

distinguished, for muddy water extended right across the narrowest part of the channel. The mud patch northeast of Mandanui tower had only grass and small bushes on its outer southwest part, the remainder being bare.

### ZEBU.

*Mactan Island.*—Mactan Island consists of an old coral reef raised a few feet (8 or 10 at most) above the present sea level. At one part of the island, where a convent stands, a low cliff fringes the shore, being the edge of an upper stratum of the upheaved reef. This raised reef is here preserved, but has, over the portion of the island immediately fronting Zebu, been removed by denudation, with the exception of a few isolated pillar-like blocks which remain, and which are conspicuous from the anchorage. These show that the whole island was once of the same height as the distant cliff. Opposite the town of Zebu, the island of Mactan is bordered by a wide belt of denuded coral flat, partly covered at high tide. The surface is scooped out into irregular basins and sharp projecting pinnacles, and covered in all directions with mud, resulting from the denudation. Very few living corals are to be found on these flats, but small beds of them fringe their seaward margin.

These muddy expanses are the haunt of numerous shore birds. In the pools a large Sea Anemone, belonging to the genus *Cerianthus*, expands its tentacles in the full blaze of the sun. *Cerianthus* uses its nematocysts, which in all its widely varying allies are apparently only employed as offensive stinging organs, to construct a dwelling. The cysts are shed out in enormous abundance, and with their protruded filaments matted together and combined with abundant secreted slime, form a tough leathery tube with a smooth and glistening inner surface, which is buried upright in the mud. Within this tube the anemone lives, expanding its tentacles at the mouth of the tube, on a level with the surface of the mud. It has the power of moving itself with extreme rapidity down its tube, and disappears like a flash when alarmed. The species at Mactan Island is very large; the tube measures 1 foot 4 inches in length, and is very thick and heavy; the animal itself is 6 inches in length. This species of *Cerianthus* lives in shallow water in the full heat and glare of the sun, while another species of the same genus, *Cerianthus bathymetricus*, Moseley,<sup>1</sup> differing from it in hardly any particular, except that it is of much smaller size, inhabits the sea at a depth of 3 miles, in almost entire, if not absolute absence of sunlight, at a temperature near freezing point, and under a pressure of, roughly, 3 tons to the square inch.

*Zebu.*—Zebu (Cebu) is celebrated as being the scene of the death of Ferdinand Magellan (in Portuguese Fernão de Magalhães), the first circumnavigator. Magellan arrived here on the 5th April 1521 (the ships entering the port with all their colours fly-

<sup>1</sup> *Trans. Linn. Soc. Lond. (Zool.)*, ser. 2, vol. i. p. 302, 1877.