

cavity was to be seen rising and falling, with a regular pulsating motion, as the animal in breathing took in the water, which was afterwards expelled through the siphon. The tentacle-like arms contrast strongly with those of most other Cephalopods, because of their relatively extreme slightness and shortness, though they are not shorter proportionately than those of the living *Sepia*. They are held by the animal, whilst swimming, extended radially from the head, somewhat like the tentacles in a sea anemone; but each pair has its definite and different direction, which is constantly maintained. This direction of the many pairs of tentacles at constant but different angles from the head, is the most striking feature to be observed in the living Nautilus. Thus, one pair of tentacles was held pointing directly downwards; two other pairs, situated just before and behind the eyes, were held projecting obliquely outwards and forwards, and backwards respectively, as if to protect the organs of sight. In a somewhat corresponding manner, the tentacular arms of the common cuttle-fish whilst living are maintained in a marked and definite attitude, as may be observed in any aquarium. Another living Nautilus was brought to the Consul at Kandavu during the stay of the Challenger. The natives were said to frequently catch them alive, and to give them to their chiefs, who eat them.

*Ngaloa*.—The ship left Matuku at 4 P.M. on the 24th July, and on the following morning at daylight the whole of the Kandavu group was well in sight, and the ship was steered for Ngaloa Harbour, which it was proposed to survey in consequence of its having been made a port of call for the mail steamers running between Sydney and San Francisco. No difficulty was experienced in entering the harbour under sail, for the reefs and dangers can all be readily distinguished from aloft. At 11 A.M. the vessel "came to" on the south side of Ngaloa Island, in 15 fathoms, and in the afternoon a tide pole was put up and other preliminary operations performed so that the survey might be commenced at once.

The survey was continued, and astronomical observations obtained on the 26th; on the 27th the ship left Kandavu for the capital of the Fiji group, to connect the island with Captain Denham's position at Levuka, and to complete the stock of coals and other necessaries. At 6 P.M. on the 27th, when to the southward of Kandavu, the light cast by the moon on the water ahead, appeared exactly like a reef, and for a short time it was thought to be one; and once again, shortly afterwards, the same deceptive appearance caused the officers of the watch to stop and go full speed astern. Such phenomena are frequently reported as reefs, and had it not been ascertained that this appearance was merely caused by a break in the clouds, through which the moon cast a peculiar reflection on the water, it might have been inferred that a shoal existed. At 10.30 P.M., after the vessel rounded the eastern end of Kandavu Island, the fires were put out and sail was made for Levuka.

At daybreak on the 28th the vessel was close to the position of a recently reported reef, Metcore, but nothing was seen of it; the traders at Kandavu knew nothing of it,