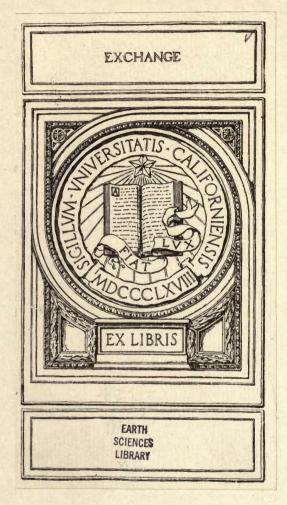
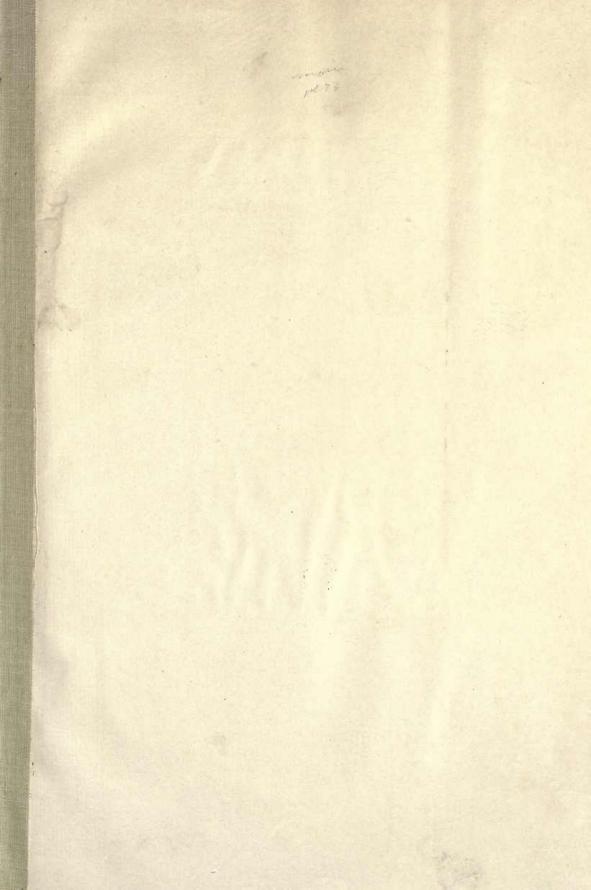
# MARYLAND GEOLOGICAL SURVEY

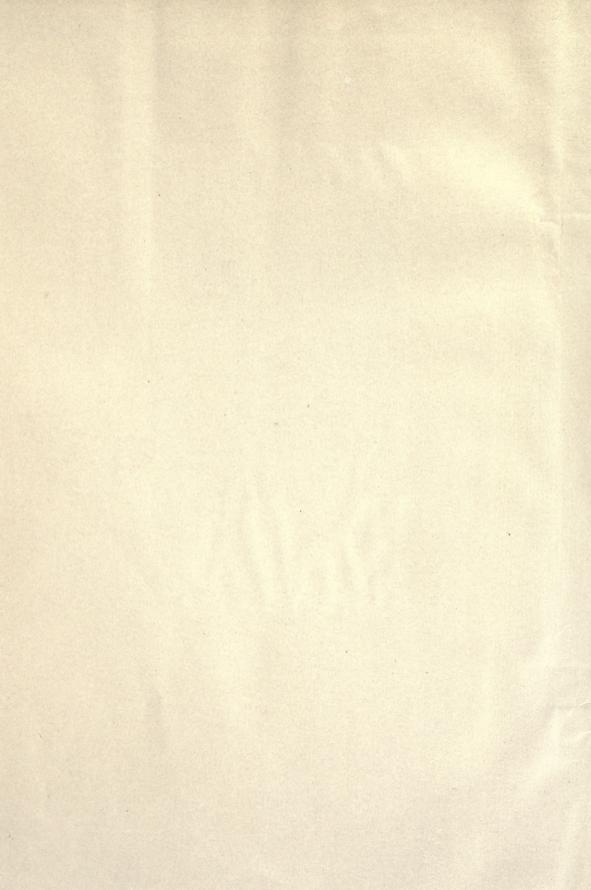




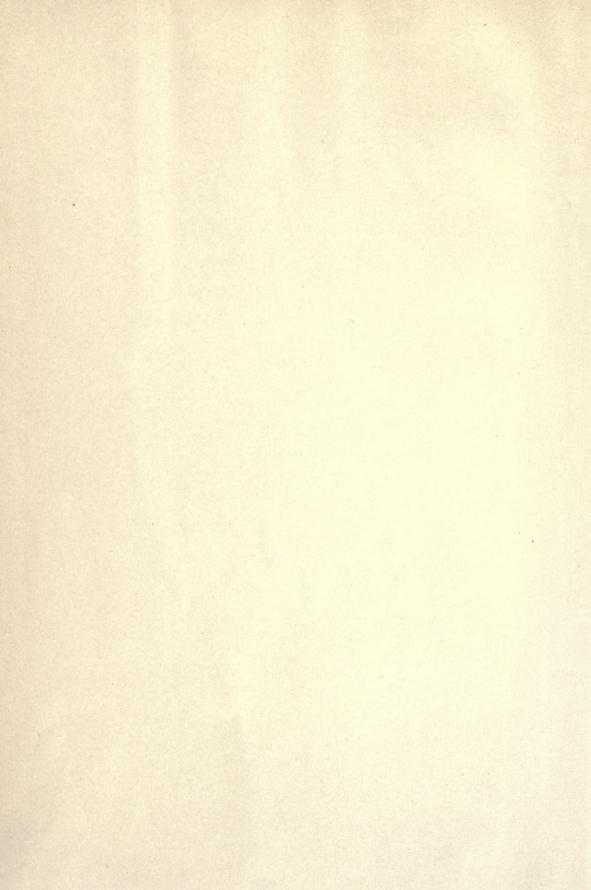
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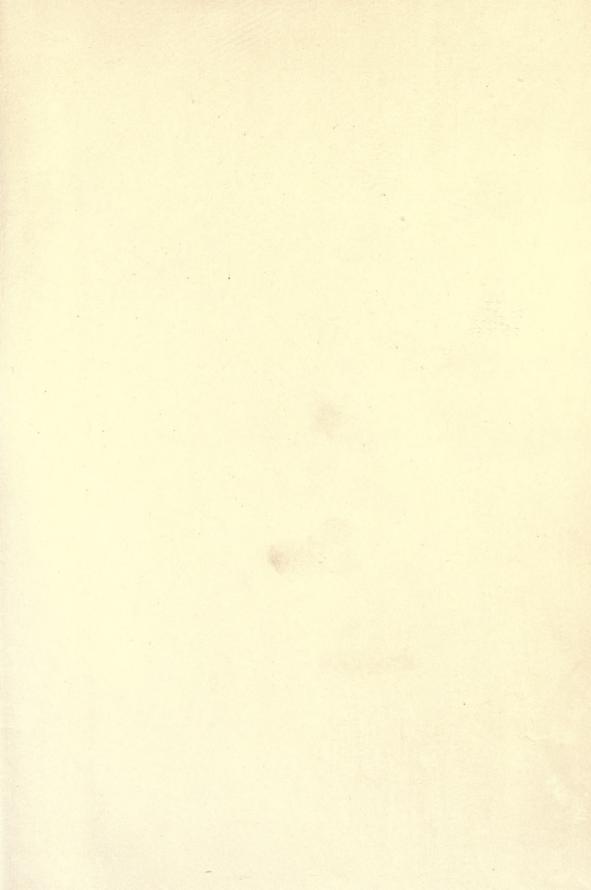


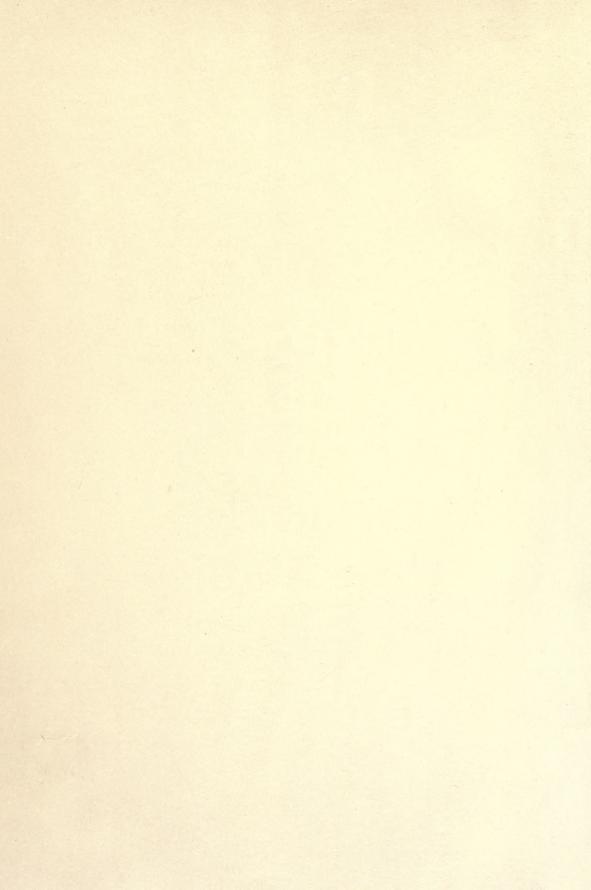






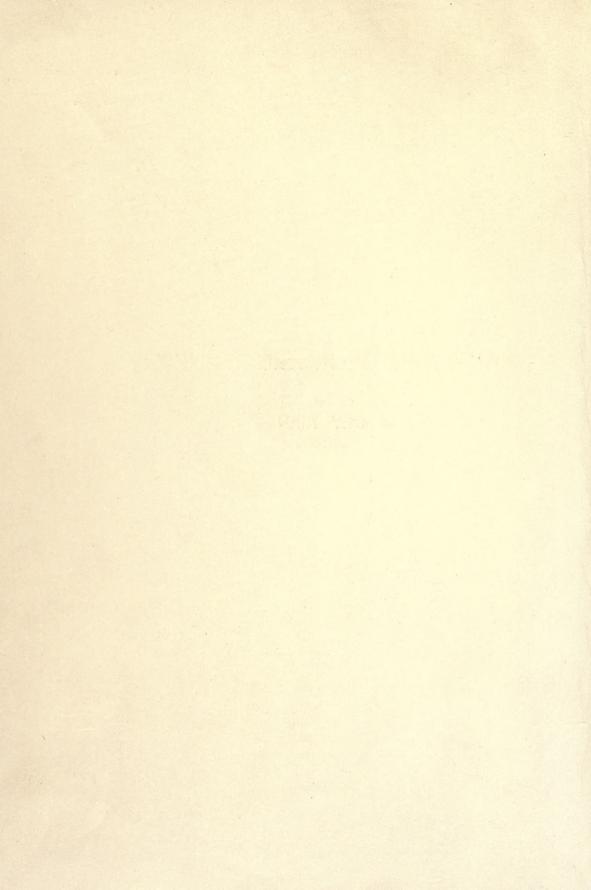






## MARYLAND GEOLOGICAL SURVEY

DEVONIAN PLATES



# MARYLAND GEOLOGICAL SURVEY



DEVONIAN PLATES

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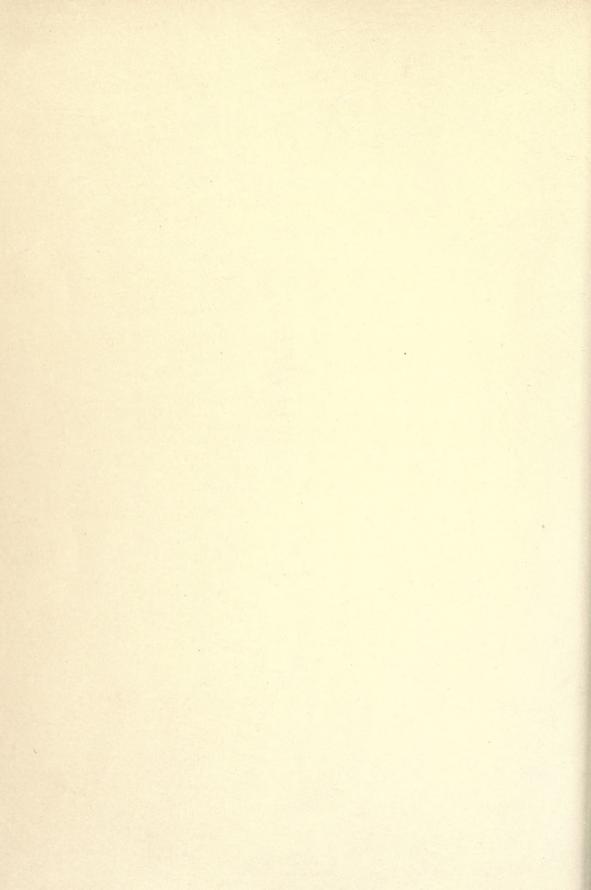
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### DEVONIAN LOWER

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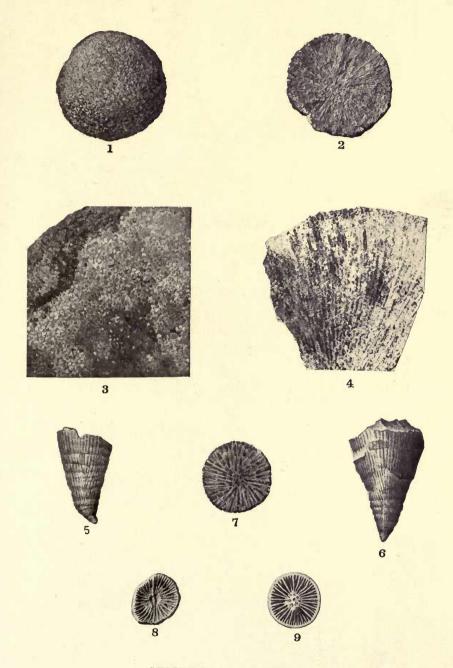
#### NOTE

Plates I to XVI, illustrating the Geological and Paleontological Relations of the Lower Devonian, are bound with the text volume. The following plates illustrate the Systematic Paleontology of the Lower Devonian of Maryland.

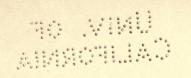
All drawings cited from New York formations, in the following descriptions of plates, are from the Paleontology of New York, and are after Hall or Hall and Clarke. Only in cases where Hall figured material from Maryland is acknowledgment made in the descriptions.

#### PLATE XVII

PAG	àЕ
Figs. 1-4. HINDIA SPHÆROIDALIS Duncan	95
1. Exterior view.	
2. Radial section of sponge.	
3. Tangential section showing tubes. $\times$ 4.	
4. Radial section showing spicules and tubes. $\times$ 4.	
Helderberg formation, Keyser member, Cash Valley.	
Figs. 5-9. Streptelasma strictum Hall	98
5, 6. Lateral and posterior views of corallum.	
7. Transverse section.	
New Scotland formation, New York.	
8. Interior of calyx.	
9. Transverse section of corallum.	
Helderberg formation, New Scotland member, Cherry Run.	
W. Va.	

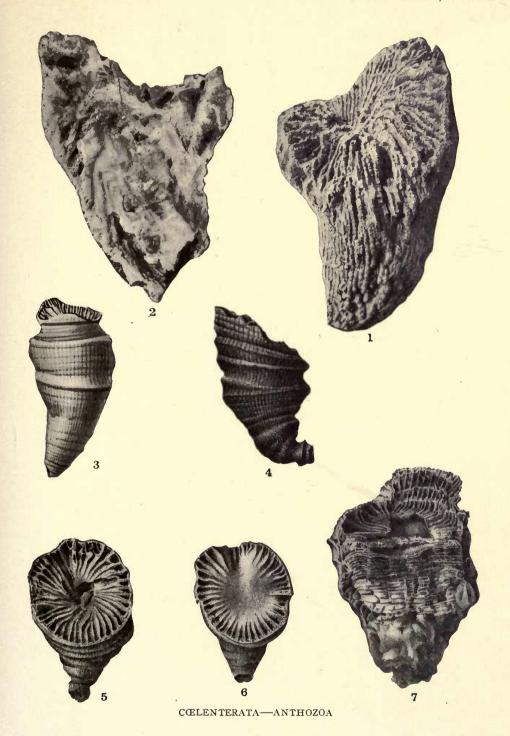


CŒLENTERATA-ANTHOZOA



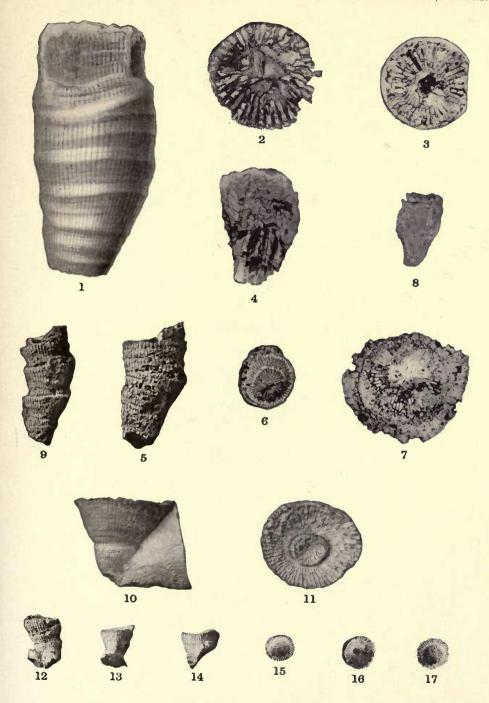
#### PLATE XVIII

PA	GE
Figs. 1, 2. Streptelasma cumberlandica Swartz n. sp	.99
1. Exterior of weathered corallum.	
2. Longitudinal section of same individual.	
Helderberg formation, near Cumberland.	
Figs. 3-7. Zaphrentis ræmeri M. Edwards and Haime 2	200
3. Side view of corallum, questionably referred to this species. Oris-	
kany formation, Ridgely member, Cumberland.	
4. Side view of corallum.	
5, 6. Transverse sections of corallum.	
7. Longitudinal section of corallum.	
New Scotland formation, New York.	



#### PLATE XIX

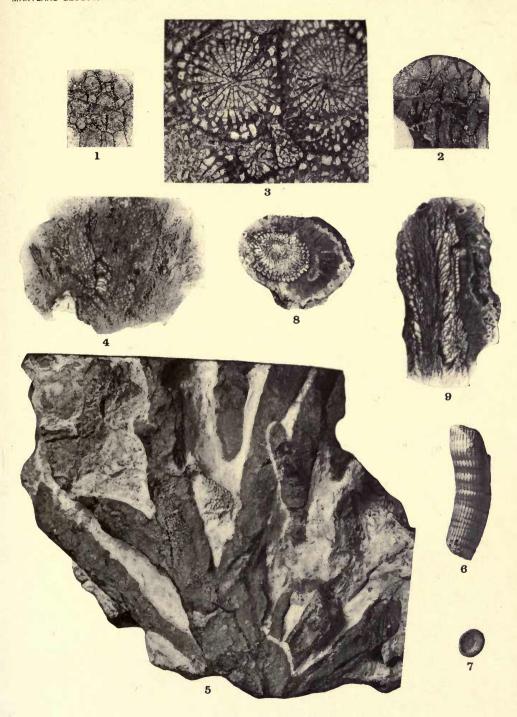
	PAGE
Figs. 1-4. Zaphrentis keyserensis Swartz n. sp	201
1. Side view of type.	
2, 3. Transverse sections.	
4. Longitudinal section of a small individual.	
Helderberg formation, Keyser member, Keyser, W. Va.	
Figs. 5-9. Cyathophyllum clarki Swartz n. sp	201
5. Side view of type.	
6. Interior of calyx of same. Martin Mountain, Allegany County.	
7. Transverse section. $\times$ 2. Cumberland.	
8. Longitudinal section. Martin Mountain, Allegany County.	
9. Side view of corallum showing deep annular constrictions. Same	
locality.	
Helderberg formation, Keyser member.	
Figs. 10, 11. CYATHOPHYLLUM OHERNI Swartz n. sp	203
10. Side view of two individuals. The corallum on right side is in-	
complete.	
11. Interior of calyx of one of preceding.	
Helderberg formation, Martin Mountain, Allegany County.	
Picc 1917 Cyrenyany Property Deminstra	000
Figs. 12-17. Cyathophyllum radiculum Rominger ?	202
15-17. Calices of same individuals.	
Helderberg formation, Keyser member, Cumberland.	



CŒLENTERATA—ANTHOZOA

#### PLATE XX

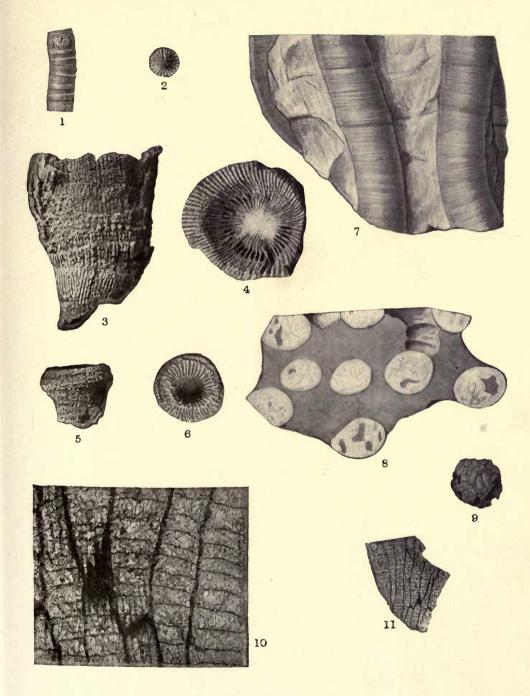
PAGE
Figs. 1-4. Cyathophyllum inequale (Hall)
1. Transverse section of coralla.
2, 3. Portions of same. $\times$ 2 and $\times$ 5.
4. Longitudinal section. $\times$ 2.
Helderberg formation, Keyser member, Flintstone.
Figs. 5-9. Cyathophyllum schucherti Swartz n. sp
5. Cluster of branching coralla. Devil's Backbone.
6. Single stem. Cash Valley, Lower Stromatopora bed.
7. Calyx. Same locality.
8, 9. Transverse and longitudinal sections. Devil's Backbone.
Helderberg formation. Keyser member.



CŒLENTERATA—ANTHOZOA

#### PLATE XXI

1 2011 12 2121
PAGE
Figs. 1, 2. Cyathophyllum marylandicum Swartz n. sp
1. Portion of a branch. Hyndman, Pennsylvania.
2. View of calyx. Cash Valley, Lower Stromatopora bed.
Helderberg formation, Keyser member.
Figs. 3-6. Heliophyllum cf. corniculum Lesueur
3, 4. Side view and calyx. Martin Mountain, Allegany County.
5, 6. Small individual, questionably referred to this species. Cumber-
land.
Helderberg formation.
Figs. 7-9. Cystiphyllum fasciculatum Swartz n. sp
7. Side view of several corallites.
8. Transverse section of same.
9. Transverse section of a single corallite.
Helderberg formation, Cumberland.
Figs. 10, 11. Columnaria? helderbergiæ Swartz n. sp
10. Longitudinal section of type.
11. Longitudinal section of same. $\times$ 5.
Helderberg formation, Keyser member, Warrior Mountain,
Allegany County.



CŒLENTERATA—ANTHOZOA

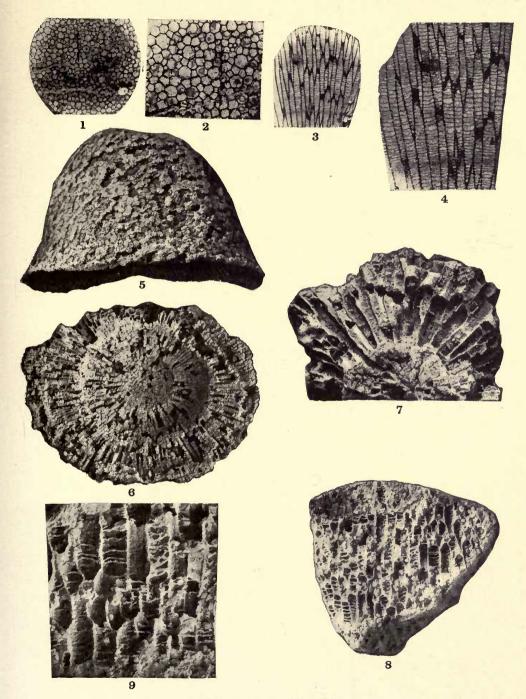
#### PLATE XXII

PAG	łΕ
Fig. 1. FAVOSITES HELDERBERGLÆ Hall	)8
Corallum showing hemispherical form. New Scotland formation,	
New York.	
Figs. 2-7. FAVOSITES HELDERBERGLÆ VAR. PRÆCEDENS Schuchert 20	9
2. Corallum of lobate form. Keyser, W. Va.	
3. Corallum of clavate form. Near Seymour, W. Va.	
4. Corallum of dendroid form. Keyser, W. Va.	
5, 6. Tangential and radial sections. × 21/2. Lower Stromatopora	
bed, Devil's Backbone.	
7. Corallum possessing very small cells. Cash Valley.	
Helderberg formation, Keyser member.	



CŒLENTERATA-ANTHOZOA

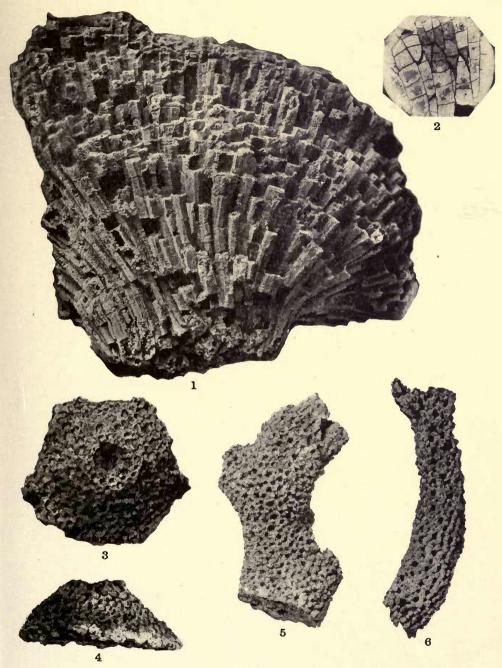
#### PLATE XXIII



CŒLENTERATA—ANTHOZOA

#### PLATE XXIV

FAGI
Figs. 1, 2. FAVOSITES FAVOSUS VAR. INTEGRITABULATUS Swartz n. var 214
1. Weathered corallum.
2. Longitudinal section of several cells.
Helderberg formation, Keyser member, Warrior Mountain,
Allegany County.
Figs. 3-6. Favosites ? schriveri (Herzer)
3, 4. Upper and side views of enlarged base of corallum.
5, 6. Fragments of branches.
Oriskany formation, Ridgely member, opposite Keyser, W. Va.



CŒLENTERATA—ANTHOZOA

#### PLATE XXV

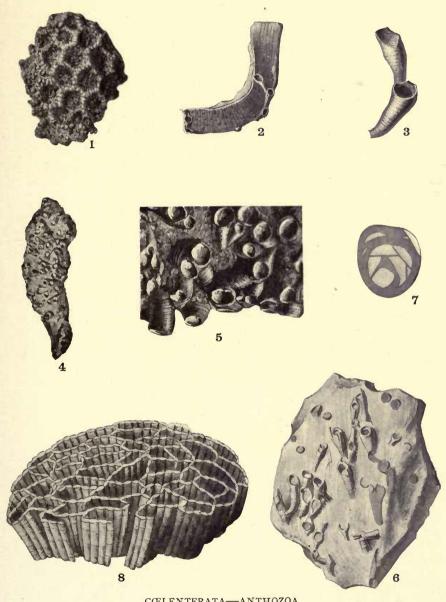
	PAGI
Figs. 1, 2. Striatopora bella Swartz n. sp	215
2. Branching corallum. × 2.	
Helderberg formation, New Scotland member, Cherry Run, W. Va.	-
Fig. 3. Striatopora sp.  Fragment of a corallum. Helderberg formation, Keyser member,  Devil's Backbone.	
Figs. 4-7. Cladopora rectilineata Simpson	216
4. Slab covered with numerous branches. Keyser, W. Va.	
5. A branching corallum. Pinto.	
6. Longitudinal and transverse sections. $\times$ 4. Four miles northeast of Cumberland.	
7. Transverse sections. × 4. Same locality.	
Helderberg formation, Keyser member.	



CŒLENTERATA—ANTHOZOA

#### PLATE XXVI

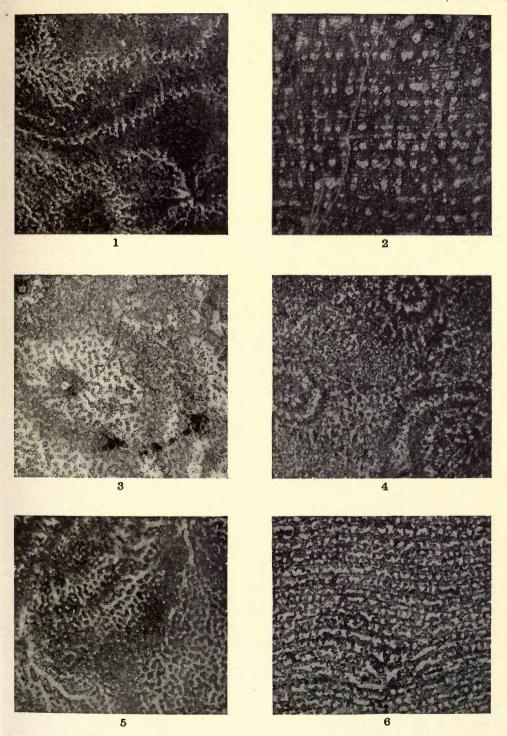
PAG	Æ
Fig. 1. PLEURODICTYUM LENTICULARE (Hall)	18
Portion of a corallum. Helderberg formation, New Scotland member,	
near Cumberland.	
Figs. 2, 3. Aulopora schoharlæ Hall	19
2. Branching corallum attached to a brachiopod.	
3. Several branches. $\times$ 3.	
Helderberg formation, Becraft member, Ernstville.	
Figs. 4, 5. Aulopora schucherti Swartz n. sp	19
4. View of type.	
5. Enlargement of several branches. × 4.	
Helderberg formation, Keyser member, Cash Valley.	
Figs. 6, 7. Ceratopora ? Marylandica Swartz n. sp	20
6. Slab covered with numerous branches.	
7. Transverse section of a single branch. $\times$ 5.	
Helderberg formation, Keyser member, Keyser, W. Va.	
Fig. 8. Halysites catenulatus Linné	20
Corallum showing chain-like branching. Niagara formation, New	
York.	



CŒLENTERATA—ANTHOZOA

#### PLATE XXVII

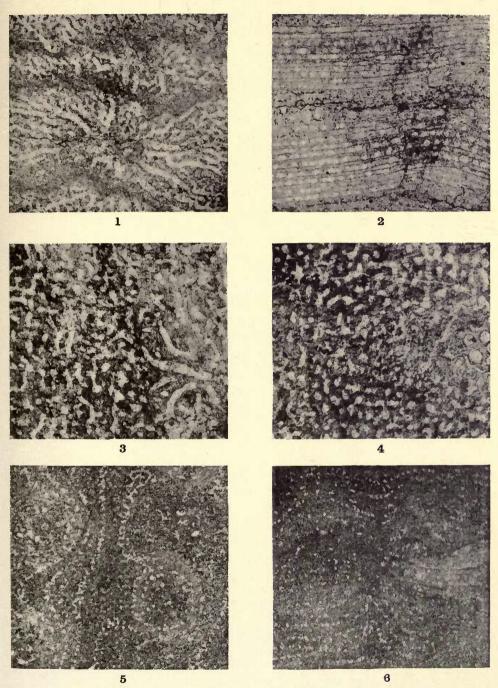
PAG
Figs. 1-6. Stromatopora constellata Hall
1, 2. Type A. Tangential and radial sections. × 10. Lower Stroma-
topora bed, Devil's Backbone.
3. Type B. Tangential section. × 10. Keyser, W. Va.
4. Type B. Tangential section. × 10. Cash Valley.
5, 6. Type C. Tangential and radial sections. × 10. East bank of
Potomac River opposite Pinto.
Helderberg formation, Keyser member.



CŒLENTERATA-HYDROZOA

## PLATE XXVIII

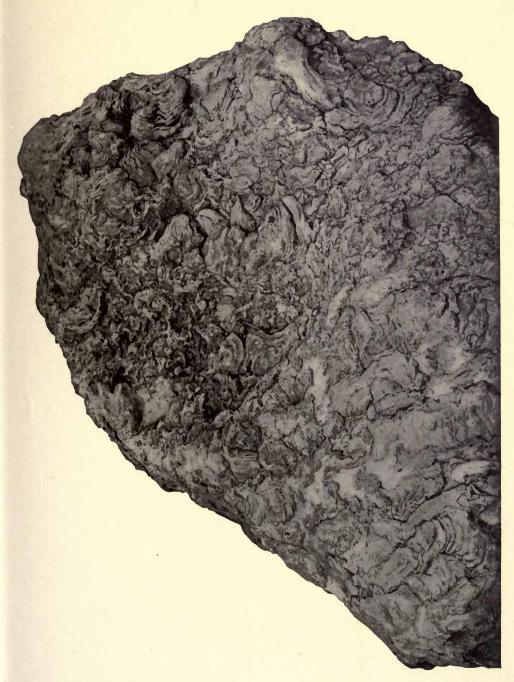
Figs. 1, 2. Stromatopora constellata Hall
Type C. Tangential and radial sections (thin sections). Showing
very large and intricately branched astorhize. Helderberg
formation, Keyser member, Cumberland,
formation, Reyser member, Cumperland.
Ti 0 4 G Gid-
Figs. 3, 4. Syringostroma barretti Girty
3. Section obliquely tangential. $\times$ 10.
4. Section obliquely radial. × 10. Branch of Cladopora rectilineata
(Simpson) at edge.
Helderberg formation, Keyser member, Cookerly, Stromato-
pora bed.
Figs 5 6 Cypyrgograpovi, oppyrpomyrs Cinty
Figs. 5, 6. Syringostroma centrotum Girty
5, 6. Tangential and radial sections. $\times$ 10. Helderberg formation,
base of Keyser member, Warrior Mountain, Allegany County.



CŒLENTERATA—HYDROZOA

## PLATE XXIX

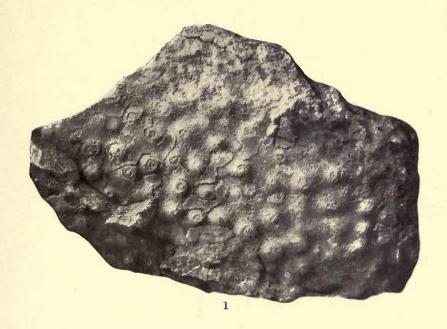
	PAGE
Fig. 1. STROMATOPORA CONSTELLATA Hall	. 221
Type A. Portion of a reef formed of this species. X 1/8. Helderber	3
formation, Keyser member, Cumberland	

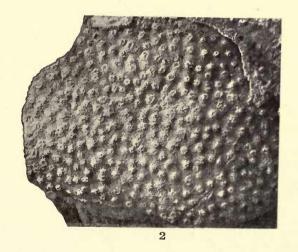


CŒLENTERATA—HYDROZOA

## PLATE XXX

Fig. 1. STROMATOPORA CONSTELLATA Hall	221
Type C. View of surface showing mamelons and astorhizæ. Helder- berg formation, Keyser member, Devil's Backbone, Stromato- pora bed.	
Fig. 2. Syringostroma centrotum Girty  View of surface showing numerous small mamelons. Helderberg formation, Keyser member, Warrior Mountain, Allegany County.	

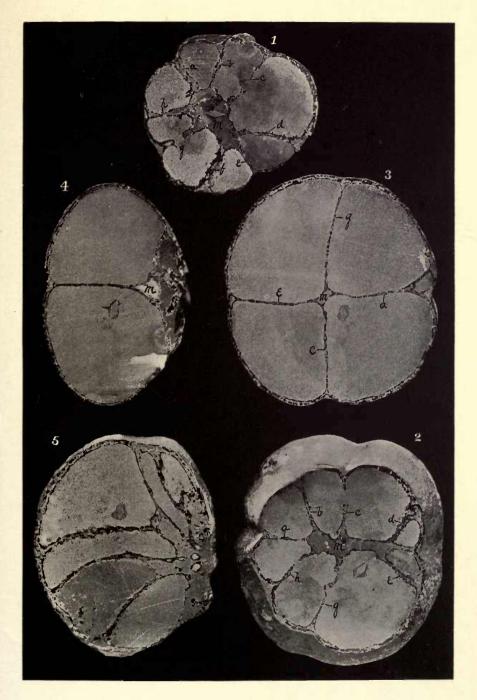




CŒLENTERATA-HYDROZOA

#### PLATE XXXI

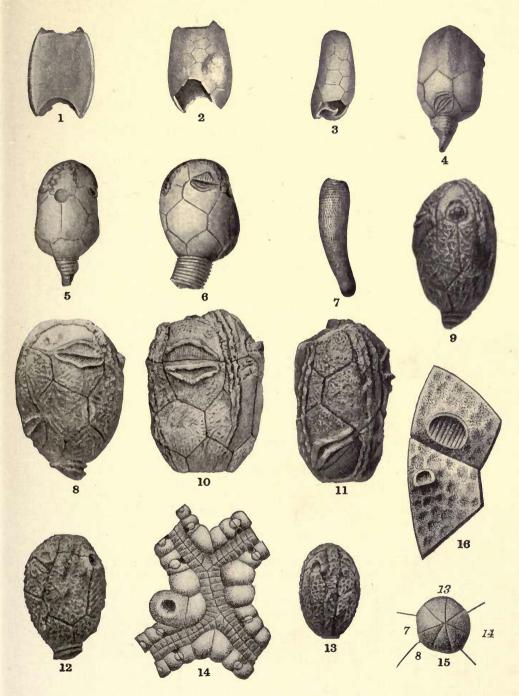
	PAGE
Figs. 1-5. Camarocrinus stellatus Hall	227
1-3. Three transverse cuts through the same bulb; the letters indicate	
the same wall in the different sections; M, the medio-basal	
chamber. $\times \frac{2}{3}$ .	
4. Another specimen cut through the center longitudinally; M, medio-	
basal chamber. $\times \frac{2}{3}$ .	
5. A second bulb cut through the center longitudinally. $\times \frac{2}{3}$ .	
Helderberg formation, Keyser member, Keyser, W. Va.	



ECHINODERMATA—CYSTOIDEA

#### PLATE XXXII

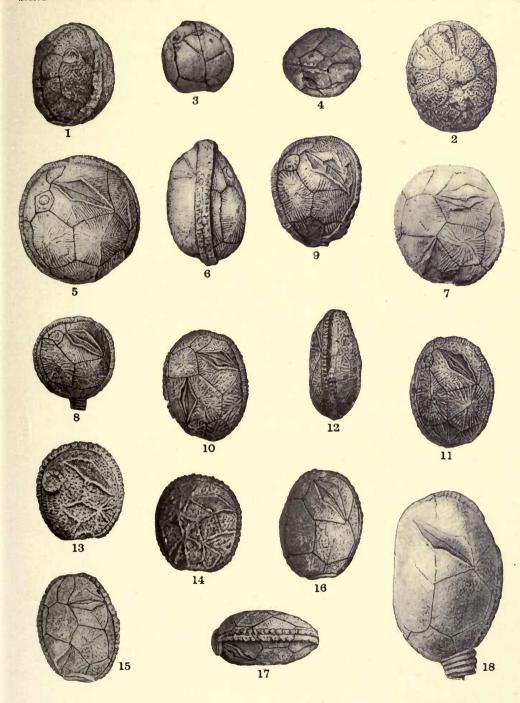
	PAGE
Figs. 1-3. Anomalocystites ? disparilis Hall	228
1. Anteal or concave side, showing the deeply arched or crescentic	
form of base with the succeeding plates.	
2. Posteal or convex side, showing the form and arrangement of plates.	
3. Lateral view of the same specimen.	
Oriskany formation, Ridgely member, Cumberland.	
Figs. 4-7. Lepocrinites gebhardi Conrad	229
4. The anterior side, showing the pectinated rhombs at the base.	
5. The posterior side, showing the ovarian aperture with the sur-	
rounding plates removed.	
6. The left side of the same specimen. The prominence of the ovarian	
side over the opposite is well seen.	
7. Base of column, showing slight evidences of rings.	
Coeymans formation, New York.	
Figs. 8, 9. Lepocrinites manlius Schuchert	231
Two views of type. × 2. Helderberg formation, Keyser member,	
Keyser, W. Va.	
110,001, 11. 10.	
Figs. 10, 11. Tetracystis chrysalis Schuchert	232
10. View showing upper left-hand pectinirhomb. × 2.	
11. Same specimen from the antanal side. × 2.	
Helderberg formation, Keyser member, Keyser, W. Va.	
fielderberg formation, Reyser member, Reyser, w. va.	
Figs. 12-16. Jækelocystis hartleyi Schuchert	922
12. View of type; a large specimen. Anal opening to the right. $\times$ 2.	200
13. A smaller specimen with the anal opening to the left. $\times$ 2.	
13. A smaller specimen with the anal opening to the left. $\times$ 2.	
of the ambulacral plates, the ambulacralia (somewhat re-	
stored), brachiole attachments, and the plate with the madre-	
porite; the latter lies in the depression of the large plate on the	
left of the figure. $\times$ 2.	
15. The anal pyramid; the positions of the bounding plates, 7, 8, 13,	
14, are indicated. × 8.	
16. Plates 14 and 15, with the discrete-pectinirhombs; the dichopores	
on plate 14 are deeply situated and do not show on the surface.	
× 8.	
Helderberg formation, Keyser member, Keyser, W. Va.	



ECHINODERMATA—CYSTOIDEA

# PLATE XXXIII

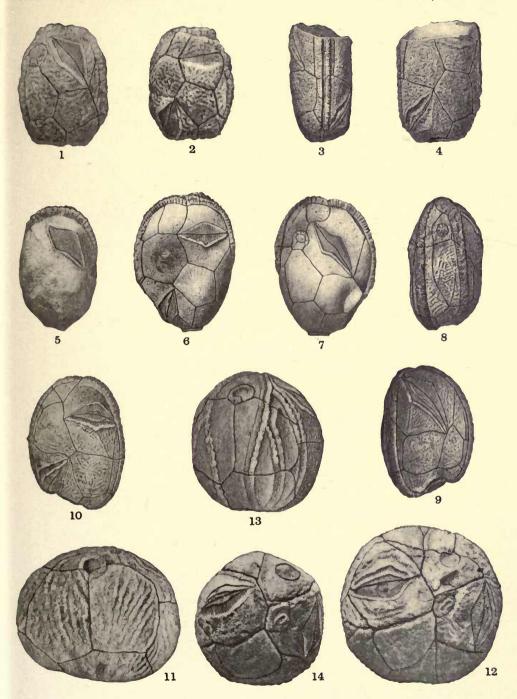
PA	AGE
Figs. 1, 2. JÆKELOCYSTIS PAPILLATUS Schuchert	234
1. Anal view. $\times$ 2.	
2. Antanal view of the type; pectinirhomb 14-15 is faintly indicated	
on the left. $\times$ 2.	
Helderberg formation, Keyser member, Keyser, W. Va.	
Figs. 3, 4. JÆKELOCYSTIS AVELLANA Schuchert	235
3. View of type, with the anal opening to the left and pectinirhomb of	
plates 14-15 to the right. $\times$ 3.	
4. Same specimen from above, showing the two small discrete-pectini-	
rhombs, the central madreporite, and the large anal opening.	
$\times$ 3.	
Helderberg formation, Keyser member, Keyser, W. Va.	
Figs. 5-9. Pseudocrinites gordoni Schuchert	236
5, 6. Two views of type, a specimen somewhat larger than usual.	
7. Another specimen.	
8. A smaller but adult individual of the rounder variety.	
9. An elongate individual, somewhat abnormal in having the ambu-	
lacra drawn over on the anal side more than is usual.	
Helderberg formation, Keyser member, Keyser, W. Va.	
Figs. 10-12. Pseudocrinites abnormalis Schuchert	238
10. View of the sides having the abnormal position of the lower	
pectinirhomb.	
11. Opposite side of the same specimen.	
12. End view of same.	
Helderberg formation, Keyser member, Keyser, W. Va.	
Figs. 13, 14. Pseudocrinites stellatus Schuchert	239
Two side views of type. Helderberg formation, Keyser member,	
Keyser, W. Va.	
Fig. 1510 Personal Col. 1	0.40
Figs. 15-18. PSEUDOCRINITES CLARKI Schuchert	240
15-17. Three views of type, an average adult individual.	
18. A very large specimen of this species. The plates around the	
pectinirhomb are somewhat broken.	
Helderberg formation, Keyser member, Keyser, W. Va.	



ECHINODERMATA—CYSTOIDEA

## PLATE XXXIV

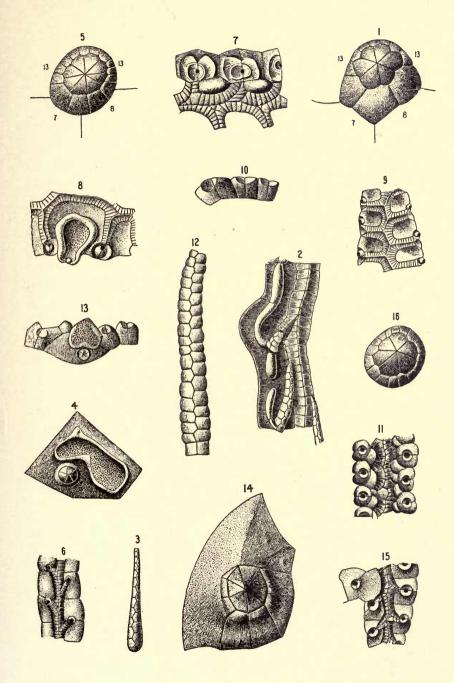
Figs. 1, 2. Pseudocrinites subquadratus Schuchert	GE 237
Figs. 3, 4. Pseudocrinites elongatus Schuchert	341
Figs. 5-7. Pseudocrinites perdewi Schuchert	42
5. Side view of a young specimen. × 2.	
6, 7. Two views of type.	
Helderberg formation, Keyser member, Keyser, W. Va.	
Figs. 8-10. Trimerocystis peculiaris Schuchert 2	44
8. View of type from anal side.	
9, 10. Same specimen from side.	
Helderberg formation, Keyser member, Keyser, W. Va.	
Figs. 11, 12. Sphærocystites multifasciatus Hall	45
11. A large specimen, from anal side; most of the sculpturing con-	
sists of the ambulacral branches. × 2.	
12. The same individual from above. $\times$ 2.  Helderberg formation, Keyser member, Cash Valley.	
ricider beig formation, Reyser member, Cash Valley.	
Figs. 13, 14. Sphærocystites globularis Schuchert	47
The type seen from anal side and above. $\times$ 2. Helderberg formation,	-
Keyser member, Keyser, W. Va.	



ECHINODERMATA—CYSTOIDEA

#### PLATE XXXV

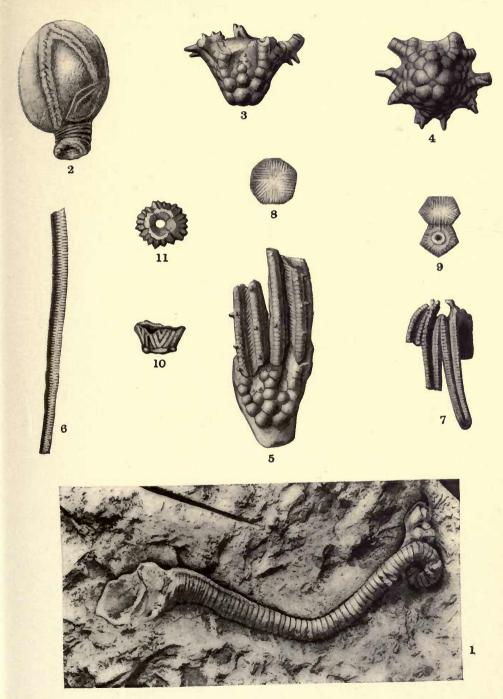
F	AGE
Figs. 1-4. Sphærocystites multifasciatus Hall	245
1. The two circles of plates composing the anal pyramid; the numbers	
indicate the bounding thecal plates. About $\times$ 5.	
2. Part of an ambulacrum, showing one row of ambulacral plates, the	
ambulacralia, and remnants of brachioles. About $\times$ 10.	
3. An incomplete brachiole. About $\times$ 10.	
4. Deltoid 23, with the madreporite and hydropore closed by its	
pyramid. About $\times$ 10.	
pyramia. Industry 201	
Figs. 5. 6. Sphærocystites globularis Schuchert	247
5. The anal pyramid and the bounding thecal plates indicated by	
numbers. About $\times$ 5.	
6. Part of an ambulacrum, showing the ambulacral and ambulacralia	
plates, and the points of attachment for the brachioles. About	
× 5.	
<b>∧ 0.</b>	
Fig. 7. Pseudocrinites stellatus Schuchert	229
Part of an ambulacrum, showing one row of ambulacral plates, the	200
brachiole facets, and the ambulacralia with their intermediate	
large plates. About $\times$ 5.	
large places. About X 5.	
Figs. 8-10. Pseudocrinites perdewi Schuchert	949
	242
8. Deltoid 23, with the madreporite and the small hydropore; the	
double row of small plates and the ambulacralia. About $\times$ 5.	
9. Portion of an ambulacrum in a young specimen. About × 5.	
10. Same as fig. 9; seen from the side to show the high elevation of	
ambulacralia. About $\times$ 5.	
Fig. 1110 Day	000
Figs. 11-13. PSEUDOCRINITES GORDONI Schuchert	236
11. Portion of an ambulacrum. About × 5.	
12. A nearly complete brachiole. About × 5.	
13. Deltoid 23 crowded into the ambulacral plates, showing the madre-	
porite and hydropore. About $\times$ 5.	
Eig 14 Daywan and Calanda	040
Fig. 14. PSEUDOCRINITES CLARKI Schuchert	240
Plate 13 on the left and the incomplete circle of 7 small plates bounding	
the anal pyramid of 7 pieces. About $ imes 5$ .	
Figs. 15-16. LEPOCRINITES MANLIUS Schuchert	007
	231
15. An ambulacrum near the oral opening. About × 5.	
16. The two circles of pieces composing the anal pyramid. About $\times$ 5.	



ECHINODERMATA—CYSTOIDEA

#### PLATE XXXVI

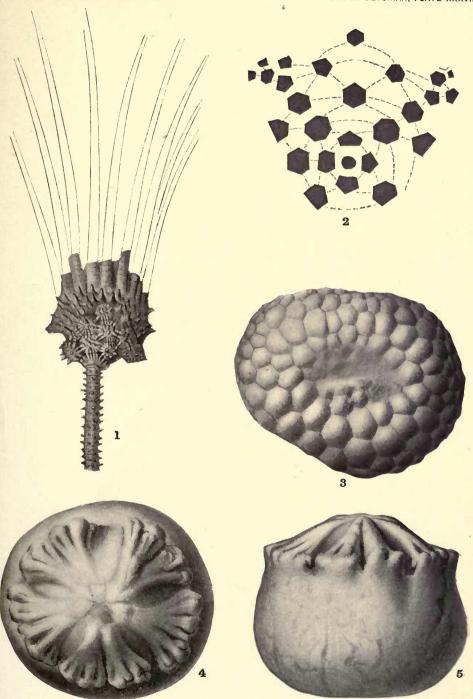
I	PAGE
Fig. 1. Sphærocystites globularis Schuchert	247
Fig. 2. Sphærocystites globularis var. ovalis Schuchert Specimen seen from the side. $\times$ 2. Helderberg formation, Keyser member, Keyser, W. Va.	
Figs. 3-7. Thysanocrinus Eugenius Ohern, n. sp	249
Figs. 8, 9. Technocrinus striatus (Hall)	
Figs. 10, 11. Technocrinus sculptus Hall	



ECHINODERMATA—CYSTOIDEA—CRINOIDEA

## PLATE XXXVII

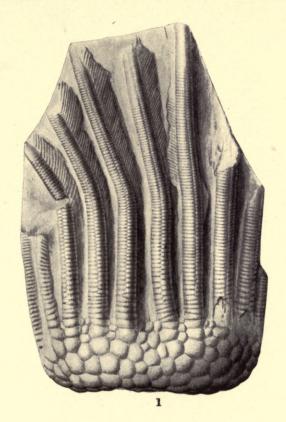
I	PAGE
Figs. 1, 2. Technocrinus spinulosus (Hall)	251
1. The body and bases of the arms with a portion of the column attached.	
<ol><li>Diagram of the structure of the body to the base of the arms, as far as determined.</li></ol>	
Oriskany formation, Ridgely member, Cumberland. (After	
Hall.)	
Figs. 3-5. Technocrinus ? Lepidus Ohern n. sp	252
3. Inferior view of calyx.	
4. Cast of interior of calyx.	
5. Side view of interior of calyx.	
Oriskany formation, Ridgely member, near Berkeley Springs,	
W. Va.	

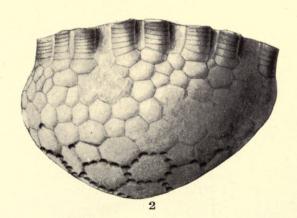


ECHINODERMATA—CRINOIDEA

# PLATE XXXVIII

Fig. 1. Technocrinus ? Lepidus Ohern n. sp	. 252
Side view of calyx and lower part of arms. Oriskany formation Ridgely member, near Hancock.	
Fig. 2. Technocrinus andrewsi (Hall)	





ECHINODERMATA—CRINOIDEA

## PLATE XXXIX

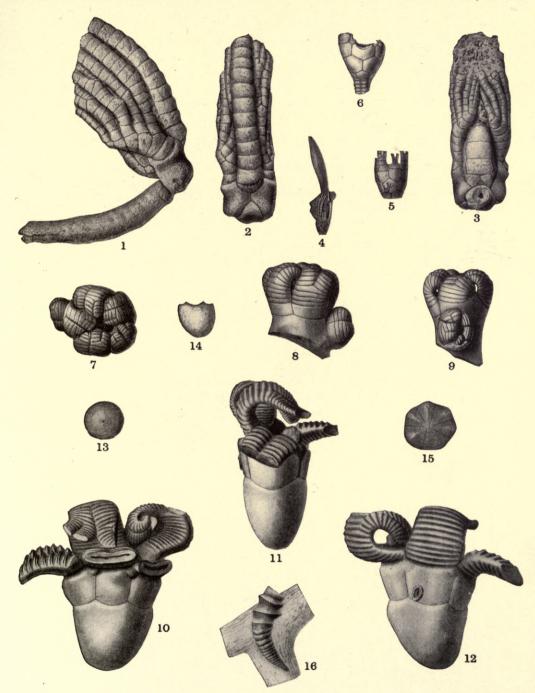
T71	-	- I	PAGE
Fig.	1.	Technocrinus? Lepidus Ohern n. sp	252
	Nea	arly complete appoint a chamina and	202
	1100	arly complete specimen showing calyx and arms. $ imes  imes_3$ . Oriskany	
		formation, Ridgely member, Berkeley Springs, W. Va.	
		berkeley Springs, W. Va.	



ECHINODERMATA—CRINOIDEA

#### PLATE XL

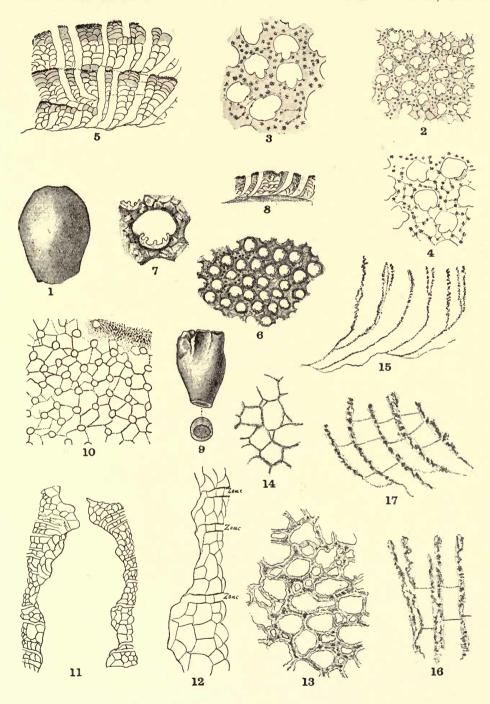
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	PAGE
Figs. 1-3. CALCEOCRINUS MARYLANDICUS Ohern n. sp	253
Figs. 4, 5. Homocrinus proboscidalis Hall	255
5. Enlargement of same. × 2.	
Oriskany formation, Ridgely member, Cumberland. (After Hall.)	
Fig. 6. Homocrinus hartleyi Ohern n. sp	255
Figs. 7-12. Edriocrinus sacculus Hall	256
7-9. Three views of calyx and arms.	
10-12. Three views of calyx and arms of a larger specimen. Oriskany formation, Ridgely member, Cumberland.	
Figs. 13-15. Edriocrinus pocilliformis Hall	257
13. Basal view of a large individual, the proportional length being	
greater than usual.	
14. Lateral view of the same.	
15. Interior of the same.	
New Scotland formation, New York.	
Fig. 16. Cornulities cingulatus Hall	258



ECHINODERMATA—CRINOIDEA

#### PLATE XLI

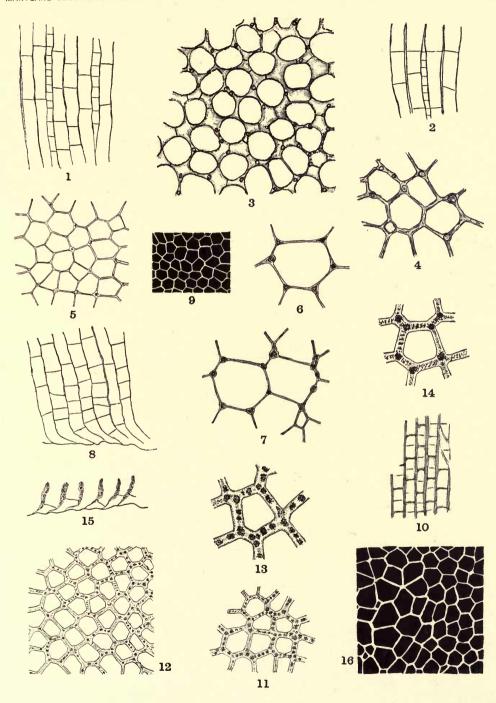
	PAGE
Figs. 1-5. Fistuliporella cumulata n. sp	263
1. Side view of a zoarium, natural size.	
2. Tangential section. $\times$ 20.	
3. A portion of the same tangential section, $\times$ 40, showing the	
characters of the mature zone.	
4. Several zoecia of the same section, $\times$ 40, from a less mature portion.	
5. Vertical section, $\times$ 20, showing several layers of zoarium.	
Helderberg formation, Keyser member, Keyser, W. Va.	
residence residence, respect means, respect, its val	
Figs. 6-8. FISTULIPORELLA QUINQUEDENTATA n. sp	264
6. Tangential section, × 20, of the type specimen.	201
7. A zoecium of the same, $\times$ 50, showing the structure of the lunarium.	
8. Vertical section of the type, × 20.	
Helderberg formation, Keyser member, Keyser, W. Va.	
Ti' 0.10 (C	0.00
Figs. 9-12. Chilotrypa micropora n. sp.	268
9. Zoarium, natural size, with end view of same, showing sack-like	
form.	
10. Tangential section, $\times$ 20, exhibiting the very small zoecia and	
the rather wide interzoecial spaces.	
11. Vertical section, $\times$ 20, through portion of a zoarium illustrating	
the variation in diameter of the central tube.	
12. A portion of the same vertical section, × 40, showing the more	
minute structure of the zoecia (zoec) and vesicles.	
Helderberg formation, Keyser member, Keyser, W. Va.	
Figs. 13-17. CERAMOPORA ? INCONDITA n. sp	260
13. A tangential section, × 12, passing through the mature zone	
where the zoecia and mesopores are most irregular in shape	
and arrangement.	
14. A similar section, × 12, through an immature portion of the same	
zoarium.	
15. A vertical section, $\times$ 12, through both zones of a thin incrusting	
zoarium in which diaphragms appear to be wanting.	
16, 17. Vertical sections, × 12, showing the usual characters of the	
mature region.	
Helderberg formation, Keyser member, Devil's Backbone.	



MOLLUSCOIDEA—BRYOZOA

# PLATE XLII

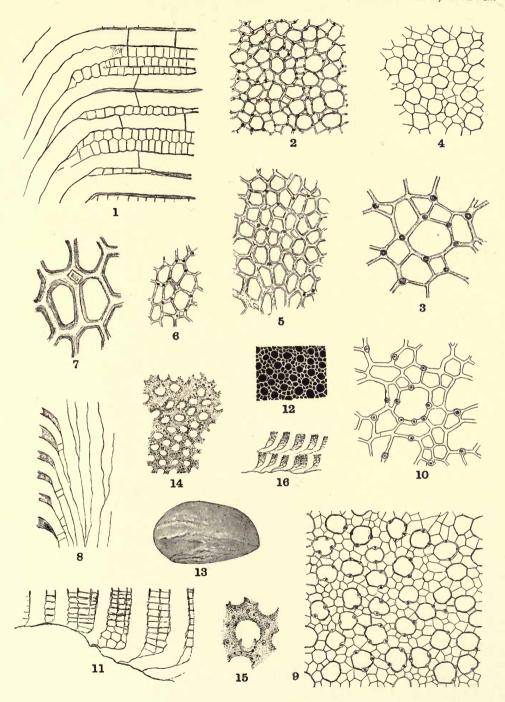
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Figs. 1-4. Stromatotrypa globularis n. sp	279
1, 2. Two vertical sections, $\times$ 10, one showing the usual features and	
the second illustrating the closing of a mesopore as the surface	
is approached.	
3. A tangential section, × 20, with rounded zoecia and rather numer-	
ous acanthopores and mesopores.	
4. A few zoecia, $\times$ 20, of a tangential section in which mesopores are	
few.	
Helderberg formation, Keyser member, Keyser, W. Va.	
Figs. 5-9. CYPHOTRYPA CORRUGATA (Weller)	269
5. Tangential section, $\times$ 20, showing the simple polygonal zoecia.	
$6, 7$ . Several zoecia of the same section, $\times$ 50, illustrating the minute	
structure of the walls and acanthopores.	
8. A vertical section through an immature and mature zone, $\times$ 20.	
9. Surface of a zoarium, $\times$ 9.	
Helderberg formation, Keyser member, Keyser, W. Va.	
Fig. 10. Ptilodictya tenella n. sp	288
Tangential section, $\times$ 20, illustrating the shape of the zoecia and	
showing also the inferior hemiseptum as a sharp transverse	
line in most of the zoœcia. Helderberg formation, Keyser	
member, Devil's Backbone.	
Figs. 11-16. Stenopora? incrustans n. sp	275
11, 12. Tangential sections, $\times$ 20, showing slight variations in the	
wall structure.	
13, 14. Several zoecia in thin sections, $\times$ 50, illustrating the structure	
of the acanthopores and the minute dotting of the walls.	
15. Vertical section, × 20, through a single layer of zoœcia.	
16. Surface of a specimen, × 20.	
Helderberg formation, Keyser member, Cash Valley.	



MOLLUSCOIDEA—BRYOZOA

#### PLATE XLIII

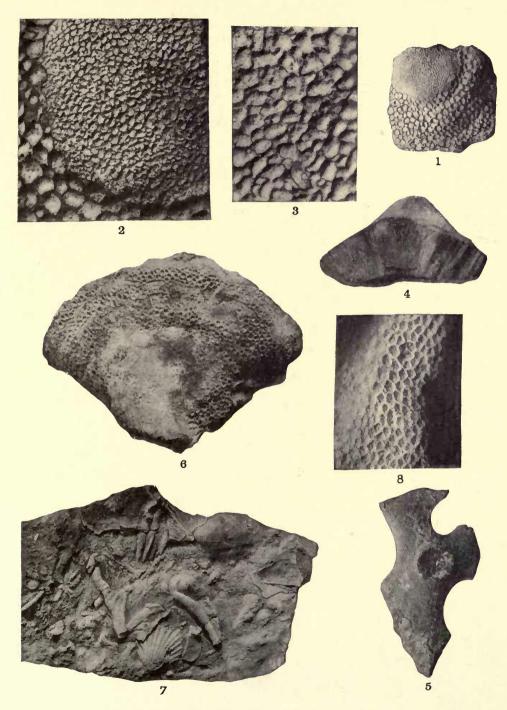
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	PAGE
Figs. 1-4. Lioclema subramosum n. sp	273
1. Vertical section, $\times$ 20.	
2, 3. Tangential section, $\times$ 20, through the mature zone, and a small	
portion of the same, $\times$ 50, illustrating the structure of the walls and acanthopores.	
<ol> <li>A tangential section, × 20, through an early stage of the mature zone where the acanthopores are undeveloped and the zoœcia</li> </ol>	
are thin walled.	
Helderberg formation, Keyser member, Keyser, W. Va.	
Figs. 5-8. Eridotrypa parvulipora n. sp	272
5. A tangential section, × 20.	
6. A portion of another tangential section, × 20, in which the acanthopores are more numerous.	
7. Several zoecia of a thin section, $\times$ 50.	
8. A vertical section, $\times$ 20.	
Helderberg formation, Keyser member, Keyser, W. Va.	
Figs. 9-12. Lioclema pulchellum, n. sp	274
9, 10. Tangential section, $\times$ 20, and a portion, $\times$ 35, passing through the mature zone.	
11. A vertical section, $\times$ 20.	
12. Surface of the type, $\times$ 9.	
Helderberg formation, Keyser member, Keyser, W. Va.	
Figs. 13-16. Fistuliporella minima n. sp	265
13. Side view of a zoarium, natural size.	
14. Tangential section, $\times$ 20.	
15. A zoecium of the same section, $\times$ 50.	
16. A vertical section, × 20, through two layers of zoecia.	
Helderberg formation, Keyser member, Keyser, W. Va.	



MOLLUSCOIDEA-BRYOZOA

## PLATE XLIV

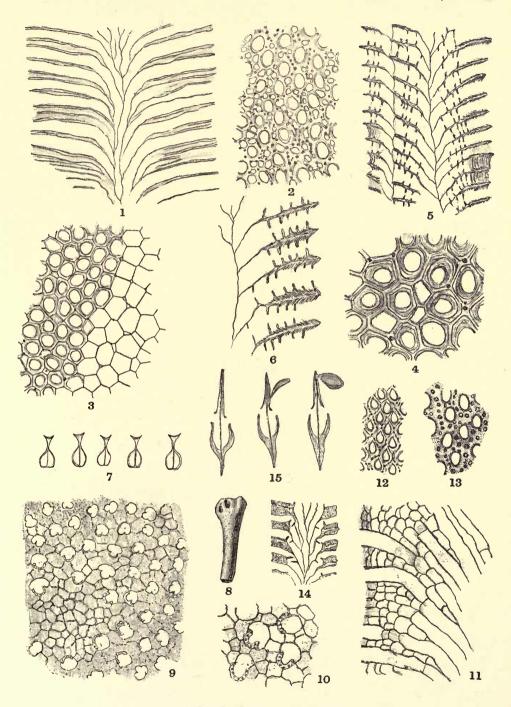
PAGE
Figs. 1-3. Ceramopora ? incondita n. sp
1. View of a small zoarium, × 1.5, incrusting a Favosites.
2, 3. Surface of same, $\times$ 3 and $\times$ 9, respectively.
Helderberg formation, Keyser member, Devil's Backbone.
Fig. 4. CYPHOTRYPA CORRUGATA (Weller)
Fig. 5. Lioclema subramosum n. sp
Fragment of a zoarium, $\times$ 1.5. Helderberg formation, Keyser member, Keyser, W. Va.
Fig. 6. Stenopora? incrustans n. sp. 275
A zoarium, incrusting a specimen of Favosites, $ imes 1.25$ . Helderberg formation, Keyser member, Cash Valley.
Figs. 7-8. Eridotrypa parvulipora n. sp
7. Portion of small slab, $ imes$ 1.25, showing several fragments of this species.
8. Surface of one of the specimens, $\times$ 9.
Helderberg formation, Keyser member, Keyser, W. Va.



MOLLUSCOIDEA—BRYOZOA

## PLATE XLV

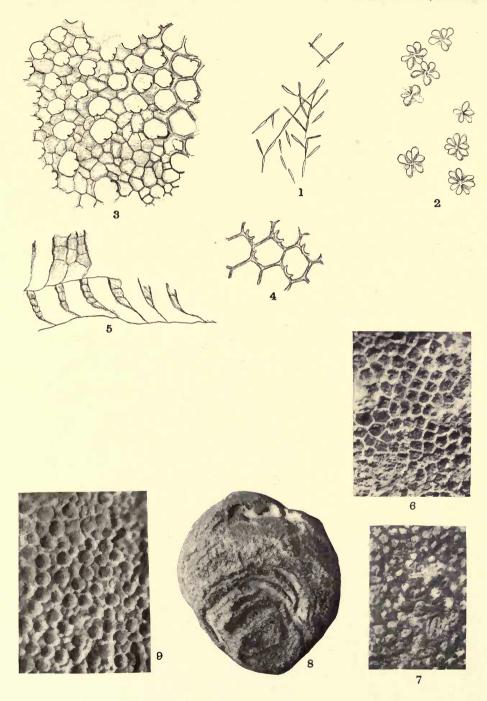
	PAGE
Figs. 1, 2. Batostomella interporosa n. sp	270
1. Vertical section, $\times$ 20, through the center of a branch.	
<ol><li>Tangential section, X 20, showing the numerous acanthopores and mesopores.</li></ol>	
Helderberg formation, Keyser member, Devil's Backbone, Maryland.	
Figs. 3-6. DIPLOSTENOPORA SILURIANA (Weller)	
4. Portion of mature region of the same section, $\times$ 35.	
5. Vertical section, × 20, with a second layer of zoœcia on the left.	
6. One-half of the same, × 35, illustrating the wall structure and perforated diaphragms in more detail.	
Helderberg formation, Keyser member, Devil's Backbone.	
Fig. 7. Semicoscinium planum n. sp	285
Transverse section of the type specimen, $\times$ 12, introduced to show the	
expanded carina. Helderberg formation, Keyser member,	
Hyndman, Penna.	
Figs. 8-11. FISTULIPORELLA MARYLANDICA n. sp	266
8. Portion of a rather narrow zoarium, natural size.	
<ol> <li>Tangential section, × 20, passing through a macula and adjoining zoœcia.</li> </ol>	
10. Several zoecia of the same section, × 35, exhibiting granular	
structure of lunarium.	
11. Vertical section, $\times$ 20, showing a portion of a solid branch.	
Helderberg formation, Keyser member, Cash Valley.	
Figs. 12-14. Orthopora rhombifera Hall	286
12. Tangential section, × 20, illustrating quincuncial arrangement	
and rhomboidal shape of zoecia in an average example.	
13. Tangential section of an old zoarium, $\times$ 30.	
14. Vertical section, $\times$ 20.	
Helderberg formation, Keyser member, Devil's Backbone.	
Fig. 15. FENESTELLA (CYCLOPORINA) ALTIDORSATA n. sp	282
Transverse section, × 12, showing the carinated obverse and reverse	
sides and the ovicell-like structure on the sides of the carina.	
Helderberg formation, Keyser member, Devil's Backbone.	
relation, ixeyser member, Devil's Backbone.	



MOLLUSCOIDEA-BRYOZOA

#### PLATE XLVI

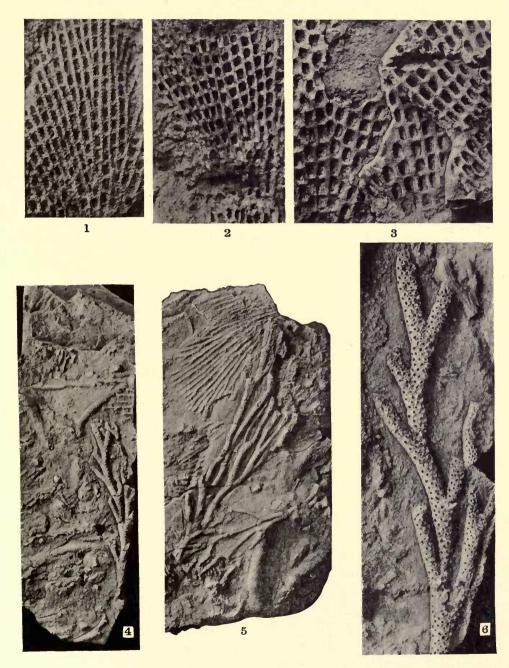
PLATE XLVI
PAGE
Fig. 1. Rhopalonaria attenuata Ulrich and Bassler
Fig. 2. Ascodictyon siluriense Vine
formation, Keyser member, Cash Valley.
Figs. 3-7. FISTULIPORELLA MAYNARDI n. sp
3. A slightly oblique tangential section, $\times$ 20, illustrating the structure of the outer ridge-like walls on one edge of the drawing and the usual zoecia and mesopores elsewhere.
4. Tangential section, $\times$ 20, through the outermost part of the zoarium.
<ol> <li>Vertical section, × 20, through two layers of zoœcia but not including the outer ridge-like wall in either layer.</li> </ol>
6. Surface view of zoecia, $\times$ 9, with crested walls and overarching lunaria well developed.
7. View of another portion of the same specimen, × 9, in which the ridge-like outer wall is shown only in one corner.
Helderberg formation, Keyser member, Cash Valley.
Figs. 8-9. Stromatotrypa globularis n. sp. 279
8. Side view of a zoarium, natural size, showing a portion of the wrinkled base.
9. Surface of zoarium, × 9.
Helderberg formation, Keyser member, Keyser, W. Va.



MOLLUSCOIDEA-BRYOZOA

## PLATE XLVII

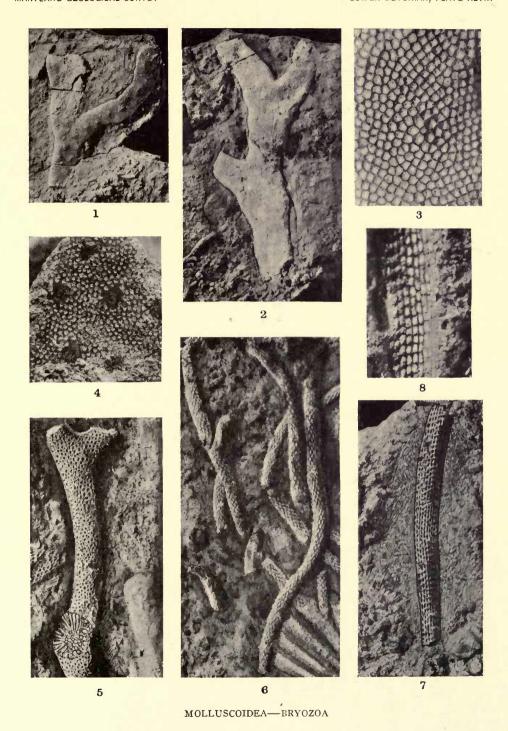
	AGE
Figs. 1, 2. Fenestella cumberlandica n. sp	280
1. Obverse face, $\times$ 5.	
2. Reverse face, × 5.	
Helderberg formation, Keyser member, Cash Valley.	
Fig. 3. Polypora dictyota n. sp	283
Reverse face of the type specimen, $\times$ 5. Helderberg formation, Keyser member, Devil's Backbone.	
Figs. 4-6. Thamniscus regularis n. sp	286
4, 6. Celluliferous and non-celluliferous face respectively of the two	
type specimens, $\times$ 1.5.	
6. Enlargement of a portion of fig. $4, \times 5$ .	
Helderberg formation, Keyser member, Devil's Backbone.	



MOLLUSCOIDEA-BRYOZOA

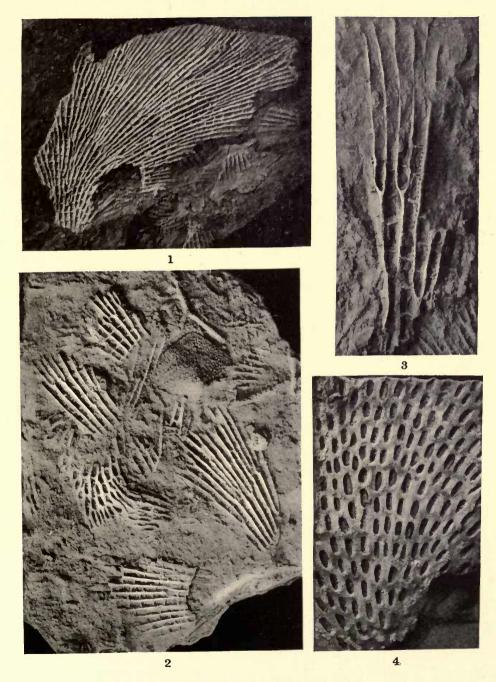
# PLATE XLVIII

I	PAGE
Figs. 1-3. DIPLOSTENOPORA SILURIANA (Weller)	277
1. An incomplete zoarium of average size, $\times$ 1.5, with low monticules.	
2. A more robust incomplete, smooth zoarium, × 1.5.	
3. Surface of specimen shown in fig. 1, $\times$ 9.	
Helderberg formation, Keyser member, Cash Valley.	
relations formation, Reysel member, Cash Valley.	
Fig. 4. FISTULIPORELLA MARYLANDICA n. sp	266
	200
Surface of a zoarium, × 6, exhibiting the well-marked solid maculæ.	
Helderberg formation, Keyser member, Cash Valley.	
Fig. 7. D.	
Fig. 5. Batostomella interporosa n. sp.	270
One of the type specimens, $\times$ 5. Helderberg formation, Keyser	
member, Devil's Backbone.	
Fig. 6. Orthopora rhombifera Hall	286
Surface of a slab, $\times$ 5, showing numerous fragments of this species.	
Helderberg formation, Keyser member, Cash Valley.	
Figs. 7, 8. PTILODICTYA TENELLA n. sp	288
7. Incomplete specimen, × 5.	
8. Surface of same, $\times$ 9.	
Helderberg formation, Keyser member, Devil's Backbone.	



# PLATE XLIX

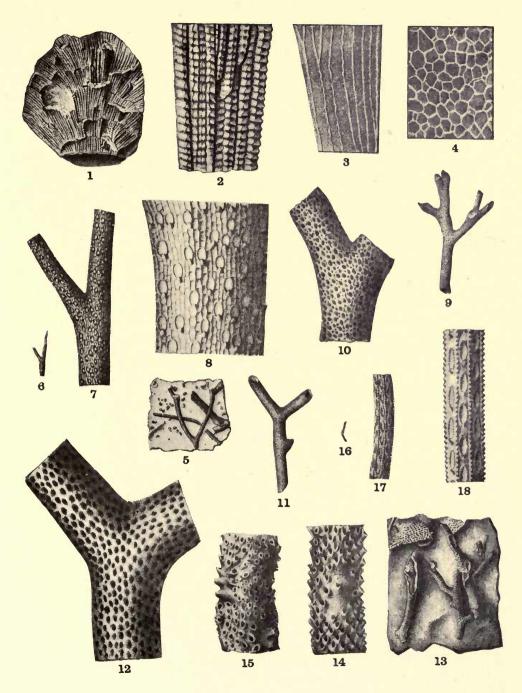
$\mathbf{P}$	AGE
Figs. 1-3. Fenestella (Cycloporina) altidorsata n. sp	282
1. An incomplete, well-preserved frond, × 1.5.	
2. Surface of a slab, $\times$ 2, with specimens showing both obverse and reverse sides.	
3. A third specimen, $\times$ 5, exhibiting the celluliferous face.	
Helderberg formation, Keyser member, Devil's Backbone.	
Fig. 4. Semicoscinium planum n. sp	285
Portion of the non-celluliferous face of the type specimen, $\times$ 5. Helder-	
berg formation, Keyser member, Hyndman, Penna.	



MOLLUSCOIDEA-BRYOZOA

## PLATE L

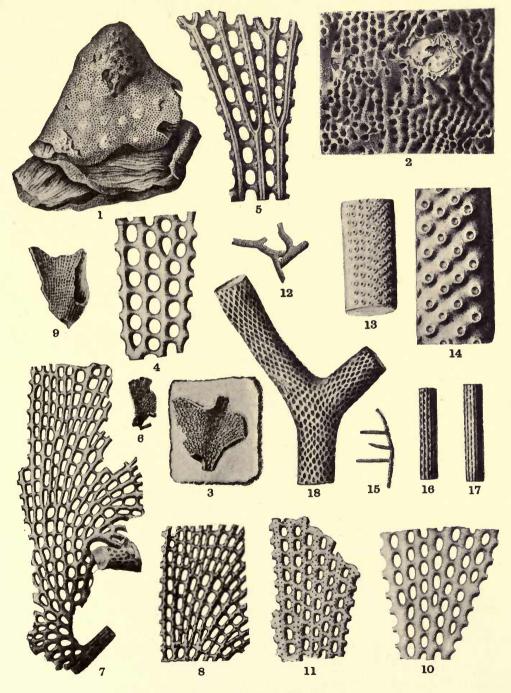
	PAGE
Figs. 1-4. Monotrypa tabulata (Hall)	278
1. Vertical fracture of a zoarium, natural size, showing corrugated	
zoœcial walls.	
2. A portion of the same enlarged.	
3-4. Vertical and tangential sections, × 6.	
New Scotland formation, New York.	
Figs. 5-8. Callotrypa striata (Hall and Simpson)	271
<ol><li>A fragment of limestone with small examples of this species, natural size.</li></ol>	
6, 7. A small fragment and a portion of the same enlarged.	
8. A further enlargement (×18), showing the arrangement of the	
zoecia and mesopores and the prominent spine, at the posterior	
end of the zoœcium.	
New Scotland formation, New York.	
Figs. 9, 10. Callotrypa macropora (Hall)	271
A branching fragment and a portion of the same enlarged. New Scot-	
land formation, New York.	
Figs. 11, 12. Eridotrypa corticosa (Hall)	273
A fragment, natural size, and a portion of the same enlarged showing	
the thick walled zoecia. New Scotland formation, New York.	
Figs. 13-15. Chilotrypa constricta (Hall)	269
13. A small piece of limestone with fragments of this species.	
14, 15. Two fragments enlarged, the first showing the regular arrange-	
ment of the zoœcia and the second showing several maculæ.	
New Scotland formation, New York.	
Figs. 16-18. Orthopora ovatipora (Hall)	288
16, 17. A fragment, natural size, and an enlargement of the same.	
18. Surface of a fragment, $\times$ 18.	
New Scotland formation, New York.	



MOLLUSCOIDEA—BRYOZOA

# PLATE LI

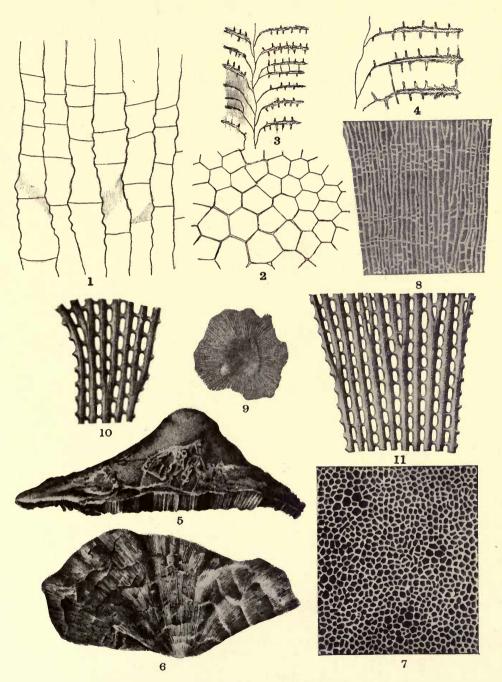
P P	AGE
Figs. 1, 2. Fistulipora maculosa (Hall)	262
1. A complete zoarium, natural size, showing the characteristic	
maculæ.	
2. Surface of a zoarium magnified.	
New Scotland formation, New York.	
Figs. 3-5. Semicoscinium coronis (Hall)	285
3. A fragment, natural size.	
4. An enlargement of the non-celluliferous face.	
5. Celluliferous face enlarged, showing the characteristic, expanded	
carina.	
New Scotland formation, New York.	
Figs. 6-8. Fenestella Philia Hall	281
6, 7. A fragment showing the non-celluliferous face, $\times$ 1, and an	
enlargement of the same.	
8. Enlargement of the celluliferous side.	
New Scotland formation, New York.	
Figs. 9-11. POLYPORA COMPACTA (Hall)	284
9. A fragment, natural size.	
10, 11. Enlargements of the non-celluliferous and celluliferous faces	
of this species.	
New Scotland formation, New York.	
Figs. 12-14. Stictopora ? papillosa Hall	289
12. Fragments, natural size.	
13-14. Surface of specimen, $\times$ 6 and $\times$ 18.	
New Scotland formation, New York.	
Figs. 15-17. Orthopora regularis (Hall)	287
15. A specimen showing a rectangular mode of branching, × 1.	201
16, 17. Surfaces of two specimens, $\times$ 6, showing variations in the	
thickness of the zoecial walls.	
New Scotland formation, New York.	
To a Scottand formation, New York.	
Fig. 18. Orthopora rhombifera (Hall)	286
Enlargement of a specimen showing arrangement and form of the	200
zoecial apertures. New Scotland formation, New York.	
aportures. They be trained for mation, New York.	



MOLLUSCOIDEA—BRYOZOA

# PLATE LII

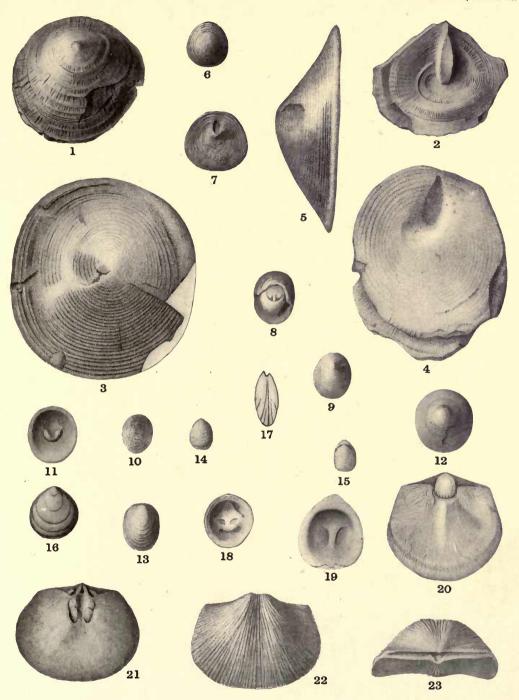
Figs. 1, 2. Cyphotrypa corrugata (Weller)	AGE 269
<ul> <li>Figs. 3, 4. DIPLOSTENOPORA SILURIANA (Weller)</li></ul>	277
Figs. 5-8. Monotrypa sphærica (Hall)  5. Side view of a zoarium, natural size. 6. A vertical fracture, natural size. 7. An enlargement of the celluliferous surface. 8. Vertical section illustrating the distribution of the diaphragms.  × 4.  New Scotland formation, New York.	278
Figs. 9-11. Fenestella ? Idalia Hall  9. A funnel-shaped frond, natural size.  10. An enlargement of the non-celluliferous face of the same.  11. An enlargement of another specimen with stouter branches.  New Scotland formation, New York.	281



MOLLUSCOIDEA-BRYOZOA

## PLATE LIII

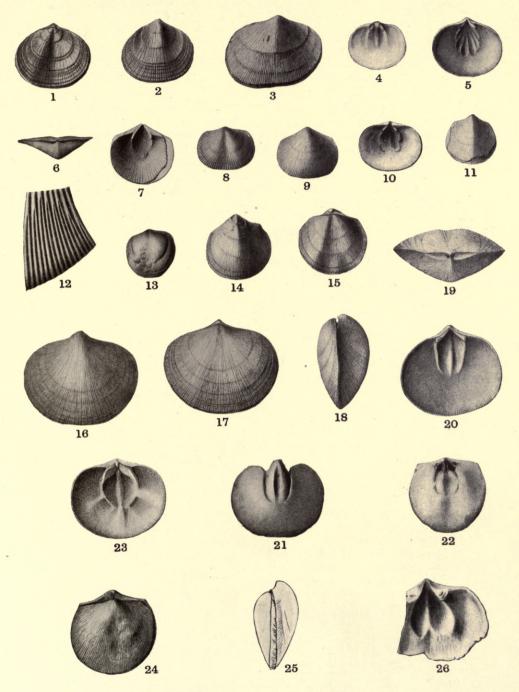
	PAGE
Figs. 1, 2. Orbiculoidea ræderi Schuchert n. sp	290
1. Exterior of dorsal valve.	
2. Exterior mold of ventral valve.	
Oriskany formation, Ridgely member, Cash Valley.	
Figs. 3-5. Orbiculoidea ampla (Hall)	291
3. Cast from a mold of the dorsal valve.	
4. Side elevation of same.	
5. Partially exfoliated ventral valve.	
Oriskany formation, New York.	
Figs. 6, 7. Orbiculomea schucherti Swartz n. sp	292
6. Exterior of dorsal valve.	
7. Exterior of ventral valve.	
Helderberg formation, Keyser member, Dawson, W. Va.	
Figs. 8, 9. Pholidops multilamellosa Schuchert n. sp	293
8. Exterior of ventral? valve partially exfoliated, showing interior	
muscular scars. × 2.	
9. Exterior of dorsal valve. × 2.	
Oriskany formation, Shriver member, Cash Valley.	
orandary rotations, plant of meditor, outsit tunoy.	
Figs. 10-12. Pholidops ovata Hall.	294
10. Exterior of dorsal valve. $\times$ 3. New Scotland of New York.	201
11. Interior of dorsal valve. $\times 5$ .	
12. Exterior of dorsal valve. $\times$ 5.	
Helderberg formation, Keyser member, 34 mile southwest of	
Rawlings.	
144 111155.	
Fig. 13. Pholidops tumida Schuchert n. sp	294
Exterior of dorsal valve. × 3. Oriskany formation, Shriver member,	
Winchester road.	
Winchester road.	
Figs. 14-19. Lingulapholis terminalis (Hall)	206
14. Exterior of ventral valve.	200
15. Exterior of dorsal valve.	
16. Exterior of dorsal? valve of another specimen. × 2.	
17. Profile outline of same, showing both valves in position.	
18. Interior of ventral valve. $\times 2$ .	
19. Interior of ventral valve. $\times$ 3.	
Oriskany formation, Ridgely member, Cumberland. (Figs.	
14, 15, 19, after Hall.)	
II, 10, 10, alter man,	
Figs. 20-23. Orthostrophia strophomenoides (Hall)	207
20, 21. Internal casts of ventral and dorsal valves.	231
22, 23. Dorsal and cardinal views.	
New Scotland formation, New York.	
New Scottand formation, New York.	



MOLLUSCOIDEA-BRACHIOPODA

#### PLATE LIV

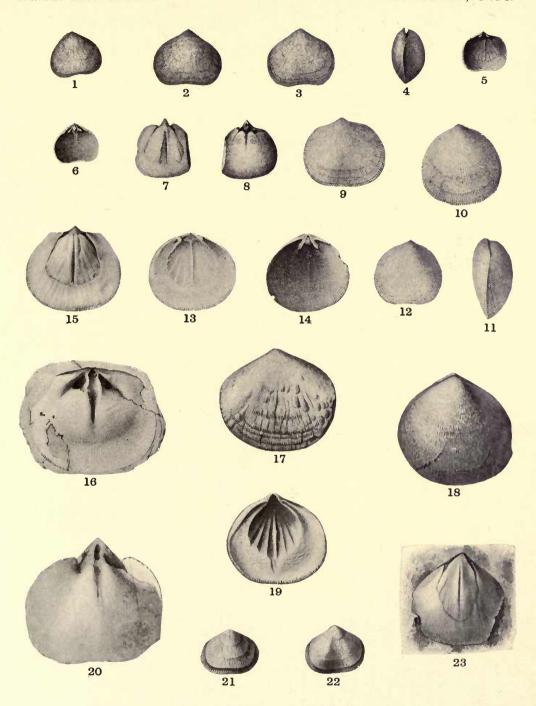
Figs. 1-6. Dalmanella Planiconvexa (Hall)
4. The interior of dorsal valve of a smaller individual.
5. Interior of ventral valve.
6. Cardinal view of a larger individual. New Scotland formation, New York.
Fire 7.10 Developer or over Mormond n. co. 200
Figs. 7-10. Dalmanella clarki Maynard n. sp
8. Dorsal valve. $\times 2$ .
9. Ventral valve. × 2.
10. Interior of dorsal valve. × 2.
Helderberg formation, Keyser member, Cash Valley.
Figs. 11-13. Dalmanella concinna (Hall)
11. Ventral valve.
12. Surface ornamentation. $\times$ 7.
13. Dorsal valve.
Helderberg formation, Keyser member, Cumberland.
Figs. 14-23. Dalmanella perelegans (Hall)
14, 15. Ventral and dorsal valves. Helderberg formation, New Scotland member, Corriganville.
16-19. Ventral, dorsal, side, and cardinal views.
20. Interior of ventral valve.
21. Internal cast of ventral valve.
22. Internal cast of dorsal valve.
23. Interior of dorsal valve.
New Scotland formation, New York.
Figs. 24-26. Dalmanella eminens (Hall)
24. Dorsal view.
25. Profile outline of same.
26. Interior of ventral valve.
Helderberg formation, New Scotland member, Corriganville.



MOLLUSCOIDEA—BRACHIOPODA

#### PLATE LV

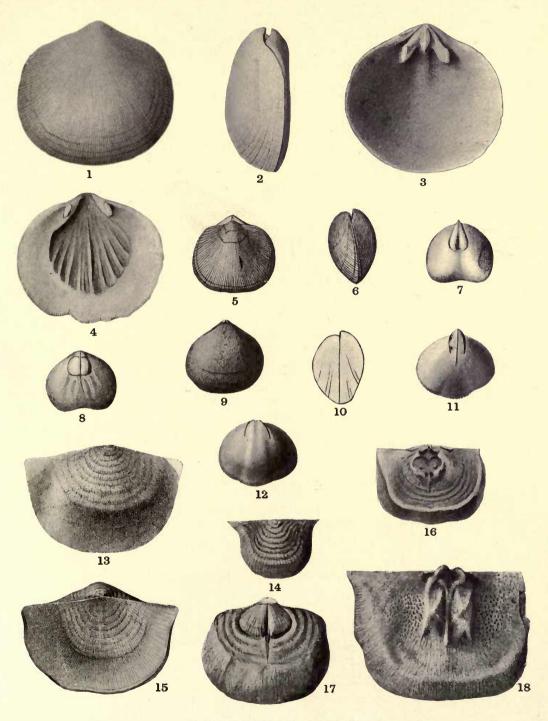
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Figs. 1-8. Rhipidomella emarginata (Hall) 36	02
1-4. Illustrations of the form and character of this variety.	
5, 6. Interior of ventral and dorsal valves.	
7, 8. Cast of the ventral and dorsal valve.	
Helderberg formation, Keyser member, Cumberland. (After	
Hall.)	
Figs. 9-16. Rhipidomella oblata (Hall)	03
9, 10. Ventral and dorsal valves.	
11. Profile of same.	
12. A small dorsal valve.	
13, 14. Interior of ventral and dorsal valves.	
15. Internal cast of the ventral valve, showing the muscular and	
vascular impressions.	
16. Cast of the dorsal valve, with impressions of the cardinal and	
brachial processes.	
New Scotland formation, New York.	
Figs. 17-19. Rhipidomella assimilis (Hall) 36	04
17. Ventral valve.	
18. Dorsal view of a large shell.	
19. Interior of ventral valve.	
Helderberg formation, Becraft member, North Mountain, W.	
Va.	
Fig. 20. Rhipidomella musculosa (Hall)	05
Cast of interior of dorsal valve. Oriskany formation, New York.	
Figs. 21, 22. Rhipidomella musculosa var. arctisinuata Schuchert n.	
var 30	06
21. Dorsal view.	
22. Ventral view of same.	
Oriskany formation, Ridgely member, Cumberland.	
Fig. 99 Byrnyngarydd achard a cae Cabardant a cae	0.0
Fig. 23. RHIPIDOMELLA MARYLANDICA Schuchert n. sp	06
Interior cast of ventral valve. Oriskany formation, Ridgely member,	
Williams road, near Cumberland,	



MOLLUSCOIDEA—BRACHIOPODA

# PLATE LVI

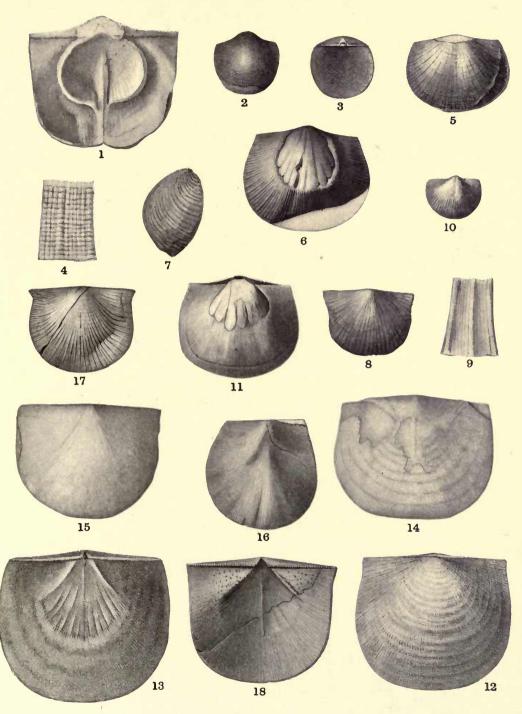
PAG	E
Figs. 1-4. Rhipidomella musculosa (Hall)	5
1. Exterior of dorsal shell.	
2. Lateral view of the conjoined valves.	
3. Interior of dorsal valve.	
4. Interior of ventral valve.	
Oriskany formation, Ridgely member, Cumberland. (After	
Hall.)	
Figs. 5-8. Schizophoria multistriata (Hall) 30	7
5, 6. Dorsal and side views of shells.	
7, 8. Internal cast of ventral and dorsal valves.	
New Scotland formation, New York.	
Figs 0.19 Compressions on the Cohymphont n on 200	7
Figs. 9-12. Schizophoria oriskania Schuchert n. sp	1
9, 10. Dorsal and side views. The discontinuous striæ in the drawing	
are due to the pseudomorphous nature of the specimen.  11, 12. Internal casts of ventral and dorsal valves.	
Oriskany formation, Ridgely member, Cumberland.	
oriskany formation, Ridgely member, Cumperland.	
Figs. 13-17. LEPTÆNA RHOMBOIDALIS (Wilckens)	2
13, 15. Ventral and dorsal views.	
14. Ventral valve.	
16. Interior of dorsal valve, showing some variety of character.	
17. Internal cast of ventral valve.	
New Scotland formation, New York.	
Fig. 18. Leptæna rhomboidalis var. ventricosa (Hall) 309	)
Interior view of dorsal valve. Oriskany formation, New York.	



MOLLUSCOIDEA—BRACHIOPODA

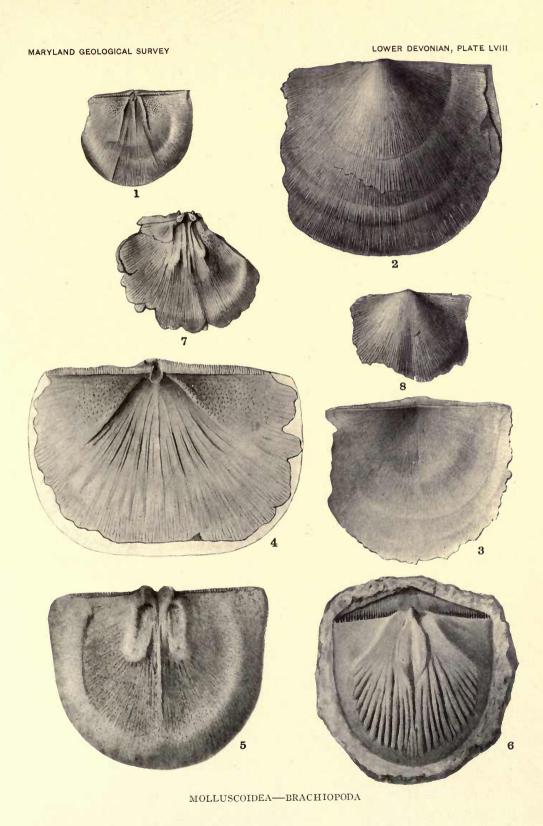
## PLATE LVII

Fig. 1. Leptæna rhomboidalis var. ventricosa (Hall)
Figs. 2-6. Leptænisca concava (Hall)
4. Enlargement of the surface, showing the finer longitudinal striæ.  New Scotland formation, New York.
<ol> <li>Exterior of ventral valve. × 2.</li> <li>Helderberg formation, New Scotland member, Devil's Backbone.</li> </ol>
Fig. 6. Stropheodonta coeymanensis Swartz n. sp
Figs. 7-10. Stropheodonta arata (Hall)
Fig. 11. Stropheodonta demissa (Conrad)
Figs. 12, 13. Stropheodonta (Leptostrophia) beckii (Hall)
Figs. 14-16. Stropheodonta (Leptostrophia) planulata (Hall)
Figs. 17, 18. Stropheodonta (Leptostrophia) bipartita (Hall) 316 17. Exterior of ventral valve. Pinto. 18. Interior of ventral valve. Devil's Backbone. Helderberg formation, Keyser member.



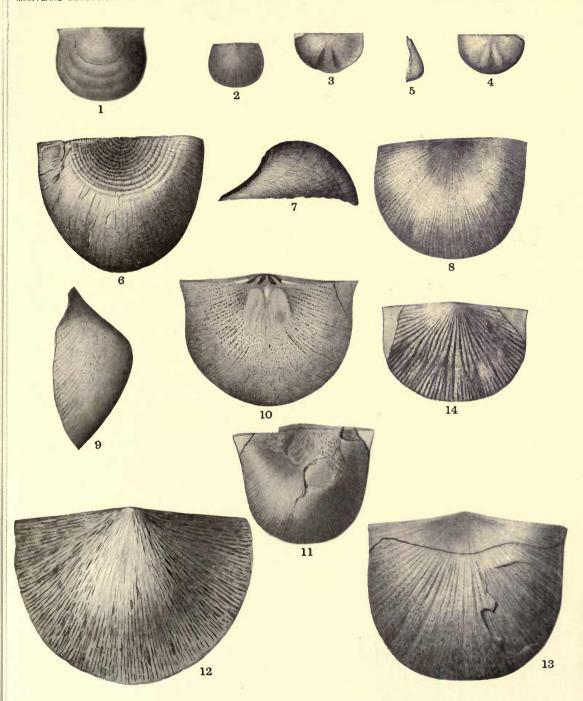
MOLLUSCOIDEA-BRACHIOPODA

PLATE LVIII
Fig. 1. Stropheodonta (Leptostrophia) arctimuscula Schuchert n. sp 317 Interior of ventral valve. Oriskany formation, Shriver member, 21st Bridge.
Figs. 2-5. Stropheodonta (Leptostrophia) magnifica (Hall)
Figs. 6-8. Stropheodonta (Leptostrophia) magniventra (Hall)



# PLATE LIX

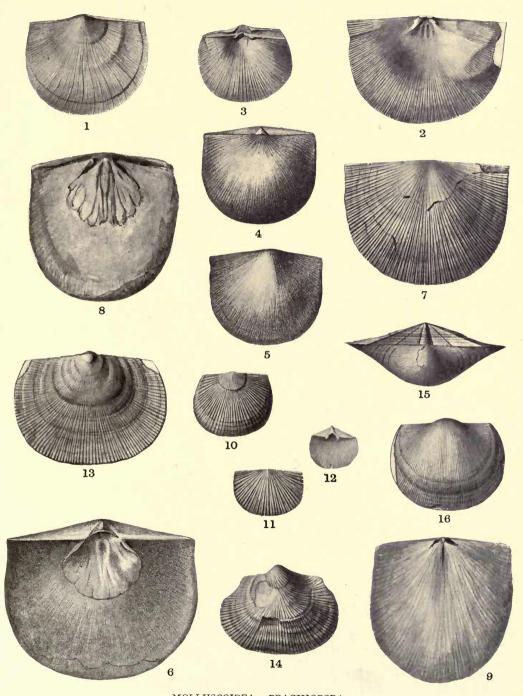
Figs. 1, 2. Stropheodonta varistriata Conrad	PAGE 312
Figs. 3-5. Strophonella geniculata (Hall)	
Figs. 6, 7. Strophonella Leavenworthana (Hall)	322
Figs. 8-10. Strophonella punctulifera (Hall)	323
Fig. 11. Strophonella keyserensis Swartz n. sp	324
Fig. 12. Strophonella headleyana (Hall)	325
Figs. 13, 14. Strophonella undaplicata Swartz n. sp	326



MOLLUSCOIDEA—BRACHIOPODA

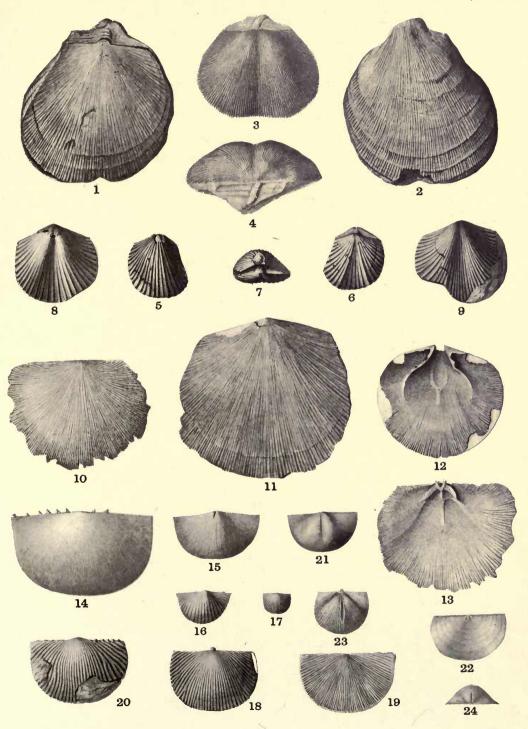
#### PLATE LX

	PAGE
Figs. 1-3. Schuchertella prolifica Schuchert n. sp	327
1. Ventral valve.	
2. Interior of dorsal valve.	
3. Two small overlapping ventral interiors.	
Helderberg formation, Keyser member, Keyser, W. Va.	
Figs. 4-9. Schuchertella woolworthana (Hall)	328
4. Dorsal view.	
5. Ventral valve.	
6. Interior of a large ventral valve.	
New Scotland formation, New York.	
7. Dorsal valve. Helderberg formation. New Scotland member, Cedar Cliff, W. Va.	
8, 9. Internal cast of ventral and dorsal valves. New Scotland forma-	
tion, New York.	
Figs. 10-12. Schuchertella becraftensis (Clarke)	329
10, 11. Two dorsal valves.	
12. Interior of ventral valve.	
Oriskany formation, New York.	
Figs. 13-16. Schuchertella deckerensis (Weller)	329
13, 14. Ventral valves.	
15. Cardinal view.	
16. Dorsal valve.	
Helderberg formation, Keyser member, Keyser, W. Va.	



### PLATE LXI

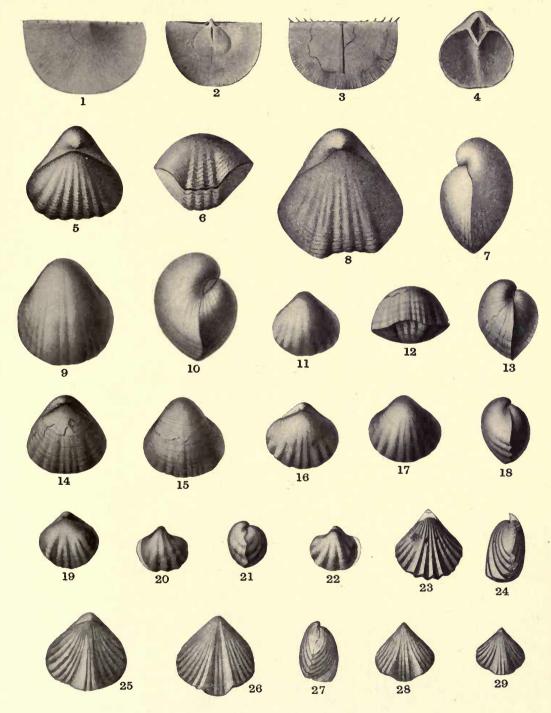
PAGE
Figs. 1, 2. Schuchertella deformis (Hall)
1. View of the dorsal valve and area of the ventral valve.
2. Ventral valve of the same specimen, showing the contracted and
distorted beak.
Helderberg formation, Keyser member, Cumberland. (After
Hall.)
Figs. 3, 4. Schuchertella sinuata (Hall and Clarke)
Dorsal and cardinal views. Helderberg formation, Keyser member,
Cumberland. (After Hall and Clarke.)
Figs. 5-9. Schuchertella Marylandica Maynard n. sp
5, 6, 7. Ventral, dorsal, and cardinal views of type specimen.
8, 9. Partially exfoliated dorsal valves, Keyser, W. Va.
Helderberg formation, Keyser member, Cumberland.
The state of the s
Figs. 10-13. Hipparionyx proximus Vanuxem
10, 11. Dorsal and ventral valves.
12, 13. Interior ventral and dorsal valves.
Oriskany formation, Ridgely member, Cumberland. (After
Hall.)
Fig. 14. Chonetes rowei Schuchert n. sp
Ventral valve. Oriskany formation, Ridgely member, Miller's Spring,
near Cumberland.
Fig. 15. Chonetes hudsonicus Clarke
Ventral valve. The umbo is cracked. Oriskany formation, Ridgely
member, Winchester road.
Fig. 16. Chonetes subacutiradiatus Schuchert n. sp
Ventral valve. Helderberg formation, New Scotland member, Miller's
Spring, near Cumberland.
Figs. 17-19. Chonetes Jerseyensis Weller
17. Ventral valve of a young individual, Tonoloway.
18, 19. Ventral and dorsal valves, Flintstone.
Helderberg formation, Keyser member.
Fig. 20. Chonetes jerseyensis var. spinosus Maynard n. var
Ventral valve. Helderberg formation, Keyser member, Hancock.
Fig. 21. Anoplia helderbergiæ Schuchert n. sp
Ventral valve. $\times$ 3. The median furrow is due to a fracture. The
shell is uniformly convex. Helderberg formation, New Scotland
member, 21st Bridge.
Figs. 22-24. Anoplia nucleata (Hall)
22. Exterior of dorsal valve. $\times$ 3.
23. Interior of dorsal valve. $\times$ 2.
24. Cardinal view of the internal cast of the ventral valve.
Oriskany formation, New York.



MOLLUSCOIDEA—BRACHIOPODA

## PLATE LXII

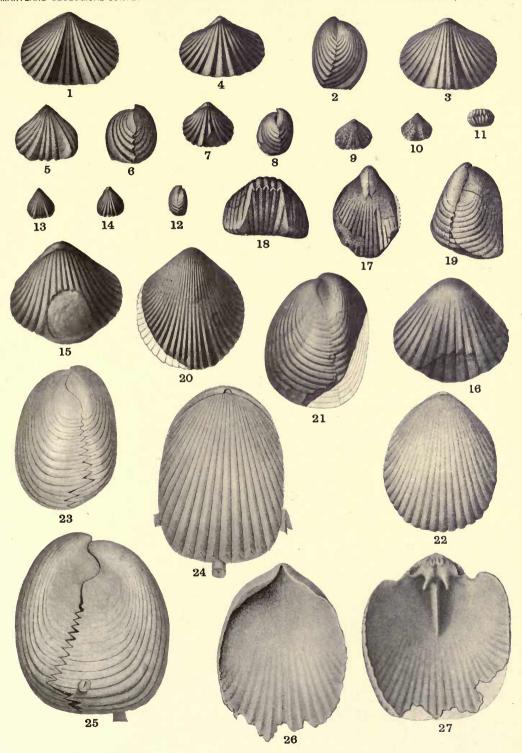
Figs. 1, 2. Chonostrophia complanata (Hall)	341
Fig. 3. Chonostrophia helderberglæ Hall and Clarke	342
Figs. 4-7. GYPIDULA (SIEBERELLA) COEYMANENSIS Schuchert n. name 4. Interior of ventral valve. 5-7. Dorsal, anterior, and side views. 8. Dorsal view of large individual. Coeymans formation, New York.	342
Figs. 9-11. GYPIDULA (SIEBEREJLA) COEYMANENSIS VAR. PROGNOSTICA Schuchert n. var	344
Figs. 12-18. Gypidula (Sieberella) coeymanensis var. corriganensis Maynard n. var.  12-15. Anterior, side, dorsal, and ventral views of a large individual. Cumberland.  16-18. Dorsal, ventral, and side views of type. Devil's Backbone.  19. Dorsal view. Keyser, W. Va.  Helderberg formation, Keyser member.	345
Figs. 20-22. Gypidula subglobosa Maynard n. sp	346
Figs. 23, 24. RHYNCHOTRETA CUMBERLANDIA Rowe n. sp  Dorsal and side view of a large specimen. Oriskany formation, Ridgely member, Cumberland.	347
Figs. 25-29. Stenochisma formosa Hall	349



MOLLUSCOIDEA—BRACHIOPODA

## PLATE LXIII

Figs. 1-4. Stenochisma deckerensis (Weller)
Figs. 5, 6. Camarotechia ? altiplicata (Hall)
Figs. 7, 8. Camarotechia oriskania Rowe n. sp
Figs. 9, 10. Camarotechia ? Lamellata (Hall)
Figs. 11-14. Camarotechia Litchfieldensis Schuchert
Figs. 15, 16, Camarotechia gigantea Maynard n. sp
Figs. 17-19. Camarotechia (Plethorhyncha) campbellana (Hall) 354 Ventral, anterior, and side views. New Scotland formation, New York.
Figs. 20, 21. Camarotechia (Plethorhyncha) præspeciosa Schuchert n. sp
Figs. 22-27. Camarotechia (Plethorhyncha) speciosa (Hall)



MOLLUSCOIDEA—BRACHIOPODA

#### PLATE LXIV

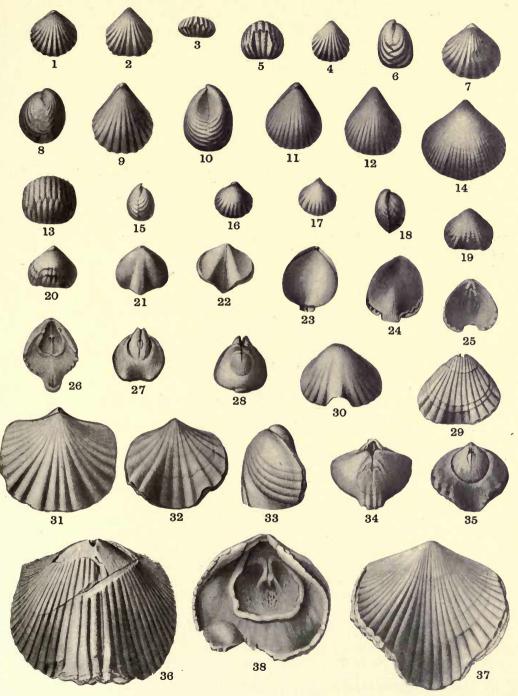
THATE HAIV	
I I	PAGE
Fig. 1. CAMAROTECHIA (PLETHORHYNCHA) SPECIOSA VAR. RAMSAYI (Hall).  Dorsal view of the type specimen. Oriskany formation, Ridgely member, Cumberland. (After Hall.)	358
Figs. 2, 3. Camarotechia (Plethorhyncha) barrandii (Hall)	359
Figs. 4, 5. Camarotœchia (Plethorhyncha) barrandii var. fitchana (Hall)	359
Dorsal and side views of internal cast. Oriskany formation, New York.	
Fig. 6. Camarotœchia (Plethorhyncha) pleiopleura (Conrad) Dorsal valve. The drawing is much restored on the left. Oriskany formation, Ridgely member, Cumberland.	360
Figs. 7-10. Uncinulus vellicatus (Hall)	362
Figs. 11, 12. Uncinulus abruptus (Hall)	363
Figs. 13-15. Uncinulus globulus Schuchert	364
Figs. 16, 17. Uncinulus nucleolatus (Hall)	365
Figs. 18-20. Uncinulus nucleolatus var. angulatus Maynard n. var Side, ventral, and dorsal views of type specimen. Helderberg formation, Keyser member, Cumberland.	366

MOLLUSCOIDEA--BRACHIOPODA

# PLATE LXV

Figs. 1-6. Uncinulus gordoni Maynard n. sp
3, 4. Anterior and ventral views of a smaller specimen. 5, 6. Anterior and side views of a gibbous form. Helderberg formation, Keyser member, Cash Valley.
Figs. 7, 8. Uncinulus keyserensis Schuchert n. sp
Figs. 9-14. Uncinulus convexorus Maynard n. sp
10-13. Side, dorsal, ventral, and anterior views.  14. View of large ventral valve with fine plications.  Helderberg formation, Keyser member, Keyser, W. Va.
Figs. 15-17. Wilsonia globosa Weller
Figs. 18-20. Wilsonia cf. globosa Weller
Figs. 21, 22. EATONIA SINGULARIS (Vanuxem)
Figs. 23-28. EATONIA PECULIARIS (Conrad)
Figs. 29, 30. Eatonia whitfield Hall
Figs. 31-35. EATONIA MEDIALIS (Vanuxem)
34, 35. Dorsal and ventral views of internal cast of a small individual.  New Scotland formation, New York.  Figs. 36-38. Eatonia sinuata Hall

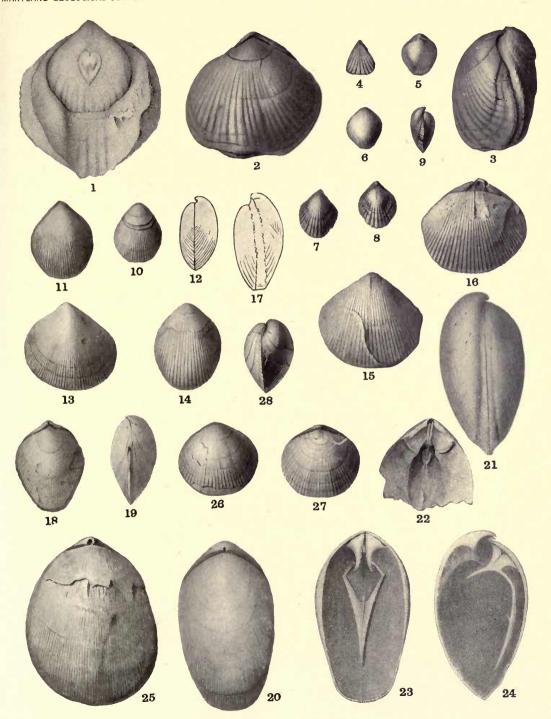
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MOLLUSCOIDEA-BRACHIOPODA

### PLATE LXVI

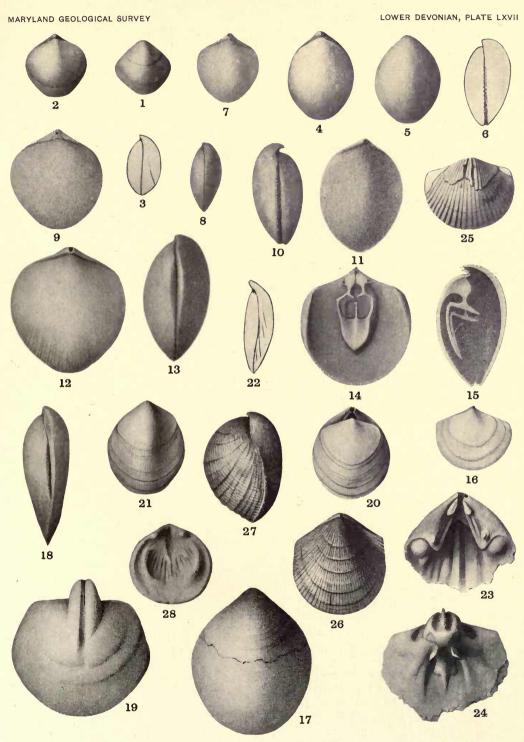
	PAGE
Fig. 1. EATONIA SINUATA Hall	
Cumbertana. (Micci Mani)	
Figs. 2, 3. Eatonia Hartleyi Schuchert n. sp	
Fig. 4. RHYNCHONELLA (?) BIALVEATA Hall	377
Figs. 5, 6. Rensselæria mutabilis (Hall)	
Figs. 7-9. Rensselæria mutabilis var	
Figs. 10-12. Rensselæria subglobosa Weller	379
11, 12. Ventral and side views of an average individual.  Helderberg formation, Becraft member, Cherry Run, W. Va.	
Fig. 13. Rensselæria subglobosa var. avus Schuchert n. var	
Fig. 14. Rensselæria subglobosa var. crassa Schuchert n. var	
Figs. 15-17. Rensselæria circularis Schuchert n. sp	
Figs. 18-24. Rensselæria marylandica Hall	382
<ul> <li>23. Interior of dorsal valve to show the large crural plates and the pointed brachidium which supports the fleshy arms.</li> <li>24. Median section of shell to show the various plates, thickening of the posterior region of the valves, and the position of the jugum. Oriskany formation, Ridgely member, Cumberland. (After Hall.)</li> </ul>	
Fig. 25. Rensselæria marylandica var. symmetrica Schuchert n. var Dorsal view. Oriskany formation, Ridgely member, Cumberland.	384
Figs. 26-28. Rensselæria keyserensis Swartz n. sp	384



MOLLUSCOIDEA—BRACHIOPODA

# PLATE LXVII

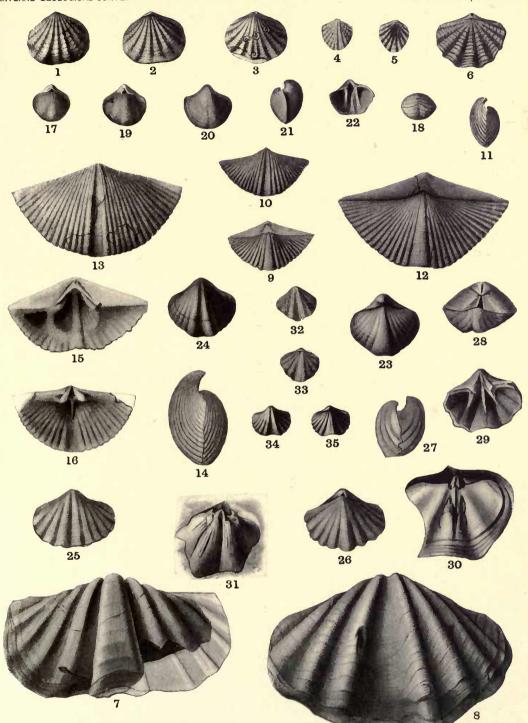
F	AGE
Figs. 1-3. Rensselæria (Beachia) proavita Schuchert n. sp	385
1. Ventral valve. $\times 1\frac{1}{2}$ .	
2, 3. Dorsal and side views of another specimen. $\times 1\frac{1}{2}$ .	
Helderberg formation, Keyser member, Pinto.	
Figs. 4-6. Rensselæria (Beachia) cumberlandiæ (Hall)	386
Dorsal, ventral, and side views. Oriskany formation, Ridgely mem-	
ber, Cumberland.	
boi, Camboi and	
Figs. 7-15. Rensselæria (Beachia) suessana (Hall)	287
7, 8. Dorsal and side views of a small specimen.	901
9, 10. Same of an average specimen.	
11. Dorsal view of an elongate specimen.	
12, 13. Dorsal and side views of a large specimen.	
14. Interior of dorsal valve.	1 3
15. Longitudinal section of valves showing crura and appendages.	
Oriskany formation, Ridgely member, Cumberland. (After	
Hall.)	
Fig. 16. Rensselæria (Beachia) suessana var. immatura Schuchert n.	
var	388
Dorsal valve. $\times 1\frac{1}{2}$ . Oriskany formation, Shriver member, Cash	
Valley, Cumberland.	
Figs. 17-19. Rensselæria (Beachia) ovalis (Hall)	389
17, 18. Ventral and side views.	
19. Internal cast of ventral valve.	
Oriskany formation, New York.	
Figs. 20-24. Oriskania lucerna Schuchert n. sp	390
20-22. Dorsal, ventral, and side views.	
23, 24. Interior of ventral and dorsal valves. × 2.	
Oriskany formation, Ridgely member, Cumberland.	
Fig. 25. Tropidoleptus carinatus (Conrad)	390
Ventral valve. Oriskany formation, Ridgely member, Cumberland.	000
The second state of the second	
Figs. 26-28. Atrypa reticularis (Linné)	392
26, 27. Dorsal and side views.	004
28. Interior of ventral valve.	
New Scotland formation, New York.	
New Boutland Tormation, New Tork.	



MOLLUSCOIDEA—BRACHIOPODA

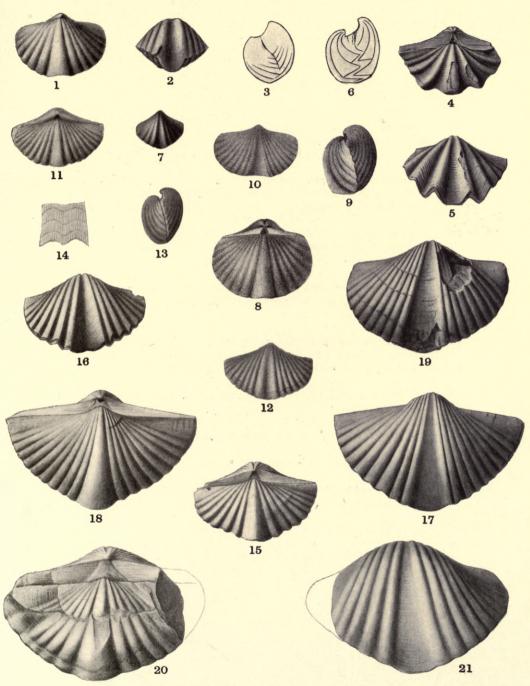
#### PLATE LXVIII

P	AGE
Figs. 1-3. Atrypa? Biconvexa Maynard n. sp	393
3. Dorsal view of another example. Cash Valley, Cumberland. Helderberg formation, Keyser member.	
Figs. 4-6. Atrypina imbricata (Hall)	394
New Scotland formation, New York.	
Figs. 7, 8. Spirifer Macropleurus (Conrad)	206
Dorsal and ventral valves. Helderberg formation, New Scotland mem-	370
ber, Corriganville.	
Figs. 9-16. Spirifer Cumberlandlæ Hall	398
9-11. Dorsal, ventral, and side views of a small specimen.	
12-14. Same views of an average specimen.	
15, 16. Interior of ventral and dorsal valves.  Oriskany formation, Ridgely member, Cumberland. (After	
Hall.)	
Figs. 17-22. Spirifer modestus Hall	399
17, 18. Dorsal and front view.	
19-21. Dorsal, ventral, and side views of a larger individual.	
22. Interior of ventral valve.  Helderberg formation, Keyser member, Cumberland. (After	
Hall.)	
Figs. 23, 24. Spirifer modestus var. plicatus Maynard n. var	400
Dorsal and ventral views of type. Helderberg formation, Keyser member, Keyser, W. Va.	
Figs 95 90 Chapter acressory was Hell	401
Figs. 25-29. Spirifer octocostatus Hall	401
Helderberg formation, Keyser member, Cumberland. (After Hall.)	
11411.)	
Figs. 30, 31. Spirifer paucicostatus Schuchert n. sp	402
Figs. 32, 33. Spirifer Vanuxemi Hall	403
Figs. 34, 35. Spirifer vanuxemi var. prognostica Schuchert n. var	403
Ventral and dorsal views. Helderberg formation, Keyser member, ¾ mile southwest of Rawlings.	



### PLATE LXIX

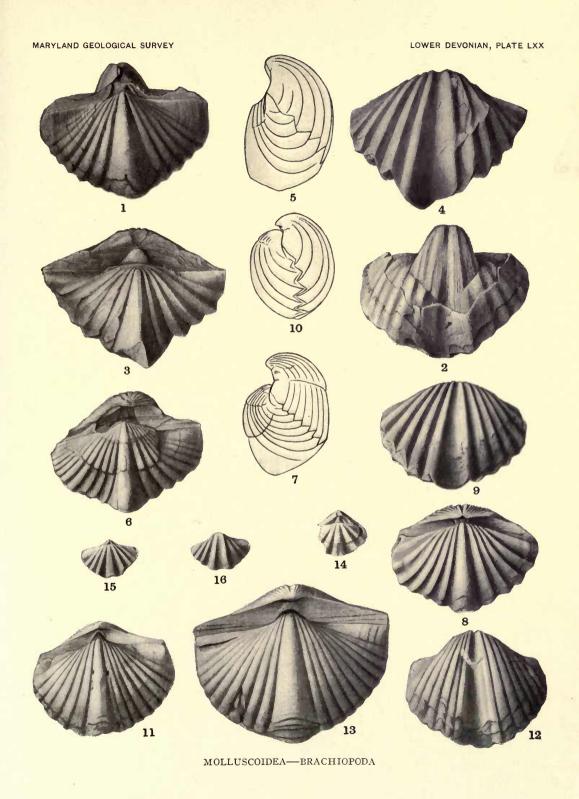
P	AGE
Figs. 1-3. Spirifer vanuxemi var. prognosticus Schuchert n. var	403
2, 3. Anterior and side views of a smaller individual. $\times$ 2.	
Helderberg formation, Keyser member, Pinto.	
Figs. 4-6. Spirifer perlamellosus Hall	397
Dorsal, ventral and side views. Helderberg formation, New Scotland member, Cumberland.	
Fig. 7. Spirifer eriensis Grabau	404
Ventral valve. Helderberg formation, Keyser member, Cash Valley.	
Figs. 8-10. Spirifer cyclopterus Hall	406
8, 9. Dorsal and side views of average specimen.	
10. Ventral valve of a smaller specimen.	
New Scotland formation, New York.	
Figs. 11-14. Spirifer tribulis Hall	407
11-13. Dorsal, ventral, and side views.	
14. A portion of the surface lamellæ much magnified to show the finely spinose margins.	
Helderberg formation, New Scotland member, Cumberland.	
(After Hall.)	
Figs. 15, 16. Spirifer angularis Schuchert n. sp	409
Dorsal and ventral views of a large specimen. Oriskany formation,	
Ridgely member, Cumberland.	
Figs. 17-21. Spirifer intermedius Hall	409
17, 18. Ventral and dorsal views of Cumberland specimen.	
19. Ventral valve with a wider sinus. Cumberland.	
20, 21. Dorsal and ventral views of an average specimen from Warren Point, Penna.	
Oriskany formation, Ridgely member.	



MOLLUSCOIDEA—BRACHIOPODA

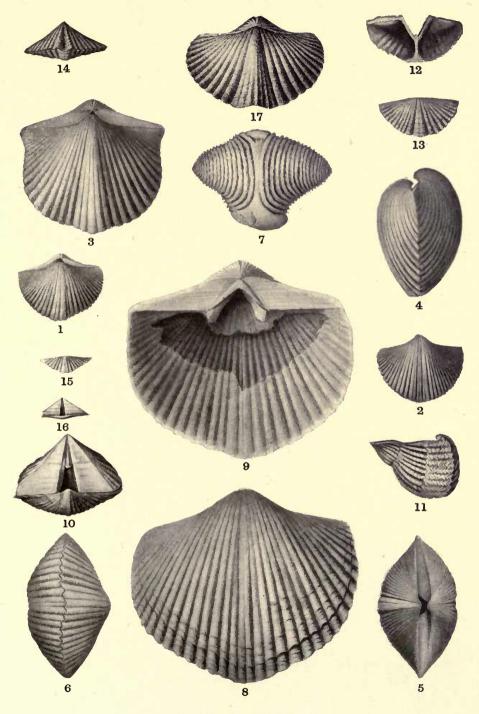
# PLATE LXX

PAGE	
Figs. 1-5. Spirifer murchisoni Castelnau	
1. Dorsal view of an average specimen. Cumberland.	
2. Internal cast of ventral valve retaining portion of shell, same locality.	
3-5. Dorsal, ventral, and side views of the form with angular plications. Warren Point, Penna.	
Oriskany formation, Ridgely member.	
Figs. 6, 7. Spirifer Murchisoni var. Marylandicus Schuchert n. var 413 Dorsal and side views. Oriskany formation, Ridgely member, Cumberland.	THE RESIDENCE OF THE PARTY OF T
Figs. 8-10. Spirifer hartleyi Schuchert n. sp, 413 Dorsal, ventral, and side views of the type. Oriskany formation, Ridgely member, Cumberland.	
Figs. 11-13. Spirifer perdewi Schuchert	
Figs. 14-16. Spirifer tribuarius Schuchert n. sp	



## PLATE LXXI

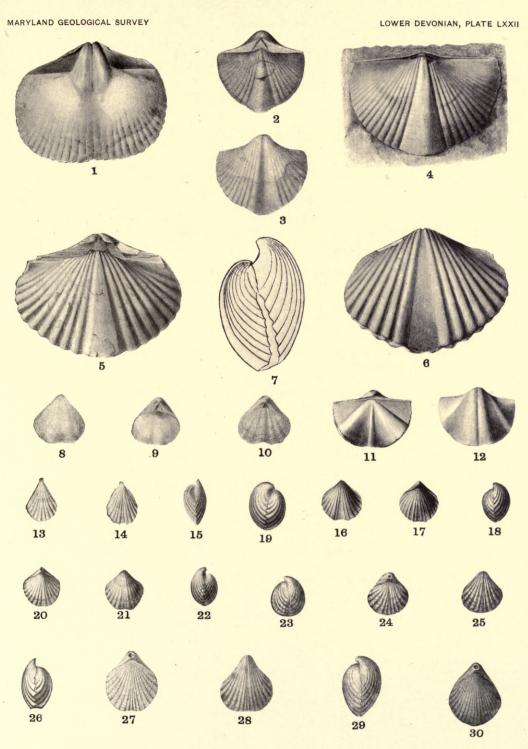
P	AGE
Figs. 1-9. Spirifer arenosus (Conrad)	415
1, 2. Dorsal and ventral views of a young individual.	
3-6. Dorsal, side, cardinal and anterior views of an average specimen.	
7. The spiralia silicified.	
8, 9. Exterior and interior of a large ventral valve.	
Oriskany formation, Ridgely member, Cumberland. (After	
Hall.)	
Figs. 10-16. Cyrtina rostrata (Hall)	423
10, 11. Cardinal and side views of a large specimen.	
12. Interior of ventral valve.	
13. Dorsal valve.	
14. Anterior view of an alate specimen.	
15, 16. Dorsal and cardinal views of a small specimen.	
Oriskany formation, New York.	
Fig. 17. Spirifer proavitus Schuchert n. sp	418
Dorsal view of type. Helderberg formation, New York.	



MOLLUSCOIDEA—BRACHIOPODA

### PLATE LXXII

P	AGE
Fig. 1. Spirifer Arenosus (Conrad)	415
Figs. 2, 3. Spirifer concinnus Hall	417
Fig. 4. Spirifer concinnoideus Schuchert n. sp	419
Figs. 5-7. Spirifer gordoni Schuchert n. sp	420
Figs. 8-10. Reticularia bicostata (Vanuxem)	420
Figs. 11, 12. Metaplasia pyxidata (Hall)	422
Figs. 13-15. Rhynchospira rectirostris (Hall)	424
Figs. 16-25. RHYNCHOSPIRA GLOBOSA (Hall)	425
Figs. 26-30. Rhynchospira formosa Hall	426

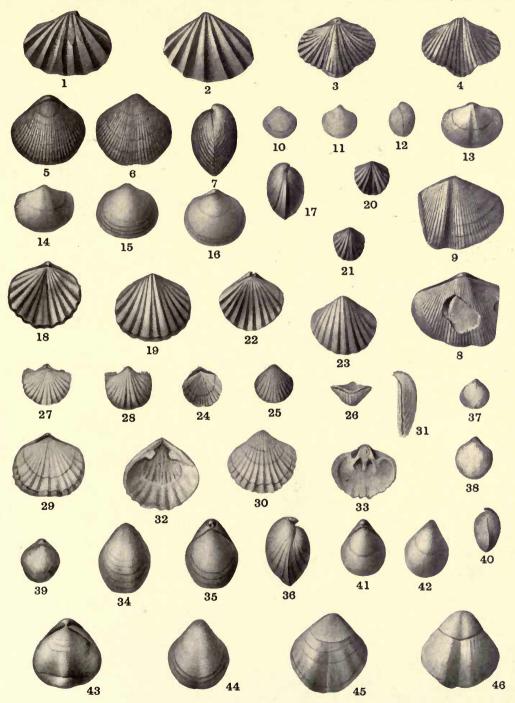


MOLLUSCOIDEA-BRACHIOPODA

## PLATE LXXIII

		PAGE
	Figs. 1, 2. Trematospira simplex Hall ?	
	Figs. 3, 4. Trematospira multistriata (Hall)	428
	Figs. 5-7. Trematospira deweyi (Hall)	429
	Figs. 8, 9. Trematospira equistriata Hall and Clarke	430
	Figs. 10-12. Nucleospira ventricosa (Hall)	
	Figs. 13, 14. Nucleospira elegans Hall	
	Figs. 15-17. Nucleospira swartzi Maynard n. sp	
	Figs. 18, 19. Anoplotheca concava (Hall)	
The same of the same of	Figs. 20, 21. Anoplotheca concava var. tonolowayensis Swartz n. var Dorsal and ventral views. $\times$ 2. Helderberg formation, Keyser member, Tonoloway.	434
	Figs. 22, 23. Anoplotheca equistriata Schuchert n. sp Dorsal and ventral views. $\times$ 2. Oriskany formation, Ridgely member, Cumberland.	
	Figs. 24-26. Anoplotheca dichtoma (Hall)	
	Figs. 27, 28. Anoplotheca (Leptoccella) fimbriata (Hall)  Dorsal and ventral views. Oriskany formation, Ridgely member, Cumberland. (After Hall.)	
	Figs. 29-33. Anoplotheca (Leptocelia) flabellites (Conrad)	
	Hall.)  Figs. 34-36. Whitfieldella (?) prosseri Grabau  Ventral, dorsal, and side views. Helderberg formation, Cherry Run, W. Va.	439
	Figs. 37-40. Whitfieldella (?) Nucleolata Hall	441
	Figs. 41, 42. Whitfieldella (?) minuta Maynard n. sp Dorsal and ventral views. $\times$ 5. Helderberg formation, Keyser member, Round Top.	442
	Figs. 43-46. Meristella prænuntia Schuchert n. sp	

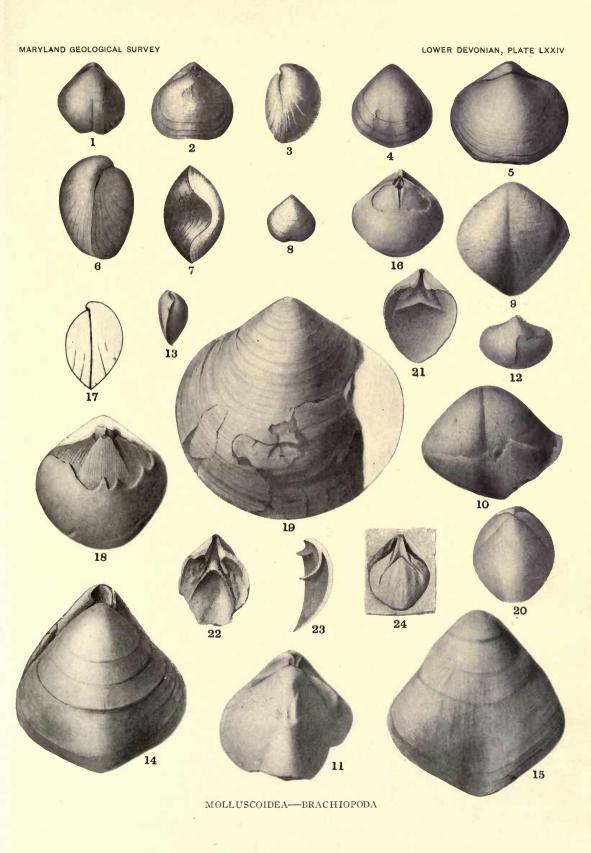
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MOLLUSCOIDEA—BRACHIOPODA

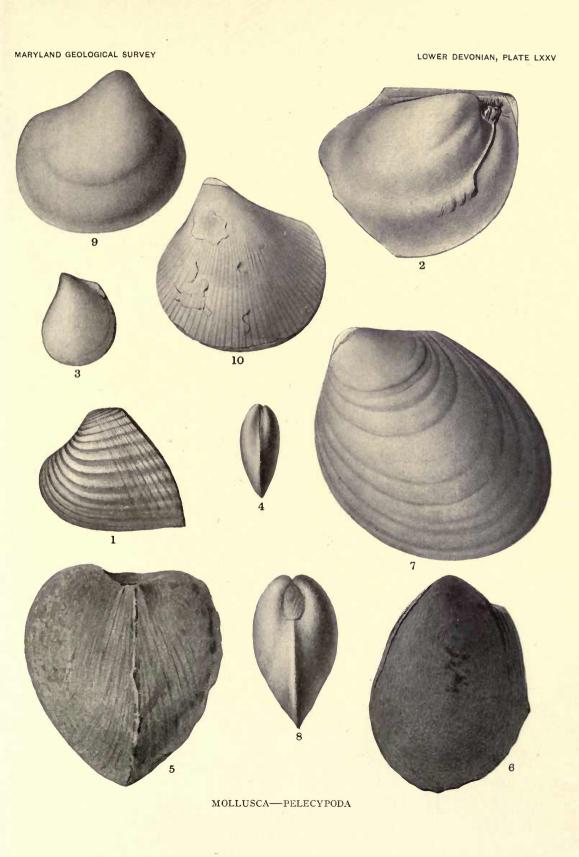
### PLATE LXXIV

1. Dorsal view. 2-4. Dorsal, side, and ventral views of a large and gibbous specimen.  Helderberg formation, Keyser member, Keyser, W. Va.  Figs. 5-8. Meristella arcuata (Hall)
Helderberg formation, Keyser member, Keyser, W. Va.  Figs. 5-8. Meristella arcuata (Hall)
Figs. 5-8. Meristella arcuata (Hall)
5, 6. Dorsal and side views.
7. Anterior view to show depth of ventral sinus.
8. Small ventral valve.
New Scotland formation, New York.
Figs. 9-11. Meristella lata (Hall)
9, 10. Ventral view of different specimens.
11. Dorsal view of another specimen.
Oriskany formation, Ridgely member, Warren Point, Penna.
Figs. 12, 13. Meristella lentiformis Clarke
Figs. 14, 15. Meristella rostellata Schuchert n. sp
Dorsal and ventral views of type. Oriskany formation, Ridgely mem-
ber. Cumberland.
Figs. 16-19. Meristella symmetrica Schuchert n. sp
16, 17. Dorsal and side views of a small individual.
18. Ventral view of a large specimen.
19. Ventral view of an unusually large specimen.
Oriskany formation, Ridgely member, Cumberland.
Figs. 20-24. Merista typa (Hall)
20. Dorsal view.
21, 22. Interiors of ventral valves.
23. A longitudinal section of fig. 22.
24. Internal cast of ventral valve.
Helderberg formation, Keyser member, Cumberland. (After
Hall.)



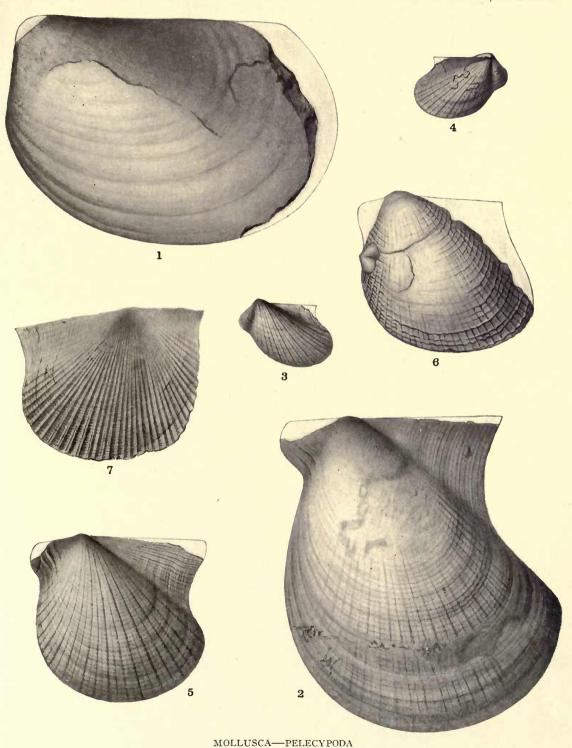
#### PLATE LXXV

PA	
Fig. 1. Grammysia sp	50
Anterior part of left valve. Helderberg formation, Keyser member,	
Keyser, W. Va.	
Fig. 2. Leptodesma (?) sp 4	51
Internal cast of right valve. Oriskany formation, Ridgely member,	
Rock Enon Spring, W. Va.	
Figs. 3, 4. MYTILARCA MARYLANDICA Ohern n. sp 4	52
3. Internal cast of left valve.	
4. Anterior view of internal cast.	
Helderberg formation, Cumberland.	
Figs. 5, 6. Mytilarca cordiformis (Hall)	52
5. Profile view from the anterior side of the shell.	
6. View of the right valve, having the posterior cardinal extension	
abraded.	
New Scotland formation, New York.	
Fig. 7. MYTILARCA (PLETHOMYTILUS) ROWEI Ohern n. sp	53
Left valve. Oriskany formation, Ridgely member, Hancock.	
Figs. 8-10. Amphicelia ulrichi Maynard n. sp	53
8. Anterior view of internal cast.	
9. Internal cast of right valve.	
10. Left valve.	
Helderberg formation, Keyser member, Keyser, W. Va.	
Total	



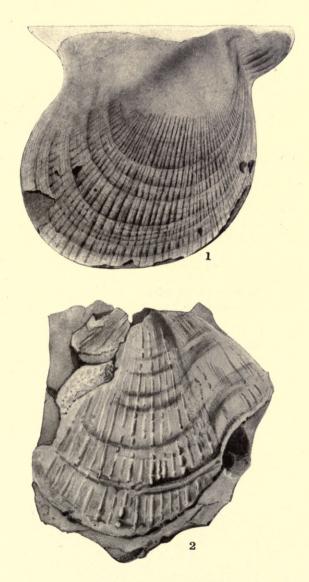
#### PLATE LXXVI

PAGE
Fig. 1. PALEOPINNA LATA Ohern n. sp
Figs. 2-4. Actinopteria communis (Hall)
<ol><li>Left valve of a large specimen. Helderberg formation, New Scot- land member, Cumberland.</li></ol>
3, 4. Left and right valves. Oriskany formation, Ridgely member, Cumberland.
Fig. 5. ACTINOPTERIA TEXTILIS (Hall)
Left valve. Helderberg formation, New Scotland member, Cumberland.
Fig. 6. Actinopteria reticulata Weller
Left valve. Helderberg formation, Keyser member, Keyser, W. Va.
Fig. 7. Avicula recticosta Hall
Right valve. Oriskany formation, New York.



## PLATE LXXVII

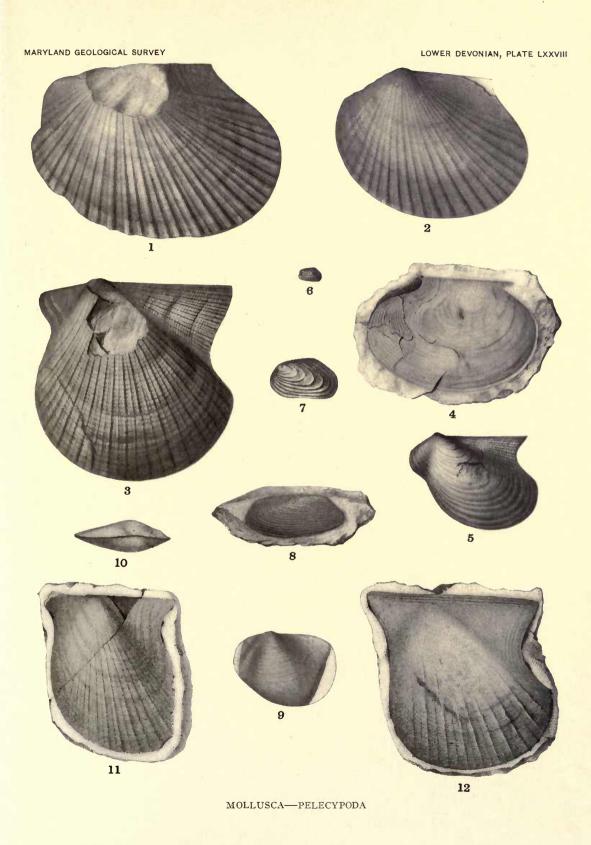
P	AGE
Figs. 1, 2. Actinopteria textilis var. arenaria Hall	457
1. External cast of left valve. × 3/3.	
2. Left valve weathered and exfoliated. × 3/3.	
Oriskany formation, New York.	



MOLLUSCA-PELECYPODA

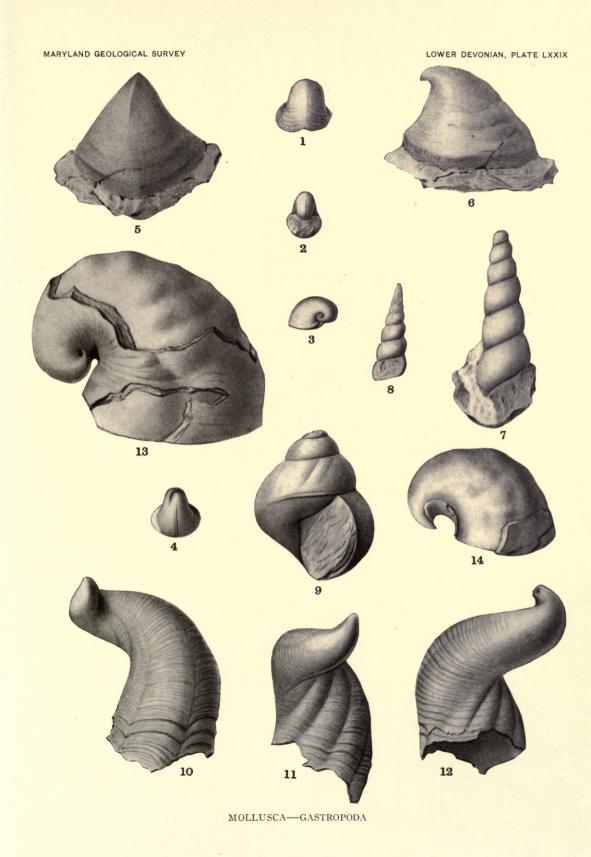
# PLATE LXXVIII

Figs. 1, 2. Actinopteria virginica Ohern n. sp	
Fig. 3. Aviculopecten ? cumberlandensis Ohern n. sp	460
Fig. 4. AVICULOPECTEN TENUILAMELLATUS Hall	461
Fig. 5. Megambonia Lamellosa Hall	462
Figs. 6, 7. CYPRICARDINIA CF. LAMELLOSA Hall	463
Fig. 8. Cypricardinia sublamellosa Hall	463
Figs. 9, 10. ILIONIA SINUATA Hall	464
Figs. 11, 12. PTERINEA HALLI Clarke	450



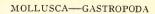
#### PLATE LXXIX

PLAIE LAXIA
Figs. 1, 2. Bellerophon cf. Auriculatus Hall
Figs. 3, 4. Bellerophon Helderberglæ Swartz n. sp
Figs. 5, 6. Cyrtolites expansus Hall
Fig. 7. Loxonema fitchi Hall
Fig. 8. Loxonema sp
Fig. 9. Holopea sp
Figs. 10-12. Orthonychia tortuosa (Hall)
Figs. 13, 14. PLATYCERAS NODOSUM Conrad
Mountain.



#### PLATE LXXX

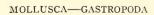
Fig. 1. PLEUROTOMARIA LABROSA Hall  Dorsal view of partially exfoliated specimen, preserving spiral band.  Also an enlargement of the surface markings. Becraft formation, New York.	AGE 465
Figs. 2-9. PLATYCERAS GEBHARDI Conrad	470
8, 9. Upper and lower views of specimen with free but not expanded peristome.  Oriskany formation, Ridgely member, Cumberland. (All but fig. 5 after Hall.)	



9

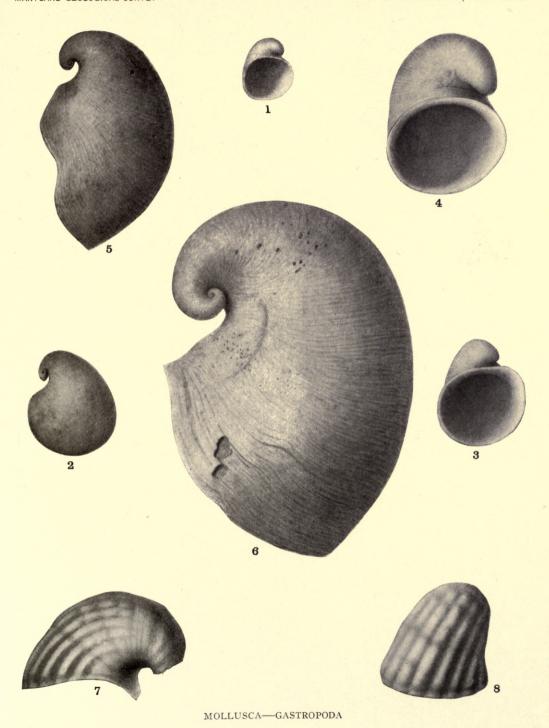
## PLATE LXXXI

	PAG
Figs. 1-9. Platyceras gebhardi var. ventricosum Conrad	47
1, 2. Upper and ventral views.	
3, 4. Ventral and upper views of a small individual.	
5, 6. Upper and ventral views of a specimen of medium size.	
7,8. Upper and ventral views of a large specimen with contiguous	
volutions.	
9. Upper view showing a broad sinuosity in the margin.	
Oriskany formation, Ridgely member, Cumberland. (After	
Hell)	



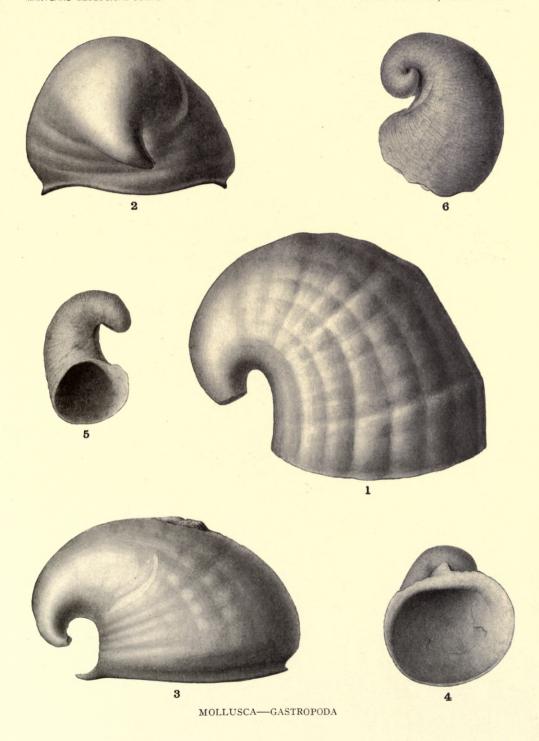
#### PLATE LXXXII

IDATE BAAAII	
P	AGE
Figs. 1-6. Platyceras magnificum Hall	472
1. Ventral view of a young shell.	
2, 3. Dorsal and ventral views of a larger specimen with free volutions.	
4. Ventral view of a specimen with the volutions free and the peris-	
tome less expanded.	
5. Upper view.	
6. Upper view of the spire of a large specimen in which all the parts	
are symmetrical and well preserved, and the volutions are free except at the extreme apex.	
Oriskany formation, Ridgely member, Cumberland. (After	
Hall.)	
Figs. 7, 8. PLATYCERAS SUBFALCATUM Ohern n. sp	472



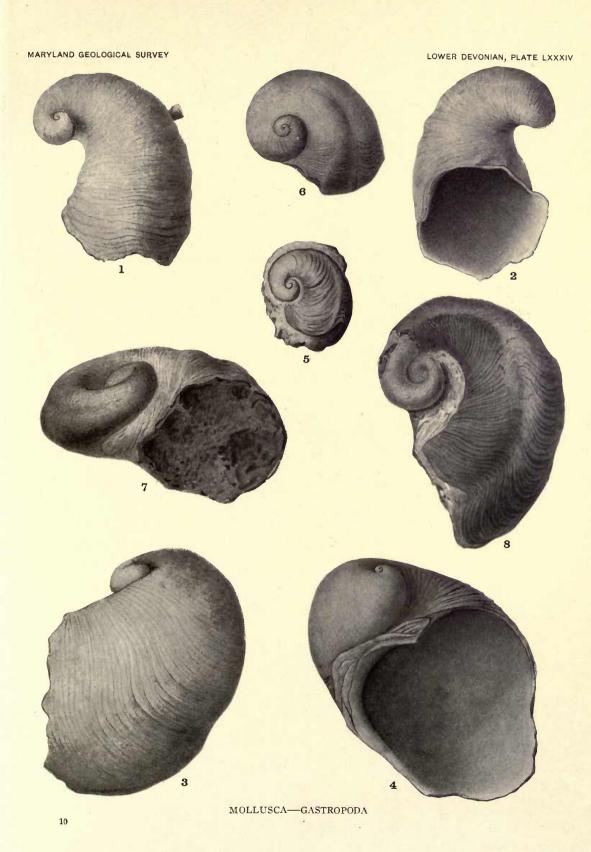
## PLATE LXXXIII

	PAGE
Figs. 1-3. Platyceras subfalcum Ohern n. sp	. 472
1. Upper view of a large specimen.	
2, 3. Views of type.	
Oriskany formation, Ridgely member, Hancock.	
Fig. 4. Platyceras patulum Hall	. 473
Ventral view. Oriskany formation, Ridgely member, Cumberland	
(After Hall.)	
Figs 5 6 Dramworm a new Train	
Figs. 5, 6. Platyceras reflexum Hall	. 473
5. Ventral view of a small specimen.	
6. Upper view of a larger specimen.	
Oriskany formation, Ridgely member, Cumberland. (After	,
Hall.)	
11411.)	



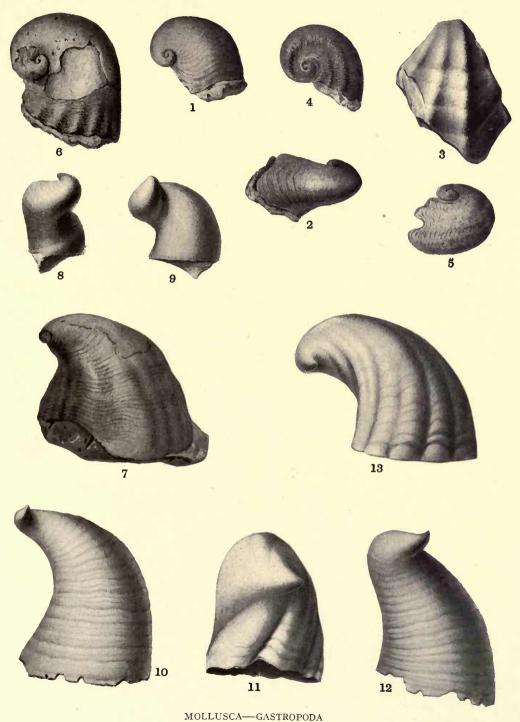
# PLATE LXXXIV

P	AGE
Figs. 1, 2. PLATYCERAS REFLEXUM Hall	473
Figs. 3, 4. Platyceras ? callosum Hall	474
Dorsal and ventral views. Oriskany formation, Ridgely member,	
Cumberland. (After Hall.)	
Figs. 5, 6. Platyceras sinuatum Hall?	474
5. Upper view of a small specimen, showing the deep marginal	
sinuosity and the strong wrinkled surface.	
6. Upper view of a larger specimen.	
New Scotland formation, New York.	
Figs. 7, 8. Platyceras trilobatum Hall	475
Ventral and upper views. [The striæ represented between the aper-	
ture and the next volution do not exist in the specimen.] New	
Scotland formation, New York.	



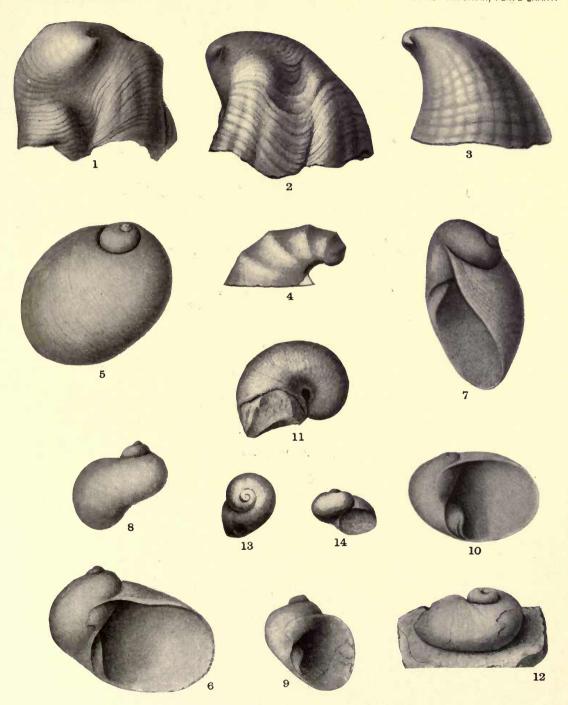
## PLATE LXXXV

PAGE
Figs. 1, 2. Platyceras tenuiliratum Hall
Fig. 3. Platyceras angulare Rowe n. sp
Figs. 4-6. PLATYCERAS MULTISINUATUM Hall
Fig. 7. PLATYCERAS PLATYSTOMUM Hall
Figs. 8, 9. PLATYCERAS SPIRALE Hall
Figs. 10-13. PLATYCERAS GRACILE Ohern n. sp



#### PLATE LXXXVI

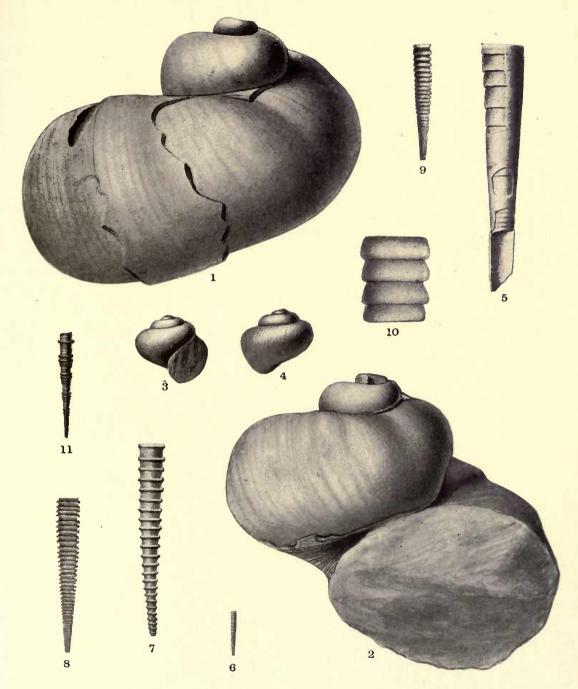
p	AGE
Figs. 1-3. Platyceras subconicum Ohern n. sp	
Oriskany formation, Ridgely member, Cumberland.	
Fig. 4. PLATYCERAS NEWBERRYI Hall	
Figs. 5-7. Strophostylus transversus Hall	480
Figs. 8, 9. STROPHOSTYLUS MATHERI Hall	481
Fig. 10. Strophostylus andrewsi Hall	481
Figs. 11, 12. DIAPHOROSTOMA DEPRESSUM (Hall)	482
Figs. 13, 14. Diaphorostoma desmatum Clarke	483



MOLLUSCA-GASTROPODA

### PLATE LXXXVII

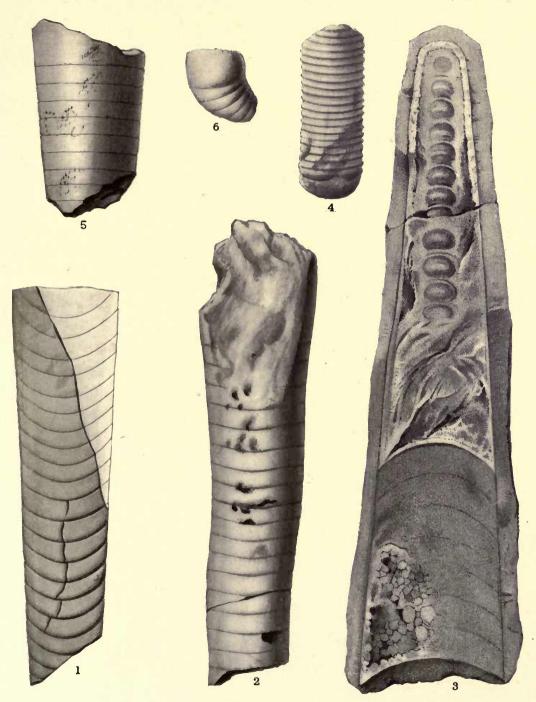
	PAGE
Figs. 1, 2. Diaphorostoma ventricosum (Conrad)	482
Dorsal and ventral views of a large individual. Oriskany formation,	
Ridgely member, Cumberland.	
Firm 9 4 Dramygrove washing Hell	100
Figs. 3, 4. PLATYSTOMA NIAGARENSE Hall	400
Ventral and dorsal views. Helderberg formation, Keyser member, Keyser, W. Va.	
110,502, 11. 14.	
Fig. 5. Tentaculites ? acus Clarke	484
Partially exfoliated specimen. Oriskany formation, New York.	
Figs. 6, 7. Tentaculites aculus Hall	485
6. Specimen from the Helderberg formation, New York.	
7. Same. × 5.	
Figs. 8-10. Tentaculites elongatus Hall	195
8. An individual of medium size.	400
9. An exfoliated individual.	
10. A portion of the same enlarged, showing the appearance of the annu-	
lations. $\times$ 4.	
New Scotland formation, New York.	
Fig. 11. Tentaculites gyracanthus (Eaton)	486
A shell. × 5. Helderberg formation, Keyser member, Keyser, W. Va.	



MOLLUSCA—GASTROPODA

# PLATE LXXXVIII

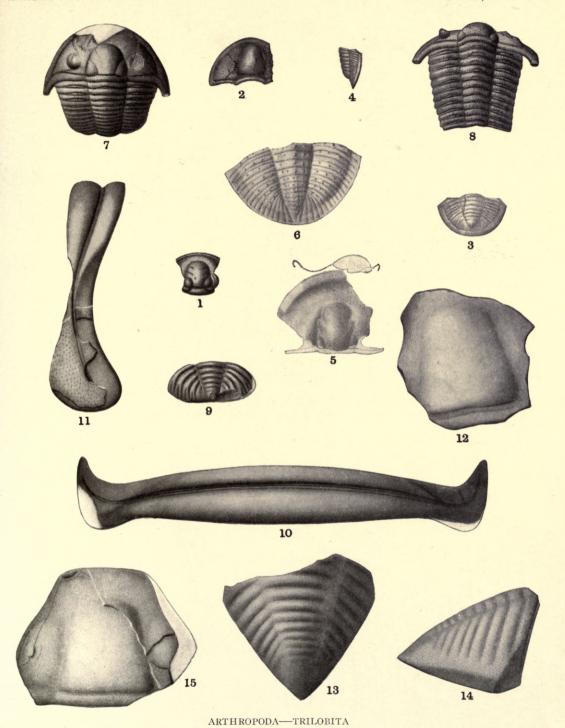
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Figs. 1-3. Orthoceras longicameratum Hall	487
2. Internal cast, doubtfully referred to this species.	
Helderberg formation, Cumberland.	
3. A longitudinal section of a specimen, the septa being proportionally	
a little more distant. Coeymans formation, New York.	
Fig. 4. Orthoceras schucherti Maynard n. sp	487
Internal cast. Helderberg formation, Keyser member, Cumberland.	
Fig. 5. Orthoceras rigidum Hall ?	488
Fragment preserving surface ornamentation. Helderberg formation.	100
Keyser member, Devil's Backbone.	
Rejser member, Devil's Dackbolle.	
Fig 6 Cyprocepts 2 pyrovys Sweets n on	100
Fig. 6. Cyrtoceras? Dubium Swartz n. sp	488
Internal cast of type. Helderberg formation, Coeymans member,	
Devil's Backbone.	



MOLLUSCA—CEPHALOPODA

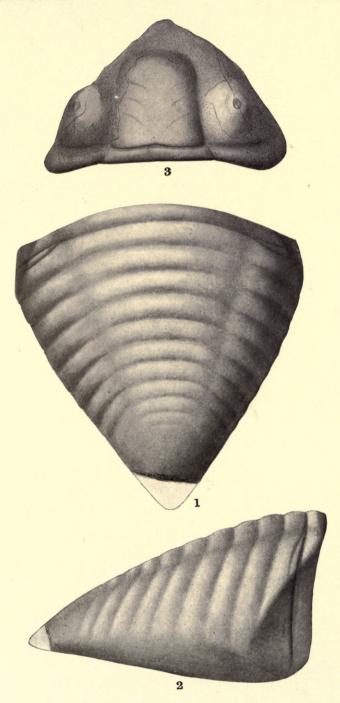
#### PLATE LXXXIX

	AGE
Fig. 1. Proëtus pachydermatus Barrett	489
Portion of cephalon preserving glabella. × 2. Helderberg formation,	
Keyser member, Cumberland.	
Figs. 2-4. Proëtus cf. protuberans Hall	490
2. Cephalon.	100
3. The pygidium of another individual.	
4. Profile of the same.	
Coeymans formation, New York.	
Figs. 5, 6. CORDANIA CYCLURUS Hall and Clarke	491
5. Fragment of cephalon showing lateral furrows of the glabella a	
little too strongly. $\times$ 3.	
6. Pygidium showing ornamentation. $\times$ 3.	
New Scotland formation, New York.	
2.00 Southern formation, New York.	
Figs 7 8 CVATHASDIS ANSTRALIS Oborn n on	100
Figs. 7, 8. CYATHASPIS AUSTRALIS Ohern n. sp.	492
Two views of the type. $\times$ 3. Helderberg formation, Cumberland.	
Tile 0 G	
Fig. 9. Calymene camerata Conrad	494
Pygidium, exfoliated. Helderberg formation, Keyser member, Pinto.	
Figs. 10-12. Homalonotus swartzi Ohern n. sp	495
10, 11. Detached pleuræ.	
12. Glabella.	
Oriskany formation, Ridgely member, Millers Spring near	
Cumberland.	
Figs. 13-15. Homalonotus vanuxemi Hall	100
13, 14. Views of pygidium.	496
15. Nearly complete cephalon.	
Oriskany formation, Ridgely member, Franklin, W. Va.	



# PLATE XC

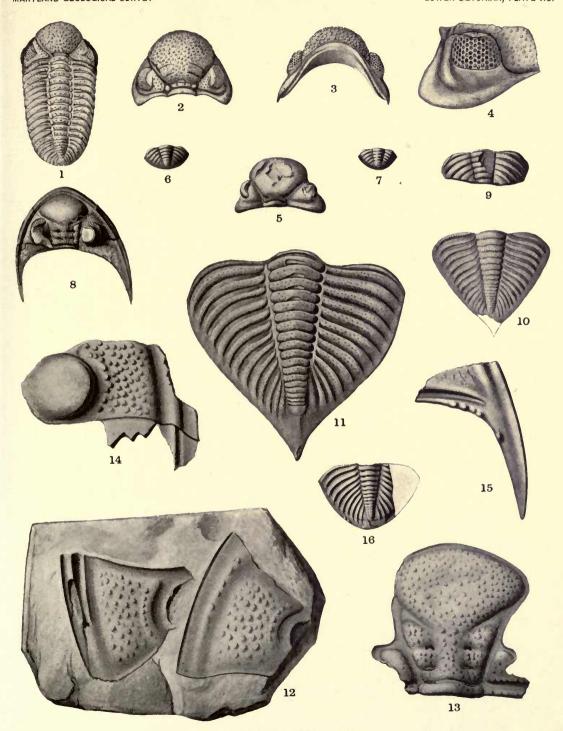
1	PAGE
Figs. 1, 2. Homalonotus swartzi Ohern n. sp	495
Pygidium of type. Oriskany formation, Ridgely member, Berkeley	
Springs, W. Va.	
Fig. 3. Homalonotus vanuxemi Hall	496
Complete cephalon. Oriskany formation, Ridgely member, Franklin,	
W Va	



ARTHROPODA—TRILOBITA

## PLATE XCI

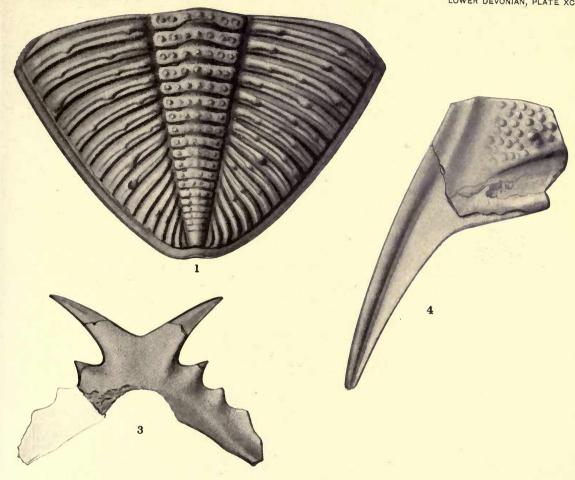
I	PAGE
Figs. 1-4. Phacops logani Hall	497
<ol> <li>An entire specimen which has the head compressed from above, and the eyes slightly distorted.</li> </ol>	
2. The head of a larger individual which shows the transverse furrows.	
and preserves the eyes in their proper form.	
3. View of the lower side of the head of another specimen, showing	
some crenulations along the marginal furrow.	
4. The eye enlarged.	
New Scotland formation, New York.	
Figs. 5-7. Phacops ? sp	498
5. Cephalon exfoliated.	
6, 7. Pygidia.	
Oriskany formation, Ridgely member, Cumberland.	
Figs 0 0 Divisions and Control	400
Figs. 8, 9. Dalmanites keyserensis Swartz n. sp	499
9. Part of a pygidium probably belonging to the same species.	
Helderberg formation, Keyser member, Tonoloway.	
freder beig formation, Reyser member, Tonoloway.	
Figs. 10-11. Dalmanites micrurus (Green)	507
10. A small pygidium.	00.
11. A larger pygidium from which the test has been removed, leaving	
the cast punctate.	
New Scotland formation, New York.	
Figs. 12-15. Dalmanites multiannulatus Ohern n. sp	500
12. Fragments of cheeks.	
13. Glabella.	
14. Eye and part of cheek.	
15. Genal angle.	
Oriskany formation, Knobly Mountain, near Cumberland.	
Ti- 10 Discount of the control of th	
Fig. 16. Dalmanites aspinosus Weller.	499
Exfoliated pygidium. Helderberg formation, Keyser member, Cash	
Valley.	

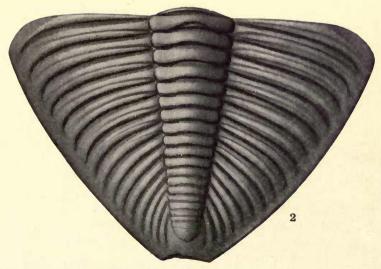


ARTHROPODA-TRILOBITA

## PLATE XCII

	PAG
Figs. 1-4. Dalmanites multiannulatus Ohern n. sp	50
1. Exfoliated pygidium showing ornamentation imperfectly.	
2. Exfoliated pygidium which does not show the tubercular surface.	
3. Hypostoma showing the bifurcating frontal process.	
4. Genal angle.	
Oriskany formation, Ridgely member, Knobly Mountain near	
Cumborland	

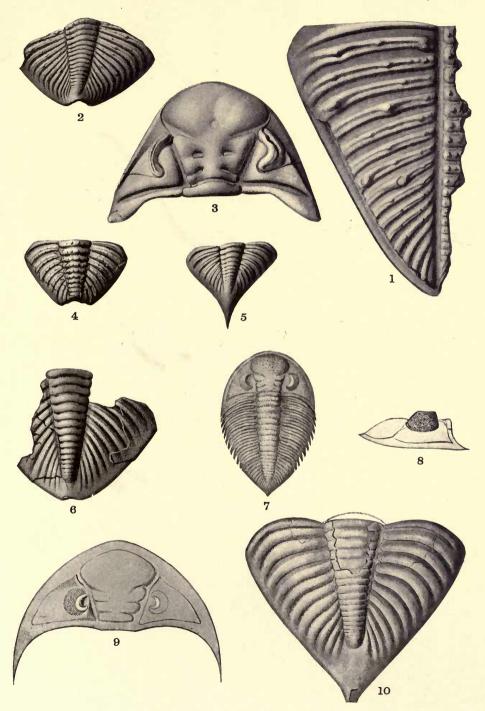




ARTHROPODA—TRILOBITA

#### PLATE XCIII

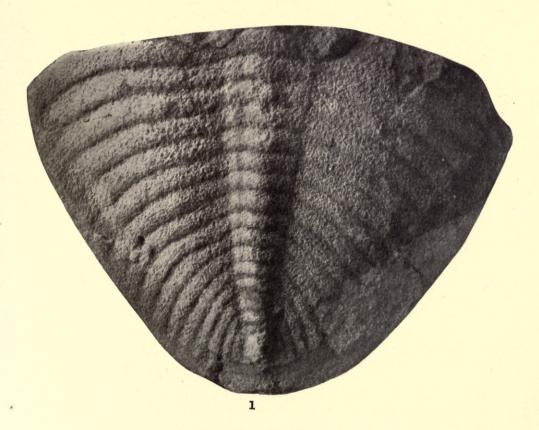
PLATE XCIII	
Fig. 1. Dalmanites multiannulatus Ohern n. sp	AGE 500
Fragment of an exfoliated pygidium. Oriskany formation, Ridgely member, Knobly Mountain, near Cumberland.	
Fig. 2. Dalmanites latus Ohern n. sp	502
Fig. 3. Dalmanites (Synphoria) stemmatus Clarke Exfoliated cephalon. Oriskany formation, Ridgely member, Cumberland.	503
Fig. 4. Dalmanites (Corycephalus) dentatus Barrett ?	505
Fig. 5. Dalmanites (Chasmops) anchiops (Green)	508
Figs. 6-10. Dalmanites (Hausmannia) pleuroptyx (Green)	510
<ul><li>8. Profile of the head, showing the form and elevation of the eye.</li><li>9. Exfoliated glabella, genal angles restored.</li><li>10. A large exfoliated pygidium.</li></ul>	
New Scotland formation, New York.	



ARTHROPODA-TRILOBITA

# PLATE XCIV

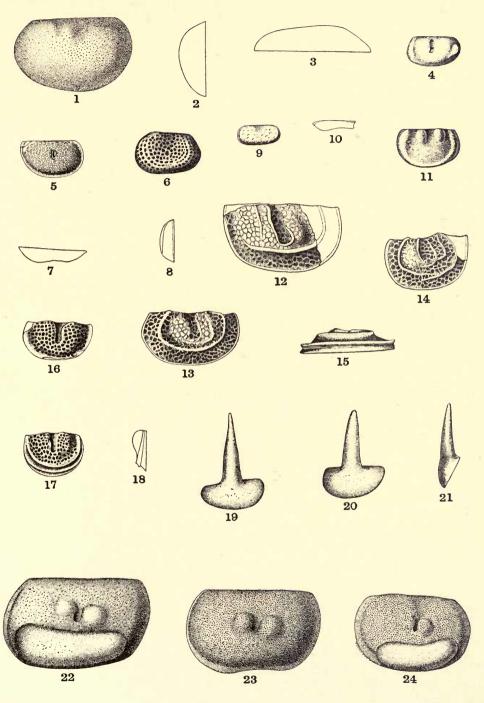
	PAGE
Fig. 1. Dalmanites berkeleyensis Swartz n. sp	512
Pygidium of type specimen. Oriskany formation, Ridgely member, 3	
miles north of Berkeley Springs, W. Va.	



ARTHROPODA—TRILOBITA

# PLATE XCV

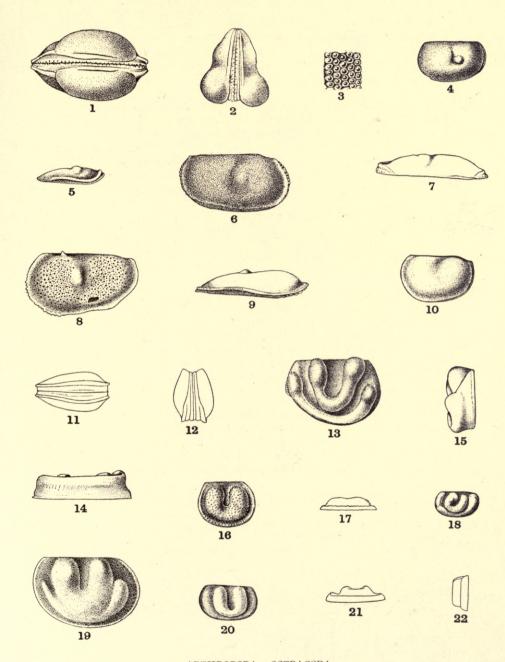
PA	GE
Figs. 1-3. Aparchites gordoni Ulrich and Bassler n. sp	
Fig. 4. Primitia postturgida Ulrich and Bassler n. sp 5. The unique right valve on which this species is founded, showing the flattened anterior spine and the posterior marginal swelling. $\times$ 20. Oriskany formation, 21st Bridge.	515
Fig. 5. Primitia? Cumberlandica Ulrich and Bassler n. sp	516
Figs. 6-8. Primitia? concentrica Ulrich and Bassler n. sp	517
Figs. 9, 10. Primitiella variolata Ulrich and Bassler n. sp External and dorsal edge views of a right valve. $\times$ 20. Oriskany formation, 21st Bridge.	518
Fig. 11. Ulrichia Æqualis Ulrich and Bassler n. sp	518
Figs. 12-15. STREPULA IRREGULARIS Jones and Holl	519
Fig. 16. Halliella? Seminulum var. Longa Ulrich and Bassler n. var  A right valve slightly injured along the margin. × 20. Helderberg formation, Keyser member, Cumberland.	520
Figs. 17, 18. Halliella ? TRIPLICATA Ulrich and Bassler n. sp	521
Figs. 19-21. ÆCHMINA CUSPIDATA Jones and Holl	521
Figs. 22-24. Mesomphalus hartleyi Ulrich and Bassler n. gen. and sp  22. Lateral view of right valve showing the ventral swelling. × 20.  23. An average right valve without the ventral pouch. × 20.  24. Left valve of a rather small complete carapace. × 20.	523
Helderberg formation, Keyser member, Cumberland.	



ARTHROPODA-OSTRACODA

#### PLATE XCVI

	O.T.
Figs. 1-3. Mesomphalus hartleyi Ulrich and Bassler n. gen. and sp 52 1, 2. Ventral and posterior end views of a female individual. × 20. 3. Highly magnified view of the surface of original of fig. 24, pl. xcv.	
Figs. 4, 5. Mesomphalus submarginata Ulrich and Bassler n. sp 52 Lateral and ventral edge views of the type specimen. × 20. Helder- berg formation, Keyser member, Cumberland.	23
Figs. 6-9. Ctenobolbina? Denticulata Ulrich and Bassler n. sp 52 6. Lateral view of one of the type specimens, a left valve with a portion of the flange broken away and the surface simply granulose. $\times$ 20.	24
<ul> <li>7. Dorsal edge view of the same specimen. × 20.</li> <li>8. A right valve showing pits between the granules of the surface. × 20.</li> </ul>	
9. Ventral edge view of same. $\times$ 20. Helderberg formation, Keyser member, Cumberland.	
Figs. 10-12. Ctenobolbina? Dubia Ulrich and Bassler n. sp	25
Figs. 13-15. Bollia americana Ulrich and Bassler n. sp 5. Lateral, ventral and posterior views of a left valve. $\times$ 20. Oriskany formation, 21st Bridge.	25
Figs. 16, 17. Bollia curta Ulrich and Bassler n. sp	26
Fig. 18. Bollia irregularis Ulrich and Bassler n. sp 5 Lateral view of right valve. $\times$ 20. Helderberg formation, New Scotland member, 21st Bridge.	527
Fig. 19. Bollia Jugalis Ulrich and Bassler n. sp	527
Figs. 20-22. Bollia ungula Jones	528

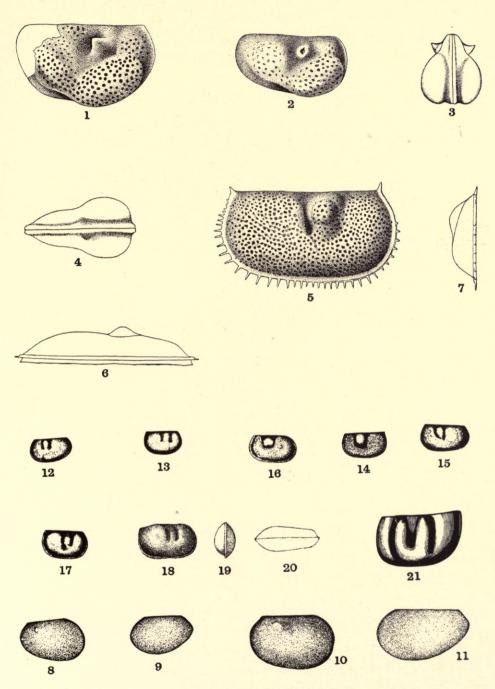


ARTHROPODA—OSTRACODA

## PLATE XCVII 1

	AGE
Figs. 1-4. KLEEDENIA CENTRICORNIS Ulrich and Bassler	529
$\cdot$ $\times$ 20.	
2. Left valve of a complete carapace. × 20.	
3, 4. Posterior and ventral views of same specimen. $\times$ 20.	
Fig. 5.7 Wronnyr, warmyr Histoh and Decales	590
Figs. 5-7. KLEDENIA FIMBRIATA Ulrich and Bassler	549
5. Lateral view of a perfect left valve. $\times 20$ . 6.7. Ventral and end views of same specimen. $\times 20$ .	
Coeymans formation, Herkimer County, New York.	
Coeymans formation, Herkimer County, New York.	
Figs. 8, 9. Leperditia altoides Weller	513
8. Left valve. $\times 2\frac{1}{2}$ .	010
9. Right valve. $\times 2\frac{1}{2}$ .	
Decker Ferry formation, Flatbrookville, New Jersey.	
Fig. 10. LEPERDITIA GIGANTEA Weller	514
A left valve, natural size. Rondout formation, Nearpass Quarry, New	
Jersey.	
Fig. 11. LEPERDITIA ELONGATA Weller	514
A right valve. X 2. Rondout formation, Nearpass Quarry, New	
Jersey.	
Figs. 12, 13. Klædenia nearpassi (Weller)	530
Left and right valves. $ imes$ 6. Decker Ferry formation, Nearpass Quarry,	
New Jersey.	
Figs. 14, 15. Kicedenia sussexensis (Weller)	
Two left valves showing slight variations. $\times 4$ and $\times 6$ . Decker	
Ferry formation, Nearpass Quarry, New Jersey.	
Fig. 16. KLŒDENIA KÜMMELI (Weller)	531
A left valve. $\times$ 3. Rondout formation, Nearpass Quarry, New Jersey.	
TV- 15 VI-	<b>F</b> 00
Fig. 17. KLGEDENIA BARRETTI (Weller)	
A right valve. × 5. Decker Ferry formation, Nearpass Quarry, New	
Jersey.	
Figs. 18-20. Klædenella pennsylvanica (Jones)	E00
Figs. 18-20. KLGEDENELLA PENNSYLVANICA (Jones)	
berg formation, Pennsylvania.	
Fig. 21. KLŒDENELLA CLARKEI (Jones)	533
Right valve. × 20. Helderberg formation, Herkimer County, New	
York.	

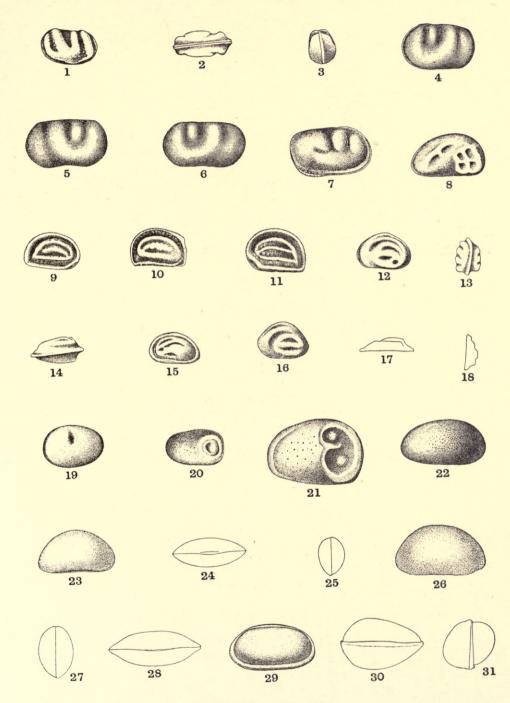
<sup>&</sup>lt;sup>1</sup> Figs. 8-17 (after Weller), Figs. 18-21 (after Jones).



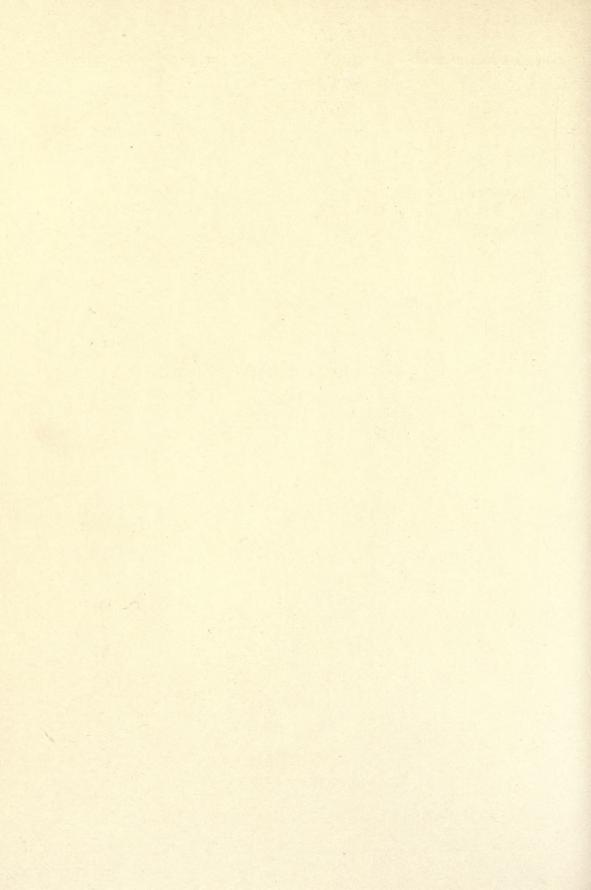
ARTHROPODA—OSTRACODA

#### PLATE XCVIII

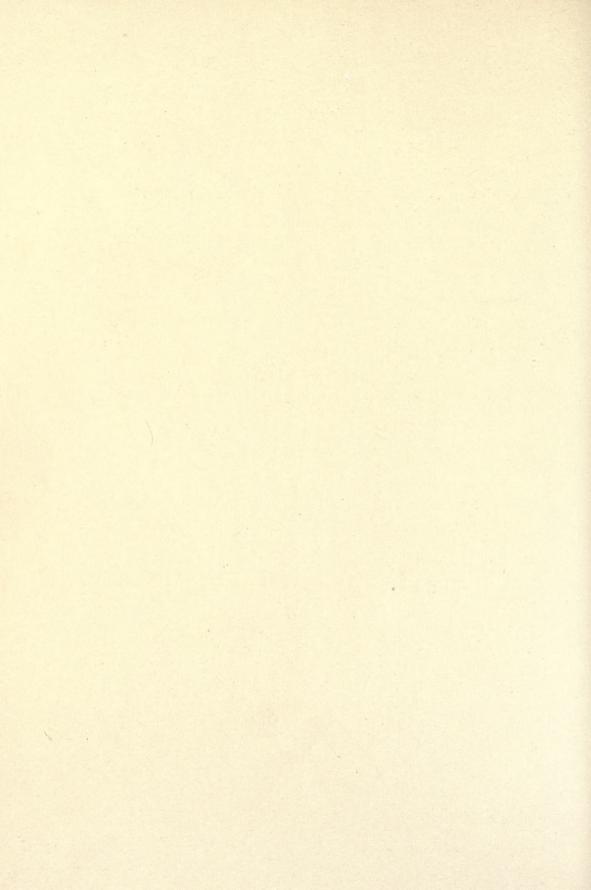
Figs. 1-3. KLCDENELLA CLARKEI VAR. PAUPERA Ulrich and Bassler  1. Left side of complete carapace showing the emaciated appearance and the granules in some of the furrows.  2, 3. Ventral and anterior end views of same.  Helderberg formation, Keyser member, Cumberland.	534
Figs. 4-6. KLEEDENELLA TURGIDA Ulrich and Bassler	535
Fig. 7. Klædenella turgida var. ventrosa Ulrich and Bassler Left valve of a complete carapace. $\times$ 20. Helderberg formation, Keyser member, Cumberland.	535
Fig. 8. Thlipsura multipunctata Ulrich and Bassler n. sp Lateral view of right valve. $\times$ 20. Oriskany formation, 21st Bridge.	536
Figs. 9-11. Octonaria? Angulata Ulrich and Bassler n. sp	537
<ul> <li>Figs. 12-18. OCTONARIA INÆQUALIS Ulrich and Bassler n. sp</li></ul>	
Fig. 19. OctoNARIA SIMPLEX (Krause)	538
Fig. 20. Craterellina oblong Ulrich and Bassler n. sp	
Fig. 21. Craterellina robusta Ulrich and Bassler n. sp	
Fig. 22. Bythocypris punctulata var. arctatum Ulrich and Bassler n. var	
Figs. 23-25. Pontocypris arcuata Ulrich and Bassler n. sp	
Figs. 26-28. Pontocypris Mawii var. Breviata Jones	
Figs. 29-31. Pachydomella longula Ulrich and Bassler n. sp	542



ARTHROPODA—OSTRACODA



# DEVONIAN MIDDLE

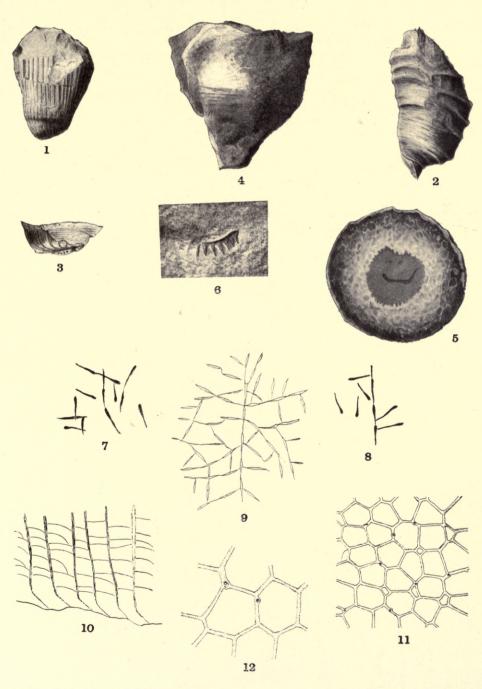


# NOTE

Plates I to VI, illustrating the Geological and Paleontological Relations of the Middle and Upper Devonian, are bound with the text volume. The following plates (Plates VII to XLIV) illustrate the Systematic Paleontology of the Middle Devonian of Maryland.

#### PLATE VII

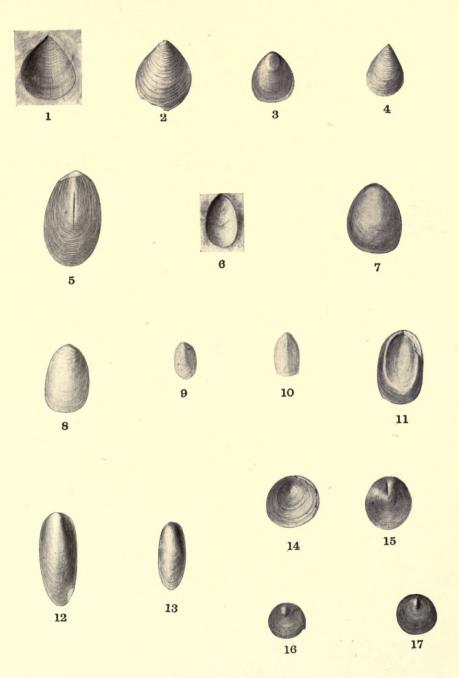
Fig. 1. Stereolasma rectum (Hall)	119
Fig. 2. Cf. Amplexus Hamiltoniæ Hall	120
Fig. 3. Heliophyllum sp.  Upright view of part of corallum, epitheca partly exfoliated showing the septa. × 11/4. Romney formation, Hamilton member, Ernstville.	121
Figs. 4, 5. Cystiphyllum americanum Milne-Edwards and Haime (?) 4. Upright view of corallum. 5. Transverse section of the same. Romney formation, Hamilton member, Evitts Creek.	121
Fig. 6. Polygnathus sp. undet	122
<ul> <li>Figs. 7-9. Rhopalonaria tenuis Ulrich and Bassler</li></ul>	123
<ul> <li>Figs. 10-12. Monticulipora (?) Marylandensis Ulrich and Bassler n. sp 10. Vertical section, showing tabulation. × 20.</li> <li>11. Tangential section. × 20.</li> <li>12. Several zorecia of same, to show structure of walls and acanthopores. × 35.</li> <li>Romney formation, Hamilton member, Evitts Creek.</li> </ul>	123



CŒLENTERATA—ANTHOZOA, VERMES—CHÆTOPODA AND MOLLUSCOIDEA—BRYOZOA.

# PLATE VIII

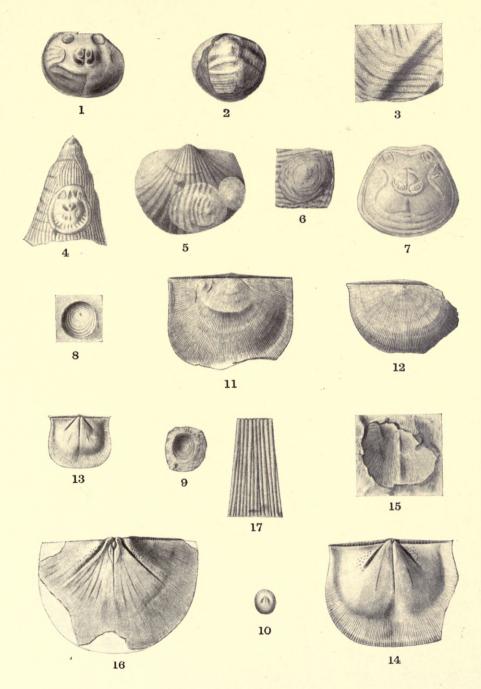
P	AGE
Figs. 1-4. Lingulella (?) Paliformis Hall	124
1. Interior of dorsal valve (?). Evitts Creek.	
2. Ventral valve, showing faintly the pedicle-groove. Evitts Creek. $\times 1\frac{1}{2}$ .	
3. A partly exfoliated valve. Evitts Creek. × 1½.	
4. Ventral valve, the specimen showing the pedicle-groove. Williams Road, 3½ miles southeast of Cumberland. × 2.  Romney formation, Hamilton member.	
Fig. 5. Lingula delia Hall (?)	125
Fig. 6. Lingula Ligea Hall (?)	126
Figs. 7, 8. Lingula cf. nuda Hall.	197
7. Partly exfoliated distorted valve. × 2½. Romney formation, Onon-daga member, Williams Road, 3½ miles southeast of Cumberland.	121
8. Partly exfoliated ventral valve (?). $\times 1\frac{1}{2}$ . Romney formation,	
Hamilton member, Oldtown Road, east of Cumberland.	
Figs. 9, 10. Lingula Nuda Hall	127
Fig. 11. Lingula cf. compta Hall and Clarke	128
View of crushed and broken specimen. $\times$ 1¼. Romney formation, Hamilton member, Evitts Creek.	
Figs. 12, 13. Lingula clarki n. sp	128
Partly exfoliated valves showing strong median convexity. × 3. Romney formation, Hamilton member, 21st Bridge.	120
Figs. 14-17. Orbiculoidea lodiensis var. media (Hall)	129
14. Interior of dorsal valve. $\times$ 2.	
15. Exterior ventral valve showing the pedicle-groove. $\times$ 2.	
Romney formation, Hamilton member, Evitts Creek.	
16. Interior of a partly exfoliated ventral valve. The more exfoliated portions are smooth, not striated, as indicated by figure. Bells	
Gap, Va.	
17. Natural cast of the exterior of ventral valve, showing concentric striæ. East of Cumberland.	
Romney formation, Onondaga member. (After Kindle.)	



MOLLUSCOIDEA—BRACHIOPODA

#### PLATE IX

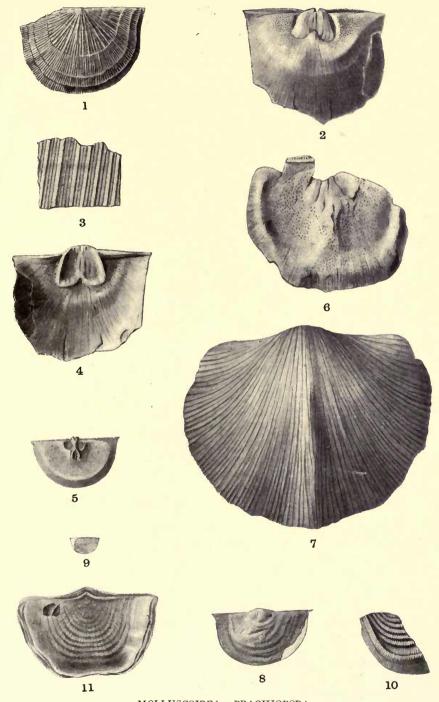
THATE IX	
	PAGE
Figs. 1-7. Craniella Hamiltoniæ Hall	191
<ol> <li>Therefore impression of dorsal valve. A 172.</li> <li>Upper or dorsal valve from which the shell is gone near the margin. X 2.</li> </ol>	
3. Enlargement of part of preceding showing the finely punctate shell structure. × 6.	
Romney formation, Hamilton member, Evitts Creek.	
4. Interior of a lower valve attached to a Streptelasma.	
5. Three individuals of different sizes, attached to the surface of Tropidoleptus carinatus.	
6. Dorsal valve.	
7. Internal impression of dorsal valve. $\times$ 2. Hamilton formation, New York.	
Fig. 8. Pholidops Hamiltoniæ Hall	129
Interior of valve. × 8. Romney formation, Onondaga member, Williams Road, 3½ miles southeast of Cumberland.	102
Figs. 9, 10. Pholidops cf. areolata (Hall)	122
9. Cast of the ventral valve.	199
10. Internal cast of the ventral valve. The slender impressed median line of the figure has about twice the proper length. It is conspicuous only near the apex of the crescent-shaped depression. × 5.	
Romney formation, Onondaga member, Bells Valley, Virginia. (After Kindle.)	
Figs. 11-17. Stropheodonta (Leptostrophia) perplana (Conrad) 11. Partly exfoliated interior of dorsal valve. Iron Bridge over Town Creek, northeast of Oldtown.	134
12. Apparently exfoliated interior of dorsal valve, same locality.	
13. Internal impression of small ventral valve. $\times$ 1¼. Williams Road, ¼ mile east of Queen City Hotel, Cumberland.	
14. Further enlargement of preceding specimen, showing crenulated hinge-line. $\times$ 3.	
15. Internal impression showing median ridge. Iron Bridge over Town Creek, northeast of Oldtown.	
<ol> <li>Internal impression of ventral valve showing muscular impressions. McCoys Ferry.</li> </ol>	
Romney formation, Hamilton member.	
17. An enlargement of the striæ. Hamilton formation, New York.	



MOLLUSCOIDEA—BRACHIOPODA

#### PLATE X

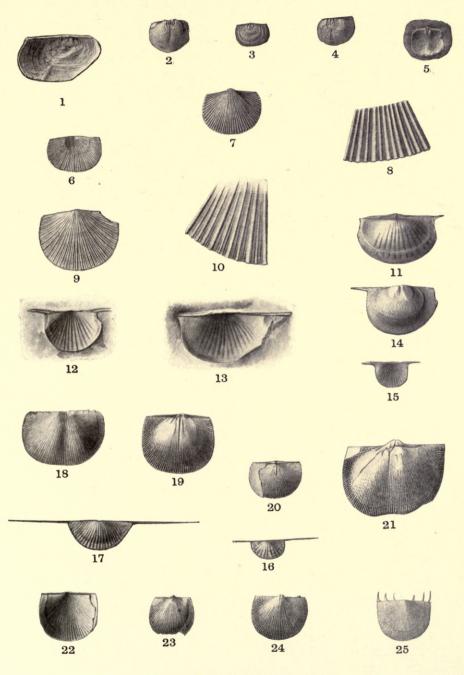
PLATE X	
P	AGE
Fig. 1. Stropheodonta demissa (Conrad)	136
Ventral valve. Romney formation, Hamilton member, Hancock-Har-	
risonville Road, about 2 miles north of Hancock.	
Figs. 2-5. Stropheodonta (Douvillina) inæquistriata (Conrad)	138
2. Interior of ventral valve, showing fragment of shell near lateral	
margin.	
3. Enlargement of same, showing striæ. × 6.	
4. Squeeze of No. 2.	
Romney formation, Hamilton member, Evitts Creek.	
5. Interior of ventral valve. Hamilton formation, New York.	
Figs. 6, 7. Stropheodonta concava Hall	139
6. Interior of dorsal valve, showing its strongly pustulose character	
and part of crenulated hinge-line. Romney formation, Hamilton	
member, Evitts Creek.	
7. Ventral valve which is carinate along the center. Hamilton forma-	
tion, New York.	
Figs. 8, 9. Pholidostrophia pennsylvanica Kindle	141
8. Ventral valve of type. $\times$ 3. East of Cumberland.	
9. Interior of ventral valve, showing short and very slender median	
septum. Berkeley Springs, W. Va.	
Romney formation, Onondaga member. (After Kindle.)	
Figs. 10, 11. Leptæna rhomboidalis (Wilckens)	141
10. Fragment of ventral valve. Romney formation, Hamilton member,	
Ernstville.	
11. View of dorsal valve. Hamilton formation, New York.	
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MOLLUSCOIDEA—BRACHIOPODA

# PLATE XI

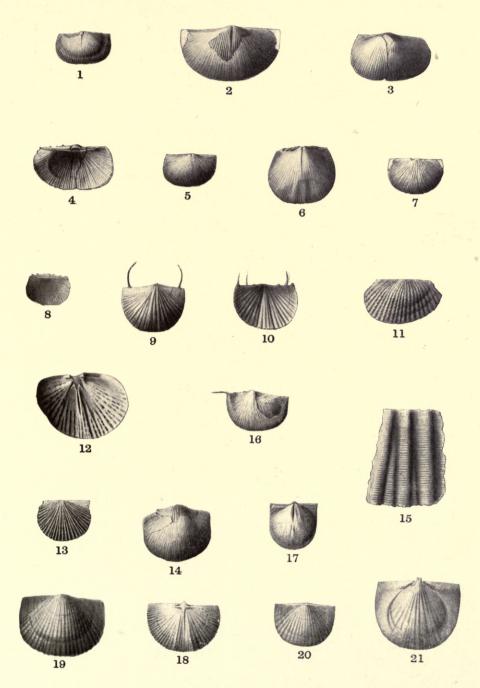
PAGE
Figs. 1-5. Leptænisca australis Kindle
1-3. Ventral valves. Fig. $1 \times 2$ . Berkeley Springs, W. Va.
4. Type specimen, ventral valve. $\times$ 2. Berkeley Springs, W. Va.
5. Interior of dorsal valve. New Bloomfield, Pa.
Romney formation, Onondaga member. (After Kindle.)
Figs. 6-10. Schuchertella variabilis Prosser n. sp
6. Dorsal valve (?). Williams Road, ¼ mile east of Queen City Hotel,
Cumberland.
7. Ventral valve. $\times 1\frac{1}{4}$ . Same locality.
8. Portion of same enlarged to show character of striæ. × 4.
9. Dorsal valve (?).
10. Portion of same enlarged to show regular variation in strength of
radiating striæ. $\times$ 4.
Romney formation, Hamilton member.
Figs. 11-17. Chonetes mucronatus Hall
11. Ventral valve. $\times$ 2. McCoys Ferry.
12. Ventral valve, showing two spines near each cardinal angle. $\times$ 2.
Same locality.
13. Partly exfoliated interior of ventral valve, showing cardinal spine. $\times$ 2. Same locality.
14. Interior of ventral valve showing muscular impressions and one
cardinal spine. $\times$ 2. Same locality.
Romney formation, Hamilton member.
15. Dorsal valve, showing cardinal spines. Hamilton formation, New
York.
16. Small pedicle valve. $\times$ 3. Cumberland.
17. A pedicle valve of average size and appearance, showing the long
spines. $\times$ 2. Cumberland.
Romney formation, Onondaga member. (After Kindle.)
Figs. 18-21. Chonetes coronatus (Conrad)
18. Partly exfoliated ventral valve, showing shallow median sinus and
cardinal spines. Evitts Creek.
19. Interior of ventral valve, showing pustulose pittings toward margin
of shell. Hancock-Harrisonville Road, about 2 miles north of
Hancock.
20. Dorsal valve. Hancock-Harrisonville Road, about 2 miles north of
Hancock.
21. Interior of ventral valve showing pustulose pittings. McCoys
Ferry.
Romney formation, Hamilton member.
Figs. 22-25. Chonetes setiger (Hall)
22. Ventral valve, partly exfoliated. × 2. Iron Bridge over Town
Creek, northeast of Oldtown.
23. Dorsal valve. × 1½. West of Tonoloway Ridge.
24. Interior of ventral valve, showing pustulose pittings toward margin
of shell. × 1½. McCoys Ferry.
Romney formation, Hamilton member.
25. Ventral valve showing cardinal spines. × 2. Hamilton formation,
New York.



MOLLUSCOIDEA—BRACHIOPODA

# PLATE XII

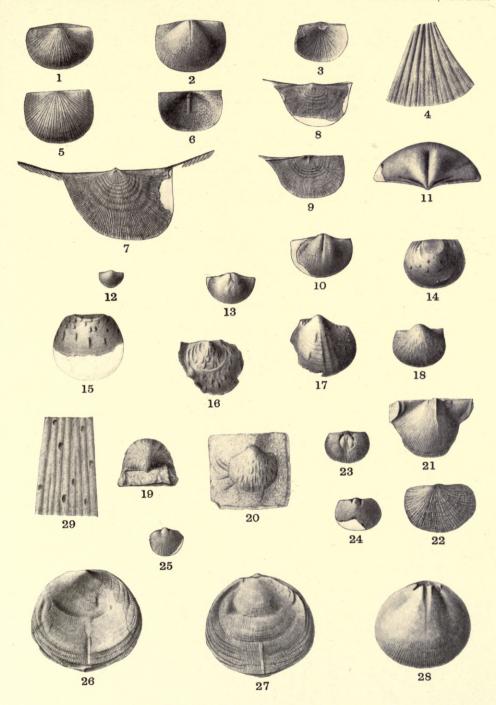
	GE
Figs. 1-8. Chonetes scitulus Hall	50
1. Interior of ventral valve. $\times$ 1½. 21st Bridge.	
2. Ventral valve. $\times 1\frac{1}{2}$ . Right bank of Potomac about 4 miles south	
of Cumberland.	
3. Ventral valve. $\times 1\frac{1}{2}$ . Same locality.	
4. Dorsal valve of same specimen, showing cardinal area and spines of ventral valve. $\times 1\frac{1}{2}$ .	
5. Partly exfoliated dorsal valve (?). $ imes 1\frac{1}{4}$ . Iron Bridge over Town	
Creek northeast of Oldtown.	
6. Interior of ventral valve. $\times$ 2¼. B. & O. R. R. cut opposite Hancock.	
7. Dorsal valve (?). × 1½. McCoys Ferry.	
Romney formation, Hamilton member.	
8. Dorsal valve, showing cardinal area and deltidium. Hamilton formation, New York.	
TV 0.10 C	
Figs. 9-13. Chonetes lepidus Hall	193
9. Ventral valve partly exfoliated, showing two cardinal spines. $\times$ 3.	
Evitts Creek.	
10. Valve showing three cardinal spines. × 4. Evitts Creek.	
11. Interior of dorsal valve (?). $\times$ 3. Iron Bridge over Town Creek, northeast of Oldtown.	
12. Interior of ventral valve, showing cardinal teeth. $\times$ 3. West of	
Tonoloway Ridge.	
13. Ventral valve (?). × 3. B. & O. R. R. cut opposite Hancock.	
Romney formation, Hamilton member.	
Romney for mation, framitton member.	
Figs. 14-21. Chonetes vicinus (Castelnau)	155
14. Ventral valve. Evitts Creek.	100
15. Portion of the same near the umbo, showing the intercalation of	
radiating and fine concentric striæ. × 8.	
16. Partly exfoliated ventral valve showing one cardinal spine. × 14.	
Iron Bridge over Town Creek, northeast of Oldtown.	
17. Interior of ventral valve. × 11/4. McCoys Ferry.	
18. Interior of dorsal valve. × 2. Hancock-Harrisonville Road, 2 miles north of Hancock.	
19-20. Exteriors of ventral valves. × 2. Same locality.	
21. Interior of the dorsal valve. $\times$ 3. Same locality.	
Romney formation, Hamilton member.	
Townson, The Million Million.	



MOLLUSCOIDEA—BRACHIOPODA

## PLATE XIII

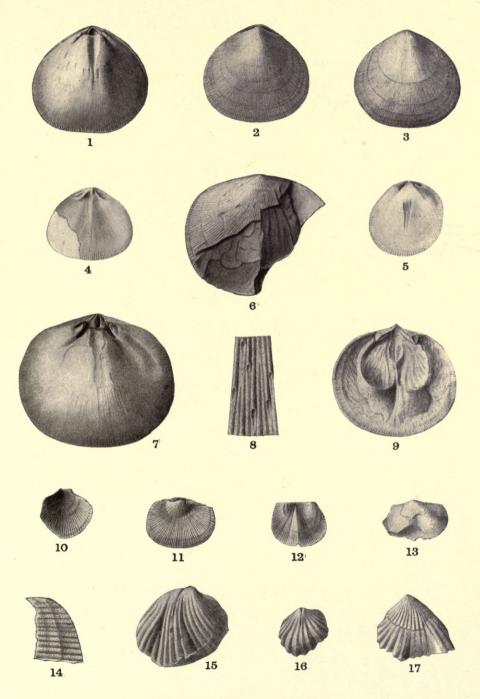
Figs. 1-6. Chonetes marylandicus Prosser n. sp	157
<ol> <li>Exterior of dorsal valve. × 1½. Same locality.</li> <li>Portion of the same enlarged, showing the bifurcating striæ and the radiating thread-like ones. × 5.</li> <li>Partly exfoliated interior of dorsal valve. × 2. 21st Bridge.</li> </ol>	
6. Interior of ventral valve, showing rounded median ridge. $\times$ 1½. Same locality. Romney formation, Hamilton member.	
<ul> <li>Figs. 7-9. Chonetes rugosus Kindle</li></ul>	158
Figs. 10-13. Anoplea nucleata	159
<ul> <li>12. Cardinal view of natural cast of pedicle valve, showing filling of oblique cardinal tubes. × 5.</li> <li>13. Pedicle view.</li> </ul>	
Romney formation, Onondaga member, Mendota, Va. (After Kindle.)	
Figs. 14-16. STROPHALOSIA TRUNCATA (Hall)	160
Fig. 17. Productella CF. SPINULICOSTA Hall	162
Figs. 18-20. PRODUCTELLA SPINULICOSTA Hall	162
20. Small individual imbedded in the rock and showing attached spines.  Hamilton formation, New York.	
Fig. 21. Productella (?) schucherti Prosser n. sp	163
Figs. 22-25. Dalmanella lenticularis (Vanuxem)	164
<ol> <li>Interior of a dorsal valve.</li> <li>Two fragmentary casts of ventral valves.</li> <li>Romney formation, Onondaga member, Berkeley Springs, W</li> <li>(After Kindle.)</li> </ol>	
Figs. 26-29. Rhipidomella vanuxemi Hall	165
28. Interior of dorsal valve. Williams Road, ¼ mile east of Queen City Hotel, Cumberland.  Romney formation, Hamilton member.	
29. An enlargement of the surface striæ. Hamilton formation, New York.	



MOLLUSCOIDEA—BRACHIOPODA

#### PLATE XIV

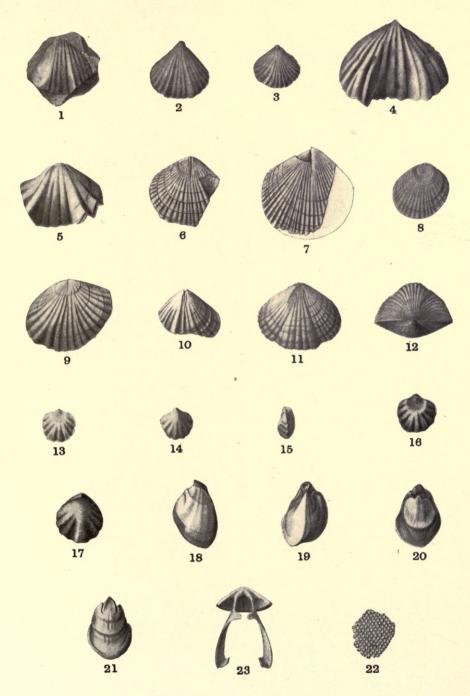
PAGE
Figs. 1-5. Rhipidomella leucosia Hall
Hotel, Cumberland. Romney formation, Hamilton member.
2. Dorsal valve of specimen of ordinary size.
3. Ventral valve of the same.
Hamilton formation, New York.
4. Interior of dorsal valve showing cardinal process and dental sockets.
Little Run, near Hancock.
5. Interior of ventral valve showing muscle scars. Two miles north of
Hancock. Romney formation, Hamilton member.
Robbiney formation, Hammton member.
Figs. 6-9. Rhipidomella penelope Hall
6. Broken specimen of ventral valve (?). Evitts Creek. Romney
formation, Hamilton member.
7. Interior of dorsal valve. Cumberland.
8. Enlargement of surface, showing the character of the striæ, the
ordinary puncta and the elongate tubular openings.
9. Interior of ventral valve showing the muscular impressions and
cardinal teeth. Hamilton formation, New York.
Hamilton formation, New Tork.
Fig. 10. Rhipidomella cyclas Hall (?)
10. External impression of ventral valve. $\times$ 1½. Williams Road near
church, 3½ miles southeast of Cumberland.
Figs. 11, 12. Dalmanella Lenticularis (Vanuxem)
11. Dorsal valve (?). $\times 1\frac{1}{4}$ . Ernstville. 12. External impression of dorsal valve. $\times 1\frac{1}{2}$ . Hanging Rock,
W. Va.
Romney formation, Onondaga member.
Figs. 13, 14. Schizophoria striatula (Schlotheim) (?)
13. Partly exfoliated ventral valve. Ernstville.
14. A portion of the lateral margin enlarged, showing punctate
structure. × 5.
Romney formation, Hamilton member.
Figs. 15-17. Camarotechia congregata (Conrad)
15. Interior of dorsal valve. × 1¼.
16. Interior of somewhat distorted small dorsal valve. $\times$ 1\(^1_4\).
17. Partly exfoliated ventral valve. $\times 1\frac{1}{4}$ . Run at eastern end of
Hancock.
Romney formation, Hamilton member.



MOLLUSCOIDEA—BRACHIOPODA

# PLATE XV

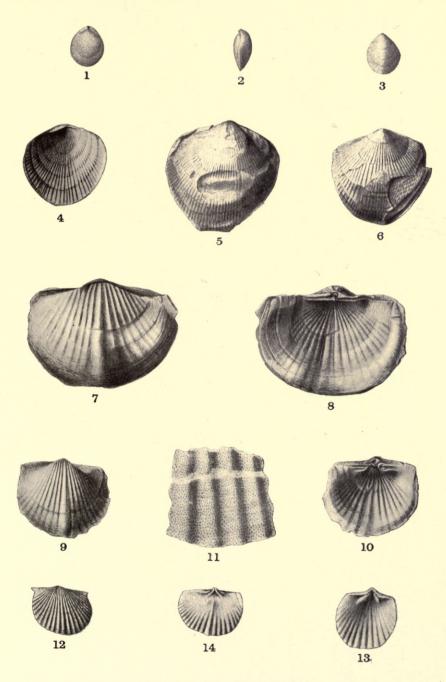
Figs. 1-3. CAMAROTECHIA PROLIFICA Hall	
Fig. 4. Camarotechia sappho Hall	4
Fig. 5. Camarotechia sp	5
Figs. 6-8. Liorhynchus Limitare (Vanuxem)	5
9. Somewhat distorted and crushed exfoliated dorsal valve. × 1½. Williams Road near church, 3½ miles southeast of Cumberland.  10. Interior of dorsal valve. × 1¼. Williams Road near church, 3½ miles southeast of Cumberland. Romney formation, Hamilton member.  11. Dorsal valve of typical specimen. 12. Cardinal view. Hamilton formation, New York.	7
Figs. 13-17. LIORHYNCHUS CF. MYSIA	3
Figs. 18-23. Eunella lincklæni Hall	9



MOLLUSCOIDEA—BRACHIOPODA

#### PLATE XVI

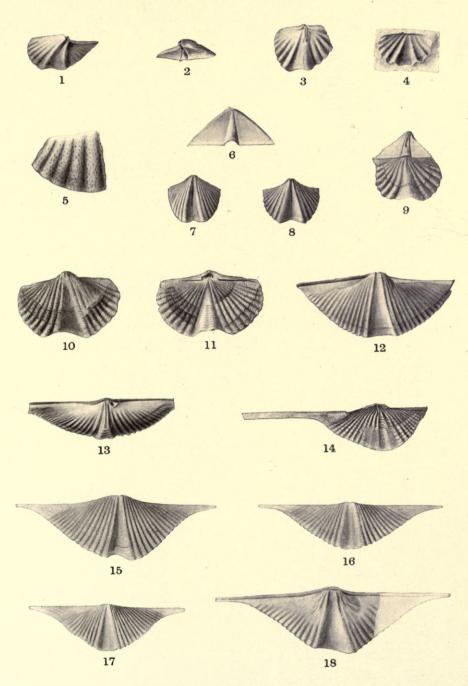
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Figs. 1-3. Centronella cf. ovata Hall
Dorsal, side and ventral view of shell. Onondaga formation, New
York.
Ti- 10 100
Figs. 4-6. Atrypa reticularis (Linné)
4. Partly exfoliated ventral valve (?).
5. Dorsal valve.
6. Ventral valve.
Romney formation, Hamilton member, Evitts Creek.
Figs. 7-14. Tropidoleptus carinatus (Conrad)
7, 8. Ventral and dorsal valves of large specimen. 21st Bridge.
9, 10. Ventral and dorsal valves of medium specimen. Same locality.
11. Surface enlarged showing punctæ. × 4. Evitts Creek.
12. Exterior of ventral valve.
13, 14. Interior of ventral and dorsal valves. × 2. Near Tonoloway
Ridge, Washington County.
Romney formation, Hamilton member.



MOLLUSCOIDEA—BRACHIOPODA

#### PLATE XVII

FLATE AVII
PAGE
Figs. 1-9. Cyrtina hamiltonensis Hall
1. Interior of ventral valve distorted by crushing. McCoys Ferry.
2. Cardinal area of same, showing delthyrium.
3. Interior of dorsal valve. McCoys Ferry.
4. Dorsal valve. McCoys Ferry. × 1½.
5. Enlarged part of shell showing its structure. × 4. National Road northeast of Cumberland.
6. Cardinal area of ventral valve. $\times$ 2. Near Hancock.
7, 8. Internal casts of ventral valve. Near Hancock.
Romney formation, Hamilton member.
9. Dorsal valve and cardinal area of ventral valve, showing the
elongate foramen on the deltidial plate. Hamilton formation,
New York.
2011 2021
Figs. 10-18. Spirifer mucronatus (Conrad)
10. Ventral valve. Evitts Creek.
11. Dorsal valve of same.
12. Interior of ventral valve. Iron Bridge over Town Creek, northeast of Oldtown.
13. Interior of dorsal valve. Same locality.
14. Interior of partly exfoliated dorsal valve. McCoys Ferry.
15-17. Exteriors of ventral valves. Near Hancock.
18. Interior of ventral valve. Near Hancock.
Romney formation, Hamilton member.

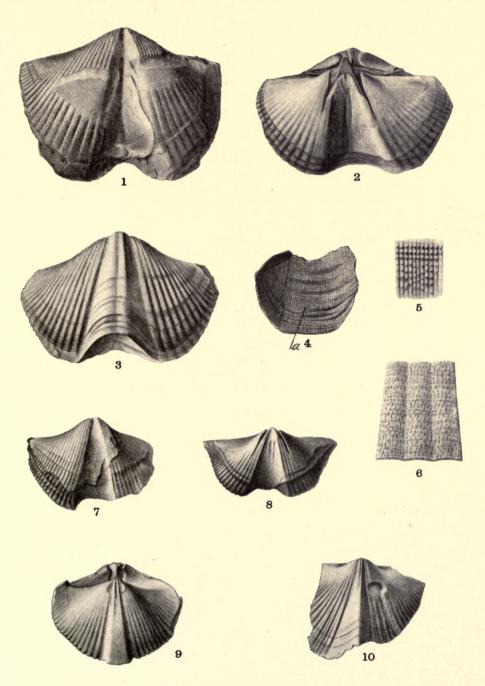


MOLLUSCOIDEA—BRACHIOPODA

## PLATE XVIII

<ol> <li>Figs. 1-6. Spirifer granulosus (Conrad)</li></ol>
<ol> <li>Interior of ventral valve. Flintstone Creek in Gilpin.</li> <li>Interior of dorsal valve of same specimen.</li> <li>Enlarged portion of surface from sinus of ventral valve, showing the small granules. × 2. Evitts Creek.</li> <li>Same more highly magnified. × 8.         Romney formation, Hamilton member.     </li> </ol>
<ol> <li>Interior of dorsal valve of same specimen.</li> <li>Enlarged portion of surface from sinus of ventral valve, showing the small granules. × 2. Evitts Creek.</li> <li>Same more highly magnified. × 8.         Romney formation, Hamilton member.     </li> </ol>
<ol> <li>Enlarged portion of surface from sinus of ventral valve, showing the small granules. × 2. Evitts Creek.</li> <li>Same more highly magnified. × 8.         Romney formation, Hamilton member.     </li> </ol>
the small granules. × 2. Evitts Creek.  5. Same more highly magnified. × 8.  Romney formation, Hamilton member.
5. Same more highly magnified. $\times$ 8. Romney formation, Hamilton member.
Romney formation, Hamilton member.
6. An enlargement of the surface, showing its papillose character.
Hamilton formation, New York.
Figs. 7-9. Spirifer audaculus (Conrad)
7. Ventral valve, partly exfoliated. Evitts Creek.
8. Interior of ventral valve. Warrior Mountain, east of Rush.
9. Interior of dorsal valve and cardinal area of ventral valve. West-
ern Maryland.
Romney formation, Hamilton member.
Fig. 10. Spirifer acuminatus (Conrad)
Interior of broken dorsal valve. McCoys Ferry. Romney formation,
Hamilton member.

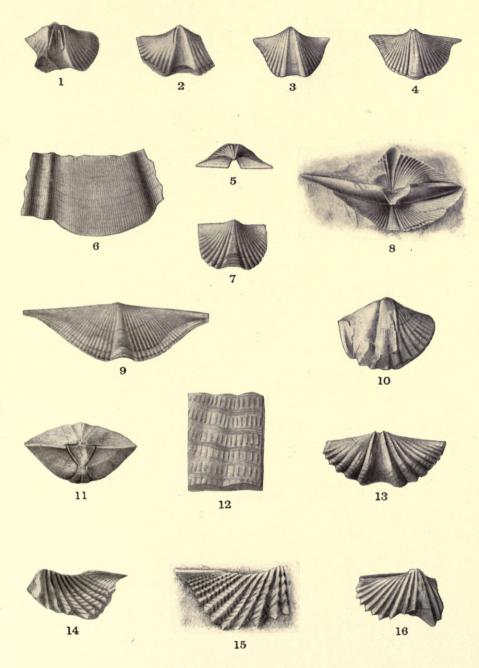
MIDDLE DEVONIAN, PLATE XVIII



MOLLUSCOIDEA—BRACHIOPODA

## PLATE XIX

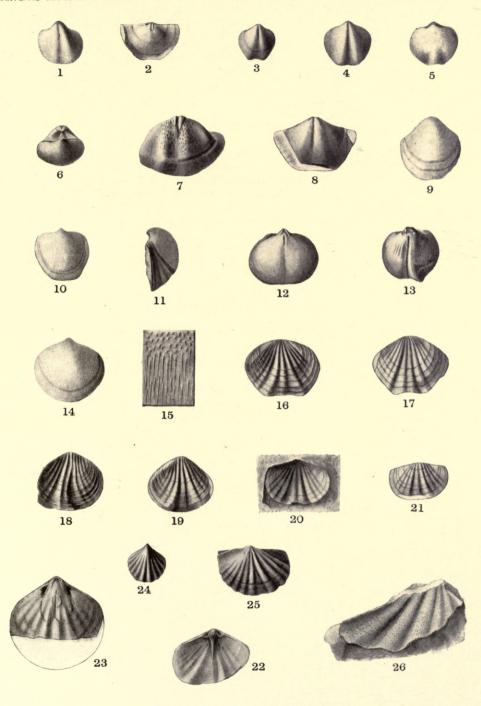
Figs. 1-7. Spirifer tullius Hall
7. Dorsal valve of average specimen. Hamilton formation, New York.
Figs. 8, 9. Spirifer angustus Hall
Figs. 10-12. Spirifer (Reticularia) fimbriatus (Conrad)
Fig. 13. Spirifer cf. consobrinus (d'Orbigny)
Figs. 14-16. SPIRIFER SCULPTILIS VAR. MARYLANDENSIS Prosser n. var 200 14. Dorsal valve. Warrior Mountain, east of Rush. 15. Squeeze of same. × 1½. 16. Internal impression of same. Romney formation, Hamilton member.



MOLLUSCOIDEA—BRACHIOPODA

## PLATE XX

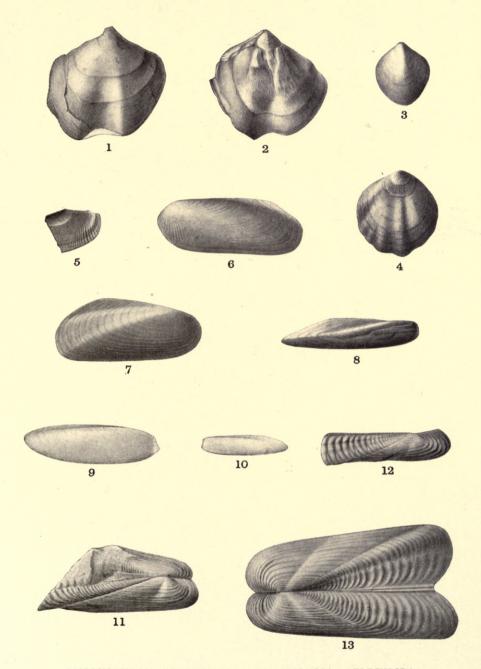
	PAGE
Figs. 1, 2. Ambocœlia umbonata Conrad	200
1. Partly exfoliated ventral valve. × 2. Ernstville.	
2. Partly exfoliated dorsal valve. × 1½. Evitts Creek.	
Romney formation, Hamilton member.	
Figs. 3-6. Amboccelia virginiana Prosser n. sp	202
3. Ventral valve. × 6. 3 miles south of Green Spring, W. Va. Mar-	
cellus limestone,	
4. Ventral valve. × 5. Right bank of Potomac, 1½ miles below Cum-	
berland.	
5. Dorsal valve of same specimen. × 5.	
6. Cardinal area and dorsal valve of same specimen. × 5.	
Romney formation, Hamilton member.	
	904
Figs. 7, 8. Amboccelia præumbona Hall (?)	204
7. Partly exfoliated ventral valve. × 1½.	
8. Interior of ventral valve. × 1¼. Ernstville.	
Romney formation, Hamilton member.	
Figs. 9-11. Ambocœlia præumbona Hall	204
9. Ventral valve.	
10. Dorsal valve.	
11. Profile view.	
Hamilton formation, New York.	
Figs. 12-15. Nucleospira concinna Hall	206
12. Interior of ventral valve (?). $\times 1\frac{1}{2}$ .	
13. Interior of ventral valve. $\times$ 1½.	
Romney formation, Hamilton member, Ernstville.	
14. Ventral valve.	
15. A portion of surface enlarged, showing the character of the spin-	
ules.	
Hamilton formation, New York.	
Figs. 16-23. Anoplotheca (Cœlospira) acutiplicata (Conrad)	207
16. Ventral valve. × 11/4. Williams Road near church, 31/2 miles	
southeast of Cumberland.	
17. Squeeze of same, showing appearance of ventral valve. $\times 1\frac{1}{4}$ .	
18. Dorsal valve. × 1¼. Williams Road near church, 3½ miles	
southeast of Cumberland.	
19. Squeeze of same, showing appearance of dorsal valve. $\times$ 1¼.	
20. Interior of partly exfoliated dorsal valve. × 1¼. Williams Road,	
3½ miles southeast of Cumberland.	
21. Squeeze of same, showing appearance of dorsal valve. $\times 1\frac{1}{4}$ .	
22. Squeeze of internal impression of dorsal valve, showing hinge-	
plate, deep dental sockets and median ridge. × 1¼. Williams	
Road near church, 3½ miles southeast of Cumberland.	
23. Cast of a dorsal valve. × 2. East of Cumberland.	
Romney formation, Onondaga member. (Fig. 23 after Kindle.)	
Fig. 24. Anoplotheca camilla (Hall)	200
View of pedicle valve. Romney formation, Onondaga member, Blair	209
County, Penna. (After Kindle.)	
	04.0
Figs. 25, 26. VITULINA PUSTULOSA Hall	210
25. Exfoliated ventral valve. × 1½. National Road, northeast of	
Cumberland.	
26. Enlargement from an impression of the surface, showing the ap-	
pearance of the pustules. × 4.	
Romney formation, Hamilton member.	



MOLLUSCOIDEA—BRACHIOPODA

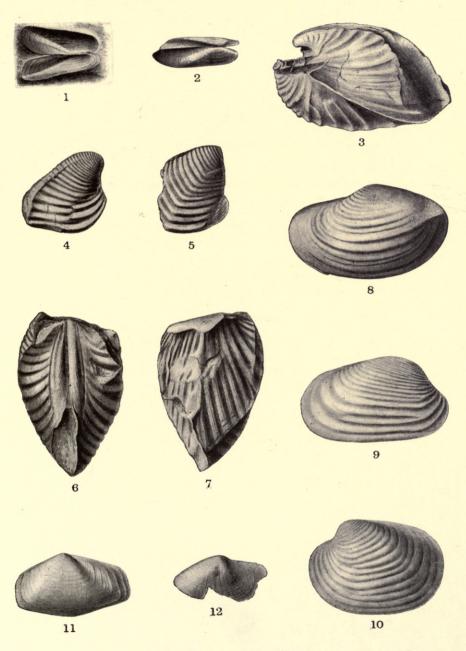
## PLATE XXI

	PAGE
Figs. 1, 2. Athyris spiriferoides (Eaton)	211
1. Ventral valve.	
2. Interior of same, showing the muscular markings.	
Romney formation, Hamilton member, Evitts Creek.	
Figs. 3, 4. Meristella (?) sp	213
3. Ventral valve. × 6.	
4. Dorsal valve (?). $\times$ 6.	
Romney formation, Hamilton member, Iron Bridge over Town	
Creek, northeast of Oldtown (?).	
Dies F. T. Drawyour, engagement (Conned)	014
Figs. 5-7. Phthonia sectifrons (Conrad)	214
Hamilton member, Williams Road near church, 3½ miles south-	
east of Cumberland.	
6. A large left valve narrowed by compression.	
7. A large right valve, showing the form and surface characters.	
Hamilton formation, New York.	
	015
Figs. 8-10. PROTHYRIS LANCEOLATA Hall.	215
8. Right valve. × 1½. Romney formation, Hamilton member. Right bank of Potomac, about 3 miles below Cumberland.	
9, 10. Right and left valves. Hamilton formation, New York.	
o, io. mand the various raminous formation, new roll.	
Figs. 11-13. ORTHONOTA UNDULATA Conrad	216
11. View of broken specimen, showing anterior portion of both valves.	
B. & O. R. R. cut, opposite Hancock.	
12. Right valve. McCoys Ferry.	
Romney formation, Hamilton member.	
13. A specimen of medium size preserving both valves. Hamilton	
formation, New York.	



MOLLUSCOIDEA—BRACHIOPODA AND MOLLUSCA—PELECYPODA

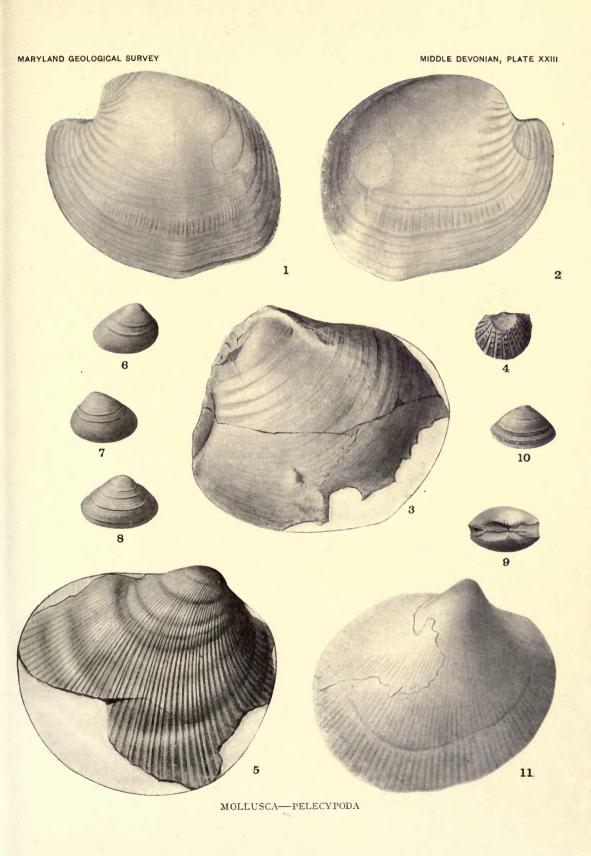
PLATE XXII	
Figs. 1, 2. Orthonota (?) parvula Hall	-
Romney formation, Hamilton member, Evitts Creek.	
Fig. 3. Grammysia bisulcata (Conrad)	18
Figs. 4-10. Grammysia arcuata (Conrad)	19
4. Anterior end of right valve. McCoys Ferry.	
5. Posterior end of left valve of same specimen.	
6, 7. Cardinal and ventral views of a specimen vertically compressed.  Pine Hill, 5 miles north of Oldtown.	
8. Right valve distorted by vertical pressure. Town Creek, about 6	
miles north of Oldtown.	
Romney formation, Hamilton member.	
9, 10. Right and left valves. Hamilton formation, New York.	
Figs. 11, 12. TELLINOPSIS SUBEMARGINATA (Conrad)	22
12. Part of left valve showing fine radiating striæ. Right bank of Potomac, about 3 miles below Cumberland. Romney formation, Hamilton member.	



MOLLUSCA—PELECYPODA

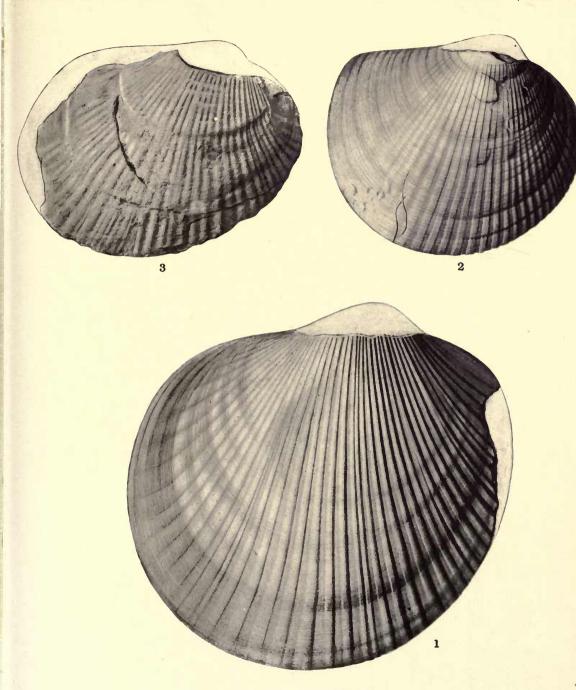
#### PLATE XXIII

FLATE AAIII	
	PAGE
Figs. 1, 2. Grammysia circularis Hall	220
Right and left valves partly exfoliated, showing muscular scars and	
pallial line. Hamilton formation, New York.	
Fig. 3. Grammysia circularis (?) Hall	220
Left valve. Romney formation, Hamilton member, 21st Bridge.	
Fig. 4. Buchiola Halli Clarke	225
Left valve showing the conspicuous concentric ridges on the plications.	
× 2. Romney formation, Hamilton member, Evitts Creek.	
Fig. 5. Panenka cf. dichotoma Hall	224
View of a fragmentary right valve. Romney formation, Onondaga	
member, Oldtown.	
Figs. 6-10. Nucula corbuliformis Hall	226
6. Right valve. × 1½. Right bank of Potomac River, about 3 miles	
below Cumberland.	
7. Left valve of same.	
8. Right valve. $\times 1\frac{1}{2}$ . Same locality.	
9. Cardinal view of internal impression showing hinge crenulations	
$\times$ 1½. Same locality.	
10. Right valve showing varices of growth and concentric striæ. Evitts	
Creek.	
Romney formation, Hamilton member.	
Fig. 11. Panenka cf. multiradiata Hall	225
View of a large right valve showing strong radii. Hamilton formation	
New York.	



# PLATE XXIV

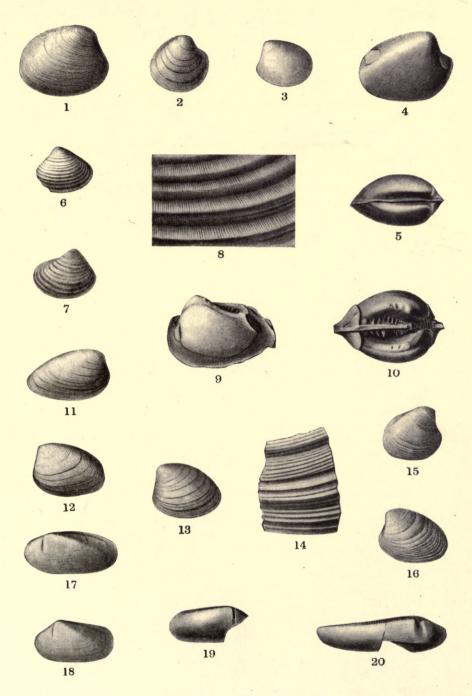
PA	AGE
Fig. 1. PANENKA ALTERNATA Hall	223
View of a large right valve showing strong radii. Oldtown. Romney	
formation, Onondaga member.	
Figs. 2, 3. PANENKA OBSOLESCENS Kindle n. sp	224
2. View of right valve of type. Oldtown.	
3. Fragmentary right valve. Ridgeville, W. Va.	
Romney formation, Onondaga member.	



MOLLUSCA—PELECYPODA

#### PLATE XXV

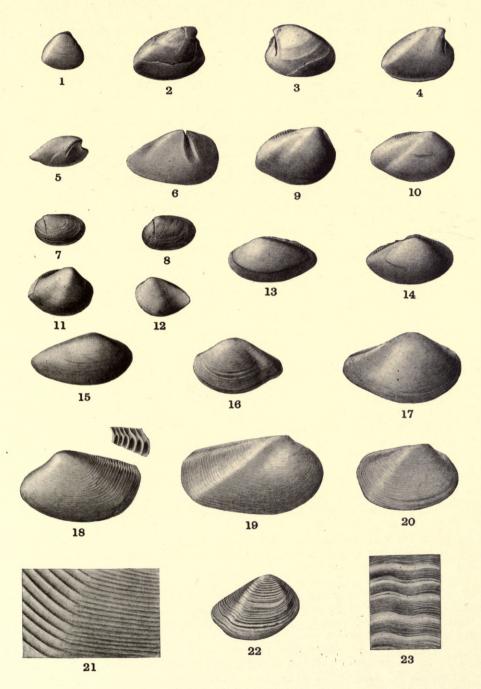
	-
	PAGE
Figs. 1-5. Nucula bellistriata (Conrad)	. 227
1. Right valve. $\times 1\frac{1}{2}$ .	
2. Right valve, showing concentric striæ and strong varices of growth	
× 1½.	
3. Left valve. $\times$ 2.	
Romney formation, Hamilton member, Evitts Creek.	
4. Interior of right valve, showing muscular scars. × 1½.	
5. Cardinal view of same. $\times 1\frac{1}{2}$ .	
Romney formation, Hamilton member, Western Maryland.	
resulting formation, framition member, western maryland.	
Figs 60 Nyout vana, (Consod)	000
Figs. 6-8. Nucula lirata (Conrad)	
6. Left valve, distorted somewhat about the beak. Romney formation	,
Hamilton member, Evitts Creek.	
7. Right valve.	
8. Enlarged surface showing strong concentric undulations and fine	9
radiating striæ.	
Hamilton formation, New York.	
Figs. 9, 10. Nucula lirata (Conrad) (?)	229
9. Interior of left valve, showing muscular scars, pallial line and	
hinge crenulations. $\times 114$ .	•
10. Cardinal view of same specimen, showing muscular scars and	
	ı
hinge crenulations. × 1¼.	
Romney formation, Hamilton member, Western Maryland.	
Figs. 11-16. Nucula varicosa Hall	230
11, 12. Right and left valves. $\times$ 1¼.	
13. Left valve, showing concentric striæ and varices of growth. $ imes 1\frac{1}{4}$	
14. Enlargement from same, showing the character of the concentric	,
striæ and varices of growth. × 4.	
Romney formation, Hamilton member, Evitts Creek.	
15, 16. Right and left valves. Hamilton formation, New York.	
Figs. 17-20. Nuculites oblongatus Conrad	231
17. Left valve showing fine concentric striæ. Evitts Creek.	-01
18. Small left valve also showing fine concentric striæ. × 2. Evitts	
Creek.	•
19. Interior of right valve, showing crenulated hinge and impression	
of clavicular ridge. National Road, northeast of Cumberland.	
20. Interior of right valve elongated by pressure. Hill in West Vir	
ginia, 3 miles south of Cumberland.	
Romney formation, Hamilton member.	



MOLLUSCA—PELECYPODA

## PLATE XXVI

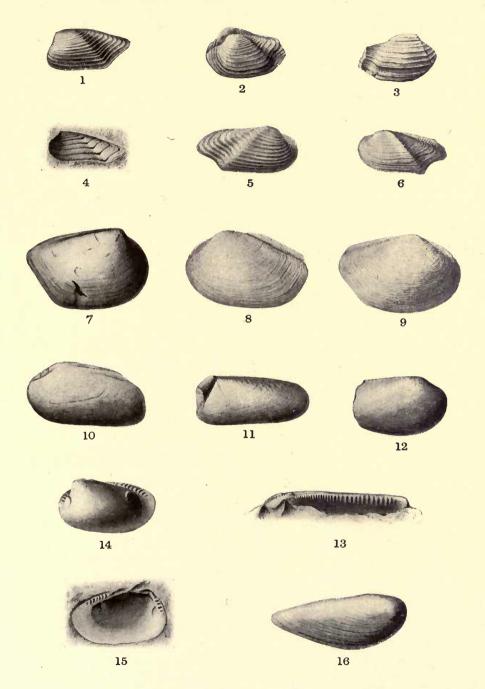
PAGE 200	
Figs. 1-5. Nuculites triqueter Conrad	5
2. Partly exfoliated right valve. $\times 1\frac{1}{4}$ . Right bank of Potomac,	
about 3 miles below Cumberland.  3. Left valve of same specimen, showing impression of clavicular	
ridge. × 1¼.  4. Internal impression of right valve, showing clavicular ridge. × 1¼.  Hill in West Virginia, about 3 miles south of Cumberland.	
5. Internal impression of right valve, distorted by pressure, showing impression of clavicular ridge. × 1¼. McCoys Ferry.	
Romney formation, Hamilton member.	
Fig. 6. Nuculities grabaul Prosser n. sp	ŀ
Figs. 7, 8. Nuculites modulatus Kindle	Į.
Romney formation, Onondaga member, Ridgeville, W. Va. (After Kindle.)	
Figs. 9-12. PALÆONEILO CONSTRICTA (Conrad)	5
9. Right valve, showing crenulations of hinge-line, fine concentric striæ and constriction. × 1¼. Evitts Creek.	
10. Right valve somewhat elongated by pressure, showing crenulations	
of hinge-line, fine striæ and constriction. × 1¼. Evitts Creek.	
<ol> <li>Small right valve. × 1¼. Evitts Creek.</li> <li>Small left valve. × 1¼. Williams Road, ¼ mile east of Queen</li> </ol>	
City Hotel, Cumberland.	
Romney formation, Hamilton member.	
Figs. 13-15. PALÆONEILO PLANA Hall	ſ
Creek.  15. Right valve. × 1¼. Right bank of Potomac, about 3 miles	
below Cumberland. Romney formation, Hamilton member.	
Fig. 16. PALÆONEILO MAXIMA (Conrad) (?)	3
Left valve with strong sulcus. Romney formation, Hamilton member, Evitts Creek.	
Fig. 17. PALÆONEILO MAXIMA (Conrad)	}
New York.	
Figs. 18-21. PALÆONEILO FECUNDA Hall	)
18. Left valve showing concentric striæ, × 1¼, and above that, a portion of the surface bordering the hinge-line enlarged 3 times. Williams Road, ¼ mile east of Queen City Hotel, Cumberland.	
19, 20. Right valves.	
21. An enlargement of the surface striæ from fig. 20.  Romney formation, Hamilton member (figs. 19-21 after Hall).	
Figs. 22, 23. PALÆONEILO PERPLANA VAR. GRABAUI Prosser n. var 240	)
<ul><li>22. Squeeze of external impression of right valve.</li><li>23. Surface of same. × 4.</li></ul>	
Romney formation, Hamilton member, Evitts Creek.	



MOLLUSCA—PELECYPODA

## PLATE XXVII

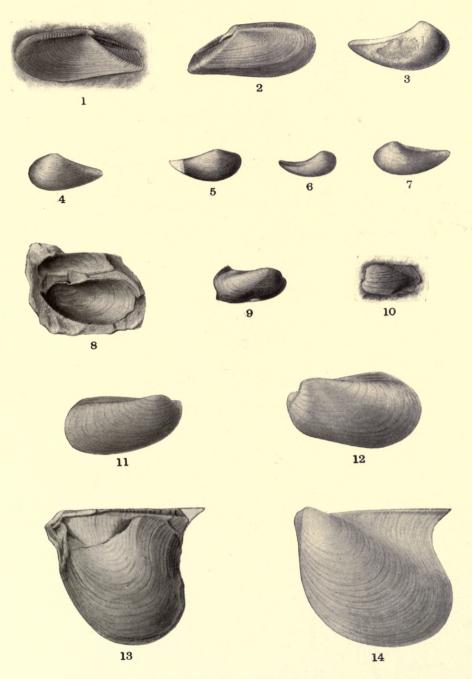
	PAGE
Figs. 1-6. PALÆONEILO EMARGINATA (Conrad)	241
1. Left valve, showing the strong concentric ridges. Evitts Creek.	
2. Left valve of shorter form. Hancock-Harrisonville Road, about	
2 miles north of Hancock.	
3. Right valve of same specimen.	
4. External impression of right valve. McCoys Ferry. Romney formation, Hamilton member.	
5, 6. Right and left valves. Hamilton formation, New York.	
o, o. might and left valves. Hammion formation, New York.	
Fig. 7. PALÆONEILO TENUISTRIATA Hall (?)	242
Right valve of a broken and mostly exfoliated specimen. Romney	
formation, Hamilton member, McCoys Ferry.	
Figs. 8, 9. Palæoneilo tenuistriata Hall	242
Left and right valves. Romney formation, Hamilton member, near	
Cumberland. (After Hall.)	
Diam 10.19 D D	
Figs. 10-13. PALÆONEILO CLARKEI Prosser n. sp	244
11. Broken left valve, sinus at anterior end caused by crushing.	
12. Right valve, shortened by the breaking away of the posterior end.	
13. Interior of hinge line of No. 12 enlarged, showing the taxodont	
dentition. × 2.	
Romney formation, Hamilton member, right bank of Potomac	
River, about 3 miles below Cumberland.	
Figs. 14, 15. PALÆONEILO ROWEI Prosser n. sp	244
14. Internal impression of left valve, showing muscular markings and	
hinge crenulations.	
15. Squeeze of same specimen.	
Romney formation, Hamilton member, McCoys Ferry.	
Fig. 16 Day FONEHO MADVI ANDIGA Droggor n. cn.	945
Fig. 16. PALÆONEILO MARYLANDICA Prosser n. sp	445
Hancock. Romney formation, Hamilton member.	
indicon. Itominey formation, Hamilton member,	



MOLLUSCA-PELECYPODA

### PLATE XXVIII

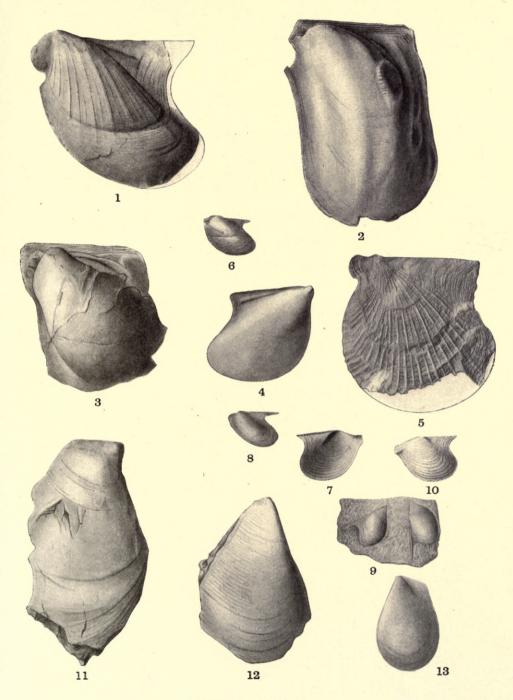
T I	AGE
Figs. 1, 2. Tancrediopsis clarkei Prosser n. sp	245
1. External impression of right valve. $\times 1\frac{1}{4}$ .	
2. Squeeze of same specimen, showing external appearance of right	
valve. $\times 1\frac{1}{4}$ .	
Romney formation, Hamilton member, Western Maryland.	
	0.17
Figs. 3, 4. Leda diversa Hall	247
3. Right valve. $\times$ 2. Romney formation, Hamilton member, McCoys Ferry.	
4. Left valve. × 2. Hamilton formation, New York.	
The state of the s	
Figs. 5-7. Leda rostellata (Conrad)	247
5. Right valve of young specimen. × 3. Romney formation, Hamil-	
ton member, National Road west of Tonoloway Ridge.	
6, 7. Right and left valves. $\times$ 2. Hamilton formation, New York.	
Figs. 8-12. Parallelodon Hamiltoniæ (Hall)	940
8. External impression showing part of both valves.	240
9, 10. Right and left valves, margins partly broken away.	
Romney formation, Hamilton member, Evitts Creek.	
11. Right valve showing surface markings. Hamilton formation, New	
York.	
12. Left valve of an unusually large individual from near Cumberland.	
(After Hall.)	
Fig. 13. Liopteria cf. conradi Hall	252
Partly exfoliated left valve. Romney formation, Hamilton member,	
Iron bridge over Town Creek, northeast of Oldtown.	
Fig. 14. Liopteria conradi Hall	252
A large left valve. Hamilton formation, New York.	



MOLLUSCA—PELECYPODA

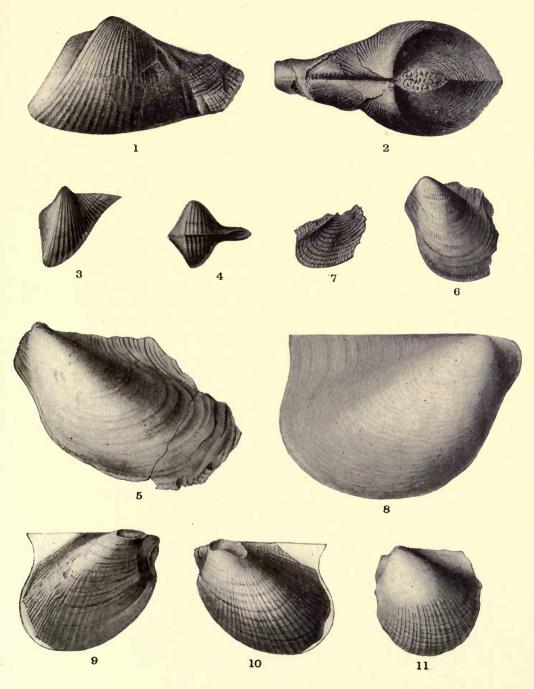
#### PLATE XXIX

THATE AMA	
	PAGE
Figs. 1-4. Pterinea flabellum (Conrad)	250
<ol> <li>Left valve, showing alternation in size of radiating ribs. Evitts Creek.</li> </ol>	
<ol> <li>Internal impression of left valve, showing muscular scar and striated ligamental area. Iron Bridge over Town Creek, north- east of Oldtown.</li> </ol>	
<ol> <li>Internal impression of left valve, broken toward the front; but showing well the striated ligamental area. Flintstone Creek in Gilpin.</li> </ol>	
4. Right valve, partly exfoliated. Evitts Creek.	
Romney formation, Hamilton member.	
Fig. 5. Pterinea sp. undet	251
Left valve showing surface ornamentation. Romney formation, Onon- daga member, Little Moccasin Gap, Va. (After Kindle.)	
Fig. 6. LIOPTERIA LÆVIS Hall	253
Figs. 7-10. Leptodesma rogersi Hall	254
7, 8. External impression $\times$ 2 and squeeze of left valve. Romney formation, Hamilton member, Evitts Creek.	201
<ol> <li>Block showing two right valves. × 2.</li> <li>Left valve.</li> </ol>	
Hamilton formation, New York.	
Figs. 11-13. MYTILARCA (PLETHOMYTILUS) OVIFORMIS (Conrad)	255
11. An imperfect right valve. 21st Bridge.	
12. Another imperfect right valve. Evitts Creek.	
Romney formation, Hamilton member.	
13. Left valve of a young shell of elongate form. Hamilton formation, New York.	



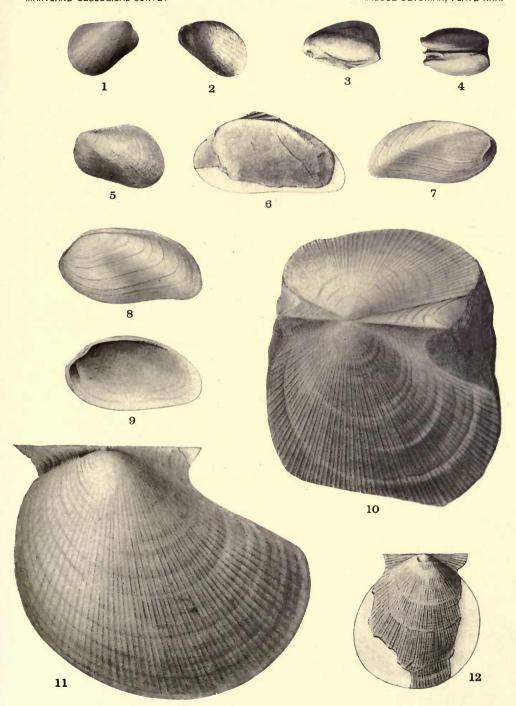
MOLLUSCA—PELECYPODA

PLATE XXX	
P	AGE
Figs. 1, 2. Conocardium normale Hall	257
Right side and cardinal view of large partial cast of exterior. Romney	
formation, Hamilton member, Cumberland. (After Hall.)	
Figs. 3, 4. Conocardium cumberlandiæ Swartz n. sp	257
Right side and ventral view of type. Romney formation, Hamilton	-0.
member, Williams Road, 3½ miles east of Cumberland.	
member, williams iteau, 6/2 miles east of entired land.	
Figs. 5-8. ACTINOPTERIA DECUSSATA Hall	258
5. Partly exfoliated left valve.	200
6. Left valve.	
7. External impression of a portion of a left valve, showing the char-	
acter of the surface markings.	
Romney formation, Hamilton member, road east of Pine Hill, about 4 miles north of Oldtown.	
8. A large right valve. Hamilton formation, New York.	
Figs. 9, 10. ACTINOPTERIA BOYDI VAR. GIBBOSA Prosser n. var	259
9. Right valve.	
10. Left valve of same specimen.	
Romney formation, Hamilton member, Town Creek, 4 miles	
northeast of Oldtown.	
Fig. 11. ACTINOPTERIA sp	260
Left valve, surface markings mostly obliterated over the umbonal	
region. Romney formation, Hamilton member, Iron Bridge over	
Town Creek, northeast of Oldtown.	



MOLLUSCA-PELECYPODA

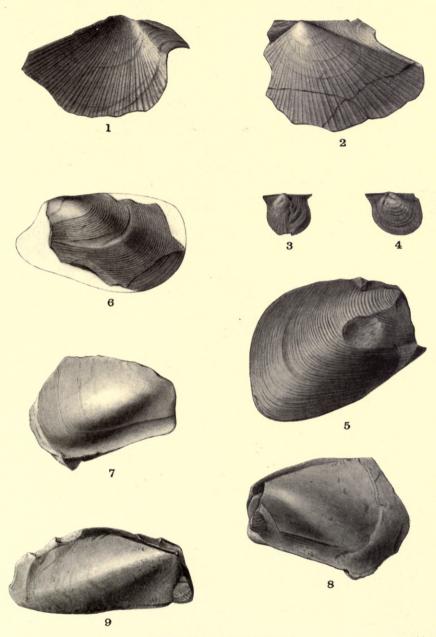
PLAIE AAAI	
F	AGE
Figs. 1-5. Modiella pygmæa (Conrad)	261
1. Right valve upon which the fine radiating striæ are faintly shown. $\times$ 2. Evitts Creek.	
2. External impression of right valve. × 2. Evitts Creek.	
3. Internal impression of left valve, showing anterior muscular scar and oblique sinus. $\times$ 1½. Hill 3 miles south of Cumberland in West Virginia.	
4. Cardinal view of same specimen. × 1¼.	
Romney formation, Hamilton member.	
5. Left valve showing fine radiating striæ. $\times$ 2. Hamilton formation, New York.	
Fig. 6. Nyassa arguta Hall (?)	262
Internal impression of a broken left valve, showing impressions of posterior lateral teeth. Romney formation, Hamilton member, McCoys Ferry.	
Figs. 7-9. Nyassa arguta Hall	262
7, 8. Right and left valves.	
9. A squeeze showing the appearance of the interior of the right valve. Hamilton formation, New York.	
Figs. 10, 11. AVICULOPECTEN PRINCEPS (Conrad)	263
10. A specimen preserving both valves.	
11. A large left valve, much extended posteriorly.	
Hamilton formation, New York.	
Fig. 12. AVICULOPECTEN Sp	266
An incomplete right valve. Romney formation, Hamilton member, near Hancock.	



MOLLUSCA-PELECYPODA

## PLATE XXXII

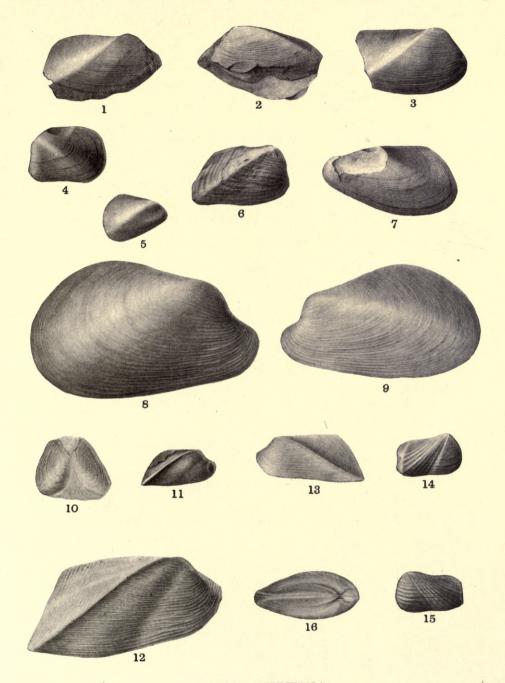
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65
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MOLLUSCA—PELECYPODA

## PLATE XXXIII

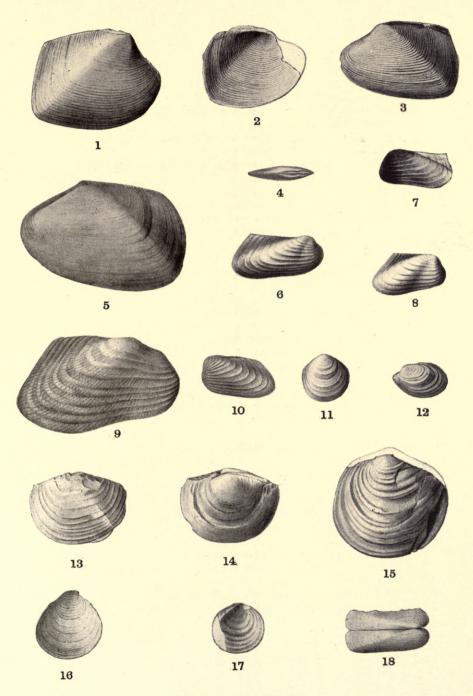
PAGE
Figs. 1-6. Modiomorpha subalata (Conrad)
1, 2. Right and left valves.
3. Right valve.
4. Left valve of small specimen. × 2.
5. Probably right valve of young specimen. $\times$ 2.
6. An imperfect right valve.
Romney formation, Hamilton member, Evitts Creek.
Fig. 7. Modiomorpha mythodes (Conrad) (?)
Left valve from which umbonal region is broken.
Romney formation, Hamilton member, Evitts Creek.
Figs. 8-10. Modiomorpha mytiloides (Conrad) 269
8, 9. Right and left valves.
10. Young specimen showing both valves.
Hamilton formation, New York.
Figs. 11-13. Goniophora Hamiltonensis Hall
11. Partly exfoliated right valve, showing sharp umbonal ridge. Rom-
ney formation, Hamilton member, Hancock-Harrisonville Road,
about 2 miles north of Hancock.
12, 13. Right and left valves. Hamilton formation, New York.
Figs. 14-16. Pholadella radiata (Conrad)
14, 15. Right and left valves. Hancock-Harrisonville Road, about 2
miles north of Hancock.
16. Cardinal view of a specimen. Cumberland.
Romney formation, Hamilton member (fig. 16, after Hall).



MOLLUSCA—PELECYPODA

## PLATE XXXIV

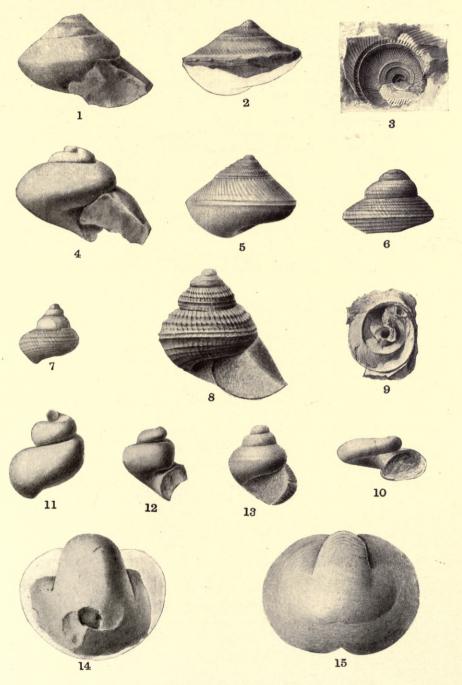
	PAGE
Figs. 1-4. Cypricardella bellistriata (Conrad)	273
1. Right valve. Evitts Creek.	
<ol> <li>Interior of left valve (?) with broken anterior end. Evitts Creek.</li> <li>Left valve. Evitts Creek.</li> </ol>	
<ol> <li>Cardinal view of small specimen preserving both valves. Cumberland.</li> </ol>	
Romney formation, Hamilton member (fig. 4, after Hall).	
Fig. 5. Cypricardella tenuistriata (Hall)	
Figs. 6-10. Cypricardinia indenta (Conrad)	276
6. Right valve. × 2. Evitts Creek.	
7. External (?) impression of right valve. × 2. 21st Bridge.	
8. A squeeze from the same specimen. $\times$ 2.	
Romney formation, Hamilton member.	
9. Right valve showing surface markings.	
10. Left valve.	
Hamilton formation, New York.	
Figs. 11-14. Paracyclas Lirata Conrad	077
11. Right valve of small specimen. Great Cacapon.	211
12. Left valve elongated by pressure. McCoys Ferry.	
13, 14. Right and left valves somewhat distorted. Western Maryland.	
Romney formation, Hamilton member.	
Fig. 15. PARACYCLAS LIRATA Conrad var. (?)	278
Left valve somewhat broken along the hinge line. Romney formation, Hamilton member, McCoys Ferry.	
Figs. 16, 17. Paracyclas tenuis Hall	278
Fig. 18. PALÆOSOLEN MINUTUS Prosser n. sp	279



MOLLUSCA-PELECYPODA

# PLATE XXXV

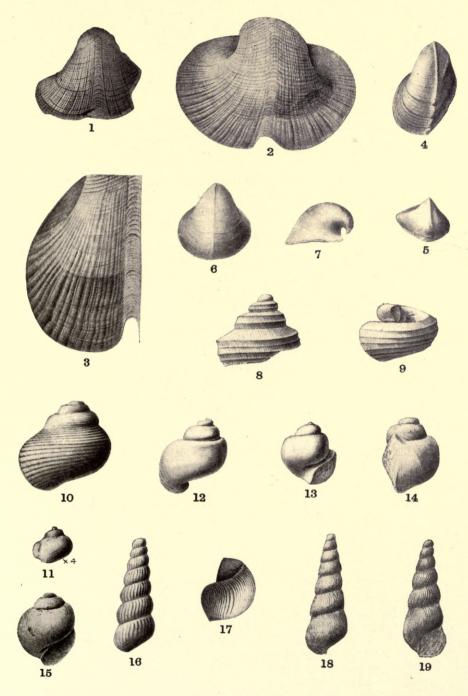
P	AGE
Figs. 1-5. PLEUROTOMARIA (BEMBEXIA) SULCOMARGINATA Conrad	280
1. Ventral view of specimen. Warrior Mountain, east of Rush.	
2. View of spire and upper part of body whorl. Right bank of Potomac,	
about 3 miles below Cumberland.	
3, 4. External and internal impressions. Western Maryland.	
Romney formation, Hamilton member.	
5. Dorsal view of specimen, showing surface character. Hamilton	
formation, New York.	
Figs. 6-8. PLEUROTOMARIA (GYROMA) CAPILLARIA CONTAD	282
6. Dorsal view, showing surface markings. × 1¼.	
7. Body whorl showing the surface markings but shell is exfoliated	
from the spire. $\times 1\frac{1}{4}$ .	
Romney formation, Hamilton member, Evitts Creek.	
8. Enlarged specimen, showing surface characters. $\times$ 2. Hamilton	
formation, New York.	
Figs. 9, 10. PLEUROTOMARIA (TREPOSPIRA) ROTALIA Hall (?)	283
9. Part of body whorl, showing surface markings. $\times 1\frac{1}{2}$ . National	
Road, west of Tonoloway Ridge.	
10. Internal impression of body whorl. $\times$ 1¼. McCoys Ferry.	
Romney formation, Hamilton member.	
Figs. 11, 12. PLEUROTOMARIA (EURYZONE) ITYS Hall (?)	284
11. Dorsal view of internal impression. Robinson farm, 2 miles south	
of Patterson Depot, W. Va.	
12. Ventral view of internal impression. Western Maryland.	
Romney formation, Hamilton member.	
Til 10 Page 19	
Fig. 13. PLEUROTOMARIA (EURYZONE) ITYS Hall	284
View of an internal impression retaining traces of the surface charac-	
ters toward the aperture. Hamilton formation, New York.	
Die 14 Province (Province VIII)	
Fig. 14. BELLEROPHON (PATELLOSTIUM) PATULUS Hall (?)	287
Dorsal view of smooth internal impression from which the margins are	
broken. Romney formation, Hamilton member, Western Maryland.	
lanu.	
Pig 15 Petterophon (Parettogram) parettog Hell	007
Fig. 15. Bellerophon (Patellostium) patulus Hall	287
Dorsal view of specimen. Hamilton formation, New York.	



MOLLUSCA—GASTROPODA

### PLATE XXXVI

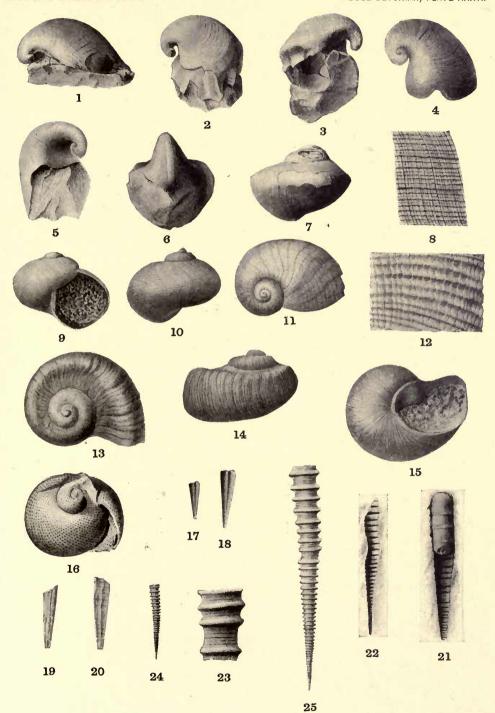
	AGE
Figs. 1-3. Bellerophon (Bucanopsis) Leda Hall	285
1. Dorsal view, showing surface markings. $\times$ 1½. Romney forma-	
tion, Hamilton member, Evitts Creek.	
2. Dorsal view of specimen with finely preserved surface. $\times$ 2.	
3. View of one side of dorsal surface, showing surface markings. $\times$ 3.	
Hamilton formation, New York.	
Figs. 4-7. Cyrtolites (Cyrtonella) mitella Hall	288
4. Dorsal view of specimen which is crushed on right side. $\times 1\frac{1}{4}$ .	
5. Dorsal view of smaller specimen which is distorted toward the	
front. $\times$ 1½.	
Romney formation, Hamilton member, road east of Pine Hill,	
about 4 miles north of Oldtown.	
6. Dorsal view of partly exfoliated specimen.	
7. Side view of the type, an internal impression.	
Hamilton formation, New York.	
Hamilton formation, New York.	
Fig. 9 0 Gyorovay, synthys than on havy Drogger a war	200
Figs. 8, 9. Cyclonema Liratum var. grabaui Prosser n. var	290
8. Squeeze from an external impression, showing part of the body	
whorl, the spire and surface markings. $\times 1\frac{1}{2}$ .	
9. Probably the internal impression of the body whorl of the same	
specimen. $\times 1\frac{1}{4}$ .	
Romney formation, Hamilton member, Williams Road, about	
3½ miles southeast of Cumberland.	
Fig. 10. Cyclonema (?) marylandense Prosser n. sp	292
Side view, showing the surface markings. Romney formation, Hamil-	
ton member, right bank of Potomac River, 4 miles below Cum-	
berland.	
Fig. 11. Naticopsis sp. undet	293
Lateral view. X4. Romney formation, Onondaga member, Ridge-	
ville, W. Va.	
Figs. 12-15. Macrochilus Hamiltoniæ Hall	293
12, 13. Dorsal and ventral views of internal impression. Romney	
formation, Hamilton member, Western Maryland.	
14, 15. Views of the opposite sides of the type. Hamilton formation,	
New York.	
Figs. 16-19. Loxonema Hamiltoniæ Hall	294
16. Dorsal view, showing strong longitudinal striæ. $\times 1\frac{1}{4}$ . $4\frac{1}{2}$ miles	201
northeast of Oldtown.	
17. Body whorl, showing longitudinal striæ. × 2. Evitts Creek.	
Romney formation, Hamilton member.	
18, 19. Dorsal and ventral views of specimen of usual size. Hamilton	
formation, New York.	



MOLLUSCA—GASTROPODA

## PLATE XXXVII

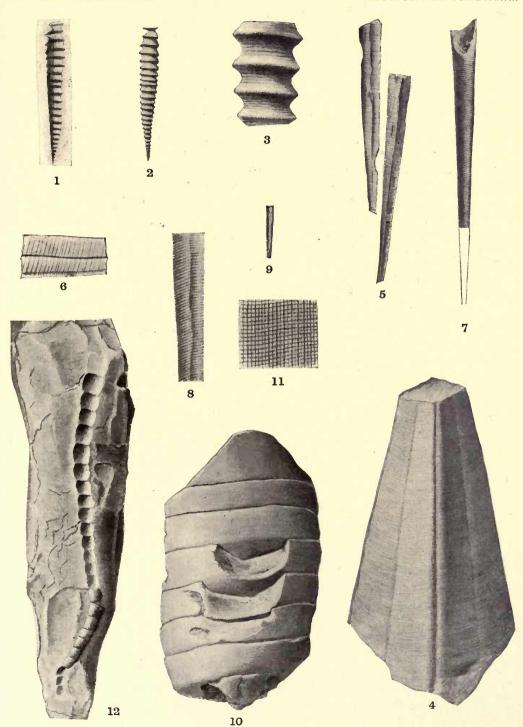
	PAGE
Figs. 1-3. Platyceras erectum Hall (?)	296
1. Lateral view of partly exfoliated specimen. $\times$ 1\%.	
2, 3. Two views of exfoliated specimen, wrinkled by crushing toward the margin. $\times 1\frac{1}{4}$ .	
Romney formation, Hamilton member, Hancock-Harrisonville	
Road, about 2 miles north of Hancock.	
Figs. 4, 5. Platyceras erectum Hall	296
Two views of specimen from Hamilton formation of New York.	
Fig. 6. Platyceras cf. symmetricum Hall	297
Dorsal view of partly exfoliated specimen. Romney formation, Hamilton member, Evitts Creek.	
Figs. 7-12. Diaphorostoma lineatum (Conrad)	208
7. Lateral view.	400
8. Enlarged portion of same to show surface markings. $\times$ 7.	
Romney formation, Hamilton member, Ernstville.	
9. The aperture and spire of a symmetrical specimen.	
10. Lateral view of the same.	
11. Side view of a specimen preserving the surface in great perfection.	
12. Enlargement of the surface of the preceding.	
Hamilton formation, New York.	
Figs. 13-15. Platystoma cf. euomphaloides Conrad	299
Upper, side and lower views. Hamilton formation, New York.	
Fig. 16. (?) Gastropod.  Squeeze from external impression (?). × 10. Romney formation,	
Hamilton member, road east of Pine Hill, about 4 miles north	
of Oldtown.	
Figs. 17-20. Styliolina fissurella (Hall)	300
17. Lateral view of small specimen. × 6.	
18. Similar view of larger specimen. × 6.	
Romney formation, Hamilton member, Iron Bridge over Town Creek, northeast of Oldtown.	
19. Specimen strongly striated longitudinally. $\times$ 6.	
20. Specimen showing transverse and longitudinal striæ. $\times$ 6.	
Marcellus formation, New York.	
Fig. 91 Promacy true and the state of the st	004
Fig. 21. Tentaculites attenuatus Hall	301
impression for the remainder. × 5. Romney formation, Hamil-	
ton member, National Road, west of Tonoloway Ridge.	
Figs. 22-25. Tentaculites bellulus Hall	302
22. External impression. × 3.	
23. Same enlarged to show annulations and fine transverse striæ. × 8.	
Romney formation, Hamilton member, Iron Bridge over Town Creek, northeast of Oldtown.	
24. A specimen showing the general features of the species.	
25. Enlargement of the same showing annulations and encircling	
striæ.	
Hamilton formation, New York,	



MOLLUSCA-GASTROPODA

### PLATE XXXVIII

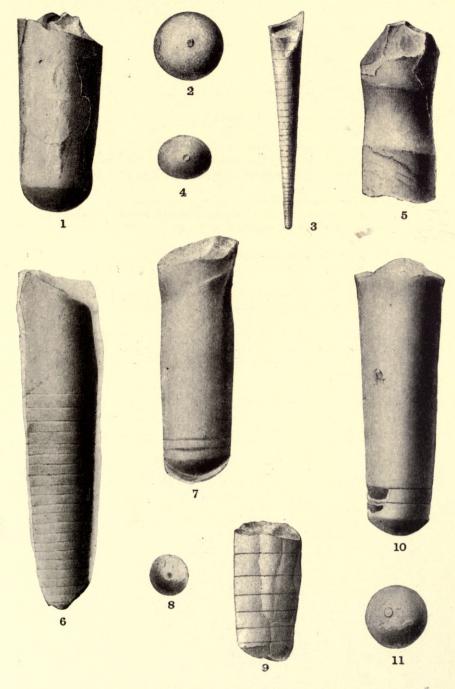
	AGE
Figs. 1-3. Tentaculites bellulus var. potomacensis Prosser n. var	303
1. View of external impression. $\times 1\frac{1}{2}$ .	
2. Squeeze of same, showing the external appearance of the species.	
$\times$ 1½.	
3. Same specimen enlarged to show annulations and transverse striæ.	
× 4.	
Romney formation, Hamilton member, McCoys Ferry.	
Pig A Cover and vivory and Conned	004
Fig. 4. Conularia undulata Conrad	304
Side view of shell. Hamilton formation, New York.	
Files F.O. Corporation II 11	00=
Figs. 5-8. Coleolus tenuicinctus Hall	305
5. Two specimens, showing concentric striæ; median longitudinal groove due to fracture.	
6. Part of right hand specimen of preceding enlarged, showing appear-	
ance of transverse striæ. × 3.	
Romney formation, Hamilton member, Evitts Creek.	
7. An imperfect specimen.	
8. A fragment enlarged.	
Hamilton formation, New York.	
Fig. 9. Bactrites aciculus	320
Fragment of tube. Romney formation, Onondaga member, Sassin, Va.	020
(After Kindle.)	
(Arter Minute.)	
Figs. 10, 11. Orthoceras bebryx Hall (?)	207
10. Internal impression of part of an individual. Oldtown Road near	301
Cumberland.	
11. Enlargement showing surface markings. × 4. Great Cacapon.	
Romney formation, Hamilton member.	
Fig. 12. Orthoceras bebryx Hall	207
	307
A much compressed and weathered fragment, with the siphuncle ex-	
posed. Hamilton formation, New York.	



MOLLUSCA—GASTROPODA AND CEPHALOPODA

## PLATE XXXIX

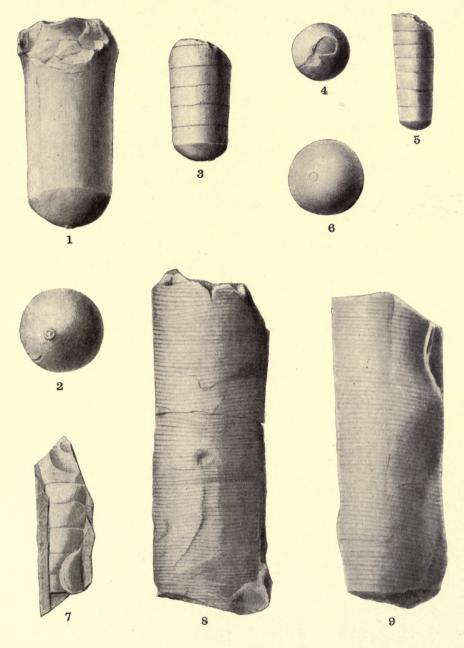
Figs. 1, 2. Orthoceras subulatum Hall (?)
3 miles below Cumberland.
Figs. 3, 4. Orthoceras subulatum Hall
4. A septum, showing the position of the siphuncle.  Hamilton formation, New York.
<ul> <li>Figs. 5-8. Orthoceras constriction Vanuxem</li></ul>
Fig. 9. Orthoceras cf. exile Hall
Figs. 10, 11. Orthoceras exile Hall



MOLLUSCA—CEPHALOPODA

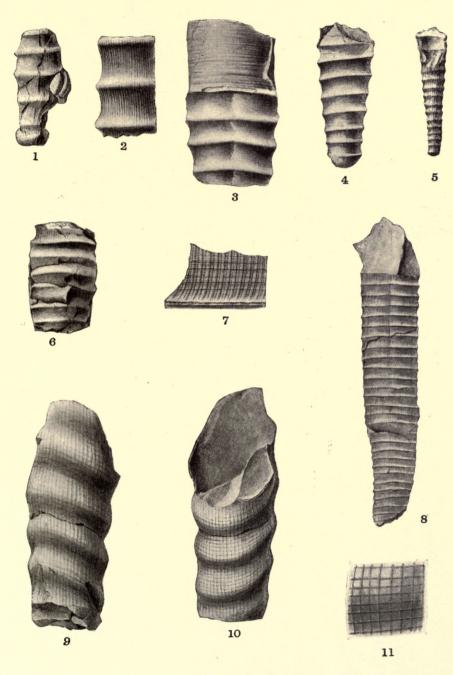
#### PLATE XL

	AGE
Figs. 1-4. Orthogeras telamon Hall (?)	311
1. Internal impression of living chamber.	
2. Septum of preceding, showing excentric siphuncle.	
3. A specimen showing five air-chambers.	
4. Septum of preceding, showing excentric siphuncle.	
Romney formation, Hamilton member, Robinsons farm, 2	
miles south of Patterson Depot, W. Va.	
Figs. 5, 6. Orthoceras telamon Hall."	311
5. Small fragment showing depth of air-chambers and gradual en-	
largement of tube.	
6. A septum, showing very excentric position of siphuncle.	
Hamilton formation, New York.	
Fig. 7. ORTHOCERAS EMACERATUM Hall (?)	313
Internal impression, showing six air-chambers. Romney formation,	
Hamilton member, right bank of Potomac, 3 miles below Cum-	
berland.	
	3
Fig. 8. Orthoceras cf. aulax Hall	313
Portion of living chamber, showing surface markings. Romney forma-	
tion, Hamilton member, road east of Pine Hill, about 4 miles	
north of Oldtown.	
Fig. 9. Orthoceras aulax Hall	313
Fragment of living chamber, showing the prominent, regular trans-	
verse furrows and ridges of the surface. Hamilton formation,	
New York.	



MOLLUSCA—CEPHALOPODA

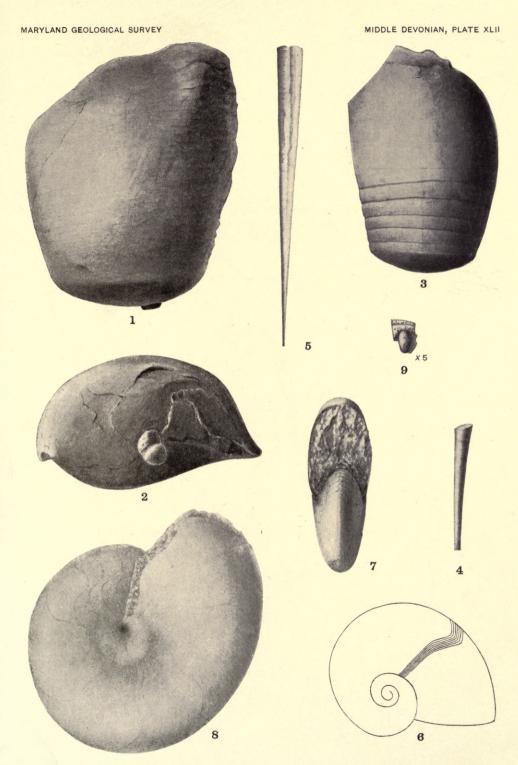
PLATE XLI	
	PAGE
Figs. 1-5. Spyroceras crotalum (Hall)	314
1. Fragment, showing the prominent annulations and longitudin	al
striæ.	
2. Enlargement of same. $\times$ 2.	
Romney formation, Hamilton member, Western Maryland.	
3. Internal impression of portion of living chamber, showing absen	ce
of annulations near aperture and striate surface.	
4. A small, septate fragment, preserving the characteristic fine, lon	gi-
tudinal striæ over the exterior of the tube.	
5. A small, slightly compressed specimen, showing the surface man	·k-
ings and the increase in prominence of the annulations towa	rd
the larger end.	
Hamilton formation, New York.	
Figs. 6-8. Spyroceras nuntium Hall	316
6. Partly exfoliated fragment, showing the surface striæ.	
7. Shell of same enlarged, showing surface striæ. × 6.	
Romney formation, Hamilton member, right bank of Potoma	ac,
3 miles below Cumberland.	
8. A compressed specimen showing annulations and longitudinal stri	æ.
Hamilton formation, New York.	
Figs. 9-11. Spyroceras clarkei Prosser n. sp	317
9, 10. Two views of fragment, showing five annulations and surfa	.ce
markings.	
11. Same enlarged, showing the longitudinal and concentric stri	æ.
$\times$ 3.	
Romney formation, Hamilton member, Ernstville.	



MOLLUSCA—CEPHALOPODA

#### PLATE XLII

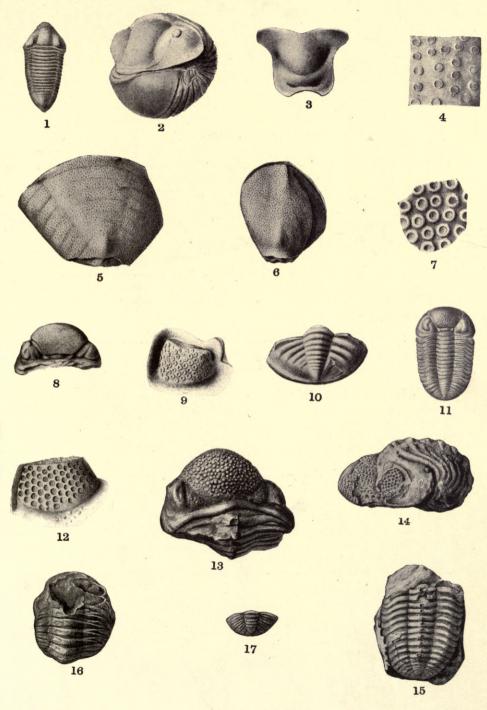
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PAG
Figs. 1, 2. Cf. Gomphoceras pingue Hall
1. Part of living chamber.
2. Septum of preceding, showing position of siphuncle.
Romney formation, Hamilton member, Western Maryland.
words and the state of the stat
Fig. 3. Gomphoceras pingue Hall
Fragment showing ventricose form and curvature of living chamber
toward aperture. Hamilton formation, New York.
Fig. 4. Bactrites aciculatus (Hall)
Part of an individual. × 1½. Romney formation, Hamilton member,
21st Bridge.
Fig. 5. Bactrites aciculum Hall
Shell slightly crushed. Genesee formation, New York.
Fig. 6. AGONIATITES EXPANSUS (Vanuxem)
Outline figure showing character of surface striæ. Romney formation,
Onondaga member, Cumberland. (After Kindle.)
Figs. 7, 8. PARODICERAS DISCOIDEUM (Conrad)
Lateral and ventral views. Marcellus formation, New York.
Fig. 9. Cyphasis cf. stephanophora Hall
Fragmentary glabella. × 5. Romney formation, Onondaga member,
Berkeley Springs, W. Va. (After Kindle.)



MOLLUSCA—CEPHALOPODA AND ARTHROPODA—TRILOBITA

#### PLATE XLIII

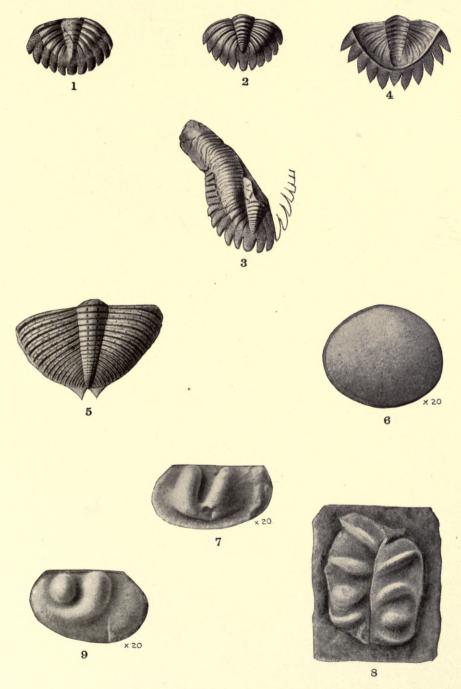
PAC	
Figs. 1-7. Homalonotus dekayı (Green)	28
1. A young, distinctly trilobate and nearly entire individual.	
2. An enrolled and uncompressed individual.	
3. The hypostoma.	
4. An enlargement of the under surface. $\times$ 5.	
Hamilton formation, New York.	
5. Dorsal view of a pygidium.	
6. A smaller and somewhat crushed pygidium, showing the reflexed	
apex.	
7. An enlargement of a portion of the surface of same. $\times$ 10.	
Romney formation, Hamilton member, road east of Pine Hill,	
about 4 miles north of Oldtown.	
Figs. 8-12. Phacops rana (Green)	29
8. Dorsal view of cephalon. 21st Bridge.	
9. The eye of same. $\times$ 3.	
10. Pygidium. × 2. Evitts Creek.	
Romney formation, Hamilton member.	
11. A small individual.	
12. The eye of a slightly weathered specimen enlarged.	
Hamilton formation, New York.	
Figs. 13-15. Phacops cristata Hall	31
13. Cephalon and part of the thorax of an enrolled specimen, showing	
axial and genal spines. Alinda, Penna.	
14. Lateral view of an enrolled specimen with a partly crushed gla-	
bella, showing genal spine base. Alinda, Penna.	
15. Fragmentary thorax and pygidium, showing axial spines. Ridge-	
ville, W. Va.	
Romney formation, Onondaga member. (After Kindle.)	
Figs. 16, 17. Phacops cristata var. pipa Hall	2
16. Fragmentary enrolled thorax. Alinda, Penna.	
17. Pygidium, showing duplicate character of pleural annulations.	
Near New Bloomfield, Penna.	
Romney formation, Onondaga member. (After Kindle.)	



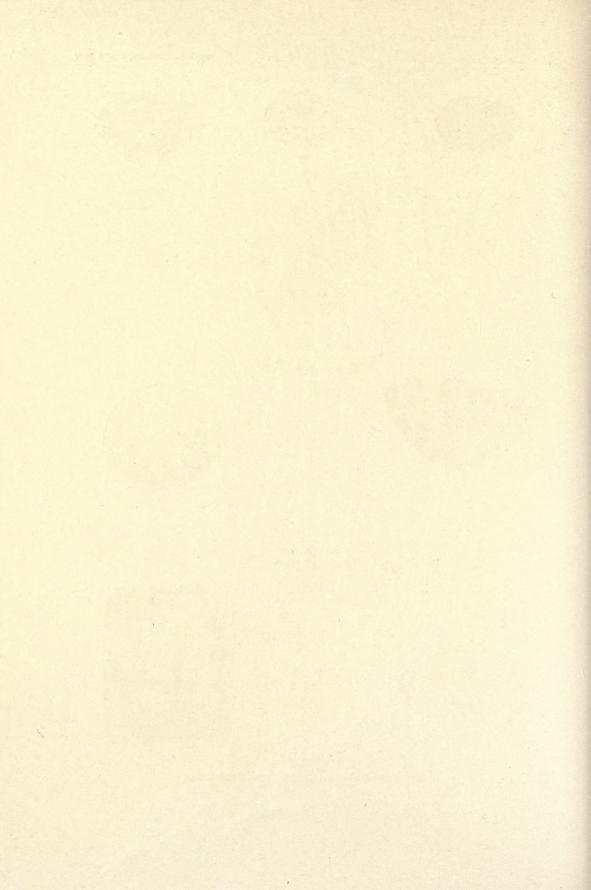
'ARTHROPODA-TRILOBITA

#### PLATE XLIV

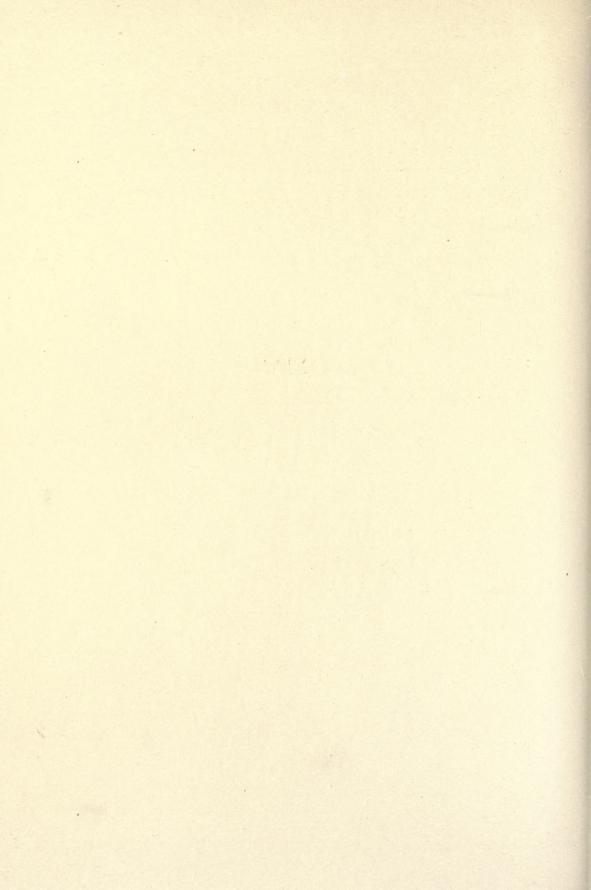
PLATE ALIV	
	PAGE
Figs. 1-4. Dalmanites (Cryphæus) boothi (Green)	333
1. Partly exfoliated pygidium with marginal spines. $\times 1\frac{1}{2}$ .	
2. Another partly exfoliated and smaller pygidium. $\times$ 2.	
3. A pygidium and part of one side of a thorax. $\times 1\frac{1}{2}$ .	
Romney formation, Hamilton member, Evitts Creek.	
<ol> <li>Internal surface of a pygidium, in which the spines are broad and flat. Hamilton formation, New York.</li> </ol>	
Fig. 5. Dalmanites marylandicus Prosser n. sp	334
Partly exfoliated pygidium, showing the pustulose surface and two	
spines at the apex. Romney formation, Hamilton member,	
Ernstville.	
Fig. 6. LEPERDITIA ? SUBROTUNDA	335
Right valve. × 20. Romney formation, Onondaga member, Little	
Moccasin Gap, Va. (After Kindle.)	
Figs. 7, 8. Bollia ungula Jones	336
7. Cast of a left valve. $\times$ 20. Rees Tannery, Mineral County, W. Va.	
8. Dorsal view of a slightly distorted specimen. $\times$ 20. Berkeley	
Springs, Ridgeville, W. Va.	
Romney formation, Onondaga member. (After Kindle.)	
Fig. 9. Bollia obesa Ulrich	
Cast of left valve. × 20. New Bloomfield, Penna. Romney formation,	
Onondaga member. (After Kindle.)	



ARTHROPODA-TRILOBITA AND OSTRACODA



# DEVONIAN UPPER



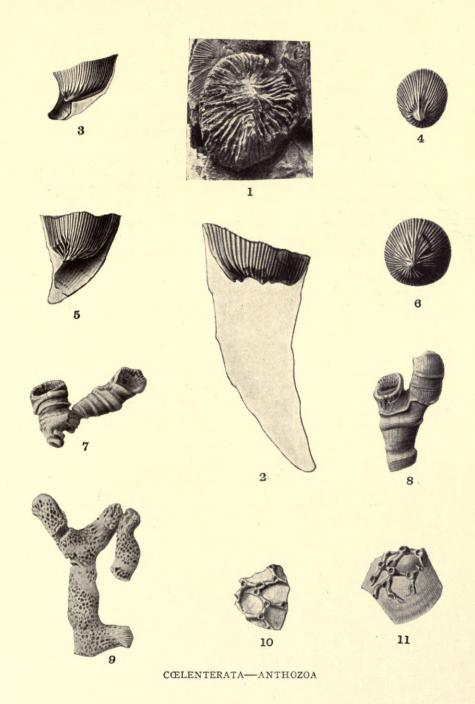
## NOTE

The following plates (Plates XLV to LXXIII) illustrate the Systematic Paleontology of the Upper Devonian of Maryland.

#### PLATE XLV

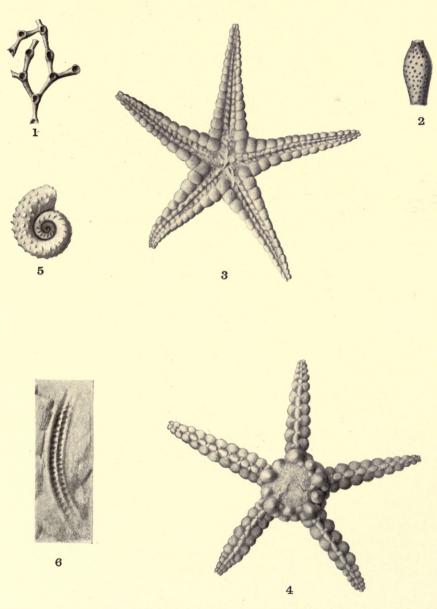
FLATE ALV	
P	AGE
Figs. 1, 2. Zaphrentis marylandicus n. sp	539
1. Cast of calyx of type specimen as seen from below.	
2. Side view of preceding showing its relation to outline of corallite.	
Jennings formation, Chemung member, National Road, Polish	
Mountain, 2714.1	
Figs. 3-6. Zaphrentis chemungensis n. sp	540
3. Side view of cast of interior of calyx, showing its relation to shape	
of corallum.	
4. Lower surface of preceding.	
5. View of type specimen, similar to fig. 3.	
6. Lower surface of same individual.	
Jennings formation, Chemung member, Polish Mountain, 2714.	
Figs. 7, 8. Heliophyllum scrutarium n. sp	540
7. Branching corallum showing calyxes.	
8. Specimen similar to preceding.	
Jennings formation, Chemung member ?, Sideling Hill Creek,	
Washington County.	
Fig. 9. Favosites sp	541
A small corallum showing size of the cells. Jennings formation, Che-	
mung member ?, Sideling Hill Creek, Washington County.	
Figs. 10, 11. Aulopora repens Knorr and Walch	542
10. Corallum attached to shell of Rhipidomella vanuxemi.	
11. Corallum similarly attached, showing some difference in propor-	
tion of corallites.	
Jennings formation, base of Parkhead member, hill-top south	
of Potomac River, 21/2 miles southeast of Cumberland.	

<sup>&</sup>lt;sup>1</sup> The figures following localities indicate the altitude in feet above the base of the Jennings formation at which the specimens were found.



#### PLATE XLVI

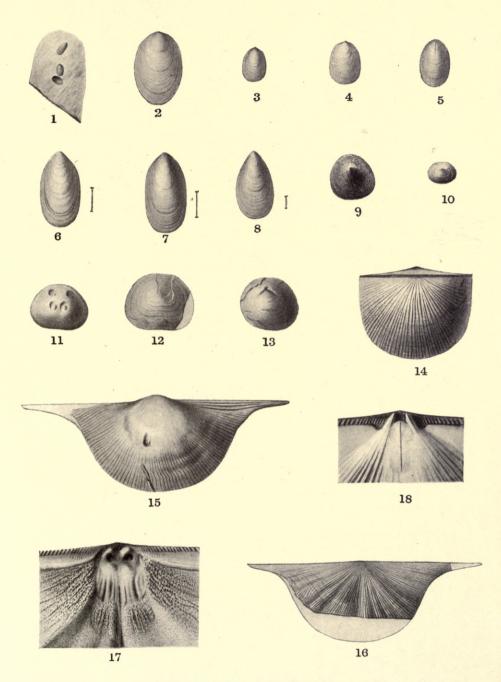
	PAGE
<ul> <li>Figs. 1, 2. Cladochonus humilis n. sp</li></ul>	542
Figs. 3, 4. Paleaster clarki n. sp	543
<ul> <li>3. Ambulacral surface, showing the character of the thecal plates, and some of the adambulacral plates. The mouth parts are not clearly retained. × 1½.</li> <li>4. Abactinal surface, showing the character of the three rows of plates on the arms, the fine intercalary plates of the median row and the large and mammillated body plates. × 1½.  Jennings formation, Chemung member, near Oakland.</li> </ul>	
Fig. 5. Spirorbis gyrus n. sp	544
An attached tube, showing the tubercled surface. × 5. Jennings formation, Chemung member ?, Sideling Hill Creek, Allegany County.	311
Fig. 6. Pteridichnites biseriatus n. sp	545



COELENTERATA—VERMES—ECHINODERMATA

### PLATE XLVII

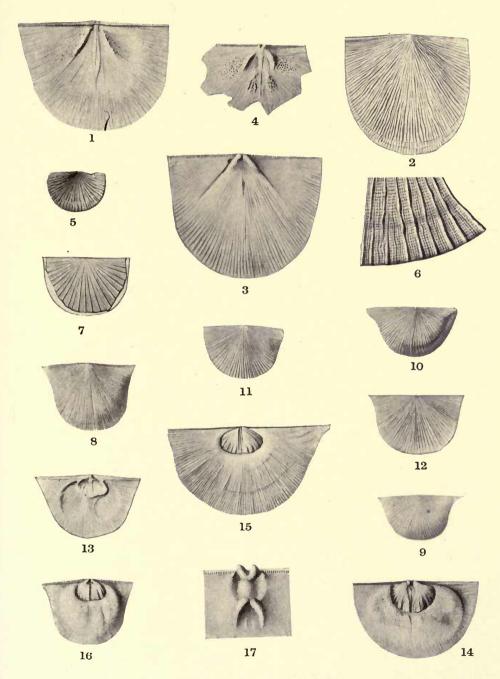
	PAGE
Figs. 1-5. Lingula oherni n. sp.	546
1. Small shells probably young of this species.  2. Single valve from preceding group.	
<ol> <li>Single valve from preceding group. × 6.</li> <li>Exteriors of valves showing slight differences of form.</li> </ol>	
5. Interior of valve.	
Jennings formation, Parkhead member, Williams Road, 3½	
miles east of Cumberland, 1393.	
Figs. 6, 7. LINGULA LIGEA Hall	547
6. Exterior of valve. × 3.	
7. Exterior of valve which differs slightly in form. × 3.	
Jennings formation, Woodmont member, National Road, east of Hancock, 1564 to 1599.	
of Hallcock, 1904 to 1977.	
Fig. 8. Lingula spatulata Vanuxem	548
Exterior of valve. × 6. Jennings formation, Woodmont member,	
Ithaca fauna, National Road, east of Hancock, 1149 to 1274.	
Figs. 9, 10. Orbiculoidea cf. media (Hall)	549
9. Dorsal valve. Chemung formation, New York.	
10. Dorsal valve somewhat distorted. Jennings formation, Parkhead member, Williams Road, 3½ miles east of Cumberland, 1393.	
member, withams Road, 572 miles east of Cumberland, 1595.	
Figs. 11-13. Crainella hamiltoniæ Hall	549
11. Cast of interior of dorsal valve. The vascular markings are visible	
upon cast, but are not shown in figure. Jennings formation,	
Parkhead member, Williams Road, Polish Mountain, 1660.	
12, 13. Exterior and cast of interior of dorsal valve. Jennings forma-	
tion, Chemung member, Ellerslie, Penna., 1474.	
Tig 14 (manyyanayan paysag, (Canad)	551
Fig. 14. Stropheodonta demissa (Conrad)	991
fauna, Hancock-Harrisonville Road, 2 miles north of Hancock,	
882.	
Figs. 15-18. Stropheodonta maynardi n. sp	551
15. Ventral valve of type.	
16. Dorsal valve.	
17. Enlargement of cast of portion of interior of dorsal valve. × 2.	
18. Enlargement of a portion of a cast of the interior of the ventral valve showing hinge and muscular scars. $\times$ 2.	
Jennings formation, Chemung member, Town Creek, 2391.	
Commission, Chamans manner, 20th Olon, 2001.	



MOLLUSCOIDEA—BRACHIOPODA

#### PLATE XLVIII

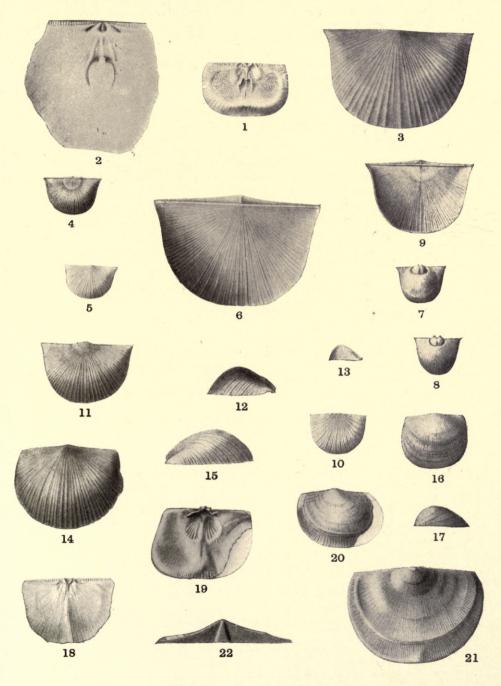
	PAGE
Figs. 1-4. Leptostrophia perplana var. nervosa (Hall)	552
1. The interior of a ventral valve.	
2. Ventral valve showing the character of the surface.	
3. Internal cast of an average ventral valve showing muscular scars	
and denticulate hinge.	
4. Interior of the dorsal valve showing the double cardinal process,	
muscular fulcra, and pustulose patches about the muscular area.	
Jennings formation, Chemung member, from localities near	
Deer Park and Oakland.	
Figs. 5, 6. Leptostrophia perplana var. alternata n. var	553
5. Cast of exterior of ventral valve, hinge-line imperfect.	
6. Enlargement of striæ. $\times$ 5.	
Jennings formation, Chemung member, Town Creek, 2391.	
Fig. 7. Leptostrophia interstrialis (Vanuxem)	
Ventral valve. Striæ of shell are less regular than shown and some-	
what nodose. Jennings formation, Woodmont member, Ithaca	
fauna, National Road, east of Millstone, 795.	
Figs. 8-17. Douvillina cayuta (Hall)	555
8. A small ventral valve of average proportions.	
9, 10. Two broader ventral valves.	
11. External cast of dorsal valve.	
12. Dorsal valve.	
13. Interior of ventral valve showing the clearly defined brachial de-	
pressions in front of the muscle scars.	
14. A characteristic internal cast of the ventral valve showing mus-	
cular scars and crenulate hinge.	
15. Internal cast of a larger ventral valve.	
16. Internal cast of ventral valve.	
17. Enlargement of the cardinal portion of the dorsal valve.	
Jennings formation, Chemung member, Deer Park, Oakland	
and Altamont.	



MOLLUSCOIDEA-BRACHIOPODA

#### PLATE XLIX

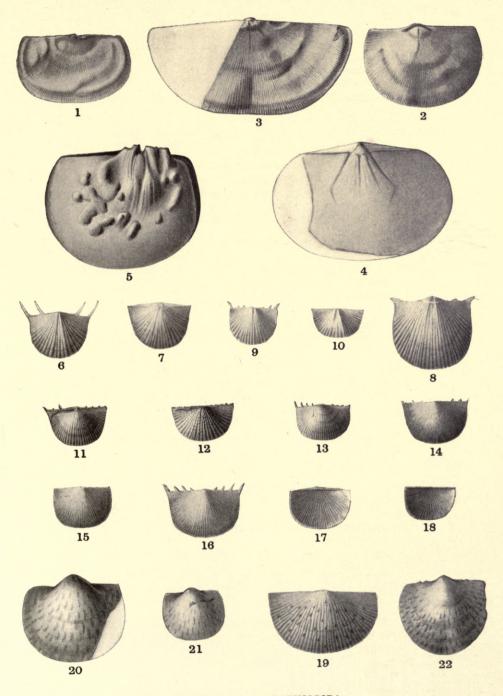
	PAGE
Figs. 1, 2. DOUVILLINA CAYUTA (Hall)	999
1. Interior of dorsal valve.	
2. Enlargement of internal cast of dorsal valve. × 2.	
Jennings formation, Chemung member, Oakland and Deer	
Park.	
Figs. 3-13. Douvillina cayuta var. graciliora n. var	556
3. Ventral valve. × 3.	000
4. Ventral valve represented somewhat too concave at the umbo.	
5. Ventral valve.	
6. Dorsal view of shell. × 3.	
7. 8. Internal casts of ventral valves.	
9. Dorsal view of a larger specimen. × 2.	
10. Ventral valve similar to fig. 1.	
11. 12. Upper and profile views of a characteristic ventral valve. $\times$ 2.	
13. Profile view of ventral valve.	
Jennings formation, Chemung member, Deer Park and Oak-	
land.	
Figs. 14-17. DOUVILLINA ARCUATA (Hall)	557
14, 15. Upper and profile views of a typical ventral valve. $\times$ 2. From	
Upper Devonian of Lime Creek, Iowa. (Introduced for com-	
parison with following.)	
16, 17. Upper and profile views of a ventral valve believed to be of this species.	
Jennings formation, Chemung member, National Road, 6	
miles west of Frostburg.	
Fig. 18. Strophonella cf. reversa (Hall)	557
The interior of a dorsal valve showing the reversed convexity, cardinal	
process, hinge and median sinus. Jennings formation, Che-	
mung member, Trout River, near Oakland.	
TV 10.00 G	
Figs. 19-22. Schuchertella Chemungensis (Conrad)	559
19. Interior of small dorsal valve. Deer Park.	
20. Dorsal valve. Wills Creek Station.	
21, 22. Upper and cardinal views of a ventral valve. Two miles east of Oakland.	
Jennings formation, Chemung member.	
ountings formation, Chemidis member.	



MOLLUSCOIDEA-BRACHIOPODA

#### PLATE L

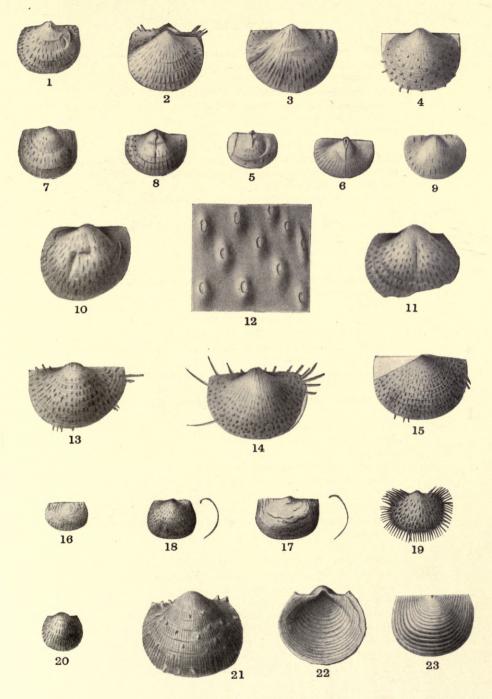
Figs. 1-3. Schuchertella chemungensis (Conrad)	AGE 559
2. Dorsal valve showing impress of cardinal process. Top of Polish  Mountain.	
3. Internal cast of a very broad ventral valve. Near Deer Park.  Jennings formation, Chemung member.	
Fig. 4. Schuchertella elliptica n. sp	560
Fig. 5. Schuchertella (?) ponderosa n. sp	560
<ul> <li>Figs. 6-10. Chonetes lepidiformis n. sp</li></ul>	561
10. More transverse ventral valve. X 3. Figs. 8, 9, and 10 are from National Road, east of Millstone. Jennings formation, Parkhead member.	
Figs. 11-13. Chonetes scitulus Hall	563
<ul> <li>12. Cast of interior of ventral valve showing papillose surface. × 2.</li> <li>Same locality.</li> <li>13. Ventral valve having finer striæ. Williams Road, Polish Mountain,</li> </ul>	
1422. Jennings formation, Parkhead member.	
Figs. 14-18. Chonetes oaklandensis n. sp	562
Jennings formation, Chemung member, Green Glade Run, near Deer Park.	
Fig. 19. Chonetes rowel n. sp	563
Figs. 20-22. Productella Lachrymosa (Conrad)	564
21. Ventral valve of small individual. Williams Road, Polish Mountain, 1660.	
22. Ventral valve upon which spines are somewhat closer than usual.  Same locality as preceding.  Jennings formation, Parkhead member.	



MOLLUSCOIDEA—BRACHIOPODA

#### PLATE LI

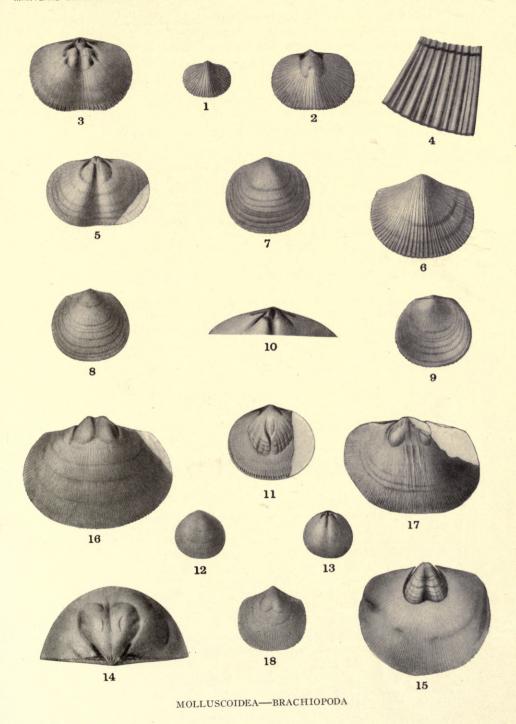
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Figs. 1-3. Productella lachrymosa (Conrad)	
tain.	
Figs. 4-9. Productella Lachrymosa var. Marylandica n. var	
Figs. 10-12. PRODUCTELLA LACHRYMOSA (Conrad) var	
Figs. 13-15. PRODUCTELLA SPECIOSA Hall	
Figs. 16-19. PRODUCTELLA HYSTRICULA (Hall)	567
Fig. 20. Productella navicelliformis n. sp	567
Figs. 21-23. Productus (Marginifera?) Hallanus Walcott	568



MOLLUSCOIDEA—BRACHIOPODA

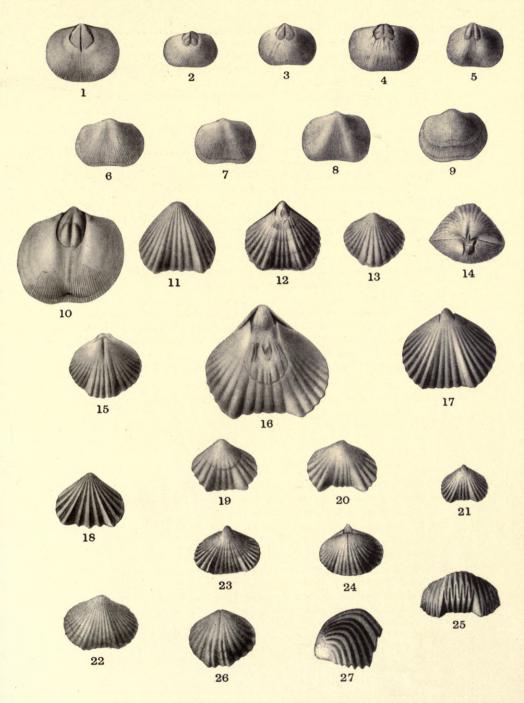
#### PLATE LII

	PAGI
Figs. 1-4. Dalmanella tioga (Hall)	569
1. Small ventral valve.	
2. Cast of interior of ventral valve.	
3. Cast of interior of dorsal valve showing muscular scars.	
4. Portion of surface of preceding. × 4.	
Jennings formation, Chemung member, Ellerslie, Penna.	
Figs. 1, 2, at 1316. Figs. 3, 4, at 1474.	
Fig. 5. Dalmanella carinata (Hall)	570
Cast of interior of dorsal valve. Jennings formation, Chemung mem-	
ber, west of Ellerslie, Penna.	
Fig. 6. Dalmanella sp	572
Ventral valve. $\times$ 3. Jennings formation, Chemung member, National	
Road, Polish Mountain.	
Figs. 7-11. RHIPIDOMELLA VANUXEMI (Hall)	572
7. Ventral valve. Hill south of Potomac River, 2½ miles southeast of	
Cumberland.	
8, 9. Ventral and dorsal valves. Hinge line is shorter and cardinal	
angles more acute than in fig. 7. Same locality.	
10. Enlargement of interior of dorsal valve showing hinge. $\times$ 2. Williams Road, Polish Mountain, 1371.	
11. Cast of interior of ventral valve showing muscular scars. Base of	
Parkhead member, hill south of Turners Run Road, 9 miles	
southeast of Cumberland.	
Jennings formation, Parkhead member.	
Figs. 12, 13. Rhipidomella vanuxemi var.	
12. Ventral valve.	
13. Cast of interior of dorsal valve.	
Jennings formation, base of Parkhead member, B. & O. R. R.	
cut, Rocky Run, 7 miles southeast of Cumberland.	
Figs. 14-18. Schizophoria striatula (Schlotheim)	572
14. Cast of interior of ventral valve of an unusually large individual	
showing deep muscular scars. Western Maryland Railroad, 2	
miles west of Pawpaw, 1300.	
15. Cast of interior of ventral valve. Same locality as preceding.	
16. Cast of interior of dorsal valve, preserving striæ. Yellow Springs	
Road, 3 miles east of Berkeley Springs, West Virginia, 660 feet	
west of beginning of section.	
17. Cast of interior of dorsal valve. National Road, west of Tonoloway Ridge.	
10 0-4 -6 -4 -	
locality as fig. 16. 310 feet west of beginning of section.	
Jennings formation, Woodmont member, Ithaca fauna.	
oomings formation, woodmont member, Ithaca fauna.	



#### PLATE LIII

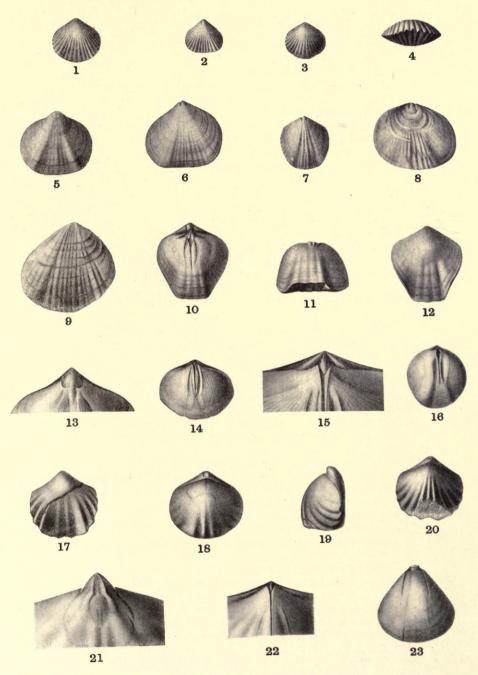
	PAGE
Fig. 1. Schizophoria striatula (Schlotheim)	
Cast of interior of ventral valve which approaches the next variety.  Jennings formation, Chemung member, Ellerslie, Penna., 1474.	
Figs. 2-9. Schizophoria striatula var. marylandica n. var	574
5. Internal cast of ventral valve. 6-8. Three ventral valves.	
9. Dorsal valve.	
Jennings formation, Chemung member, Deer Park and vicinity.	
Fig. 10. Schizophoria striatula (Schlotheim)?	
Figs. 11-16. Camarottechia congregata var. parkheadensis n. var 11. Ventral valve more elongate than usual. Parkhead member, National Road, east of Hancock, 1600.	
<ul><li>12. Cast of interior of ventral valve. Associated with fig. 11.</li><li>13. Dorsal valve. Associated with preceding.</li></ul>	
14. Posterior view of cast of interior. Chemung member, National Road, Polish Mountain above 7th turn.	
15. Cast of interior of dorsal valve. Associated with fig. 14.	
16. Cast of interior of ventral valve. $\times$ 2. Associated with preceding.	
17. Cast of interior of ventral valve approaching C. sappho in form.	
Base of Parkhead member, road 1 mile north of Rocky Run. 6 miles southeast of Cumberland.	
Jennings formation.	
Figs. 18-20. Camarotechia contracta (Hall)	
19, 20. Ventral valves possessing less angular plications, approaching	
C. congregata var. parkheadensis. National Road, Polish Moun-	
tain, above 7th turn.  Jennings formation, Chemung member.	
Fig. 21. Camarotechia contracta (Hall) var	577
Figs. 22-25. Camarotechia horsfordi (Hall)	578
23, 24. Cast of interiors of ventral and dorsal valves. Parkhead member. 2½ miles north of mouth of Sideling Hill Creek, 1700.	
25. Anterior view of shell. Parkhead member, Western Maryland	
Railroad, 2 miles west of Pawpaw.  Jennings formation.	
Figs. 26, 27. Camarotechia orbicularis (Hall)	579
26. Cast of interior of dorsal valve. 2½ miles southwest of Mountain Lake Park.	010
27. Side view of dorsal valve. Jennings Run Road, 1 mile east of Barrelville.	
Jennings formation, Chemung member.	



MOLLUSCOIDEA—BRACHIOPODA

#### PLATE LIV

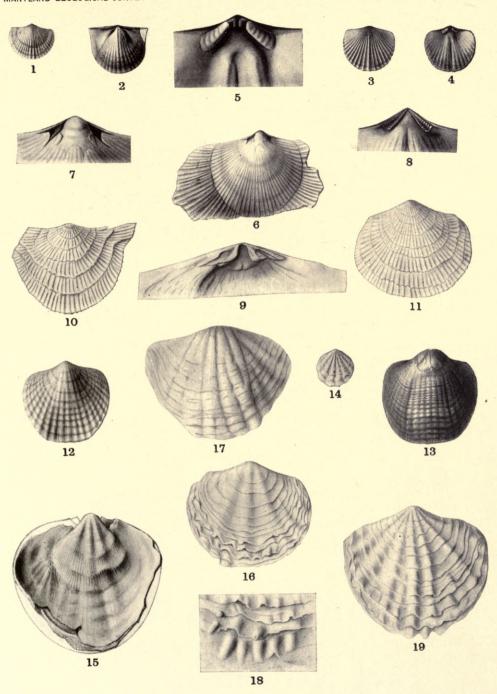
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Figs. 1-4. Camarotechia eximia (Hall)	579
1. Ventral valve. Town Creek, 4596.	
2. Cast of interior of ventral valve. Allegany Grove, 1860.	
3. Cast of interior of dorsal valve. Western Maryland Railroad, 2	
miles west of Pawpaw, 4703.	
4. Anterior view showing slight development of sinus. × 2. Town	
Creek, 4596.	
Jennings formation, Chemung member.	
Johnings formation, Choming Momeout	
Figs. 5-8. Liorhynchus mesacostale Hall	581
5. Ventral valve.	001
6. Cast of interior of ventral valve.	
7. Cast of interior of ventral valve of young individual.	
8. Cast of interior of ventral valve of a somewhat crushed individual.	
Jennings formation, Parkhead member, Williams Road, 31/2	
miles east of Cumberland, 1393.	
Fig. 9. Liorhynchus cf. multicostum Hall	581
Exterior of ventral valve. Jennings formation, Parkhead member (?),	
National Road, west side of Green Ridge.	
Figs. 10-16. Liorhynchus globuliforme (Vanuxem)	582
10-12. Dorsal, anterior and ventral views of an internal cast of an	
unusually elongate individual. Yellow Springs Road, 3 miles	
east of Berkeley Springs, W. Va., 1124.	
13. Enlargement of muscular scars and hinge of ventral valve. $\times$ 3.	
National Road, east of Millstone, 1122.	
14. Cast of interior of dorsal valve of usual form. Western Maryland	
Railroad, 2 miles west of Pawpaw, 1300.	
15. Enlargement of hinge and muscular scars of fig. 14. × 4.	
16. Cast of interior of dorsal valve. Locality not known.	
Jennings formation, Woodmont member, Ithaca fauna.	
Figs. 17-22. Pugnax pugnus var. altus Calvin	583
17-19. Ventral, dorsal and side views of internal cast. Woodmont, 1000.	
20. Cast of interior of a dorsal valve bearing more pronounced angular	
plications.	
21. Enlargement of muscular scars and hinge of ventral valve. $\times$ 3.	
Same locality as figs. 17-19.	
22. Enlargement of hinge of dorsal valve. × 3. Yellow Springs Run	
Road, 3 miles east of Berkeley Springs, West Virginia, 510 feet	
west of beginning of section.	
Jennings formation, Woodmont member, Ithaca fauna.	
Fig. 23. Cryptonella cf. eudora Hall	584
Internal cast of a ventral valve. Jennings formation, Chemung mem-	201
ber (?), Williams Road, Polish Mountain.	
( · ), Williams Ituau, I ulish Muullain,	



MOLLUSCOIDEA—BRACHIOPODA

#### PLATE LV

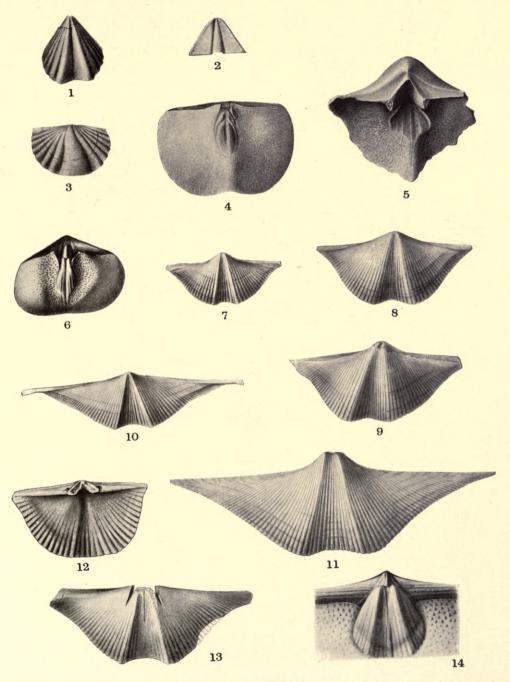
	PAGE
Figs. 1-5. Tropidoleptus carinatus (Conrad)	585
1. Ventral valve. Williams Road, 31/2 miles east of Cumberland, 1466.	
2. Cast of interior of ventral valve. Sideling Hill Creek, 21/2 miles	
above mouth, 1700.	
3. Dorsal valve. Two miles north of mouth of Town Creek, 1949.	
4. Interior of dorsal valve. Same locality as preceding specimen.	
5. Enlargement of hinge of fig. 4. × 4.	
Jennings formation, Parkhead member.	
Figs. 6-11. Atrypa reticularis (Linné)	586
6. Ventral valve showing alation about margin unusually well. Jen-	000
nings formation, Woodmont member, Ithaca fauna, National	
Road, east of Hancock, 690.	
7. Enlargement of hinge of cast of interior of ventral valve. $\times 2$ .	
Same specimen as fig. 6.	
8. Enlargement of hinge of cast of interior of dorsal valve. $\times$ 3. 2½	
miles northeast of Pratt.	
9. Cardinal region of the dorsal valve enlarged, showing the crenulate	
dental sockets. Polish Mountain.	
10. Ventral valve retaining parts of concentric lamellæ. Near Deer	
Park.	
11. Ventral valve. Oakland.	
Jennings formation, Chemung member.	
Figs. 12, 13. Atrypa spinosa Hall	587
12. Ventral valve.	
13. Cast of interior of dorsal valve.	
Jennings formation, Chemung member, Ellerslie, Penna., 1524.	
, , , , , , , , , , , , , , , , , , , ,	
Figs. 14-19. Atrypa hystrix Hall	589
14. A young ventral valve. National Road, 5 miles west of Frostburg.	
15. Cast of interior of ventral valve with very coarse plications. 34	
mile southwest of Gortner.	
16. Ventral valve. Trout Creek, Oakland.	
17. Dorsal valve. Near Oakland.	
18. Enlargement of surface showing the lamellæ enfolding into spines.	
$\times$ 2.	
19. Ventral valve. Trout Creek, Oakland.	
Jennings formation, Chemung member.	



MOLLUSCOIDEA—BRACHIOPODA

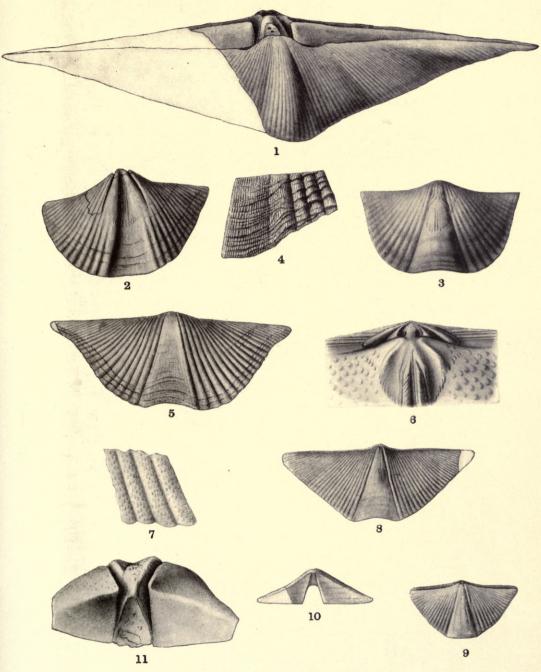
#### PLATE LVI

	PAGE
Figs. 1-3. Cyrtina hamiltonensis Hall	591
1. Cast of interior of ventral valve. Chemung member, road from	
Oakland to Deer Park.	
2. Cast of interior of ventral cardinal area. Same locality.	
3. Dorsal valve. × 2. Woodmont member, Ithaca fauna, National	
Road, west of Tonoloway Ridge.	
Jennings formation.	
Figs. 4-6. Reticularia lævis (Hall)	592
4. Cast of interior of dorsal valve.	
5. Interior of ventral valve. Portage formation, New York.	
6. Cast of interior of ventral valve showing muscular scars.	
Jennings formation, Woodmont member, Ithaca fauna, Na-	
tional Road, east of Hancock, 690.	
Figs. 7-14. Spirifer disjunctus Sowerby	593
7. Ventral valve. National Road, Polish Mountain.	
8, 9. Ventral valves. Near Deer Park.	
10. Ventral valve with extended cardinal angles. National Road, near	
top of Polish Mountain.	
11. Ventral valve with extended cardinal angles. Near Deer Park.	
12. Interior of dorsal valve. Near Oakland.	
13. Internal cast of ventral valve. National Road, Polish Mountain.	
14. Enlargement of cardinal portion of internal cast of ventral valve.	
× 2. Town Creek, 2122.	
Jennings formation, Chemung member.	



MOLLUSCOIDEA—BRACHIOPODA

PLATE LVII	
	AGI
Fig. 1. Spirifer disjunctus Sowerby	593
Internal cast of conjoined valves with extremely extended cardinal	
angles. Jennings formation, Chemung member, near Deer Park.	
Figs. 2-5. Spirifer mesastrialis Hall	596
2. Cast of interior of ventral valve. Near Pawpaw, W. Va.	
3. Cast of interior of dorsal valve. National Road, east of Millstone, 2444.	
4. Enlargement of portion of surface of dorsal valve. Wills Creek Station, Penna.	
5. Dorsal valve. National Road, east of Millstone.	
Jennings formation, Chemung member.	
Figs. 6-10. Spirifer marcyi var. superstes n. var	597
6. Portion of cast of interior of dorsal valve, enlarged $\times$ 2, showing	
muscular scars and hinge. B. & O. Railroad cut, Rocky Run, 7	
miles southeast of Cumberland.	
<ol> <li>Enlargement of a portion of surface showing granulose plications.</li> <li>X 5. National Road, Polish Mountain.</li> </ol>	
8. Cast of interior of dorsal valve. National Road, Polish Mountain, above sixth turn.	
<ol> <li>Cast of interior of dorsal valve with shorter wings. National Road on Green Ridge, 2690.</li> </ol>	
10. Posterior view showing cardinal area of ventral valve with partially	
filled delthyrium. Associated with fig. 9.	
11. Posterior view of cast of interior of ventral valve showing strength	
of dental plates. Associated with fig. 9.	
Jennings formation, Figs. 6, 7 from near base of Parkhead	
member, Figs. 8-11 from Chemung member.	

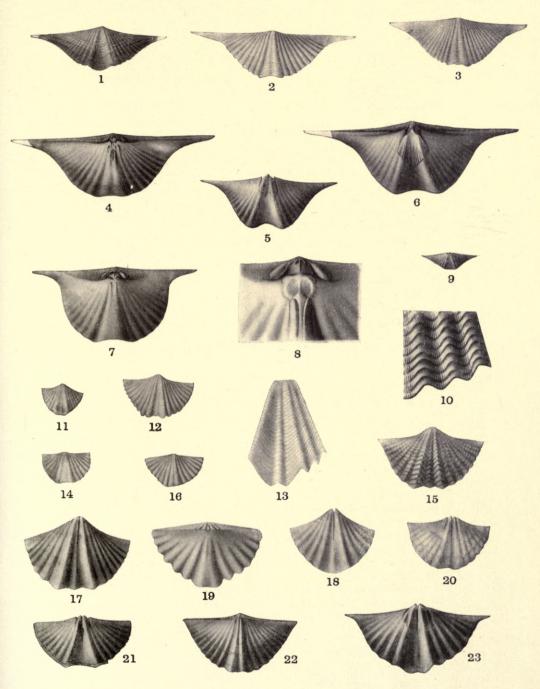


MOLLUSCOIDEA—BRACHIOPODA

### PLATE LVIII

PAGI	E
Figs. 1-10. Spirifer mucronatus var. posterus Hall and Clarke 599	9
1. Ventral valve of medium size. National Road, east of Hancock, 1149 to 1274.	
2. Dorsal valve with extended cardinal angles. National Road, west	
of Tonoloway Ridge.	
3. Dorsal valve. Associated with fig. 2.	
4. Cast of interior of a very large dorsal valve. Woodmont, 1032.	
5. Cast of interior of ventral valve of medium size. There is no	
median septum but muscular scar is divided by an impressed	
line. Yellow Springs Road, 3 miles east of Berkeley Springs, 660	
feet west of beginning of section.	
6. Cast of interior of large ventral valve with greatly extended ex-	
tremities. Woodmont, 1032.	
7. Cast of interior of dorsal valve differing from prevailing form.	
Woodmont, 1000.	
8. Enlargement of cast of interior of dorsal valve showing muscular	
scars. × 3. Western Maryland Railroad, 2 miles west of Pawpaw, 1300.	
9. Cast of interior of ventral valve of young individual. National	
Road, east of Hancock, 690.	
10. Enlargement of a portion of exterior of valve of young individual	
showing ornamentation. × 10. National Road, east of Mill-	
stone, 795.	
Jennings formation, Woodmont member, Ithaca fauna.	
Figs. 11-23. Spirifer (Delthyris) mesacostalis Hall 603	1
11. Ventral valve of a very small individual. Near Deer Park.	
12. A larger ventral valve. National Road, Polish Mountain.	
13. Enlargement of a part of surface of ventral valve showing median	
rib and sharp lamellose concentric markings. $\times$ 2. Same	
locality.	
14. Small dorsal valve. Same locality.	
15. Small ventral valve. × 2. The ribs are made to appear too sharp	
and the concentric lines too angular. Near Pawpaw, W. Va.	
16. Small dorsal valve. Near Deer Park.	
17, 18. Cast of interior of small ventral valves. × 2. Same locality.	
19. Cast of interior of small dorsal valve. × 2. Same locality.	
20. Cast of interior of ventral valve. Mountain Lake Park.	
21, 22. Cast of interiors of ventral and dorsal valves of usual size. Williams Road, Polish Mountain, 1660.	
23. Cast of interior of large ventral valve having extended cardinal	
angles. 4700 feet northeast of Sunnyside.	
Jennings formation, figs. 21, 22 Parkhead member, balance	
Datance	

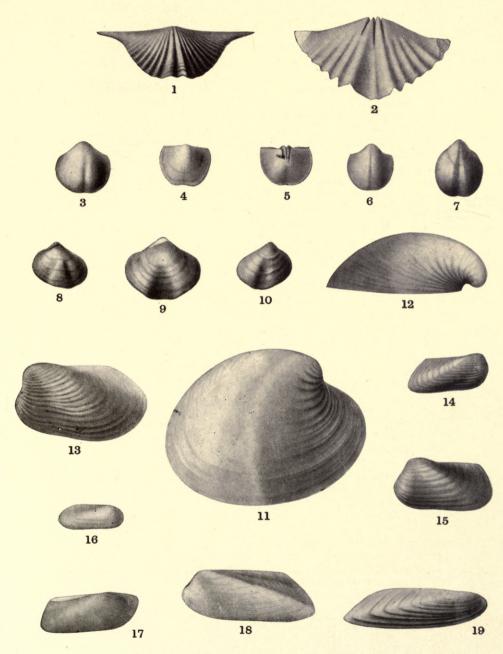
Chemung member.



MOLLUSCOIDEA—BRACHIOPODA

#### PLATE LIX

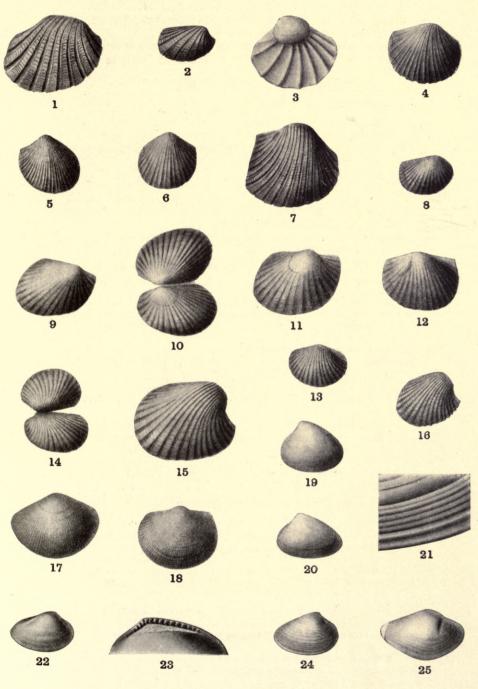
	PAGE
Figs. 1, 2. Spirifer (Delthyris) mesacostalis Hall	
<ol> <li>Cast of interior of ventral valve of usual size. X 2. National Road, Polish Mountain.         Jennings formation, Chemung member.     </li> </ol>	
Jennings formation, Onlineing member.	
Figs. 3-7. Ambocœlia umbonata (Conrad)	602
<ol> <li>Ventral valve. × 2. Polish Mountain.</li> <li>Dorsal valve. × 2. Same locality.</li> </ol>	
5. Internal cast of dorsal valve. $\times$ 2. Same locality.	
6. Exterior of ventral valve. × 2. Same locality.	
7. Internal cast of ventral valve. × 2. Near Deer Park.	
Jennings formation, Chemung member.	
Figs. 8-10. Athyris angelica Hall	604
8. Dorsal valve.	
9, 10. Ventral valves.  Jennings formation, Chemung member, Allegany Grove, 2941.	
Jennings for mation, Onemung member, Anegany Grove, 2541.	
Figs. 11, 12. Grammysia Elliptica Hall	
nine east of barrervine.	
Fig. 13. Grammysia subarcuata Hall	606
Left valve. Chemung formation, New York.	
Figs. 14, 15. Grammysia communis Hall	607
fauna, Yellow Springs Run Road, 3 miles east of Berkeley Springs, W. Va., 1124.	
Figs. 16, 17. PALÆANATINA ANGUSTA	609
16. A small right valve.	
17. Cast of interior of right valve.	
Jennings formation, Chemung member, Town Creek, 4596.	
Figs. 18, 19. Sphenotus contractus Hall.	610
18. Sculpture cast of left valve. Chemung formation, New York.	310
19. Right valve doubtfully determined. Jennings formation, Chemung	
member, Wills Creek Station, Penna.	



MOLLUSCOIDEA—BRACHIOPODA AND MOLLUSCA—PELECYPODA

#### PLATE LX

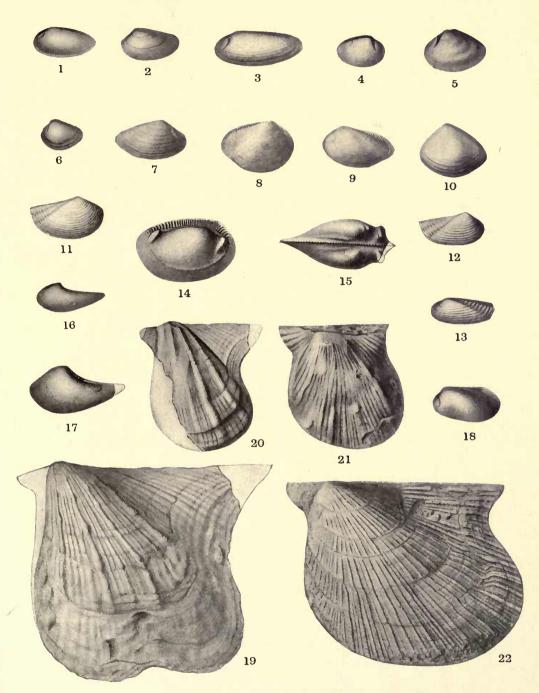
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	Figs. 1-3. Buchiola retrostriata (v. Buch)	PAGI 613
	mile west of Corriganville.  2. A very small right valve with few broad flat ribs with coarse re curved surface markings. × 5. Town Creek, Gilpin.	
	3. An enlargement showing the smooth embryo shell and the abrupt introduction of the radial ornament in secondary growth. $\times$ 10 Wolfe Mills, near Cumberland.	•
	Jennings formation, Genesee member.	01-
	Figs. 4-6. BUCHIOLA CONVERSA Clarke	7
	Figs. 7, 8. Buchiola Mariæ n. sp	615
	7. Right valve. × 4.	
	8. Smaller right valve. $\times$ 3. Jennings formation, Genesee member, Williams Road, Cumberland.	P
	Figs. 9-12. Buchiola? Livoniæ Clarke	
	<ol> <li>The two valves, normally expanded. Romney Road, 3½ miles southeast of Burlington, W. Va. Jennings formation, Genesee member.</li> </ol>	
	11. Right valve. × 4. Same locality as fig. 10.	
	12. Left valve of the type specimen showing the fine concentric lineation of ribs. X 3. Styliola limestone of Genesee shales, Livonia salt shaft, New York.	
	Figs. 13-16. Paracardium doris Hall	617
	<ul> <li>14. Both valves. × 4. Wolfe Mills, near Cumberland.</li> <li>15. A large right valve. × 4. West of Corriganville.</li> <li>16. The right valve. × 4. Same locality as fig. 15. Jennings formation, Genesee member.</li> </ul>	
]	Figs. 17, 18. Paracardium delicatulum Clarke	618
	17. A valve with normal characters, somewhat deformed about the hinge. X 10. This is the type specimen. Styliola limestone of the Genesee shale (Naples fauna). Canandaigua Lake, New York.	
	18. A right valve showing the extremely fine radial ribs, which are crossed by concentric lines, though these are made much too strong in the drawing. × 10.	
	Jennings formation, Genesee member, Wolfe Mills, near Cum-	
I	berland. Figs. 19-23. Nucula corbuliformis Hall	619
	19. Cast of interior of left valve. $\times$ 2. Woodmont member, Ithaca fauna, National Road, west of Tonoloway Ridge.	
	20. Cast of interior of left valve. × 2. Woodmont member, Ithaca fauna, same locality as fig. 19.	
	<ul> <li>21. Enlargement of portion of exterior. × 8. Woodmont member, Ithaca fauna, Berkeley Springs, West Virginia, 1058.</li> <li>22. Right valve. Parkhead member, 2 miles north of mouth of Town</li> </ul>	
	Creek, 1716.	
	<ol> <li>Enlargement of cast of interior showing hinge. Parkhead member, Williams Road, Polish Mountain, 1352.</li> <li>Jennings formation.</li> </ol>	
F	Fig. 24. PALÆONEILO PETILA Clarke?	624
F	Fig. 25. PALÆONEILO MAXIMA (Conrad) ?	622
	Creek, Parkhead member, 1282.  Jennings formation.	



MOLLUSCA—PELECYPODA

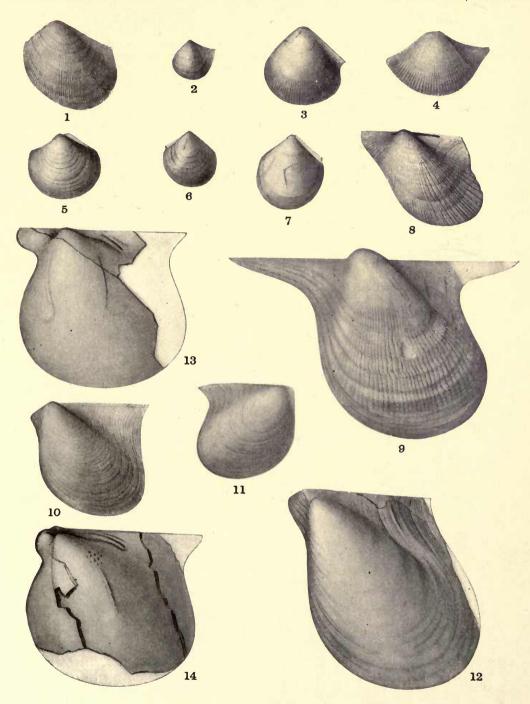
### PLATE LXI

	AGE
Figs. 1-3. PALÆONEILO PLANA Hall	621
<ol> <li>Left valve. Associated with preceding.</li> <li>Cast of interior of a very elongate left valve probably of this species.         Near Mr. Cheney's, 2½ miles northeast of Pratt, at base of section.     </li> </ol>	
Jennings formation, Chemung member.	
Figs. 4-6. PALÆONEILO BREVIS Hall	622
Figs. 7-10. Palæoneilo constricta (Conrad)	
8, 9. Sculpture casts of right and left valves. Hamilton formation, western New York.	
10. Cast of left valve. Jennings formation, Chemung member, Green Ridge.	
Figs. 11, 12. PALÆONEILO FILOSA (Conrad)	623
Fig. 13. PALÆONEILO ANGUSTA Hall	624
Figs. 14, 15. PALÆONEILO CRASSA n. sp	625
	000
Figs. 16, 17. Leda cf. diversa Hall	626
Jennings formation, Chemung member.	
Fig. 18. Macrodon Chemungensis Hall	
Figs. 19-21. Pterinea nodocosta n. sp	
and Oakland.  Jennings formation, Chemung member.	
Fig. 22. Pterinea chemungensis (Conrad)	



MOLLUSCA—PELECYPODA

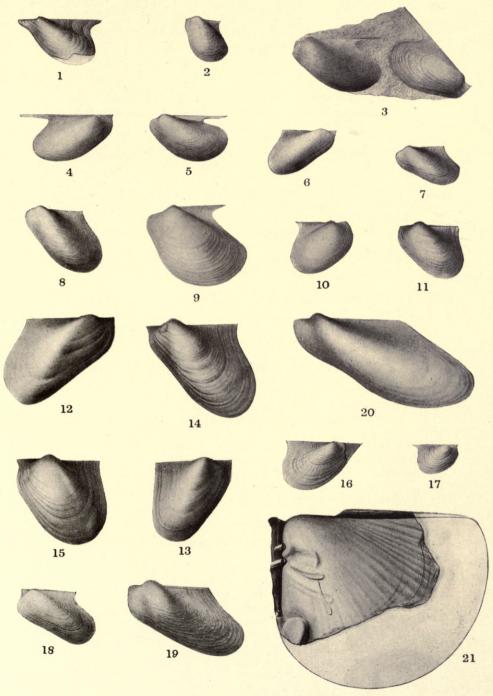
PLATE LXII	
P	AGE
Figs. 1-3. Lunulicardium encrinitum Clarke	630
1. Left valve showing the finely lineate surface. × 3. Town Creek, Gilpin, Allegany County.	
2. Same. × 2. Wolfe Mills, near Cumberland.	
3. Same. × 3. Allegany County.	
Jennings formation, Genesee member.	
Johnson Williams, Goldson Montes.	
Fig. 4. Lunulicardium cymbula n. sp	631
The single valve observed. × 5. Jennings formation, Genesee mem-	
ber, near Corriganville.	
bol, new contiguities	
Figs. 5-7. Pterochænia fragilis (Hall)	632
5. Right valve showing the smooth concentrically lined surface and	
the sica. × 3. Jennings formation, Woodmont member, Naples	
fauna, Town Creek, Gilpin.	
6, 7. Right and left valves. × 3. Jennings formation, Genesee mem-	
ber, west of Corriganville.	
Figs. 8, 9. Ectenodesma birostratum Hall	633
8. Cast of interior of left valve. The wings of this specimen are	
broken. Jennings formation, Woodmont member, Ithaca fauna,	
Little Orleans, Wagon Road, north of Western Maryland R. R.	
9. Left valve. Chemung formation, New York.	
	15
Figs. 10-12. Liopteria bigsbyi Hall	634
10,11. Left and right valves. Hamilton or Ithaca, Schoharie, New	
York.	
12. Left valve doubtfully referred to this species. Jennings forma-	
tion, Chemung member, National Road, Polish Mountain, 2714.	
Figs 12 14 Lightedia Maryiannica n ch	69=
Figs. 13, 14. Liopteria marylandica n. sp	059
member, Town Creek, 2023.	
member, 10 mi ereck, 2020.	



MOLLUSCA—PELECYPODA

#### PLATE LXIII

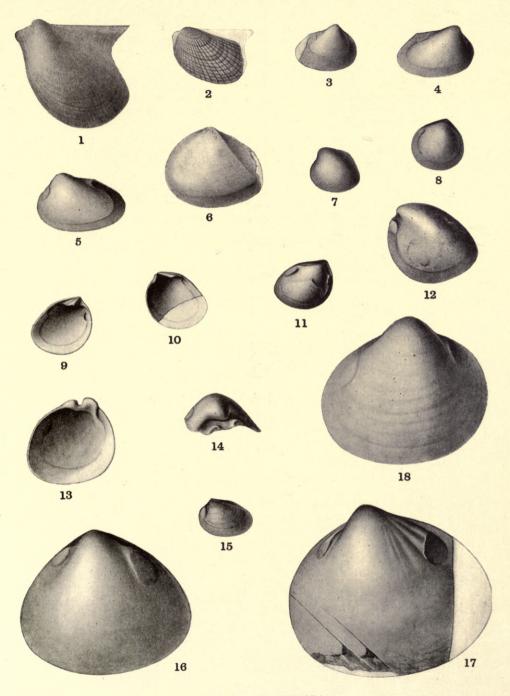
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Fig. 1. LIOPTERIA AURICULATA n. sp	
Fig. 2. LIOPTERIA sp.  A small suberect left valve with short posterior wing and concentrically lined surface. Jennings formation, Chemung member, Trout River, 2 miles south of Oakland.	
Fig. 3. Leptodesma rogersi Hall	636
Figs. 4-8. Leptodesma longispinum Hall	
6. Left valve doubtfully referred to this species. National Road, 6 miles west of Frostburg.	
7, 8. Right and left valves. Same locality.  Jennings formation, Chemung member.	
Figs. 9, 10. Leptodesma agassizi Hall	637
Figs. 11-15. LEPTODESMA MEDON Hall  11. Small left valve. National Road, 7 miles west of Frostburg. 12, 13. Right valves. Allegany Grove, 2307. 14, 15. Left valves. Allegany Grove, about 2215.  Jennings formation, Chemung member.	638
Figs. 16, 17. Leptodesma naviforme Hall	639
Figs. 18, 19. Leptodesma lichas Hall	640
Fig. 20. Leptodesma elongatum n. sp Left valve. Jennings formation, near top of Chemung member, Keyser-Piedmont Road, 2½ miles west of Keyser, W. Va.	640
Fig. 21. Gosselletia sp	641



MOLLUSCA—PELECYPODA

# PLATE LXIV

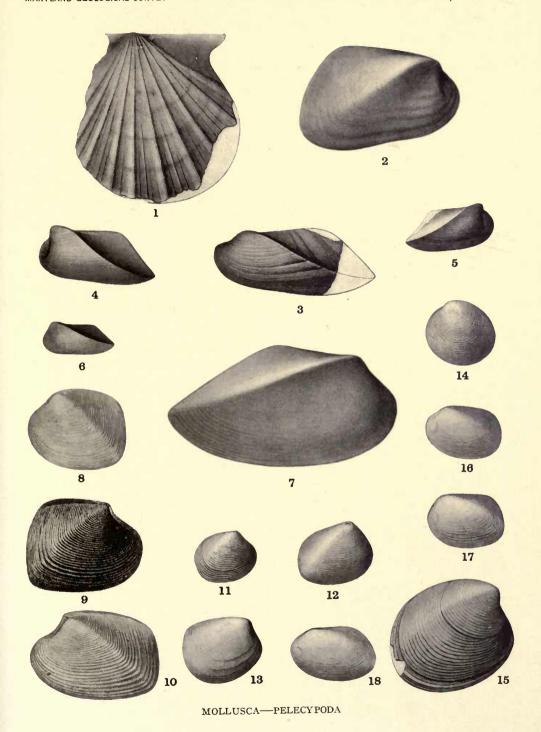
P	AGE
Fig. 1. ACTINOPTERIA CF. EPSILON Hall	642
A large left valve, showing radial lines. Ithaca beds, Ithaca, N. Y.	
Fig. 2. ACTINOPTERIA BOYDI (Conrad)	642
Left valve, outline restored. Jennings formation, Woodmont member,	0 1,2
Ithaca fauna, Woodmont, 1170.	
itilaca launa, woodinont, 1170.	
Figs. 3-5. Schizodus chemungensis (Conrad)	044
	044
3, 4. Casts of interior of right valve.	
5. Cast of interior of left valve.	
Jennings formation, Chemung member, Town Creek, 3453.	
Fig. 6. Schizodus chemungensis var. Quadrangularis Hall	645
Left valve. Jennings formation, Chemung member, near Deer Park.	
Figs. 7-14. Schizodus oherni n. sp	646
7. Left valve.	
8. Cast of interior of right valve of more circular shape than usual.	
9, 10. Interior of left and right valves showing hinge.	
11. Cast of interior of right valve.	
Jennings formation, Parkhead member, National Road, east	
of Millstone, 1781.	
12, 13. Cast of interior of very large left valves.	
14. Posterior view of cast of valve shown in fig. 13.	
Jennings formation, Chemung member, Sideling Hill Creek.	
Jennings formation, Chemung member, Sidering Hill Creek.	
Pig 15 Courgony Programme Programme Programme	0.15
Fig. 15. Schizodus frostburgensis n. sp.	047
Cast of interior of left valve. Jennings formation, Chemung member.	
National Road, 7 miles west of Frostburg.	
Eign 1010 G	
Figs. 16-18. Schizodus trigonalis n. sp	647
16-17. Casts of interiors of left valves. Chemung member, Town	
Creek, 2228.	
18. Cast of interior of right valve, probably of this species. Parkhead	
member, National Road, east of Millstone, 1781.	
Jennings formation.	



MOLLUSCA—PELECYPODA

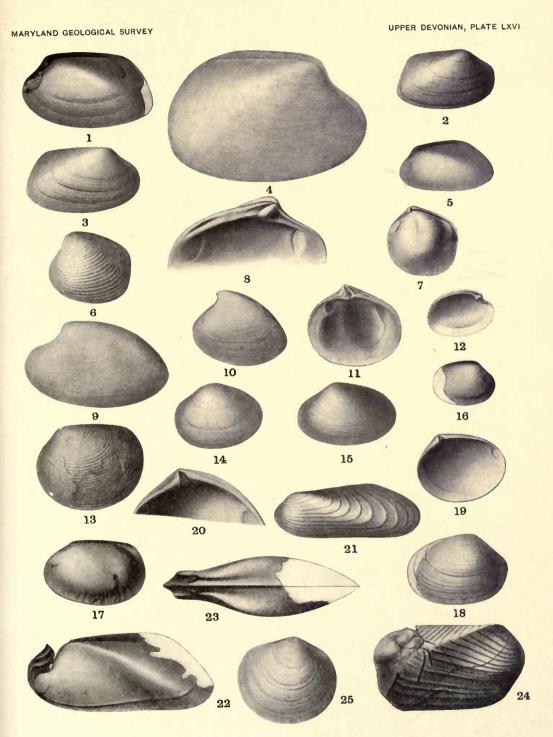
#### PLATE LXV

	PAGE
Fig. 1. Lyriopecten tricostatus (Vanuxem)	649
Left valve with characteristic surface markings. Jennings formation,	
Chemung member, Allegany County, near West Virginia line.	
Fig. 2. Modiomorpha subangulata Hall var	
Right valve. Jennings formation, Chemung member, Williams Road,	
Polish Mountain, 2382.	
	5
Fig. 3. Goniophora hamiltonensis Hall	
Left valve. Jennings formation, Parkhead member, Western Mary-	
land Railroad, 2 miles west of Pawpaw, 1485.	
77-11	051
Figs. 4-6. Goniophora truncata Hall	991
4. Cast of interior of left valve.	
5. Cast of interior of right valve.	
6. Left valve.  Jennings formation, Parkhead member, Williams Road, Polish	
Mountain, 1660.	
Mountain, 1000.	
Fig. 7. GONIOPHORA GLAUCA Hall	652
Right valve. Jennings formation, base of Parkhead member, White	
Sulphur Branch, 4 miles southeast of Pratt.	
Figs. 8-10. Cypricardella bellistriata (Conrad)	653
8. Left valve.	
9. Right valve.	
10. Left valve.	
Hamilton formation, New York.	
Figs. 11-15. Cypricardella marylandica n. sp	654
11. Right valve.	
12. Right valve somewhat distorted.	
13. Internal cast of right valve.	
14. Left valve of normal outline.	
15. Right valve expressing the correct characters of the exterior. × 2	
Jennings formation, Chemung member, Deer Park.	
Figs. 16-18. Cypricardella gregaria (Hall)	654
Internal casts of left valves. Jennings formation, Parkhead (?) mem-	
ber, National Road, west of Green Ridge.	



# PLATE LXVI

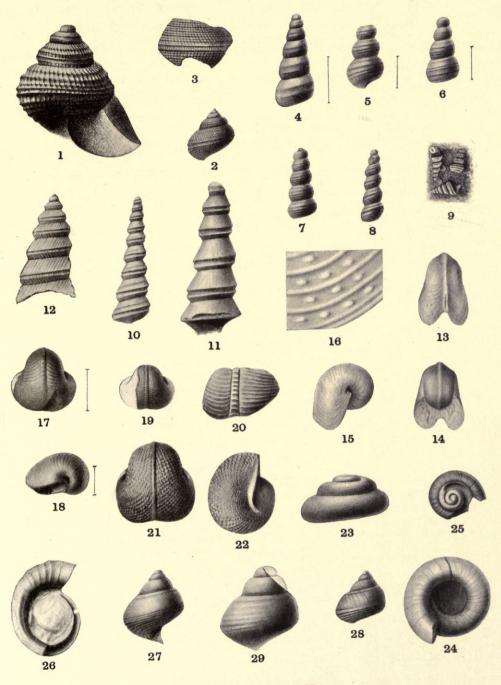
	PAGE
Figs. 1-5. Cypricardella tenuistriata (Hall)	656
1. Cast of interior of left valve. Sideling Hill Creek, 2½ miles above mouth, 1700.	
2. Right valve. Two miles north of mouth of Town Creek, 1716.	
3. Right valve, somewhat questionably referred to this species, upon	
which concentric striæ of umbo are nearly obsolete. Two miles	
north of mouth of Town Creek, 1632.	
Jennings formation, Parkhead member.	
4. Large left valve. Hamilton formation, New York.	
Figs. 6-12. Cypricardella nitidula n. sp	656
6. Left valve showing the well marked umbonal slope and strong	
concentric ridges. $\times 2$ .	
7. Internal cast of left valve showing muscle scars and hinge. × 2.	
8. Gutta-percha squeeze of hinge of left valve. × 2.	
9, 10. Two left valves of an elongate finely lined shell, with posterior	
umbonal ridge close upon the margin. These shells resemble in	
outline C. tenuistriata Hall except for the position of the pos-	
terior ridge.	
11. Gutta-percha squeeze showing interior of right valve. $\times$ 2.	
12. The interior of a small left valve of the same species.	
Jennings formation, Chemung member, figs. 6-11 Deer Park,	
fig. 12 National Road, west of Frostburg.	
ng. 12 National Road, west of Prostourg.	
E' 10 0	
Fig. 13. CYPRICARDELLA CUMBERLANDLÆ n. sp	65%
Cast of interior left valve. Jennings formation, Chemung member,	
Allegany Grove.	
Figs. 14-20. Cypricardella crassa n. sp	657
14, 15. Left valves.	
16. Cast of interior of right valve.	
17. Cast of interior of left valve.	
18. Right valve.	
19. Interior of right valve.	
20. Hinge of right valve enlarged $\times$ 2.	
Jennings formation, Chemung member, National Road, east of	
Millstone, 2761.	
Fig. 21. Cypricardinia elegans n. sp	659
Left valve of type. Jennings formation, Chemung member, National	
Road, 300 feet west of schoolhouse, Belle Grove.	
road, 500 feet west of schoolhouse, belie grove.	
Diag 00 04 Compression	0.00
Figs. 22-24. Cypricardinia elegans var. angusta n. var	659
22. Cast of interior of left valve.	
23. Dorsal view of internal cast. The valves are not equal in convexity	
as the figure seems to indicate.	
24. Right valve.	
Jennings formation, Chemung member, Town Creek, 3584.	
, and a decing of the cross, o	
Fig. 25. Paracyclas marylandica n. sp	660
Right valve of type. Jennings formation, Chemung member, Town	000
Crook 2070	
Creek, 3870.	



MOLLUSCA-PELECYPODA

#### PLATE LXVII

I	AGE
Figs. 1-3. PLEUROTOMARIA (GYROMA) CAPILLARIA Conrad	661
2. Dorsal view of small shell. Jennings formation, Parkhead member, Sideling Hill Creek, 2½ miles above mouth, 1700.	
3. Exterior of portion of shell showing ornamentation and slit band. Associated with preceding.	
Fig. 4. Hormatoma bistriata n. sp	663
Figs. 5-8. ECTOMARIA MARYLANDICA n. sp	663
mouth, 1700. 7. Dorsal view of type specimen. Western Maryland Railroad, 2 miles west of Pawpaw, 1597.	
8. Cast of exterior of shell. The apical angle is much too small, due to cast. Same locality.  Jennings formation, Parkhead member.	
	ees
Figs. 9-12. ECTOMARIA ECCLESIÆ n. sp	004
11. Part of the spiral with the concentric striæ obsolete. × 5. Near Oakland.	l le
12. An enlargement of part of the spire showing the surface ornamentation. × 5. Polish Mountain.  Jennings formation, Chemung member.	
Figs. 13-16. Bellerophon nactoides n. sp.	665
13-15. Dorsal, ventral, and side views of cast of exterior. National Road, west of Tonoloway Ridge.	000
16. Enlargement of portion of surface. × 3. Same locality.  Jennings formation, Woodmont member, Ithaca fauna.	
Figs. 17-20. Bellerophon Clarki n. sp	666
19. Dorsal view. Western Maryland Railroad, 2 miles west of Paw- paw, 1597.	
20. Enlargement of exterior showing ornamentation. Polish Mountain.	
Jennings formation, Parkhead member.	
Figs. 21, 22. Bucanopsis Mæra (Conrad)	667
Figs. 23-25. Straparollus marylandicus n. sp. 23. Internal cast of type, dorsal view.	668
<ul> <li>24. Lower surface of specimen illustrated in fig. 23, showing large umbilicus. Sideling Hill Creek, 2½ miles above mouth, 1700.</li> <li>25. Upper view of small shell. Williams Road, Polish Mountain, 1661.</li> </ul>	
Jennings formation, Parkhead member.	
Fig. 26. Phænerotinus Laxus (Hall)	669
Figs. 27-29. CYCLONEMA CONCINNUM Hall	670
Creek, 2228. 28. Dorsal view of smaller specimen. Parkhead member, Western Maryland Railroad, 2 miles west of Pawpaw, 1597.	
29. Internal cast. Parkhead member, Sideling Hill Creek, 2½ miles above mouth.	
Jennings formation	



MOLLUSCA—GASTROPODA

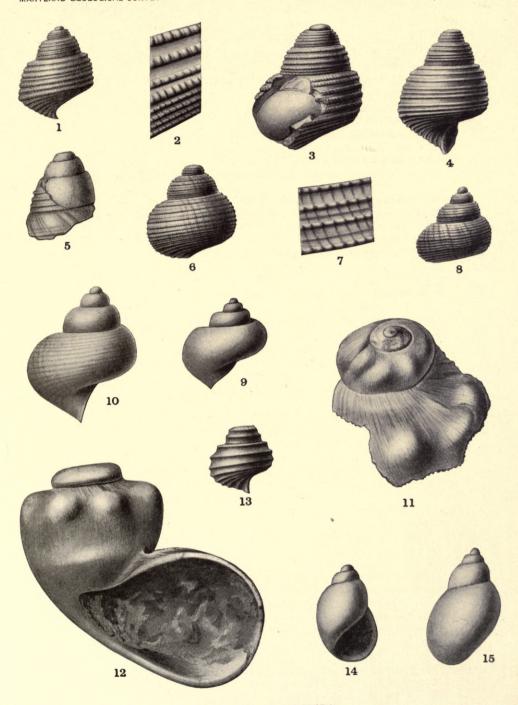
# PLATE LXVIII PAGE 1. Dorsal view. 2. Portion of the surface of a shell enlarged. $\times$ 3. 3. Dorsal view of individual showing great thickness of the shell. 4. Dorsal view showing aperture. Type. Jennings formation, Chemung member, Town Creek, 2228. Shell preserving portion of test, showing ornamentation. Jennings formation, Chemung member, Town Creek, 2228. 6. Dorsal view of type. Sideling Hill Creek, 21/2 miles above mouth, 1700. 7. Enlargement of a portion of the surface showing ornamentation. $\times$ 5. Same locality. 8. Dorsal view of a shell of slightly different proportions. Same locality. 9. Cast of interior. Same locality. 10. Internal cast of a very large shell. Williams Road, Polish Mountain, 1600. Jennings formation, Parkhead member. 11. Profile from a replica. The original cast of this is somewhat imperfect or distorted about the lower edge of the aperture. 12. A part of the exterior drawn from a gutta-percha squeeze. Jennings formation, Chemung member, National Road, 6 miles west of Frostburg. Dorsal view. Jennings formation, Chemung member, National Road, east of Hancock, 2223. Figs. 14, 15. Macrochilina pulchella n. sp. . . . . . . . . 675

Jennings formation, Chemung member, Williams Road, Polish

14. Internal cast of the only specimen observed.  $\times$  5.

15. Exterior of the same.  $\times$  5.

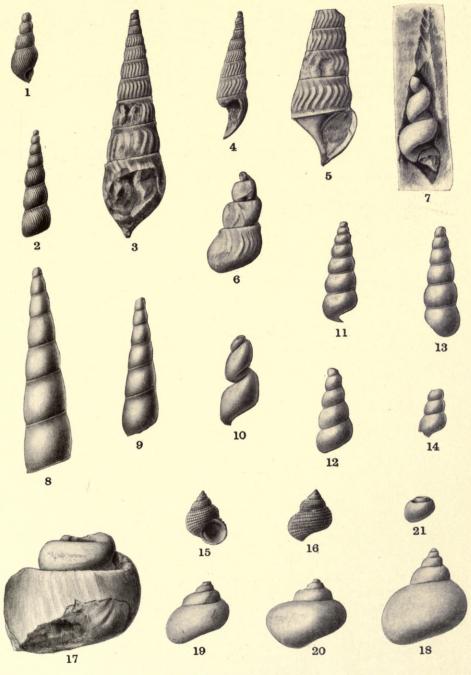
Mountain.



MOLLUSCA—GASTROPODA

#### PLATE LXIX

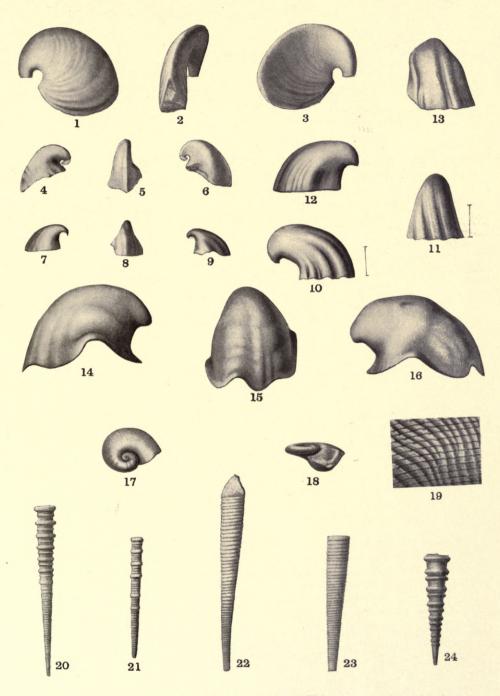
I I I I I I I I I I I I I I I I I I I	AGE
Figs. 1, 2. Loxonema Hamiltoniæ Hall	
2 miles west of Pawpaw, 1597. 2. Dorsal view of a larger individual of the usual proportions. Same	
locality, 1485.  Jennings formation, Parkhead member.	
	050
Figs. 3-7. Loxonema terebrum Hall	010
5. A portion of the exterior. Same locality. 6. Part of an internal cast. Glade Run.	
7. External and internal cast of a specimen. Same locality. Jennings formation, Chemung member.	
Figs. 8-10. Loxonema styllolum Hall	676
8, 9. Dorsal view of exteriors of shells upon which ornamentation is not preserved.	
10. Internal cast of apical portion.  Jennings formation, Chemung member, Town Creek, 2238.	
Figs. 11-14. Loxonema (?) Glabrum n. sp	677
	070
Figs. 15, 16. Trachyodomia precursor (Clarke)	678
Figs. 17, 18. Holopea rowei n. sp	679
Jennings formation, Chemung member, Williams Road, Polish Mountain.	
Figs. 19, 20. Holopea Marylandica n. sp	680
Fig. 21. Holopea humilis n. sp	680



MOLLUSCA—GASTROPODA

## PLATE LXX

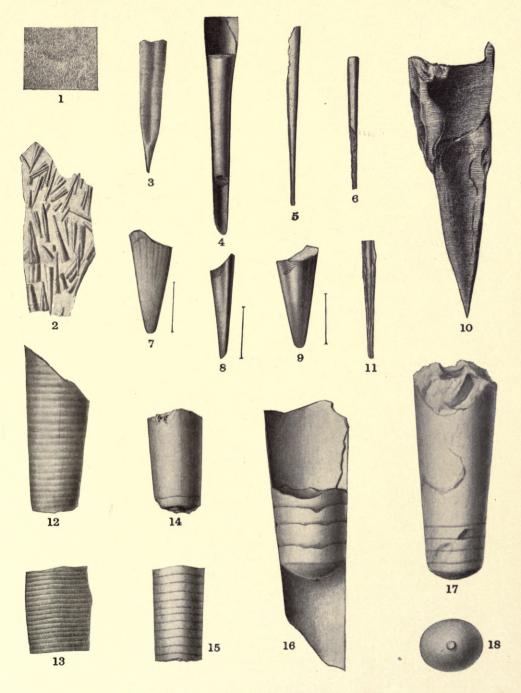
Figs. 1-3. PLATYCERAS COMPRESSUM n. sp	PAGE 683
Figs. 4-6. Orthonychia prosseri n. sp	
Figs. 7-9. Orthonychia unguiculata n. sp	
Figs. 10, 11. Orthonychia sp	682
Figs. 12-16. PLATYCERAS MARYLANDICUM n. sp	
Figs. 17-19. DIAPHOROSTOMA LINEATUM (Conrad)	684
Figs. 20-23. Tentaculites descissus n. sp	686
Fig. 24. Tentaculites spiculus Hall	687



MOLLUSCA-GASTROPODA

### PLATE LXXI

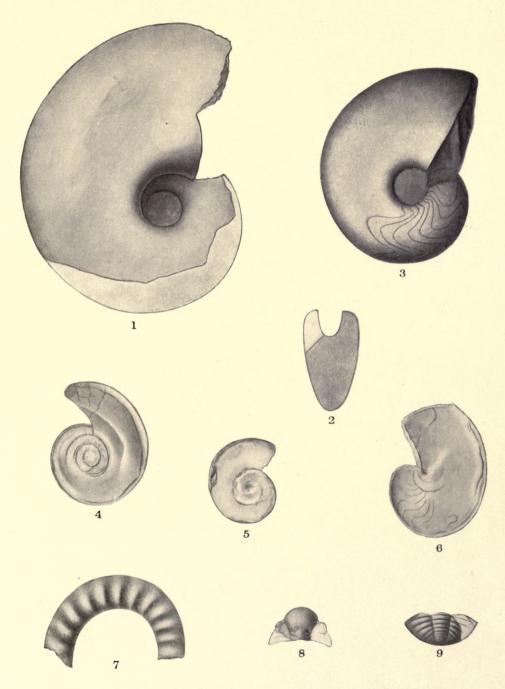
	PAGE
Figs. 1-3. Styliolina fissurella (Hall)	685
1. Surface of fragment of shale covered with shells, natural size.	
2. Fragment enlarged. × 3.	
3. Single individual. × 6.	
Genesee formation, New York.	
Figs. 4-6. Coleolus tenuicintus Hall	687
4. Cast of interior of shell of unusually large size. Maryland-Pennsyl-	001
vania state line, east of Ragged Mountain.	
5, 6. Apices of two specimens. × 6. One-half mile north of Pawpaw.	
Jennings formation, Parkhead member.	
Figs. 7-9. Hyolithes aclis Hall	688
Three views of cast of interior. × 2. Jennings formation, Parkhead	
member, Sideling Hill Creek, 2½ miles above mouth, 1700.	-
Fig. 10. Pharetrella tenebrosa Hall	600
Specimen showing ornamentation. Genesee formation, New York.	030
Special desired and the second	
Fig. 11. Bactrites aciculus (Hall)	692
A specimen showing the usual crushed and incomplete condition of the	
fossil. Jennings formation, Genesee member, Williams Road,	
near Cumberland.	
Figs. 19. 19. Oppyrocypus are const. Clark.	004
Figs. 12, 13. Orthogeras filosum Clarke	691
Woodmont member, Naples fauna, Town Creek, Gilpin.	
woodmost member, rapies faulta, fown creek, dripin.	
Figs. 14, 15. Orthoceras demum Hall	691
14. Chamber of habitation.	
15. A part of shell showing septa.	
Jennings formation, Chemung member, National Road, east of	
Hancock, 2223.	
Figs. 16-18. Orthoceras consortale Hall	coo
16. Cast of a portion of shell showing septa.	690
17. Portion of shell showing chamber of habitation.	
18. Septum showing siphuncle.	
Jennings formation, Chemung member, Williams Road, Polish	
Mountain, 2043.	



MOLLUSCA—GASTROPODA AND CEPHALOPODA

# PLATE LXXII

Figs. 1-3. Manticoceras patersoni (Hall)		PAGE
Williams Road, Polish Mountain, 2042.  2. Transverse section of shell shown in fig. 1.  3. Smaller individual preserving suture lines. Portage formation, Naples fauna, New York.  Figs. 4, 5. Probeloceras lutheri Clarke		693
2. Transverse section of shell shown in fig. 1. 3. Smaller individual preserving suture lines. Portage formation, Naples fauna, New York.  Figs. 4, 5. ProbeLoceras Lutheri Clarke		
3. Smaller individual preserving suture lines. Portage formation, Naples fauna, New York.  Figs. 4, 5. ProbeLoceras Lutheri Clarke		
Portage formation, Naples fauna, New York.  Figs. 4, 5. ProbeLoceras Lutheri Clarke		
Figs. 4, 5. Probeloceras lutheri Clarke		
Two small specimens neither showing septa, tentatively referred to this species. Fig. 4 × 3; fig. 5 natural size. Jennings formation, Genesee member, Wolfe Mill, Allegany County.  Fig. 6. Tornoceras uniangulare (Conrad)	Portage formation, Naples fauna, New York.	
Two small specimens neither showing septa, tentatively referred to this species. Fig. 4 × 3; fig. 5 natural size. Jennings formation, Genesee member, Wolfe Mill, Allegany County.  Fig. 6. Tornoceras uniangulare (Conrad)	Figs 4 5 Proper compage anymous Clarks	COF
this species. Fig. 4 × 3; fig. 5 natural size. Jennings formation, Genesee member, Wolfe Mill, Allegany County.  Fig. 6. Tornoceras uniangulare (Conrad)		090
tion, Genesee member, Wolfe Mill, Allegany County.  Fig. 6. Tornoceras uniangulare (Conrad)		
Fig. 6. Tornoceras uniangulare (Conrad)		
A small flattened specimen showing the characteristic septal sutures.  × 2. Jennings formation, Genesee member, Williams Road, Cumberland.  Fig. 7. Sandbergeroceras Chemungensis (Vanuxem)	tion, deficise member, worte min, Anegany County.	
A small flattened specimen showing the characteristic septal sutures.  × 2. Jennings formation, Genesee member, Williams Road, Cumberland.  Fig. 7. Sandbergeroceras Chemungensis (Vanuxem)	Fig. 6. TORNOCERAS UNIANGULARE (Conrad)	696
× 2. Jennings formation, Genesee member, Williams Road, Cumberland.  Fig. 7. Sandbergeroceras Chemungensis (Vanuxem)		000
Cumberland.  Fig. 7. Sandbergeroceras chemungensis (Vanuxem)		
Part of a single volution. Jennings formation, near base of Parkhead member, White Sulphur Branch, 4 miles southeast of Pratt.  Figs. 8, 9. Phacops rana (Green)		
Part of a single volution. Jennings formation, near base of Parkhead member, White Sulphur Branch, 4 miles southeast of Pratt.  Figs. 8, 9. Phacops rana (Green)		
Part of a single volution. Jennings formation, near base of Parkhead member, White Sulphur Branch, 4 miles southeast of Pratt.  Figs. 8, 9. Phacops rana (Green)	Fig. 7. SANDBERGEROCERAS CHEMUNGENSIS (Vanuxem)	697
Figs. 8, 9. Phacops rana (Green)	Part of a single volution. Jennings formation, near base of Parkhead	
<ol> <li>Glabella. Sideling Hill Creek, 2½ miles above mouth, 1700.</li> <li>Pygidium. Road leading northeast from Pratt, ½ mile west of 15-mile Creek.</li> </ol>	member, White Sulphur Branch, 4 miles southeast of Pratt.	
<ol> <li>Glabella. Sideling Hill Creek, 2½ miles above mouth, 1700.</li> <li>Pygidium. Road leading northeast from Pratt, ½ mile west of 15-mile Creek.</li> </ol>		
9. Pygidium. Road leading northeast from Pratt, ½ mile west of 15-mile Creek.	Figs. 8, 9. Phacops rana (Green)	699
15-mile Creek.		
Johnings formation Darkhand momban		
Jennings formation, Parknead member.	Jennings formation, Parkhead member.	

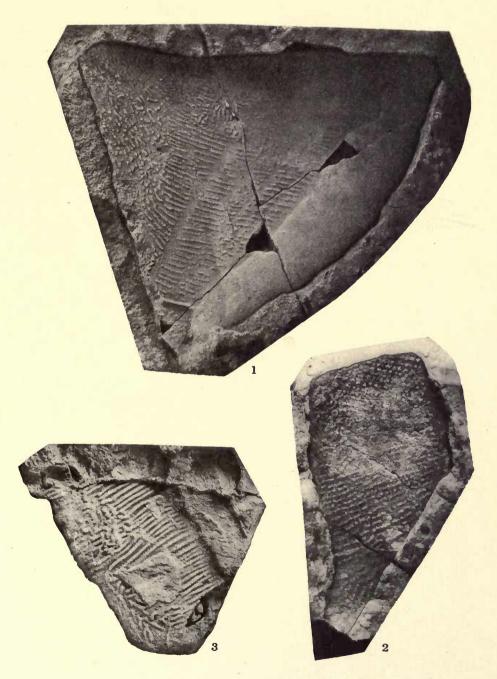


MOLLUSCA—CEPHALOPODA AND ARTHROPODA—TRILOBITA

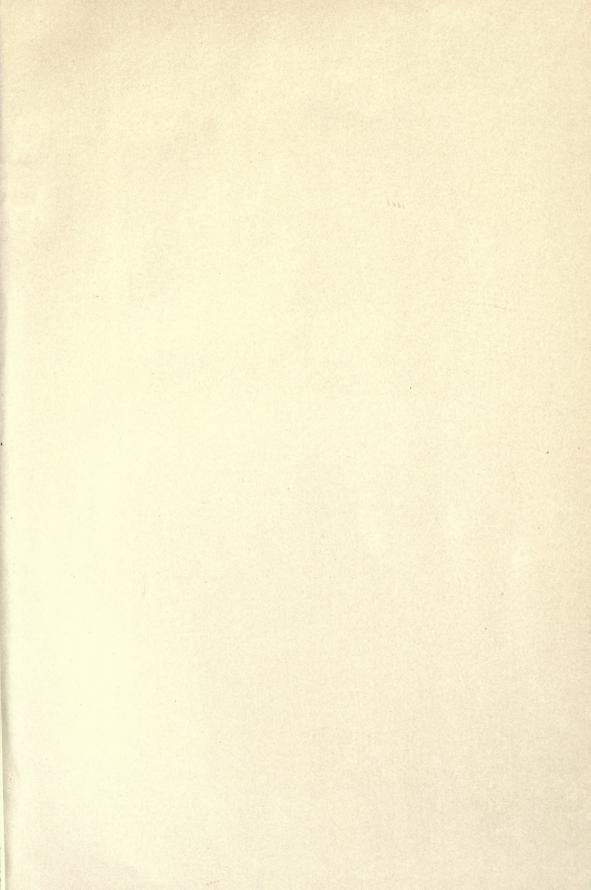
# PLATE LXXIII

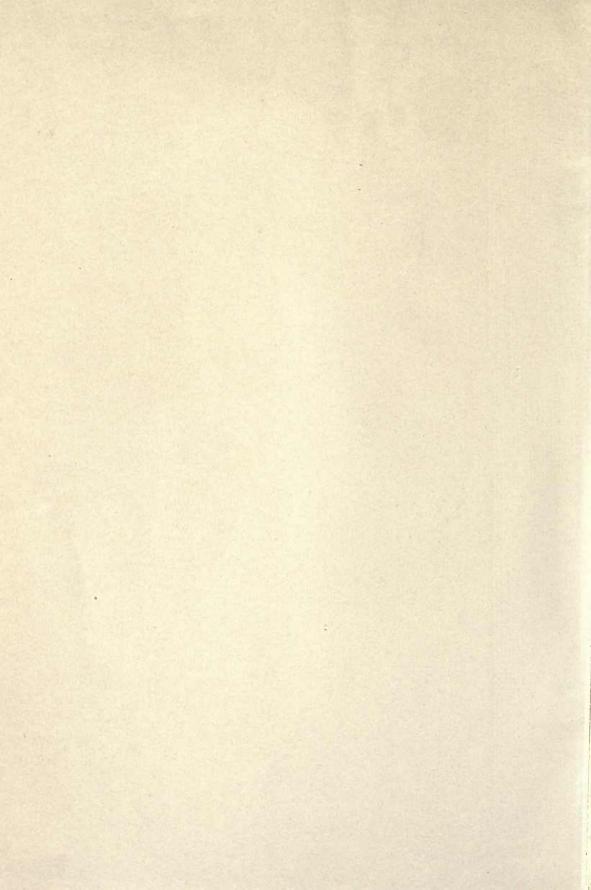
Ti- 10 G	PAGI
Figs. 1-3. Glyptaspis eastmani n. sp	. 700
1. Antero-ventro-lateral plate showing surface ornamentation. Jet	n-
nings formation, base of Parkhead member, Horse Ridge, sout	n-
west of Hancock, 1600.	
2. Right postero-ventro-lateral plate showing surface ornamentation	
Jennings formation, Parkhead member (?), west of Gree	n
Ridge, near Pennsylvania line.	
3. Fragment of an undetermined plate from the same locality as fig.	1.

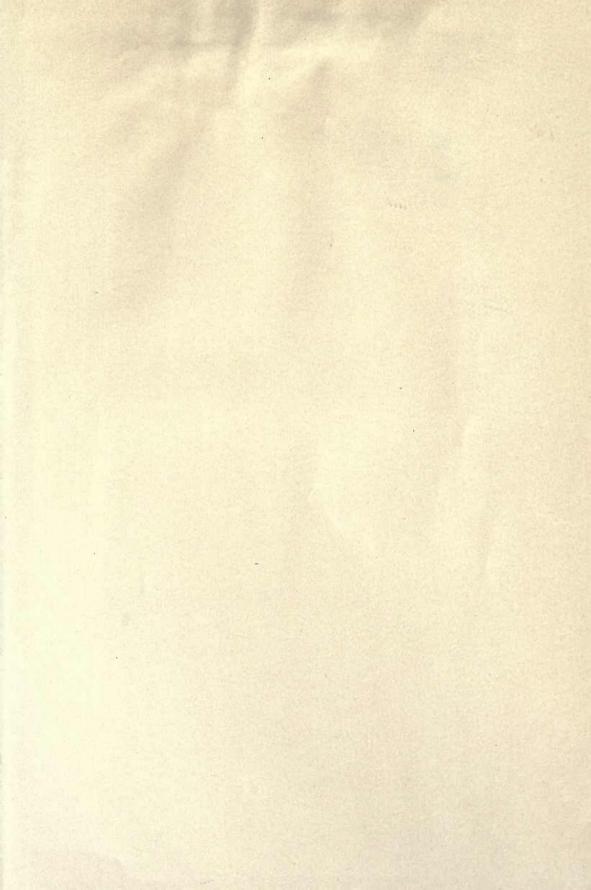




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