X.—*Preliminary Account of a new Cetacean captured on the shore at Buenos Ayres.* By Dr. HERMANN BURMEISTER*.

[Plate III.]

ON the 8th of August of the present year, at 9 o'clock in the morning, a large whale was observed by the boatmen of Señor D. Juan Antonio Nuñez, near the Custom-House Wharf. It was seen near the shore, raising itself from time to time out of the water and then disappearing for some moments, during which it spouted a stream of water with much vehemence. The men approached this animal in a boat and fired two shots at it, which appeared to take no effect; however, urged by curiosity, they came so near that a son of Señor Nuñez was able to give the animal two stabs in the throat. On this it spouted a violent stream of blood, and died after struggling for two hours. Dragging it first to their ship, the men afterwards took it to the wharf, where it was landed by the steamboat-crane, put into a cart, and transported to the Museum, being generously presented to that establishment by Señor Nuñez.

The scientific study of this animal, which I immediately commenced, showed me that it belongs to a new group of the Dolphins, very near the genus *Ziphius* of Cuvier (*Delphinorhynchus* of Blainville and Dumortier), but differing in the position of the large teeth of the lower jaw, placed, not in the centre of each side of the jaw, but at the very point, as in the genus *Hyperoodon*†.

The animal, belonging thus to a group intermediate between *Hyperoodon* and *Ziphius*, I propose should be named *Ziphiorrhynchus cryptodon*, placing it, in the natural classification, before *Ziphius* and after *Hyperoodon*. I subjoin a general description in order to acquaint the scientific public with its special and distinctive characteristics.

Ziphiorrhynchus cryptodon, Pl. III.

The general external form of the animal exactly resembles that of *Ziphius*; the head not much raised in front, the belly rather thick, the fins small, and the snout sharply pointed; but the form of the tail, inclined with the point backwards, is remarkable and very singular for this group of Dolphins.

The animal measures 3·95 metres in length, and 2 metres in circumference at the middle of the body. The snout is short,

* Communicated by Dr. J. E. Gray, F.R.S. &c.

† [This animal is evidently allied to *Epiodon cavirostris* of the Mediterranean and *Petrorhynchus capensis* of the Cape seas. Figures of the skulls of these animals have been sent to Dr. Burmeister for comparison.—J. E. GRAY.]

a little curved backwards ; the mouth on each side is 21 centimetres in length, and the small eye is 22 centimetres distant from the posterior angle of the mouth. The ear is a very small opening, 1 millim. in breadth, situated 10·5 centim. behind the eye ; the aperture of the nose is a transverse arched fissure, 10·5 centim. in breadth, on the top of the head, 45 centim. distant from the point of the snout. There are two remarkable diverging plaits, 24 centim. long, on the throat ; two small fins, 35 centim. long, on each side of the breast, about half a metre distant from the eye ; and another smaller, of a curved shape and 17 centim. high in the posterior part of the back, about 2 metres distant from the nostril. To this fin corresponds, in the under part of the body, the position of the posterior openings, the sexual aperture being a little before the fin, and the anal aperture a little behind it. Both are longitudinal fissures, the first 16 centim. broad and the second 9 ; at the commencement of the second are seen two other small fissures of 3 centim., one on each side, which indicate the teats. As far as these apertures and as the posterior fin the body is round ; but beyond them, where the tail begins, its shape changes to a compressed lamina with sharp edge above as well as below. Thus the tail diminishes quickly, descending at first, and afterwards ascending in a direction inclined backwards until the point, where there is a large horizontal fin of a metre in breadth, semilunar in shape, but without incision in the middle, this part being little more prominent than those on either side, near the central portion of the tail. This is a remarkable feature in the animal, as likewise the upward inclination of the tail. The whole body is of a clear grey colour, a little yellowish, but darker on the back and lighter on the stomach ; the fins are darker, almost black, and the large fin of the tail has an irregular white spot underneath.

In studying the internal parts I began with the mouth, seeking for teeth, but not meeting with any ; the gum consisted of a narrow callus, a little raised on each side of the mandible, rather wider in the lower one, especially at the point of the mandible. Opening this callus with my anatomical knife, I was much surprised to find, inside of the gum, a large number of very small teeth, each enclosed in a little bag, to which it was fastened at its two points, as well above as below. These teeth are about 3 to 5 millim. long, of conical shape, and slightly enlarged at the upper part. I counted 25 teeth in the gum on each side of the upper mandible, and from 30 to 32 in the lower. There are besides two very large teeth at the point of the lower jaw, of very pointed conical shape, also imbedded in the gum. These two teeth are found in the same manner in the genus *Hyperoodon*, as well as those in the gums ; but as the skull is without the

elevated crests at each side of the snout in the bones of the upper jaw, it does not seem possible to unite this species with *Hyperoodon*, the shape of the head being exactly that of *Ziphius*. However, *Ziphius* (at least in the male) has two large teeth visible in the middle of the lower jaw; and as the specimen examined by me is also a male and has not these teeth, but wider ones, as in *Hyperoodon*, at the tip of the mandible, I am obliged to make a new genus for the animal here described. In dissecting it the other day I examined all its internal structure and made drawings of the principal parts, in order to describe its organization afterwards in the Annals of our Museum. I give here a preliminary description from the examination made.

The tongue is flat, of elliptic shape, and attached to the mandible, having no free motion; there are 26 papillæ, placed in two rows on the back of the tongue. The pharynx has a rather small opening inclined backwards where it joins the larynx, which has an epiglottis much prolonged above, like a curved cone, which enters the posterior aperture of the nose. The trachea is rather short, 26 centim. long and 8 broad, and has a third bronchus on the right side, smaller, and placed more behind, before its final division into the two regular bronchi.

There are three principal parts in the lungs—one on the left side of the body, and two, very unequal, on the right. The heart is tolerably large, but broader and flatter than in the terrestrial Mammalia. The internal structure is not different from the general type, but the distribution of the nutritive veins on the whole surface is very remarkable. There is a single opening of the nutritive vein in the right auricle, whence issues a large vein which descends in the lower longitudinal furrow as far as the tip of the heart, forming there a rather broad sac, from which issues, on the other side, another vein, ascending in the upper longitudinal furrow to the base of the ventricle.

As to the digestive viscera, the œsophagus is internally covered with many folds; these folds descend into the first stomach, which is very large, of a remarkable sinuous shape, and in two unequal parts, of which the second part is the smallest and of a coarser and more muscular texture. Behind the first stomach there are seven others, of which the last is the largest, larger even than the first; the other six are very small, particularly the second, third, sixth, and seventh; the eighth is 34 centim. long, and the first 29 centim. The duodenum is very narrow, hardly 2.5 centim. wide, and the ilium very long, measuring 17.5 metres. Its interior surface is covered with many folds, which form small bags at the sides. The colon is of twice the width, but much shorter, hardly 2 metres long; its internal surface has not so many folds and bags as the duodenum and

ilium. There is no cæcum, as is always the case in the true Cetaceans.

No food of any kind was found in the intestines, only a mucous yellow fluid in the small intestine, and a fluid of a black colour, like pitch, in the large one. Probably the animal had fasted for a long time; and there is no doubt that the heavy storm from which Montevideo had suffered two days before had forced him to take refuge in the mouth of the Rio de la Plata.

The liver is situated on the right side of the last stomach, covering it with its lower part, which is the smoother of the two into which it is divided. There is no gall-bladder, but a wide duct entering the duodenum by the side of the pancreatic duct. The pancreas is large and of regular construction, situated between the curvatures of the eight stomachs. The spleen is a thin mass, small, of triangular shape, behind the first stomach, and closely attached to its upper part. The kidneys are large, 40 centim. long, spindle-shaped, fastened to the centre of the belly above the other intestines, and composed of numerous divisions, of the shape and size of a large nut. The urinary channel is a metre, more or less, long; the bladder very large and of thick substance.

The sexual organs are not perfected—proving, as does the soft and spongy texture of the bones, that the animal was still young.

The body consists of a large mass of very dark, almost black, flesh, and over this, covering the whole surface, a layer of whitish fat, of 5 centim. thick. The skin is thin, closely united to the fat, and is composed of two layers, the inner one soft and black, the outer hard and grey. Over this skin extends a fine but hard and very smooth epidermis, which gives a shining appearance to the animal. It is said that the inner skin of the Anarnac (*Hyperoodon*) is considered a delicacy by the inhabitants of Greenland and Iceland, in the seas of which these animals abound.

I cannot enter into a detailed description of the skeleton, since its preparation has not been concluded. I can only give a few general details of the shape of the skull and of the number of the vertebræ and ribs. The skull is exactly similar to that in the genus *Ziphius*, and has not the smallest resemblance to that of *Hyperoodon*. The upper part, with the opening of the nose, is much arched, and the right side is much larger than the left. The zygomatic bones are extremely thin, and are free behind, and the os petrosum is united to the skull very firmly. Of the seven vertebræ of the neck, the first three are united in one piece, the others are free. There are ten dorsal vertebræ, with ten pairs of ribs, of which six are directly joined

with the sternum. The number of the lumbar vertebræ is twelve, and of the vertebræ of the tail twenty-five, of which the first eleven have large inferior spines between them, the first spine being incomplete and composed of two parts entirely separate. In the pectoral fins all the bones are well formed, as well as the little bones of the carpus, which are not cartilaginous; only the last phalanges of the fingers are formed of this substance.

XI.—*Description of some new Species of Butterflies belonging to the Genus Athyma in the Collection of the British Museum.*

By ARTHUR G. BUTLER, F.Z.S., Assistant, Zoological Department, British Museum.

1. *Athyma lactaria*, n. sp.

Upperside—*front wings* dark olive-brown; the discoidal streak broadly divided into three parts, white; two small white spots near the costa, placed obliquely halfway between the cell and the apex; a large white spot between the end of the cell and the anal angle, divided by the second median branch; a submarginal row of five small white spots, the three upper ones subapical, placed obliquely: *hind wings* dark olive-brown; costa and inner margin paler, a broad transverse central white band broadest between the discoidal nervules, narrowest at the inner margin; a submarginal row of eight small white spots, equidistant except at the anal angle.

Underside—*front wings* olive-brown; the discoidal streak as above but better defined; three oblique subapical rows of elongate white spots, the two outer rows approximating, the outermost row sometimes continued along the outer margin; a large white spot between the end of the cell and the anal angle; three submarginal white spots along the anal outer margin, the lowest one obscure, the centre one large, oblong: *hind wings* white; base and front margin dark olive-brown; a white spot at the base, a second similar spot near the base of the cell, and an elongate bluish white streak above the cell; outer margin olive-brown, with a very narrow submarginal white line and a row of eight large white spots.

Body brown; palpi, two lateral streaks on the abdomen, and coxæ pale ochreous.

Expanse of wings $2\frac{3}{8}$ –2 inches.

Hab. Aru Islands.

Allied to *A. Venilia*, Linn. (Oceania), but the markings of the upperside more nearly resemble those of *Neptis Jumbah*, Moore.

Burmeister, Hermann. 1866. "X.—Preliminary account of a new Cetacean captured on the shore at Buenos Ayres." *The Annals and magazine of natural history; zoology, botany, and geology* 17, 94–98.

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