

PLATES FOR PAPER

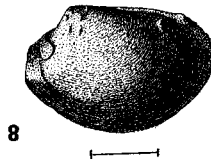
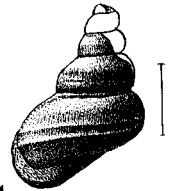
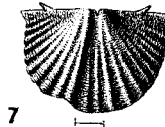
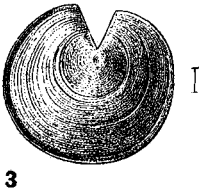
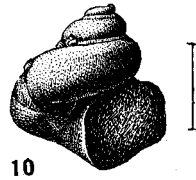
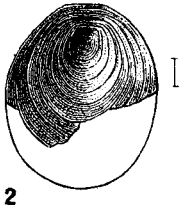
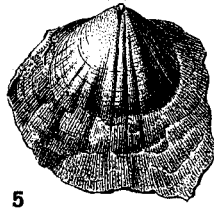
ON

Devonian Fossils and Stratigraphy

OF INDIANA.

PLATE I.

	Page.
Fig. 1. <i>Lingula spatulata</i>	572
Pedicle valve (?).	
New Albany shale; Falls of the Ohio.	
Fig. 2. <i>Schizobolus concentricus</i>	573
Exterior of brachial valve.	
New Albany shale; Falls of the Ohio.	
Fig. 3. <i>Schizobolus concentricus</i>	573
Pedicle valve.	
New Albany shale; Falls of the Ohio.	
Fig. 4. <i>Orbiculoidea lodiensis?</i>	573
Cast of pedicle valve.	
Falls of the Ohio.	
Fig. 5. <i>Leiorhynchus quadricostata</i>	571
Dorsal valve of a crushed specimen.	
New Albany shale; Lexington.	
Fig. 5a. <i>Leiorhynchus quadricostata?</i>	571
Interior cast of pedicle valve.	
New Albany shale; Lexington.	
Fig. 6. <i>Stropheodonta</i> sp.....	574
Exfoliated ventral valve.	
New Albany shale; Delphi.	
Fig. 7. <i>Chonetes lepidus</i>	572
Ventral valve.	
New Albany shale; Helt's Mill, Jennings County.	
Fig. 8. <i>Paleoneilo</i> sp.....	574
View of a cast of the interior of left valve.	
Fig. 8a. Cardinal view of the same.	
New Albany shale; Delphi.	
Fig. 9. <i>Plethospira socialis?</i>	575
Cast of the interior.	
New Albany shale; Delphi.	
Fig. 10. <i>Macrochilina?</i> sp.....	576
Cast of the interior.	
New Albany shale; Delphi.	
Fig. 11. <i>Pleurotomaria</i> sp.....	575
New Albany shale; Delphi.	
Fig. 12. <i>Straparollus</i> sp.....	576
A pyritized and partially exfoliated specimen.	
New Albany shale; Delphi.	



11



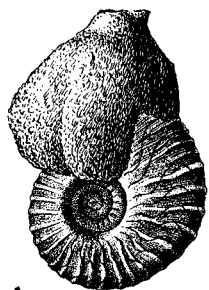
12

5a

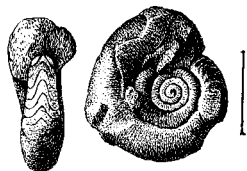
8a

PLATE II.

	Page.
Fig. 1. <i>Goniatites delphiensis</i> n. sp.....	577
Side view of type specimen showing mass of pyrites attached.	
Fig. 1a. Peripheral view of the same. New Albany shale; Delphi.	
Fig. 2. <i>Goniatites delphiensis</i> n. sp.....	577
View of specimen showing weak transverse ridges. New Albany shale; Delphi.	
Fig. 3. <i>Goniatites delphiensis</i> n. sp.....	577
Specimen showing transverse ridges only on the inner whorls. New Albany shale; Delphi.	
Fig. 4. <i>Goniatites wabashensis</i> n. sp.....	577
Lateral view of type specimen.	
Fig. 4a. Ventral view of the same. New Albany shale; Delphi.	
Figs. 5-7. <i>Spathiocaris emersoni</i>	579
New Albany shale; Delphi.	
Fig. 8. <i>Orthoceras</i> sp	578
New Albany shale; Delphi.	
Fig. 9. <i>Styliola fissurella</i>	576
New Albany shale; Scipio.	

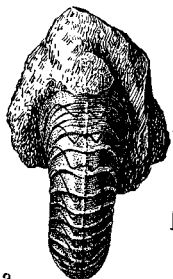


1



4a

4



1a



8



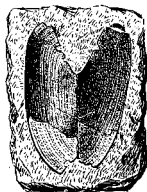
5



2



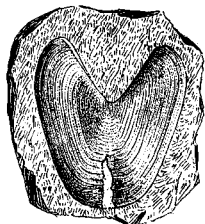
9



6



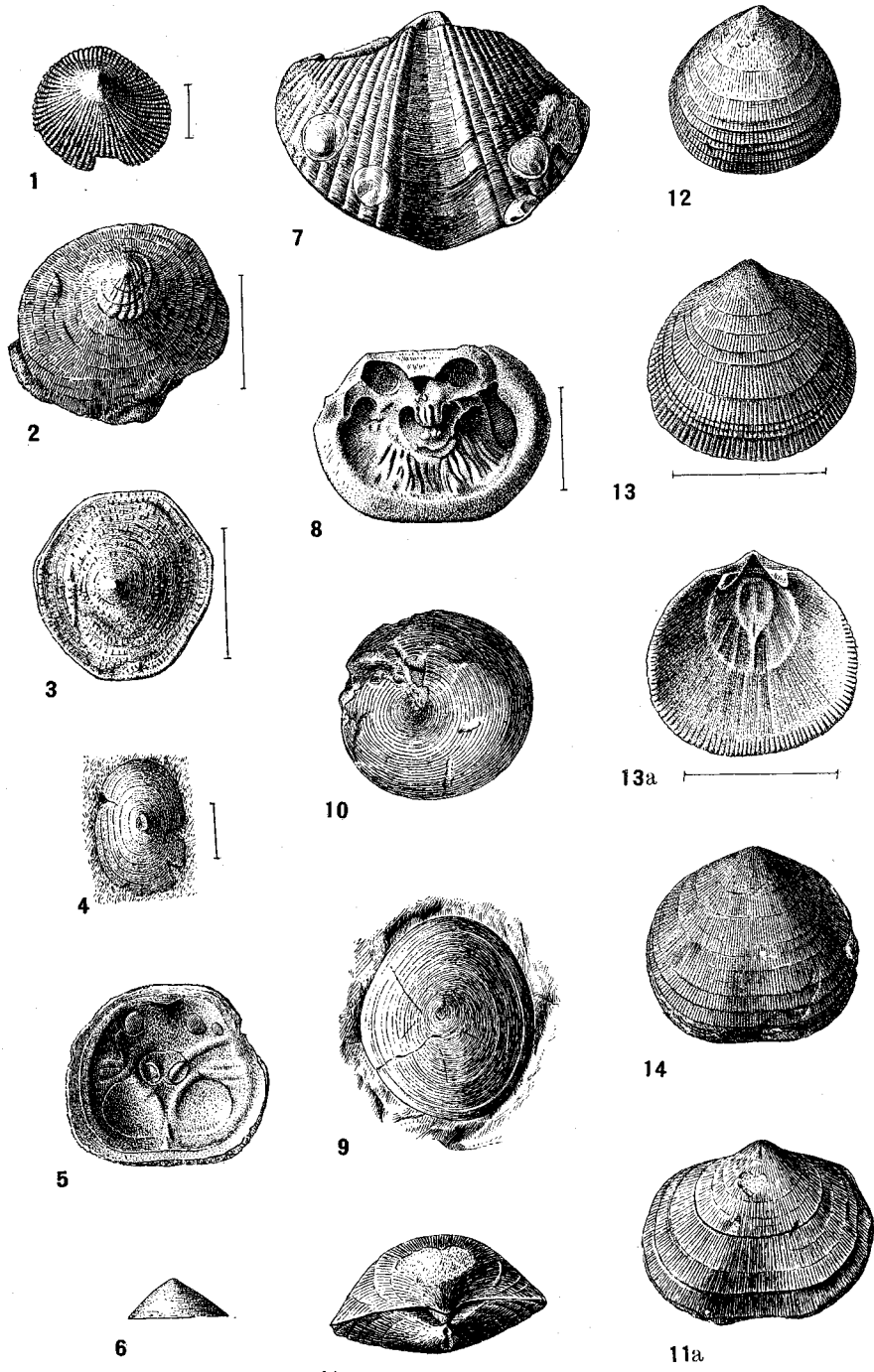
3



7

PLATE III.

		Page.
Fig. 1.	<i>Crania crenistria</i> Exterior of upper valve. Jeffersonville limestone; Falls of the Ohio.	581
Fig. 2.	<i>Crania sheldoni</i> Exterior view of upper valve. Sellersburg beds; Charlestown.	581
Fig. 3.	<i>Crania granosa</i> Exterior view of upper valve. Jeffersonville limestone; Falls of the Ohio.	581
Fig. 4.	<i>Pholidops sp</i> Exterior of upper valve. Jeffersonville limestone; Bunker Hill.	580
Fig. 5.	<i>Craniella hamiltonie</i> Interior of upper valve, showing muscular scars. Jeffersonville limestone; Falls of the Ohio.	582
Fig. 6.	<i>Craniella hamiltonie</i> Profile view of upper valve. Jeffersonville limestone; Bunker Hill.	582
Fig. 7.	<i>Orbiculoidea doria</i> Three individuals attached to <i>Sp. granulosus</i> . A lower valve is shown on the left, and upper valve on the right side of the figure. Sellersburg beds; Charlestown.	579
Fig. 8.	<i>Crania sp.</i> Interior view of ventral valve. Sellersburg beds; Charlestown.	582
Fig. 9.	<i>Orbiculoidea ampla</i> View of an interior cast of the upper valve. Sellersburg beds; Charlestown.	
Fig. 10.	<i>Orbiculoidea ampla</i> Lower valve. Sellersburg beds; Charlestown.	
Fig. 11.	<i>Schizophoria striatula</i>	626
Fig. 11a.	Ventral view of the same. Sellersburg beds, Clark County.	
Fig. 12.	<i>Rhipidomella leucosia</i> Ventral valve. Sellersburg beds; Charlestown.	624
Fig. 13.	<i>Rhipidomella leucosia</i> Exterior view of ventral valve.	624
Fig. 13a.	Interior view of same. Sellersburg beds; Charlestown.	
Fig. 14.	<i>Rhipidomella vanuxemi</i> Exterior view of brachial valve. Sellersburg beds; Charlestown.	622



DEVONIAN LIMESTONES.

PLATE IV.

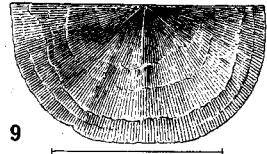
	Page.
Fig. 1. <i>Rhipidomella vanuxemi</i>	622
Cardinal view.	
Fig. 1a. Ventral view of the same.	
Sellersburg beds; Charlestown.	
Fig. 2. <i>Rhipidomella vanuxemi</i>	622
Interior of brachial valve.	
Sellersburg beds; Charlestown.	
Fig. 3. <i>Rhipidomella vanuxemi</i>	622
Interior of pedicle valve.	
Fig. 3a. Interior of pedicle valve of another individual.	
Sellersburg beds; Charlestown.	
Fig. 4. <i>Rhipidomella livia</i>	624
View of brachial valve.	
Sellersburg beds; Charlestown.	
Fig. 5. <i>Leptæna rhomboidalis</i>	593
Exterior of pedicle valve partially exfoliated.	
Sellersburg beds; Charlestown.	
Fig. 6. <i>Chonetes arcuatus</i>	601
Pedicle valve.	
Fig. 6a. Pedicle valve of another specimen.	
Jeffersonville limestone; Paris Crossing.	
Fig. 7. <i>Chonetes coronatus</i>	602
Pedicle valve.	
Sellersburg beds; Charlestown.	
Fig. 8. <i>Chonetes yandellanus</i>	605
Pedicle valve.	
Fig. 8a. View of brachial valve and cardinal area of same.	
Sellersburg beds; Falls of the Ohio.	
Fig. 9. <i>Chonetes manitobiensis</i>	600
View of brachial valve.	
Sellersburg beds; Little Rock Creek, Cass County.	
Fig. 10. <i>Chonetes manitobiensis</i>	600
View of pedicle valve.	
Sellersburg beds; Little Rock Creek, Cass County.	
Fig. 11. <i>Chonetes mucronatus</i>	606
Pedicle valve.	
Jeffersonville limestone; Falls of the Ohio.	
Fig. 12. <i>Stropheodonta inequistriata?</i>	621
Pedicle valve.	
Jeffersonville limestone; Pipe Creek Falls.	
Fig. 13. <i>Stropheodonta inequistriata</i>	621
Pedicle valve.	
Jeffersonville limestone; Pipe Creek Falls.	



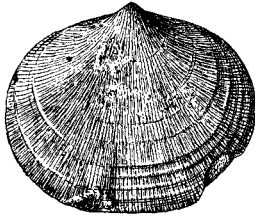
1



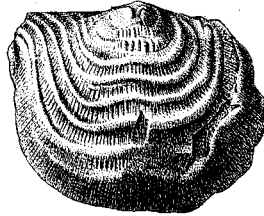
4



9



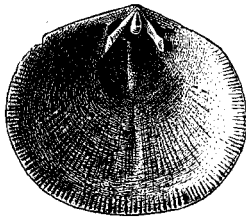
1a



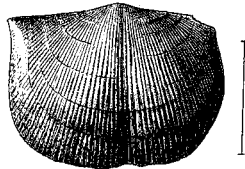
5



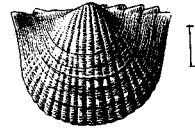
10



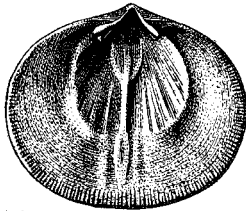
2



6



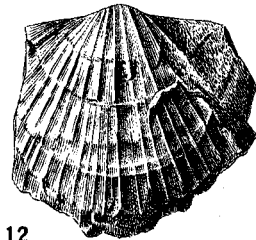
11



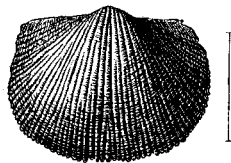
3



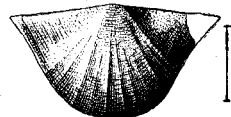
6a



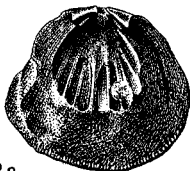
12



7



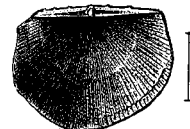
13



3a



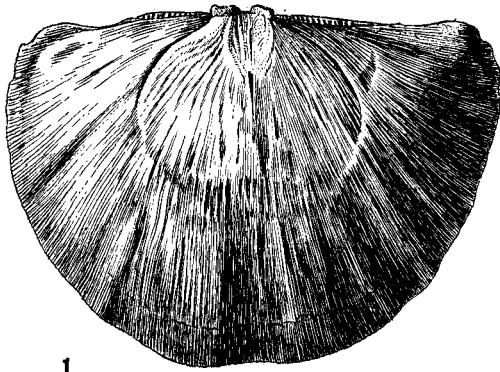
8



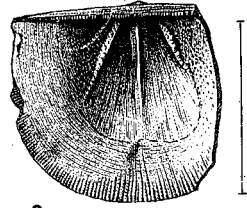
8a

PLATE V.

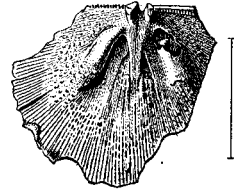
	Page.
Fig. 1. <i>Stropheodonta concava</i>	619
View of cast of the interior of pedicle valve showing muscular scars and impressions of hinge teeth.	
Fig. 1a. Cardinal view of same. Jeffersonville limestone; Jefferson County.	
Fig. 2. <i>Stropheodonta concava</i>	619
Interior of brachial valve. Jeffersonville limestone; Pipe Creek Falls.	
Fig. 3. <i>Stropheodonta perplana</i>	618
Interior of pedicle valve showing muscular scars and cardinal area. Jeffersonville limestone; Falls of the Ohio.	
Fig. 4. <i>Stropheodonta perplana</i>	618
Interior of a portion of the brachial valve showing cardinal process. Jeffersonville limestone; Falls of the Ohio.	
Fig. 5. <i>Stropheodonta perplana</i>	618
Exterior of the pedicle valve. Jeffersonville limestone; Little Rock Creek, Cass County.	
Fig. 6. <i>Stropheodonta perplana</i>	618
Exterior of small individual. Jeffersonville limestone; Newbern.	
Fig. 7. <i>Stropheodonta perplana</i>	618
View of a natural cast of the interior of brachial valve. Jeffersonville limestone; Falls of the Ohio?.	



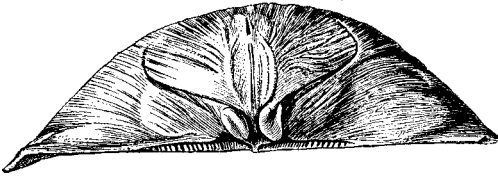
1



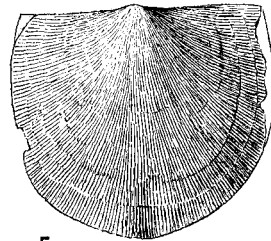
3



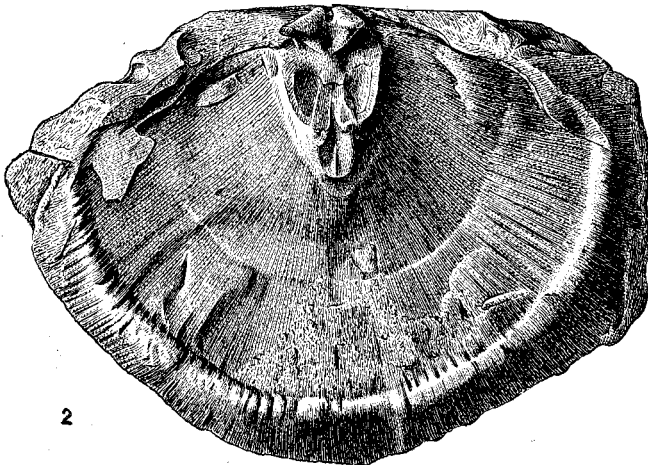
4



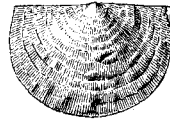
1a



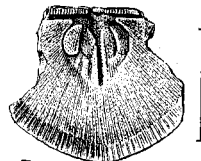
5



2



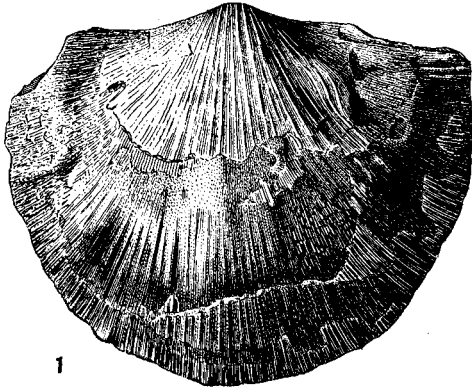
6



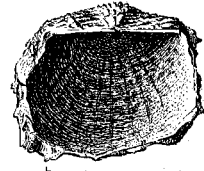
7

PLATE VI.

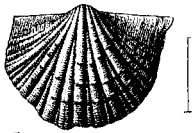
	Page.
Fig. 1. <i>Stropheodonta concava</i>	619
Interior view of a partially exfoliated pedicle valve. Jeffersonville limestone; Little Rock Creek, Cass County.	
Fig. 2. <i>Stropheodonta plicata</i>	618
Pedicle valve. Jeffersonville limestone; Falls of the Ohio.	
Fig. 3. <i>Orthotheses chemungensis</i> var. <i>arctostriatus</i>	593
View of wax cast of pedicle valve.	
Fig. 4. <i>Tropidoleptus carinatus</i>	595
Exterior of pedicle valve. Sellersburg beds; Lexington.	
Fig. 5. <i>Tropidoleptus carinatus</i>	595
Pedicle valve. Sellersburg beds; Charlestown.	
Fig. 6. <i>Pholidostrophia iowaensis</i>	590
Interior of pedicle valve. Jeffersonville limestone; Falls of the Ohio.	
Fig. 7. <i>Pholidostrophia iowaensis</i>	590
Exterior of brachial valve. Jeffersonville limestone; Falls of the Ohio.	
Fig. 8. <i>Pholidostrophia iowaensis</i>	590
Exterior of brachial valve. Sellersburg beds; Charlestown.	
Fig. 9. <i>Productella spinulicosta</i>	629
Exterior of pedicle valve showing spines.	
Fig. 9a. Exterior of brachial valve of the same. Sellersburg beds; Charlestown.	
Fig. 10. <i>Atrypa reticularis</i> var.	598
Pedicle valve. Sellersburg beds; Charlestown.	
Fig. 11. <i>Atrypa spinosa</i>	599
Brachial view. Jeffersonville limestone; Falls of the Ohio.	
Fig. 12. <i>Gypsidula romingeri</i> var. <i>indianensis</i> n. var.	653
Brachial valve.	
Fig. 12a. Pedicle valve of the same. Jeffersonville limestone; Falls of the Ohio.	



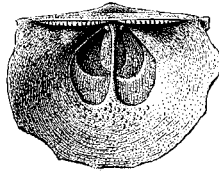
1



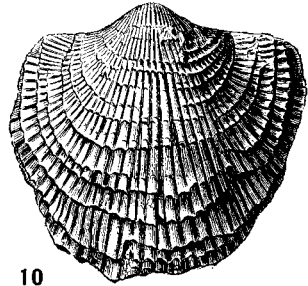
9a



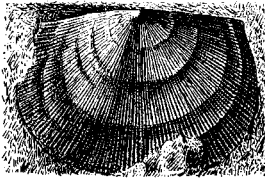
2



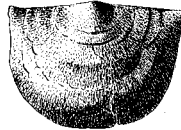
6



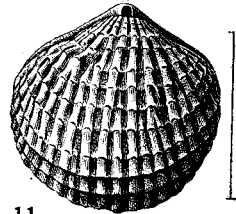
10



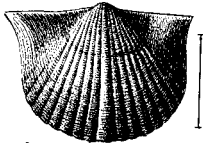
3



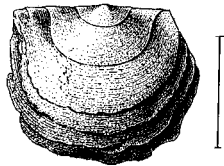
7



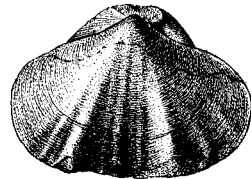
11



4



8



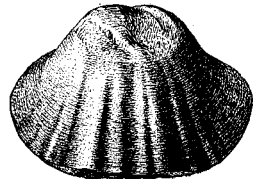
12



5



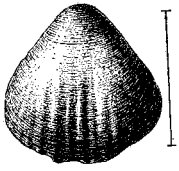
9



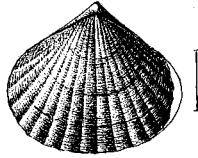
12a

PLATE VII.

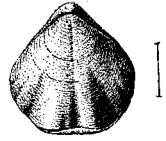
	Page.
Fig. 1. <i>Pentamarella pavillionensis</i>	612
Pedicle view.	
Fig. 1a. Profile view of the same.	
Sellersburg beds; Charlestown.	
Fig. 2. <i>Pentamarella arata</i>	615
Pedicle valve.	
Jeffersonville limestone; Bunker Hill.	
Fig. 3. <i>Cyclorina nobilis</i>	583
Brachial view of a partially exfoliated specimen.	
Jeffersonville limestone; Bunker Hill.	
Fig. 4. <i>Camarotoechia sappho</i>	584
Brachial view.	
Fig. 4a. Front profile view of the same.	
Fig. 5. <i>Rhynchonella depressa</i> n. sp.	589
Brachial view.	
Fig. 5a. Pedicle view of same.	
Fig. 5b. Profile view of same.	
Jeffersonville limestone; Bunker Hill.	
Fig. 6. <i>Rhynchonella louisvillensis?</i>	587
Pedicle valve.	
Sellersburg beds; Charlestown.	
Fig. 7. <i>Rhynchonella tenuistriata?</i>	588
Brachial valve.	
Sellersburg beds; Charlestown.	
Fig. 8. <i>Camarotoechia nitida</i> n. sp.	586
Brachial valve.	
Fig. 8a. Profile view of the same.	
Jeffersonville limestone; Little Rock Creek, Cass County.	
Fig. 9. <i>Rhynchonella gainesi</i>	587
Brachial valve.	
Fig. 9a. Pedicle valve of the same.	
Fig. 9b. Profile view of the same.	
Jeffersonville limestone; Bunker Hill.	
Fig. 10. <i>Rhynchonella gainesi</i> var. <i>cassensis</i> n. var.	588
Pedicle valve.	
Fig. 10a. Profile view of the same.	
Fig. 11. <i>Reticularia fimbriata</i>	651
Brachial valve.	
Sellersburg beds; Charlestown.	



1



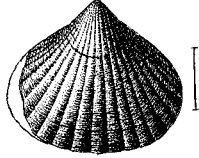
5



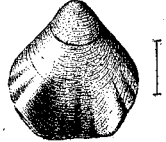
9



1a



5a



9a



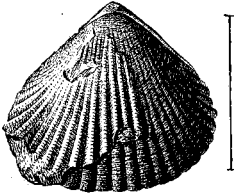
2



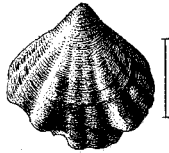
5b



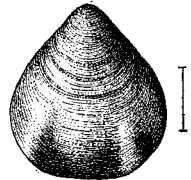
9b



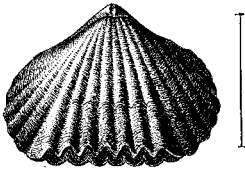
3



6



10



4



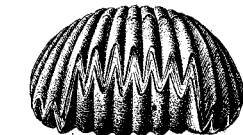
7



10a



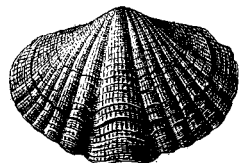
8



4a



8a



11

PLATE VIII.

	Page.
Fig. 1. <i>Spirifer pennatus</i>	649
Pedicle valve of a typical specimen.	
Locality?	
Fig. 2. <i>Spirifer pennatus</i>	649
Pedicle valve partially exfoliated.	
Fig. 2a. Brachial valve of another individual.	
Sellersburg beds; Little Rock Creek, Cass Co.	
Fig. 3. <i>Spirifer macra</i>	650
Pedicle valve.	
Fig. 3a. Pedicle valve of another individual.	
Fig. 3b. Brachial valve.	
Fig. 3c. Cardinal view of same.	
Sellersburg beds; Charlestown.	
Fig. 4. <i>Spirifer audaculus</i>	646
Brachial view showing cardinal area of apical valve.	
Sellersburg beds; Watson.	
Fig. 5. <i>Spirifer divaricatus</i>	634
Pedicle valve.	
Fig. 5a. Cardinal area of pedicle valve and spiral cones which are calcified.	
Fig. 6. <i>Spirifer grieri</i>	638
Profile view.	
Jeffersonville limestone; Falls of the Ohio.	

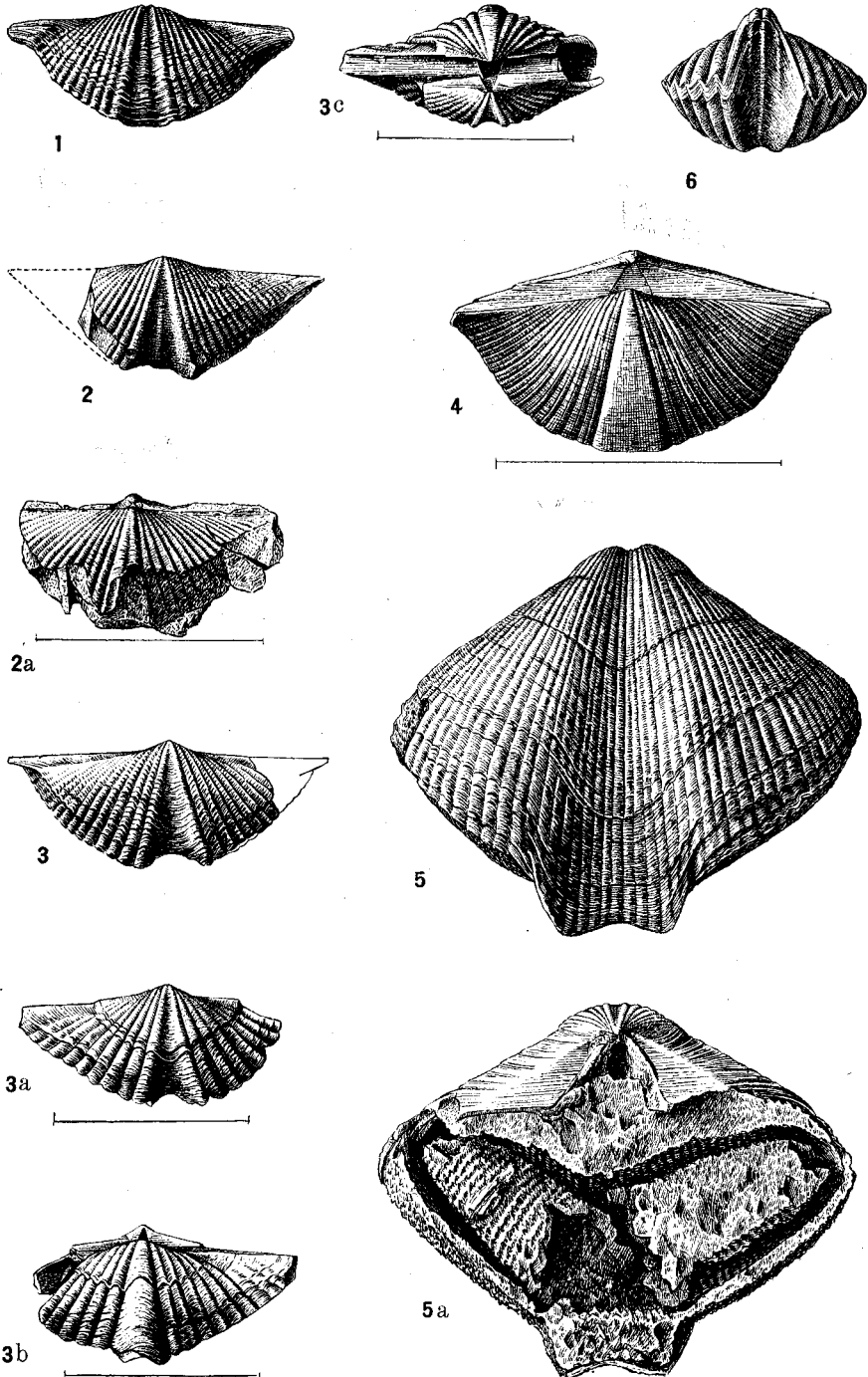
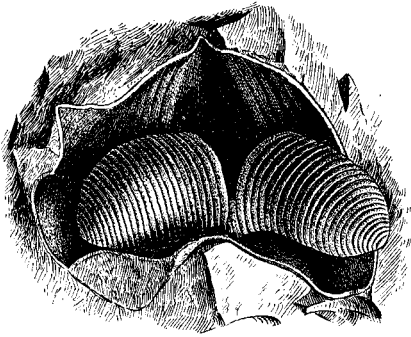


PLATE IX.

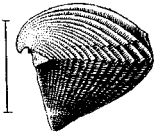
	Page.
Fig. 1. <i>Spirifer acuminatus</i>	635
View of spiral cones. Jeffersonville limestone; Jefferson County.	
Fig. 2. <i>Spirifer granulatus</i>	640
View showing spiral cones enlarged by an incrustation of silica.	
Fig. 2a. View of another individual showing brachial cones; the apical portion of right cone is free from silica.	
Fig. 2b. Cardinal view of another individual. Sellersburg beds; Charlestown.	
Fig. 3. <i>Spirifer varicosus</i>	644
View of brachial cones. Sellersburg beds; Charlestown.	
Fig. 4. <i>Atrypa reticularis</i>	598
Cardinal view showing apical cones and a portion of brachial valve.	
Fig. 5. <i>Spirifer varicosus</i>	644
Cardinal view.	
Fig. 5a. Ventral view of the same. Sellersburg beds; Charlestown.	
Fig. 6. <i>Spirifer byrnesi</i>	644
Brachial view.	
Fig. 6a. Profile view of the same. Sellersburg beds; Charlestown.	
Fig. 7. <i>Spirifer segmentum</i>	643
Profile view.	
Fig. 7a. View of pedicle valve and cardinal area. Sellersburg beds; Watson.	
Fig. 8. <i>Spirifer davisi</i>	639
Brachial view.	
Fig. 8a. Profile view. Jeffersonville limestone; Charlestown.	
Fig. 9. <i>Delthyris varicosta</i>	609
Brachial valve. Sellersburg beds; Charlestown.	
Fig. 10. <i>Spirifer duodenarius</i>	647
Pedicle valve. Sellersburg beds; Charlestown.	



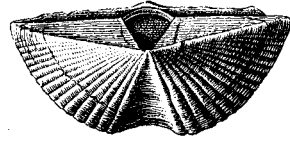
1



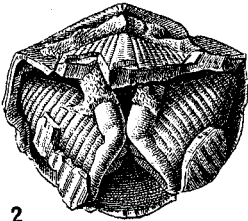
3



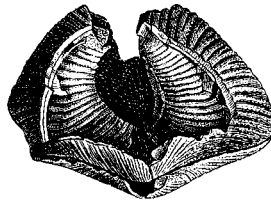
7



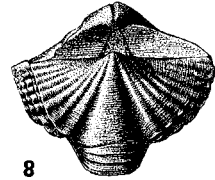
7a



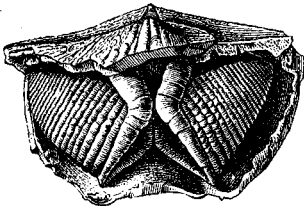
2



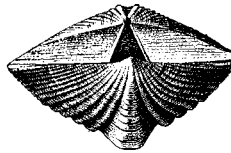
4



8



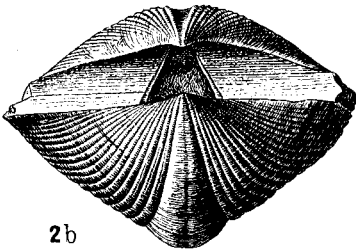
2a



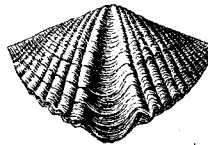
5



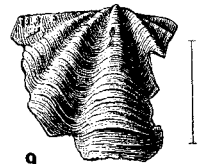
8



2b



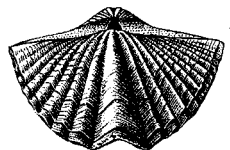
5a



9



6a



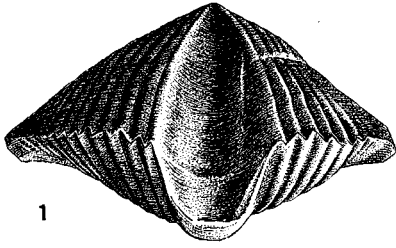
6



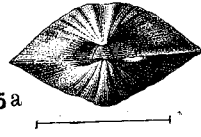
10

PLATE X.

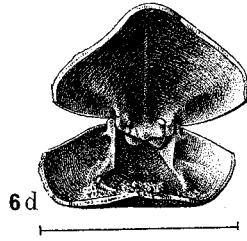
	Page.
Fig. 1. <i>Spirifer manni</i>	642
Front profile view.	
Fig. 1a. Cardinal view of the same.	
Jeffersonville limestone; Falls of the Ohio.	
Fig. 2. <i>Delthyris sculptilis</i>	608
Pedicel valve.	
Sellersburg beds; Charlestown.	
Fig. 3. <i>Spirifer gregarius</i>	636
Brachial valve and cardinal area.	
Fig. 4. <i>Spirifer gregarius</i> var. <i>greeni</i> n. var.....	637
Brachial view.	
Fig. 4a. Cardinal view of the same.	
Jeffersonville limestone; Falls of the Ohio.	
Fig. 5. <i>Reticularia wabashensis</i> n. sp.....	653
Brachial view.	
Fig. 5a. Cardinal view of the same.	
Fig. 5b. Front profile view.	
Jeffersonville limestone; Bunker Hill.	
Fig. 6. <i>Pentagonia unisulcata</i>	610
Brachial view.	
Fig. 6a. Pedicel valve of the same.	
Fig. 6b. Cardinal view of another individual.	
Fig. 6c. View of one of the brachial cones.	
Fig. 6d. Interior view showing the articulation of valves partially opened and having the margins broken away.	
Sellersburg beds; Charlestown.	
Fig. 7. <i>Ambocœlia umbonata</i>	590
Brachial view.	
Fig. 7a. Cardinal view of the same.	
Sellersburg beds; Louisville, Ky.	



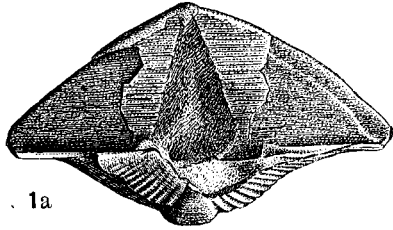
1



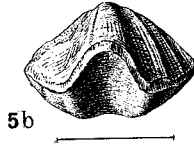
5a



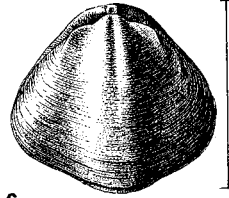
6d



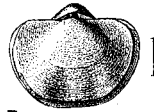
1a



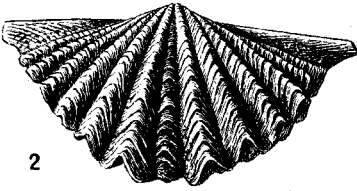
5b



6



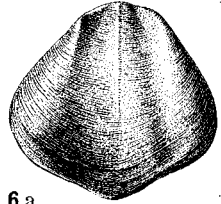
7



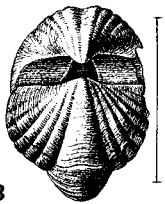
2



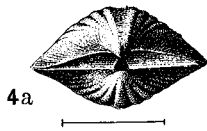
7a



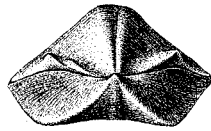
6a



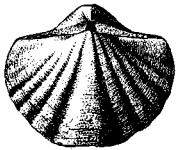
3



4a



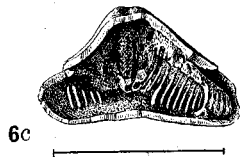
6b



4



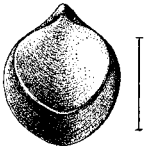
5



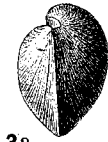
6c

PLATE XI.

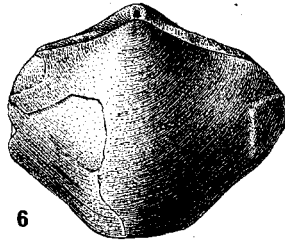
	Page.
Fig. 1. <i>Centronella glansfagea</i>	631
Brachial valve.	
Fig. 1a. Pedicle valve of the same.	
Fig. 1b. Interior of pedicle valve.	
Sellersburg beds; Charlestown.	
Fig. 2. <i>Vitulina pustulosa</i>	632
Pedicle valve.	
Fig. 2a. Brachial valve.	
Fig. 2b. Interior of same.	
Sellersburg beds; Charlestown.	
Fig. 3. <i>Martinia subumbona</i>	627
Brachial view.	
Fig. 3a. Profile view of the same.	
Sellersburg beds; Little Rock Creek, Cass County.	
Fig. 4. <i>Parazyga hirsuta</i>	594
Brachial valve.	
Fig. 4a. Pedicle valve.	
Sellersburg beds; Charlestown.	
Fig. 5. <i>Martinia williamsi</i> n. sp.	627
Brachial valve.	
Fig. 5a. Pedicle valve of the same.	
Fig. 5b. Cardinal view of the same.	
Jeffersonville limestone; Hope.	
Fig. 6. <i>Athyris spiriferoides</i>	596
Brachial view.	
Sellersburg beds; Charlestown.	
Fig. 7. <i>Nucleospira concinna</i>	628
Brachial view.	
Sellersburg beds; Charlestown.	
Fig. 8. <i>Cryptonella ovalis</i>	659
Brachial view.	
Fig. 8a. Pedicle valve.	
Jeffersonville limestone; Falls of the Ohio.	
Fig. 9. <i>Cryptonella lens</i>	658
Brachial view.	
Jeffersonville limestone; Pipe Creek Falls.	
Fig. 10. <i>Terebratula jucunda</i>	660
Brachial view.	
Fig. 10a. Cardinal view of another individual.	
Jeffersonville limestone; Bunker Hill.	



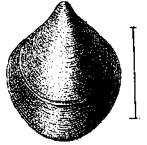
1



3a



6



1a



5b



7



1



4



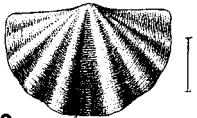
2



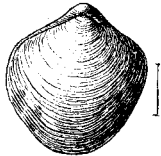
4a



8



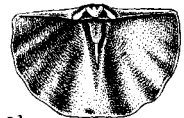
2



5



8a



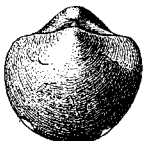
2b



5a



9



3



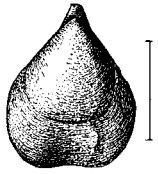
10a



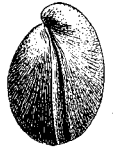
10

PLATE XII.

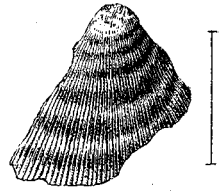
	Page.
Fig. 1. <i>Eunella sullivanti</i>	656
Pedicel view.	
Jeffersonville limestone; Bunker Hill.	
Fig. 2. <i>Eunella harmonia</i>	657
Brachial valve.	
Sellersburg beds; Charlestown.	
Fig. 3. <i>Eunella linckleri</i>	658
Brachial view.	
Fig. 3a. Profile view of the same.	
Jeffersonville limestone; Pipe Creek Falls.	
Fig. 4. <i>Crancina romingeri</i>	660
Pedicel valve.	
Fig. 4a. Profile view of same.	
Jeffersonville limestone; Bunker Hill.	
Fig. 5. <i>Camarospira eucharis</i>	661
Brachial view.	
Jeffersonville limestone; Falls of the Ohio.	
Fig. 6. <i>Meristella barrisi</i>	655
Pedicel valve.	
Jeffersonville limestone; Falls of the Ohio.	
Fig. 7. <i>Meristella nasuta</i>	654
Pedicel valve.	
Jeffersonville limestone; Falls of the Ohio.	
Fig. 8. <i>Pterinopecten reflexus</i>	666
Left valve.	
Jeffersonville limestone; Pipe Creek Falls.	
Fig. 9. <i>Pterinopecten nudosus</i>	666
A portion of left valve.	
Jeffersonville limestone; Pipe Creek Falls.	
Fig. 10. <i>Aviculopecten princeps</i>	662
Left valve of crushed specimen.	
Jeffersonville limestone; Keysport, Cass County.	
Fig. 11. <i>Aviculopecten exacutus</i>	662
Left valve.	
Jeffersonville limestone; Pipe Creek Falls.	
Fig. 12. <i>Aviculopecten (Pterinopecten) terminalis</i>	663
Left valve.	
Jeffersonville limestone; Pipe Creek Falls.	
Fig. 13. <i>Aviculopecten (Pterinopecten) terminalis</i>	663
Left valve.	
Jeffersonville limestone; Bunker Hill.	



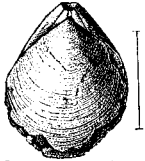
1



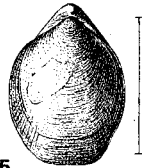
4a



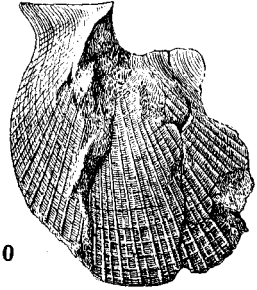
9



2



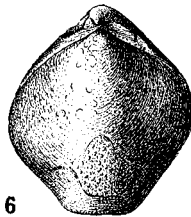
5



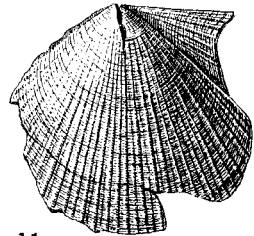
10



3



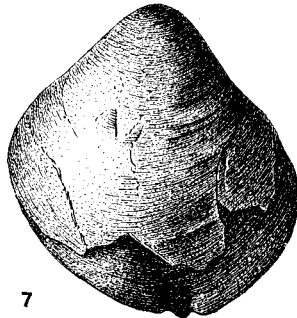
6



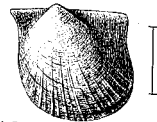
11



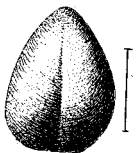
3a



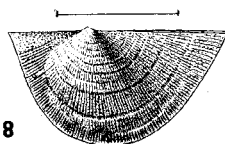
7



12



4



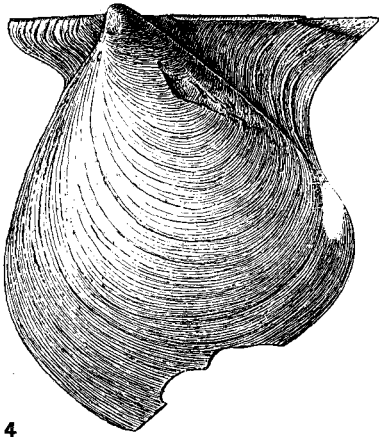
8



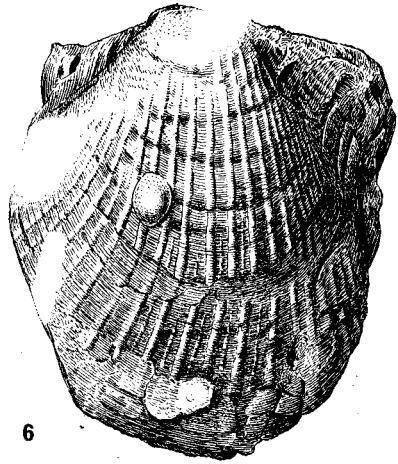
13

PLATE XIII.

	Page.
Fig. 1. <i>Aviculopecten (Pterinopecten?) terminalis</i>	663
Left valve.	
Jeffersonville limestone; Pipe Creek Falls.	
Fig. 2. <i>Actinopteria boydi</i>	667
Left valve.	
Jeffersonville limestone; Pipe Creek Falls.	
Fig. 3. <i>Leptodesma rogersi</i>	671
Left valve, with wing broken away.	
Fig. 3a. Left valve of another individual.	
Fig. 3b. View of a nearly perfect left valve.	
Jeffersonville limestone; Pipe Creek Falls.	
Fig. 4. <i>Glyptodesma occidentale</i>	669
View of wax cast of exterior impression of left valve.	
Jeffersonville limestone; Newbern.	
Fig. 5. <i>Glyptodesma occidentale</i>	669
View of a natural cast of the interior of left valve.	
Jeffersonville limestone; Jefferson County.	
Fig. 6. <i>Limoptera cancellata</i>	664
View of a portion of a left valve.	
Sellersburg beds; Watson.	



4



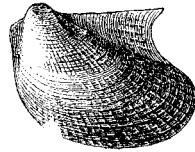
6



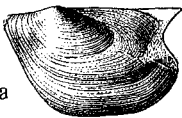
1



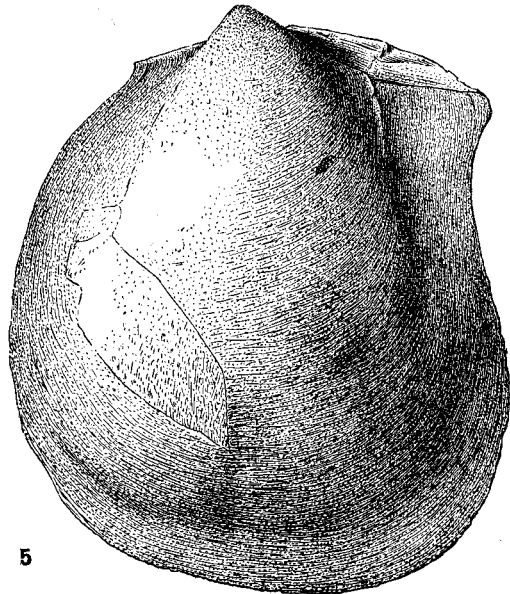
3b



3



3a



5

PLATE XIV.

	Page.
Fig. 1. <i>Glyptodesma occidentale</i>	669
Natural cast of the interior of the left valve showing muscular scar and pallial line.	
Jeffersonville limestone; Newbern.	
Fig. 2. <i>Nucula lamellata</i>	679
Left valve; drawing from wax cast.	
Jeffersonville limestone; Burnsville.	
Fig. 3. <i>Nucula hanoverensis</i> n. sp.....	676
View of a natural cast of the interior showing muscular scars and hinge teeth.	
Jeffersonville limestone; Jefferson County.	
Fig. 4. <i>Nucula neda</i>	678
Right valve.	
Sellersburg beds; Charlestown.	
Fig. 5. <i>Nucula corbuliformis</i>	677
Right valve.	
Sellersburg beds; Charlestown.	
Fig. 6. <i>Nucula niotica</i>	678
Left valve exfoliated.	
Sellersburg beds; Charlestown.	
Fig. 7. <i>Nucula niotica</i>	678
Right valve.	
Sellersburg beds; Charlestown.	
Fig. 8. <i>Modiomorpha alta</i>	682
Left valve with a crania attached.	
Sellersburg beds; Watson.	
Fig. 9. <i>Modiomorpha affinis</i>	681
Right valve.	
Sellersburg beds; Clarke County.	
Fig. 10. <i>Modiomorpha concentrica</i>	680
Left valve with crania sp. attached.	
Sellersburg beds; Watson.	
Fig. 11. <i>Modiomorpha concentrica</i>	680
Left valve with anterior portion exfoliated.	
Sellersburg beds; Charlestown.	

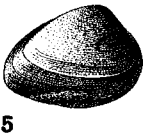
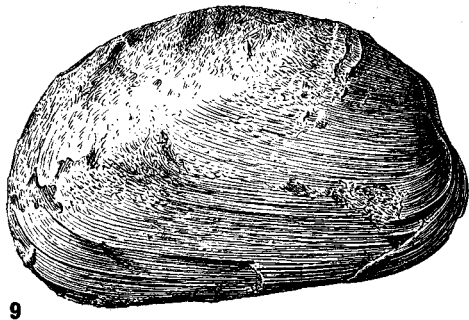
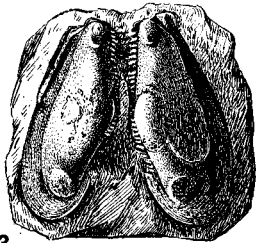
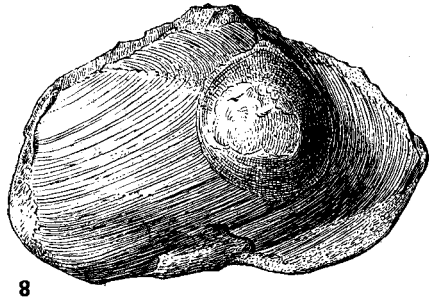
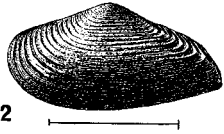
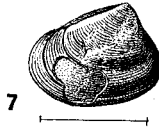
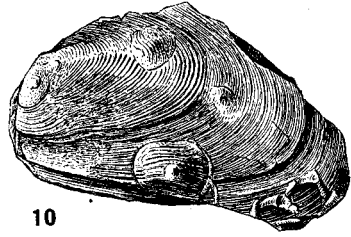
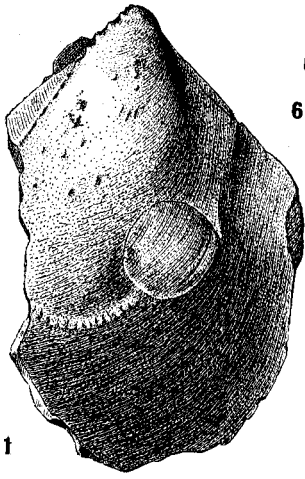


PLATE XV.

	Page.
Fig. 1. <i>Paracyclas ohioensis</i>	675
Fig. 1a. Cardinal view of the same.	
Fig. 1b. Left valve of another individual. Sellersburg beds; Charlestown.	
Fig. 2. <i>Ptychodesma knappianum</i>	671
Left valve.	
Fig. 2a. Cardinal view of the same.	
Fig. 2b. Left valve of another individual.	
Fig. 2c. Interior of anterior end of left valve, showing hinge teeth. Sellersburg beds; Charlestown.	
Fig. 3. <i>Grammysia subarcuata</i>	684
View of a part of right valve. Sellersburg beds; Charlestown.	
Fig. 4. <i>Conocardium cuneus</i> var. <i>trigonale</i>	687
Right valve. Jeffersonville limestone; Bunker Hill.	
Fig. 5. <i>Conocardium cuneus</i> var. <i>trigonale</i>	687
Right valve. Jeffersonville limestone; Falls of the Ohio.	
Fig. 6. <i>Conocardium ohioense</i>	686
Right valve. Jeffersonville limestone; Falls of the Ohio.	
Fig. 7. <i>Conocardium ohioense</i>	686
Posterior view. Jeffersonville limestone; Falls of the Ohio.	
Fig. 8. <i>Cypricardinia indenta</i>	685
Left valve.	
Fig. 8a. Right valve of another individual. Jeffersonville limestone; Bunker Hill.	
Fig. 9. <i>Schizodus contractus</i>	672
Natural cast of interior of right valve showing muscular scars. Jeffersonville limestone; Newbern.	
Fig. 10. <i>Paracyclas lirata</i>	673
Left valve. Sellersburg beds; Charlestown.	

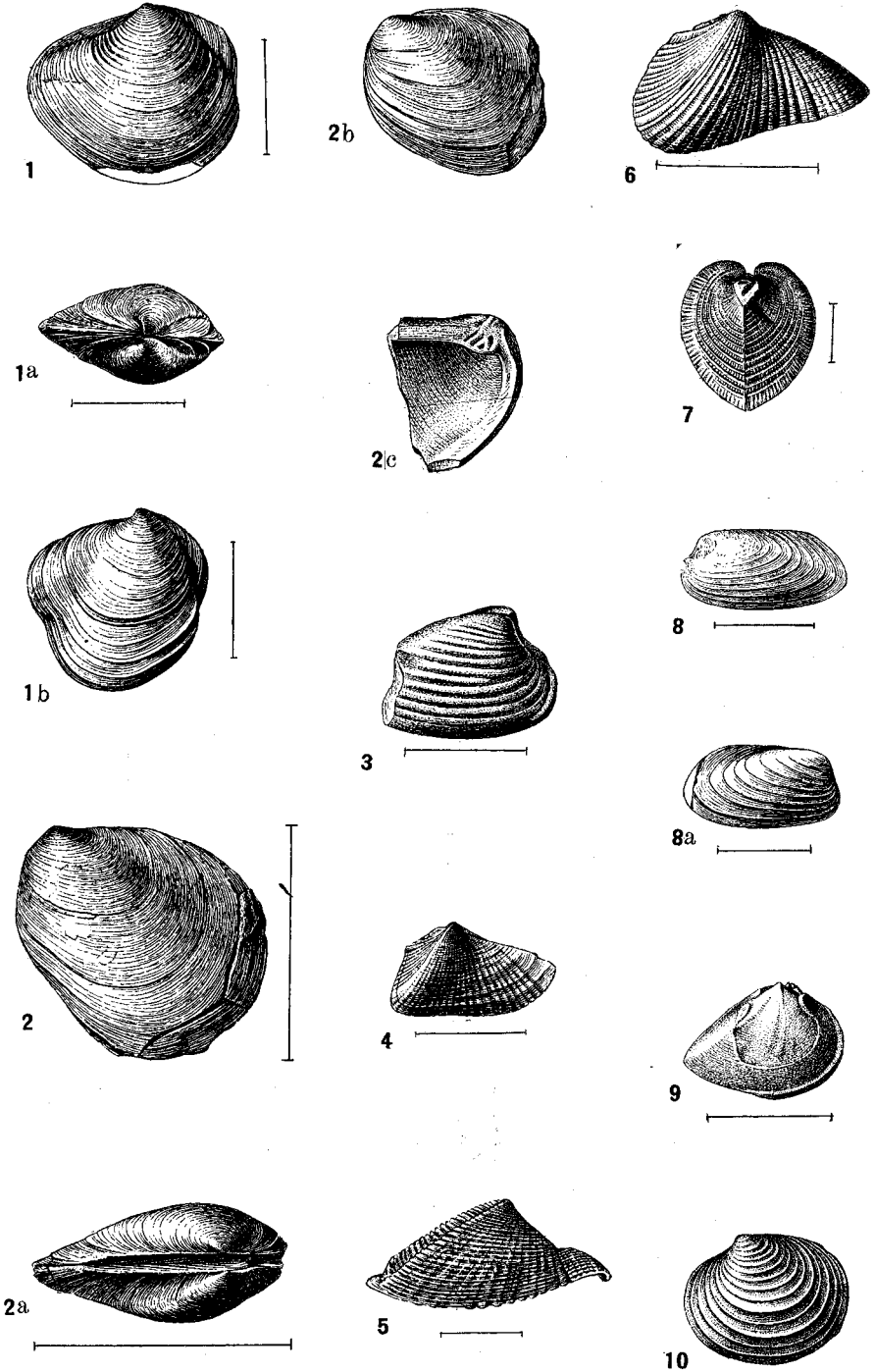
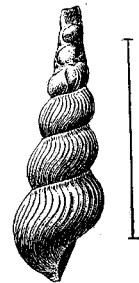
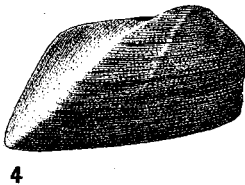
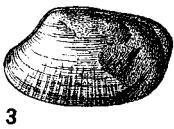
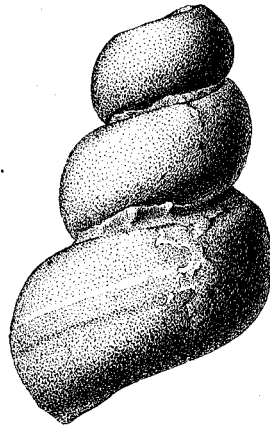
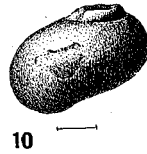
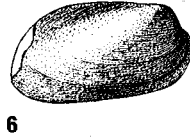
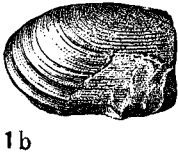
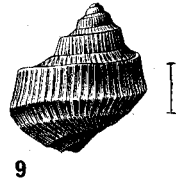
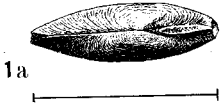
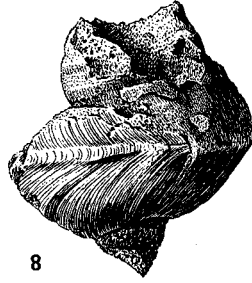
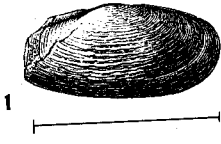


PLATE XVI.

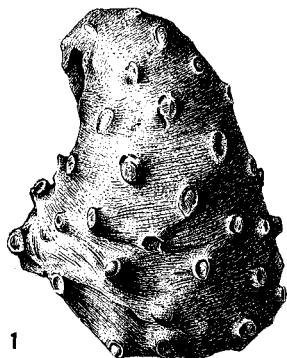
	Page.
Fig. 1. <i>Solemya (Janeia) vetusta</i>	690
Left valve. .	
Fig. 1a. Cardinal view of the same.	
Fig. 1b. Posterior portion of right valve.	
Sellersburg beds; Charlestown.	
Fig. 2. <i>Clinopistha subnasuta</i>	688
Left valve.	
Sellersburg beds; Watson.	
Fig. 3. <i>Clinopistha antiqua</i>	689
View showing part of a left valve.	
Sellersburg beds; Charlestown.	
Fig. 4. <i>Goniophora hamiltonensis</i>	684
View of a natural cast of a right valve.	
Jeffersonville limestone; Newbern.	
Fig. 5. <i>Goniophora hamiltonensis</i>	684
View of a cast of an imperfect left valve.	
Sellersburg beds; Newbern.	
Fig. 6. <i>Sanguinolites sanduskiensis</i>	683
Natural cast of left valve showing muscular scar.	
Jeffersonville limestone; Newbern, Shelby County.	
Fig. 6a. Right valve.	
Jeffersonville limestone; Manley lime kiln, Bartholomew County.	
Fig. 7. <i>Murchisonia sp</i>	—
Internal cast.	
"Corniferous limestone;" Charlestown.	
Fig. 8. <i>Murchisonia desiderata</i>	705
Showing a portion of the last whorl.	
Jeffersonville limestone; Falls of the Ohio.	
Fig. 9. <i>Trochonema meekanum</i>	713
Jeffersonville limestone; Newbern.	
Fig. 10. <i>Naticopsis sp</i>	706
Specimen with upper part of spire broken away.	
Jeffersonville limestone; Bunker Hill.	
Fig. 11. <i>Capulus cassensis</i> n. sp.	719
Side view.	
Jeffersonville limestone; Pipe Creek Falls.	
Fig. 12. <i>Loxonema hydraulica</i>	702
Sellersburg beds; Lexington.	



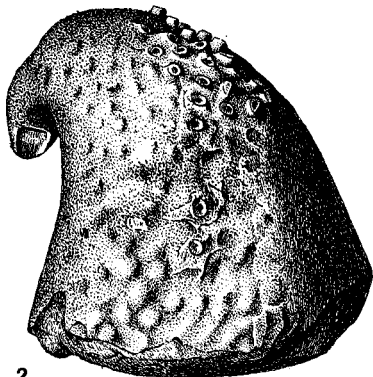
DEVONIAN LIMESTONES.

PLATE XVII.

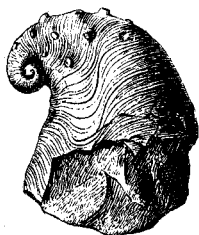
	Page.
Fig. 1. <i>Platyceras dumosum</i>	722
Jeffersonville limestone; Falls of the Ohio.	
Fig. 2. <i>Platyceras dumosum</i> var. <i>pileum</i> n. var.	723
Jeffersonville limestone; Falls of the Ohio.	
Fig. 3. <i>Platyceras multispinosum</i>	723
Jeffersonville limestone; Falls of the Ohio.	
Fig. 4. <i>Platyceras dumosum</i> var. <i>rurispinum</i>	723
Sellersburg beds; Charlestown.	
Fig. 5. <i>Platyceras rictum</i> var. <i>spinosa</i> n. var.	729
Side view.	
Fig. 5a. View of another specimen.	
Fig. 5b. Posterior view of type specimen.	
Fig. 5c. Lateral view of a partially exfoliated individual.	
Sellersburg beds; Charlestown.	
Fig. 6. <i>Platyceras blatchleyi</i> n. sp.	733
Lateral view of type specimen.	
Jeffersonville limestone; Little Rock Creek, Cass County.	



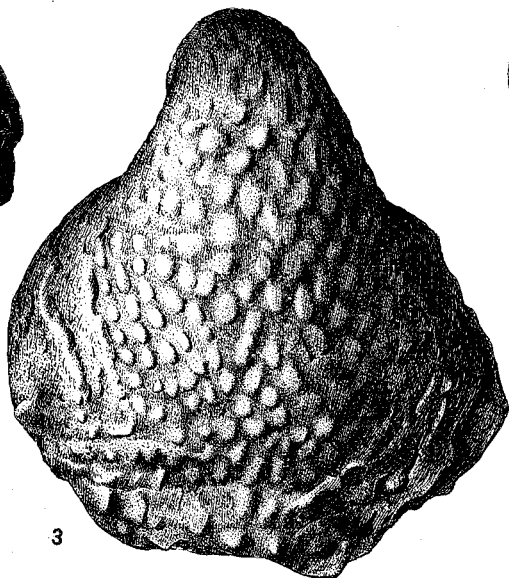
1



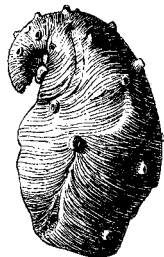
2



4



3



5a



5



5c



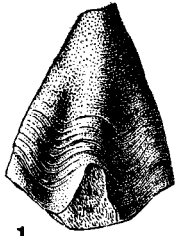
5b



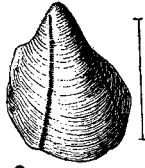
6

PLATE XVIII.

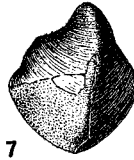
	Page.
Fig. 1. <i>Platyceras conicum</i>	721
Jeffersonville limestone; Falls of the Ohio.	
Figs. 2-2a. <i>Platyceras conicum</i>	721
Lateral views of typical specimens.	
Fig. 2b. Top view of specimen with semi-revolving longitudinal folds.	
Sellersburg beds; Charlestown.	
Fig. 3. <i>Platyceras lineare</i> n. sp.	734
Dorsal view of type specimen.	
Fig. 3a. View of aperture of the same.	
Jeffersonville limestone; Falls of the Ohio.	
Fig. 4. <i>Platyceras</i> sp.	725
Sellersburg beds; Charlestown.	
Fig. 5. <i>Platyceras carinatum</i>	721
Dorsal view.	
"Corniferous limestone;" Charlestown.	
Fig. 6. <i>Platyceras carinatum</i>	721
Sellersburg beds; Charlestown.	
Fig. 7. <i>Platyceras carinatum?</i>	721
Dorsal view.	
Fig. 7a. Lateral view of the same.	
Sellersburg beds; Charlestown.	
Figs. 8-8a. <i>Platyceras thetis</i>	724
Right and left side views of the same individual.	
Sellersburg beds; Charlestown.	
Fig. 9. <i>Platyceras thetis?</i>	724
Sellersburg beds; Charlestown.	



1



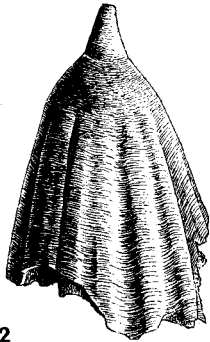
3



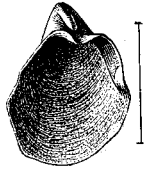
7



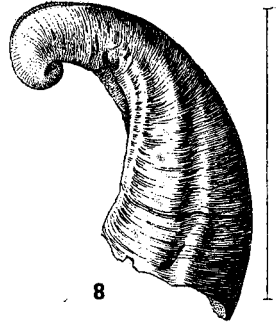
7a



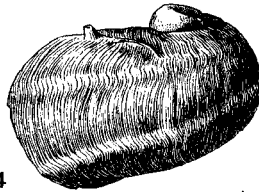
2



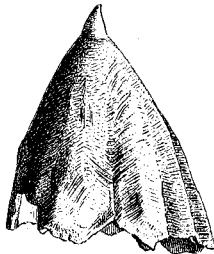
3a



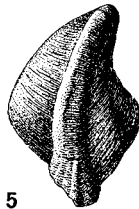
8



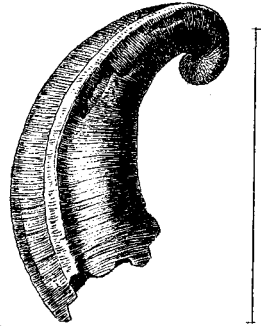
4



2a



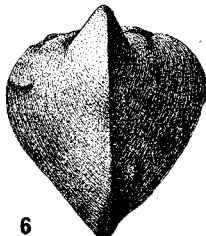
5



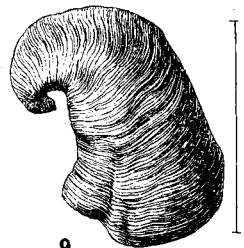
8a



2a



6



9

PLATE XIX.

	Page.
Figs. 1-1a. <i>Platyceras thetis</i>	724
Dorsal and side views of an individual. Sellersburg beds; Charlestown.	
Fig. 2. <i>Platyceras compressum</i> var	730
Lateral view.	
Fig. 2a. View of the aperture of the same. Sellersburg beds; Charlestown.	
Figs. 3-3a. <i>Platyceras bucculentum</i>	725
Dorsal and side views of an individual.	
Fig. 3b. Lateral view of another specimen. Sellersburg beds; Charlestown.	
Fig. 4. <i>Platyceras bucculentum</i>	725
Views of the aperture.	
Fig. 4a. Lateral views of the same.	
Fig. 5. <i>Platyceras subcirculare</i> n. sp	734
Lateral view. Jeffersonville limestone; Falls of the Ohio.	
Fig. 6. <i>Platyceras attenuatum</i>	728
Exfoliated shell. The pustulose surface is due to the peculiar style of silicification of the shell. Sellersburg beds; Charlestown.	
Fig. 7. <i>Platyceras erectum?</i>	728
Sellersburg beds; Charlestown.	
Fig. 8. <i>Platyceras</i> sp	725
Lateral view with cephalon of a trilobite closing aperture. Jeffersonville limestone; Charlestown.	
Figs. 9-9a. <i>Platyceras indianensis</i>	727
Dorsal and lateral views of an individual. Jeffersonville limestone; Little Rock Creek, Cass County.	

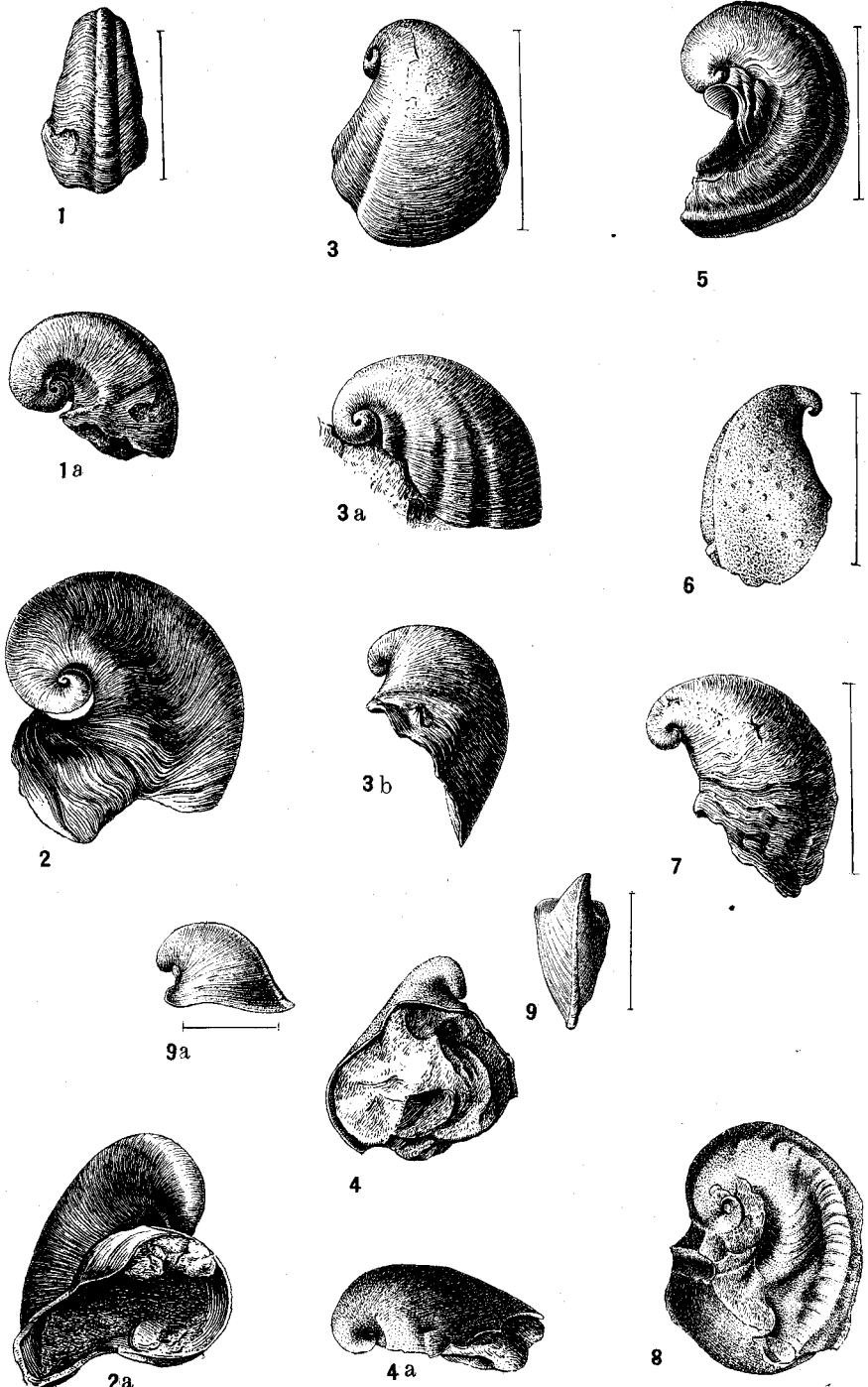
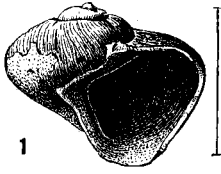
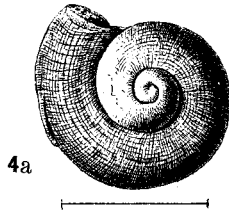


PLATE XX.

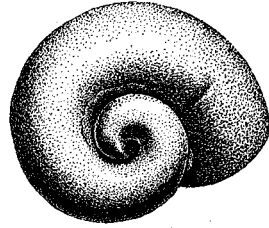
	Page.
Fig. 1. <i>Platyostoma lineata</i>	695
View showing aperture.	
Sellersburg beds; Charlestown.	
Figs. 2-2a. <i>Platyostoma lineata</i>	695
Views of two individuals.	
Sellersburg beds; Charlestown.	
Fig. 3. <i>Platyostoma lineata</i>	695
View of a large individual.	
Jeffersonville limestone; Falls of the Ohio.	
Fig. 4. <i>Platyostoma lineata</i> var. <i>callosum</i>	696
View of the aperture.	
Fig. 4a. Top view of the same.	
Sellersburg beds; Charlestown.	
Figs. 5-5a. <i>Strophostylus varians</i>	697
Two views of an individual.	
Sellersburg beds; Charlestown.	
Fig. 6. <i>Platyostoma pleurotoma</i>	694
Sellersburg beds; Charlestown.	
Fig. 7. <i>Platyostoma lineata</i> ?	695
Cast of the interior.	
Jeffersonville limestone; Falls of the Ohio.	
Fig. 8. <i>Platyostoma</i> sp.	695
Sellersburg beds; Charlestown.	
Fig. 9. <i>Pleurotomaria sulcomarginata</i>	710
Sellersburg beds; Charlestown.	
Fig. 10. <i>Pleurotomaria sulcomarginata</i> ?	710
View of a distorted specimen.	
Sellersburg beds; Charlestown.	
Fig. 11. <i>Callonema lichas</i>	699
Internal cast.	
Jeffersonville limestone; Jefferson County.	



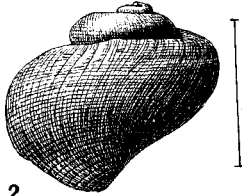
1



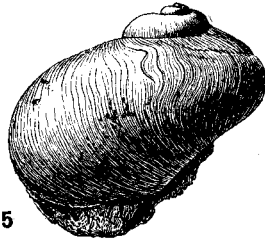
4a



7



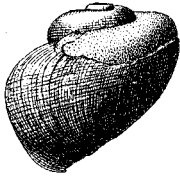
2



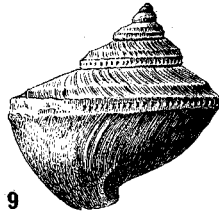
5



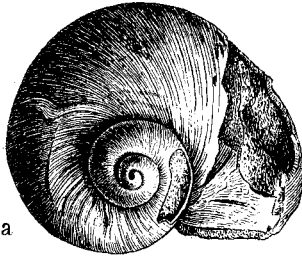
8



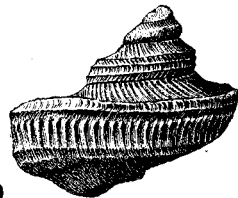
2a



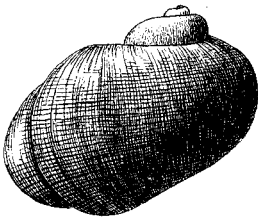
9



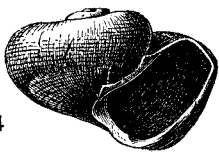
5a



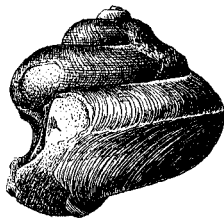
10



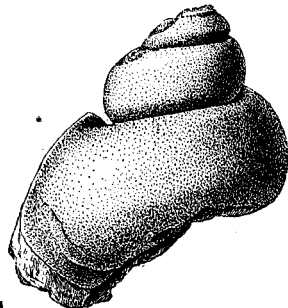
3



4



6



11

PLATE XXI.

		Page.
Fig. 1-1a.	<i>Bellerophon curvilineatus</i> Dorsal and side views of an imperfect specimen.	693
Fig. 2-2a.	Two views of another individual. Jeffersonville limestone; Hope.	
Fig. 3.	<i>Bellerophon</i> sp. View showing a portion of the lip at the sides, outer part of lip being broken away.	694
Fig. 4.	<i>Bellerophon leda</i> "Corniferous"? Clarke County.	691
Fig. 5.	<i>Bellerophon leda</i> View of a partially exfoliated specimen; the fossil shows faint traces of revolving striae on the dorsal band not indicated in the figure. Sellersburg beds; Charlestown.	691
Fig. 6.	<i>Bellerophon pelops</i> Sellersburg beds; Charlestown.	692
Fig. 7.	<i>Bellerophon patulus</i> A cast of the interior. Jeffersonville limestone; Jefferson County.	692
Fig. 8.	<i>Euomphalus exiguus</i> n. sp..... View of type, showing a portion of spire broken away.	718
Fig. 9.	<i>Straporollus cyclostomus</i> Sellersburg beds; Charlestown.	707
Fig. 10.	<i>Cyclonema crenulata</i> View of a partially exfoliated specimen. Jeffersonville limestone; Pipe Creek Falls.	716
Fig. 11.	<i>Cyclonema crenulata</i> View showing revolving and transverse striae. Jeffersonville limestone; Bunker Hill.	716

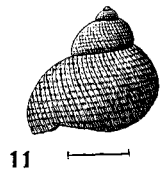
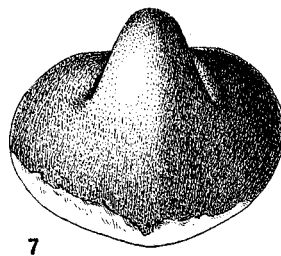
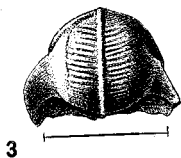
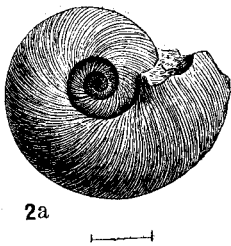
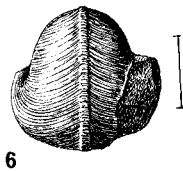
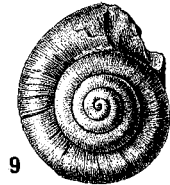
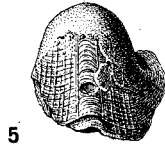
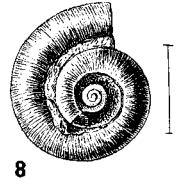
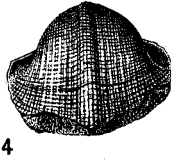
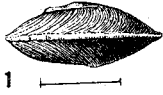
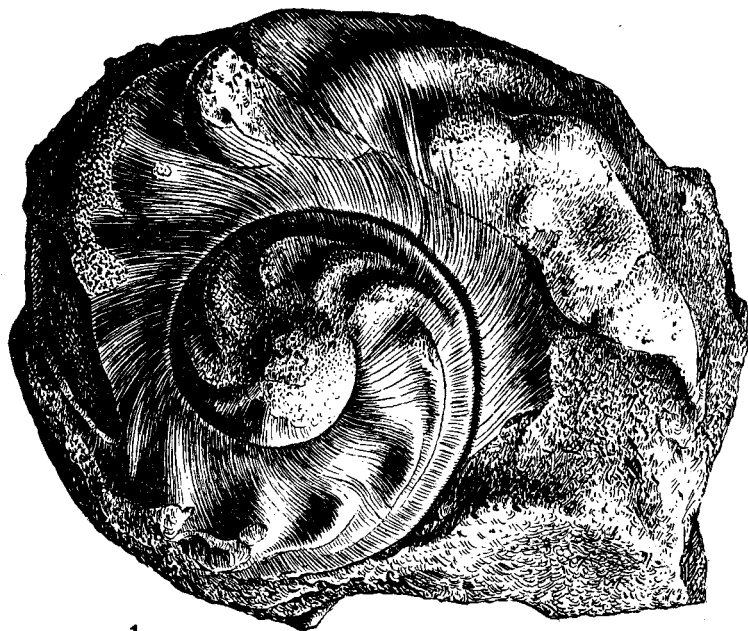
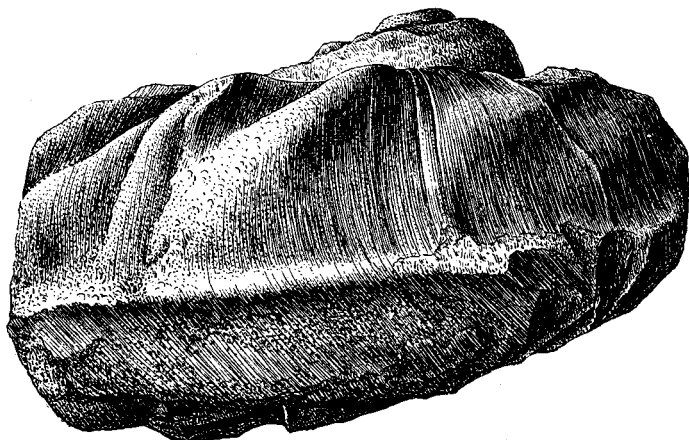


PLATE XXII.

	Page.
Fig. 1. <i>Turbo shumardi</i>	708
Top view.	
Fig. 1a. Lateral view of the same.	
Jeffersonville limestone; Falls of the Ohio.	



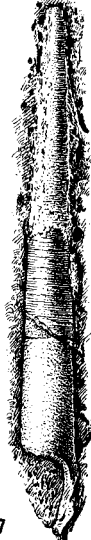
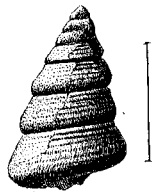
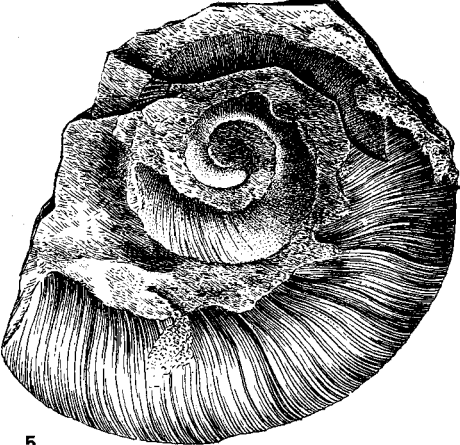
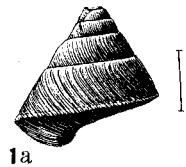
1



1a

PLATE XXIII.

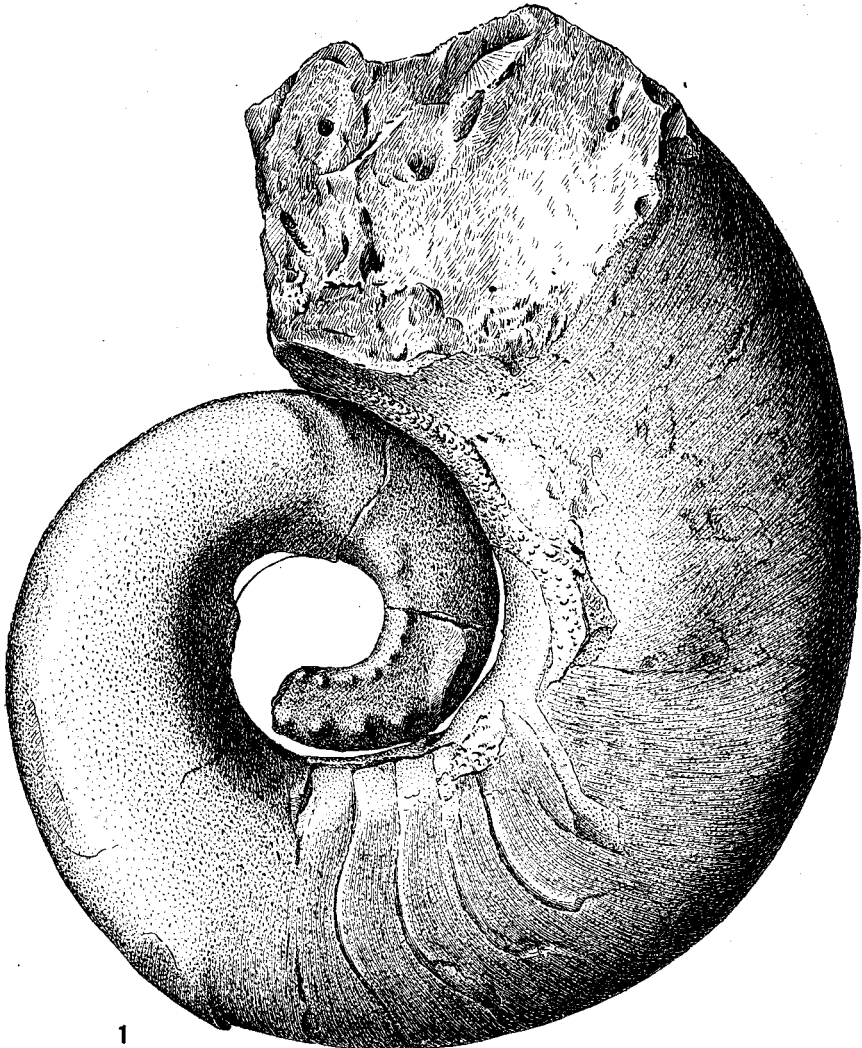
	Page.
Fig. 1. <i>Callonema conus</i> n. sp. Type specimen.	699
Fig. 1a. View of another individual. Jeffersonville limestone; Hope.	
Fig. 2. <i>Macrocheilina hebe</i> View of an exfoliated specimen. Jeffersonville limestone; Bunker Hill.	704
Fig. 3. <i>Aclisina barnetti</i> n. sp. View of type specimen partially exfoliated. Jeffersonville limestone; Bunker Hill.	717
Fig. 4. <i>Aclisina barnetti</i> var. <i>elongata</i> n. var. View of partially exfoliated specimen. Jeffersonville limestone; Keysport, Cass County.	717
Fig. 5. <i>Callonema imitator</i> View of specimen with surface partially hidden by limestone matrix. Jeffersonville limestone; Falls of the Ohio.	699
Fig. 6. <i>Coleolus tenuicinctum</i> "Upper Helderburg;" (Sellersburg beds?) Charlestown.	735
Fig. 7. <i>Coleolus tenuicinctum</i> View of a partially exfoliated specimen. Sellersburg beds; Charlestown.	735
Fig. 8. <i>Conularia</i> sp. An enlargement showing the character of the surface markings. Sellersburg beds; Delphi.	737
Fig. 9. <i>Tentaculites scalariformis</i> View of an exfoliated specimen. Jeffersonville limestone; Burnsville.	736



DEVONIAN LIMESTONES.

PLATE XXIV.

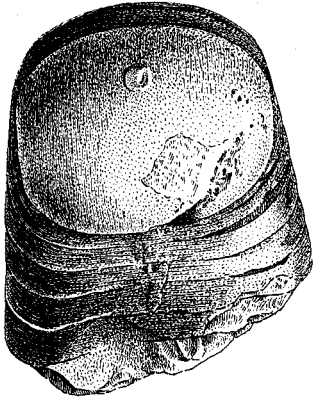
	Page.
Fig. 1. <i>Gyroceras indianense</i> n. sp	738
View of type specimen three-fourths natural size. Jeffersonville limestone; Jefferson County.	



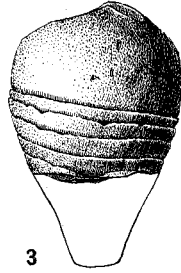
DEVONIAN LIMESTONES.

PLATE XXV.

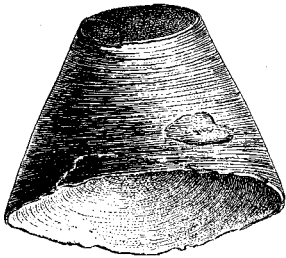
	Page.
Fig. 1. <i>Gyroceras indianense</i> n. sp	738
Transverse section showing siphuncle.	
Fig. 1a. Another view of the same to show the direction of the septa on the side and periphery. Jeffersonville limestone; Jefferson County.	
Fig. 2. <i>Cyrtoceras</i> sp	743
Sellersburg beds; Lexington.	
Fig. 3. <i>Gomphoceras minus</i>	740
Sellersburg beds; Charlestown.	



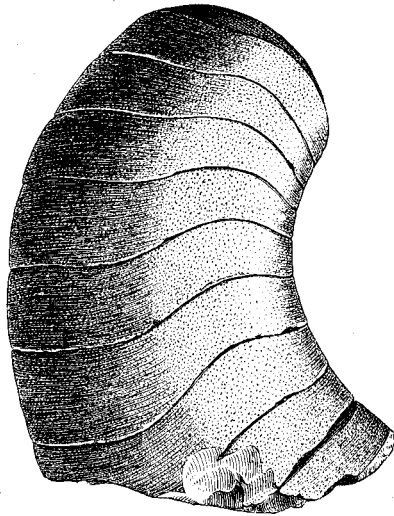
1



3



2

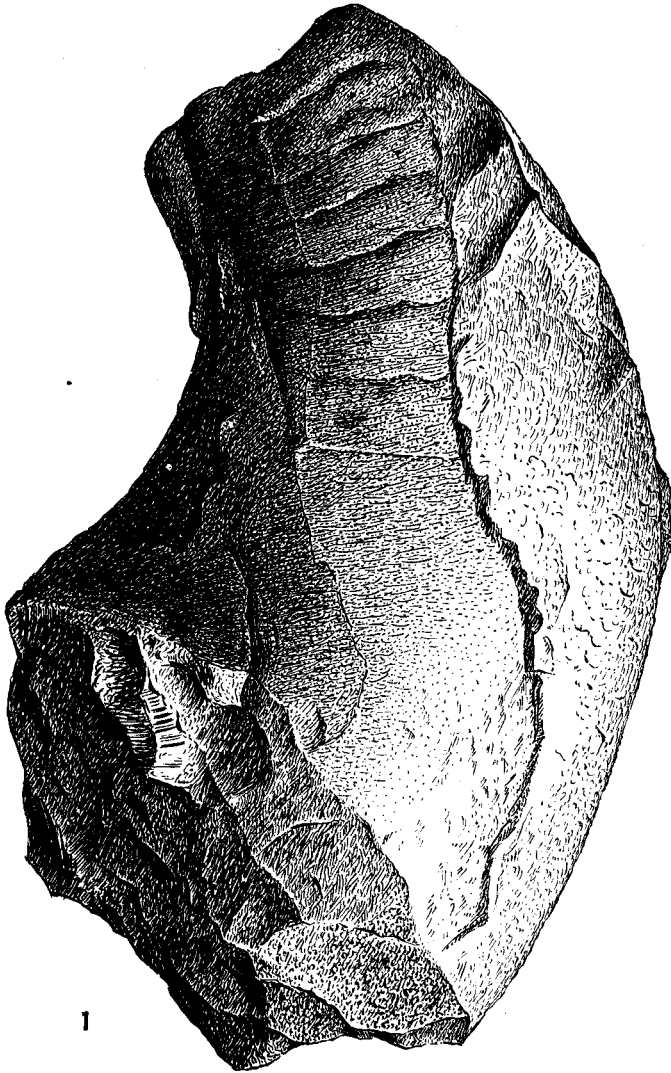


1a

DEVONIAN LIMESTONES.

PLATE XXVI.

	Page.
Fig. 1. <i>Cyrtoceras expansum</i> n. sp	743
View of type specimen.	
Jeffersonville limestone; Bunker Hill.	

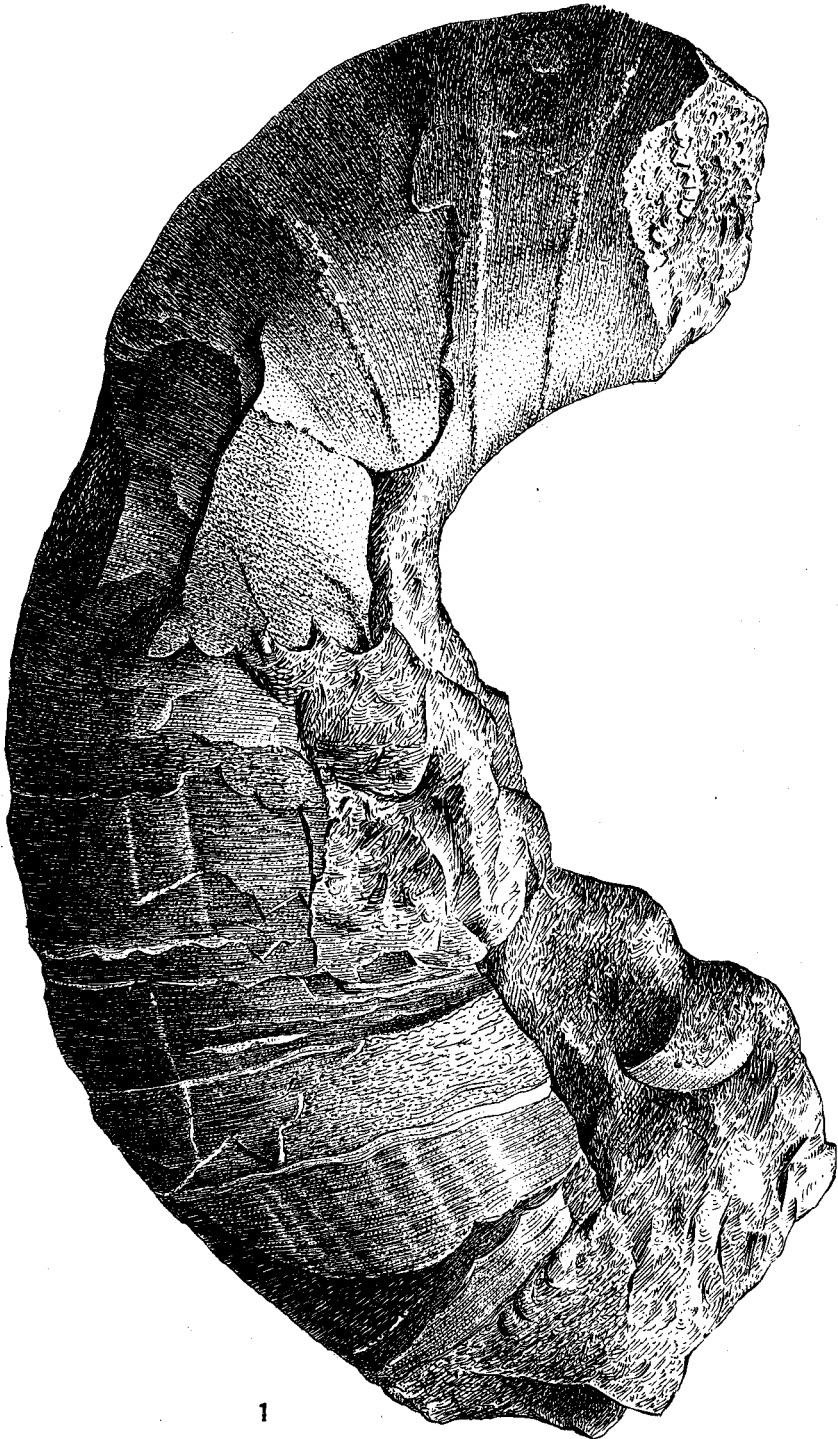


1

DEVONIAN LIMESTONES.

PLATE XXVII.

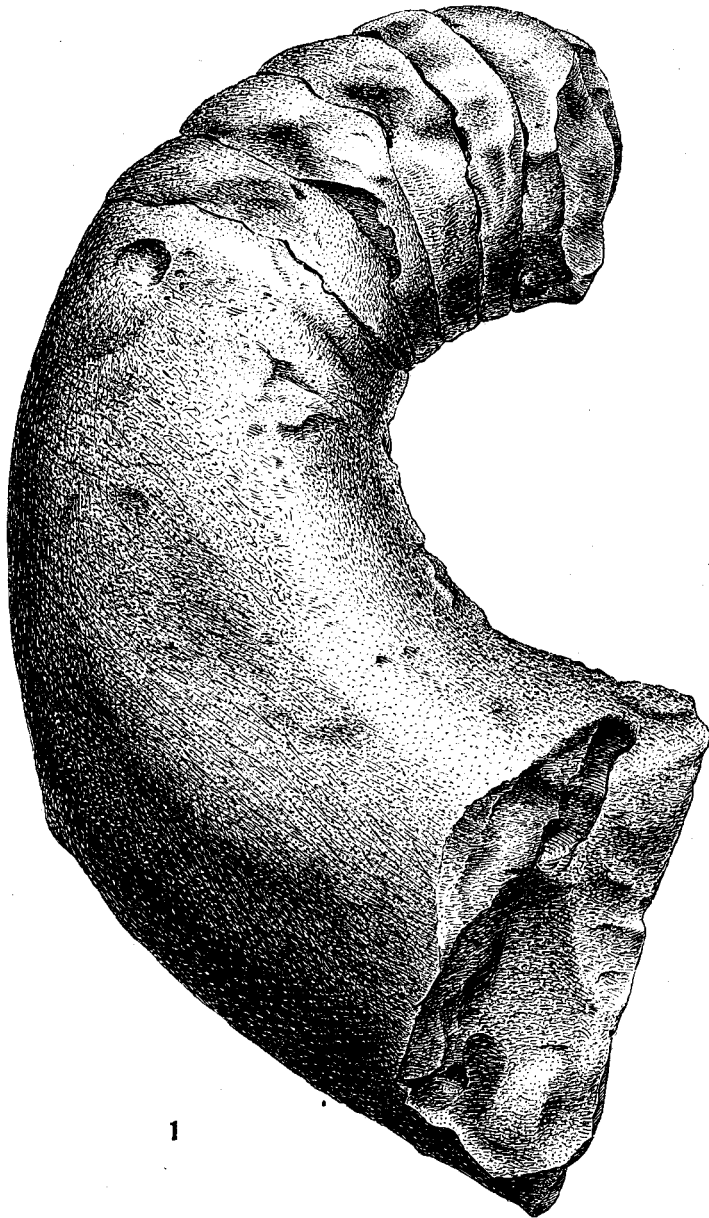
	Page.
Fig. 1. <i>Gyroceras jason</i>	737
About two-thirds natural size.	
Jeffersonville limestone; Lexington.	



DEVONIAN LIMESTONES.

PLATE XXVIII.

	Page.
Fig. 1. <i>Gyroceras inelegans?</i>	739
About four-fifths natural size.	
Jeffersonville limestone; Falls of the Ohio.	

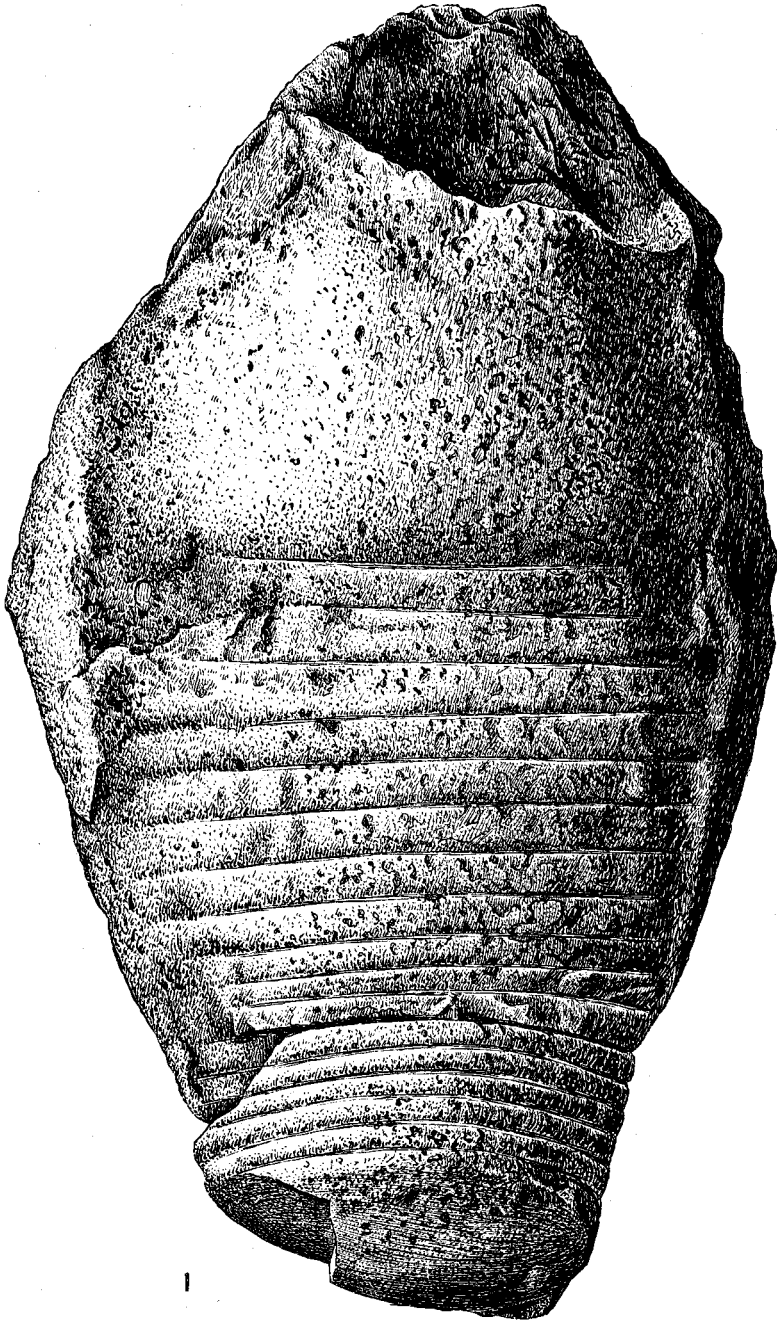


1

DEVONIAN LIMESTONES.

PLATE XXIX.

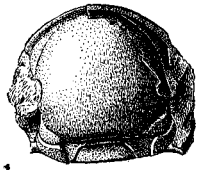
	Page.
Fig. 1. <i>Gomphoceras</i> sp.	741
About seven-eighths natural size.	
Jeffersonville limestone; Falls of the Ohio.	



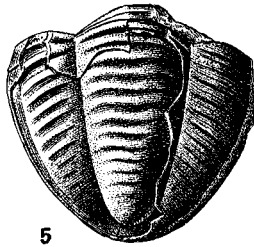
DEVONIAN LIMESTONES.

PLATE XXX.

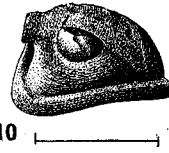
	Page.
Fig. 1. <i>Proetus crassimarginatus</i>	750
An imperfect glabella with the crust mostly exfoliated.	
Fig. 1a. Another specimen with partially exfoliated test showing lateral furrows.	
Jeffersonville limestone; Pipe Creek Falls.	
Fig. 2. <i>Proetus crassimarginatus</i>	750
A specimen showing a part of the cephalon and thorax.	
Sellersburg beds; Charlestown.	
Fig. 3. <i>Dalmanites (Chasmops) calypso</i>	755
An imperfect pygidium.	
Sellersburg beds; Charlestown.	
Fig. 4. <i>Phacops cristata</i> var. <i>pipa</i>	744
A pygidium.	
Jeffersonville limestone; Falls of the Ohio.	
Fig. 5. <i>Proetus crassimarginatus</i>	750
A partially exfoliated pygidium.	
Jeffersonville limestone; Charlestown.	
Fig. 6. <i>Proetus crassimarginatus</i>	750
A pygidium.	
Jeffersonville limestone; Pipe Creek Falls.	
Fig. 7. <i>Proetus macrocephalus</i>	751
A pygidium.	
Jeffersonville limestone; Bunker Hill.	
Fig. 8. <i>Proetus clarus</i>	751
A glabella.	
Jeffersonville limestone; Falls of the Ohio.	
Fig. 9. <i>Proetus clarus</i>	751
A pygidium from which the crust has been nearly all removed,	
showing lateral process.	
Sellersburg beds; Lexington.	
Fig. 10. <i>Proetus folliceus</i>	749
Lateral view of a cephalon.	
Fig. 10a. Top view of the same.	
Jeffersonville limestone; Pipe Creek Falls.	
Fig. 11. <i>Proetus macrocephalus</i>	751
View of a cephalon.	
Fig. 11a. View of a portion of another and larger cephalon.	
Jeffersonville limestone; Pipe Creek Falls.	
Fig. 12. <i>Proetus clarus</i>	751
The right free cheek.	
Jeffersonville limestone; Falls of the Ohio.	



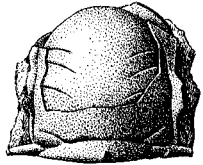
1



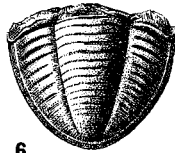
5



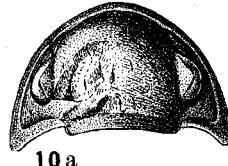
10



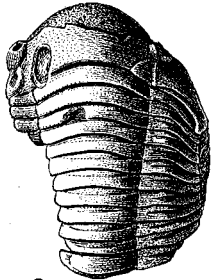
1a



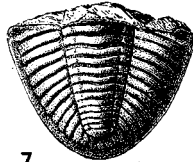
6



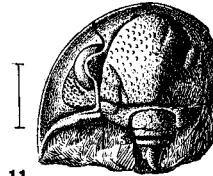
10 a



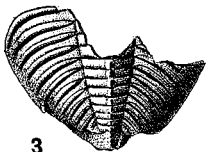
2



7



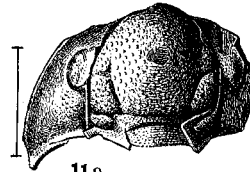
11



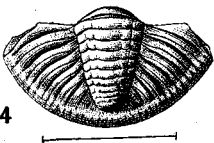
3



8



11 a



4



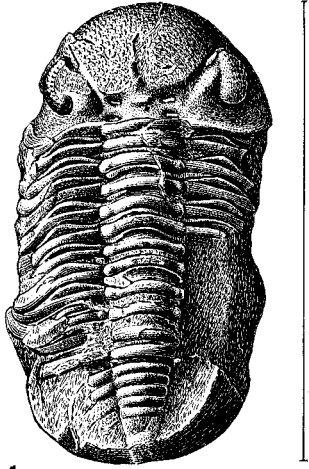
9



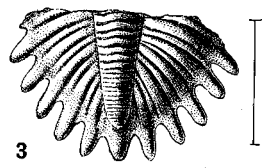
12

PLATE XXXI.

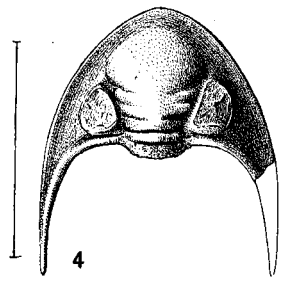
	Page.
Fig. 1. <i>Phacops rana</i>	744
View of an extended individual.	
Fig. 1a. An enrolled individual.	
Sellersburg beds; Charlestown.	
Fig. 2. <i>Dalmanites anchiops</i>	755
Pygidium.	
Jeffersonville limestone; Falls of the Ohio.	
Fig. 2a. View of pygidium showing grooved pleural annulations.	
Jeffersonville limestone; Charlestown.	
Fig. 3. <i>Dalmanites boothi</i> var. <i>calliteles</i>	754
Pygidium.	
Little Rock Creek, Cass County.	
Fig. 4. <i>Dalmanites boothi</i> var. <i>calliteles</i>	754
View of cephalon from which the eyes have been broken.	
Jeffersonville limestone; Little Rock Creek, Cass County.	
Fig. 5. <i>Dalmanites (Odontocephalus) azeria</i>	757
Cephalon having the frontal denticulations and right eye partially destroyed.	
Jeffersonville limestone; Falls of the Ohio.	
Fig. 6. <i>Lichas</i> sp.....	758
View of a part of the left movable cheek.	
Jeffersonville limestone; Falls of the Ohio.	



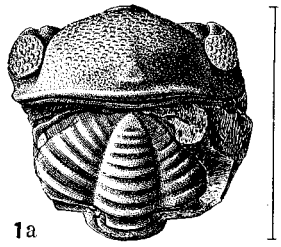
1



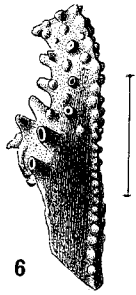
3



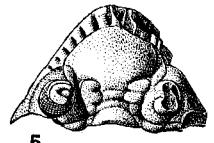
4



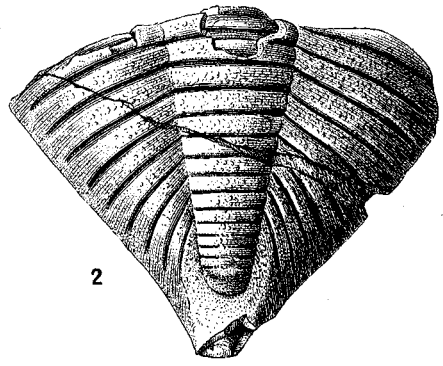
1a



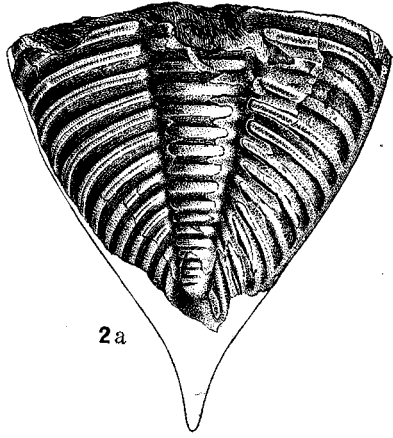
6



5



2



2a