are developed in the test (Pl. XIX. fig. 7). These peculiar spicules are described more fully in the account of the species given below, but they seem very similar in all the five known species, and are quite unlike any other form of spicule found in the Tunicata.

The test is always more or less cartilaginous in consistence, and contains large numbers of bladder cells. The mantle is moderately strong, and the branchial and atrial siphons are both of good size and are six-lobed at their openings. The atrial siphon apparently may vary considerably in form. Von Drasche states that the shape differs in different specimens of *Cystodytes durus*, and the forms I have figured (Pl. XIX. fig. 11, *at.*, and Pl. XX. fig. 7, *at.*) for *Cystodytes draschii* and *Cystodytes philippinensis* are very dissimilar. Common cloacal apertures are always present.

The stigmata in the branchial sac are always of rather small size, and are not very numerous. The tentacles, so far as is known (they are not described by von Drasche), are exceptionally long and numerous. The stomach is always smooth walled. The reproductive organs are hermaphrodite.

The five known species of *Cystodytes*, though agreeing in all the above characters, may, I think, be readily distinguished. In colour they differ considerably. *Cystodytes dellechiaiæ* is violet, *Cystodytes durus* is of a distinct yellow colour, *Cystodytes cretaceus* is milk-white, *Cystodytes draschii* is of a brownish-grey, and *Cystodytes philippinensis* is rather darker than the last. *Cystodytes durus* and *Cystodytes cretaceus* form decidedly thicker colonies than *Cystodytes draschii* and *Cystodytes philippinensis*. *Cystodytes durus* and *Cystodytes cretaceus* have the Ascidiozooids arranged in distinct systems, and, judging from von Drasche's figures, this is especially the case in *Cystodytes durus*, where the systems are obvious and very clearly circumscribed. In the two new species no such distinct arrangement is found, and in *Cystodytes dellechiaiæ*, according to Della Valle, the systems are not well-marked. On the whole the new species are nearer to one another than to any of those previously known, which are very clearly distinguishable by their colours (see von Drasche's beautiful plates). The detailed comparison of the two new species will be given below under *Cystodytes philippinensis*.

The five species may briefly be distinguished by the following characters :—