

Fig. 1. *Cuspidaria fragilissima*, Smith.

Fig. 1. The animal seen from the right side, the mantle having been removed up to its union with the branchial partition.

*b*, Anterior palp; *d*, foot; *e*, branchial partition; *f*, visceral mass; *g*, orifice in the partition; *i*, free margin of the mantle (pedal orifice); *j*, point where the two lobes of the mantle are united posteriorly to the pedal aperture; *l*, anterior adductor; *m*, posterior adductor; *p*, siphons; *r*, lateral muscles of the branchial partitions.

Fig. 2. *Cuspidaria curta*, Jeffreys.

Fig. 2. The muscular partition seen ventrally.

*a*, Buccal aperture; other letters as in fig. 1.

Figs. 3, 4. *Cuspidaria rostrata*, Spengler.

Fig. 3. The animal seen from the ventral aspect, the mantle having been removed from both sides.

*h*, Membrane uniting the muscular partition to the mantle; *k*, internal aperture of the branchial siphon; the other letters as in the figures above.

Fig. 4. The animal seen from the right side, the mantle having been removed up to its union with the branchial partition.

*c*, Posterior palp; *n*, posterior retractor of the foot; the other letters as in the figures above.

Fig. 5. *Cuspidaria platensis*, Smith.

Fig. 5. Labial palps seen ventrally.

Letters as in the preceding figures.

Fig. 6. *Cuspidaria*.

Fig. 6. Diagrammatic sagittal section, passing through the median plane.

*h*, Cerebral ganglion; *n*, anterior retractor of the foot; *n'*, posterior retractor of the foot; *o*, heart; *p*, sagittal partition of the dorsal chamber; *q*, anus; *r*, kidney; *s*, branchial siphon; *t*, anal siphon; *u*, partition separating the two siphons; *v*, free end of the anal siphon; *w*, common sheath of the two siphons; the other letters as above.

Fig. 7. *Lyonsiella jeffreysi*, Smith.

Fig. 7. Diagrammatic transverse section.

*a*, Mantle; *b*, pedal aperture; *c*, foot; *d*, visceral mass; *e*, gill; *h*, dorsal or anal chamber; *i*, ventral chamber.

Fig. 8. *Lyonsiella abyssicola* (Sars).

Fig. 8. Diagrammatic transverse section.

*f*, Membrane uniting the gill to the mantle, and forming along with it the branchial partition; other letters as in fig. 7.

Fig. 9. *Cuspidaria*.

Fig. 9. Diagrammatic transverse section.

*e*, Muscular portion of the branchial partition; *g*, orifice which pierces it; other letters as in figs. 7, 8.

Fig. 10. *Gills of Pelecypoda*.

Fig. 10. Diagrammatic transverse sections of the right gill of different types of Pelecypoda:—

*A*, *Malletia*; *B*, *Nucula*; *BB*, *Solenomya*; *C*, A hypothetical type, really unknown; *D*, *Arca*; *E*, *Unio*; *F*, *Cardium*; *G*, *Tellina*; *H*, *Lucina*; *I*, *Lyonsia*.

*a*, Direct lamina of the outer plate; *a'*, reflected lamina of the outer plate; *a''*, appendage; *b*, direct lamina of the inner plate; *b'*, reflected lamina of the inner plate; *c*, point of attachment of the gill.