Notes and Memoranda.

On a Specimen of Leptocephalus Morrisii.—During the first week of June of the present year, a specimen of *Leptocephalus* was brought to the Laboratory by a boy, who had found it under a stone on the shore, in a small cove in front of the building. The beach in this cove consists of broken fragments of limestone. The specimen was alive when brought up, and was preserved in formaldehyde. When I examined it a few weeks later it was entire and in excellent condition, and retained its transparency to a considerable degree in the preserving liquid. The specimen is 11.25 cm. long (4½ in.); the greatest dorso-ventral breadth of the body, a little behind the anus, is 7 mm.; the breadth in the same direction at the back of the head is 5 mm. The dorsal line rises slightly behind the head. From the tip of the lower jaw to the anus the distance is 5.25 cm., from the tip of the snout to the commencement of the dorsal fin is 3.6 cm. Thus the point at which the dorsal fin commences is nearer to the anus than to the pectoral fin, although, in the fully developed conger, the dorsal fin extends forwards to a point in front of the posterior extremity of the pectorals. In this respect the larval form more resembles the adult common eel (*Anguilla*) than its own parent. The greatest lateral thickness of the body is just behind the head, and does not exceed 2 mm. Behind the anus it is narrower still. The head, however, is not much compressed laterally, but is rather broad, and flat on the dorsal surface. The length of the head is 8 mm., measured from the tip of the snout to the gill opening; its breadth is 3 mm.; its vertical height at the level of the eyes, 4 mm. In characters the head resembles that of the conger very closely. The eyes are large, the exposed front being silvery, except along the dorsal edge, where there is a streak of black pigment. The anterior tubular nostrils and the posterior open ones are present, as in the conger, and the gill opening is a reduced slit in front of the base of the pectoral, as in the latter. The upper jaw is a little longer than the lower, and the angle of the mouth is below the middle of the eye. No bones can be seen in the interior of the body by this examination of the entire animal without further

preparation; the myotomes are distinct, numerous, and narrow antero-posteriorly. There are simple, slender, permanent fin rays in the longitudinal fin; I counted 480 of these, but at the anterior extremities of the fin they were too indistinct to be counted accurately. The end of the tail has the same shape as in the adult conger, the fin passing continuously round it, and the rays being arranged symmetrically and somewhat more elongated than in the dorsal and ventral parts of the fin. The pectoral fin is 3 mm. long.

There is a single linear series of black dots along the middle of each side, each dot being a single stellate chromatophore. There are a few additional chromatophores below the principal series, and also a row along each side of the middle ventral line of the abdomen. At the base of the longitudinal fin, there is a series of chromatophores on each side, one to each fin-ray, continued round the end of the tail to a point about $\frac{1}{2}$ in. from the apex of the tail dorsally, but there are none on the rest of the dorsal edge of the body.

In most respects, as may be seen on comparing the above description with Couch's figure, our specimen agrees well with the latter. The characters of the head are not, however, well brought out in that figure. Judging from our specimen, the eyes are too small, and the character of the mouth and jaws is not shown; the whole head is also too small. In Couch's figure, too, the body increases more in breadth towards the middle region and in the posterior half than in our specimen, in which the dorso-ventral breadth remains almost uniform in the middle two-thirds of the body, decreasing anteriorly and posteriorly.

Further anatomical examination must be deferred to some other opportunity. I will only add here that the character of the larva suggests to myself the idea that it corresponds to special conditions of life, as is the case in other larvæ, and that these special conditions are not of the pelagic kind. The head is, to all intents and purposes, the head of a conger, and the like may be said of the longitudinal fin, with the reservation mentioned above. The body is compressed, colourless, transparent, and boneless, and these qualities would, I think, be fostered, if not produced, by the habit of living under stones and in narrow crevices, with comparatively little exertion of the trunk musculature.

J. T. Cunningham.

Cuthona ? aurantiaca.—I am glad to be able to add this beautiful species to the *Nudibranchiate* fauna of Plymouth. Two specimens were found amongst some dredging from the Millbay channel, on February 6th, 1895. On the same stone there was a colony of *Antennularia ramosa*, which most likely formed the food of the *Nudibranch*. One of the specimens had deposited spawn on the same stone. The interest of this lies in the fact that Alder and Hancock mention this animal as spawning in June and July, whereas this specimen spawned on or about the 6th February. I think there can be no doubt that this spawn belongs to the *Eolid*, as it exactly answers Alder and Hancock's description of it, and, moreover, no other *Nudibranchs* were found in the dredging. During the short time I kept these animals alive, like so many other *Eolids*, they exhibited a partiality for floating on the surface of the water, foot uppermost.

J. C. Sumner.