

## Faunistic Notes.

JANUARY TO JUNE, 1895.

By

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THE following notes on the collecting work carried out during the period from January to June, 1895, follow the lines of Mr. Garstang's notes for 1892\* and 1893.† In putting the observations on record, I should like to thank the various workers at the Laboratory during the period covered, for the help which they have given. My own part of the work has consisted chiefly in keeping the record, and in endeavouring to give a certain amount of continuity to the whole. At the same time the final responsibility for the names adopted must be my own.

What strikes one perhaps most forcibly in keeping a detailed record of collecting operations such as are carried out by the Association, and comparing it with previous records and observations, is the great relative variation in the abundance of different forms from year to year. In any particular year, animals which at a given season are usually quite common, may be almost entirely absent, whilst other forms usually regarded as rare may be taken in great abundance. Several instances of this kind will appear in what follows, and it is from this point of view that such records are likely to be of the utmost value, if continued from year to year. It is only by their means that the modifications of the fauna and flora of any district, due in the first place to the direct action of physical conditions, and in the second to the inter-relations of the various organisms which compose it, may be expected to receive anything like a complete explanation.

\* This Journal. Vol. ii. N.S. p. 333.

† „ „ Vol. iii. N.S. p. 212.

*Tubularia indivisa* has been unusually abundant, and several colonies with polyps of exceptional size for this locality were taken near the Asia Rock, during the latter half of March. This species was also growing in profusion on the rocks below West Hoe Terrace about the same time. *Tubularia indivisa*, of a more luxurious growth and redder colour than that found in the Sound, was taken on May 8th from beneath the overhanging shelf of rock below the remains of the old lighthouse at the Eddystone. It was growing there in considerable quantity, side by side with a species of *Aglaophenia*, which will be described by Prof. Nutting.

*Tubularia larynx*, which appears to have been common in the Sound in former years, has not been so during the present season.

*Garveia nutans*, which has been regarded as a rare form at Plymouth, has been plentiful this spring. It was continually found on the stones dredged in Millbay channel, and on April 8th numerous colonies, covered with gonophores, were growing on the rocks under West Hoe. This species has not, I believe, been previously found at Plymouth between tide marks.

A small species of *Eudendrium*, of very delicate habit, and at once recognisable by the milk-white colour of its polyps, which Prof. Allman is inclined to regard not as *Eudendrium capillare*, which it resembles in some points, but as a new species, was found in large quantities on stones taken from Millbay channel, and bore gonophores during April.

On the 25th and 26th of April, a species of *Syncoryne*, resembling *Syncoryne mirabilis* of Agassiz, bearing medusæ of two kinds, was found by Mr. Garstang at Devil's Point and Garden Battery. This species will be described by Mr. Garstang in detail.

On May 9th another species of *Syncoryne*, resembling *Syncoryne eximia*, but of rather more delicate habit, with the tentacles already formed on the zooids, was found growing on the roots of *Laminaria* on a buoy moored near the Eddystone.

The interesting hydroid *Corymorpha nutans* has again been obtained. The last recorded instances of its capture at Plymouth is by Mr. Heape,\* on May 17th, 1887, in about three fathoms, below Fort Tregantle, in Whitsand Bay. On May 20th of the present year, we succeeded in obtaining three specimens with the dredge, off the same fort, in about nine fathoms, and one mile from shore. One of the specimens had medusæ attached. On the following day, May 18th, our fisherman, Roach, tried with the dredge a patch of sand at the east end of the Breakwater, and succeeded in taking two specimens. From the abundance in which the medusæ of this species occur here during

\* This Journal. Vol. i. N.S. p. 394.

the spring and early summer, it seems probable that the hydroid grows in large numbers somewhere in the neighbourhood, and it is curious that it should be so seldom taken.

Medusæ were very late in appearing this season. During January not a single one was seen, and only one or two Leptomedusæ were taken occasionally in the latter half of February. It was not until the middle of March that they began to be met with in any numbers, when the tow-nets contained a good many specimens of the Anthomedusa, *Amphicodon amphipleurus* of Haeckel (March 15th and onwards), each having numerous medusa buds springing from the base of the tentacle bundle. A few specimens of *Corymorpha nutans* (*Steenstrupia rubra*) also appeared about this time. Leptomedusæ (*Phialidium* sp.) were still found in small numbers, but were not plentiful. Towards the end of March they became numerous.

During April *Amphicodon* generally showed gonads developing on the manubrium, and in May (first seen May 9th) the young hydra form was found inside the umbrella.

At the beginning of April two species of *Tiaropsis*, which will be discussed in detail by Mr. Garstang, were present, and the larger species continued to be taken, the specimens gradually increasing in size, until the end of May. *Sarsia pulchella* and *Margelis* (*Bougainvillia*) *ramosa*, L. Agassiz, both of large size, were fairly common during May. Specimens of *Rathkea octopunctata* were also taken during the same month.

From May 21st onwards, medusæ of the *Phialidium* group, bearing the parasitic *Halcampa* sp. inside the umbrella, were common.

The first Ephyra was observed on February 19th, but Ephyrae did not become plentiful until the beginning of March.

A month later only Ephyrae of the largest size were taken, and on May 28th the first fairly grown Aurelia (about 3 in. diameter) was seen.

On April 29th a small specimen of *Chrysaora isosceles* (about  $\frac{3}{4}$  in. diameter) was taken, and towards the end of May fair-sized specimens of this medusa were common.

The Lucernarian *Depastrum cyathiforme*, which has been taken twice before at Plymouth,\* once at Drake's Island and once under Rame Head, has been found on two occasions this year; on February 12th on the shore below Mount Edgcumbe, and on May 15th below Mount Batten.

*Bolina hydatina*, referred to by Mr. Garstang† as having been noticed during May, 1892, and again in May, 1894, but as being apparently

\* This Journal. Vol. iii. p. 216.

† This Journal. Vol. iii. p. 216.

absent during 1893, has been taken this year on several occasions, as before, during the latter half of May.

Large colonies of *Alcyonium digitatum* have again been growing on the iron piles of the Promenade Pier, a position in which they were found last year.

Post-larval stages of *Arenicola* similar to those described by Dr. Benham \* in this Journal, which have previously appeared in February, were not found until nearly a month later than usual, the first recorded being taken on March 25th. A corresponding lateness in the appearance of the regular constituents of the floating fauna, as compared with previous records, has been very marked during the early part of this year.

A specimen of *Sipunculus nudus* about 5 in. long was brought to the Laboratory on April 2nd by a fisherman, having been taken whilst trawling.

On the 5th of the same month, our own man was on board a Plymouth trawler, obtaining fertilised eggs of flat-fishes, when another specimen of about the same size was taken ten miles south of the Eddystone light.

Amongst the Nudibranchiata large specimens of *Aplysia punctata* (5-6 inches long when extended) have been abundant in the Yealm River, and have been spawning freely in the tanks during May and June. *Hero formosa* has been found in considerable numbers six miles south of the Mewstone, and *Triopa claviger*, of which two specimens have been previously recorded at Plymouth, † has again been taken off the Mewstone. Four specimens were found on a mass of the Polyzoan *Lepralia foliacea* on May 28th.

On February 6th Mr. Sumner found on the dredging from Millbay channel two specimens of *Cuthona aurantiaca* (A. and H.), a form which has not previously been taken at Plymouth.

The remarkable scarcity of the common shrimp (*Crangon vulgaris*) in the Sound, during the past six months, is a fact worth putting on record. On spots where one haul of the trawl in an ordinary year could have been relied on to bring up many hundreds of shrimps, we could only obtain a dozen or so at each haul during the early months of the year. This scarcity still exists, though the numbers appear to be increasing. It is difficult to suggest a cause for this immense diminution in the numbers of so common an animal. The shrimp fishermen, I understand, account for the fact by the presence in the Sound during January of large shoals of small whiting, many of which fish, when caught, were gorged with shrimps. My attention was not

\* This Journal. Vol. iii. N.S. p. 48.

† Garstang. This Journal. Vol. i. N.S. p. 455.

drawn to the matter until it was too late to make any attempt to confirm the latter statement.

A fact of a similar nature, has been the almost entire absence from the neighbourhood of the common squid (*Loligo Forbesii*). This animal is largely used by the fishermen as bait, but for the first six months of the year it was impossible to procure even individual specimens, and the fishermen have been put to great straits to get bait of any kind for their work.