

when the surrounding tissues are in the state of contraction. Each piece is composed of about twenty-four (?) rods, twelve radiating towards each opposite side. Only a single polian vesicle is present. The madreporic canal opens externally by a pore, near the orifice of the reproductive organ. A great number of auditory vesicles is found along both of the lateral nerve-cords of the ventral surface; the number of otoliths varies from one to a multitude. The digestive tract makes a small convolution. The cloaca is not very important. The reproductive organ consists of two fascicles, each composed of a comparatively wide tube, into which opens a number of bundles of very small cæca; the organ of the largest individual reaches the length of 15 to 20 mm.

When comparing *Peniagone vitrea* and the above described species, one finds several striking points of resemblance; the position and aspect of the appendages of the dorsal surface, as well as the roughness of the integument and the shape of the calcareous bodies, have a great deal of similarity. They differ, on the contrary, much from each other in several extremely obvious characters. First we have to observe the form of the body, which is more depressed in *Peniagone affinis*, and wants the narrow, downwardly directed neck-like part; besides, the pedicels of this species are arranged all along the sides of the ventral surface, not only around its posterior part, and the five or six posterior pairs are webbed together, consequently only their ends are free, while all the pedicels of *Peniagone vitrea* are free.

TABULAR VIEW OF THE SPECIES OF THE GENUS *Peniagone*.

- I. Calcareous deposits: four-armed bodies with one to four processes directed outwards.
- A. Body anteriorly with a narrow neck-like part directed downwards. Pedicels sixteen, disposed round the posterior third of the ventral surface, *Peniagone vitrea*.
- B. Body destitute of a narrow neck-like part.
- a. Pedicels twenty two, eleven all along each side of the ventral surface; *Peniagone affinis*.
- b. Pedicels only round the posterior half or two-thirds of the ventral surface.
- × Body posteriorly almost flat, and with an incision in its middle.
Pedicels seventeen, *Peniagone challengeri*.
- × × Body posteriorly not flattened, and without incision.
1. Dorsal appendage in direction of the medio-dorsal line.
Pedicels sixteen or eighteen, *Peniagone horrifera*.
2. Dorsal appendage in a transverse position, not very broad and without visible processes. Pedicels about ten, *Peniagone atrox*.
3. Dorsal appendage in a transverse position, broad and with four small processes. Pedicels about ten, *Peniagone lugubris*.
4. Dorsal appendage in a transverse position, broad and with four long processes. Pedicels about sixteen, *Peniagone wyvillii*.
- II. Calcareous deposits: three-armed bodies; branched or unbranched spicula; and small C-shaped ones, *Peniagone naresi*.