

FURTHER CONTRIBUTIONS TO THE AVIFAUNA OF THE LIU KIU ISLANDS, JAPAN, WITH DESCRIPTIONS OF NEW SPECIES.

By LEONHARD STEJNEGER.

(Plates xxi, xxii.)

The authorities of the Tokio Educational Museum have again shown their zeal in promoting our knowledge of the natural history of Japan. Mr. M. Namiye forwarded to me for inspection additional specimens from Okinawa Shima, collected by him during his short stay there in March, 1886 (see Proceedings U. S. Nat. Mus., 1886, p. 634). Shortly afterwards I received from the same source two more lots of birds presented to the Tokio Educational Museum, one collected by Mr. C. Tasaki in the northern part of Liu Kiu, presumably Okinawa Shima, the other by Mr. J. Nishi on Yayeyama Island, "Okinawa prefecture." For the privilege of examining these interesting collections I wish to express my best acknowledgments. It should also be mentioned that a set of duplicates have been most liberally presented to our museum.

I am also obliged to Mr. H. Pryer for an annotated list of Liu Kiu birds obtained by his collector during December and January. Great praise is due to Mr. Pryer for his untiring labors in the interest of the Japanese fauna, and his researches in the Liu Kiu Islands have been rewarded by the discovery of some fine new species, for instance, the remarkable "*Picus*" *noguchii*. It will also be seen that several of the additions to the Liu Kiu avifauna contained in the following paper are due to Mr. Pryer's efforts.

Hassenstein's excellent atlas of Japan, still in course of publication, has no island named Yayeyama. Mr. S. Watase, an accomplished Japanese student at the Johns Hopkins University, Baltimore, Md., however, has had the kindness to examine the charts issued by the Hydrographic Bureau of the Japanese Navy and to furnish me with the following remarks:

"This name is not given to any single island, but to a group of islands. Near the southernmost extremity of the Liu Kiu Islands chain, lying between the parallels 24° and 25° north, you will find two large islands, Iriomate-Shima and Ishigaki-Shima, surrounded by several other of minor dimensions. To this compact group of islands is given the name of Yayeyama."

The Yayeyama Islands are, consequently, the western group of the archipelago usually called Nambu Soto, or the Southern Liu Kiu Group, also often styled the Miyako Islands, a name properly belonging to a single island, Miyako-Shima, situated a little east of the above-mentioned ones. These islands are very mountainous and rocky, as the name Yayeyama implies, Ishigaki-Shima reaching a height of 460 meters and Iriomate-Shima about 600 meters. On the latter island (Has-

senstein's map) there are two promontories, the names of which nearly coincide with that of the group, viz, Yayeno Saki and Yayeme Saki, and this is possibly the Yayeyama Island *par excellence*. In order to better illustrate the position of the several islands between Formosa and Japan proper, I have appended a sketch map of the region (Plate xxi).

When a short time ago I submitted a "List of the Birds hitherto reported as occurring on the Liu Kiu Islands" to the "Zeitschrift für die Gesammte Ornithologie," I could enumerate only 63 species. With the additions recorded in the present paper the total number of species is swelled to 77, and it cannot be doubted that future researches in these islands will add materially to this number.

So far the Liu Kiu Islands have contributed about 26 species (and subspecies) additional to the Japanese avifauna, of which about 12 are recently described as new. Of the 77 species known to occur there, many of which are water birds or winter migrants, no less than 12 species are peculiar to some or all of the islands.

In the following paper the measurements are given in millimeters, and the names of the colors used in the descriptions refer to Ridgway's "Nomenclature of Colors for Naturalists."

Sterna fuliginosa Gm.

This species was not mentioned in my last "list" of the Liu Kiu bird (Zeitschr. Ges. Orn., 1887, pp. —), as the species was left undetermined in Mr. Namiye's letter. A specimen was collected by Mr. Nishi on Yayeyama Island.

Sterna bergii LICHT., subsp.

This addition to the Japanese avifauna is due to Mr. Nishi, who brought home a fine specimen from Yayeyama Island. There is nothing unexpected, however, in this occurrence, for Swinhoe states (Ibis, 1860, p. 68; 1863, p. 430) that it breeds on small islands off the north coast of Formosa, and one of his specimens from that locality is also before us for comparison.

In following Mr. Saunders's example, calling these birds *Sterna bergii*, I do not mean to convey the idea that I regard them as identical with the typical South African form, to which this name properly belongs, but I am forced to abandon the task of deciding whether it should stand as *S. bergii pelecanooides*, or *S. bergii poliocerca*, or whether it should have a new subspecific name, so conflicting and unsatisfactory are the descriptions accessible to me, and so scanty the material at my command.

It consists of one specimen from "South Africa" (U. S. Nat. Mus., No. 103419, Layard coll.), with the back of a pale drab-gray of about the same shade as Ridgway's Gray No. 8 (Nomencl. Colors, plate ii), two specimens from Inhambane, on the African mainland, opposite the southern end of Madagascar (U. S. Nat. Mus., Nos. 111440 and 111441; Richard coll.), with the mantle bluer gray, on account of being less

abraded, but otherwise hardly lighter; they, therefore, agree well with Lichtenstein's original description of *S. bergii*, in which the color is said to be the same as that of *S. anglica*. Identical in coloration with the first-mentioned specimen, and of the size of the last mentioned too, is a specimen from New South Wales (U. S. Nat. Mus., No. 71684), which I take to be typical *S. pelecanoides*.*

So far my material agrees with Mr. Saunders's remark (P. Z. S., 1876, p. 658) that "the types of *S. bergii*, from the Cape of Good Hope, and of *S. velox*, from the Red Sea, are identical in size and color, and are not perceptibly lighter in color than "*S. pelecanoides*," but judging from his remarks further on, that "from the Cape of Good Hope and from the Red Sea * * * the China Seas, down to Australia * * * we find a uniformly dark mantle and tail," it would seem as if true *S. bergii* had a dark mantle, though this seems contrary to Lichtenstein's original description! What makes me place an exclamation mark here is the fact that the three specimens before me from "the China Seas" are much darker than the above-mentioned African and Australian examples, their mantles and tails being "smoke-gray," quite as dark as Ridgway's No. 12, pl. ii, or fully two shades darker than the bird I am led to consider a typical *S. bergii*. These specimens are also somewhat smaller, and would therefore seem to be entitled to the name *S. poliocerca* GOULD were it not that this appears to be a light-colored bird. (Gould, B. Austr., VII, pl. 24.) It might be urged that this goes only to show that these birds cannot be separated; but it seems to me that the difference in color, at least, is too great to be one of individual variation only, and while it may not be expedient to separate the birds specifically, since intergradation seems to occur, a recognition by name of the different races may be permissible. For that purpose I ask: Will anybody kindly inform me what name properly belongs to the smaller dark birds from the China Seas?

This bird being new to the fauna of Japan, I append the following description of Mr. Nishi's specimen:

♂ ad. (*Tokio Educational Museum. J. Nishi coll. Yayeyama Island*).—Mantle, rump, and tail, rather dark smoke-gray; forehead, lores, cheeks, ear-coverts, neck all around, and entire under surface, pure white;

*I would call attention, however, to the short tarsus of the Australian bird as a feature of possible consequence. I present a table of measurements of the specimens mentioned above, remarking that the shortness of the tail in No. 71684 is due to abrasion.

Museum and No.	Collector and No.	Sex and age.	Locality.	Date.	Wing.	Tail feathers.	Exp. culmen.	Tarsus.	Middle toe, with claw.
U. S. Nat., 111440.	Richard ...	ad ..	Inhambane, S. Africa.	.....	345	178	58	32	32
U. S. Nat., 111441.	.....do	ad ..	.....do .....	.....	350	193	68	31	33.
U. S. Nat., 103419.	Layard	ad ..	"S. Africa "	.....	372	182	61	33	34
U. S. Nat., 71684.	.....99	♂ ad.	Illawarra, N. S. Wales	.....	350	160	63	28	33.

crown of head spotted black and white, the old feathers being white with dark centers, the new ones pure glossy black; occiput with a long pendent crest of very glossy black feathers; first six primaries hoary blackish slate, the interior web white for rather more than the outer half, except the tip which is dusky, this color on the second and following primaries descending for a short distance along the edge; the remaining remiges more grayish, becoming gradually white towards the inner edge; tail-feathers smoke-gray, gradually shading into white basally and internally, and darkening towards the tip of the inner web, especially the outer pair, which has the tip slate-color; shafts of remiges and rectrices whitish. Bill (in dried specimen) dark olive becoming pale yellowish towards the tip; feet blackish.

DIMENSIONS.—Wing, 350^{mm}; tail-feathers, 164^{mm}; exposed culmen, 60^{mm}; tarsus, 30^{mm}; middle toe, with claw, 33^{mm}.

In view of the complications in regard to the nomenclature of this form, alluded to above, it is impossible for me at present to give a satisfactory synonymy. I therefore only quote a few references, which undoubtedly belong here.

Sterna bergii SAUNDERS, P. Z. S., 1876, p. 657 (part).—*Sterna cristata* SWINHOE, Ibis, 1860, p. 62.—*Id.*, *ibid.*, 1863, p. 430.—*Thalasseus cristatus* SWINHOE, P. Z. S., 1863, p. 329.—*Sterna velox* SWINHOE, Ibis, 1860, p. 429.—*Id.*, *ibid.*, 1861, p. 345.—*Id.*, *ibid.*, 1866, p. 134.—*Thalasseus pellicanoides* SWINHOE, P. Z. S., 1871, p. 422.

Charadrius squatarola LIN.

Mr. Pryer informs me that his collector has obtained this species in Liu Kiu during December and January.

Charadrius dominicus fulvus (GM.).

In the collection of Mr. Tasaki, from the "northern part of Liu Kiu," there is a specimen marked ♂, which has been presented to our museum (No. 110977).

Ægialitis dubia (SCOP.).

"*Ægialites curonicus*" PRYER (in litt.).

Phalaropus lobatus (LIN.).

Mr. Nishi brought home from Yayeyama Island a young ♂ in transition plumage, very much like the bird figured by Mr. Dresser on pl. 539 (B. Eur., VI). Scapulars and tertiaries are black with buff edgings, but a few new ones are gray with white borders.

Porzana phæopyga, sp. nov.

DIAGNOSIS.—Similar to *Porzana erythrothorax* (TEMM. & SCHL.), but darker throughout, the lower back and rump being of an olivaceous "clove brown," and the abdomen, under wing-coverts, and tail-coverts blackish, transversely barred with whitish; outer web of first primary with a number of whitish spots, and inner feather of alula similarly marked.

MEASUREMENTS.—Wing, 105^{mm}; tail-feathers, 51^{mm}; exposed culmen, 23^{mm}; tarsus, 39^{mm}; middle toe, with claw, 46^{mm}.

HABITAT.—Yayeyama Island, Liu Kiu, Japan.

TYPE.—U. S. Nat. Mus., No. 110976.

Although very closely allied to *P. erythrothorax*, the present form may be easily distinguished by the above diagnosis. In size it compares favorably with the typical Japanese bird, although the wing is slightly shorter, but the bill is apparently somewhat larger (cf. Table of Dimensions of four *P. erythrothorax* in Proc. U. S. Nat. Mus., 1886, p. 399). It is consequently much larger than the Philippine Islands species *P. fusca*, from which it also differs in coloration in the same manner as it differs from *P. erythrothorax*, though equaling it in the richness of the vinaceous rufous of the jugulum and breast; in the new species the chin and throat are white, however, like the Japanese birds. None of my specimens of the latter or of *P. fusca* show any trace of the whitish marks on the alula and first primary so conspicuous in the type specimen of the present species. If this character be constant it makes the identification of *P. phaeopyga* a very easy matter indeed.

The addition of this novelty necessitates the rearrangement of the "Synopsis of the Japanese species of the genus *Porzana*," as given by me in my "Review" (Proc. U. S. Nat. Mus., 1886, p. 396). The section affected by this addition may be changed to read as follows:

- e*¹. Back and upper wing-coverts brown, with black and white longitudinal markings (*Zapornia*).....*P. intermedia*.
*e*². Back and upper wing-coverts uniform olive brown, without any kind of markings (*Limnobænus*).
*d*¹. Outer web of first primary uniform dusky; lower back and rump pale olive sepia; under wing-coverts brownish drab with whitish markings....*P. erythrothorax*.
*d*². Outer web of first primary, with whitish spots; lower back and rump olivaceous clove-brown; under wing-coverts brownish black with whitish margins.....*P. phaeopyga*

Euryzona sepiaria, sp. nov.

DIAGNOSIS.—Upper surface of a saturated olivaceous brown, darkening towards the tail, and becoming lighter as it descends on the fore-neck which is of a pale olivaceous sepia; chin and throat whitish; under wing-coverts, abdomen, tibiæ, and under tail-coverts black, broadly banded with white; remiges with trace of white cross-bars at the base of inner webs only.

DIMENSIONS.—Wing, 152^{mm}; tail-feathers, 63^{mm}; exposed culmen, 30^{mm}; tarsus, 46^{mm}; middle toe, with claw, 43^{mm}.

HABITAT.—Yayeyama Island, Liu Kiu Prefecture, Japan.

TYPE.—U. S. Nat. Mus., No. 110975.

This large and handsome species of Rail is an addition to the Japanese fauna not anticipated in my "Review"; even the genus was not mentioned there, as no representative of it had been taken north of the Philippine Islands. In order to bring the synopsis up to date, I give

below* the necessary alterations as well as the synonymy of the genus.

DESCRIPTION.—♀ ad. (*U. S. Nat. Mus.*, No. 110975. *Yayeyama Island, Liu Kiu, Japan. J. Nishi coll.*).—Entire upper parts a dark olivaceous brown of the following shades: head and neck bister (with a slight wash of raw umber on the forehead), shading gradually into a saturated “mummy brown” (*Ridgw., Nomencl. Col.*, pl. iii, n. 10), becoming darker towards the tail, and slightly suffused with raw umber on the tertials; chin and throat whitish; loreal and malar regions of a “hair-brown” color (*ibid.* n. 12) with a faint indication of a light supraloral stripe; jugulum and sides of head and breast of an olivaceous sepia, slightly suffused with raw umber, gradually blending into the color of the hind neck; rest of under parts transversely banded black and white, the bands on the breast and upper abdomen being of nearly equal width (4–5^{mm}), while on the under wing-coverts and under tail-coverts the white bands become narrower, being only half as wide as the black interspaces; wing above uniform like the back; remiges underneath blackish-brown with white oblique marks in the basal half near the inner margin; tail uniform above, and below colored like the back. Bill apparently black, lower mandible whitish at tip, olive green at base; legs, in the dried specimen, black.

Mr. Namiye in his letter to me designated this bird as “*Gallinula eurizonoides?*” It is somewhat related to this species of Lafresnaye, but it is very distinct specifically. Structurally it differs from *G. eurizonoides* LAFR., of which the type is before me, thanks to the courtesy of the authorities of the Boston Society of Natural History, in the proportionately shorter tail and tarsus. The other dimensions are much larger, and Lafresnaye’s bird has the whole head and neck of a fine cinnamon-rufous, pale on chin and upper throat.

* AMENDED SYNOPSIS OF THE JAPANESE *RALLÆ*.

(Cf. *Proc. U. S. Nat. Mus.*, 1886, p. 395.)

- b¹. Inner toe without claw much longer than exposed culmen; hind toe longer than distance from nostrils to tip of bill. *Porzana*.
 b². Inner toe without claw not longer than exposed culmen; hind toe shorter than distance from nostrils to tip of bill.
 c¹. Height of bill at base more than one-third the exposed culmen. *Euryzona*.
 c². Height of bill at base less than one-third the exposed culmen *Rallus*.

Euryzona BONAP.

- 1846.—*Corethrura* GRAY, *Gen. B.*, III, p. 595 (type *R. ceylonicus* GM.) (*nec* REICHB.).
 1852.—*Iypotenidia* REICHENBACH, *Syst. Av.*, p. xxiii (type *R. pectoralis* CUV.) (*part*).
 1855.—*Rallina* GRAY, *Cat. Gen.*, p. 120 (type *R. fasciatus* RAFFL.) (*nec* REICHB.).
 1856.—*Euryzona* BONAPARTE, *Compt. Rend.*, XLIII, p. 599 (same type).

The species composing this group resemble greatly the members of the subgenus *Limnobanus* (*Porzana*) in the comparative shortness and stoutness of the bill and the general style of coloration. Their toes are comparatively short, however, and more like those of the true Rails and the Banded-Rails.

Nettion crecca (LIN.).

A female, collected by Mr. Nishi.

Dendrocygna javanica (HORSF.).

The Lesser Whistling Teal which Mr. Pryer's collectors brought from Liu Kiu proper has also been collected on Yayeyama Island by Mr. Nishi, and an apparently young bird is now before me.

As this bird is not described in any work bearing on Japanese ornithology, and as its synonymy until quite recently has been very confused, a fuller treatment of this bird may be acceptable.

The present species may at once be distinguished from all other Japanese ducks by the peculiar shape of the first primary, which in its inner web is provided with a tooth-like prominence shaped like the dorsal fin of a whale (see pl. xxii, fig. 1); the next two feathers have also a very pronounced notch in the inner web.

This species is most commonly known as *D. arcuata*, but from Hume's remarks (Stray Feath., VI, p. 486, and especially foot-note on p. 487) it is evident that this name properly belongs to the larger species with black lunules on breast and neck, and with buffy upper tail-coverts, a species usually known as *D. vagans* FRASER.

The synonymy of the present species will stand as follows:

- 1821.—*Anas javanica* HORSFIELD, Trans. Linn. Soc., xiii (p. 200).—*Dendrocygna j.* HUME, Stray Feath., VI, p. 486 (1878) (N. B.!).—SEEBOHM, Ibis, 1887, p. 181.—STEJNEGER, Zeitschr. Ges. Orn., 1887, p. —
- 1832.—*Mareca amsuree* SYKES, P. Z. S., 1832, p. 168.—*Dendrocygna a.* JERDON, B. Ind., iii, p. 789 (1864).
- 1849.—*Dendrocygna arcuata* BLYTH, Cat. B. E. Ind. Mus., p. —, (*et plurimorum auctorum*, nec HORSF., 1824, quæ *D. vagans* Auct.)—*Id.*, Ibis, 1867, p. 175.—SCLATER, P. Z. S., 1864, p. 300.—SCHLEGEL, Mus. P. Bas, Anseres, p. 89 (1866.)
- 1856.—*Dendrocygna arcuata* b. *minor* BONAPARTE, Compt. Rend., XLIII, p. 649.

DESCRIPTION.—(*Tokio Educational Museum. Yayeyama Island. J. Nishi coll.*).—Top of head dark grayish brown, the feathers edged with burnt umber; chin and upper throat whitish; an umber brown streak down the middle of the hind neck; rest of head and neck, as well as all the under parts, drab, more or less washed with ochraceous, except under tail coverts, which are whitish; scapulars and interscapulum (of the old plumage) dark hair-brown, margined with pale raw umber, the new feathers being more slate-colored, margined with pale ochraceous-rufous; back and rump slate-color, the edges of the feathers slightly pale, and on the rump inclining to ochraceous; upper tail-coverts and the small upper wing-coverts of a light maroon chestnut; middle and greater upper wing-coverts like the scapulars but more slaty; secondaries blackish slate; primaries slate black; axillaries and under wing-coverts black; tail-feathers dark grayish-brown washed with ochraceous towards the tip. Bill and feet blackish.

DIMENSIONS.—Wing, 174^{mm}; tail feathers (much worn), 50^{mm}; exposed culmen, 39^{mm}; tarsus, 46^{mm}; middle toe, with claw, 64^{mm}.

An apparently more adult specimen from Malacca (U. S. Nat. Mus. No. 15596) has the abdomen strongly suffused with rufous, the margins to the scapulars brighter tawny, and the wing-patch deeper, nearly typical "bay."

The present species is common in India and throughout Burmah, Tenasserim, &c., Malacca; it is also found in Java, but, curiously enough, has not yet been recorded from China, Formosa, or the Philippine Islands.

The species known from the latter archipelago is *D. arcuata*, or perhaps more correctly *D. arcuata vagans*, easily distinguished by its superior size, the blackish lunules on the feathers of the neck and breast, and the pale buffy upper tail-coverts.

Nycticorax nycticorax (LIN.).

Mr. Namiye collected a female at Tomigusuku, Liu Kiu, on March 26, 1886. Total length, 560^{mm}; stretch of wing, 1 meter.

This specimen differs greatly from the female from Tokio, collected by Mr. Jouy, in being much lighter, in fact, nearly as light as the lightest European specimen in our collection, showing that but little reliance can be placed in the intensity of the gray color in these birds. There are two occipital plumes, a little over 100^{mm} long, and tipped with blackish for a distance of about 8^{mm}. Cf. *antea*, p. 296.

Janthoenas jouyi STEJNEGER.

1837.—*Carpophaga ianthina* SEEBOHM, Ibis., 1837, p. 179 (*part*).—*Janthoenas i.* STEJNEGER, Zeitsch. Ges. Orn., 1837, p. —.

1837.—*Janthoenas jouyi* STEJNEGER, Amer. Natural., June, 1837, p. 583.

DESCRIPTION.—Ad. (*Tokio Educational Museum. Coll. in northern part of Liu Kiu, February 3, 1837. Presented by Mr. C. Tasaki. Type of species*).—Ground color of the entire bird dark slate gray, with various metallic reflections, except the lower portion of the hind neck and the anterior part of the interscapilium, which are of a dead white, forming a large rhomboidal patch; remiges and rectrices blackish slate without metallic reflections; the reflections on the head are a delicate rose-purple, exactly as in *J. janthina*; those on the neck metallic green, especially bright on the hind portion, less glossy and mixed with rose-purple on the sides and front part; lower portion of fore neck with no metallic reflections, merely shaded with a dull oily green gloss mixed with rose-purple next to the white interscapular patch; back, rump, scapulars, smaller upper wing-coverts, and tertiaries, glossed with a delicate bronze green, the feathers just behind the white patch suffused with rose-purple, and the rump-feathers as well as some of the scapulars more or less margined with a coppery gloss; flanks with a hardly perceptible violet gloss.

At the first glance one would be tempted to regard this bird as a mere individual variation of the true *J. janthina* from Japan proper, but there are several other characters than the white interscapular patch, viz,

the general lighter tint of the ground color; the uniform green reflections of the back which exhibit no trace of the violet reflections so characteristic in *J. janthina*, and the absence of the strong green reflections on the lower fore neck, which render the latter so conspicuous. That the white patch is not due to local albinism is evident from the fact that Mr. H. Pryer has received several specimens similarly marked (Pryer, in letter dated March 10, 1887).

This is apparently a local resident peculiar to the Liu Kiu Island, while *J. janthina* is probably only a winter visitor.

Measurements.

I. JANTHOENAS JOUYI.

Museum and No.	Collector and No.	Sex and age.	Locality.	Date.	Wing.	Tail-feathers.	Exposed culmen.	Tarsus.	Middle toe with claw.	Total length.
Tokio Educat....	Tasaki.....	ad ...	"Northern part of Liu Kiu."	Feb. 3, 1887..	253	188	23	35	51	.....

II. JANTHOENAS JANTHINA.

U. S. Nat. 110482 .	Petersen, 17	♀ (?) ad	Akunora Kinsiu ...	Feb. 10, 1886.	242	174	21	35	49	.....
Tokio Educat....	Namiye.....	♀ ad...	Tomignusuku, Liu Kiu.	Mar. 10, 1886.	218	140	20	32	45	"415"

Janthoenas janthina (TEMME.).

Curiously enough, the true Crow-pigeon occurs also in the Liu Kiu Islands, though probably only as a winter migrant, the case being similar to that of *Hypsipetes pryeri* and *amaurotis*.

For comparison with the Liu Kiu specimen, we have a fine bird from Kinsiu, collected by Mr. Petersen. As will be seen from the table of dimensions given under the heading of the foregoing species, the former is much the smaller one, notwithstanding the fact that both are labeled as females. As to coloration the two specimens are absolutely identical, and I suspect Petersen's bird to be a male.

Turtur stimpsoni, sp. nov.

DIAGNOSIS.—Similar to *T. gelastis* TEMME., but coloration generally much deeper; breast cinnamon drab, and abdomen deep vinaceous cinnamon, inclining to rufous.

1862.—*Turtur rapicola* CASSIN, Proc. Acad. Philada., 1862, p. 320 (*nec* PALL.).

1887.—*Turtur orientalis* SEEBOHM, Ibis, 1887, p. 179.—STEJNEGER, Zeitschr. Ges. Ornith., 1887, p. —.

HABITAT.—Liu Kiu Islands, Japan.

TYPE.—U. S. Nat. Mus., No. 21220. W. Stimpson coll.

With seven specimens of the typical form before me (besides half a dozen Corean birds which I was allowed to examine by the courtesy of Mr. P. L. Jony), and two specimens from Liu Kiu, I have no hesitation in pronouncing the latter to be distinct.

The chief difference is expressed in the diagnosis, for while in the typical birds from Japan proper (and I have specimens from Yezo, Hondo, and Kinsiu) the breast is of a more or less vinous 'fawn-color' and the abdomen of a vinaceous-buff, these parts in the new species are of a decided cinnamon color, which on the breast overlies a dark drab, but on the abdomen is lighter, richer, and tinged with vinaceous and rufous. The interscapular region is more russet, the broad margins to scapulars and tertiaries of a richer and deeper burnt-sienna, and the rump darker, nearly slate black.

That these differences are not due to season is evident from the fact that I have typical *T. gelastis* in all seasons, some of them corresponding closely with the Liu Kiu specimens as to date, but differing widely in coloration, not one of the former even approaching the rich cinnamon of the latter.

Mr. Pryer, in a letter dated March 10, 1887, informs me that his specimens also are "rather more fully colored than Japanese."

Turtur stimpsoni agrees with *T. gelastis* in having the under tail-coverts and the tip of the tail-feathers gray. (Ridgway's Nomencl. Col., pl. ii, fig. 7.)

I have named this bird after its first discoverer.

Measurements.

I. TURTUR STIMPSONI.

Museum and No.	Collector and No.	Sex and age.	Locality.	Date.	Wing.	Tail-feathers.	Exposed culmen.	Tarsus.	Middle toe, with claw.	Total length.
U. S. Nat., 21220*	Stimpson, 166.	ad ..	Liu Kiu Island	Dec., 1854...	187	†120	16	25	34	.....
Tokio Educat ...	Namiye.....	♀ ad.	Chatan, Liu Kiu ...	Mar. 12, 1886.	189	129	16	26	32	"340"

II. TURTUR GELASTIS.

Christiania, N ...	Petersen, 40	♂ ad.	Amakusa, Kinsiu ..	Mar. 29, 1886.	198	139	16	28	34	.....
.....	Henson, 76.	♀ ad.	Hakodate, Yezo....	Aug. 14, 1883.	187	118	116	27	33	.....
U. S. Nat., 15844..	Heine, 3	ad ..	do	May, 1854 ..	193	126	.....	.....	.....	.....
Do. 95934..	Blak., 267.	♀ ad.	Sapporo, Yezo	May 10, 1877.	188	124	15	26	33	"318"
Do. 109467..	Namiye, 20.	♀ ad.	Sagami, Hondo	Nov. 15, 1884	178	118	16	26	32	"310"
Do. 91581..	Jouy, 1019 ..	♀ ad.	Tokio, Hondo	Mar. 24, 1883.	195	122	15	26	31	.....

* Type. † Tail defective.

Megascops elegans (CASS.).

A very young bird of this rare species, collected by Mr. Tasaki in "the northern part of Liu Kiu," has been presented to our Museum (No. 110974). Head and neck are partly in the down of a pale russet cinnamon, becoming still paler on the nape, transversely barred with ill-defined dusky vermiculations, the white spots on scapulars and wing-coverts are absent, and the whole under surface is strongly suffused with russet, each feather with peculiar dusky markings somewhat like two letters *x* placed on top of each other and united by the black shaft-streak running through the middle of both, the semilune of each *x* at the same time embracing a roundish spot of paler color; the wing pattern very much as in the adults, but the bands on the tail-feathers more distinct and better defined.

Ninox japonica (TEMM. & SCHL.).

Having for comparison only one specimen of this bird from Japan proper, I cannot say with *absolute* certainty whether Nishi's bird (δ ad.) from Yayeyama Island, now in our Museum (U. S. Nat. Mus., No. 110,973) is a typical *N. japonica*, or whether it presents any peculiarities of its own.

It is very dark sepia brown above, head and neck being still darker blackish or "clove-brown" (Ridgw., Nom. Col., pl. iii, No. 2), abruptly defined from the sepia-brown of the back; wings strongly tinged with russet; the brown spots on the under surface bold, broad, and of a saturated burnt umber; the broad edges to the jugular feathers ochraceous; tail rather dark, with five bars; concealed spots on scapulars large and white; loreal feathers basally very white.

DIMENSIONS. — δ , Yayeyama Island. — Wing, 204^{mm}; tail-feathers, 111^{mm}; bill from nostrils, 13^{mm}; tarsus, 30^{mm}; middle toe, without claw, 25^{mm}.

It agrees very closely with a specimen in Mr. Henson's collection, kindly submitted by the owner for inspection (♀ ad., Henson, No. 120; Hakodate, Oct. 20, 1885), except that in the latter the color of head and back seems to be uniform dark sepia brown, with perhaps a faint shade of grayish on head and neck; the spots on the under surface are also browner, and the concealed scapular spots somewhat smaller.

This specimen measures as follows: ♀ , Hakodate. — Wing, 217^{mm}; tail-feathers, 118^{mm}; bill from nostrils, 13^{mm}; tarsus, 30^{mm}; middle toe, without claw, 26^{mm}.

On the whole the two specimens agree so well that they may unhesitatingly be referred to the same form. A good series of Japanese specimens is, however, one of the more important desiderata of our museum.

Falco peregrinus TUNST.

Falco peregrinus orientalis STEJNEGER, Zeitschr. Ges. Orn., 1887, p.—.

With a few unimportant exceptions the specimen of Peregrine Falcon which Mr. Nishi brought home from Yayeyama Island agrees in nearly

every detail with the Hakodate specimen (U. S. Nat. Mus., No. 21086, Mr. Wright coll.) upon which Mr. Ridgway founded his *Falco communis* var. *orientalis* (Land B. North Am., III, p. 128; ex Gmelin). A comparison of Eastern Asiatic birds with the fine series of American specimens now in the National Museum seems to indicate, however, that if the former are to be regarded as subspecifically distinct from the typical European bird, their place would be with the American *F. p. anatum* rather than forming an independent subspecies. The two adults from Japan now before me agree most minutely with several American specimens (U. S. Nat. Mus., No. 49790, Yukon; No. 35458, Ft. Anderson; No. 42997, Jamaica), and a Pegu bird, collected by Mr. Oates (No. 95912), is very similar. In further support of this theory I may mention that a young Peregrine, which Mr. Harry V. Henson kindly lent me for examination (Coll. Henson, No. 207; ♀ juv., Hakodate, Oct. 26, 1882), is of the dark type, fully as dark as the average American bird,* and considerably darker than any European Peregrine I have seen. It is also worth mentioning that Mr. Robert Ridgway himself has arrived at the same conclusion.

In view of the comparative scantiness of the material and Mr. J. H. Gurney's opposite opinion, so strongly expressed,† I do not feel justified in substituting one uncertainty for another.

Butastur indicus ?

Pryer (*in litt.*).

Thalassoaëtus pelagicus (PALL.).

Mr. Pryer kindly informs me that his collector during December, or January, obtained a specimen of this magnificent eagle, which "was caught exhausted in a paddy field and died a few days after." This is the most southern record, so far as I know.

Eurystomus orientalis (LIN.).

The male specimen collected by Mr. Nisli on Yayeyama Island agrees in every particular with Philippine Islands examples.

* It matches exactly U. S. Nat. Mus. No. 94316, collected by L. M. Turner at Ungava, Labrador.

† Ibis, 1882, p. 299: "The Peregrine of Japan, if distinct, would be entitled to the specific name of '*orientalis*,' Gmelin, ex Latham; but that it is not distinct from the ordinary *F. peregrinus* appears to me to be certain. Mr. Ridgway, in his summary of subspecific races of *F. peregrinus*, speaks of '*var. orientalis*' as being 'beneath pure white, the breast and middle of abdomen without markings,' basing his description on 'two specimens examined from Japan,' but in Japan, as in India, these characters are not constant. An adult specimen from Japan and another from Formosa, both preserved in the Norwich Museum, have the breast and the middle of the abdomen abundantly sprinkled with numerous, though not large, spots, which, on the abdomen, are mingled, especially in the Japanese example, with imperfect, but very perceptible transverse bars, the general aspect of both specimens corresponding closely with some European and West-Asiatic specimens in adult, and probably rather aged, plumage of the paler type." I may remark, however, that in speaking of subspecific races the question is not whether the difference is *constant*, but whether it is *sufficiently constant*! Cf. Ibis, 1882, p. 296

This species seems to differ from the Australian *E. pacificus* (LATH.) (in spite of Schlegel's assertion to the contrary, Mus. P. Bas, Corac., p. 139) in being somewhat more brilliantly colored, but particularly in having a comparatively longer tail and shorter wings. In all my specimens of *E. orientalis* the longest tail-feathers are more than one-half the wing, while in *E. pacificus* the proportion is reversed.

The Yayeyama specimen has the following dimensions: Wing, 180^{mm}; tail-feathers, 103^{mm}; exposed culmen, 23^{mm}; tarsus, 19^{mm}; middle toe, with claw, 30^{mm}.

Halcyon coromanda (LATH.).

The Ruddy Kingfisher, collected by Mr. J. Nishi on Yayeyama Island, differs from the form occurring in Japan proper (which with Temminck and Schlegel we shall designate as *H. major*, or *H. coromanda major*) in the following points:

- (1) First primary shorter than seventh.
- (2) Violet gloss on upper surface much more vivid.
- (3) Ochraceous color on under surface much darker and more tawny, throat and abdomen being tawny-ochraceous, not whitish.
- (4) Feathers of the white rump patch white to the base.

In all these points it agrees with Malaccan specimens of what is usually regarded as typical *H. coromanda*. From these it differs only in the larger size, being fully as large as the Japanese birds. It therefore seems to agree well with the form from Celebes and Sula, described by Wallace as *H. rufa*,* and should possibly stand as *Halcyon coromanda rufa*, but without specimens of the latter I shall not at present attempt the subspecific identification of our bird, which measures as follows:

♂ ad. (*U. S. Nat. Mus.*, No. 110972. *Yayeyama Island, Liu Kiu. J. Nishi coll.*).—Wing, 123^{mm}; tail-feathers, 75^{mm}; exposed culmen, 55^{mm}; tarsus, 17^{mm}; middle toe, with claw, 30^{mm}.

Wing formula: 3, 4, 2, 5, 6, 7, 1.

Anthus maculatus }
Anthus cervinus } PRYER (*in litt.*).

Hypsipetes pryeri STEJNEGER.

An additional specimen from the northern part of Liu Kiu, collected by Mr. C. Tasaki, has been presented to our museum by the authorities of the Tokio Educational Museum. It agrees very well with the type of the species which is in the museum just mentioned, and corroborates the distinctness of *H. pryeri*. The specimen measures as follows:

ad. (*U. S. Nat. Mus.* No. 110941. *Liu Kiu Island. C. Tasaki coll.*).—Wing (first three primaries molting), 120^{mm}; tail-feathers, 108^{mm}; exposed culmen, 23^{mm}; tarsus, 22^{mm}; middle toe, with claw, 22^{mm}.

* P. Z. S., 1862, p. 338.

Hypsipetes amaurotis (TEMN.).

I have already announced (Zeitsch. Ges. Orn., 1887, p. —), on the authority of Messrs. Pryer and Namiye, that the typical *H. amaurotis* visits the Liu Kiu Islands during the winter, at which season both species are found there.

To make quite sure I asked Mr. Namiye to lend me the specimen he collected, and by his courtesy I am now enabled to compare it with specimens from Japan proper.

In coloration it agrees perfectly with specimens from Kiusiu and Hondo, and while smaller than any of the specimens included in my former table of dimensions (Proc. U. S. Nat. Mus., 1886, p. 643), it agrees perfectly with a specimen collected by Mr. Petersen at Urakami (now in the Zoological Museum of the University in Christiania, Norway, and kindly lent me for examination by Prof. Robert Collett). The latter specimen is labeled "male," but this may be a mistake. At all events there can be no doubt as to the correctness of referring the Liu Kiu winter visitor to the true *H. amaurotis*.

The specimen in question measures as follows:

♂ ad. (Tokio Educational Museum. Napa, Liu Kiu. March 8, 1886. Namiye coll.).—Wing, 118^{mm}; tail-feathers, 108^{mm}; exposed culmen, 24^{mm}; tarsus, 22^{mm}; middle toe, with claw, 22^{mm}. Total length (according to label), 265^{mm}.

Icoturus komadori (TEMN.).

One may imagine my delight at finding a true *I. komadori* in the last lot received from the Tokio Educational Museum.

It will be remembered that when describing *I. namiyei* (Proc. U. S. Nat. Mus., 1886, p. 644) I had no access to a specimen of the bird originally described by Temminck, and that for distinctive characters I had to rely upon Mr. Seebold's description of the type specimens of *I. komadori*; and in assuming his description to be correct I was not mistaken, for the specimen now before me sustains the former diagnosis beautifully, and proves the specific distinctness of *I. namiyei* and *I. komadori*.

The structural differences, as pointed out in the original description, are at once sufficient to distinguish the two species most trenchantly. *I. komadori* has a much shorter first primary, much shorter than one-half the second, while in *I. namiyei* it is longer than one-half the second. *I. komadori* has the second primary intermediate between sixth and seventh; in *I. namiyei* it is intermediate between ninth and tenth. In the former the point of the wing is formed by the third, fourth, and fifth primaries, third being much longer ($\frac{1}{2}$ ^{mm}) than sixth, while in the latter the sixth is so much longer than the second; third, fourth, fifth, and sixth being longest. In *I. komadori* the distance between the tips of the longest primaries and those of the longest secondaries is nearly twice as great as the same distance in *I. namiyei*. In other

words, the latter has a much more rounded wing than the former. It also has a much longer and more rounded tail, as well as a longer tarsus. The bill, however, is of the same size in both forms.

In regard to color the characters previously given are not only confirmed, but the actual comparison of specimens' furnishes additional important ones. The rufous color of the upper parts is much brighter in *I. komadori*, being of a vivid rufous orange, against the deep orange rufous of *I. namiyei*. The supposed difference in the coloration of the under tail-coverts is also confirmed, they being suffused with a pale cinnamon-rufous in *I. namiyei*, while in *I. komadori* they are pure white. The specimen of the latter before me has the black feathers of the fore neck narrowly margined with white, a feature apparently attributable to season, and the pale color of the under mandible may possibly be due to the same cause.

The specimen of *I. komadori* measures as follows:

♂ ad. (*Tokio Educat. Mus. Yayeyama Island. J. Nishi coll.*).—Wing, 76^{mm}; tail-feathers, 45^{mm}; exposed culmen, 14^{mm}; tarsus, 26^{mm}; middle toe, with claw, 22^{mm}.

My surmise (*Zeitsch. Ges. Ornith.*, 1887, p. —) that the *Icoturus*, reported by Mr. Pryer to occur on the northern group of the Liu Kiu Archipelago, might possibly be the true *I. komadori* was evidently not a happy one, as it turns out that it is the most southern group which is inhabited by this species. But, then, what is the bird of the northern group? May we possibly expect a third species from there?

Turdus pallidus GMEL.

A young male, with whitish tips to the great wing-coverts, collected by Mr. Namiye at Napa, Okinawa Shima, March 4, 1886, and an adult female, collected by Mr. J. Nishi on Yayeyama Island, both agreeing with specimens from Japan proper, are in the collection. The latter is now U. S. Nat. Mus. No. 110970. The former measures as follows:

Wing, 128^{mm}; tail-feathers, 91^{mm}; exposed culmen, 20^{mm}; tarsus, 32^{mm}; middle toe, with claw, 31^{mm}. Total length, according to Mr. Namiye, 250^{mm}.

Turdus chrysolaus TEMM.

A single specimen, adult male, is before us, collected by Mr. Namiye on March 19, 1886, at Nagogushiku, Liu Kiu. It is somewhat aberrant, as the wing-formula is nearly that of *T. obscurus*, second primary being somewhat longer than fifth. The bill is also rather small, but the under wing-coverts and axillaries are as gray as in typical specimens. It measures as follows:

Wing, 124^{mm}; tail-feathers, 94^{mm}; exposed culmen, 17^{mm}; tarsus, 32^{mm}; middle toe, with claw, 30^{mm}. Total length, according to Mr. Namiye, 240^{mm}.

Monticola solitaria (MÜLL.).

A bird in the gray plumage was collected by Mr. Tasaki in the "northern part of Liu Kiu."

Melodes caliope (PALL.).

Mr. Nishi collected a fine male of the Kamtschatkan Nightingale at Yayeyama Island. It agrees with Kamtschatkan birds in every particular. U. S. Nat. Mus., No. 110969.

Zanthopygia sp. ?

Muscicapa sp. ? STEJNEGER, Zeitsch. Ges. Orn., 1887, p. —.

A young Flycatcher was collected by Mr. Nishi on Yayeyama Island, but, as none of the adult birds were obtained, an exact identification of the species cannot be expected at present, especially since it seems evident that it is not referable to any of the Flycatchers known to occur in Japan or in Formosa.

In coloration it comes nearest to the young *Zanthopygia narcissina*, differing from an authentic male specimen of the latter collected by Mr. P. L. Jouy at Tate Yama, Hondo, October 26, 1882 (U. S. Nat. Mus., No. 91380; Jouy, No. 729), in the following points:

(1) The ground color of the under parts is "maize yellow," instead of white suffused with "straw yellow."

(2) The upper parts very slightly greener and the rump somewhat more yellow.

(3) The light edges to the tertiaries somewhat duller, and narrower toward the tip, not forming any light terminal spot.

(4) The light margins to the wing-coverts narrower, the tips of the inner ones being margined with whitish.

These discrepancies in the coloration of a young bird might, perhaps, be insufficient to prove specific difference, but there are structural differences which seem to preclude the possibility of the Yayeyama bird being a *Z. narcissina*, viz:

(1) The bill, although of the same size and lateral outline as that of *Z. narcissina*, is considerably more depressed.

(2) The wing formula is entirely different. In the first place, the primaries are comparatively shorter, the distance between the tips of the longest primaries and the tips of the longest secondaries being less than the length of the tarsus, while in *Z. narcissina* the same distance is much longer than the tarsus. The Yayeyama bird, furthermore, has the second primary intermediate between sixth and seventh, third nearly equal to fifth, fourth longest; in *Z. narcissina*, on the other hand, the second primary is considerably longer than the sixth; third equals fourth, which are the longest, being somewhat longer than fifth.

The only other Japanese Flycatcher which is greenish in the corresponding plumage is *Zanthopygia zanthopygia* (or *tricolor**), but the white wing spot, yellow rump, and black upper tail-coverts of this species at once obviate the necessity of further comparison. Its wing formula is also like that of *Z. narcissina*.

* *Muscicapa zanthopygia* HAY. Madr. Journ., XII. pt. 2 (p. 162) (1844).—*Muscicapa* (*Muscicapula*) *tricolor* HARTLAUB, Revue Zool., 1845, p. 406.—*Zanthopygia leucophrys* BLYTH, Journ. As. Soc. Bengal, XVI (p. 154) (1847).—*Muscicapa hylocharis* TEMM. & SCHL., Fauna Jap., Aves, p. 44, pl. xvii (1847).

The peculiar structure of the wing of the Yayeyama bird may, perhaps, indicate generic difference from *Zanthopygia*, but so great is the general resemblance to *Z. narcissina* that provisionally, at least, I refer it to the same genus.

At any rate, we have here an addition to the Japanese fauna, and it will remain for future investigators to ascertain whether it belongs to an undescribed species or not.

The measurements of this interesting specimen are as follows: Wing, 65^{mm}; tail feathers, 45^{mm}; exposed culmen, 10^{mm}; tarsus, 16^{mm}; middle toe, with claw, 14^{mm}; distance between tips of longest primaries and secondaries, 14^{mm}.

The corresponding measurements of the young *Z. narcissina*, referred to above (U. S. Nat. Mus., No. 91380), are: Wing, 76; tail feathers, 50; exposed culmen, 10; tarsus, 17; middle toe, with claw, 17; distance between tips of primaries and secondaries, 23^{mm}.

Zanthopygia narcissina (Temm.).

Mr. Pryer informs me that his collector obtained this species in Liu Kiu during December, 1886, and January, 1887.

Cisticola bruniceps (TEMME & SCHL.).

1835.—*Sylvia cisticola* (var. jap.) TEMMINCK, Man. d'Orn., 2 éd., III, p. li, + p. 125.

1847.—*Salicaria (Cisticola) bruniceps* TEMMINCK & SCHLEGEL, Fauna Japon., Aves, p. 134, pl. xx, C.—*Cisticola b.* BONAPARTE, Consp. Av., I, p. 286 (1850).—BLAKIST. & PRYER, Tr. As. Soc. Jap., X, 1882, p. 157.—SEEBOHM, Ibis, 1887, p. 175.—STEJNEGER, Zeitschr. Ges. Ornith., 1887, p. —.—*Locustella b.* BLAKIST. & PRYER, Ibis, 1878, p. 238.

1879.—*Cisticola cursitans* SEEBOHM, Ibis, 1879, p. 37 (nec FRANKLIN).—BLAKIST. & PRYER, Trans. As. Soc. Jap., VIII, 1880, p. 221. — *Ibid.*, *ibid.*, X, 1882, p. 157.

1883.—*Cisticola cisticola* SHARPE, Cat. B. Brit. Mus., VII, p. 259 (part). —SEEBOHM, Ibis, 1884, p. 40.—BLAKISTON, Amend. List B. Jap., p. 56 (1884).

It would seem from Mr. Seebohm's paper in the Ibis, 1887, p. 175, that he now recognizes two forms of the Fan-tail Warbler as occurring in Japan, a northern one, the true *Cisticola cisticola*, and a southern race, *C. bruniceps*, differing from "European examples in the color of the tail." To this latter race he refers a skin from the Liu Kiu Islands, obtained by Mr. Pryer, to the former, the birds from Japan proper.

In this I think he is wrong, for the reason that a male specimen from Liu Kiu, collected on the 29th of March, which Mr. Namiye has kindly lent me for examination, agrees in every respect with a summer male from Tokio, collected by Mr. Ota. In the coloration of the tail these specimens agree perfectly with Seebohm's description of his Liu Kiu specimen, and I have no doubt that these three examples represent the regular male summer plumage of the Japanese bird, which should stand under the name given it by Temminck and Schlegel. The European bird, even the old male in summer, has never a tail colored like my Japanese examples. In winter the tail is longer and the ochraceous buff space on the rectrices above the subterminal black band is absent in the Japanese birds also; but even in this plumage it is easily dis-

tinguished from its European ally by its greatly superior size. Mr. R. B. Sharpe has already drawn attention to this (Cat. B. Brit. Mus., VII, p. 262), but says that "too much stress cannot be laid on these differences, as all the Japanese specimens in the collection appear to be in winter plumage." From the tables below it will be seen, however, that the summer birds bear out the differences fully as well. Mr. Sharpe having only winter specimens was, of course, unable to point out the great extent of the ochraceous buff color on the rectrices as a further distinguishing mark of the Japanese birds.

The birds from India and China seem to have the tails somewhat similarly colored. I have only two specimens from Tenasserim and two from China, but judging from these the ochraceous buff space is much more restricted. They differ furthermore by being smaller, even more so than the European specimens, and their bills are particularly small. These, I suppose, should be called *C. cursitans* (FRANKL.).

The above differences are the most striking ones, but there seems to be several others. Thus in the Japanese winter birds the outer edges of the shoulder feathers are distinctly whitish, and the male summer bird has the crown apparently more uniform, and the superciliary streak better defined.

Mr. J. Nishi collected a young bird in the first plumage on Yayeyama Island. It is but slightly younger than a specimen, now before me (U. S. Nat. Mus., No. 96245), which was collected by Mr. Ota, near Tokio. The two birds are absolutely alike, except that the Yayeyama bird is slightly paler. The ochraceous buff space on the rectrices, of course, is wanting in this specimen.

Measurements.

I. *CISTICOLA BRUNNICEPS.*

Museum and No.	Collector and No.	Sex and age.	Locality.	Date.	Wing.	Tail-feathers.	Exposed culmen.	Tarsus.	Middle toe with claw.	Total length.
Tokio Educat....	Namiye.....	♂ ad..	Shuri, Liu Kiu	Mar. 29, 1886	54	43	10	23	17	110
U. S. Nat., 96246..	Ota, Bl., 2708...	♂ ad..	Tokio, Hondo	(Summer)	51	41	9.5	.....	.....	.....
U. S. Nat., 96244..	Ota, Bl., 2706...	ad....	Suruga, Hondo	(Winter)	55	55	10.5	22	.....	.....
U. S. Nat., 91498..	Jouy, 947.....	♂ ad..	Tokio, Hondo	Jan. 21, 1883	55	51	9.5	22	.....	.....

II. *CISTICOLA CISTICOLA.*

U. S. Nat., 18970..	Dronet.....	♂ ad..	France.....	(Winter)	49	48	10	19	16	.....
U. S. Nat., 56428..	Schlüter, 401..	♂ ad..	Italy.....	(Summer)	46	35	10.5	19	.....	.....

III. *CISTICOLA CURSITANS?*

U. S. Nat., 96173..	Blak., T 29....	ad....	Canton, China	Oct. —, —	46	34	8	20	15	101
U. S. Nat., 96474..	Blak., T 30....	ad....	do.....	Oct. —, —	43	35	9	.....	.....	101
U. S. Nat., 95315..	Bingham.....	♀ ad..	Tenasserim..	June 3, 1879	44	34	.....	19	16	107
U. S. Nat., 95314..	Bingham, 46...	♂ ad..	do.....	Aug. 17, 1879	45	33*	9	19	.....	118

* Tail molting.

Cettia cantillans (TEMM. & SCHL.).

The bird which in my former list was called "*Phylloperastres xanthodryas*?" on the authority of Mr. Namiye, has now come to hand, and belongs undoubtedly to *Cettia cantillans*.

The two *Cettias* inhabiting Japan afford the most extraordinary example of two distinct species which are absolutely identical in everything, except size, inhabiting the same country. They do not seem to be local representatives of each other, yet there can be no doubt as to their distinctness.

One specimen was collected by Mr. Namiye at Napa, Okinawa Shima, March 8, 1886.

Another was collected by Mr. J. Nishi on Yayeyama Island, and the measurements of both specimens are included in the following table:

Measurements.

I. CETTIA CANTILLANS.

Museum and No.	Collector and No.	Sex and age.	Locality.	Date.	Wing.	Tail feathers.	Exposed culmen.	Tarsus.	Middle toe with claw.	Total length.
U. S. Nat., 91376..	Jouy, 775	♂ ad.	Tate-Yama, Hondo.	Nov. 7, 1882	53	54	10	22	16	.....
U. S. Nat., 91460..	Jouy, 907	♀ ad.	Yokohama, Hondo.	Jan. 1, 1883	55	56	10	23	16	.....
U. S. Nat., 96242..	Ringer, Bl., 2819	ad...	Nagasaki, Kiusiu.	Jan. 18, 1880	53	53	10	.....	.....	.....
Tokio Educat....	Namiye	♀ ad.	Napa, Okinawa, I., Liu Kiu.	Mar. 8, 1886	58	57	10.5	22	.....	"127"
Do.....	J. Nishi.....	♀ ad.	Yayeyama Island, Liu Kiu.	.....	59	57	10	23	16	.....
			Average of five specimens.	.....	56	55	10	22.5	16	.....

II. CETTIA CANTANS.

U. S. Nat., 96241..	Blak., 2871	♂ ad.	Moraran, Yezo..	May —, —	65	64	11	25	17	"152"
U. S. Nat., 109344	Namiye	♂ ad.	Tokio, Hondo...	Mar. —, 1885	66	67	11.5	25	17	.....
U. S. Nat., 91501..	Jouy, 950	♂ ad.	do	Jan. 21, 1883	66	67	10.5	24	17.5	.....
U. S. Nat., 88630..	Jouy, 367	♂ ad.	Fuji, Hondo....	June 30, 1882	64	65	12	24	.....	.....
U. S. Nat., 91375..	Jouy, 774	♀ ad.	Tate-Yama, Hondo.	Nov. 7, 1882	64	64	11	24.5	.....	.....
U. S. Nat., 93240..	Ringer, Bl., 2818.	ad...	Nagasaki, Kiusiu.	Jan. 18, 1886	65	67	12	25	.....	.....
Christiania, N...	Petersen, 15 ...	♀ ad.	Urakami, Kiusiu	Jan. 8, 1886	69	67	12	25	.....	.....
Do.....	Petersen, 71 ...	♂ ad.	Nagasaki, Kiusiu.	Nov. —, 1886	66	66	11	25	18	.....
			Average of 8 specimens.	.....	66	66	11.3	25	17.3	.....

Cettia cantans (TEMM. & SCHL.).

Mr. Pryer (*in litt.*) informs me that he has winter specimens from Liu Kiu. It is not at all likely that he should confuse it with the foregoing species.

Pericrocotus tegimæ STEJNEGER.

Mr. Tasaki has presented to the Tokio Educational Museum another specimen of this very distinct species, which he collected in the "northern part of Liu Kiu," and Mr. Pryer informs me that he has other specimens from the same islands. Mr. Tasaki's specimens agree very well with the type specimens and substantiates all the diagnostic characters given in the original description (Proc. U. S. Nat. Mus., 1886, pp. 648-650), except that the light spots on some of the remiges which form the speculum are not pure white, but strongly suffused with buff.

The specimen is not sexed, but having the top of the head glossy bluish black, it is probably a male, a supposition strengthened by the dimensions, which are as follows: Wing, 87^{mm}; tail-feathers, 99^{mm}; exposed culmen, 12^{mm}; tarsus, 15^{mm}; middle toe, with claw, 18^{mm}.

Lanius sp. ?

Mr. H. Pryer informs me that his collector in Liu Kiu obtained a *Lanius*, the species of which he has not identified.

Parus minor commixtus (SWINH.).

1868.—*Parus commixtus* SWINHOE, Ibis, 1868, p. 63.

1869.—*Parus commixtus* GRAY, Hand-l. B., p. 231.

1887.—*Parus minor* SEEBOHM, Ibis, 1887, p. 176.—STEJNEGER, Zeitschr. Ges. Orn., 1887, p. —.

The specimen sent adds a new form to the Japanese avi-fauna. As the name indicates it is most nearly related to *Parus minor* of Japan proper, but it is easily distinguished by having the back gray with only a tinge of green on the interseapular region, and by the absence of the olive-buff tinge on the flanks so conspicuous in the typical form.

We have before us specimens from Southern China, whence came the type of Swinhoe's *P. commixtus*, which agrees with the Liu Kiu Island bird. Some of the South China examples, possibly most of them, have the green nearly entirely absent, and hence they have been referred to *P. cinereus* or *nipalensis* from India, and in my previous paper on the Japanese *Paridae* I expressed the same opinion. However, having since then received two more examples of the Indian bird, I find by careful examination that the true *P. nipalensis* differs quite considerably from the Chinese and Japanese birds in the extent of the white on the second pair of tail-feathers. In the three Indian birds before me the white on the second pair occupies nearly the entire outer web besides about half of the inner one, while in the Chinese and Japanese birds (as well as in about half a dozen specimens from Korea which Mr. Jony most liberally allowed me to examine) the white on this feather is restricted to a small wedge-shaped terminal spot. Only in one of these specimens (U. S. Nat. Mus. No. 91803) is this wedge of any greater extent, nearly 25^{mm} long in one rectrix, but it is confined to the inner web, and being considerably smaller on the feather of the other side it is apparently only an individual abnormality. I will not deny

the possibility of intermediate links being found, but I think it safer for the present to keep the two species separate, and would at the same time call attention to the apparently proportionally shorter tail of the Indian birds.

In regard to the entirely gray backed Chinese specimens, I am uncertain whether to refer them to a separate subspecies or not, but not knowing the relative abundance of those with a pure gray back and those which have the interseapular portion slightly tinged with yellow, nor having any reliable information whether the two forms have a separate range of distribution, I shall refer them all to *P. commixtus*.

I have no hesitation in referring the Liu Kiu bird to this form in spite of the fact that I have only one specimen, for Mr. Pryer, in letter dated March 10, 1887, kindly informs me that his specimens of *Parus minor* from Liu Kin have "less green on the back than Japanese" examples.

Measurements.

I. PARUS MINOR.

Museum and No.	Collector and No.	Sex and age.	Locality.	Date.					Middle toe with claw.	Total length.
					Wing.	Tail-feathers.	Exposed culmen.	Tarsus.		
U. S. Nat., 109354.....		♀ ad.	Tokio, Hondo.....	Jan 8, 1884	65	61	9	17	16	.....
U. S. Nat., 91345... Jouny, 804...		♀ ad.	Tate-Yama, Hondo	Nov. 23, 1882	65	59	9.5	18	16	.....
U. S. Nat., 96146... Blak., 3174...		ad.	Sapporo, Yezo...	Oct. —, —	68	62	10	19	16	"140"
U. S. Nat., 85799... Jouny, 29...		♂ ad.	Nagasaki, Kiusiu.	May 30, —	66	58	9.5	19	.....	.....
U. S. Nat., 8-641... Jouny, 325...		♂ ad.	Fuji-Yama, Hondo	June 28, 1882	68	62	9	18	16.5	.....
Christiania, N..... Petersen, 78.		♂ ad.	Nagasaki, Kiusiu.	Dec. —, 1886	66	62	9	18.5	16.5	.....

II. PARUS COMMIXTUS.

Tokio Educat....	Namiye.....	♂ ad.	Ginowan, Liu Kiu.	Mar. 11, 1886	69	64	9.5	19	17	"145"
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For the sake of completeness I add the measurements of my Chinese specimens referable to *Parus commixtus* and those of three *P. nipalensis*.

Measurements of PARUS COMMIXTUS.

U. S. Nat. Museum No.	Collector and No.	Sex and age.	Locality.	Date.					Middle toe with claw.	Total length.
					Wing.	Tail-feathers.	Exposed culmen.	Tarsus.		
86142	Jouny, 205...	♂ ad.	Deep Bay, Hong-Kong.	Nov. 12, 1881	66	59	9	18	.....	.....
86098	Jouny, 160...	♂ ad.	Lamma Island, Hong-Kong.	Oct. 2, 1881	65	59	.....	.....	.....	.....
91808	Jouny, 231...	♀ ad.	Mira Bay	Jan. 2 ^d , 1882	64	58	9	.....	.....	.....
96456	Blak., T., 58.	♂ ad.	Canton	Oct. —, —	67	61	.....	.....	.....	"132"

Measurements of *PARUS NIPALENSIS*.

U. S. Nat. Mus. cum No.	Collector and No.	Sex and age.	Locality.	Date.	Wing.	Tail-feathers.	Exposed culmen.	Tarsus.	Middle-toe with claw.	Total length.
95648	Riswill, 465.	ad	"N. W. Himalayas"	.....	63	57	9	.....	.....	.....
110537	Fairbank ...	ad	"Mahr. India"	.....	62	53	10	.....	.....	.....
110547	Legge, 32...	♂ ad.	Colombo, Ceylon...	Aug. 30, 1869.	65	57	10	.....	.....	.....

Corvus macrorhynchus levaillantii (LESSON).

It appears that it is the small-billed form, the "Black Hill Crow" of the Indian ornithologists, which on the Liu Kiu Islands represents the heavy-billed *Corvus japonensis*, or *C. macrorhynchus japonensis* as its name ought to stand. The only difference between the two forms seems to be the size of the bill, for their coloration is absolutely identical as far as I can see. It may be, however, that *C. levaillantii** will average slightly smaller throughout.

Mr. Seebohm, acting on Pryer's notes that the Liu Kiu Islands Crow resembles the Carrion Crow, but has a much larger beak than ordinary and shorter primaries, suggests, with some doubt, its identity with *C. japonensis* (Ibis, 1887, p. 176). Mr. Namiye, on the other hand, referred it to the Carrion Crow, labeling the specimen which he had the kindness to send me for examination "*Corvus corone*?" With the latter the present form should not be confounded, however. *C. corone*, or *C. corone orientalis*† as the Eastern subspecies should be called, may be easily distinguished from *C. levaillantii* (and *C. japonensis*) by the outlines of the individual feathers on top of the head being distinguishable at a glance, and by having the jugular feathers lanceolate and strongly individualized, while in *C. levaillantii* their outlines are completely blended, the whole surface of the parts in question being uniformly smooth.

*1831.—*Corvus levaillantii* LESSON, Tr. d'Orn., p. 328 (nec *C. corone levaillantii* STEJNEGER, Orn. Expl. Kamtsch., p. 239, qui *C. c. orientalis* (EVERSM.)).

1858.—*Corvus sinensis* MOORE, Cat. B. Mus. E. I. Co., II, p. 556.—DRESSER, B. of Eur., IV, p. 532 (1875).

1864.—*Corvus colonorum* SWINHOE, Ibis, 1864, p. 427.

1866.—*Corvus andamanensis* TYTLER, Ibis, 1866, p. 420.

1876.—*Corvus orientalis* TACZANOWSKI, Journ. f. Orn., 1876, p. 195 (nec EVERSM.).

1877.—*Corone macrorhyncha* α *levaillantii* SHARPE, Cat. B. Be. Mus., III, pp. ix + 39.

1879.—*Corvus intermedius* SCULLY, Stray Feath., VIII, p. 325 (nec ADAMS, 1859?).

1885.—? *Corvus corone, orientalis* TACZANOWSKI, Bull. Soc. Zool. France, 1885, p. 472 (nec EVERSM.?).

1887.—*Corvus japonensis*? SEEBOHM, Ibis, 1887, p. 176.

† *Corvus orientalis* EVERSMANN, Add. Pall. Zoogr., II (p. 7) (1841).—TACZANOWSKI, Journ. f. Orn., 1874, p. 329.—*Corvus corone levaillantii* STEJNEGER, Orn. Expl. Kamtsch., p. 239 (nec LESSON) (1885).—*Corvus corone orientalis* STEJNEGER, Proc. U. S. Nat. Mus., X, 1887, p. 321, which see!

From *C. japonensis* the present form differs solely by the size of the bill. The culmen presents the same strong curvature (in contradistinction to the more gentle bend of the culmen in *C. corone*) but the bill is considerably lower throughout.

Judging from descriptions this is the same form which Swinhoe collected in Formosa and named *Corvus colonorum*.

I. Measurements of *CORVUS MACRORHYNCHUS LEVAILLANTII*.

Museum.	Collector.	Sex and age.	Locality.	Date.	Wing.	Tail-feathers.	Exposed culmen.	Height of bill at anterior border of nostrils.	Tarsus.	Middle toe with claw.
Tokio Educat..	Namiye ..	♀ ad.	Yuutansan, Liu Kiu	Mar. 13 1886	325	208	56	22	55	48

II. Measurements of *CORVUS CORONE ORIENTALIS*.

Museum and No.	Collector and No.	Sex and age.	Locality.	Date.	Wing.	Tail-feathers.	Exposed culmen.	Height of bill at anterior border of nostrils.	Tarsus.	Middle toe with claw.
U. S. Nat., 91391...	Jouy, 811	♂ ad.	Tate-Yama, Hondo...	Nov. 25, 1882	352	265	56	19	65	54
U. S. Nat., 85801...	Jouy, 33	♂ ad.	Nagasaki, Kiusiu.....	June 14, 1881	347	211	59	21	64	53
Christiania, N.....	Petersen, 83	♂ ad.	do	Dec. —, 1886	343	200	53	20	63	53
Do.....	Petersen, 19	♀ ad.	Tomatchi, Kiusiu.....	Jan. 26, 1886	330	190	52	20	62	52

Sturnia pyrrhogenys TEMM. & SCHL.

I can discover no appreciable difference between the specimen sent, which was collected by Mr. Nishi on Yayeyama Island, and typical specimens from Northern Japan, except that the under tail coverts are nearly pure white. There seems to be great variation, however, in this respect.

Zosterops japonica TEMM. & SCHL.

It is impossible to say, from the single specimen collected by Mr. Nishi at Yayeyama Island, whether the form occurring there is absolutely identical with the typical *Z. japonica*, or whether it constitutes a race of its own.

In general coloration it agrees well with Japanese specimens, except that the flanks are somewhat paler than average *Z. japonica*. The dusky of the lores and under the eyes is of the same intensity as in the latter.

There is, however, a considerable difference in the wing, which in the Yayeyama bird is shorter, while in all the other dimensions it agrees with the ordinary type, the wing being only 53^{mm} against 58^{mm}, the average of 7 Japanese specimens. This shortness of the wing is particularly due to the shortening of the primaries, the relative proportions of which also differ from any Japanese bird I have seen, the wing-

formula in the Yayeyama specimen being as follows: First (ninth) primary equals seventh; second equals fifth; third intermediate between second and fourth which is longest. In the Japanese specimens the wing-formula is as follows: First primary about equals fifth (sometimes longer, sometimes shorter than fifth); second between fifth and fourth which equals the third, these two being the longest.

Additional material will be necessary in order to decide whether the above differences are constant characters of a local race, or only an extraordinary individual variation.

The Yayeyama bird which is marked ♂ measures as follows: Wing, 53^{mm}; tail feathers, 49^{mm}; exposed culmen, 11^{mm}; tarsus, 18^{mm}; middle toe, with claw, 15^{mm}.

Mr. Pryer (*in litt.*) remarks that one of his Liu Kiu specimens "has a number of brown feathers scattered over its body."

Passer montanus saturatus STEJNEGER.

The male specimen which Mr. Namiye collected at Napa, Liu Kiu, March 5, 1886, is by far not so deeply colored as the type of my *P. saturatus*, and seems to show that, if tenable at all, it can only rank as a subspecies. There are traces of the brown edges to the feathers of the lower surface, and the rump is rather richly colored, although closely approached by an October specimen from Canton (U. S. Nat. Mus., No. 96515.) Additional material of autumnal birds will be necessary to clear up the question. I should remark, however, that Mr. Pryer, under March 10, 1887, writes me as follows:

"As I feared *Passer saturatus* cannot stand; I have now a long series of the Ryu Kiu bird, and they are quite indistinguishable from Japanese."

Mr. Namiye's specimen measures as follows: Wing, 68^{mm}; tail-feathers, 52^{mm}; exposed culmen, 11^{mm}; middle toe with claw, 18^{mm}. Total length, according to Mr. Namiye, 143^{mm}.

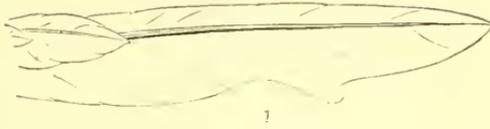
Catalogue of birds hitherto recorded from the Liu Kiu Islands.

Current number.	Number in Stejneger's list of Liu Kiu birds, Zettsch. Ges. Ornith.	Number in Blakiston and Pryer's "Birds of Jap.," Tr. As. Soc. Jap.	Species.	Proc. U. S. Nat. Mus., 18, 1886, page —	Proc. U. S. Nat. Mus., x, 1887, page —	Seebohm, in "Ibis," 1887, page —
1	1	62	<i>Sterna sinensis</i>			181
2	2		<i>Sterna melananchen</i>			181
3	3		<i>Sterna dougalli</i>			181
4			<i>Sterna fuliginosa</i>		392	
5			<i>Sterna bergii subsp.</i>		392	
6	4	64½	<i>Anous stolidus</i>			
7			" <i>Thalassidroma monorhis</i> " SWINH.*			
8		91	<i>Charadrius squatarola</i>		394	
9	5	84	<i>Charadrius dominicus fulvus</i>		394	180
10		87	<i>Ægialitis dubia</i>		394	
11	6	100	<i>Actitis hypoleucos</i>			
12	7	94	<i>Heteractitis brevipes</i>			180

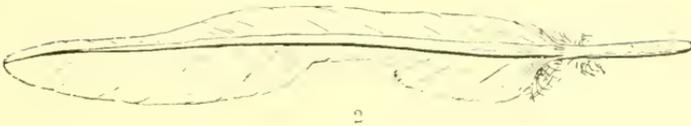
* P. Z. S., 1871, p. 422: "Breeding on the small islands northeast of Formosa (*Collingwood*)."

Catalogue of birds hitherto recorded from the Liu Kiu Islands—Continued.

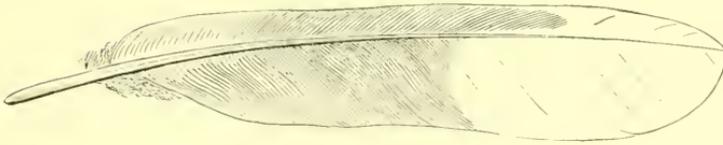
Current number.	Number in Stejneger's list of Liu Kiu birds, Zettsch, Ges. Ornith.	Number in Blakiston and Pryer's "Birds of Jap., Tr. As. Soc. Jap.	Subject.	Proc. U. S. Nat. Mus., ix, 1886, page 1.	Proc. U. S. Nat. Mus., x, 1887, page 1.	Seebohm, in "Ibis," 1887, page 1.
13	8	121	<i>Numenius lineatus</i>			
14	9	112	<i>Numenius sp. ?</i> (Pryer, <i>in litt.</i>)			
15	10		<i>Phalaropus lobatus</i>		394	
16	11		<i>Porzana phaeopygia</i>		394	
17	12	150	<i>Euryzona sepiaria</i>		395	
18	13	151	<i>Gallinula chloropus</i>			180
19	14	43	<i>Fulica atra</i>			180
20	15	37	<i>Aythya marila</i>			
21	16		<i>Nettion crocea</i>		397	
22	17	60	<i>Dendrocygna javanica</i>		397	181
23	18	128	<i>Sula sula</i>			
24	19	137 $\frac{1}{2}$	<i>Nycticorax nycticorax</i>		398	181
25	20		<i>Demigretta ringeri</i>		300	180
26	21	133	<i>Demigretta greyi</i>		302	
27	22	134	<i>Ardea cinerea</i>			
28	23		<i>Herodias alba modesta</i>			
29	24		<i>Turnix blakistoni</i>	635		179
30?	25?	161	<i>Trogon permagna</i>	637		
31			<i>Trogon sieboldii</i>			179
32	26	162	<i>Janthoenus jouyi</i>		398	
33	27		<i>Janthoenus janthina</i>		399	179
34	28		<i>Columba intermedia</i>			
35	29		<i>Turtur stimpsoni</i>		399	179
36	30	304	<i>Megascops elegans</i>	639	401	
37	31	298	<i>Megascops semitorques</i>			174
38	32	323	<i>Ninox japonica</i>		401	174
39		315	<i>Falco peregrinus</i>		401	
40		308	<i>Butastur indicus ?</i>		402	
41	33	178	<i>Thalassoaetus pelagicus</i>		402	
42	34	175	<i>Eurystomus orientalis</i>		402	
43	35		<i>Alcedo bengalensis</i>			176
44	36		<i>Haleyon coromanda</i>		403	176
45	37		<i>Yungipicus nigrescens</i>			177
46		225	<i>Blythipicus ? noguchii</i>			178
47		227	<i>Anthus maculatus</i>		403	
48	38	230	<i>Anthus cervinus</i>		403	
49	39		<i>Motacilla melanope</i>	642		176
50	40	257	<i>Hypsipetes pryeri</i>	642	403	
51	41		<i>Hypsipetes amaurotis</i>		404	
52		249	<i>Icturus namiyei</i>	644		175
53	42	261	<i>Icturus komadori</i>		404	
54	43	259	<i>Turdus naumanni</i>	646		174
55	44	263	<i>Turdus pallidus</i>		405	174
56	45	256	<i>Turdus chrysolus</i>		405	174
57	46	252	<i>Monticola solitaria</i>	646	405	174
58	47	251	<i>Melodes calliops</i>		406	
59	48		<i>Ianthia cyanura</i>	646		174
60		209	<i>Zanthopygia sp.</i>		406	
61	49	235 $\frac{1}{2}$	<i>Zanthopygia narcissina</i>		407	
62	50	233 $\frac{1}{2}$	<i>Cisticola bruniceps</i>		407	175
63		233 $\frac{1}{2}$	<i>Cettia cantillans</i>		409	
64	51		<i>Cettia cantans</i>		409	
65	52	214	<i>Chelidon namiyei</i>	646		176
66	53		<i>Ampelis japonicus</i>	648		176
67			<i>Pericrocotus teginæ</i>	648	410	176
68	54		<i>Lanius sp.</i>		410	
69	55		<i>Parus castaneiventris</i>	650		176
70	56	215	<i>Parus minor commixtus</i>		410	176
71	57		<i>Parus ater ?</i>			176
72	58	203	<i>Corvus macrorhynchus levaillantii</i>		412	176
73	59	180	<i>Sturnia pyrrhogenys</i>		413	
74	60	272	<i>Zosterops japonica</i>		413	176
75	61	285	<i>Emberiza personata</i>			174
76	62	260	<i>Spinus spinus</i>	651		174
77	63		<i>Fringilla montifringilla</i>			
			<i>Passer montanus saturatus</i>		414	174



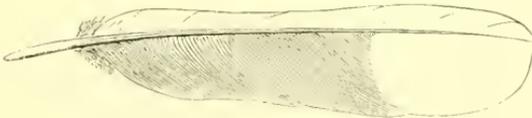
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- 1.—First primary of *Dendrocygna javanica*; $\frac{2}{3}$ natural size. (p. 397.)
2.—Third primary of *Treron*; $\frac{1}{2}$ natural size. (p. 417.)
3.—External tail-feather of *Turtur douracatorquatus*. U. S. Nat. Mus. No. 109408; $\frac{2}{3}$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