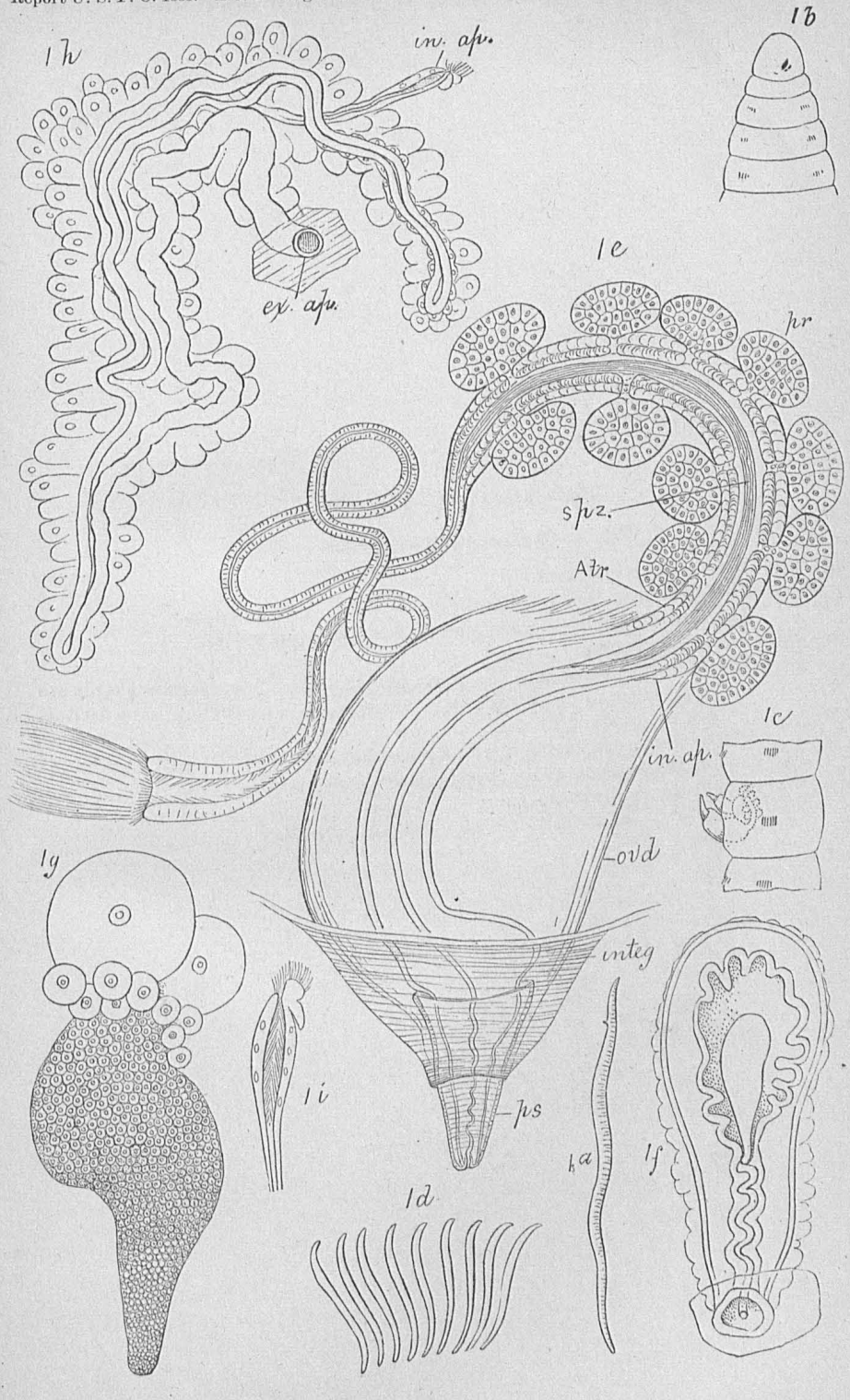
EXPLANATION OF THE REFERENCE LETTERS USED IN THE PLATES.

atr.—Atrium.
eff.—Efferent duct.
eff. f.—Efferent funnel.
p.—Penis.
p. s.—Penis sheath.
ex. ovd.—Exterior oviduct.
in. ovd.—Interior oviduct.
in. apt.—Interior aperture.
ex. apt.—Exterior aperture.
sp. mscl.—Spiral muscles.
pr.—Prostate glands.
sp.—Spines.
v. v.—Ventral vessels.
d. v.—Dorsal vessel.
n. s.—Natural size.
h. mgfd.—Highly magnified.
ovd.—Oviduct.
s. bc.—Buccale segment.
l. cep.—Cephalic lobe.
f.—The first fissure between the penis and the penis sheath.

EXPLANATION OF PLATE I.

FIG. 1.—TELMATODRILUS VEJDOVSKYI.

Fig. 1 *a*.—The worm, natural size.
1 *b*.—The anterior part of the worm.
1 *c*.—The 10th setigerous segment, showing the exterior penis.
1 *d*.—A fascicle of spines, h. mgfd.
1 *e*.—The efferent duct, atrium and penis, and oviduct. The prostate glands are seen surrounding the atrium. The muscles surrounding or constituting the oviduct are not represented.
1 *f*.—One of the receptacles in the ninth setigerous segment.
1 *g*.—One of the ovaries; at its upper end are seen some ripe ova.
1 *h*.—One of the segmental organs.
1 *i*.—The interior aperture of the same, highly magnified.


1h
inv. apv.
ex. apv.
1b
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hr
spvz.
Atr
inv. apv.
1c
ovd
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integ
1i
ps
1d
1a
1f

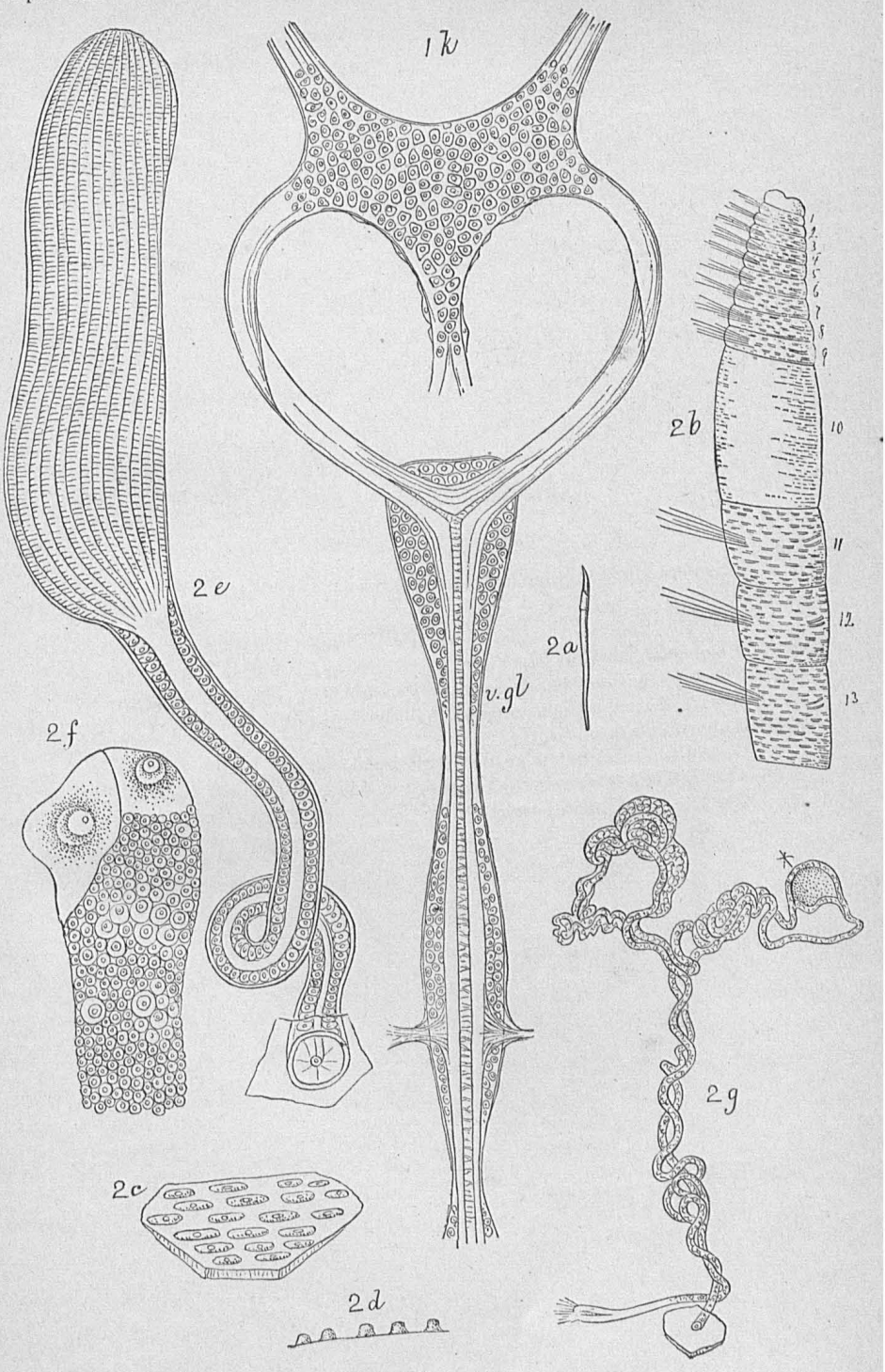
EXPLANATION OF PLATE II.

FIG. 1.—TELMATODRILUS VEJDOVSKYI.

Fig. 1 *k*.—The cephalic ganglion and the ventral nerve cord.

FIG. 2.—SPIROSPERMA FEROX.

Fig. 2 *a*.—The worm, natural size.
2 *b*.—The front part of the worm, highly magnified.
2 *c*.—A part of the epithelium, showing the elevated cells.
2 *d*.—The same, side view.
2 *e*.—One of the receptacles in the ninth setigerous segment.
2 *f*.—The free end of one of the ovaries.
2 *g*.—One of the segmental organs. At * is seen an enlarged chamber in the main duct.


1 k
2 e
2 a
v. gl
2 b
1
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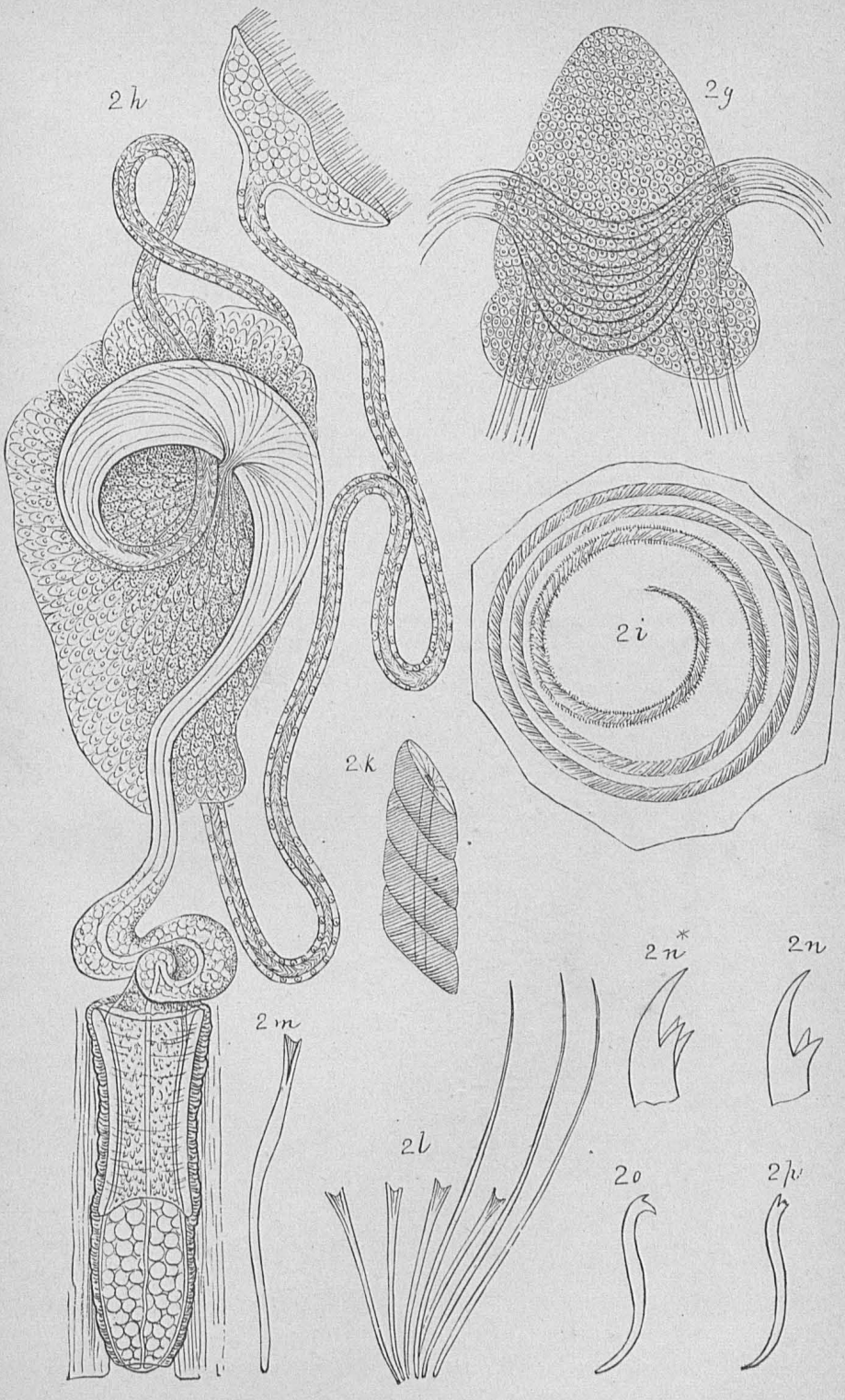
2 f
2 g
2 c
2 d

EXPLANATION OF PLATE III.

FIG. 2.—SPIROSPERMA FEROX.

Fig. 2 *h*.—The efferent duct, atrium, prostata, penis, and oviduct.
2 *i*.—One of the spiral spermatophores, surrounded by a pellucid sack.
2 *k*.—A part of the same spermatophore, more highly magnified.
2 *l*.—A fascicle of spines from the upper side of the body.
2 *m*.—One of the fan-like spines from the above fascicle, highly magnified.
2 *n*.—The free end of a 3-forked spine.
2 *n*.*—Free end of another spine with 4 prongs.
2 *o*.—One of the biforked spines, highly magnified.
2 *p*.—Another spine with 4 prongs. The spines with more than 2 prongs are from the cephalic segments.
2 *q*.—The cephalic ganglion, seen from above.


2h
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2i
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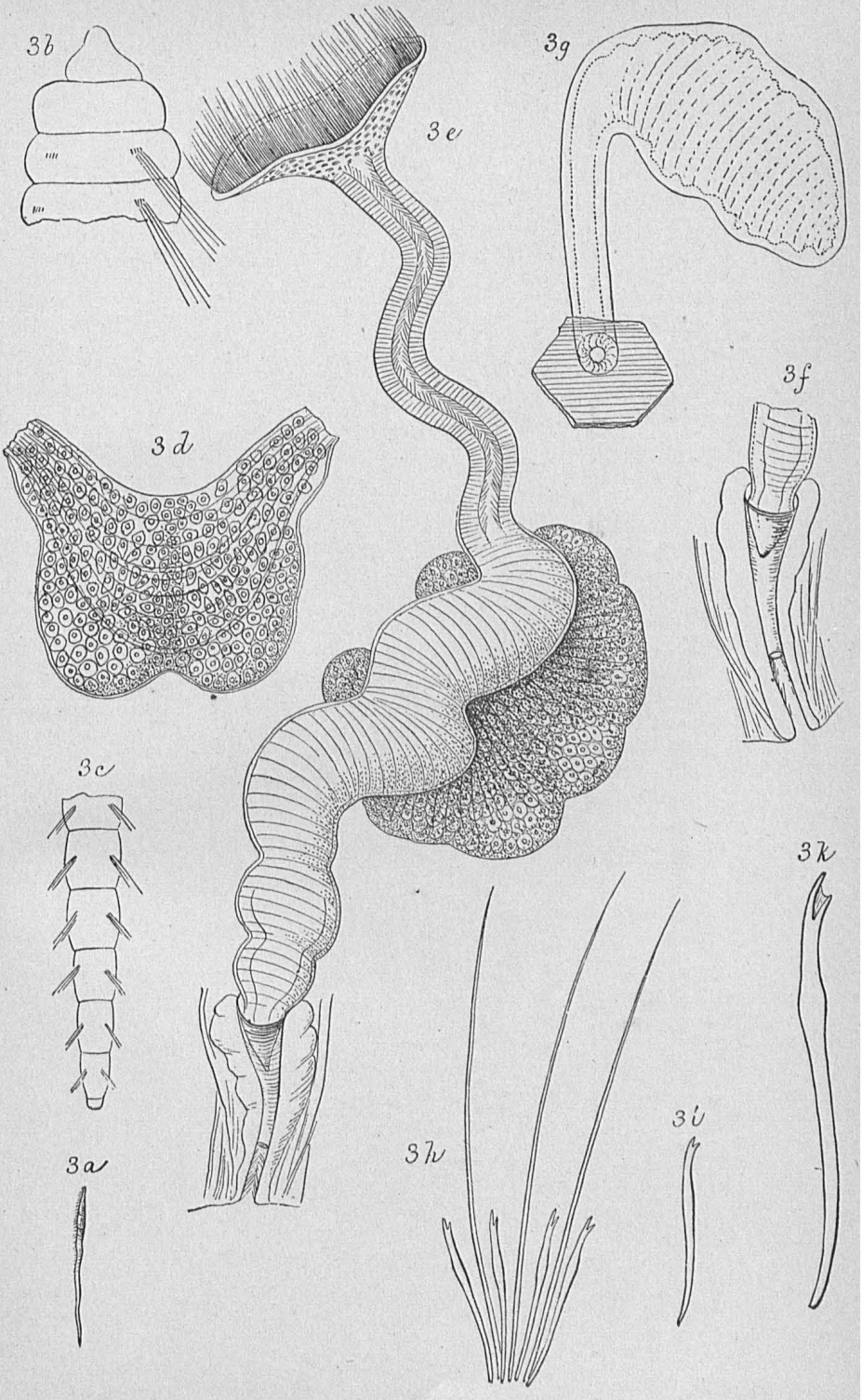
2n*
2n
2l
2o
2p

EXPLANATION OF PLATE IV.

FIG. 3.—ILYODRILUS PERRIERII.

Fig. 3 *a*.—The worm, natural size.
3 *b*.—The front part of the worm, magnified.
3 *c*.—The hind part of the same.
3 *d*.—The *cephalic ganglion*.
3 *e*.—The efferent duct, atrium, penis, and oviducts.
3 *f*.—The penis and oviducts, more highly magnified.
3 *g*.—One of the receptacles.
3 *h*.—A fascicle of spines from the upper side of the body.
3 *i*.—One of the spines from the lower side of the body.
3 *k*.—One of the fan or comb like spines.


3b
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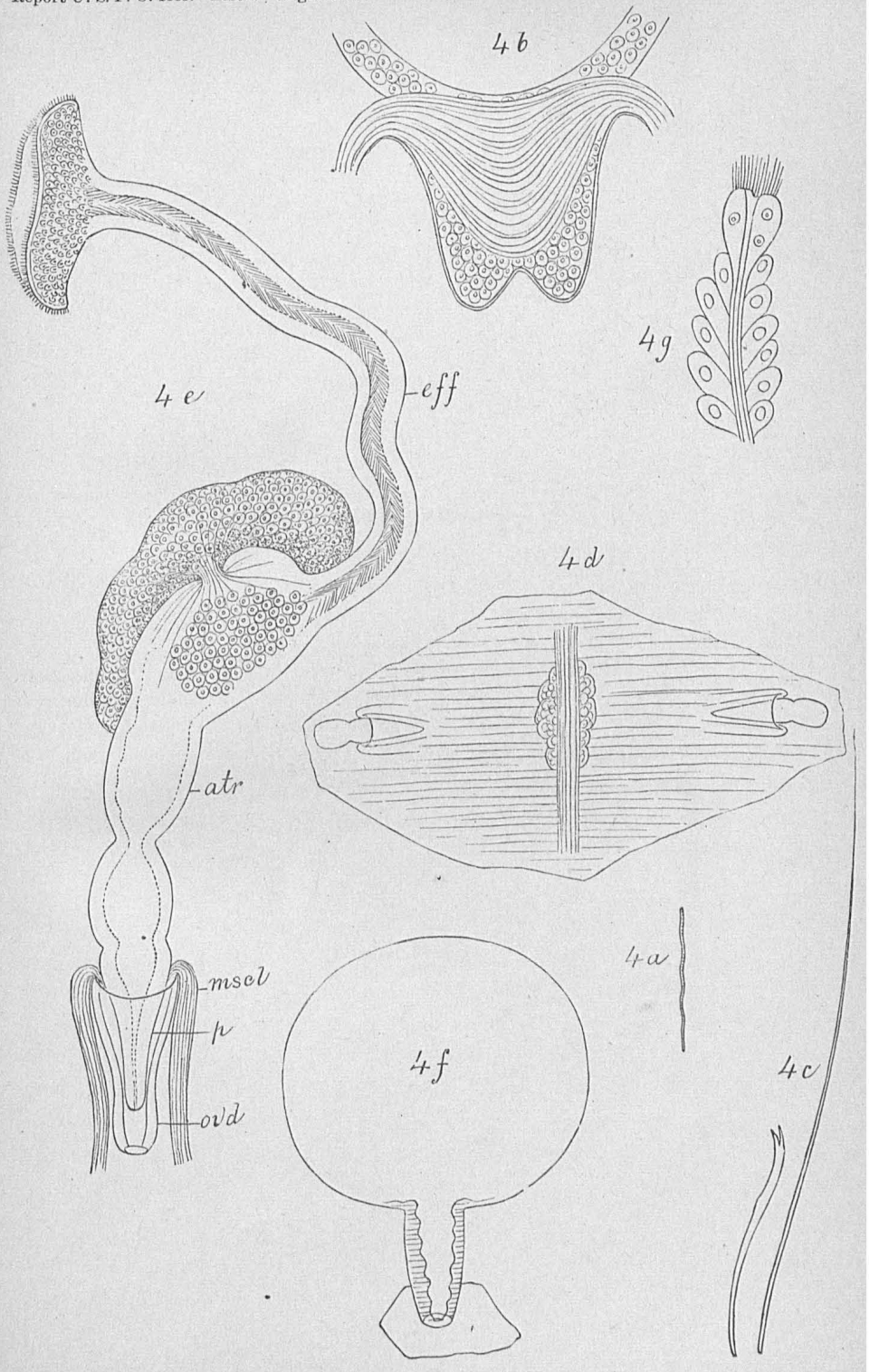
3g
3d
3f
3c
3k
3h
3i
3a

EXPLANATION OF PLATE V.

FIG. 4.—ILYODRILUS FRAGILIS.

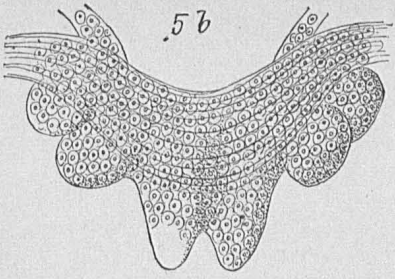
Fig. 4 *a*.—The worm, natural size.
4 *b*.—The cephalic ganglion.
4 *c*.—One of the forked and one of the hair-spines.
4 *d*.—A part of the segment containing the efferent duct, showing the distance between the exterior opening of the penis and the ventral ganglion.
4 *e*.—Efferent duct, atrium, penis, and oviduct.
4 *f*.—One of the receptacles.
4 *g*.—The interior aperture of one of the segmental organs.


4b
4g
4e
eff
4d
atr
msel
p
ovd
4a
4f
4c

EXPLANATION OF PLATE VI.

FIG. 5.—ILYODRILUS SODALIS.

Fig. 5 *a*.—The worm, natural size.
5 *b*.—The cephalic ganglion.
5 *c*.—The front end of one of the forked spines.
5 *d*.—The same spine, whole.
5 *e*.—The front end of one of the spines, which occurs together with the hair-spines. It shows the beginning of a comblike structure.
5 *f*.—The same spine, whole.
5 *g*.—The efferent duct, atrium, prostata, penis, and oviduct. In the latter are seen numerous spicula.
5 *h*.—One of the receptacles. At its base is seen an accessory gland.
5 *i*.—One of the ovaries.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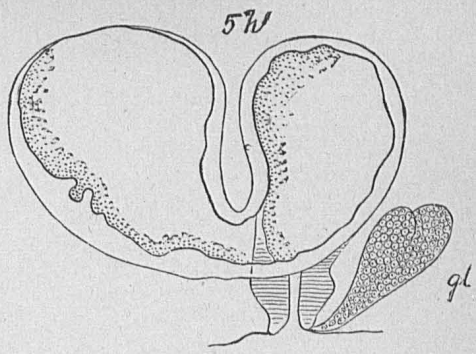
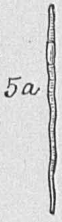

5 h
gl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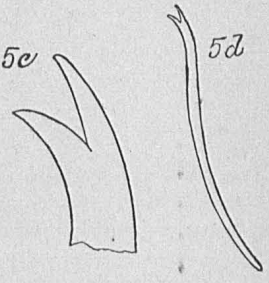
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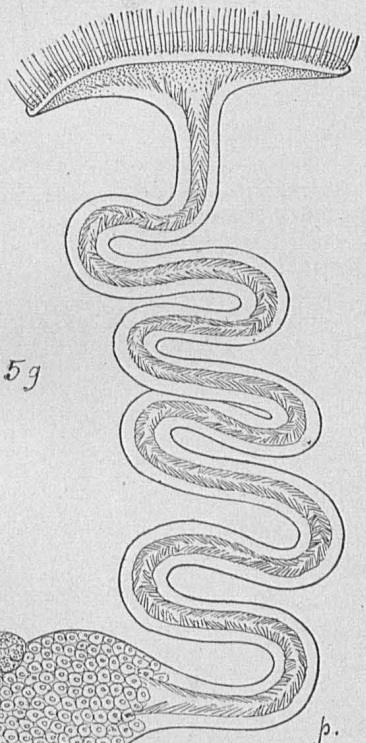
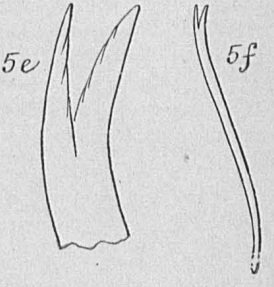
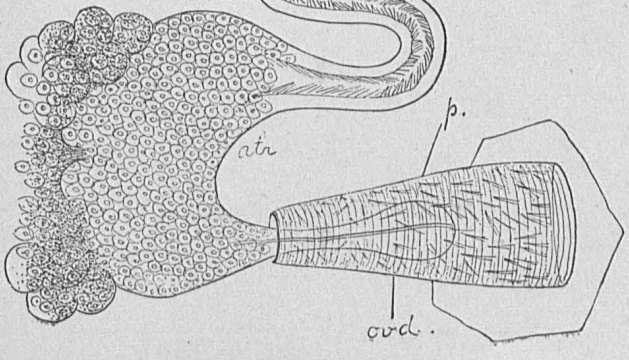
5d


5 g


5e
5f


atr
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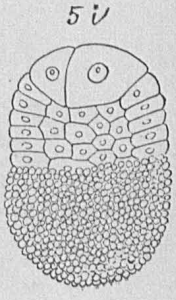

5 i

EXPLANATION OF PLATE VII.

FIG. 6.—HEMITUBIFEX INSIGNIS.

Fig. 6 *a*.—The worm, natural size.

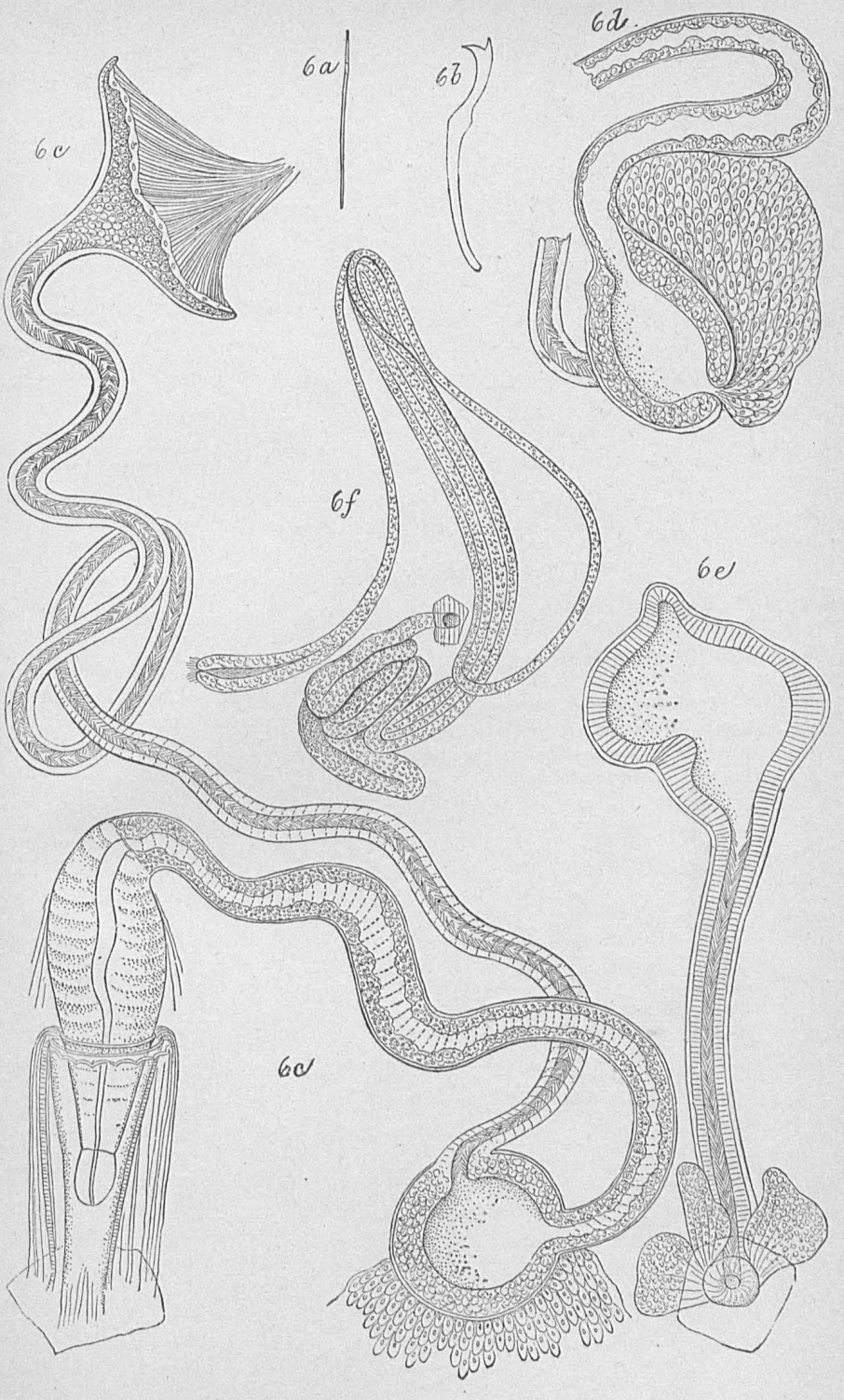
6 *b*.—One of the spines.

6 *c*.—The efferent duct, atrium, vesicula seminalis, prostata, penis, penis sheath, oviduct (exterior and interior). Numerous muscles are seen attached to the oviducts. *v. s* = vesicula seminalis.

6 *d*.—A part of the atrium, with the vesicula seminalis and the prostata gland.

6 *e*.—One of the receptacles. At its base are seen 3 winglike glands.

6 *f*.—One of the segmental organs.


6a
6b
6c
6d
6e
6f
6g

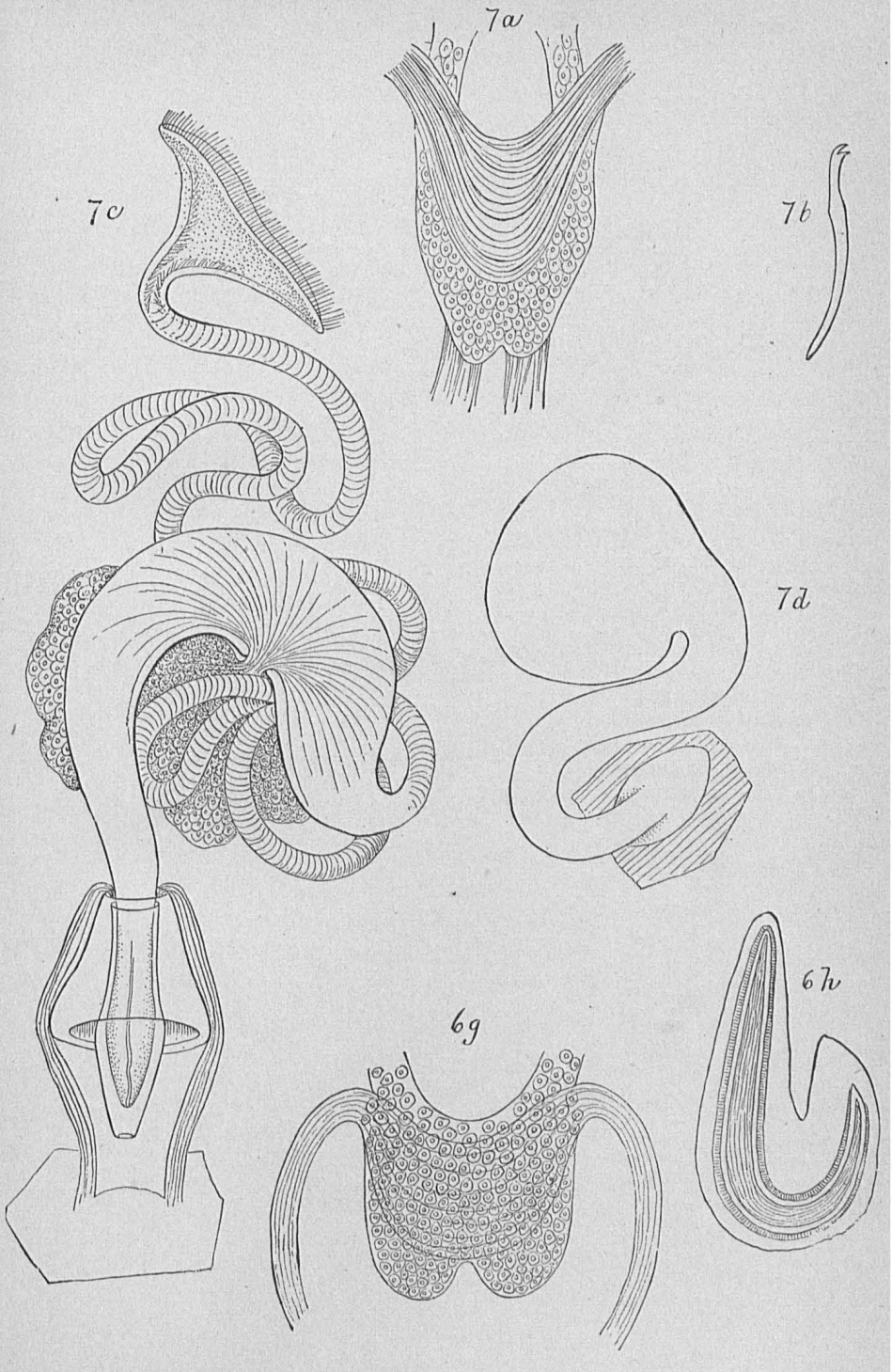
EXPLANATION OF PLATE VIII.

FIG. 6.—HEMITUBIFEX INSIGNIS.

Fig. 6 *g*.—The cephalic ganglion.
6 *h*.—One of the spermatophores.

FIG. 7.—TUBIFEX CAMPANULATUS.

Fig. 7 *a*.—The cephalic ganglion.
7 *b*.—One of the spines.
7 *c*.—Efferent duct, atrium, prostata, penis, penis sheath, and oviducts.
7 *d*.—One of the receptacles.


7a
7b
7c
7d
6h
6g

EXPLANATION OF PLATE IX.

FIG. 8.—LIMNODRILUS ORNATUS.

Fig. 8 *a*.—The worm, natural size.
8 *b*.—One of the spines, magnified.
8 *c*.—The cephalic ganglion.
8 *d*.—Efferent duct, atrium, prostata, penis, penis sheath, and oviduct. Round the upper end of the penis sheath is seen a crown of starlike concretions.
8 *e*.—One of the receptacles.
8 *f*.—Another slightly modified receptacle, showing the striated surface.
8 *g*.—One of the ovaries.
8 *h*.—A part of the tube of the segmental organ.

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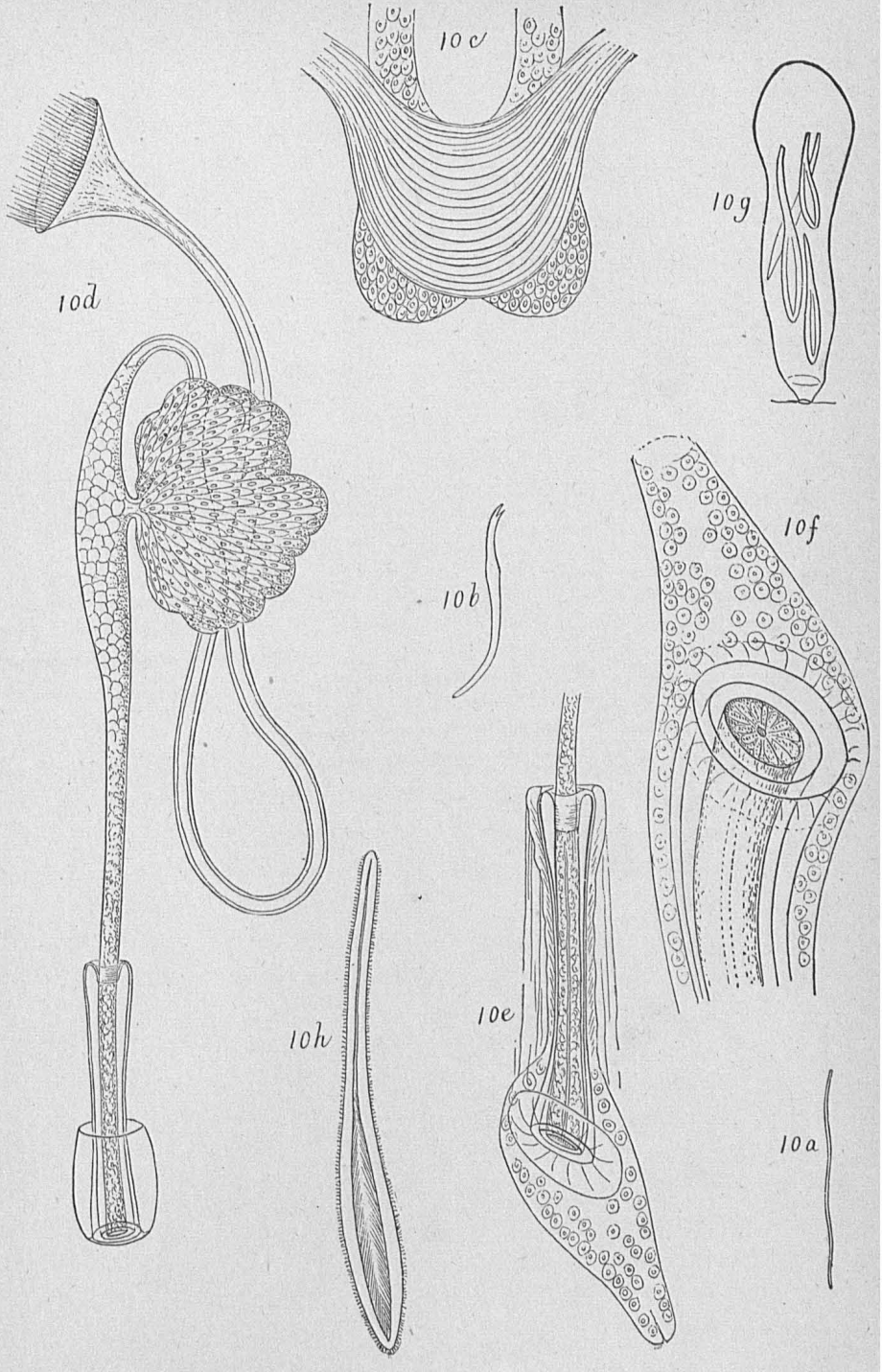
EXPLANATION OF PLATE XI.

FIG. 10.—LIMNODRILUS MONTICOLA.

Fig. 10 *a*.—The worm, natural size.
10 *b*.—One of the spines.
10 *c*.—The cephalic ganglion.
10 *d*.—Efferent duct, atrium, penis, penis sheath, oviducts (interior and exterior).
10 *e*.—Penis and oviducts, more highly magnified.
10 *f*.—The exterior end of the penis, penis sheath, and oviducts.
10 *g*.—One of the receptacles, with spermatophores.
10 *h*.—One of the spermatophores, highly magnified.


10c
10g
10d
10f
10b
10e
10h
10a

EXPLANATION OF PLATE XII.

FIG. 11.—LIMNODRILUS ALPESTRIS.

Fig. 11 *a*.—The front part of the nervous system, showing the (sometimes) 3-lobed cephalic ganglion, seen from above.

11 *b*.—Efferent duct, atrium, prostata, penis, penis sheath, and the two oviducts.

11 *c*.—Atrium and upper part of the copulative organs; common form.

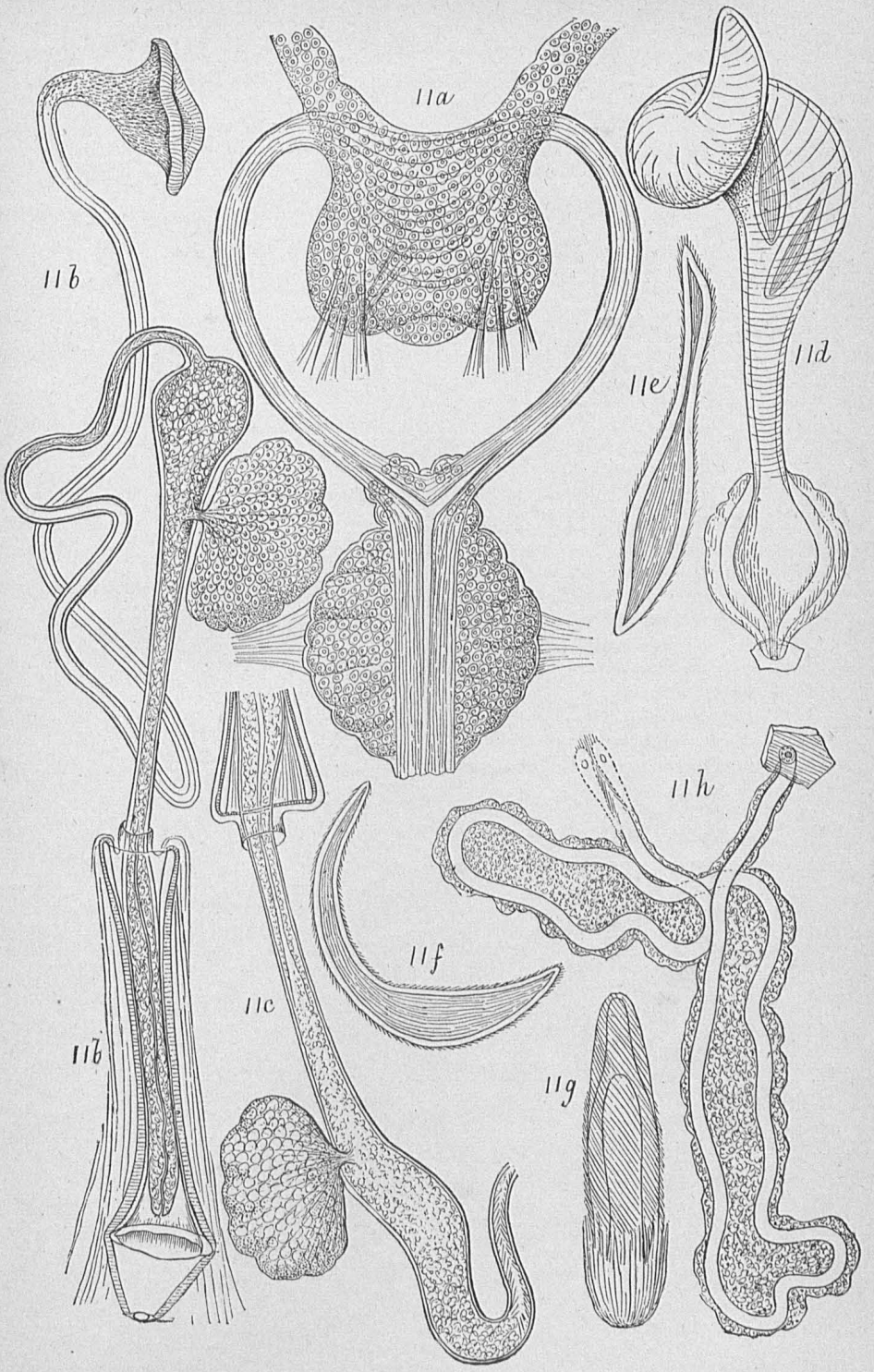
11 *d*.—One of the receptacles.

11 *e*.—Spermatophore.

11 *f*.—Spermatophore.

11 *g*.—Spermatophore.

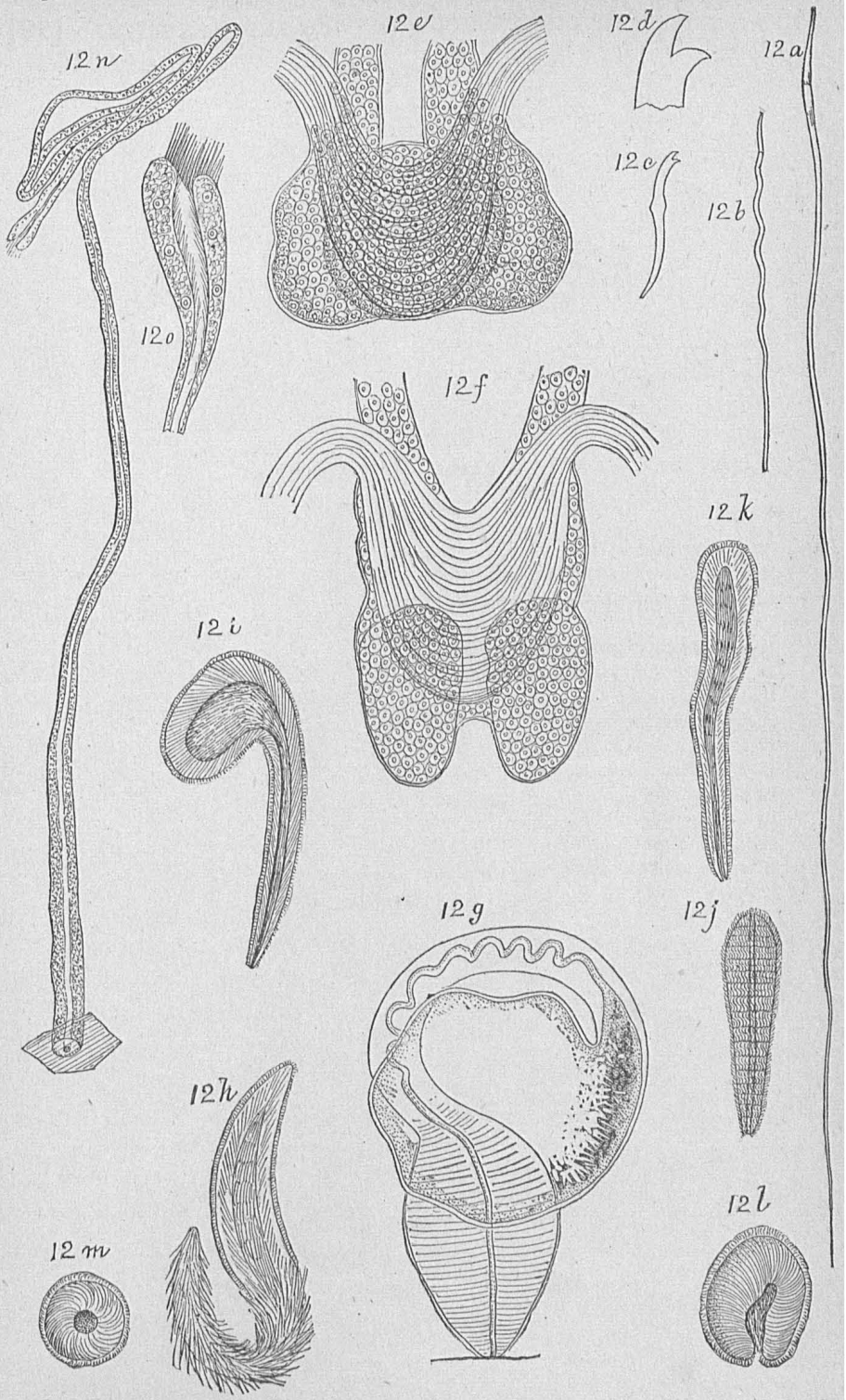
11 *h*.—One of the segmental organs.


11a
11b
11c
11d
11e
11f
11g
11h
11i

EXPLANATION OF PLATE XIII.

FIG. 12.—LIMNODRILUS SILVANI.

Fig. 12 *a*.—The worm, large form, natural size.
12 *b*.—The worm, smaller form, natural size.
12 *c*.—One of the spines.
12 *d*.—The front part of the same spine.
12 *e*.—Cephalic ganglion, broadest form.
12 *f*.—Cephalic ganglion, longest form.
12 *g*.—One of the receptacles.
12 *h*.—Spermatophore.
12 *i*.—Spermatophore.
12 *j*.—Spermatophore.
12 *k*.—Spermatophore.
12 *l*.—Spermatophore.
12 *m*.—Spermatophore.
12 *n*.—One of the segmental organs.
12 *o*.—The interior aperture of the same organ.


12 n
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12 l
12 m

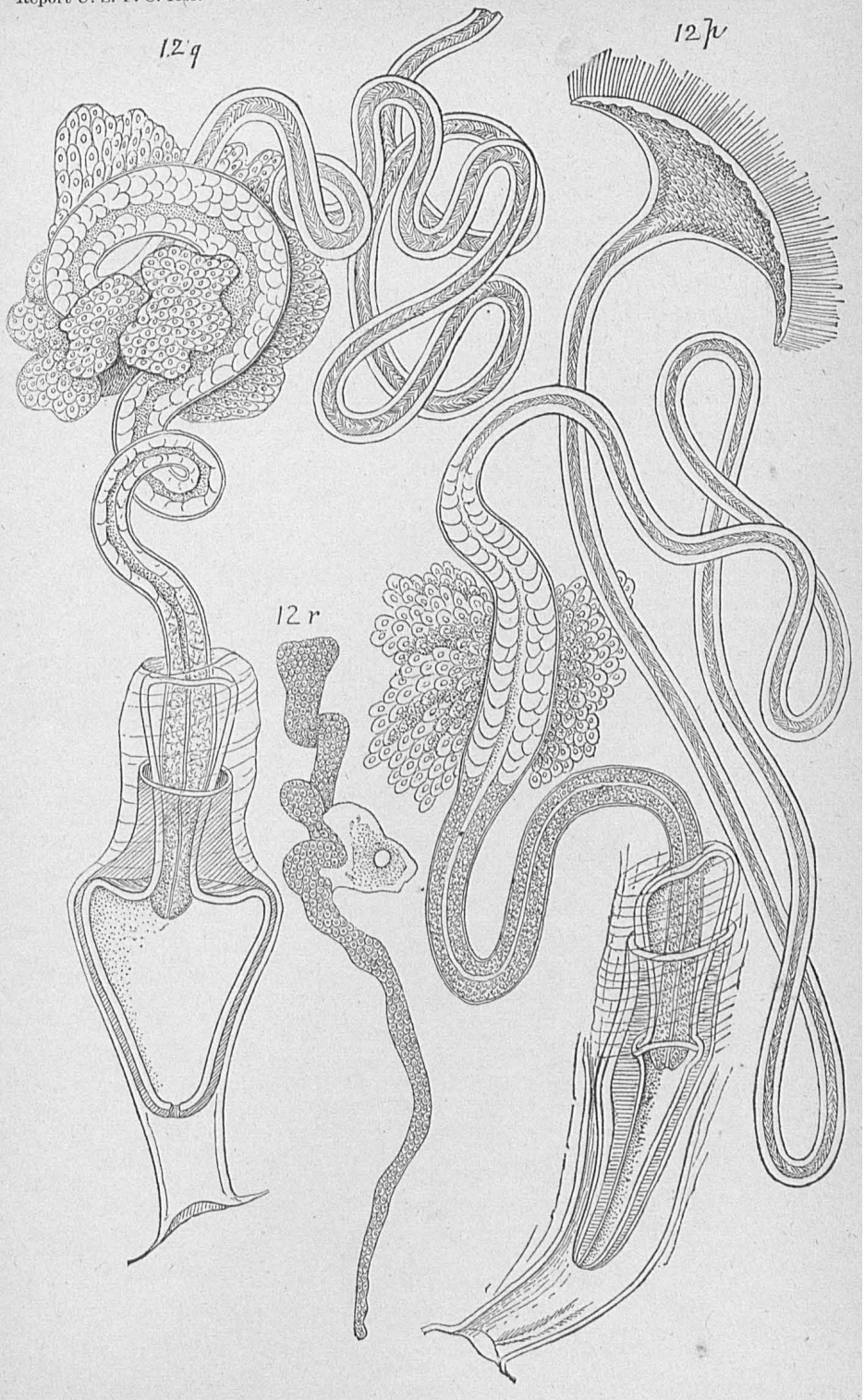
EXPLANATION OF PLATE XIV.

FIG. 12.—LIMNODRILUS SILVANI.

Fig. 12 *p*.—Efferent duct, atrium, penis, penis sheath, interior and exterior oviducts. The organ is seen from the side.

12 *q*.—The same organ, seen from the front.

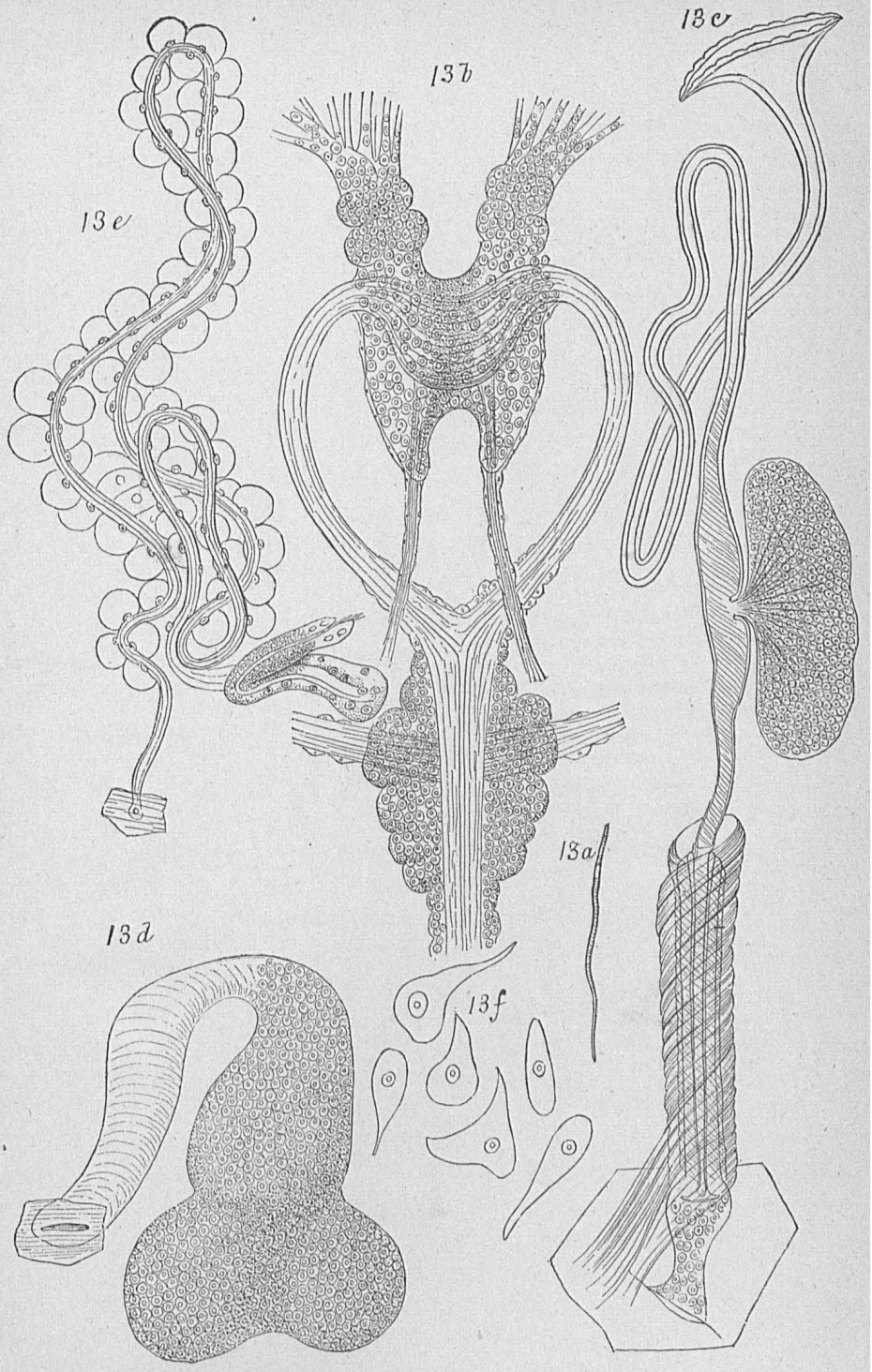
12 *r*.—One of the ovaries.


12 q
12 r
12 p

EXPLANATION OF PLATE XV.

FIG. 13.—CAMPTODRILUS IGNEUS.

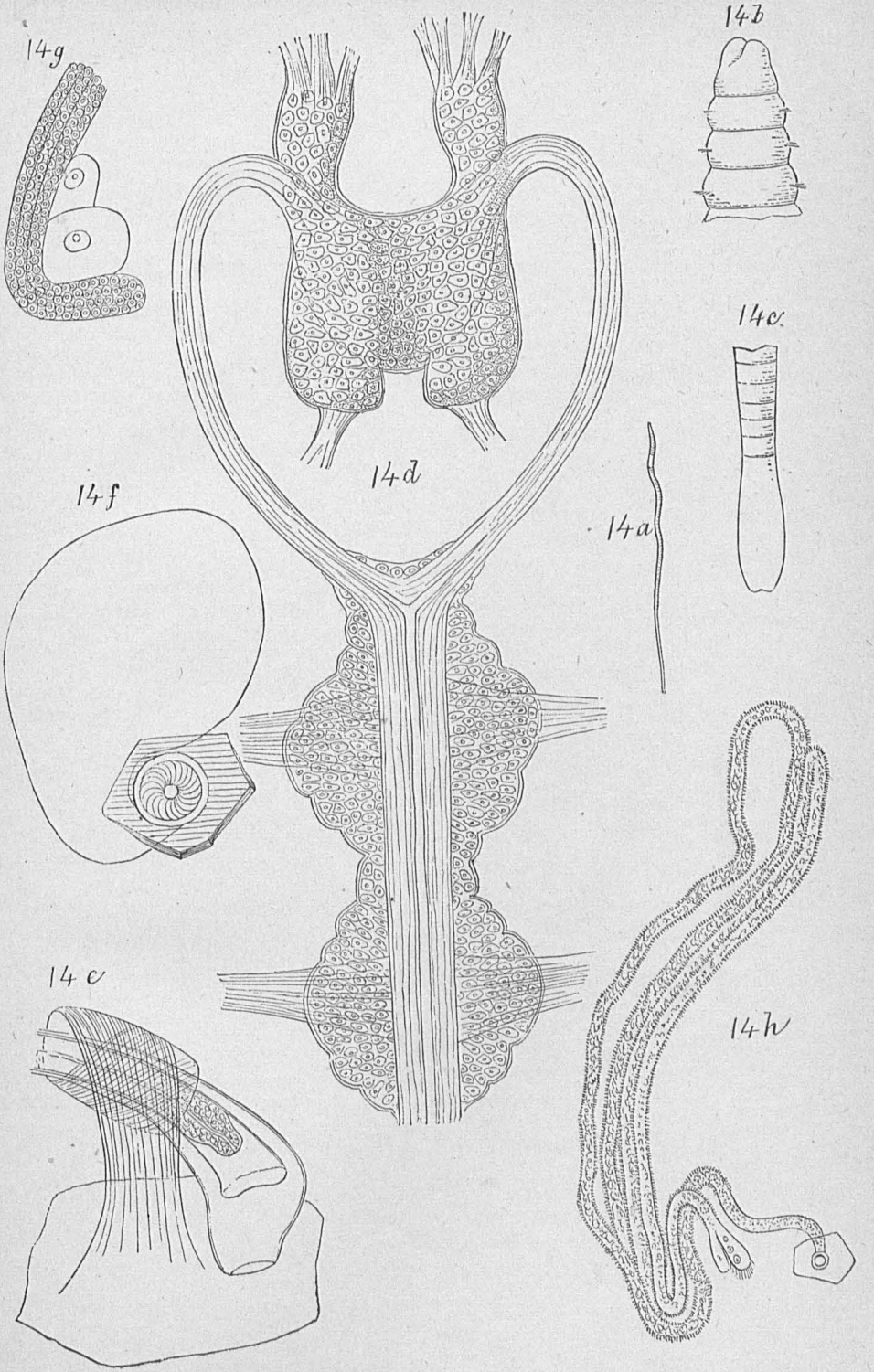
Fig. 13 *a*.—The worm, natural size.
13 *b*.—The front part of the nervous system, seen from above.
13 *c*.—Efferent duct, atrium, prostata, penis, penis sheath, oviduct, and spiral muscles.
13 *d*.—One of the receptacles.
13 *e*.—One of the segmental organs.
13 *f*.—Perigastric cells, of different form.


13c
13b
13e
13a
13d
13f

EXPLANATION OF PLATE XVI.

FIG. 14.—CAMPTODRILUS CORALLINUS.

Fig. 14 *a*.—The worm, natural size.
14 *b*.—Front part of the worm, magnified.
14 *c*.—Posterior part of the worm, magnified.
14 *d*.—Front part of the nervous system, seen from above.
14 *e*.—The lower part of the copulative organs, showing part of penis, penis sheath, oviduct, and spiral muscles.
14 *f*.—One of the receptacles.
14 *g*.—One of the ovaries.
14 *h*.—One of the segmental organs.


14g
14b
14c
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14a
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EXPLANATION OF PLATE XVII.

FIG. 11.—LIMNODRILUS ALPESTRIS.

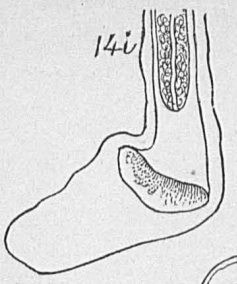
Fig. 11 *i*.—The copulative organs in a very young specimen.
11 *k*.—The same organ in a more advanced individual.

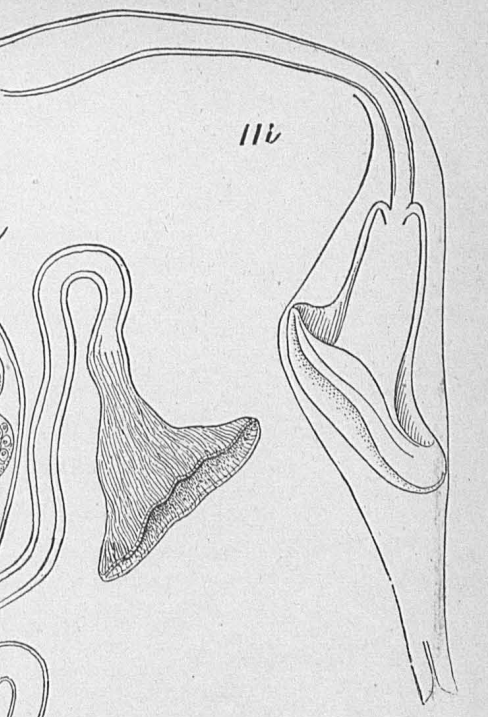
FIG. 14.—CAMPTODRILUS CORALLINUS.

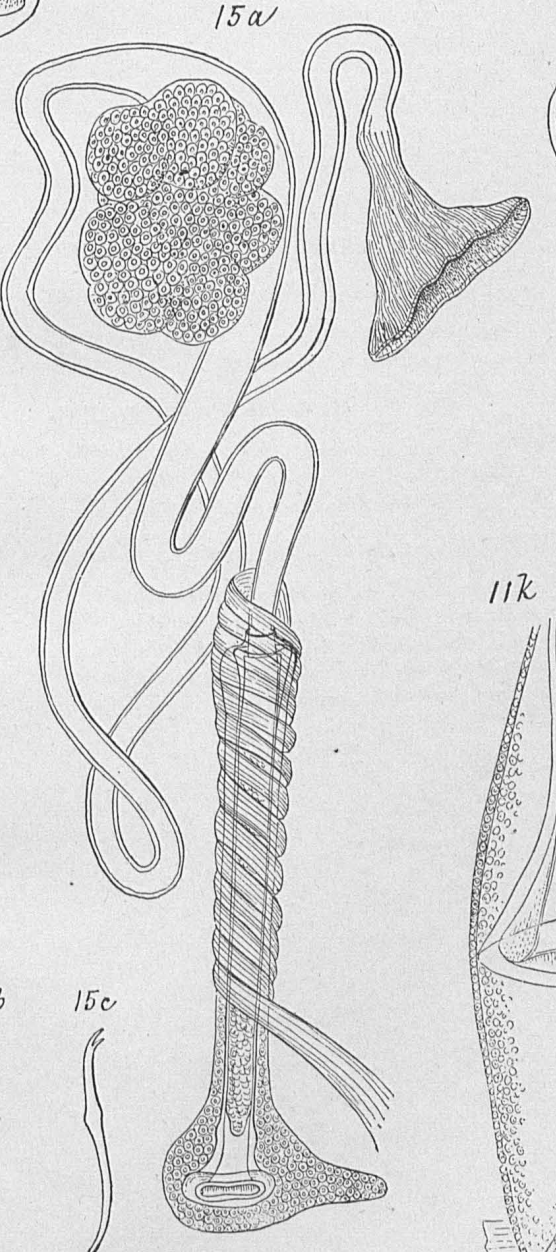
Fig. 14 *i*.—The lower end of the copulative organs, showing the penis, penis sheath, and oviduct.
14 *k*.—The same as above, from another individual.

FIG. 15.—CAMPTODRILUS SPIRALIS.

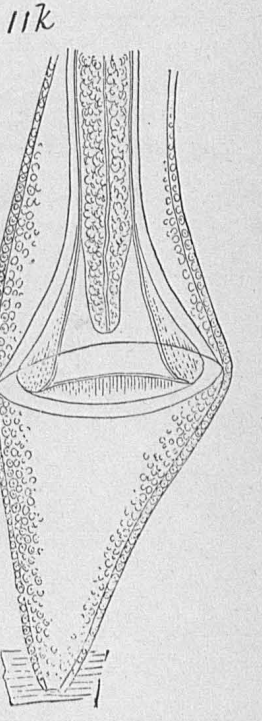
Fig. 15 *a*.—The efferent duct and funnel, atrium, prostata, penis, penis sheath, exterior and interior oviducts, and spiral muscles.
15 *b*.—One of the spines from behind the cingulum.
15 *c*.—One of the spines from one of the anterior segments.
15 *d*.—The front part of the interior aperture of a segmental organ.


14i


11i


15a


14k


11k

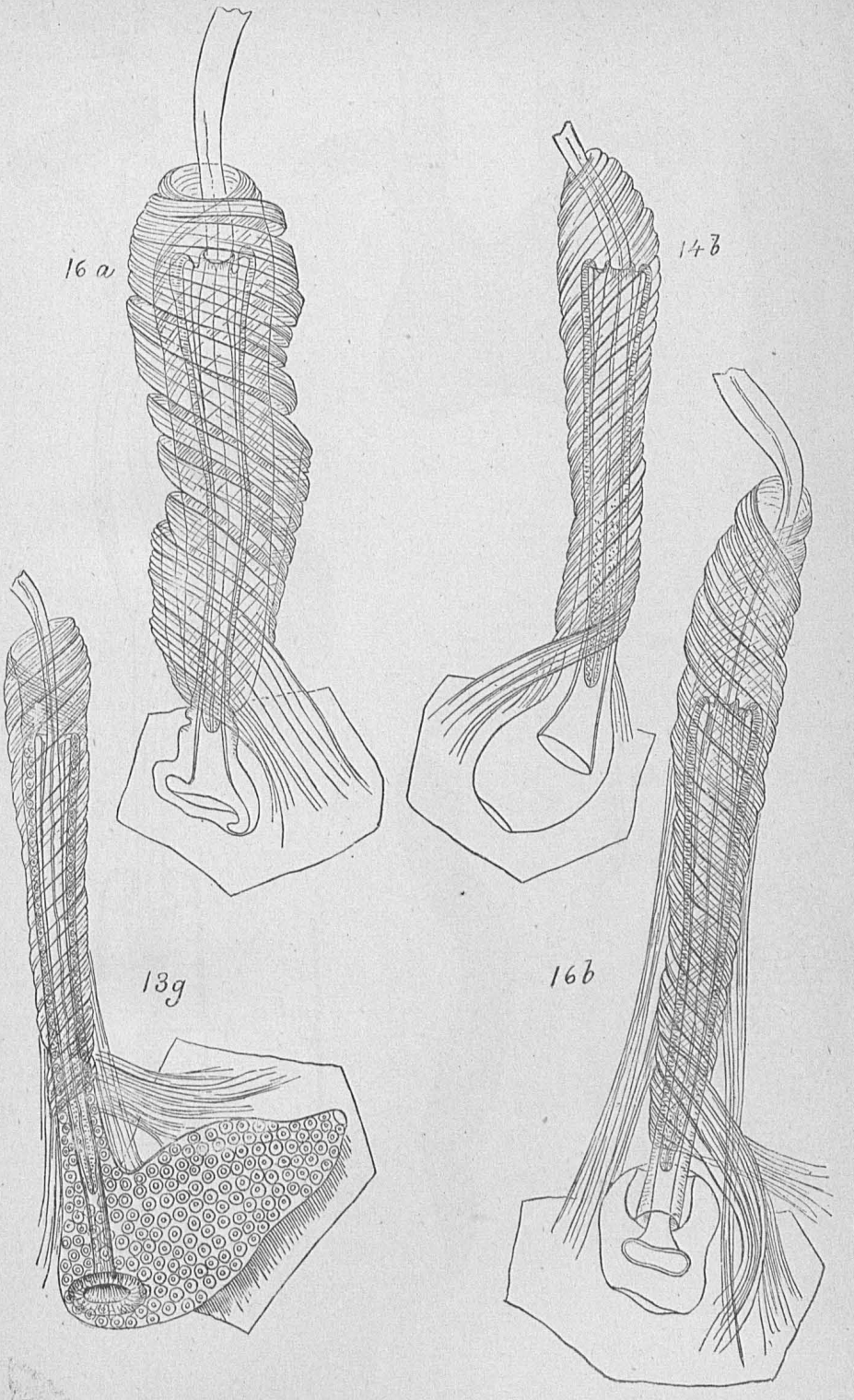

15d


15b

15c

EXPLANATION OF PLATE XVIII.

Fig. 13 *g*.—*Camptodrilus igneus*.
14 *b*.—*Camptodrilus corallinus*.
16 *a*.—*Camptodrilus Californicus*.
16 *b*.—*Camptodrilus Californicus*.
All the figures represent the lower end of the copulative organs.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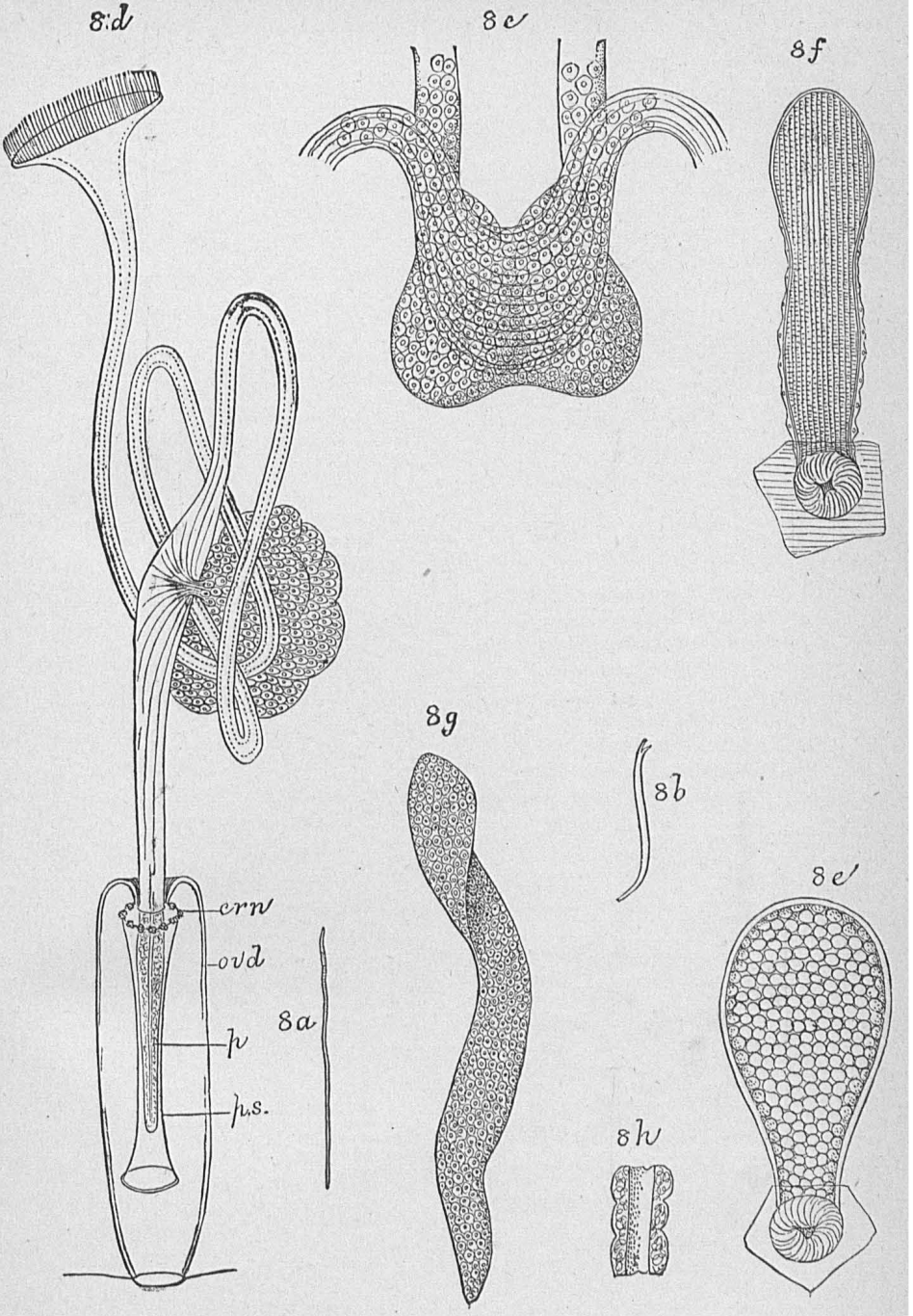
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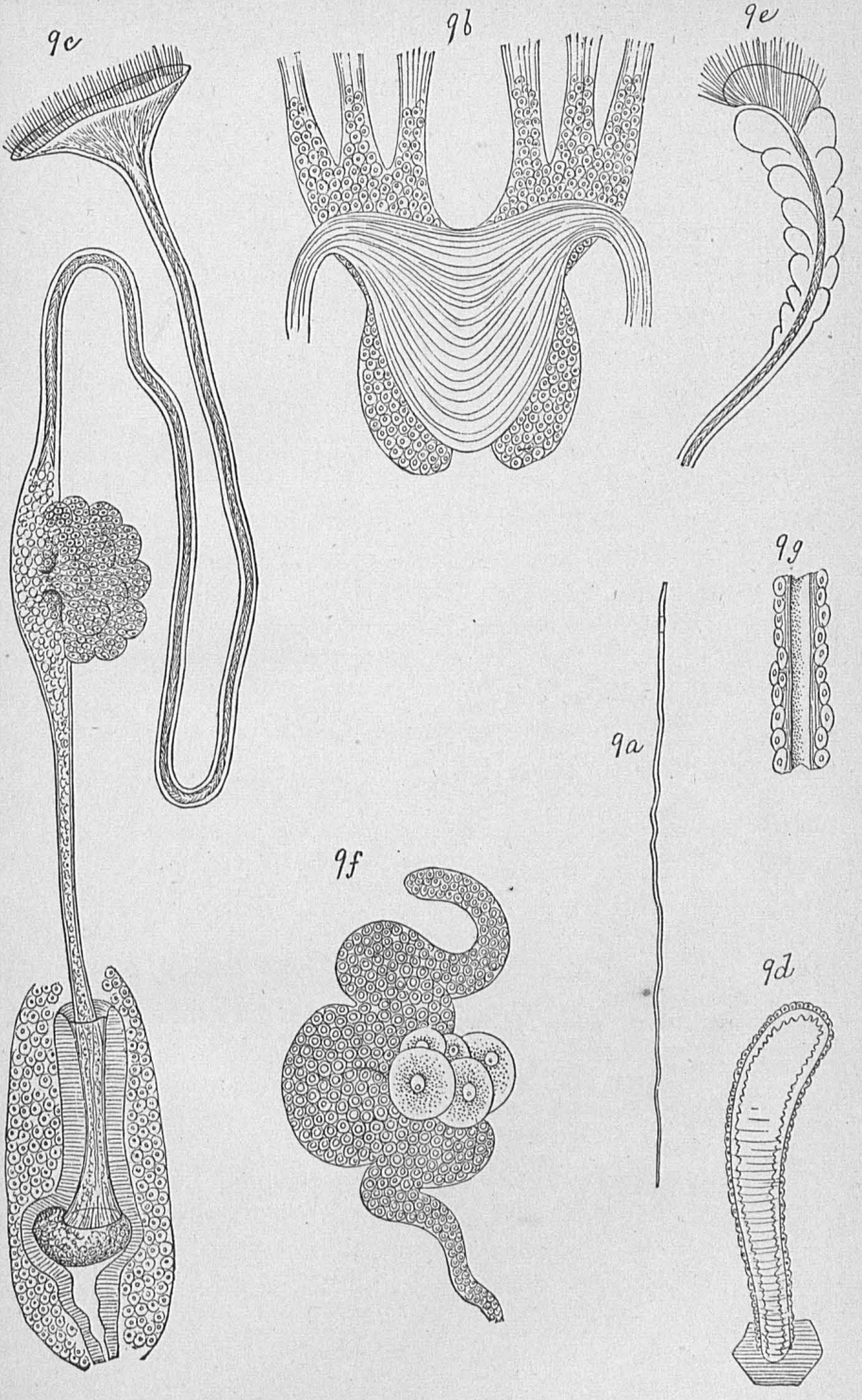
8b
8e
8h

EXPLANATION OF PLATE X.

FIG. 9.—LIMNODRILUS STEIGERWALDII.

Fig. 9 *a*.—The worm, natural size.
9 *b*.—The cephalic ganglion, seen from below.
9 *c*.—Efferent duct, atrium, prostata, penis, penis sheath, interior and exterior oviduct.
9 *d*.—One of the receptacles.
9 *e*.—The interior aperture of a segmental organ, highly magnified.
9 *f*.—One of the ovaries.
9 *g*.—A part of the tube of a segmental organ.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9a
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9d

EXPLANATION OF PLATE XIX.

FIG. 17.—TELMATODRILUS VEJDOVSKYI.

Fig. 17 *a*.—A part of the copulative organ of a young individual. The oviduct (= ovd.) is not yet fully differentiated, but is seen entirely inclosing penis, atrium, and prostata glands.

17 *b*.—The same as above, in a fully developed individual.

FIG. 18.—LIMNODRILUS ALPESTRIS.

All the figures represent the copulative organs, demonstrating their mode of development from the original generative gland to the fully developed form of the adult individual.

Fig. 18 *a*.—The generative gland as it is first seen on the body wall of the tenth setigerous segment, seen from above.

18 *b*.—The same as above, side view, and somewhat more magnified.

18 *c*.—The same gland, but in a more advanced state of development. The cortical layer is well separated from the interior matrix. In the latter is seen the lumen of the penis. (This figure is from *L. corallinus*.)

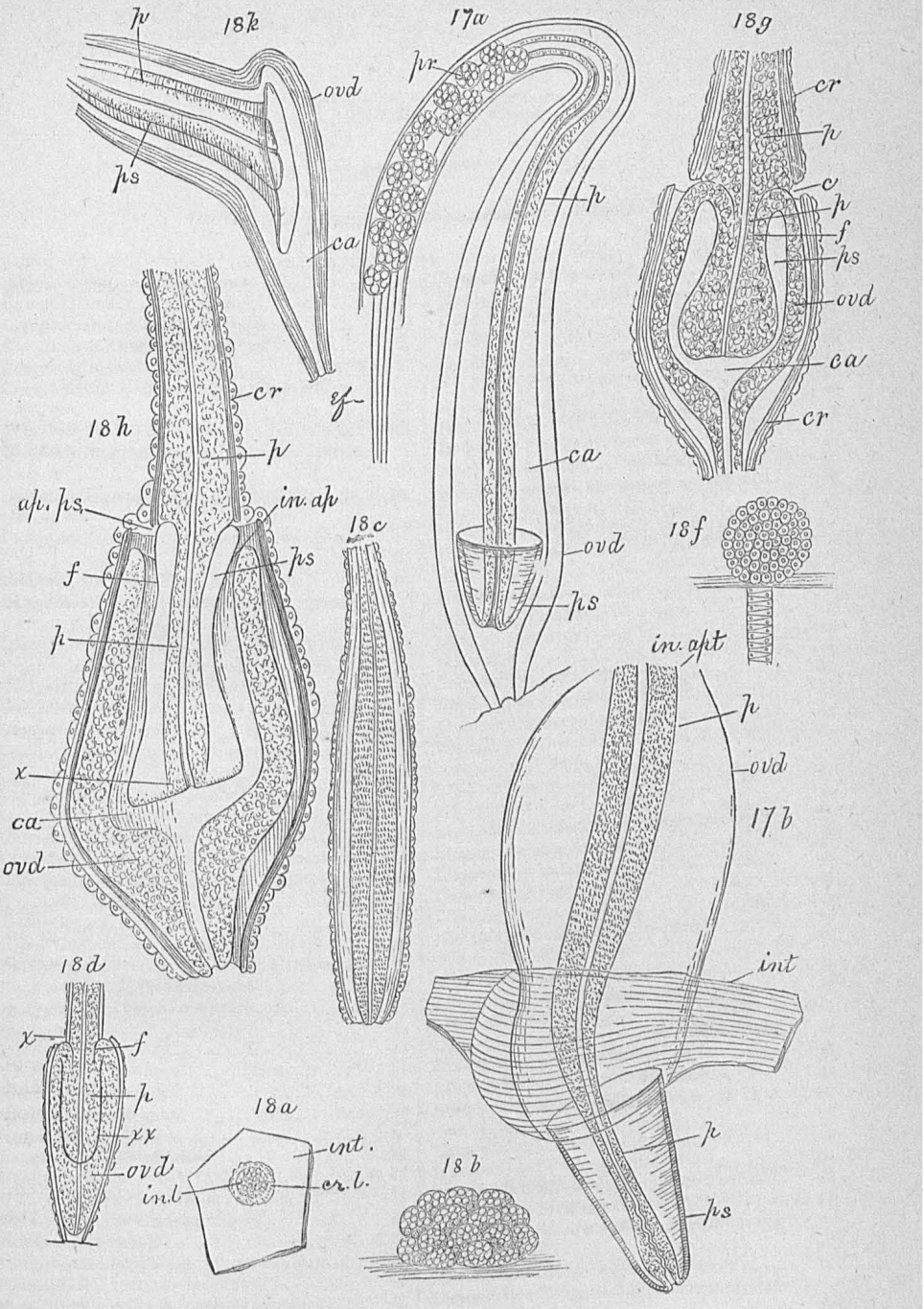
18 *d*.—The same as above, in a yet more advanced state of development. In the interior of the matrix is seen a semi-elliptic line (*x x*) separating the future penis (*p*.) from the oviduct proper (*ovd*.). At *x* is seen the first sign of the aperture of the penis sheath. (This figure is from *L. alpestris*.)

18 *f*.—The first beginning of the efferent funnel. The aperture is not yet differentiated.

18 *g*.—The same as 18 *d*, but in a more advanced stage of development. The cavity (*ca*.) between the oviduct and penis sheath is further developed, but the oviduct (*ovd*.) is not yet fully separated from the penis and penis sheath, the connection being at *c*. The cavity between the penis and the penis sheath is enlarging. The cortical layer (*or*.) forms an exterior oviduct and is separated by a cavity from the interior sheath of the oviduct (*ovd*.).

18 *h*.—The same as above, in a more advanced stage of development. The interior oviduct is fully separated from the penis sheath (*p. s*.), and the aperture (*in. ap*.) is defined. The penis sheath (*p. s*.) is also nearly fully separated from the penis, but connects as yet at *x*. The oviduct (*ovd*.) and the cortical layer are fully separated, but the former is yet connected with the sexual porus. The aperture of the penis sheath is well defined (*ap. p. s*.).

18 *k*.—The lower end of a perfectly developed copulative organ of a *Limnodrilus*, with a single oviduct. The penis sheath is fully separated from the penis proper.


18k
p
ovd
hs
ca
17a
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