February 25, 1834.

Lieut.-Col. Sykes in the Chair.

A letter was read, addressed to the Secretary by M. W. Bojer, Corr. Memb. Z.S., and dated Mauritius, Nov. 15, 1833. It referred principally to the animal from Madagascar, which was transmitted in the spring of last year to the Society by the late Mr. Telfair, and which was brought by Mr. Bennett on April 9, 1833, (Proceedings, Part I. p. 46,) under the notice of the Society as the type of a new genus, for which he proposed the name of *Cryptoprocta*, on account of its possessing an anal pouch, and being thereby distinguishable from *Paradoxurus*, F. Cuv. One of the habits of the *Cryptoprocta ferox* indicated, during the life of the animal, the existence of this pouch: when violently enraged, and it was apt to become exceedingly ferocious on the sight of a morsel of flesh, "it frequently gratified the persons present with, not an odoriferous, but a most disagreeable smell, very like that of *Mephitis*." When its voracity was not thus excited, it was "quite domesticated and extremely fond of playing with children," and ran "about the house and yard free and sprightly, eating everything." When at liberty "it lay constantly in a rolling posture;" in confinement its sleeping position was not that of the *Viverræ*, "but always on its side, or even on its back, holding with its fore-feet the small wires of its cage." "It died of epileptic fits, which tormented it for nearly three months, and during the last few days of its existence the attacks were very strong and frequent." It had lived in the Mauritius, M. Bojer states, about twenty-five months; and he feels on this account some hesitation as to the immature condition of its dentary system, inquiring whether "this period was not sufficient for its development, or were the detention and domestication the cause of the imperfection?"

With reference to this inquiry, Mr. Bennett remarked that in the *Viverridæ* generally the replacement of the milk teeth takes place at a comparatively late period of existence, a fact recorded by Mr. Gray in the 'Proceedings of the Committee of Science and Correspondence' of this Society (Part II., p. 65), and principally insisted on as regards *Paradoxurus*, a genus most intimately allied to *Cryptoprocta*. He added, that the fits of which the animal died were not improbably occasioned by the irritation of dentition.

Mr. Bennett's account of *Cryptoprocta ferox*, with a figure of the animal, will be published in the Second Part of the Society's 'Transactions.'

The reading was commenced of a Paper, entitled "Descriptions of New Species of *Calyptraidæ*: by W. J. Broderip, Esq.;" and the *Shells* described in it, chiefly obtained from the collection of

Mr. Cuming, were exhibited. The abstract of this Paper, including the characters of the new species, will be given on the completion of the reading of it.

Mr. Owen read a Paper "On the Anatomy of the *Calyptræidæ*." After referring to the account given by Cuvier of the anatomy of *Crepidula*, to that by M. Deshayes of *Calyptræa*, and to M. Lesson's of *Crepidatella*, as elucidating the general plan of organization in this family, he proceeds to describe the structure of *Calypeopsis*.

The anatomy of this genus agrees very nearly with that of the before-known genera of the family, scarcely differing, except in the comparative extent of the locomotive and respiratory systems; but Mr. Owen has been enabled to add to the labours of his predecessors an account of the *testis*, and a description of the salivary glands. The *testis* is lodged in a membranous chamber, and consists of a glandular part of a light brown colour, and of a fibrous texture when seen under the lens; though, from analogy, the apparent fibres are no doubt seminal tubes. By the side of the *testis* there is a bag, or *vesicula seminalis*, appropriated to receive the secretion, which communicates with the termination of the oviduct posterior to the *anus*; the *anus* being situated on the right side of the branchial orifice, anterior to the *testis*, which here separates it from the oviduct. Between the *testis* and the process on the right side of the neck (regarded by Cuvier as the *penis*,) Mr. Owen has been unable to trace any communication: he feels, consequently, convinced that if this process forms part of the male generative system, it is to be regarded rather as an exciting than an intromittent organ. The salivary apparatus consists of two elongated follicles with glandular *parietes*, occupying the neck on either side of the *œsophagus*, anterior to the nervous collar, and opening into the *œsophagus* on each side of the base of the lingual plate.

After passing in review the several systems, Mr. Owen concludes by remarking on the internal chamber or cup which exists in the shells of this family. He regards it as being necessitated by the greater extent of the locomotive powers in *Calyptræa* than in *Patella*; a calcareous plate being interposed between the *viscera* and the foot to protect them from the pressure to which they would otherwise be exposed during the comparatively extensive and frequent contractions of the latter organ. As respiration has a direct relation to locomotion, the *Calyptræidæ* approach towards the higher marine univalves in the organs dedicated to that function. Throughout the family the extent of the respiratory *lamina* is found to correspond with the extent of the internal shell, and with the extent and organization of the foot.

Numerous specimens were exhibited of *Birds* collected in North America, principally in the United States, by George Folliott, Esq., and presented by him to the Society. At the request of the Chairman, Mr. Gould brought them severally under the notice of the Meeting. His principal object being to illustrate, so far as these

birds were concerned, the geographical distribution of allied or identical species, he directed his observations chiefly to the determination of those North American Birds which seemed to him to be referrible to European species, and of those which, having been generally considered as identical with European, appeared, on direct comparison, to present differences in form and colouring.

The common Turnstone of Europe, *Strepsilas collaris*, Temm., appears to be not only identical with the Turnstone of North America, but to be spread, without any tangible variation, over almost every portion of the globe. The Sanderling, *Calidris arenaria*, Temm., and the Knot, *Tringa Canutus*, Linn., are also identical in both continents; as is the great white Heron or Egret, *Ardea Egretta*, Temm. The common Tern or Sea-Swallow of England, *Sterna Hirundo*, Linn., occurs equally in North America. The common Crow, *Corvus Corone*, Linn., is also identical in both continents.

With respect to the Whimbrel, *Numenius phæopus*, Temm., and the little Sandpiper, *Tringa Temminckii*, Mr. Gould stated himself to be unable to determine as to their identity without the comparison of more specimens from America than he had yet been able to obtain for the purpose of examination.

The Cross-bill of North America Mr. Gould showed to be very distinct from that of Europe, the *Loxia curvirostra*, Linn.; it is one third less in all its proportions, and is somewhat less brilliant in colouring. The Ring Dottrel of North America is also specifically distinct from that of Europe, the *Charadrius Hiaticula*, Linn.; independently of differences in admeasurement, its semipalmated foot will always serve to distinguish it.

In addition to the Birds that have been already mentioned, Mr. Folliott's collection contained a series of the *Sylviadæ* of the United States, several *Fly-catchers*, the *Orphea rufa*, &c., &c.

Mr. Gray exhibited specimens of the shelly covering of a *Radiated* animal, allied to the *Echinidæ* and the *Asteriidæ*, which he regarded as the type of a new genus, and for which he proposed the name of

GANYMEDA.

Corpus hemisphæricum, depressum; depressione dorsi centrali quadrangulari.

Os inferum, centrale.

Anus nullus.

Ambulacra nulla.

“The body is hemispherical, depressed, thin, chalky and hollow.

“The back is rounded, rather depressed, flattened behind, with a rather sunk quadrangular central space.

“The sides are covered with sunken angular cavities with a small round ring, having an oblong transverse subcentral hole in their base.

“The under side is small, rather concave, with five slight sloping elevations from the angles of the mouth to the angles of the rather pentagonal margin. The edge is simple.

"The mouth is central. The vent none.

"The cavity is simple.

"The *parietes* are thin and minutely dotted, and the centre of the dorsal disc is pellucid.

"This genus is very nearly allied to the fossil described by Dr. Goldfuss in his beautiful work on Petrifications, under the name of *Glenotremites paradoxus* (tab. 49. f. 9. and t. 51. f. 1.), with which it agrees in external appearance and form, in the possession of a sunken space on its upper surface, and in having only a single inferior pentagonal mouth. It differs from *Glenotremites* by being unfurnished with *ambulacra* running from the angle of the mouth to the margin, by being unprovided with conical cavities between those near the mouth, and by having in the flattened disc on the back a central quadrangular impression instead of the pentagonal star of that genus.

"Dr. Goldfuss describes the glenoid cavities on the surface as giving attachment to spines similar to those of the *Turban Echini*, (*Cidaris*, Lam.), and states that the under surface is covered with very small tubercles to which he believes spines were attached. The cavities on the surface of *Ganymeda* and the pits in them have very much the form of those figured by Dr. Goldfuss in his fossil, but I cannot regard them as being fitted for the attachment of spines: they have much more resemblance to the mouths of cells. So great, indeed, is this resemblance, that I entertained doubts whether the whole mass might not be a congeries of cells like the *Lunulites*, rather than the case of a single body, until I considered that it was impossible, from its form, that it could increase in size with the growth of the animal, and that its exceeding regularity proved that it must be the formation of a single creature.

"I am induced to consider these two genera, though differing in the above-stated particulars, as forming a family or order between the *Echinidæ* and the *Asteriidæ*; allied to the latter in having only a single opening to the digestive canal, and agreeing with the former in form and consistence, but differing from it in not being composed of many plates.

"I only know two specimens of this genus, which I believe were found on the coast of Kent, as I discovered them mixed with a quantity of *Discopora Patina* which I collected several years ago from *fuci* and shells on that coast. The specimens are $\frac{1}{4}$ of an inch in diameter.

"I propose to call the species *Ganymeda pulchella*."