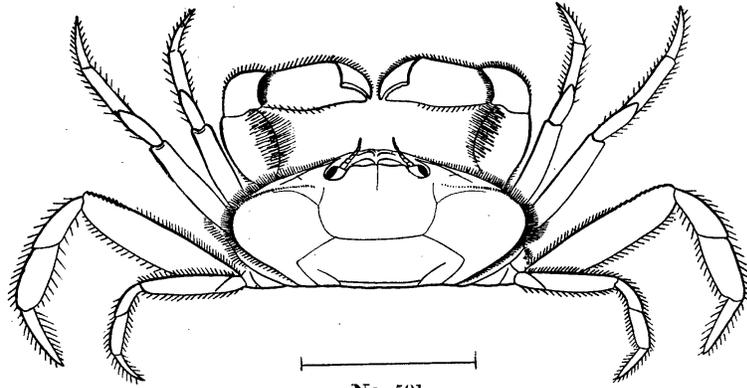


EXPLANATION OF PLATE I.

- FIGURE 1.—*Pinnixa cylindrica* Say, (p. 546;) male, enlarged four diameters.
2.—*Pinnotheres ostreum* Say, (p. 546;) male, enlarged four diameters.
3.—*Panopeus depressus* Smith, (p. 547;) male, natural size.
4.—*Platyonichus ocellatus* Latreille, (p. 547;) male, slightly reduced in size.

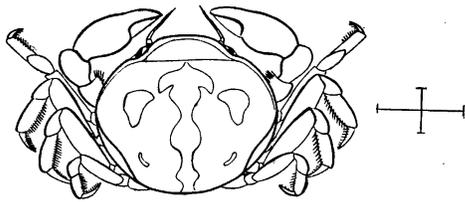
(All the figures were drawn by J. H. Emerton.)

Fig. 1.



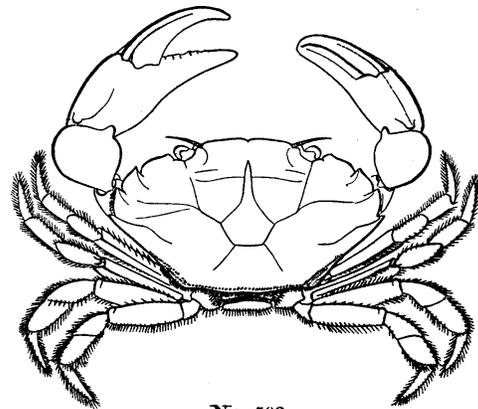
No. 501

Fig. 2.



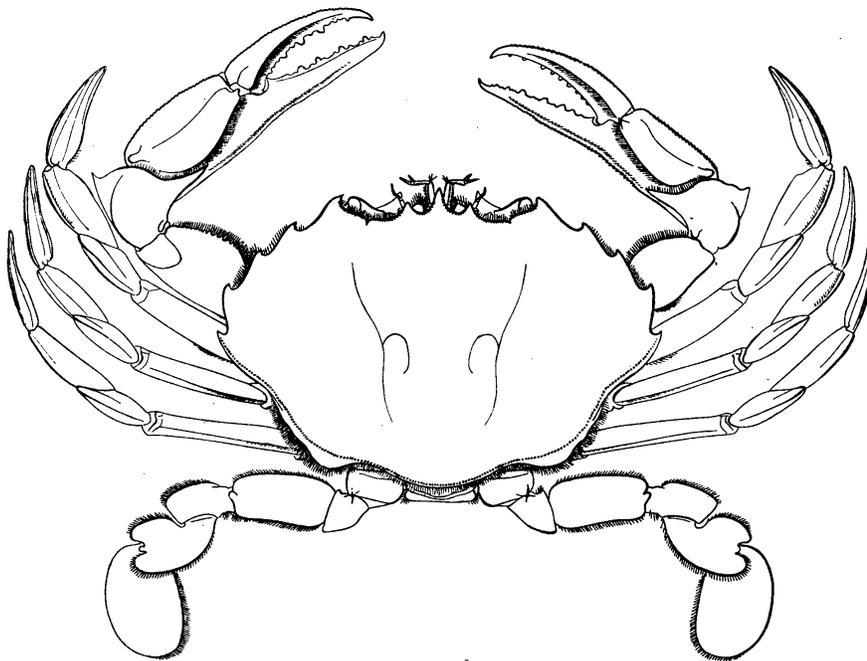
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Fig. 3.



No. 503

Fig. 4.



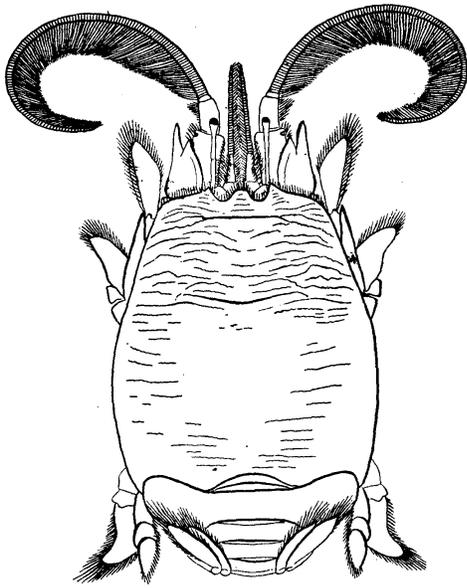
No. 504

EXPLANATION OF PLATE II.

- FIGURE 5.—*Hippa talpoida* Say, (p. 548;) dorsal view, enlarged about two diameters.
6.—*Pandalus annulicornis* Leach, (p. 550;) dorsal view, slightly reduced in size.
7.—*Gebia affinis* Say, (p. 549;) female; lateral view, slightly enlarged.
8.—*Callianassa Stimpsoni* Smith, (p. 549;) larger cheliped; outside, natural size.
9.—*Palæmonetes vulgaris* Stimpson, (p. 550;) male; lateral view, enlarged one and one-half diameters.

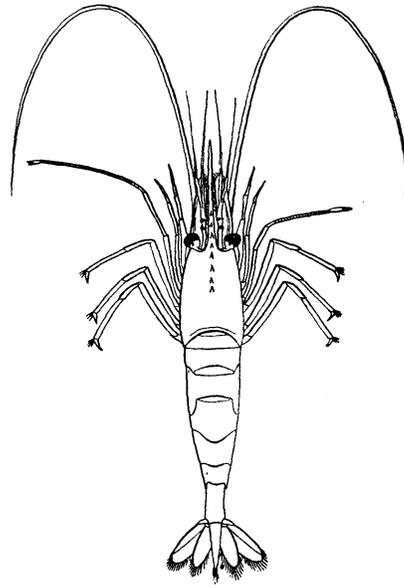
(All the figures were drawn by J. H. Emerton.)

Fig. 5.



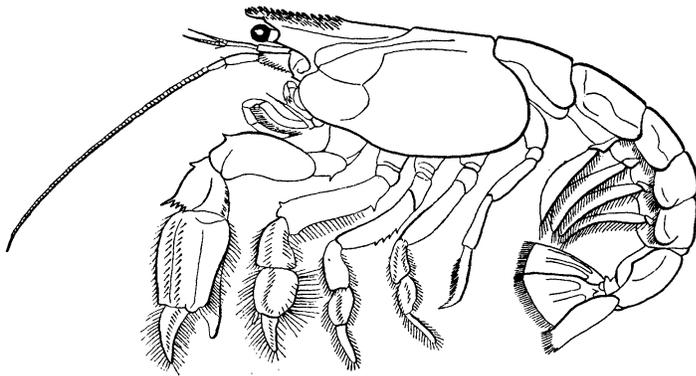
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Fig. 6.



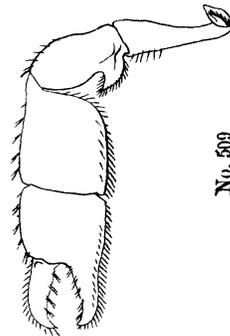
No. 515

Fig. 7.



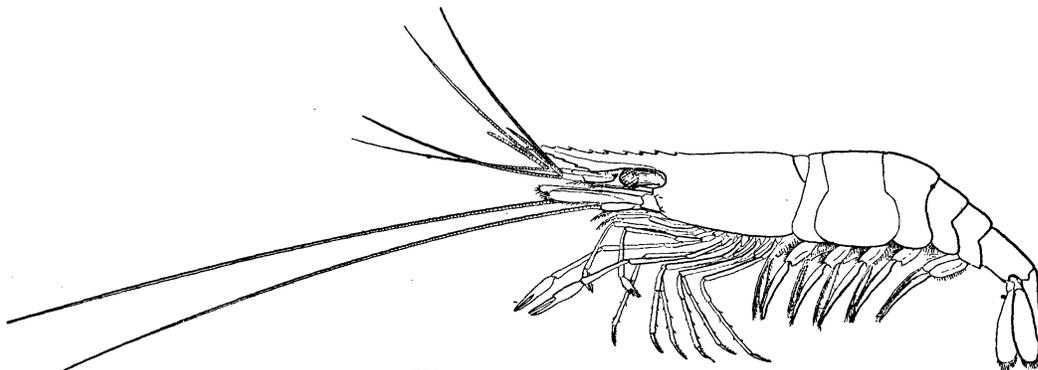
508

Fig. 8.



No. 509

Fig. 9.



516

EXPLANATION OF PLATE III.

FIGURE 10.—*Crangon vulgaris* Fabr., (p. 550;) male; dorsal view, natural size.

11.—*Virbius Zostericola* Smith, (p. 550;) female; lateral view, slightly enlarged.

12.—*Mysis stenolepis* Smith, (p. 551;) young female; lateral view, enlarged four diameters. The anterior margin of the carapax is not well represented in this figure; see description.

13.—*Diastylis quadrispinosa* G. O. Sars, (p. 554;) lateral view, enlarged seven diameters.

(All the figures were drawn by J. H. Emerton.)

Fig. 10.

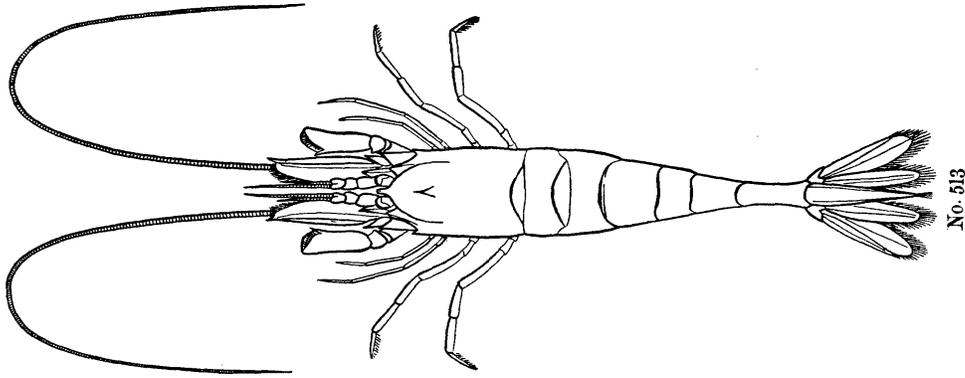


Fig. 11.

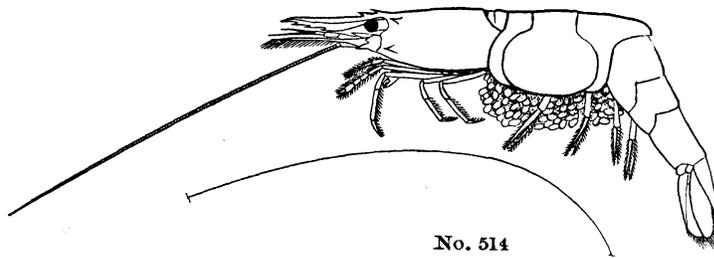


Fig. 12.

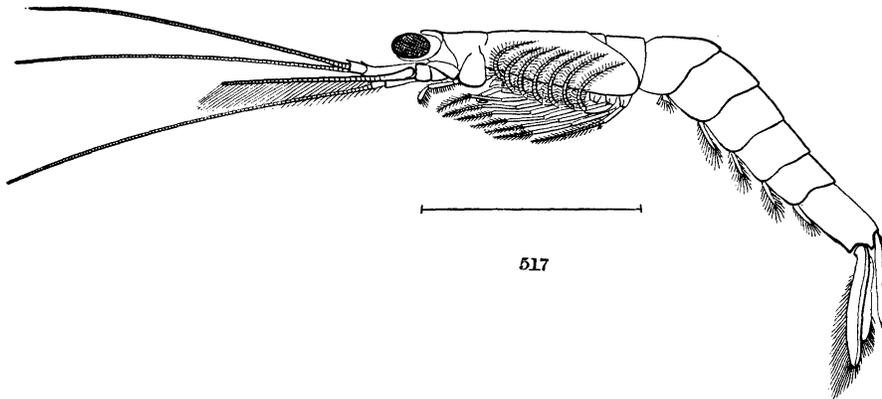
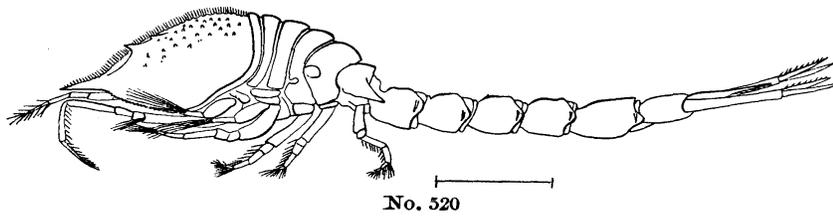


Fig. 13.

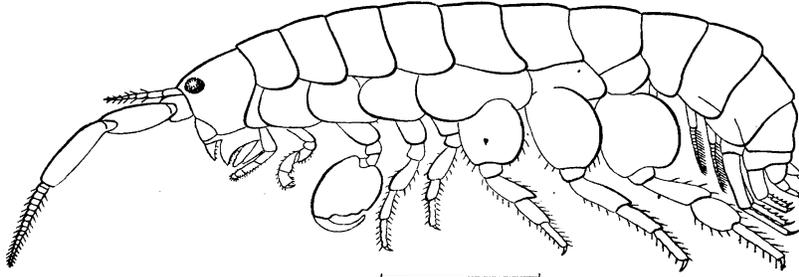


EXPLANATION OF PLATE IV.

- FIGURE 14.—*Orchestia agilis* Smith, (p. 555;) male; lateral view, enlarged five diameters.
- 15.—*Gammarus ornatus* Edwards, (p. 557;) male; lateral view, enlarged two diameters.
- 16.—*Amphithoë maculata* Stimpson, (p. 563;) male; lateral view, enlarged two diameters.
- 17.—*Ampelisca* sp., (p. 561;) lateral view, enlarged five diameters.
- 18.—*Cerapus rubricornis* Stimpson, (p. 565;) female; lateral view, enlarged five diameters; and hand of the second pair of legs of the male, enlarged the same amount.
- 19.—*Unciola irrorata* Say, (p. 567;) male; dorsal view, enlarged six diameters.

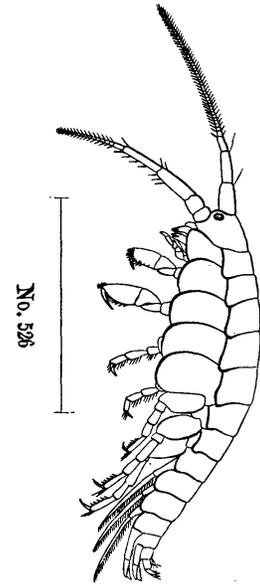
(All the figures were drawn by J. H. Emerton and S. I. Smith.)

Fig. 14.



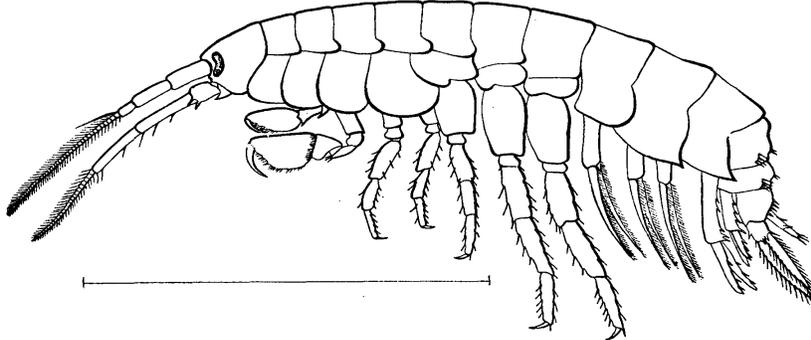
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Fig. 16.



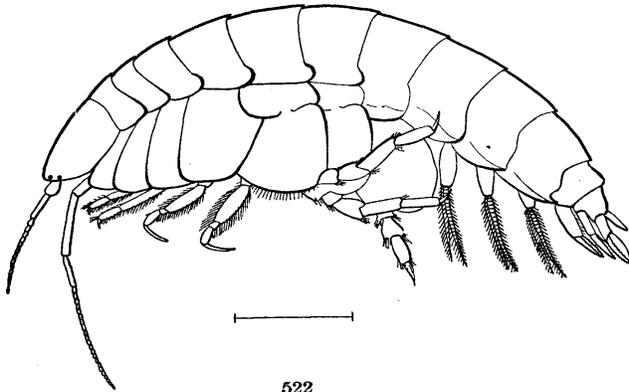
No. 526

Fig. 15.



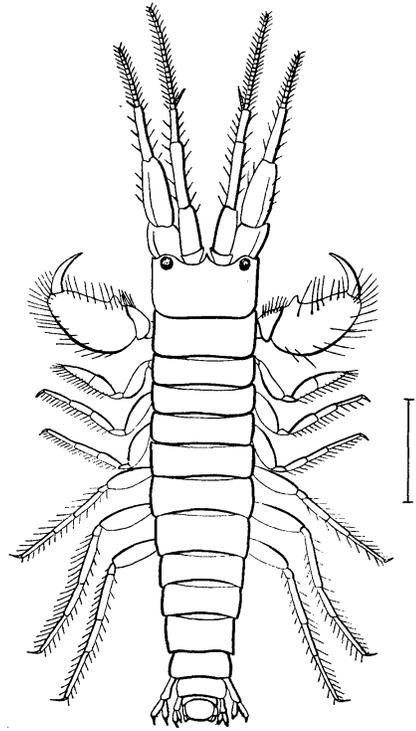
524

Fig. 17.



522

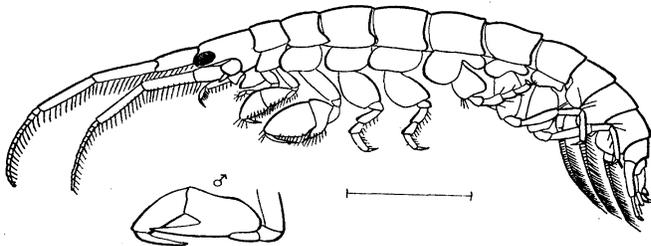
Fig. 19.



528

Fig. 18.

♀



No. 527

EXPLANATION OF PLATE V.

FIGURE 20.—*Caprella geometrica* Say, (p. 567;) lateral view, enlarged about three diameters.

21.—*Sphæroma quadridentata* Say, (p. 569;) dorsal view, enlarged five diameters.

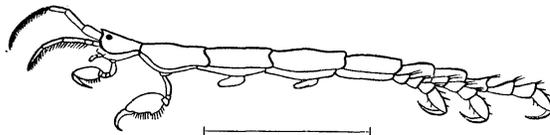
22.—*Idotea cæca* Say, (p. 569;) male; dorsal view, enlarged three diameters.

23.—*Idotea irrorata* Edwards, (p. 569;) male; dorsal view, enlarged two diameters.

24.—*Idotea robusta* Kroyer, (p. 569;) male; dorsal view, enlarged two diameters.

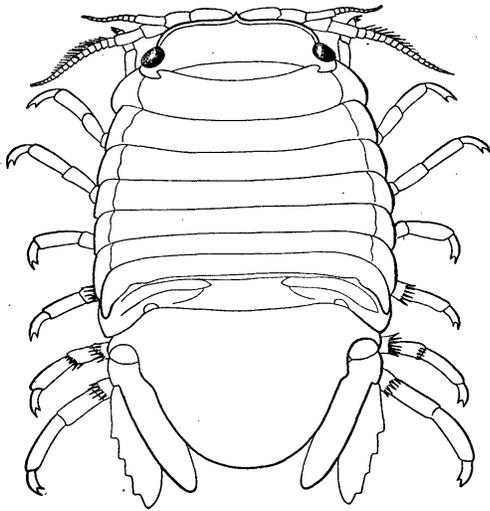
(Figures 20, 21, 23, and 24, were drawn by J. H. Emerton; figure 22 by O. Harger.)

Fig. 20.



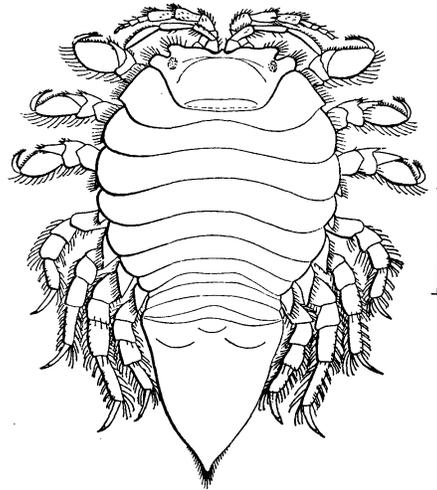
No. 529

Fig. 21.



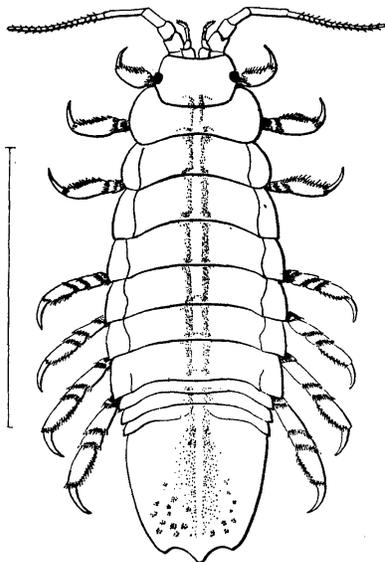
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Fig. 22.



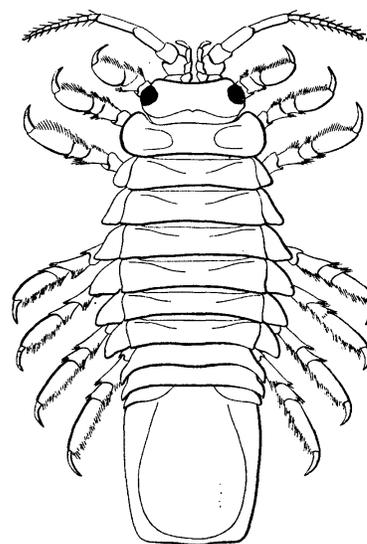
No. 782

Fig. 23.



533

Fig. 24.



534

EXPLANATION OF PLATE VI.

- FIGURE 25.—*Limnoria lignorum* White, (p. 571;) dorsal view, enlarged ten diameters.
26.—*Erichsonia filiformis* Harger, (p. 570;) dorsal view, enlarged five diameters.
27.—*Erichsonia attenuata* Harger, (p. 570;) dorsal view, enlarged three diameters.
28.—*Epelys trilobus* Smith, (p. 571;) dorsal view, enlarged ten diameters.
29.—*Livoneca ovalis* Harger, (p. 572;) dorsal view, enlarged three diameters.
(Figure 25 was drawn by S. I. Smith; 26 and 28 by O. Harger; 27 and 29 by J. H. Emerton.)

Fig. 25.

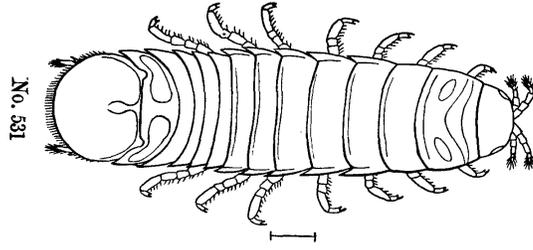


Fig. 26.

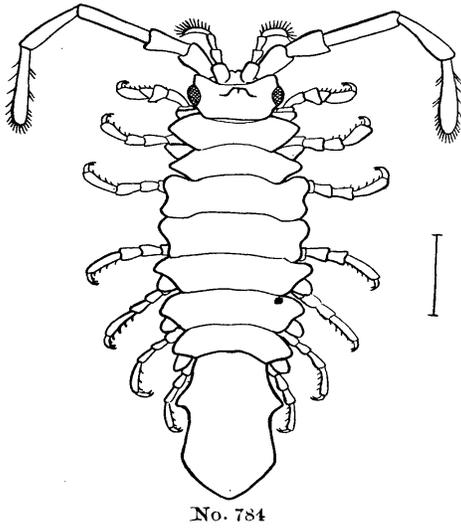


Fig. 27.

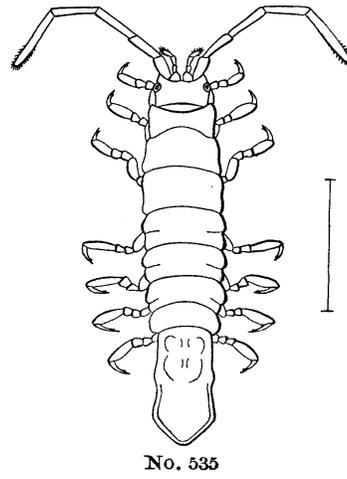


Fig. 28.

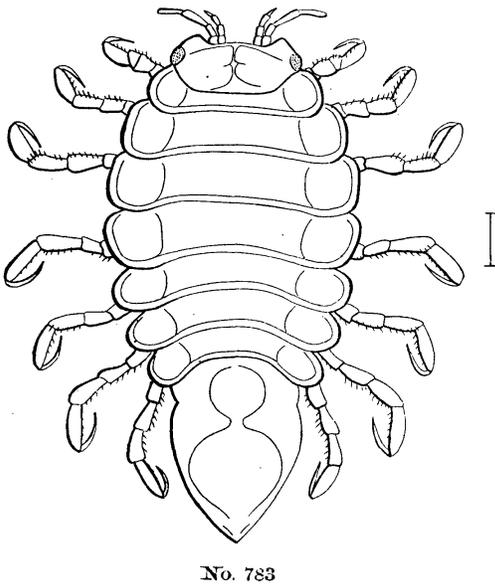
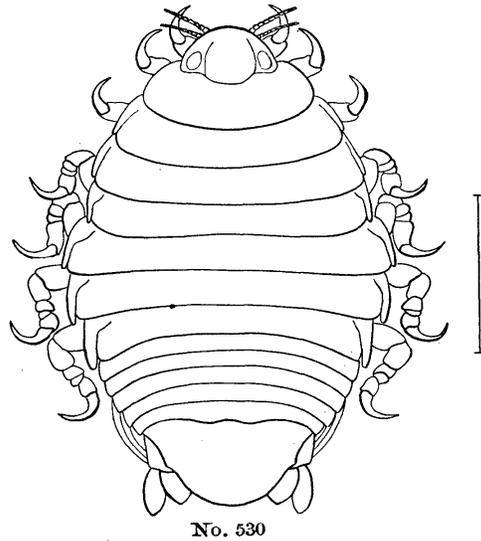


Fig. 29.



EXPLANATION OF PLATE VII.

- FIGURE 30.—*Lerneonema radiata* Steenstrup and Lütken, (p. 578;) female, enlarged two diameters.
- 31.—*Pandarus*, (p. 576;) female; dorsal view, enlarged five diameters.
- 32.—*Nogagus Latreilli*, (p. 576;) male; dorsal view, enlarged five diameters
- 33.—*Sapphirina*, (p. 573;) male; dorsal view, enlarged ten diameters.
- 34.—*Lepas fascicularis* Ellis and Solander, (p. 579;) lateral view of a single animal from a large cluster, slightly enlarged.
- 35.—*Phoxichilidium maxillare* Stimpson, (p. 544;) male; dorsal view, enlarged two diameters.

(Figure 33 was drawn by S. I. Smith; all the others by J. H. Emerton.)

Fig. 30.

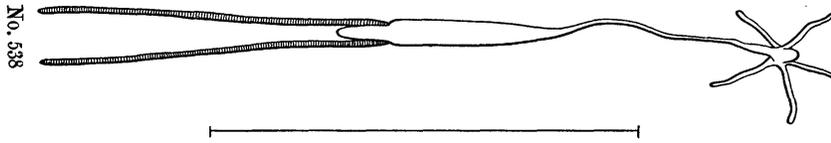
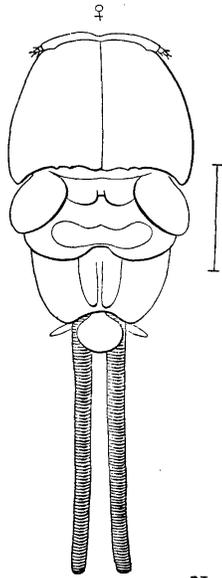


Fig. 31.



No. 537

Fig. 32.

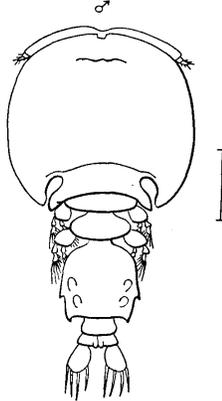


Fig. 33.

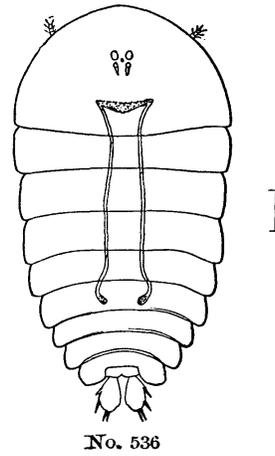


Fig. 34

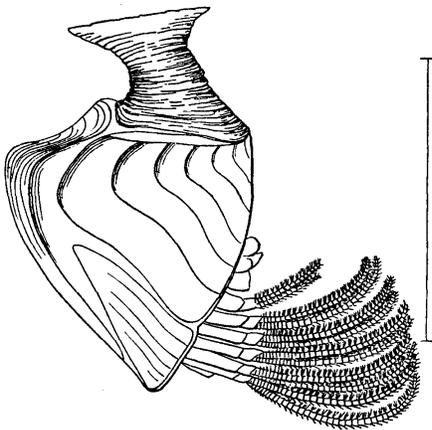
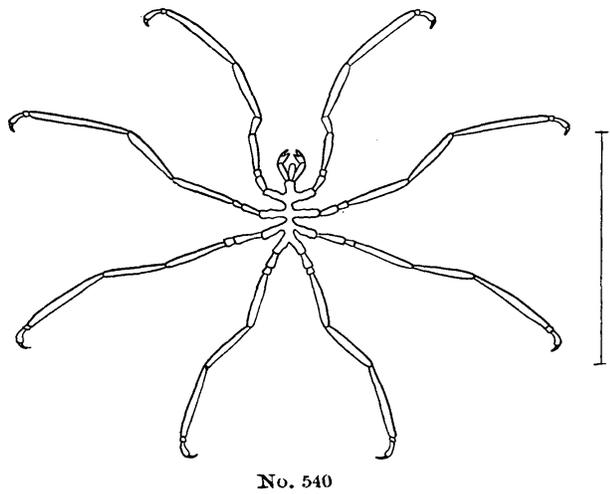


Fig. 35.



EXPLANATION OF PLATE VIII.

- FIGURE 36.**—*Squilla empusa* Say, (p. 536;) lateral view of the free-swimming larvæ in one of its later stages, enlarged ten diameters.
- 37.**—Zoëa of the common crab, *Cancer irroratus*, (p. 530;) in the last stage just before it changes to the megalops condition; lateral view, enlarged seventeen diameters.
- 38.**—Megalops stage of the same, just after the change from the zoëa condition; dorsal view, enlarged thirteen diameters.

(All the figures were drawn by J. H. Emerton.)

Fig. 36.

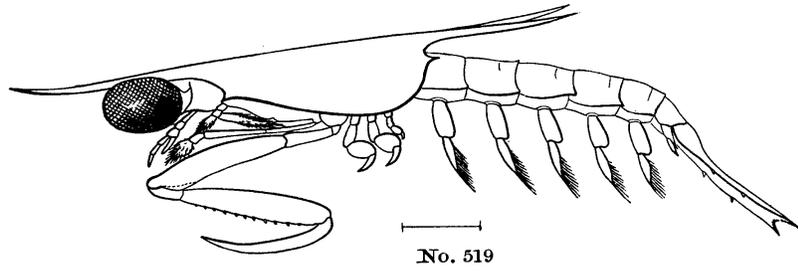


Fig. 37.

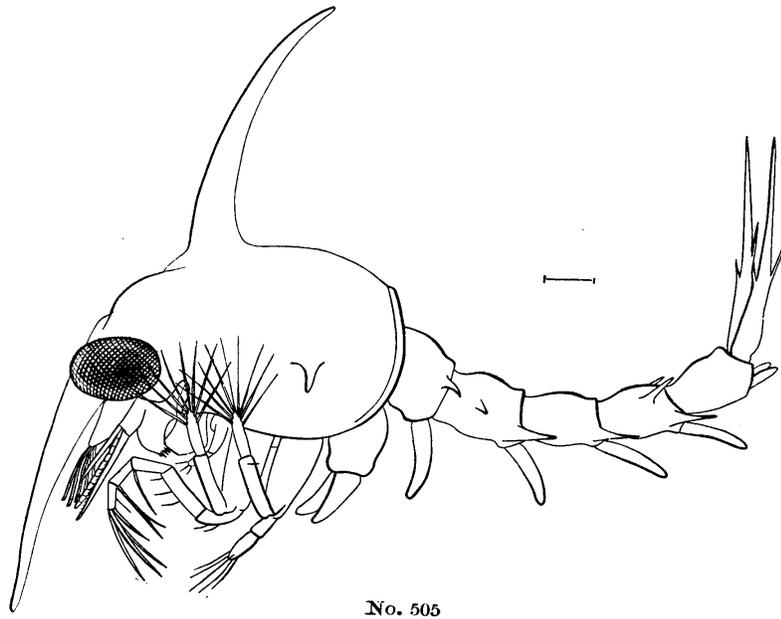
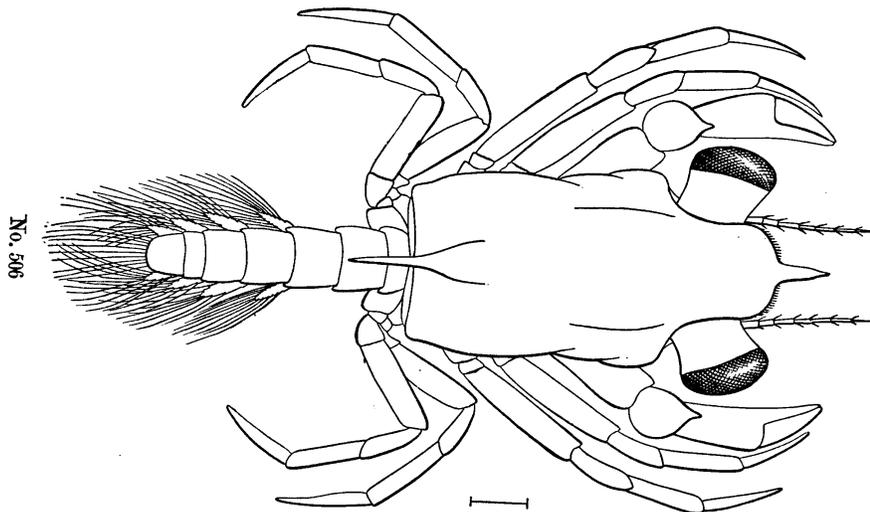


Fig. 37 a.



EXPLANATION OF PLATE IX.

Larval young of the Lobster, *Homarus Americanus* Edwards, (p. 522.)

FIGURE 38.—*A.* Lateral view of the larval young in the first stage observed, enlarged seven diameters.

B. The same in a dorsal view, the abdomen held horizontally.

C. Antennula, enlarged fourteen diameters.

D. One of the thoracic legs of the second pair, enlarged fourteen diameters; *a*, exopodus; *b*, epipodus; *c*, branchiæ.

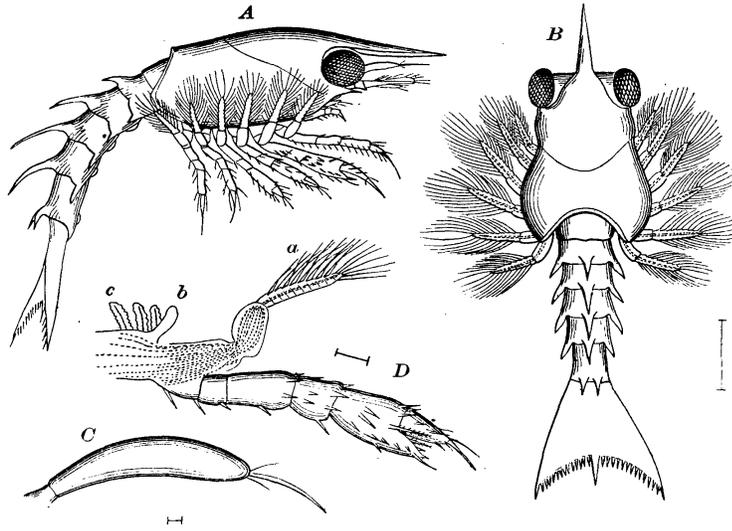
39.—*E.* Lateral view of the larval young in the third stage, enlarged five and one-half diameters.

F. Terminal portion of the abdomen seen from above, enlarged ten diameters; *a*, one of the small spines of the posterior margin of the terminal segment, enlarged fifty diameters.

G. Basal portion of one of the legs of the second pair, showing the epipodus and branchiæ, enlarged fourteen diameters.

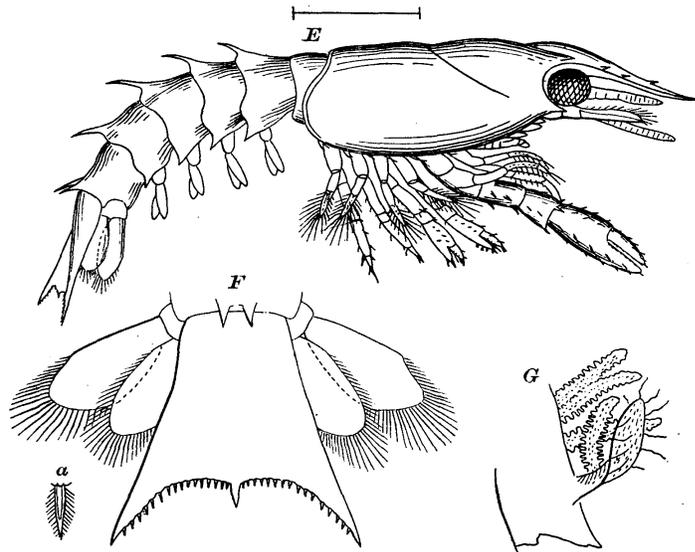
(All the figures were drawn from alcoholic specimens, by S. I. Smith.)

Fig. 38.



511

Fig. 39.



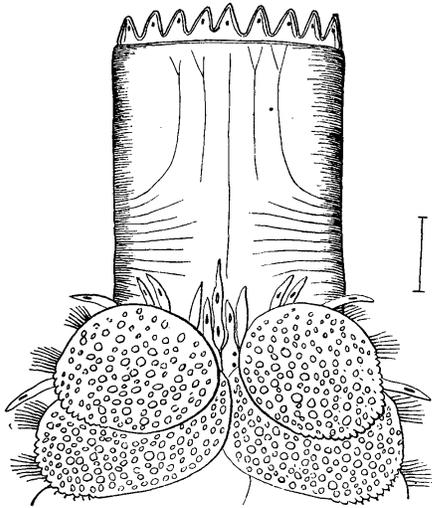
No. 512

EXPLANATION OF PLATE X.

- FIGURE 40.—*Lepidonotus squamatus*, (p. 581;) anterior part of the body, head, and proboscis; dorsal view.
- 41.—The same; end of the proboscis; front view, showing the jaws and papillæ.
- 42.—*Lepidonotus sublevis*, (p. 581;) dorsal view.
- 43.—*Rhynchobolus dibranchiatus*, (p. 596;) anterior part of body, mouth and head; lower side.
- 44.—The same; lateral appendage, showing the dorsal cirrus, the upper and lower branchiæ and the setigerous lobes between them.
- 45.—*Rhynchobolus Americanus*, (p. 596;) anterior part of the body and extended proboscis; dorsal view.
- 46.—The same; lateral appendages, showing the dorsal cirrus, the branched gill, the setigerous lobes, and the ventral cirrus.

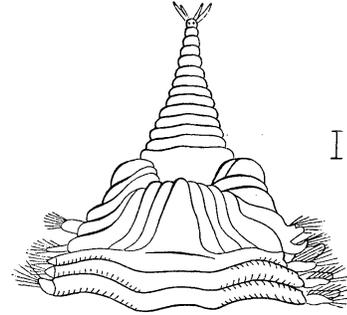
(Figures 40, 41, 42, 45, were drawn from nature by J. H. Emerton; 44 by A. E. Verrill; 43 and 46 were copied from Ehlers.)

Fig. 40.



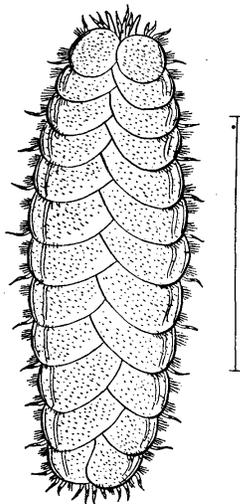
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Fig. 43.



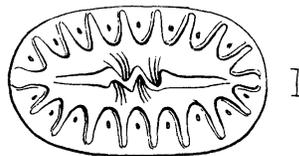
557

Fig. 42.



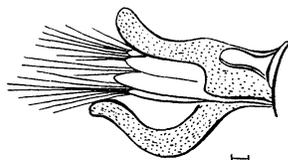
No. 543

Fig. 41.



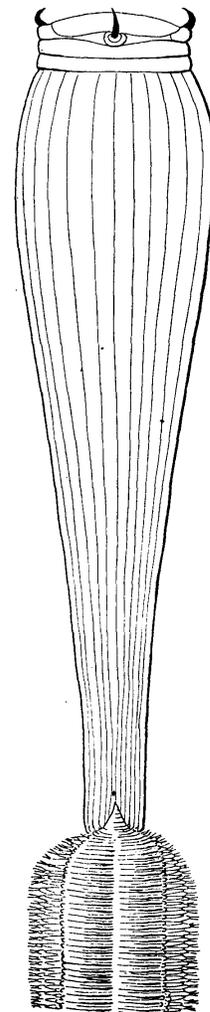
No. 545

Fig. 44.



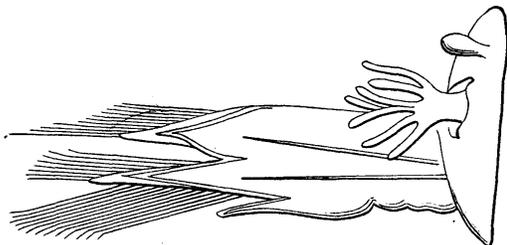
No. 558

Fig. 45.



No. 559

Fig. 46.



No. 560

EXPLANATION OF PLATE XI.

- FIGURE 47.—*Nereis virens*, (p. 590;) head little more than natural size ; dorsal view.
48.—The same ; extended proboscis ; dorsal view.
49.—The same ; probosci ; sventral view.
50.—The same ; lateral appendage.
51.—*Nereis limbata*, male, (p. 590;) a few segments of the middle region of the body, anterior region, head and extended proboscis ; dorsal view.
52.—*Nereis pelagica*, female, (p. 591;) natural size ; dorsal view.
53.—The same ; male, natural size ; dorsal view.
54.—The same ; head more enlarged ; dorsal view.
55.—The same ; proboscis ; ventral view.
56.—*Phyllodoce gracilis?*, (p. 586;) head ; dorsal view.

(Figure 51 was drawn from nature by J. H. Emerton; 47, 48, 49, 50, 52, 53, were copied from Ehlers; 54, 55, from Malmgren; 56, from A. Agassiz.)

Fig. 47.

546

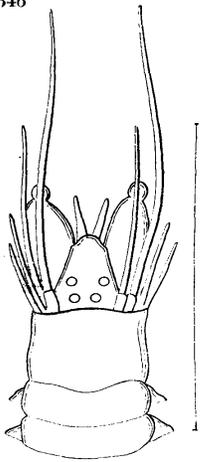
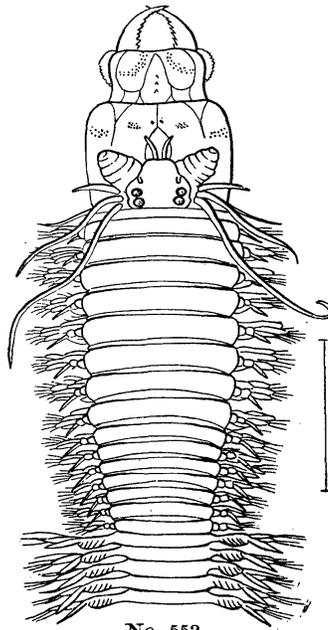


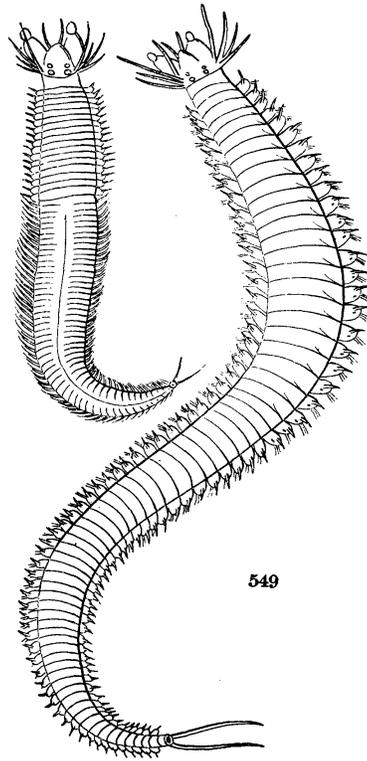
Fig. 51.



No. 552

Fig. 53.

Fig. 52.



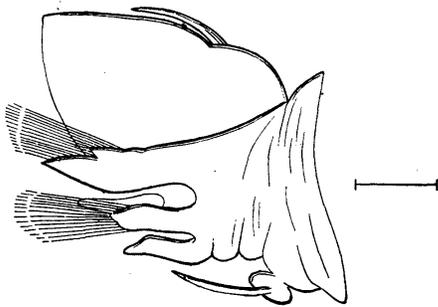
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Fig. 48.

Fig. 49.

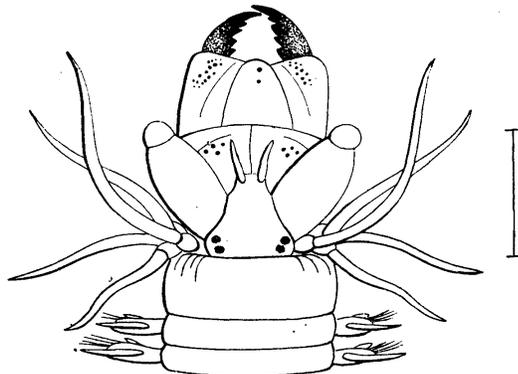


Fig. 50.



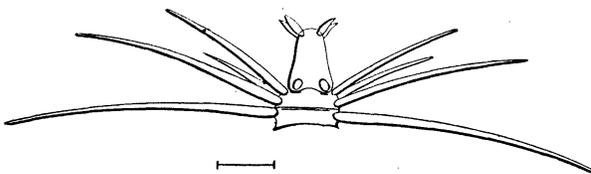
No. 548

Fig. 54.



No. 550

Fig. 56.



565

Fig. 55.



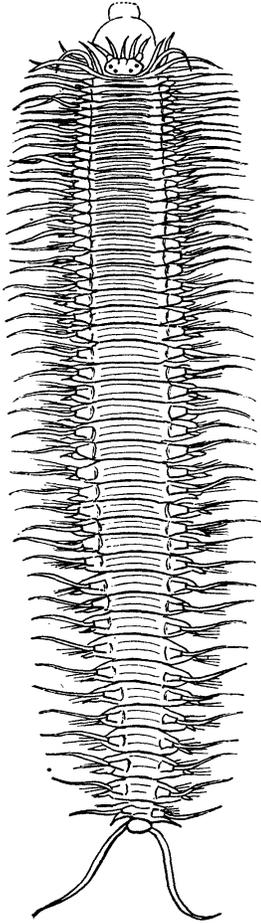
No. 551

EXPLANATION OF PLATE XII.

- FIGURE 57.**—*Nephtys picta*, (p. 583;) anterior part of body and head, much enlarged; dorsal view.
- 58.—*Nephtys buccera*, (p. 583;) anterior part of body and head, enlarged; ventral view.
- 59.—*Nephtys ingens*, (p. 583;) anterior part of body and extended proboscis; ventral view.
- 60.—The same; dorsal view.
- 61.—*Podarke obscura*, (p. 589;) dorsal view, from a specimen preserved in alcohol and much contracted in length.
- 62.—*Nectonereis megalops*, (p. 592;) ventral view.
- 63.—The same; anterior region of body and head; dorsal view.
- 64.—*Marphysa Leidyi*, (p. 593;) anterior part of body and head, enlarged about three diameters; dorsal view.

(Figures 57 and 58 were copied from Ehlers; all the rest were drawn from nature by J. H. Emerton)

Fig. 61.

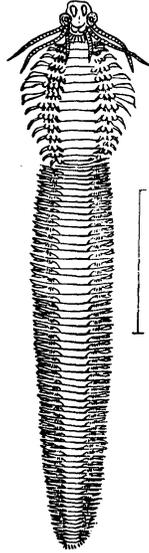


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Fig. 57.

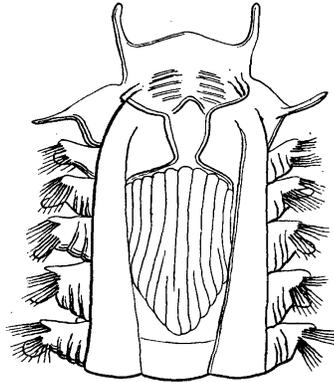


F 62.



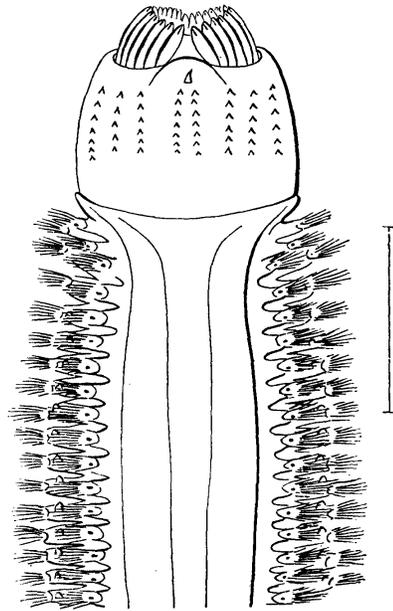
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Fig. 58.



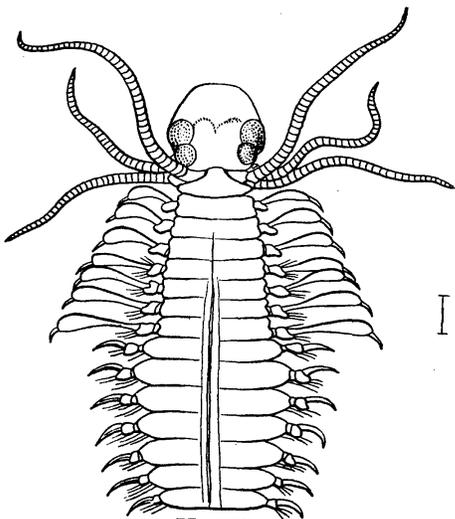
No. 562

Fig. 59.



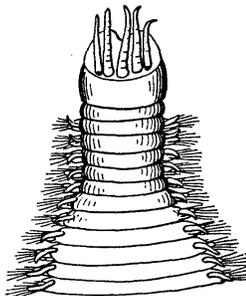
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Fig. 63.



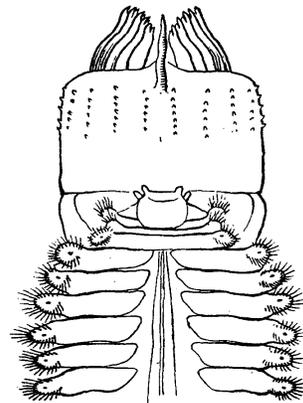
No. 568

Fig. 64.



No. 779

Fig. 60.



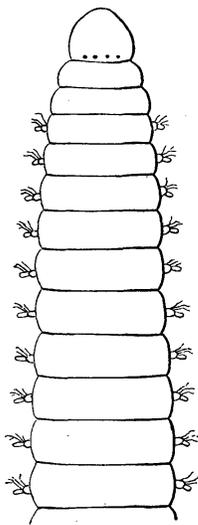
No. 563

EXPLANATION OF PLATE XIII.

- FIGURE 65.—*Autolytus cornutus*, (p. 590;) an asexual individual, from which a male is about to separate; dorsal view, enlarged about six diameters; A, A, A, antennæ of the former; C, C, C, C, two tentacles and one tentacular cirrus on each side, followed by the dorsal cirri; F, the intestine; *d*, the long setæ and dorsal cirri of the male.
- 66.—The same; anterior part of a female, more enlarged; the letters as before; *b*, the eyes; *e*, the eggs; *f*, the intestine; 3, one of the appendages of the anterior region of the body; *c*, the dorsal cirrus; *h*, the setigerous tubercle, supporting hooked setæ.
- 67.—*Diopatra cuprea*, (p. 593;) head and anterior part of body, showing part of the branchiæ; side view.
- 68.—The same; ventral view, showing the mouth open and jaws thrown back.
- 69.—*Lumbriconereis opalina*, (p. 594;) anterior part of body; dorsal view.
- 70.—The same; lateral appendage and setæ.

(Figures 65 and 66 were copied from A. Agassiz; 67, 68, 69 were drawn from nature by J. H. Emerton; 70, by A. E. Verrill.)

Fig. 69.



No. 555

Fig. 65.

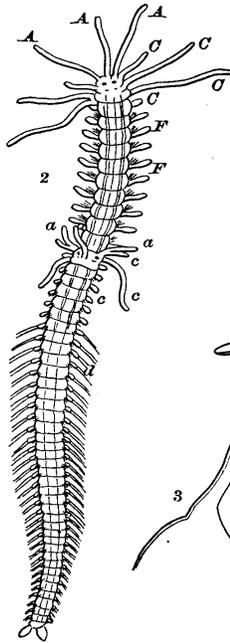
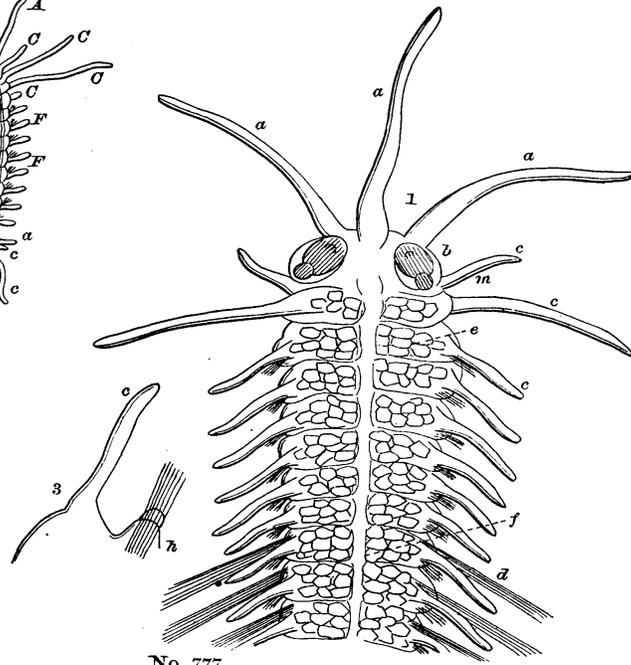
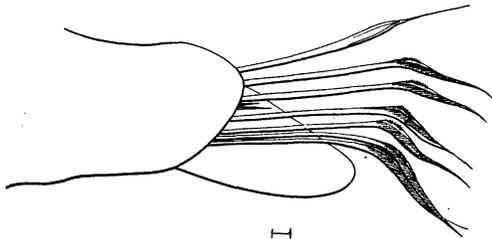


Fig. 66.



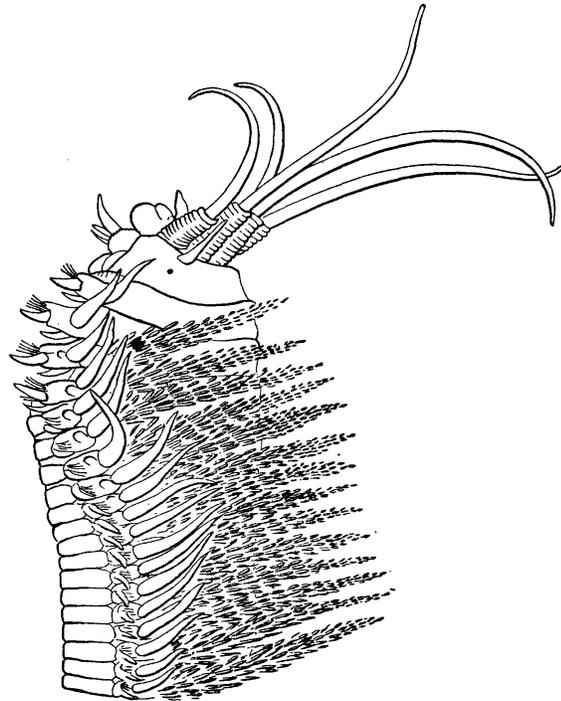
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Fig. 70.



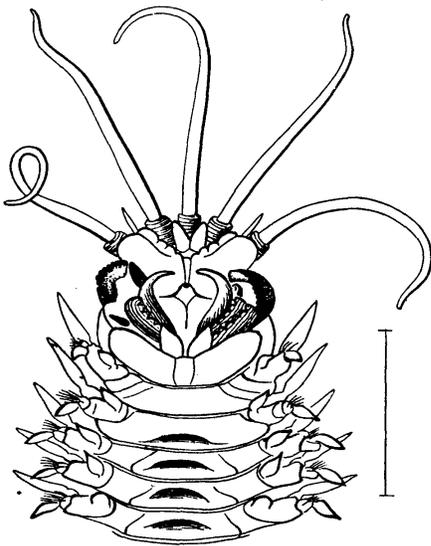
No. 556

Fig. 67.



No. 553

Fig. 68.



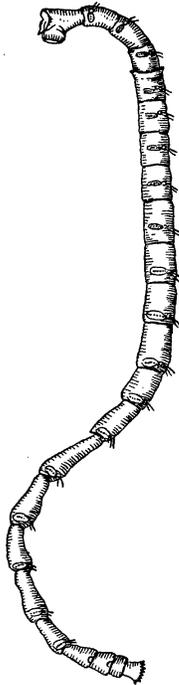
No. 554

EXPLANATION OF PLATE XIV.

- FIGURE 71.**—*Clymenella torquata*, (p. 608;) natural size; lateral view.
72.—The same; head and extended proboscis; front view.
73.—The same; posterior and caudal segments; dorsal view.
74.—*Sternaspis fossor*, (p. 606;) dorsal view.
75.—*Trophonia affinis*, (p. 605;) anterior portion; dorsal view.
76.—*Anthostoma robustum*, (p. 597;) anterior portion of body, head, and extended proboscis; dorsal view, natural size.
77.—*Spio setosa*, (p. 602;) anterior segments and head; side view; only one of the two large tentacles is represented.
78.—*Polydora ciliatum*, (p. 603;) anterior and posterior parts; dorsal view.

(Figures 71, 72, 73, 75, 76, were drawn from nature by J. H. Emerton; 74, by A. E. Verrill; 77, 78, were copied from A. Agassiz.)

Fig. 71.



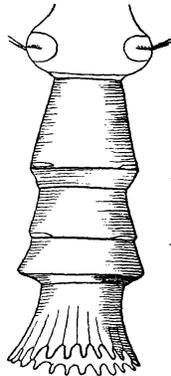
No. 577

Fig. 72.



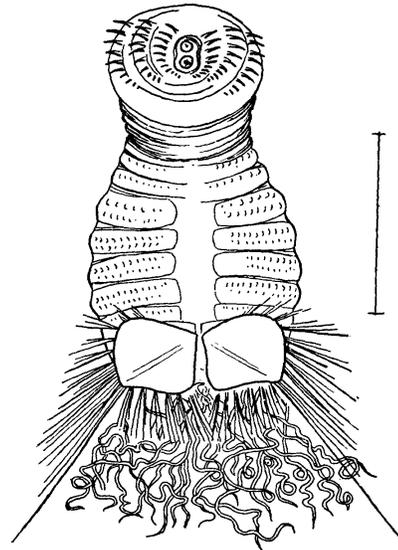
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Fig. 73.



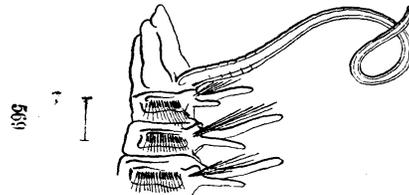
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Fig. 74.



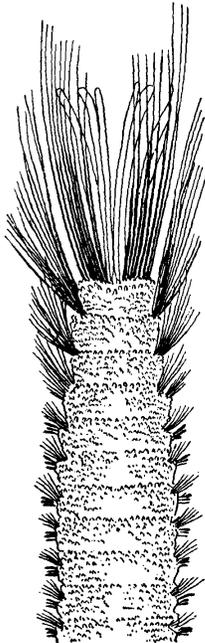
No. 576

Fig. 77.



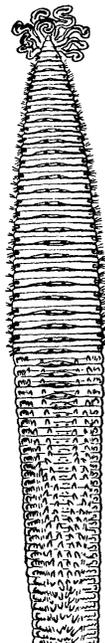
699

Fig. 75.



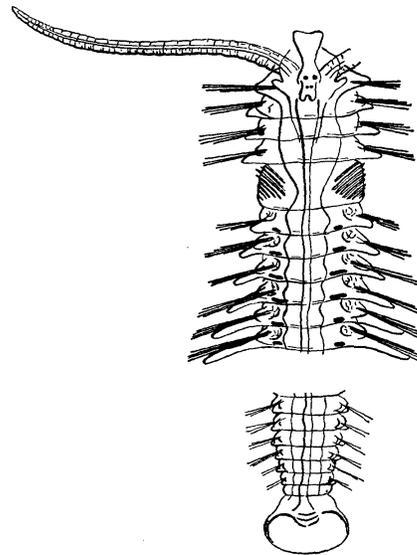
No. 575

Fig. 76.



No. 571

Fig. 78.



570

EXPLANATION OF PLATE XV.

FIGURE 79.— *Annotrypane fimbriata*, (p. 604;) ventral view.

80.— *Cirratulus grandis*, (p. 606;) natural size, from a living specimen; lateral view.

81.—The same; natural size, from a preserved specimen; dorsal view.

(Figures 79 and 81 were drawn from nature by J. H. Emerton; figure 80, by A. E. Verrill.)

Fig. 79.

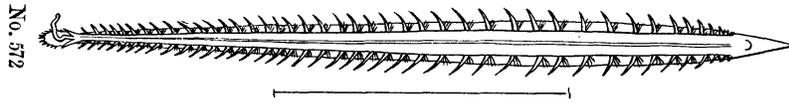
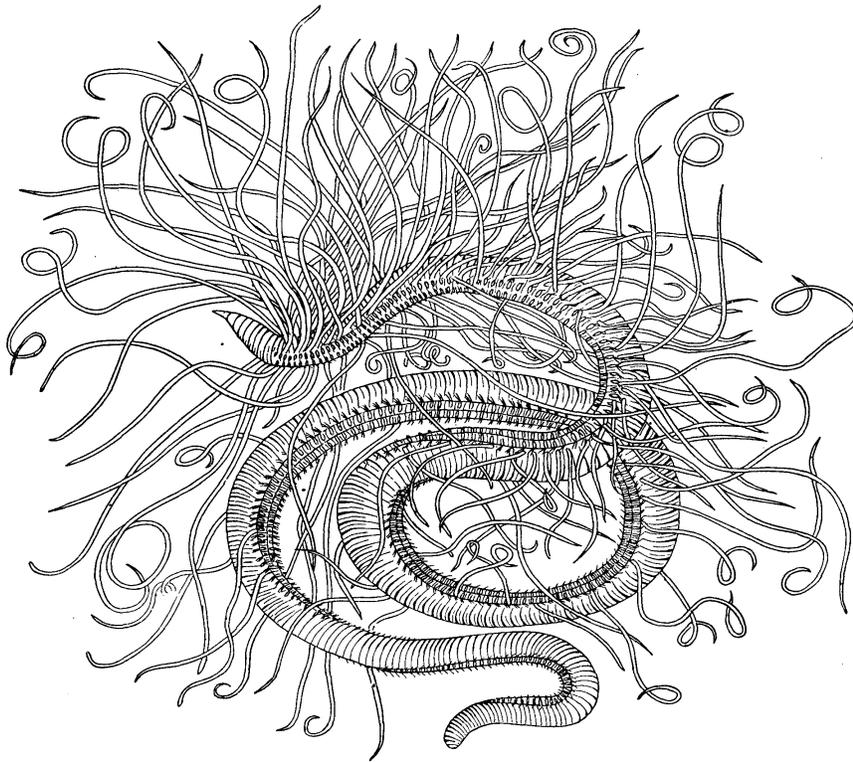
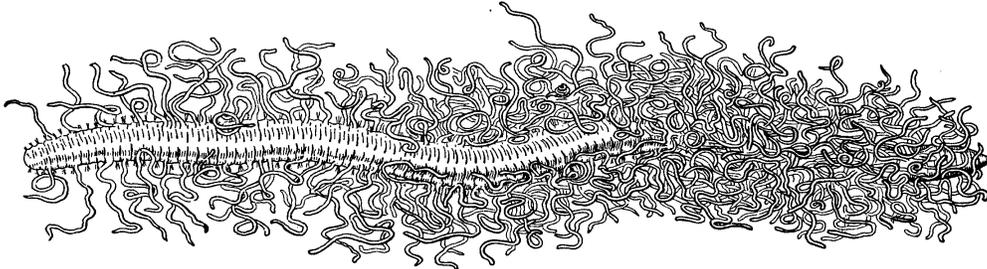


Fig. 80.



No. 574

Fig. 81.



No. 573

EXPLANATION OF PLATE XVI.

FIGURE 82.—*Amphitrite ornata*, (p. 613;) lateral view, somewhat reduced, from a living specimen.

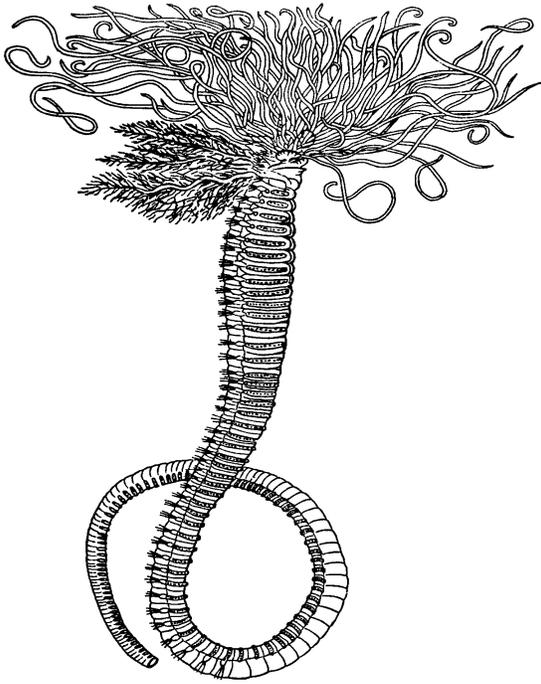
83.—*Ampharete gracilis*, (p. 612;) lateral view.

84.—*Euchone elegans*, (p. 618;) lateral view.

85.—*Polycirrus eximius*, (p. 616;) dorsal view of a living specimen creeping by means of its tentacles; natural size.

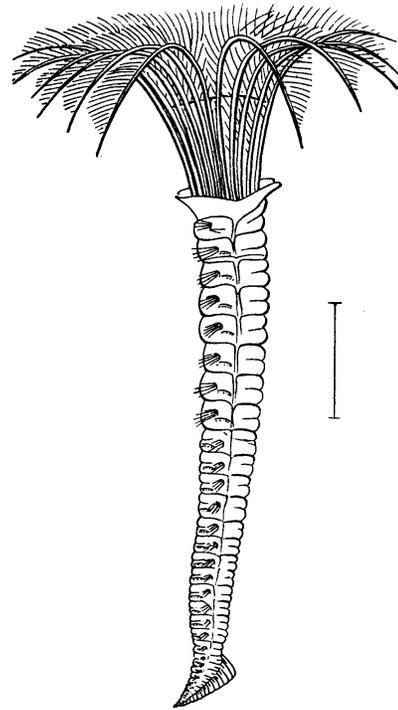
(Figures 82, 84, 85, were drawn from nature by A. E. Verrill; 83, by J. H. Emerton.)

Fig. 82.



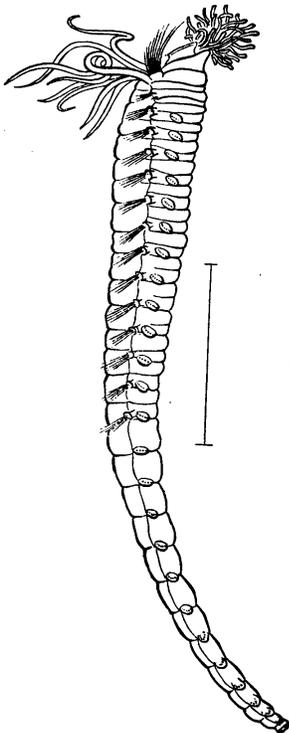
No. 586

Fig. 84.



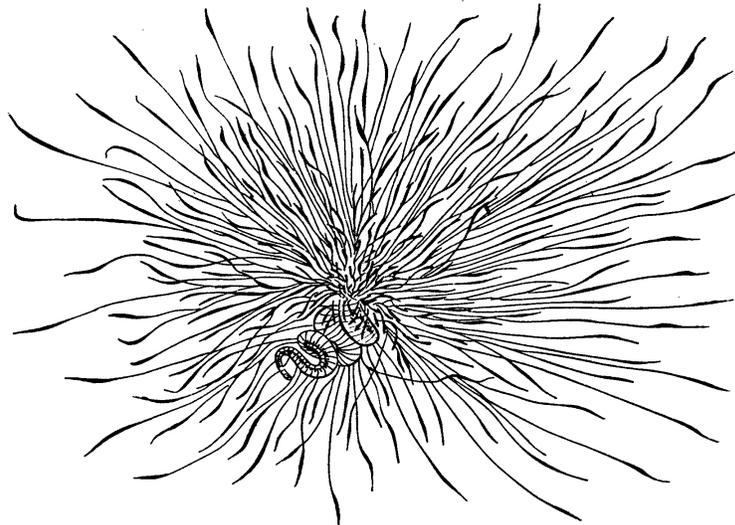
No. 585

Fig. 83.



No. 584

Fig. 85.



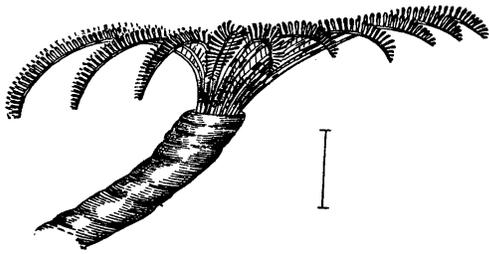
No. 587

EXPLANATION OF PLATE XVII.

- FIGURE 86.—*Potamilla oculifera*, (p. 617 ;) in its tube, with branchiæ fully expanded, from a living specimen, found at Eastport, Maine.
87.—*Cistenides Gouldii*, (p. 612 ;) lateral view.
87*a*.—The same; head and branchiæ, dorsal view.
88.—*Sabellaria vulgaris*, (p. 611 ;) lateral view.
88*a*.—The same; view of the operculum and tentacles, from above.

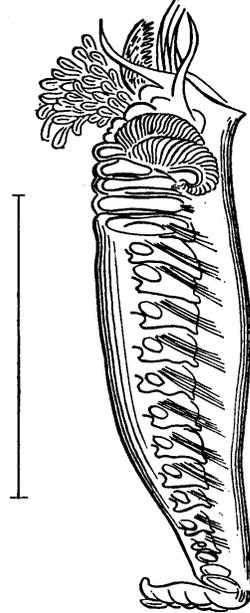
(Figures 84, 88, 88*a* were drawn from nature, by J. H. Emerton; 87, 87*a* by A. E. Verrill.)

Fig. 86.



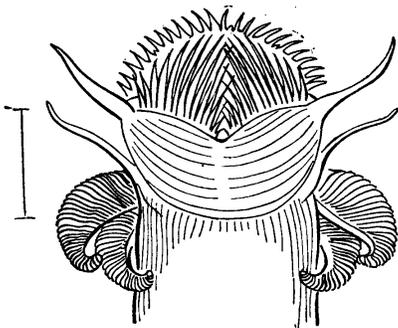
No. 778

Fig. 87.



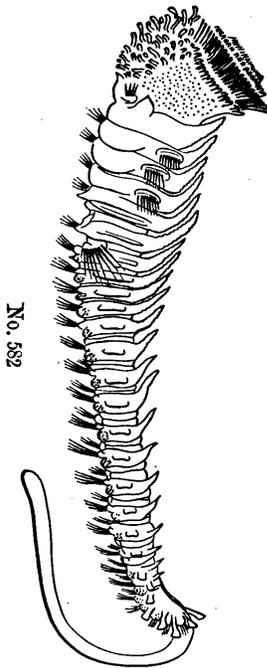
No. 580

Fig. 87a.



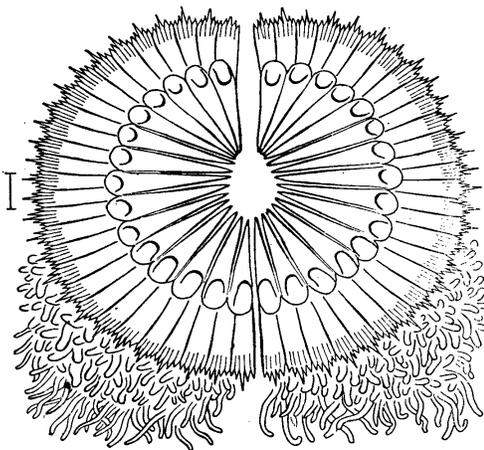
No. 581

Fig. 88.



No. 582

Fig. 88a.



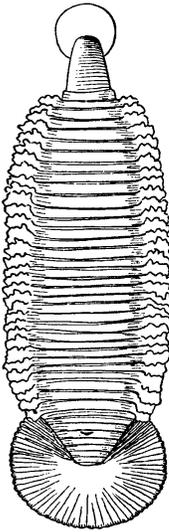
No. 583

EXPLANATION OF PLATE XVIII.

- FIGURE 89.—*Branchiobdella Ravenelii*, (p. 624 ;) dorsal view, natural size.
90.—*Malacobdella obesa*, (p. 625 ;) dorsal view.
91.—*Pontobdella rapax*, (p. 625 ;) dorsal view.
92.—*Phascolosoma cæmentarium*, (p. 627 ;) lateral view.
93.—*P. Gouldii*, (p. 627 ;) lateral view, reduced one-half.
94.—*Pontonema marinum*, (p. 634 ;) female, lateral view, enlarged 15 diameters; *o*, eggs; *v*, genital orifice.

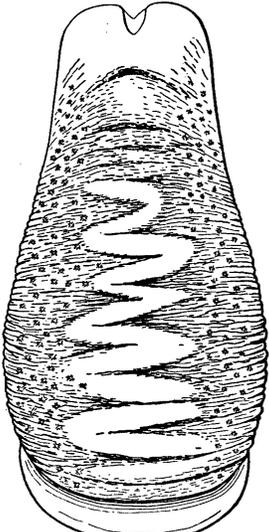
(Figure 94 was drawn from a living specimen, by A. E. Verrill; all the others were drawn from preserved specimens, by J. H. Emerton.)

Fig. 89.



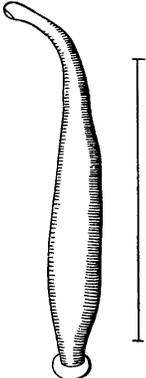
No. 588

Fig. 90.



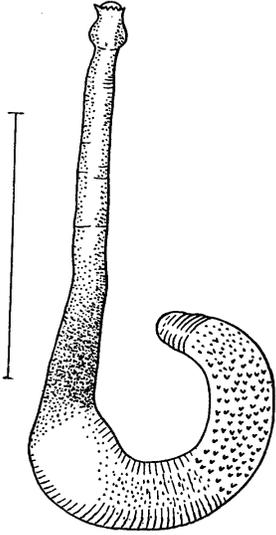
No. 781

Fig. 91.



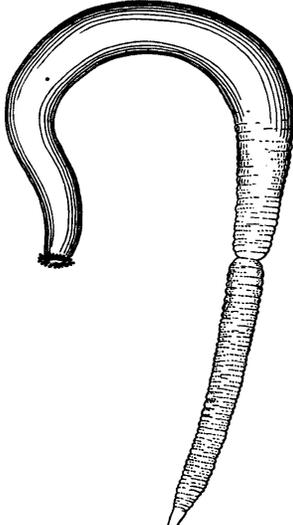
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Fig. 92.



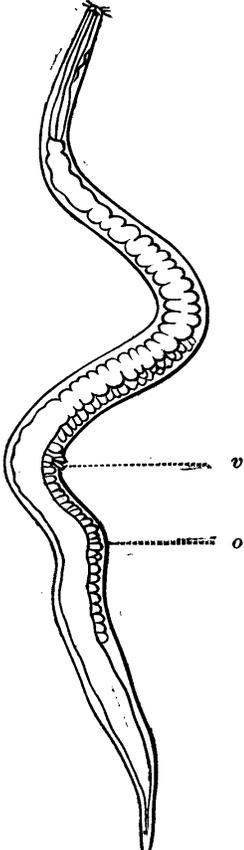
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Fig. 93.



No. 780

Fig. 94.

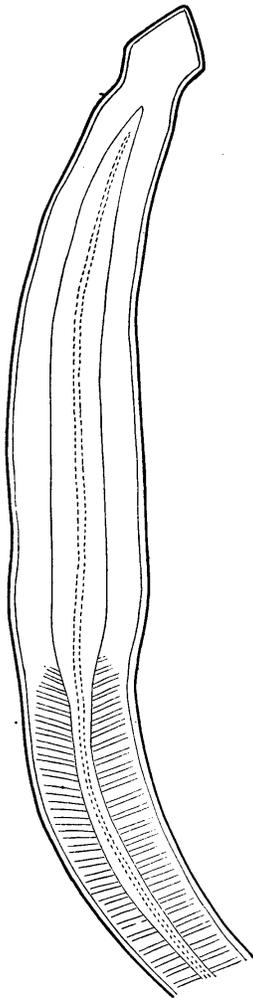


EXPLANATION OF PLATE XIX.

- FIGURE 95.—*Cosmocephala ochracea*, (p. 630 ;) anterior portion, enlarged nearly three diameters, dorsal view.
95*a*.—The same ; ventral view.
96.—*Meckelia ingens*, (p. 630 ;) anterior portion of a specimen not full grown, natural size.
96*a*.—The same ; ventral view of the anterior portion and head of a larger specimen, in a different state of contraction, natural size.
97.—*Polinia glutinosa*, (p. 631 ;) dorsal view, enlarged two diameters.
98.—*Tetrastemma arenicola*, (p. 629 ;) dorsal view.
99.—*Stylochopsis littoralis*, (p. 632 ;) dorsal view.
100.—*Planocera nebulosa*, (p. 632 ;) dorsal view.

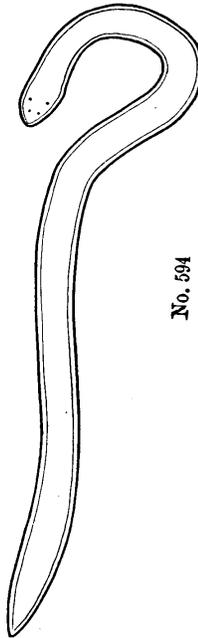
(All the figures were drawn from living specimens, by A. E. Verrill.)

Fig. 96.



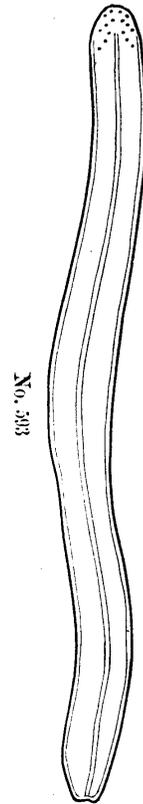
No. 591

Fig. 98.



No. 594

Fig. 97.



No. 593

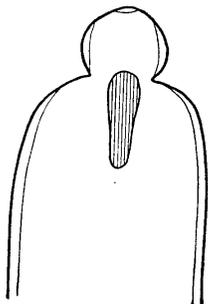
Fig. 95.



Fig. 95a.

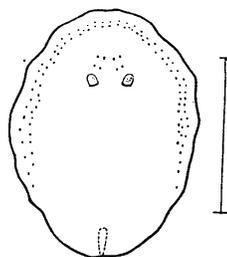


Fig. 96a.



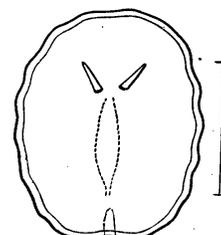
No. 592

Fig. 99.



No. 596

Fig. 100.



No. 595

EXPLANATION OF PLATE XX.

FIGURE 101.—*Loligo pallida*, (p. 635 ;) dorsal view, about one-third natural size.

101*a*.—The same ; the "pen" dorsal side.

102.—*Loligo Pealii* ?, (p. 635 ;) a cluster of the eggs.

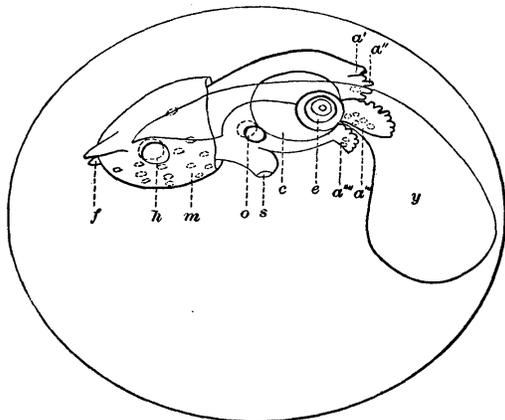
103.—The same ; an embryo just before hatching, much enlarged ; *a'*, *a''*, *a'''*, *a'''*, the right "arms" belonging to four pairs ; *c*, the side of the head ; *e*, the eye ; *f*, the caudal fins ; *h*, the heart ; *n*, the mantle in which color-vesicles are already developed and capable of changing their colors ; *o*, the internal cavity of the ears ; *s*, the siphon ; *y*, the portion of the yolk not yet absorbed.

104.—The same ; an embryo in an earlier stage of development, more highly magnified ; the letters are the same as before.

105.—The same ; a young specimen, recently hatched, found swimming at the surface, dorsal view.

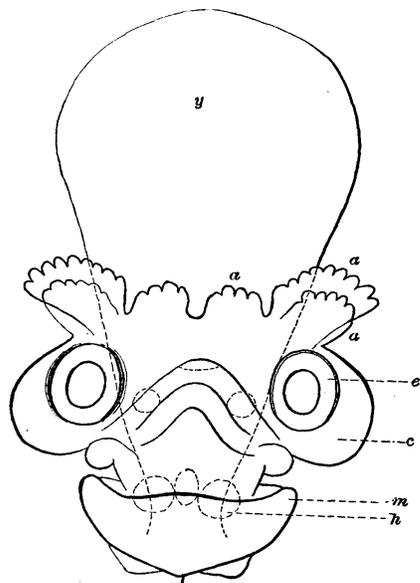
(Figures 103, 104 are camera-lucida drawings made from the living specimens, by A. E. Verrill ; all the others were drawn from preserved specimens, by J. H. Emerton.)

Fig. 103.



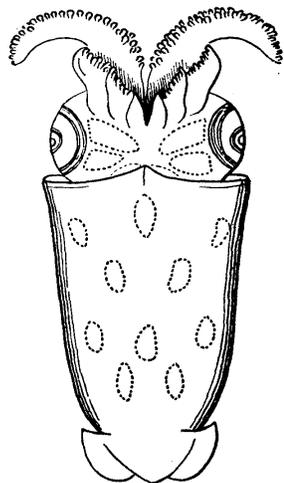
No. 775

Fig. 104.



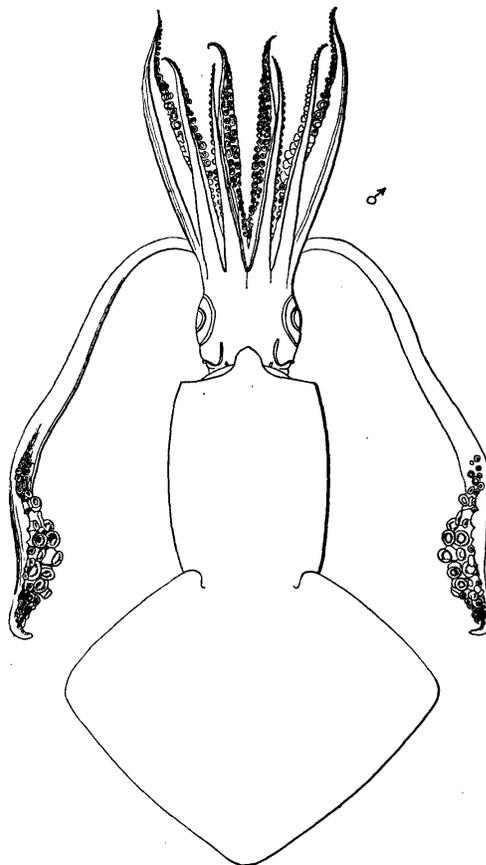
No. 774

Fig. 105.



No. 621

Fig. 101.



No. 622

Fig. 102.

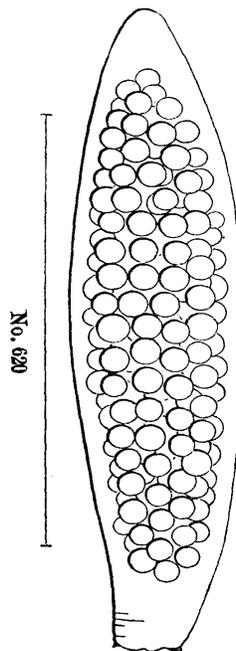
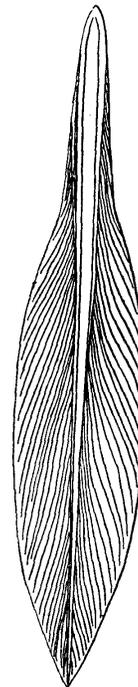


Fig. 101a.



No. 623