

ON THE BIRDS OF THE MARIANNE ISLANDS.

By ERNST HARTERT.

THE following article has a little history. About three years ago the Tring Museum received several excellent collections from the islands of Guam and Saipan. They were brought together by two Japanese collectors, sent to those islands by our correspondent, Mr. Alan Owston, of Yokohama, at the request of Mr. Walter Rothschild. Soon after they were in our hands I had prepared the following article in a much more complete and more detailed form; but, when it was ready to be printed, Professor M. E. Oustalet's long and excellent article "*Les Mammifères et les Oiseaux des Îles Mariannes*" appeared in Vol. VII. of the third series of the *Nouvelles Archives du Muséum d'Histoire Naturelle de Paris*, late in 1895, followed by the concluding second part in 1896. Under these circumstances I first thought of destroying the whole article; but, finding afterwards that it would be, after all, of some interest to give some account of our collection, which was accompanied by many nests and eggs, and seeing that, with all respect and admiration due to Mons. Oustalet's excellent work, I had to differ from him in a few points, and had to correct an oological and some other mistakes, I altered the form of the article, shortened and adapted it to the circumstances, and hope it will thus still be of some service to ornithologists.

With regard to the notes on the colour of the soft parts, I may mention that the collectors were provided with Ridgway's *Nomenclature of Colours*, and quoted plates and figures on the label of every bird. All nests and eggs were accompanied by the parent bird, numbered correspondingly. The "sexes" are evidently quite trustworthy, in fact more so than those given by many European collectors.

For convenience I adopt Oustalet's old-fashioned classification.

1. *Astur sharpei* Oust. (Oust. I. p. 161).

Only a single specimen, brought home by the collectors of the Astrolabe expedition "*des Mariannes*" is known. The island where it was shot is not mentioned.

Our collectors did not see nor hear of any hawk on the islands, nor did Mons. Marche find it. From the affinities of this remarkable hawk one is tempted to doubt the correctness of the locality, especially since it is not very exact.

2. *Accipiter nisoides* Blyth (Oust. I. p. 166).

A single *male* is said to have been shot by Marche on the island of Guam. Our Japanese collectors did not come across it. It is probably of accidental occurrence only in the Marianne Islands.

3. *Asio accipitrinus* (Pall.) (Oust. I. p. 168).

Said by Messrs. Freycinet, Quoy et Gaimard to be found on the Marianne Islands, but specimens from there are not with certainty to be found in the Paris Museum. Our collectors did not send any specimens either.

4. *Halcyon albicilla* Dumont (Oust. I. p. 169).

This species was not found on Guam by any collectors, but we received a large series from Saipan. Marche found it on Saipan, Rota, Pagan, and Agrigan. Local name on Saipan: "Shiihii." Maxilla black, mandible white with blackish tip; iris dark, III. 8 ("burnt umber"); legs and toes III. 1 ("seal-brown"); claws II. 3 (blackish slate). Wing 114—118 mm.

The head seems to be pure white in very old individuals only, but the majority of specimens have some dark greenish blue longitudinal spots on the crown, and the young birds have more or less developed buffy white edges on the upper wing-coverts.

The species is easily distinguished from *H. saurophaga* Gould, which has so often been called *H. albicilla*, by the smaller size and the greenish blue line encircling the nape. An egg was found in a hole of a tree on Saipan July 31st, 1895. It is only slightly glossy, very thin, pure white, but soiled all over with deep brown spots, evidently from the decaying wood in the nest-hole. It measures 33 : 25 mm.

5. *Halcyon cinnamomina* Swains. (Oust. I. p. 175).

Halcyon cinnamomina Swains., *Zool. Illustr.* Ser. I. Vol. II. pl. 67 (1821).

H. ruficularis Sharpe, *Cat. B. Brit. Mus.* XVII. p. 260 (♀).

Local name: "Shiihii."

♂ ad. Neck and head and entire under surface cinnamon, a little paler on the throat. In quite freshly moulted specimens the cinnamon is very dark, but it fades in the breeding time. Ear-coverts black, more or less washed and mixed with blue; a narrow black line from the right ear-covert to the left, round the nape. Back, scapulars, and small upper wing-coverts near the bend deep blue-green, more green if viewed with the light from above. Inner webs of wing-quills black; tail, outer webs of wing-quills, upper wing-coverts, rump, and upper tail-coverts blue; rump more vivid, like "cerulean blue" of Ridgway, Pl. IX. fig. 21; tail and wing deeper blue, and all these blue parts more greenish in a certain light and if the bird is in abraded plumage. Iris, Ridgw. III. 8, dark (burnt umber); bill black, basal part whitish; legs and feet II. 11 (mouse-grey); claws II. 3 (blackish slate).

♀ ad. Throat a little paler than in the *male*; breast, abdomen, under tail- and under wing-coverts white. Bare parts as in ♂; legs and feet II. 13 (drab grey). The hind-neck is cinnamon in some examples, but almost pure white in others, apparently older ones.

Juv. Crown mixed with greenish blue; upper wing-coverts bordered with pale cinnamon. One specimen, marked ♀, shot on Guam on December 28th, 1894, has the breast and abdomen buffy white, mixed with cinnamon, some whitish feathers on the throat, under wing-coverts pale cinnamon. The colour of head and upper wing-coverts shows it to be a young bird.

Total length about 9—10 inches; wing 100—108, culmen 45—49, tail 80—85 mm.

More than thirty sexed skins and a special note of the collectors prove beyond doubt that Sharpe's supposed "subspecies" (from an unknown place) *H. ruficularis* is the *female* of the cinnamon-bellied *male*. This observation is not at all new, for Kittlitz, *Reise* II. p. 132, where also excellent field notes are given, has already correctly described the colour of both sexes, and also the markings of the head in immature birds. Finsch has afterwards made the same observation (*Journ. Mus.*

Godeffr. XII. p. 20; *Journ. f. Ornith.* 1880. p. 285, and *Ibis* 1881. p. 112), but neither Sharpe (*Cat. B.* XVII. p. 260) nor Wigglesworth (*Aves Polynes.* p. 16) would believe in what these authors stated. Oustalet, however, came to the same conclusion, in spite of some specimens (evidently wrongly sexed) which did not agree with his theory.

Halcyon cinnamomina is only known from Guam, while Saipan is the home of another species, the Pelew Islands are inhabited by *H. pelewensis* Wigglesw. (*Aves Polynes.* pp. 15, 16), and Ponapé by *H. reichenbachii* (Hartl.), of which *H. mediocris* Sharpe is no doubt the male, judging from the case of the Guam species.

6. *Collocalia fuciphaga* (Thunb.) (Oust. I. p. 187).

We got it from Guam and Saipan. If further researches should enable us to split this widespread species up into subspecies, then the name *vanikorensis* Quoy & Gaim. would have to stand for this form, but I cannot yet see the possibility of recognising it as different. Marche found it on Saipan and Rota.

7. *Rhipidura uraniae* Oust. (Oust. I. p. 190 *partim*).

Rhipidura uraniae Oust. in *Bull. Soc. Philom. Paris* 1881, March; Büttikofer in *Notes Leyden Mus.* 1893. p. 77.

Rh. atrigularis Reichenow in *Journ. f. Orn.* 1885. p. 110.

In the case of the *Rhipiduræ* from the Marianne Islands I have to differ entirely from M. Oustalet. I am sorry to say that there is not more than a single fact in which I can agree with his recent views, as laid down in his great work on the birds of the Marianne Islands. Formerly M. Oustalet described as a new species *Rh. uraniae* from the Marianne Islands. This name belongs to the black-throated form of Guam. (See original description and Oustalet, *op. cit.* p. 192.) Recently the author declared his *Rh. uraniae* not only identical with the specimens from Saipan, but he referred both forms to *Rh. versicolor* Hartl. & Finsch from Yap. He concludes from his specimens that the white-throated birds are in breeding plumage, while those with the black throat are in autumn or winter dress. This supposition, however, is wrong, for not only have our men shot both forms on the two islands of Saipan and Guam in the same months, but we also got nests and eggs of the black-throated Guam birds. Thus our large series proves beyond a shadow of doubt that the two islands of Saipan and Guam are inhabited by two different forms of *Rhipidura*, which replace each other. The one from Guam must bear Oustalet's name of *Rh. uraniae*. The latter author's supposition (derived from Reichenow's description) that *Rh. atrigularis*, described from the Pelew Islands, is the same as the Guam species, is quite correct, for I sent skins of *Rh. uraniae* to Prof. Reichenow, who kindly identified them with his type and found them entirely similar. Therefore *Rh. uraniae* would inhabit the Pelew Islands and Guam! This is a very peculiar fact, as we find in Yap, between the Pelew and Marianne Islands, a white-throated form, and on the Pelew Islands another not very distant, though quite distinct species, viz. *Rh. lepida*. I cannot therefore help casting strong doubt on the locality given for Reichenow's *Rh. atrigularis*, a doubt which is strengthened by Reichenow's *Phlegoenas virgo* and *Corvus kubaryi*, which are both Guam species, being described from the Pelew Islands.

Local name Guam: "Chichilica." Bill above Ridgw. II. 3 (blackish slate); iris dark III. 2 (clove-brown); legs and toes II. 5 (slate-grey); claws II. 3.

The sexes seem not to differ in colour or size.

Nests were found on Guam in February and March, two to six feet above the ground. They are constructed in the usual way of the *Rhipidura* nests, being a round cup with a very smooth whitish outer surface, and rest on the top of a branch. The eggs are creamy buff, with a zone of tiny patches and spots of brown and greyish, sometimes nearer the thick end, sometimes right in the middle. They are somewhat longish, and measure about 16·5 : 12·5 mm.

8. *Rhipidura saipanensis* sp. nov.

Rhipidura versicolor Oustalet I. pp. 190 ff. partim (nec *Rh. versicolor* Hartlaub & Finsch).

The specimens from Saipan are very similar to *Rh. versicolor*, from Yap in the Mackenzie group, but differ in having the bases of all the rectrices rufous, the *rump and* upper tail-coverts rufous. The sides of the abdomen are not olive-brown, but rufous. These differences seem quite sufficient to give a name to the Saipan form, especially since the distribution of a form over the Mackenzie group and Saipan, while the island of Guam between those two areas is inhabited by *Rh. uraniae*, would be almost phenomenal. The ear-coverts, lores, and a line under the eye are black. The under tail-coverts are of the same pale rufous colour as the flanks, while the rump, upper tail-coverts, and base of tail are of a deep bright rufous. The rufous at the base of the rectrices, which on the central pair occupies nearly half the feather, diminishes towards the sides of the tail, it extending only 10—15 mm. wide on the lateral pair. The white, on the other hand, which forms only a narrow fringe on the central pair, becomes broader towards the lateral rectrices, where it is about 12 mm. wide. Total length of adult *male* (type) about 151 mm.; wing 69; tail 80; bill 8; tarsus 19.

Rh. saipanensis resembles very closely *Rh. rubrofrontata* Rams. from the far distant island of Guadalcanar, in the Solomon group of islands, from which it chiefly differs in the greater extent of rufous on the base of the tail and the slightly wider rufous forehead.

Oustalet, in his article on what he calls *Rh. versicolor*, further expresses his opinion that his own *Rh. astrolabi*, which he described from Vanikoro in the Santa Cruz Archipelago, is the same as *Rh. versicolor*, thinking it may be its summer dress. I see no reason to accept that view, as Oustalet's theory about the *Rhipidurae* of Saipan broke down, not to speak of the peculiar distribution at all. Thus I think, without doubt, that Oustalet's *Rh. versicolor*, as he limited it under No. 7 of his article, consists of—

1. *R. versicolor* Hartl. & Finsch, Yap.
2. *R. uraniae* Oustalet, Guam.
3. *R. saipanensis* Hartert, Saipan.
4. *R. astrolabi* Oustalet, Vanikoro.

9. *Myiagra freycineti* Oust. (Oust. I. p. 194).

Oust., *Bull. Soc. Philom.* 1881 (7), V. p. 73; id., *Naturaliste* 1889. p. 260; Wiglesw., *Aves Polynes.* p. 24.

♂ ad. Maxilla black, mandibula plumbeous. Top of the head deep metallic blue, with a somewhat slaty hue; rest of upper surface dark grey, with a steel-blue gloss; wings and tail blackish, outer webs narrowly edged with grey, inner webs

with brownish white, tail narrowly tipped with greyish white. Under parts white, breast more or less strongly washed with rufous buff. Iris light ochraceous (Ridgway V. 7); legs and feet with claws slate-colour. Total length about 130 mm.; wing 71—73; tail 60—62; culmen 17. Local name: "Chugangan" or "Chug-wangwan."

♀ ad. Top of head slate-colour, slightly glossy. Back and rump grey, washed with ferruginous brown; wing-coverts with rusty edges; under parts as in *male*, but not only the breast, but rather the whole of the under parts with a rufous wash, which is strongest on the breast and vanishes on the belly. Smaller than *male*: culmen 15—16 mm.; wing 66—68; tail 59. Local name: "Chichilica." Iris, feet, and bill as in *male*.

I have no doubt that these two birds are *male* and *female*, as all our skins are sexed accordingly. Oustalet also came to the same conclusion. But if this information is right, the inhabitants of Guam have different names for the sexes—a thing which may be observed elsewhere, for example by myself in Curaçao. This species is apparently confined to Guam, where it seems to be common; it was not found by our collectors on Saipan, nor did the French collectors find it elsewhere than on Guam.

A nest with one egg was found in a "Kamachiri" tree, three feet from the ground, February 14th, 1895. The nest is somewhat flat, with a thick bottom, but not very thick walls. It is composed of fibres and rootlets, interwoven with lichens, cobwebs, and leaves, and is about 55 mm. wide and hardly 22 mm. deep. The single egg reminds one much of an egg of *Lanius collurio* in colour. It is of a brownish cream-colour, with a zone of heavy dark brown and deeper-lying cinereous blotches and spots nearer to the thick end, and measures 19:14.6 mm. Nest and egg are here described for the first time.

10. *Myzomela rubratra* (Less.) (Oust. I. p. 197).

Both on Guam and Saipan, evidently very common on the former, but less numerous on the latter island. Local name: "Segegi" or "Sgegi." Colour of bill Ridgw. II. 1 (black); iris III. 11 (Prout's brown); legs and toes II. 4 (slate-colour); claws II. 3 (blackish slate).

We have received over fifty skins of this bird, which is very numerous on Guam. The *males* are much larger; the *females* have the wing about 6 mm. shorter, and have the red paler, the wing and wing-coverts not pure black, but dark olive-brown, the remiges with greenish olive edges on the outer webs, the back less red, and the abdomen and vent more olive greyish brown, not black.

Bonaparte, *Compt. Rend.* XXXVIII. p. 263, described *Myzomela major* ex insulis Carolinis ab Hombr. & Jacq. as different from *M. rubratra* from the Marianne Islands with the diagnosis: "Similis praecedenti, sed major et percoccinea." That is all—no measurements, nothing more! Oustalet, *Naturaliste* 1889. p. 261, mentions *Myzomela rubratra* from the Mariannes, and says: "Représentée par des individus de tailles très différentes, trouvés dans la même île (*M. rubratra* ordinaire et *M. rubratra* var. *major* Bp.)." Oustalet, *t.c.* p. 200, says that some specimens from Pagan and Agrigan, collected by Marche, are entirely similar to the type of *M. major*, and therefore he regards this name as synonymous to *M. rubratra*. I cannot see any striking differences in size in our large series, beyond the

differences of the sexes. Specimens from the Carolines (Ruk, Ualan) do not differ from Marianne Islands specimens.

A number of nests were found in January, February, and March on Guam. They were placed in bushes or trees, chiefly the "Kamachiri" tree, from four to eight feet from the ground. They are deep cups, woven together of rootlets and fine grasses, outside ornamented with leaves, sheepswool, cobwebs, etc., and are about 5—7 cm. deep and 6—8 cm. wide. The eggs are two in number, white or cream-colour, richly marked with deep rufous brown spots, especially on the thicker end. They measure from 17.1 : 14 to 19 : 14 mm. In some clutches the spots are of a paler somewhat brick-red colour. A similar variation occurs in the eggs of our *Phylloscopus trochilus*.

Kittlitz, *Reise* II. p. 127, mentions this species as a "rothe Souimanga," and gives as its name "Egik."

11. *Cleptornis marchei* Oust. (Oust. I. p. 202, Pl. VII.).

This pretty little honey-eater was discovered on the island of Saipan by M. Alfred Marche, and described as *Ptilotis marchei*, or rather as *Cleptornis* (the distinguishing characters of the reservedly proposed genus being well stated) *marchei*, by Oustalet in *Le Naturaliste* 1889. p. 260. It is deep golden yellow, darker and a little merging into orange on the abdomen; back, rump, wings, and tail greenish olive-yellow. Bill light V. 7 (ochraceous); iris III. 8 (burnt umber); feet and legs V. 3 (orange-ochraceous); claws light ochraceous. The *males* have the wings 76—80 mm., the *females* 71—73 mm.; the *females* have also shorter bills. The local name is "Canario." Our specimens collected in July and August are partly in moult, while those from September are in full plumage.

A nest was found on July 7th in a "Rakiti" tree. It hangs in the fork of a thin branch, just like the nest of a golden Oriole, at the end concealed by the long oval laurel-like leaves of the "Rakiti." The sides of the nest are not very tightly woven and consist of roots, grasses, etc., outside beautifully ornamented with small leaves and the silk of light green cocoons. It is about 5½ cm. high and 7 to 8 cm. wide. It is *not* lined with any special soft material, a character peculiar to all the nests of Guam before me. The egg, when found, was almost hatched, and therefore had to be cut in halves. It is pale blue without gloss, spotted over and over with rufous, more so on the thicker end, and measures about 20 : 15 mm.

Four more nests, received afterwards, found on Saipan late in August in "Paipai" and "Agauteran" trees, are exactly like the one here described, also nearly all more or less well shaded on one side by overhanging leaves, some of course being a little smaller, others somewhat larger, but not much different. The eggs, of which two or three were found in a nest, agree with the one described above; some, however, are of a deeper sky-blue, thus resembling the eggs of some species of *Pyrrhula*. The rufous spots are smaller in some, larger and more like blotches in others, all being richly and some rather beautifully marked. They measure 21.5 : 16, 20 : 15.1, 19.8 : 14.3, 20 : 15.1, 20 : 14.9, 20 : 14.5, 20.6 : 15, 20.5 : 16.2 mm.

The nest figured by Oustalet agrees with our nests, but the eggs which he describes and figures are those of a *Zosterops* !

12. *Zosterops conspicillata* (Kittl.) (Oust. I. p. 205).

Z. semperi (nec Hartl.) Oust. in *Le Naturaliste* 1889. p. 261.

A series from Guam, where it is evidently common, and also some from Saipan which probably belong to the same species.

Hitherto only recorded from Guam, for *Z. semperi* from Ruk and Pelew Islands is quite another species, with no white on the forehead.

Local name : "Nosai." Maxilla, Ridgw. III. 2 (clove-brown); mandible V. 10 (ochraceous buff); legs and toes X. 15 (sage-green); claws deep brown.

This species is, according to Kittlitz (*Reise* II. p. 131), rather common, keeps mostly in the higher trees, and reminded him somewhat of the Titmice.

We have also six specimens from Saipan, shot in July and August. Unfortunately they are mostly poor specimens, some being in moult or apparently immature, others badly shot, so that it is difficult to make them out. They seem to have the white ring round the eyes narrower, the lores and forehead more yellowish, than typical *Z. conspicillata* from Guam, and there is also a distinct grey wash on the sides of the neck and head, which is not perceptible in our Saipan specimens. Although I can see these differences very well, I must at present refrain from separating the Saipan bird, as there is an immature Guam skin which looks just like the Saipan birds, and in a genus like *Zosterops* (of which 130 species are described already, and some more are to be discovered without doubt) it is especially wise to be careful in separating new forms. Nevertheless it may be possible to distinguish the Saipan bird when good adult specimens are to hand.

Several nests were found on Guam in February and March. They were placed three or four feet from the ground in various bushes and trees. The nest is a fairly deep cup, placed in the fork of a branch, woven together of fine grasses and roots, and on the outside ornamented with cobwebs, wool, and cottonwool, varying in width from 8 to 5 cm. The clutches consist of two and three eggs. The eggs are pale blue, like all *Zosterops* eggs. They measure 18:13, 17:13.2, 17:12.2, 15.5:12.5, 17:13.5, and between these measurements.

[Oustalet, *t.c.* p. 207, mentions also *Z. semperi* as occurring on Rota, an island between Guam and Saipan, which are, according to Oustalet, both inhabited by *Z. conspicillata*, a view which seems to be correct, although I could not be quite certain about it. The reoccurrence of *Z. semperi* on Rota is very peculiar.]

13. *Acrocephalus lusciniæ* (Quoy & Gaim.) (Oust. I. p. 209).

Thryothorus luscinius Quoy & Gaim., *Voy. Astrolabe* I. p. 202. Pl. V. (1830).

Tatare lusciniæ Gray, *Gen. B.* (1849) III. p. 8, App.; Büttik., *Notes Leyden Mus.* XIV. p. 16 (1892).

Acrocephalus mariannæ Tristr., *Ibis* 1883. p. 45.

Tatare mariannæ Sharpe, *Cat. B.* VII. p. 528; Oustalet, *Naturaliste* 1889. p. 26.

Sylvia syrinx Kittl., *Reise* II. p. 141 (Guam, heard but not collected! Not *S. syrinx* Kittl. Carolines!).

Tatare lusciniæ, Oustalet in *Nouv. Arch. Mus. Hist. Nat. Ser. III. Vol. VII.* p. 209.

A good series both from Guam and Saipan. Birds from the two islands cannot be separated. Local name Guam : "Kalisō" (Quoy & Gaimard and Marche give it as "Gapio"). Maxilla, Ridgw. II. 3 (blackish slate); mandible V. 11 (cream-buff); iris IV. 3 ("madder-brown"); legs and toes II. 11 (mouse-grey); claw II. 5 (slate-grey).

As already mentioned by Mr. Rothschild in *Avifauna of Laysan* I. p. 2 of his article on his *Acrocephalus familiaris*, I agree with him and Canon Tristram in uniting the so-called *Tatare* with *Acrocephalus*. Although *Tatare longirostris* and *luscinia* seem to differ much from our *Acrocephalus* in their long bills, there are *A. syrinx* and *A. mendanae* bridging over the gap between *A. arundinaceus* and *A. longirostris* or *luscinia*, nor has the form of the wing sufficient constancy to warrant a generic separation. But even if *Tatare* is kept up by fanatic genus-splitters, *A. familiaris* Rothsch. from Laysan would go with *Acrocephalus*, not with *Tatare*. Song and nests and eggs of the so-called *Tatare* are like those of *Acrocephalus* sensu strictiore. On the other hand, Oustalet (p. 210) retains the genus *Tatare*, and says that certain members of the genus have different plumages in different seasons, a character which is not found in *Acrocephalus*. However, neither *A. luscinia* nor *A. syrinx*, of which we have large series, show any different plumages in different seasons or ages, so that I doubt the propriety of attributing generic value to the facts stated by Prof. Oustalet, of which we should very much like to know more.

A. luscinia has been rebaptised *A. mariannae* by Tristram, because he "feared that *luscinia* was preoccupied as a specific sylvian name," but I cannot find any *Acrocephalus* of that name, and we need not consider *Aëdon luscinia* (the nightingale), which is in a totally different genus. I do not know either why Sharpe in the *Catalogue of Birds* accepted the name of *T. mariannae*, as it was against his usual practice. Kittlitz's note that he heard the song of his *Sylvia syrinx* in the swamps of Guam no doubt refers to *A. luscinia*.

It is an extraordinary fact that, according to Oustalet, *t.c.* p. 210, *A. syrinx* (*Tatare syrinx*) was found by Marche on the island of Pagan, one of the northernmost Mariannes. As this species is otherwise an inhabitant of the Carolines, and seems not to occur in the Southern Mariannes, we would have here a peculiar instance of distribution, much like that of *Zosterops semperi*, if there is no mistake about that.

14. *Aplonis kittlitzii* Finsch & Hartl. (Oust. I. p. 212).

Wiglesw., *Aves Polynesiae* p. 44.

Iris, Ridgw. VI. 11 (lemon-yellow); bill, Ridgw. II. 1 (black); legs, toes, and claws, Ridgw. II. 3 (blackish slate). Another specimen: Iris V. 9 (ochre-yellow); bill II. 1; legs, toes, and claws, Ridgw. II. 1 (black).

Local name Guam: "Salé" and "Sōlei."

Very common on the island of Guam. Size somewhat variable, the wings of the *males* measuring from 118 to 131 mm., but mostly about 125 to 128 mm.

In May, June, and July many *males* had many of the white-edged feathers of the young on the underside, and old birds were much in moult, but in November, January, and March they were all in good plumage.

Finsch & Hartlaub described this species from the Caroline Islands, but it was found on the Marianne Islands by Kittlitz and Marche, and on the Pelew Islands by Tetens and Kubary.

We have also received a small series from Saipan, collected in July, and partly in moult, partly in full plumage. The Saipan specimens have mostly higher bills and mostly longer wings, but it seems impossible to found on them even a subspecies. Their wings measure from 122 to 133 mm. The Marianne birds cannot,

I think, be distinguished specifically from those from Ruk or Luganor, the only island from where I have specimens before me, and some from the Pelew Islands are also quite similar, though, on an average, with a trifle shorter wings. Wiglesworth (*l.c.*) states that "specimens from Yap are bigger than those from Ualan, but otherwise similar."

Two eggs found on Guam March 11th, 1895, "position of nest on 'Ninginku' tree." The eggs resemble much the eggs of several species of *Calornis*. They are of a very pale blue, spotted all over with deep rufous brown and deeper-lying brownish violet patches and spots, and measure 29 : 20 mm.

15. *Corvus kubaryi* Rchw. (Oust. I. p. 218).

Corvus solitarius Kittl., *Reise* II. p. 143 (1858) (Guam) (*nec C. solitarius* Württ. 1852, ex Hayti) (descr. nulla!).

Corvus kubaryi Rchw., *Journ. f. Orn.* 1885. p. 110 (Pelew Is.).

Corone philippina Wiglesw. (*nec* Bp.), *Aves Polynes.* p. 46.

Corvus solitarius, Oustalet in *Nouv. Arch. Ser. III. Vol. VII.* p. 218 (1895).

Kittlitz (*l.c.*) says: "In these forests (of the island of Guaham) lives singly a species of crow, which at the beginning I thought to be *Corvus corone*, and therefore neglected. Only too late I convinced myself that it was a new bird, to which I gave, for the time being, the name of *Corvus solitarius*, but I never found time to describe it properly. Unfortunately I could only keep one of several I shot. Afterwards I found the species again in Manila. I saw this crow always in trees only." From this note it is clear that Kittlitz's name is merely a "nomen nudum," besides being preoccupied by *C. solitarius* Württ (1852). It can therefore not be used for the Guam crow.

Wiglesworth, who certainly never saw a specimen of it, considered the Guam crow to be *C. philippina*, from which however it differs at a glance in its small size, the wing being more than two inches shorter, the bill and everything else incomparably less. It is much more like *Corvus pusillus* Tweedd., and from that species (also a Philippine one) it is chiefly distinguished by its dark black plumage, with only very little steel-blue gloss, and by a somewhat differently shaped bill.

I have sent one of our Guam skins to Prof. Reichenow, who kindly informs me that it is his *C. kubaryi*, which however he described as coming from the Pelew Islands.

Our specimens measure: ♂. Culm. 53—57 mm.; al. 230—245; caud. 160—170; tars. 50. ♀. Culm. 48—52 mm.; al. 220—230; caud. 160; tars. 50.

A dwarfed specimen, sex doubtful, Guam, July 25th, has the wing only 212 mm.; tail 146; culm. 47.

Local name: "Tōlilé." Bill black; iris III. 5 (vandyke brown); feet and claws black. Total length about 15—16 inches. From December to February they were in good plumage, but those shot late in March or later were very abraded and rough.

Marche has also obtained a skin at Rota. Future researches must show whether this raven is really found in the Pelew Archipelago. It is strange that former collectors did not find it there, as a crow is not a bird which is easily overlooked. I cannot help doubting the correctness of the statement that it comes from the Pelew Islands.

16. *Ptilinopus roseicapillus* (Less.) (Oust. I. p. 218).

We have received a large series from Guam and two from Saipan. Marche got it also in Rota.

Local name: "Totolu" or "Totoru." Iris, Ridgw. VI. 8 (chrome-yellow); legs and feet dark VIII. 18 (heliotrope-purple); claws II. 3 (blackish slate); bill X. 21 (oil-green).

Total length 200—230 mm.; wing 130.

The sexes do not differ materially, but some of our skins have the upper breast darker, less distinctly tipped with pearly grey; most of these are *females*, but not all. Specimens from Saipan are quite like those from Guam.

Nests were found in "Kamachiri" and "Abasu" trees, in different heights, three and six feet from the ground, and they contained one egg each. The eggs are of a glossless white, very pale yellow if held against the light. They measure 31.5 : 23, 31.6 : 21.4 (almost fusiform), and 35 : 22 mm.

17. *Turtur dussumieri* (Temm.) (Oust. I. p. 222).

Very common in Guam and also in Saipan.

Local name: "Paloma halomtano." Iris between Ridgw. VI. 3 and V. 1 (tawny orange); bill II. 11 (mouse-grey); feet between VIII. 17 and VIII. 20 (solferino and rose-purple).

The home of this dove is no doubt the Philippine Archipelago, and it is probably introduced in Guam, where however as long ago as Kittlitz's visit it was very numerous, and kept in cages in almost every house. Being aware of the fondness of the Malays for keeping doves in captivity, I do not doubt that this species is also not a native in Borneo, but only introduced there as well. Wilesworth however seems to believe the reverse, and credits Temminck with an "error" for giving the island of Luzon as the habitat of his species, but it is so universally distributed over the Philippines that I cannot see the origin of Wilesworth's theory. Oustalet also believes that it is introduced in Guam, and says that Marche found it less common than it was in Kittlitz's time. Our men however found it very numerous.

With No. 279 of his list however Wilesworth has again propagated a long-existing error, for *Turtur prevostianus* Bp. is = *T. picturatus* (Temm.), and came from Marianne Island, one of the Seychelles, but has nothing to do with the Marianne or Ladrone Islands.

Nests of *Turtur dussumieri*, each containing one fresh egg, were found on Guam in April and May. They were placed in "Lemoneina" trees. The eggs are somewhat longish and glossy, and nearly pure white if held against the light. They measure 29.5 : 22 and 29 : 22.4 mm.

18. *Phlegoenas xanthonura* Temm. (Oust. I. p. 224).

Columba xanthonura, Temm., *Pl. Col.* 190. livr. 32 (1823). (This figure shows distinctly a *female* or *young male* of this species. There is therefore no reason why the name of Temminck should not be accepted.)

Columba pampusan Quoy & Gaim., *Voy. Uranie*, Zool. pl. 30 (1824).

Columba xanthura auct. aliquot, nec Forst.

Columba erythroptera Hartl. (nec Gmel. !), *Journ. f. Orn.* 1854. p. 167.

Phlegoenas erythroptera Rehb., *Tauben I.* p. 41; Oust., *Naturaliste* 1889. p. 261.

Phlegoenas pampusan Wigglesw., *Aves Polynes.* p. 55; Salvad., *Cat. B. Brit. Mus.* XXI. p. 602. (*Teste Reichenow.*)

Phlegoenas virgo Rehw., *Journ. f. Orn.* 1885. p. 110.

Phlegoenas pampusan, Oustalet, *op. cit.* p. 224.

Not being able to find any differences between Dr. Reichenow's diagnosis of *P. virgo* and the Guam specimens, I sent some of the latter to that author, who kindly compared them with his bird and informed me that some of them were identical with his type. This is surprising, as the Pelew Islands are inhabited by another not very distantly related species (*P. canifrons*), and the island of Yap, between the Pelew and the Marianne Islands, is the home of another (*P. yapensis*). I can very well understand that Dr. Reichenow, not having a large series of *P. pampusan* before him, believed the rusty isabelline colour of the occiput and hind-neck to be a differentiating character; but that three very conspicuous species—i.e. *P. pampusan*, *Rhipidura uraniae*, and *Corvus kubaryi*—were found on the Pelew Islands, while Finsch in his work on the birds of that group in the *Journal of the Museum Godeffroy* had not mentioned them, and that they inhabited both the Pelew and Marianne Islands, while closely allied forms were found on the Pelew Islands as well as on Yap and the Marianne Islands, is difficult to understand. It will be seen from this article that all the three species described by Reichenow (*l.c.*) from the Pelew Islands have otherwise only been found on Guam, and I am therefore inclined to believe that these three species came really from Guam, and were labelled Pelew Islands by some mistake.

Our specimens agree perfectly with Salvadori's description in the *Catalogue of Birds*, but the hind-neck and occiput are sometimes deep rusty rufous, sometimes only very pale rusty buff, and in some nearly black, the latter younger examples. Younger females have pale edges to the feathers of the upperside.

We have it from Guam and Saipan. Local name of the male "Apaca," of the female "Paloma kuno." Iris ♂ Ridgw. III. 2 (clove-brown), ♀ II. 3 (blackish slate); feet ♂ and ♀ light VIII. 6 (light Indian purple); bill II. 5 (slate-grey).

19. *Excalfactoria sinensis* (Gm.) (not in Oustalet).

Guam, introduced! Local name: "Bishibishi." The collectors say: "It is reported that this bird was introduced last year from Manila by a man named Henry, but as it is found in different places on the island this statement may prove to be incorrect." It was probably introduced several times before.

(Oustalet mentions also *Gallus bankiva* as having been shot in Saipan by Mons. Marche. It was no doubt introduced, as also Oustalet admits.)

20. *Megapodius laperouse* Quoy & Gaim. (Oust. II. p. 26).

Five skins and a chick in first plumage from Saipan, and one from Guam. The chick was found on July 17th.

Local name Saipan: "Sachigāt." Bill, Ridgw. VI. 10 (gamboge-yellow),

spotted with II. 5 (slate-grey); legs and feet yellow, spotted with black on the toes, sometimes the toes quite black; iris VI. 2 (cadmium-orange).

This is the true *M. laperouse* which was described from Guam, Botta, and Tinian. Oustalet (in *Annales Sc. Natur.* 1891. p. 196) declared it to be the same as *M. senex* Hartl. from Pelew. Grant (*Cat. B.* XXII. p. 460) followed Oustalet, never having seen any specimens except from the Pelew Islands. The two forms are certainly very closely allied, but *M. senex* differs from *M. laperouse* in a decidedly paler grey top of the head, which is not obviously different from the nape; *M. laperouse* however has the crown darker and a patch on the nape or uppermost hind-neck pale ashy grey, in contrast with the colour of the crown. Wing 170—180 mm.

The young is coloured exactly like the one of *M. senex* described and figured in the *Journ. Mus. Godeffr.*

21. *Hypotaenidia owstoni* Rothsch. (Oust. II. p. 32).

Râle tiklin Quoy et Gaimard, *Voyage Uranie*, Zool. I. p. 35.

Rallus philippinensis, Wieglesworth, *Aves Polynesiae*, in *Abhandl. & Ber. Mus. Dresden* 1890-91. p. 59. sp. 305 (*partim*, *Râle tiklin* ex Guam).

Hypotaenidia owstoni Rothsch. in *Nov. Zool.* II. p. 481 (1895).

H. marcheii, Oustalet, *op. cit.* II. p. 32 (1896).

In 1895 Mr. Rothschild described this species from three *females*. It is named in honour of Mr. Alan Owston, of Yokohama. Since then Mr. Rothschild has received three more *females* and one *male*, all from Guam, where it was also found by Marche. The *female* is well described in *Nov. Zool.* II. p. 481 by Mr. Rothschild, and as also Professor Oustalet has given us a very good description, I need not add much. I may only say that the *male* seems a little larger than the *females*, especially the beak longer. Exposed culmen 40 mm.; wing 125; tail 44; tarsus 51.

The remiges are very soft and short, so that the bird cannot fly much. This is confirmed by the note of the collectors saying that "it cannot fly high." (See Rothsch., *Nov. Zool.* II. p. 487.)

22. *Gallinula chloropus* (Linn.) (Oust. II. p. 34).

Gallinula spec., Kittlitz, *Reise* II. p. 145.

Gallinula galeata var. *sandwichensis* (sic) (*nec* Streets, Stejneger, Ridgway, Wilson & Evans Sharpe), Oustalet, *op. cit.* p. 34.

Kittlitz, *Reise* II. p. 145, tells us that he got a moorhen on Guam, "which was very much like our *Gallinula chloropus*." "The *Gallinula*," he says, "is said to be very rare on Guam, and it may have much opportunity to hide in the inaccessible reed-thickets. I never saw it in the open, but I got two alive. Unfortunately only the less fine one of the two, a young *male*, remained for me, the other, much finer bird, escaping out of the cage in which it was brought. The iris in this was blackish brown; bill and frontal shield beautifully red; the feet yellow, with green toes and red knee-bands. The plumage seemed to be blacker than that of *G. chloropus*, which differs specifically already in the colour of the iris." The specimens before me, however, do *not*, according to the notes

of the collectors, differ by the colour of the eye from European moorhens, nor is their colour blacker. I have tried hard to find any distinguishing characters from European *Gallinula chloropus*, but failed. Although the oldest *males* have very fine large red frontal shields, they are matched by specimens from Africa, England, and the Malay Archipelago, nor is there any other remarkable difference.

Our collectors have sent us thirty-six well-prepared skins, all from Guam, shot in January, February, April, July, August, and December. This proves that it is a sedentary bird on Guam, where it also breeds. Local name: "Plataru." Iris, Ridgw. VII. 15 (Chinese orange); bill and frontal shield VII. 3 (crimson); tip of bill X. 20 (apple-green); feet X. 20 (apple-green); claws II. 5 (slate-grey). The collectors also supplied the following information on one of the labels, which I reproduce literally translated: "This bird was obtained in the neighbourhood of swamps. It is more frequently found near water. We caught alive an immature bird. We kept it in confinement and fed it with rice, but unfortunately, during our absence, it fell victim to the dogs. We observed that it was very quiet in the day-time, and used to move about only in the night-time."

Nests were found in December and March on Guam in the grass on swampy ground. The eggs are like those of European moorhens, and vary just as much in size, form, and markings.

Mons. Marche also procured some specimens, but they are referred by Professor Oustalet to what he terms "*Gallinula galeata* var. *sandwichensis*."

Having before me a good series of the *Gallinula* from the Sandwich Islands, collected by Mr. Palmer, I am able to state that the form from Guam does not at all belong to it, nor to *G. galeata*, which is the American form. The latter resembles very much our *G. chloropus*, from which it differs almost only in the form of the frontal shield, which is less rounded, but more truncated at the top.

If any one wishes to separate it only subspecifically, he cannot be blamed; but we may just as well follow the American ornithologists, Sharpe, and others in keeping it specifically distinct. On the other hand, *G. sandwichensis* Streets cannot be put down as a subspecies of *galeata*, from which it differs considerably by the extent of the frontal shield, which reaches beyond the eyes, is more rounded on the hinder corners, and *much more swollen*. I consider this form more distinct from *G. galeata* than *G. galeata* from *G. chloropus*. With regard to the subspecies of *G. chloropus*, I may say that it seems to me possible to separate the very small specimens from the Malayan Islands subspecifically, although it is difficult to draw a line of limitation. I also find that all the specimens I have seen from Madagascar and Réunion have the under tail-coverts buff throughout. This character, in the rare cases when found in European moorhens, is more or less confined to the outer under tail-coverts, and mostly due to a dirty condition. I therefore do not think it unwise to recognise *G. pyrrhorhoa* as a subspecies. *G. garmani*, which I have from the lake of Titicaca, is so large that I must consider it worthy of subspecific rank.

The status of this group of the genus *Gallinula* would thus be as follows:—

G. chloropus chloropus (L.), Europe, Africa, Asia (Guam).

G. chloropus (orientalis?), S.E. of Asia and Malayan Islands.

G. chloropus pyrrhorhoa Newt., Mauritius, Madagascar, Réunion.

G. galeata Bp., America generally.

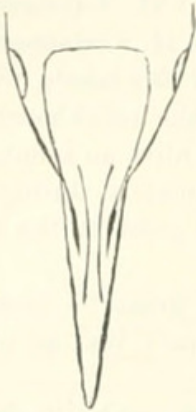
G. galeata garmani Allen, Lake Titicaca and Chili.

G. sandwichensis Streets, Sandwich Islands.

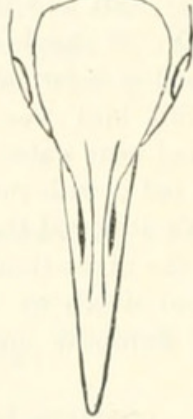
Sharpe also thinks that the West Indian specimens might be separated subspecifically from *G. galeata*. I do not know them.

The accompanying figures show our *G. chloropus* (an old male from Guam) and *G. galeata* and *G. sandwichensis*. They are taken from average-sized adult males.

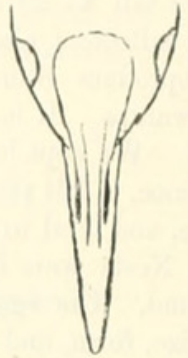
Gallinula galeata
(BRAZIL).



G. sandwichensis
(MOLOKAI).



G. chloropus
(GUAM).



23. *Fulica atra* L. (not in Oustalet).

An unsexed specimen, evidently a bird of the year, has been shot by the Japanese collectors on Guam in autumn. Wing 165 mm. Bill, Ridgway V. 8; legs and toes V. 8; claws II. 3. Total length 11 inches.

New to the ornithology of the Marianne Islands, where it is probably only an accidental visitor.

24. *Poliolimnas cinereus* (Vieill.) (not in Oustalet).

Guam, July, February, and about two dozen from August. Local name: "Galangajio" or "Garangajio." Maxilla dark V. 8; mandible V. 7; iris VII. 3; legs and toes V. 12; claws III. 23. The collector says: "The birds were obtained in a swamp, where you sink waist-deep, and overgrown with rushes. The note of this bird is pleasant (*sic*). It is no exaggeration to say that the swamp is so spacious that you forget your way back."

The bird is evidently very numerous in the swamps of Guam, although former collectors did not find it there.

The Guam specimens do not differ from those from other countries.

25. *Demiegretta sacra* (Gm.) (Oust. II. p. 36).

Common Guam and Saipan. Local name: "Chichuko."

Nests, composed of dry twigs and branches, were found among the grass on Saipan July 28th, 1895.

The eggs are very pale greenish blue, like other herons' eggs; sea-green inside if held against the light. They measure 44 : 34, 47 : 35, and 45 : 34.8 mm.

26. **Ardetta sinensis** (Gm.) (Oust. II. p. 38).

Guam, all the year round. Local names: "Kalalang" and "Cagag." Maxilla II. 1; mandible and tip of maxilla VI. 15; iris VI. 5; legs and toes VI. 15; claws III. 23.

The old birds are rather pale above.

27. **Numenius phaeopus variegatus** (Scop.) (Oust. II. p. 39).

N. tenuirostris Kittl., *Reise* II. p. 129.

Guam, March and February.

The eastern form of the wimbrel seems very distinct, but Stejneger and Seeborn were acquainted with many intermediate specimens, so that they had to regard it only as a subspecies.

28. **Numenius cyanopus** Vieill. (not in Oustalet).

♂. Guam, December 11th, 1894. Local name: "Kalalau" or "Kalalaug." Bill II. 1; from middle to base of mandible light II. 5; legs between II. 6 and II. 7.

I believe that the species is never recorded with absolute certainty from the North Pacific Islands, but the "Corlieux" of Messrs. Quoy & Gaimard (*Voyage Uranie*) was probably this species, and perhaps some other references now referred to *N. tahitiensis* might belong to *N. cyanopus*.

29. **Limosa lapponica baueri** (Naum.) (not in Oustalet).

♀. Guam, November 26th, 1894. Local name: "Kalalaug" or "Kalalau." Bill II. 3; basal half of mandible II. 15; iris between III. 2 and III. 5; legs and toes II. 6.

30. **Totanus hypoleucus** (Linn.) (Oust. II. p. 43).

♀. Saipan, July 27th, 1895.

31. **Totanus incanus** (Gm.) (Oust. II. p. 41).

Guam, common in March and April. Local name: "Dōli."

(Mons. Marche shot also a *T. glareola* on Guam. See Oust. II. p. 43.)

32. **Gallinago megala** Swinh. (not in Oustalet).

One *female*, Guam, December 16th, 1894. Local name: "Kalalau" or "Kalalaug." Bill II. 3; basal half II. 11; iris III. 1; legs and feet II. 13. Tail unfortunately in moult. Wing 141 mm.; bill 65.

This bird agrees with skins of *Gallinago megala* from Palawan (Whitehead coll.), but the bill is a little longer. Those from Palawan have bills 55—60 mm. in length.

33. **Tringa arenaria** Linn. (not in Oustalet).

Guam, December. Local name: "Dōli."

Some specimens with grey upperside, some with black spots on the back.

(Marche also collected *Tringa acuminata*. Oust. II. p. 44.)

34. *Charadrius fulvus* Gm. (Oust. II. p. 46).

Guam, very common in March and April. Local name : "Dōli."

35. *Streptopelia interpres* (Linn.) (Oust. II. p. 45).

Guam, common in March and April. Local name : "Dōli."

36. *Charadrius squatarola* Linn. (not in Oustalet).

Saipan, August 7th, 1895. Bill II. 1 ; iris between III. 1 and III. 2 ; legs and toes II. 6. A rather large specimen. Exposed culmen 33 mm. ; wings 191 ; tarsus 45.

There seems to be a large race which winters in Australia (cf. Hartert, *Katal. Vogels. Senckenb. Mus.* p. 217, footnote 406), and which was named *C. rhynchomega* by Bonaparte ; but if I recollect it well, its head was remarkably larger than in the specimen from Saipan. The first primary of the Saipan specimen has much white in the middle of the outer web.

37. *Charadrius mongolicus* Pall. (Oust. II. p. 48).

Guam, February and November. Local name : "Dōli."

38. *Anas oustaleti* Salvad. (Oust. II. p. 49).

(?) *Anas boschas a. freycineti* Bp., *Compt. Rend.* XLIII. p. 649 (*nomen nudum*. "Isles Malouines" [?]. Oust. thinks it may have come from the Marianne Islands!).

Anas oustaleti Salvad., *Bull. Brit. Orn. Club* No. XX. p. 1 ; id., *Cat. B. Brit. Mus.* XXVII. p. 189 footnote.

I have before me adult *males* and *females* from the months of January, April, August, and December, and I find that Salvadori's suspicion, that the bird described by him might not be in full dress, is unfounded. In fact the sexes, as in *A. superciliosa*, do not differ materially. The central rectrices of the specimens before me are very soft, and become very likely easily curled, but they show a tendency rather to curl down than to curl up.

This excellent species has the top of the head brownish black, with a slight greenish gloss. Rest of upper parts more brownish, feathers narrowly edged with brown, back often uniform. An indistinct blackish superciliary stripe, being separated from the top of the head by only a narrow pale line. Sides of head and neck buff, streaked with dark brown. Throat buff, not streaked. Wings dark brown ; speculum bluish purple, a little greenish in a certain light, but never pure metallic green as in *A. superciliosa*. Speculum bordered *above and below* by a black line, *followed by a white band*. Under wing-coverts and axillaries white. Total length about 21 inches ; wing 245—265 mm. ; culmen 55 ; tarsus 40.

At once distinguishable from *A. superciliosa* by the purple speculum, which is lined with black *and white* lines above and below, darker and spotted cheeks, indistinct superciliary stripe, broader bill, and paler somewhat greyish brown upper wing-coverts without any pale margins.

Guam and Saipan. Local name : "Nagai."

Bill, Ridgw. II. 5 (slate-grey), sparingly spotted with II. 1 (black) ; iris light III. 1 (light seal-brown) ; legs and feet IV. 10 (ferruginous) ; claws II. 5 (slate-grey).

39. *Hydrochelidon leucoptera* (Meisn. & Schinz) (Oust. II. p. 57).

A young bird shot on Guam, November 6th. Native name: "Chūgi." Bill II. 1 (black); iris II. 1; legs and feet IV. 6.

It may also be mentioned that we have received two adult *H. leucoptera* from a place called "Ogasawara." They have been sent us with other rare Japanese birds by Mr. Owston, and are no doubt from one of the islands belonging to Japan, though I cannot find the name on our map.

40. *Gygis alba kittlitzi* Hartert (Oust. II. p. 58).

I am inclined to keep up my subspecific term for the white tern of the North Pacific, not that I consider it *very* different from others, but to call attention again to the fact that the northern birds are regularly smaller than those from the South Pacific. I have before me now half a dozen white terns from Guam, a series from Laysan and Lisiansky, and one from Huahine, which I have compared with a large series from the Kermadec Islands, and I found that they all have the bill from 3 to 10 mm. shorter and the wing from 6 to 20 mm. shorter than those from the Kermadecs, a fact which in any case is worth recording. (Cf. Hartert, *Katal. Vogels. Senckenb. Mus.* p. 237, footnote 460; Rothsch., *Avif. Laysan I.* p. 36; Saunders, *Cat. B. Brit. Mus.* XXV. pp. 149—152.)

Mr. Saunders (*l.c.*) prefers the name *G. candida* (1788), instead of *G. alba* (1786), for reasons given *P. Z. S.* 1876. p. 667—namely, that the latter was badly described. Sparrman's description, however, is quite recognisable, and there is no other tern to which it could apply (except *G. microrhyncha*, which is only known from the Marquesas!). He says, "*Sterna tota alba, rostro pedibusque nigris*," and further, that it has the size of *S. nigra*, and is found in the South Sea, in India, and at the Cape of Good Hope. Saunders' description (*l.c.*) runs: "Above and below ivory-white, except for a narrow black ring round the eye; at times some dark colour on the shafts of the primaries and rectrices, depending, I think, on the age of the feather: bill black; irides blue; tarsi and toes dark brown, the webs yellow and very much incised." (Follow exact measurements.) If we consider that the ring round the eye is very narrow indeed and not visible in bad skins, such as they most likely had over a hundred years ago, there is no great difference between the two descriptions. The feet are certainly more black than brown in skins, nor are they exactly "dark brown" in life. If Sparrman's description is to be rejected, then hardly any Linnean or any older name can be accepted, and a good many modern names must be rejected too, as one can easily find out by glancing them over. Sorry as I am for dissenting in any case from the *Catalogue of Birds*, I must accept *Sterna alba* of Sparrman. If we care for an undisturbed standard nomenclature at all, we must be strict and firm to the utmost in following priority without exceptions—unless the name is already used in the same *genus*, or not with any certainty referring to the species in question, which, I think, Sparrman's name does as well as any other.

Our collectors found this species *breeding on Saipan*, and sent skins from there and from Guam, shot in the months of January, February, and March. The native name is "Chūgi." The iris is given as Ridgway III. 1 to III. 2, the centre of the eye as II. 1 (seal-brown to clove-brown); bill II. 1 (black), basal part light IX. 5 (light hyacinth-blue); legs and toes II. 15 (plumbeous), claws II. 1 (black).

Kittlitz (*Reise II.*) also describes the iris as blackish brown, Gould (*B. Australia*) as black.

Eggs were found on Saipan on July 28th and August 11th. They mostly perfectly agree with the eggs of this species, as described and figured elsewhere, especially with those figured in Part I. of Walter Rothschild's *Avifauna of Laysan*, and are of the same size. They vary much, however, in size, shape, and colour. One egg is rather longish, measuring 44 : 31.4 mm., and being white with very pale and small greyish and brownish grey spots. Another egg is nearly spherical, measuring 33.5 : 32.9 mm., and dirty yellowish, all over sprinkled and spotted with darker and paler brown and greyish. One is dirty brown, marked all over with dark brown spots, patches, and zigzag lines. Some specimens have a ringlike zone, but all, except the longish white one, are more or less characteristic *Gygis* eggs. Specimens from the Kermadec Islands are quite similar, but on an average (though not all) a little larger.

All the eggs were found without any nest on the forks of low trees, every bird laying one egg only.

41. *Anous stolidus* (Linn.) (Oust. II. p. 59).

Guam, three specimens from April.

Mons. Oustalet enumerates further: *Anous leucocapillus* Gould, *Phaëton candidus* Temm., *Sula leucogastra* Bodd., *Sula piscatrix* L., *Tachypetes aquila* var. *minor*, *Larus vegae* Palmén, *Puffinus tenebrosus* Pelz., which Salvin unites with *P. obscurus*, but which Oustalet considers to be different, *Puffinus obscurus* (Gm.), *Diomedea nigripes* And., *Fuligula cristata* Steph. None of these (which I quote with Oustalet's names) were sent by our men, who had no boat of their own, and who did not visit Rota and Agrigan, where most of these were found.

We have thus the following list of the birds known to occur in the Marianne Islands, and it is not to be expected that many more will be found, although collections from Rota and the islands north of Saipan would still be of interest, while we may accept that Guam and Saipan, where most of Marche's collections were formed, and where Mr. Owston's Japanese collectors did their careful work, are now ornithologically very well known:—

LIST OF BIRDS KNOWN FROM THE MARIANNES.

1. *Astur sharpei* Oust. (? See No. 1.)
2. *Accipiter nisoides* Blyth. (Accidental.)
3. *Asio accipitrinus* (Pall.). (Accidental.)
4. *Halcyon albicilla* Dumont. (Resident, northern islands.)
5. „ *cinnamomina* Sw. (Resident, Guam.)
6. *Collocalia fuciphaga* (Thunb.). (Resident.)
7. *Rhipidura uraniae* Oust. (Resident, Guam.)
8. „ *saipanensis* Hart. (Resident, Saipan.)
9. *Myiagra freycineti* Oust. (Resident.)
10. *Myzomela rubratra* (Less.). (Resident.)
11. *Cleptornis marcheii* Oust. (Resident, Saipan.)
12. *Zosterops conspicillata* (Kittl.). (Resident.)
13. „ *semperi* Hartl. (Rota, acc. to Oustalet.)
14. *Acrocephalus lusciniæ* (Quoy & Gaim.). (Resident, Guam.)
15. „ *syrinx* (Kittl.). (Pagan, acc. to Oustalet.)

16. *Aplonis kittlitzii* F. & Hartl. (Resident.)
17. *Corvus kubaryi* Rehw. (Resident.)
18. *Ptilinopus roseicapillus* (Less.). (Resident.)
19. *Turtur dussumieri* (Temm.). (Probably introduced.)
20. *Phlegoenas xanthonura* (Temm.). (Resident.)
21. *Gallus bankiva* Temm. (No doubt introduced and run wild.)
22. *Excalfactoria sinensis* (Gm.). (Probably introduced.)
23. *Megapodius laperouse* Quoy & Gaim. (Resident.)
24. *Hypotaenidia owstoni* Rothsch. (Resident, Guam.)
25. *Gallinula chloropus* (L.). (Resident, Guam.)
26. *Fulica atra* L. (Probably accidental; Tring Mus.)
27. *Poliolimnas cinereus* (V.). (Resident, Guam; Tring Mus.)
28. *Demigretta sacra* (Gm.). (Resident.)
29. *Ardetta sinensis* (Gm.). (Resident.)
30. *Numenius phaeopus variegatus* (Scop.). (On migration.)
31. „ *cyanopus* V. (On migration; Tring Mus.)
32. *Limosa lapponica baueri* (Naum.). (On migration; Tring Mus.)
33. *Totanus hypoleucus* (L.). (On migration.)
34. „ *incanus* (Gm.). (On migration.)
35. „ *glareola* (L.). (On migration; Paris Mus.)
36. *Gallinago megala* Swinh. (On migration probably; Tring Mus.)
37. *Tringa arenaria* L. (On migration; Tring Mus.)
38. „ *acuminata* (Horsf.). (On migration; Paris Mus.)
39. *Charadrius fulvus* Gm. (On migration, numerous.)
40. *Streptilas interpres* (L.). (On migration, numerous.)
41. *Charadrius mongolicus* Pall. (On migration.)
42. „ *squatarola* L. (On migration; Tring Mus.)
43. *Anas oustaleti* Salvad. (Resident.)
44. *Fuligula fuligula* (L.). (On migration; Paris Mus.)
45. *Diomedea nigripes* Aud. (Probably accidental; Paris Mus.)
46. *Puffinus obscurus* (Gm.). (One specimen; Paris Mus.)
47. „ *tenebrosus* Pelz. (One specimen; Paris Mus.)
48. *Larus vegae* Palmén. (One female; Paris Mus.)
49. *Hydrochelidon leucoptera* (Meisn. & Schinz). (Probably rare visitor.)
50. *Gygis alba kittlitzii* Hart. (Resident.)
51. *Anous stolidus* (L.). (Perhaps resident.)
52. „ *leucocapillus* Gould. (Resident, acc. to Oustalet.)
53. *Phaeton candidus* Temm. (Resident, Agrigan; Paris Mus.)
54. *Sula sula* (L.). (One sent by Marche; Paris Mus.)
55. „ *piscatrix* L. (Rota, May.)
56. *Tachypetes minor* (Schleg.). (Probably accidental.)

These 56 species are all known up to the present day. Kittlitz (*Reise* II. p. 146) says that he observed 23 species of birds on Guam, of which however several were not identified.

Wiglesworth (*l.c.*) names 31 species as occurring on the Marianne Islands, of which however one (*Turtur prevostianus*) was given erroneously. Oustalet in his great work enumerates 47 species.



Hartert, Ernst. 1898. "On the Birds of the Marianne Islands." *Novitates zoologicae : a journal of zoology in connection with the Tring Museum* 5, 51–69.

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