

January 27, 1870.

Professor Newton, V.P., in the Chair.

Mr. Sclater read extracts from several letters addressed to him by Mr. Robert B. White, C.M.Z.S., concerning the Hairy Tapir (*Tapirus roulini**), specimens of which Mr. White was endeavouring to procure for the Society's Menagerie. In a letter dated Popayan, 8th June, 1869, Mr. White wrote as follows:—

“During the past two months I have been several times on the central Cordillera, to the Volcano of Puracé and elsewhere, and have thought that it would be highly interesting to the Society to get specimens of the Tapir which is found there. Boussingault speaks of it, I think; but owing to the stupidity of the natives, the tales told about the animal are so absurd as to throw discredit on its existence. They are very shy, and I have not been able to get near them, but have seen them at a distance of half a mile, with a telescope, bathing themselves in a small lake. I have also seen the foot-prints, the excrement, and the skins occasionally brought in by the Indians. From this I can say that this Tapir is about the size of the ordinary one, greyish black, with very powerful snout and hoofs. It is never found at a lower elevation than 3500 metres above the sea-level, where the temperature is 6° to 10° Cent., and it exists up to 4200 metres. It would therefore be easy to acclimatize it in England; for it constantly freezes in the Cordillera at 4000 metres. These animals are rarely killed, because the skin only sells for about 3s.; but last week I bought a Bear's skin from an Indian, who sometimes kills Tapirs.”

Mr. Sclater remarked that this Tapir was a very rare animal, and that he believed that there was no complete specimen of it in any European collection†. It appeared to have been first discovered, about 1828, by Dr. Roulin, during his residence at Bogota‡, on the Paramos of Quindiu and Suma Paz. A second French naturalist, M. Justin Goudot, who was in New Granada about 1842, had given us some particulars concerning the life and habits of this Tapir in a memoir published in the ‘Comptes Rendus’ of the Academy of Sciences of Paris (vol. xvi. p. 331, 1843). M. Goudot met with the animal at an elevation of from 1400 metres to 4400 metres (being nearly up to the snow-level) on the Peak of Tolimá.

The only other original authority that mentioned this animal was

* The first *Latin* specific name applied to this Tapir appears to be *roulini* of Fischer (Syn. Mamm. Add. p. 406), 1829. Wagler's term *villosus* (Syst. d. Amph. p. 17) is one year later; and the earlier French writers merely call the animal *Tapir pinchaque*.

† [In reply to inquiries, M. Alphonse Milne-Edwards kindly informs me that the collection of the Jardin des Plantes includes only two crania of this Tapir—one obtained by M. Roulin in 1828, and the other by M. Goudot in 1843.—P. L. S.]

‡ See Cuvier's report on M. Roulin's memoir (Ann. Sci. Nat. xvii. p. 107), and M. Roulin's memoir itself (Ann. Sci. Nat. xviii. p. 26).

Tschudi, who, however, gave its occurrence in Peru (Faun. Peruan. Mamm. p. 213) from hearsay, not having himself observed it. According to the native reports, it was found in Peru, on the eastern slope of the minor Cordilleras, at an elevation of from 7000 to 8000 feet above the sea-level.

Mr. Sclater remarked that the acquisition of a living specimen of this animal would be of great interest to science, and announced that the Council had already placed a sum of money at the disposal of Mr. White for the purpose of making preliminary investigations.

In laying before the Meeting a skin of the North-American *Zonotrichia albicollis*, which had been shot near Aberdeen on the 17th of August 1867*, and sent for exhibition by Mr. W. C. Angus of that town, Professor Newton called attention to the practice of many, or most, ornithologists in this country, who are prone to give the name of "British birds" to all such species as occur from time to time in the United Kingdom. This practice he deemed to be very injudicious, as it tended to confound every correct notion as to the geographical distribution of species—one of the most important subjects with which naturalists had to deal. Without venturing at present to draw a positive line of demarcation, he thought that at any rate those species of birds which confessedly do not breed within the limits of the zoogeographical region in which the British islands lie should on no account be termed "British," and that it should be a matter for future deliberation how far the same title might properly be given even to species which certainly do breed within the same limits. Speaking accurately, the term "British" should be restricted to those species of birds which for a longer or shorter period of the year actually *inhabit* the British islands. But Prof. Newton was inclined to think that this rule might be relaxed in the case of certain European or even North-Asiatic species which, though apparently only chance stragglers, might reasonably be regarded, in the absence of more complete observations, as occurring much oftener without attracting attention; and added that it was quite possible that some of these, which had been noticed the most frequently, were in fact regular annual visitors to this country.

Dr. Cobbold, F.R.S., exhibited specimens of, and made remarks upon, the new Entozoon from the Aard-wolf, described at the last Meeting of the Society, and proposed to be called *Acanthocheilonema dracunculoides* (vide *antea*, p. 9).

Mr. G. Dawson Rowley, F.Z.S., exhibited, and made the following remarks upon, a specimen of the Siberian Lark (*Alauda sibirica*, Gmelin) and other rare British birds:—

"I have the pleasure to exhibit to the Society a specimen of the

* *Vide* Proceedings of the Natural-History Society of Glasgow, vol. i. part I, p. 209, plate.

Siberian Lark (*Alauda sibirica*, Gmelin; the *Alauda leucoptera* of Pallas). It was caught near Brighton, November 22, 1869, out of a flock of about two dozen of *Emberiza nivalis*, and is a female. This is, as far as I know, the first of this species ever captured in Great Britain.

"I also place before the Meeting a Wild Canary (*Fringilla canariensis*), taken in a clap-net November 20, 1869. How such a bird arrived in this country I cannot say.

"The third bird which I have to show is a Lapland Bunting (*Emberiza calcarata*).

"These three birds are recorded in the January number of the 'Zoologist' this year as *Fringilla nivalis*, *Emberiza rustica*, and *Fringilla citrinella*. With the aid of Professor Newton, when we saw the Lark on the 1st of January, I assigned to it its true designation. Various Northern species have lately occurred at Brighton, in addition to *Alauda sibirica*, such as *Emberiza pusilla*, *Emberiza rustica*, *Turdus atrigularis*, and *Pyrrhula erythrina*, all of them of considerable interest."

The following papers were read:—

1. Letter on the Discovery of Cooking-pits and Kitchen-middens in Canterbury Settlement, Middle Island, New Zealand. By Dr. JULIUS HAAST, F.R.S. Communicated, with Remarks, by Prof. OWEN, F.R.S., F.Z.S., &c.

As most of the information on record respecting *Dinornis* is to be found in the publications of the Zoological Society of London, I use the liberty given me by my esteemed correspondent Dr. Haast, F.R.S., to submit to the same Society the accompanying letter of October 20th, 1869, received January 8th, 1870:—

"Canterbury Museum,
Christchurch, N. Z.,
October 26, 1869.

"MY DEAR PROFESSOR OWEN,—I have to thank you very much for your kindness in sending me Parts XI. and XII. of your Memoirs on *Dinornis*, which I received by last mail, and which I have read with great interest. Concerning the age of remains of the *Dinornis robustus*, described in the first, I have not visited the locality where they were found, but am certain that they must have been buried in very dry sand, because I have no doubt that the species of *Dinornis* have been extinct many hundreds of years—an opinion which I formed some years ago from the manner of their occurrence, as well as from the fact that the Maories, the present inhabitants of New Zealand, have no traditions about them. Some time ago I sent a paper on some prehistoric remains of New Zealand to Sir Charles Lyell, in which I have treated of the subject. Since then I have been so fortunate as to find a large Moa-hunters' encampment, with

their cooking-places and kitchen-middens, covering more than forty acres, near the mouth of the River Kakaia, where I have made extensive excavations. The results, which I shall publish as soon as some other work which I have in hand will allow me, will be considered not uninteresting, as they give us not only an insight into the habits of a primitive people who hunted (and, I may say, exterminated) the *Dinornis*, but have also brought to light their rough stone implements. These are either pieces of hard sandstone broken off from large boulders in a peculiar manner, or made of flint or, rather, hard siliceous rocks, chipped very roughly, and generally the exact counterpart of those found at Amiens. Some of them are, however, chipped only on one side, the other side being perfectly flat. I have drawings made for publication of some of the most characteristic ones. The cooking-places or ovens are built like those of the Maories, and are now covered by from 6 to 8 inches of silt and vegetable soil.

"But what is still more striking is the state in which the Moa bones are found. I collected from some of the kitchen-middens all the bones, and brought them to Christchurch to sort them; and the result was a very interesting one; in every respect it coincided with that obtained by the excavations at Glenmark. If you will look at the list in the 'Transactions of the New-Zealand Institute' (vol. i. p. 89), you will observe that by far the greater number of bones belonged to *D. casuarinus* (45), the next to *D. didiformis* (37), and then to *D. crassus* (14). The same proportional occurrence is also found in the case of the kitchen-middens—*D. casuarinus* predominating, and *D. didiformis* and *D. crassus* following in numbers. There are also some bones of *D. elephantopus* (13) and of a small *Palapteryx ingens* (belonging to several specimens), but none of *D. giganteus* and *D. robustus*.

"The leg-bones are all broken, the tibiæ on both sides near the end, so as to get out the marrow or the contents of the hollow of the bone. At the same time both ends are generally scooped out, so as to suggest at once that the Moa-hunters used a flint flake as a spoon to get the animal eatable matter out of those parts of the bone which were more difficult to break. The middle portion of the tibiæ is nearly always broken into small fragments; and I found near the kitchen-middens several large flat stones and also others of an oblong form, which had doubtless been used for the purpose of smashing them. Femora and metatarsi of specimens belonging to *D. casuarinus* and *D. didiformis* are partly broken in the centre, partly on both sides; but those of *D. crassus* and *D. elephantopus*, owing to their pachydermal form and the narrow hollow inside, are generally only broken in the centre, and in many cases are still intact, as not offering sufficient inducement for taking the trouble. The skulls are invariably scooped out from below to get at the brain. The pelvic and sternal bones are always in fragments.

"There were also bones of the native Dog, of Seals, Sea-gulls, and the tympanic bones of several species of Whales amongst them,

but no *human* bones; so that it seems certain that the inhabitants of these islands who hunted the Moa were not cannibals. There were, with the exception of sharp flakes of flint and obsidian, no stone implements which could have been used as weapons for warfare or chase; and I suppose, therefore, that these people manufactured wooden ones for such purposes, and that they caught the birds in pits or snares. I found also some pieces of translucent quartz, rock-crystal, chalcedony, agate, and cornelians, but not the least sign of greenstone or nephrite. It is therefore evident, although the Moa-hunter obtained flint from different and distant parts of this island, and obsidian from the northern island, that the use of the nephrite was not known, and that they had never visited the west coast.

"Another proof of the primitive character of this people may be adduced from the total absence of ornaments of any kind made of a substance of permanent character. There were, however, two ulnæ of the Albatros, broken in the centre, which had both been neatly bored near the proximal end, and consequently might have been used as amulets or for ornament; but I hope that further researches will give us a still greater insight into the life of this remarkable prehistoric people. I shall not fail to send more specimens from these kitchen-middens to England, so that you may be able to examine them; and I trust that this preliminary communication will not be without interest to you. Should you consider these notes of sufficient importance to lay before the Geological or any other Society, I shall be very glad if you would do so.

"I am expecting very anxiously the result of your examination of the bones sent to Mr. Flower, of which doubtless the British Museum has kept those which were wanted for the completion of the collection.

"Your twelfth Memoir, containing the description of bones of *D. maximus*, was particularly useful to me, because I observed that my No. 18 is not only your *D. maximus*, but that the three leg-bones of Major Michael belong to the identical specimen of which we have the pelvis, right femur, tibia and fibula, and the two first dorsal vertebræ in our Museum. It is thus evident why we could not succeed in finding the other bones, since they had been taken out of the drain, as I expected all along. I should like very much to obtain a cast of the tibia and metatarsus of your *D. maximus* to complete our leg; and if you like, I will send you a cast of the fibula. The fragment of metatarsus found in the drain belonged, as I suspected, to the same specimen. I thought and hoped that the bones you had described as of *D. maximus* belonged to a specimen of which we possess some phalanges and a few vertebræ, and of which the leg-bones disappeared mysteriously from Glenmark. The men in excavating the drain got three leg-bones out, which they considered to have been 7 feet to 7 feet 6 inches together in length. Mr. Moore inspected them, and confirmed this statement. The men placed the bones carefully in the grass; but when they returned after dinner to work, the bones were gone. I hope they will turn up some time. Should you like a drawing, with dimensions, of the pelvis,

which is in perfect condition, please to tell me, and I shall have it prepared as soon as possible.

"Believe me, my dear Professor Owen,

"Your's most faithfully,

"*Prof. R. Owen, F.R.S.*

"JULIUS HAAST."

British Museum, London."

In perusing with much interest the foregoing letter, I jotted down a few notes that occurred to me, and send the following as an Appendix to Dr. Haast's remarks:—

In the traditions of the Maories, handed down by tales and chaunts from father to son, collected and translated by Governor Sir George Grey, K.C.B., are some relating obviously to the Moa*. Through how many generations such traditions had travelled there is no evidence. Neither does Dr. Haast communicate in the foregoing interesting letter the other alleged facts on which conviction could rest as to the indubitableness of the extinction of the species of *Dinornis* "many hundred years ago." If the "manner of their occurrence" relates to the depth "6 or 8 inches of vegetable soil" covering the "cooking-places or ovens," that evidence is insufficient as to their date.

The native oven and contiguous heap of bones discovered by Mr. Cormack in the North Island of New Zealand, in the bay Opito; on the east coast, were covered by a "stratum of sand" of 3 feet depth†. The "kitchen-midden" there was chiefly of remains of *Dinornis*, with bones of smaller birds and of fishes; and, with reference to the former, it is significant of a knowledge of the "traditions," that Mr. Cormack's "native attendant remarked that they were the remains of the food cooked here at a former period and eaten by the then native inhabitants"‡.

The geological judgment, to which Mr. Cormack defers, as to the time required for the accumulation of 3 feet of drift-sand over a cooking-oven on a sand-cliff by the sea-shore would not be favourable to assigning to it a date of "several hundred years." Mr. Cormack does not notice any human remains or works in his "kitchen-midden;" nor were any of the former in the collection of bones transmitted to me. Dr. Haast's negative evidence is the more valuable, since remains of the human skeleton were evidently sought for, and would have been recognized by so accomplished a naturalist and anatomist. I conclude, therefore, whatever may be the date of these Moa feasts, that the moderate or middle-sized species of these large birds were then in numbers sufficient to stave off that fell famine which at or near the epoch of their extinction drove the Maories to cannibalism. But upon this point, and in the absence of the more gigantic species of *Dinornis* from the "ovens" and "middens" discovered by Dr. Haast, I may refer to the concluding paragraph of my first memoir "on *Dinornis*" (Trans. Zool. Soc. vol. iii. p. 270).

* See Sir George Grey's remarks, below, p. 116.—Ed.

† "On *Dinornis*," Part VI. (Trans. Zool. Soc. vol. iv. p. 146).

‡ Ib. p. 146.



J. Smith del.

CORYPHISTERA ALAHEINA

M. & N. Hanhart imp.

I will only add that the cranium of the *Dinornis*, tom. cit. pl. 38. fig. 41, that figured in vol. iv. pl. 24. fig. 4, and a few other mutilated crania not figured show the basal aperture which Dr. Haast rightly, I believe, conjectures to have been made for the purpose of extracting the brain.

2. On some new or little-known Birds from the Rio Paraná.

By P. L. SCLATER, M.A., Ph.D., F.R.S., Secretary to the Society.

(Plate III.)

The authorities of the Smithsonian Institution have kindly submitted to my examination a small collection of bird-skins from various parts of South America, belonging principally to the difficult groups of Tyrannidæ, Dendrocolaptidæ, and others, which it is almost impossible to determine without the assistance of a large series of named specimens. Amongst these are several skins obtained during the second American expedition to the Rio Paraná, under the command of Capt. T. J. Page, U.S.N., in 1859-60. Some of these belong to very interesting species, such as *Casiornis rubra* (Vieill.), *Hapalocercus pectoralis* (Vieill.)*, *Stigmatura budytoides* (Lafr. et d'Orb.)†, *Euscarthmus margaritaceiventris* (Lafr. et d'Orb.), and *Empidagra suiriri* (Vieill.). Two others, which have particularly attracted my attention, are a specimen of the scarce Synallaxine form *Coryphistera alaudina* of Burmeister and a rather obscure Tyrant-bird, which I propose to describe as new.

The single skin of *Coryphistera alaudina* (Plate III.) is the only example that I have ever seen of this bird besides the original specimens of Burmeister, which were obtained in the neighbourhood of the city of Paraná. It is marked "Vermejo, Feb. 1860," by which, I suppose, is intended the Rio Vermejo—a confluent of the Paraguay above its junction with the Paraná. It agrees generally with Burmeister's description (La Plata-Reise, ii. p. 470), and belongs, without doubt, to a well-marked and rather isolated form, to be located, as Burmeister has arranged it, near to *Synallaxis* and *Anumbius*, but presenting some points of analogical resemblance to the Crested Larks. Burmeister does not notice the white lores and eye-ring and the chestnut ear-coverts, which form a conspicuous feature in this bird; but his description is otherwise generally accurate.

Of the Tyrant-bird above alluded to, there is likewise only a single skin, labelled "male: Corumba, Brazil, July 1859"‡. Its colour

* Cf. Pelzel, Orn. Bras. p. 103.

† Cf. Sclat. et Salv. P. Z. S. 1866, p. 188.

‡ Corumba is a Brazilian settlement on the Upper Paraguay in the province of Matto-Grosso, about 120 miles above Coimbra. See Page's 'La Plata, the Argentine Confederation, and Paraguay' (New York, 1859), p. 187.

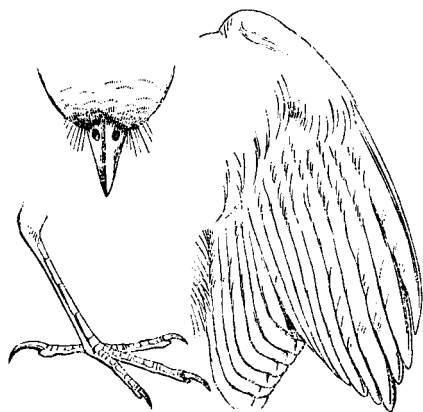
somewhat reminds one of *Sayornis*; but it appears to belong structurally to *Cnipolegus*, and I propose to call it

CNIPOLEGUS CINEREUS, sp. nov.

Obscure cineraceus fere unicolor, tectricum alarum et secundarium marginibus angustis paulo dilutioribus; fronte, oculorum ambitu, et cauda tota nigricantibus; remigum externorum apicibus angustatis, acutis, eorum omnium pogonibus internis in parte basali et maculis quibusdam hypochondriorum absconditis albis: rostro nitenti-corneo, pedibus obscure carneis: long. tota 5·3 poll. Angl., alæ 2·3, caudæ 2·5, tarsi 0·75.

Hab. Corumbá, in ripis fl. Paraguay superioris.

Mus. Smithsoniano, no. 16,355.



Cnipolegus cinereus.

This bird agrees in every essential part of its structure with the smaller species of *Cnipolegus* forming the section *Sericoptila*, but may be distinguished at once by its nearly uniform dark cinereous colouring, with paler brownish edgings to the wing-coverts and secondaries. The bill is like that of *Cnipolegus unicolor*, differing only in being slightly narrower. As in the last-named species, also, the outermost primaries are very narrow throughout their length and pointed at their extremities. The fourth primary is longest, slightly exceeding the fifth, the outer three being graduated.

The tail is nearly square, the outer rectrices being but little shorter than the median. The feet are those of the other *Cnipolegi*, but perhaps rather more slender.

3. Description of a new Genus and Species of Shells from Whydah, on the West Coast of Africa, with some Remarks on the Genus *Proto* of DeFrance. By W. BAIRD, M.D., F.R.S., &c.

The British Museum has just received, through the kindness of Mrs. Knocker, of Exmouth, a series of shells collected by her late husband, Captain H. H. Knocker, R.N., C.M.Z.S., at Whydah and the Bight of Benin on the west coast of Africa. Amongst these is a species belonging to the family Turritellidæ, which I at first considered might be referred to the genus *Proto* of DeFrance. Upon more mature examination, however, of that genus as established by the French author mentioned above, I now believe this mollusk to be distinct and fairly entitled to be described as a new genus. I have therefore named it *Protoma*, from its resemblance to one of the species referred to that genus and from the slit in the under lip*. It may be thus defined:—

PROTOMA, nov. gen.

Testa turrita. Apertura ovalis, labro inferiore acute inciso. Operculum circulare, corneum, multispirale.

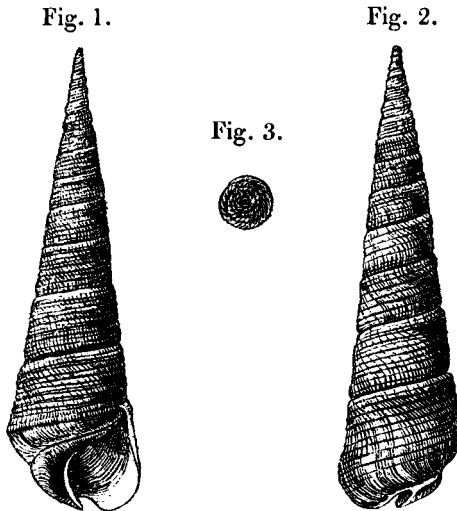


Fig. 1. *Protoma knockeri*, Baird.
2. ———, dorsal aspect.
3. Operculum.

* *Proto* and *τομή*, a slit.

As yet, we have only one species; and I propose naming it after its discoverer. It may be thus defined:—

PROTOMA KNOCKERI.

Testa elongato-subulata, transversim dense sulcata, sulcis minutis; anfractibus sedecem, planulatis, suturis distinctis; apertura ovalis, labro infra aperturam acute inciso; operculum circulare, parvum, multispirale, corneum.

Long. $2\frac{1}{2}$ poll.

Hab. Whydah, west coast of Africa (*Capt. H. H. Knocker, R.N.*).

This species resembles in some respects, generically, the *Proto cathedralis* of DeFrance. It is much smaller than that shell, however; the sulci or ridges are much finer and more numerous; and there are no large circular ribs or sulci at the base of the last whorl. Instead of merely an emargination on the under lip, this part of the shell is more sharply cut or incised, and the slit is more profound. The operculum, which fortunately exists in one specimen, is small, circular, and resembles that of *Mesalia* or *Turritella*. It is difficult to say what the colour is, as in the largest specimen we possess the shell is brown, while in all the others it is quite white or colourless.

Remarks on the Genus Proto of DeFrance.

Taking the *Turritella cathedralis* of Brongniart to be the type, as Deshayes (in the last edition of Lamarck's 'An. sans Vertéb.') asserts it to be, of the genus *Proto* of DeFrance, I was at first induced to consider the shell just described a species of that genus. A further examination, however, has decided me to alter my opinion, as the following observations will show.

In 1815, in the eleventh volume of the 'Linnean Transactions,' Leach established the genus *Proto* for a particular species of amphipodous Crustacea. This name has since then been adopted by Desmarest (in 1825), Johnston, A. White (in his 'Catalogue of the Crustacea in the British Museum'), and by Spence Bate (in his 'Catalogue of the Amphipoda in the British Museum').

In the same year (1815) the name of *Proto* was given by Oken, in his 'Lehrbuch,' to a genus of Annelidan worms belonging to the Naiadina. This genus was subsequently adopted by Cérsted in Krøyer's 'Tidsskrift' in 1843, and by Johnston in his 'Catalogue of the Non-parasitical Worms in the British Museum.' Grube, however, considers the genus *Proto* to be synonymous with another genus established by Oken in the same work, and called by him *Dero*. If this synonymy be correct and the genus *Dero* be adopted, we shall then have no difficulty in giving precedence to the genus formed by Leach.

To render the word *Proto*, however, still more perplexing, DeFrance gave the same name to a genus of shells. In the 'Dict. des Sc. Nat. vol. xliii. (published in 1825), this author defined his genus; and about the same time it made its appearance in De Blainville's 'Manuel de Malacologie.' As the species upon which DeFrance founded his genus was figured by him (and reproduced by Blainville in the

work mentioned above), under the name of *Proto maraschirii*, we find it represented as having the mouth perfectly round, and no appearance is shown of the slit or incision in the lower lip; neither is there any mention made of this character in his description. The genus *Proto* is defined by him as a shell having "a round mouth formed by the reunion of the left lip, which, passing circularly to that of the right side, terminates higher up towards the middle of the last whorl." It is also described as having the lower part of each whorl with a raised band round it, as in many of the species of the genus *Terebra*. The *Proto maraschirii* is said by him to be recent. The other species which have been referred to this genus are apparently quite different, both in the mouth and the body of the shell, and must be separated from it. They may possibly enter as species into the genus which I have now formed; and it is somewhat remarkable, if so, that no recent species have hitherto been found. However this may be, the name *Proto* having been previously used by Leach for a crustacean, and since then adopted by several carcinologists, must stand; and it has the precedence of DeFrance's name by ten years.

In the same collection of shells made by Captain Knocker two or three specimens of a turritelliform shell occur, which agree in shape and size (about 9 lines long) with the *Proto maraschirii* as figured by DeFrance. They are, however, so worn and rubbed, that it is impossible to ascertain exactly their identity.

I may also remark that a species of shell, *Cardita ajar*, occurring in the same collection (from the Bight of Benin) is likewise found fossil in the Miocene formation in Europe.

4. On the Genus *Pelargopsis*, Gloger.

By R. B. SHARPE.

In pursuance of the plan I before proposed to myself, of laying before the Society short synopses of the various genera of Kingfishers which are more or less obscure, I have now the pleasure of submitting a review of the genus *Pelargopsis*, or Stork-billed Kingfishers. By most authors these Kingfishers have been included in the genus *Halcyon*; but in my opinion they are more closely allied to *Ceryle*, to the larger members of which latter genus they bear unmistakable affinity. There is probably no group in the whole family of the "Alcedinidæ" which is involved in greater confusion than the present genus, consequent, apparently, on the close affinity of one species to another, and on the refusal of ornithologists to grant specific rank to the various well-characterized races of the brown-capped section of the genus, and likewise from the wrong identifications of the species of the older authors. I have endeavoured in the present paper to dispel the existing confusion; and by treating the various so-called "races" as good species, which, in my humble opinion, they decidedly constitute, a much clearer idea of the genus *Pelargopsis* may be arrived at.

I therefore propose to divide and classify the different species as follows. All the birds enumerated in the "*clavis*" present some distinguishing characteristic, while there are others which will not admit of a separate diagnosis; and these are therefore considered in the light of races or subspecies.

a. Rostro nigro	1. <i>melanoryncha</i> .
b. Rostro rubro.	
a'. Scapularibus brunneis	2. <i>amauroptera</i> .
b'. Scapularibus cyaneis aut viridi-cyaneis.	
a''. Capite haud pileato, collo postico concolori.	
a'''. Major: supra viridi-cyanea	3. <i>gouldi</i> .
b'''. Minor: supra latissime cyanea	4. <i>leucocephala</i> .
b''. Capite indistincte pileato, ochrascenti-cinereo	5. <i>fraseri</i> .
c''. Capite distincte pileato.	
a'''. Pileo haud cyaneo lavato.	
a'''''. Pileo saturate brunneo	6. <i>gurali</i> .
b'''''. Pileo albescenti-cinereo	7. <i>burmanica</i> .
b'''. Pileo pallide brunneo, viridi-cyaneo distincte lavato	8. <i>floresiana</i> .

I may state that the idea of separating these Kingfishers into different species has not been hastily conceived by me; on the contrary, the conclusions obtained in the present paper are the result of several months' patient study with a very large series of specimens at my command from all localities. It has, indeed, before been mooted whether these birds ought not to be separated as species; and Lord Walden has expressed his opinion (P. Z. S. 1866, p. 553) that the variations in plumage were also coincident with changes of locality.

1. PELARGOPSIS MELANORYNCHA (Temm.).

Alcedo melanoryncha, Temm. Pl. Col. 391 (1826); Schl. Mus. Pays-Bas, *Alced.* p. 15 (1863); *id.* Vog. Ned. Ind. *Alced.* pp. 10, 47, pl. 2 (1864).

Halcyon melanoryncha, Gray, Gen. of Birds, i. p. 79 (1846); Bonap. Consp. Gen. Av. i. p. 155 (1850); Cass. Cat. Halc. Phil. Mus. p. 10 (1852); Wall. Ibis, 1860, p. 142, et P. Z. S. 1862, pp. 335, 338.

Hylcaon melanoryncha, Reich. Handb. *Alced.* p. 18, t. cccxcix. f. 3074 (1851).

Ramphalcyon melanoryncha, Bonap. Consp. Vol. Anis. p. 10 (1854).

Entire body cream-colour, a little deeper on the throat, and approaching to pale orange on the abdomen and under tail-coverts; forehead dusky grey, the base of a few feathers on the crown also slightly showing this colour; cheeks and ear-coverts more decided dusky grey, the feathers narrowly edged or washed with cream-colour; middle of the back, scapularies, and wing-coverts brownish, washed with dull green, the latter narrowly edged with cream-colour at the tip; quills dark brown, the inner web white at the base, the basal half of the outer web of the primaries and the whole of the outer web of the secondaries dusky green; tail dusky green above, dark brown beneath; bill black; feet dusky; eyes dark brown.

Total length 14 inches, of bill from front 3·3, from gape 3·5, wing 5·9, tail 3·7, tarsus 0·45, middle toe 1·1, hind toe 0·5.

Hab. Celebes and Sula Islands (*Wallace*).

This is the most distinct species of the genus, easily recognizable by its jet-black bill. It appears to be by no means rare in the island of Celebes, several beautiful specimens having been forwarded to me from thence by my friend Mr. W. T. Fraser, from one of which the above description has been taken.

2. PELARGOPSIS AMAUROPTERA (Pears.).

Halcyon amauroptera, Pears. Journ. As. Soc. Beng. 1841, p. 635; Blyth, Ann. Nat. Hist. xii. p. 94 (1843); Gray, Gen. of Birds, i. p. 79 (1846); Blyth, Cat. Birds Mus. As. Soc. Beng. p. 313 (1849); Bonap. Consp. Gen. Av. i. p. 155 (1850); Cass. Cat. Halc. Phil. Mus. p. 10 (1852); Horsf. and Moore, Cat. Birds Mus. E. I. Co. i. p. 124 (1854); Jerdon, Birds of India, i. p. 224 (1862); Blyth, Ibis, 1866, p. 347.

Ramphalcyon amauroptera, Reich. Handb. Alced. p. 17, t. cccclxxx. f. 3407 (1851); Bonap. Consp. Vol. Anis. p. 10 (1854).

Pelargopsis amauroptera, Cab. & Heine, Mus. Hein. Th. ii. p. 157 (1860).

Entire head, neck, and under surface of the body yellowish cinnamon; upper part of the back, scapularies, and wing-coverts chocolate-brown; entire back and rump silvery cobalt; quills chocolate-brown, the inner web light cinnamon at the base; tail-coverts and tail chocolate-brown, darker underneath; bill and feet sealing-wax red. Total length 13 inches, of bill from front 3, from gape 3·5, wing 5·8, tail 4, tarsus 0·5, middle toe 1, hind toe 0·5.

Hab. Bengal (Sundurbuns especially); Arakan; Tenasserim provinces; very abundant along the eastern coast of the Bay of Bengal, not yet observed on the western. Not rare in the vicinity of Calcutta (*Blyth*), Assam (*Mus. H. B. Tristram*).

I cannot understand how this very distinct and clearly characterized species could ever have been united under any circumstances to the more common *P. gural*. The whole distribution of the colouring and the brown scapularies at once distinguish it. My description is from an Assamese specimen, kindly lent me by the Rev. H. B. Tristram.

3. PELARGOPSIS GOULDI, sp. n.

Whole head and neck and the whole of the under surface of the body rich ochre; upper part of the back, scapularies, wing-coverts, upper tail-coverts, and upper surface of the tail green, slightly inclining to blue on the latter; whole of the back and rump silvery cobalt; quills blackish, the inner web pale orange at the base, the exterior web of the primaries and nearly the whole of both webs of the secondaries bright cobalt; bill rich vermilion; feet dark red. Total length 13 inches, of bill from front 3·2, from gape 3·6, wing 6, tail 3·5, tarsus 0·5, middle toe 1, hind toe 0·5.

Hab. Philippines, Island of Luzon (*Cuming*; *mus. J. Gould*).

This new species forms the second of the uncapped section of the genus *Pelargopsis*, the other being the *P. leucocephala* (Gm.) from Borneo. From this latter species it is distinguished by its much larger size, and by the green colour of the upper surface of the body, this being in *P. leucocephala* of a rich ultramarine.

Mr. Blyth has referred to this bird as being the only species to which the much-disputed name of *leucocephala* is really referable. The specimen on which Mr. Blyth made this remark is a Manilla specimen collected by the late Mr. Cuming, and now in the Derby Museum at Liverpool. Mr. T. J. Moore, the well-known curator of the above-named museum, very kindly sent me the bird to examine. I found it apparently quite identical with a specimen in Mr. Gould's collection from Manilla; but, from long exposure to light, the Liverpool specimen has become so bleached that all the rich ochre colour has completely vanished from the head, leaving that portion white, whence Mr. Blyth's remarks.

I consider this species to be very distinct from the Javan species and from the Bornean, and propose to call it after Mr. Gould, who has always most kindly assisted me in my study of Kingfishers.

4. PELARGOPSIS LEUCOCEPHALA.

Martin-pêcheur de Java, Buff. Pl. Enl. 757.

Alcedo javana, Bodd. Tabl. Pl. Enl. 757 (1783, ex Buff.).

White-headed Kingfisher, Lath. Syn. i. pt. ii. p. 678 (1782).

Alcedo leucocephala, Gm. Syst. Nat. i. p. 456 (1788, ex Lath.); Lath. Ind. Orn. i. p. 248 (1790); Bonn. et Vieill. Enc. Méth. i. p. 288 (1823); Shaw & Nodd. Nat. Misc. pl. 793 (1807).

Halcyon leucocephala, Steph. Gen. Zool. viii. p. 100 (1826); Bonap. Consp. Gen. Av. i. p. 154 (1850); Selater, P. Z. S. 1863, p. 213.

Alcedo javanica, Shaw, Gen. Zool. viii. p. 67 (1811).

Halcyon javana, Gray, Gen. of B. i. p. 79 (1846).

Halcyon javana (part.), Pelz. Reise d. Nov. Vög. p. 49 (1865).

Bakaka and *Rajah udong* of the natives of Banjermassing (*Motley*).

Head and back of the neck pale ochre; back of the neck richer ochre; upper part of the back and scapularies ultramarine, with a faint greenish lustre; lower part of the back extremely rich cobalt; wing-coverts rich ultramarine; quills dark blackish brown, the inner web pale ochre at the base, the basal half of the outer web of the primaries and the whole of the outer web of the secondaries very rich ultramarine; tail rich ultramarine above, black beneath; throat and cheeks pale ochre; rest of the under surface of the body rich ochre, a few of the flanks washed with ultramarine; bill dark scaling-wax red; feet dark red. Total length 13 inches, of bill from front 3, from gape 3·3, wing 5·8, tail 3·3, tarsus 0·45, middle toe 0·1, hind toe 0·45.

Hab. Borneo, Sarawak (*Wallace*); Banjermassing (*Motley*); Labuan (*Motley*).

As Lord Walden has suggested (P. Z. S. 1866, p. 553), the bird

figured by Buffon (*l. c.*) as the *Martin-pêcheur de Java* agrees very well with the Bornean *Pelargopsis*; and as the description also accords with the same bird, I see no reason to refuse the conclusion forced upon us in this manner. On this plate is founded the *Alcedo javana* of Boddaert; but this name must be dropped as inapplicable, and the term *leucocephala*, the next in order of priority, be substituted.

5. PELARGOPSIS FRASERI, sp. n.

Isida capitis bonæ spei, Briss. Orn. iv. p. 488.

Alcedo capensis, Linn. Syst. Nat. i. p. 180 (1766, ex Briss.); Bon. et Vieill. Enc. Méth. i. p. 285 (1823).

Halcyon capensis, Bonap. Consp. Gen. Av. i. p. 154 (1850); Eyton, P. Z. S. 1839, p. 101.

Ramphalcyon javana, Reich. Handb. Alced. p. 7, t. cccxcviii. b. fig. 3406 (1851, nec Bodd.).

Halcyon javana, Cab. & Heine, Mus. Hein. Th. ii. p. 156 (1860, nec Bodd.).

Halcyon javanica, Cass. Cat. Halc. Phil. Mus. p. 11 (1852, nec Shaw).

Halcyon javana (part.), Pelz. Reise d. Nov. Vög. p. 49 (1865).

Alcedo leucocephala, Horsf. Trans. Linn. Soc. xiii. p. 174 (1822, nec Gm.).

Halcyon leucocephalus, Blyth, Cat. Birds Mus. As. Soc. Beng. p. 46 (1849); Bonap. Consp. Gen. Av. i. p. 154 (1850); Horsf. & Moore, Cat. Birds Mus. E.-I. Co. i. p. 123 (1854, pt.); Moore, P. Z. S. 1854, p. 268.

Burong-Kaha of the natives of the Malay peninsula (*Eyton*).

Tengke-Buto of the Javans (*Horsfield*).

Head indistinctly capped, ashy brown, strongly washed with pale ochre; space between the bill and the eye, cheeks, and ear-coverts more decidedly ashy grey; sides and back of the neck ochre; upper part of the back and scapularies indigo-blue, with more or less of a greenish tinge; whole of the back rich cobalt; wing-coverts blue, with a slight greenish lustre; quills pale brown, the inner web light ochre at the base, the outer web, especially of the secondaries, indigo; tail indigo above, black beneath; under surface of the body ochre, tinged with whitish on the throat; bill dark sealing-wax red; feet dark red. Total length 14 inches, of bill from front 3·3, from gape 3·7, wing 6·2, tail 3·8, tarsus 0·45, middle toe 1, hind toe 0·45.

Hab. Java (*Horsfield, Wallace*); Malacca (*mus. R. B. S.*); Penang (*Cantor; mus. R. B. S.*).

a. Sumatran race.

Alcedo leucocephala, Raffl. Trans. Linn. Soc. xiii. p. 293 (1822).

Baug Kaha of the natives of Sumatra (*Raffles*).

Hab. Sumatra (*Raffles, Wallace*).

The Sumatran race of *P. fraseri* is much smaller, the blues slightly more intense, but the bird appears to be not specifically separable.

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After carefully comparing a skin of the adult Javan bird with Brisson's elaborate description, I believe that his "*Ispida capitis bonæ spei*" was really taken from a Javan specimen. Consequently the species stands primarily as *Alcedo capensis*, Linn. But in the face of the manifest incongruity of such an appellation, I believe myself justified in proposing a new name for the bird, and I therefore take the opportunity of connecting with it the name of my friend Mr. W. T. Fraser, of Soerabaya, Java, to whom I am indebted for many kind remittances of Javan Kingfishers.

It is very seldom that we meet with a specimen of *P. fraseri* with any thing like a distinct cap. Mr. Wallace's collection, however, contains a specimen obtained by himself in Eastern Java which has the cap very distinct, like the bird figured by Professor Reichenbach (*l. c.*). The species, however, differs from *P. burmanica* by always having an admixture of ochre, sometimes very distinct, in the feathers of the head.

6. PELARGOPSIS GURIAL.

Halcyon gural, Pears. Journ. As. Soc. Beng. 1841, p. 633 (descr. orig.); Blyth, Cat. Birds Mus. As. Soc. Beng. p. 47 (1849); Bonap. Consp. Gen. Av. i. p. 155 (1850); Irby, Ibis, 1861, p. 228; Blyth, Ibis, 1865, p. 30.

Ramphalcyon gural, Reich. Handb. *Alced.* p. 16, t. cccxxvi. (1851).

Pelargopsis gural, Cab. & Heine, Mus. Hein. Th. ii. p. 156 (1860).

Halcyon capensis, Jerd. Madr. Journ. 1840, p. 231; Blyth, Ann. Nat. Hist. xii. p. 94 (1843).

Halcyon brunniceps, Jerd. Madr. Journ. 1844, p. 143.

Halcyon leucocephalus (part.), Horsf. & Moore, Cat. Birds Mus. E.-I. Co. p. 123 (1854).

Halcyon leucocephalus, Jerdon, Birds of India, i. p. 222 (1862); Day, Land of Perm. p. 460 (1863); Beav. Ibis, 1865, p. 407; Blyth, Ibis, 1866, p. 347.

Gural of the Bengalese (*Pearson*).

Mala-poyma of the natives of Malabar (*Jerdon*).

Head dark chocolate-brown; sides of the neck and a collar encircling the same pale ochre; upper portion of the back and scapularies dull green; rest of the back rich greenish cobalt; wing-coverts dull green with a faint blue lustre; quills black, the inner web yellowish white at the base, the outer edge of the whole of the feathers greenish blue; tail greenish blue above, black beneath; under surface of the body ochre, palest on the throat; bill very dark sealing-wax red; feet dull red. Total length 14 inches, of bill from front 3.1, from gape 3.7, wing 6.4, tail 3.6, tarsus 0.5, middle toe 1.1, hind toe 0.5.

Hab. All India, from the extreme south to Bengal and Ceylon; common in Malabar; rarely seen in the Carnatic and upon the tableland; occasionally found in Central India and the Northern Circars;

most abundant in Bengal, but apparently not found, or rare, in the north-west (*Jerdon*).

a. Assamese and Nepaulese race, with the head a little lighter brown.

Halcyon leucocephalus, Horsf. P. Z. S. 1839, p. 156; Gray, Cat. Fiss. Brit. Mus. p. 55 (1848, pt.); Horsf. & Moore, Cat. Birds Mus. E.-I. Co. p. 123 (1854).

Halcyon capensis, J. E. & G. R. Gray, Cat. Birds and Mamm. of Nep. p. 56 (1846).

Halcyon guriel, J. E. & G. R. Gray, Cat. Birds and Mamm. of Nep. p. 24 (1863).

b. Malacca race. Much smaller. Head much darker and generally glossed, sometimes also a slight blue lustre being apparent.

This race must ultimately be separated specifically, and I name it provisionally *Pelargopsis malaccensis*. Its nearest ally is *P. guriel*; but it is altogether smaller, the blues are always much brighter, and it must be remembered that true *P. guriel* never really approaches the range of this Malacca bird. Between the ranges of the two species intervene *P. burmanica* and *P. amauroptera*.

Professor Schlegel states, in his "Catalogue," that a Nepaulese specimen in the Leyden Museum is "*absolument semblable aux individus de Java*." This statement, which seems to have taken Mr. Blyth by surprise (*vide* 'Ibis,' 1866, p. 347), certainly astonished me considerably. I think, however, that there must be a mistake in the labels of the specimens examined by the learned Professor; for I have in my collection a Stork-billed Kingfisher from Assam, which agrees in every respect with specimens in the British Museum from Nepal, presented by Mr. Hodgson, from whom also Professor Schlegel obtained his specimen. These birds differ a little in the colour of the cap, which is a shade lighter brown than in true *P. guriel* from India, but I have never seen an adult Javan specimen with such a clearly defined cap.

Reichenbach, in the letterpress of his work, refers to "t. cccxcix. fig. 3075" as being the figure of *Ramphalcyon guriel*. This is a mistake, as this figure is a copy of Buffon's plate 757 (*P. leucocephalus* of this paper), and the reference given in the list of plates to Reichenbach's work, viz. "t. ccccxvi. fig. 3158" is really the representation of *R. guriel*.

7. PELARGOPSIS BURMANICA, sp. n.

Halcyon leucocephalus, Gould, P. Z. S. 1859, pp. 151, 152; Schomb. Ibis, 1864, p. 247; Beav. Ibis, 1866, p. 221; Walden, P. Z. S. 1866, p. 553; Beav. Ibis, 1867, p. 318.

Halcyon leucocephalus (part.), Horsf. & Moore, Cat. Birds Mus. E.-I. Co. i. p. 123 (1854).

? *Ramphalcyon capensis*, Reich. Handb. *Alced.* p. 16, t. cccxcix. f. 3072, 3073 (1851).

Head, which is distinctly capped, clear albescent grey; sides of the neck and a collar encircling the same very deep ochre; upper part of

the back and scapularies dull green, with a faint blue lustre here and there; whole of the back very rich cobalt; wing-coverts greenish, more distinctly washed with blue; quills brown, the inner web pale ochre at the base, the exterior web, especially of the secondaries, externally edged with bright blue; tail bright blue above, dark brown beneath; entire under surface very deep ochre; bill dark vermilion; feet dark red. Total length 14 inches, of bill from front 3·4, from gape 3·7, wing 6, tail 3·8, tarsus 0·5, middle toe 1, hind toe 0·5.

Hab. Tavoy, Tenasserim Provinces (*Briggs*); Burmah (*Blyth*; *mus. Lord Walden*); Siam (*Schomburgk*; *Mouhot*, *mus. J. Gould*); Andaman Islands (*Tytler*, *Beavan*).

This species may be distinguished at a glance by the colouring of the cap, which is always of a light grey, very different from the dark brown cap of *P. gural*. Its principal habitat seems to be Burmah, whence it ranges into Siam to the eastward, and perhaps into the Malayan peninsula to the southward.

The plates of Reichenbach's work are so inaccurate that it is only doubtfully that I refer the figures given in his 'Tabulæ' to the present species. Its range is stated by him to be the Cape of Good Hope, South and South-eastern Africa generally (*Dresden Museum*), which statement naturally does not aid one in a correct determination of the locality of the specimens figured.

8. PELARGOPSIS FLORESIANA, sp. nov. Flores Kingfisher.

Martin-pêcheur du Cap de Bonne Espérance, Buff. Pl. Enl. 590.

Halcyon leucocephalus, Wald. P. Z. S. 1863, p. 484 (nec Gm.).

Halcyon capensis, Swains. Classif. of B. ii. p. 335 (1837, nec Linn.).

Head (distinctly capped) pale brown, with a bluish-green lustre; cheeks, sides of the neck, and a collar encircling the back of the neck pale ochre; upper part of the back and scapularies ultramarine with a tinge of green; back rich cobalt, deepening into ultramarine on the rump and upper tail-coverts; quills brownish black, the inner web pale ochre at the base, the outer web, especially of the secondaries, washed with blue; tail rich blue above, black beneath; under surface of the body deep ochre, much paler on the throat; bill dark sealing-wax red, black at the tip; feet dark red. Total length 13·5 inches, of bill from front 3·2, from gape 3·7, wing 5·7, tail 3·6, tarsus 0·45, middle toe 1, hind toe 0·45.

Hab. Flores (*Wallace*).

In all specimens of the Stork-billed Kingfisher that I have examined from the island of Flores, there has always been a very distinct greenish lustre on the head; and as the colour of the cap is always a pale brown, and these characters appear to be constant, I do not hesitate to separate it specifically.

Buffon's plate represents the bird with a green head; I have carefully compared an adult Flores specimen with the description given by him, and it agrees very well indeed; so that I think it extremely probable that the present species formed the subject of his plate. I



J. Smith del.

M. & N. Hanhart imp.

CAMPEPHAGA ANDERSSONI.

do not consider Buffon's *Martin-pêcheur du Cap de Bonne Espérance* to be the same bird as Brisson's "*Ispida capitis bonæ spei*" (= *A. capensis*, Linn.); and I think it probable that Buffon hastily referred his bird to Brisson's species, the exact localities of both being unknown.

Table of the Geographical Distribution of the Genus Pelargopsis.

	Indian Region.														Australian Region.				
	Indian Asia.				Chinese Asia.				Indo-Malay Islands.						Celebes.	Timor group.			
	India.	Ceylon.	Nepaul.	Assam.	Arakan.	Andaman Isl.	Burmah.	Siam.	Tenasserim pr.	Malacca and Singapore.	Sumatra.	Java.	Borneo.	Philippines.	Celebes.	Sula Island.	Lombok.	Flores.	Timor.
1. <i>P. melanoryncha</i>	*			*	*				*						*				
2. <i>P. amauroptera</i>																			
3. <i>P. gouldi</i>																			
4. <i>P. leucocephala</i>																			
5. <i>P. fraseri</i>										*		*	*	*					
<i>a. Sumatran race</i> ..											*								
6. <i>P. gurial</i>	*	*		*															
<i>a. Assamese race</i> ..				*	*														
<i>b. Malaccan race</i> ..										*									
(<i>P. malaccensis</i>) }																			
7. <i>P. burmanica</i>						*	*	*											
8. <i>P. floresiana</i>																		*	

5. On *Campephaga anderssoni*, an apparently undescribed Species of this Genus from South-western Africa. By R. B. SHARPE.

(Plate IV.)

In the last collection made by the late Mr. C. J. Andersson from Damara Land and the adjacent district of Ovampo, I found the bird which forms the subject of the present paper. So far as I can make out, it is not included by Dr. Hartlaub in his elaborate paper on the *Campephaginae* ("Monographische Studien über die Gruppe der Campephaginen, von Dr. G. Hartlaub," Journ. f. Orn. 1865, p. 153). According to the descriptions given in the learned doctor's monograph, the Damara bird would appear to be closely allied to *Campephaga frenata* (Heugl. Journ. f. Orn. 1864, p. 255) from the Bogos country; but it differs conspicuously in the colour of the throat. I therefore propose to call it after Mr. Andersson, whose untimely

death will not fail to be regarded by every one as a most serious loss to the cause of African ornithology.

CAMPEPHAGA ANDERSSONI, sp. n. (Plate IV.)

C. supra pulchre cinerea, uropygio paullo pallidiore; remigibus cinerascens, secundariis externe cinereo lavatis et gracillime albo marginatis; rectricibus mediis cinereis, reliquis nigris albo terminatis, duobus extimis albo marginatis: fronte basali et regione oculari albis, loris nigricantibus: subtus purissime alba, gutture circumscripte pallide cinereo.

Long. tot. 9 poll. Angl., al. 5·4.

Hab. in terra Damarensi.

Above delicate grey, a little lighter on the rump; wing-coverts uniform with the back; quills ashy brown, exteriorly margined with white; the outer web of the inner secondaries light grey, the innermost secondaries being entirely of this colour; tail black, narrowly tipped with white, the two middle feathers ashy grey, with obscure cross markings in some lights, the outer rectrix having the outer web white; the base of the forehead and the feathers in front of and round the eye white; the space between the base of the bill and the eye black; the entire under surface of the body pure white, the throat with a crescent-like band of clear grey, cutting off the chin from the breast, both of these being pure white; bill and feet black. Total length 9 inches, of bill from front 0·7, wing 5·4, tail 4·7, tarsus 0·85.

Hab. Ovaquenyama, Damara Land, June 25th, 1867 (*C. J. Andersson; spec. in mus. R. B. S.*).

Besides an apparent difference in the extent of white on the exterior tail-feathers, this new species seems at once to be distinguished from *Campephaga frenata* by the colour of the throat, which in this latter species, according to Dr. Hartlaub's description (*l. c.*), is entirely obscure greyish ashy.

6. Notes on the Skulls of the Genus *Orca* in the British Museum, and notice of a Specimen of the Genus from the Seychelles. By Dr. J. E. GRAY, F.R.S.

Mr. Swinburne Ward has kindly sent a very beautiful skull of a "Killer" taken in the sea near the Seychelles Islands.

To determine this skull I have been induced to compare the skulls of the genus in the British Museum, which it is very necessary to do from time to time, as specimens gradually accumulate, and often arrive when I am occupied on other subjects, and consequently are put aside for future examination.

In this examination I have observed that in the 'Catalogue of Seals and Whales' I have confounded the skull described under the name of *Orca capensis* with one from the North Pacific, the former being the true *Orca capensis*, and the skull now received from the Seychelles Islands being of the same species.

The skull figured in the 'Zoology of the Erebus and Terror' under the name of *O. capensis* is from a specimen received from the Zoological Society, to which it was presented by Capt. Delville, who said he obtained it in the North Pacific (?). It is quite a different species, for which I propose the name of *Orca pacifica*. I doubt its being from the North Pacific, as I believe there is a skull of the same species in the Paris Museum, collected by M. Eydoux, and said to come from Chili.

This reexamination has convinced me, and also, I believe, Mr. Flower, that the skull described under the name of *Orca intermedia* belongs to a very small species, and is not "the skull of a very young individual, probably of one of the large species," as Mr. Flower supposed, apparently from the examination of the figure (see Flower, P. Z. S. 1864, p. 425). Indeed, when the animal is known, I should not be at all astonished if it should prove to be a large species of *Electra* rather than of *Orca*, or perhaps a new genus.

The examination of the four skulls of *Orca* found on the English coast show they belong to two very distinct species, one with a much more attenuated beak than the other.

The *Orca brevirostris*, Owen, is only known from the skull of a very young animal. I have formed for it the genus *Orcaella*, and consider that it belongs to the tribe Delphinina, and not Orcadina (see Gray, 'Synopsis of Whales and Dolphins,' p. 7).

- I. *The beak from the notch before the orbit the same length as from the notch to the condyles; the width at the notch three-fifths of the length of the beak. The occipital end of the skull slightly concave; condyles of moderate size; lower jaw broad on the sides, very thick and solid in front. ORCA.*

A. *The beak of the skull tapering and narrow in front, end narrow. GLADIATOR.*

1. ORCA STENORHYNCHA. (Fig. 1, p. 72, and fig. 3, p. 74.)

Orca gladiator, Gray, Cat. Seals and Whales, p. 279.

North Sea. Skeleton from Weymouth, and a skull from the English coast. B.M.

Intermaxillaries narrow in the middle and rather dilated in front, but the extent of dilatation varies in the two specimens.

- B. *Beak of the skull spatulate; sides of the hinder half nearly parallel, of the front half arched and converging; end rounded, middle rather wider than at the notch. ORCA.*

2. ORCA CAPENSIS, Gray, Cat. Seals and Whales, p. 283. (Fig. 2, p. 73, and fig. 4, p. 75.)

Delphinus orca, Owen.

Grampus gladiator, Smith, South-African Zool. p. 126.

Hab. Cape of Good Hope (*Viney*, B.M.; *Villette*, Mus. Coll. Surg. no. 1139); Seychelles Islands (*Swinburne Ward*).

In the Cape specimen the intermaxillaries are nearly of the same

Fig. 1.

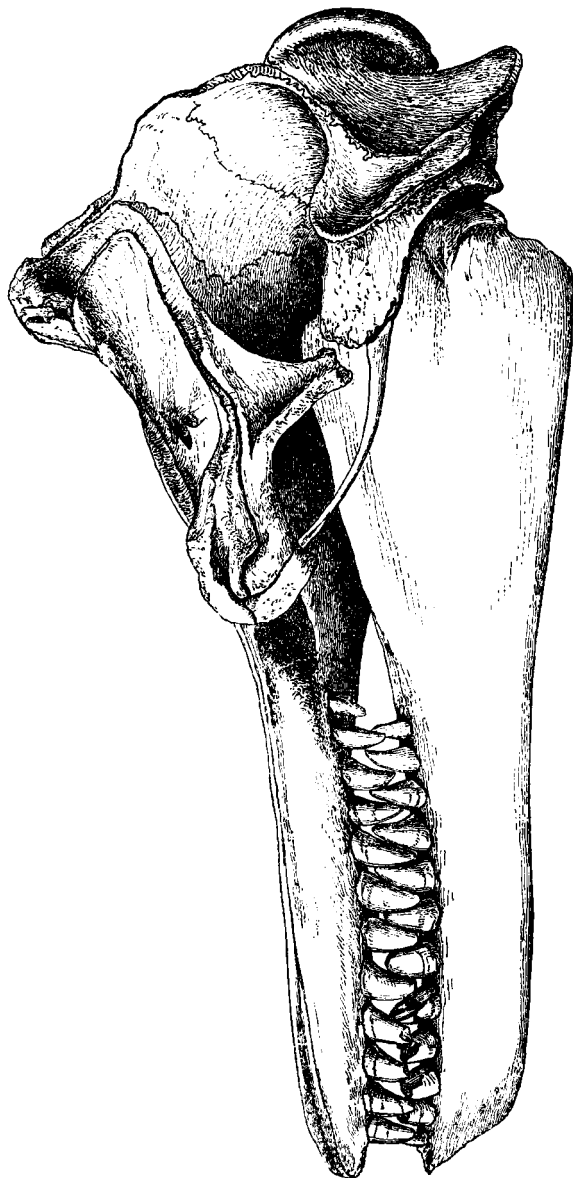
*Orca stenorhyncha.*

Fig. 2.

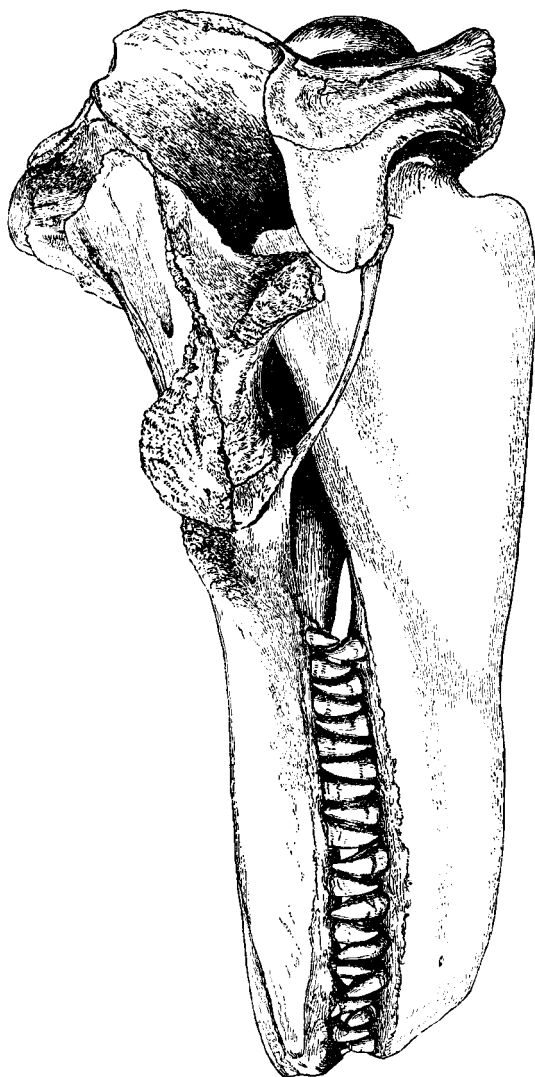
*Orca capensis.*

Fig. 3.

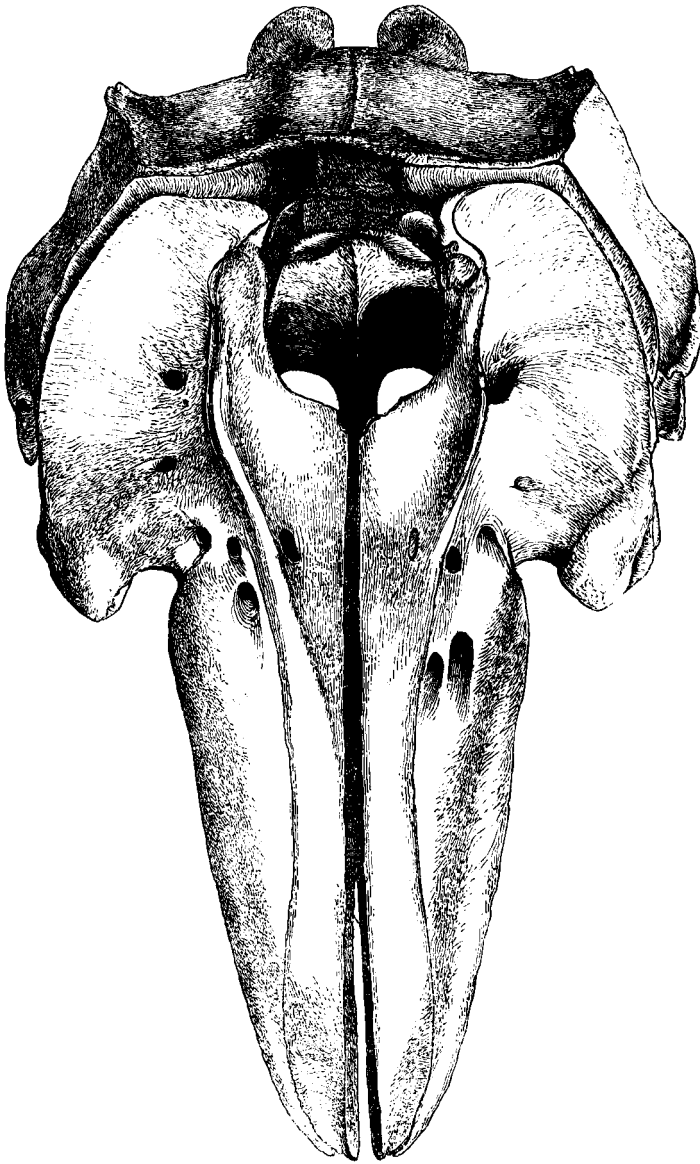
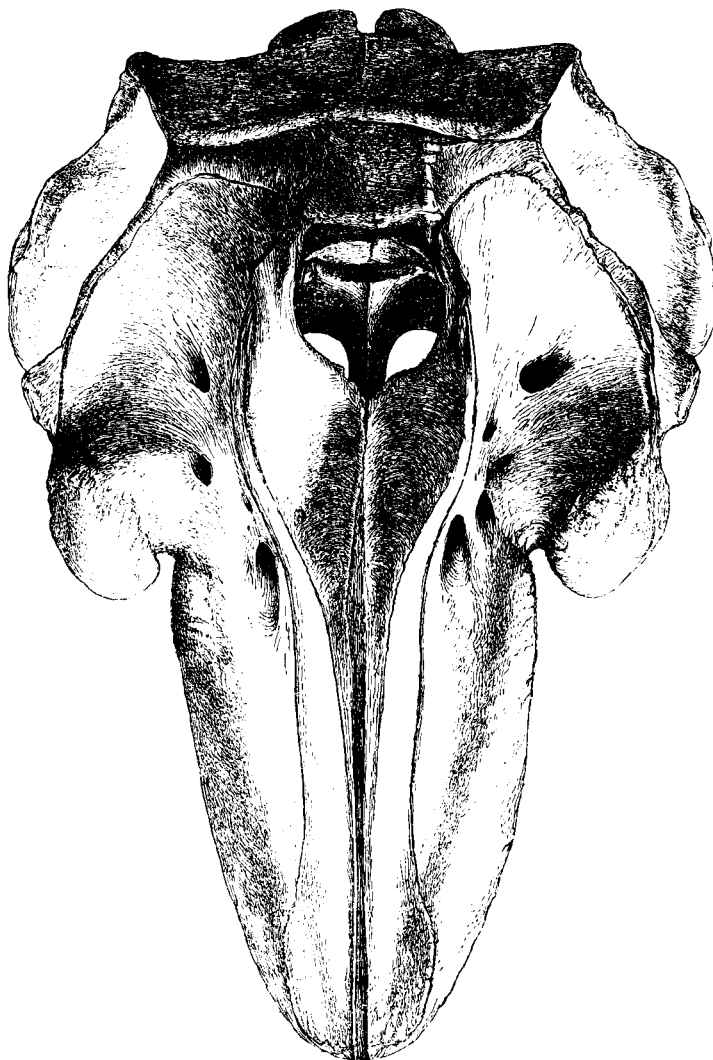
*Orca stenorhyncha.*

Fig. 4.

*Orca capensis.*

width in the whole of their length; in the Seychelles skull they are contracted in the greater part of their length, and rather dilated in front.

3. ORCA LATIROSTRIS.

Delphinus orca, Cuv. Oss. Foss. v. tab. 22. fig. 4 (skull).

The skull very similar to that of the Cape species, but much smaller; but the beak is rather narrower, the intermaxillaries moderately broad, slightly dilated in front.

Hab. North Sea.

An adult skull from the coast of Essex (361 *a*), and another without the lower jaw, are in the British Museum.

These skulls of the smaller British or, rather, European *Orca* are distinguishable from those of *O. gladiator* by the smaller size and the broader, rounder nose—and from the skulls of the Cape-of-Good-Hope species by being of a much smaller size, and having a depressed crown of the head.

I believe the skull figured under the name of *Delphinus orca* by Cuvier, Oss. Foss. vol. v. tab. 22. figs. 3, 4, represents this species, from the form of the beak and the narrowness of the occiput: this figure has been copied by various British and other authors.

Gervais, in the 'Zoology and Paleontology of France,' figures the skull of a young *Delphinus orca*, taken on the coast of Cete, which is now in the Museum of Paris. It appears to belong to this species, or it may be that the *Orca* of the Mediterranean does not grow to the usual size; or, again, it may be of a different species, for the skull is only fifty-eight centimetres long and thirty broad.

4. ORCA MAGELLANICA.

Orca magellanica, Burmeister, Ann. & Mag. Nat. Hist. ser. 3. vol. xviii. p. 101; An. Mus. Publ. de Buenos Ayres, vol. i. p. 373, tab. 22.

Hab. Patagonia (Mus. Buenos Ayres).

This species, according to the figure, is very like *Orca latirostris*.

- II. *The beak from the notch before the orbit the same length as from the notch to the condyle; width at the notch two-thirds the entire length of the beak. Intermaxillaries very narrow, slightly dilated in front; brain-cavity broad; occiput deeply concave. Lower jaw very broad on the sides, very thick and solid in front.*

OPHYSIA, Gray, Synopsis of Whales and Dolphins, p. 8.

5. ORCA PACIFICA.

Delphinus globiceps, Grant, P. Z. S. 1833, p. 65.

Delphinus orca, Eydoux, Mus. Paris.

Orca capensis, Gray, Zool. Erebus and Terror, p. 34, tab. 9, not Cat. Seals and Whales, p. 283.

Orca (Ophysia) capensis, Gray, Synopsis of Whales and Dolphins, p. 8, tab. 9 (skull).

Hab. North Pacific (*Capt. Delville, R.N.*).

Skull, from the Zoological Society's collection.

III. *The beak of the skull from the notch rather shorter than from the notch to the condyle, depressed, flat above, gradually tapering in front; the width at the notch two-thirds of the entire length of the beak. Lower jaw slender, narrow and thin in front.* FERESA.

6. ORCA INTERMEDIA.

Orca intermedia, Gray, Cat. Seals and Whales, p. 283; Zool. Erebus and Terror, p. 34, tab. 8 (skull).

Hab. — ?

This is the skull of a very small species of the genus. It is evidently one of a full-grown animal, and yet it is not so large as the skull of a newly born specimen of the other species. Mr. Flower, judging from the figure, believed it to be the skull of a very young animal; but on examining the skull along with me he became satisfied, from the solidity and definite form of the bones, that it is the skull of a full-grown though not aged specimen.

This skull has many resemblances to the skull of some of the species of *Electra*; the teeth are much smaller than those of *Orca*.

The following are the measurements of the different skulls of the genus in the collection of the British Museum; they are carefully taken with calipers by Mr. Edward Gerrard.

	<i>O. stenorhyncha.</i>		<i>O. capensis.</i>		<i>O. latirostris.</i>		<i>O. pacifica.</i>		<i>O. intermedia.</i>	
	361 b. in.	361 c. lin.	1065 b, c. in.	361 a. lin.	1065 a. in.	362 a. in.	1065 a. lin.	362 a. lin.	1065 a. lin.	362 a. lin.
Length from end of nasal to centre of occipital condyle }	35	0	37	0	39	0	33	0	36	6
Length of nose	17	6	18	6	22	6	17	0	18	0
— of tooth-line	13	6	14	0	16	0	13	0	14	6
— of lower jaw	27	6	30	0	31	0	26	0	29	6
Breadth at the notch	10	6	11	0	12	0	10	0	12	6
— at the orbit	18	0	19	6	20	0	18	0	21	0
— at temple above	18	0	19	6	20	0	18	0	20	0
— at middle of beak	9	0	10	0	11	0	9	6	10	0
— at intermaxillaries	3	3	3	3	4	6	3	3	3	6

7. On a Larval *Œstrus* found in the Hippopotamus. By JAMES MURIE, M.D., F.L.S., F.G.S., &c., Prosector to the Society.

Neither in the comprehensive 'Monographie der Œstriden' of Frederick Brauer (Vienna, 1863), nor in the writings of others who have treated of species of the Œstrid family of Diptera, in the larval or imago state, do I find any mention that the Hippopotamus occasionally serves as a nidus for the immature insect. For this reason I place the following observation of such a case on record.

A number of the orders of Mammalia are subjects whereon or

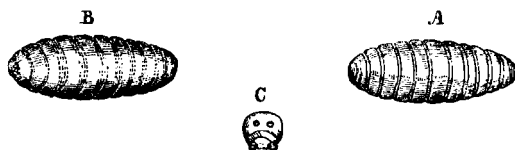
within the bodies of which the ova of Œstridæ are reared, and none more frequently so than the *Artiodactyla*. It is not, therefore, to be wondered at that the Hippopotamus, belonging to this group, should be so troubled.

During two years' sojourn in the countries bordering the Upper White Nile, our party met with and shot at innumerable Hippopotami; but only in two instances were the animals with certainty killed and the bodies secured. As may easily be understood, whenever Hippopotami are seen in the river within range, they are fired at by the voyagers; consequently the animals are shy. Most often under cover of night do they freely snort, and approach close to the vessels. When shot at or hit they quickly disappear; so it is difficult to tell whether they have received a mortal wound or not.

I may further incidentally mention that I have partaken of the flesh, which is beef-like in fibre, but sweeter to the taste. It is peculiar in containing a vast amount of watery or sanguineo-serous element. Thus on being cooked it shrinks very much, and when dried in the sun in strips diminishes in volume in a most extraordinary manner.

The adult Hippopotamus from which the grub in question was extracted was killed in the river Ayi, near Wayo, in Moro, lat. $4^{\circ} 46' N.$ and long. $30^{\circ} 26' 20'' E.$, on the 30th January, 1863. It was the day following ere the body was recovered, it having floated some little distance down stream from where it was shot. The cranium in a rough condition alone was brought to camp, the entrails and flesh of the body having been cut up piecemeal and carried off by the Negroes. Whilst ridding the skull of parts liable to decompose I dissected out both eyes, and among the fatty and fibrous tissues of the left orbit was surprised to find a large maggot. For the moment I was inclined to regard it as the produce of a Blowfly, and was amazed at what seemed the excessively rapid growth of the Blowfly's ova; for the Hippopotamus at this time had not been slain above forty hours. More extended examination of the parts, however, convinced me this could not be the case, as the larva was solitary, situated deeply within the orbit, and differed materially from the common maggot.

I thereupon made sketches of the specimen, of the natural size; and these have been reproduced in the accompanying figures.



Larva from the orbit of Hippopotamus. Nat. size.

A. Upper view. B. Abdominal surface. C. Anal extremity.

The characters may be given as undernoted.

Colour yellowish white. Body cylindrical, tapering obtusely at

either end. Extreme long diameter 0·9 inch, and its greatest transverse one 0·3 inch. Some ten or more slightly raised ridges surround the body; ventrally these are covered with short fine hairs or setæ. On the abdominal surface, close to the head, are two hooklets, by which the animal fixes itself to the flesh. There are two prominent black spots at the anal extremity, beneath these a lip-like projection (the anus), the lower part of which has minute spines; and in this view (C) two nipple-like limbs stand out on each side.

Herr Brauer, *l. c.* p. 276, has given a very useful tabular statement of the various orders, families, and species of mammals in which Œstrid larvæ have been found. There is added to each mammalian species the name of the insect, and the part of the body where it was located. Throughout the work there is a full detail of the history, synonyms, &c. of the species; and a copious *résumé* of the literature on the subject precedes the descriptive text.

From his classified Table the subjoined list is drawn; but the present arrangement is altered, and the orders, genera, and species of mammals adapted to our Society's 'List of Vertebrated Animals,' for 1866. Some of the common names have been taken from Dr. Gray's Catalogue of Mammalia in the British Museum, 1843.

The object, then, of the following list is to call the attention of anatomists at home, naturalists, sportsmen, Fellows of the Society, and others abroad to the circumstance that any larvæ found by them in cutting up or skinning animals other than those here given, perchance may belong to a species of insect new to science. At all events every observation must add to a better knowledge of the life-history of those already known.

Whilst entomologists have acquaintance with the imago insect, they often lack information as to the larval form, which those engaged in different pursuits might supply.

List of Mammals in which Œstri larvæ have been found.

BIMANA.

Man. *Homo sapiens*, L.

QUADRUMANA.

Monkeys. *Simia platyrrhinæ*, genus et sp.?

CARNIVORA.

Domestic Dog. *Canis familiaris*, L.

Striped Hyæna. *Hyæna striata*, Zimm.

Jaguar. *Felis onca*, L.

Common Badger. *Meles taxus*, Schreb.

RODENTIA.

Brazilian Squirrel. *Sciurus æstuans*, Linn.

Squirrel. *Sciurus aureogaster*, Cuv.

Hackee. *Sciurus (Tamias) lysteri*, Ray.

Marsh-Hare. *Lepus palustris*, Bachman.

Hare. *Lepus*, sp?

Sadajac. *Lagomys alpinus*, Desm.

Fur-country Pouched Rat. *Saccophorus borealis*, Rich.

ARTIODACTYLA.

Common Camel. *Camelus dromedarius*, L.

Domestic Sheep. *Ovis aries*, L.

Siberian Wild Sheep. *Caprovis argali* (Pall.).

Domestic Goat. *Capra hircus*, L.

Wild Goat. *Capra aegagrus*, Gm.

Sassaby. *Acronotus lunatus*, Burch.

Riet Bok. *Heleotragus reduncus*, H. Smith.

Gazelle. *Gazella dorcas*, L.

Saiga Antelope. *Saiga tartarica*, Pall.

D'seren. *Procapra gutturosa*, Pall.

White-tailed Gnu. *Catoblepas gnu*, Gm.

Brindled Gnu. *Catoblepas gorgon*, H. Smith.

Domestic Ox. *Bos taurus*, L.

Cape Buffalo. *Bubalus caffer*, Sparr.

Moose or Elk. *Cervus alces*, L.

Red Deer. *C. elaphus*, L.

Fallow Deer. *C. dama*, L.

Mule Deer. *C. macrotis*, Say.

Roebuck. *C. capreolus*, L.

Reindeer. *Rangifer tarandus*, L.

Musk-deer. *Moschus moschiferus*, L.

Hippopotamus. *H. amphibius*, L.

PERISSODACTYLA.

Common Horse. *Equus caballus*, L.

Domestic Ass. *E. asinus*, L.

The Mule. *E. mulus*.

Two-horned Rhinoceros. *Rhinoceros bicornis*, L.

Burchell's Rhinoceros. *R. sinus*, Burch.

MARSUPIALIA.

Opossum. *Didelphys philander*, L.

8. Note on a Specimen of *Aquila barthelemyi* recently living in the Society's Gardens. By JAMES MURIE, M.D., Prosector to the Society.

The following letter from Mr. Gurney to me explains itself. I shall only preface a memorandum on the receipt and disposal of the specimen as far as the Society is concerned.

The example of *Aquila barthelemyi*, Jaub., referred to was obtained

from St. Victoire, France. It was purchased by the Society 30th April, 1866, and died 13th November, 1869. It proved to be a male on dissection. The specific wing-markings being absent when the body was received by me, I thought proper to place it in Mr. George Gray's hands for identification. This gentleman pronounced it, as appearing to him, no other than *A. chrysaëtos*, Linn. The skin, being in poor condition, was not kept; but the skeleton was retained by him for the National Osteological Collection. In case that any doubts might hereafter arise regarding the specimen, I considered that the history of the bird should be attached to the skeleton as well as published. Mr. Gurney coincided with me in this opinion, and at my request kindly forwarded the accompanying note for that purpose.

“Nov. 24, 1869.

“MY DEAR SIR,—You will find in the volume of the ‘Ibis’ for 1864, p. 339, the account of two young specimens of *A. barthelemyi* which came into my possession in 1857, and the survivor of which six or seven years afterwards obtained the white scapular spots which are found close to the junction of the wing with the body in the Eagle to which the above name has been assigned.

“These marks were very beautiful and conspicuous when I wrote the paper in the ‘Ibis’ above referred to; but subsequently to the specimen passing into the hands of the Zoological Society in 1866, they seem to have disappeared, and I conclude from what you tell me that they were not apparent in the bird at the time of death.

“I doubt much whether *Aquila barthelemyi* be a race entitled to specific rank, but whatever it be, the bird in question which passed from my possession to that of the Zoological Society, and of which the skeleton is now in the British Museum, undoubtedly belongs to it, and is entitled to the name of *A. barthelemyi*, if that name be recognized as of specific value.

“I am, &c.,

“J. H. GURNEY.”

9. Descriptions of Seventeen New Species of Land Shells from the South-Sea Islands, in the Cabinet of Mr. JOHN BRAZIER of Sydney. By Dr. JAMES C. COX, C.M.Z.S.

1. *HELIX ALLECTA*.

Shell with a deep open funnel-shaped umbilicus, depressedly orbicular, thin, uniformly closely and strongly striated, the striae of a dull, dark-reddish chestnut-colour; spire flat; whorls $4\frac{1}{2}$ to 5, convex, the last not descending in front; suture deep and excavated; aperture rounded; peristome simple, obtuse, columellar margin dilated.

Diam., greatest 0·10, least 0·08; height 0·04 of an inch.

Hab. Upolu, Navigator's Islands; found on the mountains, under decayed wood (*Brazier*).

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2. *HELIX WANGANENSIS*.

Shell perforated, depressed, thin, hyaline, smooth, and shining, of an amber-brown colour; spire almost flat; whorls 5, flattened, very slowly increasing in size, last not depressed, rounded at the base; suture strongly marked; aperture lunate; peristome simple, thin; columella dilated, concealing the slight perforation.

Diam., greatest 0·31, least 0·21; height 0·22 of an inch.

Hab. Wanga, San Christoval, Solomon Islands; on the mountains, under leaves (*Brazier*).

3. *HELIX QUINTALÆ*.

Shell imperforate, lenticular, greenish yellow, thin, transparent, flattened above; whorls 8, slowly increasing, the last sharply keeled, not descending in front, base rounded and excavated in the middle, irregularly rugosely striated above, smooth below the keel; suture shallow, but rather broad; aperture narrowly angularly lunate; peristome simple; columella scarcely dilated.

Diam., greatest 0·14, least 0·12; height 0·08 of an inch.

Hab. Norfolk Island; found in the pine-forests, under leaves in damp places (*Brazier*).

This species is closely allied to *H. lizardensis*, Pfr., and, at Mr. Brazier's request, is named in honour of Mr. Arthur Quintala, jun., of Norfolk Island.

4. *HELIX HELVA*.

Shell flattened, deeply and widely umbilicated, pale red, uniformly striated with coarse, regular, rather widely separated rib-like striæ; whorls $4\frac{1}{2}$ to 5, rounded, the last descending gradually in front; aperture lunately rounded, margins joined by a dark callus; peristome obtuse, not reflected.

Diam., greatest 0·10, least 0·08; height 0·04 of an inch.

Hab. Aneiteum, New Hebrides; found under a log of wood (*Brazier*).

5. *HELIX ARDUA*.

Shell minutely umbilicated, turbinately globose, yellowish brown, thin, smooth, slightly shining; spire obtusely conical; whorls 6, markedly convex, the last not descending in front; base rounded; suture deep; aperture roundly lunate; peristome simple, somewhat expanded at the columella.

Diam., greatest 0·12, least 0·10; height 0·11 of an inch.

Hab. Erumanga, New Hebrides; found under a log of wood near the sea.

6. *HELIX VANNÆ-LAVÆ*.

Shell imperforate, conoidly depressed, dark yellowish horn-colour, smooth, shining; spire broadly conoid; whorls $5\frac{1}{2}$, only slightly convex, last not descending, base convex; suture shallow; aperture

lunate; peristome thin, simple, columellar margin a little dilated above.

Diam., greatest 0·14, least 0·12; height 0·11 of an inch.

Hab. Aneiteum, New Hebrides; found under decaying leaves near the sea-shore (*Brazier*).

7. *HELIX SORORIA*.

Shell imperforate, depressedly globose, thin, smooth, shining, throughout light olive-yellow; spire slightly elevated; whorls 5, moderately convex, slowly increasing in size, last not descending in front, base rounded, narrowly margined at the suture; aperture ovately rounded; peristome simple, columellar margin only slightly dilated.

Diam., greatest 0·15, least 0·13; height 0·09 of an inch.

Hab. Ovalau, Fiji Islands; found under leaves on the mountains (*Brazier*).

8. *HELIX SANSITUS*.

Shell conical, narrowly umbilicated, regularly spirally striated, striae slightly raised and granular, thin, light brown; spire raised and pointed; whorls 6, gradually increasing, the last sharply and prominently keeled, flattened at the base, which is also granularly spirally striated; peristome simple, thin.

Diam., greatest 0·11, least 0·10; height 0·09 of an inch.

Hab. Vanna Lava, Banks's Group; found inland, under decayed leaves in very wet places; also found at Viti Levu, Fiji, inland, in similar localities (*Brazier*).

9. *HELIX EXAGITANS*.

Shell plano-convex, flat above, convex below, deeply and openly umbilicated, pale brown-yellow, upper surface irregularly finely striated across the whorls; whorls 5, rapidly increasing, last not depressed in front, sharply keeled; peristome simple, thin.

Diam., greatest 0·09, least 0·06; height 0·04 of an inch.

Hab. Norfolk Island; found in damp places in the pine-forests, under leaves (*Brazier*).

10. *HELIX TUTUILLÆ*.

Shell depressedly conical, imperforate, of a dull pale brown, above finely granular, smooth and shining below; spire conical, obtuse; whorls 5, rounded, slowly increasing in size, last not depressed, not keeled, base rounded; suture broad and channelled; peristome thin, roundly lunate.

Diam., greatest 0·12, least 0·10; height 0·09 of an inch.

Hab. Tutuilla, Navigator's Islands; found in wet places, under leaves, near the sea (*Brazier*).

11. *HELIX ANTELATA*.

Shell depressedly conical, perforated, dull reddish brown, smooth;

spire obtuse, suture narrow, not excavated; whorls 5, last whorl inflated at the base, and excavated round the perforation; peristome simple, thin, columellar margin dilated at its insertion.

Diam., greatest 0·12, least 0·10; height 0·10 of an inch.

Hab. Aneiteum, New Hebrides; found under leaves near the sea (*Brazier*).

12. *HELIX PATESCENS*.

Shell imperforate, globosely depressed, thin, transparent, pale straw-coloured, shining, finely rugosely striated; spire conically raised; whorls $3\frac{1}{2}$ to 4, the last rapidly increasing, much inflated at the base, and banded with a faint broad brown band; aperture oblique; peristome simple, thin, rounded.

Diam., greatest 0·16, least 0·12; height 0·12 of an inch.

Hab. Norfolk Island, under leaves in damp places (*Brazier*).

13. *HELIX DEPSTA*.

Deeply, rather widely, and openly umbilicated, discoid, thin, light yellowish brown; spire almost flat, suture well defined; whorls $4\frac{1}{2}$, roughly arcuately striated above, much smoother below, slowly increasing in size, the last very slightly angled and a little depressed at its termination; aperture oblique, lunately rounded; peristome simple, not thickened, columellar margin not expanded.

Diam., greatest 0·23, least 0·19; height 0·13 of an inch.

Hab. Norfolk Island; under leaves in damp places (*Brazier*).

14. *HELIX RETARDATA*.

Shell deeply, openly, but narrowly umbilicated, thin, transparent, hyaline, pale horn-colour; apex of spire raised; whorls 5, gradually increasing, last not depressed, smooth and unsculptured; peristome lunately rounded, columellar margin a little dilated and reflected.

Diam., greatest 0·16, least 0·12; height 0·12 of an inch.

Hab. Aneiteum, New Hebrides; found under dead leaves near to the sea-shore (*Brazier*).

15. *DIPLOMMATINA WISEMANI*.

Shell sinistral, callously rimate, elongately oval, pupiform, light yellowish brown; apex acute; whorls 5, very finely obliquely, closely, and regularly costulate, third and fourth becoming rapidly tumidly enlarged, last contracted and subascendent; aperture subcircular, much expanded, thick, shining, and porcellaneous; margins joined by a thick expanded callus.

Breadth 0·05, height 0·11 of an inch.

Hab. Wangai, San Christoval, Solomon Isles (*Brazier*); found on the mountains, in damp places, under leaves.

Named, by Mr. *Brazier's* request, after Commodore Wiseman.

16. *DIPLOMMATINA BRAZIERI*.

Shell rimate, cylindrically acuminate, of a dull white colour; spire

acute; whorls $6\frac{1}{2}$, regularly increasing, crossed by rather prominent, straight, widely separated ribs, the last contracted and ascendent; aperture ovately circular, thick, callous, and shining; margins formed by a thick callus continuous with the aperture.

Breadth 0·04, height 0·08 of an inch.

Hab. Wanga, San Christoval, Solomon Islands; found on the mountains, in damp places (*Brazier*).

17. CYCLOSTOMA BRAZIERI.

Shell pyramidal; spire acute and elevated, apex rose-red; whorls 5, round, under the lens very faintly spirally striated, dark cinnamon-colour; suture deep; umbilicus deep and narrow; aperture circular; peristome plain, scarcely thickened. Operculum solid, very concave outwardly, with prominent circular ridges.

Breadth 0·13, height 0·16.

Hab. Upolu, Navigator's Islands; found on the mountains, under decaying logs (*Brazier*).

10. Note on a Freshwater Fish from the Neighbourhood of Aden. By Lieut.-Col. PLAYFAIR, F.Z.S., H.M. Consul-General in Algeria.

I am indebted to the kindness of my successor at Aden, Captain Goodfellow, for several specimens of a Cyprinoid fish recently discovered in South Arabia.

During all the years I resided there I never heard of its existence, and I was fully convinced that the streams of that region, which are almost if not entirely dry in summer, and which even in the cold season are lost in the sand before reaching the sea, were destitute of fishes.

Not long ago the Sultan of Lahej, whose territories touch Aden, and of which, indeed, the latter once formed a part, sent to the Political Resident a jar of fishes, which he had caught in one of his streams, and which he suggested should be put into the ancient reservoirs, recently restored, and then full of rain-water.

This was done, and in a very short time the fishes increased both in number and size; and it is of these that Capt. Goodfellow forwarded the specimens before mentioned.

I was at first inclined to regard it as a new species of *Discognathus*, chiefly from the fact that it has four and a half series of scales between the lateral line and the root of the ventral fin, whereas the only other known species nearly resembling it had but two or two and a half.

My friend Dr. Günther, however, who has compared it with numerous specimens of *D. lamta* in the National collection from various localities between Nepaul and Palestine, has no doubt that it is referable to that remarkable species.

The following is a description of the specimens :—

Height of body considerably more than length of head, which is one-fifth of the total length without caudal. Head depressed; its width is five-sixths of its length; eye very small; interorbital space half the length of the head; width of mouth less than that of interorbital space; labial disk well developed.

Barbels four in number, the upper nearly double the diameter of the eye. *Four and a half longitudinal series of scales between the lateral line and the root of the ventral.*

Pectoral as long as head, terminating at about its own length before root of ventral. Caudal deeply emarginate, lobes equal.

Colour silvery, darker above; a black spot behind upper end of gill-opening; tip of snout blackish; no lateral band; no darker spot at base of caudal.

Length 5 inches.

February 10, 1870.

John Gould, Esq., F.R.S., V.P., in the Chair.

The Secretary called the attention of the Meeting to the following additions to the Menagerie during the month of January :—

1. A specimen of the Great Northern Diver (*Colymbus glacialis*), captured in Cornwall, and presented to the Society by A. R. Hunt, Esq., January 6th. The bird, which was believed to be the first specimen of the species ever obtained by the Society alive, had been rather shy at first, but had been gradually induced to feed, and now seemed likely to do well. It appeared to be a bird of the year.

2. A small Armadillo, purchased January 15th of Mr. E. Paddison. This Armadillo, which Mr. Sclater referred with some doubt to the Little Armadillo (*Dasypus minutus*), was stated to have been captured on the eastern slope of the Andes of La Plata, at an elevation of 3000 feet, in 35° 15' S. lat.

3. Five Brown Tritons (*Geotriton fuscus*), from the vicinity of Spezia in Italy, purchased January 22nd, and believed to be the first specimens of this Batrachian exhibited in the Society's collection.

4. A female Potto (*Perodicticus potto*), purchased January 24th, making a pair of this scarce Lemurine form now living in the Society's collection.

The Secretary likewise reported that Mr. G. S. Rodon had presented to the Society the survivor of the two White-handed Gibbons (*Hylobates lar*) which he had deposited in the Society's Gardens on the 17th of November last—and that since the death of its fellow this animal had been placed in the same cage as the Hoolock Gibbon (*Hylobates hoolock*), presented by Mr. Grote, so that the two species might now be seen and compared together. A drawing (Plate V.) was exhibited, representing these two animals.