March 13, 1866.

Dr. J. E. Gray, F.R.S., V.P., in the Chair.

Mr. Fraser read the following list of species of Mollusks recently collected by Robert Swinhoe, Esq., H.B.M. Vice-Consul, C.M.Z.S., in Formosa, stating that the list had been furnished him by Henry Adams, Esq., F.L.S., and that it was a continuation of the list published in the Society's 'Proceedings' for 1865, p. 196.

<i>Conus chaldæus</i> , Bolt.	<i>Melania fasciolata</i> , Oliv.
— <i>lignarius</i> , Reeve.	— <i>crenulata</i> , Chem.
<i>Fusus colosseus</i> , Lam.	<i>Telescopium fuscum</i> , Chem.
<i>Murex microphyllus</i> , Lam.	<i>Lampania zonalis</i> , Brug.
<i>Eburna spirata</i> , Linn., var.	<i>Pyrazus semistriatus</i> , Bolt.
<i>Phos senticosus</i> , Linn.	<i>Cerithium variegatum</i> , Quoy.
<i>Nassa thersites</i> , Brug.	— <i>mitræformis</i> , Sow.
— <i>gemmulata</i> , Lam.	<i>Vivipara angularis</i> , Müll.
— <i>marginulata</i> , Lam.	<i>Galerus extinctorum</i> , Lam.
— <i>olivacea</i> , Brug.	<i>Gladius fusus</i> , Linn.
— <i>tænia</i> , Gmel.	<i>Nerita guillouana</i> , Récl.
<i>Cuma carinifera</i> , Lam.	— <i>costata</i> , Gmel.
<i>Mitra coccinea</i> , Reeve.	— <i>yoldii</i> , Récl.
<i>Fulgoraria rupestris</i> , Gmel.	— <i>squammulata</i> , Guill.
<i>Semicassis decussata</i> , Linn.	— <i>plicata</i> , Linn.
— <i>areola</i> , Linn.	<i>Neritella subpunctata</i> , Récl.
<i>Dolium fasciatum</i> , Brug.	<i>Senectus radiata</i> , Gmel.
<i>Lagena wiegmanni</i> , Ant.	<i>Lunella reclusa</i> , Chem.
<i>Bursa rana</i> , Linn.	<i>Turbo marmoratus</i> , Linn.
<i>Sycotypus ficus</i> , Linn.	<i>Chondrula cantori</i> , Phil.
<i>Dactylus mustelinus</i> , Lam.	<i>Cyclophorus indicus</i> , Desh.
— <i>maurus</i> , Lam.	<i>Macha strigillata</i> , Lam.
<i>Harpa major</i> , Mart.	<i>Hiatula diphos</i> , Linn.
<i>Natica maroccana</i> , Chem.	<i>Trigonella luzonica</i> , Desh.
— <i>lineata</i> , Chem.	<i>Macoma truncata</i> , Jonas.
<i>Ruma sebæ</i> , Sow.	<i>Cryptogramma flexuosa</i> , Linn.
<i>Architectonica maxima</i> , Phil.	<i>Circe undatina</i> , Lam.
<i>Niso brunnea</i> , Sow.	— <i>gibbia</i> , Lam.
<i>Volva volva</i> , Linn.	<i>Callista citrina</i> , Lam.
<i>Cypræa miliaris</i> , Gmel.	<i>Chione dysera</i> , Linn.
— <i>tigris</i> , Linn.	<i>Trapezium</i> , ? n. s.
— <i>arabica</i> , Linn.	<i>Crassatella sulcata</i> , Lam.
<i>Littorina melanostoma</i> , Gray.	<i>Lithophaga fusca</i> , Gmel.
— <i>newcombia</i> , Reeve.	<i>Scapharca disparilis</i> , Reeve.
— <i>pintado</i> , Wood.	<i>Anomalocardia trapezina</i> , Desh.
— <i>obesa</i> , Sow.	<i>Limopsis japonica</i> , A. Ad.
<i>Melania pyramis</i> , V. d. Busch.	<i>Amussium pleuronectes</i> , Linn.
— <i>lateritia</i> , Lea.	<i>Lingula ovalis</i> , Reeve.

Mr. A. Murray, F.L.S., read a communication on the minor cha-

acters by which the species of Mammals may be distinguished, and called particular attention to the structure of the hair as shown under the microscope, and the form of the dung, as likely to lead to results available in classification.

Mr. H. B. Tristram, C.M.Z.S., gave a notice of the recent capture of *Gymnetrus banksii*, the Great Ribbonfish, off the coast of Durham. The specimen was about 16 feet long, and was the ninth instance on record of this fish having occurred on the British coasts since the year 1700.

The following papers were read :—

1. Notice of the Examination of the Type Specimen of *Aëлло cuvieri* of Leach. By DR. J. E. GRAY, F.R.S., V.P.Z.S., F.L.S., &c.

Dr. Leach, in the thirteenth volume of the 'Transactions of the Linnean Society,' has described several genera of Leafless Bats, especially one under the name of *Aëлло*, from a specimen in the Museum of Joshua Brookes, of Blenheim Street, Oxford Street. This specimen was sold at his sale, and purchased by Professor Dr. Edmund Grant of University College, London. I have more than once sought for it in that collection without having been able to discover it, and I believe that Mr. Tomes was equally unsuccessful.

The genus has not been recognized by the characters given by Dr. Leach, though they are full and particular, and consequently has been one of the puzzles to the students of these animals. It has been conjectured to have been described from a specimen of a Bat in which the tail had been partially withdrawn.

Wishing to verify the previous determination that Leach's genus *Celæno* was only a synonym of *Noctilio*, I requested Dr. Grant to allow me to see the specimens under his care; and he most kindly acceded to my request, and said he would put the Bats out on a table that I might examine them whenever I called. I availed myself of his kindness accordingly, and went directly to see them. I was much pleased, not only to find *Celæno brookesii* (which is certainly *Noctilio americanus*), but also the long lost *Aëлло cuvieri*; and there could not be a doubt for a moment that the latter was a species of my genus *Chilonycteris*, which Gundlach has also described under the name of *Lobostoma*; so that these generic names must give way to the more ancient one of *Aëлло* of my earlier teacher and friend.

The specimen is in a moderately good state, considering that it has been preserved dry, as it was expanded when it was taken out of spirits. The crest over the nostrils, and the end of the nose and chin, are contracted. The skin in front of the chin and on one side of the face have been cut off in order to examine the teeth. This explains why the ridges of the chin and the peculiar form of the nose, so characteristic of the genus, were not described by Dr. Leach.

It is this imperfection of the description that has left the genus so long unrecognized, and, indeed, made it impossible to determine what it was without the examination of the type specimen. The hair is of a very bright uniform red-brown colour, much redder than in any specimen of *Chilonycteris* in the British Museum; but it is a question whether this is the proper colour of the fur, or whether it arises from the partial bleaching of the specimen, which was probably taken from spirits when it was prepared. The hair is of one uniform colour to the base, wherein it agrees with the description of *Lobostoma cinnamomeum* of Gundlach from Cuba, which I believe to be only a variety of *Chilonycteris macleayii*. In the proportions of the arm-bone and the fingers, &c., it also agrees with *Chilonycteris macleayii*.

The generic characters of *Aëlo*, as given by Dr. Leach, occupy nearly a page of a quarto book, and yet no one has been able to discover the genus. One could not have a more convincing proof that it is not mere length of character that is required to define a genus.

It is remarkable that Dr. Leach described two genera, *Mormops* and *Aëlo*, so nearly allied to each other, without seeing their relation, and placed one in his group of Bats with leaves on the nose, and the other in that without a nose-leaf. Yet he was a person who had a quick eye for natural affinities; and zoologists ought never to forget that it is to him we owe our acquaintance with the work of Cuvier and Latreille. It was the desire to present the latter to the English reader that induced him to devote the greater part of his nights to its translation. He made it a rule to translate a certain number of pages every morning before he had his breakfast and began his daily official duties; and this hard work, I believe, caused the breaking down of his health and early death.

2. Additional Notes on the *Anatidæ* of the Genera *Dendrocygna* and *Tadorna*. By P. L. SCLATER, M.A., Ph.D., F.R.S., &c., Secretary to the Society.

I have a few additional remarks to offer on the species of Ducks of the genera *Dendrocygna* and *Tadorna*, concerning which I have previously communicated some notes to the Society*.

Sp. 6. DENDROCYGNA MAJOR.

The occurrence of *Dendrocygna major* in Madagascar has been confirmed by the receipt of a skin of this species recently collected in that island by Mr. Gerrard, which has been kindly submitted to my examination by Mr. A. Newton†. This species is at once distinguishable from *D. arcuata* by its larger size and the white band across the upper tail-coverts.

* "Note on the species of *Tadorna* living in the Society's Menagerie" (P. Z. S. 1864, p. 189), and "Note on the Geographical Distribution of the Ducks of the genus *Dendrocygna*" (*ibid.* p. 299).

† See Mr. Newton's account of this collection, P. Z. S. 1865, p. 837.

Sp. 7. *DENDROCYGNA VAGANS*.

I was not aware when I wrote my previous notes that this species had been described and figured in Fraser's 'Zoologia Typica' (pl. 68) under the MS. name bestowed upon it by Mr. Eyton. There can be no doubt, therefore, that this name should be adopted as its first given and very appropriate designation. Mr. Gould has apparently altogether overlooked my notes on this species, as in his recently published 'Handbook to the Birds of Australia' (vol. ii. p. 374) he calls it *Dendrocygna gouldi*. But, as I have already shown (P. Z. S. 1864, p. 300), the Australian bird to which the late Prince Charles Bonaparte gave this MS. name is not separable from the Moluccan and Philippine-Island *Dendrocygna vagans*.

I am indebted to my friend Dr. G. Bennett for a notice of the occurrence of this species in a more southern locality than has hitherto been recorded. In a letter from him, dated Sydney, May 19th, 1865, the following passage occurs:—

"A curious occurrence took place on March 17th (Easter Monday), being a holiday. When several thousand persons were about the aviary in the Botanic Gardens, three wild Whistling Ducks (*Dendrocygna arcuata*, Gould) flew down to the tame pair of these birds we have had for some time in a pond in the Gardens. They remained some time swimming about in the pond with them (and could have been easily shot), and then took their departure, and have not been seen since. What renders this more singular is that the Whistling Duck is very rarely or never seen nearer to Sydney than Port Macquarie, and principally inhabits the northern districts."

Mr. G. R. Gray, in his list of Pacific Island Birds*, has also noted the occurrence of this species in the Fiji Islands.

Since I wrote the article above referred to on *Dendrocygna*, the British Museum has acquired a specimen of *Dendrocygna fulva* (Gm.) from Mexico, which I have thus had an opportunity of examining for the first time. This species is very like *D. major* in form and plumage, and is, in fact, hardly to be distinguished from it except by its smaller size and shorter bill. If, as I believe is the case, though I have not yet had an opportunity of comparing specimens from South America, *Dendrocygna virgata* (Max.) is identical with *D. fulva*, we have three very closely allied species presenting us with the following distribution in the Tropics:—

1. *D. vagans*, from the Philippines, through the Moluccas, to N.E. Australia and Fiji Islands.
2. *D. major*, peninsula of India and Madagascar.
3. *D. fulva*, Central and Southern America.

The pair of Variegated Sheldrakes (*Tadorna variegata*), which I have spoken of in my notes on the birds of that group (P. Z. S. 1864, p. 190) as having been received from Mr. Sharpley in 1863, bred in the Society's Gardens for the first time in the spring of last year, in

* 'Cat. of Birds of the Tropical Islands of the Pacific Ocean in the Collection of the British Museum' (London, 1860), p. 54.

one of the small ponds near the Small Mammals' House. Five eggs were laid by the female in one of the breeding-boxes about the second week in April, and five young birds were hatched on the 15th of May. One of the five died in the first downy plumage, which in this species very nearly resembles that of the young Ruddy Sheldrake (*Tadorna rutila*). When about three months old the remaining four moulted into the first feather-dress, in which stage they were all four alike, and nearly resembled the *adult male*, having the head and neck black. In the autumnal moult three of them threw off the black hood, and assumed the characteristic white head of the female.

This curious change of plumage appears to me of considerable importance, as I am not aware that any previous instance has been recorded in which, the sexes being differently coloured, the dress of the immature bird resembles that of the *adult male*.

3. Descriptions of a New Genus and a New Species of Mollusks. By HENRY ADAMS, F.L.S.

Genus BROTTIA, H. Adams.

Testa fusiformis; spira elevata, anfractibus ad angulum spinis armatis, ultimo antice subrostrato; apertura subovata, antrorsum producta. Operculum corneum, tenue, rotundatum, multispirale.

BROTTIA PAGODULA, H. Ad.

Melania pagodula, Gould, Proc. Bost. Soc. Nat. Hist. ii. p. 218.
Io pagodula, Gould, Otia Conch. p. 252.

This singular shell, which was first described by Dr. Gould as a *Melania*, has much the appearance of an *Io*, to which genus he subsequently referred it in his 'Otia Conchologica.' The operculum, however, which I have recently had an opportunity of examining, not only separates it from that genus, but shows its position to be in the *Cerithiidae*, and not in the *Melaniidae*. It forms, in my opinion, the type of a new group in the former family. It is from the river Thoungyin, Tavoy, Siam.

COLINA GRACILIS, H. Adams.

C. testa elongato-turrita, in medio tumida, tenui, pallide fulva; spira truncata, anfractibus ad 10, convexiusculis, longitudinaliter plicatis et transverse concinne striatis, plicis in anfractu ultimo obsoletis; sutura cingulo moniliformi ornata; anfractu ultimo valde contracto, et in medio angulato; apertura semi-ovali, canali brevi, recurvo; columella obliqua, vix arcuata; labro valde expanso, incrassato, subreflexo.

Long. 10, lat. $1\frac{1}{2}$ mill.

Hab. Eastern Seas (Coll. H. A.).

This species is most nearly allied to *C. macrostoma*, Hinds, but is smaller and more attenuated; the last whorl is angulated in the middle and more contracted, and the sculpture, although of the same character, is more sharply defined; it is also without any of the coloured markings which distinguish *C. macrostoma*.

4. On the Structure and Affinities of *Microrhynchus laniger*.

By ST. GEORGE MIVART, F.L.S., F.Z.S.

(Plate XV.)

MICRORHYNCHUS LANIGER (Linn.). (Pl. XV.)

Lemur laniger, Linn. Syst. Nat. ed. Gmelin, i. p. 44. no. 10; Shaw, Gen. Zool. i. p. 99, pl. 34; G. Cuvier, Règne An. t. 1. p. 29; Blainville, Ostéogr. Lemur, pls. 8 & 11.

L. lanatus, Schreber, Säug. pl. 42 a.

Lichanotus laniger, Illiger, Prodrusus, p. 72.

L. avahi, Van der Hoeven, Tijdschr. v. nat. Gesch. xi. p. 44.

Indris longicaudatus, Geoffroy St.-Hilaire, Ann. du Mus. xix. p. 158; Mém. sur les Makis (1796), et Tabl. des Quad. (1812); Desmarest, Mammalogie, p. 97.

Indris laniger, Smith, S. Afr. Journ. (1835) ii. p. 27.

Indri laniger, Fischer, Syn. p. 73, et Anat. der Maki (1804), p. 16.

Semnocebus avahi, Lesson, Species (1840), p. 210.

S. laniger, Vrolik in Todd's Cyclop. of Anat. & Phys. iv. p. 215. f. 136.

Habrocebus lanatus, Wagner, Schreber, Suppl. i. p. 258; v. p. 140.

Avahis laniger, Isid. G. St.-Hilaire, Leçons des Mamm. et Cat. Primates, p. 69; Paul Gervais, Mammifères, pt. i. p. 164, pl. 7.

Avahi, Jourdan, L'Institut, t. ii. p. 231, 1834; Chenu, Encyclop. d'Hist. Nat. Quadrumanes, p. 256, pl. 32.

Microrhynchus laniger, Jourdan, Thèse inaug. à la Fac. des Sc. de Grenoble, 1834; J. E. Gray, P. Z. S. 1863, p. 141; St. George Mivart, P. Z. S. 1864, p. 638.

Maquis a bourres, Sonnerat, Voy. aux Indes Orient. t. ii. p. 142, pl. 89, 1782.

Autre espèce de maki, Buffon, Suppl. vii. p. 123, pl. 35.

This species was first described and figured by Sonnerat in his 'Voyage aux Indes Orientales'*; but the muzzle is drawn much too long and pointed. The animal is moderately well represented in plate 35 of the seventh supplementary volume of Buffon's 'Histoire Naturelle,' published in the ever memorable year 1789.

In 1839 an excellent representation of the skull and dentition appeared in De Blainville's 'Ostéographie,' Lemur, pls. 8 and 11.

* Vol. iv. p. 92, and pl. 87, in the octavo edition in the library of the British Museum.

In 1844 Professor Van der Hoeven published a representation of the external form and of the skull*.

A woodcut of a skull in the Museum of Leyden (probably the same as that figured by Professor Van der Hoeven) appeared in Professor Vrolik's article on the "Quadrumanæ" in Todd's 'Cyclopædia of Anatomy and Physiology' in 1852.

M. Paul Gervais, in his 'Histoire Naturelle des Mammifères,' 1854, pl. 7, has given a representation of the external form; and another somewhat better one has appeared in Dr. Chenu's volume on Quadrumanæ in the Encyclopédie d'Histoire Naturelle, pl. 32.

None of these, however, represent the animal quite satisfactorily, though by far the best is the figure given by Prof. Van der Hoeven.

This very rare mammal is at present represented in the British Museum only by the skin of a young individual. In the Museum at Paris, according to M. Isid. G. St.-Hilaire†, there were two adult males and one young male in 1851.

In the Museum of Leyden there is a skin and a skull which afforded Prof. Van der Hoeven the opportunity of giving the description in the 'Tijdschrift voor Natuurlijke geschiedenis,' above referred to, where, at page 27, he says‡, "The woolly *Maki*, or, as it has often been called, the long-tailed *Indri*, had not been again seen since the voyage of Sonnerat, who discovered it. Gmelin had given it a place in the 'Systema Naturæ' under the name of *Lemur laniger*; but the actual state of science required a more precise knowledge of the dentition in order to determine in which of the groups, into which zoologists had divided the genus *Lemur*, the animal should be placed. M. Jourdan, Director of the Museum of Natural History at Lyons, received, in 1833, a skin and a skull of this animal, of which he gave a description, which was read at a Séance of the Académie Royale des Sciences at Paris, but which was only made public by extracts published in the scientific journals. He believes it should constitute a new genus of the family of Lemurs, to which he gives the designation *Avahi*, that being the name given to the animal by the natives inhabiting the eastern part of Madagascar.

"For a few years past there has been a skin and a skull in the Royal Museum of Leyden.

"As regards the skull our figure§ shows that it is short, and that the lower jaw is remarkable for its height. The form of this lower jaw recalls to mind, in certain respects, what one meets with in certain South-American Monkeys (of the genus *Stentor*); and the skull in general has some resemblance to that of the Daman, that anomalous genus of the Pachydermata to which Hermann has given the name *Hyrax*.

"The animal has the hair curly or woolly, greyish brown on the back, greyish yellow near the tail; the belly is grey; the posterior

* Tijdschrift voor Natuurlijke geschiedenis, pl. 1. fig. 6, and pl. 3.

† See Catalogue des Primates, p. 69.

‡ I am indebted to the kindness of Mr. Smit for a French translation of the Dutch text.

§ Plate 1. fig. 6.

part of the thighs and around the anus whitish ; the tail and the paws are of a reddish brown. The hairs of the back are grey at the base, then reddish, rather darker in the nape of the neck. The ears are round, short, and covered with hair. The length of the head and trunk measures 0·3 ; the tail to its end, without the hair, 0·25 ; the posterior limbs, to the heel, measure 0·21 ; the anterior limbs to the end of the fourth finger measure 0·16. The fourth finger is longest, both in the anterior and posterior extremities.

"The barbarous name *Avahi* will probably meet with little acceptance. On that account we believe that we ought to accept the name *Habrocebus*, proposed by Wagner, and which alludes to the soft and woolly hair. At the same time it is uncertain whether it is more than a subdivision of the genus *Lichanotus*, and it is also uncertain whether *Propithecus diadema* should be placed in the same genus with it."

So far Prof. Van der Hoeven.

Dr. Ch. Coquerel* informs us that the Indri is called by the natives *Batakoton*, the former name merely signifying behold ! or, to use Dr. Coquerel's words, "*tiens ! voici ! regarde ! le voila !*"

With regard to *Microrhynchus* he says that (unlike the Indri, which appears confined to the mainland of Madagascar) it is found in the great forest of Tsasifoutt, in the Island of St. Mary, and that it is known to the natives by the name *Ampongui*. He adds that it is more decidedly nocturnal than the true *Lemurs*, and that in comparison with them it is a stupid animal.

A fine skin of an adult individual (containing a nearly perfect skull and most of the bones of the limbs) was obtained in Madagascar by Mr. Gerrard†, and has been kindly placed in my hands for description by Dr. Sclater.

This skin answers to the description, above quoted, of Prof. Van der Hoeven ; but it has (what he does not mention or represent in his figure) a very distinct transverse whitish band across the forehead, which is the more marked because the hair immediately in front of and behind this band is darker than on the rest of the body. The general coloration is brighter and darker than in the young skin in the British Museum, and the transverse light frontal streak, with its dark margins, better defined. The hands and feet are of a rusty brown, and the tail rufous ; but the fur of these parts is dark grey at the base, as indeed it is all over the body, except at the white patches on the backs of the thighs, where most of the hairs are light-coloured for their whole length. The face is almost entirely covered with short hairs of nearly the same tint as the fur of the arms.

The ears are short and rounded, nor do they appear to be at all tufted. The fourth digit is the longest in both the anterior and the posterior extremities.

In form *M. laniger* is remarkable for its very long hinder limbs, which it shares with the other *Indrisinæ*, and for its long tail, in which it agrees with *Propithecus*. Perhaps, however, its most pecu-

* See Revue et Magasin de Zoologie, 2^e série, xi. 1859, p. 461.

† See P. Z. S. 1865, p. 833.

liar feature is its small head and exceedingly short muzzle, in which it differs remarkably from the other *Indrisinæ*, and from the true Lemurs. Fully the proximal third of the sole of the hind extremity is hairy, and the four outer digits of both the anterior and the posterior extremities are united together by integument as far as the distal ends of the proximal phalanges of the respective digits. The index finger is very short, and the pollex slender and placed far back.

The dimensions of the skin are :—

	inches.
Length from muzzle to root of tail	12·7
—— of tail	13·0
—— from shoulder to extremity of fourth digit of hand	7·5
—— from groin to extremity of fourth digit of foot	12·0
—— from shoulder to root of tail	8·0
—— of hand (palm and fourth digit)	2·8
—— of foot (sole and fourth digit)	3·5

Fig. 1.

Left dental series of both jaws. Scale, twice nat. size.

As regards the dentition, there are two pairs of upper incisors, which are widely separated from each other. Though the præmaxilla is very short, yet all the incisors are in front of the canines (thus differing from *Hapalemur*), and, the inner one of each pair being in front of the outer one, two incisors are visible when the skull is viewed in profile. The posterior one of each pair is *very considerably* larger than the more anterior one—a condition which obtains in no other genus of the order, and which presents a marked contrast to the proportions existing in *Indris* and *Propithecus**.

The upper canine is very peculiar, and much resembles the tooth immediately behind it. It is the most vertically extended tooth in the upper jaw, yet but very slightly exceeds the most anterior premolar in that or in any dimension†.

* In De Blainville's figures (pls. 4 & 8) of *Indris*, the posterior incisor is represented as the larger, but not so in pl. 11. Of the specimens in the British Museum, in one the posterior incisors are decidedly the smaller; in the other they all appear subequal, as they are in the specimen in the College of Surgeons' Museum. In both specimens of *Propithecus* in the British Museum the anterior incisors are the larger.

† Such is the case in the specimen described, and in the skull figured, by De Blainville (*Ostéographie, Lemur*, pl. 8); but in the skull at Leyden the canine is more produced, judging from Prof. Van der Hoeven's figure (*loc. cit.* pl. I. fig. 6) and from the woodcut (of the same skull?) in Todd's *Cyclopædia*, art. *Quadrumanus*, vol. iv. p. 215. fig. 136.

Externally there is a mere rudiment of a cingulum ; but internally it is exceedingly developed both in front and behind, but especially the latter, where it constitutes a distinct, though small, basilar process, or talon, almost as marked, indeed, as in the two premolars behind it.

Fig. 2.

Inside of left upper canine and premolars. Scale, twice nat. size.

From the middle of the internal surface a strong vertical prominence is developed, which extends from the cingulum down to the apex of the tooth ; in front of this is the small anterior process, which projects forwards from the middle of the anterior margin of the tooth, greatly increasing its antero-posterior diameter, and presenting a character absolutely peculiar to this species of the *Lemuroidea*.

In *Hapalemur* it is rather longer relatively, and considerably exceeds the most anterior premolar in size. In *Indris* the canine is even slightly more prolonged as compared to the premolar than in *Hapalemur*, and decidedly so in *Propithecus*.

In *M. laniger* the canine and most anterior premolar are more equal than in any other Lemuroid*, or indeed than in any other Primate except Man.

This canine is exceedingly like the first premolar of *Lemur*.

The anterior upper premolar is unicuspidate, and resembles the canine, except that it is less vertically extended ; while the process from its anterior margin is much larger. The cingulum also is rather more marked externally. This tooth differs from the corresponding one of every other species of the suborder ; but most resembles the homologous one of *Indris*, which, however, has the anterior process rudimentary. It slightly resembles the second premolar of *Lemur* and *Hapalemur*, but is more antero-posteriorly and less transversely extended.

The posterior upper premolar is like the preceding, except that it is smaller in all dimensions except width from within outwards, and that the posterior basilar process is shorter, while the internal cingulum is much more marked. This tooth has the same resemblances and differences to its homologue in *Indris* as that last described has to its representative in that genus. It resembles the second premolar of *Lemur* and *Hapalemur* more than the anterior premolar does ; and it much more resembles the second than it does the third premolar of any Lemuroid.

The first upper molar is very different from the premolars, and is the largest grinding-tooth in the upper jaw. There is more difference in size between it and the posterior premolar than there is between any other contiguous grinding-teeth of the upper jaw, as also is the case in *Indris*.

* I. e. any other species of the suborder *Lemuroidea*.

It may be said to have eight cusps, as, beside the four large normal prominences, there are three small ones developed from the very strongly marked external eingulum, also one very small one between the two anterior large cusps. The three small external cusps are placed one in front of, one between, and one behind the external pair of the four large normal cusps. These last-mentioned cusps are not connected together by transverse ridges, as in *Indris*; but a slightly marked ridge runs from the postero-external to the antero-internal one. The two external normal cusps are longer and larger than are the two inner ones. There is no internal eingulum.

This tooth differs widely from its homologue in all the other Lemuroids except *Indris*, with which it entirely corresponds, except as regards the oblique ridge.

Fig. 3.

Basis cranii. Scale, nat. size.

The second upper molar is in all respects like the first one, except only that it is slightly smaller in all dimensions except vertical extent, that the minute cusp between the anterior large ones has disappeared, and that the oblique ridge from the postero-external to the antero-internal cusp is rather more marked.

This tooth has the same resemblance to its representative in *Indris*, and exhibits the same differences from the corresponding molar of all other genera, as in the case of the first upper molar.

The third molar has two anterior cusps—one external, and the other internal—like the other true upper molars. Behind these the margin of the tooth develops three subequal and minute cusps, which are arranged in a semicircle, and appear to be developed from the eingulum, which is elsewhere rudimentary. No other Lemuroid, except *Indris*, has a third upper molar so formed.

The two inferior incisors have the narrow elongated form so com-

mon in the *Lemuroidea*. Externally their crowns are convex from above downwards, but concave from side to side at their upper halves, which are longitudinally grooved. Internally their crowns are slightly concave from above downwards, and strongly convex transversely, there being, in fact, a median longitudinal prominence extending from the base to the apex of each tooth. The lateral margins of each incisor (on each side of the median prominence) are probably prolongations upwards of the rudimentary basal cingulum*.

The lower incisors of *Indris* and *Propithecus* are quite similarly formed; but the marked external longitudinal grooves are quite peculiar to the *Indrisinæ* amongst Lemuroids.

The lower canines are like the incisors, except that they are rather broader, that the external grooves are less marked, and that the lateral prolongations upwards of the basal talon are more so.

In *Indris* the same conformation exists, save only that the inner surface has a more marked and wider groove, owing to the greater development of the lateral prolongations of the talon.

The anterior lower premolar shows a tendency to assume the elongated and anteriorly produced form of the incisors and canines, yet it is the most vertically extended tooth in the lower jaw. In shape it is like the anterior upper premolar, only more extended forwards. It is unicuspidate, the cusp being the extremity of a strongly marked median longitudinal prominence. There is a slight basilar posterior process, and a strongly marked anterior one developed from the middle of the anterior margin. Both these appear to be productions of the cingulum, which exists within, but is scarcely traceable externally. This tooth differs from the corresponding one of all other Lemuroids except *Indris* and *Propithecus*.

Fig. 4.

Inside of left lower premolars. Scale, twice nat. size.

The posterior lower premolar is like the tooth just described, except that the anterior process is relatively more marked, the apex less produced, and that the median longitudinal ridge is so prominent as to project upwards above the external margin of the tooth, the grinding-surface presenting a marked antero-posteriorly directed groove at its hinder half.

This tooth closely resembles its homologue in *Indris*; it has a certain resemblance to the second lower premolars of *Galago*, especially of *G. senaarensis*.

The first lower molar is the longest of the inferior grinders, from before backwards; and there is more difference in size between it and the second premolar than there is between any other two contiguous

* As described by Prof. Huxley in *Arctocebus* (see P. Z. S. 1864, p. 322).

inferior molars. It has four main cusps, the anterior of the two internal ones being opposite the interspace between the two external ones. A transverse ridge connects the postero-internal cusp with the postero-external one, and another connects the antero-external with the antero-internal one, in addition to which an oblique ridge connects the postero-external with the antero-internal cusp. The antero-external cusp is divided into two processes, the internal one of which is almost on a line with the two internal cusps, so that the tooth may be said to have two external and three internal cusps. The cingulum is very rudimentary within and little marked without. The anterior main cusps are subequal in height; but the postero-internal is higher than the postero-external cusp. The posterior part of the tooth is considerably broader than the anterior.

The homologous tooth in *Indris* is quite similarly formed.

Fig. 5.

Left half of mandible. Scale, nat. size.

The second lower molar is like the preceding, except that the transverse diameter of the anterior part equals that of the posterior part, that the antero-internal cusp is considerably more extended vertically, and that the supplementary anterior cusp is very much smaller or absent*.

The same tooth of *Indris* is similar, except that the supplementary cusp and oblique ridge are both absent.

The last lower molar is like the second one; only the supplementary lobe is entirely obsolete, and there is a minute third posterior lobe at the middle of the posterior margin, making the tooth quinquecuspid. There seems also to be no oblique ridge. In *Indris* the last lower molar is similar, except that the fifth cusp is more developed.

	inch.
Length of the anterior upper incisor.....	·08
Breadth " ".....	·03
Length of the posterior upper incisor	·10
Breadth " ".....	·05
Interspace between the two median incisors	·17
Antero-posterior diameter of upper canine at its base	·12
Extreme antero-posterior diameter of upper canine	·15
Vertical extent of upper canine	·15
Extreme width from within outwards	·08
Antero-posterior diameter of anterior upper premolar at its base	·16

* It is smaller on one side, and absent on the other side of the specimen described.

	inch.
Extreme antero-posterior diameter of anterior upper premolar . .	·19
Vertical extent of anterior upper premolar	·13
Breadth from within outwards	·09
Antero-posterior diameter of posterior upper premolar at its base .	·12
Extreme antero-posterior diameter of posterior upper premolar .	·16
Vertical extent of posterior upper premolar	·12
Breadth from within outwards	·10
Antero-posterior diameter of first upper molar at its base . . .	·15
Extreme antero-posterior diameter of first upper molar	·18
Vertical extent of first upper molar	·10
Breadth from within outwards	·15
Antero-posterior diameter of second upper molar at its base . .	·14
Extreme antero-posterior diameter of second upper molar . . .	·17
Vertical extent of second upper molar	·10
Breadth from within outwards	·14
Antero-posterior diameter of third upper molar	·13
Vertical extent of third upper molar	·08
Breadth from within outwards	·11
Length of inferior incisor	·22
Transverse diameter	·04
Antero-posterior diameter	·05
Length of inferior canine	·22
Transverse diameter	·05
Antero-posterior diameter	·05
Antero-posterior diameter of anterior lower premolar at its base .	·11
Extreme antero-posterior diameter of anterior lower premolar .	·17
Vertical extent of anterior lower premolar	·16
Breadth from within outwards	·07
Antero-posterior diameter of posterior lower premolar at its base .	·13
Extreme antero-posterior diameter of posterior lower premolar .	·19
Vertical extent of posterior lower premolar	·11
Breadth from within outwards	·07
Antero-posterior diameter of first lower molar at its base	·15
Extreme antero-posterior diameter of first lower molar	·20
Vertical extent of first lower molar	·10
Breadth from within outwards	·10
Antero-posterior diameter of second lower molar	·14
Vertical extent of second lower molar	·10
Breadth from within outwards	·10
Antero-posterior diameter of third lower molar	·15
Vertical extent of third lower molar	·08
Breadth from within outwards	·10

The skull.—All that De Blainville* says of the skull of this species is “La tête osseuse”—“au premier aspect semble différer beaucoup de celle de l'*Indri* ordinaire pour se rapprocher de celle des *Loris* paresseux, parce que les mâchoires sont excessivement courtes ; mais en y regardant attentivement, on y retrouve absolument toutes

* *Loc. cit.* p. 22.

les mêmes particularités; seulement le canal lacrymal est moins avancé dans la face et presque marginal; les orbites sont plus grandes, l'incisif est encore plus petit, et la mâchoire inférieure a son angle plus large, plus arrondi, et sa symphyse plus longue et plus oblique."

Fig. 6.

Front view of skull. Scale, nat. size.

One of the most striking characters of the skull of *M. laniger* is the exceeding shortness of its facial part, which distinguishes it from all other *Lemuroidea*, with the exception perhaps of *Tarsius* and *Cheiromys*. As in *Tarsius* and some Galagos, the antero-posterior extent of the anterior opening of the orbit greatly exceeds the length of the muzzle in front of it.

When viewed from above, the entire skull is seen to be broadest between the outer margins of the orbits; but the greatest width of the cranium proper is in a line drawn just behind the posterior ends of the zygomatic arches. As in *Indris* the mastoidal region of the periotic is not inflated, but there is a prominence at, and above, the posterior root of each zygoma just above the aperture of the external auditory meatus. This peculiar enlargement is absent in *Indris* and in all the other genera of *Lemuroidea*; but when compared with some of the smaller species of the suborder (as the *Nycticebinæ* and *Galagoninæ*) it seems to answer to their mastoidal swelling, only placed further forwards.

The surface of the cranium presents a strongly marked depression (concave both antero-posteriorly and transversely) between the orbits; behind this the roof of the skull is smoothly and evenly convex, except a slight concavity just in front of the most anterior point of the supraoccipital.

There appears to be no interparietal. The two temporal ridges are slightly but distinctly marked. As in *Indris*, they do not unite to form a sagittal ridge, which is the case in *Haplemur*, and sometimes in *Galago*.

The nasals are rather strongly convex, and are broader at each end than in the middle, instead of narrowing gradually upwards as in *Indris*. They are shut out from the lachrymal by a narrow process of the maxilla which ascends to join the frontal, the short fronto-

maxillary suture being almost on a line with the posterior margin of the nasals, instead of considerably below it, as in a specimen of the genus *Indris* in the British Museum*. *Microrhynchus*, however, agrees with that genus in having no large malar foramen, as also in having the lachrymal foramen rather nearer the margin of the orbit than in the *Lemuridae*, though it still opens upon the cheek. The suture between the maxilla and the præmaxilla is so far obliterated in the specimen described that it is impossible to determine whether the latter sends up a small process to join the nasal as it certainly does in *Indris*; sometimes, though, judging from De Blainville's figure, it does not quite reach the nasal.

The floor of the orbit is very large, with many perforations, and is placed so low down as to be but little above the alveolar margin of the upper jaw. The malar is very wide, and its lower part is irregular, forming a vertically ridged and grooved surface for the attachment of the masseter, which surface is bounded above by an antero-posteriorly directed ridge. The malar also develops, from its posterior border, an obtuse process† (which projects backwards over, but some distance above, the anterior extremity of the zygomatic process of the squamosal), and extends back to very near the anterior margin of the glenoid surface.

The masseteric space, on the malar, is larger and more ridged than in any other Lemuroid. In *Indris* the same thing exists, but in a less degree, and the surface is more posteriorly situated. A similar wide masseteric space is also present in the larger Galagos; but it is not ridged, and it approaches close to the upper alveolar margin; whereas in *M. laniger* it is kept at a distance from that margin by the wide maxillary floor of the orbit, a structure which causes the *basis cranii* of this Lemuroid to differ strikingly in aspect from that of any other member of the suborder.

The glenoid surface for the lower jaw is strongly concave from within outwards and faintly convex from behind forwards at its anterior part, the outer end of this convexity forming a slight process, which depends from the lower border of the zygoma at a point just in front of, and without, the spot which receives the condyle of the mandible. This process is similarly developed in *Indris*; but I have not seen it elsewhere, except in *Galago pallidus*, where there is a trace of such a structure. The glenoid surface is limited posteriorly by a very large and wide postglenoid process, behind which opens a conspicuous postglenoid foramen. This process is very different in form from that which exists in *Lemur*; but it is quite like that of *Indris*, and it also resembles that of *Hapalemur* and some Galagos.

There are one or two small suborbital foramina, as in *Indris*, and the posterior palatine foramina are also small; but the two genera are distinguished by these latter; for in *Indris* there is one large posterior palatine foramen behind the last molar, and a small one a

* In De Blainville's figure of the skull of *Indris* the suture is nearly on a line with the upper margin of the nasals (see *Ostéographie*, Lemur, pl. 8).

† This process is not represented in De Blainville's figure, but it is in that of Prof. Van der Hoeven.

little in advance of the posterior margin of the palate. On the other hand, in *Microrhynchus* there is a very minute one behind the last molar; but the one near the posterior margin of the palate is of fair size, and there is another, as large, more anteriorly placed. The anterior palatine foramina are very large, relatively larger than in *Indris*, and both absolutely and relatively larger than in any other Lemuroid. The palate is well ossified and entire, as in *Indris*, and is of nearly equal width throughout, having somewhat the appearance of that of *Galeopithecus*.

Its posterior border is not thickened as it is in *Indris*; but a process is prolonged backwards from its middle, as also seems to be the case, sometimes, in the last-mentioned genus*.

The most anterior point of this posterior margin is on a line with the anterior end of the hindmost third of the second true molar.

There is a small, but distinct, paroccipital process.

The foramen rotundum is united with the sphenoidal fissure, and there is a distinct Vidian foramen, thus agreeing with *Indris* in both these respects.

There is no conspicuous carotid foramen on the basis cranii.

The pterygoid fossa is large; and the ectopterygoid plate sends back a process to the petiotic, arching over the foramen ovale.

The bulla is rather compressed, with an obscure ridge running forwards and inwards along the outer part of its inferior surface.

A marked ridge runs forward (as in *Indris* and *Lemur*) from the anterior root of the posterior origin of the zygoma, across the alisphenoid; but this last sends out no process towards the malar.

The cribriform plate is wide, and is not situated in a narrow depression; but there is no *crista galli*. The petiotic has a large and deep cerebellar fossa. The mandible is remarkable for the size and the downward and backward prolongation of its angle, for the enormous elongation of the symphysis, which is nearly three times the length of the lower incisors, and also for the deep fossa for the insertion of the digastric.

The condyle is not transversely extended, as in *Lemur*, but is small; and its articular surface is prolonged downwards behind in a peculiar manner, and is vertically grooved. There is a strongly marked prominence running backwards above the mylohyoid foramen, and another running downwards and backwards beneath and in front of it; this latter prominence corresponds to part of the inferior margin of the mandible of *Indris*, and thus in it that margin appears much more strongly concave and the angle to be more suddenly bent downwards than in *Microrhynchus*.

In the digastric fossa and non-transversely extended condyle the *Indrisinæ* differ from all the *Lemuridæ*, and, as regards the latter character, approach *Cheiromys*, and closely resemble *Tarsius*, which has the articular surface likewise prolonged downwards behind. The digastric fossa, however, does not exist in those two genera. *Indris* shares with *Microrhynchus* the continuation downwards and back-

* It is so represented by De Blainville (see *loc. cit.*); but in two skulls in the British Museum there is no such median process.

wards of the articular surface of the condyle; but the vertical groove and *very deep* digastric fossa are absolutely peculiar to the latter genus.

<i>Dimensions.</i>	inch.
Length from anterior end of the præmaxilla to anterior margin of foramen magnum	1·75
Length from anterior end of the præmaxilla to most anterior point of orbital margin	0·40
Length between lines traversing most anterior and most posterior points of orbital margin	0·60
Length from last to posterior end of skull	1·03
Extreme width between outer margins of orbits	1·53
Extreme width behind posterior roots of zygomata	1·13
Width between nearest points of orbits	0·43
Width between temporal ridges just behind orbits	0·90
Width between temporal ridges at junction with lambdoidal	0·35
Length of palate	0·81
Breadth of palate between first premolars	0·40
Breadth of palate at posterior end	0·40
Length of nasals	0·35
Breadth of nasals	0·25
Length of lower alveolar margin from front of first premolar to behind last molar	0·73
Length of symphysis	0·64
Height of condyle above alveolar margin	0·32
Height of coronoid process above alveolar margin	0·48

After speaking of the skull, De Blainville says* :—“ Quant au reste du squelette, je n'en ai vu qu'une partie des membres, et ils conservent toutes les particularités de ceux des Indris; l'humerus, percé d'un trou au condyle interne, et égalant à peine la moitié de la longueur du fémur; le radius et le cubitus longs et grêles; le carpe sans os intermédiaire; l'unciforme très-grand; mais ici le métacarpien de l'annulaire est notablement plus gros et plus long que celui du doigt médian. Le fémur et les os de la jambe, à peu près égaux, sont long et grêles, surtout le péroné, et les os du tarse sont dans la proportion ordinaire.”

The few bones I have been able to examine are the following :—

Humerus.—Not being able to ascertain the length of the spine I cannot compare the humerus with it; but it is doubtless of a similar proportion to that of *Indris*, as it agrees with the humerus of the latter animal in being so much shorter than the forearm.

It has a strong sigmoid curve, stronger than in either *Lemur* or *Indris*, and the supinator ridge is more developed than in either.

As in *Indris*, the internal condyle does not descend so nearly down to the free margin of the ulnar ridge of the trochlea as it does in *Lemur*.

As in both, the bony canal is distinct, but not so large as in either;

* Ostéographie, Lemur. p. 23.

the inner surface of the ulnar ridge of trochlea (again like *Indris* and unlike *Lemur*) is entirely behind the internal condyle.

The capitellum has a concavity outside the rounded head. The radial ridge of the trochlea is remarkably prominent.

Radius.—This is much longer in proportion than is the humerus. Taking the latter at 100, the radius is 114·7 long, nearly equalling the proportion of *Indris* (viz. 116·5), and greatly exceeding that of *Lemur* (91·6), or of any of the *Lemuridae*, *Loris* approaching nearest, however, and being 110·2.

It is slightly more slender than in *Lemur*, though not so much so as in *Indris*; but it rather agrees with the latter, and differs from *Lemur* in the rounded shape of the bone towards the ulna, and, indeed, of its radial side also. It agrees with *Indris* also, and differs from *Lemur*, in that the inferior (distal) border of the anterior (flexor) surface is not prominent and produced; on the other hand, there is a distinct prominence (from almost the distal extremity of the radial margin), as if for the supinator longus; but it may be for the pronator quadratus. As in *Indris* the anterior surface is rounded, and not grooved from the flexor longus pollicis as in *Lemur*.

Ulna.—This bone, although not so distant from the radius as in *Indris*, is nevertheless more so than in *Lemur*; hence perhaps the less grooved condition of the bones, the interosseous membrane thus affording a wider space for muscular attachment.

The ulna has a similar excess over the humerus to the radius, namely as 127·6 to 100. In *Indris* it is 132, but in *Lemur* only 113·5.

As in *Indris*, it is a much more slender bone than in *Lemur*; indeed it is *very* slender.

It is remarkable for the very small size of the olecranon, differing from *Lemur* in this even more than *Indris* does.

As in *Indris*, the only fossa for the origin of the flexor profundus digitorum is situated beneath the sigmoid cavity; nor is there any groove extending down the shaft of the bone for the extensor pollicis as in *Lemur*—thus again agreeing with *Indris*, as also in the fact that there is scarcely any trace of a ridge for the pronator quadratus, which, on the contrary, attains its maximum in *Lemur*.

The carpus presents a most remarkable character, noticed by De Blainville, inasmuch as it agrees with that of *Indris*, and differs from that of all the other Primates, except Man and *Troglodytes*, in the fact of possessing no os intermedium, and having only eight carpal bones. It agrees with that of *Indris*, except that the pisiforme is smaller.

In my specimen the third metacarpal is slightly the longest, thus differing from De Blainville's* specimen. It is to the radius (taking the latter at 100) as 31·8, which is almost its proportion in *Indris*, where it is 31·1. In *Lemur* it is only 26·4.

The metacarpal of the index is not so curved as in *Indris*; but it preponderates more over that of the pollex, which is here very short, the proportion of the metacarpal of the index to that of the pollex being as 183·3 to 100, while in *Indris* it is only 151·8 to 100. The

* *Loc. cit.* p. 23.

proportion of the same bone to the radius is only 14·2 to 100, while in *Indris* it is 18·3.

The femur is wanting in the specimen described; but De Blainville says* it about equals the length of the tibia, which last is, as compared to the radius, as 149·1 to 100, and is very much compressed laterally, and strongly concave on its peroneal side.

The fibula is relatively, as well as absolutely, rather more slender than in *Indris*, and still more so than in *Lemur*.

The tarsus differs from that of the last-named genus in its rather longer astragalus, in its relatively shorter cuboid, which, compared to the *os calcis*, is only 37·6 to 100, instead of 46·0 as in *Lemur*. *Indris* closely resembles *Microrhynchus* in this respect, as its cuboid is to its calcaneum as 38·6 to 100.

The cuboid of *M. laniger* is also less deeply grooved for the tendon of the peroneus longus than is that of *Lemur*.

The metatarsals are absolutely and relatively longer than in that genus, that of the hallux greatly exceeding the *os calcis* in length, while in *Lemur* it does so very slightly.

When, in the autumn of 1864†, I endeavoured to clear up some of the confusion existing with regard to certain kinds of *Lemuridae*, I regretted being able to say so little regarding the *Indrisinae*, no extracted skull of either *Propithecus* or *Microrhynchus* then existing in this country.

From a consideration of the figures extant of the cranium of the last-named genus I ventured on a decided opinion that those had rightly decided who associated it with *Indris*, and that it could by no means be separated from that form and approximated to *Galago*.

The examination of the specimen now described fully confirms this view; indeed so numerous and striking are the points of resemblance between it and *Indris* that it is a matter of some difficulty to find distinctive characters sufficient to justify even their generic separation.

Unfortunately I have had no opportunity of examining any extracted cranium of *Propithecus*; but I strongly suspect that when obtained it will be found closely to resemble the two other genera of *Indrisinae*, as the dentition, as far as can be seen in the mounted specimens in the British Museum, so closely agrees with that of *Indris*. That subfamily may, I think, be characterized as follows:—

INDRISINÆ.

Characters‡.—I. $\frac{2-2}{2}$. C. $\frac{1-1}{1-1}$. P.M. $\frac{2-2}{2-2}$ §. M. $\frac{3-3}{3-3}$ =30.

Ears short; muzzle long, moderate or short; hind legs much longer than the fore limbs; index very short, much shorter than

* *Loc. cit.*

† See Notes on the Crania and Dentition of the *Lemuridae*, P. Z. S. 1864, p. 611.

‡ The cranial, most of the dental, and some other characters are, of course, drawn from *Indris* and *Microrhynchus* only, and may have to be curtailed or modified when the structure of *Propithecus* is better known.

§ The immature condition of the teeth of *Propithecus* represented in M. de Blainville's plate led me, in 1864, to the conclusion that there are, as stated, two premolars and three molars on each side of each jaw. (See P. Z. S. 1864, p. 634.)

fifth digit; pollex short and placed far back; hallux very long and covered with hair; tail long, or very short and rudimentary; internal condyle of the humerus perforated; carpus destitute of an os intermedium; tarsus short; first upper molar with four large and four small prominences, no internal cingulum; last upper molar with two large anterior cusps and three very small posterior prominences; each lower incisor with its outer surface longitudinally grooved; lower premolar much antero-posteriorly extended; first lower molar with four or five cusps; last lower molar quinquecuspid; a paramastoid process; no malar foramen; lachrymal foramen very near margin of the orbit; masseteric surface of malar wide and ridged; a process depending from zygoma just in front of, and external to, the glenoid surface; a postglenoidal foramen; anterior palatine foramina very large; mandibular symphysis very long; condyle rounded, not transversely extended; articular surface prolonged somewhat down the back of ascending ramus; digastric fossa deep.

Hab. Madagascar exclusively.

MICRORHYNCHUS.

Characters.—Muzzle very short; ears very small and hidden in the fur; tail very long; fur woolly; supinator ridge of humerus very large; posterior pair of upper incisors considerably larger than the anterior pair; canine scarcely exceeding first premolar in vertical extent, and closely resembling it in form; two first upper molars with slight oblique ridges; skull strongly concave between the orbits; antero-posterior extent of the anterior opening of the orbit exceeding the length of the muzzle in front of that opening; a protuberance just above the external auditory meatus; an obtuse process projecting from the malar over the anterior end of the zygomatic process of the squamosal; floor of orbit very little above the upper alveolar margin; no large palatine foramen behind the third molar; palate with its posterior margin not thickened; anterior palatine foramina very large; mandibular symphysis nearly three times the length of the lower incisors; fossa for digastric very deep; a vertical groove on posterior part of articular surface of condyle; inferior margin of mandible only slightly concave.

Hab. Madagascar and St. Mary's Island.

INDRIS.

Characters.—Ears exserted; muzzle elongated; tail short; posterior pair of upper incisors generally a little smaller than the anterior pair; canine considerably exceeding first premolar in vertical extent; upper molars destitute of oblique ridges; skull not concave between the orbits; antero-posterior extent of the anterior opening of the orbit less than the length of the muzzle in front of that opening; no protuberance above the external auditory meatus; no process of the malar projecting over the anterior end of the zygomatic process of the squamosal; floor of orbit considerably above the upper alveolar margin; a large palatine foramen behind the third molar; palate

with its posterior margin thickened; mandibular symphysis much less than three times the length of the lower incisors; fossa for digastric not very deep; no vertical groove on posterior part of articular surface of condyle; inferior margin of mandible strongly and suddenly concave.

Hab. Madagascar, but not St. Mary's Island.

PROPIITHECUS.

Characters.—Median upper incisors very decidedly larger than the outer pair; upper canine much more vertically extended than the first premolar; ears short, in the fur; muzzle moderately produced; tail long.

Hab. Madagascar.

March 27, 1866.

Dr. J. E. Gray, F.R.S., V.P., in the Chair.

The following extract was read from a letter addressed to the Secretary by Dr. George Bennett, F.Z.S., dated Sydney, January 20th:—

“There is now a living Lyre-bird (*Menura novæ-hollandiæ*) at Mr. J. S. Palmer's, at New Town near Sydney, which he informs me is two years and four months old, and has been in his possession in captivity for full two years. He had it first when it was so young that it could only just feed itself. At that time he fed it with great care and regularity on worms and grubs, German paste, and beef chopped very fine. It now eats the same, together with hemp-seed, bread, &c. As regards its habits of feeding and the mode of rearing it, he compares it to the Thrush and Blackbird. Since he has had this specimen, he has purchased Lyre-birds of all ages, brought from the Illawara district; but this is the only one that has survived in confinement; the others only lived for a short time. Those that died were heard to whistle at dusk in the evening, apparently healthy and well, but were found dead in the morning. This we also observed with those we had in the Gardens here, the longest period we got one to survive in captivity in our aviary being six months—from August 1864 to January 1865. I rode out on the 4th of January to see Mr. Palmer's bird; it was apparently a full-grown female, or male in immature plumage. I have this day been informed by Mr. Palmer that it is now developing two of the peculiar tail-feathers of the male; so that there is now no doubt as to the sex. On the occasion of my visit I found it, as is usual with these birds, in a constant state of restless activity, running with greater or less rapidity about the spacious aviary in which it is confined, scratching about the ground, and leaping upon and over the stones and branches placed in the inclosure. It would stop and feed rather more frequently than is usually the case with this bird in the presence of strangers.