

SPECIATION IN THE WHITE-CHEEKED GEESE *

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IN an attempt to identify certain specimens of white-cheeked geese from various parts of the United States it was necessary to review all of the forms, using the specimens in the United States National Museum and others, borrowed from various collections, totaling 254 birds.† With a few exceptions the results of the study bore out the conclusions of Taverner (1931) and Todd (1938). The results reported here are for the most part supplementary, rather than contradictory, to their findings.

Variation trends.—When specimens of white-cheeked geese are arranged by color and size, the following geographic trends are noticeable: increasing size from north to south; and increasing darkness from east to west, except in the more southern regions of the breeding range, where the geese show the pallor usual in arid plains and basin country. In other words, the smallest geese are those that breed on the Arctic tundra, the largest those that dwell in the more southern, forest and grassland, regions; pale geese breed in the Atlantic maritime region, while darker geese occur in the interior, from Minnesota north to Hudson Bay, where the trend is reversed, so that the palest of all white-cheeked geese are found in the plains and basin country from Lake Athabaska southward, and west to Utah and eastern California, Oregon, and Washington, with then a rather abrupt change to the darkest white-cheeked geese breeding on the Pacific coastal strip of western and southern Alaska and British Columbia.

Speciation.—On the surface, such trends look like normal subspecific variation. However, naturalists and Eskimos alike have observed sharp differences in the behavior of the birds which seem to indicate that two distinct species are involved. In the vicinity of the seacoast, in the eastern Arctic as well as in the western Arctic (coastal Alaska, and apparently certain islands of northeastern Asia), two kinds of geese breed close together. They differ from each other in voice, nesting habits, habitat, and time of migration, as well as in color and size. In both regions, the voice of the smaller goose is described as a cackle, distinct from the honking of the larger birds. The cackling goose nests on small islands in ponds near the coast, while the larger one usually nests on higher ground a considerable distance inland, and, at least in the north country, frequently in willow thickets along streams. There is an almost unanimous agreement among those who have studied these birds on their breeding grounds that in both the Hudson Bay and Alaskan

* The term "white-cheeked geese" is used to include all of the races formerly included under *Branta canadensis*, not merely to refer (as in the fourth edition of the A.O.U. Check-List) to *Branta c. occidentalis*.

† For the loan of specimens I am greatly indebted to the National Museum of Canada, Carnegie Museum, Philadelphia Academy of Natural Sciences, Museum of Comparative Zoology, and the American Museum of Natural History.

regions two distinct species are present (Conover, 1926:175; Sutton, 1932:30-31; H. W. Brandt, 1943:276; and Soper, 1946:18).

None of these observers, however, has suggested that the small, dusky, cackling goose of the northwestern Alaskan coast belongs to the same species as the small, pale, cackling goose of the more eastern Arctic islands. Yet, I can see no reason for not doing so. They replace each other geographically, and in size and habits they are very similar. The validity of Taverner's assumption (1931:40) that the wide gap between their ranges argues against subspecific relationship is questionable; there are many recognized examples of conspecific races separated by equally wide gaps, particularly in species found in both the New and the Old World. The color differences between the eastern and western cackling geese seem to be bridged by the population inhabiting Bering Island, Siberia.

Nomenclature.—The earliest available name for the cackling geese is *Anser Hutchinsii* Richardson (1831 [1832]:470). Since this name was based on a very small bird from the Melville Peninsula, it almost certainly refers to the eastern race of the cackling goose, which becomes *Branta hutchinsii hutchinsii*, while the Alaskan cackling goose may be known as *Branta hutchinsii minima*. The very small goose of Bering Island, Siberia, and probably also the Kurile Islands (Taczanowski, 1893:1110), which also apparently breeds in the same region with a larger species, seems intermediate between *minima* and *hutchinsii* in appearance, although not in range. It seems to represent a distinct race, which may be called:

Branta hutchinsii asiatica, new subspecies. Asiatic Cackling Goose.

Type.—Adult ♂, No. 92827, U. S. National Museum; Bering Island, Siberia; June 9, 1883; Leonhard Stejneger; original number, 2165.

Subspecific characters.—Similar to *Branta hutchinsii hutchinsii*, but darker above. Similar also to *Branta hutchinsii minima*, but lighter below.

Measurements.—Adult ♂ (3 specimens from Bering Island): wing, 363-377 (Av. 368) mm.; tail, 110-119 (114.7); exposed culmen, 30.5-32.5 (31.7); tarsus, 65.5-77 (70.1); middle toe without claw, 57-62 (58.8). Adult ♀ (1 specimen from Bering Island): wing, 373; tail, 128; exposed culmen, 33; tarsus, 71; middle toe without claw, 54.

Geographic distribution.—Breeds on the Commander Islands, Siberia, and probably also the Kurile Islands (Bergman, 1935:225). Probably migrates southward at least to Japan (Taczanowski, 1893:1110). Confusion in the nomenclature makes it impossible to be sure whether these references are for the present form, or for *B. canadensis leucopareia*, of which there is one breeding specimen, from Bering Island, in the American Museum of Natural History (No. 730928), first noted by Hartert (1920:141).

Among the medium-sized geese of the *Branta canadensis* group, which, as pointed out above, are a species distinct from *Branta hutchinsii*, two races seem to be recognizable, viz., a relatively dark bird from the islands of northeastern Asia east to Baffin Island, for which the name *Anser leucopareius* J. F. Brandt (1836:37) is available, and an extremely pale bird which breeds in the northern portion of the Prairie Provinces of Canada, which I believe should be called *parvipes*. Both seem to be subspecies of *Branta canadensis*. I have examined the type of *Anser parvipes* Cassin (1852), evidently a migrant bird, from Veracruz, Mexico, in the collection of the Academy of Natural Sciences of Philadelphia, and it agrees very closely with the pale medium-sized goose which breeds in the Lake Athabaska region. *Bernicla leucolaema* Murray (1859) is, in my opinion, unidentifiable but probably a hybrid.

The large Canada geese experience the widest range of ecological conditions on their breeding grounds and are also the most subject to racial separation. The extremely dark *B. canadensis occidentalis* occupies the relatively narrow area of southeastern Alaska and British Columbia south to Vancouver Island (Rand, 1943:60) during the breeding season. In the region from Hudson Bay south to Minnesota occurs a large intermediately-colored goose recently given the name *B. c. interior* by Todd (1938:662), who at the same time restricted the name *B. c. canadensis* to the pale-breasted bird of the Atlantic coasts of Quebec, Labrador and Newfoundland. This leaves a rather extensive area in which geese breed, at least scatteringly: the Great Plains of the northern United States and central-southern Canada, and the Great Basin from Utah west to northeastern California, and north to southern British Columbia. Breeding specimens from these regions are very large, a fact which has long been noted by residents in the Plains states (Wetmore, field notes 1922, and McAtee, 1944:136). These birds are even paler above than typical *canadensis*, from which race they are geographically separated by *interior*, a race which is darker than *canadensis* both above and below. Also the ecological conditions under which the plains and basin goose lives appear to be quite different from those of other races. There seems to be no alternative to recognizing it as a distinct subspecies, which may be known as:

***Branta canadensis moffitti*, ‡** new subspecies. Basin Canada Goose.

Type.—Adult ♂, No. 365117, U. S. National Museum (Fish and Wildlife Service collection); Blue Lake, near Coulee City, Washington; April 26, 1938; V. Clifford.

Subspecific characters.—Similar to *Branta canadensis canadensis*, but larger and paler in general coloration. In fresh autumn specimens the brown areas of upper parts and flanks are between olive brown and buffy brown, rather than mummy brown. Under parts average somewhat less whitish.

‡ Named for James Moffitt, who had begun a revision of these geese just before his death in July 1943.

Measurements.—Adult ♂ (11 specimens): wing, 480–522 (Av. 502.8) mm.; tail, 144–177 (161.1); exposed culmen, 52–68 (57.9); tarsus, 84–106.5 (93.9); middle toe without claw, 76.5–92.5 (83.5). Adult ♀ (6 specimens): wing, 435–503 (474.3); tail, 121–166 (141.8); exposed culmen, 50–61 (54.8); tarsus, 85–93.5 (89.6); middle toe without claw, 76–84.5 (80.1).

Geographic distribution.—Great Plains and Great Basin regions of the United States and Canada west to eastern Washington and Oregon and northeastern California, east to northeastern North Dakota (Dawson), and south to Great Salt Lake, Utah, and central-western Nebraska, north to southern British Columbia and southern portion of the Prairie Provinces of Canada.

Relationship of races of Branta canadensis.—*B. canadensis moffitti* is the breeding Canada goose of the prairie and basin marshes of the more arid portions of interior North America, as compared with the more heavily forested region farther east, in which *B. c. interior* breeds, or presumably bred formerly, from Arkansas north to Hudson Bay, and east to Kentucky, Michigan, and western Quebec. Presumably *B. c. moffitti* intergrades with *B. c. parvipes*, a goose of similar pale coloration but of smaller size, in the middle section of the Prairie Provinces. It intergrades with *parvipes* also in British Columbia, as is indicated by an August specimen from Big Salmon River, British Columbia, which is distinctly smaller than the smallest *moffitti*, but too large for *parvipes* and much too pale to be considered *leucopareia*.

Although *B. c. moffitti* most closely approximates *B. c. canadensis* among the larger geese, it is larger, and enough paler above to be easily distinguished in series. Its habitat is evidently quite different from that of the maritime form, and its range is and probably always was completely cut off from that of *canadensis* by the still darker *B. c. interior*.

B. c. interior must have intergraded with *moffitti* in the general region where forest merges with grassland in the middle western region. It presumably intergrades with *leucopareia* along the western side of Hudson Bay and apparently also in southern Baffin Island.

Soper (1946:18) describes the decreasing size of breeding geese of the *canadensis* group along the southern coast of Baffin Island, saying that the smallest population breeds in the same general region with *hutchinsii* in the Cape Dorset region. His measurements of birds which he called *hutchinsii* from Cape Dorset certainly indicate that they were of that species, although the average which he gives for the wings of these birds, 12 inches [305 mm.] for males, and 11.77 inches [299 mm.] for the females, are remarkably small. Apparently he was not aware that *leucopareia* breeds in western Baffin Island, a fact disclosed by specimens in the National Museum of Canada and the Museum of Comparative Zoology, which I have examined. Average measurements which he gives for geese from the Fox Basin coast of western Baffin Island

MEASUREMENTS (IN MM.) OF ADULT BRANTA HUTCHINSII AND BRANTA CANADENSIS *

Male

Subspecies†	Wing (chord)	Tail	Exposed culmen	Tarsus	Middle toe without claw
<i>B. hutchinsii</i> <i>minima</i> (4)	353-373 (363.8)	109-116 (113.3)	26-28.5 (27.3)	64-70.5 (66.9)	48-53.5 (49.6)
<i>asiatica</i> (3)	363-377 (368)	110-119 (114.7)	30.5-32.5 (31.7)	65.5-77 (70.1)	57-62 (58.8)
<i>hutchinsii</i> (6)	360-393 (377.8)	116-133 (123.7)	31-35 (33.7)	67-77 (70.3)	54-61 (57)
<i>B. canadensis</i> <i>leucopareia</i> (22)	388-456 (410.2)	113-136 (127.3)	34-45.5 (37.8)	70.6-86 (76.6)	55-69 (60.9)
<i>parvipes</i> (7)	413-442 (430.9)	113-145 (132.7)	38-46 (42.6)	74-88 (81.7)	63.5-73 (68)
<i>occidentalis</i> (9)	446-493 (473.9)	137.5-162 (150.2)	45.5-54.5 (50.5)	84-99.5 (93.5)	75-83 (79.4)
<i>interior</i> (9)	430-473 (456.8)	131-149 (143.9)	46-55.5 (50.7)	81-91.5 (89.1)	67-80.5 (73.2)
<i>canadensis</i> (7)	444-485 (466.3)	131-149 (143)	53-58 (56)	88-95 (90.8)	72.5-83 (79.2)
<i>moffitti</i> (11)	480-522 (502.8)	144-177 (161.1)	52-68 (57.9)	84-106.5 (93.9)	76.5-92.5 (83.5)

Female

Subspecies	Wing (chord)	Tail	Exposed culmen	Tarsus	Middle toe without claw
<i>B. hutchinsii</i> <i>minima</i> (11)	332-371 (353.5)	97-117 (104.2)	26.5-32.5 (28.2)	58-70 (65.7)	47-58 (50.9)
<i>asiatica</i> (1)	373	128	33	71	54
<i>hutchinsii</i> (7)	350-381 (365.5)	116-117 (116.6)	31-32.8 (31.6)	65-68.5 (67.4)	52-55.5 (54)
<i>B. canadensis</i> <i>leucopareia</i> (22)	384-422 (400.3)	110-140 (124.5)	33-42 (37.3)	69-82 (73.4)	53-64.5 (58.6)
<i>parvipes</i> (2)	410-423	123-135	36-45.5	73-82	57.5-67
<i>occidentalis</i> (6)	437-471 (448.5)	139-152.5 (144.1)	44.5-50.0 (48.4)	84-92 (89.1)	72.5-79 (76.4)
<i>interior</i> (10)	427-467 (445.5)	133-155 (145.4)	45-53 (49.7)	76-90 (83.6)	68-76 (71.5)
<i>canadensis</i> (7)	435-488 (465)	134-158 (147.3)	51.5-56.5 (53.9)	81-88.5 (85.9)	72.5-80 (76.1)
<i>moffitti</i> (6)	435-503 (474.3)	121-166 (141.8)	50-61 (54.8)	85-93.5 (89.6)	76-84.5 (80.1)

* The measurements of immature specimens (detected by the plumage criteria described by Elder, 1946:98) were omitted from these tables.

† Figures in parentheses after the subspecies name indicate the number of specimens measured.

are somewhat larger than those of his Cape Dorset birds, and could have included some specimens of *leucopareia*.

B. c. leucopareia intergrades with *parvipes* in western Mackenzie. A specimen from Fort Simpson, Mackenzie, which is the type of *Bernicla barnstoni* Ross (1862), is referable to *parvipes*, as is also a specimen from the site of Old Fort Hope, 100 miles below Good Hope, Mackenzie. On the other hand, a breeding specimen from Great Bear Lake seems referable to *leucopareia*. In other words, *parvipes* is the interior, pale, representative of *leucopareia*.

The very much greater geographical range of *leucopareia* as compared with that of *parvipes* is further shown by the great preponderance of migrant specimens of the former race in collections. Although relatively few migrant specimens of *parvipes* have been examined, they are from extremely widely separated localities, as may be seen from the appended list of specimens.

Migrations.—From specimens of migrant geese and from bird-banding returns it would seem that there is considerable fanning out and crossing over by the various races during migration, as well as a distinct northward movement of Great Basin breeding birds. Although the summer residents of the Maritime region (*B. c. canadensis*) seem to remain fairly close to the Atlantic coast in migration, many birds of the Hudson Bay region (*B. c. interior*) cross to the Atlantic coast while others proceed down the Mississippi Valley. In fact, a big majority of the geese banded at the Mattamuskeet National Wildlife Refuge, on the coast of North Carolina, came from Hudson Bay, as indicated by both specimens and banded birds. All of the New England banded birds, however, were recaptured in the Maritime region and are therefore *B. c. canadensis*. Since *B. c. interior* has been found on the Atlantic coast only from Maryland southward it is apparent that the crossover occurs south of New England.

Another crosswise movement is found in *B. c. moffitti*. There are even extensive post-breeding northward movements of this race. There are records of breeding geese of Great Salt Lake, Utah, being retaken in December at Platte, South Dakota; and of breeding geese of Los Banos, California, being retaken at Scapa, Alberta, in October; of breeding geese of Great Salt Lake retaken at Brooks and Rocky Rapids, Alberta; of a goose from Voltage, Oregon, retaken at Del Bonita, Alberta; and of a goose from Burns, Oregon, retaken at Grand Prairie, Alberta.

Apparently *Branta canadensis occidentalis* and *Branta hutchinsii minima* confine themselves rather closely to the Pacific coast of North America in migration, the latter wintering chiefly in the interior valley of California (Swarth, 1913), although individuals wander to the Hawaiian Islands (for example, the type specimen of "*Bernicla munroii*," which, I find, is a typical example of *B. h. minima*). *Branta c.*

leucopareia, as might be expected from its almost transcontinental breeding range, is found in migration from the Atlantic to the Pacific coast, but is particularly numerous from the Central Flyway westward.

Because of the paucity of records, we know much less about the migrations of the Athabaska Canada goose, *Branta canadensis parvipes*, and of the Hutchins cackling goose, *Branta hutchinsii hutchinsii*. On the whole, they both appear to follow chiefly the Central Flyway to New Mexico and Mexico. Occasionally they reach the Atlantic seaboard, and there are specimens of *hutchinsii* from as far west as Solomon, Alaska, and Klamath Falls, Oregon.

LIST OF SPECIMENS EXAMINED

Branta hutchinsii minima, Alaskan Cackling Goose.—*Alaska*: Attu Island, 1 ♀; Hooper Bay, 1 ♀, 1 ?; Kotlik (mouth of Yukon), 1 ♂, 1 ♀; Nushagak, 1 ♂; Nushagak (Bear River), 1 ♀; Point Constantine, 2 ♀; St. Michael, 1 ♂, 2 ♀, 1 ?; St. Paul Island, 1 ♂ im. *California*: Gridley, 1 ♂, 2 ♀; Stockton, 1 ♀, 1 ?; Tule Lake, 1 ♀ im.

Branta hutchinsii asiatica, Asiatic Cackling Goose.—*Siberia*: Bering Island, 3 ♂, 1 ♀, 1 ? (head only).

Branta hutchinsii hutchinsii, Hutchins Cackling Goose.—*Alaska*: Solomon, 1 ♂ im.; *Illinois*: Andalusia, 1 ? im.; Chicago, 1 ?. *Iowa*: Whiting, 1 ♀; Wolf Creek Slough, 1 ♀. *Mexico, Chihuahua*: Guzman, 1 ♀ im.; *Jalisco*: La Barca, 1 ♂ im. *Nebraska*: Wood River, 1 ?. *Nevada*: Washoe Lake, 1 ? im. *North Carolina*: Crow Island, 1 ♂ im.; Fairfield, 1 ?; Lake Mattamuskeet, 1 ♂ im. *North Dakota*: Lac-aux-Morts, 1 ♂. *Northwest Territories, Franklin*: Baffin Island, 1 ♀; Baffin Island (Camp Dorset), 1 ♂; Baffin Island (Camp Kungovik), 2 ♂, 3 ♀; Melville Peninsula, 1 ♂. *Keewatin*: Southampton Island (Ranger Brook), 1 ♂. *Oklahoma*: Kiowa Agency (4 mi. from, on Wachita River), 1 ♀. *Oregon*: Klamath Falls, 1 ♀ im.

Branta canadensis leucopareia, Lesser Canada Goose.—*Alaska*: Agattu, 1 ♂; Barter Island, 1 ♂; Chogiung, 1 ♀ (head only); Egushik River, 1 ♂; Fort Kenay, 1 ?; Kotlik, 1 ♂; Kuskokwim River (North Fork, base Mt. Sishwoo), 1 ♂; Nulato, 1 ♂; Nulato River, 2 ♂; Nushagak, 1 ♀; Nushagak River (80 mi. up), 1 ♂; Old Crow River (mouth Black Fox Creek), 1 ♀; Putnam River, 2 ?; St. Michael, 1 ?; St. Paul, 1 ?; Tanana Crossing, 1 ♂, 1 ♀, 1 ?; Tanana Crossing (15 mi. below), 1 ♂. *British Columbia*: Puget Sound (Semiahmoo Camp), 1 ♂, 1 ?. *California*: Gridley, 1 ♂, 4 ♀; San Francisco, 1 ?; Stockton, 1 ?; Locality ?, 1 ?. *Florida*: St. Marks River (Wakulla County), 1 ♀. *Illinois*: Chicago, 1 ♀ im., 1 ?. *Iowa*: Sloan, 1 ♂; Sloan (near), 1 ♂. *Minnesota*: Red River, 1 ?. *Nebraska*: Platte River (Elm Creek), 4 ♀, 1 ?; Wood River, 2 ♂, 4 ♀, 1 ♀ im. *Nevada*: Stillwater (3 mi. N.), 1 ♀; Washoe Lake, 1 ♂. *New Mexico*: San Antonio, 1 ? im. *Northwest Territories, Franklin*: Baffin Island (west coast), 2 ♂;

Dolphin and Union Strait (between Franklin and Mackenzie), 1 ♂; Victoria Island (Walker Bay), 1 ♀. *Keewatin*: Kazan River (lower), 1 ♀ im. *Mackenzie*: Cape Fullerton (Hudson Bay), 1 ?; Franklin Bay (island in), 1 ♀; Great Bear Lake, 1 ♂; Thelon River (The Gap), 1 ♂. *Yukon*: Herschel Island (Mackenzie Bay), 2 ♀; International Boundary and Arctic Circle, 1 ?; Old Crow River, 1 ♀; Old Crow River (Timber Creek), 1 ♂, 1 ♀; Old Crow River (Timber Creek, 15 mi. above), 1 ♀. *Oregon*: Silver Lake, 1 ♀. *Siberia*: Bering Island, 1 ♀. *South Dakota*: Vermillion, 1 ♂. *Virginia*: Neabsco, 1 ? . *Washington*: Kiona, 1 ♂. [*Washington*]: Camp Lopez, 1 ♀; Columbia River, 1 ?.

Branta canadensis parvipes, Athabaska Canada Goose.—*Alberta*: Athabaska River (near Sled Island), 1 ♂ im.; Egg Lake (15 mi. N. W. Fort Chipewyan), 1 ♂; Lake Athabaska (Goose Island), 1 ♂, 1 ♀. *Georgia*: Brady County, 1 ♀. *Manitoba*: Steel River (2 miles below mouth Fox River), 1 ♂ juv. *Mexico, Veracruz*: Locality ?, 1 ? . *Nevada*: Camp 26, 1 ♂; Truckee Meadows (Camp 26), 1 ♂. *New Mexico*: Rio Rita (near Laguna), 1 ? . *North Carolina*: Currituck Sound, 1 ? . *Northwest Territories, Mackenzie*: Fort Simpson, 1 ♂; Hope (100 mi. below Good Hope; site of old Fort Hope), 1 ♂.

Branta canadensis occidentalis, Pacific Canada Goose.—*Alaska*: Chichagof Island (Hoonah Sound), 1 ♂, 1 ♀; Gustavus Point, 1 ♂; Juneau, 1 ♂; Keku Pass, 2 ♂, 2 ♀; Prince of Wales Island, 1 ?; Sergif Island (mouth Stikine River), 1 ♂; Stikine River Flats, 2 ♂, 3 ♀, 1 ? . *British Columbia*: Semiahmoo, 1 ♂. *Washington*: Port Townsend, 1 ?; Puget Sound, 1 ?.

Branta canadensis interior, Interior Canada Goose.—*Alabama*: Leighton, 1 ♀; *District of Columbia*: Washington, 1 ? . *Illinois*: Chicago, 1 ? . *Maryland*: Marlboro, 1 ♂; Seneca, 1 ♂; Upper Marlboro, 1 ? . *Michigan*: Black Lake (Ottawa County), 1 ♀. *Minnesota*: Elk River, 1 ♀, 1 ? . *Mississippi Valley*: Locality ?, 1 ♀. *Nebraska*: Gibbon, 1 ♂; Platte (Elm Creek), 1 ♂; Wood River, 1 ♂, 1 ? . *North Carolina*: Currituck Sound, 1 ♀, 4 ?; Poplar Branch (Pine Island), 1 ? . *Ontario*: Belcher Islands (Tukarak Island), 2 ♀; Hudson Bay (Povungnituk), 1 ♀; Point Pelee, 1 ?; St. James Bay (Nattahisha Point), 1 ♀ im. *Pennsylvania*: Carlisle, 1 ♂. *Quebec*: Fort George (east side James Bay), 1 ?; Hudson Bay (Nastapoka River, 5 mi. S.), 1 ♂; Port Harrison, 2 ♂; St. Augustine (Portneuf), 1 ♂. *South Dakota*: Aberdeen, 1 ♂. *Texas*: Houston, 1 ♀, 1 ?; Lavaca Forks, 1 ♂. *Virginia*: Buckingham County, 1 ♀.

Branta canadensis canadensis, Eastern Canada Goose.—*Maine*: Merrymeeting Bay, 1 ♂ im. *Maryland*: Ewell, 1 ♂. *Michigan*: Schoolcraft County (Waterfowl Refuge), 1 ♂. *Newfoundland*: Addies Pond, 1 ♀; Humber River (upper), 1 ♂, 1 ♀. *North Carolina*: Avon,

1 ♂; Nanteo (Pea Island), 1 ♂, 5 ♀; Pea Island, 2 ♂. *Rhode Island*: Lake Worden, 1 ♂. *Virginia*: Back Bay (Princess Anne County), 2 ♀; Uptonburgh, 1 ♀ im.

Branta canadensis moffitti, Basin Canada Goose.—*British Columbia*: Big Salmon River, 1 ♀. *California*: Bodega, 1 ♀; Brownell, 1 ♂; Camp Bidwell, 1 ♀. *Missouri*: Macon, 1 ♂; *Montana*: Crooked Falls, 1 ♂. *Nebraska*: Wood River, 1 ♀. *North Dakota*: Dawson, 1 ♂; Devils Lake, 1 ♀; Glasston (Pemberton County), 1 ♂; Robinson, 3 ♂, 2 ♀; Sweetwater Lake, 1 ♀. *Oregon*: Dary, 1 ♂ im.; Olene, 1 ♀ im. *South Dakota*: Platte, 1 ♂. *Utah*: Bear River Mouth, 1 ♂, 1 ♀ im.; Locality ?, 1 ♀. *Washington*: Blue Lake (near Coulee City), 1 ♂, 2 ♀.

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