

EXPLANATION OF THE PLATES.

All the figures were drawn from nature by Mr. J. H. Emerton, except when otherwise stated.

PLATE I.

Figure 1.—*Architeuthis Harveyi* (No. 5). Head and arms; $\frac{1}{2}$ natural size. From a photograph of the specimen when freshly caught. The back of the head rests upon an oar, so as to cause the beak to protrude, while the arms hang down in a reversed position. The diameter of the bathing tub was 38.5 inches: *a*, left, and *a'*, right ventral arms; *b*, left, and *b'*, right arms of the third pair; *c*, left, and *c'*, right arms of the second pair; *d'*, right dorsal arm, mostly concealed behind the others; *e*, left, and *e'*, right tentacular-arms, folded several times over the oar; *i* to *iv*, the 'club'; *i* to *ii*, the 'wrist'; *ii* to *iii*, the part bearing large suckers; *iii* to *iv*, the terminal division; *o*, the beak.

Figure 2.—Part of the body and caudal fin of the same specimen; $\frac{1}{2}$ natural size. From a photograph made at the same time with the preceding; *u*, mantle cut open; *t*, tip of tail; *b*, right, and *l*, left lateral lobes of the caudal fin.

PLATE II.

Figure 1.—*Architeuthis Harveyi*.—A restoration, $\frac{1}{2}$ natural size, based on the preceding figures and on the specimens received. (See note, p. 9.)

PLATE III.

Figure 1.—*Architeuthis Harveyi* (No. 5). Upper mandible; natural size.

Figure 2.—Lower mandible of same; natural size; lacks a small piece at *a*.

Figure 3.—Posterior part of the 'pen' of the same specimen; $\frac{1}{2}$ natural size. The dotted lines indicate missing parts.

Figures 4, 4a.—*Architeuthis Harveyi*. (Specimen No. 4.) The two sides of the broken lower mandibles; natural size.

Figures 1 and 2 were drawn by Mr. J. H. Blake, from the alcoholic specimens; figure 3 was restored and drawn by the author; figures 4 and 4a are camera-drawings by the author.

PLATE IV.

Figure 1.—*Architeuthis Harveyi* (No. 4). One of the larger suckers from the tentacular arms; natural size. From a dried specimen.

Figure 1a.—Portion of the marginal ring of the same sucker, seen from the inside; enlarged.

Figure 2.—The same. (No. 24.) Distal part of arm. Front view; natural size.

Figure 2a.—The same. Front view. 50th sucker of 2nd pair of arms; enlarged 12 diameters. The marginal scales are destroyed on one side.

Figure 3, 3a.—*Architeuthis Harveyi* V. (No. 2). Horny ring of one of the marginal suckers of the club; 3, side view; 3a, the same, front view; enlarged 3 diameters.

Figure 4.—*Architeuthis Harveyi* (No. 5). Suckers of tentacular-club; side view, natural size; *a*, one of the larger suckers; *b*, one of the marginal suckers.

Figure 5.—The same specimen. Horny marginal ring of one of the suckers from near the base of ventral arm; enlarged 2 diameters.

Figures 6 and 6a.—The same specimen. One of the largest and least oblique of the horny rings from a sucker near the base of one of the lateral arms; top and side views; enlarged $1\frac{1}{2}$ diameters.

Figures 7 and 7a.—The same specimen. One of the rings from a medium-sized and more oblique sucker of the middle portion of the lateral arms; top and side views; enlarged $1\frac{1}{2}$ diameters.

Figure 8.—The same specimen. Another ring from a more distal, smaller, and more oblique sucker, top view; enlarged $1\frac{1}{2}$ diameters.

Figures 9 and 9a.—The same specimen. One of the horny rings from one of the smooth-rimmed, sessile, connective suckers on the 'wrist' of the 'club' of the tentacular arms; top and side views; enlarged 3 diameters.

Figures 10 and 10a.—The same specimen. One of the small suckers from the distal portion of the 'club', top and side views; enlarged 3 diameters.

Figure 11.—The same specimen. Caudal fin; $\frac{1}{2}$ natural size; drawn from the preserved specimen.

Figures 4, 5 and 11 were drawn by the author, also figure 8, which is a camera-drawing. The others are by J. H. Emerton.

PLATE V.

Figure 1.—*Architeuthis Harveyi* V. (No. 5). Teeth of the odontophore, from the anterior portion; enlarged 18 diameters; *a*, median; *b*, inner lateral; *c* and *d*, the two outer lateral teeth; *e*, marginal plates. Drawn from detached teeth.

Figure 2.—The same specimen. Teeth from farther back, on the dorsal portion of the odontophore. Lettering as in fig. 1.

Figure 3.—The same specimen. Anterior portion of odontophore, showing the teeth nearly in their natural positions; enlarged about 3 diameters.

Figure 4.—The same specimen. Portion of the membrane lining the palate, showing the teeth, and hard granules attached to it; enlarged.

Figure 4a.—The same specimen. Two of the granules from the membrane lining the mouth; enlarged 18 diameters.

Figure 5.—The same specimen. Another portion of the lining membrane of the palate; enlarged.

Figure 6.—*Architeuthis Harveyi* V. (No. 24). Teeth of odontophore; *a*, median; *b*, inner-lateral; *c*, *c'*, and *d*, from two outer lateral rows; enlarged about 24 diameters. Drawn from detached teeth.

Figure 7.—The same specimen. Portion of radula, showing most of three transverse rows of teeth; enlarged 18 diameters.

Figure 8.—The same specimen. Otolith; *a*, side view; *b*, front view; much enlarged.

All the figures are camera-drawings by the author.

PLATE VI.

Figure 1.—*Architeuthis Harveyi* V. (No. 24). Young. Pharynx and beak, with odontophore; *o*, oesophagus; natural size.

Figure 2.—The same. Distal part of tentacular-arm, with club; natural size.

Figures 3 and 3a.—The same. Segment from distal portion of left arm of the third pair of sessile arms, front view; 3a, the same, side view; natural size.

Figure 4.—The same. Basal portion of right arm, of second pair. Front view; natural size.

PLATE VII.

Figure 1.—*Architeuthis princeps* V. Side view. Restored mostly from No. 13; $\frac{1}{2}$ natural size.

Figure 2.—*Sthenoteuthis pteropus* V. Side view of the specimen from Bermuda; $\frac{1}{2}$ natural size.

Figure 2a.—Caudal fin of the same specimen. Dorsal view; $\frac{1}{2}$ natural size.

PLATE VIII.

Architeuthis princeps V. (No. 14). General figure; from the recently preserved specimen; restored in accordance with the measurements of the freshly caught specimen; $\frac{1}{2}$ natural size. Drawn by the author.

PLATE IX.

- Figures 1 and 1a.—*Architeuthis princeps* Verrill (No. 14). A marginal ring from one of the large suckers of the tentacular-arm; 1, side view, enlarged $1\frac{1}{2}$ diameters; 1a, portion of the rim; enlarged 3 diameters.
- Figures 2 and 2a.—The same specimen. One of the medium-sized, oblique rings of a sucker from the distal part of a sessile arm; enlarged $1\frac{1}{2}$ diameters; top and side views.
- Figures 3 and 4.—The same. Top and side views of one of the smaller and more distal rings, from a sessile arm; enlarged 3 diameters.
- Figures 5 and 6.—The same. Top and side views of a complete sucker, with its pedicel, from the middle of a sessile arm; enlarged $1\frac{1}{2}$ diameters.
- Figure 7.—The same. Top view of one of the smaller, very oblique, distal suckers, from a sessile arm; enlarged 3 diameters.
- Figure 8.—The same. Portion of the horny ring of a medium-sized sucker from the middle of a sessile arm; top view; enlarged 6 diameters; from a camera-drawing.
- Figure 9.—The same. Side view of the horny ring of one of the largest and least oblique of the suckers from near the base of the lateral arms; enlarged $1\frac{1}{2}$ diameters.
- Figure 10.—The same. Side view of the horny ring of one of the marginal suckers of the tentacular-club; enlarged 3 diameters.
- Figure 11.—*Architeuthis princeps* (No. 13). Portions of the horny ring of one of the large suckers of the tentacular-arm, much enlarged; *a* and *b*, portions of the margin, from the outside; *c*, portion seen from the inside.
- Figures 8 and 11 are camera-drawings by the author; all the others are by J. H. Emerton.

PLATE X.

- Figure 1.—*Architeuthis princeps* V. (No. 14). Caudal fin from beneath; from the specimen a few days after it had been placed in alcohol; about $\frac{1}{2}$ natural size.
- Figure 2.—The same specimen. After it had been preserved several months in strong alcohol; about $\frac{1}{2}$ natural size.
- Figure 1 was drawn by J. B. Holder, M. D.; figure 2 by the author.

PLATE XI.

- Figure 1.—*Architeuthis princeps* V. (No. 10). Upper jaw; natural size.
- Figure 2.—The same. Lower jaw; the dotted line shows the parts that are present on the opposite side.
- Figure 3.—*Architeuthis princeps* (No. 1). Part of lower jaw; side view; natural size.
- Figure 3a.—The same. Front view; natural size. The rest of this beak had been destroyed.
- Figures 1 and 2 were drawn by the author; figure 3 by J. H. Emerton.

PLATE XII.

- Figure 1.—*Architeuthis Hartingii* V. Lower mandible, showing the anterior portion only; natural size.
- Figure 1a.—The same. Section of a sucker from a sessile arm of the same specimen; 1b, horny ring of the same; natural size. After Harting.
- Figure 1c.—The same. Teeth on the radula. After Harting.
- Figure 2.—*Architeuthis dux* Steenstrup. Lower mandible; natural size. Copied from Harting's figure, after Steenstrup.

- Figure 3.—*Architeuthis monachus* Steenstrup (Type specimen). Lower mandible; natural size. After Steenstrup.
 Figure 4.—*Enoplateuthis Hartingii* Verrill. Anterior portion of jaws; natural size. After Harting.
 Figure 5.—*Moroteuthis robusta* Verrill. Section of the solid, terminal cone of the pen; natural size.

PLATE XIII.

- Figure 1.—*Moroteuthis robusta* (Dall) V. Side view of one of the specimens, as found on the beach; $\frac{1}{2}$ natural size.
 Figure 2.—The same. Dorsal view. The dotted lines indicate portions of the arms that had been destroyed; $\frac{1}{2}$ natural size.
 Figure 3.—The same. Side view of the head and siphon, with the anterior part of the mantle, cut open; *e*, the eye; *s*, siphon; *o*, *o'*, *o''*, the three nuchal olfactory crests; *c*, *c'*, *c''*, the connective cartilages attaching the mantle to the neck; *c*, lateral cartilage of mantle; *c'*, lateral cartilage at base of siphon; *c''*, dorsal cartilage of neck; *m*, *m'*, cut edge of mantle.
 Figure 4.—The same. The entire dorsal 'pen'; side view; $\frac{1}{2}$ natural size.
 Figure 5.—The same. Ventral view.
 Figure 6.—The same. A portion from the middle of the 'pen', less reduced.
 All the figures were made from the fresh specimens by Mr. W. H. Dall.

PLATE XIV.

- Figure 1.—*Moroteuthis robusta* (Dall) Verrill. Odontophore; side view; enlarged 3 $\frac{1}{2}$ diameters.
 Figure 2.—The same. Part of a row of the teeth from near the anterior bend of the odontophore; enlarged 22 diameters; *a*, median tooth, front view; *a'*, side view of same; *b*, first lateral; *b'*, the same, side view; *c*, second lateral, front view; *d*, outer lateral, front view.
 Figure 3.—The same. One of the inner lateral teeth, side view; enlarged 54 diameters.
 Figure 4.—The same. Median tooth, side view; enlarged 54 diameters.
 Figure 5.—The same. Upper mandible, natural size.
 Figure 6.—The same. Lower mandible, natural size.
 Figure 7.—The same. Anterior end of terminal cone, showing a portion of the posterior end of the 'pen' inserted into it; $\frac{1}{2}$ natural size.
 Figure 8.—The same. Section of a ventral arm, close to the base; natural size; *a'*, one of the suckers, side view; *b* and *b'*, marginal membranes; *c*, crest or membrane along outer angle; *e*, median vein, near inner surface.
 Figures 1 to 4 are camera-drawings by the author; the rest are by J. H. Emerton.

PLATE XV.

- Figure 1.—*Lestoteuthis Fabricii* Verrill. Young. Pen; enlarged 2 diameters. Copied from G. O. Sars as *Gonatus amanus*.
 Figure 1a.—The same. Part of odontophore. Copied from G. O. Sars.
 Figure 1b.—The same. Portion of tentacular club, front view; enlarged. Copied from G. O. Sars.
 Figure 2.—The same. Young. General figure, dorsal view; enlarged 2 diameters. From an American example.
 Figures 2a, 2b.—The same. Front and side views of one of the suckers from the outer rows of a lateral arm of the same specimen.
 Figures 2c, 2d.—The same. Front and side views of a hook-sucker from the median rows of the same arm.
 Figure 3.—*Lestoteuthis Fabricii* Verrill (*Cheloteuthis rapax*). Club of tentacular arm, front view; enlarged 2 diameters. The horny hooks are lost from the claws *a*, *a'*, *a''*; *b*, *c*, small lateral suckers; *d*, *d'*, small suckers of distal portion; *e*, *e'*, connective suckers and tubercles.

- Figure 3a.—The same specimen. One of the suckers corresponding to *c* of figure 1, front view; much enlarged.
- Figure 3b.—The same specimen. A small sucker, corresponding to *d* of figure 1.
- Figures 3c, 3d.—The same specimen. Front and side views of one of the claws, with its enclosed horny hook or 'nail', from the middle of a lateral arm; enlarged 8 diameters.
- Figure 3e.—The same specimen. Connective cartilage from base of siphon, front view; enlarged 2 diameters.
- Figure 3f.—The same specimen. Beak and pharynx, side view; enlarged 2 diameters.
- Figure 4.—The same specimen. Teeth of the odontophore; enlarged 22 diameters.
- Figure 5.—*Enoploteuthis Hartingii* Verrill. Two hooks, *a*, *b*, from the arms, side views; *c*, *d*, median and lateral teeth of the odontophore. After Harting.
- Figure 6.—*Onychoteuthis Banksii*. One of the large hooks from the middle of the club; *a*, side view; *a'*, front view; *b*, *b'*, corresponding views of one of the smaller hooks of the club; *c*, side view; *c'*, front view of horny ring from one of the small suckers in the proximal cluster of connective suckers and tubercles of the club; enlarged 6 diameters.

PLATE XVI.

- Figure 1.—*Sthenoteuthis megaptera* Verrill. Type specimen. Body seen from beneath; $\frac{1}{3}$ natural size; from the alcoholic specimen.
- Figure 2.—The same specimen. Part of the membrane lining the palate; enlarged 8 diameters; *a* and *b* are from different places.
- Figure 3.—The same specimen. A single row of teeth from the odontophore; enlarged 8 diameters.
- Figure 4.—The same specimen. Teeth from the odontophore; enlarged 16 diameters; *a*, two median teeth; *b*, inner lateral teeth; *c* and *d*, teeth of the two outer lateral rows. Drawn from the detached teeth.
- Figure 5.—The same specimen. Two of the outer lateral teeth, profile view; enlarged 16 diameters.
- Figure 6.—The same specimen. Several lateral teeth in their natural sequence; enlarged 16 diameters.
- Figure 7.—The same specimen. Two teeth from the next to the outer row; enlarged 16 diameters.
- Figures 8 and 8a.—The same specimen. Twenty-second sucker of a ventral arm; front and side views, enlarged 2 diameters.
- Figure 9.—The same specimen. One of the largest suckers from the club of the tentacular arm; front view; enlarged 2 diameters.
- Figure 10. *Sthenoteuthis megaptera* V. from George's Bank. Large sucker from the tentacular club, front view; enlarged 2 diameters.
- Figures 8, 8a, and 9 are by J. H. Emerton; the others are by the author; 2 to 7 are camera-drawings.

PLATE XVII.

- Figure 1.—*Sthenoteuthis megaptera* Verrill, from George's Bank. Beak and inner buccal membrane, front view; natural size.
- Figure 2.—The same. Another specimen. Side view of jaws and odontophore; natural size.
- Figure 3.—*Sthenoteuthis pteropus* Verrill, from Bermuda. Jaws; *a*, upper; *b*, lower mandible; natural size.
- Figure 4.—The same specimen. Isolated teeth from odontophore; enlarged 25 diameters; *a*, median teeth, front view; *b*, inner lateral; *c*, middle lateral; *d*, outer lateral tooth.
- Figure 5.—The same specimen. Anterior end of the pen; natural size.
- Figure 5a.—Posterior end of the same pen.

- Figure 6.—The same specimen. Connective cartilage from the base of the siphon; natural size.
- Figure 7.—The same specimen. Transverse sections of some of the arms; *a*, of dorsal; *b*, of second pair; *c*, of third pair; natural size. The suckers are omitted.
- Figure 8.—The same specimen. Rings of suckers of the sessile arms, enlarged 2 diameters; *a*, *a'*, side and front views of the 15th and 13th suckers of a ventral arm; *b*, *b'*, side and front view of one of the largest suckers of a lateral arm; *c*, *c'*, side and front views of one of the larger suckers of a dorsal arm.
- Figure 9.—The same specimen. Part of the border of one of the larger suckers (12th) of the second pair of arms; more enlarged, showing part of the dentate edge of the horny ring, with a portion of the circle of small plates, attached to the membranous border.

Figures 4 and 7 are by the author; fig. 4 is a camera-lucida drawing.

PLATE XVIII.

- Figure 1, 1a.—*Ommastrephes illecebrosus* V. Young male from Provincetown, Mass. General figure of ventral side; $\frac{1}{4}$ natural size; 1a, club of the right tentacular arm, front view; $1\frac{1}{4}$ natural size.
- Figure 2.—The same. Club and part of tentacular arm, of a larger female specimen; enlarged $1\frac{1}{4}$ diameters.
- Figure 3, 3a.—The same. Hectocotylied right ventral arm of a large male specimen, from Eastport, Me., showing the sexual modification of the suckers and their peduncles toward the end of the arm; 3a, transverse section of the modified portion of the same.
- Figure 4.—The same. Pen of a young specimen; $\frac{1}{4}$ natural size.
- Figures 5 and 5a.—The same. Side and front views of a large sucker of the lateral arms; enlarged $\frac{1}{4}$ diameters.
- Figures 6 and 6a.—The same. Side and front views of a smaller distal sucker of the lateral arms; enlarged $\frac{1}{4}$ diameter.
- Figure 7.—The same. ♀. Side view of the horny ring of one of the largest suckers of the club; enlarged $3\frac{1}{4}$ diameters.
- Figure 8.—The same. From Eastport, Me. Part of the teeth of the odontophore, in their natural positions; enlarged 10 diameters; *a*, median teeth; *b* and *b'*, inner lateral teeth; *c*, middle lateral teeth; *d*, outer lateral teeth.

PLATE XIX.

- Figure 1.—*Ommastrephes illecebrosus*. Male, $\frac{1}{4}$ natural size. Opened on the ventral side. The peritoneal membrane, most of the renal organs on the right side, and the reproductive organs, except the testicle (*t*), have been removed. M, mantle cut open; F, caudal fin; P, posterior part of pen; S, stomach; S', cæcal lobe; H, systemic heart; *c*, the eye; *b*, olfactory or nuchal crests; *d*, siphon; *f*, *f*, connective cartilages on the base of the siphon; *f'*, *f'*, connective cartilages of the mantle, which fit into *f*, *f*; *m'*, lateral muscles of neck; *g*, *g*, gills; *l*, liver; *i*, ink-sac; *h*, intestine or rectum; *ao*, anterior aorta, going to head; *bo*, efferent branchial vessel; *o*, median ventral artery of mantle; *o'*, *o'*, lateral arteries going to mantle and fins; *au*, branchial auricles; *vc*, anterior vena-cava; *vo'*, posterior vena-cava of left side (the right one has been removed); *rr*, saccular ventral renal organs; *r'*, more compact glandular (renal) organ, connected with the posterior vena-cavæ; *t*, testicle or spermary; *p''*, hooded posterior tip of pen, inclosing the end of the spermary. From an alcoholic specimen.
- Figure 2.—The same. Jaws; enlarged $1\frac{1}{4}$ diameters; *a*, superior; *b*, inferior mandible.
- Figure 3.—The same. Part of the teeth of the odontophore in their natural positions, enlarged 25 diameters; *a*, median teeth; *b* and *b'*, inner lateral teeth; *c*, middle lateral teeth; *d*, outer lateral teeth.

Figure 4.—The same. Side view of the head and siphon, after removal of part of the mantle, $\frac{3}{4}$ natural size; 1, 2, 3, 4, bases of 1st to 4th pairs of sessile arms; $t a$, base of tentacular arm; m , mantle; b, b' , olfactory crests around the ear; d , siphon; f, f' , one of the connective cartilages for attaching it to the mantle.

Figure 4a.—The same. Lateral connective cartilage, n , on the inside of the mantle, which fits closely into the cartilage pit (f) on the base of the siphon.

Figures 5 and 5a.—The same. Side and front views of one of the larger suckers of the lateral arms; enlarged 4 diameters.

Figures 6 and 6a.—The same. Side and front views of a smaller distal sucker of the lateral arms; enlarged 4 diameters.

Figure 3 is from a camera-lucida drawing by the author.

PLATE XX.

Figure 1.—*Ommastrephes illecebrosus* Verrill. Female; less than natural size. Lettering as in Plate 19, figure 1, with the following additional letters: b'' , lower nuchal facet, with the auditory pore; u , urethral openings in the peritoneal membrane, communicating between the gill-cavity and the visceral cavity, containing the renal organs, r, r ; $v o'$, lateral pallial veins, or venæ-cavæ; $o v$, ovary; $o d, o d'$, right and left oviducts; $o p$, the anterior opening; $o x, x x$, nidamental glands.

Figure 2.—*Loligo Pealei*, var. *pallida*. Anatomy of the alimentary canal, &c.; $\frac{3}{4}$ natural size. The organs are shown nearly in a dorsal view, except the jaws, which are viewed from the side and in section; $b m$, buccal membrane; $s m$, section of superior mandible; $i m$, of inferior mandible; $o d$, of odontophore, with teeth; $o e, o e'$, œsophagus; $s g$, salivary glands; $s d$, salivary duct; $g l$, subœsophageal ganglion; $l l$, liver; ao, ao , anterior aorta, running parallel with the œsophagus along and through the liver; S , first stomach; S' , second stomach or cœcal appendage; S'' , third stomach, strongly plicated within; h , intestine or rectum; h' , anal orifice and papillæ; i , ink-sac; i' , orifice of its duct; H , ventricular heart; bo , cut end of one of the branchio-cardiac vessels; $g o$, genital artery, going to testicle; so, so , branches of gastric artery; t , testicle or spermary; $v d$, vas deferens; $p r$, prostate gland and vesiculæ seminales; $s s$, spermatophore-sac; p , 'penis' or efferent duct.

PLATE XXI.

Figure 1.—*Mastigoteuthis Agassizii* Verrill. Dorsal view; slightly enlarged.

Figure 1b.—The same. Pen; ventral view; enlarged 2 diameters.

Figure 1c.—The same. Side view of the same pen.

PLATE XXII.

Figure 1.—*Calliteuthis reversa* Verrill. Ventral view; natural size.

Figure 1a.—The same. Beak, buccal membranes and base of arms; front view; natural size.

Figure 1b.—The same. One of the larger suckers from a lateral arm; much enlarged.

Figure 1c.—The same. Pen; ventral view; somewhat enlarged.

Figure 2.—*Mastigoteuthis Agassizii* Verrill. Front view of the beak, buccal membranes (b, d), and bases of the arms; enlarged 2 diameters.

Figure 2a.—The same. Side view of head, siphon, and anterior part of mantle, showing the cartilage (c), on the inner surface of the mantle, which interlocks with c' on the base of the siphon; e , olfactory (\dagger) papilla near the ear; p , an aquiferous pore (\dagger); s , siphon; $t a$, base of tentacular arms; 1, 2, 3, 4, bases of corresponding pairs of arms.

Figure 2b.—The same. Portion from near the end of one of the tentacular arms; enlarged 16 diameters.

Figure 2c.—The same. Suckers from the tentacular arm; much enlarged; a , side view; a' and a'' , front views.

Figure 2*d*.—The same. One of the suckers from the middle of a lateral arm; front view; much enlarged.

Figure 2*e*.—The same. Three rows of teeth on the radula, in their natural positions; enlarged nearly 50 diameters.

PLATE XXIII.

Histioteuthis Collinsii Verrill. Side view of the head and arms; from the preserved specimen; $\frac{3}{4}$ natural size. Drawn by J. H. Emerton.

PLATE XXIV.

Figure 1.—*Desmoteuthis hyperborea* V. Ventral view of a female; $\frac{3}{4}$ natural size.

Figure 2.—The same specimen. Dorsal view of the head and arms. Part of the arms are imperfect.

Figure 2*a*.—The same. One of the arms, left of the third pair; natural size.

Figure 2*b*.—The same. One of the larger suckers from the middle of third pair of arms; front view; enlarged 8 diameters.

Figure 3.—*Histioteuthis Collinsii* V. Original type. One of the tentacular arms; front view; $\frac{1}{2}$ natural size.

Figure 4.—Beak of the same specimen; *a*, upper; *b*, lower mandible; natural size.

Figure 5.—Suckers of the same specimen; *a*, side, and *a'*, front view of one of the larger suckers of lateral arm; *b*, side, and *b'*, front view of a distal sucker; enlarged $2\frac{1}{2}$ diameters.

Figure 6.—The same specimen. Teeth of the odontophore; isolated and enlarged 25 diameters; *a*, median; *b*, inner lateral; *c*, and *d*, outer laterals; *e*, marginal plate; *h*, *g*, and *f*, other views of the lateral teeth. The teeth are not drawn in their natural positions.

Figure 7.—The same specimen. Teeth on the radula in their natural positions; enlarged 22 diameters.

Figure 6 is from a camera-lucida drawing by the author.

PLATE XXV.

Figure 1.—*Desmoteuthis hypoborea* Verrill. Female; about $\frac{3}{4}$ natural size. Specimen opened on the ventral side. M, mantle; F, caudal fin; P, P', posterior part of pen; *c*, *c*, eyes; *d*, siphon; *d o*, aperture of same; *d''*, base and posterior entrance of same; *f'*, commissure attaching the siphon to the mantle laterally; *g*, *g*, gills; *i*, ink-sac; S', first stomach, or gizzard; S, S, lobes of stomach; S'', caecal lobe; *l*, *l*, long, tubular intestine, plicated within, and with clusters of follicular glands externally along the sides; *h*, rectum; *j*, liver; H, systemic heart or ventricle; *b o*, branchial efferent vessels; *a*, *u*, branchial auricles; *v o'*, posterior vena-cava; *r'*, renal organs; *ov*, ovary; *o v'*, some ovules larger than the rest; *op*, *o p'*, right and left oviducts; *x'*, nidamental glands of the oviducts; *x x'*, accessory nidamental glands. From a somewhat mutilated specimen.

Figure 1*a*.—The same. Pen; ventral view; $\frac{3}{4}$ natural size.

PLATE XXVI.

Figure 1.—*Loligo Pealei* Lesueur. Female from Vineyard Sound. Ventral view; $\frac{3}{4}$ natural size; 1, dorsal arms; 2, 3, 2*d* and 3*d* lateral arms; 4, ventral arms; *t*, tentacular arms; *a*, ventral olfactory crests around the ear; *e*, eye; *p*, aquiferous pore; *s*, siphon.

Figure 2.—The same. Tentacular arm of a large male; enlarged $1\frac{1}{2}$ diameters.

Figure 3, 3*a*.—Front and side views of the hectocotylized left ventral arm of a male, showing the sexual modifications of the suckers and their peduncles, toward the tip; enlarged $1\frac{1}{2}$ diameters.

Figure 4.—The same. Female; front view of the beak and buccal membranes; natural size; *m*, mandibles; *f*, inner fold; *e*, second fold of the buccal membrane; *a*, dorsal; *b*, *c*, lateral; *d*, ventral angles of the outer buccal membrane, with their small suckers; *s*, peculiar horseshoe-shaped tubercle, for the attachment of the spermatophores during copulation.

PLATE XXVII.

Figure 1.—*Loligo Pealei*, var. *borealis*. Female specimen, from Annisquam, Mass. Pen; natural size. Represented as flattened to show the full width of the thin portion.

Figure 2.—*Loligo Pealei* Les. Female specimen, from Vineyard Sound. Pen; natural size; represented as before in the same manner.

Figure 3.—The same. Pen of a young specimen from Vineyard Sound; natural size. Represented in the same way.

Figure 4.—The same. Pen of a male; $\frac{2}{3}$ natural size. Viewed in the same manner as figures 1 and 2.

Figure 4a.—The same. Pen; side view of tip; enlarged.

Figure 5.—*Loligo Gahi* D'Orb. Pen; $\frac{2}{3}$ natural size.

PLATE XXVIII.

Figure 1.—*Loligo Pealei*, var. *pallida* Verrill. Male, from Ansonia, N. Y. Dorsal view; about $\frac{1}{2}$ natural size.

Figure 2.—The same. Pen; about $\frac{1}{2}$ natural size.

Figure 3.—The same. Male. Suckers enlarged 3 diameters; *b'*, front view of tenth, from third arm; *b*, side view of the same; *c*, side view of the horny ring of the fifth large sucker of the tentacular club; *c'*, front view of the same.

Figure 4.—The same. Female. Suckers: *a*, lateral, and *a'*, front view of tenth sucker from the third pair of arms; *e*, side, and *e'*, front view of the fifth large sucker of the tentacular arm; enlarged 3 diameters.

Figure 5.—The same. Upper mandible: *a*, rostrum or tip of the beak; *b*, the notch; *c*, the inner end of ala; *d*, the frontal lamina; *e*, the palatine lamina; *a b*, the cutting edge of beak; *b c*, anterior or cutting edge of ala.

Figure 5a.—The same. Lower mandible: *a*, rostrum; *a b*, cutting edge; *b c*, anterior edge of ala; *d*, mentum or chin; *e*, gular lamina.

Figure 6.—The same. Part of the teeth of the odontophore; enlarged 50 diameters; *a*, median tooth, front view; *c*, next to outer lateral teeth; *d*, outer lateral teeth; *e*, marginal plates; all are in their natural positions, except *a*.

Figure 7.—The same. Portion of the radula; enlarged 22 diameters.

Figure 8.—*Loligo Pealei*. Portion of the radula; enlarged about 20 diameters.

Figures 9, 9a.—The same. Male; side and front views of the horny ring of one of the marginal suckers of the tentacular club; enlarged 10 diameters.

Figure 10.—Teeth on the lining membrane of the palate; enlarged 25 diameters.

Figure 11.—*Chiroteuthis lacertosa*. One of the tentacular suckers; front view; enlarged 75 diameters.

Figure 11a.—The same sucker, with pedicel; front view; enlarged 22 diameters.

Figures 5 and 5a were drawn by the author; figure 9 was drawn by J. H. Blake, from nature; the rest, by J. H. Emerton.

PLATE XXIX.

Figure 1.—*Loligo Pealei*, var. *pallida*. Male. Ventral view; about $\frac{2}{3}$ natural size. The mantle has been cut open, a little to one side of the median line; most of the peritoneal membrane has been removed. C, lower side of head; M, mantle; F, caudal fin; *a*, lachrymal pore; *a'*, muscles; *b*, olfactory crests; *c*, eye; *d*, siphon, cut open; *d''*, cavity of siphon; *e*, valve of siphon; *f*, one of the connective cartilages of the siphon; *f'*, one of the connective cartilages of the mantle, in the form

of a ridge, fitting into the siphonal cartilage; *g*, left gill; *h*, rectum; *h'*, termination of the intestine or rectum; *i*, ink-sac; *i'*, duct of ink-sac; *l*, portion of liver, in position; *m*, *m'*, muscular columns connecting the head and siphon with dorsal portion of the body; *H*, systemic heart, or ventricle, crossed by the artery of the ink-sac; *a o*, bulbous base of anterior aorta; *o*, ventral pallial artery, or median branch of the posterior aorta, supplying the ventral parts of the mantle; *o'*, one of the caudal arteries or lateral branches of the posterior aorta going to the caudal fin and posterior parts of the mantle; *a u*, *a u*, branchial auricles; *b v*, afferent vessel going to the gills; *b o*, efferent branchial vessels, returning the blood to the ventricle, their swollen basal portions acting as auricles; *v a*, anterior vena-cava; *r*, *r*, ventral renal organs, two ventral sacculated branches of the vena-cava (on the left side, the vein from the ink-sac and rectum is shown); *r'*, *r'*, two pyriform renal organs, or sacculated and glandular portions of the posterior venæ-cavæ, directly connected with *r*, *r*; *v*, *v o'*, lateral pallial veins, going to the dorsal sacculated divisions of the venæ-cavæ; *v o''*, *v o''*, two posterior venæ-cavæ, returning from the caudal fin and mantle; *S*, the first stomach, or gizzard; *S'*, large, saccular cæcal appendage of the stomach; *S''*, glandular, plicated stomach, in continuation with the anterior portion of *S'*; *t*, spermary or testicle; *p r*, prostate gland, with the vesiculæ-seminales and spermatophore-sac; *p*, efferent sperm-duct or 'penis'; *P*, posterior portion of the pen.

Figure 2.—The same. Dorsal view of the reproductive organs, part of the renal organs, heart, etc., dissected out. The lettering is as in figure 1, with the following additions: *v d*, *v d'*, vas-deferens, closely folded upon itself; *v s*, vesiculæ-seminales; *e s*, spermatophore-sac; *p o*, genital artery; *g o*, spermatic artery and vein; *p t*, part of peritoneal membrane.

Figure 3.—*Loligo Pealei*. Female in the breeding season. Oviduct, filled with ova, dissected out. Ventral view, about $\frac{1}{2}$ natural size; *v o*, commencement of convoluted, thin membranous portion of oviduct; *o d*, entrance to glandular portion; *o d'*, glandular portion of oviduct, surrounded by the large, laminated gland, *x'*, the arterial vessels of which have been injected; *o p*, orifice of the oviduct.

Figure 3a.—The same specimen, seen from the dorsal side.

Figures 2, 3 and 3a are from drawings by the author.

PLATE XXX.

Figure 1.—*Loligo Pealei*. Embryo taken from the egg, ventral view, much enlarged; *a*, *a*, *a*, ventral arms, tentacular arms, and third pair of sessile arms; *o*, *o*, eyes on stout peduncles or lobes from the sides of the head; *m*, mantle-edge; *h*, branchial auricles; *y*, unabsorbed yolk-mass.

Figure 2.—The same. An embryo, within the egg, somewhat more advanced than figure 2, side view, less enlarged. The lettering is as in figure 2, with the following additions: *a'*, second pair of arms; *a''*, third pair; *a'''*, tentacular arms; *a''''*, ventral arms; *s*, orifice of siphon; *o*, otoliths; *f*, rudimentary caudal fins. Chromatophores are developed on the mantle.

Figure 3.—The same. An embryo at the period of hatching. Ventral view, enlarged about 15 diameters. The yolk-sac (*y*) is nearly absorbed; *a³*, third pair of sessile arms; *t a*, tentacular arms; *v a*, ventral arms; *b*, beak; *l*, odontophore; *r*, teeth on the radula; *s*, siphon; *o t*, otolith; *m*, mantle; *f*, caudal fin; *g*, *g'*, gills; *i*, ink-sac; *t*, rectum; *h'*, *h'*, branchial auricles; *u*, *u'*, rudiments of the stomach.

Figure 4.—The same. Young, just hatched, seen as a transparent object, enlarged 6 diameters; from a specimen raised from the eggs at Nowport, R. I. August 5th. Ventral view; *a³*, the third pair of arms; *t a*, tentacular arms; *v a*, ventral arms; the suckers show on *t a*, the tentacular arms; *b*, the beak; *l*, odontophore; *e*, the eye; *f*, caudal fin; *g*, gill; *h*, ventricle of the heart; *h'*, *h'*, branchial auricles; *i*, ink-bag; *m*, mantle; *o t*, otoliths; *s*, siphon; *s'*, base of siphon; *t*, end of intestine; *u*, stomach; *y*, portion of yolk-sac, not yet absorbed. The chromatophores are omitted.

Figure 5.—The same. A somewhat older larva, taken swimming at the surface. Dorsal view; enlarged about 7 diameters. The dorsal arms are still very small; the tentacular arms are much the largest; the chromatophores are large and symmetrically arranged, but only a part of them are shown in the figure; the caudal fins do not reach the posterior end.

Figure 6.—The same. Young female. Dorsal view of a specimen taken at Newport, R. I., in August. Enlarged 2 diameters. From a fresh specimen.

Figure 7.—The same. One of the egg-capsules, slightly enlarged.

Figure 8.—The same. A very young embryo, earlier than figure 1; dorsal view; rudiments of the arms; *o*, otoliths; *s*, inner folds of the siphon; *g*, rudiments of the gills; *e*, "eye-stalks," or swellings of the sides of the head; *m*, mantle; *p*, shell-area; *y*, yolk.

Figures 1 and 2 are from camera-drawings by the author; figure 8 is copied from Brooks; the rest are by J. H. Emerton.

PLATE XXXI.

Figure 1.—*Loligo Pealei*. Portion of middle of club, showing the four rows of suckers; enlarged 4 diameters. From an individual having larger suckers than usual.

Figure 2.—The same. Portion of the middle of the tentacular club of a specimen from the same lot and of nearly the same size as figure 1, but having small tentacular suckers; enlarged 4 diameters; *a*, *a'*, largest median suckers; *b*, *b'*, lateral suckers.

Figure 3.—The same. Portion of the horny ring and marginal denticles of one of the large median suckers of the tentacular club; much enlarged.

Figure 4.—*Loligo brevis* Bv. Female. Dorsal view; natural size.

Figure 4a.—The same specimen. Pen; natural size.

Figure 4b.—The same. Portion of horny ring and marginal scales of one of the large tentacular suckers; much enlarged.

Figure 4c.—The same sucker; less enlarged; front view. From a mounted specimen which, by contracting, has everted the denticulated border of the rim.

PLATE XXXII.

Figure 1.—*Chiroteuthis lacertosa* Verrill. One of the tentacular arms, outer side; natural size.

Figure 1a.—The same. Front view of club; enlarged 2 diameters.

Figure 1b.—The same. One of the suckers, front view; enlarged 10 diameters.

Figure 2.—*Loligo Pealei*, var. *borealis*. Female, in the breeding season. Ventral view; about $\frac{1}{2}$ natural size. The mantle has been cut open nearly in the median line and the peritoneal membrane partly removed. The lettering is the same as in figure 1 of Pl. XXIX, with the following additions: 1, 2, 3, 4, first, second, third, and fourth pairs of sessile arms; *t a*, tentacular arms; *d'*, external orifice of siphon; *o v*, *o v'*, ovary, mostly concealed by the oviduct; *v o*, commencement of glandular portion of oviduct; *x'*, large gland surrounding the oviduct; *o d'*, anterior portion of oviduct; *op*, orifice of oviduct; *x x*, pair of large, ventral, laminated, nidamental glands; *x*, pair of folliculated and mottled, accessory nidamental glands; *u*, one of the urethral openings of the peritoneal membrane.

Figure 3.—The same. Section of gill; enlarged about 8 diameters; *a*, one of the lamellae with the efferent vessel along its edge; *a'*, its outer end; *b o*, the main efferent or branchio-cardiac vessel, returning the blood to the heart; *b v*, the main branchial vein, or efferent vessel; *b*, one of the branches supplying a lamella; *v*, another vein in the muscular stem; *c*, *d*, membrane uniting the gill to the mantle; *e*, membrane running across the dorsal side of the gill.

PLATE XXXIII.

- Figure 1.—*Heteroteuthis tenera* Verrill. Front view of male; enlarged 2 diameters.
 Figures 1a, 1b.—The same. Front and side views of one of the larger suckers of the lateral arms of the same specimen; more enlarged.
 Figure 2.—The same. Jaws, side view; enlarged 4 diameters; a, superior; b, inferior mandible.
 Figure 2a.—The same. Tentacular club; enlarged 5 diameters.
 Figure 2b.—The same. Pen; enlarged 6 diameters.
 Figure 2c.—The same. Part of the radula; much enlarged.
 Figure 2d.—The same. Part of the radula; more enlarged.
 Figure 3.—The same. Dorsal view of a male; enlarged 2 diameters.
 Figure 3a.—The same. One of the larger marginal suckers of the tentacular club, front view; much enlarged.
 Figure 3b.—The same. Portion of the margin of the sucker, more enlarged, to show the scales.

PLATE XXXIV.

- Figure 1.—*Heteroteuthis tenera* Verrill. Dorsal view of female; enlarged 2 diameters.
 Figure 1a.—The same. A group of eggs; enlarged 2 diameters.
 Figure 2.—*Rossia sublevis* Verrill. ♀. Dorsal view; natural size.
 Figure 2a.—The same. One of the suckers of the tentacular club, side view; much enlarged.
 Figure 2b.—The same. Marginal scales on the edge of the same sucker; more enlarged.
 Figure 3.—The same. Pen, ventral view; enlarged 6 diameters.
 Figure 4.—The same. Ventral view; enlarged $1\frac{1}{4}$ diameters.
 Figure 5.—The same. One of the arms of the third pair, from another female example; enlarged 3 diameters.
 Figure 6.—The same. Corresponding arm of the male; enlarged 3 diameters.

PLATE XXXV.

- Figure 1.—*Histioteuthis Collinssi* Verrill. One of the largest median suckers of the tentacular club; side view; enlarged 4 diameters.
 Figure 1a.—The same. One of the suckers from next to the outer row, of the same club; enlarged 4 diameters.
 Figure 2.—*Rossia Hyatti* Verrill. Side view of young male; enlarged $1\frac{1}{4}$ diameters; from life.
 Figure 3.—*Rossia megaptera* Verrill. Female; dorsal view; natural size.
 Figure 4.—The same. Suckers; enlarged 22 diameters; a, front view of one of the largest from the third pair of arms; b, c, d, three suckers from the tentacular club.
 Figure 5.—*Rossia Hyatti* Verrill. Egg containing an embryo; enlarged 6 diameters. The shaded portion represents the yolk still remaining unabsorbed.
 Figure 6.—The same. Pen; enlarged 6 diameters.

PLATE XXXVI.

- Figure 1.—*Stoloteuthis leucoptera* Verrill. Male; from a specimen taken in 1879; enlarged $1\frac{1}{4}$ diameters.
 Figure 1a.—The same specimen. Male; upper lateral arm, showing the greatly enlarged, middle suckers; enlarged 4 diameters.
 Figure 2.—The same. Young female; ventral view; enlarged 3 diameters.
 Figure 3.—*Rossia Hyatti* Verrill. A young specimen; enlarged $1\frac{1}{4}$ diameters.
 Figure 4.—The same. Adult female; dorsal view; enlarged $1\frac{1}{4}$ diameters.
 Figure 5.—The same. Female; suckers; enlarged 22 diameters; a, one of the largest from third pair of arms, side view; b, c, two forms of suckers from the tentacular club.
 Figure 6.—The same. Lateral arm of a male; enlarged 3 diameters.

PLATE XXXVII.

- Figure 1.—*Rossia Hyatti* Verrill. Female; ventral view of the head and arms; enlarged 3 diameters.
 Figure 2.—*Rossia sublevis* Verrill. Female; ventral view of the head and arms; enlarged 3 diameters.

PLATE XXXVIII.

- Figure 1.—*Stauroteuthis syrtensis* Verrill. Dorsal view; $\frac{1}{2}$ natural size.
 Figure 2.—The same. Lower side of head; *s*, siphon; *e*, eye; *a*, the auditory pore.
 Figure 3.—The same. The siphon, turned back.
 Figures 4 and 5.—The same. Superior and inferior mandibles; enlarged $2\frac{1}{2}$ diameters.
 This plate was drawn by the author, from the alcoholic specimen, except figures 4 and 5, which are by J. H. Emerton.

PLATE XXXIX.

- Figure 1.—*Alloposus mollis* Verrill. Young male; side view, showing the sac containing the hectocotylized arm, cut open, so as to expose the partially developed arm; $\frac{1}{2}$ natural size.
 Figure 1a.—The same specimen. Hectocotylized arm removed from the sac; enlarged 2 diameters.
 Figure 2.—The same. Young female; ventral view; $\frac{1}{2}$ natural size.
 Figure 2a.—The same specimen. Dorsal view; $\frac{1}{2}$ natural size.

PLATE XL.

- Figure 1.—*Octopus piscatorum* Verrill. Female; original type. Ventral view; $\frac{1}{2}$ natural size.
 Figure 1a.—The same specimen. Dorsal view.
 Figure 2.—*Parasira catenulata* Steenst. Female; front view; $\frac{1}{2}$ natural size.
 Figure 2a.—The same specimen. Side view of body and head; $\frac{1}{2}$ natural size.

PLATE XLI.

- Figure 1.—*Octopus Bairdii* Verrill. Male; ventral view; natural size; *h*, terminal spoon-shaped organ of the hectocotylized arm; *i*, the groove along the lower side of the arm.
 Figure 1a.—The same specimen. Hectocotylized arm; enlarged 2 diameters.
 Figure 2.—The same. Male; figured in the act of swimming; dorsal view; *a*, terminal spoon of hectocotylized arm. From a living specimen; nearly natural size.
 Figure 3.—*Octopus Bairdii* var. Verrill. Side view of a young male, enlarged about $1\frac{1}{2}$ diameters.
 Figure 3a.—The same specimen. Terminal appendage of the hectocotylized arm; more enlarged.

PLATE XLII.

- Figure 1.—*Octopus Bairdii* Verrill. Male; dorsal view from a living specimen; nearly natural size.
 Figure 2.—The same. Side view, from life; nearly natural size.
 Figure 3.—The same. Jaws; *s*, superior; *i*, inferior mandibles; enlarged 2 diameters.
 Figure 4.—The same. Portion of odontophore; enlarged 22 diameters.
 Figure 5.—The same. Spermatophores. A, one with the inner sac (*S*) partly extruded; *i*, the point from which the extension commences; enlarged $1\frac{1}{2}$ diameters; B, another spermatophore in its original condition; *a*, filament at large end; *b*, filament at small end.
 Figure 6.—*Octopus obesus* Verrill. Male; original type. Basal portion of one of the lateral arms, to show the arrangement of suckers; enlarged $1\frac{1}{2}$ diameters.

Figure 6a.—The same. Terminal portion of the hectocotylized arm; enlarged 2 diameters.

Figure 7.—*Alloposus mollis* Verrill. Part of a large mutilated specimen. Portion of an arm, with suckers, from near the base: natural size.

PLATE XLIII.

Figure 1.—*Octopus lentus* Verrill. Female; original specimen. Ventral view; $\frac{2}{3}$ natural size.

Figure 2.—The same specimen. Dorsal view; $\frac{2}{3}$ natural size.

PLATE XLIV.

Figure 1.—*Alloposus mollis* Verrill. An entire, detached, mature hectocotylized arm; $\frac{2}{3}$ natural size.

Figure 2.—*Octopus lentus* Verrill. Side view of a male; enlarged about $1\frac{1}{2}$ diameters.

Figure 3.—*Eledone verrucosa* Verrill. Side view of a male; $\frac{2}{3}$ natural size.

Figure 3a.—The same specimen. Distal portion of the hectocotylized arm, to the edge of the basal web, showing the terminal appendage and the lateral groove.

PLATE XLV.

Figure 1.—*Lestoteuthis Fabricii* V. One of the tentacular arms; enlarged 2 diameters.

Figure 1a.—The same. The larger claw; side view.

Figure 1b.—The same. Lateral arm; enlarged 2 diameters.

Figures 1b', 1b''.—The same. One of the hooks; enlarged 4 diameters.

Figure 1c.—The same. Portion of ventral arm; enlarged 2 diameters.

Figure 1d.—The same. Pen, ventral view; a little less than natural size.

Figure 2.—*Desmoteuthis tenera* V. General figure of male, dorsal view; natural size.

Figure 2a.—The same. Teeth of odontophore; enlarged 22 diameters.

Figure 2b.—The same. One of the larger suckers of the lateral arms; front view; enlarged 8 diameters.

Figure 2c.—The same sucker; side view.

Figure 2d.—Valve-like apparatus within base of siphon; larger than natural size; *S*, orifice of siphon; *m*, median organ; *t'*, lateral papilla, and *t*, medio-dorsal papilla; *n*, *n'*, lateral cushions.

Figure 3.—*Brachioteuthis Beanii* Verrill. Dorsal view of the male; natural size.

Figure 3a.—The same. Pen, ventral view; enlarged slightly.

Figure 3b.—The same. Teeth of the radula; enlarged 22 diameters.

Figure 4.—*Desmoteuthis hyperborea*. Side view of one of the large suckers of the 3d pair of arms; side view; enlarged 8 diameters.

Figure 4a.—The same. Peculiar organs on the interior of the medio-dorsal side of the base of the siphon; enlarged 2 diameters; *i*, median, *t'*, lateral papillæ.

Figure 5.—*Chiroteuthis lacertosa* V. Young female. One of the suckers of the tentacular arms; front view; enlarged 22 diameters.

Figure 6.—*Histioteuthis Collinsii*. One of the larger suckers of the median rows of the tentacular club; side view; enlarged 2 diameters.

Figure 6a.—The same. One of the suckers of the sublateral rows of the tentacular club.

PLATE XLVI.

Figure 1.—*Chiroteuthis lacertosa* Verrill. Dorsal view of the male; a little less than three-quarters natural size; *t a*, stump of one of the tentacular arms, with a few of the sessile suckers remaining.

Figure 1a.—The same. Ventral view of the pen; enlarged about 3 diameters.

- Figure 1a'.—The same. Section of the anterior part of the pen; 1a'', section of the posterior part of the pen; much enlarged.
- Figure 1b.—The same. Connective cartilage of siphon; enlarged 3 diameters.
- Figure 1c.—The same. Lateral connective cartilage of mantle.
- Figures 1d, 1e.—The same. One of the larger suckers of the 3d pair of arms; front and side views; enlarged 6 diameters.
- Figure 1f.—The same. Papilla, or rhinophore, from behind and below the eye; enlarged 3 diameters.
- Figure 2.—*Brachioteuthis Beanti* V. Connective cartilage of the mantle; enlarged.
- Figure 2a.—The same. Lateral connective cartilage of the siphon; enlarged.
- Figure 3.—*Desmoteuthis tenera* V. Tentacular arm; enlarged 3 diameters.