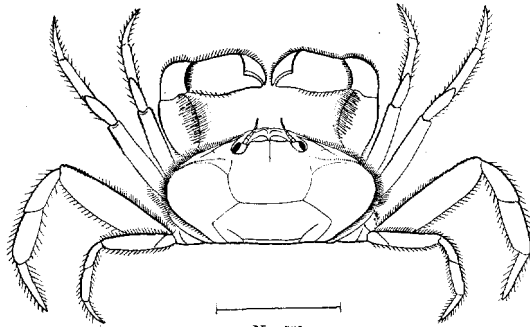


EXPLANATION OF PLATE I.

- 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.

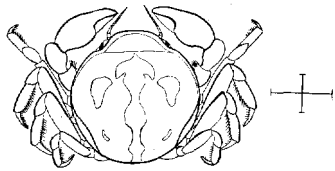
(All the figures were drawn by J. H. Emerton.)

Fig. 1.



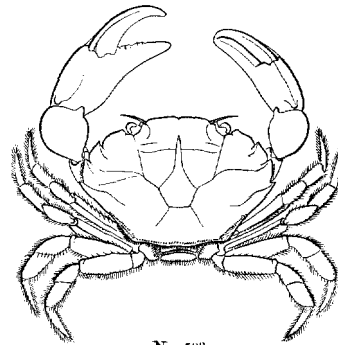
No. 501

Fig. 2.



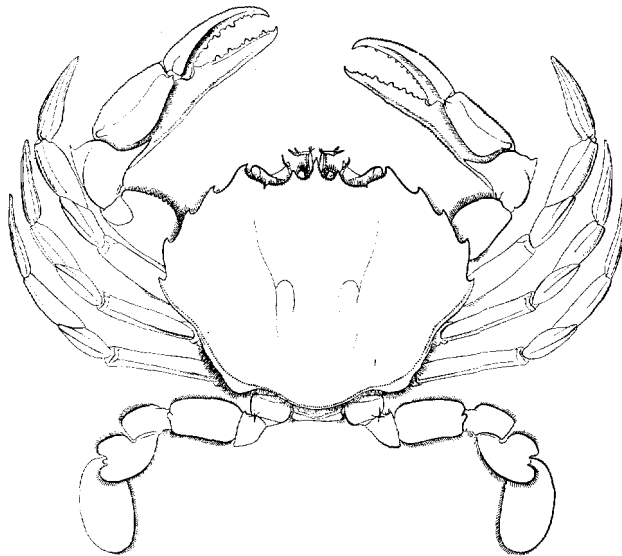
No. 502

Fig. 3.



No. 503

Fig. 4.



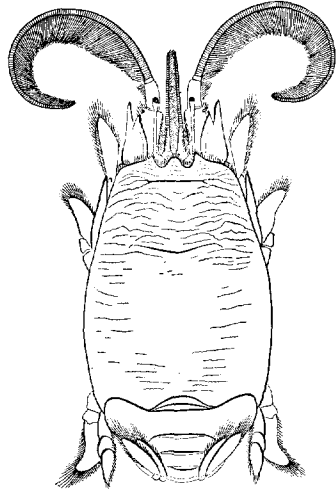
No. 504

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.

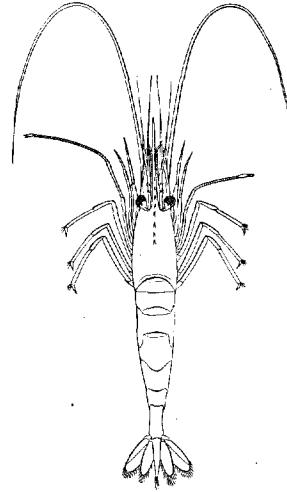
(All the figures were drawn by J. H. Emerton.)

Fig. 5.



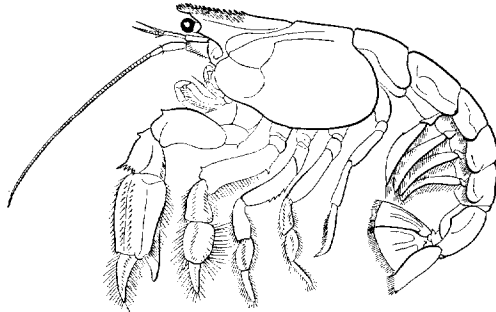
No. 507

Fig. 6.



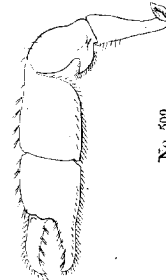
No. 515

Fig. 7.



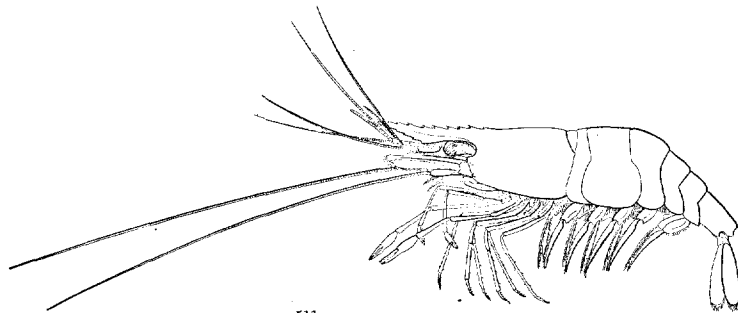
508

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.

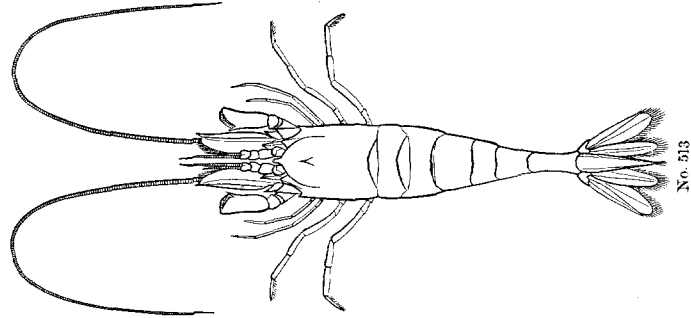


Fig. 11.

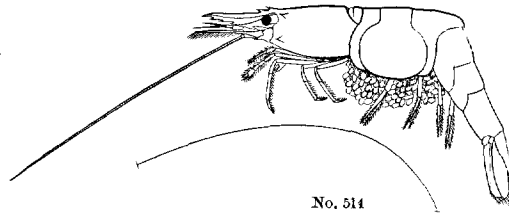


Fig. 12.

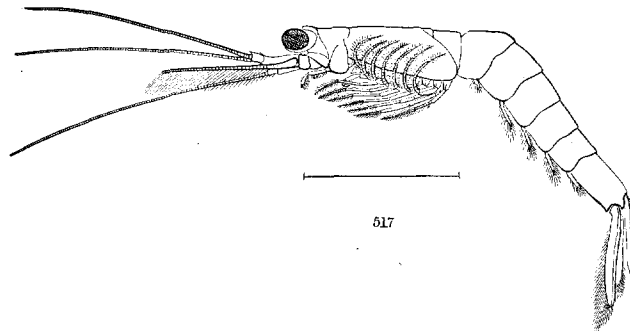
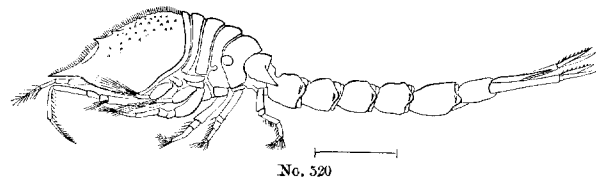


Fig. 13.

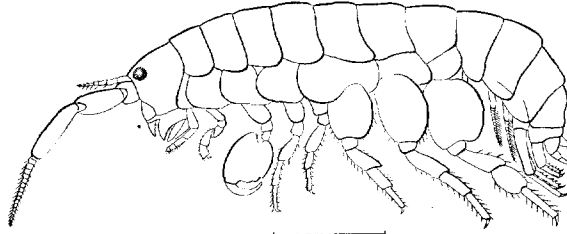


EXPLANATION OF PLATE IV.

- 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 rubicornis* 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.

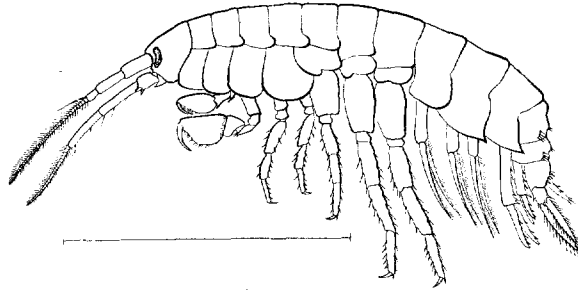
(All the figures were drawn by J. H. Emerton and S. I. Smith.)

Fig. 14.



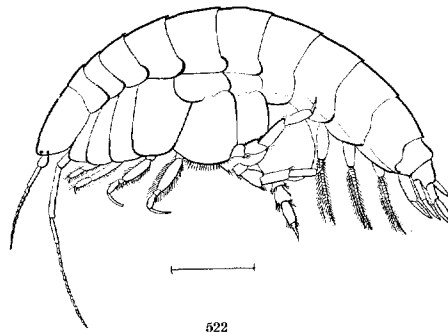
No. 521

Fig. 15.



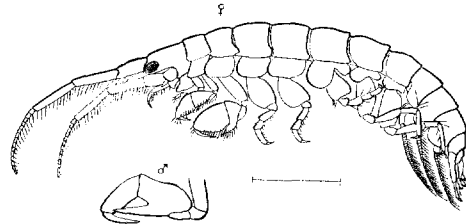
524

Fig. 17.



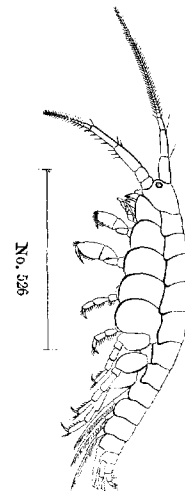
522

Fig. 18.



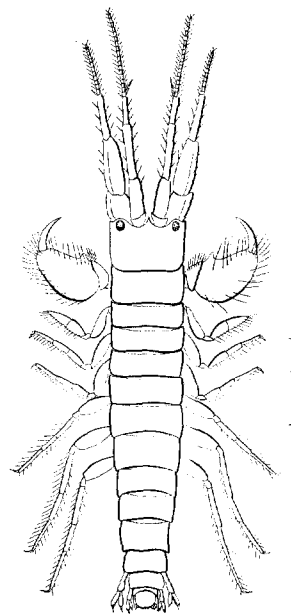
No. 527

Fig. 16.



No. 528

Fig. 19.



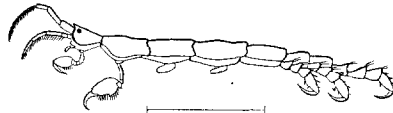
528

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.

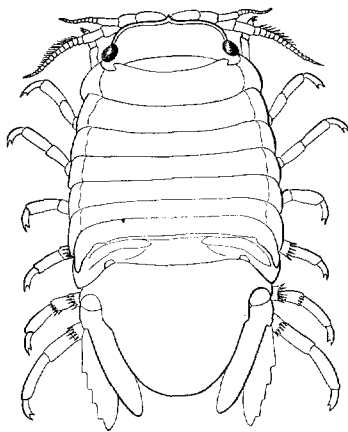
(Figures 20, 21, 23, and 24, were drawn by J. H. Emerton; figure 22 by O. Harger.)

Fig. 20.



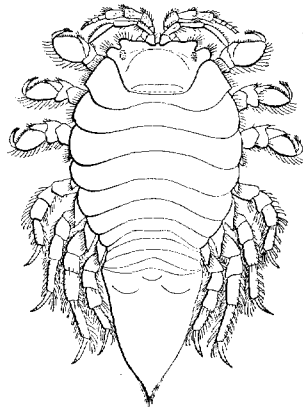
No. 529

Fig. 21.



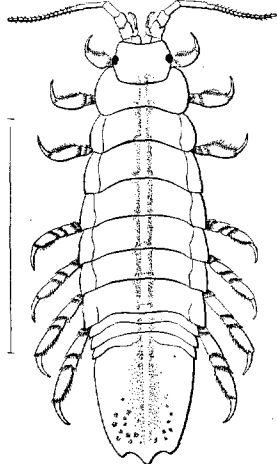
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Fig. 22.



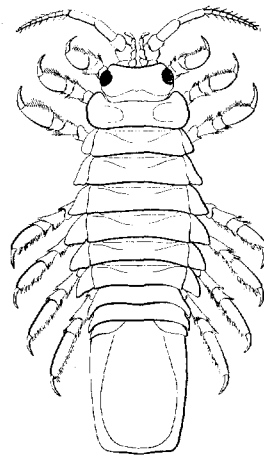
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Fig. 23.



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. Ender.)

Fig. 25.

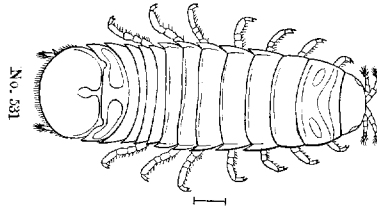
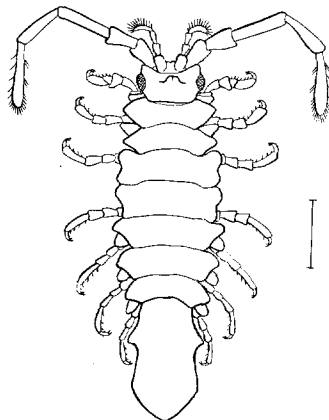
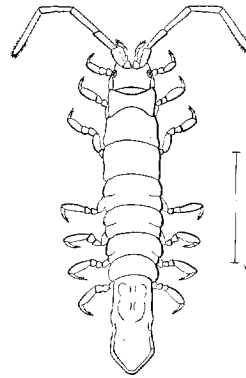


Fig. 26.



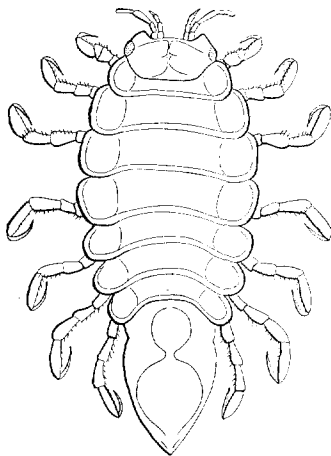
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Fig. 27.



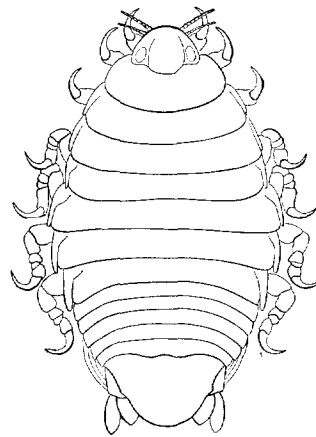
No. 535

Fig. 28.



No. 783

Fig. 29.



No. 530

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.

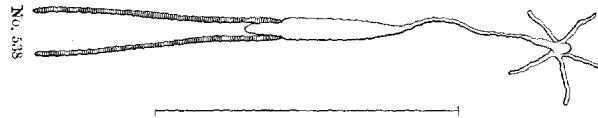


Fig. 31.

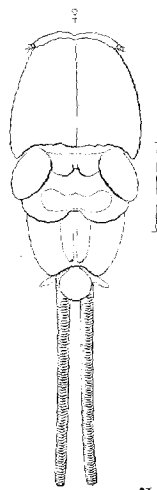


Fig. 32.

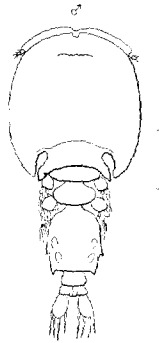


Fig. 33.

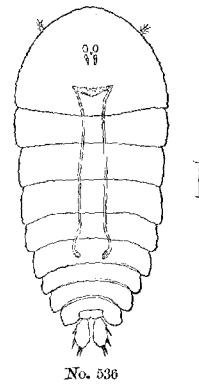


Fig. 34.

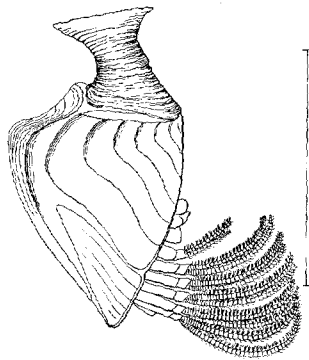
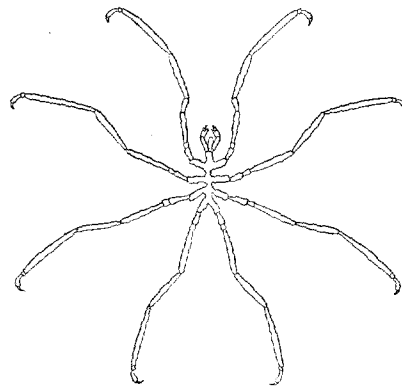


Fig. 35.



EXPLANATION OF PLATE VIII.

- FIGURE 36.—*Squilla empusa* Say, (p. 536;) lateral view of the free-swimming larva in one of its later stages, enlarged ten diameters.
- 37.—Zoea 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 zoea condition; dorsal view, enlarged thirteen diameters.

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

Fig. 36.

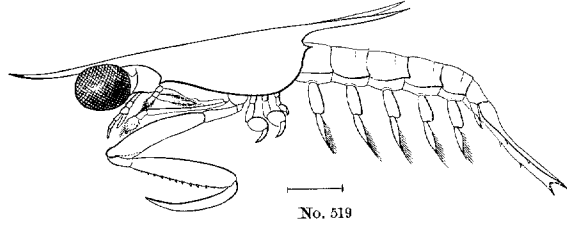


Fig. 37.

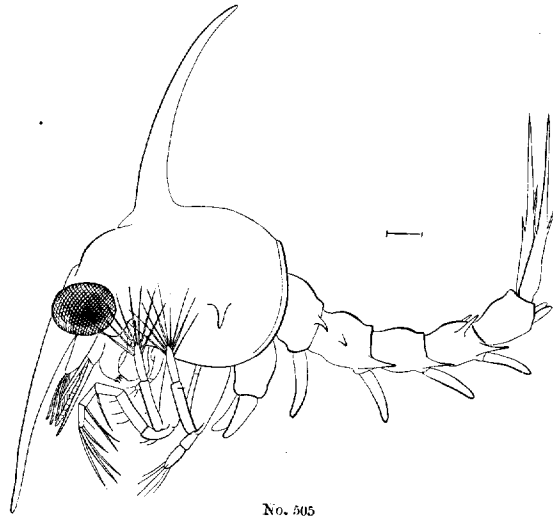
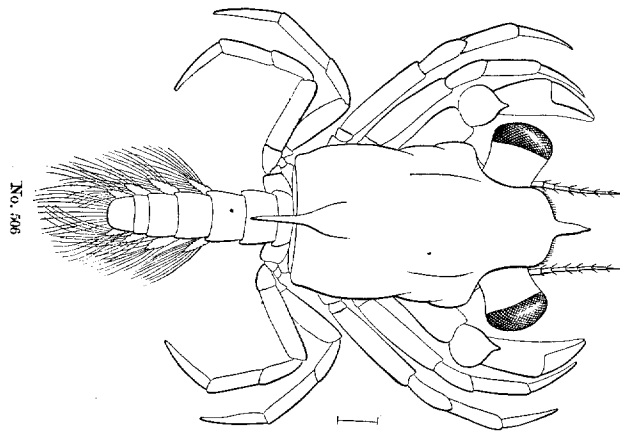


Fig. 37 a.



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.

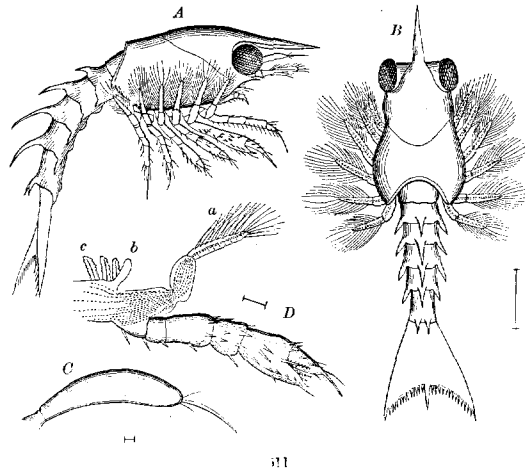
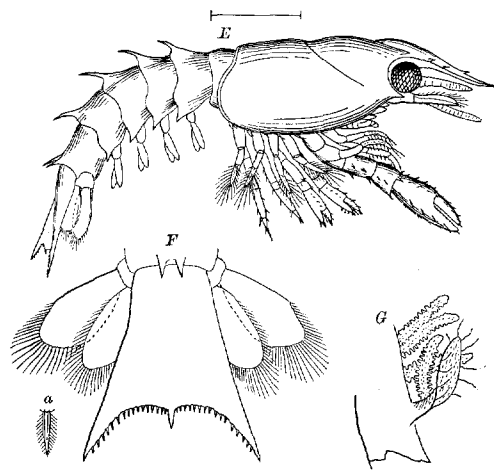


Fig. 39.



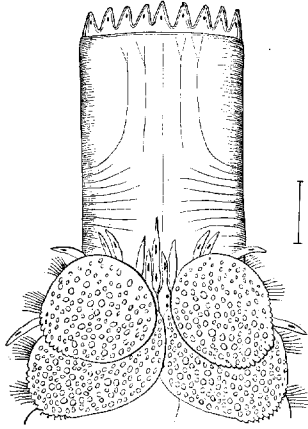
No. 512

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.

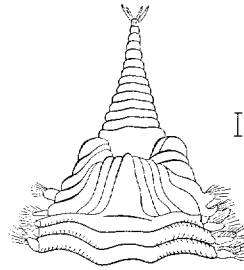
(Figures 40, 41, 42, 45, were drawn from nature by J. H. Emerton; 44 by A. E. Verrill; 43 and 46 were copied from Ehlers.)

Fig. 40.



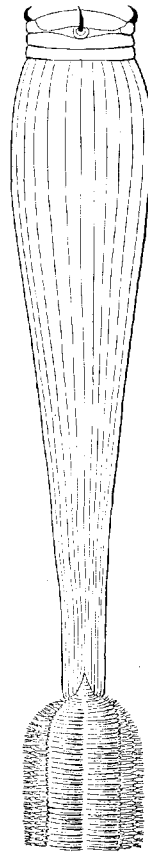
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Fig. 43.



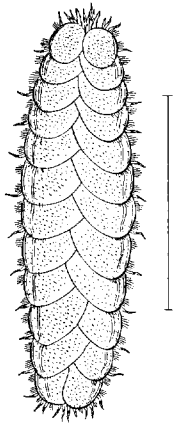
537

Fig. 45.



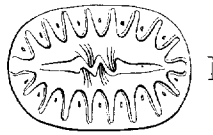
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Fig. 42.



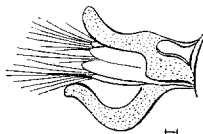
No. 543

Fig. 41.



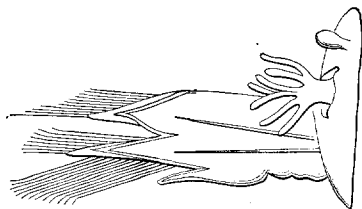
No. 545

Fig. 44.



No. 558

Fig. 46.



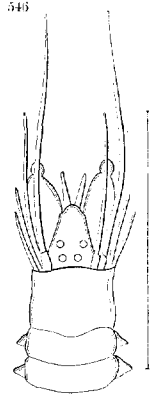
No. 560

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.—*Phyllococe gracilis?*, (p. 586;) head ; dorsal view.

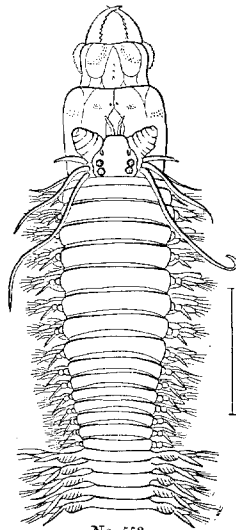
(Figure 51 was drawn from nature by J. H. Emerton ; 47, 48, 49, 50, 52, 53, were copied from Ehlers, 54, 55, from Mahlgren ; 56, from A. Agassiz.)

Fig. 47.



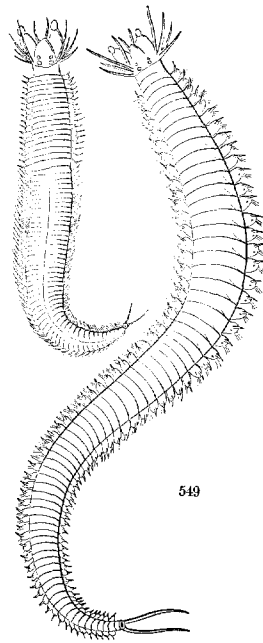
546

Fig. 51.



No. 552

Fig. 53.



549

Fig. 52.

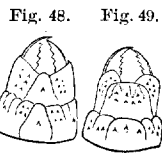
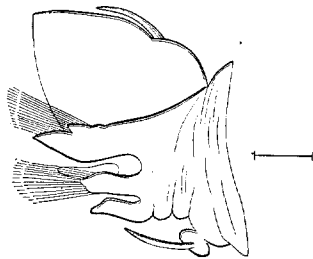


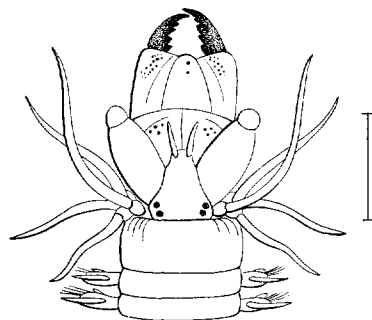
Fig. 48. Fig. 49.

Fig. 50.



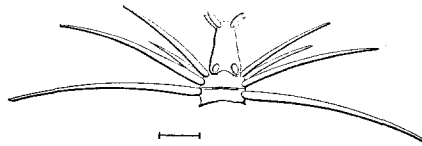
No. 548

Fig. 54.



No. 550

Fig. 56.



565

Fig. 55.



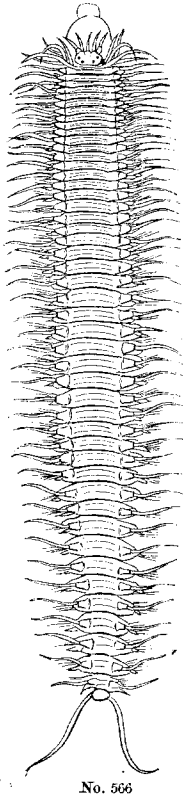
No. 551

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.

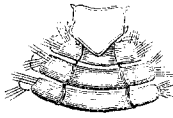
(Figures 57 and 58 were copied from Ehlers; all the rest were drawn from nature by J. H. Emerton)

Fig. 61.



No. 566

Fig. 57.

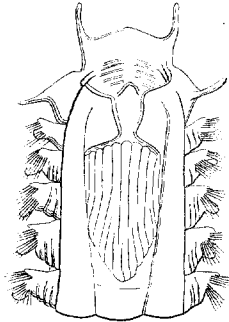


F 62.



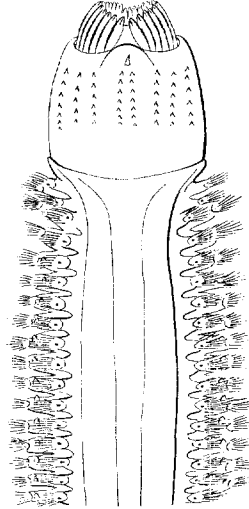
No. 567

Fig. 58.



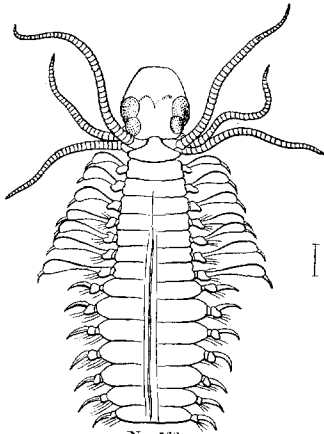
No. 562

Fig. 59.



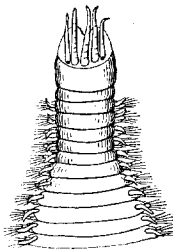
No. 564

Fig. 63.



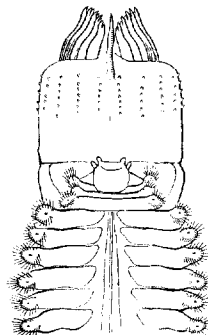
No. 568

Fig. 64.



No. 779

Fig. 60.



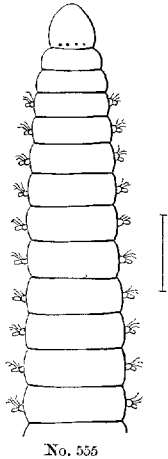
No. 563

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.

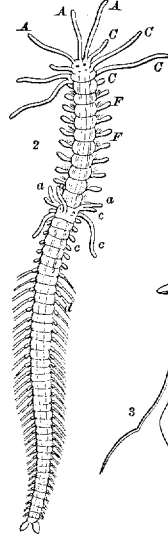
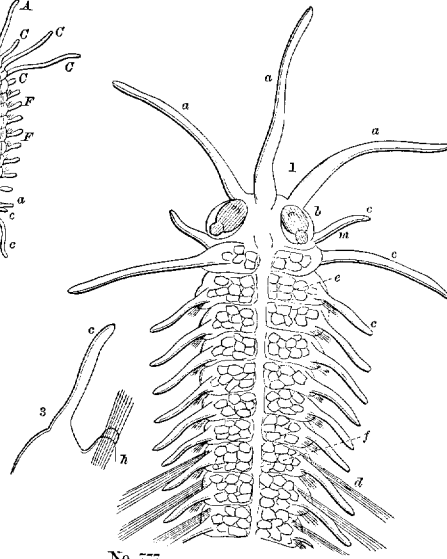
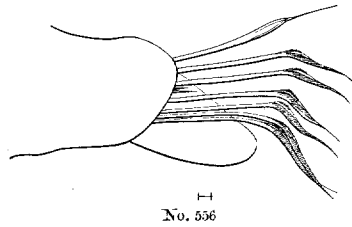


Fig. 66.



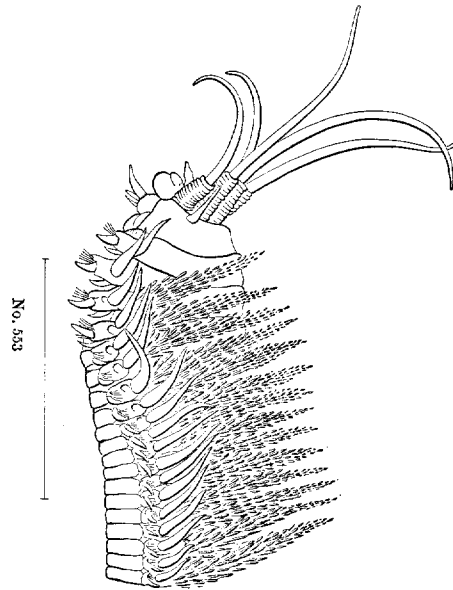
No. 777

Fig. 70.



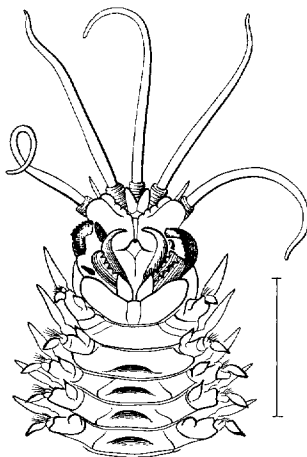
No. 556

Fig. 67.



No. 553

Fig. 68.

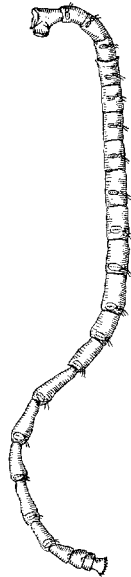


No. 554

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.



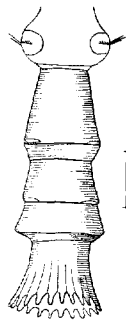
No. 577

Fig. 72.



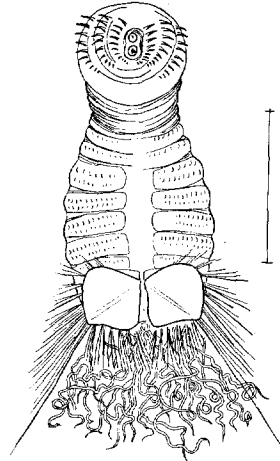
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Fig. 73.



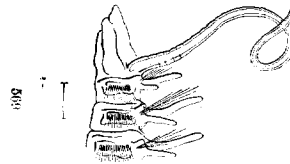
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Fig. 74.



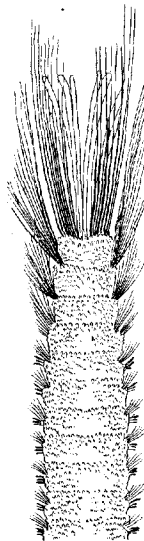
No. 576

Fig. 77.



No. 575

Fig. 75.



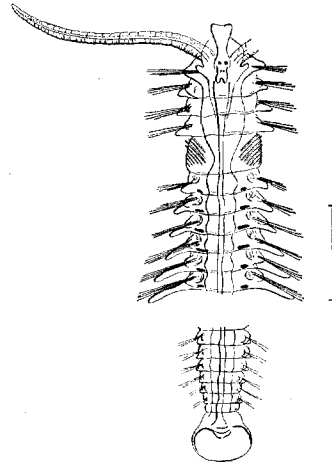
No. 575

Fig. 76.



No. 571

Fig. 78.



No. 570

EXPLANATION OF PLATE XV.

FIGURE 79.—*Ammotrypane 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.

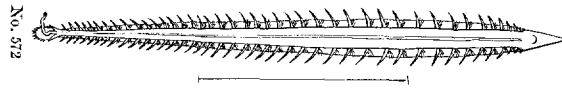
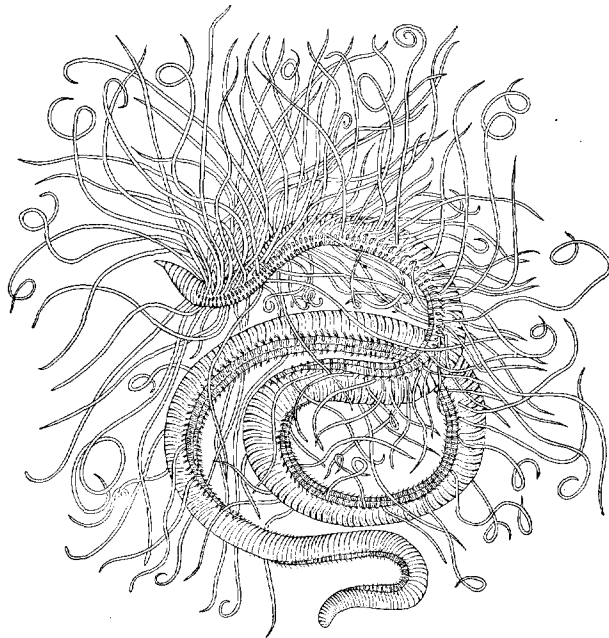
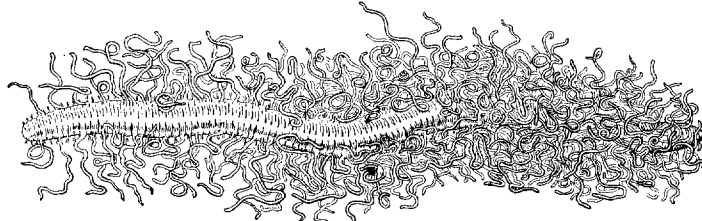


Fig. 80.



No. 574

Fig. 81.



No. 573

EXPLANATION OF PLATE XVI.

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

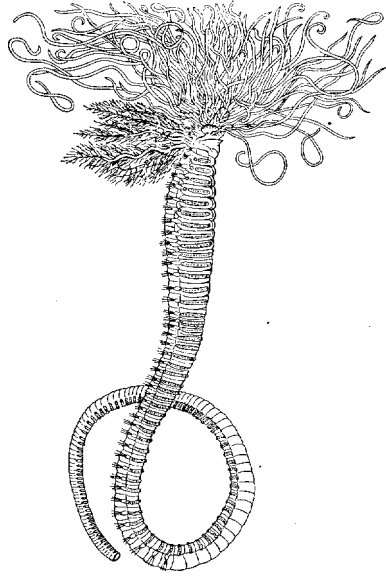
83.—*Ampharete gracilis*, (p. 612;) lateral view.

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.

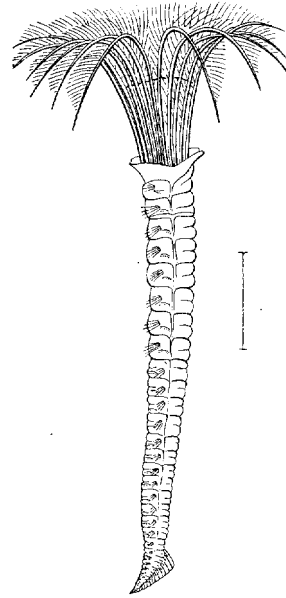
(Figures 82, 84, 85, were drawn from nature by A. E. Verrill; 83, by J. H. Emerton.)

Fig. 82.



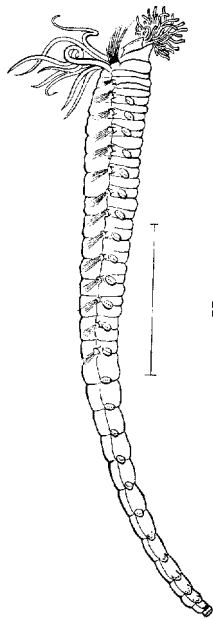
No. 586

Fig. 84.



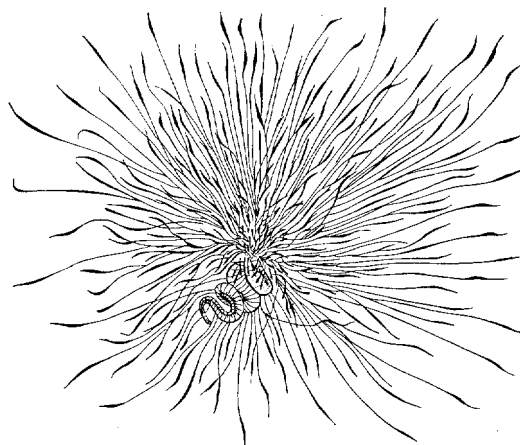
No. 585

Fig. 83.



No. 584

Fig. 85.



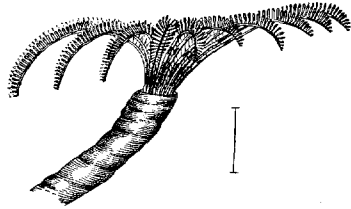
No. 587

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.



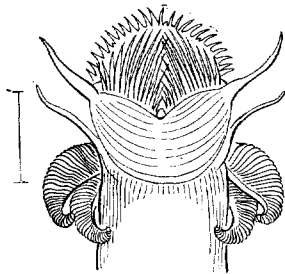
No. 778

Fig. 87.



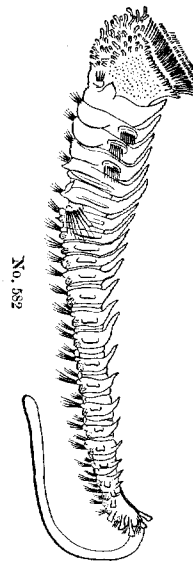
No. 580

Fig. 87a.



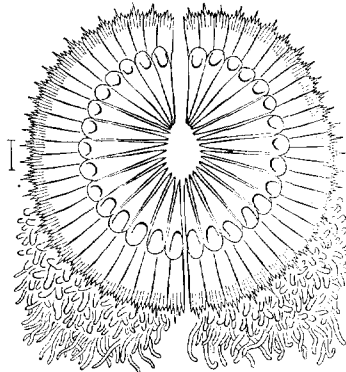
No. 581

Fig. 88.



No. 582

Fig. 88a.



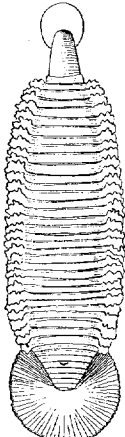
No. 583

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 caementarium*, (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.

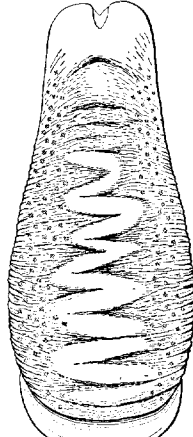
(Figure 94 was drawn from a living specimen, by A. E. Verrill; all the others were drawn from preserved specimens, by J. H. Emerton.)

Fig. 89.



No. 588

Fig. 90.



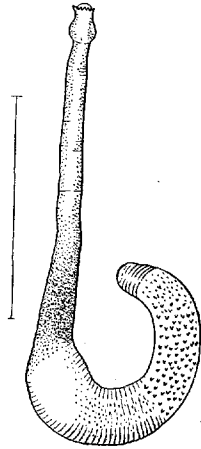
No. 781

Fig. 91.



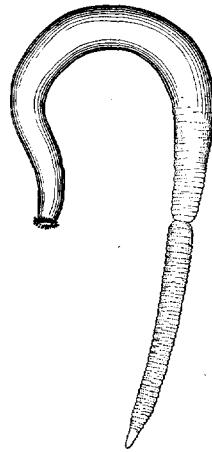
No. 589

Fig. 92.



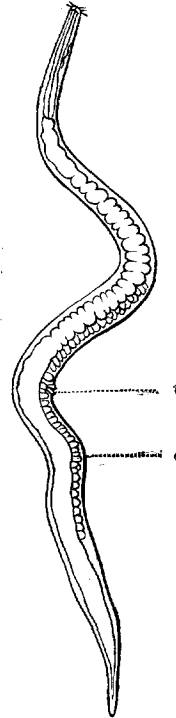
No. 590

Fig. 93.



No. 780

Fig. 94.

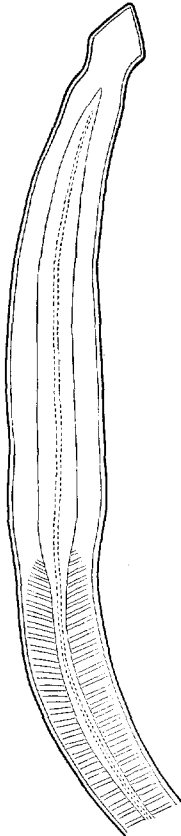


EXPLANATION OF PLATE XIX.

- FIGURE 95.—*Cosmocephala ochracea*, (p. 630;) anterior portion, enlarged nearly three diameters, dorsal view.
95a.—The same; ventral view.
96.—*Meekelia ingens*, (p. 630;) anterior portion of a specimen not full grown, natural size.
96a.—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.

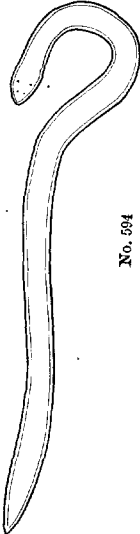
(All the figures were drawn from living specimens, by A. E. Verrill.)

Fig. 96.



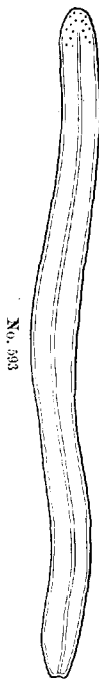
No. 591

Fig. 98.



No. 594

Fig. 97.



No. 593

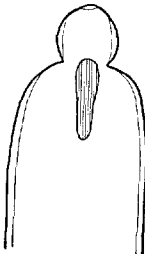
Fig. 95.



Fig. 95a.

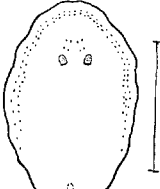


Fig. 96a.



No. 592

Fig. 99.



No. 596

Fig. 100.



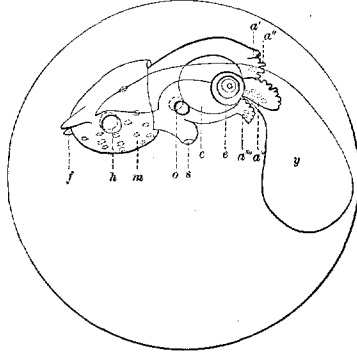
No. 595

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.

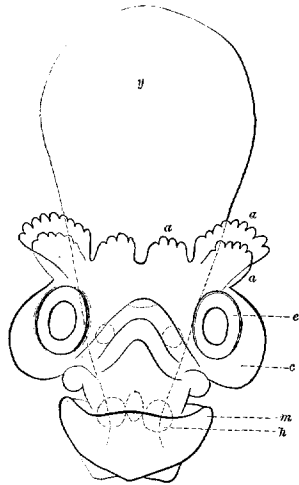
(Figures 103, 104 are camera-lucida drawings made from the living specimens, by A. E. Verrill; all the others were drawn from preserved specimens, by J. H. Emerton.)

Fig. 103.



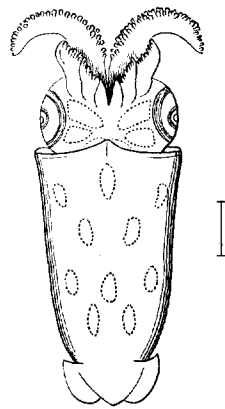
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Fig. 104.



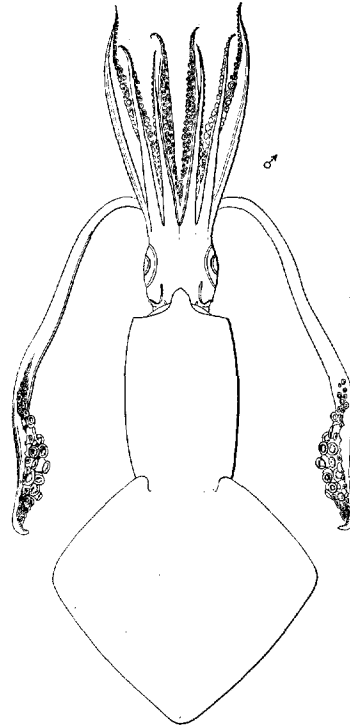
No. 774

Fig. 105.



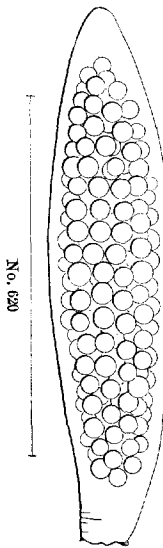
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Fig. 101.



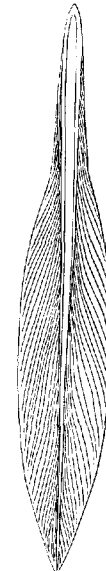
No. 622

Fig. 102.



No. 623

Fig. 101a.



No. 623

EXPLANATION OF PLATE XXI.

- FIGURE 106.—*Pleurotoma bicarinatum*, (p. 638;) natural size.
107.—*Bela plicata*, (p. 637;) natural size.
108.—*Bela harpularia*, (p. 636;) natural size.
109.—*Anachis similis*, (p. 644;) natural size.
110.—*Astyris lunata*, (p. 645;) enlarged.
111.—*Astyris zonalis*, (p. 645;) enlarged.
112.—*Tritia trivittata*, (p. 641;) natural size.
113.—*Ilyanassa obsoleta*, (p. 641;) natural size.
114.—*Nassa vibex*, (p. 640;) natural size.
115.—*Neptunea pygmaea*, (p. 639;) natural size.
116.—*Urosalpinx cinerea*, (p. 641;) natural size.
117.—*Eupleura caudata*, (p. 642;) natural size.
118.—*Purpura lapillus*, (p. 642;) natural size.
119.—The same; banded variety.
120.—The same; egg-capsules, enlarged one-third.
121.—*Buccinum undatum*, (p. 638;) natural size.
122.—*Scalaria multistriata* (p. 660;) enlarged.
123.—*Scalaria lineata*, (p. 660;) enlarged.

(Figure 120 was drawn from nature by J. H. Emerton; the rest are from Binney's Gould, drawn by E. S. Morse.)

Fig. 107.



Fig. 106.



Fig. 109.



Fig. 111.



Fig. 110.



Fig. 108.



Fig. 112.



Fig. 114.



Fig. 113.



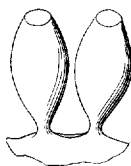
Fig. 118.



Fig. 119.



Fig. 120.



No. 785

Fig. 115.



Fig. 117.



Fig. 121.

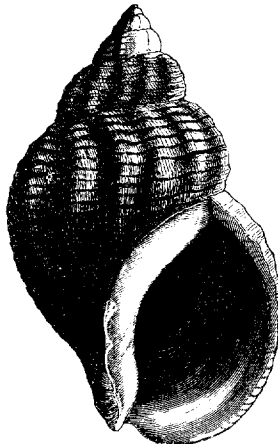


Fig. 122.



Fig. 116.



Fig. 123.



EXPLANATION OF PLATE XXII.

FIGURE 124.—*Fulgur carica*, (p. 640;) natural size.
(From Binney's Gould, drawn by E. S. Morse.)

Fig. 134.



EXPLANATION OF PLATE XXIII.

- FIGURE 125.—*Crucibulum striatum*, (p. 651;) natural size.
126.—The same; side view.
127.—*Crepidula plana*, (p. 650;) natural size.
128.—*C. convexa*, (p. 650;) natural size.
129.—*C. fornicata*, (p. 649;) natural size.
129*a*.—The same; young specimen.
130.—*Neverita duplicata*, (p. 646;) natural size.
131.—*Lunatia immaculata*, (p. 646;) natural size.
132.—*Natica pusilla*, (p. 647;) slightly enlarged.
133.—*Lunatia heros*, (p. 646;) natural size.
134.—The same; with the animal extended, as in crawling; dorsal view.
135.—The same, variety *triseriata*, (p. 354;) young, natural size.
136.—The same variety; natural size, lower side.

(From Binney's Gould, drawn by E. S. Morse.)

Fig. 125.



Fig. 126.



Fig. 127.



Fig. 128.



Fig. 129a.



Fig. 129.

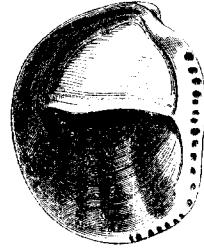


Fig. 130.

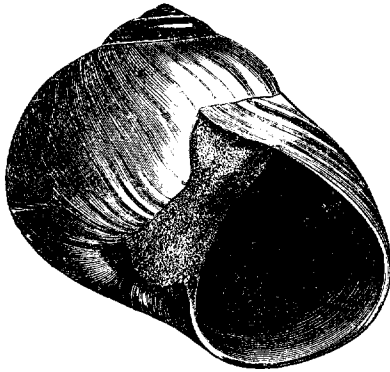


Fig. 131.



Fig. 132.



Fig. 135. Fig. 136.

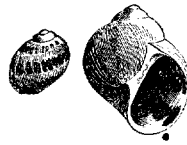


Fig. 133.

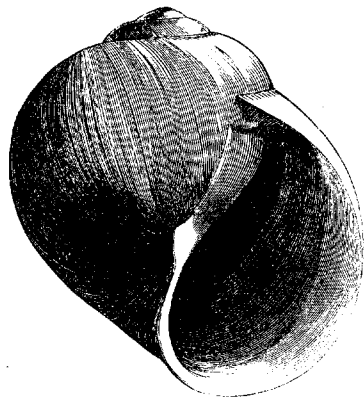
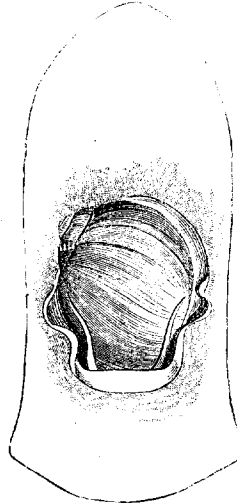


Fig. 134.



EXPLANATION OF PLATE XXIV.

- FIGURE 137.—*Littorina rudis*, (p. 651;) natural size.
138.—*Littorina palliata*, (p. 652;) natural size.
139.—*Lacuna vineta*, (p. 652;) enlarged.
140.—*Littorinella minuta*, (p. 653;) enlarged.
141.—*Rissoa aculeus*, (p. 654;) enlarged.
142.—*Skenea planorbis*, (p. 655;) enlarged.
143.—*Odostomia producta*, (p. 656;) enlarged.
144.—*O. fusca*, (p. 656;) enlarged.
145.—*O. trifida*, (p. 656;) enlarged.
146.—*O. trifida*, var., (p. 656;) enlarged.
147.—*O. impressa*, (p. 656;) enlarged.
148.—*O. seminuda*, (p. 657;) enlarged.
149.—*Eulima oleacea*, (p. 655;) natural size.
150.—*Cerithiopsis terebralis*, (p. 648;) enlarged.
151.—*C. Emersonii*, (p. 648;) enlarged.
152.—*Triforis nigrocinctus*, (p. 648;) enlarged.
153.—*Cerithiopsis Greenii*, (p. 647;) enlarged.
154.—*Bittium nigrum*, (p. 648;) enlarged.
155.—*Turbonilla elegans*, (p. 657;) much enlarged.
156.—*Margarita obscura*, (p. 661;) natural size.
157.—*Vermetus radicola*, (p. 649;) natural size.
158.—*Cæcum pulchellum*, (p. 649;) natural size and enlarged.
159.—*Acmæa testudinalis*, (p. 661;) natural size.
159*a*.—The same; lower side.
159*b*.—The same, variety *alveus*; natural size.

(Figure 155 was drawn from nature, by A. E. Verrill; the others are from Binney's Gould, mostly drawn by E. S. Morse.)

Fig. 137.



Fig. 138.



Fig. 139.



Fig. 140.



Fig. 141.



Fig. 142.



Fig. 143.

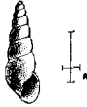


Fig. 144.



Fig. 145.



Fig. 146.



Fig. 147.



Fig. 148.



Fig. 149.



Fig. 150.



Fig. 151.

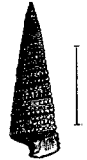


Fig. 152.



Fig. 153.



Fig. 154.



Fig. 155.



Fig. 156.



Fig. 157.

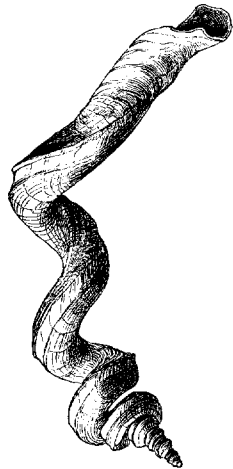


Fig. 158.

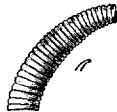


Fig. 159.



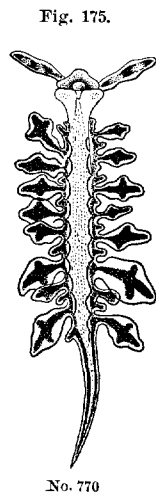
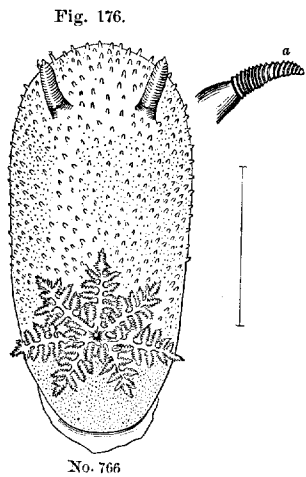
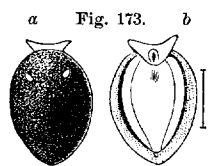
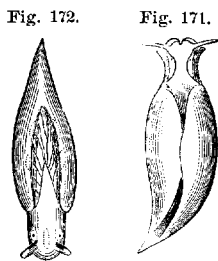
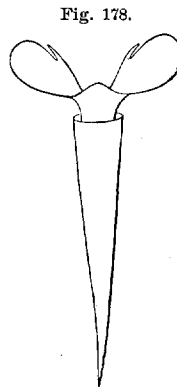
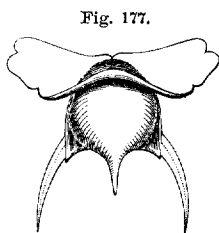
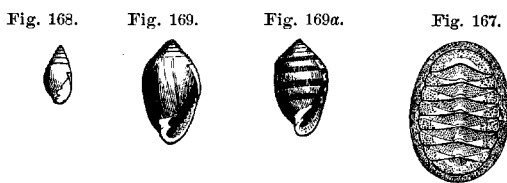
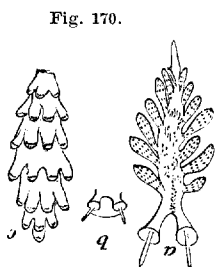
Fig. 159b.



EXPLANATION OF PLATE XXV.

- FIGURE 160.—*Utriculus canaliculatus*, (p. 663;) enlarged.
161.—*Bulla solitaria*, (p. 662;) natural size.
162.—*Amphisphyræ debilis*, (p. 663;) enlarged.
163.—*Cylichna alba*, (p. 664;) natural size.
164.—*Cylichna oryza*, (p. 664;) enlarged.
165.—*Actæon puncto-striata*, (p. 664;) enlarged.
166.—*Trachydermon ruber*, (p. 662;) natural size.
167.—*Chætopleura apiculata*, (p. 661;) natural size.
168.—*Alexia myosotis*, (p. 662;) natural size.
169.—*Melampus bidentatus*, (p. 662;) natural size.
169*a*.—The same; banded variety, (p. 662;) natural size.
170.—*Doto coronata*, (p. 665;) *a*, dorsal view, enlarged; *b*, head, from above;
c, one of the branchiæ.
171.—*Elysiella catulus*, (p. 668;) enlarged three diameters.
172.—*Elysiella chlorotica*, (p. 667;) enlarged two diameters.
173.—*Doridella obscura*, (p. 664;) *a*, dorsal view; *b*, ventral view, enlarged.
174.—*Montagna pilata*, (p. 666;) natural size.
175.—*Hermæa cruciata*, (p. 667;) enlarged.
176.—*Doris bifida*, (p. 664;) enlarged three diameters.
177.—*Cavolina tridentata*, (p. 669;) natural size.
178.—*Styliola vitrea*, (p. 668;) enlarged three diameters.

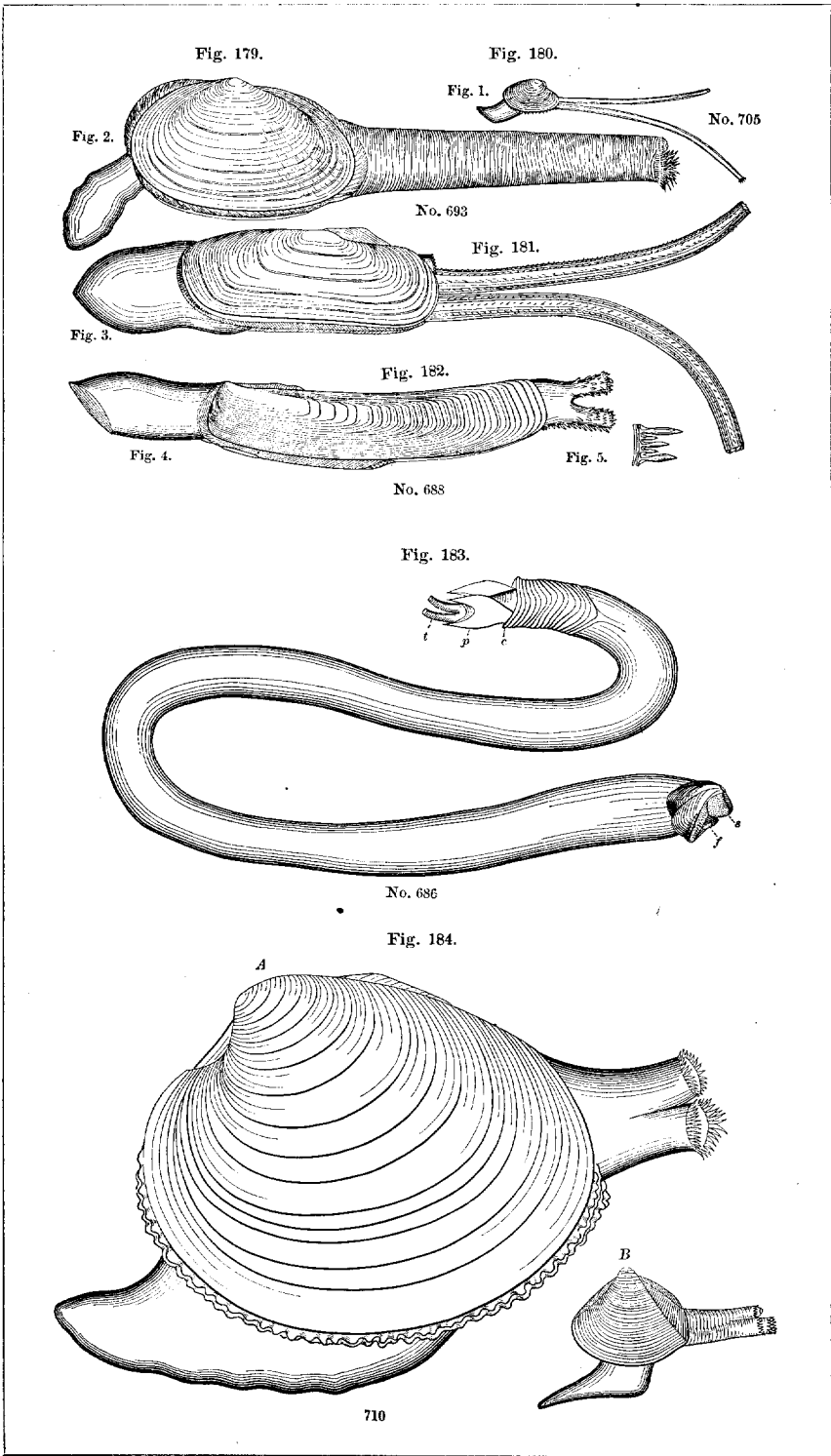
(Figures 171, 172, 173, 174, 178 were drawn from nature, by A. E. Verrill; 169*a*, 170 by E. S. Morse; 175 by A. Agassiz; 176, by J. H. Emerton; 177 was copied from Cuvier, (last ill. ed.) The rest are from Binney's Gould, mostly by E. S. Morse.)



EXPLANATION OF PLATE XXVI.

- FIGURE 179.—*Mya arenaria*, (p. 672;) with animal in extension, reduced to one-half the natural size.
- 180.—*Angulus tener*, (p. 677;) animal reduced one-half.
- 181.—*Tagelus gibbus*, (p. 675;) with animal, the siphons not fully extended, one-half natural size.
- 182.—*Ensatella Americana*, (p. 674;) with animal extended, one-half natural size. The figure at the right shows some of the terminal papillæ enlarged.
- 183.—*Teredo navalis*, (p. 669;) enlarged two diameters.
- 184, A.—*Venus mercenaria*, (p. 681;) natural size.
- 184, B.—*Mulinia lateralis*, (p. 680;) natural size.

(The figures were all drawn from nature, by A. E. Verrill.)



EXPLANATION OF PLATE XXVII.

- FIGURE 186.—*Teredo navalis*, (p. 669;) shell and pallets.
187.—*Teredo Thomsoni*, (p. 670;) shell and pallets.
188.—*Teredo megotara*, (p. 670;) shell and pallets.
189.—*Xylotrya fimbriata*, (p. 670;) shell and pallets.
190.—*Gastranella tumida*, (p. 678;) shell, enlarged six diameters.
191.—*Corbula contracta*, (p. 672;) natural size.
192.—*Saxicava arctica*, (p. 671;) natural size.
193.—*Clidiophora trilineata*, (p. 673;) natural size, with animal.
194.—*Lyonsia hyalina*, (p. 672;) natural size.
195.—*Thracia truncata*, (p. 674;) natural size.
196.—*Thracia myopsis*, (p. 673;) natural size.
197.—*Periploma papyracea*, (p. 673;) natural size.
198.—*Cochlodesma leanum*, (p. 673;) natural size.
189.—*Petricola pholadiformis*, (p. 680;) natural size.
200.—*Pholas truncata*, (p. 670;) natural size.

(Figure 190 was drawn by A. E. Verrill; all the rest are from Binney's Gould, mostly drawn by E. S. Morse.)

Fig. 186.

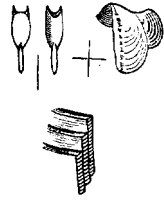


Fig. 187.

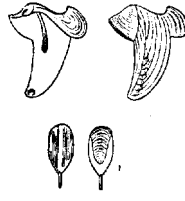


Fig. 189.

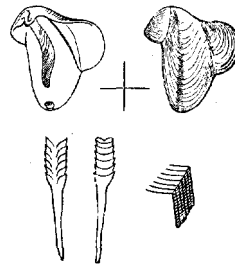


Fig. 190.



Fig. 188.

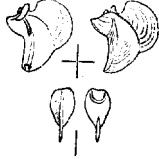


Fig. 192.

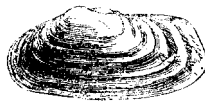


Fig. 191.



Fig. 195.



Fig. 193.

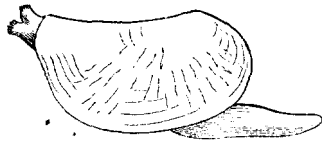


Fig. 194.



Fig. 196.



Fig. 199.

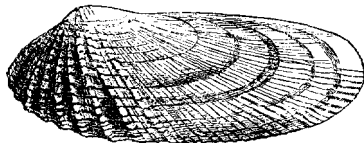


Fig. 197.

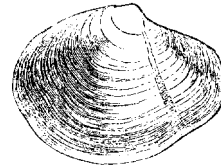


Fig. 200.

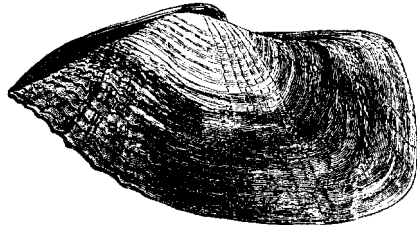
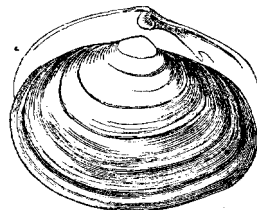


Fig. 198.



EXPLANATION OF PLATE XXVIII.

FIGURE 201.—*Cyprina Islandica*, (p. 683;) natural size.

202.—*Macra solidissima*, (p. 680;) natural size.

(The figures are both from Binney's Gould, drawn by E. S. Merse.)

Fig. 201.

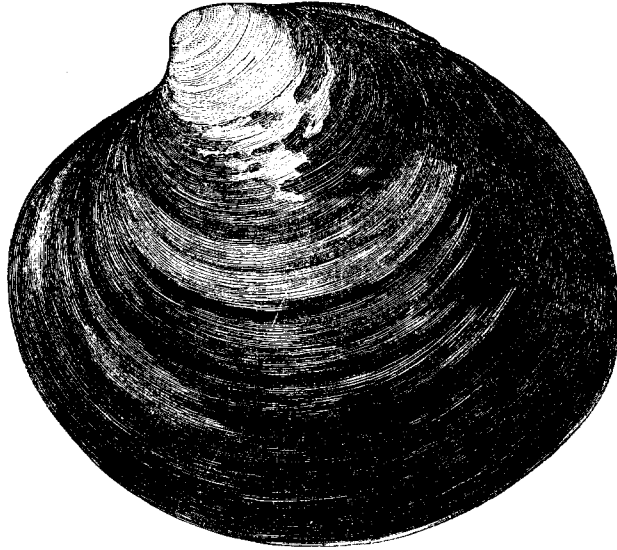
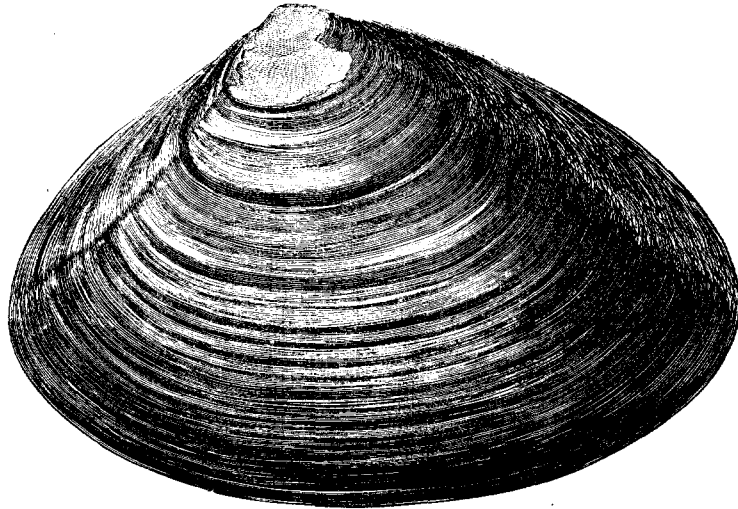


Fig. 202.



EXPLANATION OF PLATE XXIX.

- FIGURE 203.—*Astarte undata*, (p. 684;) somewhat reduced.
204.—*Astarte castanea*, (p. 685;) natural size.
205.—*Astarte quadrans*, (p. 685;) natural size.
206.—*Gouldia mactracea*, (p. 685;) natural size.
207.—The same, inside of one valve, enlarged.
208.—*Lævicardium Mortoni*, (p. 683;) natural size, with animal.
209.—*Cardium pinnulatum*, (p. 683;) natural size.
210.—*Solenomya velum*, (p. 688;) natural size.
211.—*Cyclas dentata*, (p. 686;) natural size.
212.—*Lucina filosa*, (p. 686;) natural size.
213.—*Cryptodon Gouldii*, (p. 686;) enlarged two diameters.
214.—*Cryptodon obesus*, (p. 687;) enlarged three diameters.
215.—*Cyclocardia Novangliæ*, (p. 684;) natural size.
216.—*Cyclocardia borealis*, (p. 683;) natural size.

(Figures 203, 207, 214 were drawn by A. E. Verrill; 215 by E. S. Morse; the rest from Binney's *Gould*, and mostly drawn by E. S. Morse.)

Fig. 203.



Fig. 208.

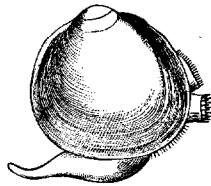


Fig. 210.



Fig. 204.

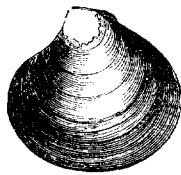


Fig. 205.



Fig. 209.



Fig. 211.

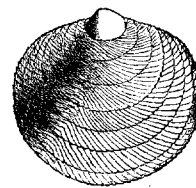


Fig. 207.

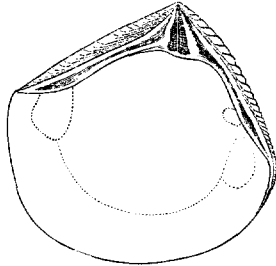


Fig. 206.



Fig. 212.

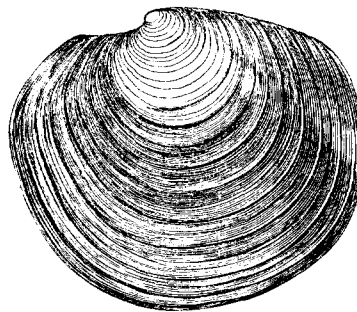


Fig. 215.

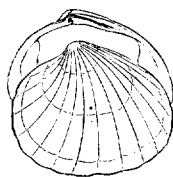


Fig. 213.



Fig. 214.

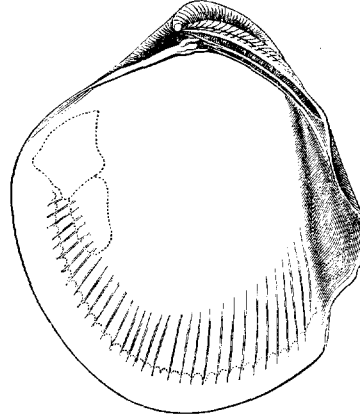
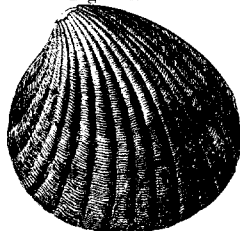


Fig. 216.



EXPLANATION OF PLATE XXX.

- FIGURE 217.—*Tagelus gibbus*, (p. 675;) natural size.
218.—*Tegelus divisus*, (p. 676;) natural size.
219.—*Callista convexa*, (p. 681;) natural size.
220.—*Tottenia gemma*, (p. 682;) enlarged.
221.—*Cumingia tellinoides*, (p. 679;) natural size.
222.—*Macoma fragilis*, var. *fusca*, (p. 676;) natural size.
223.—*Angulus tener*, (p. 677;) natural size.
224.—*Angulus tenellus*, (p. 677;) natural size.
225.—*Tellina tenta*, (p. 678;) natural size.
226.—*Kellia planulata*, (p. 688;) enlarged.
227.—*Argina pexata*, (p. 692;) natural size.
228.—*Scapharca transversa*, (p. 691;) natural size.
229.—*Nucula delphinodonta*, (p. 691;) enlarged.
230.—*Nucula proxima*, (p. 691;) natural size.
231.—*Yoldia sapotilla*, (p. 689;) natural size.
232.—*Yoldia limatula*, (p. 689;) natural size.

(Figure 224 was drawn by A. E. Verrill; the rest are from Binney's Gould, by E. S. Morse.)

Fig. 217.

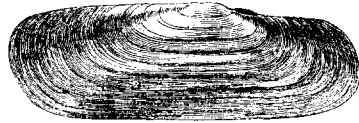


Fig. 218.

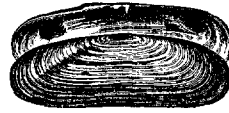


Fig. 219.

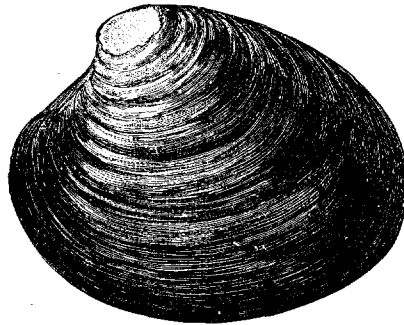


Fig. 220.



Fig. 221.



Fig. 222.



Fig. 227.

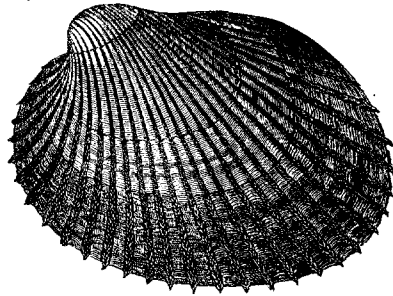


Fig. 224.



Fig. 223.



Fig. 229.



Fig. 230.



Fig. 225.



Fig. 231.



Fig. 226.



Fig. 228.

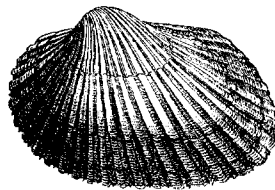
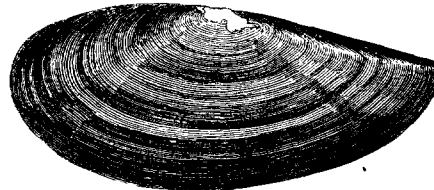


Fig. 232.



EXPLANATION OF PLATE XXXI.

- FIGURE 233.—*Crenella glandula*, (p. 695.)
234.—*Mytilus edulis*, (p. 692.)
235.—*Modiolaria corrugata*, (p. 694.)
236.—*Modiolaria nigra*, (p. 694.)
237.—*Modiola modiolus*, (p. 693.)
238.—*Modiola plicatula*, (p. 693.)

(All the figures are of natural size, and from Binney's Gould, drawn by E. S. Morse.)

Fig. 233.



Fig 234.

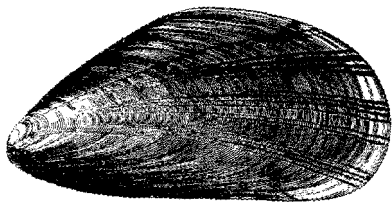


Fig. 235.



Fig. 236.

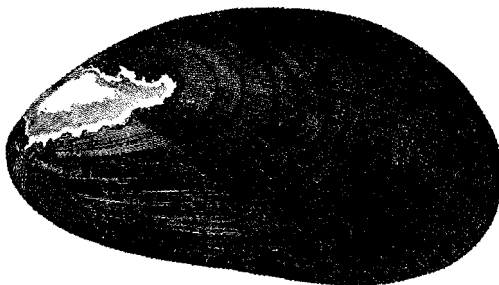


Fig. 237.

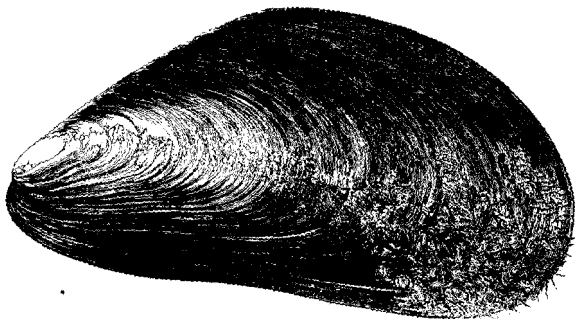


Fig. 238.



EXPLANATION OF PLATE XXXII.

- FIGURE 239.—*Anomia aculeata*, (p. 697;) lower side, natural size.
240.—The same, upper side.
240*a*.—The same, portions of the upper side magnified.
241.—*Anomia glabra*, (p. 696;) profile view, natural size.
242.—The same, (p. 696;) lower side
242*a*.—The same, (p. 696;) young, natural size.
243.—*Pecten irradians*, (p. 695;) natural size.
244.—*Siliqua costata*, (p. 675;) natural size.
245.—*Ensatella Americana*, (p. 674;) natural size.

(The figures are from Binney's Gould, drawn by E. S. Morse.)

Fig. 239.



Fig. 240.



Fig. 244.

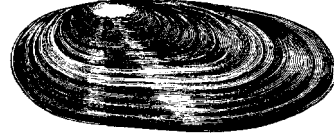


Fig. 241.

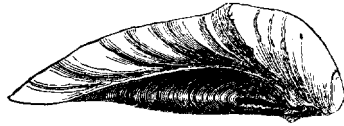


Fig. 242a.



Fig. 240a.



Fig. 242.

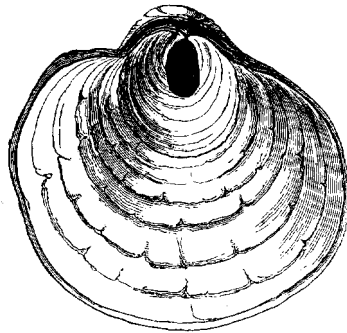


Fig. 245.

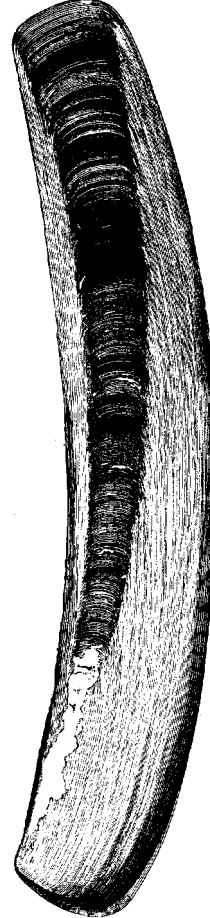
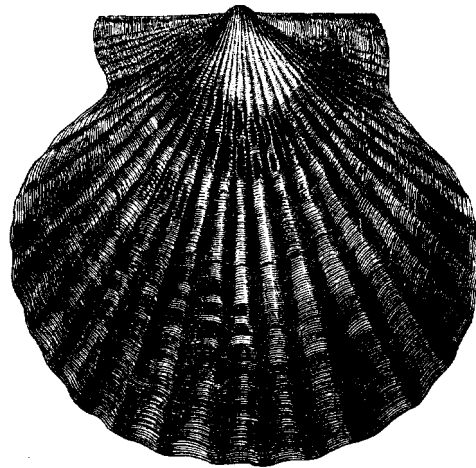


Fig. 243.



EXPLANATION OF PLATE XXXIII.

- FIGURE 246.—*Cynthia partita*, variety *stellifera*, (p. 701;) natural size.
247.—*Cynthia carnea*, (p. 701;) natural size.
248.—The same, (p. 701;) younger specimens, natural size.
249.—*Eugyra pilularis*, (p. 700;) natural size.
250.—*Molgula Manhattensis*, (p. 699;) smooth variety, natural size.
251.—*Molgula arenata*, (p. 699;) natural size.
252.—*Botryllus Gouldii*, (p. 702;) colony incrusting the stem of *Tubularia*, somewhat enlarged.
253.—The same; one of the zooids, enlarged ten diameters; *a*, anal tube and orifice; *s*, stomach; *g*, groove and vessels along the edge of the branchial sac, inside; *o*, left ovary; *b*, bud, attached by a slender stolon.
254.—*Salpa Cabotti*, (p. 706;) solitary individual, from the dorsal side, enlarged; *h*, heart; *s*, small chain of salpæ budding within the old one.
255.—The same; one of the individuals from a mature chain, three-quarter view enlarged; *a*, posterior or anal opening; *b*, anterior or branchial opening; *c*, processes by which the individuals of the chain were united; *h*, heart; *n*, nervous ganglion; *o*, nucleus; *r*, gill.
256.—*Escharella variabilis*, (p. 713;) few of the cells, much enlarged.

(Figure 256 was drawn by A. Hyatt; 254 and 255 were copied from A. Agassiz; the others were drawn by A. E. Verrill.)

Fig. 246.



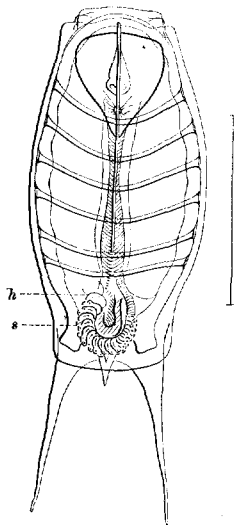
Fig. 247.



Fig. 248.



Fig. 254.



750

Fig. 249.



Eugyra
749

Fig. 251.



748

Fig. 253.

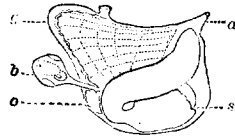


Fig. 250.

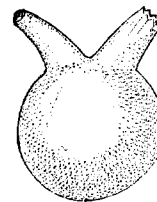
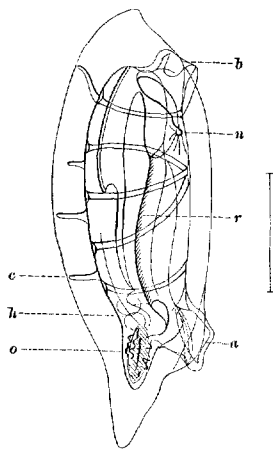


Fig. 255.



751

Fig. 252.

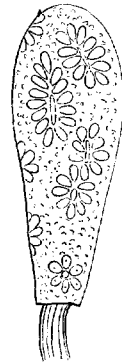
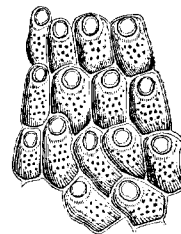


Fig. 256.



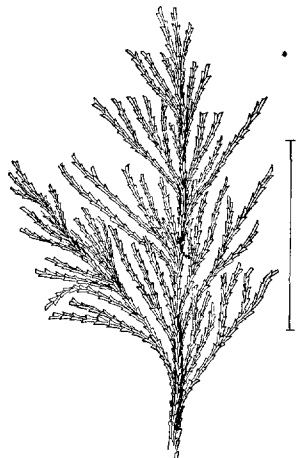
No. 765

EXPLANATION OF PLATE XXXIV.

- FIGURE 257.—*Aleyonidium ramosum*, (p. 708;) a young unbranched specimen, enlarged two diameters.
- 258.—*Bugula turrita*, (p. 712;) extremity of a branch, enlarged.
- 259.—The same; a branchlet more highly magnified.
- 259*a*.—The same; a branchlet bearing ovicells.
- 260.—*Crisia eburnea*, (p. 707;) a cluster of branches, enlarged.
- 261.—The same; a branch bearing an ovicell, more highly magnified.
- 262.—*Membranipora pilosa*, (p. 712;) a few of the cells, seen from above, magnified.
- 362*a*.—The same; a single cell, seen in profile.
- 263.—The same; one of the zooids expanded.
- 264.—*Mollia hyalina*, (p. 713;) one of the zooids in expansion, highly magnified.

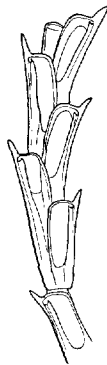
(Figures 257, 259, 259*a* were drawn by A. E. Verrill; the rest were furnished by A. Hyatt.)

Fig. 258.



No. 766

Fig. 259.

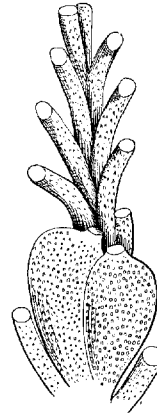


No. 767

Fig. 259a.

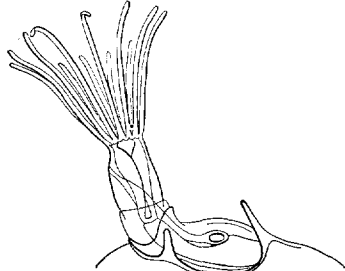


Fig. 261.



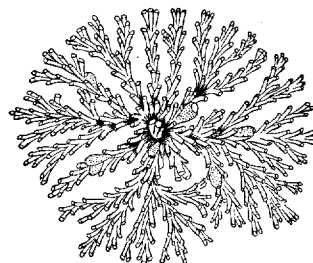
No. 772

Fig. 263.



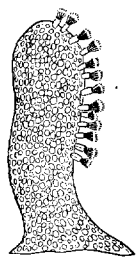
No. 769

Fig. 260



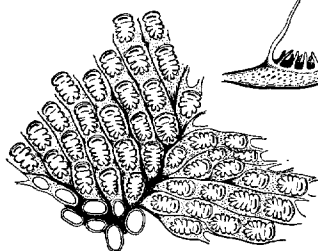
No. 771

Fig. 257.



764

Fig. 262.

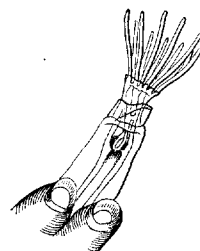


No. 768

Fig. 262a.



Fig. 264.

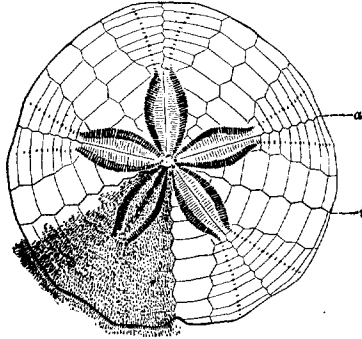


No. 773

EXPLANATION OF PLATE XXXV.

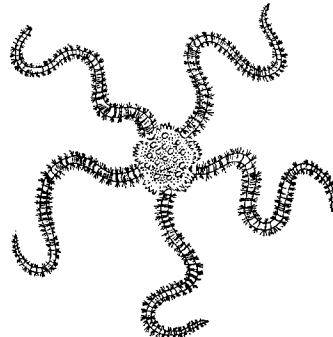
- FIGURE 265.—*Leptosynapta Girardii*, (p. 716;) anterior part of the body, enlarged one-half.
- 266.—The same; perforated plates from the skin, and the "anchors," highly magnified.
- 267.—*Echinarachnius parma*, (p. 717;) upper surface with the spines partly removed, natural size; *a*, ambulacral zones; *b*, interambulacral zones.
- 268.—*Strongylocentrotus Drübachiensis*, (p. 716;) side view, natural size.
- 269.—*Asterias arenicola*, (p. 718;) dorsal view, somewhat reduced.
- 270.—*Ophiopholis aculeata*, (p. 719;) dorsal view, about one-half natural size.
- (Figures 265, 266 were drawn by A. E. Verrill; 267, 269 were copied from A. Agassiz; 268, 270 were drawn by E. S. Morse.)

Fig. 267.



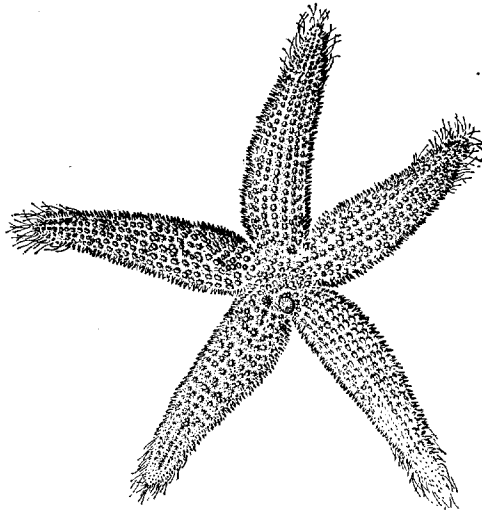
617

Fig. 270.



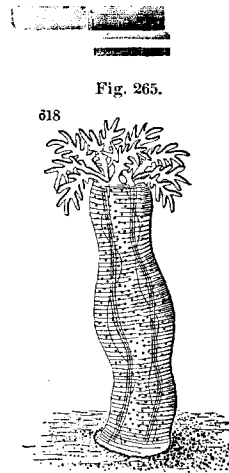
No. 615

Fig. 269.



616

Fig. 265.



618

Fig. 268.

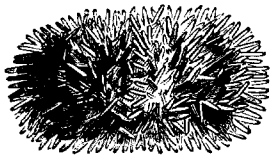
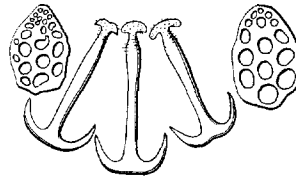


Fig. 266.



EXPLANATION OF PLATE XXXVI.

FIGURE 271.—*Aurelia flavidula*, (p. 723;) upper side, about one-fourth the natural size.

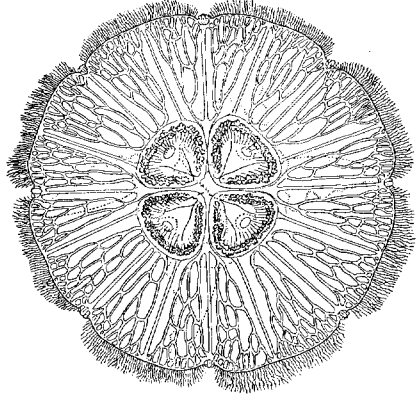
272.—*Dactylometra quinquecirra*, (p. 724;) lateral view, one-fourth the natural size.

273.—*Corymorpha pendula*, (p. 736;) natural size.

274.—*Parypba crocea*, (p. 736;) natural size.

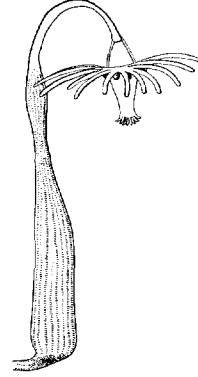
(Figure 272 was copied from A. Agassiz, Catalogue Acalephs; the others were copied from L. Agassiz, Contributions to Natural History of United States.)

Fig. 271.



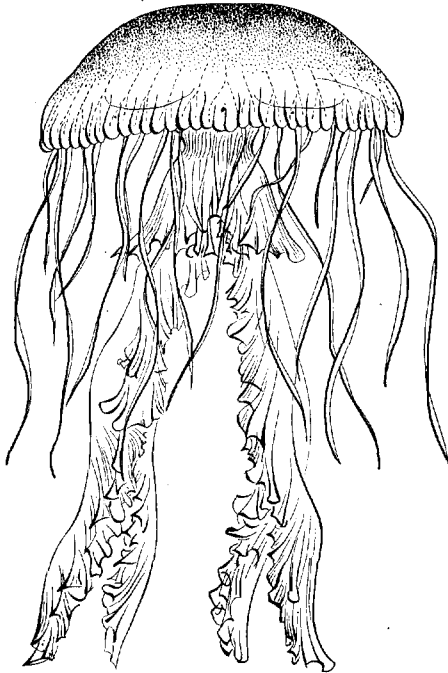
No. 613

Fig. 273.



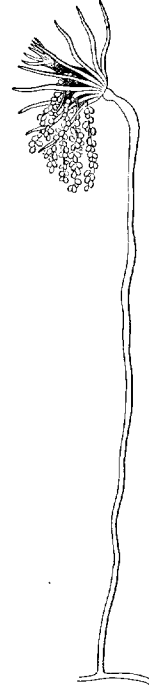
No. 608

Fig. 272.



No. 614

Fig. 274.

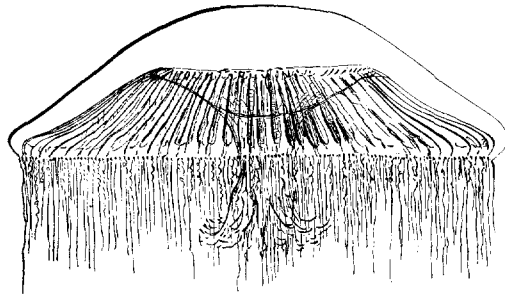


No. 607

EXPLANATION OF PLATE XXXVII.

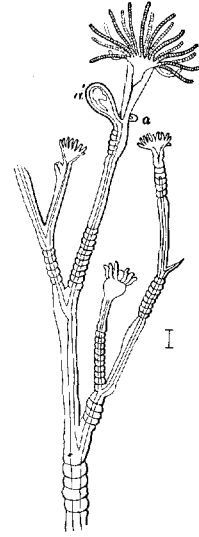
- FIGURE 275.—*Zygodactyla Grœnlandica*, (p. 729;) profile view, one-half natural size.
276.—*Bougainvillia superciliaris*, (p. 733;) a branch, much enlarged.
277.—*Pennaria tiarella*, (p. 735;) a branch, natural size.
278.—The same; one of the hydroids, with medusa, buds developing at the base of the proboscis.
279.—*Sertularia pumila*, (p. 732; part of a colony on a frond of sea-weed, natural size.
280.—*Sertularia argentea*, (p. 732;) a branch bearing reproductive capsules, (gonothecæ,) with the soft parts removed, much enlarged.
281.—*Obelia commissuralis*, (p. 728;) a branch bearing hydroids and one female gonotheca, much enlarged.

(Figures 275 and 279 were copied from A. Agassiz; 276 and 281 from L. Agassiz; 278 from J. Leidy; 277 and 280 were drawn by A. E. Verrill.)



No. 612

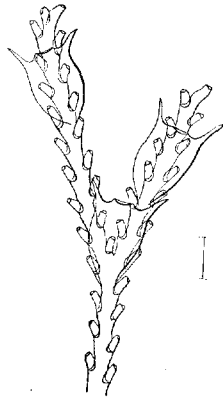
Fig. 279.



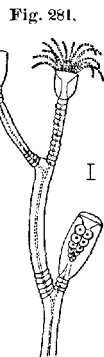
No. 606



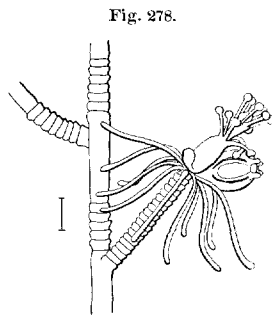
No. 603



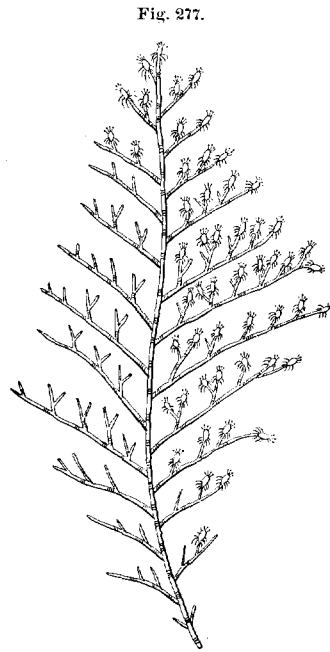
No. 604



No. 605



611



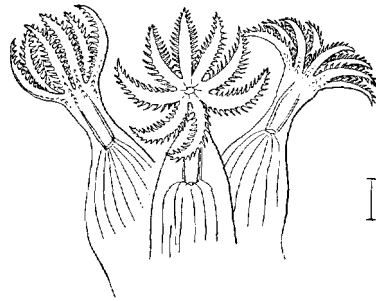
No. 610

EXPLANATION OF PLATE XXXVIII.

- FIGURE 282.—*Hybocodon prolifer*, (p. 736;) natural size, the head seen from the back side.
- 283.—*Aleyonium carneum*, (p. 737;) three of the polyps fully expanded, much enlarged.
- 284.—*Sagartia leucolena*, (p. 738;) natural size, in expansion, but the tentacles are not fully extended; the * indicates the long odd tentacle.
- 285.—*Halocampa producta*, (p. 738;) natural size, well expanded, but the body may be much more elongated.
- 286.—*Epizoanthus Americanus*, (p. 740;) a colony which had completely covered and absorbed a shell occupied by a hermit-crab, (*Eupagurus pubescens*,) which still lived within the cavity; the polyps are not expanded, natural size.
- 287.—The same; one of the polyps in full expansion, natural size.

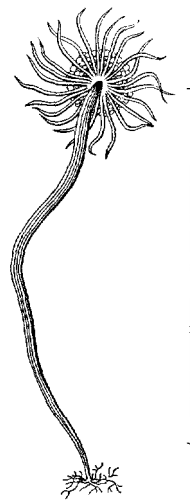
(Figure 282 was copied from L. Agassiz; 286 is from the *American Naturalist*, drawn by E. S. Morse; the rest were drawn by A. E. Verrill.)

Fig. 283.



No. 598

Fig. 282.



No. 609

Fig. 284.

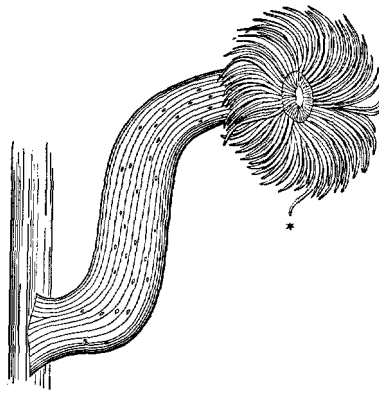
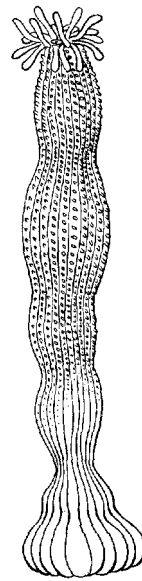


Fig. 285.



No. 600

Fig. 286.

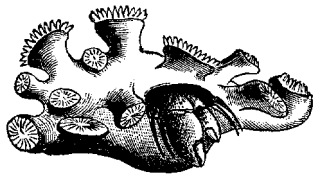


Fig. 287.



Fig. 20.

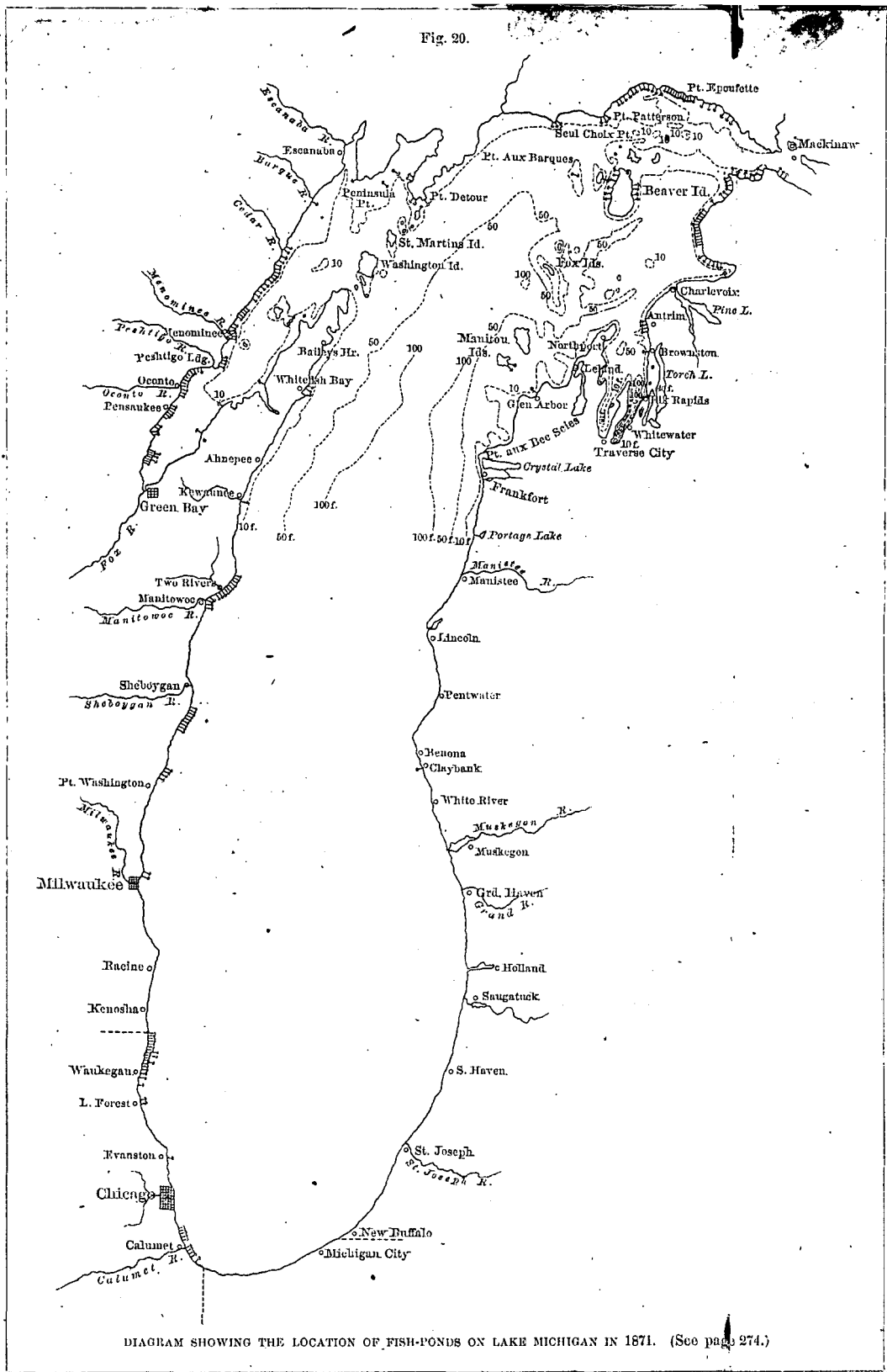


DIAGRAM SHOWING THE LOCATION OF FISH-PONDS ON LAKE MICHIGAN IN 1871. (See page 274.)

