April 11, 1848.

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

The following paper was read to the meeting :—

SUPPLEMENTARY NOTE ON THE GREAT CHIMPANZEE (*TROGLODYTES*
GORILLA, *Savage*, *TROGL. SAVAGEI*, *Owen*). BY PROFESSOR
OWEN, F.R.S. ETC.

Since the communication of my description of the skulls of the great Chimpanzee of the Gaboon district, I have received from an esteemed correspondent, Dr. Wyman, Professor of Anatomy in Harvard University, United States, and a most accomplished anatomist and physiologist, a copy of his description of the parts of the skeleton of the Great Chimpanzee which Dr. Savage had taken with him on his return to America, together with a preliminary and highly interesting sketch of the natural history of the species by its discoverer, who proposes to call it *Trogloodytes Gorilla*, adopting the term used by Hanno in describing the wild men which he discovered on the coast of Africa during his famous voyage*.

Dr. Wyman gives dimensions of the skulls of a male and female *Trogloodytes Gorilla*, with comparative measurements of a characteristic skull of a negro, and those of the *Trogloodytes niger* and *Simia satyrus* (Sumatran variety, or *S. Abelii*) from my Memoir in Trans. Zool. Soc. vol. i. p. 374; and he sums up the following points as showing that from the *Trogloodytes niger* the *Trogl. Gorilla* "is readily distinguished—

- " 1. By its greater size ;
- " 2. By the size and form of the supraciliary ridges ;
- " 3. By the existence of the large occipital and interparietal crests in the males, and by rudiments of the same in the females ;
- " 4. By the great strength and arched form of the zygomatic arches ;
- " 5. By the form of the anterior and posterior nasal orifices ;
- " 6. By the structure of the infraorbital canal ;
- " 7. By the existence of an emargination on the posterior part of the hard palate ;
- " 8. The incisive alveoli do not project beyond the line of the rest of the face, as in the Chimpanzee and Orang ;
- " 9. The distance between the nasal orifice and the edge of the incisive alveoli is less than in the Chimpanzee ;
- " 10. The ossa nasi are more narrow and compressed superiorly."

The 5th, 7th and 9th are the characters which are most decisively repeated in the Bristol specimens of the skulls of *Trogl. Gorilla*, and are those that are least ascribable to age or the operation of external

* See the passage cited at p. 13, 'Falconer's Translation of the Voyage of Hanno,' London, 1797.

circumstances tending to produce a stronger variety of Chimpanzee. The value of the character from size is established by the concurrence of the foregoing more fixed ones. The supraciliary ridges are relatively as strongly developed and as prominent in the skull of a female adult *Trogl. niger* as in that of the *Trogl. Gorilla*, and they are as angular and rough or uneven in the skull of the adult male *Trogl. niger* as in that of the adult male *Trogl. Gorilla*. The male *Trogl. niger* shows also the median prominence between the orbits above the root of the nose.

In six skulls of *Troglodytes niger* Dr. Wyman found that "the temporal ridges are generally separated from each other by a space varying from half an inch to one or two inches, according to age, but in none of them is to be seen even a rudiment of the interparietal ridge." In an adult, but by the condition of the teeth, not old male *Trogl. niger*, the temporal ridges have met above the obliterated suture, and developed the rudiment of an 'interparietal ridge,' which would probably have risen above its rudimental state had the exercise of the large temporal muscles been longer continued. Processes, ridges and crests dependent upon the stimulus of muscular action for their development, are the seats of most variety, and the least safe or satisfactory osteological marks of specific distinction. In the great males of the *Tr. Gorilla* even a certain range of variety is presented by the skulls of the four adult males, which we are now able to compare.

In the one described by Dr. Wyman the interparietal or sagittal crest is elevated about $1\frac{1}{2}$ inch above the skull, and terminates above in a thin and free edge: in the fine male skull figured, and in the older male's skull, the two temporal ridges, though touching each other at their base, do not coalesce to form a single sagittal crest, but each terminates in a free edge, inclining from its fellow, and neither of them rise to half an inch at their highest part, three inches behind their point of contact.

4. The specific character of the zygomatic arches is best shown by the depth and convex or angular upper contour of the squamosal portion of the arch.

5. Dr. Wyman has well indicated the characteristic forms of the anterior and posterior nares; and the conformity of the four skulls, two males and two females, submitted to his able and scientific scrutiny, in this important character, with the three skulls which I have described, adds to our confidence in its constancy and value. The observed range of variety does not materially affect the well-marked difference of form in the posterior nares. Dr. Wyman finds in the *Tr. niger* that "the transverse diameter of the orifice exceeds that of the vertical, but in the *Tr. Gorilla* the vertical is twice that of the transverse, a condition which results from the elongation downwards of the superior maxillary bones." In one skull of an adult female *Trogl. niger*, in the Bristol Museum, the vertical diameter equals the transverse diameter of the posterior nares, and it exceeds it by about one-half only in the three skulls of the *Tr. Gorilla* in the same museum.

6. With regard to the sixth character, which was pointed out to

Dr. Wyman by Prof. Agassiz, it is stated that "in the Chimpanzee the infraorbital canal forms a deep groove, terminating in the spheno-maxillary fissure, its depth remaining uniform to its termination; but in the Engé-ena (*Trogl. Gorilla*) the canal becomes gradually less deep from before backwards, and at the fissure is scarcely obvious." In the skull of the female *Trogl. Gorilla* (fig. 2) examined by me, the infraorbital canal is also shorter and shallower than in the skull of a female *Trogl. niger*, but the varieties observable in the condition of this canal in different individuals of the *Trogl. niger* are more marked than those above noticed in the skulls of the two species, and induce me therefore to attach less importance to this character as a specific one. In two skulls of adult males, *e. g.* in the College of Surgeons, the infraorbital groove as it passes backwards again becomes a canal by the meeting, and in one specimen by the coalescence of the two sides of the groove above the canal for an extent of from two to three lines before it enters the spheno-maxillary fissure. Dr. Wyman indeed notices a similar conformation in an adult cranium of the Chimpanzee belonging to Dr. J. C. Warren. Now this is a more decided difference from the continuous open groove at the floor of the orbit in the adult female *Tr. niger* than that groove presents in comparison with the shorter and shallower one in *Trogl. Gorilla*. I find too that the second character of *Trogl. Gorilla* pointed out by Prof. Agassiz,—“from the internal walls of the orbits which recede from each other in descending towards the floor, thus leaving a large pyramidal space for the lodgment of the os ethmoides,”—is so much less marked in the female skull of *Tr. Gorilla*, as contrasted with that of *Tr. niger*, as to induce me to view it more in the light of a sexual than a specific modification.

The seventh is a good character, and is repeated by each of the skulls of *Tr. Gorilla* examined by me. All the skulls of *Tr. niger* also show the backward projecting point, where the emargination exists in *Tr. Gorilla*.

8. The minor relative projection of the incisive alveoli beyond the line of the rest of the face is as characteristic of the three skulls of *Tr. Gorilla* now in England as of the four in the United States, and results from the same comparative shortness of the premaxillary bones, between the nasal orifice and the edge of the incisive alveoli. But the ossa nasi, besides being more narrow and compressed superiorly, are more prominent at that part in *Tr. Gorilla* than in *Tr. niger*, and they are also more expanded and broader inferiorly, and I cannot but regard the most decisive mark of the specific distinction of the *Troglodytes Gorilla* to be the longer persistence of the maxillo-premaxillary sutures, and the evidence thereby given of the peculiar form, development and connexions of the upper portions of the premaxillary bones. It is remarkable indeed, since these sutures remain so distinct in the adult female skull (fig. 2) and the younger adult male skull (fig. 1) here described, that no trace of them should have been detected in any of the four skulls taken by Dr. Savage to America, in which Dr. Wyman describes the *ossa nasi* as being “firmly co-ossified with each other and with the surrounding bones.”

The triangular expanded facial part of the upper end of each pre-maxillary intervening between the nasal and maxillary bones will always serve to distinguish the cranium of an immature *Trogl. Gorilla* from that of a *Trogl. niger*.

May 9, 1848.

W. Yarrell, Esq., V.P., in the Chair.

Letters were read from Captain Hope, R.N., dated Rio Janeiro, February 23, and from Mr. Bridges, Corr. Memb., dated Valparaiso, Feb. 27, 1848.

The following communications were made to the Meeting :—

1. NOTICE OF A NEW SPECIES OF MONKEY FROM ANGOLA, LIVING IN THE GARDENS OF THE SOCIETY. BY J. E. GRAY, ESQ., F.R.S. ETC.

(Mamm. pl. 3.)

The Society has recently procured a Monkey from Angola, which bears some resemblance to the Diadema Monkey which M. F. Cuvier erroneously described and figured as the female of *Cercopithecus Diana*, but it differs from that species in the lips being black, like the face, and only covered with very short whitish hairs; and also in being much darker coloured; and this blackness has increased since it has been in the possession of the Society and obtained a better fur. At first sight I thought that it might be a melanism of some other species; but on comparing my notes with the specimens in the British Museum collection, I am convinced that it is different from any I have before had the opportunity of examining.

It belongs to the division of the genus *Cercopithecus* with *rounded whiskers formed of annulated hairs, which have no beard, a variegated fur, and black nose and lips*, and is easily distinguished from the species of that division by its dark colour and broad frontal band. I propose to call it

The Pluto. *Cercopithecus Pluto*.

Sp. ch. Black; the hair of the broad frontal band, ringed with white; the large rounded whiskers, the back, the upper part of the front of the sides, and the base of the tail, ringed with varying greenish white; the distal half of the tail black; the face and lips black, with short, scattered white hairs.

Inhab. Angola.

This species is easily known at first sight by the deep black colour of the back of the head, and limbs, and the broad white frontal band: the large mantle-like patch of minute, white, grised hairs on the