XLI.—*Notes on Professor Owen's Description of* Euphysetes simus. By Dr. J. E. Gray, F.R.S. &c.

Professor Owen, in a note to his paper on Indian Cetacea, in the 'Transactions of the Zoological Society,' vol. vi. p. 37, observes:—"M. de Blainville figures, but makes no mention of, this bony ridge bisecting the 'postnarial' cavity. Dr. Gray, in appending the term *Kogia* to the *Physeter breviceps*, De Blainv. (Zoology of the Erebus and Terror, Cetacea, 4to, 1846, p. 22), is equally silent—indeed, adds nothing to De Blainville's meagre sketch of so remarkable a cranium, and quotes his admeasurements as in English inches and lines, without correction for the difference of the French 'foot.' Macleay was the first who pointed out the heavy ridge of bone that longitudinally divides the spermacetic cavity into two unequal parts (*op. cit.* p. 47) as subgenerically distinguishing his *Euphysetes* from *Physeter* or *Catodon*."

To this I have only to observe:—First, that the skull from the Cape figured by M. de Blainville does not possess the "heavy ridge of bone" found in the Indian and Australian skulls, but in the place of it has a couple of thin elevated plates united in front and forming a funnel-shaped cavity. The possession of the heavy bony ridge described by Mr. Macleay is the best character to separate the Australian and Indian species from that of the Cape.

Secondly, that I acknowledged that what was printed in the 'Zoology of the Erebus and Terror' was a mere translation of De Blainville's account; and if I had corrected the admeasurements into English feet, I should only have misled the reader. As I had only seen the skull years previously for a few minutes, I did not venture, from recollection, to make any addition to the original description. I am very glad that my essay to unravel the Cetacea, which, until my paper in the 'Voyage of the Erebus and Terror' above cited appeared, had scarcely been studied in a zoological point of view since the appearance of M. Cuvier's researches in the 'Ossemens Fossiles,' can only be assailed by such trivial observations as those above cited and the objection that I had not stated as clearly as I might the length of the symphysis of the lower jaw of *Steno* (*l. c.* p. 19); yet I should have thought that any one reading the characters would see that I compared the length of the suture with that of the lower jaw itself.

The publication of the observations on Whales in the 'Zoology of the Erebus and Terror,' which I know are very imperfect, and which I have since done all in my power to improve, has been followed by the recognition of three times as many large Whales as were known before its appearance, and they have lately been

defined and studied in a manner which must lead to the discovery of many more.

The result of the study I have bestowed on them has been that the British Museum contains the largest collection of the remains of the species ever brought together, and preserved and arranged in the best manner for the use of scientific men—much more so than if they were set up in large galleries, which would have the effect of sending the general visitors away disgusted at looking at what to them would seem like the repetition of the same skeleton; for they are too large for the eye to take in at one view, unless they are placed too far from the observer for the peculiarities of each kind to be studied and recognized.

The description of *Euphysetes simus* in the paper above quoted contains some peculiarities which require to be noted, that succeeding naturalists may not misunderstand them. In plate 12 of this valuable contribution to the knowledge of Indian Cetacea are represented the side and back views of the skull. The explanation of plate 12 stands thus:—"*Euphysetes simus*: fig. 1, side view of the skull; fig. 2, back view of the skull (rather more than half the natural size)." The upper figure represents the lower as well as the upper jaw: but no lower jaw was brought to Europe; and the figure of it must have been copied from the Indian drawing, which, I think, might as well have been stated; at least its not being stated has led to an inconvenience already, as persons have come to the Museum to see the lower jaw, which does not exist there,—more especially as, at page 40, the lower jaw is described at considerable length, and not a word is said that the description was taken from an Indian drawing, and not from the real bones.

Plate 11. fig. 2 represents the outline of the body, containing a shaded drawing of a skeleton; the plate is lettered "*Physeter simus*," and the explanation of plate 11 runs thus: "fig. 1, side view of male (to same scale as female, plate 10); fig. 2, outline of ditto, with skeleton." The figure really represents the outline of the *Euphysetes simus* of Owen, from India, and the skeleton of *Euphysetes Grayi* of Macleay, from Australia, combining two most distinct species in one figure and under one name. At page 42, under "Bones of the Trunk and Fins (plate 11. fig. 2)," occurs the following observation:—"Having been favoured with photographs of these bones in *Euphysetes Grayi* by the present able Curator (Mr. Krefft) of the Australian Museum, I have thought it might be useful to add the following notes." Then follow the details of the skeleton, preceded, not by "*Euphysetes Grayi*," but simply by the generic name "*Euphysetes* (plate 11. fig. 2)." I feel assured that most readers of both the text and the explanation of the plate will believe that

the skeleton figured and described is that of *Euphysetes simus* of India, and will not have the least idea that the outline belongs to one species and the skeleton to another, which are admitted by Professor Owen to be distinct, and are so regarded all through the paper.

Since the above was written I have been informed of a much more serious mistake in the paper. The account of the *Euphysetes simus* begins thus:—"The Cetacean which I have next to describe is represented by drawings of the adult *male* (side view, plate 11, to scale) and *female* (side view, plate 10. fig. 1; upper view, fig. 2; to scale). It is noted as 'a kind of Porpoise' in Mr. Elliot's MS., and is known to the Telugu fishermen of the coast by the name of 'Wonga.' The *male*, measuring 6 feet 8 inches in length, was taken at Waltair, February 28, 1853. The *female* was taken on the 1st of March, 1853, at the same part of the coast; she measured 6 feet in length" (p. 30). "According to the figures, the pectoral fin becomes free 1 foot 1 inch behind the snout in the *male*, and 1 foot 4 inches in the female; but there may be some inaccuracy here" (p. 31). The comparison is continued, and terminates as follows:—"The *vulva* is 3 inches in advance of the vent; the *prepuce* of the male is 9 inches in advance" (p. 32).

Now, after all these details, I am assured that both the drawings above referred to were taken from the same specimen, the only example of the "porpoise" recorded as taken on the Indian shores, that that specimen was a *female*, and, further, that the drawings and bones were accompanied by accurate admeasurements taken from the animal itself when in a fresh state.

XLII.—*On the Temperature of Geological Periods, from indications derived from the observation of Fossil Plants.* By the Count Gaston de Saporta*.

It is by the aid of facts derived not only from the study of ancient organisms, but at the same time from all sorts of observations, that we may hope one day to solve the complex question of the temperature of the globe at periods anterior to that in which we live.

We are still very far from any such result; but, in order to approach it, we must endeavour to apply to the problem a series of partial researches, so as gradually to bring together the elements of a complete and definitive solution. I shall therefore confine myself exclusively within the limits of the vegetable

* Translated from the 'Bibliothèque Universelle: Archives des Sciences,' tome xviii. pp. 89–142.