia* and *B. h. minima*, since 1984, during ongoing research into the movements of geese through the island. In spring 2006, however, we encountered at two different locations (Fig. 1) and eleven occasions in total, an individual that was very much larger than either *B. h. leucopareia* or *B. h. minima* and were able to take photographs; we were eventually able to identify the bird as *B. c. parvipes*. We present here the first formal record of a wild 'Canada goose' other than *B. h. leucopareia* or *B. h. minima* for Japan.

The first of these two locations is in Biratori Town (42°34'N, 142°07'E), situated near the Pacific coast along the Saru River; three of its districts, Honcho, Nibutani and Nukibetsu, are visited by various species of geese. This area, together with habitat along the Mu River, is one of the first staging sites used by geese in Hokkaido as they migrate north from Honshu to Far Eastern Russia in spring, and before they take divergent routes either east to Tokachi or north to Sorachi, then to Sarobetsu. Among the various *Anser* species found here, the Taiga Bean Goose *A. fabalis middendorffii*, Tundra Bean Goose *A. f. serrirostris* and Greater White-fronted Goose *A. albifrons* all occur commonly, whereas the Lesser Snow Goose *A. caerulescens*, Lesser White-fronted Goose *A. erythropus*, and Swan Goose *A. cygnoides* are all rare, but regularly sighted in small numbers. We have also observed the rare 'Canada goose' subspecies *B. h. leucopareia* here most springs, with numbers now rising to over 50 (H. & M. Ikawa personal observation).

In the Biratori area, the geese feed on harvested rice fields and on grass fields, moving from south to north from one district to the next, influenced by the amount of snow cover or frost and the availability of food. The geese roost, together with Whooper Swans *Cygnus cygnus* and Tundra Swans *C. columbianus jankowskyi*, mainly on the Saru River, but with a few also roosting on Nibutani Reservoir. However, large numbers of Greater White-fronted Geese feeding in this area during the daytime return to Lake Utonai (42°41'N, 141°42'E) to roost at night (H. & M. Ikawa personal observation based on individually recognizable neck-banded birds).

The second location, in Teshio Town (44°53'N, 141°44'E), is situated in the Sarobetsu plain of northernmost Hokkaido. Once geese have left the Biratori area, some move in stages northwards through Hokkaido before leaving the island entirely by the end of the first decade of May. Sarobetsu is already renowned as one of the key autumn staging sites in Japan for the Taiga Bean Goose (Miyabayashi & Mundkur 1999); our observations indicate that it is an important spring staging area as well, albeit for a more limited number of birds.

In the northern part of Teshio Town, grass fields along both sides of the Teshio River are used by various species of geese in spring; these consist mostly of the Taiga Bean Goose, but we have also occasionally encountered Greater White-fronted Goose and rarely Lesser Snow Goose, Lesser White-fronted Goose, Swan Goose and *B. c. leucopareia*, as well as large numbers of the Whooper Swan and Tundra Swan. Most of the birds roost in Furai district, on an isolated oxbow lake derived from the Teshio River,

while some geese roost on the Teshio River itself.

In 2006, in the course of our research into the movements of marked Bean Geese, we visited the first location, Biratori, twelve times from 4 to 26 March, each time visiting all three districts from south to north, in the early morning or in the afternoon. Observations and counts were made from roads or paths at a distance of 200–350 m from goose flocks. We visited the second location, Teshio, eleven times from 1 April to 7 May and counted and observed goose flocks from roads or paths on riverside embankments, usually at distances of 200–300 m, each time for about four hours starting at dawn, with a late afternoon observation tour of about two hours. Observations were made with binoculars (10×) and telescopes (30×, 50×, 75× eyepieces). Utmost care was taken not to disturb the geese. We observed and counted all of the geese around the ‘Canada goose’ and also in the general area, to clarify any relationships between them (Tables 1 & 2).

We first observed the unusual ‘Canada goose’ in Biratori on 12 March 2006, then subsequently five more times there until 23 March. In the Teshio area, our first observation was on 15 April and we subsequently had four more observations until 24 April. The overall size of the bird was smaller than the Taiga Bean Goose, considerably larger than the Greater White-fronted Goose, and approximately as large as a large Tundra Bean Goose (Fig. 2). Compared with the Taiga Bean Goose, its body was much slimmer (Fig. 3), while its wingspan appeared almost as long. Compared with the Greater

Table 1. Number of geese staging at Biratori, Hokkaido from 12 to 23 March 2006. AFAM=*Anser fabalis middendorffii*, AFAS=*A. f. serrirostris*, AAL=*A. albifrons*. r/w=red with white alphanumeric code, y/b=yellow with black alphanumeric code.

Date	With <i>Branta canadensis parvipes</i>			Total in the study area			Neck-banded AFAM
	AFAM	AFAS	AAL	AFAM	AFAS	AAL	
12 March	0	19	26	750	105	400	r/w, K22
13 March	711	20	56	711	97	286	r/w, K22
19 March	400	0	500	572	0	500	r/w, K22
21 March	234	0	30	694	0	330	r/w, K22, K34
22 March	316	0	230	706	0	280	r/w, K22, K01, y/b, A31
23 March	210	0	50	779	2	211	r/w, K22, K01, y/b, A31

Table 2. Number of geese staging at Teshio from 15 to 24 April 2006. AFAM=*Anser fabalis middendorffii*, AFAS=*A. albifrons*. r/w=red with white alphanumeric code, y/b =yellow with black alphanumeric code.

Date	With <i>Branta canadensis parvipes</i>			Total in the study area			Neck-banded AFAM*
	AFAM	AFAS	AAL	AFAM	AFAS	AAL	
15 April	19	0	0	1,565	0	31	r/w K34
16 April	650	0	11	1,858	0	48	r/w K34
22 April	360	0	1	1,724	0	57	r/w K34
23 April	37	0	1	1,060	0	63	r/w K34
24 April	398	0	6	862	0	73	r/w K34

* Neck-banded AFAM y/b A31 was sighted on 8 April before the arrival of *Branta canadensis parvipes*.

Fig. 1. The locations of the two study areas in Hokkaido, Japan: Location 1, Biratori, a staging site for geese in the southern part of the island, and Location 2, Teshio (Sarobetsu), the northernmost staging area in Japan.

Fig. 2. The bird in a grass field together with Taiga Bean Geese and Greater White-fronted Geese at Teshio; photographed on 15 April 2006. It is much larger than the Greater White-fronted Geese, but smaller than the Taiga Bean Goose. (All photographs by H. Ikawa)

White-fronted Goose, its body was considerably more thickset (Fig. 4). No Taiga Bean Goose that we observed in the same fields was as small as this bird. The neck was thin, particularly when in the alert posture (Fig. 5). The upper breast was a pale sandy color, which became progressively darker towards the belly. The head was gently rounded from

Fig. 3. The bird in a grass field with Taiga Bean Geese at Teshio, photographed on 23 April 2006. It is slimmer than the Taiga Bean Goose and its bill is considerably smaller.

Fig. 4. The bird in a rice field with Greater White-fronted Geese at Biratori, photographed on 23 March 2006. It is much larger than the Greater White-fronted Geese and its bill is slimmer.

the forehead to the rear crown, with no sharp angles. The bill was about two thirds of the length of that of the Taiga Bean Goose and almost the same length as that of the Greater White-fronted Goose, but slimmer. The culmen slope was not steep, even appearing slightly concave, and this sloping profile continued to the forehead. The bird did not have a black throat stripe dividing the white chin patches (Fig. 6). It had neither a complete nor an incomplete neck ring.

Fig. 5. The bird in alert posture at Teshio, photographed on 15 April 2006. Its neck is thin and relatively long, with the head gently rounded.

Fig. 6. The bird feeding in a grass field at Teshio, photographed on 23 April 2006. No black throat stripe divides the white chin patches.

The 'Canada goose' we saw and photographed at Biratori and Teshio was very probably the same individual, since all of the distinguishing characters, such as overall size, body shape, wingspan, neck shape, color of the breast and the belly, form of the head, size and form of the bill and lack of black throat stripe and white neck ring were in concordance. No other 'Canada goose' of this size was reported in the same season in Hokkaido. In addition, two collared Taiga Bean Geese were also observed to have moved

Fig. 7. The bird in a grass field at Teshio, photographed on 23 April 2006. Overall plumage characteristics confirm it to be an adult, and to not be a hybrid.

between the same two locations during the same period, suggesting that the ‘Canada goose’ had followed the same migration route as the collared Bean Geese, perhaps even having migrated with them (Tables 1 & 2). The individual ‘Canada goose’ is considered to have been a wild bird because the even larger- and paler-bodied escapee ‘Canada geese’ recorded in central Japan are resident in that region throughout the year (Japanese Association for Wild Geese Protection 2008, Kato 2009) and no medium-bodied escapee ‘Canada goose’ was been reported in 2006. The clear and neat pattern of its overall plumage suggests that it was not a hybrid, and it fits no known hybrid descriptions. The bird was an adult, as indicated by the broadness of its body feathers, the neat rows of pale edgings on its back feathers and wing coverts, and its pure black neck with a very distinct margin (Fig. 7). The latter characteristics therefore rule out the possibility of it being a young individual of another large-bodied subspecies.

The identification of ‘Canada geese’ subspecies is often problematic, particularly in the case of a lone individual with no other ‘Canada goose’ for comparison. No single characteristic is sufficient to separate one subspecies from the others. Instead, it is necessary to consider an array of different characteristics, such as overall size, neck length, breast color, head shape, the slope of the forehead, and the size and shape of the bill. As no other ‘Canada geese’ were present for direct comparison during spring 2006, we compared the bird with the three taxa of geese that it was found amongst in the same fields. According to the literature, the lengths of the Taiga Bean Goose, Greater White-fronted Goose and Tundra Bean Goose are 90–100 cm, 65–86 cm and 78–89 cm, respectively (Brazil 2009). The Taiga Bean Goose weighs approximately 4.6 kg (female) to 5.1 kg (male), while its wingspan is 180–200 cm (Brazil 2009). The weight range of the Greater White-fronted Goose is 1.7 kg to 3.0 kg (Brazil 2009). The yellow collared Taiga Bean Goose, A31 (a relatively small male for its species), which was seen in the same

flock, weighed 4.6 kg when it was banded as an adult in 1999 (Hiromi Sato personal communication), but was larger than the 'Canada goose'. We estimate, therefore, that the bird weighed between 3 kg and 4 kg.

The only subspecies that meets all of the particular characteristics we observed is *B. c. parvipes* (Madge & Burn 1988, Ogilvie & Young 1998, Mowbray *et al.* 2002, Deviche & Moore 2008), which is described as weighing 3.3 kg for males and 2.9 kg for females (Mowbray *et al.* 2002). *B. c. maxima*, *B. c. canadensis* and *B. c. fulva* are all too large, and all either too pale or too dark to fit this individual. An extremely small *B. c. moffitti* cannot be excluded *a priori*, based on coloration, but it is impossible to define the bird we observed as *B. c. moffitti* when the body shape and the size and the shape of the bill and the head are also taken into consideration. In particular, the observed bird's body was too small, the bill was neither large enough, nor long enough, and the head was too oval-shaped for it to be *B. c. moffitti*. At the opposite extreme of the range, *B. h. hutchinsii*, *B. h. leucopareia* and *B. h. minima* are all far too small for consideration. Out of the four medium-sized 'Canada geese' taxa, *B. c. interior* and *B. c. occidentalis* can be excluded because of the breast color, which is much darker in both subspecies than in the bird we saw, and *B. h. taverneri* can be excluded because that subspecies is darker and has a shorter bill, a forehead forming a noticeably steeper angle with the culmen slope and a more square head shape (Ogilvie & Young 1998, Mowbray *et al.* 2002, Deuel 2004, Deviche & Moore 2008, Krueger 2009). While each of the other subspecies can be ruled out, based on observed characteristics such as length, wingspan, weight, color of breast and belly, head shape, bill size and shape and neck shape, none of these characteristics are in conflict with its identification as subspecies *B. c. parvipes*. We therefore concluded that the bird we observed repeatedly in 2006 was very likely *B. c. parvipes*, and presumably a large male.

B. c. parvipes is known to breed throughout central, interior Alaska, to migrate south from interior Alaska along the Pacific coast and to winter primarily in the Willamette River valley of west Oregon and the lower Columbia River valley of north-central Oregon and south-central Washington (Mowbray *et al.* 2002). We can only speculate on how it became mixed with migrating geese in east Asia.

On our first observation at Biratori on 12 March, the bird was in a mixed flock of 19 Tundra Bean Geese and 26 Greater White-fronted Geese, although a further 750 Taiga Bean Geese were counted in the region. The Tundra Bean Geese left the location first, and the bird was seen together with Taiga Bean Geese and Greater White-fronted Geese from our third observation onwards (Table 1). The Greater White-fronted Geese were frequently moving while feeding, but we did not observe *B. c. parvipes* moving with them. That suggests it was not closely associated with them. In Teshio, we witnessed its arrival from the south, on 15 April, with Taiga Bean Geese; no Tundra Bean Geese were present and the number of Greater White-fronted Geese in the region was very small (Table 2). It is not certain with which species the bird arrived in Hokkaido, but it is clear that whereas at first it was with Greater White-fronted Geese and/or Tundra Bean Geese, it later joined Taiga Bean Geese as it continued its migration northwards through Hokkaido. Three weeks elapsed between our last sighting of it in Biratori and our first sighting in Teshio, but it is highly probable that it migrated through the Sorachi region because: a)

the bird migrated with Taiga Bean Geese, b) in contrast with the autumn migration, most of the Taiga Bean Geese coming to Sarobetsu in spring migrate along this route (based on our previous studies and on observations of neck collared birds), and c) no sightings of medium-sized 'Canada geese' were reported from the Tokachi region.

Since we did not observe its actual arrival at Biratori, nor did we witness its departure from this staging area, we can only say that the bird stayed at least 12 days in this southern part of Hokkaido between 12 and 23 March. In the Teshio area, we saw the bird arrive on migration on 15 April and last sighted it in the same area on 24 April, indicating that it remained for a minimum of 10 days in this northernmost staging site in Hokkaido. Therefore, the minimum length of time that the individual spent in Hokkaido during its spring migration was 43 days, from 12 March to 24 April. Lengths of stay for individual geese on migration are not well-known, however, K22, a collared Taiga Bean Goose remained for at least 24 days in 2004, 43 days in 2007, 29 days in both 2008 and 2009 and 45 days in 2010 (H. & M. Ikawa unpublished data).

Adverse weather conditions in Honshu temporarily delay migratory movements and geese arrive late in Hokkaido, thus shortening their period of stay on the island. Late snowfalls in Hokkaido, after the geese have arrived there, slow down their onward migration and consequently they remain for longer periods. This weather pattern gave us the opportunity to observe the bird over a prolonged period in spring 2006.

As no previous observations of *B. c. parvipes* have been formally reported in Japan, we describe the possible first record of this subspecies with its migration route through Hokkaido.

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野生チュウカナダガンと思われる個体の日本における観察記録

2006 年春、北海道で 1 羽の野生カナダガンが観察された。著者らは、計 11 回にわたる観察の結果、この個体が亜種チュウカナダガン *Branta canadensis parvipes* である可能性がきわめて高いと判断した。日本ではこれまで一度も公式報告例のないチュウカナダガンの同定過程を報告する。同時に、北海道の南と北端に位置する、この個体を利用した渡りの中継地点 2 か所、他種ガンとの関係、および北海道における滞在期間を報告する。

井川マリジョー・井川 浩：〒062-0931 札幌市豊平区平岸 1-8-8-604.