

Notes on a Collection of Birds from  
Tsushima.

by

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*Rigakushi, Ph. D., Rigakuhakushi.*

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With plate XII.

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The interest attached to the island of Tsushima,\* as one of the links connecting the Japanese Islands with the continent, led us to send Messrs. Namiye and Tsuchida, Assistants in the Zoological Laboratory, Science College, to make a general reconnaissance of its fauna. They collected specimens at several places on the island, altogether from Febr. 19th to April 7th, 1891, but of that time, short as it was, they could devote only a part to the work of the ornithological collection. Nevertheless, they succeeded in acquiring 136 skins of birds referable to some 48 species, a number which well attests the zeal of the collectors. It is upon these specimens that I now propose to make notes.

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\* Tsushima lies in the Straits of Corea, between Kiushiu and the Korean peninsula. Although it had been but imperfectly explored by zoologists, we had long known of the existence there of a species of wild-cat found in no other of the Japanese islands, and of a wood-pecker, *Thriponax richardsi*, considered to be peculiar to that island. The occurrence there of the Chinese Ring-necked Pheasant, *Phasianus torquatus*, not found on any of the main islands of Japan, has also been recorded, but this I believe is to be regarded as an element introduced from Corea by human agency.

1. ***Merula fuscata***, (Pall.)

Jap. names : Tsugumi ; Chōma.

This species was found in great numbers on open paddy-fields. They were probably on migration. Eight specimens, dating Febr. 22nd to March 7th, were obtained at four different localities.

A specimen was also brought home from the island of Iki, between Tsushima and Kiushiu.

2. ***Merula naumanni*** (T.)

Hachijō-tsugumi ; Akajinai.

This species, which but rarely straggles to the north-eastern portion of Hondo, seems to be a common visitor to Tsushima. Three specimens, all males (dating Febr. 22nd to March 6th), were obtained. They were found mixed in flocks of the above species. According to the report of Taczanowski (*Proc. Zool. Soc.*, 1888, p. 463) *M. naumanni* should also be common in Corea during the time of migrations.

3. ***Merula pallida*** (Gm.)

Shirohara ; Yabutsugumi.

Numerous in bushes. Four specimens obtained, Febr. 19th to March 6th.

4. ***Monticola solitaria*** (Müll.)

Iso-hiyodori.

A female and two males were collected at Wani-ura at the northern extremity of the island.

5. **Tarsiger cyanurus** (Pall.)

Ruribitaki.

This bird was very abundantly met with. Eight specimens were obtained at Izuhara and vicinity on Febr. 19th and 21st.

A female specimen of *Ruticilla aurora* was obtained on the island of Iki. This species undoubtedly occurs also on Tsushima.

6. **Hypsipetes amaurotis** (T.)

Hiyodori.

This species was one of the commonest birds of the island. Fifteen specimens obtained at different localities. In Tsushima as in Hondo, this bird has the habit of frequenting the blossoms of *Camellia japonica*. All the specimens from Tsushima have more or less pollen-powder, undoubtedly of the above-mentioned tree, attached to feathers at the base of bill. Mr. Namiye observed at Tsushima that the same tree is a favourite resort of *Mustela melampus* during night or in early morning. Anatomical examination of this mammal shot down from that tree, invariably showed him no solid contents in the stomach. On the other hand, he found that the half-open and up-turned corolla of *Camellia* contains drops of nectar, much sought after by children. I share with him in the belief that the *Mustela* as well as the Brown-eared Bulbul seeks that fluid instead of feeding on pollen.

On some of the specimens of *Hypsipetes amaurotis* from Tsushima, I notice the jugulum rather distinctly traversed by a band of pale-chestnut joining the dark chestnut patches on the sides of the head. It is caused by the apical half of the jugular feathers being suffused with that colour, which gradually fades away into the whitish of the attenuated end. The latter is usually found more or less abraded. The band is by no means equally pronounced in all

specimens and, where very faint, might easily be overlooked. Bringing together Hondo specimens (obtained in winter) for comparison's sake, I find similar colouring of the jugular feathers; in at least three out of ten specimens the jugular band is as marked as in the Tsushima specimen which first attracted my attention to the matter. Possibly the deeper or fainter tone of chestnut on the jugular feathers is merely a matter of age. Even when very prominent, the ruddy area is so inextensive as to exclude the idea of directly linking the Tsushima birds with *H. squamiceps* of the Bonin Islands or with *H. pryeri* of the Loo-choos. In size the Tsushima specimens are as variable as Hondo-birds, and in their average I see no appreciable difference from the latter. The measurements of Tsushima specimens are appended below:

Museum number	Sex.	Length of wing.	Length of tail.	Tarsus	Middle toe with claw	Exposed culmen	Remarks.
1697	♀	120 mm.	112 mm.	21 mm.	21 mm.	21 mm.	*
1698	♀	126 "	116 "	23 "	23 "	22½ "	*
1699	♀	124 "	114 "	22 "	23 "	25 "	{ Scarcely any trace of ruddiness on jugular feathers.
1700	♂	131 "	118 "	23 "	23 "	25 "	*
1701	♂	130 "	122 "	22 "	23 "	24 "	*
1702	♀	126 "	112 "	23 "	22 "	23 "	{ The pale chestnut of jugular feathers rather prominent.
1703	♀	122 "	112 "	22 "	23 "	23½ "	*
1704	♂	130 "	119 "	23 "	22 "	25 "	*
1705	♂	133 "	123 "	23½ "	23 "	26 "	*
1706	♂	132 "	122 "	22 "	23 "	25 "	{ The pale chestnut of jugular feathers rather prominent.
1707	♂	118 "	105 "	22½ "	24 "	"	*
1708	♂	132 "	123 "	23½ "	23 "	25 "	*
1709	—	128 "	115 "	22 "	23 "	25 "	*
1710	♀	123 "	115 "	25 "	22 "	22 "	
1711	♂	132 "	117 "	25 "	22 "	23 "	

\* Jugular feathers suffused with pale chestnut in varying degrees.

Messrs Namiye and Tsuchida also obtained two specimens of this species on the island of Iki, between Tsushima and Kiushiu. Both of these are much suffused with ruddy colour on the jugulum. The collectors do not remember to have noticed any difference in the screeching cry between the Tsushima and the Hondo Brown-eared Bulbuls.

**Zosterops japonica**, T. & S.

Mejiro.

This species is reported to be common on the island. It frequents *Camellia japonica* like *Hypsipetes amaurotis*. The two specimens brought back present the following measurements :

Mus. No.	Sex.	Wing.	Tail.	Tarsus.	Middle toe with claw	Exposed culmen
1749.	ad. ♂	59½ mm.	44 mm.	18 mm.	14 mm.	13 mm.
1750.	ad. ♂	60 "	—	18 "	14 "	12½ "

Both have the bill perceptibly stouter and longer than average Hondo-specimens, in which the exposed culmen measures 10—11 mm. The breast and flanks are somewhat less rufous than in many Hondo-specimens, others of which however match exactly in this respect with the two Tsushima skins now before me. Whether the latter represent a local race, perhaps intermediate between typical *Z. japonica* and *Z. stejnegeri*, I am not prepared to say.

8. **Cettia cantillans** (T. & S.)

Ko-uguisu.

A single female specimen was brought home. The wing measures only 55 mm., on which account I refer it to this species.

The collectors have very often heard the notes of this or the larger species (*C. cantans*). I would here remark that the distinctness of these two forms is exceedingly doubtful.

9. **Regulus cristatus orientalis**, Seeb.

= **R. japonicus**, Bp.

Kiku-itadaki.

This is said to be not uncommon on the island. A single specimen, a female, was obtained Febr. 28th.

10. **Parus minor**, T. & S.

Shijiukara.

This species was found common in pine-forests. A single female specimen was secured on Febr. 19th.

11. **Parus varius**, T. & S.

Yamagara.

Common in bushes. Seven specimens, all males, were obtained on Febr. 21st and March 2nd.

12. **Corvus macrorhynchus**, Wagl.

Hashibutogarasu.

The collectors brought home two specimens of the Oriental Raven. In gloss of plumage and in having grey bases to feathers, they agree perfectly with the two races known to occur in Japan, viz., *C. macrorhynchus japonensis* of Hondo and *C. macrorhynchus levillanti* of Loo-choo. In size of body they are decidedly smaller than the former, approaching the latter. The measurements are as follows :

Mus. No.	Locality	Date	Sex	Wing	Tail-feather	Tarsus	Middle toe with claw	Bill in front of the nostril	Height of upper mandible
1811	Tsushima	—	♀	316 mm.	204 mm.	57 mm.	53 mm.	41 mm.	16 mm.
1812	"	Febr. 23rd.	♂	318 "	204 "	57 "	54 "	39 "	18 "

For sake of comparison, I append below measurements of the two races just mentioned.

*C. macrorhynchus japonensis.*

Mus. No.	Locality	Date	Sex.	Wing	Tail-feather	Tarsus	Middle toe with claw	Bill in front of the nostril	Height of upper mandible
143	Tokyo	Nov. 28th 1883	ad. ♂	349 mm.	227 mm.	63 mm.	55 mm.	41 mm.	18 mm.
1495	Suka-gawa	Jan. 1st 1891	ad. —	340 "	216 "	60 "	53 "	43 "	17½ mm.

*C. macrorhynchus levaillanti.*

Insp. Mus., Tokyo	Loco-choo	March 13th. 1886	ad. ♀	320 mm.	210 mm.	53 mm.	50 mm.	37 mm.	15 mm.

In the above measurements, the height of the upper mandible was taken by placing one end of a divider on the cutting edge and the other on the culmen across the centre of nostril.

Of the two specimens from Tsushima, one (namely No. 1811) has the bill almost as slender as the specimen of *C. macrorhynchus levaillanti* from Loo-choo with which I have compared it. With regard to the other specimen (No. 1812), it is to be stated that the bill is as thick as in *C. macrorhynchus japonensis*, although in other respects it agrees well with No. 1811. I notice however that the curvature of the culmen is slightly but perceptibly less arched than in average specimens of the Hondo-race. Whether the indicated characters are due simply to immaturity or are to be regarded as pointing to the

Loo-choo race, my knowledge does not reach far enough to decide. As it is known that the two races intergrade, it is possible that I have intermediate forms before me.

The collectors very often noticed the thick-billed raven both in towns and on fields, associated with the following species.

13. **Corvus corone**, L.

Hashibosogarasu.

This should be quite common on Tsushima. A single immature specimen (No. 1813) was brought home.

14. **Garrulus japonicus**, Bp.

Kakesu, Kashidori.

The collectors have met with this species on two occasions, Febr. 21st and March 6th. Three specimens were obtained.

15. **Lanius bucephalus**, T. & S.

Mozu.

A male specimen seen only once and obtained.

16. **Motacilla lugens**, Kittl.

Haku-sekirei.

This was found not so common as in Tokyō. Two specimens, an adult and an immature male, were brought back.

17. **Motacilla leucopsis**, Gld.

Hōjiro-sekirei.

This species, which occurs also in Corea (Taczanowski, *Proc. Zool. Soc.*, 1888, p. 464), is an addition to the ornis of the Japanese

Empire. Although I have no continental specimen to compare with, I do not hesitate in the least to consider the specimen now before me as of this species, as it matches perfectly with Mr. Sharpe's description in *Brit. Mus. Catalogue*, vol. X. It is a male adult in full plumage (Mus. No. 1746). The black of the throat is a large patch and the base of the secondaries is white on both webs. Dimensions: Wing 90 mm.; Tail-feather 89 mm.; Tarsus 24 mm.; Middle toe with claw 17 mm.; Bill in front of nostril  $10\frac{1}{2}$  mm.

The specimen was shot March 24th on Mitsu-shima, a group of rocks at the northern end of Tsushima. The collectors looked on it as an old example of *M. lugens*; but it is at once distinguishable by the absence of black eye-stripe.

18. ***Anthus spinoletta japonicus***, (T. & S.)

Tahibari.

A specimen in much abraded plumage was secured, Febr. 20th. Flocks of this bird were observed several times.

19. ***Fringilla sinica***, L.

Ko-kawarahiwa.

Very common on the island, but only a single male specimen was obtained.

20. ***Passer montanus***, (L.)

Suzume.

Very abundant near houses as in Hondo. A specimen was brought home.

21. *Emberiza ciopsis*, Bp.

Hōjiro.

? *Emberiza castaneiceps*, Moore.

Chōsen-Hōjiro.

*E. castaneiceps*, originally known from China, also occurs in Corea (Giglioli and Salvadori, *Proc. Zool. Soc.*, 1887, p. 582; Taczanowski, *ibid.*, 1888, p. 465.) On the main islands of Japan it is represented by *E. ciopsis*, which, so far as I am aware, differs from the Chinese form only in the males having the ear-coverts black (summer plumage), or almost black with a slight suffusion of russet (winter plumage), instead of deep chestnut always. In what points the females of the two species differ, I do not know.

Messrs. Namiye and Tsuchida collected on Tsushima six specimens of Bunting, all in winter plumage. The following is the list :

Mus. No.	Locality	Date	Sex	Wing	Tail-feather	Tarsus	Middle toe with claw	Exposed culmen
1751	Tsushima	March 16th 1891	ad. ♂	74 mm.	71 mm.	19 mm.	18 mm.	10 mm.
1752	"	" 3rd "	" "	73 "	72 "	18 "	20 "	10½ "
1753	"	Febr. 19th "	" "	74 "	70 "	18½ "	19 "	11 "
1754	"	March 2nd "	" "	73 "	69 "	19 "	18 "	10 "
1755	"	" 19th "	" ♀	71 "	68 "	19 "	19 "	10 "
1756	"	—	" ♂	77 "	72 "	20 "	20 "	10 "

Of the five males, one (No. 1756) was presented to Canon Tristram, so that I have now four males before me. Minute comparison of these with winter specimens of *E. ciopsis* collected on Hondō, shows a close agreement in all respects except in the colour of the ear-coverts. Namely, two specimens (Nos. 1753 and 1754) have the

blackish auriculars slightly more suffused with russet or chestnut than in most Hondō specimens; but then Hondō specimens that match completely in this respect, are not wanting. In the third Tsushima specimen (No. 1752), the auriculars bear a russet tone to such a degree as is never known in *E. ciopsis* of Hondo. The fourth Tsushima specimen (1751) has the auriculars a shade more russet; I would simply call it russet-brown or deep chestnut. Unfortunately I have no specimen of *E. castaneiceps* to compare it with. Perhaps the two forms are to be considered as intergrading with each other on the island of Tsushima. It will be interesting to know whether in summer the ear-coverts of the Tsushima Bunting turn black or remain suffused with chestnut more or less.

According to Mr. Sharpe (*Brit. Mus. Catalogue*, Vol. XII, p. 544), *E. castaneiceps* should be wanting the tiny black spot on the chin; but that this is not always the case, has been shown by Canon Tristram (*Ibis*, 1889, p. 294). Of the four male Tsushima skins now before me, three have a distinct chin-spot, the fourth (No. 1753) having that part destroyed by shot. In true *E. ciopsis* of Hondō, the chin-spot is mostly wanting; out of forty-two male skins that I examined, only six showed it with any distinctness. The single female skin (No. 1755) from Tsushima shows no trace of chin-spot, agreeing in all respects of colouration with females collected on Hondō.

In the amount of white on the outer tail-feathers, I see no appreciable difference between Tsushima and Hondō specimens.

Messrs. Namiye and Tsuchida also collected two male specimens on the island of Iki (Nos. 1824 & 1825). These have the ear-coverts agreeing well in colour with average Hondō specimens.

22. *Emberiza personata*, T.

Awoji.

A male specimen obtained March 2nd measures: Wing 70 mm.; Tail-feather 70 mm.; Tarsus 21 mm.; Middle toe with claw  $20\frac{1}{2}$  mm.; Exposed culmen  $10\frac{1}{2}$  mm. It differs considerably in colouring from adult specimens collected on Hondō. The lores are more black; the head, nape, hind-neck, and sides of head and neck are less olive-green but more ashy-grey; the slight streak above the ear-coverts is whitish instead of sulphur-yellow; the cheek-stripe and under parts from throat to under tail-coverts, whitish, washed with very pale sulphur-yellow, yellower on breast and sides of abdomen. In fact, the yellow of the plumage is paler than I have ever seen on Hondo specimens; otherwise it agrees well with the latter. Young, in first winter plumage?

A male specimen of *Emberiza variabilis* in immature plumage was brought home from the island of Iki. This species has, as far as I know, never yet been recorded from Corea.

23. *Emberiza elegans*, T.

Miyama-hōjiri.

Common on the island. Five specimens obtained at three different localities, March 2nd to 19th.

24. *Thriponax richardsi*, (Tristram.)

Amanojakuma (Pl. XII)

This is undoubtedly the most interesting species among the present collection. Only a single female specimen hitherto existed in the possession of Canon Tristram, the original describer of the species (*Proc. Zool. Soc.*, 1879, p. 386). Messrs Namiye and Tsuchida had

succeeded in securing three magnificent specimens during their stay on Tsushima. The following is their table of measurements.

Mus. No.	Locality	Date	Sex	Total Length	Stretch of Wings	Wing	Tail-feather	Tarsus	Anterior external toe without claw	Bill from frontal feathers
1784	Kune-inaka	March 8th, 1891.	Ad. ♂	524 mm.	799 mm.	255 mm.	186 mm.	35 mm.	27½ mm.	59 mm.
1785	Niimura	„ 16th „	Ad. ♀	502 mm.	773 mm.	250 mm.	190 mm.	34 mm.	26½ mm.	55 mm.
1786	Kune-inaka	„ 13th „	Ad. ♀	488 mm.	774 mm.	247 mm.	180 mm.	34 mm.	26 mm.	57 mm.

In the above measurements, the total length and stretch of wings were taken by the collectors from the fresh specimens. The colour of the iris should be *clear yellow*, not black as represented in Canon Tristram's figure (*loc. cit.* Pl. XXXI), or as quoted by Mr. Hargitt (*Brit. Mus. Cat.*, vol. XVIII, p. 506) from Richards, the collector of the type specimen. Bill horny black, each mandible with a small dull-whitish spot at the tip of cutting edge; tarsus and toes black; claws horny-black.

The description of adult female plumage as given by Mr. Hargitt (*loc. cit.*) from the type specimen tallies well with the two female skins now before me. The male agrees with the female in all respects except in having the same sexual distinction of red on the head possessed by its congeners, as had been foretold by Canon Tristram twelve years ago. As I presume that specimens of this species will continue to be rare among collections, I insert the following description of the plumage.

Adult male. *The prevailing colour is black or deep brownish-black, with exceptions to be mentioned in the sequel. Feathers of this colour have generally dark grey bases, and those of the hind neck, the upper*

back, the side of neck, the ear-coverts, the smaller wing-coverts, the lower throat and the upper breast show a varying degree of greenish gloss. On the upper back this is the most intense, and here as on the upper breast, it is seen as restricted to the rather well-defined, narrow marginal zone of feathers. Forehead, crown and elongated occipital crest bright crimson, the feathers having the basal part white and the extreme base dark grey. Broad malar stripe also crimson, but somewhat duller, each feather with a small whitish patch near the base which is dark grey. Nasal bristles black with smoky-brown bases. Chin and upper throat dark smoky-grey, gradually passing into the brownish-black with greenish-black gloss of the lower throat. The latter is finely streaked with short white lines, caused by the marginal tips of barbs being of that colour. A few similar streaks also found on post-malar feathers and a patch of them just behind the ear-coverts. Lower back and rump silky white, the exposed parts of feathers bearing a slight buffy tinge. A few feathers along the anterior border of this white area have more or less black on them, leaving the tips white; this can only be recognized by raising the feathers. Some few hindmost feathers of the lower rump have a black spot near the tip, varying in shape and size. The two central feathers of the upper tail-coverts are white with a large irregular spot of black on their apical portion; but when the feathers of the rump are not raised, they have the appearance of being black margined with white, as Mr. Hargitt observes. Six primaries (2nd to 7th) tipped with white, broadest on the 3rd, 4th and 5th primary, narrowest on the outer web of the 7th primary. Bases of all primaries and secondaries white with a slight tinge of yellow, the former only on the inner web (to the extent of about 18 mm. on the 1st and about 39 mm. on the 3rd primary); the latter on both webs (to the extent of 70-80 mm. on the inner web). Under wing-coverts mostly white with a yellowish tinge, some feathers near the edge of the wing being marked with varying amount of dark-brown, whereas the edge itself is black with greenish gloss. Axillaries, the entire sides of the body,

lower breast and upper abdomen, white with a slight yellowish or buffy tinge, the feathers having the extreme base dark-grey and the rest of basal portion silky white, assuming the above-mentioned tinge towards the exposed apical portion. The black feathers of the breast in close proximity to the white area are margined at the tip with buffy white. Lower abdominal feathers black and also margined with buffy white. Thigh-feathers with a large black area, presenting the appearance of being likewise black and margined with buffy white. Tibial feathers with a brownish-black marking, leaving the tips buffy-white and the basal parts whitish. Shafts of quills and of tail-feathers deep brownish-black.

Adult female. Like the male in plumage, except that the head is entirely wanting in red. The feathers of the forehead, crown and occipital crest, as also of the malar region black with greenish gloss, the bases of feathers being dark grey. The greenish gloss of the upper back less intense than in the male. On one (No. 1786) of the two female skins, the short 1st primary is tipped with white, which is not the case on the other specimen; the six following primaries have always white tips as in the male.

Of the habit of this species, and of other points concerning it, Messrs. Namiye and Tsuchida have kindly supplied me with materials for the following account.

On March 3rd, while passing through the deep forest of Tadera (about 15 miles to south-west of Izuhara), their attention was called to a strange piercing cry repeated a few times. Whence it emanated they could not tell, but imagined it was something like the shriek of some hawk's nestling. They waited for many minutes expecting to hear it once again, but in vain, and as no sign of any animal was discernible, they moved on, little thinking that they had just heard the long-sought *Thriponax richardsi*, as subsequent experience taught

them. A few days later, the bird itself was sighted for the first time at a village called Kune-inaka. Its cry is very characteristic and sounds somewhat like a prolonged "*Kyah*," alike in both sexes, very loud and heard for a great distance. This it repeats at intervals when on the wing as well as when climbing trees. Only in the latter case, each single "*Kyah*" is less prolonged. Besides the localities already mentioned, Messrs. Namiye and Tsuchida observed the bird also in the villages of Nii, Takeshiki, Mitsune, Sago, Sumo, &c. The specimens now in the Science College were shot, a pair at Kune-inaka and a second female at Nii, as will be seen from the list I have given. It is needless to say that the collectors made special endeavours to secure more specimens; but the wariness and the rapid movements of this bird made approach difficult and offered but little chances of a shot. The collectors' own observations and the answers of natives to inquiries made at various localities, prove that this fine woodpecker is by no means rare on Tsushima.

It finds its abode in dense, more or less extensive forests of tall pines, firs, cryptomerias, oaks, camphor-trees &c. Such a forest usually exists in valleys between hills, and is known to natives as *kuromi* (a dark place). The bird is never found in any numbers together; perhaps a pair is the utmost that a *kuromi* might harbour. Standing on the hill-top, one hears its peculiar cry and loud tappings at some considerable distance in the wooded valley beneath; he descends to the spot probably to find the bird gone, but some chippings of bark or wood strewn on the ground, and some bare places on the tree-stem above tells him the work it was recently busy at. Dead trees or branches naturally attract it when in search of food, and it is said that the bird goes regular rounds to its favourite trees every day. Should one of its trees be recognised, a collector would do well therefore to lie in ambush awaiting its arrival. Its

manner of flight is similar to that of other woodpeckers. The collectors have often marked the spot where the bird alighted, and on more than one occasion, they discovered it again *on the ground*, whence it climbed up a tree-trunk in the usual manner on their approach. I do not know whether a similar habit has ever been noticed in any other woodpecker.

The lower classes of the inhabitants of Tsushima hold this bird in some degree of religious awe. Some natives, as Mr. Namiye tells me, indulge in the superstition that when Buddha was in the process of creating man, a certain being called *ama-no-jakuma* pressed to have a certain part put on his forehead instead of much lower down on his body, and that that being was none else than the woodpecker in question. Hence the natives call this bird by that name. In ordinary Japanese, *ama-no-jaku* or *ama-no-jakuma* (evidently of buddhistic origin) is an appellation given to a cross-minded person.

#### 25. *Iyngipicus kisuki*, (T.)

Kogera.

The typical form found on the Hondo also occurs on Tsushima. It was found to be very common. Six specimens were obtained between Febr. 19th and March 19th. They agree in colour and markings with specimens collected in Provinces Sagami and Hida.

#### 26. *Turtur gelastis*, (T.)

Kijibato.

Abundant on the island. Nine specimens obtained. Length of wing, measured from the carpal joint, 183—197 mm.

27. *Phalacrocorax capillatus* (T. & S.)

Shimatsu.

Abundant on rocky shores. A specimen brought back.

28. *Ardea cinerea* L.

Aosagi.

An adult specimen brought home was the only individual that was seen on the island.

29. *Ardea jugularis*, Wagl.

Kurosagi.

On Mitsushima, a group of rocks at the northern end of Tsushima, the collectors have met with a flock of this bird already known to inhabit the island through the collections of Jouy and Ringer. It was exceedingly difficult to approach. Two fine specimens were secured.

Mus. No.	Locality & date	Sex	Wing	Tail-feather	Tarsus	Middle toe without claw.	Exposed culmen
1802	Mitsushima, March 25th 1891	Ad. ♀	290 mm.	112 mm.	80 mm.	58 mm.	83 mm.
1803	" " " "	Ad. ♀	284 mm.	105 mm.	78 mm.	55 mm.	81 mm.

Total length and stretch of wings, as measured by the collectors, were 640 mm. and 1004 mm. in No. 1802, 627 mm. and 1041 mm. in No. 1803, respectively.

Dr. Stejneger has erected the grey Reef-heron of Tsushima into a distinct species, *Demiegretta ringeri*, for the reason that the top of head and the occipital crest are plumbious and lighter than the back (*Proc. U. S. Nat. Mus.*, 1887, p. 300). On the two specimens

before me, I fail to see this distinction ; hence I have preferred to retain Wagler's name, as Mr. Seebohm does in his *Birds of the Japanese Empire*.

The white on the chin and throat seems to be quite variable in amount. On one specimen (No. 1802), it is a narrow interrupted streak, while on the other it is represented by a broad large patch on the upper throat followed by some three little spots.

The white form of Reef-heron was not observed.

30. **Anas formosa**, Georgi.

A'i-gamo ; Tomoye-gamo.

A male specimen was shot at Niimura, March 16th.

31. **Anas galericulata**, L.

Oshidori.

A male specimen was obtained also at Niimura on the same day.

32. **Alca carbo**, (Pall.)

Keimafuri.

A specimen (sexed ♂ with query, Mus. No. 1787) was shot near Ōfunakoshi, March 27th. This was the only individual that the collectors have met with. It is in mature plumage with remiges and rectrices much abraded. Amongst other localities this species also occurs in Olga Bay (Giglioli & Salvadori, *Proc. Zool. Soc.*, 1887, p. 593).

33. **Alca antiqua**, Gm.

Umi-suzume.

On March 15th a specimen was shot at Sagamura. A few days

later five specimens were secured at Ina-ura. They were found in flocks.

34. ***Alca wumizusume***, (T.)

Kanmuri-umisuzume.

A pair of this rare bird was observed and one of them (Mus. No. 1783) secured, near Ōfuna-koshi, March 27th. The specimen obtained is a male and is furnished with a black occipital crest.

35. ***Fratercula monocerata***, (Pall.)

Utō.

This species was common, mostly found in pairs. Five specimens were obtained at three or four points on the coast, March 18th. The horny projection above the nostrils is in various degrees of development, fully developed on only one specimen.

36. ***Larus cachinnans***, Pall.

Seguro-kamome.

There are among the collection two specimens of Herring Gulls, which I refer to this species. The one, shot on Mitsushima, March 25th, is an adult, measuring 366 mm. in the wing (Mus. No. 1815). The other obtained at Azama, March 5th, is in young plumage, the wing measuring 347 mm. (Mus. No. 1817).

37. ***Larus vegae***, (Palmén).

In 1890 I sent to Dr. Stejneger for identification three specimens of Herring Gull, collected at or near Tokyo. They were returned to me identified as *L. vegae*, a species originally discovered on the coast of Tchuski Land by the "Vega" expedition and described

by Palmén under the name of *L. argentatus*, var. *vegae* (*Bidrag Sibir. Ishafsk. Fogelfauna Vega-expedition\**). The same species was also found by Dr. Bunge on the Liakoff Islands (*Beitr. z. Kenntn. d. Russ. Reiches u. d. angrenzenden Länder Asiens†*). Now, there is among the present collection from Tsushima an adult specimen of Herring Gull (Mus. No. 1816, obtained at Kuta, Febr. 20th) which agrees completely with those identified by Dr. Stejneger as *L. vegae*. It is very much like *L. cachinnans* but smaller. Total length 620 mm. (against 715 mm. of adult *L. cachinnans*, (Mus. No. 1815), wing 308 mm. (against 366 mm.), middle toe with claw 61 mm. (against 68 mm.), exposed culmen 50 mm. (against 61 mm.).

38. *Larus crassirostris*, Vieill.

Umi-neko.

Two adult specimens were obtained.

39. *Larus canus*, L.

Kamome.

A specimen in immature plumage obtained.

40. *Hæmatopus osculans*, Swinh.

Miyakodori.

Abundant on Mitsushima, at the northern extremity of Tsushima. Three specimens obtained.

The white on the outside web of the primaries appears on one specimen (Mus. No. 1799) on the fifth and on another on the sixth quill, while the third specimen (Mus. No. 1800) shows a mere streak of it on the fifth quill.

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\* † These works have remained inaccessible to me, and are known to me only through Mr. Seebohm's account in *Ibis*, 1888, p. 349.

41. **Numenius cyanopus**, Vieill.

Hōroku-shigi.

A specimen was once met with and secured, on the sea-shore at Kōura, March 14th. It is a female with the exposed culmen 182 mm. long.

42. **Totanus fuscus**, (L.)

Tsuru-shigi.

A female in winter plumage was shot at Nii-mura, March 16th. That was the only time that this species was observed.

43. **Totanus glareola**, (L.)

Takabu-shigi.

A female was shot at Komoda, April 1st.

44. **Totanus hypoleucus**, (L.)

Mushibami-shigi.

A male obtained at Wani-ura, March 23rd.

45. **Colymbus arcticus**, L.

Ōhamu.

This species was often met with. A female in immature plumage was obtained. Above, brownish black, with few white spots on wing-coverts; below, white from the chin. Wing 182 mm., exposed culmen 50 mm.

46. *Podiceps rubricollis major*, T. & S.

Akanodo-kaitsumuri.

A fine pair was shot at Takeshiki, April 1st. Male (with chestnut throat) and female measure respectively 181 mm. and 180 mm. in wing, 50 mm. and 48 mm. in exposed culmen.

47. *Podiceps cornutus*, (Gm.)

Mimi-kaitsumuri.

A specimen was only once met with and obtained at Ina-ura, March 21st. It is a female in winter plumage. Wing 135 mm., exposed culmen 22 mm.

48. *Phasianus torquatus*, Gm.

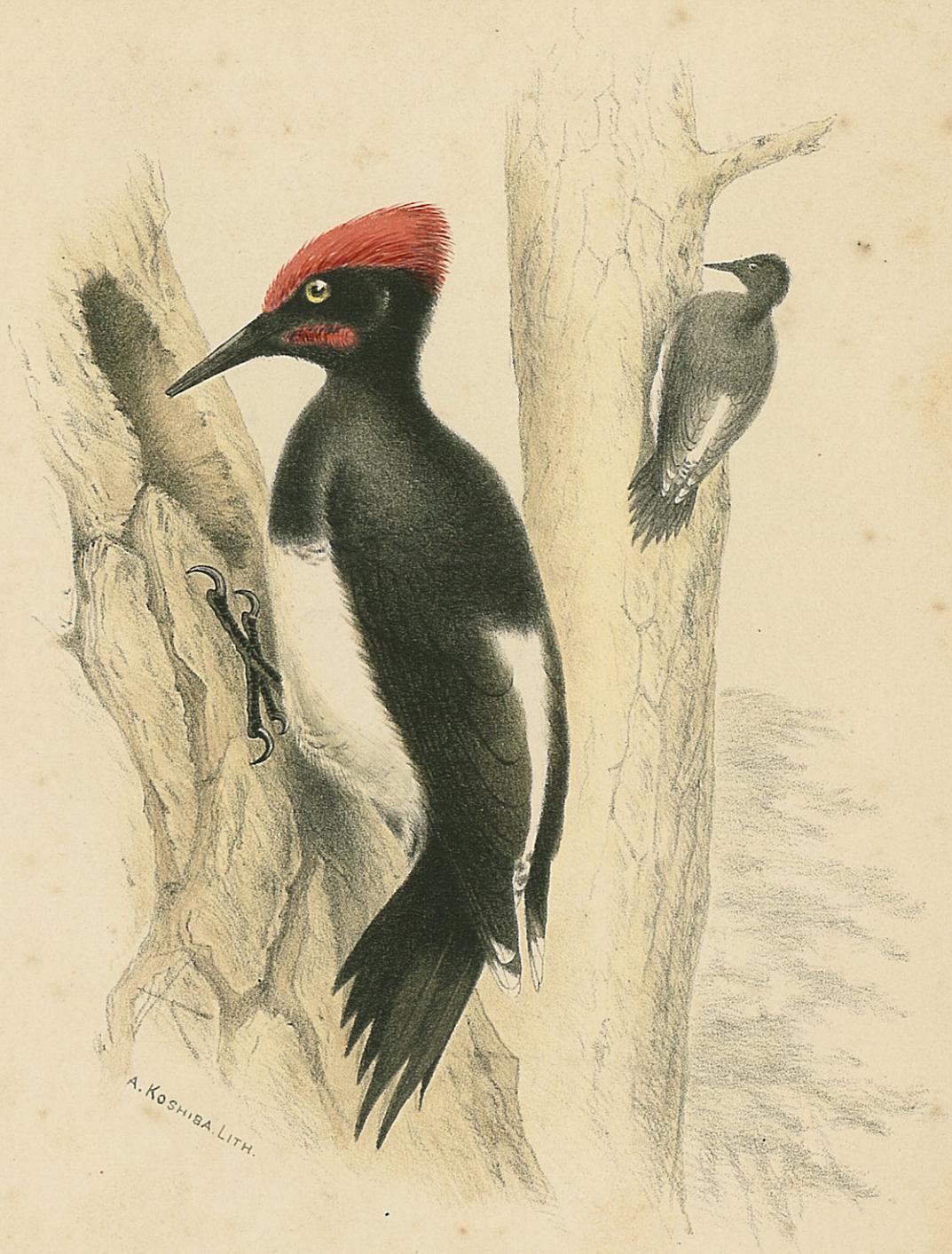
Kōrai-kiji.

This is the common pheasant of Tsushima. *P. versicolor* is not found. Three males and one female were obtained at the villages of Uchiyama, Kune-inaka and Kuta. It is said to be most abundant at O-ura, a village not far from Izuhara. I have no continental specimens to compare with.

In an authentic manuscript work entitled "*Tsushima Kiryaku*" (津島紀略, treating of the geography, history, and natural products of Tsushima, written about 190 years ago) by Suyama, it is stated that pheasants are said to have been originally entirely wanting on the island and to have been first introduced in the middle ages on Unijima (at the northern extremity of Tsushima), whence they spread over the island proper. In another old manuscript "*Tsushima-Kiji*" (津島記事, a voluminous work of similar nature and equally authentic) by Hirayama, there stands a statement to the same effect only more definite.

In this connection I may mention that in the first named work I find a statement that the pheasants of Jishima (a small island off the coast of the province of Chikuzen, Kiushiu) are the same as those of Tsushima, as the result of transplantation from the latter island. Hino Kanroku in his ornithological work ("Yōkin-Monogatari," Narratives on Bird-keeping, written about 90 years ago) has also left a record of the Corean pheasant being introduced and made to thrive on some island off the western coast of Kiushiu (one of the Hirato group?).





THRIPONAX RICHARDSI.

(Male  $\frac{1}{3}$  Nat. size.)