the central bands by a tawny dark-edged band; the cell of the primaries is whitish at the base and crossed by a dark-margined spot of the same colour near the end; beyond it is a similar mark running into the central white band.

Hab. Volcano of Chiriqui (*Arcé*).

Mus. nostr.

A beautiful and distinct species, coming perhaps nearest *A. syma* (Hübn.) of S. Brazil.

Papilionidæ.

19. Papilio syedra, sp. n.

♂. Exp. 5 in. Allied to *P. abderus*, Hopff., and *P. asclepius*, Hübn., the yellow submarginal lunules of the secondaries being absent as in the former of these two species. From it the present species differs in the row of black lunules which traverse the secondaries beneath, beyond the yellow band, being distinctly margined on their inner convex edges with maroon, the outer concave edges enclosing an area of blue; these marks in *P. abderus* are respectively grey and yellow: the submarginal lunules beneath on the secondaries are deeper maroon than in *P. abderus*.

Hab. Volcano of Chiriqui (*Arcé & Ribbe*).

Mus. nostr. et O. Staudinger.

We have long possessed a single specimen of this species. Having recently seen others in the collection of Dr. Staudinger, we have been able to test the stability of the characters by which it differs from *P. abderus*.

5. On a small Collection of Birds from the Ellice Islands. By R. Bowdler Sharpe, F.L.S., F.Z.S., &c. With a Note on other Birds found there, by the Rev. S. J. Whitmee.

[Received January 21, 1878.]

The Rev. S. J. Whitmee has been so kind as to submit to me a small parcel of birds obtained for him by a collector in the Ellice Islands. The few skins do not give materials for a large paper; but I trust that the details connected with the synonymy of *Anous cæruleus* will be found interesting.

1. Ardea sacra, Gm.; Finsch & Hartl. Faun. Central-Polyn. p. 201 (1867).

Two specimens in changing plumage, one with the white dress nearly complete, the other still with plentiful remains of ashy-brown feathers.

2. Anous cæruleus.

I must acknowledge the assistance which I have received from Mr.

Howard Saunders's paper on the Sterninæ in the 'Proceedings of this Society for 1876; and it is solely through want of material that he was unable to discriminate the two Grey Noddies of the Pacific, as I am able to do from the receipt of the present specimens.

Two examples are in the collection now sent; and I saw at once that they belonged to a different species from the bird marked as *A. cæruleus* in the national collection. The following is a description of one of these specimens:—

Suprà cinereus, alis caudâque quam dorsum vix saturatioribus: primariis duobus externis extùs magis nigricantibus: pileo colloque undique puriùs canis, fronte et facie anticâ albicantibus: maculâ parvâ anteoculari nigrâ: corpore reliquo subtùs cinereo, subalaribus externis et margine alari canescentibus: rostro nigro.

Long. tota 9·3, rostri a fronte 0·95, alæ 6·6, caudæ 2·75, rectricis penultimæ 3·85, tarsi 0·9.

It appears that this small species is unquestionably the true *Sterna cærulea* of Bennett, and that Mr. Gould was perfectly right when he separated the North-Australian bird as *Anous cinereus*, and that he was wrong in sinking this name, published in 1845, in favour of Néboux's, which was not published until 1846. The following appears to be the true synonymy of the two species.

ANOUS CÆRULEUS.

Sterna cærulea, F. D. Bennett, Narr. of a Whaling Voyage, ii. App. p. 248 (1840).

Sterna cendré, Néboux, Rev. Zool. 1840, p. 291.

Sterna tereticollis, Lafr. Rev. Zool. 1841, p. 242.

Procelsterna tereticollis, Lafr. Mag. de Zool. 1842, pl. 29.

Anous parvulus, Gould, P. Z. S. 1845, p. 104; Cassin, U.S. Expl. Exp. Birds, p. 393 (1858); Gray, Cat. B. Pacific Isl. p. 60 (1859).

Anous gracilis, Gray, Gen. B. iii. p. 661 (1846, lapsu).

Stolida cinerea, Néboux, Voy. Vénus, Atlas, pl. 9 (1846, nec Gould).

Megalopterus plumbeus, Peale, U.S. Expl. Exp. p. 285 (1848).

Anous cinereus, Prévost et Des Murs, Voy. Vénus, v. p. 276 (1855); Finsch & Hartl. Faun. Central-Polyn. p. 239, taf. xiii. fig. 4, taf. iv. figs. 4 & 5 (1867).

Procelsterna cinerea, Bp. C. R. xlii. p. 773 (1856).

Anous cinerea, Gray, Hand-l. iii. p. 123. no. 11088 (1871).

Diagn.: *Minor, schistaceo-cinereus, pileo et corpore subtùs toto vix pallidiùs cinereis; secundariis externis angustissimè ad apicem albo limbatis; subalaribus schistaceo-cinereis.*

Hab. in insulis orientalibus maris Pacifici.

ANOUS CINEREUS. (nec King)

Pelecanopus pelecanoides, Gray, List of *Anseres*, p. 180 (1844).

Anous cinereus, Gould, P. Z. S. 1845, p. 104; id. B. Austr. fol. pl. 46 (1848): Reichenb. Vög. Neuholl. p. 181. no. 536 (1850).

Anous tereticollis, Gray, Gen. B. iii. p. 661 (1846).
Procelsterna albivitta, Bp. C. R. xlii. p. 773 (1856); Gould, Handb. B. Austr. ii. p. 420 (1865).
Sterna cinerea, Schleg. Mus. P.-B. *Sternæ*, p. 38 (1863).
Anous albivitta, Gray, Handl. B. iii. p. 123, no. 11089 (1871).
Anous cæruleus, Saunders, P. Z. S. 1876, p. 671 (*nec* Bennett).

Diagn.: *Major, suprà cinereus; pileo et collo undique et corpore subtùs toto albicanti-cinereis; secundariis conspicuè albo terminatis; subalaribus albis.*

Hab. In Australiâ septentrionali et orientali usque ad insulas Pacificas 'Friendly' dictas.

Dr. Finsch, in his paper read before the Society on the 20th of November last, records this species from Eua in the Friendly group. He recognizes the distinctness of the two species; but there is no need to restore the name of *Anous albivitta*, as the title *cinereus* was given by Gould in 1845, and Néboux's *A. cinereus* was not published till 1846.

3. Anous stolidus (L.); Saunders, P. Z. S. 1876, p. 669.

Two specimens.

4. Anous leucocapillus, Gould; Saunders, P. Z. S. 1876, p. 670.

A single example of a Noddy apparently referable to this species.

5. Sterna anæstheta (Scop.); Saunders, P. Z. S. 1876, p. 664.

One specimen.

6. Gygis candida (Gm.); Saunders, P. Z. S. 1876, p. 667.

One specimen.

Besides the above-named species there are some eggs, two of a Noddy Tern, sent with the skins of *Anous stolidus* and *A. leucocapillus* and probably belonging to the former, and three eggs apparently of a Duck. In one box were also two wings of a small Parrot.

Note on the preceding Communication. By the Rev. S. J. Whitmee, F.R.G.S., C.M.Z.S.

During 1876 Mr. Fritz Jansen, a Danish Botanical student who had been residing with me in Samoa for a year, collecting the flora of those islands, went on a cruise through several groups of islands to collect for me the flora and as much as possible of the fauna existing there. In addition to the birds included in the foregoing list, he saw a *Carpophaga* in the Ellice Islands; and the Frigate-bird (*Fregata aquila*) also occurs there. In fact, the latter bird is domesticated by the natives; and when I was in those islands in 1870 I saw scores of them about the villages sitting on long perches erected for

them near the beach. The natives procure the young birds and tie them by the leg and feed them till they are tame. Afterwards they let them loose, and they go out to sea to get their food, and return to their perches in the villages at intervals.

I cannot say to what species the *Carpophaga* is referable, not having seen it myself. Mr. Jansen procured young ones in May and June; but he, thinking they were the same as the Pigeon found in Samoa (*C. pacifica*), did not preserve any specimens. Natives of the Ellice Islands who were in Samoa when I left there, told me their pigeon is like the Samoan species, "except that it is smaller, owing to its food being less plentiful." That is their own explanation of the cause of difference. They say it feeds almost entirely on the fruit of the native fig (*Ficus*, sp.). They also tell me it is not gregarious in those small islands as it is in Samoa during part of the year. As far as they know it does not migrate, but may always be found sparsely distributed over the islands.

So far as I have been able to learn, no Pigeon occurs in the Gilbert Islands; but a *Carpophaga* occurs in the Union or Tokelau Islands. Mr. Jansen tells me that all the birds he procured in the Ellice Islands, which are included in the foregoing list, are found also in the Union Islands. This may probably be considered nearly a complete list of the avifauna of those small atolls.

6. Note on the Dentition of *Cuscus*.

By EDWARD R. ALSTON, F.L.S., F.Z.S., &c.

[Received January 25, 1878.]

In reporting last year on the Rev. G. Brown's collection from New Ireland and the vicinity[1], I observed that the two specimens of *Cuscus* contained in it differed from the characters usually given of *C. orientalis* in having but two small teeth behind the large lower incisors, and in wanting the small extra upper premolar. At the same time I corroborated Mr. Waterhouse's remark[2] that the number of functionless teeth is not always trustworthy in this group, and observed that it must be left to future investigation to show whether the New-Ireland Phalangers were or were not constant in the peculiarity of their teeth.

Mr. Sclater has now kindly placed in my hands a second small collection received from Mr. Brown, consisting of one example of *Mus browni*, Alst., one of *Uromys rufescens*, Alst., ten of *Belideus ariel*, Gould, and eight of *Cuscus orientalis*, Pall. All these species were represented in Mr. Brown's former consignment; but the series of the last-named now available enables me to decide the question as to its dentition.

In *four* of these eight specimens the extra upper premolar is

[1] P. Z. S. 1877, p. 126. [2] Nat. Hist. Mamm. i. p. 265.