

PLATE I

- Fig. 1. Ventral view of Spec. I (the holotype).
Fig. 2. Dorsal view of Spec. I.
Fig. 3. Spec. I from the right.
Fig. 4. Detail of Spec. I, showing the apical region from the right.
Fig. 5. Spec. I, anterior view.

an = anus

ap = apex

f. m = foot margin

gi = gills

m = mouth

pa. g = pallial groove

pa. m = pallial margin

po. t = postoral tentacles

sh. m = shell margin

vel = velum

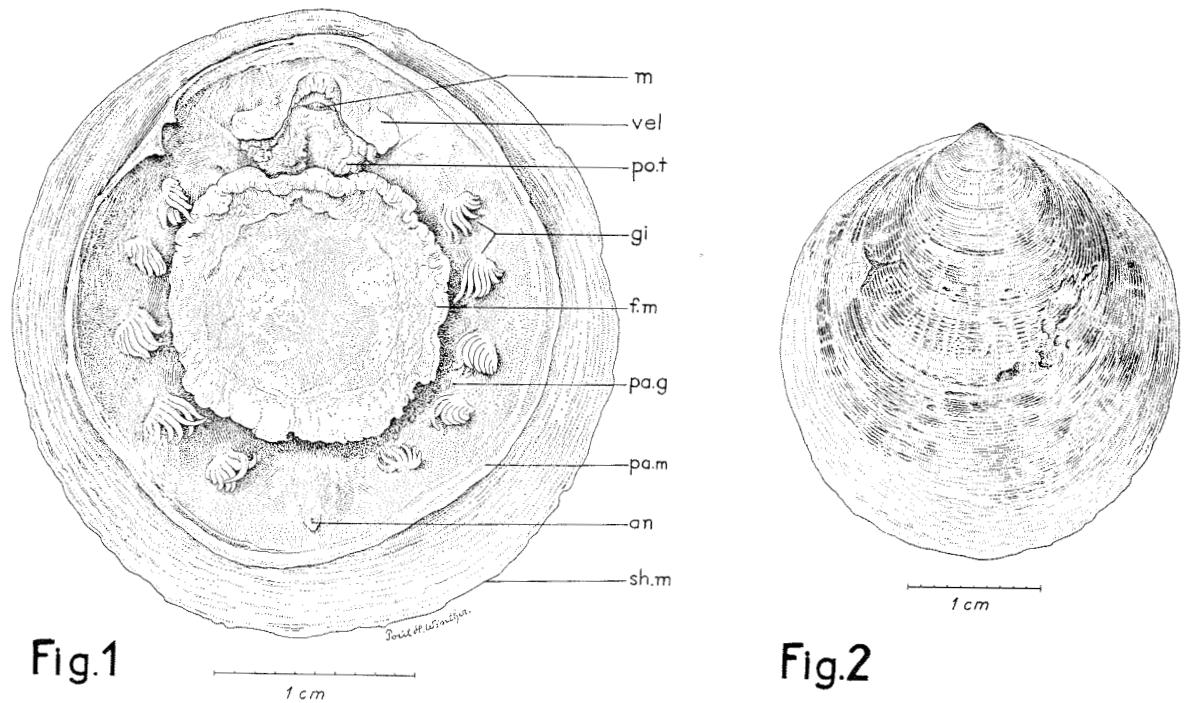


Fig.2

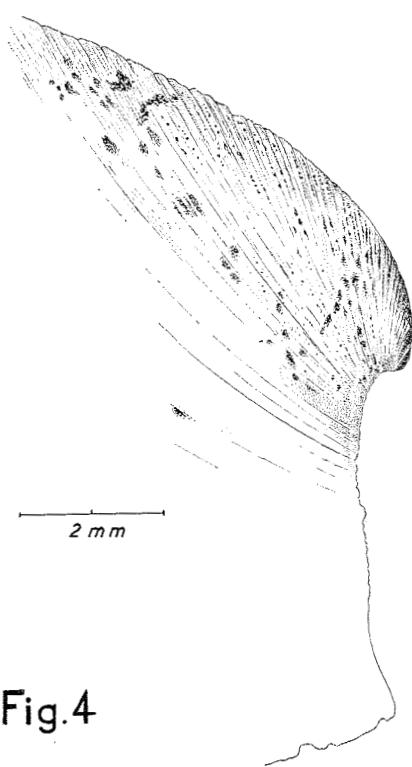
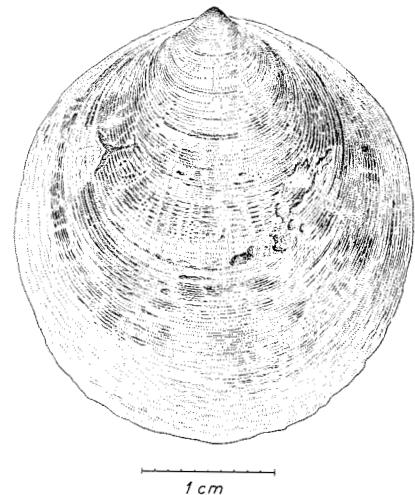


Fig.4

Fig.3

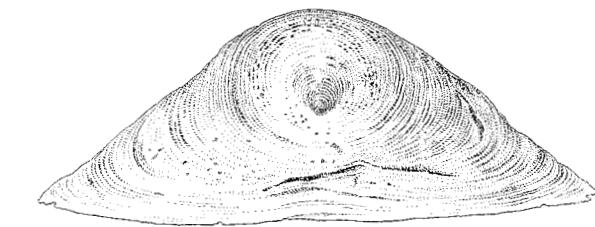


Fig.5

PLATE 2

Fig. 6. Photograph of Spec. I (holotype), dorsal view.

Fig. 7. Photograph of Spec. IV, ventral view.

For explanations see Plate 1.

Fig. 7

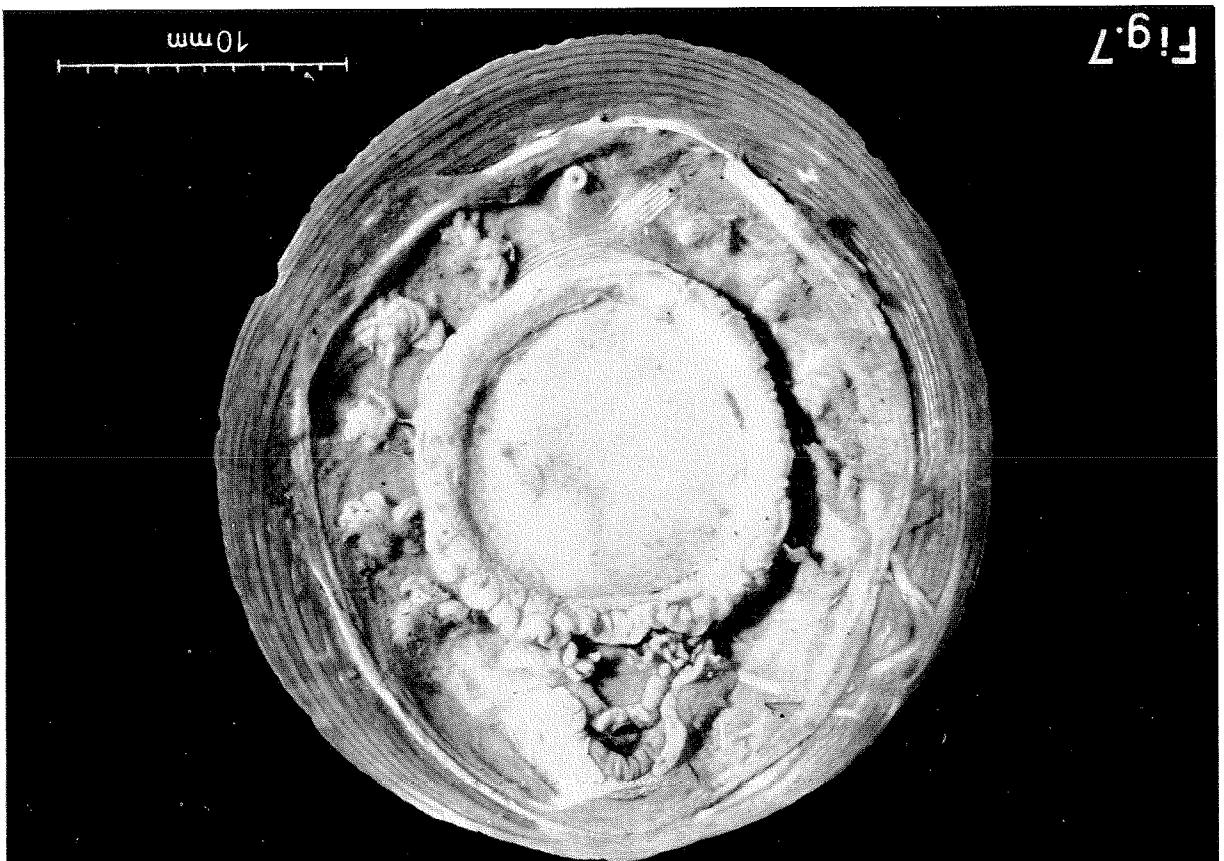


Fig. 6



PLATE 3

- Fig. 8. Transversal section through the anterior foot margin. Spec. III.
Fig. 9. Transversal section through the posterior end of the stomach. Spec. III.
Fig. 10. Transversal section through the heart region. Spec. III.

at₁ = atrium of heart, 1st pair
at.-ve. v = atrio-ventricular valve
d. coe = dorsal coelom
E = segmental foot retractor E
f. c = membranous foot centre
f. m = foot margin
gi₁ and gi₄ = gills, 1st and 4th pair, resp.
int. c 1-6 = intestinal coils 1-6
li = liver
ne = nephridia
oe = oesophagus
ov = ovaries
pa. g = pallial groove
pa. m = pallial margin
re = rectum
sh. m = shell margin
st = stomach
ven = ventricle of heart

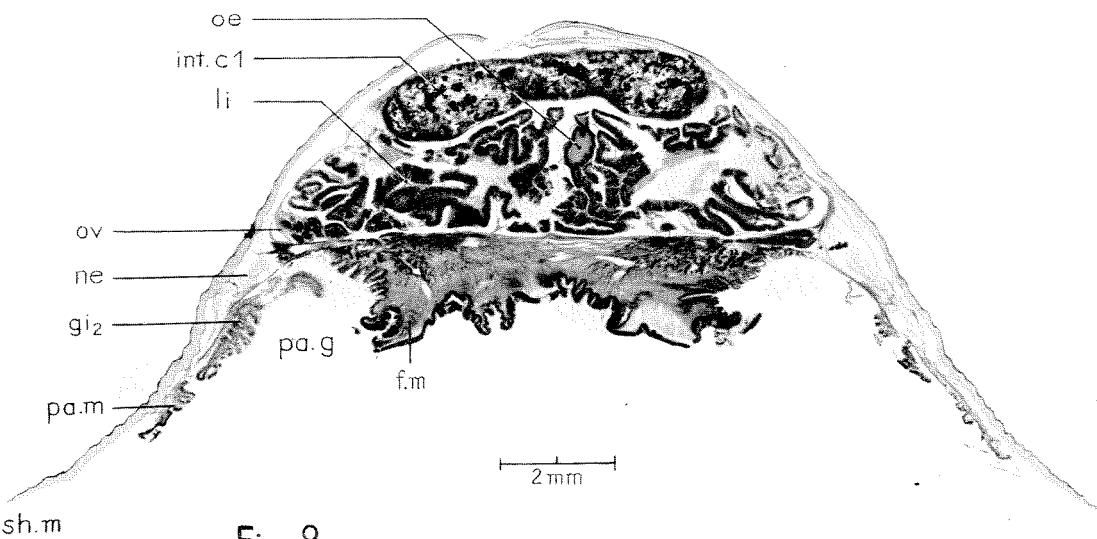


Fig.8

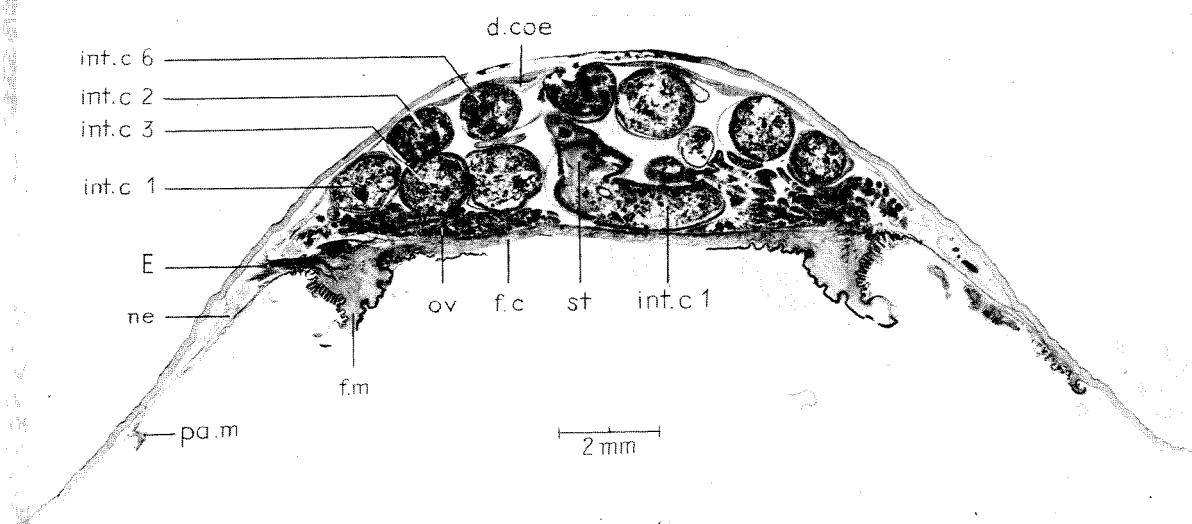


Fig.9

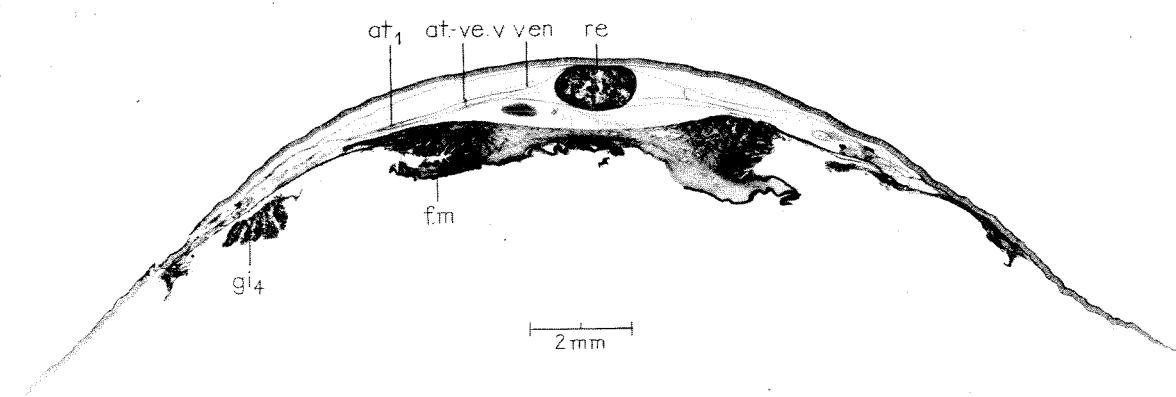


Fig.10

PLATE 4

Fig. 11. Horizontal section through the gonad and the segmental foot retractors.
Spec. IV.

A₁ = m. obliquus anterior A
at₂ = atrium of heart, 2nd pair
D-H = segmental foot retractors D-H
d. coe = dorsal coelom, two pairs of anterior
cavities shown
f. m = foot margin with ramifications of the
pedal retractors A-C
m. ra. 1 = musculus radulae longus
m. re. ra = musculus retractor radulae
m. re. ve = musculus retractor veli posterior
m. pr. ra = musculus protractor radulae
m. t. A = musculus transversalis A
ne = nephridia
pa. g = pallial groove
ph = pharynx
re = rectum
s-r. o = subradular organ
te₁ and te₂ = testes, 1st and 2nd pair, resp.

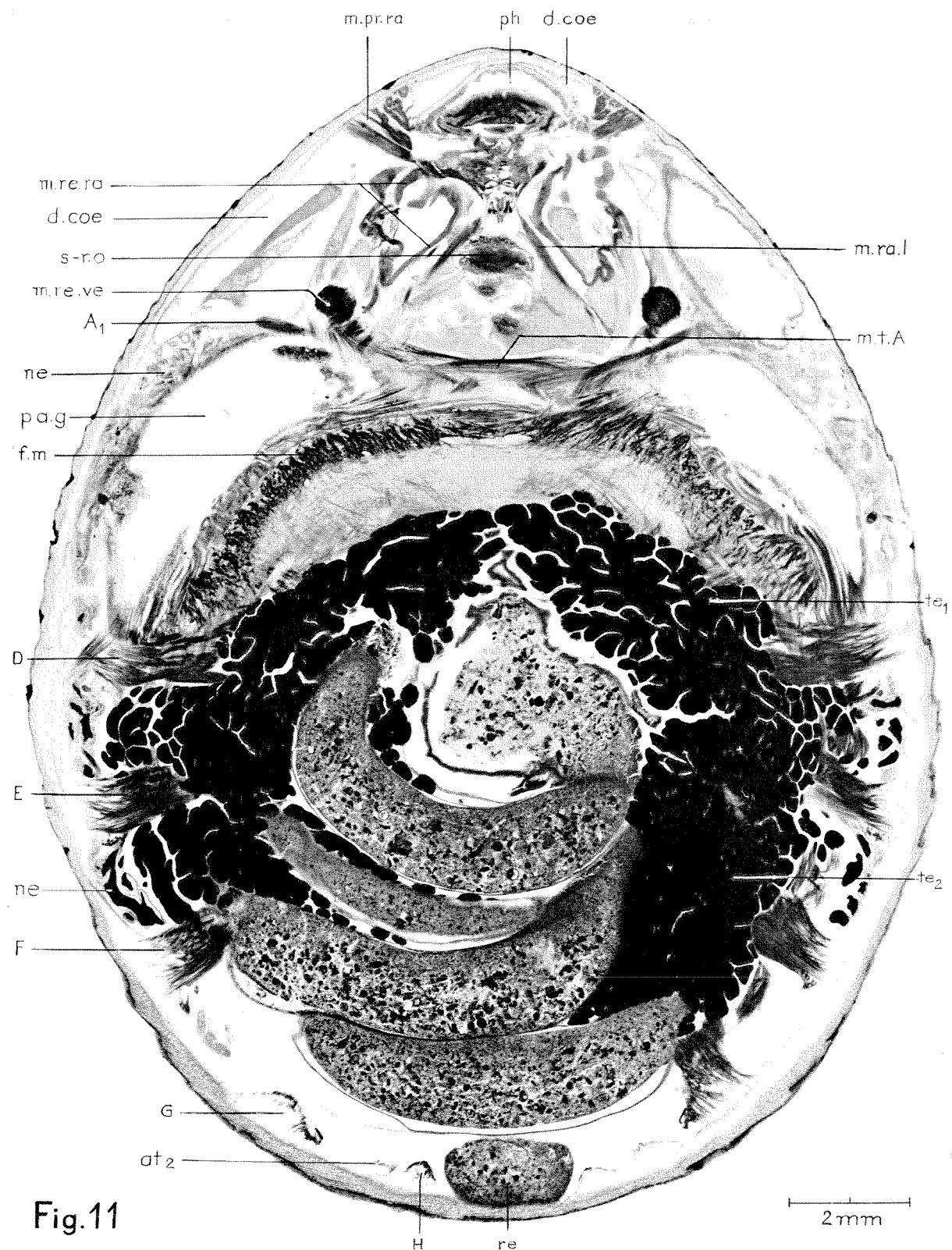


Fig.11

PLATE 5

Fig. 12. Horizontal section of Spec. IV, at the level of the gills and the foot margin.

fe. f = feeding furrow
f. m = foot margin with ramifications of pedal
retractor muscles
 gi_1-gi_5 = gills, 1st to 5th pair, resp.
m. pr. ca. d = musculus protractor cartilaginis dorsalis
m. pr. v. m = musculus protractor vesicae major
ne = nephridia
or. c = oral cavity
pa. g = pallial groove
pe. g = pedal gland (i. e. the secretory epithelium
of the anterior foot margin)
po. t = postoral tentacles
pr. t = preoral tentacle
re = rectum
sal. g = anterior salivary gland
sr. m = subradular membrane
tr. p. t. r = transversal part of tentacle ridge,
associated with the posterior lip
ve = velum
 Y_1 = the muscle Y_1

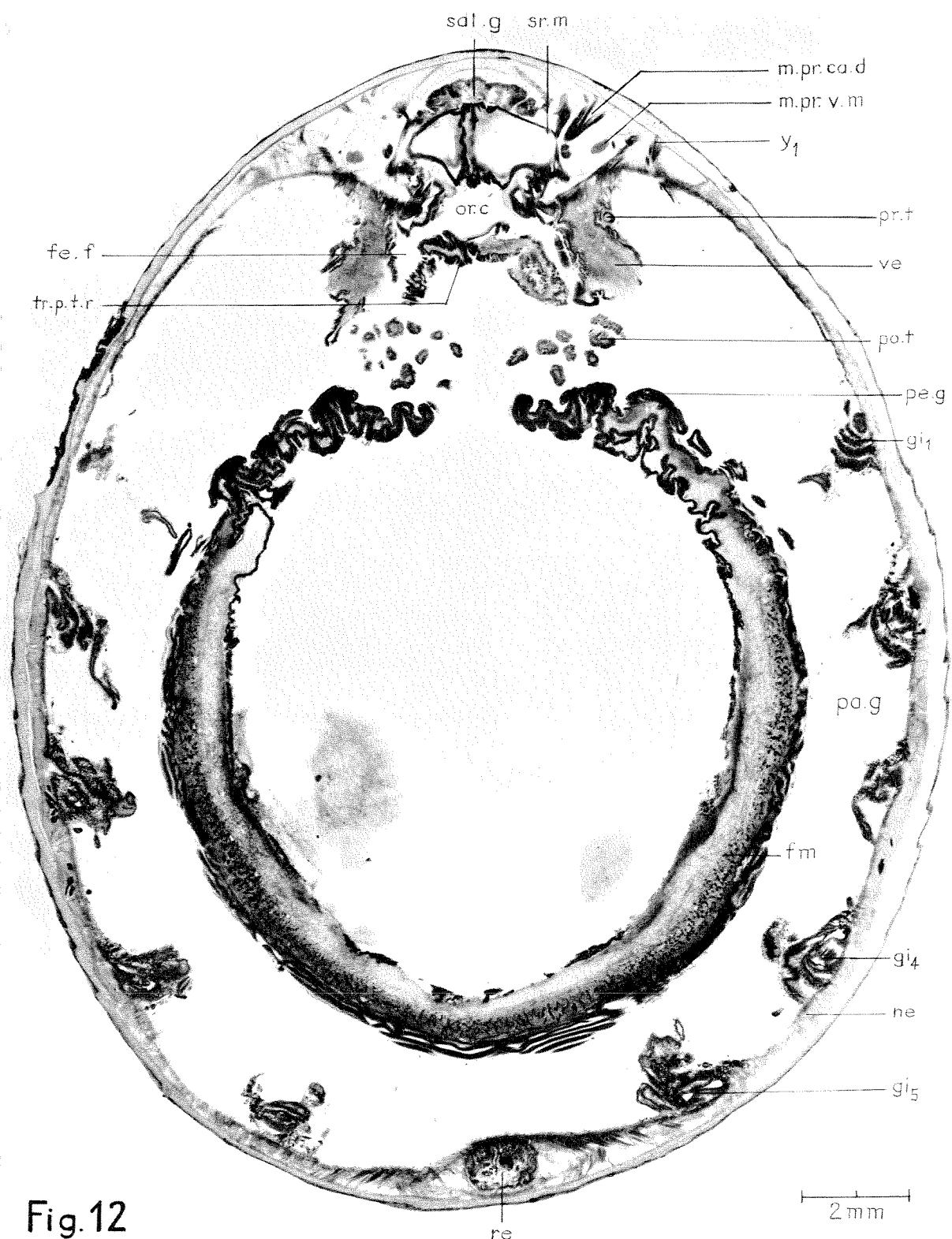


Fig.12

PLATE 6

- Fig. 13. Ciliated epithelium on the side of a gill lamella. Spec. IV.
Fig. 14. Epithelium of the pallial groove, just inside the gills. Note the "globules" (gl) close to the basement membrane. Spec. III.
Fig. 15. Epithelium of the foot sides. Spec. III.
Fig. 16. Epithelium of the ventral foot surface. Slender, ciliated interstitial cells (in. ce) alternate with glandular cells (se. ce). Spec. III.
Fig. 17. Epithelium of the lateral, basal surface of the velum. Spec. III.
Fig. 18. Ciliated epithelium on the tip of a gill lamella. In the lower part of the figure transition to common gill-edge epithelium with goblet cells (mu. ce).
Fig. 19. Strongly ciliated, high epithelium on the free edge of the velum. Spec. III.

bl. ce = blood cells

gl = globules of unknown significance

in. ce = interstitial (ciliated) cells

mu. ce = mucous glandular cells

n = nerve

se. ce = secretory cells

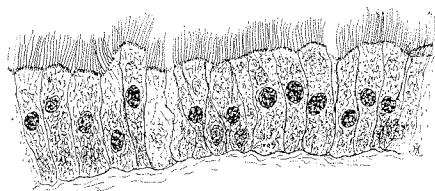


Fig.13

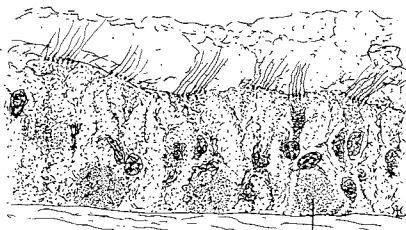


Fig.14

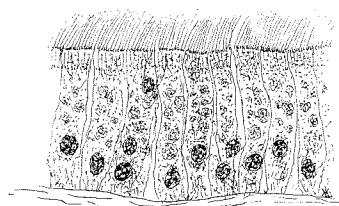


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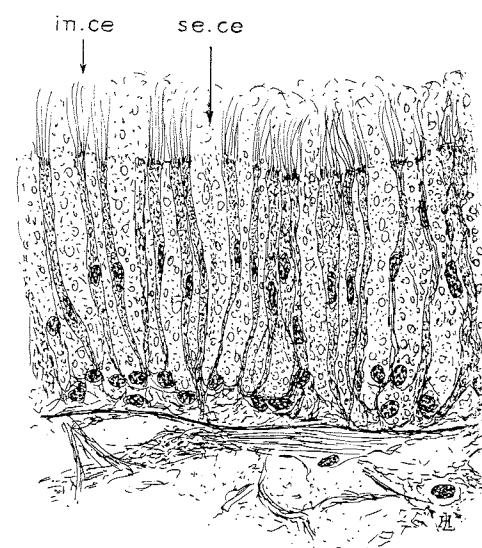
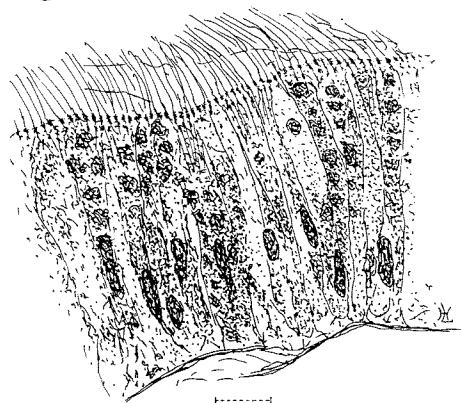


Fig.16

Fig.17

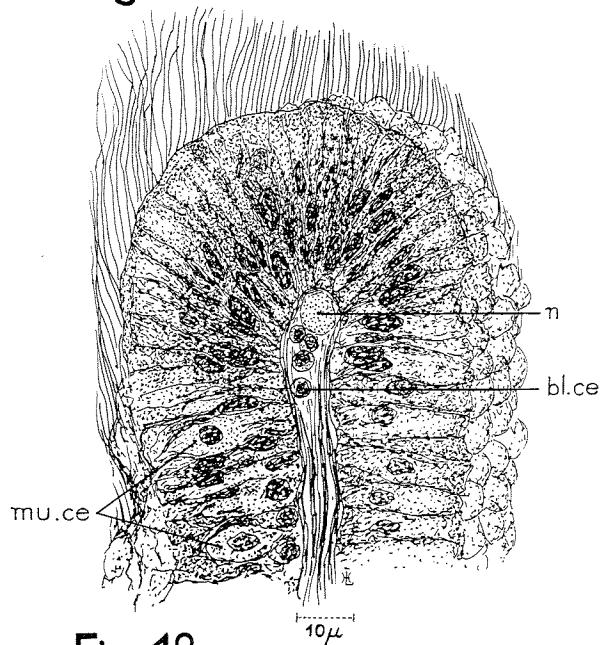


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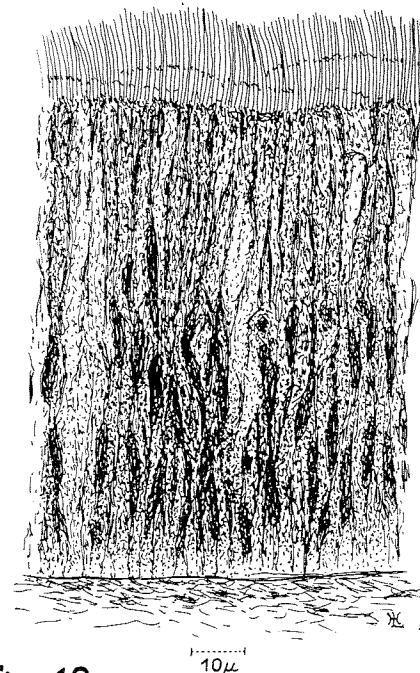


Fig.19

PLATE 7

- Fig. 20. Epithelium of the preoral pallial groove. Microphotograph. Spec. III.
- Fig. 21. Ciliated epithelium on the lateral, basal surface of the velum. Note the big granules. Microphotograph, Spec. III.
- Fig. 22. A single ciliated cell (*ci. ce*) in the epithelium of the postoral tentacles. Microphotograph, Spec. IV.
- Fig. 23. Pedal gland epithelium with the two distinct layers of nuclei. Microphotograph, Spec. IV.



Fig.20

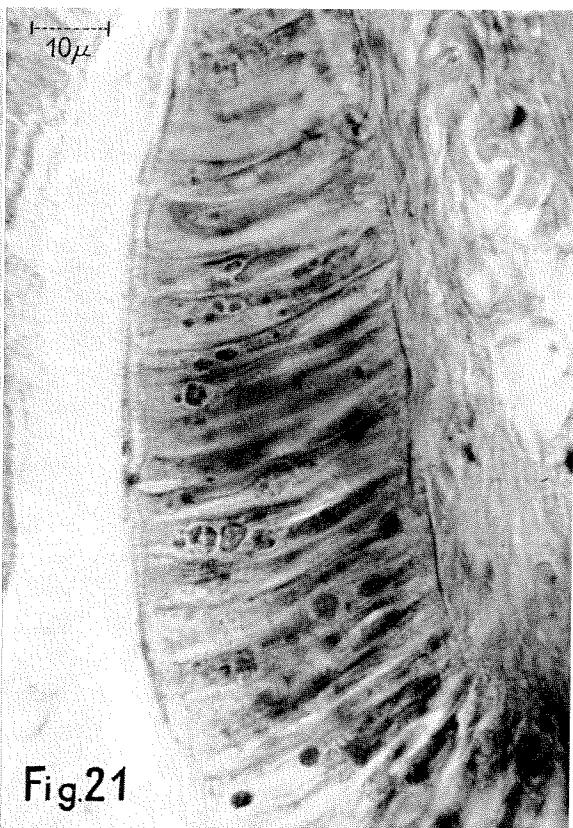


Fig.21



Fig.22

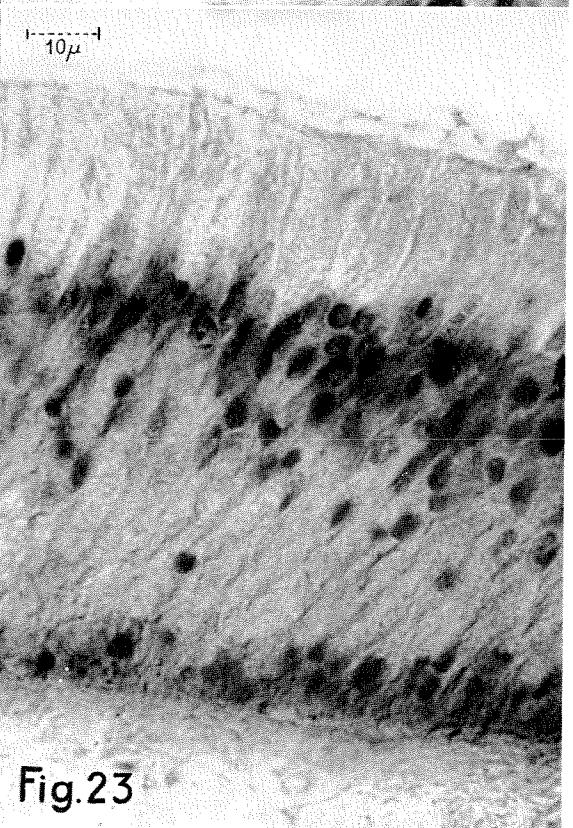


Fig.23

PLATE 8

- Fig. 24. Ciliated epithelium on the free edge of the velum. The vesicles under the surface are probably artificial. Microphotograph, Spec. III.
- Fig. 25. Epithelium with goblet cells (mu. ce) and interstitial cells (in. ce) on the outer side of the inner marginal fold. Microphotograph, Spec. III.
- Fig. 26. Ciliated epithelium on the ventral foot surface. Note the two layers of nuclei. Microphotograph, Spec. IV.
- Fig. 27. Epithelium with cuticle on the inner side of the anterior lip. The vesicles under the cuticle may be artefacts. Microphotograph, Spec. III.

mu. ce = mucous (goblet) cells

in. ce = interstitial, ciliated cells

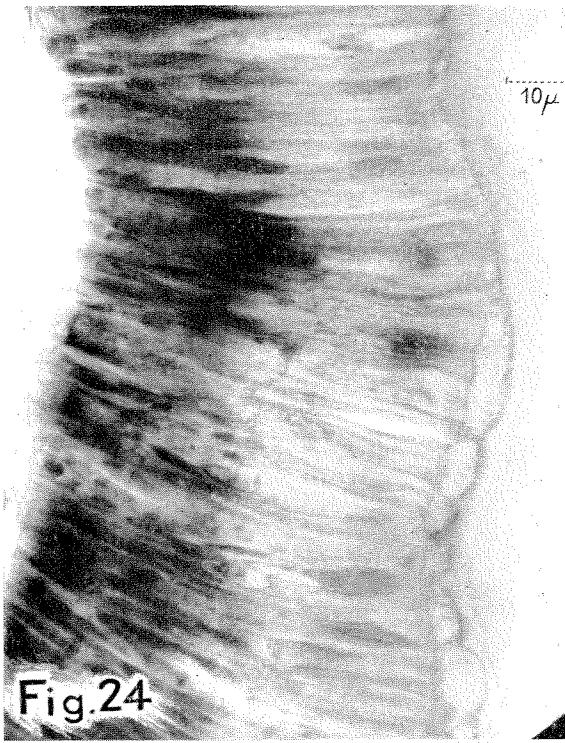


Fig.24

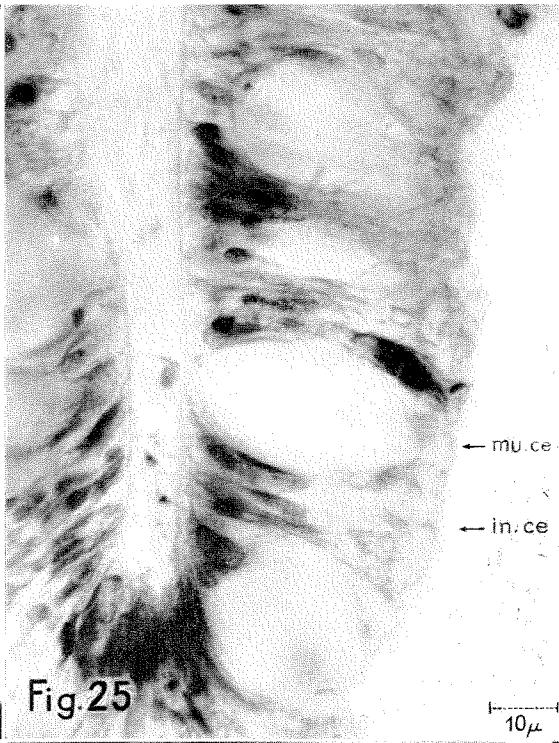


Fig.25

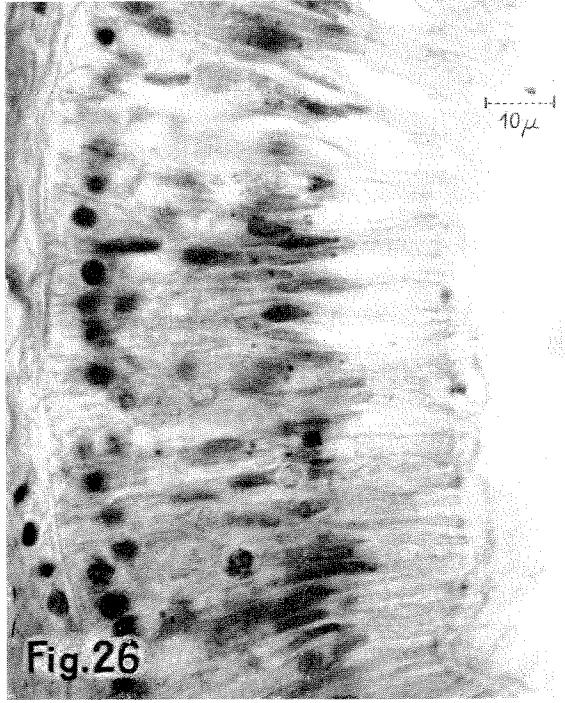


Fig.26



Fig.27

PLATE 9

- Fig. 28. The dark-staining granulate gland cells in the basal part of the preoral tentacle. Spec. IV.
- Fig. 29. Epithelium with scattered goblet cells (mu. ce) between the common, ciliated interstitial cells (int. ce) in the epithelium of the pallial groove above the gill. Spec. III.
- Fig. 30. Epithelium of the hypobranchial gland, consisting of crowded glandular cells and a few, ciliated interstitial cells (in. ce). Spec. III.
- Fig. 31. Inner marginal fold (in. ma. f) and marginal mucous gland (ma. mu. gl). Central direction to the left. Spec. III.
- Fig. 32. Middle marginal fold (mi. ma. f) and periostracum gland (per. gl). Note the high, strongly ciliated epithelium on the outer (right) surface of the fold. Central direction to the left. Spec. III.

con. t = connective tissue

in. ce = interstitial (ciliated) cells

in. ma. f = inner marginal fold

m. pal = pallial muscle

ma. mu. gl = marginal mucous gland

mi. ma. f = middle marginal fold

mu = muscle fibres

mu. ce = mucous cells

per = periostracum

per. gl = periostracum gland

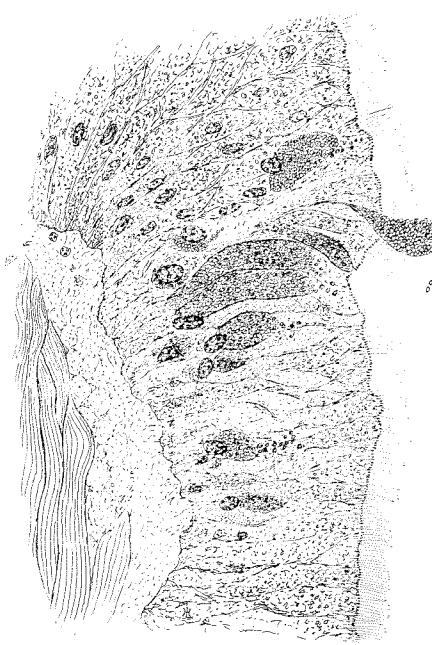


Fig.28

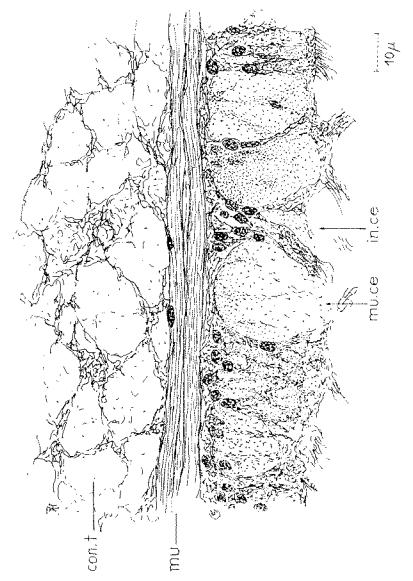


Fig.29

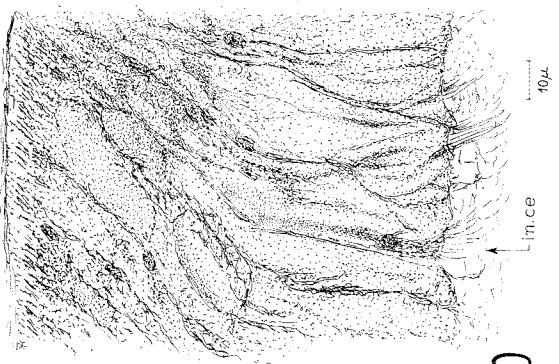


Fig.30

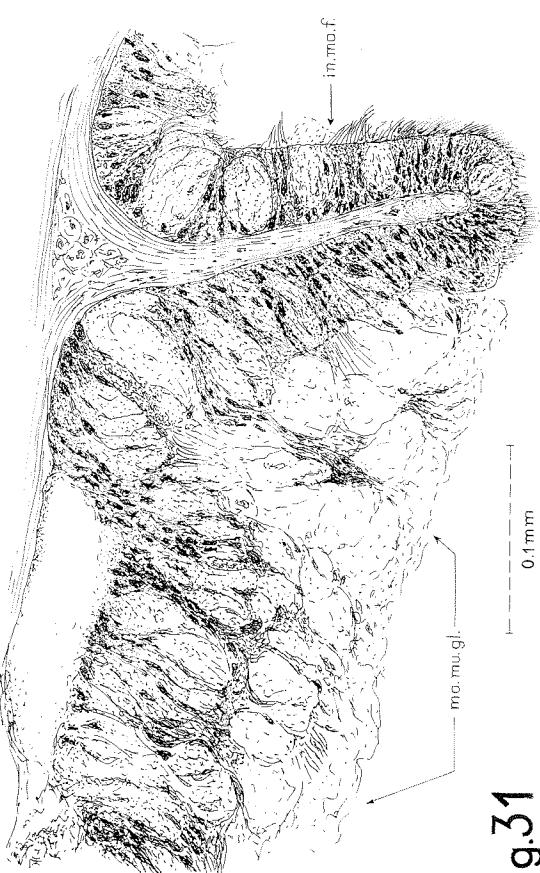


Fig.31

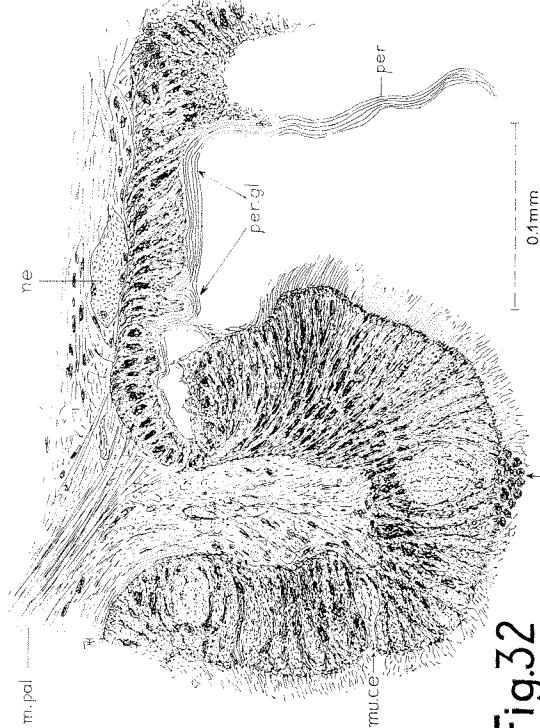


Fig.32

PLATE 10

- Fig. 33. Diagram illustrating the formation of the shell and the structure of the pallial margin. The thickness of the shell has been increased several times in proportion to the other structures. The attachment of the outer marginal fold to the shell has not been observed in the sections. Compare Fig. 45.
- Fig. 34. Sketch of the apex with the protoconch in Spec. III, drawn before the decalcification. The anterior wall of the animal is upwards in the figure. Compare Fig. 49.
- Fig. 35. The apex of Spec. IV. The same orientation as Fig. 34. Slight impressions indicate the place of the lost protoconch.
- Fig. 36. The outer surface of the shell with concentric growth lines and radial ribs. Spec. IV.
- Fig. 37. Detail of the outer shell surface showing its puncture. Spec. IV.

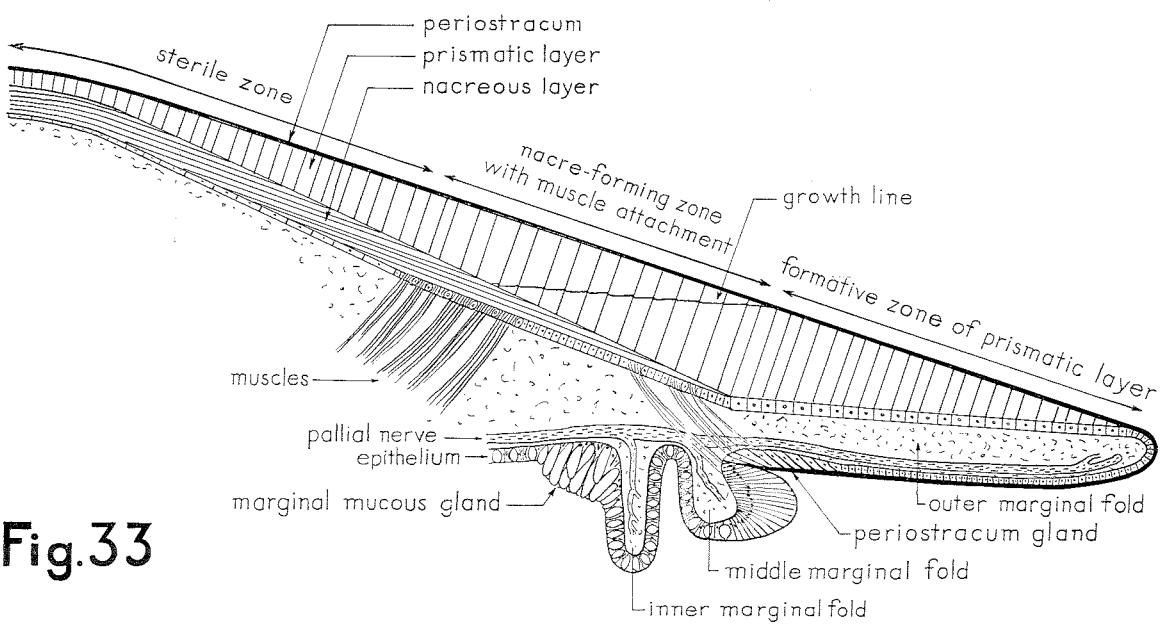
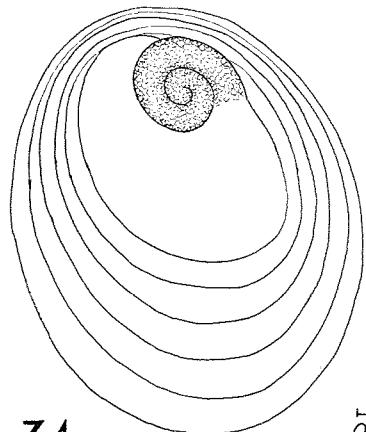


Fig.33



0.1mm

Fig.34

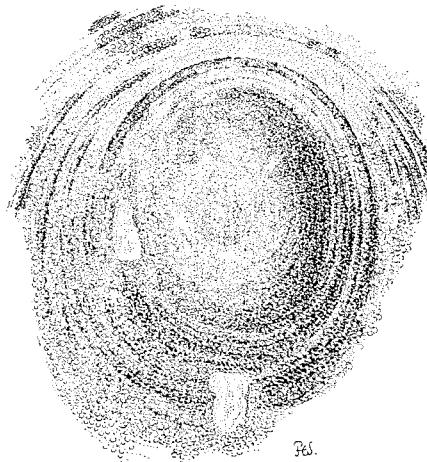
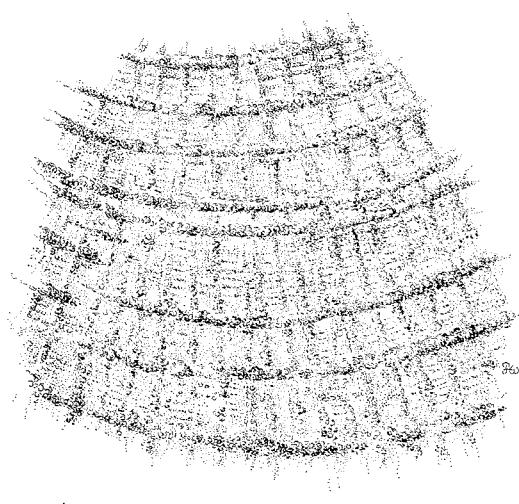
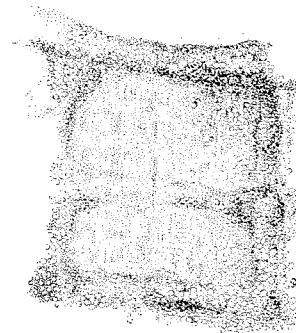


Fig.35



1 mm

Fig.36



0.1mm

Fig.37