SPOLIA ZEYLANICA.

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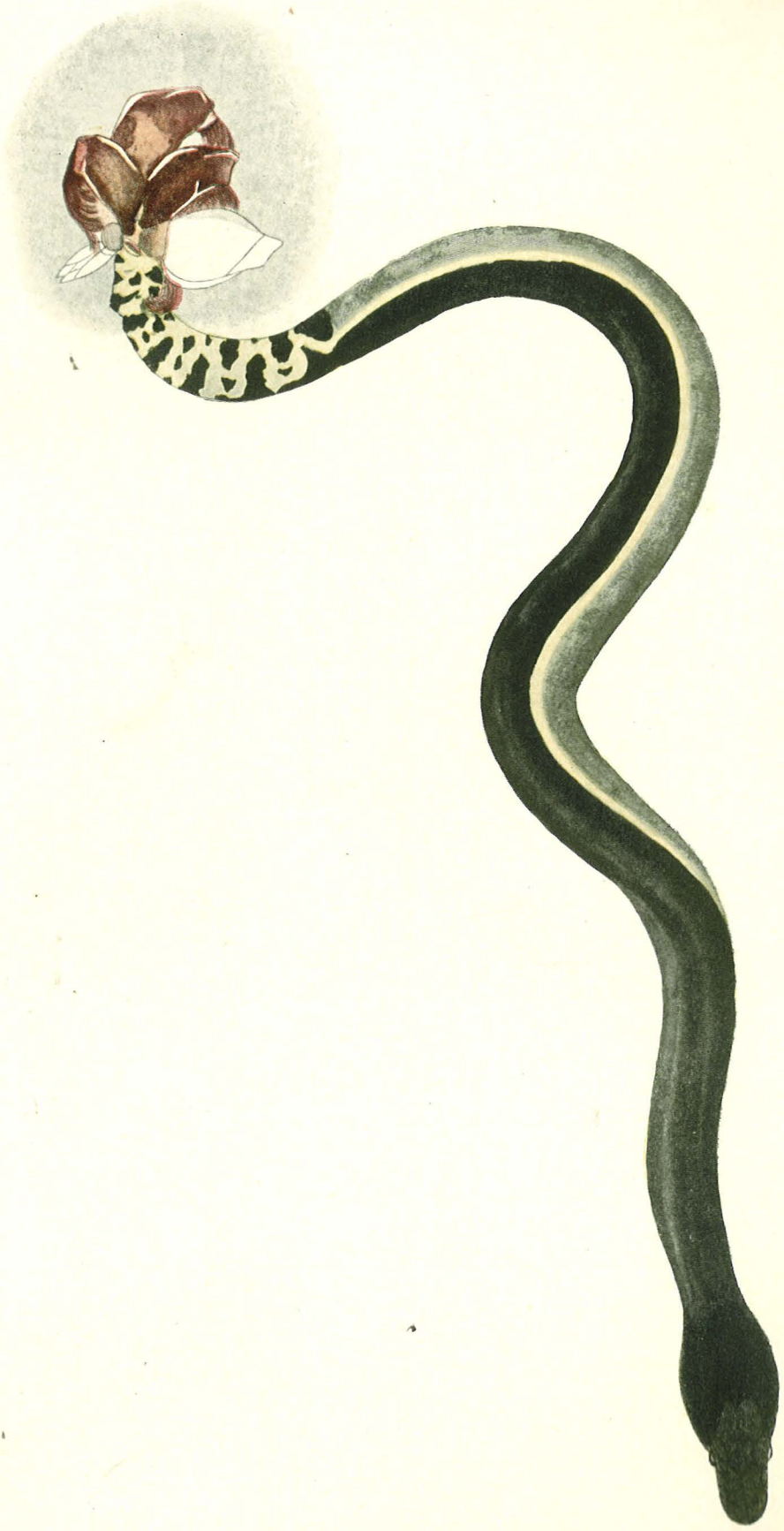
6. *Association of Barnacles with Snakes and Worms.*—The object of this note is to present to the readers of this journal a picture showing a group of barnacles belonging to two species attached by their stalks to the flattened tail of a sea-snake, *Hydrus platurus*. The attachment of barnacles to the skin of sea-snakes has long been known, and was of course mentioned repeatedly by Darwin in his "Monograph of the Cirripedes," but a conspicuous example like the one here figured is not so commonly met with in Ceylon. The specimen was brought alive to the Museum on July 23, 1909. The two species of barnacles can be recognized in the drawing; the one with complete white calcareous valves is *Lepas anserifera*, which Dr. Annandale referred to in *Spolia Zeylanica*, vol. III., p. 193, as being "the commonest pedunculate form on floating objects in this part of the Indian ocean"; the other exposing the soft brown mantle which carries the greatly reduced calcareous valves is *Conchoderma hunteri*.

The barnacles are not ectoparasites, as they do not feed upon the skin of the snake, nor do they assist the snake in any way; on the contrary, their presence must have seriously impeded the movements of the snake. Moreover, they thrive equally well when attached to floating bottles and drifting spars. So far as the snake is concerned, they are simply an incubus which cannot be shaken off, and the snake is merely their facultative vehicle. These barnacles are sedentary animals destitute of proper powers of locomotion, although capable of securing their own nourishment, but they have acquired a planozoic or passively vagrant habit, and they must be kept on the move.

Their relation to the snake is somewhat analogous to a remarkable case of association between certain Hydroid polyps (*Stylactis minoi*) and a small rock perch, *Minous inermis*, which was found by the Royal Indian Marine Survey ship "Investigator" in several places off the Indian coast, from the Mahanaddi to Calicut, in depths of 45–150 fathoms. The skin of the fish is beset with the commensal polyps, which have never been found elsewhere, and Colonel Alcock ("A Naturalist in Indian Seas," London, 1902) thinks that they help to conceal the fish from its enemies, in that they play the same part which is, in other cases, performed by frond-like cutaneous filaments.

The barnacle *Lepas anserifera* always, in my experience, occurs in pure culture when attached to bottles and logs, unaccompanied by the *Conchoderma*. But under these conditions, more particularly on logs, it is frequently accompanied by two Annelid worms, very distinct from each other, though both belonging to the same family, Amphinomidæ. In August, 1907, and December, 1909, Lepas-logs were brought to me at the Museum, upon which I found numbers of these two species, *Amphinome rostrata* and *Hipponoë gaudichaudi*, not previously recorded from Ceylon, but known from the South



Pacific, the Mediterranean, and the Atlantic coast of North America. The *Hipponoë* is the rarer species, and has a rich uniform pinkish coloration resembling the colour of the egg-ribbons of the *Lepas*. It sometimes penetrates within the valves of the barnacle.

Colombo, March 29, 1910. A. WILLEY.

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7. *Nest of the Bambara Bee at the Museum.*—During the building operations at the new wing of the Museum the outer verandah was appropriated by a swarm of bambara bees (*Apis dorsata*), who began building their comb on the roof of the verandah in March, 1909. They crowded together one over the other to form a dense swaying mass in the characteristic crescentic shape of the future comb, although nothing of the latter was visible. Many of them were found lying dead upon the floor from time to time. On May 19 I took a photograph of them from the top of a temporary platform. About this time the yellow basal portion of the comb began to show against the woodwork of the ceiling. Individual bees were constantly leaving the mass and returning to it laden with yellow bee-bread, round pollen-masses attached to the hind legs (femora).

On July 14 the swarm was still at work, the bees on the lower or growing part of the comb constantly leaving and returning to it as before, but now bringing two packets of white bee-bread. They had now arranged themselves in vertical columns or chains, after the fashion of the red ant (*Oecophylla smaragdina*) when drawing leaves together preparatory to the construction of a nest; one such living chain, 6 or 7 inches long, was seen to be detached from the main mass, except at the two ends.

On October 14 a Death's Head moth, which is known as a pest of beehives, was found dead on the ground below the comb; presumably it had been overpowered and stung to death, though it is hard to say why intruding moths are not always killed by the bees.

On November 27 the swarm deserted the comb in a body. The life of this particular comb thus lasted almost exactly nine months.

It is known that these bees sometimes attack horses and pedestrians, and can constitute an actual danger when disturbed, although I cannot give any references to published accounts of such attacks. The local saying is that if seven of these bees attack a man he will die.

This species is distributed over most parts of the Island to the tops of the highest mountains. In February, 1910, Mr. E. E. Green and I found them visiting the blue flowers of the "nellu" (*Strobilanthes*) on the summit of Namunukuli, near Badulla, in great numbers whenever the sun was sufficiently strong to dispel the rising mists.

Colombo, March 31, 1910. A. WILLEY