

grisea and said to inhabit the U. States which somewhat resembles the present in its markings, but upon comparison they will be found specifically distinct.

“John K. Townsend, Philad.
Sept. 27th, 1833.”

[Superscribed]
“John James Audubon Esq.”

ANNOTATED LIST OF THE WATER BIRDS OF WELD,
MORGAN AND ADAMS COUNTIES, COLORADO,
SOUTH TO THE FIRST SECTIONAL LINE BE-
LOW THE FORTIETH PARALLEL.

BY A. H. FELGER.

With Three Maps.

EASTERN Colorado has come to rank prominently as a section of our country where water birds, waders, and shore birds may, in suitable localities, be found in abundance. This is attributable in the main to two complementary causes, (1) the close settling of the Mississippi Valley with the attendant drainage of the sloughs and marshes of that region, (2) the construction on the eastern slope of Colorado of great numbers of reservoirs, or artificial lakes, for the purpose of storing water for irrigation. From these reservoirs there extend in all directions through the surrounding farm lands net-works of irrigating ditches, producing luxuriant growths of alfalfa, grains, weeds, and wild grasses, which in turn afford most excellent feeding and breeding grounds for many species. About a great many of the reservoirs, too, has grown dense vegetation consisting of deep borders of sedges, cattails, and rushes, which furnish much desired protection both in and out of breeding season.

This section is, moreover, cut by numerous streams, which collect the melting snow from the eastern mountain slopes and start it on its journey to the Gulf of Mexico. Many of the smaller of these streams, it is true, are dry during the summer, but in the spring, when the northern flight of birds is at its height, their banks in many

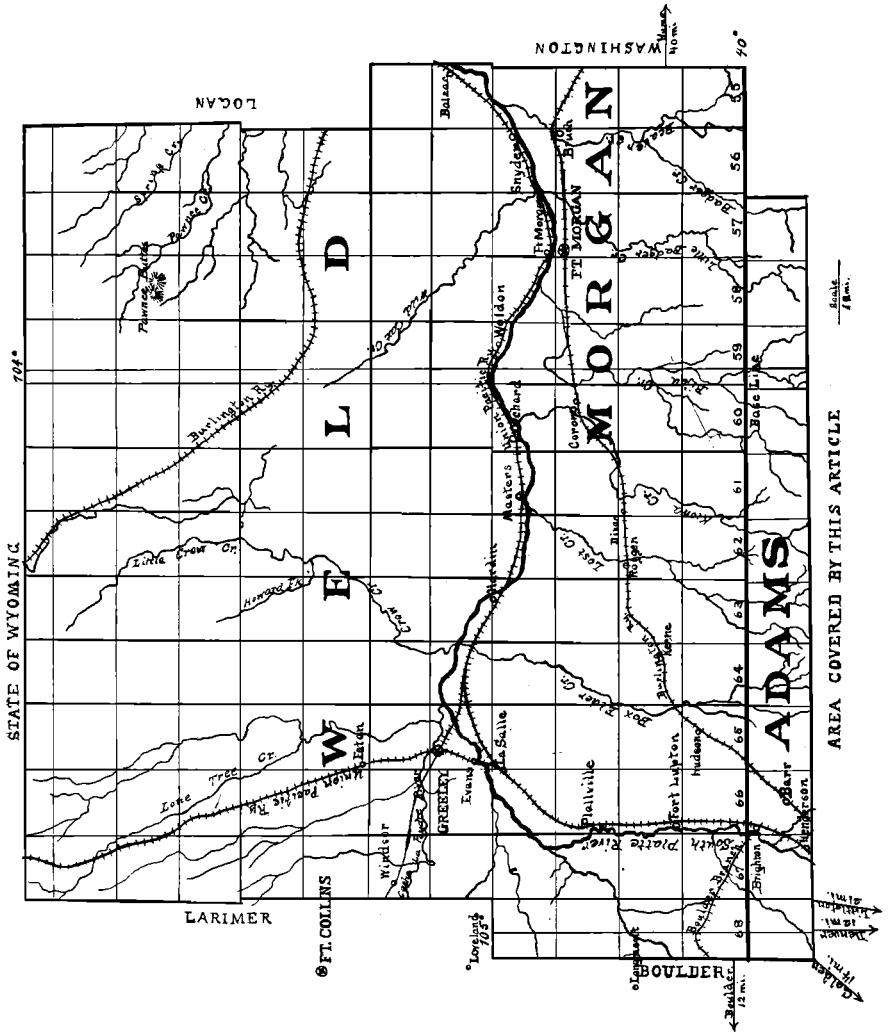
instances are overflowed, causing great areas to be flooded, and furnishing thereby most desirable localities in which water-loving species may pause awhile in their journey. On the other hand, a goodly number of the larger streams, like the Arkansas, South Platte, etc., carry water the year around, and receiving the drainage from the cities along their courses, bear upon their surfaces the cannery and factory waste products, many of which are eagerly sought out by these birds for food.

The area covered by this article occupies a portion of the Eastern Slope very highly adapted to water-frequenting birds; it contains many artificial lakes of large size, is intersected by many irrigating ditches, contains numerous fields of alfalfa and the various grains, and receives via the Platte River all the refuse products of the factories and canneries of Denver. Its elevation varies from 4000 feet to 7000 feet. The hunting and fishing privileges of nearly all the lakes and reservoirs within it are held by gun clubs under leases covering hunting and fishing only. With many of these clubs shooting on the lakes is permitted only during certain days of each week of the hunting season. Whether shooting is permitted on other days of the week, or not, nearly all the clubs are uniform in allowing it on Saturdays and Sundays. As a result, on Saturday afternoons, from the towns within or near the area there is a perfect exodus of hunters to the lakes in their outlying districts.

Within this area, 18 miles northeast of Denver on the main line of the Chicago, Burlington, and Quincy Railroad, lies the little village of Barr. Beginning perhaps a quarter of a mile southwest of Barr there extends in a northeasterly direction, mostly on the east side of the above named railway, a chain of artificial lakes constructed for the storage of water for purposes of irrigation. The largest of these, and in fact the feeders of the entire chain, are two lakes known as Barr Lake and Upper Barr Lake, and it is on account of the prominence of these two lakes that I shall speak of this chain as the Barr Lake Chain.

The contents of this article are based in large part upon a systematic study in the field of the birds of the Barr Lake Chain covering, with a few interruptions, the period from 1898 to 1909, exclusive of the year 1906. During these eleven years I have made many trips between this field and Denver, on numerous occasions making

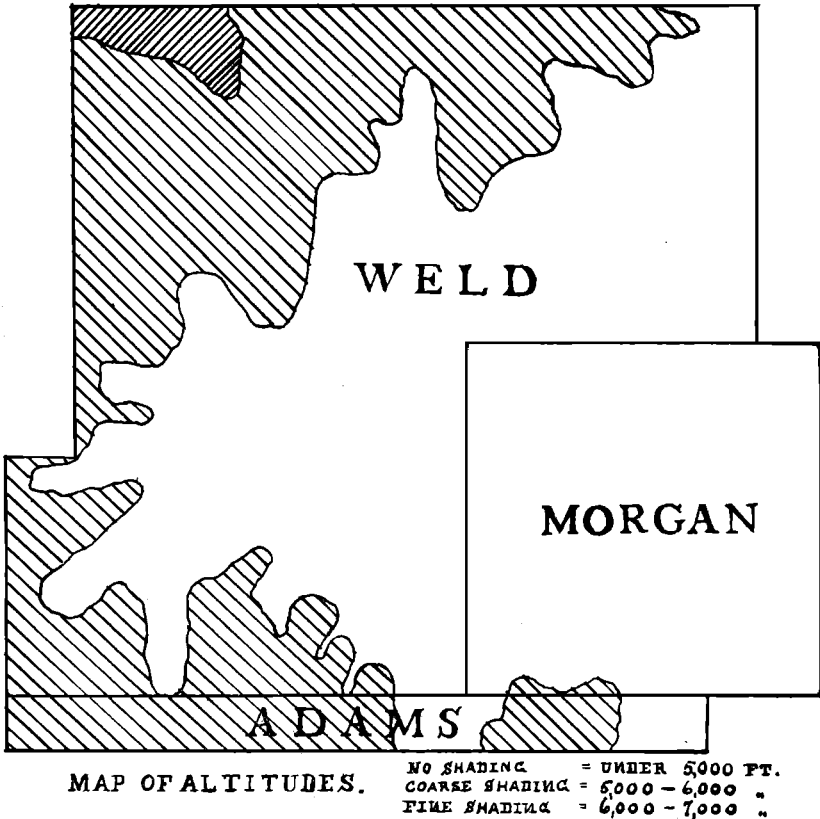
the journey, a distance measured by cyclometer of twenty-five miles by road, on a bicycle, leaving Denver at a very early morning hour



and returning at a very late evening hour. Upon many other occasions the trip has been made by train with a stay of several succes-

sive days on each trip; and upon one occasion the writer rented a house at Barr and took his family there, to be constantly in the field.

Aside from this field work along the Barr Lake Chain, I have, during the past twelve years, including the year 1906, taken many



trips down the Platte River and to other lakes within this area, collecting and taking notes for the list which is now submitted.

In order to give to my readers, especially to those students of ornithology living in proximity to this chain, an idea of the outlines and sizes of these lakes, together with the character of their borders,

I present herewith a detailed map containing measurements personally made. These measurements represent in each case the size of the body of water at the average high water line. They are not assumed to be absolutely accurate, but sufficiently accurate for all ornithological purposes. In taking these measurements I first of all established base lines, then with the aid of a compass I projected upon these base lines the points marking the extreme limits of the lengths and breadths of the several lakes, and stepped off the distances between these projected points. The extreme points of the lakes having thus been established, I sketched in their outlines as best I could from observation while on the ground.

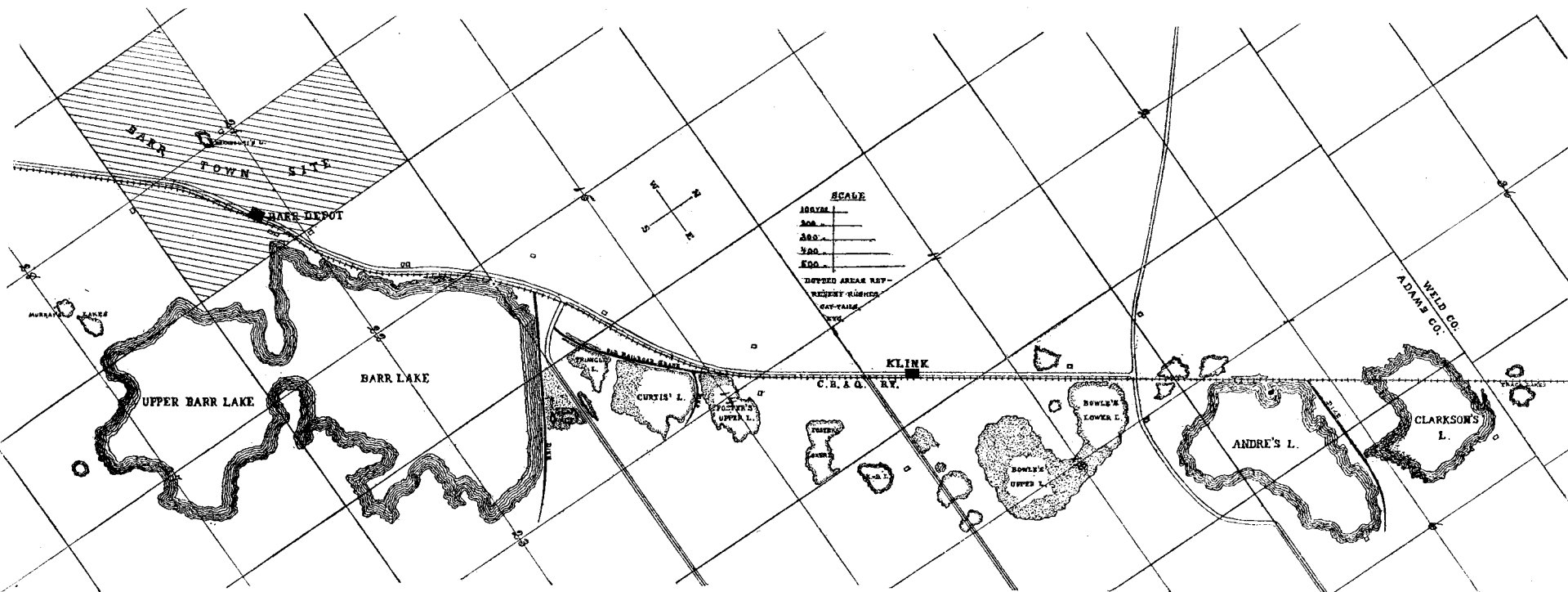
I have included in these notes the earliest and latest dates known to me, of the occurrence of the various species within or adjacent to this area. It is not to be presumed that these dates represent in all cases the extreme periods in which specimens may be found; they are given to serve as a basis for future observations.

Realizing the value to the ornithological student in his field work in any given area of being familiar with the records of species not yet discovered in said area, but noted in adjoining areas, I have deemed it advisable to introduce herein an hypothetical list with notes appertaining thereto.

I have aimed to give proper credit where due by adding the name of the informant wherever a record not my own is used, and I desire in this connection to express my gratitude to those whose names are herein mentioned, for helpful notes.

[1. *Æchmophorus occidentalis*. WESTERN GREBE.—Straggler, rare in adjoining and near-by areas. (Oct. 25-Nov. 9.) A western species found only six times to date east of the range in Colorado: at Sloane's, Marston's, and Tynon's lakes near Denver, reported by H. G. Smith (Nid., III, 1896, p. 48.); at Sheldon's Lake, near Fort Collins, reported by W. W. Cooke (Birds of Colo., p. 191); at Citizen's Lake, near Denver, reported by A. H. Felger (Auk, XXVI, 1909, p. 86). From these near-by records it seems probable that this species will yet be found in the area covered by this article.]

[3. *Colymbus auritus*. HORNED GREBE.—Migrant, very rare in near-by area. (Oct. 8, only date known.) Only three apparently unquestionable records to date for the eastern slope of the State, one at Fort Lyon, the other two at Golden. (Birds of Colo., pp. 49, 155.) All these birds were observed at points south of this area, and since it is a northern species coming south in the winter, it should be found here.]



SKETCH MAP OF THE BARR LAKE CHAIN.

4. **Colymbus nigricollis californicus.** AMERICAN EARED GREBE.— Summer resident; very common locally. (April-Oct. 22.) Breeds in considerable numbers all along the Barr Lake Chain. Begins laying in latter part of April or first part of May. The writer has found by May 19 sets of as many as eight and nine eggs advanced in incubation. In all of the sets incubation had at least begun, but in the majority it was from one fourth to three fourths complete.

6. **Podilymbus podiceps.** PIED-BILLED GREBE.— Summer resident; very common locally. This species is usually found associated with the former, and in many cases in almost equal, if not equal, numbers. The remarks made in regard to the former species will apply equally to this species.

7. **Gavia immer.** LOON.— Migrant; rather rare. (March ?, April 15-May 7; Sept. 18-about Dec. 1.) Seen oftener in fall than in spring, usually in ones or twos, but the writer has one record of five in a flock. George C. Welch shot one on the Barr Lake Chain, and the writer has two that were shot by B. T. Ames in the same locality. Of the nineteen records that the writer has for this area and adjoining and near-by areas, fourteen are noted for the fall.

[8. **Gavia adamsi.** YELLOW-BILLED LOON.— Migrant; very rare in adjoining area. (May 25, only date.) One specimen, the only record for Colorado, was taken by W. G. Smith, May 25, 1885, near Loveland. (Birds of Colo., p. 155.)]

[37. **Stercorarius parasiticus.** PARASITIC JAEGER.— Migrant; very rare in adjoining localities. (Fall to early winter.) There was one in the Maxwell collection, taken at Boulder in December of some year prior to 1874; reported by Cooke. (Birds of Colo., p. 50.) H. G. Smith reports one at Sloan's Lake in the fall of 1889. (Nid., III, 1896, p. 48.)]

[40. **Rissa tridactyla.** KITTIWAKE.— Migrant; very rare in adjoining and near-by areas. (December, only month recorded.) One, the only specimen for Colorado reported to date, was in the Maxwell collection and was taken at Boulder in December; reported by Cooke. (Birds of Colo., p. 50.) Rudolph Borchardt, a Denver taxidermist, stated to me on Feb. 3, 1906, that he had received one or two of this species to mount during his residence in this city.]

[49. **Larus occidentalis.** WESTERN GULL.— Straggler from the West; very rare in adjoining area. (September, only month reported.) One taken by Prof. Wm. Osburn, at Loveland, Sept. 30, 1889; reported by Cooke. (Birds of Colo., p. 50.)]

51. **Larus argentatus.** HERRING GULL.— Migrant; rather uncommon. (March-December.) As a rule associated in small numbers with Ring-billed Gulls, but sometimes in small flocks by themselves. Eight birds is the most that I have ever seen together here. One may expect to see an occasional specimen at any time when the Ring-bills may also be found.

[53. **Larus californicus.** CALIFORNIA GULL.— Straggler from the West; very rare in adjoining area. (May, only month reported.) One taken by Prof. Wm. Osburn, at Loveland, May 7, 1890. (Birds of Colo., p. 51.)]

54. **Larus delawarensis.** RING-BILLED GULL.— Common in migration and in summer, but not known to breed. (About March 10—about November 15.) Flocks of from five to seventy-five may be noted in mid-summer at almost any time along the Barr Lake Chain.

[58. **Larus atricilla.** LAUGHING GULL.— Migrant; very rare in near-by district. (December, only month recorded.) Colorado's only record is that of a specimen taken at Sloan's Lake, Denver, in December, 1889, and reported by H. G. Smith. (Nid., III, 1896, p. 48.)]

[59. **Larus franklini.** FRANKLIN'S GULL.— Migrant; rare in adjacent and near-by localities. (May 8; about November 12.) One taken by W. G. Smith, at Loveland, and one reported by A. W. Anthony as having come from near Denver; both recorded by Cooke. (Birds of Colo., p. 51.) Hugo Todenwarth, a Denver taxidermist, reports that on November 13, 1902, he received from W. H. Englesole one of this species in the flesh to mount. Miss Jennie M. Patten reports to Judge Junius Henderson that she saw a Franklin's Gull May 8, 1905, near Yuma.]

[60. **Larus philadelphia.** BONAPARTE'S GULL.— Migrant; rare in adjoining and near-by areas. (Fall, and apparently spring also.) Cooke reports that this species has been taken near Fort Collins, and that it is said to be not uncommon locally, adding that nearly all were taken in the fall. (Birds of Colo., pp. 51, 193.)]

[62. **Xema sabinii.** SABINE'S GULL.— Migrant; rare in near-by and adjoining districts. (October 1–December.) Cooke mentions five specimens from Denver, Boulder, Loveland, and Fort Collins, all noted from October to December. He also states that E. L. Berthoud says that these gulls were not uncommon in early days, but have disappeared in late years. (Birds of Colo., pp. 51, 155.) Two of the above are records of H. G. Smith's, one for October 1, and the other bearing no date. (Nid., III, 1896, p. 48.) I have in my collection a young bird presented to me by Hugo Todenwarth. It was shot November 17, 1902, supposedly near Denver; collector unknown to the writer.]

69. **Sterna forsteri.** FORSTER'S TERN.— Summer resident. (April–October 7.) In summer, common locally; more common in migration. Quite a number breed regularly along the Barr Lake Chain upon the lake shores and upon masses of dead, floating cattails and rushes. Have noted flocks of one hundred, or more, in May, and flocks of from thirty to forty through June and July. Have taken sets of eggs on May 19, in none of which was incubation begun.

[71. **Sterna paradisæa.** ARCTIC TERN.— Migrant. (Spring–July 9) Very rare in adjacent and near-by localities. Cooke states that Wm. Osburn has an adult male taken at Loveland July 9, 1889 (Birds of Colo., p. 51.) H. G. Smith states that one was shot near Denver in the spring of 1887. (Nid., III, 1886, p. 48.) There are no other Colorado records.]

77. **Hydrochelidon nigra surinamensis.** BLACK TERN.— Summer resident. (April–October.) Common locally both in summer and in migration. Breeds along the Barr Lake Chain in localities similar to those of Forster's

Terns. Have seen flocks of as high as one hundred twenty-five in May and flocks of from twenty to sixty in June and July.

[120. **Phalacrocorax auritus.** DOUBLE-CRESTED CORMORANT.— Migrant. (March 20-?; about October 1-November 23.) Rare in adjacent and near-by localities. H. G. Smith records a flock of about twenty from Sloan's Lake, one specimen from Marston's Lake, and one from Jones's Lake, all near Denver. He also records one from "about twenty miles from Denver." (Auk, III, 1886, p. 284, and Nid., III, 1896, p. 48.) I have records of one at Bowles's Lake, near Littleton; a flock of four at Rocky Mountain Lake, in Denver; and one shot by H. W. Theden, of Denver, on November 23, 1903, locality unknown. I have no records for this area, but it doubtless has been present in this region.]

121. **Phalacrocorax vigua mexicanus.** MEXICAN CORMORANT.— Migrant. (Only date, October 15.) Very rare. The only specimen taken in Colorado is one recorded by the writer as being in his collection, it having been taken at Smith's Lake, October 15, 1899. (Auk, XVIII, 1901, p. 189.) This lake lies across the Platte River west of Henderson, Adams County, and is, as far as the writer can determine from information at hand, on the boundary line of this area.

125. **Pelecanus erythrorhynchos.** AMERICAN WHITE PELICAN.— Migrant or summer resident. (About April 15-November 22.) Not common in migration; in summer, rare. Not known to breed, but I place it as a possible summer resident from the following note: Mr. Durward Luper, of Evans, Weld County, informs me that during July, 1906, there was a small flock on a reservoir of 200-300 acres, which lies 3-4 miles from Evans. This flock remained there for some time; just how long, or whether before or after July, I do not know. Nearly every season a flock, sometimes large, sometimes small, frequents the Barr Lake Chain. In the spring of 1903 there was a flock of about twenty on Andre's Lake, one of the Barr Lake Chain, and on May 13, 1905, I counted forty-one on Barr Lake.

129. **Mergus americanus.** AMERICAN MERGANSER.— Winter resident. (Nov. 1-March 16.) Not uncommon in winter, more common in migration. Quite a number remain during the winter along the South Platte River, especially in localities down the river from Hardin, where there are sand bars in mid-river. I have found, as Mr. Cook remarks, that the river about Fort Morgan is a favorite place for them. A few frequent, during the winter, lakes in which there is some open water.

130. **Mergus serrator.** RED-BREASTED MERGANSER.— Winter resident. (About same dates as previous species.) In migration, not uncommon; in winter, uncommon. This species is never so common as the former species. It may be found in about the same localities.

131. **Lophodytes cucullatus.** HOODED MERGANSER.— Winter resident. (Oct.-April 1). In migration, common; in winter, not uncommon. A few remain through the winter in same localities as American Merganser. One should see from one to a dozen on almost any day in winter and early spring along the Platte River between Hardin and Fort Morgan.

132. **Anas platyrhynchos.** MALLARD.— Resident. In summer, common; in migration, abundant; in winter common locally. A common breeder along the Barr Lake Chain. A goodly number of this species remain all winter about the lakes with some open water and along the South Platte River. Common on Barr Lake and Upper Barr Lake in winter.

134a. **Anas fulvigula maculosa.** MOTTLED DUCK.— Migrant; rare. (March 15-?; Oct. 10-about Dec. 10.) Cooke refers to but three specimens; one of which was taken by Wm. Osburn near Loveland, and the other was reported by H. G. Smith as presumably coming from Colorado. Aside from these, one was killed in the fall of 1895 by Vic. Kennicott at Kennicott Club Lake, 3½ miles east of Longmont, and I have one killed just prior to Nov. 13, 1904, near Loveland. C. A. Kendrick says that they are rare about the lakes on which he shoots near LaSalle, Weld County, but that one is occasionally taken there.

135. **Chaulelasmus streperus.** GADWALL.— Resident. In summer, common; in winter, not uncommon; in migration, abundant. Common breeder along the Barr Lake Chain.

137. **Mareca americana.** BALDPATE.— Resident. In summer, not common; in winter, not uncommon; in migration, abundant. Only a few pairs breed along the Barr Lake Chain.

139. **Nettion carolinensis.** GREEN-WINGED TEAL.— Resident. In summer, not uncommon; in winter, not uncommon; in migration, abundant. Breeds along the Barr Lake Chain, but not in such large numbers as the two following species.

140. **Querquedula discors.** BLUE-WINGED TEAL.— Summer resident. (April 5-Dec. 1.) In summer, common; in migration, abundant. Mr. Durward Luper and Mr. L. B. Meek each shot a Blue-winged Teal on Upper Barr Lake on Dec. 1, 1905. Occasionally a Blue-winged Teal is found straggling along with a flock of Green-wings in its migratory flights, sometimes as early as February and as late as December, but I know of none that has remained during the winter. Have found by June 21 eggs that were nearly ready to hatch and fresh eggs on June 26.

141. **Querquedula cyanoptera.** CINNAMON TEAL.— Summer resident. (March 26-Nov. 1 to 15.) In summer, not uncommon locally, but not as common as the former species; in migration, not uncommon locally. While this species is regularly taken along the Barr Lake Chain, at some of the other lakes in this area it seems to be rare. C. A. Kendrick stated to me during the fall of 1908 that he had not seen one on the club lakes at La Salle for four years. At that place between Nov. 1 and Nov. 15, 1903, he shot two of this species during a hard snow storm and while standing in one foot of snow. La Salle lies only 3 miles east of a north and south line through Barr, so it seems strange that this species should not occur at the former place more frequently, even though it is a western species finding its extreme limit in eastern Colorado. Have found fresh eggs June 13 and eggs advanced in incubation July 27.

142. **Spatula clypeata.** SHOVELLER.— Resident. In summer, common; in winter, uncommon; in migration, abundant. A common breeder along the Barr Lake Chain. Have found eggs advanced in incubation by June 24.

143. **Dafila acuta.** PINTAIL.— Summer resident. (First week in February—middle of November.) In summer, uncommon; in migration, abundant. A few pairs breed regularly along the Barr Lake Chain.

144. **Aix sponsa.** WOOD DUCK.— Migrant; very rare. (?—about May 1; Oct. or Nov.) C. A. Kendrick shot one at La Salle in October or November, 1905. Judge Junius Henderson of Boulder records this species for Boulder County. (Univ. of Colo. Studies, V, 3, p. 234.) The specimens upon which that record is based were two males and one female taken by Messrs. James Cowie and Bert B. Werley, 5½ miles northeast of Boulder at Twin Lake, in the end of October, 1904, and the three were in one flock when taken. I am informed that Mr. P. J. Werley shot another male at the same lake three or four years prior to the taking of these three. Mr. Cooke reports it as having been taken "at Loveland and occasionally on the lakes near Denver." He also states that Mr. E. J. Oslar has one, "that was taken at Littleton about May 1, 1892." (Birds of Colo., pp. 55, 156.) I have notes on several others taken in or near this area but the data thus far received on them are too insufficient to mention here. From these known dates, it seems that it is present in or near this area only during spring and fall migration.

146. **Marila americana.** REDHEAD.— Resident. In summer, common; in winter, rather uncommon; in migration, abundant. Have taken it at Barr in mid-winter. Breeds along the Barr Lake Chain in goodly numbers, more abundantly than the following species.

147. **Marila vallisneria.** CANVAS-BACK.— Resident. In summer, not uncommon; in winter, rather uncommon; in migration, common. A few pairs breed regularly along the Barr Lake Chain. Have found fresh eggs June 20.

148. **Marila marila.** SCAUP DUCK.— Migrant; rare (March 26—April 5). Only two specimens have, to my knowledge, been taken in this area, both by Mr. Bryan Haywood at Calkin's Lake, east of Longmont, and just within Weld County. One was taken March 26, 1904, and is now in the State Historical Society collection; the other was taken April 5, 1902, and is in the writer's collection. There seems to have been none recorded from the surrounding territory.

149. **Marila affinis.** LESSER SCAUP DUCK.— Resident. In summer, not uncommon; in winter, rather uncommon; in migration, abundant. A few pairs breed along the Barr Lake Chain.

150. **Marila collaris.** RING-NECKED DUCK.— Migrant; rare. (March 29—about April 25.) There are but few records for the entire State on this species and in the territory near-by this area I know of but two specimens having been taken. For this area itself, I have only one record, a male in my collection, killed by Bryan Haywood at Calkin's Lake, Mar. 29, 1903.

151. ***Clangula clangula americana***. AMERICAN GOLDEN-EYE.— Resident. In summer, not common; in winter, common; in migration more common. A dozen or more of this species have been known to remain all summer along the Barr Lake Chain, and for this reason I have called it a resident, although I have never actually found its nest. There are no hollow trees or stumps along this chain of lakes for them to nest in. I have found other ducks' nests in excavations that the ducks themselves had made in musk-rat houses. Following its natural inclinations for hollowed-out nesting sites, this duck may do the same.

152. ***Clangula islandica***. BARROW'S GOLDEN-EYE.— Winter resident. (Nov. 18-?.) In migration, not common; in winter, not uncommon. Not known to breed.

153. ***Charitonetta albeola***. BUFFLE-HEAD.— Winter resident. (Oct. 24-April 25.) In migration, common; in winter, not uncommon.

154. ***Harelda hyemalis***. OLD-SQUAW.— Winter resident. (Oct. 16-about March 1.) In migration and winter, rare. Cooke mentions but six specimens for Colorado, all taken in or near this area. They are: one found dead by G. F. Breninger on the shore of a lake near Fort Collins; two shot by J. B. Sibley on McKay Lake, near Denver, Nov. 13, 1892; two shot by Bryan Haywood at Calkin's Lake, near Longmont, and in Weld County, Oct. 16, 1898; and another shot by Mr. Haywood at the same place on Oct. 23. (Birds of Colo., pp. 57, 195.) H. G. Smith records one other, shot by Judge Park at Longmont, about Nov. 20, 1903. (Auk, XXV, 1908, p. 185). I have a number of other specimens to here record: One, received in the flesh to mount by J. C. Miles, a Denver taxidermist, on Nov. 12, 1903, was shot by D. I. Simmons, about 10 miles down the Platte River from Denver; another was shot by Adolph Siebolt, who gave me the note, during the first or second week in November, 1904, at Lock's Lake, one of the Barr Lake Chain; another received in the flesh by J. C. Miles, Dec. 30, 1904, was shot by Mart Watrus at Kennicott Club Lake, 3½ miles east of Longmont; another received in the flesh to mount by Hugo Todenwarth, on Dec. 4, 1905, was shot by Paul Ireland, presumably near Denver; another was shot by Mart Watrus, my informant, at Kennicott Club Lake in the latter part of February or first part of March, 1906. It thus appears that seven out of the total of twelve specimens reported for Colorado were taken within this area.

[160. ***Somateria dresseri***. AMERICAN EIDER.— Migrant; very rare in adjoining locality. Cooke records one taken by W. G. Smith at Loveland some time previous to 1892. (Birds of Colo., p. 156.) He also states that "there is a mounted bird of this species at the rooms of the Society of Natural History in Denver...presumably taken in Colorado nearly twenty years ago." The bird herein referred to does not appear to be a *dresseri*; in fact, Mr. Rudolph Borchardt, who mounted it, and from whom the Natural History Society purchased it, informed me that he imported this skin, along with a lot of other skins, from Germany.]

[163. ***Oidemia americana***. AMERICAN SCOTER.— Migrant; rare in

adjoining localities. (About Oct. 2-?.) Cooke records only two for Colorado, one in Mrs. Maxwell's collection, taken presumably near Boulder, and one found dead near Fort Collins by G. F. Breninger. (Birds of Colo., p. 57.) Mr. Adam Balmer informed me that one was taken at Aurora Lake, Aurora, a suburb of Denver, about October 2, 1901.]

165. **Oidemia deglandi.** WHITE-WINGED SCOTER.—Migrant; rare. (Oct. 11-Nov. 3.) Cooke records four specimens for Colorado; three reported by G. F. Breninger, one of which was taken Nov. 3, 1890; and one reported by Mr. Fenton as having been taken at Barr Lake, Nov. 2, 1898. (Birds of Colo., pp. 57, 195.) H. G. Smith records five specimens, as follows: one at Marston's Lake, near Littleton, October, 1887; One at Lee's Lake, near Fort Collins, Oct. 23, 1888; one in the collection of W. G. Smith, Loveland; one at Sloan's Lake, near Denver; and one taken at La Salle, Oct. 24, 1904. (Nid., III, 1896, p. 48, and Auk, XXV, 1908, p. 184.) Dr. W. H. Bergtold records one taken at Loveland, Oct. 11, 1903. (Auk, XXI, 1904, p. 78.) I have in my collection another of this species that was killed by Bryan Haywood at Calkin's Lake, near Longmont, and in Weld County, Oct. 20, 1901.

166. **Oidemia perspicillata.** SURF SCOTER.—Migrant; rare. (October-?.) Cooke records five specimens for Colorado; one in the collection of W. G. Smith, taken at Loveland; one reported by H. G. Smith, taken at Marston's Lake, near Denver, in October, 1887; two killed by H. A. Flynn at Loveland, Oct. 31, 1899; and one killed at Barr Lake by L. B. Meek, Oct. 22, 1889. (Birds of Colo., pp. 57, 196.)

167. **Erismatura jamaicensis.** RUDDY DUCK.—Summer resident. (March 24-?.) In summer, common; in migration, more common. A common and regular breeder along the Barr Lake Chain.

169. **Chen hyperborea.** LESSER SNOW GOOSE.—Winter resident. (Oct. 20-March 14.) Not common in migration or winter. A mounted specimen in the Colorado Museum of Natural History, at City Park, Denver, was shot by J. T. Mason at Barr. Miss Jennie Patten reports to Judge Henderson that on Mar. 14, 1905, she saw a flock of thirty at Yuma.

169a. **Chen hyperborea nivalis.** GREATER SNOW GOOSE.—Migrant; rare. (?-April 9.) Cooke records but two specimens for Colorado; one taken within this area east of Greeley by Pres. Z. X. Snyder, on Mar. 20, 1895; the other taken by John F. Champion at Boyd's Lake near Loveland, on April 9, 1899.

170. **Chen rossi.** ROSS'S SNOW GOOSE.—Winter resident; very rare. (Dec. 23, only date.) The only record for Colorado was a specimen reported by the writer as having been shot by Capt. Eli, U. S. A., and presented by him to Mart H. Watrus who in turn presented it to the Colorado Museum of Natural History. It was taken on Dec. 23, 1906, at Kennicott Club Lake, 3½ miles east of Longmont, and was at the time associating with a flock of Mallards. (Auk, XXIV, 1907, p. 211.)

171a. **Anser albifrons gambeli.** AMERICAN WHITE-FRONTED GOOSE.—Migrant; rare. (March 24 only date known.) There is but one record

for this area known to the writer, a specimen observed by him on March 24, 1903, on the South Platte River a few miles above Masters, Weld County. On the following day Mr. Adam Balmer, in company with the writer, shot this same lone bird, and the identity was thereby rendered positive.

172. ***Branta canadensis***. CANADA GOOSE.— Winter resident. (Oct.-April.) In migration, common; in winter, common locally. Scattered flocks may be found during the winter about the large lakes and along the Platte River. Beyond this area down the Platte they are at times abundant, and it is to that section that the hunters of Denver so frequently go in special quest of geese. Cooke records this species as breeding in 1897 at an altitude of 5500 feet, 5 miles west of Ni Wot, Boulder County, which point is 7-8 miles west of this area. It seems probable from this record that the species will some day be found as a breeder in this area.

172a. ***Branta canadensis hutchinsi***. HUTCHIN'S GOOSE.— Migrant; not uncommon. (?-April 10.) It seems as if this bird should be found to be also a winter resident, but I have, to date, no record for this season.

[172c. ***Branta canadensis minima***. CACKLING GOOSE.— Migrant; very rare in adjoining area. (?-April 10.) Cooke records but one specimen for Colorado, a bird which was shot by Mr. John F. Campion at Loveland, April 10, 1898, and is now in the collection of the State Historical and Natural History Society. (Birds of Colo., p. 196.)

180. ***Olor columbianus***. WHISTLING SWAN.— Migrant; not common. (About Feb. 5-March 16; latter part of October-?) Mr. Chas. Johnson informs me that Luke Wallick shot a swan at Barr in the spring of 1907. J. C. Miles informs me that he mounted it. C. A. Kendrick shot one at La Salle in the latter part of October, 1906. These were both presumed to be the Whistling Swan, but the writer saw neither of them. These swans are never common, yet it is expected that each season a few will be seen and one or more taken in or near this area.

181. ***Olor buccinator***. TRUMPETER SWAN.— Migrant; rare. (Spring; fall.) Cooke reports one that was shot adjacent to this area, near Fort Collins, in the fall of 1896. (Birds of Colo., p. 59.) There is a mounted specimen in the Colorado Museum of Natural History that was killed at Eaton, Weld County.

184. ***Guara alba***. WHITE IBIS.— Migrant; very rare. The only Colorado record is reported from this area by H. G. Smith, who states that one was shot at Barr Lake in 1890. (Nid., III, 1896, p. 65.)

187. ***Plegadis guarauna***. WHITE-FACED GLOSSY IBIS.— Migrant; rare. (Latter part of March-?; ?-Oct. 3.) H. G. Smith mentions three from Marston's Lake, near Denver. (Nid., III, 1896, p. 65.) Cooke speaks of one in the Maxwell collection at Boulder, and another in W. G. Smith's collection at Loveland. He also states that two specimens were shot at Barr Lake, Oct. 3, 1898. (Birds of Colo., pp. 60, 177.) Two more records may be added: Hugo Todenwarth received to mount a specimen that was shot near Denver in the spring of 1904, the same being examined by the writer; Adolph Siebolt says that in the latter part of March, 1903,

he shot one during a hard snow-storm on Lock's Lake, one of the Barr Lake Chain.

[188. *Mycteria americana*. WOOD IBIS.—Migrant; rare in near-by areas. (?-Aug. 30.) A southern species wandering into Colorado occasionally in summer. Cooke speaks of one in the Maxwell collection at Boulder. (Birds of Colo., p. 60.) The writer recorded two more specimens that were shot by L. L. Llewellyn, Aug. 30, 1902, at a small lake about 12 miles southwest of Denver. (Auk, XX, 1903, p. 65.) Mr. George Suess informs me that in about 1896 or 1897 he saw a flock of perhaps a dozen birds, which appear to have been of this species, at Patrick's Lake, near Littleton.]

190. *Botaurus lentiginosus*. AMERICAN BITTERN.—Summer resident; or resident. In summer, common; in December, rare; in migration, common. I speak of it as a possible resident on the strength of one record, a specimen seen by myself Dec. 28, 1904, at one of the warm springs on the Platte River near Fort Morgan. It appeared to be perfectly sound, being a strong flyer. I have eggs collected June 21, that were but slightly incubated.

[191. *Ixobrychus exilis*. LEAST BITTERN.—Migrant, or summer resident; very rare in near-by localities. (June 8, only known date.) Cooke records but six specimens for Colorado and two of these are from Denver and vicinity, the one being reported by H. G. Smith, and the other having been killed by Rudolph Borchardt, at Berkeley Lake, June 8, 1898. (Birds of Colo., pp. 157, 197.)]

194. *Ardea herodias*. GREAT BLUE HERON.—Summer resident. (March 20-about Sept. 24.) In migration, abundant; in summer, abundant, locally. Abundant in summer along the Barr Lake Chain, to which many are accustomed to fly in from the Platte River in the early morning to feed upon fishes, etc., flying back again to roost presumably in the river timber at night. They appear here in flocks containing as high as two hundred birds. So far as known, they breed in this area only in trees. A number of their heronries have been found within this area, among them being one on the Cache la Poudre River near Windsor, Weld County; one on Crow Creek, northeast of Greeley (Markham, Univ. Colo. Studies, Vol. IV, p. 155 and plate ii, fig. 2.); and two noted several years ago by the writer, the one on the Platte River near Henderson, the other on the same river near Masters. Whether these last two heronries are still used by the herons, I cannot state.

197. *Egretta candidissima*. SNOWY EGRET.—Migrant; not rare. (April 3-Sept., Salida.) A southern species that comes into Colorado in summer regularly in small numbers and strings northward as far as Buffalo, Wyoming, where, I have been told, a specimen was shot by James Dowlin about April 11, 1904. The most northerly record within this area that I have comes from La Salle, where C. A. Kendrick reports that two or three have been shot on their club lakes. I have, aside from the two or three mentioned above as being reported by Mr. Kendrick, twenty-six additional records of this species for the State, ranging from the plains to

Salida (7038 feet), in Chaffee County, where ten were observed, seven being in one flock, and from an east and west line through that point northward nearly across the State. The most of these, aside from the ten at Salida, are from Denver and vicinity northward. The flock of seven at Salida was observed and reported by Mr. B. G. Voigt, deceased, and the other three were received by him to mount, one of them having been taken in the month of September. Not known to breed in Colorado.

[198. *Dichromanassa rufescens*. REDDISH EGRET.—Migrant; very rare in near-by area. Mr. Cooke's second record for Colorado was reported by E. L. Berthoud, "who shot one near Golden about eight years ago" (1890). (Birds of Colo., p. 157.)]

202. *Nycticorax nycticorax naevius*. BLACK-CROWNED NIGHT HERON.—Summer resident. (March 31, or April 1-Dec. 20-24.) In summer, abundant locally; in migration, abundant. H. G. Smith reports a bird uninjured and in good condition as having been shot from a tree between December 20 and 24, 1902, near Fort Lupton, Weld County, by T. L. Monson. (Auk, XXV, 1908, p. 185.) Though this is a winter date, it does not seem probable that this species, owing to its particular habits, will ever be found here as a resident all through the winter. Breeds abundantly along the Barr Lake Chain in low trees, on masses of bent-over cattails and rushes, and on the ground. Flocks of from twenty-five to two hundred may be seen all during the summer along this Chain.

[203. *Nyctanassa violacea*. YELLOW-CROWNED NIGHT HERON.—Migrant, very rare to the State, the only record noted by Cooke being a specimen in the Maxwell collection at Boulder. (Birds of Colo., p. 62.)]

[204. *Grus americana*. WHOOPING CRANE.—Migrant; rare in adjoining areas. (First half of April-?) Cooke mentions one noted by W. G. Smith at Loveland, and one in the museum of the State Agricultural College at Fort Collins. (Birds of Colo., p. 62.)]

[205. *Grus canadensis*. LITTLE BROWN CRANE.—Migrant; rare in near-by areas. (March-?) Cooke mentions a specimen as being in the museum of the State Agricultural College at Fort Collins, and also a specimen mounted by A. T. Allen that was shot several years prior to 1900. (Birds of Colo., pp. 62, 198.) There is a mounted specimen in the State Historical and Natural History Society that was shot by A. T. Allen at Boulder, in March, 1901.]

206. *Grus mexicana*. SANDHILL CRANE.—Migrant; uncommon (April 1-?; Oct. 10-about Oct. 25.) C. A. Kendrick states that about Oct. 25, 1908, he shot one at La Salle, Weld County. He also says that they see, at their club lakes at La Salle, about one flock during each year. On April 1, 1904, the writer saw what he took to be a flock of five of this species at the Barr Lake Chain.

212. *Rallus virginianus*. VIRGINIA RAIL.—Summer resident, or resident. In summer, common; in migration, more common. I mention it as a possible winter resident wholly on the strength of a statement to me by Mr. Fred Granville that he shot one of this species at Ralhouse

Lake, near Denver, on Jan. 13, 1906, near open water. A common breeder along the Barr Lake Chain. Have found eggs as late as June 20 that were not much incubated.

214. **Porzana carolina.** SORA.— Summer resident; common (April-Oct. 13.) A common breeder along the Barr Lake Chain, where I have found fresh eggs as early as May 28 and as late as June 13.

[216. **Creciscus jamaicensis.** BLACK RAIL.— Migrant; very rare in near-by area. (May-?.) But one record for Colorado referred to by Cooke as having been taken at Denver by Mr. David Bruce in May. (Birds of Colo., p. 158.)]

[219. **Gallinula galeata.** FLORIDA GALLINULE.— Migrant; very rare in near-by area. Cooke records one seen by E. L. Berthoud at Lathrop's Lake, 12 miles from Golden. (Birds of Colo., p. 158.)]

221. **Fulica americana.** AMERICAN COOT.— Summer resident. (Middle of March-Oct. 11) Abundant in both migration and summer, breeding abundantly along the Barr Lake Chain. I have found that by the 19th of May practically all the eggs are partially incubated and that some are nearly ready to hatch.

223. **Lobipes lobatus.** NORTHERN PHALAROPE.— Migrant; not uncommon. (May 18; Sept. 8.) Occurs regularly along the Barr Lake Chain.

224. **Steganopus tricolor.** WILSON'S PHALAROPE.— Summer resident; common. (May 3-?.) A regular breeder along the Barr Lake Chain, where flocks of from twenty-five to fifty females may be seen during the breeding season. I have found eggs advanced in incubation by May 28, and others on May 30 in which incubation had not yet begun.

225. **Recurvirostra americana.** AMERICAN AVOCET.— Summer resident; common. (April 8-Oct. 10.) A regular breeder all along the Barr Lake Chain where from one to half a dozen pairs may be seen in the more suitable breeding localities.

226. **Himantopus mexicanus.** BLACK-NECKED STILT.— Summer resident, probably; rare. (April-Nov. 5.) This bird is not often reported this side of the range. There is in the collection of the State Historical and Natural History Society a mounted specimen which was shot near Fort Logan in April, 1899. Judge Junius Henderson saw a bird, which he was very sure was of this species, at Windsor, Weld County, on Nov. 5, 1903.

228. **Philohela minor.** AMERICAN WOODCOCK.— Summer resident, probably; rare. (May 24-Oct.) Only a few records have been made in the State on this species, and of these the bulk come from in or near this area. H. G. Smith reports one on Aug. 12, 1885, and one in October, 1885, both from almost within the city limits of Denver. He also reports one from near Boulder for the fall of 1887, and one from near Fort Lupton, Weld County. (Auk, III, 1886, p. 284, and Nid., III, 1896, p. 65.) Cooke

records one that Dr. W. H. Bergtold saw in Denver in June, 1895; also a pair with three young found July 3, 1897, at Timnath, Larimer County, some two or three miles west of this area. (Birds of Colo., pp. 64, 158.) Judge Junius Henderson writes that on May 24 and also on May 30, 1904, he saw one of this species, presumably the same bird, one mile east of Boulder.

230. **Gallinago delicata.** WILSON'S SNIPE.— Winter resident. (Sept. 26-about May 1.) In migration, common; in winter, rather rare except in certain localities, such as the vicinity of warm springs along the Platte River, where one may expect to see a few of them all through the winter.

232. **Macrorhamphus scolopaceus.** LONG-BILLED DOWITCHER.— Migrant; not uncommon. (Last week in April-?; July 24-Sept. 30.) Mr. H. W. Henshaw's capture, near Denver, of a bird of this species on July 24, 1873, makes one wonder whether it may not be some day found breeding here. My own latest spring record is May 13.

233. **Micropalama himantopus.** STILT SANDPIPER.— Migrant; not common. (May-early June; latter part of July-Sept. 30.) I do not believe this bird to be as rare as appears from previous reports. It occurs regularly in small numbers along the Barr Lake Chain and I would not expect a season of systematic note-taking there to pass without seeing a few of them, or possibly several small flocks. It starts south early, in the latter part of July, and from my experience it is more common in fall than in spring migration.

239. **Pisobia maculata.** PECTORAL SANDPIPER.— Migrant; common. (First part of May-first part of June; latter part of July-Oct. 7.) Begins to return early, along with other species of sandpipers, in latter part of July.

[240. **Pisobia fuscicollis.** WHITE-RUMPED SANDPIPER.— Migrant; rare in adjoining area. Cooke states that it is "not uncommon" in the State, "finding its western limit at the base of the Rockies," and "reported by Osburn," presumably from Loveland. (Birds of Colo., p. 55.)]

241. **Pisobia bairdi.** BAIRD'S SANDPIPER.— Migrant, or summer resident. (April-Oct. 3.) The most abundant of our sandpipers and especially numerous during the late summer and fall. I have found them in the middle of June and through July in flocks ranging from twenty-five in the middle of June to two hundred or more by the end of the first week in July. The most of these flocks are wild and restless, as birds will be in migratory flight, flushing at 100-150 yards, swishing round and round, then many times towering high into the air and striking out to the south or southeast. Many of the members of these early flocks appear to be young. Some during these early summer periods are found also in ones, or twos, and while it is, I think, not known to breed this far south, these data force one to question whether it does not breed here or in the near-by mountains. This is my only excuse for adding, "or summer resident" after "migrant."

242. **Pisobia minutilla.** LEAST SANDPIPER.— Migrant, or summer

resident. (Latter part of April-Sept. 30.) In migration, very common; in summer, not uncommon. This is another perplexing little fellow, but I am emboldened to label it "or summer resident" with, perhaps a little more reason than in the case of Baird's Sandpiper, for in this case my notes indicate his presence during the entire summer and in June only in singles, or twos, or very small groups and not in flocks the size of those of *bairdi*.

[243a. ***Pelidna alpina sakhalina***. RED-BACKED SANDPIPER.— Migrant; rare in adjacent localities. (April 29-June 1.) Cooke reports three specimens for Colorado, all from territory adjacent to this area; viz., one in the Maxwell collection at Boulder and two taken by W. G. Smith at Loveland, April 29 and May 9. (Birds of Colo., p. 66.)]

246. ***Ereunetes pusillus***. SEMIPALMATED SANDPIPER.— Migrant; rather rare. (Last of April-May 24.) Cooke speaks of this species as "not uncommon . . . mostly on the plains and below 7000 feet." (Birds of Colo., p. 66.) In this particular area it is one of the rarer of the sandpipers.

[247. ***Ereunetes mauri***. WESTERN SANDPIPER.— Migrant; rare in adjoining localities. (May 9-May 12; July 4-?.) Cooke gives but four records, three of which are from territory adjoining this area: viz., one taken at Loveland by Prof. Wm. Osburn on July 4, 1899, and another on May 12, 1890; one taken at Loveland by W. G. Smith on May 9, 1890. (Birds of Colo., p. 66.)]

248. ***Calidris leucophaea***. SANDERLING.— Migrant; rare in this and surrounding territory, being found only occasionally in spring and fall migration. This is a typical bird of the sea-shores, where it is abundant in migrations. During these periods it is, however, nearly cosmopolitan, being found on the larger bodies of water in the whole interior, and I believe that a more systematic search on our larger lakes will reveal them in greater numbers here.

249. ***Limosa fedoa***. MARBLED GODWIT.— Migrant; not common. (May 3-?.) While this bird is never common, I expect to see a few along the Barr Lake Chain every season, especially in the spring. I have no breeding records for this area, but it will not be surprising if it is found to breed here.

254. ***Totanus melanoleucus***. GREATER YELLOW-LEGS.— Migrant or summer resident. (March 29-Oct. 29.) In migration, common, but not nearly so common as the Lesser Yellow-legs, the flocks of the former usually consisting of from five to fifty or sixty birds, while those of the latter consist of as high as several hundred birds. I have noted this species during every month from March to October, and, though I have no records of nests within this area, I believe it will yet be found breeding here.

255. ***Totanus flavipes***. YELLOW-LEGS.— Migrant or summer resident. (April-October.) This species is found at about the same time and in about the same localities as the previous species and I believe that this bird will also some day be found breeding here.

256. ***Helodramus solitarius***. SOLITARY SANDPIPER.— Migrant; rather uncommon. (?-May 9; Aug. 20-Sept. 25.) Not known to breed.

258a. **Catoptrophorus semipalmata inornata.** WESTERN WILLET.— Migrant or summer resident. (April-Sept. 5.) I have notes on this species covering the most of the summer and believe it will yet be found breeding here.

261. **Bartramia longicauda.** BARTRAMIAN SANDPIPER.— Summer resident. (Latter part of April-Aug. 23.) In summer common locally. I have never found this species to be what I would call abundant at any time of the year in Colorado. I have not seen many of them along the Barr Lake Chain, and in other localities I have found them in flocking time in not large numbers.

263. **Actitis macularia.** SPOTTED SANDPIPER.— Summer resident. (Third week in March-Sept. 21.) In summer, common; in migration, very common. Cooke says, "a few remain until far into the winter, if not through the winter."

264. **Numenius americanus.** LONG-BILLED CURLEW.— Summer resident. (March 31-Oct. 22.) A common bird on the plains in suitable localities. Common along the Barr Lake Chain.

[265. **Numenius hudsonicus.** HUDSONIAN CURLEW.— Migrant; rare in near-by areas. (About May 1-?.) Cooke says, "All the records of this Curlew in Colorado come from the plains region east of the mountains." (Birds of Colo., p. 67.) Upon this statement alone, it is placed here in the hypothetical list.]

270. **Squatarola squatarola.** BLACK-BELLIED PLOVER.— Migrant; not uncommon locally. (Last week of March-latter part of May; Sept. 12-Oct. 22.) They are present along the Barr Lake Chain at some time during perhaps every migrating season, in numbers varying from one to twenty-five or more.

272. **Charadrius dominicus.** AMERICAN GOLDEN PLOVER.— Migrant; uncommon. (Last week in March-?.) This species is only occasionally seen along the Barr Lake Chain, it being not nearly so common, as far as my experience goes, as the Black-bellied Plover.

273. **Oxyechus vociferus.** KILLDEER.— Summer resident or resident. (Feb. 3-Dec. 31.) In summer and migration, abundant; in December and February, rare. I can all but call it with certainty a resident, since I have never noted it in January, but I am still hopeful of finding it all through the winter about the warm springs down the Platte River, or at open water elsewhere.

274. **Ægialitis semipalmata.** SEMIPALMATED PLOVER.— Migrant; rare. Although found in migration over the whole of North America this is the rarest of our plovers. It stops here only occasionally in its migratory flight between its breeding grounds in the far North and its winter home in Middle and South America.

281. **Podasocys montanus.** MOUNTAIN PLOVER.— Summer resident; common. (March 23-Oct. 12.) A common breeder on the plains. Have found eggs to be advanced in incubation as early as May 14, and young about a day out of the egg on June 23.

[283. *Arenaria interpres*. TURNSTONE.—Migrant; rare in near-by localities (about April 26-May 18.) H. G. Smith records one taken at Sloan's Lake, near Denver, on April 26, 1890 (Nid., III, 1896, p. 65), and Cooke records eight seen at Berkeley Lake, near Denver, on May 18, 1900. (Birds of Colo., p. 201.)]

AN INSTANCE OF HYBRIDIZATION IN HUMMING-
BIRDS, WITH REMARKS ON THE WEIGHT OF
GENERIC CHARACTERS IN THE
TROCHILIDÆ.

BY WALTER P. TAYLOR.¹

WHILE collecting in the vicinity of Nicasio, Marin County, for the Museum of Vertebrate Zoölogy on February 26, 1909, I shot a small hummingbird which I took to be *Selasphorus alleni*. My attention has been called to the fact, however, that it is a hybrid, probably the result of a cross between *Selasphorus alleni* and *Calypte anna*. According to Ridgway, it was with little doubt such a hybrid upon which Gould based his description of *Selasphorus floresii* (Mon. Troch., pt. xxiii, Sept. 1, 1861, pl. 10; Vol. III, 1861, pl. 139), from a specimen taken at Bolanos, State of Oaxaca, Mexico.

There have been to my knowledge previous to this date three definite records only of the taking of this hybrid. One of these is the type of *Selasphorus* "*floresii*," taken at Bolanos. The second is a bird found by Walter E. Bryant in a taxidermist's shop in San Francisco (first recorded in 'Forest and Stream,' XXVI, June, 1886, p. 426). This specimen was "shot by a boy" near San Francisco, and had been mounted to serve as an ornament on a hat. The third record is that of the taking of a male specimen at Haywards, California, by W. Otto Emerson (Condor, III, May, 1901, p. 68). Through the courtesy of the latter I have seen this bird. It is almost identical in coloration and size with the hybrid taken by me at Nicasio, though it resembles *Calypte anna* even more than the Marin County bird.

¹ A Contribution from the University of California Museum of Vertebrate Zoölogy