spots, stripes, nor bands. Jaws nearly equal; mouth small with retractile lips; snout cylindrical, and, when protruded, more than an inch in length; teeth setaceous. Eyes large; *irides* orange yellow and brilliant, furnished with a nictitating membrane. Gill-cover of two pieces, not spinous, but both angular. Lateral line curved. Fins: dorsal very long and divided, anterior portion of nine spines of unequal length connected by a thin membrane, the posterior consisting of fifteen [twenty-four?] bristly rays; pectoral small, of thirteen rays; ventral of six rays, the first a strong curved spine, all united by a membrane like the dorsal; anal of twenty-six rays, the first three being distinct spines; caudal square, of fourteen setaceous rays." .

The other drawing represents a *Tetrodon*, evidently identical with that obtained from the same coast by Pennant and by Mr. Donovan.

Mr. Gray gave some account of the reproduction of *Cirrhipeda*, founded on observations made by him on *Balanus Cranchii*, Leach, during a recent visit to the coast of Devonshire. In illustration of his remarks he exhibited an adult of that species with the eggs attached to the body at the base of the shell, and the young *in ovo*. He also exhibited numerous very minute individuals of *Bal. vulgaris* affixed to rock.

He described the mode of reproduction as ovoviviparous. On opening under water, after they had been preserved in spirit, the eggs attached to the body of the adult, each was found to contain a perfectly developed animal, which occupied nearly the whole of its cavity. The form of the young *Barnacle* at this period of its existence is ovate, rather tapering above, and truncated and ciliated at the tip: it is furnished with three pairs of arms along the sides, the base of each arm being two-jointed; the lower pair of arms has only one elongated process, while each of the two upper pairs has two fusiform, thick, articulated and ciliated processes, similar to those of the anterior part of the perfect animal, but less elongated. From the adult it differs chiefly in having a smaller number of feet and in the less development of the hinder part. It is also destitute of shelly covering, which is probably not formed until the young animal becomes fixed. In very small attached individuals of the *common Barnacle* the shell is rather soft, transparent and horn-coloured.

In the absence of shell from the animal in the egg, an additional evidence is furnished of the affinity of the *Cirripedes* to *Crustacea* rather than to *Mollusca*: the fœtus in the latter class being covered by a shell at a very early stage of its embryo growth. The existence in the young animal of a smaller number of arms than that found in the adult is also analogous to the corresponding fact which has been observed in several of the *Branchiopodous Crustacea*. A similar fact has recently been noticed by Dr. Nordmann as occurring in *Lernæa*.

Mr. Gray remarked that he had been the more induced to call the attention of the Society to the subjects which he exhibited, on account of his observations being at variance with those recorded

by Mr. J. V. Thompson in the fourth Memoir of his 'Zoological Researches.' The young of *Balanus* is there described as being, when $\frac{1}{10}$th of an inch in length, a free swimming animal, resembling *Cyclops* in its general form, and having pedunculated eyes: and it is stated that it then throws off its bivalve-shell-like envelope together with the greater part of the black colouring matter of the eyes, becomes fixed and covered with calcareous matter, and is changed into a young *Barnacle*, such as is described by Pennant as *Balanus pusillus*, the arms at the same time acquiring the usual ciliated appearance. In Mr. Gray's specimens of the young, on the contrary, the general form of the adult is found, and the arms are ciliated while it is still in the egg, its total length being less than $\frac{1}{50}$th of an inch. Of this length it is also by no means uncommon to find *common Barnacles* attached.

Mr. Gray added that on examining the eggs which are found around the base of the animals of *Pentalasmis*, Leach, and *Otion*, Ej., he had observed indications of the existence of young similar to the adult. They were not, however, sufficiently developed to enable him to describe them with precision.

Mr. Gray also called the attention of the Society to a fact connected with the history of some of the marine *Gasteropodous Mollusca*, which he had observed on the same occasion with the young of the *Balani*. It is well known that the animals of terrestrial shells are torpid during the winter in cold and temperate climates, and during the dry season or summer in tropical regions; but it had not been previously remarked that a similar state occurs in those of marine shells. Mr. Gray found that many individuals of *Littorina petræa*, and some of *Litt. rudis*, were in this condition during his stay at Dawlish. They were attached to the rocks several feet above the reach of the highest autumnal tides; their foot was entirely retracted; and a membranous film was spread between the rock and the edge of the outer lip of the shell: the gills were only moist, the branchial sac being destitute of that considerable quantity of water which exists in it in those of the same species which are adherent to the rock by their expanded foot. In this torpid condition, the individuals observed by Mr. Gray continued during the whole of his stay, which lasted for more than a week. On removing several of them and placing them in sea water, they recovered in a few minutes their full activity.

Mr. Gray further stated that he had on the same occasion observed that the animal of *Rissoa parva* has the power of emitting a glutinous thread, by which it attaches itself to floating sea-weeds, and is enabled, when displaced, to recover its previous position. A similar property, he remarked, was long since observed in one of the land *Mollusca*, a species of *Limax*, Linn.; and it has recently been recorded by M. Sander Rang as occurring in a marine genus of *Mollusca*, to which he has given the name of *Litiopa*. Mr. Gray added his belief that it would probably be found to be common to many species of marine *Mollusca*.