

optical properties show to be due to minute crystalline particles. A section of these concretions resembles in most respects a section of a hardened *Globigerina* ooze from tropical regions. In this case, however, the shells are nearly all filled and cemented by the finely granular carbonate of lime, while in a *Globigerina* ooze they are empty.

It is not improbable that these large concretions or rock-fragments are hardened portions of a deep-sea deposit formed at a much greater depth, and subsequently elevated into the position in which they were found, probably by the same elevation as that which upheaved the neighbouring islands.

On the 27th, at 5.30 A.M., the position was obtained by star observations, and from that time until 4.30 P.M. the course was altered as necessary to complete the survey of the Brother Islands and the Tionfolokker group.

It was found that the Tionfolokker group consisted of three large and four small islands, with a few outlying rocks. The southwesternmost island of the group is 550 feet high, and round-backed, the other islands are all low and flat, but covered with trees, so that they are visible at a distance of from 12 to 15 miles. They lie in a N.E. by N. and S.W. by S. direction, between the parallels of $5^{\circ} 31'$ and $5^{\circ} 47'$ S. latitude, and the meridians of $132^{\circ} 8'$ and $132^{\circ} 23'$ E. longitude. Passing the group on the southeast side, soundings of 170 to 140 fathoms were obtained. On the northeast side of the high, or southwestern, island are two small islets, from which a reef extends to the southward a distance of three miles, and near the edge of this reef are some rocks above water; with this exception no danger was seen, but ships should be cautious in venturing amongst these islands until the channels between them have been sounded (see Sheet 32).

The Brother Islands are three in number. The southern island, Pulo Ta, 390 feet high, is in lat. $5^{\circ} 40\frac{1}{2}'$ S., long. $131^{\circ} 55'$ E., circular in shape, about one mile in diameter, and a small reef fringes its shore. The northwest Brother, Pulo Onelin, is low, but covered with trees, circular in shape, and about half a mile in diameter, bears N. by W. 5 miles from Pulo Ta, and is in lat. $5^{\circ} 26' 15''$ S., long. $131^{\circ} 54\frac{1}{2}'$ E. Pulo Dol, the northeasternmost island of the Brother group is also low, but is larger than the other two islands, being a mile and a quarter long in a N. by W. and S. by E. direction, and one mile wide; it lies 6 miles N.E. by N. from Pulo Ta, and is in lat. $5^{\circ} 36\frac{1}{2}'$ S., long. $131^{\circ} 58\frac{1}{2}'$ E. A coral reef fringes the shores of all three islands, but does not extend to any great distance from them; the channels between them appear free from danger.

Kanalur Island, the southern island of the Nusa Tello group, is of considerable size, and rises in a succession of terraces to a height of 1600 feet. The summit is in lat. $5^{\circ} 20\frac{1}{2}'$ S., long. $131^{\circ} 57'$ E. In the passage between the Brother Islands and Kanalur Island, which is 12 miles wide, a sounding of 175 fathoms was obtained.