

PLATE 21

- Fig. 73. Horizontal section through folds of the anterior foot margin, showing the zone of "ventral foot epithelium" (ve. f. ep) separating the pedal gland epithelium (pe. g. ep) from the epithelium of the foot side (f. s. ep). Microphotograph. Spec. IV.
- Fig. 74. The oral region of Spec. IV. For explanation compare Figs. 66 and 67. Photograph.
- Fig. 75. Transversal section through the transverse, postoral part of the tentacle ridge, showing the cushion of ciliated epithelium next to the feeding furrow (ci. ep), and the origin of the posterior part of the ridge (po. te. ri). Microphotograph. Spec. III.
- Fig. 76. High epithelium with cuticle on the inner side of the anterior lip. Microphotograph. Spec. III.

ci. ep = cushion of ciliated epithelium on tentacle ridge

cu. ep = non-ciliated epithelium (with cuticle?) on
tentacle ridge

f. s. ep = foot side epithelium

pe. g. ep = pedal gland epithelium

po. te. ri = base of the posterior part of tentacle ridge

ve. f. ep = ventral foot epithelium



Fig. 74

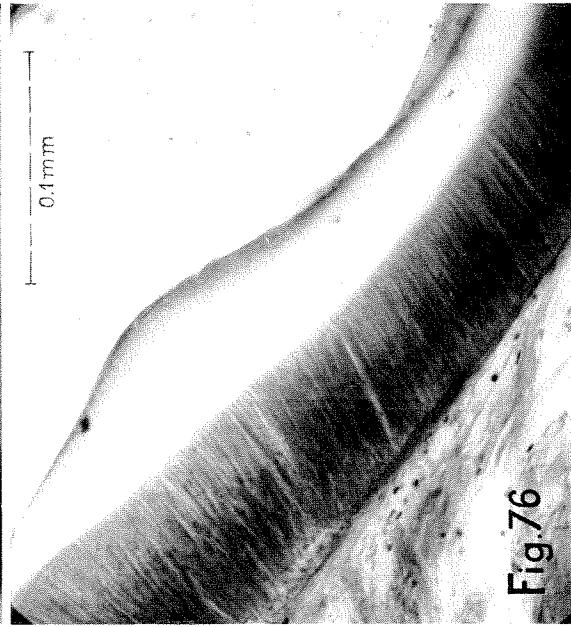


Fig. 76

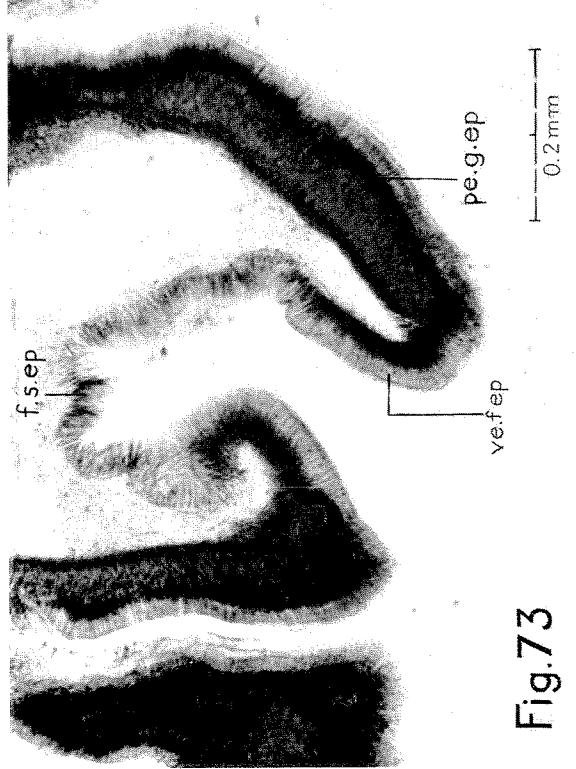


Fig. 73

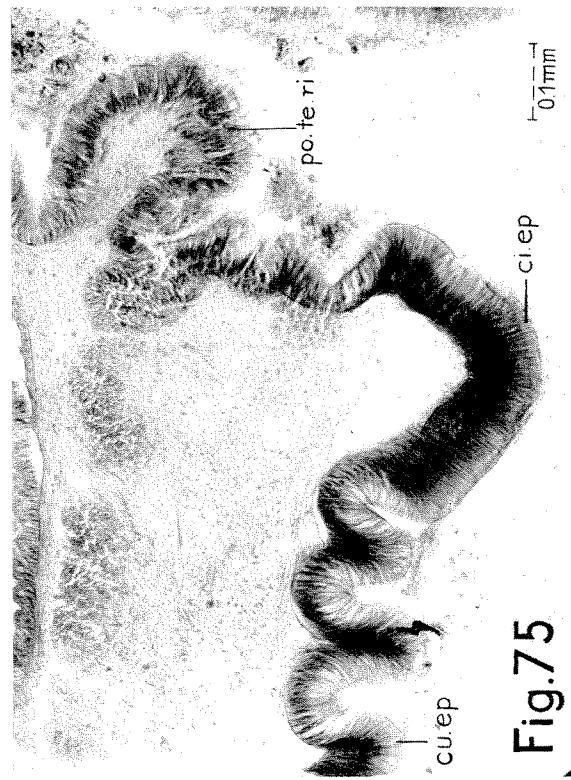


Fig. 75

PLATE 22

- Fig. 77. Transversal section of the anterior lip, showing the thin cuticle on the peripheral part (th. cu) and the strong one, which forms a bar along the inner side (cu. b). Microphotograph. Spec. III.
- Fig. 78. Transversal section of the velum showing the two kinds of epithelia. Microphotograph. Spec. III.
- Fig. 79. Branching postoral tentacles. Note the folded epithelium indicating strong contraction, and the dense appearance of the connective tissue. Microphotograph. Spec. IV.
- Fig. 80. The entrance of the *m. tentacularis transversus* into the postoral tentacles. Microphotograph. Spec. III.

cu. b = cuticular bar along the inner side of the lip

L. ce = groups of Leydig cells

m. te. tr = *musculus tentacularis transversus*

si. ve = epithelium of the sides of the velum

th. cu = thin cuticle on the peripheral part of the lip

ve. e. ep = strongly ciliated epithelium on the ventral edge of
the velum

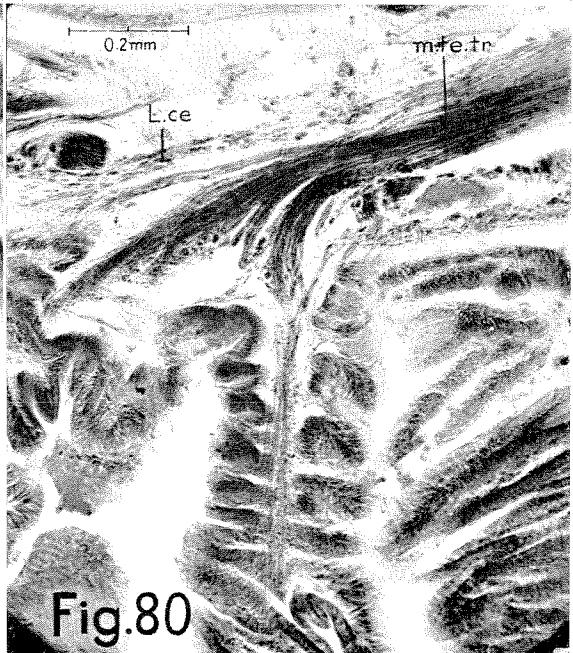
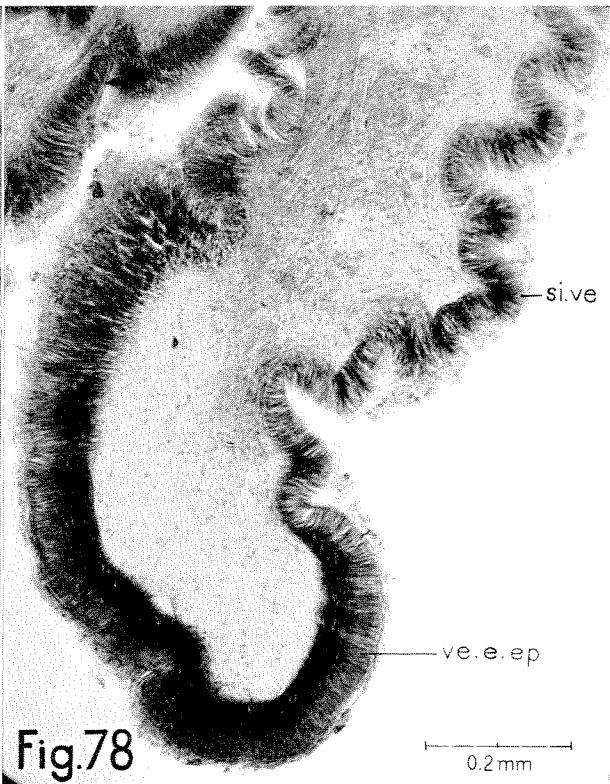
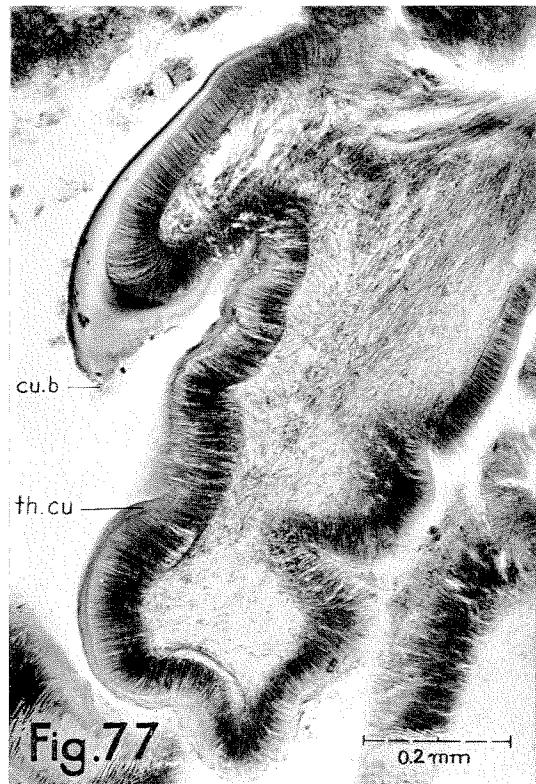


Fig.79

Fig.80

PLATE 23

Fig. 81. Median section of the oral region. Graphic reconstruction from Spec. IV.

Fig. 82. Dorsal view of the oral cavity, the horizontal part of the pharynx, and the radula support. Most of the radula cartilage is removed on the left side. The subradular membrane is only shown up to the region where it enters the radula diverticula. Graphic reconstruction from Spec. III.

A_1	= m. obliquus anterior A
ant. l	= anterior lip
bl. s	= blood sinus
cer. co	= cerebral commissure
f. m	= foot margin
lat. m. ph	= lateral margin of pharynx
m. cru	= musculus cruciatus
m. i. ra	= musculus impar radulae
m. pr. sr	= musculus protractor subradularis
m. ph. m	= musculus pharyngeus marginalis
m. ra. l. d	= musculus radulae longus, pars dorsalis
m. ra. l. v	= musculus radulae longus pars ventralis
m. tr. A	= musculus transversalis A
m. tr. ant	= musculus transversalis anterior
oe	= oesophagus
op. ph. d	= opening into pharyngeal diverticula
or. c	= oral cavity
or. e. sr. m	= oral end of subradular membrane
ph	= pharynx
po. l	= posterior lip
ra	= radula
ra. ca	= radula cartilage
ra. sh	= radula sheath
ra. ve	= radula vesicle
re. sr. s	= retractors of subradular sac
sal. g	= "anterior salivary gland"
sce. co	= subcerebral commissure
sh	= shell
sr. g	= subradular ganglion
sr. m	= subradular membrane
sr. o	= subradular organ
sr. s	= subradular sac
te. ri	= postoral part of tentacle ridge

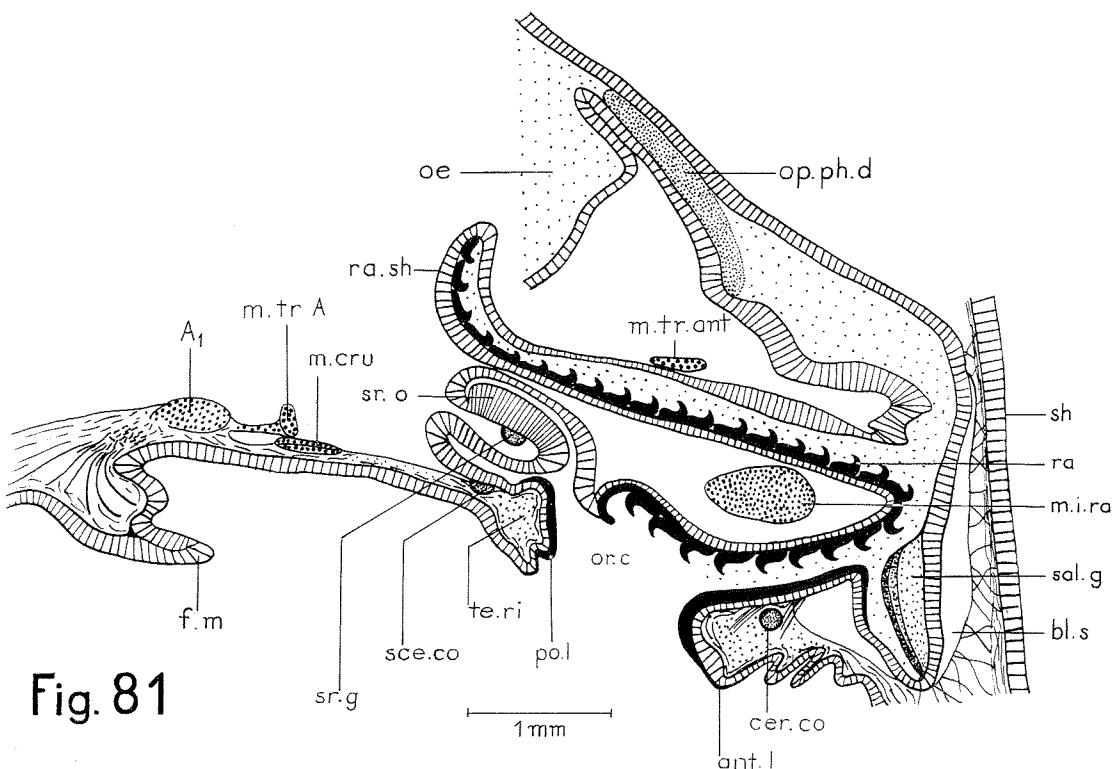


Fig. 81

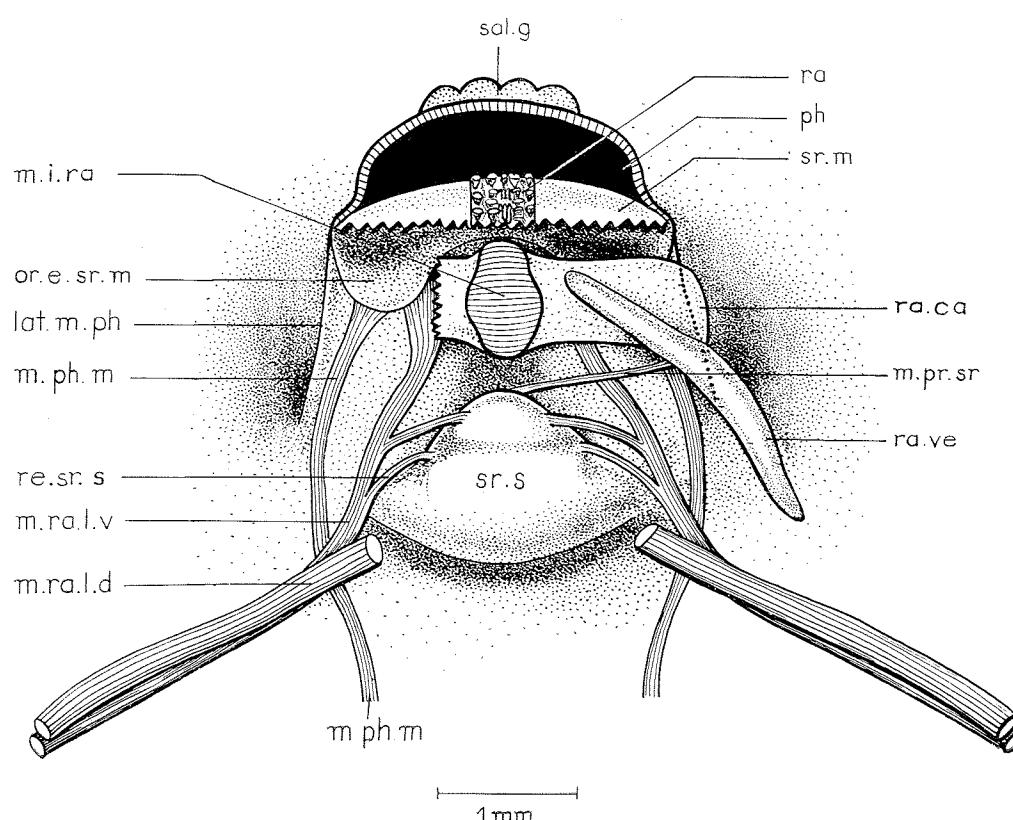


Fig. 82

PLATE 24

Fig. 83. Dorsal view of the radula apparatus with some of the muscles. The dorsal epithelium of the radula diverticula is removed, and the subradular membrane is cut away on the right side. Graphic reconstruction from Spec. III.

Fig. 84. Dorsal view of the anterior body region, showing the radula apparatus and the more important muscles. Graphic reconstruction from Spec. III.

A-C = pedal retractors A to C

A_1-C_1 = mm. obliquii anteriores A to C

m. ca. a-l = musculus cartilaginis
antero-lateralis

m. ci. int = musculus circularis intermedius

m. ci. pe = musculus circularis pedis

m. cru = musculus cruciatus

m. div. d = musculus protractor diverticulorum
dorsalis

m. l-p. C = musculus latero-pedalis C

m. m-p. C = musculus medio-pedalis C

m. or. ant = musculus oralis anterior

m. or. po = musculus oralis posterior

m. pr. ca. d = musculus protractor cartilaginis
dorsalis

m. pr. ca. d¹ = the small dorso-medial head of the
musculus protractor cartilaginis
dorsalis

m. pr. ca. p = musculus protractor cartilaginis
profundus

m. pr. ra = musculus protractor radulae

m. pr. sr = musculus protractor subradularis

m. pr. v. ma = musculus protractor vesicae major
m. pror = musculus praeoralis

m. ra. l = musculus radulae longus

m. ra. mi = musculus radulae minor

m. re. ra = musculus retractor radulae

m. te. ra = musculus tensor radulae

m. te. tr = musculus tentacularis transversus

m. tr. A = musculus transversalis A

m. tr. ant = musculus transversalis anterior

m. tr. po = musculus transversalis posterior

m. ve. a-l = musculus vesicae antero-lateralis

m. ve. a-m = musculus vesicae antero-medialis

m. ve. p-l = musculus vesicae postero-lateralis

m. ve. p-m = musculus vesicae postero-medialis

m. ve. v = musculus vesicae ventralis

ph = pharynx

ra = radula

ra. ca = radula cartilage

ra. div = radula diverticula

ra. sh = radula sheath

ra. ve = radula vesicle

sal. g = "anterior salivary gland"

sr. m = subradular membrane

sr. s = subradular sac

Y_1 = the muscle Y_1

X, Y, Z = insertion areas X, Y, Z (see text!)

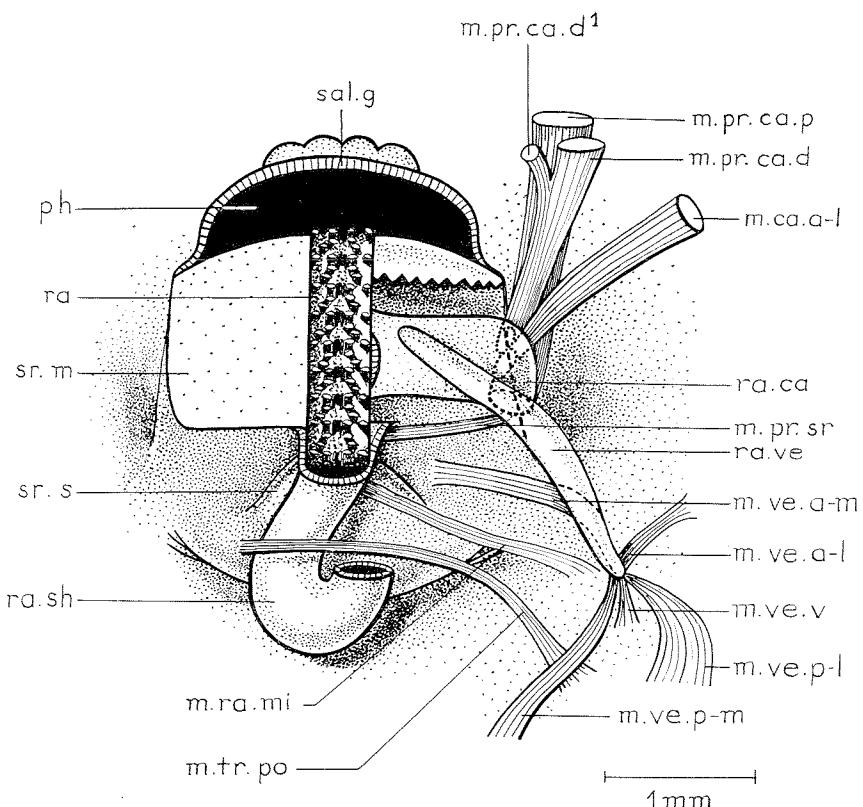


Fig.83

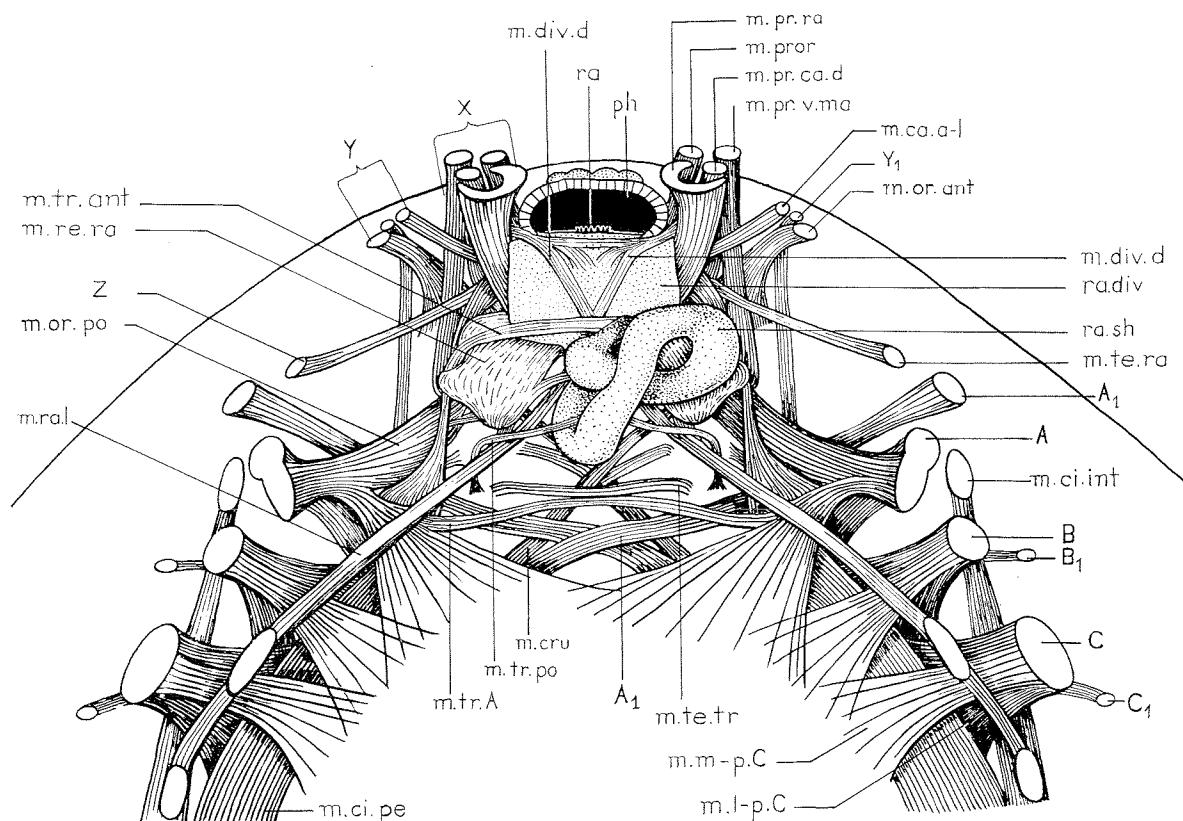


Fig.84

PLATE 25

- Fig. 85. The digestive tract seen from above after removal of the pharyngeal diverticula and most of the intestine. The extension of the stomach epithelium is indicated by short strokes. The crystalline style is drawn as if visible through the wall. Graphic reconstruction. Spec. III.
- Fig. 86. The digestive tract seen from above, the appearance of the postero-medial parts of the pharyngeal diverticula being uncertain because of damage to the specimen. Graphic reconstruction. Spec. III.
- Fig. 87. Fourth lateral tooth of the radula showing the denticles. Spec. VI.
- Fig. 88. Radular teeth of Spec. VI. One of the V-shaped rows is stippled. Oral direction upwards in the figure.

I-VI = Intestinal coils 1 to 6

an = anus

an. ph. d = anterior pouch of pharyngeal diverticula

ba. L₄ = base of 4th lateral tooth of radula

cr. st = crystalline style

int. c. 1 = intestinal coil 1

L₁-L₅ = 1st to 5th lateral

li = liver

M = median tooth of radula

me. ph. d = medial pouch of pharyngeal diverticula

oe = oesophagus

op. ph. d = opening into pharyngeal diverticula

po. ph. d = posterior pouch of pharyngeal diverticula

re = rectum

st = stomach

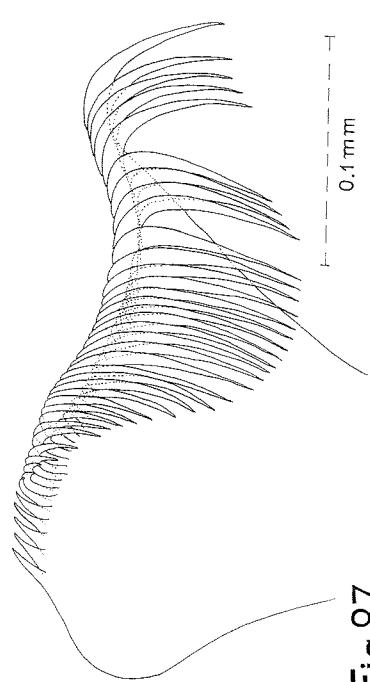


Fig. 87

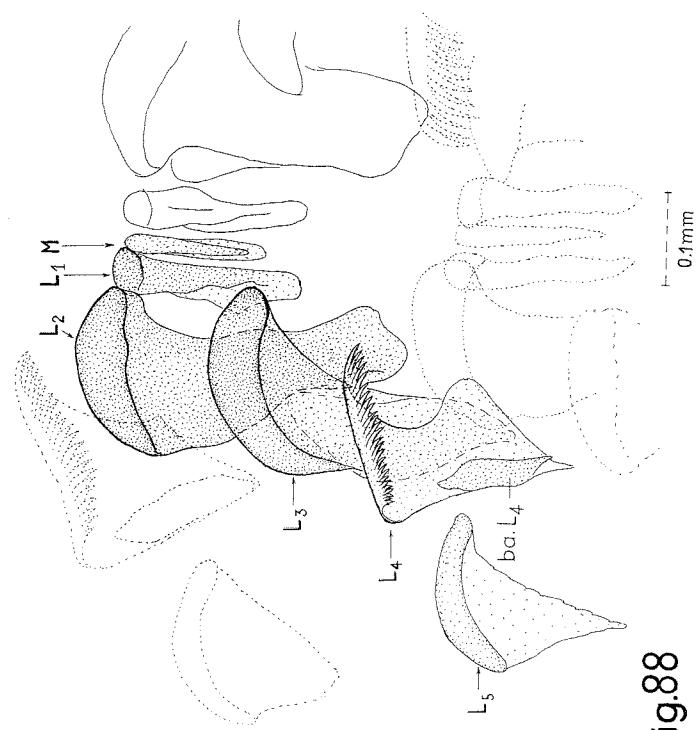


Fig. 88

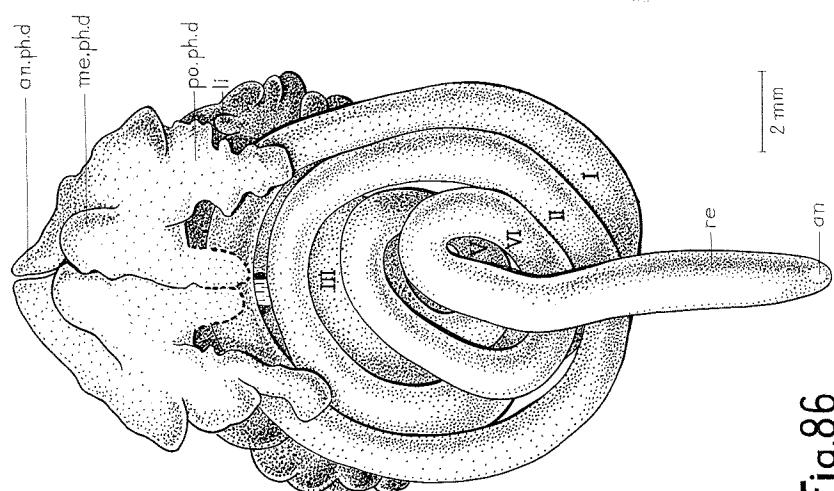


Fig. 86

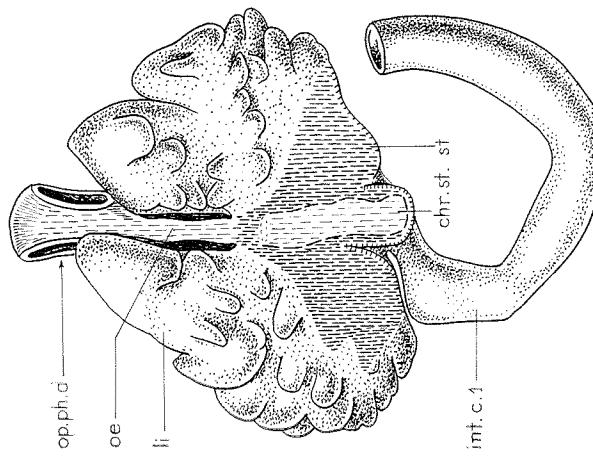


Fig. 85

PLATE 26

Fig. 89. Horizontal section through the body above the level of most muscle insertions. Microphotograph. Spec. IV.

- A-C = pedal retractors A to C
bl. s = blood sinus of the anterior body region
cl. te = cleft between the two testes
d. coe = dorsal coelom
li = liver
m. or. po = musculus oralis posterior
ne = nephridia
ph = pharynx
ph. d = pharyngeal diverticula
ra. sh = radula sheath
ra. ve = tip of radula vesicles with muscles
re = rectum
st = stomach
te₁-te₂ = testes, 1st and 2nd pair

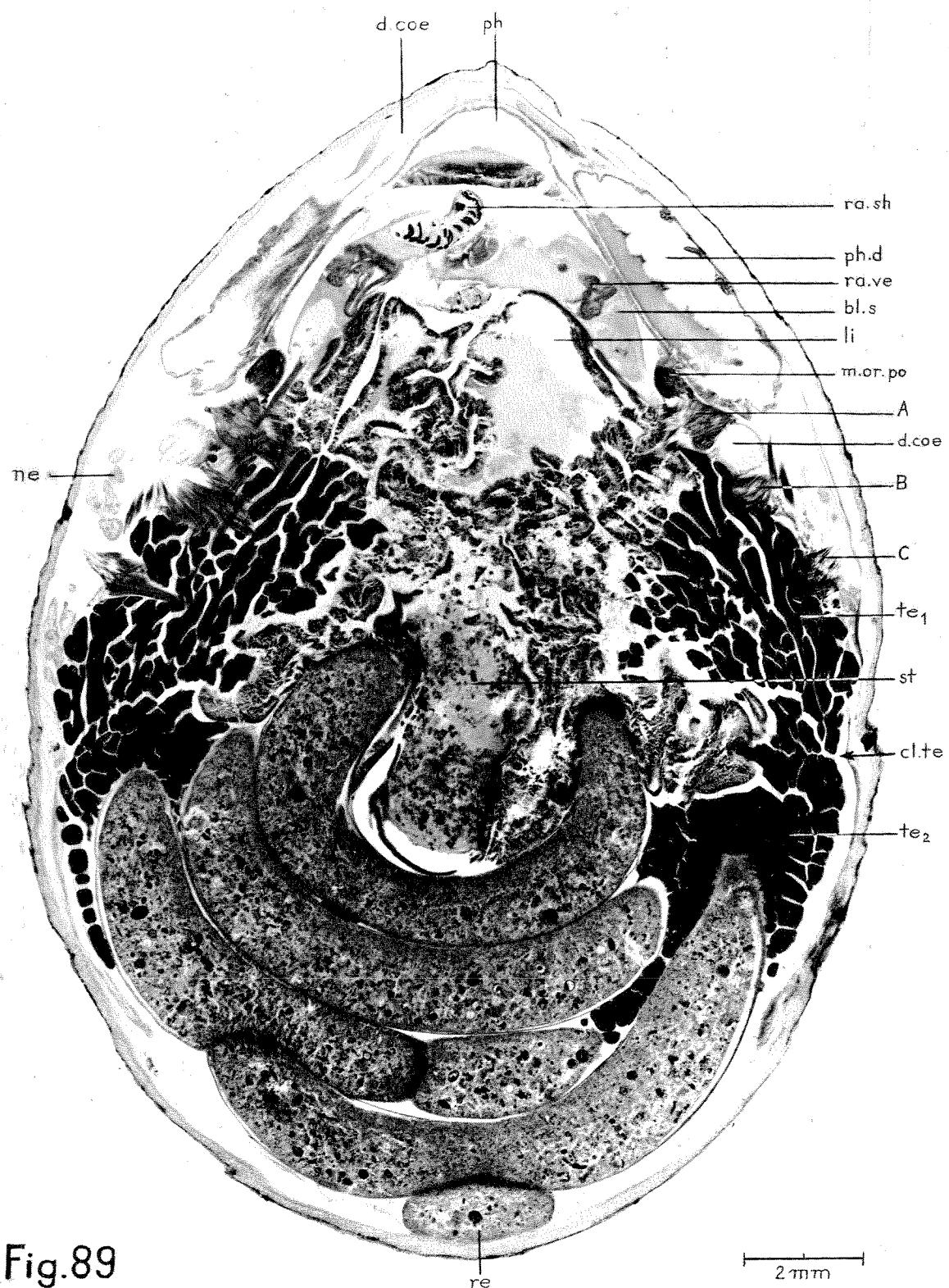


Fig.89

PLATE 27

- Fig. 90. Transversal section just in front of the mouth, showing the pharynx and the radula sheath. Microphotograph. Spec. III.
- Fig. 91. Cross section through the inner end of the radula sheath ("the radula gland"). The dorsal epithelium is folded into the lumen, whereas the ventral wall is smooth. Microphotograph. Spec. III.
- Fig. 92. Horizontal section through the anterior end of the animal showing the salivary gland (sal. g) and the pharyngeal lumen (lu. ph). Microphotograph. Spec. IV.
- Fig. 93. Cross section of the middle part of the radula sheath. Microphotograph. Spec. III.

bl. s = blood sinus

bu. c = buccal connective

cu. ph = cuticle of the ventral pharyngeal wall

d. coe = anterior diverticula of the dorsal coelom

L₂-L₄ = 2nd to 4th lateral teeth of the radula

lu. ph = lumen of pharynx

m. or. ant = musculus oralis anterior

m. ph. m = musculus pharyngeus marginalis

m. pr. c. p = musculus protractor cartilaginis profundus

m. pr. v. ma = musculus protractor vesicae major

m. pr. v. mi = musculus protractor vesicae minor

m. ra. l. v = musculus radulae longus, pars ventralis

m. re. ra = musculus retractor radulae

ra. sh = radula sheath

ra. ve = radula vesicles

sal. g = salivary gland

sr. m = subradular membrane

te. ri = tentacle ridge

ve. ep = ventral epithelium of radula sheath

vel = velum

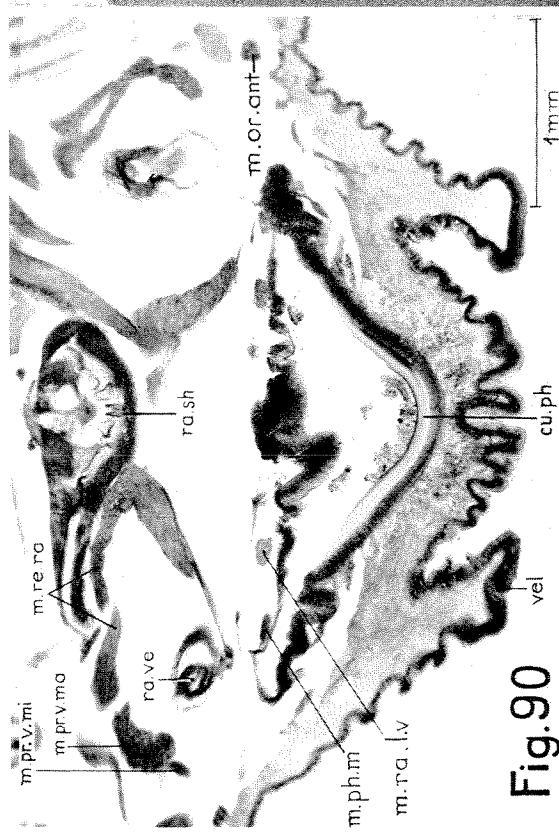


Fig.90

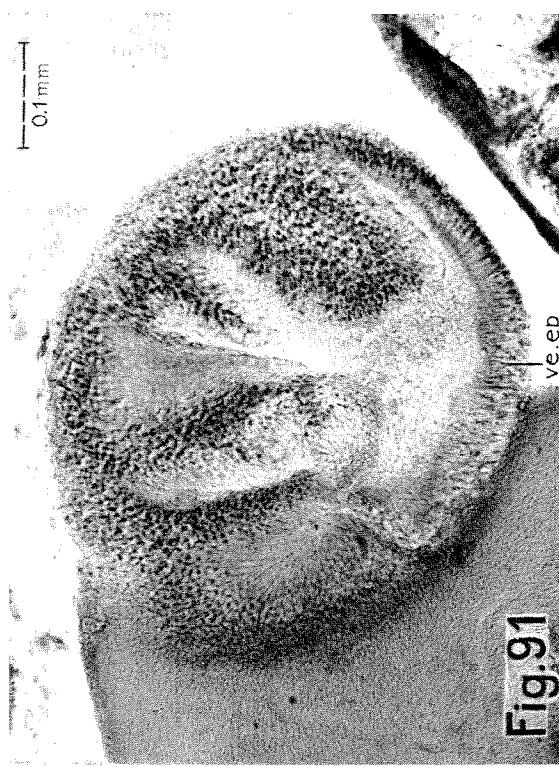


Fig.91

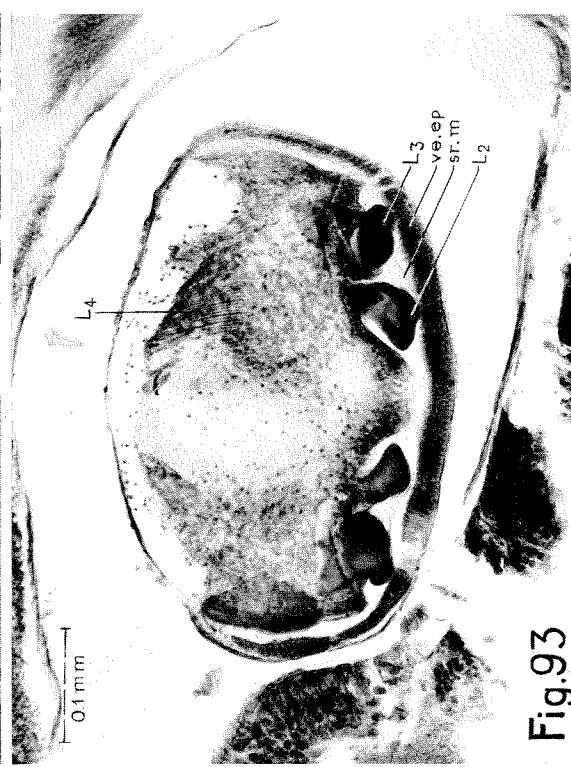


Fig.93

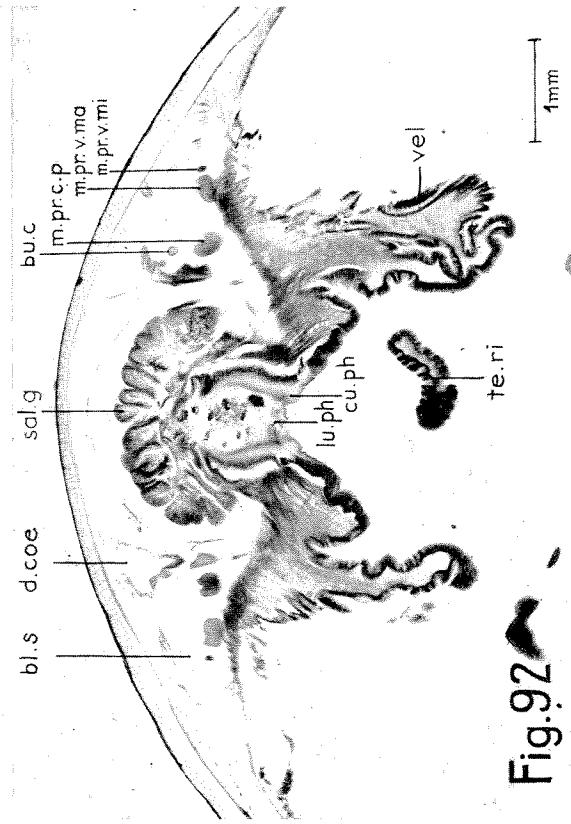


Fig.92

PLATE 28

- Fig. 94. Transversal section of the pharyngeal region just in front of the oral cavity.
Microphotograph. Spec. III.
- Fig. 95. Transversal section of the radula furrow in the region of the radula diverticula. Microphotograph. Spec. III.
- Fig. 96. The structure of the radula cartilage. Some cell nuclei are visible. Microphotograph. Spec. III.

cu. ph = cuticle of the ventral pharyngeal wall

ll = liver lobules

m. i. ra = musculus impar radulae

m. ph. m = musculus pharyngeus marginalis

m. pr. d. d = musculus protractor diverticulorum dorsalis

m. pr. ve. ma = musculus protractor vesicae major

m. pr. ve. mi = musculus protractor vesicae minor

m. ra. l. v = musculus radulae longus, pars ventralis

m. re. ra = musculus retractor radulae (different portions)

m. te. l = musculus tensor membranae lateralis

m. tr. a = musculus transversalis anterior

me. ve. ri = median velar ridge

oe = oesophagus

ra = radula

ra. ca = radula cartilage

ra. div = radula diverticula

ra. sh = radula sheath

ra. ve = radula vesicles

sr. m = subradular membrane; sr. m₁ and sr. m₂ indicate
the stainable and non-stainable parts, resp.

Y₁ = the muscle Y₁

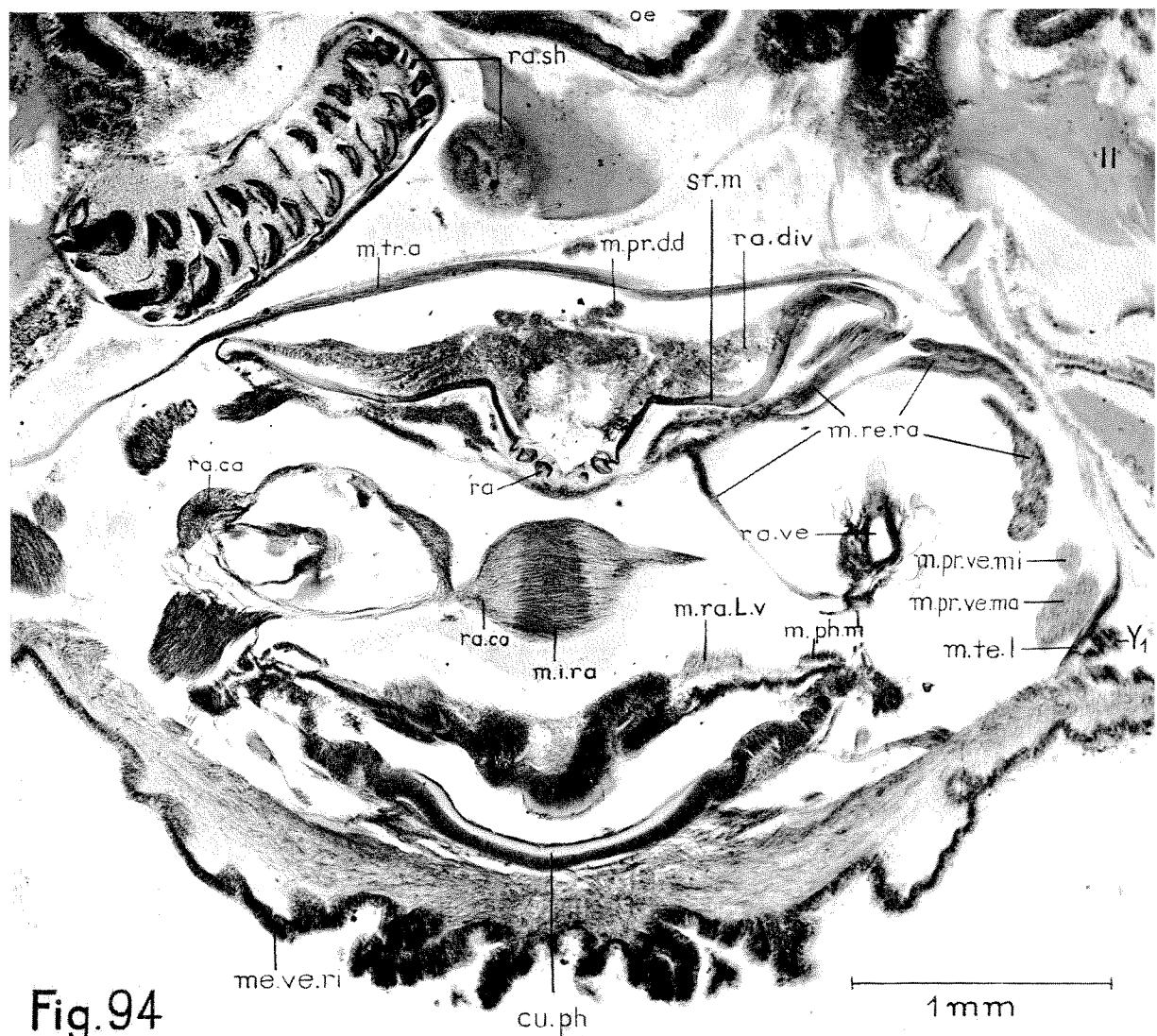


Fig.94

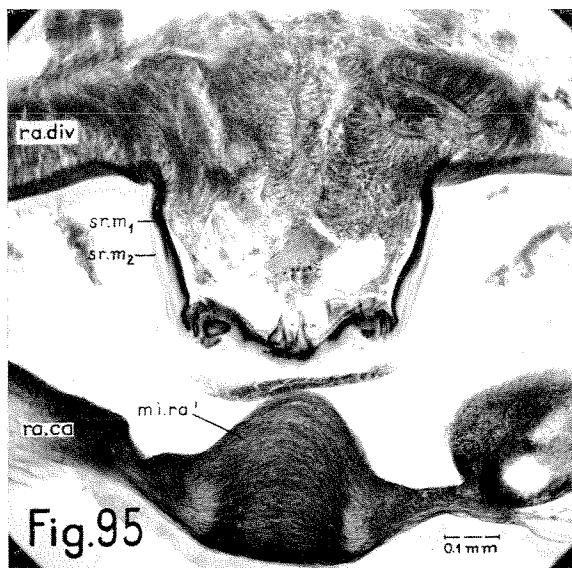


Fig.95

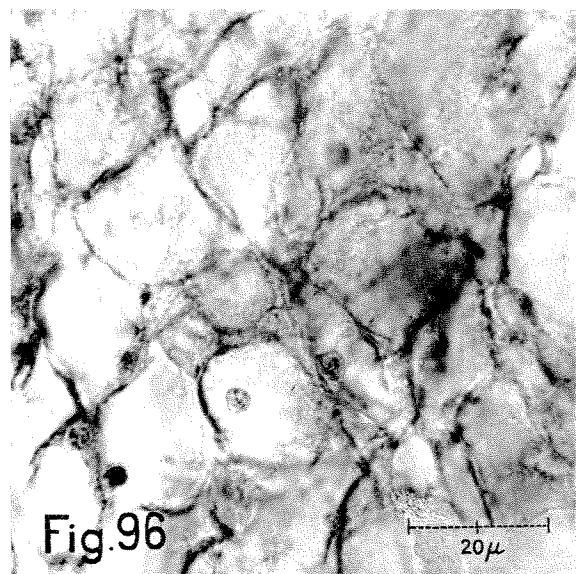


Fig.96

PLATE 29

- Fig. 97. Cross section of the crystalline style lying just beneath the dorsal wall of the stomach. Microphotograph. Spec. III.
- Fig. 98. Transversal section, showing the connection between the stomach (st) and the liver (li). Note that the stomach epithelium spreads far into the liver region in the dorsal wall. Microphotograph. Spec. III.
- Fig. 99. Cross section of the radula furrow in the region of the radula diverticula to show the situation of the teeth. Microphotograph. Spec. III.
- Fig. 100. Horizontal section through the tubular part of the radula sheath showing the arrangement of the teeth. Microphotograph. Spec. III.

chr. st = crystalline style

conn = connection between stomach and liver

L₁-L₅ = lateral teeth 1-5

ll = liver lobules

ov = ovary

sr. m = subradular membrane

st = stomach

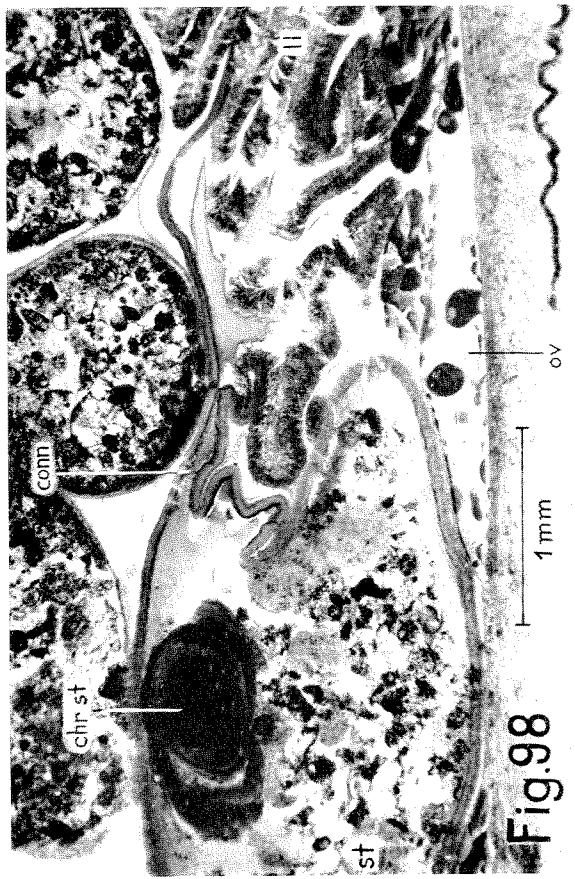


Fig.98

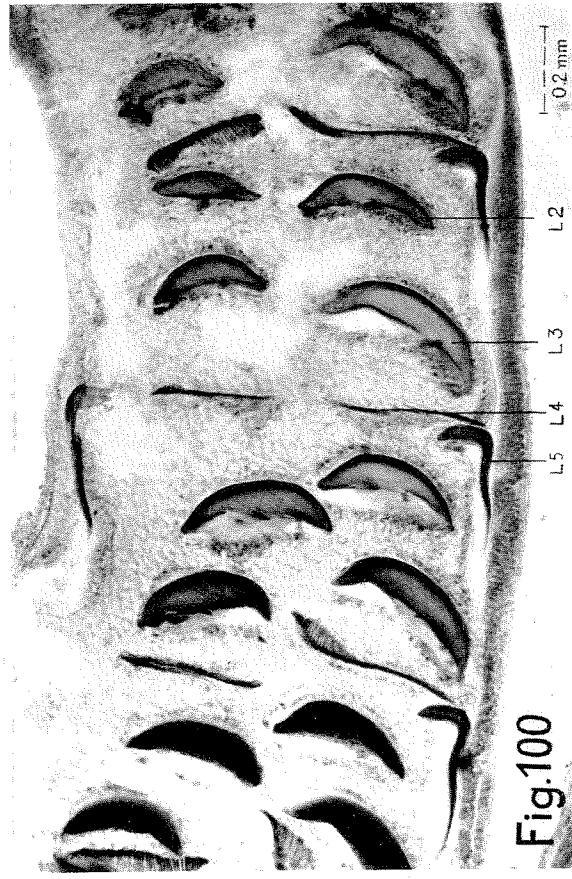


Fig.100

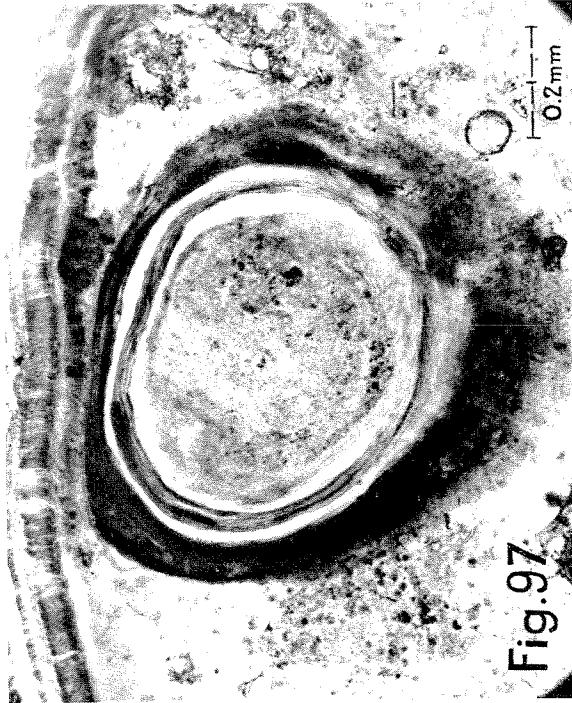


Fig.97



Fig.99

PLATE 30

- Fig. 101. Ciliated epithelium of the oesophagus. The cells have a dark-staining base, a granulate middle part, and a striated peripheral one. The dark line of basal granules next to the lumen is distinct. Microphotograph. Spec. III.
- Fig. 102. Detail of the pharyngeal epithelium, showing the basal granules and the ciliar roots in the peripheral end. Microphotograph. Spec. III.
- Fig. 103. Walls of the pharyngeal diverticulum (left) and the dorsal coelom (right), the former with basal granules along the distal surface of some cells, the latter with pigment granules. Microphotograph. Spec. III.
- Fig. 104. Epithelium of the pharynx near the pharyngeal diverticula. Basal granules, ciliar roots, and big dark-staining granules are distinct. Microphotograph. Spec. III.

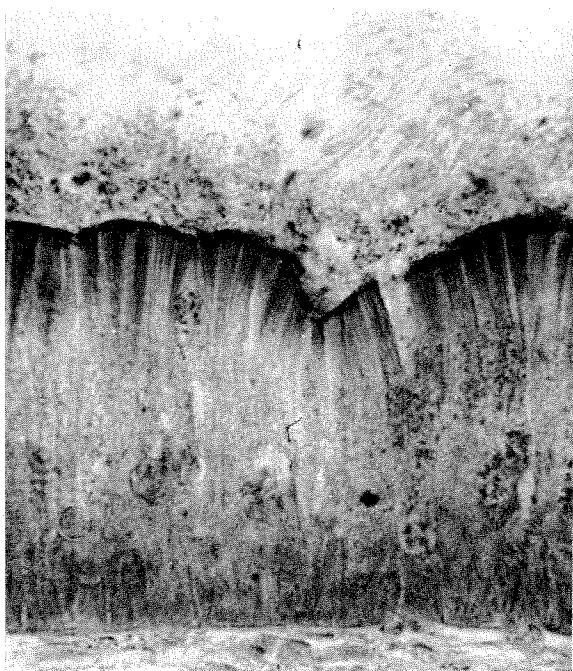


Fig.101



Fig.102



Fig.103

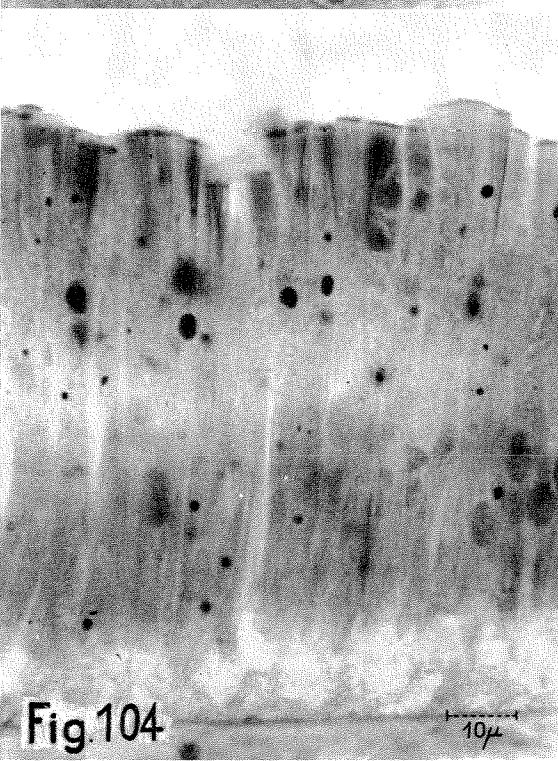


Fig.104