January 24, 1843.

William Yarrell, Esq., Vice-President, in the Chair.

Professor Owen exhibited various bones, being the remains of a gigantic Struthious Bird (*Dinornis Novæ-Zelandiæ*, Owen) which has become extinct in the North Island of New Zealand, and proceeded to read his notes relating to them.

"Since the communication to the Zoological Society, Jan. 10th, 1843, of the letter of the Rev. Mr. Cotton, relative to the remains of the gigantic bird of New Zealand which had been collected in the North Island by the Rev. Wm. Williams, one of the boxes of these remains, transmitted by that gentleman to Prof. Buckland, has been received, and the specimens have been kindly placed in my hands for description.

"An entire femur, somewhat larger than that of which the shaft is described and figured in the Society's Transactions, proves the specific identity of the present remains with the fragment, upon which I ventured to affirm, three years ago*, that a large Struthious Bird 'of a heavier and more sluggish species than the Ostrich' had recently become extinct, if it were not still living, in New Zealand.

"The femur has very nearly the same proportions of thickness to length as in the Ostrich, but the shaft is less compressed; it consequently differs from that of the Apteryx in being shorter in proportion to its thickness; but it resembles the femur of the Apteryx, and differs from that of the Ostrich and Emeu in the important character of the absence of the air-hole at the back part of the neck, and the consequent substitution of marrow for air in the interior of the bone. It differs from the femur of the Ostrich, and agrees with that of the Apteryx, in the greater width of the anterior interspace of the condyles; but it differs from that of the Apteryx, not only in size and general proportions, but also in the form of the distal extremity, which has a deeper posterior intercondyloid depression, and a sharper and more produced posterior part of the outer condyle.

"The length of the above femur of the great bird of New Zealand is eleven inches; the circumference of the middle of the shaft five and a half inches: but the present collection includes the shaft of a femur of another individual, with a circumference of seven and a half inches.

"The most perfect tibia in the present collection measures two feet four and a half inches in length, and apparently corresponds in proportion with the fragment of the larger femur. Now allowing that femur fourteen inches of entire length, the tibia is then twice the

* The memoir was communicated to the Zoological Society November 12th, 1839, vol. iii. p. 32. pl. 3.

length of the femur, while in the Apteryx the tibia is only one-third longer than the femur. The larger *Struthionidæ*, as the Ostrich and Emeu, more nearly resemble the great New Zealand Bird in the proportion of their tibia, but it is not quite twice the length of the femur in those species. The tibia of the great New Zealand Bird differs from that of the Apteryx and all the large *Struthionidæ* in the complete osseous canal for the passage of an extensor tendon in the anterior concavity above the distal condyles. This osseous canal is commonly found in the tibia of the *Grallæ*, *Gallina*, *Anseres*, and many smaller birds. The proportion of length to thickness of the tibia is nearly the same in the Ostrich and the great New Zealand Bird; the circumference of the tibia at its proximal end, in the latter, is fifteen inches; at its middle, five inches.

"The most instructive bone in the present collection is a tarso-metatarsal bone, with the distal extremity entire, showing that the gigantic bird was tridactyle, like the Emeu, Rhea, and Cassowary. The remains of the proximal end of the bone prove it to have been articulated with a tibia about an eighth part shorter than the one above described, or to a tibia about two feet in length; the length of the tarso-metatarsal bone is one foot, or half the length of the tibia, which is exactly the proportion which the tarso-metatarsal bone of the Apteryx bears to the tibia. In the Emeu the tarso-metatarsal bone is as large as the tibia; in the Ostrich it is a little shorter than the tibia. The difference in the proportions of the tarso-metatarsal bone of the gigantic bird of New Zealand and of the Emeu will be obvious from the following dimensions:—

Tarso-metatarsal bone.	<i>Dinornis.</i>		<i>Dromaius.</i>	
	in.	lin.	in.	lin.
Length	12	0	14	6
Circumference of middle	4	5	2	8
Breadth of distal end	3	10	2	10

"The comparative shortness and strength of the trifold metatarsal of the gigantic New Zealand Bird form its most striking resemblance to the Apteryx, to which it thus approximates more closely than to any of the large existing *Struthionidæ*.

"The proportions of the leg-bones, their denser texture, especially that of the femur, which, as in the Apteryx, contains no air, sufficiently indicate the generic distinction of the great New Zealand Bird from the tridactyle Emeu, Rhea, or Cassowary. The questions then arise,—is it likewise generically distinct from the *Apteryx*? or is it a gigantic species of that genus? These questions are determined by the tarso-metatarsal bone. The Apteryx is distinguished from the other *Struthionidæ* not more by its elongated bill than by the presence of a fourth small toe on the inner and back part of the foot, articulated to a slightly elevated rough surface of the tarso-metatarsal about a fourth of the length of that bone from its trifold distal end. There is no trace of this articular surface on the tarso-metatarsal of the Gigantic Bird, which was consequently tridactyle, as in the Emeu, Rhea, and Cassowary. The Dodo was tetradactyle, like the Apteryx;

the shorter proportions of the legs of the Dodo also distinguish it from the Gigantic Bird, whose career in the North Island of New Zealand was probably closed about the same period as that of the Dodo's existence in the Isle of Rodriguez.

"The fragments of the pelvis prove this to have been relatively broader, behind the acetabula, than in the Ostrich, Emeu, or Apteryx, its proportions being more like those of the Bustard.

"The results of the foregoing comparisons justify the reference of the Great Bird of New Zealand to a distinct genus in the Struthious order, for which I propose the name *Dinornis*, with the specific appellation *Novæ Zealandiæ*.

"The extraordinary size of the tibia above described—still more that of the tibia said to measure two feet ten inches in length, obtained by Mr. W. Williams, and mentioned in his letter to Dr. Buckland—prove the *Dinornis* of New Zealand to be the most gigantic of known birds. There is little probability that it will ever be found, whether living or extinct, in any other part of the world than the islands of New Zealand, or parts adjacent. At all events, the *Dinornis Novæ Zealandiæ* will always remain one of the most extraordinary of the zoological facts in the history of those islands; and it may not be saying too much to characterize it as one of the most remarkable acquisitions to Zoology in general which the present century has produced."

Mr. Ogilby then communicated his descriptions of two new species of Baboon:—

"When at Frankfort in the year 1837 I saw in the museum of that city two Baboons of the genus *Cynocephalus*, which my friend Dr. Rüppell had brought from Abyssinia. They were however confounded with the 'Babouin' of the French authors (*C. sphinx*), under which name they are noticed in the 'Neue Wirbelthiere'; and though I was too well acquainted with that species, from having frequently seen an individual then living in the Surrey Zoological Gardens, to fall into the same error, I yet committed the similar mistake of confounding the Frankfort animals with *C. anubis*, of which there was no specimen at hand to compare them with. Since that time I have had frequent opportunities of observing the latter species, which is an inhabitant of the coast of Guinea, and not uncommon in our museums and menageries; but it is only within the last few days that the acquisition of a fine adult male specimen of Dr. Rüppell's animal by the Zoological Society has enabled me to compare them together, and to ascertain their specific distinction. Both species are now living in the Society's Gardens, and offer a rare and valuable opportunity for studying their characters.

"The Abyssinian species, which was reported to have been brought from Bombay, but which had no doubt been carried thither on board some vessel trading to the Red Sea, possesses a higher degree of interest than attaches to any other *Cynocephal*. With the exception of *C. hamadryas*, it is the only known species in that part of Africa, and must consequently have been the animal which we find

so frequently figured among the hieroglyphics, and which was worshipped by the Egyptians under the name of *Thoth*. I have shown elsewhere (Nat. Hist. of Monkeys, &c., i. 431) that the Sacred Baboon of the Egyptians was not the *C. hamadryas*, as supposed by Ehrenberg; and though, from the mistake above alluded to, I was at that time inclined to identify it with *C. anubis*, there can now be no reasonable doubt that the animal which played so important a part in the mythology of that remarkable people, and of whose worship the city of Hermopolis was the principal seat, must have been the species at present under consideration. If this conjecture be well-founded, it follows also that the names *cynocephalus*, *sphinx*, &c., so often employed by Greek and Roman writers, must have referred to the same animal, at least originally; but as modern zoologists have applied all these names in a definite sense, I propose to distinguish the new species by the equally appropriate designation which it bore among the ancient Egyptians.

“Cynocephalus Thoth.—The individual from which this description was taken is an old male of large size, and, like the rest of his congeners, of a morose intractable disposition. The face is broad and of a dirty livid flesh-colour, lighter along the centre and ridge of the nose, and somewhat browner on the cheeks and muzzle; the cheek-bones are protuberant, the rostrum truncated, and the extremity of the nose reaching, but not surpassing, the plane of the upper lip and teeth. The hair of the fore-quarters is longer and thicker than on the rest of the body, though it does not form so dense or copious a mane as in *C. hamadryas*. The colour of the upper and outer parts of the body may be described as dark olive-green, and that of the lower and interior as light yellowish green; the breast, throat and under part of the chin are silvery grey; the lower parts of the whiskers are of the same colour, but they acquire a yellowish green shade as they approach and become intermixed with the hair of the head; the ears and palms of the hands are naked, and of a dark brown colour; the callosities very large and flesh-coloured, and the naked parts of the hips on each side of the callosities of a deep purple or violet-brown; the scrotum is brown, and the sheath of the penis flesh-coloured. The tail is of medium length, without a terminal tuft, and carried in the arched manner common to the rest of the genus. The hind surfaces of the legs and thighs are furnished with long hair of a yellowish brown shade; the hands are of the same colour as the body, but the hind fingers are covered with longish grey hairs, and this character, together with the dark purple colour of the naked hips and brown scrotum, will always be sufficient to distinguish the present species from *C. anubis* and *C. sphinx*, in both of which the naked parts of the buttocks are of a brilliant blood-red, and the scrotum pale flesh-colour. In colour indeed *C. Thoth* approaches more nearly to *C. sphinx* than to *C. anubis*; it has the same light silvery grey colour on the whiskers and under part of the body, but the upper colours are more obscure; the bright yellowish green is replaced by sordid dunnish brown, and the proportions of the two animals are entirely different, the long slender limbs and body of the

sphinx contrasting strongly with the massive thick-set form of the present species.

"There is likewise in the Society's Gardens a second undescribed species of *Cynocephal*, of which I remember to have formerly seen a specimen in Wombwell's collection, but unfortunately neglected to take a note of it at the time. The individual which I am now about to describe was brought from the Niger Expedition, and presented to the Society by Lieutenant Webb, R.N. It is a semiadult male, of medium size, covered on every part of the body, both above and below, with long shaggy hair of a deep russet-brown colour, each hair being annulated with rusty-brown and black rings; and I may remark, that this and *C. anubis* are the only species in which I have observed that the hair of the breast and belly are similarly annulated, and almost as thickly furnished as that on the back and sides; the whiskers are likewise bushy, of the same colour as the hair of the back, and similarly annulated; but it should be observed, that from the very dark shade of the colours the annuli are but little conspicuous anywhere. The face is more slender and tapering than in any other male *Cynocephal* that I have ever seen; the cheek-bones are but little prominent, but the nose sensibly surpasses the extremity of the muzzle. The face and space surrounding the eyes are black or dark brown, the upper eyelids alone flesh-coloured; the ears and palms of the hands, as are likewise the upper sides of the fingers, the scrotum, callosities, and naked parts of the buttocks, are of the same colour. The hair of the head, whiskers and fore-parts generally is erect and bushy, and completely conceals the ears. This species is allied to *C. anubis*, but differs from it in the colour of the hair, in the absence of the light flesh-coloured circle about the eyes, and in the dark brown instead of blood-red colour of the callosities and naked parts of the buttocks. I propose to distinguish it by the name of *C. choras*, a name which is applied to this or some other species of Baboon on the west coast of Africa, and which has a sufficiently classical form to escape the censure of barbarism, notwithstanding its origin."

Descriptions of four new species of *Conus*, a genus of Pectinibranchiate Mollusks, by Mr. Lovell Reeve, were then read.

1. *CONUS STAINFORTHII*. *Con. testâ conico-turbinatâ, leviter flexuosa, albâ, rubro purpureoque tinctâ, ad basin rosaced; granosâ, granis minutis, rubido carneove-albis, in seriebus equidistantibus parallelis transversaliter dispositis; spirâ mediocriter convexâ, tuberculis aspersis regulariter coronatâ; apice mucronato, symmetricè acuto; aperturâ subinflatâ, labro solidiusculo, intus extusque albo.*
Conch. Icon. pl. 1. f. 1.

The richly variegated purple painting of this new and very beautiful shell (which I dedicate to its fortunate possessor), and the rows of light small granular pimples standing out in relief, render it eminently characteristic. There is another specimen in Mr. Cumming's collection.

Hab. Unknown.

2. *CONUS LIGNARIUS.* *Con. testâ oblongo-turbinatâ, luteo-fusca, fusco indistinctè bifasciatâ, longitudinaliter subtilissimè striatâ, filis tenuissimis rubellis densissimè cingulatâ; basi striatâ; spirâ planiusculâ, apice elato, acuto.*

Conch. Icon. pl. 15.

This shell, which is of a uniform brown colour, profusely corded and lined, both transversely and longitudinally, was found by Mr. Cuming on mud-banks just below low-water mark at Port Sacloban, Island of Leyte, Philippines.

3. *CONUS MAGNIFICUS.* *Con. testâ cylindraceo-turbinatâ, obesâ, anfractibus supernè rotundatis, spirâ levî, subacuminatâ, apice valdè obtuso; rosacè, lineis ovato-trigonis, lacco aut purpureo-rubris, usquequaque reticulatâ, maculis perpaucis grandissimis bifasciatim cinctâ.*

Conch. Icon. pl. 6. f. 32.

This beautiful shell, which always exhibits a warm rosaceous tint, was collected by Mr. Cuming at Matnog, Island of Lucon, Philippines.

4. *CONUS NEPTUNUS.* *Con. testâ elongato-conicâ, spirâ acuminatâ, striatâ, apice acuto; pallidè carneâ, lineis maculisque rubidis ubique nebulosâ et venosâ; versus basin leviter sulcatâ, sulcis subdistantibus; columellâ et aperturæ fauce subrosacè.*

Conch. Icon. pl. 6. f. 30.

Hab. Jacna, Island of Bohol.

The delicate marking of this gem approaches so nearly to that of the *Conus gloria-maris*, that we honour it with as noble a title.