

*Ornithology of Amoy.*—BY ROBERT SWINHOE, ESQ.

The position of Amoy Island and its relative bearings to the mainland of China may be ascertained from any ordinary map. A few words will therefore suffice to explain the nature of the country in which I have followed my favourite pursuit. This island, the neighbouring shore of the mainland, and the banks of both the rivers (the chief one leading to Changchow Foo and the other to Tunggan Hien) are all densely populated, and have remarkably little wood excepting occasional banyans thriving in the midst of villages. The plains are well cultivated and planted for the greater part with rice, maize, sugar-cane, *Cucurbitaceæ*, and hemp during summer, and *bearded wheat*, spinach (*Basella rubra*), taro, cabbages, and peas during winter. The hills are either composed of granite debris studded with large black blocks of granite and extremely barren, or of clay; and are covered with small stones and scanty herbage. The character of the country will probably account for the paucity of our resident species among *land birds*, as compared with the occasional visitants or stragglers in the same group.

The water-birds, however, shew a finer list of winter residents, no doubt owing to the suitable feeding-ground afforded them by the large mud-flat of the Amoy creek, those of several other inlets and creeks into the mainland, and the marshes at the mouth of the rivers.

In identifying the following birds, Mr. Blyth of Calcutta has rendered me much service, and indeed without his valued aid I could have done little among the non-European forms. I have also to thank Mr. Stevenson of Norwich for the help which he has afforded me; and Mr. G. Schlegel at Amoy, son of Dr. Schlegel of the Leyden Museum, merits my warm thanks for the loan of a copy of the *Fauna Japonica*, from which work I have gained considerable assistance.

Amoy, 19th November, 1859.

*Ornithology of Amoy. China.*

(Classified according to Dr. J. B. Hay's Catalogue of Genera.)

1. *Buteo vulgaris*, var. *japonicus*, Temm. and Schleg., *Faun. Japon.*



A regular winter visitant.

2. *Pandion haliaëtus*, (L.) ?

Lives on the rocks at the mouth of the harbour and comes occasionally to Amoy, but is very shy and unapproachable. I have never been able to procure a specimen.

3. *Falco peregrinus*, (L.)

Breeds in the neighbourhood and is not unfrequent.

4. *Hypotriorchis subbuteo*, (L.)

Rare.

5. *Tinnunculus alaudarius*, Brisson.

A common resident.

6. *Milvus govinda*, Sykes, var. *melanotis*, Gray. Faun. Japon.

[*Ante*, p. 95.]

Very common, especially in the harbour.

7. *Accipiter nisus*, (L.) ?

Rare. Differs from the European bird chiefly in having *white* axillaries, as well as in many minor points.

8. *Micronisus badius*, Gmelin.

Received from Fouchow, and shot in Amoy, November of this year.

8. *Circus cyaneus*, (L.)

Pretty common.

9. *Circus æruginosus*, (L.)

Very common up the rivers.

10. *Ninox scutellatus*, (Raffles.)

A straggling winter visitant, common in summer at Fouchow where it breeds. The immature plumage is brown, banded with ochreous.

11. *Bubo maximus*, Sibbald.

Occasionally seen of a winter's evening. Breeds somewhere in the neighbourhood, as every early spring the young are sold in the streets of the town.

12. *Ephialtes bakkamæna*, Pennant.

Rare. I procured two one winter, one mottled brown on the upper-parts, the other mottled buff; the first I take to be the immature plumage, as both these examples were females. Mr.



Blyth informs me that this is not an uncommon species in the vicinity of Calcutta.

13. *Caprimulgus dyticiporus*, nobis. [*C. indicus*, large var., Blyth, *J. A. S.* XIV, 208; the small var. there also noticed being *C. Kelaarti*, Blyth, *J. A. S.* XX, 175, from the Nilgiris and mountains of Ceylon.]

This species is closely akin to the *Caprimulgus jotaka* of the *Fauna Japonica*; the following being the most striking points of difference. Our's has the wing  $\frac{1}{2}$  inch longer and the beak 2 lines longer. Instead of the 2nd, 3rd and 4th quills in the male having a white band, our's has a white spot on the inner web of the 1st, and a band across the 2nd and 3rd only. The sides of the head, greater and lesser wing-coverts, and scapularies are frosted with white, and a narrow line of frosted white runs from the bill to the top of the eye and extends in a broken manner beyond. In most other respects it resembles *C. jotaka*, the tail is banded with white pretty much in the same style, and the tarsus is feathered to the base of the toes. It stays in Amoy the greater part of October and November, and is there seen hawking over paddy-fields for water-beetles which fly at night. Out of the stomachs of birds shot I have repeatedly taken out whole individuals of *Dyticus marginatus*, and in one instance two perfect specimens were so found, but with the hind-legs reversed, apparently with the intention of affording no impediment to the passage of so large a beetle down the *oesophagus*. This species breeds at Fouchow.

Another and smaller species is met with in a copse about twelve miles distant from Amoy during the months of September and October. It has *naked* tarsi, is 10 inches long and has the lateral tail-feather white except just at the tip. The 1st and 2nd quills are blotched with a large spot of white on each, and two white spots occur on the throat. A yellowish circle girds the eye. Not having been able as yet to identify the species, I have named it *passim*.

14. *Caprimulgus stictomus*, nobis. [Akin to *C. monticolus*, Franklin, and *C. affinis*, Horsfield; but much richer in colouring, *E. B.*]  
 15. *Cypselus vittatus*, Jard. and Selby.



Frequent in spring, flying high in fine weather, but darting about low during rain. Does not build here.

16. *Cypselus subfurcatus*, Blyth. [*Ante*, p. 95.]

A permanent resident, associating in parties and twittering together at a great height in the sky, then, suddenly separating, the birds dart to all quarters, each displaying its command of wing in the chase after insects; then, again, they meet as before, and so on for the greater part of the day, seldom resting. The nest is often placed under the rafters of verandahs, and resembles that of the House-Martin (*Chelidon urbica*) at a distance; but is composed of straw and other soft materials glued together in regular layers. The old birds roost every night in their nests all the year through.

17. *Hirundapus nudipes*, Hodgson.\*

A straggler in spring during rain-storms.

18. *Hirundo rustica*, L., var. *gutturialis*, Scopoli.

This appears to be merely a degenerate variety of the European species. It is a summer resident here and pretty numerous, building mud-nests shaped like a half-dish, and lined with straw and a few feathers, over the doors of Chinese huts, where they are revered as the harbingers of good luck.

19. *Hirundo daurica*, L.; *alpestris*, Pallas.

A few passing flocks spend a day or two in Amoy during winter. In Formosa it takes the place of the common species, and builds domed nests of clay and mud under the roof-tops. Those nests are lined properly with feathers, and contain from 3 to 5 fine white or pinkish eggs.

20. *Eurystomus orientalis*, L.

Very rare.

21. *Halcyon smyrnensis*, L.

A common resident; called "Fei-tsuy" by the Chinese, who glue the feathers, chiefly those of the wing, over ornaments worn by their women. Thus treated the lustrous blue feathers give the appearance of turquoise stone. The bird is shy and is remarkable for its loud screeching cry.

\* A specimen since sent accords exactly with Gould's figure of the Australian species; but I consider the latter not to differ from the Himalayan.—*Cur. As. Soc*



22. *Halcyon atricapilla*, Gmelin; *pileata*, Boddäert.

Rarer than the preceding; its feathers are also used for ornaments, to which they give a deeper tone.

23. *Alcedo bengalensis*, Gmelin.

A very common resident and generally known as the "King of the Shrimps;" called by Amoy Chinese *Ang tony mng*.

24. *Ceryle rudis*, L.

Very common on the river; where it rises on the wing at a height above the water, and drops suddenly on its scaly prey. I have also seen it strike obliquely when flying close to the surface of the water.

25. *Upupa epops*, L.

Stays all the year and is nowhere common; builds in the holes of walls and exposed coffins; is called by the natives the Coffin-bird, and flies with long undulating sweeps.

26. *Orthotomus phyllorapheus*, n. sp. [*Ibis*, Vol. II, 49.]

Length  $4\frac{1}{2}$  inches; wing  $1\frac{9}{10}$ ; tail 2. Bill along culmen  $\frac{1}{2}$ ; to gape  $\frac{7}{10}$ . Tarsus  $\frac{8}{10}$ ; mid-toe  $\frac{6}{10}$ ; hind-toe  $\frac{5}{10}$ ; outer toe rather longer than the inner. Bill pale flesh-colour, along the ridge dark hair-brown. Legs and toes pale yellowish-brown. Iris buff; narrow circle round the eye, pale buff. Forehead ferruginous, gradually changing to olive-brown on the head. Back bright olive-green. Wings and tail hair-brown, the coverts margined with olive-green, and the quills with yellowish olive-brown. Round the eye and all the under-parts, including the shoulder-edge, ochreous-white, darker on the flanks, and buff on the tibiae. The two central tail-feathers of the male gradually lengthen at the commencement of spring until May, when they are about  $1\frac{1}{2}$  inch or so longer than the others, which are all somewhat graduated. I observe that these lengthened feathers soon become worn and usually drop after the first nesting, to be replaced by others scarcely longer than the lateral ones.

Mr. Blyth remarks—"Your *Orthotomus*, I think, is new, and constitutes the 12th species (!) now to be recognised. The other 11 are described by Mr. F. Moore in his monograph on the genus, read before the Zoological Society, 28th February, 1854."

This bird is usually seen in pairs, and is very common in most



bushy places. Besides at Amoy, I have also observed it at Hongkong and Fowchow.

27. *Prinia sonitans*, n. sp. [*Ibis*, Vol. II, 50.]

I have named this from the crackling noise it produces when hopping or flying from twig to twig.

Length  $5\frac{3}{10}$ ; wing  $1\frac{7}{10}$ ; tail 3. Bill along culmen  $\frac{9}{20}$ , to gape  $\frac{5}{10}$ . Tarsus  $\frac{8}{10}$ ; middle toe  $\frac{13}{20}$ ; outer slightly longer than the inner, hind-toe  $\frac{5}{10}$ . Bill and inside of mouth black. Irides orange-yellow. Legs buff, browner on the claws. Head fine deep bluish-grey; chin and cheeks white; occiput and back olive-green, blending with the grey towards the fore-part and becoming tinged with sienna on the rump. Wings light hair-brown margined with buff olive-green. Tail pale brown, margined and tinged with buff olive-green. Breast a clear pale buff tinged with primrose, deepening on the under-parts and very deep on the thighs.

The female has the head less bluish than the male; and in the young the head is uniform with the back.

This species is resident here, and builds domed nests on the stalks of reed-plants; the eggs, 7 or so in number, are strangely red. Mr. Blyth remarks on our bird—"Your *Prinia* from Amoy comes exceedingly close to *P. flaviventris*, Delessert, which is common in the Bengal Sundarbans, Tenasserim, &c., and I have received it also from Singapore; but yours has a longer tail, wants the bright yellow of the lower-parts below the breast, and there is an admixture of white in the loreal region and ear-coverts not seen in our species. Moreover, *Pr. flaviventris* lays a similar red egg, as I am informed by Major S. R. Tickell."

28. *Drymoica extensicauda*, n. sp. [*Ibis*, Vol. II, 50.]

A common resident, and seems to delight in fields of grain, long grass, &c. It is often seen standing on a stalk, throwing up its tail and twittering a short series of unmusical notes.

Length  $5\frac{1}{10}$ ; wing  $1\frac{9}{10}$ ; tail  $2\frac{1}{2}$ , long and graduated deeply, the outer feather measuring only  $1\frac{3}{10}$ . Bill along culmen  $\frac{4}{10}$ , to gape  $\frac{6}{10}$ ; deep blackish-brown, paler just at the tip, and yellowish flesh-colour at the base of the lower mandible; inside



of mouth pale flesh-colour. Iris orange-yellow, margin of eyelids buff. Tarsus  $\frac{7}{10}$ ; middle-toe  $\frac{7}{10}$ ; outer toe slightly longer than the inner which is  $\frac{9}{10}$ ; hind-toe  $\frac{11}{10}$ ; legs yellow-ochre, flesh-coloured on the upper surface of the toes. Upper parts olive-brown; region of the eyes, curvature of wing, and tibiae, buff-ochre. Under parts pale ochreous, with a tinge of primrose-yellow. Wings and tail light hair-brown; the feathers of the former margined with yellowish brown-olive on the coverts, and reddish on the quills; those of the latter indistinctly barred with a darker shade. "Your *Drymoica*" adds Mr. Blyth, "is nearly akin to the common *D. fusca* of Bengal, Nipal, &c., represented by *D. inornata* in S. India, but has a conspicuously longer tail, more decidedly rufescent lower-parts and around the eye, and the crown is distinctly striated, in which last it approximates the *Cisticolæ*."

29. *Cisticola tintinnabulans*, nobis. [*Ibis*, Vol. II, 51.]

This bird is of rare occurrence in Amoy, but is frequent in Shanghai and West Formosa. I have described it as *Calamanthella tinnabulans*, in the II. Vol of the 'Journal of the N. China Branch of the Royal Asiatic Society.' On comparing ours with *C. brunniceps* of the Fauna Japonica I note the following differences. Ours is  $\frac{1}{2}$  inch longer, and 5 lines shorter in the wing. The 1st quill is very short instead of being nearly equal to the 2nd, which is  $1\frac{1}{2}$  lines shorter than the 3rd, 4th and 5th equal and longest. The bill is longer. The feathers of the head are bordered with yellowish-brown. No greyish-brown occurs on the breast, but the medial line from the throat to the vent is pure white, both sides of it being more or less washed with sienna-buff.

30. *Acrocephalus magnirostris*. [*Ibis*, Vol. II, 51.]

This bird abounds from Amoy to Shanghai in all reedy places and is described in the Fauna Japonica under the term *Salicaria turdina orientalis*, and stated there to be found also in Borneo, Macassar, and Sumatra.

Length  $7\frac{2}{10}$ ; wing  $3\frac{2}{10}$ . Tail graduated and 3. Bill  $\frac{8}{10}$ , to gape  $1\frac{1}{10}$ . Upper parts a sienna or yellowish brown; wings brown,



margined with the same; tail do., and tipped with yellowish grey, eye-streak and throat yellowish-white. Under parts sienna-yellow with more or less white, and occasionally with a few pale brown streaks on the throat.

Mr. Blyth says, of our *Acrocephalus*, it may be remarked—"that (like the two figured in Gould's Birds of Australia) it helps to fill up the gap between the large and small species of Europe and India respectively; and that it is remarkable for the great disproportionate size of the bill, which equals that of the European *A. arundinaceus*, (L.), or of the Indian *A. brunnescens*, (Jerdon,) both of which are much larger birds."

Its song is hurried, though sweet and sometimes powerful.

31. *Acrocephalus* (?) *bistrigiceps*, n. sp. [*Ibis*, Vol. II, 51.]\*

This small species is easily distinguished by a line of black over a yellowish streak above each eye. Length  $5\frac{2}{3}$ ; wing  $2\frac{3}{10}$ ; tail  $2\frac{1}{10}$  and graduated. Bill  $\frac{1}{2}$ , to gape  $\frac{6}{10}$ . Upper parts olive-brown, tinged with sienna, and redder on the rump and edgings of the tail. Wings hair-brown margined with the prevailing colour. Throat, belly, and under wing-coverts whitish, the rest of the lower parts deeply washed with sienna-buff.

32. *Arundinax* (?) *canturians*, n. sp. [*Ibis*, Vol. II, 52.]

A winter visitant at Amoy, but found in summer at Shanghai, uttering its notes from its concealment, which are so rich and full that when first heard you expect them to be the commencement of a fine song; but alas! these 3 or 4 notes are all that the bird possesses, and though you strain your ear, listening, from the same bush you hear at intervals only the same few rich notes.

Length  $6\frac{1}{2}$ ; wing  $2\frac{8}{10}$ , tail  $2\frac{9}{10}$ . Bill  $\frac{1}{2}$ , to gape  $\frac{8}{10}$ . Forehead and crown rufous-brown; upper-parts and tail olive-brown. Wings hair-brown with yellowish-brown margins. Throat, under wing-coverts, and belly white; eye-streak and under-parts ochreous and yellowish grey. Bill and feet brownish.

Mr. Blyth observes: "This seems very like a second species of

\* This does not range well in *Acrocephalus*, nor is it a *Calamodyta*, but in form of tail approximates *Locustella*. It is, however, a distinct form, and will have to be so recognized.—*Cur. As. Soc.*



my genus *Arundinax*. The tail, however, is obscurely striated across, which I do not observe in my *A. olivaceus*; and your bird has also a much stronger hind-toe and claw, quite disproportionately so as regards the anterior toes. The white of its wings underneath is remarkable. The tail is less graduated than in *A. olivaceus*.

I have compared this with the descriptions of *Salicaria cantans* and *cantillans* in the Fauna Japonica, and though closely allied to the former it certainly is not the same. The *cantans* seems to bear to the *cantillans* the same analogy that this species bears to the succeeding."

33. *Arundinax* (?) *minutus*, n. sp. [*Ibis*, Vol. II, 52.]

This is a most singular miniature of the foregoing, resembling it almost exactly in colour, but differing considerably in size. Length 5; wing  $2\frac{2}{10}$ ;  $2\frac{1}{10}$ . This bird is also more robust in build, livelier and more open in habits, and is rarer here than the foregoing. Were it not for both birds occurring at the same season, one would be inclined to look upon this as merely a degenerate variety of the other.

34. *Phylloscopus fuscatus*, Blyth.

Common during winter, and stays so late in spring that I have a strong suspicion that it nidificates in the neighbourhood. It entertains us during the early vernal months with its pretty shake song, but its most frequent note is "*chick chick*."

35. *Phylloscopus tenellipes*, n. sp. [*Ibis*, Vol. II, 53.]

This species has delicate light pink-coloured feet, hence the name. Length  $4\frac{9}{10}$ , wing  $2\frac{1}{2}$ , 1st quill  $\frac{1}{2}$  in.; 2nd  $1\frac{5}{8}$ , 3rd 2 in. the 4th slightly longer and the longest in the wing. The 4th, 5th, and 6th quills sinuated on the outer web; the rest inwards with mucronate tips. Tail 2, the feathers nearly equal, moderately broad, rounded on the outer web towards the tip, and sinuated on the inner, both leading to a point. Expanse  $7\frac{6}{10}$ . Bill  $\frac{9}{20}$ , to gape  $\frac{6}{10}$ . Tarsus  $\frac{15}{20}$ ; middle toe  $\frac{6}{10}$ ; outer longer than the inner; hind toe  $\frac{1}{2}$ . Beak brownish, pale flesh-coloured on the tip and tomia of upper mandible and basal half of lower. Inside of mouth flesh-ochre. Upper-parts olive-green, brown on the head and upper back. Eye-streak and



cheeks cream-colour. Through the eye and below the eye-streak runs a dark line of olive-brown, darker on the coverts; the eye-streak whitening and increasing towards the occiput. Wings light hair-brown, margined and tinged with olive-sienna; quills darker hair-brown with dark shafts. Some of the large coverts tipped with yellowish. Tail light hair-brown, margined and tinged with olive-sienna, browner on the rump. Lower parts pure white, except sides of the neck, flanks, and thighs, which are slightly fibrous and grey. The shoulder, under wing- and tail-coverts, are tinged with primrose-yellow.

This is a straggling visitant during the cold weather, and may be distinguished by its note "*charr*."

36. *Phylloscopus sylvicultrix*, n. sp. [*Ibis*, Vol. II, 53.]

Mr. Blyth remarks on this—"a new species, differing from all but the European *sibilatrix* in the minute size of its first primary, in which character however *sibilatrix* exceeds it."

Length  $4\frac{1}{2}$ , wing  $2\frac{1}{2}$ , 1st quill  $\frac{5}{10}$ , 2nd  $1\frac{1}{2}\frac{5}{10}$ , 3rd and 4th  $1\frac{9}{10}$ . Tail  $1\frac{7}{10}$ . Bill  $\frac{1}{2}$ ; to gape  $\frac{1}{2}\frac{3}{10}$ . Upper mandible brown with a yellow edge, lower yellow with a patch of brown on the terminal half. Tarsus  $\frac{1}{2}\frac{5}{10}$  pale yellowish-brown, yellower on the under surface of the toes and browner on the claws. Upper parts olive-green, brownish in some lights, especially on the crown. Line over the eye, a row of feathers on the lower half of eye-circle, and part of the cheeks, pale chrome-yellow; loreal space blackish-olive. Feathers of the wings and tail hair-brown, broadly margined with olive-green, a spot of yellowish-white marks, the tip of the outer web of the first 5 2nd coverts. Under-parts pale yellowish or primrose white, varying in tint. The under-shaft of all the tail feathers white, and the margin of the inner web of the 3 outer tail-feathers faint white. The size of the bill differs considerably in different individuals.

It is very numerous here during the months of April and May, and again in October and September, on its migrations.

37. *Phylloscopus coronatus*, (Temm. and Schleg.)

This species is noticeable from having a faint line of yellow on the crown like a *Regulus*, and is identical with that of the



Fauna Japonica. It wanders to Amoy occasionally during its vernal and autumnal migrations.

38. *Reguloides proregulus*, (Pallas,)—*modestus*, Gould,—*inornatus*, Blyth.

Winters here and is solitary in habits, uttering as it pursues its food a long plaintive "sweet," which, in spring, repeated several times in rapid succession, constitutes its song.

39. *Reguloides chloronotus*, (Hodgson.)

Often seen in pairs during winter, roaming about from tree to tree.

40. *Copsychus saularis*, (L.)

A common resident; native name *Chuy Kam-Chay*.

41. *Pratincola indica*, Blyth.

Winters here.

42. *Ruticilla aurea*, (Pallas.) [*R. leucoptera*, Blyth.]

Winters here.

43. *Larvivora cyana*, Hodgson?

Straggles here occasionally, in its migrations.

44. *Ianthia rufilatus*, (Hodgson); *cyanura*, Temm. and Schleg., Fauna Japon. Winters here.

45. *Muscicapa mugimaki*, Temm. and Schleg., Fauna Japon. (see Appendix.)

[Genus. ERYTHROSTERNA, Bonap. In winter dress, I cannot distinguish it from the common *E. leucura* of India. *E. B.*]

This is a species of lively Chat-like habits, but fond of jerking up the tail like a robin. It straggles here during its autumnal migrations. The female or immature plumage, which has occurred here most frequently, may be thus described:—

Length  $4\frac{8}{10}$ . Wing  $2\frac{7}{10}$ ; expanse  $7\frac{1}{2}$ ; 1st quill  $\frac{8}{10}$ , 2nd  $1\frac{9}{10}$ , 3rd and 4th  $2\frac{1}{10}$ . Tail  $2\frac{2}{10}$ , feathers rounded on the outer web, sinuate on the inner, and ending in a point. Bill  $\frac{4}{10}$ , to gape  $\frac{5}{10}$ . Tarsus  $\frac{6}{10}$ , middle toe  $\frac{13}{20}$ , inner toe slightly shorter than the outer, hind toe  $\frac{5}{10}$ ; tarse thick; claws, especially the middle and hind one rather long and pointed all black. Inside of mouth ochreous. Irides black. Upper parts brown with an ochreous wash. Wings hair-brown edged paler; 2nd coverts tipped with ochreous, forming a transverse wing-



bar ; 3res and a few of the interior and 2nes tipped and edged with whitish. Uropygials and tail black-tipped and edged paler, the lateral rectrices with more than half the basal inner web and shaft, the 2nd and 3rd both webs, and the 4th a part of the outer web, white, all having some black near their bases. Throat, belly, and under tail-coverts pure white. Sides of neck and throat, breast, flanks, and under wing-coverts brownish with more or less ochre. Thighs brownish. Edge of inner webs of quills pale brownish.

46. *Parus minor*, Temm. and Schleg. (Figured in Gould's 'Birds of Asia.')

The same species as that described in the Fauna Japonica. It prevails along the coast of China from Hongkong to Shanghai. The *trivirgatus* of the same work is common at Shanghai, but is not met with so far South as this.

47. *Zosterops japonicus*, Temm. and Schleg.

This answers in every respect to the bird of the Fauna Japonica, except that the 1st quill, though very *minute*, is yet not *wanting*. The bill and legs are of a slaty blue when the bird is alive, and not of a *blackish brown horn-colour* (a fault evidently attributable to the descriptions being taken from a dried skin). The breast and flanks are of a pale dingy colour, with but very little reddish. Iris dark blackish-brown. It is resident in the neighbourhood, and often wanders to Amoy during winter in search for food.

48. *Motacilla boarula*, (L.)

Common winter visitant.

49. *Motacilla luzoniensis*, Scopoli.

Common in winter ; a few breed here.

50. *Motacilla lugubris*, Temminck.

Common in winter.

51. *Budytes flava*, (L.)

I think the European species ; rare.

52. *Budytes sulphurea*.

Both these species are found in autumn, in rice-fields.

53. *Anthus thermophilus*, Hodgson.

Common during winter. Two other species occur, but they still remain unidentified.



54. *Pipastes agilis*, (Sykes.)

Common during winter.

55. *Corydalla Richardi*, (Vieillot.)

A common winter visitant; deeply ochreous on its arrival, but this appearance wears off as the season advances.

56. *Myiophonus cæruleus*, (Scopoli). [*Nec*. M. TEMMINCKII, Vigors.]

Lives among rocky caverns; not common, and very shy; native name *Aw-chuy*.

57. *Turdus daulias*, Temminck.

Our commonest winter Thrush, answering in every respect to the description of the species in the *Fauna Japonica*, which work represents a figure of the bird on Plate 26; but the first notice of it is due to M. Temminck, who published a representation of it in the *Planches color.* Pl. 515.

58. *Turdus pallens*, Pallas,—*pallidus*, Gmelin.

This species varies *greatly* in size, and is remarkable for its white eye-streak. It strikes me that this is the *rufulus* of Drapiez and *modestus* of Eyton, rather than the following.

59. *Turdus chrysolaus*, Temminck. *Planches coloriées* from Japan.

It arrives here in small parties in early spring, and at that time is of frequent occurrence among bushes and gardens. Besides the above three, I have procured two other species still unidentified.

60. *Merula cardis*, (Temminck.)

This small and handsome species, so remarkable for the changes it undergoes from the plumage of a *Turdus* to that of a true *Merula*, seems to form a natural link between the two subgenera. These changes of plumage have been well described and beautifully figured in the '*Fauna Japonica*.' It visits us chiefly during winter, but I have no doubt that some of them spend the summer near at hand, as I have met them here late in spring.

61. *Merula mandarina*, Bonaparte; *M. vulgaris* of China, *auctorun*.

A common resident everywhere up the coast.

62. *Oreocincla varia*, (Lath.) *nec* Horsfield; *Turdus Whitei*, Eyton.

A straggling visitant. Number of *rectrices* 14.



63. *Petrocossyphus manillensis*, (Boddäert.)

Common among the rocks all the year through.

64. *Garrulax perspicillatus*, (Gm.)

Length 12 inches. Wing  $4\frac{7}{10}$ . Tail  $5\frac{2}{10}$ . Bill  $\frac{9}{10}$ , to gape  $1\frac{3}{10}$ . Back, wings, and tail yellowish-brown. Head and neck yellowish-grey. A band reaches from one ear-covert over the forehead to the other, forming a broad mark over the eyes. Under parts pale rufous-ochre, very deep on the vent. Beak and legs brown.

This large Butcher-thrush is common in some parts of the country, building a nest a good deal like that of the Blackbird. It is a shy bird, but may be known a long way off by its loud cry of *teó-teó*, uttered from time to time, or followed by a liquid guzzling low chatter.

65. *Garrulax sinensis*, (L.) [*Leucodioptron canorum*, Schiffer, *apud* C. L. Bonaparte; *Turdus canorus*, *T. sinensis*, and also *Lanius infaustus*, L.; nec *L. chinensis*, Scopoli.\*]

This is the *Hwa-mei* or Spectacled Thrush of the Chinese, by whom it is prized for its fine vocal powers, as well as for its pugilistic propensities. It is, strictly speaking, a hill-bird, and very abundant on the hills near Fowchow, but as I have, on more than one occasion, met with it in the bushes here, I must include it in my list.

66. *Oriolus chinensis*, L.

A rare straggler here, but very common in S. W. Formosa. The female is slightly greener than the male on the back and wings, and is considerably larger. Another species resembling this, but spotted on the breast, I have received from Mr. Holt at Fowchow, which I take to be the *Oriolus maculatus* of Vieillot. [Young of the preceding? *E. B.*]

67. *Pycnonotus sinensis*, (Gmelin); *Turdus occipitalis*, Temminck.

\* The latter is *Corvus auritus*, Daud., *Turdus shanku* et *T. melanopsis*, Gmelin, *Crateropus leucogenys*, nobis, *passim*; a true *Garrulax* inhabiting the Tenasserim hills, but doubtfully Chinese. In Horsfield's Catalogue, the name *Turdus canorus*, L., is referred to the *Merula bengalensis*, Brisson, and the former specific name adopted for that most unmusical of birds, which properly stands as *Mala-cocercus bengalensis*, (Br.)—*Cur. As. Soc.*



Very common all over the coast from Hongkong to Shanghai, and everywhere in Formosa.

68. *Pycnonotus atricapillus* [*Muscicapa atricapilla*, Vieillot, nec L.; *Hæmatornis chrysorrhous*, Lafr., and *P. hæmorrhous apud* Hartlaub, *Rev. Zool. &c.* 1846, p. 1.\*]

Found abundantly in some places in this neighbourhood, but peculiarly local, seldom straying far.

69. *Tchitrea principalis*, (Temminck.)

Figured in the Planches coloriées, and subsequently in the Fauna Japonica. A rare spring straggler here.

70. *Tchitrea cæruleocephala*, (Quoy et Gaim.)

71. *Hemichelidon latirostris*, (Raffles); *cinereo-alba*, Temm. and Schleg., Faun. Japon.

A common winter visitant; remarkable for its singing notes, like those of a Red-breast, or chinking of two pieces of silver.

72. *Hemichelidon fuliginosa*, Hodgson.

Straggles to Amoy in its vernal migrations.

73. *Hemichelidon rutilata*, n. sp.

This species approximates *H. latirostris* in form, but has a bill even broader at the base. It is of rare occurrence here and only during spring.

Length  $4\frac{7}{10}$ . Wing  $2\frac{9}{10}$ . Tail? Bill  $\frac{4}{10}$ , to gape  $\frac{6}{10}$ , breadth  $\frac{7}{20}$ . Tarsus  $\frac{5}{10}$ . Head and upper neck blackish-grey. Back and scapulars reddish-brown. Wings blackish, margined with burnt-sienna. Rump and tail tile-red, the feathers of the latter more or less marked with blackish. Throat and fore-neck white, yellowish on their sides. The rest of the lower parts, excepting just the abdomen which is white, reddish or burnt-sienna ochre, more or less intense.

74. *Xanthopygia narcissina*, (Temminck);—*chrysophrys*, Blyth.

A rare spring visitant.

75. *Cyanoptila cyanomelanura*, (Temminck.)

Figured in the Fauna Japonica. Of rare occurrence here.

*Myiagra cærulea*, Gmelin?

A blue Fly-catcher with a small bill; procured here *once*.

\* The *Pycnonotus atricapillus* of my Catalogue, founded on *Ægithia atricapilla*, Vieillot, v. *Sylvia nigricapilla*, Drapiez, a Ceylon bird, is referred to a new genus, *Meropixus*, by the Prince of Canino.—*Cur. As. Soc.*



76. *Campephaga cinerea*, Blyth ?\*

Of a deep bluish-grey; with green-black wings and tail, the feathers of both tipped more or less with white, the graduated tail-feathers deeply tipped. Vent white. Bill and legs black. Length 9; wing  $4\frac{1}{2}$ ; tail  $3\frac{7}{10}$ . The immature plumage is lighter grey, tinged with sienna-yellow, and indistinctly barred on the under-parts. The basal part of the inner webs of several of the wing-feathers are marked with white, forming a large bar, conspicuous on the under side or when the bird is seen on wing. This species occasionally shews itself here, in autumn and in spring.

77. *Pericrocotus cinereus*, Strickland.

Length 8, wing  $3\frac{8}{10}$ . Tail 4, the 3 outer feathers being shorter than the rest and equally graduated, measuring  $1\frac{1}{2}$ , 2, and  $2\frac{1}{2}$  respectively; the 6 central ones are nearly equal. Expanse  $10\frac{1}{2}$ . Bill  $\frac{1}{2}$ , to gape  $\frac{8}{10}$ . Bill and feet black. The description from de la Fresnaye runs thus "Cendré en dessus; lorums, ailes, et queue, noirs; front, une tache médiane alaire, pli de l'aile, bord externe des rémiges tertiaires, la presque totalité de trois rectrices latérales et tout le dessous de corps, blancs. Longueur totale 0m. 193. Habite l'isle de Luçon (Philippines)". The *female* in all mine has *greyish-brown* wings; the black of the lore extends over the beak; and *four* instead of *three* lateral rectrices have a good deal of white on them.

The male has a broad white forehead, and a black crown which gradually blends with the bluish-grey of the back. The wings are also blacker, and there is more grey on the sides of the breast. In fact the plumage of the male bears great affinity to that of the Wagtails; and this species forms a happy transition from the *grey* of the *Campephagæ* to the *crocus* tints of the *Pericrocoti*. It looks in, at Amoy, in parties during the vernal and autumnal migrations, and is noticeable for its pretty Canary-like trill call-note.

78. *Dicrurus macrocerus*, Vieillot.

By no means common in this neighborhood, but remarkably so in S. W. Formosa, where several may be seen during the

\* No name of my bestowing.—E. B.



season, sitting on nests in the same bamboo-tree, swaying to and fro with every puff of wind.

79. *Lanius schach*, L.

Very common ; has a great habit of shrieking. This is a *much* larger race than that found in the Indian archipelago, and is no doubt worthy of specific distinction ; it remains only to be ascertained to which of the two the name was first applied.

80. *Lanius lucionensis*, Strickland.

With reference to this species, Mr. Blyth observes that this " is decidedly the true *L. lucionensis*, vide Strickland, Ann. Mag. N. H. XIX (1847), p. 132. He considers there that all the various allied races are varieties only of the same. My notion is that there are 3 or 4 cognate races, which may breed together when circumstances permit of it, and so grade into one another. Certes a Malayan *superciliosus* is very unlike your *lucionensis*."

These are common here during the seasons of migration, and I have received them this autumn from Mr. Holt at Fowchow.

81. *Enneoctonus bucephalus*, (Temm. and Schleg.)

I have never met but one of this species here, and that proved a female. It has a large rufous head without the usual black face-band of the family, and answers in every respect to the description of the female in the Fauna Japonica.

82. *Corvus torquatus*, Cuv. [Vide J. A. S. XXIX, 96.]

Our common and only crow at Amoy.

83. *Pica media*, Blyth ;—*sericea*, Gould.

Very common.

84. *Acridotheres cristatellus*, (L.)\*

A very common species from Hongkong to Shanghai ; builds in holes of trees or walls, or makes large oval nests in trees ; learns to speak with facility and soon becomes docile.

85. *Gracupica (nigricollis)*, Paykull ; *temporalis*, Temminck ; *tricolor*, J. E. Gray.

A common resident, associating in small parties ; builds round

\* The Prince of Canino considered this to be different from true *cristatellus* of the Philippines, and adopted the name *fuliginosus*, Bl., for the China species. Cur. As. Soc.



nest on high trees, and lays clear blue eggs with very fragile shells ; is a noisy bird ; and is also found in Siam.

86. *Temenuchus turdiformis*, (Wagler) ; *sinensis*, Gmelin ; *elegans*, Lesson.

A common summer resident ; very restless ; builds in holes of walls ; and is also found in Pegu. Its habit of poking about among brick-holes in houses, &c. during the nesting season soon causes its newly moulted white plumes to be stained of a reddish hue, and the feathers of the wings and tail to be much abraded. Before taking its departure from us it undergoes a complete moult, and then the plumage is clean enough.

87. *Temenuchus sericeus*, (Latham.)

A winter visitant ; feeds largely on banyan berries.

88. *Temenuchus cineraceus*, (Temminck.)

This resembles the foregoing a good deal in form, but is broader across the back, and generally more robust. It also visits us during winter ; and is identical with the bird found in Japan.

89. *Eophona melanura*, (Gmelin.)

Found here the winter through ; but leaves us before summer ; breeds in Shanghai.

90. *Munia malacca*, (L.) common in autumn. }

91. *Munia molucca*, (L.) scarce. } [Distinct, *E. B.*]

92. *Munia rubronigra*, Hodgson, very scarce.

93. *Oryzornis oryzivora*, (L.) Occasional winter flocks.

94. *Ligurinus sinicus*, (L.)

*Fringilla kawarakiba minor*, Fauna Japonica.

Half Goldfinch, half Greenfinch ; not uncommon all the year, has a pretty tinkling note ; and feeds on thistle-heads as well as grain, &c.

95. *Passer montanus*, (L.)

Common about houses, resembles in habits *P. domesticus*.

96. *Emberiza fucata*, Pallas.

Met among standing grain during winter ; difficult to procure from its habit of dropping under cover of the grain, and seldom perching on exposed places.

97. *Emberiza pusilla*, Pallas.

Occasional flocks during winter.



98. *Emberiza canescens*, n. sp. [*The Ibis*, Vol. II, 62.]

This occurs during winter, and is probably new.

Length  $5\frac{2}{10}$ . Wing  $2\frac{9}{10}$ . Tail  $2\frac{1}{2}$  and somewhat forked. Bill  $\frac{7}{20}$

Head and neck sienna-gray; crown, cheeks and throat, blackened, of a frosted appearance. Back and scapularies black, each feather broadly margined with white and more or less tinted with reddish-sienna. Wings blackish-brown, broadly margined with sienna-white. Under-parts and rump white, sienna-washed. Tail blackish-brown, having the two central feathers broadly margined with white, the rest on each side hardly at all; the outer feathers white except a small broad portion of the inner web, the 2nd broadly tipped with the same.

The female is deeply tinged with reddish-brown above and reddish-ochre beneath.

99. *Emberiza personata*, Temminck.

Our commonest winter Bunting.

100. *Emberiza aureola*, Pallas.

Met in flocks in autumn feeding on the ripening corn.

101. *Emberiza Lathamii*, Gmelin.

Common in winter; a few breed in the neighbourhood.

102. *Emberiza fruticeti*, Kittlitz; *sulphurata*, Fauna Japon. Rare.

103. *Alauda cœlix*, Swinhoe.

This bird, which I have described under the above name in the III vol. of Shanghai Asiatic Society's Journal, differs from the Japanese Lark, *A. japonica*, Temminck, in being much smaller. The largest specimen I have measured is one inch shorter than the Japanese, though the wing is much the same length. The inner toe is  $\frac{3}{4}$  longer than the outer instead of being shorter. A close comparison of the two birds is of course required before any decision can, with safety, be arrived at, but it must not be forgotten that our's is a peculiarly Southern Chinese Lark, not being found even so far north as Shanghai.

104. *Yunx torquilla*, L.

Common during winter. The  $\frac{1}{4}$  inch red tree-ant appears to be its most favourite food, but it does not despise the large black bush-ant.



105. *Cuculus canorus*? L.

Taken here on its autumnal and vernal migrations, but breeds at Fowchow and Shanghai.

106. *Cuculus tenuirostris*, Gray.

A summer visitant; has a loud-toned whistle repeated 4 times and terminating with a shake.

107. *Turtur chinensis*, (Scopoli.)

Common everywhere from Hongkong to Shanghai.

108. *Turtur humilis*, (Temminck.)

A summer visitant; extends as far North as Shanghai, and is there of a larger size, though evidently of the same species.

109. *Turtur orientalis*, (Latham); *gelastis*, Temminck.

This large species, found in Lapland and Japan, countries so far situated apart, has been shot here by myself during winter, but it makes short stay with us. I have seen the bird in Formosa, and one was caught by a ship off the Madjicosima group.

110. *Francolinus perlatus*, (Gmelin.)

Birds of this species are brought to market by the natives from some neighbouring part of the country.

111. *Coturnix chinensis*, (Gm.)

Met in winter among standing corn; and evidently as distinct from the European species, as from the Japanese. [Evidently a misnomer. E. B.]

112. *Squatarola helvetica*, (L.)

Winter visitant; met with in small flocks on the river mud-flats.

113. *Charadrius virginicus*, Bechst. [*Pluvialis longipes*, Bonap.]

This species, I think, rather than *pluvialis*. Winter. Tail not distinctly banded, breaking off in the middle; size smaller than the European. Axillæ mottled-gray and not white.

114. *Charadrius cantianus*, Latham.

Arrives with the water-fowl, and frequents our sea mud-flats, often in large flocks.

115. *Charadrius philippinus*, Latham.

Found on inland marshes, and new-turned fields during winter.

116. *Charadrius Leschenaultii*, Lesson.

I have only one specimen, which was shot out of a flock of *C. cantianus*. It is very much larger than the so-called



Kentish Plover, but resembles it in winter garb, except that this has no *ventral* white, indications of a perfect breast-band, and lighter brown *remiges* and *rectrices*.

117. *Hæmatopus ostralegus*, L.

Rare winter-visitant.

118. *Ardea cinerea*, (L.)

Often seen here ; but builds large *heronries* at Fowchow.

119. *Herodias egretta*, (L.) ? *H. modesta*, (Gray).

A large white Heron, seen occasionally ; not identified.

120. *Herodias garzetta*, (L.)

The common resident species ; building in company on large banyan trees.

121. *Herodias eulophota*, n. sp.

This differs from *H. gazetta* strikingly in having a *yellow* bill, full-crested occiput, *round* instead of *square* tail and shorter legs. It is moreover rare and solitary in habits while with us during summer. It bears considerable affinity to *H. candidissima*, Wagler, of N. American Ornithology. Bill fine yellow, becoming flesh-coloured and purplish on the lores and round the eye. Irides pearl white. Long loose feathers spring from the occiput forming a full crest, the highest ones being longest and measuring  $4\frac{1}{2}$  each, the length diminishing gradually in the lower ones. Long loose feathers also spring from the lower neck, and from the back where they become decomposed into hair like silky webs curling upwards at their ends. The whole plumage is of a snowy white. Legs and toes yellowish or red-green, yellower on the soles and joints ; the upper surface of the lower portion of the tarsus is blackened, as also are some of the toe-joints but irregularly ; claws blackish-brown.

Average length 25 inches ; wing  $9\frac{8}{10}$  ; tail  $3\frac{1}{2}$ . Bill  $2\frac{9}{10}$ , edge of lower mandible  $3\frac{6}{10}$ . Naked part of tibia  $1\frac{6}{10}$  ; tarsus  $3\frac{3}{10}$  ; mid-toe  $2\frac{1}{2}$ , outer-toe  $2\frac{2}{10}$  ; inner  $2\frac{1}{10}$  ; hind-toe  $1\frac{1}{2}$ .

122. *Buphus coromandus*, (Boddæert) ; *russata*, Temminck ; *caboga*, Pen.

A numerous summer resident.

123. *Ardeola prasinoscelis*, n. sp. [*The Ibis*, II, 64.]

I have long had suspicions as to the identity of our bird with either



the *speciosa* from Java or the *leucoptera* from Bengal, and now, having satisfied myself, I will endeavour to shew the difference. In the first place on comparing our *Ardeola* with the description of *A. speciosa* in "Horsfield's Researches in Java," the distinction is at once apparent. We begin with ours. Description of male shot 30th May. Bill black for nearly one half from the apex, middle portion chrome yellow, base and cere indigo-grey. Legs *greenish-chrome*. Irides orange-yellow. Head and neck Indian-red, changing into purple as it descends to the back. Throat, median line of under neck, belly, rump and wings white. Back having long loose *bluish-grey* feathers decomposed and hair-like. Long and hair-like feathers also spring from the lower neck, nearly covering the blue feathers of the breast. Crest composed of two long subulated feathers  $4\frac{1}{4}$  long, with several shorter ones fitting into the grooves on their under sides; these feathers are the *same colour as the head*. Now Horsfield states that the *A. speciosa* has "in its complete dress the head above, &c. isabella-yellow with a rufous tint \* \* \* \* colour of the back *intensely black* \* \* \* \* feet *dark yellowish-brown* \* \* \* the crest consists of from 4 to 6 greatly lengthened linear plumes of a *very pure milk white* colour. The bill is dusky at the base."

This comparison of the adult plumage is surely convincing of non-identity of the two birds. The immature and winter plumage would appear to be more similar, but even here there are differences. In the Malayan species apud Horsfield "the wings and the tail are pure white," in ours they are more or less darkened with blackish. In his "the feet and the upper mandible throughout its whole length, are black." In ours the former are bright yellowish-green with brownish claws, and the bill pale liver-brown, black on the apical quarter of its length; the naked or loral space greenish-yellow, bluish at the base of the bill.

It will thus be seen that our species is perfectly distinct from the Malayan, *A. speciosa*, and for its non-identity with the Bengal species I give the testimony of Mr. Blyth who re-



marks on some skins sent by myself to him, "It is so exceeding like our common *A. leucoptera* in winter dress as to be hardly, if at all, distinguishable; but utterly unlike it in summer garb."\*

Our bird resides here all the year through, feeding in paddy-fields and marshy ground. Its food is not confined to fish, but grasshoppers, and insects of most kinds are acceptable. In confinement it soon becomes omnivorous. It is more or less solitary in habits, building loose nests of sticks on the topmost boughs of banyan trees. The fledged young keep together for some time after they leave the nest. [I consider this bird to be true *speciosa*. E. B.]

124. *Ardetta flavicollis*, (Latham.)

Rare here; but common during summer at Fowchow.

125. *Ardetta cinnamomea*, (Gmelin.)

A summer visitant.

126. *Ardetta sinensis*, (Gmelin); *lepida*, Horsfield.

Common during summer among the bushes that line the banks of the river.

127. *Butorides javanica*, (Horsfield.) Summer visitant.

128. *Nyctiardea grisea*, Vigors.

Rare here, but common at Fowchow.

129. *Platalea leucorodia*, L. Rare winter visitant.

130. *Numenius major*, Fauna Japon., Temm.

Regular winter visitant; frequents mud flats.

131. *Totanus glareola*, (L.)

Common on inland marshy ground during winter.

132. *Totanus ochropus*, (L.)

Met by small streams of fresh water during winter, very seldom near pools of salt water.

133. *Totanus chloropygius*, Vieillot?

Resembles the former in appearance and in habits, but is rarer.

134. *Totanus glottoides*, Vigors. [Identical with *T. glottis*. E. B.]

Common during winter on mud flats at the river's mouth.

*Totanus pulverulentus*, Müller and Schleg.

In the collection of G. Schlegel, Esq., and shot at Amoy.

\* The same remark applies to the European and African *A. comata* v. *ralloides*. E. B.



135. *Tringoides hypoleucos*, (L.)

Our common species, found the greater part of the year on the sea-shore.

136. *Recurvirostra avocetta*, L. Occasional winter visitant.

Chinensis, Gray.

137. *Tringa cinclus*, L.

Upper tail-coverts *black*, and not *white* as in *T. subarquata*; bill long and curved.

Frequents our shores in *large flocks* during winter.

138. *Tringa minuta*, Leisler.

Autumnal flocks drop here.

139. *Tringa Temminckii*, Leisler.

Found in small parties scattered over wet fallow paddy-fields in the cold season.

140. *Scolopax rusticola*, L.

Drop here during their migrations or on their first arrival.

141. *Gallinago uniclava*, Hodgson.

Our commonest species in paddy-fields; retires in summer to breed.

142. *Gallinago stenura*, (Temminck.)

Also common, but more solitary than the above.

143. *Gallinago solitaria* (?), Hodgson.

Found in ravines among the hills; very solitary. It is a large species and has the tail slightly rounded and consisting of 20 nearly equally long feathers; the 8 middle ones broad and the 6 lateral ones narrow, beginning with the 1st which is little more than  $\frac{1}{10}$  wide and gradually increasing towards the outermost of the 8 central, which is narrower than the rest.

It differs a good deal from the species described as *solitaria* in the Fauna Japonica.

144. *Gallinago major*, (L.)

This species I have met only during the month of September in fields overflowed with salt water. It is rather solitary and rises with a cry. It resembles *G. major* more nearly than any I am acquainted with, but has *eighteen* tail-feathers instead of *sixteen*, and the outer toe is disproportionally long.

145. *Gallinula orientalis*. Rare.



146. *Gallinula phænicura*, Pennant ; *javanica*, Horsfield ; *chinensis*, Boddaërt.

Rare.

147. *Anser segetum*, Latham ?

Frequents the mouth of the river in immense flocks during winter.

148. *Tadorna vulpanser*, Fleming.

149. *Casarca rutila*, (Pallas.)

150. *Anas boschas*, L.

151. *Anas pæcilorhynca*, Gm.

152. *Dafila acuta*, (L.)

153. *Querquedula crecca*, Stephens.

All more or less common during winter in the river.

154. *Querquedula falcata*, (Pallas) ; *multicolor*, (Scop.) ; *manillensis*, Gmel. ?

155. *Fuligula marila*, (L.)

156. *Fuligula cristata*, Stephens.

157. *Mergus serrator*, L.

158. *Colymbus glacialis*, L.

159. *Podiceps cristatus*, L.

160. *Podiceps auritus*, L.

More or less common during winter.

161. *Podiceps philippensis*, Bonn.

A resident species in large rush-covered ponds ; *chinensis*, Temminck.

162. *Diomedea brachyura*, Temminck ?

163. *Diomedea fuliginosa*, L. ?

Caught by fishermen outside the harbour and brought to market.

164. *Larus canus*, L.

165. *Larus fuscus*, L. ; *flavipes*, Meyer.

166. *Larus melanurus*, Temm. and Schleg.

167. *Larus* ——— ?

168. *Gavia Kittlitzii*, (Bruch) ; *maculipennis*, Bonap.

169. *Sterna caspia*, Pallas.

170. *Sterna cristata*, Stephens ; *pelicanoides*, King ; *velox*, Rüppell.

More or less common during winter.

171. *Sterna minuta*, L.

172. *Hydrochelidon javanica*, Horsfield.

Rare summer visitant.



173. *Pelecanus crispus*, Bruch ; *philippensis*, Gmelin.

Common in winter.

174. *Graculus carbo*, L.

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#### APPENDIX OR ADDENDA.

(Remove No. 45 to the *Muscicapidæ* and before the description of the female add)

The bird that formed the subject of description in the Fauna Japonica was most probably in full summer plumage. The account in that work runs thus :—" Les parties inférieures de cet oiseau, à partir du menton, sont d'un brun ferrugineux jaunâtre et très-vif, mais passant au blanc sur le bas ventre. Cette dernière teinte occupe également les couvertures inférieures de la queue, et les supérieures des grandes couvertures extérieures de l'aile. La moitié postérieure de la barbe externe des cinq paires extérieures des pennes de la queue est également teinte de blanc, les supérieures des rémiges secondaires sont bordées de blanc, et on observe une raie blanchâtre mais très peu apparente au dessus de la région des oreilles. Toutes les autres parties de l'oiseau sont d'un noir, plus pâle et tirant au brunâtre sur les ailes. Les plumes axillaires sont d'un brun ferrugineux jaunâtre, et les petites couvertures inférieures des ailes, noires mais bordées de blanc."

The only male as yet shot here was procured by G. Schlegel, Esq. on the 15th November, but instead of a black crown, back and scapularies, it has those parts olive-brown with a reddish wash. The *white* on the upper coverts is more indistinct ; and the basal portion of inner webs of the 5 lateral rectrices are more or less white. In all essential points it is so similar, that I have little doubt of its being the Japanese species in male winter plumage.

(Add, as a species, after No. 36, *P. sylvicultrix*.)

*Phylloscopus hylebata*, n. sp.

From one individual in the collection of G. Schlegel, Esq. of Amoy. I have compared this specimen with upwards of 20 or 30 specimens of *P. sylvicultrix*, and come to the conclusion that it must be distinct. Though the size of this species is greater, yet the 1st quill is more minute than in the foregoing.



Length 5, wing  $2\frac{6}{10}$  tail 2. Bill  $\frac{9}{20}$ , deep blackish brown with pale tomia. Tarsus  $\frac{8}{10}$ . Legs and claws deep blackish-brown with yellow soles and tips to claws. The olive-green above is much the same as in *sylvicultrix*, but the eye-streak and under-parts are much yellower.

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*On the Translation of Waves of Water with relation to the great flood of the Indus in 1858.—By J. OBBARD, Esq.*

“At 5 A. M. on the 10th August, 1858, the Indus at Attock was very low. At 7 A. M. it had risen ten feet. By 0.30 P. M. it had risen fifty feet, and it continued to rise until it stood ninety feet higher than it did in the morning. The Cabul river continued to flow upwards for ten hours. The fall was at first slow; but the river was about eight feet below its maximum by sunset; and continuing gradually to fall, it had during the 12th returned very much to the position it occupied before the flood came down.”—*Extracts from Journal of Asiatic Society*, 1858, 1859.

1. Several papers have been recently forwarded to the Society upon the great flood of the Indus in August, 1858, and, as it is a subject in which I take great interest, I trust that I may be excused in submitting my views regarding it.

2. I propose, therefore, in the following paper, to consider the mode in which this vast body of water passed Attock, and with this view, I shall first treat cursorily of the nature of waves of water generally, more especially, however, dwelling upon waves of the class which from their formation and size, seem to be analogous to that which is under consideration, stating in general terms, their mode and rate of transit; and the limit within which wave translation is possible; and I shall then endeavour to shew the application of these laws to the specialities of the Indus wave, touching briefly upon some erroneous speculations which seem to have been made upon insufficient data.

3. A wave is an inequality of surface or variation of level in a stream of water, which may be of any size according to the force of its original cause. It is unnecessary to enquire into the origin of a wave for the purpose of elucidating its specialities, as all waves when





Swinhoe, Robert. 1861. "Ornithology of Amoy." *The journal of the Asiatic Society of Bengal* 29(III), 240–266.

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