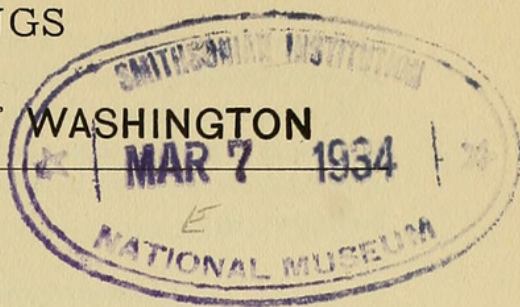


PROCEEDINGS
OF THE
BIOLOGICAL SOCIETY OF WASHINGTONREMARKS ON THE GENUS *LIMNODROMUS* WIED.

BY PIERCE BRODKORB.

Some eighty years ago Bell¹ and Lawrence² separated the dowitcher of western North America from the eastern bird, now known as *Limnodromus griseus griseus* (Gmelin). Up to the present time *Limosa scolopacea* Say has been thought to be the earliest name for this western bird. Comparison of Say's description with specimens, however, shows that his name is a synonym of Gmelin's *griseus*. I quote the distinctive passages, omitting those which might apply to either form:³

"... cheeks, chin, throat, and origin of the breast cinereous; ... tail coverts and tail white fasciate with black, ... breast and belly white; sides spotted and undulated with blackish cinereous; inferior tail coverts with black abbreviated bands, the white prevailing ..."

In this description no mention is made of the prominent bars on the throat and upper breast of the Alaskan bird, while *griseus* often has these parts almost immaculate. The tail and its coverts are said to be black and white as in *griseus*, instead of the black and deep cinnamomeous of the Alaskan bird. The sides are spoken of as spotted and undulated, which is exactly the case in *griseus*, but not so in the Alaskan bird. *Griseus*, too, often has the lower breast and belly white in spring, while the Alaskan bird seldom does.

Say gives the bill length as $2\frac{3}{4}$ inches, a measurement about one millimeter longer than any I have obtained for *griseus*. This small discrepancy may be accounted for by a different method of measuring the bill, or perhaps the measurement was inaccurately taken.

It is evident that Say was unacquainted with *Scolopax grisea* Gmelin, for he was so struck by the characters of his bird that he proposed to erect a new genus for it.

When these facts are considered, together with the apparent scarcity of the Alaskan form in Iowa, whence came Say's type, it seems clear that the

¹Bell, Ann. Lyc. Nat. Hist. N. Y., V, 1852, 1.

²Lawrence, *ibid.*, 4.

³Say, in Long's Exped. Rocky Mts., I, 1823, 170.

bird Say described was a spring example of *Limnodromus griseus griseus* of the extreme type in which the breast is almost without markings.

Scolopax longirostris Bell is merely a new name for *Limosa scolopacea* Say and must therefore also apply to *Limnodromus griseus griseus*. The form of dowitcher breeding in Alaska is thus left without a valid name. It may be known as

***Limnodromus griseus fasciatus*, subsp. nov.**

Type.—Female adult, "shot by nest," no. 3693, collection of H. B. Conover; Hooper Bay, Bering Sea, Alaska; June 9, 1924; H. B. Conover, original no. 879.

Wing (flat), 149 mm.; tail, 57 mm.; culmen, 74.5 mm.; tarsus, 40 mm.; middle toe with claw, 31.2 mm.

Characters.—Similar to *Limnodromus griseus griseus*, but wing averaging slightly shorter; culmen, tarsus, and middle toe averaging longer.

Summer adults with throat and usually chin flecked with dusky, the marks becoming extended posteriorly to form well-defined transverse bars on upper breast; sides of breast and usually under tail-coverts barred with black; general color of lower parts, including under tail-coverts, vinaceous cinnamon,⁴ the white tips of the feathers larger in the same stage of wear; light bars of central rectrices and upper tail-coverts oftener cinnamonaceous, usually orange-cinnamon; cinnamonaceous markings of tertials, scapulars, and interscapulars deeper, often orange-cinnamon.

Winter adults with throat and breast brokenly barred with darker; under tail-coverts and sides of breast usually barred.

Juvenals with ochraceous below usually duller; cinnamonaceous markings of upper parts deeper, between vinaceous-tawny and orange-cinnamon; under tail-coverts often barred.

Remarks.—Of this race 65 specimens have been examined from the following localities:

Alaska: Hooper Bay, 4; Izembek Bay (Moffet Cove), 1; Kashunuk River, 30 miles from coast, 1; Nome, 3.

Alberta: Beaverhills Lake, 4.

Bahama Islands: Inagua (Mathews Town), 2.

British Columbia: Chilliwack, 2; Sumas Lake, 2.

California: Kern County (Buena Vista Lake), 1; Los Angeles County (Playa del Rey), 1; Monterey County (Monterey), 2; Orange County (Anaheim Landing), 1; Ventura County (Point Mague), 1.

Costa Rica: Guanacaste (Punta Piedra), 1.

Florida: Amelia Island, 1; Banana Creek, 1; Cape Sable, 1; Indian River, 2; Kissimmee Lake, 2.

Georgia: McIntosh County, 1.

Illinois: Marshall County (Swan Lake), 1.

Iowa: Hancock County (Britt), 1.

Louisiana: Cameron Parish, 2.

Lower California: San José del Cabo, 2.

⁴Colors compared with Ridgway, Color Standards and Color Nomenclature, 1912.

Nebraska: Lincoln, 1.

New Mexico: Dona Ana County (San Miguel), 3.

New York: Suffolk County (Good Ground), 1.

Saskatchewan: Moose Jaw District (Lake Johnston), 5.

South Dakota: Vermilion, 1.

Texas: Brownsville, 3; Indianola, 2; Mesquit Bay, 1; Seadrift, 1; Tivoli, 1.

Utah: Ogden, 1.

Washington: Pierce County (Puyallup), 2.

Wisconsin: not further specified, 1.

Locality not specified, 2.

Prof. William Rowan has lately treated this bird as a distinct species.⁵ Contrary to his statement, however, intermediates between *fasciatus* and *griseus* are by no means rare. Over twenty individuals of the series examined in the present connection are not typical of either race. Some few, in fact, are so intermediate that it is very difficult to say to which form they are closer. Not having seen breeding birds from Yukon and Mackenzie, I am unable to state just where the area of intergradation is. Six spring intermediates from Kuiu Island, southeastern Alaska, however, give weight to the supposition that the Mackenzie Valley is the meeting-ground of the two races.

***Limnodromus griseus griseus* (Gmelin).**

[*Scolopax*] *grisea* Gmelin, Syst. Nat., I, pt. ii, April 20, 1789, 658 ("in *Noveboraci maritimis*").

[*Scolopax*] *noveboracensis* Gmelin, Syst. Nat., I, pt. ii, April 20, 1789, 658 ("in *Noveboraci maritimis*").

[*Scolopax*] *nutans* Gmelin, Syst. Nat., I, pt. ii, April 20, 1789, 659 ("in littore Labrador").

[*Scolopax*] *cayennensis* Gmelin, Syst. Nat., I, pt. ii, April 20, 1789, 661 ("in Cayenna").

[*Tringa*] *noveboracensis* Gmelin, Syst. Nat., I, pt. ii, April 20, 1789, 673 ("in Noveboraco").

Scolopax leucophæa (nec Latham) Vieillot, Nouv. Dict. d'Hist. Nat., III, 1816, 358.

Totanus ferrugineicollis Vieillot, Nouv. Dict. d'Hist. Nat., VI, 1816, 401 (new name for *Scolopax noveboracensis* Gmelin).

Scolopax paykullii Nilsson, Orn. Sueica, II, 1821, 106, pl. 11.

Limosa scolopacea Say, in Long's Exped. Rocky Mts., I, 1823, 170 ("near the Bowyer creek" = near Council Bluffs, Iowa).

Macrorhamphus punctatus Lesson, Traité d'Orn., 1831, 556 (New York).

Scolopax longirostris Bell, Ann. Lyc. Nat. Hist. N. Y., V, 1852, 3 (new name for *Limosa scolopacea* Say).

[*limnodromus*] *griseus hendersoni* Rowan, Auk, XLIX, no. 1, January 4, 1932, 22 ("Devil's Lake, Alta.").

Characters.—Similar to *Limnodromus griseus fasciatus*, but wing averaging slightly longer; culmen, tarsus, and middle toe averaging shorter.

⁵Rowan, Auk, XLIX, no. 1, Jan. 4, 1932, 14.

Summer adults with chin and throat usually immaculate; breast pinkish cinnamon spotted with black (sometimes almost immaculate), the white tips of the feathers narrower, the cinnamomeous sometimes extending to abdomen and under tail-coverts, but these often white; under tail-coverts and sides of breast spotted, the flanks alone being barred, the bars usually less well-defined; light portion of central rectrices and upper tail-coverts often white, never deeper cinnamomeous than pinkish cinnamon or vinaceous-cinnamon; light edgings of scapulars and tertials also paler, cinnamon-buff to vinaceous-cinnamon.

Winter adults with lower neck and breast usually (?) streaked with darker; sides of breast spotted or irregularly vermiculated; under tail-coverts usually spotted.

Juvenals with ochraceous below usually brighter; light edgings of tertials and scapulars paler, clay color or cinnamon-buff; under tail-coverts usually spotted.

Remarks.—Of this race 121 specimens have been examined from the following localities:

Alaska: Kuiu Island (Three-mile Arm, migrants), 6.

Alberta: Beaverhills Lake, 3; Edmonton (7 miles west), 2; Fawcett, 5; Fort Assiniboine, 2; La Saline, 2.

Bahama Islands: Andros, 1.

Brazil: Maranhão (Magunça Island), 2.

British Columbia: Sumas Lake, 2.

California: Contra Costa County (El Cerrito), 2; Humboldt County (Eureka), 1; Los Angeles County (Playa del Rey), 1; Santa Barbara County (near Goleta), 3; Ventura County (Point Mague), 1.

Costa Rica: Guanacaste (Punta Piedra), 9.

Florida: Amelia Island, 1; Banana River, 1; Caximbas, 1; Pilot Town, 1.

Georgia: McIntosh County, 3.

Illinois: Cook County (Hyde Lake), 9; Illinois River, 1; Lake County (Beach, 2; Deerfield, 1).

Indiana: Lake County (Miller), 1.

Iowa: Burlington, 1; Marshalltown, 1; Swan Lake, Johnson County, 2.

Lower California: San José del Cabo, 4.

Massachusetts: Barnstable County (Chatham, 1; East Orleans, 10; Great Island, 2; Monomoy Island, 1); Plymouth County (Marshfield), 1.

Minnesota: Lac qui Parle County, 1.

New Jersey: Barnegat Inlet, 1.

New York: Cayuga Lake, 1; Good Ground, 1; Long Beach, 1; South Oyster Bay, 1.

Rhode Island: Middletown, 1; Perme, 1.

Saskatchewan: Osler, 1.

South Carolina: Charleston, 2; Copahee Sound, 6; Frogmore, 3; Sullivan's Island, 2.

South Dakota: Vermilion, 1.

Texas: Brownsville, 1; Corpus Christi, 2; Nueces, 2.

Virginia: Cobbs Island, 3.

Wyoming: near Cheyenne, 1.

Locality not specified, 2.

I can find nothing to substantiate the recently described *Limnodromus griseus hendersoni* Rowan. There is every possible variation between the characters attributed to this bird and "typical" *griseus*. Breeding birds from Alberta differ so much among themselves that it is impossible to distinguish them, either by color or by size, from Atlantic coast birds. The white belly appears to be a character of one-year old birds or those not in full plumage and would seem to be of no geographical significance. It is, moreover, in the light of all past evidence, very unlikely that any form of dowitcher breeds regularly east of Hudson Bay, a condition which leaves true *griseus* (so-called) without a breeding range. *Limnodromus griseus hendersoni* Rowan thus becomes a synonym of *Limnodromus griseus griseus* (Gmelin).

From the specimens listed above it will be seen that this race is quite common on migration along the California coast.

***Limnodromus semipalmatus* (Blyth).**

M[acrorhamphus] semipalmatus "Jerdon," MS., Blyth, Journ. Asiat. Soc. Bengal, new ser., XVII, pt. i, no. 15, March, 1848, 252 ("Calcutta bazar").

Micropalama tacksanowskia Verreaux, Rev. et Mag. de Zool., 2nd ser., XII, May, 1860, 206, pl. 14 ("la Daourie").

Remarks.—Of this species five specimens have been examined from the following localities:

China: Chihli (Peitaiho), 2.

Siam: Bang Hia, 3.

If *semipalmatus* is excluded from *Limnodromus* and placed in *Pseudoscolopax* Blyth, as has recently been done,⁶ we have two monotypic genera instead of one genus containing two species. The only structural character by which the two "genera" may be separated is the web between the inner and middle toes of *semipalmatus*, which is absent in *griseus*. In juvenal and winter plumages the two birds are very similar. For these reasons it seems best to consider the web of *semipalmatus* as a good specific character, rather than of generic value.

For the loan of material used in the present connection I am indebted to Mr. H. B. Conover and Mr. John E. Thayer, and to the authorities of Coe College, Field Museum of Natural History, the Museum of Comparative Zoology, the Museum of Vertebrate Zoology, the University of Illinois, and the University of Iowa. My thanks are also due Dr. Witmer Stone and Mr. J. T. Zimmer, who gave information about the nomenclatural status of *Scolopax longirostris* Bell.

⁶Ridgway, Bull. U. S. Nat. Mus., no. 50, pt. viii, 1919, 146, note.

TABLE OF MEASUREMENTS
(in millimeters).

	WING			TAIL			CULMEN			TARSUS			MIDDLE TOE, WITH CLAW		
	Min.	Max.	Av.	Min.	Max.	Av.	Min.	Max.	Av.	Min.	Max.	Av.	Min.	Max.	Av.
<i>Males.</i>															
2 adults (<i>semipalmatus</i>)	162.	168.	165.0	62.0	63.2	62.6	79.0	81.2	80.1	48.5	53.2	50.9	35.0	36.2	35.6
36 adults (<i>fasciatus</i>)	137.	155.	143.9	47.0	59.8	54.3	57.0	68.0	61.7	33.0	43.8	38.2	29.4	35.0	31.5
46 adults (<i>griseus</i>)	136.	158.	145.5	46.5	58.5	54.0	54.4	62.5	56.4	33.0	39.2	36.2	27.3	32.5	30.0
<i>Females.</i>															
1 adult, 2 juvenals (<i>semipalmatus</i>)	161.	174.	168.5	56.5	62.8	60.4	75.0	90.0	80.7	47.6	51.5	49.4	34.1	34.3	34.2
23 adults (<i>fasciatus</i>)	141.	145.	146.3	47.5	59.2	54.4	65.9	78.0	72.1	33.9	43.2	40.7	30.0	35.3	32.7
50 adults (<i>griseus</i>)	141.	159.	148.8	49.0	61.0	54.4	57.0	68.0	63.5	33.0	41.5	37.8	28.5	34.0	31.0



Brodkorb, Pierce. 1933. "Remarks on the genus *Limnodromus* Wied." *Proceedings of the Biological Society of Washington* 46, 123–128.

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