

REVIEW OF JAPANESE BIRDS.

VI.—THE PIGEONS.

By LEONHARD STEJNEGER.

(Plate xxii.)

The addition of several new and interesting species of Pigeons, as well as the defective state of our knowledge in regard to several others, induced me to take up this group.

I take great pleasure in acknowledging the help I have received from material kindly placed in my hands for examination by the authorities of the Tokio Educational Museum, especially Messrs. Tegima and Namiye; by Prof. Robert Collett, Christiania, Norway; by Mr. Harry V. Henson, Hakodate, Japan; and by Mr. P. L. Jony, of the National Museum. Mr. H. Pryer, Yokohama, has also furnished me with some valuable notes. Great praise is due to the authorities of the St. Petersburg Imperial Academy of Sciences for the loan of type specimens received after the paper was submitted for publication.

SYNOPSIS OF THE JAPANESE GENERA OF *COLUMBIDÆ*.

- a*¹. Tail feathers 14 (*TRERONÆ*)..... *Treron*.
*a*². Tail-feathers 12 (*COLUMBÆ*.)
 *b*¹. Tip of wing formed by second, third, and fourth primaries; less than two-thirds of tail concealed by the coverts *Janthoenas*.
 *b*². Tip of wing formed by first, second, and third primaries, or by the last two alone; two-thirds of tail, or more, concealed by the coverts.
 *c*¹. Tail less than two-thirds of wing; tarsus feathered in front at the upper end, *Columba*.
 *c*². Tail two-thirds the length of wing, or more; tarsus entirely bare of feathers, *Turtur*.

The Japanese species may also be easily referred to their respective genera by the coloration alone, as follows:

- a*¹. Predominating color non-metallic green *Treron*.
*a*². Plumage without any non-metallic green.
 *b*¹. Predominating colors different shades of bluish-gray to black, more or less glossed with metallic reflections; tail-feathers not broadly tipped with white or gray.
 *c*¹. Tail uniformly dark..... *Janthoenas*.
 *c*². Tail with a broad subterminal light band *Columba*.
 *b*². Predominating colors brownish and grayish, without trace of metallic reflections anywhere; lateral tail-feathers broadly tipped with white or gray.... *Turtur*

TRERON VIEILL.

- 1816.—*Treron* VIEILLOT, Analyse, p. 49 (type, *Columba curvirostra* GM.).
 1817.—*Vinago* CUVIER, Règne Anim., I ed., 1, p. 457 (type, *C. abyssinica* LATH.).
 1835.—*Toria* HODGSON, Asiat. Res., XIX (p. 163) (type, *T. nipalensis* HODGS.).
 1837.—*Sphenurus* SWAINSON, Classif. B., II, p. 348 (type, *S. semitorquatus* SW.) (nec *Sphenura* LICHT., 1823).

1840.—*Sphenocercus* Gray, List Gen. Birds, p. — (same type).

1841.—*Romeris* HODGSON (*vide* Gray).

1851.—*Phalacrotreron* BONAPARTE, Consp. Av., II, p. 6 (type *C. calva* TEMM.).

1851.—*Euteron* BONAPARTE, Consp. Av., II, p. 9 (type, *C. capellii* TEMM.).

1854.—*Osmotreron* BONAPARTE, Consp. Av., II, p. 12 (type, *C. vernaans* GM.).

The different sections of Green Pigeons seem to grade into each other in such a manner as to make it impossible to regard them as generic divisions, except *Crocopus* BONAP., which is a fairly well-marked genus, characterized by the very pointed primaries, a square tail, and a very strong and short bill, with a prominent gonydeal angle, besides several peculiarities of coloration.

The absence or presence of the peculiar notch in the inner web of the third primary (see pl. xxii, fig. 2) seems to be of little value as a generic character. It is well pronounced in adult *T. sieboldii*, but two young birds before me show only the faintest possible indication of such a notch.

In regard to the differences between the two species occurring in Japan, I have nothing to offer additional to what I said in my first paper on the Liu Kiu birds (Proc. U. S. Nat. Mus., 1886, p. 639) where they are distinguished as follows :

a¹. Lower breast and entire abdomen yellowish-white; the outer tail-feathers above with a subterminal black band..... *T. sieboldii*.

a². The yellowish white of the body confined to the middle portion of the lower abdomen and the crissum; the tail-feathers without any subterminal cross-band..... *T. permagna*.

Mr. Seebohm (Ibis, 1887, p. 179) gives *T. sieboldii* as occurring in Liu Kiu. There is nothing improbable in this, although, if a resident there, it may possibly be Swinhoe's *T. sororius*, which occurs in Formosa, rather than the true *T. sieboldii*. I am bound to say, however, that I find nothing in Swinhoe's description to distinguish it from the latter, and Schlegel gives it as a synonym of *T. sieboldii* on the strength of a female specimen in the Leiden Museum received from Mr. Swinhoe himself. Until the question has been definitely settled I shall include it in the following synonymy with a query.

(161). *Treron sieboldii* (TEMME.).

Siebold's Green Pigeon.

Awo-bato.

1835.—*Columba sieboldii* TEMMINCK, Pl. Color., IV, livr. 93, pl. 549.—BLAKIST., Ibis, 1862, p. 329.—*C. (Vinago) s.* TEMM. & SCHL., Fauna Jap., Aves, p. 102, pl. 60 D (1847).—*Treron s.* GRAY, Gen. B., II, p. 467 (1844).—SCHLEGEL, Mus. P. Bas, Columb., p. 61 (1873).—V. MARTENS, Preuss. Exp. Ost-As., Zool. Th., I, p. 370 (1876).—BLAKIST. & PRYER, Ibis, 1878, p. 227.—*Id.*, Tr. As. Soc. Jap., VIII, 1880, p. 205.—*Id.*, *ibid.*, X, 1882, p. 129.—BLAKIST., Chrysanth., 1882, p. 522.—*Id.*, *ibid.*, 1883, p. 28.—*Id.*, *ibid.*, Feb., 1883, p. —.—*Id.*, Amend. List B. Jap., p. 44 (1884).—JOUY, Proc. U. S. Nat. Mus., VI, 1883, p. 314.—? SEEBOHM, Ibis, 1887, p. 179.—? STEJNEGER, Proc. U. S. Nat. Mus., IX, p. 639 (1887).—*Id.*, Zeitsch. Ges. Orn., 1887, p. —.—*Vinago s.* WHITELY, Ibis, 1867, p. 204.—SWINHOE, Ibis, 1875, p. 452.

1866.—? *Sphenocercus formosæ* SWINHOE, Ibis, 1866, p. 122 (*nee* 1863 !)

1866.—? *Sphenocercus sororius* SWINHOE, Ibis, 1866, p. 311.

1870.—? *Treron sonorius* GRAY, Hand-l. B., II, p. 224 (*lapsu* !).

The young birds of the year present some differences from the adults, as follows :

♂ hornot. (*Zoolog. Mus., Christiania, Norway. Petersen coll., No. 92. Nagasaki, Kiusiu. December, 1886.*)—Differs from the old male in having many of the small upper wing-coverts green, like the back, the wing-patch being mottled green and liver-brown; the yellow of the fore-head and fore-neck is more of a sulphur-yellow than a lemon-yellow, and the yellow on the breast does not extend so far backwards; the feathers of the tibiæ and tarsus gray, occasionally tipped with green; subapical black tail-bar less pronounced.

♀ jun. (*H. V. Henson coll., No. 256. Hakodate, Yezo. October 11, 1884.*)—Similar to the adult female, but the light edges of tail-feathers above wing-coverts much broader; the four middle pairs of tail-feathers above nearly uniform green, with scarcely a trace of a subapical black bar.

Measurements.

Museum and No.	Collector and No.	Sex and age.	Locality.	Date.	Wing.	Tail feathers.	Exposed culmen.	Tarsus.	Middle toe with claw.
U. S. Nat., 88710	Jouy, 549 ..	♂ ad.	Fuji, Hondo	July 19, 1882	195	124	21	.....	.....
U. S. Nat., 88711	Jouy, 331 ..	♀ ad.	.....do	June 29, 1882	175	111	18	.....	30
Christiania, N.	Petersen, 39	♀ ad.	Urakami, Kiusiu	Mar. 29, 1886	189	121	18	.....	34
Do	Petersen, 92	♂ juv.	Nagasaki, Kiusiu	Dec. —, 1886	189	120	19	.....	34
.....	Henson, 256	♂ juv.	Hakodate, Yezo	Oct. 11, 1884	189	103	17	.....	31

Treron permagna STEJN.

Liu Kiu Green Pigeon.

1887.—*Treron permagna* STEJNEGER, Proc. U. S. Nat. Mus., IX, p. 637.—*Id.*, Zeitschr. Ges. Orn., 1887, p. —.

In regard to this species I have only to add that Mr. H. Pryer, in a letter dated March 10, 1887, informs me that his collector at Liu Kiu had obtained specimens of “a fine new species much larger and darker than *sieboldii*.” These are evidently referable to the present species.

JANTHOENAS REICHB.

1852.—*Janthoenas* REICHENBACH, Syst. Av., p. XXV (type *Columba janthina* TEMM.).

1854.—*Janthaenas* BONAPARTE, Cousp. Av., II, p. 44 (emend.).

SYNOPSIS OF THE SPECIES OF *JANTHOENAS* OCCURRING IN JAPAN.

a¹. Chin and throat not whitish; first primary longer than fifth.

b¹. Ground color of head and throat slate-color.

c¹. Lower part of hind neck and upper part of interscapilium metallic green without white; reflections on back purplish *J. janthina*.

c². Lower part of hind neck and upper part of interscapilium white, forming a large patch; reflections on back greenish *J. jouyi*.

b². Ground color of head and throat a dull cinnamon chocolate *J. nitens*.

a². Chin and throat pale cinereous white; first primary shorter than fifth *J. versicolor*.

(162.) *Janthoenas janthina* (TEMN.).

Crow Pigeon.

Karasu-bato.

- 1830.—*Columba janthina* TEMMINCK, Pl. Color., iv, livr. 86, pl. 503.—*C. (carpophaga) j.* TEMM. & SCHLEG., Fauna, Jap., Av., p. 101, pl. 60, C. (1849).—*Janthoenas j.* REICHEN B., Syst. Av., p. xxv (1852).—SCHLEGEL, Mus. P. Bas, Columb., p. 74 (1873).—STEJNEGER, Zeitschr. Ges. Orn., 1887, p. —.—*Id.* Proc. U. S. Nat. Mus., x, 1887, p. 399.—*Carpophaga ianthina* BLAKIST. & PRYER, Tr. As. Soc. Jap., VIII, 1880, p. 205.—*Id.*, *ibid.*, x, 1882, p. 130.—BLAKIST., Amend. List B. Jap., p. 25 (1884).—SEEBOHM, Ibis, 1884, p. 179.—*Id.*, *ibid.*, 1887, p. 179 (*part*).

Having received additional specimens of this species since this paper was submitted for publication, I wish to state, that they will be commented upon in a report by me on the birds collected by Mr. Namiye on the island of Idzu, which will soon be published in these "Proceedings."

Janthoenas jouyi STEJNEGER.

- 1887.—*Carpophaga ianthina* SEEBOHM, Ibis, 1887, p. 179 (*part*).—*Janthoenas i.* STEJNEGER, Zeitschr. Ges. Orn., 1887, p.—.—*Id.*, Proc. U. S. Nat. Mus., x, 1887, p. 398.

For full description of this species see the last reference.

Janthoenas versicolor (KITTLITZ).

- 1832.—*Columba versicolor* KITTLITZ, Knpfertaf., I, p. 5, pl. V, fig. 2 (*nec* LAFR. 1846).—*Id.*, Denkwürd., II, p. 174 (1858).
 1835.—*Columba kittlitzii* TEMM., Pl. Col. iv, livr. 98, fol. ad pl. 578.—*Janthoenas kittlitzii*, BONAP., Consp. Av., II, p. 45 (1854).—REICHENB., Vollst. Naturg. Taub. p. 118 (1862).
 1839.—*Columba metallica* VIGORS, Voy. Blossom, Orn., p. 25 (*nec* TEMM.).
 1858.—*Columba iris* KITTLITZ, Denkwürd., II, p. 175.
 1873.—*Janthoenas janthina* SCHLEGEL, Mus. P. Bas, Columb., p. 74 (*part*).—*Carpophaga ianthina* BLAKIST., Chrysanth., 1883, April, p. 174.—*Id.*, Amend. List B. Jap., p. 44 (1884).
Columba splendida KITTLITZ, MSS.

The bird which glories in having had all the above names applied to it is, nevertheless, but a very imperfectly known species, although a very distinct one. Judging from Kittlitz's figure of it I should say that it resembles *Janthoenas palumboides* (HUME, Stray Feath., I, 1873, p. 308; Ibis, 1873, pl. xiii) very closely.

Not having specimens, nor even a good modern description, I shall confine myself to reprinting the original descriptions of Temminck and Vigors.

Temminck's description (*l. c.*) of *C. kittlitzii* reads as follows:

L'espèce est plus forte de taille que la Colombe violette du Japon. Sommet de la tête, occiput et poitrine bleuâtre claire à reflets pourprés; nuque cendrée à reflets opalins; plumage du haut du dos terminé par un bord vert métallique; dos et croupion d'un pourpre éclatant, à reflets verts; ventre, ailes et queue ardoise, les petites couvertures et les scapulaires bordés de violet vert doré. Bas du bec et pieds rouges. Longueur totale, seize pouces.

On a trouvé cette belle espèce dans les îles Bonin, à l'orient et sous la dépendance de l'empire du Japon.

Les musées de Pétersbourg et de Francfort possèdent des individus de ce bel oiseau que l'on trouve aussi au Japon.

Vigors (*l. c.*) describes specimens from the Bonins in the following manner:

COLUMBA METALLICA *n. s.*

Col. capite colloque vinaceo-cauis purpureo splendidibus, hoc pallidior; nuchâ dorsoque imo metallicè purpureis; alis, corpore infra, dorsoque medio metallicè viridibus; remigibus caudâque fuscis.

Rostrum rubens, apice flavo. Pedes flavi. Tectrices alarum inferiores atri, metallicè splendentes. Longitudo corporis, 16 [inches = 406^{mm}]; alæ, a carpo ad apicem remigis tertiæ, 10 [254]; rostri, 1½ [32]; caudæ, 8 [203]; tarsi, 1½ [32].

This species was met with in the Bonin Islands, in June, 1827.

Since the above was put in type I have received for examination the type specimens of this and the following species. Great thanks are due to the authorities of the Imperial Academy of Sciences in St. Petersburg, particularly Messrs. Dr. Strauch and Dr. Th. Pleske, for their truly scientific liberality and courtesy in sending these valuable examples on so long a voyage, thus permitting me to lay before the readers full descriptions of these unique specimens, and to clear the many doubts which were caused by the unavoidable errors of the old authors and by their imperfect descriptions.

Both specimens are mounted and are in excellent preservation notwithstanding the fact that they were collected nearly sixty years ago. To the bottom of the stands are fixed the original labels in Baron von Kittlitz's own handwriting. That of the present species which is very different from *J. janthina* reads as follows: "No. 202. *Columba splendida* v. Kittl. *Boninsima*. v. Kittlitz." The present museum label calls the bird *Ianthoenas metallica*, TEMM.

DESCRIPTION.—Ad. (*Mus. Zool., Imp. Ac. Sc. St. Petersb., No. 3018. Bonin-shima, May, 1828. Kittlitz coll., No. 202*). Ground color, light slate-gray, with various metallic reflections, except chin and throat, which are of a pale cinereous white, and the remiges, with the greater upper coverts, lining of the wing and rectrices which are of a blackish slate, the longer primaries narrowly edged with brownish towards the tips; fore-head dull smoke gray (perhaps only soiled); cheeks more cinereous; the white of chin and throat not abruptly defined, but gradually merging into the French gray of the neck, which is suffused with a beautiful metallic luster, being delicate silvery lilac in "positions A and B," (Gadow, *P. Z. S.*, 1882, p. 409; *Cat. B. Brit. Mus.*, IX, p. 1*), but green in "position C"; crown, occiput, and upper hind neck of a darker ground color, but glossed in the same manner; gloss on breast and abdomen similar but duller, flanks with very little gloss and that greenish even in "position B"; metallic gloss on mantle in various colors; in "positions A and B" the feathers next to the neck are

* "Position A" means that the eye is placed between the bird and the light, the eye and the light almost in a level with the planes to be examined; "position B," the bird is placed vertically to the light, the eye being still between the light and the bird; "position C," the bird is held in nearly the same level with, but between, the eye and the light.

metallic bluish green; interseapulars deep rose-purple, becoming nearly violet towards the lower back; scapulars more coppery, and the smaller upper wing-coverts as well as tertiaries greenish; lower back and rump glossed with a beautifully rich rose-purple; upper tail-coverts margined with a coppery luster; in "position C" the purple gloss turns bronze green, and the green turns purple, except on the wing-coverts and tail-coverts on which it turns bluish green.

Kittlitz's figure (Kupfertaf., pl. v, fig. 2), which is tolerably good, represents the naked parts as follows: Iris, brown; soft basal part of bill wine purple, horny tip, yellowish; feet, wine purple. The lores appear to be naked in the specimen, but on the plate they are represented as feathered.

Measurements.

Museum and No.	Collector and No.	Sex and age.	Locality.	Date.	Wing.	Tail-feathers.	Exp. culmen.	Tarsus.	Middle toe with claw.
Acad. St. Petersb., 3018*	Kittlitz, 202	ad.	Bonin-shima, Japan.	May, 1828	256	180	19	36	50

* Type.

Wing-formula.

3=4, 2, 5, 1, 6

Sixth primary 31^{mm} shorter than third; first 29^{mm} shorter than third; fifth 12^{mm} shorter than third; second 9^{mm} shorter than third, which is equal to fourth, these two being longest.

Janthoenas nitens STEJNEGER.

1832.—*Columba janthina* KITTLITZ, Kupfertaf., I, p. 5, pl. v, fig. 1 (*nec* TEMM.).—*Id.*, Denkwürd., II, p. 174 (1858).

Columbis nitens KITTLITZ, MS. on original label of the type.

Of this species, Kittlitz has only published a figure, but no description has been given, inasmuch as he wrongly referred it to the already known *J. janthina*, to which it is most nearly related. As a consequence of this confusion the bird has remained unnamed, a defect I propose to remedy by applying to it the name *Janthoenas nitens*, which is, indeed, the name by which Kittlitz designated it on the original label. Kittlitz himself afterwards became aware of the distinctness of this bird, but omitted to name it (see Denkw., II, p. 174).

The type of this hitherto undescribed species has on the bottom of the stand the original label in the discoverer's own handwriting, as follows: "No. 203. *Columba nitens* v. Kittl. *Boninsima*. v. Kittlitz." The museum exhibition label is inscribed: *Janthoenas kittlitzii* TEMM., but from the original description, as rendered above, it is evident that Temminck by this name intended the other bird.

DESCRIPTION.—Ad. (*Mus. Zool., Imp. Ac. Sc. St. Petersb., No. 3020. Bonin-shima, May, 1828. Kittlitz coll., No. 203*). Ground color dark

slate variously glossed with metallic reflections; entire head and throat of a dull cinnamon-chocolate glossed with lilac on crown and occiput; fore-neck and sides of neck in "positions A and B" glossed with rose-purple, green in "position C"; hind neck bronzy; feathers at base of hind neck and adjoining portion of back strongly glossed with green more or less mixed with rose-purple, and gradually merging through bluish into the beautiful "auricula purple" which glosses the back, scapulars, and rump, becoming more violet on the latter; smaller upper wing-coverts and upper tail-coverts slightly glossed with purplish; in "position C" the green of the upper parts retains its color, only the more bluish portion of it turning purple, but the "auricula purple" changes to bronze-green; breast strongly glossed with green more or less mixed with rose-purple; abdomen and flanks but sparingly glossed with violet; in "position C" the green of the under parts changes to violet, and the violet to green; wings and tail brownish slate.

Kittlitz's figure (Kupfertaf., pl. v, fig. 1) shows the head somewhat too light, and the metallic reflections are those of "position C"; the back ought to be violet and the breast green. The soft parts are represented as follows: Iris, brown; basal soft portion of bill heliotrope-purple, the horny tip yellow; feet heliotrope-purple. Loes and eye-rings naked, not feathered as in the figure.

Measurements.

Museum and No.	Collector and No.	Sex and age.	Locality.	Date.	Wing.	Tail-feath-ers.	Exp. culmen.	Tarsus.	Middle toe with claw.
Acad. St. Petersburg., 3020*	Kittlitz, 203	ad.	Boniu-shima, Japan	May, 1828	241	162	20	37	45

* Type.

Wing-formula.

3, 2, 4, 1, 5

Fifth primary 25^{mm} shorter than third; first 16^{mm} shorter than third; fourth 10^{mm} shorter than third; second 5^{mm} shorter than third, which is longest.

COLUMBA (LINN.).

1758.—*Columba* LINN., S. N., 10 ed., I, p. 162 (type *C. oenas* LINN.).

1852.—*Lithoenas* REICHENBACH, Nat. Syst. Vög., p. xxv (type *C. livia* BRISS.).

1852.—*Tainioenas* REICHENBACH, Nat. Syst. Vög., p. xxv (type *C. albitorques* RÜPP.).

1854.—*Palumboena* BONAPARTE, Cons. Av., II, p. 49 (type *C. oenas* LINN.).

1881.—*Rupicola* BOGDANOW, Tr. Sib. Obtsch. Jestestv., XII (p. 98), (type *C. livia* BRISS.) (*nec* BRISS., 1760).

1881.—*Sylvicola* BOGDANOW, Tr. Sib. Obtsch. Jestestv., XII, p. — (type *C. oenas* LINN. (*nec* SWAINS), 1827).

The Asiatic *Columbidae* have been sadly neglected by modern ornithologists, and there is, consequently, great confusion in regard to the nearly related species, their distinctive characters, and their geographi-

cal distribution. This confusion is especially great in regard to the so-called Rock-doves, since the domestication of one or more of the species, and their subsequent introduction into foreign localities, where they have partly reverted to a semi-feral state, and, possibly, also hybridized with the native species on a more or less extensive scale, in many instances has partly obscured the characters of the species as well as the geographical range. To ornithologists of "lumping" propensities, bent upon destroying the labors of their more painstaking colleagues, the difficulties attending the unraveling of this confusion have been ingeniously skipped under the plea that all the differences between the alleged species are due to domestication, and that there is only one valid form, the name of which is *Columba livia*.

This process, however, has not settled the question; it has only postponed the solution. In this, as in so many other cases, the premature "lumping" has done great harm, for had it not been determined by an easy-going majority that the Rock-dove is the same species all over the Eurasian continent, our series of these birds might have been larger, and the solution of the question nearer than it is at present.

In Japan *Columba livia* is said to occur, but which particular form? Is it the white-rumped, dark-tailed species which breeds in Western Europe, and which I think should stand as *C. domestica*? Or is it the form known to occur in the neighboring regions of the Asiatic mainland, and which by some ornithologists has been called *C. rupestris*? Or is it the species which we know has been collected on Great Liu Kiu Island, Strickland's *C. intermedia*?* Or, may not all three occur?

My material and the literature accessible to me have no answer to these questions beyond establishing the occurrence of *C. intermedia* in Liu Kiu. There are reasons for believing that the other two forms also occur, and, in order to facilitate identification by those in the field, I present the following "key":

Subterminal tail-band gray.....	} <i>C. intermedia</i>	Rump gray
		} <i>C. domestica</i> }
Subterminal tail-band white.....	<i>C. rupestris</i> }	Rump white.

The following synonymies do not pretend to be complete, nor is it certain that the white-rumped, dark-tailed birds occurring in Japan are absolutely identical with European *C. domestica* (*livia*). All I know in regard to these birds is what Schlegel says about Japanese specimens in the Leiden Museum, taking the specimens of "teintes ordinaires" to mean white-rumped, dark-tailed ones. In order to bring all the available material together I reprint his remarks, which are as follows:

Indiridus du Japon.—14. Adulte, voyage de M. von Siebold: teintes ordinaires.—15. Adulte, von Siebold: semblable au No. 14, mais avec des taches noirâtres isolées sur le manteau, les scapulaires et, quoique en petit nombre, également sur les con-

* In regard to this form Mr. Seeborn in the most positive terms informs us (Ibis, 1887, p. 182), that it is "a more or less domesticated pigeon, introduced in prehistoric times," a supposition entirely unsupported by any facts so far as the Liu Kiu Islands are concerned.

vertures alaires.—16. Adulte, voyage de Bürger: semblable au No. 15, mais à dos gris et à taches noirâtres plus nombreuses.—17. Adulte, Bürger: semblable au No. 16, mais à taches noires des plumes alaires excessivement larges.—18. Adulte, voyage de Bürger: semblable au No. 17, mais à dos blanc et à taches noires des plumes alaires excessivement larges.—19, 20. Adultes, von Siebold: taches noires des ailes excessivement grandes; dos gris, mais également tacheté de noir. (Mus. P.-Bas, Columb., pp. 64-65.)

It must be remarked, however, that we have no way of ascertaining whether the above specimens were in a perfectly wild state when collected or not.

Columba intermedia STRICKL.

Indian Rock-Pigeon.

1844.—*Columba intermedia* STRICKLAND, Ann. Mag. Nat. Hist., 1844 (p. 39).—CASSIN, Proc. Philada. Acad., 1862, p. 320.—SEEBOHM, Ibis, 1887, p. 182.—STEJN-GER, Zeitsch. Ges. Ornith., 1887, p. —.—*Id.*, Proc. U. S. Nat. Mus., x, 1887, p. 415.

1873.—*Columba livia* SCHLEGEL, Mus. P.-Bas, Columb., p. 64 (*part.*).

The Liu Kiu specimen (U. S. Nat. Mus. No. 21217) before us has gray rump and tail, but the axillaries are pure white. I make this remark because Seebohm (Br. B. Eggs, ii, p. 406, foot-note), apropos of the dark rump of this species, says: "As in the Stock-Dove and its allies, the color of the rump appears to be always correlated with that of the axillaries."

As this specimen is in rather poor state of preservation, I shall not describe it at present, but the dimensions are as follows: Wing, 210^{mm}; tail-feathers, 103^{mm}; exposed culmen, 18^{mm}; tarsus, 29^{mm}; middle toe, with claw, 37^{mm}.

(158?) *Columba domestica* GMEL.

Common Rock-Pigeon.

Kawara-bato.

1758.—*Columba oenas* β. *domestica* LINN., S. N., 10 ed., i, p. 162 (*nom. nud.*).

1766.—*Columba oenas* LINN., S. N., 12 ed., i, p. 279 (*nee* 1758).

1783.—*Columba domestica* GMELIN, S. N., i, p. 769.

1783.—*Columba domestica* β *livia* GMELIN, S. N., i, p. 769.

1790.—*Columba livia* BONNATERRE, Tabl. Méth., i, p. 227.—SCHLEGEL, Mus. P.-Bas, Columb., p. 63 (*part.*) (1873).—? BLAKIST. & PRYER, Ibis, 1878, p. 227.—*Id.*, Tr. As. Soc. Jap., VIII, 1880, p. 204.—*Id.*, *ibid.*, x, 1882, p. 128.—? BLAKIST., Amend. List B. Jap., p. 43 (1884).—? SEEBOHM, Ibis, 1884, p. 179.

1817.—*Columba domestica fera* NILSSON, Orn. Svec., i, p. 296.

1828.—*Columba amalie* BREHM, Isis, 1828, p. 139.

1845.—*Columba affinis* BLYTH, Journ. As. Soc. Beng., XIV, (p. 862).

1881.—*Columba livia* α. *fera* BOGDANOW, Tr. Sib. Obtsch. Jestestv., XII (p. 98).

1881.—*Columba livia* β. *rustica* BOGDANOW, Tr. Sib. Obtsch. Jestestv., XII (p. 98).

I have placed all the quotations of Messrs. Blakiston & Pryer's *Columba livia* under this heading simply because I do not know where else to place them, and because I am entirely ignorant of the form that inhabits Enoshima. Seebohm's *C. livia*, based on an example collected by Mr. Ringer at Nagasaki, may, perhaps, rather belong to *C. intermedia*, but all he says of it is that it "is darker than usual."

It is only necessary to consult the work of Gmelin to see that the nomenclature adopted above is the correct one, as Brisson's specific

names are inadmissible both under the Stricklandian code and the A. O. U. code. Gmelin's name was recognized by Prof. Sven Nilsson as early as 1817, when he called the species *Columba domestica*, distinguishing the wild birds as *Columba domestica fera*, and the tame ones as *Columba domestica mansueta*.

[*Columba rupestris* (PALL.).]

Siberian Rock-Pigeon.

1826.—*Columba ocnas* ♂ (*rupestris*) PALLAS, Zoogr. Ross. As., I, p. 560.

1854.—*Columba rupestris* BONAPARTE, Consp. Av., II, p. 48.—TACZANOWSKI, Bull. Soc. Zool., France, 1876, p. 240.—*Id. ibid.*, 1885, p. 474.—BOGDANOW, Consp. Av. Imp. Ross., I, p. 2 (1884).

1863.—*Columba livia*, var. *rupicola daurica* RADDE, Reis. Süd. Ost-Sibir., II (p. 282).

Taczanowski still maintains that the Ussuri specimens differ from those from Baikal and Dauria in being "en général plus foncés" and "ils ont la teinte vineuse de la région jugulaire beaucoup plus prononcée, la conservant plus aux changements d'incidence de la lumière, avec des reflets métalliques violets et verts, également intenses." Bogdanow, however, says that he can see no difference.

TURTUR SELBY.

1828.—*Peristera* BOIE, Isis, 1828, p. 327 (type *Col. turtur* LINN.) (*nec* SWAINS., 1827).

1835.—*Turtur* SELBY, Naturalists' Library, V (p. 169) (same type).

1854.—*Streptopelia* BONAPARTE, Consp. Av., II, p. 68 (type *C. risoria* LINN.).

1862.—*Streptopelia* REICHENBACH, Vollst. Naturg. Taub., p. 73 (*emend.*).

SYNOPSIS OF THE SPECIES OF *TURTUR* OCCURRING IN JAPAN.

- a*¹. Lower hind neck not encircled by a black semi-lune: scapulars, tertiaries, and most of the upper wing-coverts broadly and very strikingly margined with rufous, the middle portion of the feathers being blackish (*TURTUR*).
- b*¹. Abdomen pale vinaceous buff, breast vinous fawn color..... *T. gelastis*.
- b*². Abdomen deep vinaceous-cinnamon, inclining to rufous, breast cinnamon drab..... *T. simpsoni*.
- a*². Lower hind neck encircled by a black semi-lune; scapulars, tertiaries, and upper wing-coverts uniformly colored, the margins but indistinctly, if at all, different in color (*STREPTOPELIA*).
- b*¹. Outer web of outer tail-feather black at base, white at tip, the former color extending further down than on the inner web..... *T. douraca torquatus*.
- b*². Outer web of outer tail-feather entirely white.
- c*¹. Under wing-coverts white..... [*T. risorius*.]
- c*². Under wing-coverts plumbeous..... *T. humilis*.

(159). *Turtur gelastis* (TEMM.).

Eastern Turtle-dove.

Kiji-bato.

1790.—?*Columba orientalis* LATHAM, Ind. Orn., I, p. 606.—*Turtur o.* SWINHOE, Ibis, 1860, p. 63.—DRESSER, B. of Eur., VII, p. 45, pl. 463 (1876).—SEEBOHM, Ibis, 1884, p. 35.

1823.—*Columba gelastis* TEMMINCK, Pl. Color., IV, 24 livr., pl. 550.—*C. (Turtur) g.* TEMM. & SCHL., Fauna Jap., Av., p. 100, pl. 60 B (1847).—*Turtur g.* FINSCH, Verh. Zool. Bot. Ges. Wien, 1872, p. 264.—STEJNEGER, Proc. U. S. Nat. Mus., X, 1887, p. 400.

1826.—*Columba rupicola* PALLAS, Zoogr. Ross. As., I, p. 566.—*Turtur r.* BONAPARTE, Consp. Av., II, p. 60 (1854).—BLAKIST., Ibis, 1862, p. 329.—WHITELY, Ibis, 1867, p. 204.—SCHLEGEL, Mus. P. -Bas, Columb., p. 118 (1873).—McVean, Proc. Roy. Phys. Soc. Edinb., 1877, p. —, Extr., p. 6.

- 1853.—*Columba gelastes* MIDDENDORFF, Sibir. Reise, II, 2 (p. 189).—*Turtur g.* SWINHOE, P. Z. S., 1870, p. 602.—*Id.*, Ibis, 1874, p. 162.—BLAKIST. & PRYER, Ibis, 1878, p. 227.—*Id.*, Tr. As. Soc. Jap., VIII, 1880, p. 204.—*Id.*, *ibid.*, X, 1882, p. 129.—BLAKIST., Chrysanth., 1882, p. 522.—*Id.*, *ibid.*, 1883, p. 28.—*Id.*, *ibid.*, 1883, Febr., p. —.—*Id.*, Amend. List B. Jap., p. 43 (1884).
- 1858.—*Turtur meena* CASSIN, Perry's Exp. Jap., II, p. 222 (*nee* SYKES).
- 1860.—*Columba (Peristera) turtur*, var. *gelastis* SCHREINCK, Reis. Amurl., I, p. 389.

Schlegel (*loc. cit.*) maintains that there are two forms of this bird absolutely identical in color, but differing in size, the larger of which, occurring in Siberia and Japan, he calls *T. rupicola*, while for the smaller form he reserves Latham's *T. orientalis*, with the habitat Southern China and India. The latter would then probably be identical with Hume's *T. meena* (ex Sykes et Jerdon, cf. Str. Feath., VI, 1878, pp. 420-422), with which his *T. pulchrata* (ex Hodgson) with white under tail-coverts should not be confounded. I have no means at present to ascertain the true status of these forms, and consequently I adhere to the name given by Temminck to the Japanese bird as the oldest undoubted appellation, which is also a "*nomen auctorum plurimorum*" which Mr. Seebohm ought to have respected, if he would be true to his principles. It may, however, in time become necessary to style the Japanese bird *Turtur orientalis gelastis*.

For measurements of this and the following species, as well as for their distinctive characters, see my second paper quoted under the latter.

***Turtur stimpsoni* STEJN.**

- 1862.—*Turtur rupicola* CASSIN, Proc. Acad. Philada., 1862, p. 320 (*nee* PALL.).
- 1887.—*Turtur orientalis* SEEBOHM, Ibis, 1887, p. 179.—STEJNEGER, Zeitschr. Ges. Ornith., 1887, p. —.
- 1887.—*Turtur stimpsoni* STEJNEGER, Proc. U. S. Nat. Mus., 1887, p. 399.

Subgenus STREPTOPELIA BOBAP.

(160). *Turtur douraca torquatus* (BOGD.).

- Ringed Turtle-dove. Shirako-bato.*
- 1860.—*Columba risoria* SCHREINCK, Reis. Amurl., I, p. 392 (1860) (*nee* LINN.).—*Turtur risorius* SWINHOE, Ibis, 1876, p. 334.—*Id.*, *ibid.*, 1877, p. 145.—BLAKIST. & PRYER, Ibis, 1878, p. 227.—*Id.*, Tr. As. Soc. Jap., VIII, 1880, p. 205.—*Id.*, *ibid.*, X, 1882, p. 129.—BLAKIST., Amend. List B. Jap., p. 25 (1884).
- 1873.—*Turtur douraca* SCHLEGEL, Mus. P. Bas, Columb., p. 123 (*part*).
- 1876.—*Turtur ritticollis* PRZEWALSKI, Mongol., II (p. 111) (*nee* TEMM.).
- 1877.—*Turtur bitorquatus* MARTENS, Preuss. Exp. Ost-As., Zool., I, p. 370 (*nee* TEMM.).
- 1881.—*Streptopelia torquata* BOGDANOW, Tr. Sib. Otsch. Jestestv., XII (p. 98).—*Id.*, Consp. Av. Imp. Ross., I, p. 9 (1884).

It is curious that Schlegel's very clear argument (*loc. cit.*) should not have been sufficient to settle beyond dispute the fact that the domesticated Ring-dove which Linnaeus described as *Columba risoria* is NOT a descendant of the wild bird of India, China, and Japan, usually so called.

* On the label of the specimen collected by Mr. Ota I find the Japanese name given as "Dzudzukakebato."

The domesticated species belongs to that group of the subgenus *Streptopelia*, which has a comparatively short tail, with the outer tail-feather entirely white in the outer web (pl. xxii, fig. 4), and it is entirely beyond all probabilities that these features which are the normal ones of the genus should have been derived from the lengthened tail and the blackish outer web of the outer tail-feather of *T. douraca* (pl. xxii, fig. 3), features entirely unique. Besides, there are wild species which in these characters are identical with the domesticated birds without differing more from it in other respects than does the wild *T. douraca*.

Professor Bogdanow (*ll. cc.*) has fully appreciated Schlegel's argument, but he is certainly mistaken when he asserts that Brisson (*Orn.*, I, p. 95) described the wild bird, for Brisson expressly describes the upper parts as "roussâtres, ou d'un blanc tirant vers le roux" and of the tail-feathers he says: "la plus extérieure de chaque côté a aussi ses barbes extérieures blanches," the latter quotation being conclusive. However, Brisson's specific names being inadmissible under the A. O. U. code of nomenclature, Professor Bogdanow will have to stand as the authority for the name, since the Chinese and Japanese birds seem to be fairly distinguishable as a race in need of a name to separate them for the Indian true *T. douraca*.

This difference has already been pointed out by both Schlegel and Bogdanow (*ll. cc.*), and their statements are fully borne out by the material at my command. I have only one Indian bird at hand, but as it possesses the character pointed out by them I consider it quite safe to admit the subspecific difference of the northeastern form.

My Japanese specimens, as well as a number of Korean examples, which Mr. Jouy kindly allowed me to examine, have the color of the back nearly that of Ridgway's "Isabella color" (*Nomencl. Colors*, pl. iii, n. 23), while the Indian bird has the back duller and darker, or like his "drab" (pl. iii, n. 18). The latter which is the true *T. douraca*,* seems also to be somewhat smaller.

Measurements.

I. TURTUR TORQUATUS.

U. S. Nat. Mus. No.	Collector and No.	Sex and age.	Locality.	Date.	Wing.	Tail-feathers.	Exp. culmen.	Tarsus.	Middle toe with claw.
95985	Ota, Bl., 1982	♂ ad.	Tokio, Hondo .....	.....	176	137	17	23	28
109408	Namiye	♀ ad.do.....	April, 1886....	174	138	17	22	26

II. TURTUR DOURACA.

100349	Fairbank ...	♀ ad.	Wadale, India.....	March,——	160	122	16	22	29
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*1832.—*Columba risoria* SYKES, P. Z. S., 1832, p. 150 (and most Indian writers, Jerdon, Blyth, Hume, &c., but not Linn.).

1844.—*Turtur douraca* HODGSON, Gray's Zool. Misc. (p. 85).—SCHLEGEL, Mus. P.-Bas, Colomb., p. 123 (part).

1874.—? *Turtur stoliczkae* HUME, Stray Feath., II, p. 519.

[*Turtur risorius* (LINN.).]

Barbary Turtle-dove.

1758.—*Columba risoria* LINN., S. N., 10 ed., I, p. 165.—*Id.*, S. N., 12 ed., I, p. 235 (1766).—SCHLEGEL, Mus. P.-Bas, Columb., p. 125 (1873).

1838.—*Columba risoria domestica* TEMMINCK, Pl. Color., I, Tabl. Méth., p. 81.

We include this species here only to call attention to it, as it apparently only occurs domesticated. *T. douraca torquatus* is also kept in confinement, but Schlegel enumerates two white specimens of the present form brought from Japan by von Siebold as being in the museum at Leiden.

(160½). *Turtur humilis* (TEMM.).

Dwarf Turtle-dove.

1824.—*Columba humilis* TEMMINCK, Pl. Color., IV, livr. 44, pls. 25^r, 259.—*Turtur h.* GRAY, Gen. B., II, p. 472 (1844).—WALDEN, Tr. Zool. Soc., IX, 1875, p. 219.—HUME, Stray Feath., IV, 1876, p. 292.—BLAKIST., Amend. List B. Jap., p. 43 (1884).—SEEBOHM, Ibis, 1884, p. 179.

1875.—*Turtur humilior* HUME, Stray Feath., III, p. 279.

1882.—*Turtur* —? BLAKISTON & PRYER, Tr. As. Soc. Jap., x, 1882, p. 129.

Lord Walden and Mr. Hume have already pointed out the differences between the birds of the Indian peninsula and the eastern representative, to which they apply the above name. I have not sufficient material to decide, however, whether our bird should stand as above or as *Turtur tranquebaricus humilis*.

In addition to the specimens recorded by Blakiston and Pryer as obtained by Owston at Yokohama, I have to record the capture of a young male near Nagasaki by Mr. Petersen.

The adult male of the Red Turtle-dove, as this species is also called, may be easily identified by the short description of Messrs. Blakiston and Pryer (*l. e.*). The young male may be described as follows:

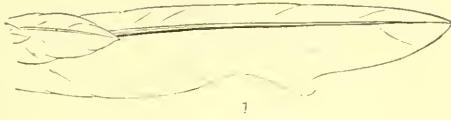
♂ juv. (*Zool. Mus. University, Christiania. Nagasaki, Kiusiu. November, 1886. Petersen coll.*).—Head above smoke-gray, fore-head and anterior part of crown somewhat paler gray; hind neck similarly colored though more tinged with pale cinnamon; lower end of hind neck encircled by a black semilune, which is bordered anteriorly on the side by a narrow line of whitish; mantle of a dark brownish drab, the individual feathers faintly bordered with dull cinnamon, more vivid on the wing-coverts; lower back, rump, and upper tail-coverts plumbeous, the feathers down the middle line more or less margined at the tips with the color of the mantle; fore-neck and breast drab gray, gradually shading into whitish on throat, chin, and sides of head, the feathers indistinctly margined with pale cinnamon; middle of abdomen white; under wing-coverts and flanks plumbeous; under tail-coverts white, laterally tinged with plumbeous; remiges blackish brown, the anterior primaries and secondaries narrowly edged with very pale buff; primary coverts like the primaries, but tipped with cinnamon; central pair of tail-feathers uniform slate-gray, tinged with drab; the two following pairs similar in their terminal third, the basal two-thirds being of a blackish slate color;

in the following pairs the tips become whiter and the bases blacker, until the outer pair which, in addition, has the entire outer web white to the base, except a narrow dark stripe along the shaft. Bill and feet apparently black.

An *adult female*, from Canton, China (*U. S. Nat. Mus.*, No. 96431. *Blakiston No. T 181. November*) is similar to the specimen just described, but the gray of the head and nape is more plumbeous, the mantle brighter, and, like the fore-neck and breast, strongly suffused with vinaceous.

Measurements.

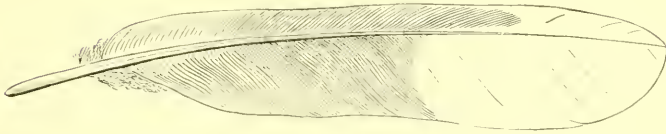
Museum and No.	Collector and No.	Sex and age.	Locality.	Date.	Wing.	Tail-feathers.	Exp. culmen.	Tarsus.	Middle toe with claw.
Christiania, N.	Petersen, 66.	♂ juv.	Nagasaki, Japan..	Nov. —, 1886	131	81	15	19	24
U. S. Nat., 37723	Swinhoe.....	♂ ad.	S. W. Formosa .....	.....	138	83	.....	.....	.....
Do.... 86118	Jouy, 181.....	♂ ad.	Deep Bay, Hong-Kong.	Oct. 10, 1881	140	86	14	19	25
Do.... 96431	Blakist., T 181.	♀ ad.	Canton	Nov. —, —	130	82	13	19	24



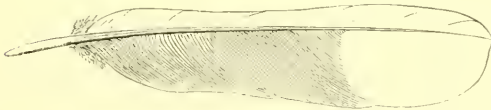
1



2



3



4

- 1.—First primary of *Dendrocygna javanica*; $\frac{2}{3}$ natural size. (p. 397.)
2.—Third primary of *Treron*; $\frac{1}{2}$ natural size. (p. 417.)
3.—External tail-feather of *Turtur doucatorquatus*. U. S. Nat. Mus. No. 109408; $\frac{2}{3}$ natural size. (p. 427.)
4.—External tail-feather of *Turtur humilis*. U. S. Nat. Mus. No. 86118; $\frac{2}{3}$ natural size. (p. 427.)