

NOTES ON BIRDS COLLECTED BY DOCTOR W. L. ABBOTT
IN CENTRAL ASIA.

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Dr. Abbott's earliest collections of birds from Cashmere and Ladak have already been fully treated by Dr. C. W. Richmond.¹ Upon leaving Madagascar, in 1895, Dr. Abbott proceeded again to Cashmere, where he spent the remainder of the year—some four months—mostly in places previously visited. Again, in 1897, he was there for a month or so from about the middle of October, having come from Ladak, in which latter region, at various localities, he had been collecting since the middle of June.

As the ornithological results of these later visits to Central Asia, the United States National Museum has duly received two consignments of specimens; and at the request of the curator of the division of birds a list of them is here presented. Although these collections number together only 142 specimens, representing 62 species, they comprise several birds of considerable interest and a number not previously obtained by Dr. Abbott. All matter within quotation marks is to be credited to the collector.

The writer is under obligation to Dr. Richmond for his uniform courtesies during the preparation of this paper, as well as for permission to make use of his notes upon several of the larger species.

Family LARIDÆ.

LARUS BRUNNEICEPHALUS Jerdon.

Larus brunneicephalus JERDON, Madras Journ., XII, 1840, p. 25.

Two adult females in somewhat worn breeding plumage, from Tsokr Chumo Lake, Ladak, at 15,000 feet altitude, July 13, 1897. "Iris pale greenish; orbital skin red; feet red; bill dark red. Length, 16 $\frac{7}{8}$ inches. A colony of 15 or 20 individuals at this lake. Nests not found."

¹ Proc. U. S. Nat. Mus., XVIII, 1896, pp. 451-503.

LARUS RIDIBUNDUS Linnæus.

Larus ridibundus LINNÆUS, Syst. Nat., 12th ed., I, 1766, p. 225.

One specimen, from the Valley of Cashmere. This is an adult male in winter plumage, with no brown hood, and with dusky only on auriculars; the black and white areas on primaries are very sharply defined. "Irides blackish brown; feet red; claws black; bill red, the tip black. Length, 16 inches."

STERNA HIRUNDO TIBETANA (Saunders).

Sterna tibetana SAUNDERS, Proc. Zool. Soc. Lond., 1876, p. 649.

Two adult males: one from the Indus River at Mya, Ladak, 13,000 feet, September 11, 1897; the other from Tsomoriri Lake, Ladak, 15,000 feet, July 29, 1897. "Length, 13½ and 14½ inches, respectively. Iris dark brown; bill red, the tip black; feet red; claws black."

Careful comparison with a large series of American and European specimens indicates that the bird from Thibet, though not specifically distinct from *S. hirundo*, is yet well worthy of separation as a geographical race, to which the name *tibetana* is applicable. This central Asian form is much darker on the mantle and much less whitish on the nape; the lower parts also are of a deeper gray, particularly on the flanks.

Family CHARADRIIDÆ.

OCHTHODROMUS INCONSPICUUS (Wagler).

Charadrius inconspicuus WAGLER, Isis, 1829, p. 651.

Charadrius pyrrhothorax GOULD, Birds Europe, IV, 1837, pl. 299.

Egialitis pamirensis RICHMOND, Proc. U. S. Nat. Mus., XVIII, 1896, p. 589.

Six specimens (four adult males, one female, and one immature male) from various localities in Ladak, at from 14,000 to 15,000 feet; taken July 7 to 20, and September 8, 1897. Among the males the amount and shade of the ochraceous on the crown varies considerably, and on the upper tail-coverts of one specimen there is very little brown; otherwise all are very similar. There are a few small flecks of white in the black of the forehead and lores, particularly the latter, but this effect is due to the wearing off of the black tips of the feathers, with its consequent exposure of the white basal portions, and would probably not be noticeable in fresh plumage. "Length, 7¼ to 7½ inches. Iris dark brown; bill, feet, and claws black."

Dr. Sharpe dismisses the female of this species with the remark that it is "similar to the male;"¹ but as a matter of fact it differs very noticeably in having the black of the forehead and lores replaced by pale ochraceous brown mixed with white, that of the subocular and auricular regions by dull brown. The crown is also duller, the breastband

¹ Cat. Birds Brit. Mus., XXIV, 1896, p. 228.

paler, the collar on hind neck narrower and less well defined. The young bird resembles the adult female, but is darker brown above, with buffy ochraceous margins to all the feathers; there is also more buffy on the sides of the head, the breastband is paler, and the entire lower surface, with the exception of the crissum, is more or less tinged with buffy.

Careful comparisons with the type of Dr. Richmond's *Egialitis pamirensis* prove beyond a doubt that it is the same as the bird Dr. Sharpe identifies¹ as *pyrrhotorax* of Gould. When Dr. Richmond described his *pamirensis* he had not access to the volume of the British Museum Catalogue containing the *Limicolæ*; and the species is synonymized with *mongolus* in Seebohm's Geographical Distribution of Plovers, Sandpipers, and Snipes. Since no specimens of *pyrrhotorax* at that time existed in the United States National Museum collection, the mistake was of course a very natural one. The correct specific name of this species seems to be *inconspicuus* Wagler,² the description and probable locality pointing to this identification, and this name antedating *pyrrhotorax* Gould by eight years.

Family SCOLOPACIDÆ.

GALLINAGO SOLITARIA Hodgson.

Gallinago solitaria HODGSON, Gleanings in Science, III, 1831, p. 238.

One male of this handsome snipe was taken on December 10, 1895, in the Valley of Cashmere. "Iris dark brown; bill plumbeous, tip black; feet and legs pale yellowish green; toes black. Length, 12¼ inches."

HELODROMAS OCHROPUS (Linnæus).

Tringa ocropus (err. typ.) LINNÆUS, Syst. Nat., 10th ed., I, 1758, p. 149.

Totanus ochropus TEMMINCK, Man. d'Orn., 1815, p. 420.

One specimen in winter plumage, from the Valley of Cashmere. "Iris dark brown; feet and legs olive plumbeous; claws black; bill black, olive at base. Length, 9½ inches."

TOTANUS TOTANUS EURHINUS, new subspecies.

Chars. subsp.—Like true *Totanus totanus*, but very much larger.

Description.—Type, male, adult, Cat. No. 162823, U.S.N.M.; Lake Tsomoriri, Ladak, 15,000 feet, July 29, 1897; Dr. W. L. Abbott. Above rufescent broccoli brown, the feathers everywhere with dark brown centers, the back more or less irregularly barred with the same; rump pure white, sparingly marked with brownish; tail and upper tail-coverts dull white, heavily barred with sepia brown, the terminal

¹ Cat. Birds Brit. Mus., XXIV, 1896, p. 226.

² Isis, 1829, p. 651.

portion of central tail-feathers buffy; wings fuscous, the innermost secondaries like the back and barred on exposed portions with dark brown; remainder of secondaries white, but pale brown on concealed bases; greater coverts white or grayish distally, brownish gray basally, and barred with sepia; median coverts brownish gray, barred with sepia; lesser coverts almost plain; lower surface white, more or less heavily marked throughout with sepia, these markings taking on throat and breast the form of broad streaks, on flanks, sides, and crissum of bars, and elsewhere of more or less irregular spots; lining of wing white, varied with brownish, except on axillars.

The form of *Totanus totanus*¹ inhabiting Central and Eastern Asia, although seemingly identical with the European bird in color and markings, is yet so much larger, particularly in length of wing, tail, and culmen, that its separation as a subspecies appears to be warranted. All of the many names which the species possesses are without doubt exclusively applicable to the European bird, thus leaving the Eastern form without a name. The following table of millimeter measurements presents the difference between the two races:

Totanus totanus totanus.

Sex.	Locality.	Wing.	Tail.	Exposed culmen.	Tarsus.	Middle toe.
Female	Havre, France.....	156	62	46	50	30
Do.....	do.....	158	64	39	44	28
Male	do.....	152	65	41	45	30
Do.....	do.....	151	62	40	41	29
Do.....	France.....	150	64	41	47	30
Average (5 specimens)		153.4	63.4	41.4	45.4	29.4

Totanus totanus eurhinus.

Sex.	Locality.	Wing.	Tail.	Exposed culmen.	Tarsus.	Middle toe.
Female	Kashgar, Turkestan.....	160	69	44	44	28
Do.....	Lake Tsomoriri, Ladak.....	170	67	51	51	32
Male	do.....	160	65	44	47	30
Do.....	do.....	163	67	47	45	31
Do.....	Hanlé, Ladak.....	162	66	47	49	30
Average (5 specimens)		163	66.8	46.6	47.2	30.2

Four specimens of *Totanus t. eurhinus*, including the type, are in the present collection; three of these are from Lake Tsomoriri, Ladak, at 15,000 feet; the other from Hanlé, Rupshu, Ladak, 14,000 feet; and all are summer birds. "Length of male, 11½ inches; of female, 11¾ inches; bill black, orange brown at base beneath; iris dark brown; feet orange red; claws black."

¹ *Scolopax totanus* Linnæus, Syst. Nat., 10th ed., I, 1758, p. 145 (= *Totanus calidris* auct.).

Family ANATIDÆ.

QUERQUEDULA QUERQUEDULA (Linnæus)

Anas querquedula LINNÆUS, Syst. Nat., 10th ed., I, 1758, p. 126.

Querquedula querquedula BAIRD, Am. Journ. Sci. and Arts, XLI, 1866, p. 339.

One apparently adult female, from Rupshu, Ladak, at 13,000 feet, September 9, 1897. "Length, 16 inches." The white of the throat is quite pure, but that of the posterior lower surface is decidedly grayish, as the bases of the feathers show through the overlaid white tips.

CASARCA CASARCA (Linnæus).

Anas casarca LINNÆUS, Syst. Nat., 12th ed., III, App., 1768, p. 224.

Casarca casarca ALLEN, Auk, XIII, 1896, p. 164.

One adult female, from Tsokr Chumo Lake, Ladak, taken July 11, 1897. The plumage of this example is much worn, and the colors of back and head much bleached. "Bill and feet black. Length, 24 inches."

Family PHASIANIDÆ.

PUCRASIA MACROLOPHA BIDDULPHI (Marshall).

Pucrasia biddulphi MARSHALL, Ibis, 1879, p. 461.

One example, from the Pir Panjal Range, Cashmere, at an altitude of 8,000 feet. This is an immature male, and is molting about the head. "Iris dark brown; feet leaden; claws dark leaden. Length, 18½ inches."

LOPHOPHORUS REFULGENS Temminck.

Lophophorus refulgens TEMMINCK, Fig. et Gall., II, 1813, p. 355.

One adult male from near Bandipoor, Cashmere, October 6, 1895. "Length, 29½ inches; weight, 6½ pounds."

TETRAOGALLUS TIBETANUS Gould.

Tetraogallus tibetanus GOULD, Proc. Zool. Soc. Lond., 1853, p. 47.

One adult male, from Takalungla, Ladak, at the remarkable altitude of 17,000 feet. "Feet brick red; claws dark horn brown; orbital skin dull orange; iris dark brown; bill horny orange."

Family COLUMBIDÆ.

COLUMBA RUPESTRIS PALLIDA Rothschild and Hartert.

Columba rupestris pallida ROTHSCHILD and HARTERT, Ornith. Monatsber., I, 1893, p. 41.

Three specimens from Ladak: two of these are from Gya, at 14,000 feet, the other from Hanlé Goupa. "Bill black; cere powdery white; feet red, claws blackish horny; iris, male, orange red; female, brick red.

Common about villages and cultivation [Gya]; common throughout Rupshu up to 16,000 and 17,000 feet. It comes picking around the camps and sheepfolds of the Champas." These examples are identical with others from Cashmere and the Thian Shan Mountains previously obtained by Dr. Abbott, and recorded by Dr. Richmond as true *rupestris*.¹ They are, however, undoubtedly referable to *Columba r. pallida*, exhibiting all the characteristics of that race.

TURTUR SURATENSIS (Gmelin).

Columba suratensis GMELIN, Syst. Nat., I, 1788, p. 778.

Turtur suratensis STRICKLAND, Proc. Zool. Soc. Lond., 1842, p. 168.

One adult male, from the Valley of Cashmere. "Iris dull red; bill black; feet livid purple; length, 11 $\frac{3}{8}$ inches."

Family VULTURIDÆ.

GYPS HIMALAYENSIS Hume

Gyps himalayensis HUME, Rough Notes, I, 1869, p. 14.

Two specimens accompanied by the following data.

"Male, Lolab, Cashmere, November 3, 1895; 8,000 feet. Iris mottled brownish gray; bill pale greenish horn; cere dark gray horn; bare skin on throat pale blue; feet pale greenish; claws blackish. Length, 46 $\frac{1}{2}$ inches; extent, 110 inches; weight, 21 pounds."

"Female, Sind Valley, Cashmere, December 13, 1895; 6,000 feet. Iris dark brown; bill pale greenish horny (like jade); cere horny blackish brown; bare skin of head pale blue; feet pale greenish slate color; claws black. Length, 46 inches; extent, 107 inches; weight, 19 pounds."

The male seems to be adult, although the crop patch is quite dark brown instead of whitish fawn color; the female, judging from the darker colors on the upper parts, appears to be more or less immature.

Family FALCONIDÆ.

CERCHNEIS TINNUNCULA INTERSTINCTA (McClelland).

Falco interstinctus MCCLELLAND, Proc. Zool. Soc. Lond., 1839, p. 154.

Two adult males of this handsome falcon: one from Zogila Pass, Cashmere, at 10,500 feet; the other from Machalung, Indus Valley, Ladak. The latter specimen is a bird in process of molt (September 17). "Its stomach contained lizards."

Specimens of the kestrel from Cashmere and Ladak are much darker, particularly above, than those from Europe, and should apparently bear the subspecific name *interstincta* McClelland. This race was originally described from specimens obtained in Assam, and it undoubtedly occu-

¹ Proc. U. S. Nat. Mus., XVIII, 1896, p. 587.

pies at least the whole of the Himalaya region, with very probably a large part of India. Birds from the Thian Shan Mountains and eastern Turkestan are, however, paler, and apparently must be referred to the European form.

FALCO PEREGRINUS Tunstall.

Falco peregrinus TUNSTALL, Orn. Brit., 1771, p. 1.

Three specimens, all from the Valley of Cashmere. "Iris dark brown; bill horny blue, black at tip, greenish yellow at base; cere and eyelids yellow; feet yellow; claws black. Length of male, $16\frac{1}{4}$ inches; of female, $18\frac{1}{2}$ inches; weight of female, $2\frac{1}{2}$ pounds. Crop and stomach of latter contained the remains of a teal."

One of these examples, which is apparently not quite adult, is darker above than the others, with the markings below larger as well as more numerous, and with a conspicuous tinge of ochraceous on the abdomen. There seems to be little or no difference between similar plumages of the birds from Asia and Europe. Our limited material indicates that European specimens are less bluish above and darker on the head; but this distinction very possibly would not prove constant in a larger series.

The *Falco peregrinus* of Tunstall, as above quoted, is apparently the earliest available name for the peregrine falcon, being 17 years prior to Gmelin's names. Most of the new specific designations in Tunstall's Ornithologica Britannica are mere *nomina nuda*, but some, among them *Falco peregrinus*, have references to Pennant's British Zoology, and are thus rendered tenable.

MILVUS GOVINDA Sykes.

Milvus govinda SYKES, Proc. Zool. Soc. Lond., 1832, p. 81.

One adult male from the Valley of Cashmere, December 4, 1895. "Iris brown; bill black, horny blue at base; cere pale horny; feet dirty white; claws black. Length, $24\frac{1}{2}$ inches."

HALIÆTUS LEUCORYPHUS (Pallas).

Aquila leucorypha PALLAS, Reis. Russ. Reichs, I, 1771, p. 454.

Haliaetos leucorypha KEYSERLING and BLASIUS, Wirb. Eur., 1840, p. xxx.

Two specimens; one of them a male from the Hanlé River, Rupshu, Ladak, taken September 2, 1897. "Length, $30\frac{1}{2}$ inches. Poisoned while feeding on the dead carcass of a wild ass (Kiang)." The other example is a female from Woolar Lake, Vale of Cashmere, September 16, 1895. "Iris brownish gray; bill dull black; cere and base of bill grayish white; feet dirty white; claws black. Length, $31\frac{1}{2}$ inches. Feeds on dead fish and carrion; foully dirty."

The plumage of the female has much ochraceous, the tips and edges of the feathers everywhere being more or less tinged with either this

color or fulvous, darkest on the head and neck. The breast and abdomen are quite uniform ochraceous, the throat darker, more fulvous, the crissum more brownish; the tail is almost plain blackish brown, mottled somewhat with grayish near its base. The male is far from being so deeply ochraceous above, the edgings on the feathers of back and wings being whitish or buffy, producing a curiously mottled appearance, and forming thus a conspicuous contrast to the plumage of the female. Below the color is pale dull brownish, lighter and more ochraceous on the abdomen and foreneck, darkest on the throat; tail black, slightly tipped with whitish, and with a broad ill-defined bar of mixed gray and dull white across its middle portion.

HALIÆTUS ALBICILLUS (Linnæus).

Falco albicilla LINNÆUS, Syst. Nat., 10th ed., I, 1758, p. 89.

Haliæetus albicilla LEACH, Syst. Cat. M. B. Brit. Mus., 1816, p. 9.

Two specimens, both taken in the Valley of Cashmere, on December 19, 1895. "Male: Iris straw color; feet yellow; claws black. Length, 32½ inches; weight, 8 pounds. Stomach contained remains of a green woodpecker (*Gecinus squamatus*). Female: Iris straw color; bill and cere horny yellow; feet yellow; claws black. Length, 34½ inches; weight, 10 pounds. Crop contained a thrush (*Merula*); stomach contained remains of thrushes and rats."

Both of these specimens seem to be fully adult, their tails white distally, except for small dusky markings near the ends of the feathers. The many light tips, and some altogether paler feathers on both upper and lower parts, give to the plumage in places a conspicuously mottled appearance. These individuals appear to be perfectly identical with one from Korea.

AQUILA BIFASCIATA J. E. Gray.

Aquila bifasciata J. E. GRAY, Illus. Ind. Zool., I, 1832, pl. XVII.

Three specimens, all females, taken in the Valley of Cashmere, December 20 and 22, 1895. "Iris dark brown; bill horny blue, tip black; gape, cere, and feet yellow; claws black. Length, 31-32 inches; weight, 7½ pounds. This species is very common in the valley at this season, and is very tame, sitting on the trees in the villages, probably because rats are plentiful near the houses. The stomachs of two of the birds taken contained remains of *Mus rattus*."

Two of the present examples are apparently typical adults, one of them evidently in process of molt both above and below. The remaining specimen is seemingly immature, being darker than the others, particularly on scapulars, wing-coverts, head, and under surface, while the primary-coverts as well as the greater series lack any indication of the paler tips characteristic of the adult. In this condition *Aquila bifasciata* superficially much resembles *A. chrysaetos*, but is everywhere paler; has fewer light fulvous feathers on occiput and nape; and the

light ashy bars on the tail extend throughout, not leaving a broad band of black at the tip.

The present writer is quite inclined to agree with Dr. Sharpe in his identification¹ of the present species with the *Aquila mogilnik* of S. G. Gmelin;² but it is perhaps better, particularly in view of the confusion existing through diversity of opinion, to abandon entirely the use of Gmelin's name, simply considering it unrecognizable—the course so strongly urged by Mr. Blanford.³ The proper name for the steppe eagle will, of course, in such event be *Aquila bifasciata* Gray.

AQUILA HELIACA Savigny.

Aquila heliaca SAVIGNY, Descr. de l'Egypte, 1809, p. 459, pl. XII.

Four specimens, all from the Valley of Cashmere, and taken in December, 1895.

“Female adult: Iris gray, mottled with brown spots; bill horny blue with black tip; cere dull horny yellowish white; feet yellow; claws black. Length, 32 inches; weight, 8½ pounds. Crop and stomach filled with the remains of *Mus rattus*.”

“Female adult: Iris gray, mottled with brown; bill horny blue, tip black; cere dull horny yellow; feet pale dirty yellow; claws black. Length, 32¼ inches; weight, 9¼ pounds. Stomach contained remains of mongoose (*Herpestes auropunctatus*).

“Immature [sex not given, but probably male]: Iris straw color, mottled with brown on lower half; bill horny blue, black at the tips; cere horny white, with a greenish tinge; toes pale yellow; claws black. Length, 31 inches; weight, 5½ pounds.

“Female immature: Iris brownish gray; bill horny blue, the tip black; cere horny yellow; feet yellow; claws black. Length, 31¾ inches; weight, 7 pounds. Stomach contained remains of a grebe (*Podiceps*).”

In the two immature birds the dark streaking below is confined to the jugulum, breast, and upper abdomen; in the supposed male it is quite narrow, but in the female is so broad as to be in many places confluent.

BUTEO FEROX (Gmelin).

Accipiter ferox S. G. GMELIN, Nov. Comm. Ac. Sci. Imp. Petrop., XV, 1771, p. 442, pl. X.

Buteo ferox CABANIS, Journ. f. Ornith., 1854, p. 260.

Eighteen specimens of this very interesting bird were secured by Dr. Abbott, all but one of them in the Vale of Cashmere. The series contains no two individuals exactly alike, and represents apparently almost if not quite all the principal variations of plumage to which the species

¹ Cat. Birds Brit. Mus., I, 1874, p. 240.

² Nov. Comm. Acad. Sci. Imp. Petrop., XV, 1771, p. 445, pl. XI b

³ Ibis, 1894, pp. 283-286.

is subject. In view of this, it seems well to present a brief description of each example, to which are also added, as of interest, the original label notes of the collector.

a. Male adult, December 4, 1895. Very dark above and below; no light spots on abdomen or thighs; some rufous streaks on throat, also on nape; tail very dark, with no broad subterminal bar, the light interspaces on central feathers so dark that the bars are but slightly indicated. "Bill black, bluish at base; cere yellowish green; gape yellow; irides pale brownish gray; feet yellow; claws black. Length, $23\frac{1}{4}$ inches; weight, 30 ounces. Stomach full of small frogs and grasshoppers; crop contained 17 small frogs and 1 grasshopper. Thin and in poor condition."

b. Male adult, December 7, 1895. Very dark, with no spots on abdomen or thighs, but rich rufous edgings on the feathers of breast, lower abdomen, and under tail-coverts; nape black and white with rufous streaks on sides; tail with very light gray, almost white, interspaces. "Bill black, pale horny at base; gape yellow; cere orange yellow; feet yellow; claws black; irides dark brown. Length, $21\frac{1}{2}$ inches. Excessively fat."

c. Male adult, December 22, 1895. Somewhat like *b*, but much lighter below, with buffy streaks on throat and breast; light interspaces of central rectrices dirty gray. "Bill black, base horny blue; cere yellowish green; feet yellow; claws black; irides brown. Length, 22 inches; weight 32 ounces. Stomach contained frogs." Very fat.

d. Male adult, December 23, 1895. Very dark above and below, like *a*, but abdomen relieved by a few whitish spots on the sides of the feathers; some whitish mottlings on back and scapulars; a little more rufous on head and nape, some also on throat and breast; light interspaces on tail feathers paler and grayer; tail with a broad blackish subterminal band. "Bill black at tip, base horny blue; cere greenish yellow; gape and feet yellow; claws black; irides dark brown. Length, 22 inches."

e. Male adult, December 27, 1895. Much like *c*, but rufous on throat and breast decidedly darker; more of rufous on crown and a wash of the same color on upper tail-coverts; gray interspaces of tail light, and the black bars broken. "Bill black, its base horny blue; feet yellow; claws black; cere horny yellow; irides dark brown. Length, 21 inches; weight, 34 ounces."

f. Female adult, December 3, 1895. Throat, breast and nape rufous, the throat variously mottled; feathers of thighs, abdomen and lower breast with large whitish spots on each side of shafts; upper tail-coverts blackish, with two to three rows of whitish gray bars; tail dirty gray, with transverse markings of black. "Bill horny black, horny blue beneath; cere yellowish green; feet dull yellow; claws black; irides hair brown. Length, $23\frac{3}{4}$ inches; weight, $2\frac{3}{4}$ pounds. Excessively fat."

g. Female adult, December 19, 1895. Almost like *f*, but having considerable rufous mixed with the gray of the tail, and the interrupted bars on upper tail-coverts pale rufous instead of grayish white. "Bill black, base horny blue; gape yellow; cere horny yellow; irides dark brown. Stomach contained frogs. Length, 23½ inches."

h. Female adult, December 19, 1895. Very dark, like *b*, but with less rufous on lower parts; under tail-coverts broadly tipped with ochraceous; tail much darker gray on light interspaces, with here and there some tinge of rufous. "Bill black, base horny blue; gape yellow; cere horny yellow; irides dark brown. Length, 23¼ inches. Stomach contained remains of frogs."

i. Female adult, December 19, 1895. Similar to *b*, but lighter rufous on throat, breast, and abdomen, mottled by lighter tips to the feathers; tail with a rufous tinge in places, the dark bars on central feathers almost V-shaped. "Bill black, the base horny blue; feet yellow; claws black. Length, 23 inches. Stomach contained frogs."

j. Female adult, December 24, 1895. Resembling *c*, but with more rufous in the markings of the throat, breast, head, and nape; light interspaces of tail paler and more grayish, with a considerable admixture of rufous, the blackish bars much broken, the subterminal bar narrow, the light terminal one very broad. "Bill black, the base horny blue; feet yellow; claws black; irides dark brown. Length, 24 inches. weight, 2½ pounds."

k. Female adult, December 25, 1895. Almost like *j*, but with fewer spots on abdomen; dark tail bars not broken, and terminal light bar not very broad. "Bill black, the base horny greenish; cere dull horny green; feet yellow; claws black; irides dark brown. Length, 24 inches; weight, 3 pounds."

l. Male immature, December 3, 1895. Throat and breast mingled rufous and buff, but darker than in *f*; abdomen and thighs with light spots; nape mixed dark brown and buff; tail gray and rufous, with the black bars, excepting the subterminal one, much broken or obsolete, the two central feathers with blackish streaks on sides of shafts and broken crossbars on their outer borders. "Bill black, horny blue at base; gape yellow; cere greenish; feet yellow; claws black; irides hair brown. Length, 21¼ inches; weight, 2 pounds."

m. Male immature, Sind Valley, Cashmere, at 6,000 feet, December 12, 1895. Light below, but with a mottled band of dark rufous across the middle of under surface, the brown and rufous markings darker and heavier than in *o*; thighs very deeply colored, the feathers with rufous margins; inferior tail-coverts buffy, with some rufous markings; center of nape with a patch of black, encircled by buff-bordered brown feathers; rump, black and upper tail-coverts blackish, the two last with light rufous tips to the feathers; scapulars dark, with buffy and rufous edgings; tail with some rufous touches on all the feathers, the dark bars wavy and irregular. "Bill black, horny blue at base; cere yel-

lowish green; gape yellow; feet yellow; claws black; irides dark brown. Length, $21\frac{3}{4}$ inches."

n. Male immature, December 25, 1895. Almost exactly like *p*, but forehead very dark; under tail-coverts nearly all rufous; gray of tail replaced wholly by rufous; black tail bars very much broken, and to some extent obsolete, the subterminal black bar narrow. "Bill black, bluish horny at base; cere dull horny green; feet yellow; claws black; irides dark brown. Length, $20\frac{3}{4}$ inches; weight, 34 ounces. Crop full of frogs."

o. Female immature December 8, 1895. Very pale buff below, with hair-like shaft lines on throat, wider streaks on breast, and still broader markings of brown on sides of abdomen; much reddish brown on thighs; under tail-coverts buffy white; upper parts light sandy brown, the feathers with dark centers and yet darker shaft lines; superior tail-coverts with a slight tinge of rufous; tail dusky gray, with lighter interspaces and no broad subterminal dark bar. "Bill black, blue at base; cere and gape pale yellowish green; feet yellow; claws black; irides pale straw color. Length, $23\frac{3}{4}$ inches. Stomach contained remains of a large rat (*Neosocia bengalensis*)."

p. Female immature, December 18, 1895. Under parts with a strong wash of rusty; throat and breast with narrow streaks of dark brown, and larger markings on abdomen; thighs and sides of body very dark brown, the feathers bordered with rufous; nape with a black and rusty spot; back and head deep brown, most of the feathers with broad margins and tips of buffy, though some with rufous edgings; upper tail-coverts dark brown, the feathers with ochraceous tips; tail with a considerable rufous wash, the dark bars nearly obliterated on the central and on some of the lateral rectrices. "Bill black, base horny blue; cere greenish; feet yellow; claws black; irides brown. Length, 24 inches. Stomach contained remains of mice."

q. Female immature, December 22, 1895. Very light below, like *o*, but brown spots on abdomen heavier and more numerous; tail much lighter, with its dark bars narrower and with no broad subterminal bar. "Bill black, base horny blue; cere pale yellowish green; gape dull yellow; feet yellow; claws black; irides grayish white. Length, 24 inches; weight, 34 ounces. Stomach contained remains of frogs and mice."

r. Female immature, December 24, 1895. Rufescent below, as in *p*, but streaks on throat broader; breast and abdomen with conspicuous dark spots; thighs very dark; top of head deep brown, but nape light; upper tail-coverts with broad rufous tips, as in *p*; light interspaces on tail grayish white with very little rufous, the dark bars almost V-shaped. "Bill black, base horny blue; cere dull horny green; feet yellow; claws black; irides pale mottled brown. Length, 26 inches; weight, 3 pounds. Stomach contained a mouse."

The changes of plumage in this species are not a little puzzling.

There seem to be, however, four principal phases: One in which the lower parts are very light colored, with little or no rufous, and with comparatively inconspicuous streaking; another, in which the under surface has more rufous, is much streaked anteriorly and barred or mottled posteriorly; a third, in which the entire lower surface is almost without obvious streakings, being rufous on throat and breast and dull brown on the hinder portions; and a fourth, in which the whole plumage above and below is almost uniform sooty brown. Connecting these several places there exists an almost unbroken series of intermediates. Doctor Sharpe considers that the last-mentioned condition is the very old bird,¹ and that each individual is very light when young, gradually darkening with advancing years. The present series of specimens offers much to corroborate this theory, and very little, if indeed anything, to oppose. The birds in the first of the above-mentioned phases, are without any doubt very young, and those of the last two are just as unquestionably adults. Those of the second phase are not so satisfactorily determinable, but they seem to be in a transition state, although how many years are required to assume this plumage must still, of course, be a matter of conjecture. Were any of the darkest specimens young birds they would easily establish a case of dimorphism very similar to that of the American *Buteo swainsoni*, to which, in its various phases of plumage, the present species bears no slight resemblance. Without such examples, however, it seems premature to advance this hypothesis as more than a suggestion, and in the light of our present knowledge we must regard the various differences of plumage as the result of age. Only one individual of this series has a completely red tail, though several have a greater or less tinge of rufous. The old adults, as also the very young birds, appear not to have a rufous tail; so that unless we are in error as to the sequence of plumage, the rufous tail belongs, rather curiously, to a transition stage.

In some conditions of plumage the present species is very difficult to distinguish from *Buteo desertorum*, but the larger size of the former will usually serve for identification.

ACCIPITER NISUS (Linnæus).

Falco nisus LINNÆUS, Syst. Nat., 10th ed., I, 1758, p. 92.

Accipiter nisus PALLAS, Zoogr. Rosso-As., I, 1826, p. 370.

Two examples. One is an adult male from Sind Valley, Cashmere, at 6,000 feet altitude, taken December 14, 1895: "Iris and feet yellow; claws black; bill black, the base horny blue. Length, 13½ inches." The other is an immature female from Srinagar, Cashmere, December 30, 1895: "Iris yellow; bill black, horny blue at base; cere yellowish green; feet yellow with a tinge of green on tarsus; claws black. Length, 15½ inches. Stomach contained the remains of small birds. This hawk was pursuing a jackdaw when shot."

¹ Cat. Birds Brit. Mus., I, 1874, p. 177.

The male is in fully adult plumage, and the rufous bars on the breast are so broad as to be in places confluent. It is darker above than a specimen from Egypt, but the present series indicates this difference to be individual rather than geographical.

CIRCUS CYANEUS (Linnæus).

Falco cyaneus LINNÆUS, Syst. Nat., 12th ed., 1, 1766, p. 126.

Circus cyaneus BOIE, Isis, 1822, p. 549.

One fine adult male of this pretty hawk was secured by Dr. Abbott in the Sind Valley, Cashmere, December 11, 1895. "Iris golden yellow; bill black, lower mandible horny blue at base; cere yellowish green; legs bright yellow; claws black. Length, 18½ inches. Stomach and crop contained the remains of a thrush."

Family BUBONIDÆ.

SYRNIUM ALUCO BIDDULPHI (Scully).

^a *Syrnium biddulphi* SCULLY, Ibis, 1881, p. 423.

Syrnium aluco biddulphi RICHMOND, Proc. U. S. Nat. Mus., XVIII, 1896, p. 456.

One adult female, from "north of the Vale of Cashmere," at 7,000 feet altitude, October 26, 1895. "Claws dull black; bill pale waxy green, the cere slightly darker. Length, 18½ inches. Crop contained remains of a species of thrush (*Merula*) and of some mice."

BUBO BUBO TURCOMANUS (Eversmann).

Strix turcomana EVERSMAAN, Add. Pall. Zoogr. Rosso-As., I, 1835, p. 3.

Bubo bubo turcomanus RICHMOND, Proc. U. S. Nat. Mus., XVIII, 1896, p. 455.

One adult male from the Valley of Cashmere, December 27, 1895. "Iris golden yellow; bill black; cere dull blackish horny; claws horny black. Length, 22½ inches; weight, 3½ pounds. Stomach contained some mouse hair."

Family ALCEDINIDÆ.

ALCEDO ISPIDA Linnæus.

Alcedo ispida LINNÆUS, Syst. Nat., 10th ed., I, 1758, p. 115.

An immature male from the Valley of Cashmere. "Bill black; iris dark brown; tarsi and soles of feet dull red; upper surface of toes brown. Length, 6¾ inches." There seem to be absolutely no characters even subspecifically to distinguish *Alcedo bengalensis* from *A. ispida*.

Family PICIDÆ.

GECINUS SQUAMATUS (Vigors).

Picus squamatus VIGORS, Proc. Zool. Soc. Lond., 1830, p. 8.

Gecinus squamatus GRAY, Genera Birds, II, 1846, p. 438.

Two adult specimens in perfect plumage: one from the Valley of Cashmere, the other from The Lolab, Cashmere, at 8,000 feet. "Upper

mandible horny brown at base, tip yellow; lower mandible yellow; feet dull olive; iris in two zones, inner zone red, outer pinkish white. Length of male. 13½ inches; female, 14 inches."

Family ALAUDIDÆ.

CALANDRELLA ACUTIROSTRIS Hume.

Calandrella acutirostris HUME, Lahore to Yarkand, 1873, p. 265.

Two specimens, from Bazgo plain, Ladak, 11,000 feet. "Iris dark brown; bill dark horn-brown above, yellowish at base beneath; feet brownish fleshy; claws pale horn-brown. Common on this plain, in pairs." These examples are identical with those previously collected by Dr. Abbott in Ladak and Tagdumbash Pamir but recorded by Dr. Richmond as *tibetana*.¹

From *Calandrella brachydaactyla* and *dukhunensis* both *acutirostris* and *tibetana* may readily be distinguished by the absence of deep buffy tinge in the edgings of the exterior webs of the outermost tail-feathers. Aside from the shape of the bill, a differential character apparently quite unreliable by reason of the great range of individual variation, *tibetana* may be separated from *acutirostris* by the pattern of the outer pair of tail-feathers. In the former species the whole feather is white excepting the basal third of the inner web and the extreme base of the outer, which are obliquely blackish; in *acutirostris* the inner web of the outer tail-feathers is largely blackish, the white occupying a diagonally terminal area equal to only about a fourth of the inner vane and one-half the outer. Dr. Richmond's inability satisfactorily to distinguish from *tibetana* the specimens he records as *acutirostris*² is explained by the fact that he had no examples of *tibetana*, those with which he made his comparison as such being all *acutirostris*.

ALAUDA ARVENSIS LEIOPUS (Hume).

Alauda leiopus HUME, Stray Feathers, I, November, 1872, p. 40.

Two breeding males from Shooshot, Indus Valley, Ladak, at 10,000 feet. Dr. Abbott reports them as "very common in the cultivated fields." These specimens do not differ from those obtained by Dr. Abbott in Cashmere.

Owing to the unfortunate confusion which at present exists among the races of *Alauda arvensis*, any determination must of necessity be largely tentative; but so far as our series is indicative, the birds from eastern Asia are larger and have more slender bills than those from Cashmere and Ladak, the difference being apparently sufficient to warrant subspecific separation. Dr. Richmond used the name *Alauda*

¹ Proc. U. S. Nat. Mus., XVIII, 1896, pp. 467, 579.

² Idem., p. 579.

arvensis intermedia (Swinhoe)¹ for this race, considering it not to differ from the bird of eastern Asia, but stating that in the event of their separation the name *guttata* of Brooks would be the proper one for the Cashmere form, since *Alauda leiopus* of Hodgson² is a *nomen nudum*. Mr. Hume, however, in an article on the skylarks of India differentiates "the *Leiopus* type from Ladak, Thibet, and the higher Himalayan plateau generally;"³ giving a diagnosis, and identifying his bird—which he regards as the breeding form of the region mentioned—with *leiopus* of Hodgson. As Hume's name antedates *A. guttata* of Brooks, and since it is a perfectly tenable one, notwithstanding the unavailability of *A. leiopus* Hodgson, the skylark of Cashmere and Ladak should be called *Alauda arvensis leiopus* (Hume).

OTOCORIS LONGIROSTRIS Moore.

Otocorys longirostris MOORE, Proc. Zool. Soc. Lond., 1855, p. 215, pl. CXI (from the Gould manuscript).

Three breeding birds from Ladak, taken, respectively, at Fotu-la Pass, 13,000 feet; Debring, Rupshu, 16,000 feet, and Tsokr Chumo Lake. Male: "Bill black, leaden beneath at base." Female: "Feet black, soles pale; bill dark horny, pale bluish horny beneath at base."

Family ENICURIDÆ.

ENICURUS MACULATUS Vigors.

Enicurus maculatus VIGORS, Proc. Zool. Soc. Lond., 1830, p. 9.

One handsome adult male, from Sind Valley, Cashmere, taken December 17, 1895, at 6,000 feet altitude. "Iris dark brown; feet and claws white; bill black; length, 10 $\frac{1}{2}$ inches."

Family CRATEROPIDÆ.

TROCHALOPTERON VARIEGATUM SIMILE (Hume).

Trochalopteron simile HUME, Ibis, 1871, p. 408.

Six specimens, from The Lolab and Lolab Valley, Cashmere, all taken at an altitude of 8,000 feet. They are exceedingly uniform in color, and present very strongly the subspecific characters of *simile*, the outer portions of the wing-quills and tail-feathers being clear gray with scarcely a suggestion of olive. "In length they range from 10 to 10 $\frac{1}{2}$ inches. Iris green; feet pale fleshy brown, or [in some] pale orange-brown; bill black."

¹ Proc. Zool. Soc. Lond., 1863, p. 89.

² Icon. ined. in Brit. Mus., Passeres, pl. 293 (No. 728).

³ Stray Feathers, I, November, 1872, p. 40.

Family ACCENTORIDÆ.

ACCENTOR HIMALAYANUS Blyth.

Accentor himalayanus BLYTH, Journ. As. Soc. Beng., XI, 1842, p. 187.

Accentor altaicus BRANDT, Bull. Acad. St. Pétersb., I, 1843, p. 365.

One young male, from Mya, on the Indus River, Ladak, at 13,000 feet.

This bird is in first plumage, though wings and tail are full grown, and may be described as follows: Upper surface dull buffy ochraceous, rather more ashy on nape, darker on back; everywhere, except on upper tail-coverts, mottled with darker, these markings largest on back, duller and smaller on head and hind neck; tail fuscous, edged externally with chestnut; wings fuscous, with broad margins of chestnut, the wing-coverts tipped with ochraceous; sides of head and neck dull brown mixed with ochraceous; a poorly indicated superciliary stripe of buffy; chin buff, speckled with dusky; throat pale dull buff, thickly marked with blackish; breast and jugulum deep ochraceous, streaked with blackish; remainder of under surface plain buffy. "Length, $6\frac{1}{2}$ inches."

Though commonly known as *Accentor altaicus*, there seems to be no reason why the earliest name for this bird, *Accentor himalayanus* Blyth, should not be employed, since the original description is clearly pertinent enough to be tenable.

Family TURDIDÆ.

SAXICOLA PICATA CAPISTRATA (Gould).

Saxicola capistrata GOULD, Birds Asia, 1865, Pt. 17.

Saxicola picata capistrata RICHMOND, Proc. U. S. Nat. Mus., XVIII, 1896, p. 480.

One adult male from Kargil, Ladak, taken June 23, 1897, at 8,000 feet altitude. "Bill and feet black." This bird is in rather worn plumage, particularly on the head, but is apparently quite a typical specimen. Intergradation with true *picata* makes necessary the trinomial designation here employed.

SAXICOLA OREOPHILA, new name.

Saxicola montana GOULD, Birds Asia, 1865, Pt. 17 (nec Koch).

Seven specimens, all from localities in Ladak. Two of the three breeding males are from Gya, at 15,000 feet; the other is from Debring, Rupshu, at 16,000 feet, and all are in worn condition. An October male from Nurla, in the Indus Valley, at 10,000 feet, is in freshly molted plumage, and, besides having the black areas obscured by light tips to the feathers, is elsewhere on the body strongly tinged with isabella color, this particularly evident on the lower back, upper tail-coverts,

and under surface. Two of the three breeding females are from Gya, at 13,000 and 15,000 feet, respectively, and though in every other respect typical, have the throat and sides of the neck, not including the chin, dull brownish black, somewhat mixed with buffy, instead of the ordinary dull buffy. The third female is from Tsokr Chumo Lake, at 15,000 feet altitude; the collector's note on the label, "bill, feet, and claws black," is applicable to both males and females.

The name *Saxicola montana* Gould, currently used for this stone chat, is preoccupied by *Saxicola montana* Koch,¹ which is *Monticola saxatilis* Linnæus; and as there are no synonyms, the new name above given becomes necessary.

PHENICURUS ERYTHRONOTUS (Eversmann).

Sylvia erythronota EVERS-MANN, Add. Pallas' Zoogr. Rosso-As., II, 1841, p. 11.

Phenicurus erythronotus RICHMOND, Proc. U. S. Nat. Mus., XVIII, 1896, p. 482.

One female in perfect fall plumage, from the Valley of Cashmere. "Bill and feet black."

PETROPHILA CYANA (Linnæus).

Turdus cyanus LINNÆUS, Syst. Nat., 12th ed., I, 1766, p. 296.

One adult male, in every respect apparently typical of this form, from Saspul, Indus Valley, Ladak, at 10,000 feet. "Bill, feet, and claws black; inside of mouth yellow." The specimens recorded by Dr. Richmond in his paper on Cashmere birds² were, by inadvertence, entered as *Petrophila solitaria*.

The very long wings appear sufficiently to distinguish the genus *Petrophila* from *Monticola*.

MOTACILLA ALBOIDES Hodgson.

Motacilla alboides HODGSON, Asiat. Researches, XIX, 1836, p. 191.

Motacilla hodgsoni HODGSON, in Gray's Zool. Misc., 1844, p. 83 (from the Blyth manuscript).

Three specimens. Two of these, an adult male and female in breeding plumage, are from Saspul, Indus Valley, Ladak, at 10,000 feet. Dr. Abbott's notes are: "Iris dark brown; bill and feet black. The commonest wagtail hereabouts. In pairs; often on stony hillsides quite a distance from water." The third example is a winter male, with white chin, taken in the Valley of Cashmere. "Length, 7 $\frac{3}{8}$ inches."

Mr. Hodgson's *Motacilla alboides* has priority over the same author's *M. hodgsoni*, and as his original description of *alboides* without doubt applies to the present species, the name should be adopted.

¹System der Baiern. Zoologie, 1816, p. 185.

²Proc. U. S. Nat. Mus., XVIII, 1896, p. 488.

Family SYLVIIDÆ.

PHYLLOPSEUSTES HUMEI (Brooks).

Reguloides humei BROOKS, Stray Feathers, VII, 1878, p. 131.

Phyllopseustes humii RICHMOND, Proc. U. S. Nat. Mus., XVIII, 1896, p. 476.

One specimen from Leh, Ladak, 11,000 feet. "Length, $4\frac{5}{8}$ inches." This is a fall bird, differing from a similar example from the Thian Shan Mountains in being more brownish on the head, rump, and under parts, this probably an indication of immaturity.

PHYLLOPSEUSTES AFFINIS (Tickell).

Motacilla affinis (err. typ.) TICKELL, Journ. As. Soc. Beng., II, 1833, p. 576.

Phyllopseustes affinis RICHMOND, Proc. U. S. Nat. Mus., XVIII, 1896, p. 475.

One example, September 11, 1897, from Mya, Indus River, at 12,500 feet, is probably a bird of the year. The entire body plumage is noticeably paler than in two breeding birds from Cashmere.

PHYLLOPSEUSTES TRISTIS (Blyth).

Phylloscopus tristis BLYTH, Journ. As. Soc. Beng., XII, 1843, p. 966.

Phyllopseustes tristis MEVES, Journ. für Orn., 1875, p. 430.

Two perfectly typical breeding males; from Nimu, Indus Valley, and Shergol, Ladak, respectively, both taken at an altitude of 10,000 feet. "Feet brownish black; bill black, fleshy horn brown at base beneath."

Family CINCLIDÆ.

CINCLUS ASIATICUS Swainson.

Cinclus asiaticus Swainson, Faun. Bor.-Amer., II, 1831, p. 174.

One example, from the Sind River, Cashmere, taken at 6,000 feet. "Length, $8\frac{5}{8}$ inches." Not in any way different from Ladak specimens.

The name *Cinclus asiaticus* Swainson, as above cited, is a *nomen nudum*; but as there remains some doubt about the proper designation of the species, no change is here made.

CINCLUS CINCLUS CASHMERICENSIS (Gould).

Cinclus cashmeriensis GOULD, Proc. Zool. Soc. Loud., 1859, p. 474.

Cinclus cinclus cashmeriensis RICHMOND, Proc. U. S. Nat. Mus., XVIII, 1896, p. 488.

One specimen, from Gya, Ladak, at 13,000 feet. "Front of tarsi and top of toes lead color, rest of feet dull black; bill black. Length, 8 inches." The head and cervix are of a warmer brown than in winter specimens, and the feathers of the flanks and sides lack entirely the whitish edgings of the latter season.

Family FRINGILLIDÆ.

EMBERIZA CIA Linnæus.

Emberiza cia LINNÆUS, Syst. Nat., 12th ed., I, 1766, p. 310.

Two specimens from Lamayuru, Ladak, taken June 26, 1897, at 12,000 feet altitude. "Bill black, leaden beneath at base; feet pale fleshy brown, with a reddish tinge; claws dark horn brown.—Common on the bare stony hillsides and about villages up to 13,000 feet; always in pairs at this season."

These birds are typical *cia*, not *stracheyi*, which Dr. Richmond surmised¹ to be the breeding form of the region.

EMBERIZA LEUCOCEPHALA Gmelin.

Emberiza leucocephalos GMELIN, Nov. Comm. Acad. Sci. Imp. Petrop., XV, 1771, p. 480, pl. XXIII, fig. 3.

A pair of winter birds from the Valley of Cashmere. "Upper mandible dark horny brown, lower mandible horny blue; feet pale fleshy brown. Length of male, $7\frac{1}{8}$ inches; female, $6\frac{3}{4}$ inches."

CARPODACUS SEVERTZOVI Sharpe.

Carpodacus severtzovi SHARPE, Proc. Zool. Soc. Lond., 1886, p. 354.

Two breeding specimens from Upshi, Valley of the Indus, Ladak, at 11,000 feet. "Iris brown; bill pale brownish horny above, whitish horny beneath; feet in male black, in female dark fleshy brown." Dr. Abbott notes that he found the species "in pairs on the stony hillsides."

CARPODACUS ERYTHRINUS (Pallas).

Loxia erythrina PALLAS, Nov. Comm. Acad. Sci. Imp. Petrop., XIV, Pt. 1, 1770, p. 587, pl. XXIII, fig. 1.

Carpodacus erythrinus GRAY, Gen. Birds, II, 1844, p. 384.

One male from Tashgam, Ladak. "Iris brown; upper mandible horny brown, lower mandible dull yellowish horny; feet fleshy brown; claws horn brown."

From the specimens available it is indicated that the birds of this region are entitled to subspecific recognition by reason of their decidedly brighter colors; but this material is too meager to justify a formal separation.

SERINUS PUSILLUS (Pallas).

Passer pusillus PALLAS, Zoogr. Russo-Asiat., II, 1826, No. xliii, p. 28.

Serinus pusillus BRANDT, Bull. Sci. Acad. St. Pétersb., I, 1843, p. 366.

Two examples, from Shooshot and from Shergol, Indus Valley, Ladak, respectively, both taken at an altitude of 10,000 feet. "Iris

¹Proc. U. S. Nat. Mus., XVIII, 1896, p. 465.

dark brown; bill brownish black; feet dull blackish. In flocks of 10 or 12, feeding on ground on bare, stony hillsides."

These specimens agree perfectly with other adults, except that the bright patch on the forehead is orange instead of scarlet, a condition very probably due to the abrasion incident to the breeding season.

PASSER DOMESTICUS INDICUS (Jardine and Selby).

Passer indicus JARDINE and SELBY, Ill. Orn., III, October, 1831, pl. 118.

Passer domesticus indicus SEEBOHM, Ibis, 1883, p. 8.

Two breeding specimens from Fotu-la Pass, Ladak, at an altitude of 12,000 feet.

LEUCOSTICTE BRANDTI Bonaparte.

Leucosticte brandti BONAPARTE, Consp. Av., I, 1850, p. 537.

Three summer specimens from Ladak: two of these are from below the Kazuri-la, Ladak, at 16,000 feet, where Dr. Abbott reports the species as occurring in small flocks on grassy areas; the third individual is from Gya, Ladak, at 14,000 feet. "Bill and feet black; iris dark brown."

MONTIFRINGILLA ALTAICA (Eversmann).

Fringilla altaica EVERS-MANN, Bull. Naturforsch. Gesellsch. Moscau, XXI, 1848, p. 219.

Fringillauda sordida STOLICZKA, Journ. As. Soc. Beng., XXXVII, 1868, p. 63.

One specimen from The Lolab, Cashmere. "Feet brownish black; iris pale brown."

An examination of the original description of Eversmann's *Fringilla altaica*, which Dr. Sharpe stated¹ that he was unable to discover, proves beyond a doubt what was long ago affirmed by Severtzoff²—the priority of the name *altaica* for the species commonly called *Montifringilla sordida* (Stoliczka). Eversmann gives the southern Altai Mountains, "Umgegend des Dorfes Uimon" as the locality; and his diagnosis is as follows: "*F. rostro crasso conico; gastræo fusco-cinereo, concolore; notæo fusco-liturato, capite ferruginoso; rectricibus nigricantibus concoloribus, tectricibus caudæ superioribus apice lato albo.*" Mention also is made of affinity to *Leucosticte arctoa* and *Fringilla montifringilla*.

MONTIFRINGILLA ADAMSI Adams.

Montifringilla adamsi ADAMS, Proc. Zool. Soc. Lond., 1858, p. 482 (from the Moore manuscript).

Three examples from Ladak: Fotu-la Pass, 12,000 feet; Upshi, Indus Valley, 11,000 feet; and Phyang, Indus Valley, 11,000 feet. "Iris yellowish brown; bill, feet, and claws black."

¹ Cat. Birds Brit. Mus., XII, 1888, p. 266 (footnote).

² Stray Feathers, III, 1875, p. 424; Ibis, 1883, p. 60.

LINARIA BREVIROSTRIS PYGMÆA (Stoliczka).

Linota pygmaea STOLICZKA, Journ. As. Soc. Bengal, XXXVII, Pt. 2, 1868, p. 62.

Five summer birds from Gya, Ladak, at from 13,000 to 14,000 feet. According to Dr. Abbott's notes the color of the feet ranges from "dark fleshy brown" to black; and the bill is variously "pale brownish fleshy," "dull leaden," or "horny white," always "dark brown at tip." "Length, male, 5½ inches." With regard to their habits he states: "In small flocks about the patches of cultivation and picking among the horse-droppings in the road."

These five specimens are exceedingly interesting, since they establish beyond a doubt the validity of *Linota pygmaea* Stoliczka, a form which has heretofore always been synonymized with *L. brevirostris*. Even casual comparison is sufficient to show that the two are at least subspecifically distinct. The original specimens of *pygmaea* came from Chini and Padam, so that this form seems to be confined chiefly to Ladak; *L. brevirostris* apparently occupying the region extending from Asia Minor to Turkestan. The original wing measurement is smaller than that of the present examples, but, excepting this and a few other unimportant discrepancies, the original description of *Linota pygmaea* is perfectly applicable.

From Turkestan and Tagdumbash Pamir specimens, which are assumed to be nearly or quite typical *brevirostris*, *pygmaea* differs in being much darker, more fulvous throughout, this being most evident on jugulum, breast, and back. One individual is rather paler than the others, thus in a measure verging toward *brevirostris* and indicating its subspecific relationship, but is without difficulty distinguishable.

The proper generic name for the linnets is apparently *Linaria* Bechstein,¹ this being almost thirty years prior to to *Linota* Bonaparte² which has been in frequent use for the group. Dr. Sclater, after showing *Linaria* to be the earliest name,³ rejects it on account of previous employment in botany,⁴ a course not in accord with current usage.

CALLACANTHIS BURTONI (Gould).

Carduelis burtoni GOULD, Proc. Zool. Soc. Lond., 1837, p. 90.

Callacanthis burtoni BONAPARTE, Consp. Av., I, 1850, p. 507.

One adult male, December 16, 1895, from Sind Valley, Cashmere, at 6,000 feet, differs from breeding males in the duller, more rosaceous tinge of the lower surface. "Bill horny yellow, brown at tip; feet pale brownish flesh color. Length, 7½ inches."

¹Ornith. Taschenb., I, 1802, p. 121.

²Saggio Distr. Met. Anim., 1831, p. 141.

³Ibis, 1892, pp. 555 et seq.

⁴Idem., p. 557.

PERISSOSPIZA¹ ICTERIOIDES (Vigors).

Coccothraustes icteroides VIGORS, Proc. Zool. Soc. Lond., 1830, p. 8.

Pycnorhamphus icteroides HUME, Nests and Eggs Indian Birds, 1874, p. 469.

One adult male in perfect plumage, from Sind Valley, Cashmere, at 6,000 feet. "Iris hair brown; feet fleshy pink; claws horny brown; bill green, slightly yellowish. Length, 9½ inches."

The generic term *Pycnorhamphus* Hume,² commonly applied to this and two allied species, is preoccupied by *Picnoramphus* Rosenberg,³ a synonym of *Sphecothera* Vieillot,⁴ the difference in the spelling of the two names being simply one of transliteration. Since for *Pycnorhamphus* there is no other name available, it may be called as above—*Perissospiza*, from περισσοός, mirabilis, and σπιζα, fringilla. The remaining species of this genus will consequently stand as *Perissospiza affinis* (Blyth) and *Perissospiza carneipes* (Hodgson).

Family HIRUNDINIDÆ.

PTYONOPROGNE RUPESTRIS (Scopoli).

Hirundo rupestris SCOPOLI, Ann. I. Hist. Nat., 1769, p. 167.

Ptyonoprogne rupestris REICHENBACH, Syst. Av., 1850, pl. LXXXVII, fig. 6.

One specimen, June 29, 1897, from Spittak, Indus Valley, Ladak, at 10,000 feet. "Feet pale brownish fleshy; iris blackish brown; claws horn brown; bill dull black." With a fair series of both Asiatic and European specimens at hand, no difference worthy of subspecific recognition is apparent.

The generic term *Biblis*,⁵ commonly applied to the crag martins when they are distinguished from *Riparia* (= *Cotile*), is ineligible for use in this connection, being preoccupied in Lepidoptera by *Biblis* Fabricius.⁶ The next available name is *Ptyonoprogne* Reichenbach,⁷ which should therefore stand as the proper designation of the group.

DELICHON CASHMERIENSIS (Gould).

Chelidon cashmeriensis GOULD, Proc. Zool. Soc. Lond., 1858, p. 356.

Two specimens, taken July 4, 1897, at Upshi, Indus Valley, Ladak, 11,000 feet. "Iris dark brown; claws horn brown; bill black." Dr. Abbott notes that one of these examples belonged to a large colony which was nesting in a bluff of conglomerate on the banks of the Indus.

As Dr. Reichenow has already demonstrated,⁸ the generic term *Cheli-*

¹ New name for *Pycnorhamphus*.

² Nests and Eggs of Indian Birds, 1874, p. 469.

³ Batavia Natur. Tijdschr. Nederl. Ind., XXIX, 1866, p. 143.

⁴ Nouv. Dict. d'Hist. Nat., XXXII, 1819, p. 5.

⁵ Lesson, Compl. Buf., VIII, 1837, p. 495.

⁶ Illiger's Mag., VII, 1807, p. 281.

⁷ Syst. Av., 1850, pl. LXXXVII, fig. 6.

⁸ Journ. f. Orn., 1889, p. 187.

don,¹ commonly employed for this and allied species, is clearly untenable, being preoccupied by *Chelidon* Forster,² which is a synonym of *Hirundo* Linnæus. *Delichon* Moore³ was proposed for the bird now known as *Chelidon nipalensis*, but as this species appears to be not generically distinct from *C. urbica* and its allies, the generic name *Delichon* must be used for all. The only alternative is to restrict *Delichon* to *nepalensis* and use *Chelidonaria* Reichenow⁴ for the *urbica* group.⁵

Family PARIDÆ.

ÆGITHALISCUS NIVEOGULARIS (Moore).

Orites (?) *niveogularis* MOORE, Proc. Zool. Soc. Lond., 1854, p. 140 (from the Gould manuscript).

Ægithaliscus niveogularis JERDON, Birds Ind., II, 1863, p. 272.

Four specimens of this handsome species, from the Sind Valley, Cashmere, at 6,000 feet. "Length, from $4\frac{1}{2}$ to $4\frac{3}{4}$ inches," the female being slightly smaller. "Iris dark brown; feet orange brown; bill black."

Family STURNIDÆ.

STURNUS VULGARIS MENZBIERI (Sharpe).

Sturnus menzbieri SHARPE, Ibis, 1888, p. 438.

Sturnus vulgaris menzbieri RICHMOND, Proc. U. S. Nat. Mus., XVIII, 1896, p. 573.

Two specimens from the Valley of Cashmere. "Iris blackish brown; feet dark purplish brown; bill black. Length of male, 9 inches; of female, $8\frac{5}{8}$ inches." This is apparently an easily distinguishable race.

Family CORVIDÆ.

TRYPANOCORAX FRUGILEGUS (Linnæus).

Corvus frugilegus LINNÆUS, Syst. Nat., 10th ed., I, 1758, p. 105.

Trypanocorax frugilegus LOCHE, Explor. Sci. Algér., Ois., I, 1858, p. 113.

Two adult males from the Valley of Cashmere, taken respectively on December 24 and 27, 1895.

CORVUS CORAX Linnæus.

Corvus corax LINNÆUS, Syst. Nat., 10th ed., I, 1758, p. 105.

One male, from the Hanlé River, Rupshu, Ladak, at 15,000 feet. "Length, $26\frac{1}{2}$ inches."

¹ Boie, Isis, 1822, p. 550.

² Synop. Cat. Brit. Birds, 1817, p. 17.

³ Proc. Zool. Soc. Lond., 1854, p. 104.

⁴ Journ. f. Orn., 1889, p. 187.

⁵ Reichenow, Ornith. Monatsb., 1899, p. 81.