

I observed unaltered for months together. This, unfortunately, cannot be done with *Spirogyræ*, some of which, however, I have been able to watch for several days before the death of the cell, without detecting any change of the fold.

For this reason it is quite inadmissible to regard the folds of the cell-membrane as abortive septa, at least as long as the production of such a septum by the amalgamation of the central margins of a true fold has not been demonstrated in a single instance, but, on the contrary, it has rather been observed that incompletely developed folds occur only as accompanying an endogenous cell-development taking place not altogether without disturbance, whilst in the normal development of the latter the newly formed septa are unmistakeably recognizable as endogenous productions.

[To be continued.]

XIV.—*Description of a Species of Dolphin found in the Orkney Islands.* By ALEX. R. DUGUID, M.D.

[Plate III.]

FOR many years I have heard the fishermen in this neighbourhood speak of a species of Whale, with white spots or stripes, which they frequently met with when in pursuit of the *Phocæna melas*, or Cãaing Whale. The facility with which the latter is driven on shore is well known: hence the specific name which has been applied to it by some naturalists—*deductor*. But of the capture of the former species, though frequently chased, I have never heard of an instance till recently.

On the 21st of August 1858, several fishermen were pursuing their avocation in Scapa Bay, near Kirkwall, when, a shoal of whales making its appearance, all the boats went in pursuit. On approaching the whales, they were discovered to be the spotted or streaked species; and some of the pursuers desisted from all further efforts, expressing their opinion, from past experience, that it would be of no use attempting to capture them. Some of the boats, however, persevered, and having succeeded in getting a part of the shoal nearer to the beach, all again resumed the chase with renewed and vigorous efforts, and at last landed twenty small whales, which were speedily put to death by means of fishermen's knives and other lethal weapons.

I saw the whales on the evening of their capture. I knew them to be of a species which I had never seen before; but it was too dark to make an examination of them. I saw them again on the 23rd of August, and, having selected a specimen which was the least injured by the knives of the captors, I shall

now describe it. The length of all the animals varied from 6 to 9 feet. Of this one, the length was 7 feet 2 inches, circumference 4 feet; length of dorsal fin 17 inches, and 8 inches high. From snout to dorsal fin 2 feet 9 inches. From dorsal fin to middle of tail 3 feet 4 inches. Tail 1 foot 8 inches broad, and cleft in the middle to the extent of 1 inch. Upper jaw 9 inches long, decidedly beaked for 3 inches; lower jaw $9\frac{1}{2}$ inches, projecting $\frac{1}{2}$ an inch beyond the upper. Pectoral fin, or swimmer, $12\frac{1}{2}$ inches long; base of it 15 inches from the extremity of the lower jaw. The eye oval, $\frac{8}{10}$ ths of an inch in its longer diameter, and $\frac{1}{2}$ an inch in its shorter, situated in a horizontal line with the mouth; the pupil dark brown. Teeth in both jaws the same in number, 29 on each side, conical. When the mouth is shut, the teeth of one jaw fit into the interstices between the teeth of the other, like the teeth of a trap. Two double teeth in the upper jaw on both sides at the back; but this was not observed in other specimens. The colours and markings were precisely the same in all the specimens, without the smallest perceptible variation. The back was black, and the belly pure white, without grooves. There was a streak, of a dark yellow or clay-colour, commencing under the anterior part of the dorsal fin, and running nearly to the tail, nearly in the middle of the side, and about $3\frac{1}{2}$ inches in breadth. Another streak of dazzling white commences some distance behind the eye, running towards the tail, partly underlapping the yellow streak, but not extending so near to the tail. Under these there is a dusky streak, running all the way from the nose to the tail, with a very irregular outline. The white streak was from 4 to 5 inches broad. The blow-hole is crescentic in shape, with the convex side backwards. (Pate III.)

I am favoured by a friend with the following description of another specimen:—From tip of snout to the middle of the tail, along the back, 8 feet 3 inches; the same, in a straight line, 7 feet 8 inches. Tip of lower jaw to anterior of pectoral fin 1 foot 4 inches; from the same to the posterior of same 1 foot 9 inches; from the same to genital organs 4 feet 10 inches; from the same to anus 5 feet 9 inches. Distance between pectoral fins below, $6\frac{1}{2}$ inches; the same, above, 2 feet $9\frac{1}{2}$ inches. Length of pectoral fins, in curve, 1 foot $4\frac{1}{2}$ inches; length from centre of base to tip 1 foot 1 inch. Expansion of tail 2 feet 1 inch. Width of flaps of tail 9 inches. Length from snout to dorsal fin 3 feet 1 inch. Length of dorsal fin in curve 1 foot 7 inches; length of the same from centre of base to tip 1 foot 1 inch; breadth of the same at middle 7 inches, at base 1 foot $3\frac{1}{2}$ inches. Length of upper jaw, in a straight line, 10 inches; of lower jaw 11 inches. Girth, at dorsal fin, 4 feet $3\frac{1}{2}$ inches; at pectoral fin, 3 feet 10 inches; at anus, 3 feet; at 1 foot from

middle of tail, 1 foot; at 8 inches from tail, 6 inches. Girth of head at blow-hole 2 feet $6\frac{1}{2}$ inches. Tip of snout to blow-hole 1 foot $1\frac{1}{2}$ inch. Length of beak $2\frac{1}{2}$ inches. Height of dorsal fin 9 inches. These measurements were from a male. There is a dark mark around the eye, about $\frac{3}{4}$ of an inch broad. The eye is small, and the form of the pupil is crescentic, with the points upwards. The blow-hole is situated between the eyes; its form is crescentic, the concave side being forward, and there is a slight depression around the blow-hole. An auditory meatus is present (not to be found in several) above and rather behind the eye, and over the anterior portion of the pectoral fin. Its opening would admit a No. 1 shot. The head is sharp and beaked; the lower jaw a little longer than the upper. The number of teeth is $\frac{29}{32} \frac{29}{32}$; they are largest in the middle of the jaw, and gradually diminish in size towards each end, those at the anterior extremities of each jaw being the smallest. There are no teeth at the symphysis of either jaw for the space of nearly an inch. In form they are conical, being slightly incurved at the back, and nearly straight in front; those in the lower jaw are most incurved. While the teeth in the upper jaw point forwards, those in the lower jaw point backwards; so that when the mouth is shut, they lock into each other very closely, and the points of the teeth are lodged in little fossæ in both jaws: these fossæ appear to be only in the membrane of the gum. The palate is smooth and spotted. The tongue is not free, but, the frænum being large, it admits of great movement; it is black at the centre, and white at the margins. At the symphysis of the lower jaw the lip turns upwards, and has two slight elevations, which fit into two corresponding notches in the upper lip. There is a regular probabium in the upper lip, so as to give it a pointed appearance. The colour of the back is jet black. There is a long streak towards the tail, of a dirty yellowish colour. About the middle of each side there is a very conspicuous oblong white streak, under which the sides are dusky. The belly is of a beautiful clear white. The pectoral and dorsal fins are black. The tail is black, with a very little white underneath.

From this animal being shortly but decidedly beaked, I assume that it belongs to the genus *Delphinus*; but I can find no description of a species in the works of Bell, Fleming, and Jardine which agrees with it. It seems to come nearer to the description of the *Delphinus Tursio* of Fabricius than to any other; but I have no doubt it will be found to be different. The symmetry of its form, and more particularly the great beauty of the colours, when contrasted with each other, with the streaks and

markings exactly alike in every individual of the shoal, would indicate with tolerable certainty that it had never been observed before; for, had it been otherwise, these peculiarities, being so very striking, could not possibly have been overlooked. But this I leave to more profound naturalists to determine.

Kirkwall.

[There is little doubt that this Dolphin is *Lagenorhynchus leucopleurus* of my Catalogue of Cetacean Animals in the British Museum, published in 1850, p. 97, which Mr. Knox (under the name of *Delphinus Tursio*) describes as found at the Orkneys in May 1835. The skeleton of this specimen is in the Museum of the University of Edinburgh.—J. E. GRAY.]

XV.—On a new British Species of Rissoa.

By E. WALLER, Esq.

To the Editors of the *Annals of Natural History*.

GENTLEMEN,

Having accompanied my friend Mr. Jeffreys in several of his late excursions to the Shetland Islands, I have had the opportunity of seeing, on their first capture, many of the novelties added to our fauna in those distant and difficult dredgings. I know his unwillingness to anticipate the interest properly reserved for his 'British Conchology,' now in course of publication, by a previous description of any of the new shells; but I am tempted to infringe, with his permission, on this rule in one instance. In the home examination of sand obtained to the north of the Island of Unst, at a depth of 85 fathoms, I found a *Rissoa* which appears to have been hitherto undescribed and unnamed. I wish to couple with it the name of Mr. Jeffreys, whose persevering and long-continued labours have added so largely to our knowledge of British conchology. I would therefore feel obliged by your publishing in the 'Annals' the following description of *Rissoa Jeffreysi*, one of the novelties announced in the Report to the British Association (1863) on the Shetland dredgings.

I remain, Gentlemen,

Lissenderry, Aughnacloy,
June 29, 1864.

Your obedient Servant,

EDWARD WALLER.

Rissoa Jeffreysi, n. sp.

Shell conical, moderately strong, somewhat glossy and semi-transparent,

Colour white,



Duguid, Alex R. 1864. "XIV.—Description of a species of Dolphin found in the Orkney Islands." *The Annals and magazine of natural history; zoology, botany, and geology* 14, 133–136.

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