

and circular in form, as seen from the masthead. In rounding it soundings of from 4 to 7 fathoms were obtained, and there was apparently shallow water to the westward. After passing Blackburne Shoal a course was shaped to the northward, soundings of from 7 to 10 fathoms being obtained until 11 A.M., when in lat.  $6^{\circ} 35' S.$ , long.  $133^{\circ} 54' E.$  the water deepened, and at noon the depth was 33 fathoms. The Arrou Islands were in sight all day, but presented a flat uniform appearance, owing to their being entirely covered with a virgin jungle. The only conspicuous object north of Red Patch Point was a small hill, slightly elevated above the adjacent land, in lat.  $6^{\circ} 40' S.$ , long.  $134^{\circ} 6' E.$  The flat hill close to Red Patch Point can hardly be distinguished when seen from the northwestward. A breeze springing up just before noon enabled the ship to proceed under sail again, a great advantage in the tropics. In the afternoon the course was altered towards the northwest point of Lutor Island, which ends abruptly, and as the vessel proceeded, Maika and Babi Islands, which are flat and covered with trees, were sighted. At 6 P.M. Babi Island bore N.E. by N., the left extremity of Maika Island N.  $43^{\circ} E.$ , the left extremity of Lutor Island S.  $76^{\circ} E.$ , and the water having shoaled to 10 fathoms, a course was shaped to the north until 8 P.M., when, the depth being 45 fathoms, the ship hove to under topsails for the night.

On the 16th, whilst drifting slowly away from the land, the water deepened until at 4 A.M. no bottom could be obtained at 150 fathoms. At 6 A.M. Babi Island bore N.  $68^{\circ} E.$ , the left extremity of Maika Island S.  $89^{\circ} E.$ , and the right extremity S.  $52^{\circ} E.$ , and from this position the vessel was steered for Dobbo Harbour, and at 9 A.M. proceeded into the harbour under steam, with Dobbo Spit bearing E.S.E. When the rock off the northwest point of Wamma Island bore S. by W., several casts of 6 to  $5\frac{1}{2}$  fathoms were obtained. At 11 A.M. the ship anchored in 16 fathoms off the town of Dobbo, with the rock off the northwest point of Wamma Island bearing west, the left extremity of Wokau Island N.  $38^{\circ} W.$ , and Dobbo Spit S.  $31^{\circ} E.$

The deposits in 6 and 7 fathoms around and near Booby and Wednesday Islands consisted of siliceous sand with large numbers of non-pelagic Foraminifera, fragments of calcareous Algæ, Polyzoa, and Mollusc shells. Between the Arrou Islands and Cape York the depth in the Arafura Sea never exceeded 50 fathoms, usually ranging from 28 to 40 fathoms. The deposit was a greenish mud in all cases, containing fragments of quartz, mica, felspars, glauconite, &c., about 0.5 mm. in diameter. In the dredgings there were fragments of sandstone and other continental rocks. The carbonate of lime in these deposits rarely exceeded 10 per cent., and consisted of the shells of *Textularia* and *Rotalia*, fragments of Echinoderms and Molluscs.

A very remarkable new compound coral was obtained at the entrance to the Prince of Wales Channel, Station 186, 8 fathoms, which has been made by Mr. Quelch the type of a new genus, *Moseleya*, and provisionally referred by him to a new subfamily of the *Astræidæ*, *Moseleyina*. This coral is of great importance as showing an approach to the *Rugosa* in its structure, possessing dissepiments disposed in concentric circles and forming nearly complete tabulæ.<sup>1</sup>

The surface nets in the Arafura Sea yielded large numbers of Diatoms, being frequently filled with a yellow shiny mass, which recalled the hauls of Diatoms made during

<sup>1</sup> J. J. Quelch, *Ann. and Mag. Nat. Hist.*, ser. 5, vol. xiii. p. 202, 1884.