

*Descriptions of several new species of Ascidia. By
C. A. Lesueur, Read March 25, 1823.*

GENUS ASCIDIA, Lin.

1. *A. atra.* *Body* subcylindric, elongated, arquated, sessile; the superior part more slender, terminated by two unequal tubes, slightly separate and parallel; these tubes have each a terminal opening, which in the shorter tube is closed by five, and in the longer one by six, triangular valves; the substance of the exterior sac is very firm, almost smooth, opaque, and very deep violaceous or blackish.

It occurs attached to rocks, amongst *Opuntia*, many species of *Sertularia* and broken shells. Its position is inclined, being adherent by the side of the base, which is a little more inflated than the other parts of the body.

We observed this species at the isles of St. Vincent and Guadaloupe, where, however, it is rather rare. Whilst dredging in the bay of Calicoua, we drew this species from the bottom of the water, with many other objects, amongst which was a beautiful *Holothuria*, marbled with brown, red, white and blackish, which had the property of dissolving so rapidly as to be observed with difficulty. Pl. 1, fig. 2.

2. *A. cavernosa.* *Body* oblong, irregular, terminated by two unequal tubes; that of the branchia and mouth much longer than the other, and directed upwards; that of the oviduct and excretions situated

at the base of the first and lateral; their apertures are entire, without marginal elevation, or apparent hair, and of a deep colour within; the exterior envelope is coriaceous, thick, very firm, opaque, rugous and folded, particularly towards the base, where the folds, united in fasciculi, form three points of attachment, by means of which the animal secures itself firmly to the interior of cavities in rocks and old *madrepores*; the colour is that of burnt terra-sienna.

This species is found only within the cavities of rocks, which are generally covered with *ulvæ* and other marine plants, at the island of St. Bartholomew's. Length 2 inches 5 lines, breadth 1 inch and a half. Pl. 1, fig. 1.

3. *A. albeola*. *Body* subpyriform, more inflated above, terminating in two apertures, that of the branchia rather more elevated; base destitute of a peduncle, but spreading a little outwards to increase the surface of attachment; *colour* white, diaphanous, exhibiting an interior globular, red, point. This species being small, measuring but a single line in height, presented less obvious characters than the preceding species; it is gregarious, attached to the surface of rocks, upright, and presents a peculiar aspect, which at once distinguishes it from any of the other species described in this paper; it may possibly be the young of a larger species.

Inhabits Guadaloupe. Pl. 2, fig. 1.

4. *A. multiformis*. *Body* variable in form, sometimes depressed or orbicular; sometimes elongated and projecting two long unequal tubes, which, as in

the other species, are distant when collapsed and divergent when projected; the opening of one of these is furnished with four, and of the other with five, triangular lips; *base* sessile, discoidal, forming an attaching surface wider than the body; substance soft, diaphanous and tinted with red; length about 5 lines, breadth 2 lines.

Many specimens are much smaller than the size here indicated; but whether or not these are young, or varieties, can only be determined by a series of regular and constant observations. Like the preceding they are gregarious, attaching themselves to rocks on the shore of the island of Guadaloupe. Pl. 2, fig. 2, natural size; fig. 3, magnified.

Var. a. Differs in being much larger, more solid and more opaque; the apertures are entire; the interior of the opening is black and the general exterior colour, gray; the almost smooth surface is interrupted by a few wrinkles; it was found covered with *ulvæ*, and resembled a beautiful green *lycopodium*; the foot was less dilated than that of the species; the apertures are terminal, conic, divergent, sometimes rectilinear and sometimes recurved.

It is a native of the coast of Guadaloupe. Pl. 2, fig. 4, natural size.

5. *A. variabilis*. *Body* variable in form, oblong, sessile; *base* inflated and adherent to extraneous bodies; *apertures* large, distant, deep red, with five brighter spots within, and each placed upon a conic protuberance, with their margins hardly divided

as in the other species by four or five valves; the conic protuberances are unequal, the surface in common with that of the whole body is rugous, of a grayish colour in some, and brownish in other individuals, somewhat in appearance like a truffle. ('Tuber.)

This species lives in society, attached to madrepores, rocks, shells, and each other; grouped with them are smaller ones, of nearly the same form, and of a beautiful red colour; but not having particularly examined these smaller specimens, I am not certain of their being the same species with their larger associates.

Length, about one and a half inches, by one inch in breadth.

Inhabits the bay of the Island of St. Thomas. Pl. 2, fig. 5.

6. *A. claviformis*. *Body* small, sub-cylindric, elongated, larger towards the extremity, or sub-clavate, terminated by two small, unequal, approximate tubercles open at their summit; *substance* gelatinous, diaphanous, glabrous. It lives in society, attached by the base to fuci and other marine bodies, and is also found thus attached floating on the surface of the water.

Inhabits the bay of St. Vincent, in the West Indies. Length about one inch, breadth 2 lines. Pl. 1, fig. 3.

7. *A. plicata*. *Body* ovate, sessile, *surface* subglabrous, but with many large inflated folds on the side of the inferior aperture, crossed by smaller folds, pre-

senting on that side the appearance of small imbricated dilatations; the remaining part of the body is covered with much smaller folds; *apertures* approximate, unequal, terminal; but being much compressed by their position in the preserving liquor, I am unable to determine their natural form; *substance* opaque, readily yielding to pressure; *colour* white; when air is forcibly introduced into the body, the latter becomes inflated like a small vesicle.

Length about two inches.

Cabinet of the Academy.

This species was found attached to the bottom of a vessel in this port. Pl. 3, fig. b.

8. *A. ovalis*. *Body* sessile, resembling the preceding species, but smaller, less rugged, being destitute of large inflated folds, with some slight, irregular wrinkles on the surface; *apertures* large, distant, placed at the extremity of two short, plaited tubes; the skin which margins the apertures is very thin, and apparently divided into many small, obsolete angles; one of these apertures is placed lower than the other and lateral; *colour*, in the alcohol, white; nearly the size of *plicata*.

Cabinet of the Academy.

The base of this specimen is surrounded by numerous individuals of a species of *lepas*, which covered the bottom of the vessel on which it was found. Pl. 3, fig. a.

9. *A. proboscidea*. An elongated *proboscis* containing the two tubes; extremity obliquely trun-

cated on each side; *apertures* subequal, placed on the summit of the proboscis, and separated only by a membrane, which extends the whole length of the tubes, and projects a short distance beyond the apertures; *colour* white; *surface* glabrous.

I have seen the proboscis only, of this animal. It was drawn up from the bottom of an estuary on the coast of Georgia, by the fluke of an anchor, imbedded in mud and fragments of shells. It was communicated to me by Mr. Say, as one of the interesting objects, collected by Messrs. Maclure, Ord, Say and Peale, on their voyage to Florida, and now forms part of the collection of the Academy. Pl. 4, fig. 4, natural size; fig. 5, transverse section.

10. *A. lobifera*. *Body* sessile, subglobular, with approximate, unequal apertures, concealed in the midst of many irregular fleshy lobes.

This species which I have seen only in the preservative liquor, was contracted and appeared to me to have been somewhat proportionably longer in the living state. It seems to have been attached to a sandstone.

The distinguishing peculiarity of this species, is the thick, fleshy and irregular lobes which defend the apertures. I think it probable that the apertures were capable of being elevated, at the will of the animal, above the lobes which protect them when at rest. The colour in its present state is a dull black, and the surface is wrinkled.

Transverse diameter, one and a half inches, height also one and a half inches.



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