

Bean Goose (*Anser fabalis*) at Hoquiam, Washington: a first state record

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Field encounter

On 7 December 2002, while scouting for a Christmas Bird Count, Patrick and Ruth Sullivan found an adult Bean Goose (*Anser fabalis*) in the company of seven Canada Geese. The flock was feeding along the runway of a small airport next to Bowerman Basin National Wildlife Refuge, Hoquiam, Grays Harbor County, Washington. The Sullivans returned the next day to photograph it, whereupon news of its discovery became widespread. Over the ensuing nine days, it was seen by many observers, either at the airport or on nearby ball-fields and lawns. It was always in the company of seven very large dark Canada Geese, likely Vancouver Canada Geese (*Branta canadensis fulva*); on many occasions, however, individuals from a wide variety of races were present, predominantly Lesser/Taverner's (*B. c. parvipes/taverneri*) and Western (*B. c. moffitti*) but also Dusky (*B. c. occidentalis*) and Cackling (*B. c. minima*), affording multiple opportunities for comparison of size and structure. It was last seen 17 December 2002.

The week prior had been one of mild temperatures and mist/fog on Washington's outer coast. The Bean Goose was found on 7 December (but could have been present for some time at this infrequently visited location), and on 9 December persistent, strong southerly winds (averaging 15.5 mph/25.4 kph) began. These subsided on 17 December, the last day the Bean Goose was seen, which would suggest that its departure was weather-related.

Description

A large brown goose readily picked out from the Canada Geese with which it associated, it was as tall and long as most of the *fulva* and *moffitti* present but seemed somewhat slimmer. It walked with an awkward bow-legged waddle and often fed by angling its head sideways and then pulling out grass at

its base. This was distinctly different from the Canada Geese, which seemed to nibble the grass from the top. The flock (presumably *fulva*) with the Bean Goose was somewhat skittish when alone but calmed down when among the larger flock that contained *moffitti* and others. In flight, the Bean Goose gave a yelping *ronk-onk* call.

The bird was grayish-brown throughout, except for white undertail and uppertail coverts. Its body color was quite similar to that of *moffitti*, but a bit darker and richer. The head, neck, and underparts were generally unmarked and fairly uniform in hue, but there was a mottled dark dusky patch at and behind the tarsi (bordering the undertail coverts). The upper neck and head were a bit darker than the chest, particularly on the anterior face near the bill, where the color was also richer. There were fine, darker longitudinal striations on the neck. The folded wings were darker brown than the underparts, with narrow pale terminal tips to the upperwing coverts and crisp, pale fringing to the tertials, causing the wings to look barred. Back color was similar to that of the underparts and appeared unbarred. The tail was blackish-brown with a narrow whitish band at the tip.

The bill was large, long, and mostly black, except for a narrow, pale yellow-orange subterminal band occupying the distal portion. The profile of the bill, combined with the sloped forehead, recalled that of an immature Trumpeter Swan (*Cygnus buccinator*). The culmen was convex, and there was a minimal bulge to the lower mandible. The forehead often appeared to have a bump just in front of, or over, the eye, although this was somewhat dependent on the bird's activity and posture, being most evident during feeding. The legs were bright orange and quite stout, being somewhat thicker than those of a Canada Goose of similar size.

The Bean Goose companions: Vancouver Canada Goose

The subspecific identity of the Bean Goose's companions has potential implications both for the identification of the bird and for speculation about its migration route. The seven Canada Geese with which the Bean Goose traveled were a rich dark brown throughout the underparts but lacked the

purplish tones of Cackling Canada Geese. This coloration fits both *B. c. fulva* and *B. c. occidentalis*, two subspecies formerly treated as a single subspecies under *B. c. occidentalis* (see Palmer 1976, Mowbray et al. 2002) breeding coastally from southeastern Alaska (Prince William Sound) to northern Vancouver Island, British Columbia, and wintering south to the lower Columbia River and Willamette Valley of western Oregon. In size, the seven dark Canada Geese were noticeably larger than the *B. c. taverni/parvipes* that often foraged nearby and were similar in size to the *B. c. moffitti* also present. Because *fulva* averages slightly larger than *occidentalis*, and thus closer in size to *moffitti*, these were probably Vancouver Canada Geese.

There are no known diagnostic plumage characteristics to separate *fulva* and *occidentalis*; their differentiation is based entirely on morphometrics (Pearce and Bollinger 2003). *B. c. fulva* is intermediate between *occidentalis* and *moffitti* in size; there is overlap in linear measurements and weight between *fulva* and *occidentalis* as well as between *occidentalis* and *moffitti*, though this is somewhat limited (Pearce and Bollinger 2003). Notably, all seven of the Bean Goose companions were similar in size to each other, and they were very similar in size to nearby *moffitti*. It seems unlikely that all seven of these dark Canadas were at the very large end of *occidentalis* and that the nearby *moffitti* were also all smaller than average. Consequently, the Bean Goose's companions were most likely *fulva*.

When first separated from *occidentalis*, *fulva* was thought to be a largely non-migratory (A.O.U. 1957, Ogilvie and Young 1998). More recently, however, a few birds have been found wintering south as far as the Willamette Valley of western Oregon (Ratti and Timm 1979, Mowbray et al. 2002). The estimated fall population of Vancouver Canada Geese is in excess of 84,000 (Delany and Scott 2002). A recent study of harvested birds initially considered *occidentalis* in southwestern Washington and northwestern Oregon included 7.9–11.4% birds with the mtDNA genetic characteristics of *fulva* (Pearce et al. 2000). Small flocks of *fulva* have also been found wintering near Tofino, British Columbia (Hatler et al. 1978), in Snohomish County, Washington (D. Kraege, in litt.), and in Yamhill County, Oregon (Hansen

1962), though the latter (wintering) population may no longer exist (B. Bales, *in litt.*). Migrating *B. c. fulva* are known to use the southern Washington coast (D. Krage, *in litt.*; Hansen 1962) and have apparently been found as far south as Del Norte and Humboldt Counties, California (Delacour 1954, A.O.U. 1957). Further complicating matters is that *occidentalis* were transplanted from the Copper River delta to the southern Washington coast in the 1950s and have interbred with the resident *moffitti* (C. Stenvall, pers. comm., J. Welch, pers. comm.). Typically, offspring from these pairings tend to be paler than pure *occidentalis* or *fulva* (B. Bales, *in litt.*; P. Springer, *in litt.*).

Ultimately, whether the companions of the Bean Goose at Hoquiam were *fulva* or *occidentalis* may not make much difference to speculation about the vagrancy vector of the Bean Goose in Washington. Both Vancouver Canada Geese and Dusky Canada Geese breed in the fjords and marine areas of northern British Columbia and Alaska. To the north of these areas, the races of Canada Goose are smaller, and a large goose such as a Bean might not select the smaller forms for flock-mates. It is conceivable that the Bean Goose's crossing into the Nearctic brought it into contact with multiple races of Canada Geese but that it joined larger *fulva* somewhere in southeastern Alaska or the Pacific Northwest on their southward migration.

Bean Goose Status and Distribution

Bean Goose consists of five widely recognized subspecies: *fabalis*, *johanseni*, *middendorffii*, *rossicus*, and *serrirostris* (Ogilvie and Young 1998). These five forms fall into two distinct taxonomic groups, Tundra Bean Goose (consisting of *rossicus* and *serrirostris*) and Taiga Bean Goose (consisting of *fabalis*, *johanseni*, and *middendorffii*); the two groups are sometimes treated as separate species in Europe (Sangster and Orel 1996, Oates 1997). Tundra Bean Goose breeds across much of northern Siberia and winters in two widely separated locations, *rossicus* in western Europe and *serrirostris* in China, Korea, and Japan (Ogilvie and Young 1998). Taiga Bean Geese breed south of the Tundra Bean Geese from Scandinavia to eastern Siberia, with *fabalis* wintering in western Europe and *johanseni* and *middendorffii* wintering in China and Japan (Ogilvie and Young 1998). *Middendorffii* breeds in eastern Siberia and *johanseni* in western Siberia. In Japan, *middendorffii* first arrive on Hokkaido (from Kamchatka) during early September and depart during March and

April (Brazil 1991). Breeding populations are estimated at 45,000–65,000 for *serrirostris*, 600,000 for *rossicus*, 100,000 for *fabalis*, and 50,000–70,000 for *middendorffii* (Delany and Scott 2002). No population data are available for *johanseni*.

In North America, Bean Geese are almost annual spring migrants in the western Aleutians, casually as far east as Adak Island, and are casual on the Pribilofs, St. Lawrence Island, and the mainland coast of southern Alaska (A.O.U. 1998). There are only two fall records from Alaska, neither identified to race. Interestingly, both were in September 2002, one at Gambell, St. Lawrence Island and another on Shemya Island (Tobish 2003). Among Alaskan spring records, there are five specimens, of which four have been identified as *serrirostris* and one as *middendorffii* (Gabrielson and Lincoln 1959, Gibson and Kessel 1997). Furthermore, most Alaskan birds photographed appear to be *serrirostris* (D. D. Gibson and T. G. Tobish, pers. comm.). Outside of Alaska, there are five previous North American records: a *rossicus* specimen from Cap Tourmente, Québec,

14–21 October 1982 (Godfrey 1982); a *middendorffii* documented at Cap Tourmente, 14–15 October 1987 (Eckert 2000); a *middendorffii* photographed at DeSoto National Wildlife Refuge, Nebraska/Iowa, 29 December 1984–10 January 1985 (Wilson 1985, Wright and Grenon 1985); a *middendorffii* documented at Funk Lagoon, Nebraska, 4 April 1998 (Sharpe et al. 2001); and a *rossicus/serrirostris* photographed at Whitehorse, Yukon, 23–24 October 1999 (Eckert 2000). A previous Bean Goose report from Hoquiam on 26 April 1993 was quite likely correctly identified (*American Birds* 47: 447), but the report was not accepted by the Washington Bird Records Committee, as the written details were brief and the observer unaccompanied (Tweit and Skirletz 1996).

Identification

Besides Bean Goose, there is only one species fitting the above description: Pink-footed Goose (*A. brachyrhynchus*). Pink-footed Geese, unlike the Hoquiam bird, typically have pink legs and a pink band on the bill, though rarely individuals can show aberrant soft part coloration (Scott 1956). Furthermore, Pink-footed Geese are smaller, with more delicate rounded heads and shorter bills than any race of Bean Goose. Thus, Pink-footed Goose was eliminated by size, structure, and bare-part coloration.

The racial identification of the Washington Bean Goose is not as simple. Taiga Bean Geese average larger than Tundra Bean Geese (Oates 1997, K. Litvin, *in litt.*). Comparison of the Hoquiam Bean Goose with accompanying Canada Geese seemed to suggest that the Washington bird was large for a Bean Goose: Ogilvie and Young (1998) give a length of 90–100 cm for both *B. c. fulva* and *B. c. moffitti* compared with 75–90 cm for *middendorffii*. The comparability of these measurements is unknown, however. More importantly, Taiga Bean Geese show longer bills with a less prominent lower mandibular bulge than Tundra Bean Geese (Oates 1997, Ogilvie and Young 1998), and the Washington bird clearly falls within the Taiga group. In particular, *serrirostris* also shows a culmen bulge (K. Litvin, *in litt.*)—which is clearly not the case in the Washington bird, which showed a long bill with minimal bulge in the culmen. Call is also said to separate Taiga from Tundra Bean Geese, with Taiga said to produce a nasal *gang gang* and Tundra a higher-pitched *ayayak* (Barthel 1995, Oates 1997). Our bird's vocalizations better fit Taiga Bean Goose.



Figures 1, 2. Bean Goose in company with Canada Geese, Bowerman Basin, Grays Harbor County, Washington, 8 December 2002. The presence of Canada Geese of the races *parvipes/taverneri*, *moffitti*, *occidentalis*, *minima*, and almost certainly *fulva* permitted size comparisons with the Bean Goose that confirmed its race as either *middendorffii* or *johanseni*, similar races of the "Taiga Bean Goose" group that are not distinguishable in the field on present knowledge. The orange on the bill, restricted to a narrow band, argues against the other member of the Taiga group, *fabalis*, but is not definitive. Races of the Taiga group share the long, sloping bill/head profile, reminiscent of an immature Trumpeter Swan, which helps rule out "Tundra Bean Goose" taxa such as *serrirostris*. Photographs by Patrick Sullivan.



Within the Taiga group, *fabalis* can be eliminated by bill pattern, as the colored region of the *fabalis* bill is not confined to a band but rather extends proximally along the cutting edge (Ogilvie and Young 1998). This leaves *johanseni* and *middendorffii* for consideration. *A. f. middendorffii* has the largest morphometrics of all the Bean Goose races, and the above size comparisons would seem to argue for this race, as would geographical distribution. However, it is doubtful that *johanseni* can be truly eliminated, and so the identification as *middendorffii/johanseni* is appropriate in the case of unmeasured birds and specimens. Photographs taken by R. Sullivan and C. Wright were reviewed by Malcolm Ogilvie, who felt this bird was clearly *middendorffii* (as opposed to *serrirostris*). These photographs, plus videotape taken by S. Mlodinow, were reviewed by Konstantin Litvin and several other Russian goose biologists, who also identified this bird as *middendorffii* (again, as opposed to *serrirostris*). The Russian biologists went further to suggest the bird was most likely from the Anadyr River basin, mostly based on geographical proximity (K. Litvin, in litt.).

Bean Geese in captivity

Bean Geese are little known in captivity. As of 2002, none were listed in the International Species Information System (ISIS) (G. Toffic, pers. comm.), which covers all zoos and some other collections in North America. It would appear that Bean Geese may be unknown in captivity anywhere in North America; in addition, *middendorffii* is exceedingly rare in captivity even in Eurasia (P. Dye, M. Lubbock, pers. comm.).

Whence and whither

The Hoquiam Bean Goose and its companions apparently left the Hoquiam area during the lull in weather on the 17 December 2002. The arrival date is unknown, as the Hoquiam area is not often visited by birders. Whether or not its companions were *B. c. fulva* or *B. c. occidentalis*, this flock was likely bound for Oregon, but birders in that state were not able to relocate the Bean Goose, and efforts to refind the bird in southwestern Washington also failed. Given the rarity of Bean Geese in captivity, especially *middendorffii*, the Hoquiam Bean Goose was most likely a wild bird that crossed the Bering Sea north of the Alaska Peninsula, or perhaps just as likely farther south.

It is curious that three of the five previous North American records of Bean Geese away from Alaska involved *middendorffii*, whereas most Alaskan records pertain to *serrirostris*. Prior to 2002, all Alaskan records of Bean Goose were from spring, whereas four of the five non-Alaskan records were from fall/early winter, and the one spring bird from Ne-

braska surely arrived on the continent during fall. Consequently, those factors that bring Bean Geese to Alaska in spring are likely different from those leading to fall appearances of the species elsewhere in North America.

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