

frequently met with on the shores of New Jersey. Whether Dr. A. A. Gould had exactly the same species before him when writing his Report, I am unable to say.

Genus COLOCHIRUS—Trosch.

This genus presents the same peculiarities as the preceding one, and only differs from it in having the suckers arranged in five longitudinal rows, of which the three inferior ones are more abundantly furnished with them than the two superior, where only a few are observed.

3. *Colochirus gemmatus*, (Pourt.)—Two specimens of this species were found with *A. carolinus* on Sullivan's Island, (S. C.) One of them is about two and a half inches in length, resembling the latter in color; the other is a little more than half that size, of a dirty white body, and green ambulacra. The internal organs are almost identical with those in *Anaperus*, as are, also, the tentacles, with the exception that they are proportionally smaller. The skin is studded with microscopical hard bodies—transparent, and refracting the light very strongly. Each one seems to be composed of several rounded pieces, combined so as to leave a hole in their middle. Those rings are again combined together, so as to form flat bodies, with two, three, or more holes in them. The suckers are arranged in five rows, of which three seem to be more abundantly furnished. In this, as well as in the preceding genus, there is a small, calcareous body, occupying a position between two of the posterior projections of the pieces of the calcareous cesophageal apparatus, near the dorsal surface. It has been noticed by Goodsir, in several species of *Holothuriæ*, and he regards it as a madreporiform tubercle, or nucleus. It is, without doubt, a representative of the madreporic plate of *Echini* and *Asteriæ*. It is connected with the sexual canal, which opens on the outside, between the two superior tentacles. This calcareous body has a spheroidal form, and is composed of two pieces, united by a meandriform border.

Genus CUVIERIA—Péron.

Characterized by having the body covered with hard scales, and three rows of suckers on the ventral disk. Only one species is known to inhabit our coast. It was referred, by Dr. A. A. Gould, to *Cuvieria squamata*. Several specimens have been found in the stomachs of fishes. Some of them have also been dredged, alive, among *Laminaria*, in Boston harbor, by Mr. William Stimpson. But as I have seen only dried specimens, of the New England species, and possessing none

of the European, I am unable to give any opinion with regard to their identity.

Unable, at present, to decide as to what genus the following species belong, I prefer calling it *Holothuria*, rather than to refer it, with doubt, to any other of this group.

4. (*Holothuria*) *Floridana*, (Pourt.)—Body cylindrical, elongated, covered with suckers; which are, however, more abundant, and longer on the ventral surface. Tentacles short, equal, twenty in number; their branches also short, and crowded together in the form of a disk. No hard papillæ around the anus. No muscular stomach. Color, of a dark brown—almost black; tentacles and suckers lighter colored. Size, when alive, from six inches to one foot long, and two or three inches thick. Inhabits muddy flats, formed by the detritus of corals, among the Florida Keys.

Although the suckers are disseminated all over the body, a close inspection will show that they are more abundant in certain regions, which can be considered as the ambulacra. There are three such longitudinal rows, or ambulacra, on the ventral surface, and two on the back; and, consequently, three interambulacral spaces on the dorsal surface, and two on the belly. The dorsal interambulacral spaces are provided, each, with two rows of conical papillæ, one row on each side, close to the ambulacral space: thus making six rows of papillæ, which are more conspicuous in young specimens, three or four inches long, than in the old ones. The two rows, situated nearer to the ventral surface, are always very conspicuous. They are erectile, like the suckers, and possess a canal, which communicates with an internal vesicle.

The skin contains small, calcareous bodies, of various forms, but mostly in that of an irregular cross, or star, the branches of which are bifurcated at their extremity. The suckers are terminated by a calcareous, perforated disk, as in most of the echinoderms. The conical papillæ contain, near their extremity, a bundle of calcareous bodies, in form of a slightly curved rib, with a small, perforated expansion at each end; a form frequently met with in the skin and tentacles of *Holothuriæ*. The intestinal canal is large, and always filled with calcareous sand, and small shells, which the animal is constantly seen carrying to the mouth, by means of the tentacles, and swallowing:

The ovaries occupy a large space of the cavity of the body: they are filiform, of a pink color, and filled with eggs, in various stages of development. The oviduct opens near the mouth, and has attached to

it, at the place where it meets the circular canal of the Polian vesicle, two clusters of small, white bodies, consisting of an elongated head, supported by a twisted peduncle, both filled with a calcareous network. There are eight or ten such bodies to each cluster.

The Polian vesicle is simple, and elongated, and communicates with a circular vessel, attached to the œsophagus, from which five branches go to the twenty internal vesicles belonging to the tentacles. These vesicles are long, and pointed. The respiratory tree is double: one of its branches is attached to the wall of the cavity on the right side, and terminates near the mouth; the other is free, and is intertwined with the brown vessels accompanying the intestinal canal—probably a liver. The calcareous ring, surrounding the œsophagus, is rather slender, and much shorter, than in *Anaperus Carolinus*.

I have never seen the young ones in the same localities with the adults; having found them only about the Mangrove islands, hidden under old logs lying in the water. They are of a lighter color than the old individuals.

Genus CHIRODOTA—Eschsch.

This genus is characterized by the want of feet, and the presence of small tentacles, fifteen in number—at least in those specimens I have examined. Dr. A. A. Gould has described one species, under the name of

5. *Chirodota arenata*, (Gould,) of which I have found several specimens, after storms, on Chelsea beach, near Boston. The tentacles I found to be fifteen in number; small, soft, and divided into five lobes. The calcareous ring is composed of five bifid plates. The calcareous parts of the skin are in the shape of plates, with hexagonal holes. The ovaries, and respiratory branched tubes, are of large size. The madreporic plate is also found in the same position as in *Anaperus* and *Colochirus*. The stomach is also muscular, as in those two genera; though, apparently, not so strongly.

I would (provisionally) place in this genus a *Holothuria* of which I have never seen any perfect specimen. They were all taken from the stomachs of fish, and deprived of all their internal organs. I would propose calling it

6. *Chirodota oolitica*, (Pourt.)—Dr. A. A. Gould* mentions this spe

* Report on the Invertebrata of Massachusetts. 1841: p. 345.