

QUARTERLY JOURNAL

OF THE

GEOLOGICAL SOCIETY OF LONDON.

EDITED BY

THE ASSISTANT-SECRETARY OF THE GEOLOGICAL SOCIETY.

Quod si cui mortalium cordi et cursæ sit non tantum inventis hæere, atque iis uti, sed ad ulteriora penetrare; atque non disputando adversarium, sed opere naturam vincere; denique non belle et probabiliter opinari, sed certo et ostensive scire; tales, tanquam veri scientiarum filii, nobis (si videbitur) se adjungant.
—*Novum Organum, Præfatio.*

VOLUME THE FORTY-THIRD.

1887.

LONDON:

LONGMANS, GREEN, AND CO.

PARIS: FRIED. KLINCKSIECK, 11 RUE DE LILLE; F. SAVY, 24 RUE HAUTEFEUILLE.
LEIPZIG: T. O. WEIGEL.

SOLD ALSO AT THE APARTMENTS OF THE SOCIETY.

MDCCLXXXVII.

List
 OF THE
OFFICERS
 OF THE
GEOLOGICAL SOCIETY OF LONDON.

Elected February 18, 1887.

President.

Prof. J. W. Judd, F.R.S.

Vice-Presidents.

J. Bauerman, Esq. Prof. T. G. Bonney, D.Sc., F.R.S.		A. Geikie, LL.D., F.R.S. Henry Woodward, LL.D., F.R.S.
--	--	---

Secretaries.

J. T. Blanford, LL.D., F.R.S.		W. H. Hudleston, Esq., M.A., F.R.S.
-------------------------------	--	-------------------------------------

Foreign Secretary.

Sir Warrington W. Smyth, M.A., F.R.S.

Treasurer.

Prof. T. Wiltshire, M.A., F.L.S.

COUNCIL.

J. Bauerman, Esq. W. T. Blanford, LL.D., F.R.S. Prof. T. G. Bonney, D.Sc., LL.D., F.R.S. Thomas Davies, Esq. Prof. P. M. Duncan, M.B., F.R.S. A. Geikie, LL.D., F.R.S. Henry Hicks, M.D., F.R.S. Rev. Edwin Hill, M.A. W. H. Hudleston, Esq. M.A., F.R.S. Prof. T. McKenny Hughes, M.A. W. Hulke, Esq., F.R.S. Prof. T. Rupert Jones, F.R.S.		Prof. J. W. Judd, F.R.S. R. Lydekker, Esq., B.A. J. E. Marr, Esq., M.A. E. Tulley Newton, Esq. Prof. H. G. Seeley, F.R.S. Sir Warrington W. Smyth, M.A., F.R.S. J. J. H. Teall, Esq., M.A. Rev. G. F. Whidborne, M.A. Prof. T. Wiltshire, M.A., F.L.S. Rev. H. H. Winwood, M.A. Henry Woodward, LL.D., F.R.S.
---	--	---

Assistant-Secretary, Clerk, Librarian, and Curator.

W. S. Dallas, Esq., F.L.S.

Assistants in Office, Library, and Museum.

Mr. W. Rupert Jones.
 Mr. Francis E. Brown.

TABLE OF CONTENTS.

	Page
BONNEY, Prof. T. G. Notes on the Structures and Relations of some of the Older Rocks of Brittany. (Plate XVII)	301
BRODIE, Rev. P. B. Notes on the Upper Keuper Section at Shrewley where Fish were found, and on the Trias generally in Warwickshire	540
CALLAWAY, C., Esq. On the Alleged Conversion of Crystalline Schists into Igneous Rocks in County Galway	517
———. A Preliminary Inquiry into the Genesis of the Crystalline Schists of the Malvern Hills	525
DAVID, T. W. EDGORTH, Esq. Evidence of Glacial Action in the Carboniferous and Hawkesbury Series, New South Wales	190
DAVIS, JAMES W., Esq. On <i>Chondrosteus acipenseroides</i> , Agassiz. (Plate XXIII.)	605
DERBY, ORVILLE A., Esq. On Nepheline-Rocks in Brazil, with Special Reference to the Association of Phonolite and Foyaite .	457
DONALD, Miss JANE. Notes upon some Carboniferous Species of <i>Murchisonia</i> in our Public Museums. (Plate XXIV.)	617
DUNCAN, Prof. P. MARTIN. On a new Genus of Madrepোরaria (<i>Glyphastræa</i>), with Remarks on the Morphology of <i>Glyphastræa Forbesi</i> , Ed. & H., from the Tertiaries of Maryland, U. S. (Plate III.)	24
———. On the Echinoidea of the Cretaceous Strata of the Lower Narbadá Region	150

	Page
DUNCAN, Prof. P. MARTIN. A Revision of the Echinoidea from the Australian Tertiaries	411
ELSDEN, J. VINCENT, Esq. On the Superficial Geology of the Southern Portion of the Wealden Area	637
GARDNER, J. STARKIE, Esq. On the Leaf-beds and Gravels of Ardtun, Carsaig, &c., in Mull. (Plates XIII.-XVI.)	270
GRESLEY, W. S., Esq. Notes on the Formation of Coal-seams, as suggested by evidence collected chiefly in the Leicestershire and South Derbyshire Coal-fields.....	671
GROOM, T. T., Esq. On some new Features in <i>Pelanechinus coralinus</i> . (Plate XXVIII.)	703
HILL, Rev. E. The Rocks of Sark, Herm, and Jethou	322
HILL, W., Esq., and A. J. JUKES-BROWNE, Esq. On the Lower Part of the Upper Cretaceous Series in West Suffolk and Norfolk ..	544
HUDLESTON, W. H., Esq. Supplementary Note on the Walton-Common Section	443
HUGHES, Prof. T. McKENNY. On the Drifts of the Vale of Clwyd and their Relation to the Caves and Cave-deposits. (Plate IX.)	73
———. On the Ancient Beach and Boulders near Braunton and Croyde in North Devon	657
HULKE, J. W., Esq. Note on some Dinosaurian Remains in the Collection of A. Leeds, Esq., of Eyebury, Northamptonshire ..	695
HUTTON, Capt. F. W. The Eruption of Mount Tarawera	178
HUXLEY, Prof. T. H. Further Observations upon <i>Hyperodapedon Gordoni</i> . (Plates XXVI., XXVII.)	675
IRVING, Rev. A. The Physical History of the Bagshot Beds of the London Basin	374
JONES, Prof. T. RUPERT. Note on <i>Nummulites elegans</i> , Sowerby, and other English Nummulites. (Plate XI.).....	132
JUKES-BROWNE, A. J., Esq., and W. HILL, Esq. On the Lower Part of the Upper Cretaceous Series in West Suffolk and Norfolk ..	544
KOTÔ, Prof. BUNDJIRO. On some Occurrences of Piedmontite-Schist in Japan	474
LYDEKKER, R., Esq. The Cetacea of the Suffolk Crag. (Plate II.)	7

TABLE OF CONTENTS.

v

	Page
LYDEKKER, R., Esq. Description of a Jaw of <i>Hyotherium</i> from the Pliocene of India	19
———. On certain Dinosaurian Vertebræ from the Cretaceous of India and the Isle of Wight	156
———. On a Molar of a Pliocene Type of <i>Equus</i> from Nubia	161
LYONS, H. G., Esq. On the London Clay and Bagshot Beds of Aldershot	431
MARTIN, JOSIAH, Esq. The Terraces of Rotomahana	165
NEWTON, E. T., Esq. On the Remains of Fishes from the Keuper of Warwick and Nottingham; with Notes on the Mode of Occurrence by the Rev. P. B. BRODIE, M.A., F.G.S., and EDW. WILSON, Esq., F.G.S. (Plate XXII.)	537
OWEN, Sir RICHARD. On the Skull and Dentition of a Triassic Saurian (<i>Galesaurus planiceps</i> , Ow.). (Plate I.)	1
PRESTWICH, Prof. JOSEPH. Considerations on the Date, Duration, and Conditions of the Glacial Period, with reference to the Antiquity of Man	393
RADCLIFFE, JAMES, Esq. On Grooves and Quartzite Boulders in the Roger Mine at Dukinfield	599
RAISIN, Miss CATHERINE A. Notes on the Metamorphic Rocks of South Devon	715
REID, CLEMENT, Esq. On the Origin of Dry Chalk Valleys and of Coombe Rock	364
ROBERTS, THOMAS, Esq. On the Correlation of the Upper Jurassic Rocks of the Swiss Jura with those of England	229
ROWE, Rev. A. W. On the Rocks of the Essex Drift	351
RUTLEY, FRANK, Esq. On the Rocks of the Malvern Hills. (Plates XIX.—XXI.)	481
SEELEY, Prof. H. G. On a Sacrum, apparently indicating a new type of Bird, <i>Orrithodesmus cliviculus</i> , Seeley, from the Wealden of Brook. (Plate XII.)	206
———. On <i>Heterosuchus valdensis</i> , Seeley, a Procelian Crocodile from the Hastings Sand of Hastings. (Plate XII.)	212
———. On <i>Patricosaurus merocratus</i> , Seeley, a Lizard from the Cambridge Greensand, preserved in the Woodwardian Museum of the University of Cambridge. (Plate XII.)	216

	Page
SEELEY, Prof. H. G. On <i>Aristosuchus pusillus</i> (Owen), being Further Notes on the Fossils described by Sir R. Owen as <i>Poikilopleuron pusillus</i> , Owen	221
SPENCER, JOHN, Esq. On Boulders found in Seams of Coal	734
THOMSON, JAMES, Esq. On the Occurrence of Species of the Genus <i>Diphyphyllum</i> , Lonsdale, in the Lower Carboniferous Strata of Scotland, with a Description of some new Species and Notices of Varieties. (Plates IV., V.)	33
WALFORD, EDWIN A., Esq. Notes on some Polyzoa from the Lias. (Plate XXV.)	632
WATERS, ARTHUR WM., Esq. On Tertiary Chilostomatous Bryozoa from New Zealand. (Plates VI.-VIII.)	40
———. On Tertiary Cyclostomatous Bryozoa from New Zealand. (Plate XVIII.)	337
WHITAKER, WILLIAM, Esq. Further Notes on the Results of some Deep Borings in Kent	197
WILSON, EDW., Esq. Notes on the Triassic Beds at Colwick Wood, near Nottingham	542
WOODWARD, A. SMITH, Esq. On the Dentition and Affinities of the Selachian Genus <i>Ptychodus</i> , Agassiz. (Plate X.)	121

PROCEEDINGS.

Annual Report	8
List of Foreign Members	17
List of Foreign Correspondents	18
List of Wollaston Medallists	19
List of Murchison Medallists	21
List of Lyell Medallists	22
List of Bigsby Medallists	23
Applications of the Barlow-Jameson Fund	23
Financial Report	24

TABLE OF CONTENTS.

vii

	Page
Award of the Medals &c.	30
Anniversary Address	38
Donations to the Library (with Bibliography)	92

BARKLY, Sir ARTHUR. Letter on the Slip of a Peat-Bog in the Falkland Islands	2
ULRICH, Prof. Notice of his discovery of a peculiar alloy of Iron and Nickel in New-Zealand Rocks	3
STANLEY, W. F., Esq. On the probable amount of former Glaciation of Norway, as demonstrated by the present condition of Rocks upon and near the Western Coast	83
“ Société Ouralienne d'Amateurs des Sciences Naturelles,” notice by the President of an exhibition to be held by the, at Ekaterinebourg	86

LIST OF THE FOSSILS FIGURED AND DESCRIBED IN THIS VOLUME.

[In this list, those fossils the names of which are printed in Roman type have been previously described.]

Name of Species.	Formation.	Locality.	Page.
------------------	------------	-----------	-------

PLANTÆ.

Acer, sp. Pl. xiv. f. 1	}	}	290
Betula? Pl. xvi. f. 4.....			290
<i>Bæhmeria antiqua</i> . Pl. xv. f. 1 ...			291
Corylites Macquarrii. Pl. xv. f. 3.			290
Glyptostrobus europæus. Pl. xiii. f. 2			289
Myrtacæ, supposed leaves of. Pl. xvi. f. 2, 3, 5			291
Platanus hebridicus. Pl. xiii. f. 12-15			289
<i>Podocarpus borealis</i> . Pl. xiii. f. 3.			289
Quercites grænlandicus. Pl. xiv. f. 2 ...			291
Sequoia Langsdorfii. Pl. xiii. f. 1.			289
Undetermined leaves. Pl. xiv. f. 3 ; Pl. xv. f. 2 ; Pl. xvi. f. 1			291

PROTOZOA.

(*Foraminifera*.)

Nummulites elegans. Pl. xi. f. 1-9.)	}	}	142
— lævigatus			147
— variolarius. Pl. xi. f. 10-14.)			145

Name of Species.	Formation.	Locality.	Page.	
CŒLEENTERATA.				
(Actinozoa.)				
<i>Diphyphyllum Blackwoodi</i> . Pl. iv. f. 3	Carboniferous	Scotland	36	
—, var. <i>approximatum</i> . Pl. iv. f. 4				36
— <i>concinnum</i> . Pl. iv. f. 1				35
—, var. <i>furcatum</i> . Pl. iv. f. 2				36
— <i>cylindricum</i> . Pl. iv. f. 5				36
— <i>gracile</i> . Pl. v. f. 10				37
— <i>latiseptatum</i> . Pl. v. f. 6				37
—, var. <i>giganteum</i> . Pl. v. f. 7, 8				37
—, var. <i>interruptum</i> . Pl. v. f. 9				37
<i>Glyphastræa Forbesi</i> . Pl. iii.				Tertiary
ECHINODERMATA.				
<i>Catopygus elegans</i>	Tertiary	Australia	420	
<i>Cidaris</i> (<i>Leiocidaris</i>), sp.				412
<i>Clypeaster folium</i>				415
— <i>gippslandicus</i>				416
<i>Echinolampas ovulum</i>				420
<i>Euspatangus Laubei</i>				426
— <i>murrayensis</i>				426
— <i>rotundus</i>				426
<i>Holaster australiæ</i> . Fig.				420
— <i>difficilis</i>				421
<i>Lovenia Forbesi</i>	424			
<i>Maretia anomala</i>	422			
<i>Megalaster compressus</i>	422			
<i>Micraster brevistella</i>	421			
<i>Ortholophus lineatus</i>	413			
<i>Paradoxechinus novus</i>	415			
<i>Pelanechinus corallinus</i> . Pl. xxviii.	Oolite	England	704	
<i>Pericosmus compressus</i>	Tertiary	Australia	423	
— <i>gigas</i>				423
<i>Psammechinus Woodsi</i>				413
<i>Salenia tertiaria</i>			412	
POLYZOA.				
<i>Cellepora albostris</i>	Tertiary	New Zealand	68	
— <i>coronopus</i>				68
— <i>costata</i>				68
— <i>decepta</i> . Pl. viii. f. 33				69
— <i>tridenticulata</i>				68
—, sp.				70
<i>Cinctipora elegans</i>				341
<i>Crassohornera waipukurensis</i> . Pl. xviii. f. 2, 3, 4, 9				349
<i>Cribrilina figularis</i>				53
— <i>monoceros</i>				52
— <i>radiata</i> , var. <i>Endlicheri</i>	53			

Name of Species.	Formation.	Locality.	Page.
POLYZOA (<i>continued</i>).			
Crisina cancellata. Pl. xviii. f. 8, 11			349
Diastopora sarniensis, var. <i>peran-</i> <i>gusta</i>			342
— <i>suborbicularis</i>			342
Entalophora intricaria. Pl. xviii. f. 5, 6			340
— <i>wanganuiensis</i> . Pl. xviii. f. 1			340
Fascicularia tubipora			344
<i>Heteropora napiensis</i>			348
— <i>pelliculata</i>			348
Idmonea contorta			339
— <i>ramosa</i>			339
— <i>serpens</i>			339
<i>Lepralia bistata</i> . Fig. 1			62
— <i>foraminigera</i>			62
— <i>imbellis</i>			60
— <i>longipora</i>			61
— <i>Poissonii</i> . Pl. viii. f. 37			59
— <i>rectilineata</i> . Pl. vii. f. 16; Pl. viii. f. 34–36			60
— <i>rostrigera</i> . Pl. vii. f. 17			61
— <i>semiluna</i> , var. <i>simplex</i> . Pl. vii. f. 19			62
Lichenopora boletiformis			347
— <i>clypeiformis</i>			345
— <i>Houldsworthii</i>			347
— <i>wanganuiensis</i> . Fig.	Tertiary	New Zealand	346
Lunulites petaloides			70
Membranipora annulus. Pl. vi. f. 2, 5, 9			47
— <i>Dumerilii</i> . Pl. vi. f. 4			45
— <i>Lacroixii</i> , var. <i>grandis</i> . Pl. vi. f. 1			45
— <i>lineata</i>			45
— <i>monostachys</i> . Pl. vi. f. 3, 6... ..			45
— <i>nobilis</i> . Pl. vi. f. 7, 10			46
— <i>occultata</i> . Pl. vi. f. 12, 13; Pl. viii. f. 40			48
— <i>solidula</i>			46
— <i>spinosa</i> . Pl. viii. f. 32			48
— <i>trifolium</i>			48
Membraniporella nitida. Pl. vii. f. 18			52
<i>Micropora variperforata</i> . Pl. viii. f. 27			51
<i>Microporella ciliata</i>			53
— <i>decorata</i> , var. <i>angustipora</i> ...			54
— ? <i>macropora</i>			54
— <i>magnirostris</i>			55
<i>Monoporella capensis</i>			49
—, var. <i>dentata</i> . Pl. viii. f. 39			49
— <i>crassatina</i> . Pl. vii. f. 15			49

Name of Species.	Formation.	Locality.	Page.		
POLYZOA (<i>continued</i>).					
Monoporella disjuncta. Pl. vi. f. 8	Tertiary	New Zealand	50		
— <i>waipukurensis</i> . Pl. vi. f. 11			50		
Mucronella ? <i>alvareziana</i> . Pl. vii. f. 24, 25			57		
— <i>firmata</i> . Pl. vii. f. 20			58		
— ? <i>Liversidgei</i>			58		
— <i>nitida</i>			55		
— <i>Peachii</i> , var. <i>octodentata</i>			56		
— <i>porosa</i> , var. <i>minima</i> . Pl. viii. f. 31			57		
— <i>præstans</i>			56		
— <i>tricuspis</i>			57		
— var. <i>waipukurensis</i> . Pl. viii. f. 30			57		
Porella <i>concinna</i>			63		
<i>Porina grandipora</i> . Pl. vii. f. 23			59		
<i>Reptocavea aspera</i> . Pl. xxviii. f. 10, 13			347		
Rhynchopora <i>longirostris</i> . Pl. vii. f. 22			70		
Schizoporella <i>cinctipora</i> , var. <i>personata</i> . Pl. viii. f. 28			67		
— <i>circinata</i> . Pl. viii. f. 41			64		
— <i>clavula</i>			65		
— <i>conservata</i> . Pl. vii. f. 21			65		
— <i>hyalina</i> . Pl. viii. f. 42, 43			68		
— <i>obliqua</i> ? Fig. 2			66		
— <i>Ridleyi</i>			64		
— <i>tuberosa</i> , var. <i>angustata</i> . Pl. viii. f. 26			67		
Smittia <i>biincisa</i> , var. <i>bicuspis</i>			58		
— <i>Napierii</i>			59		
Steganoporella <i>neozelanica</i>			50		
<i>Stomatopora elongata</i> . Pl. xxv. f. 10			Lias	England	636
— <i>granulata</i>					341
— <i>major</i>					342
Supercyrtis <i>digitata</i>					344
<i>Tubulipora biduplicata</i> . Pl. xviii. f. 12, 14			Tertiary	New Zealand	343
— <i>Campicheana</i> . Pl. xviii. f. 15					343
— <i>dimidiata</i>					343
— <i>inconstans</i> . Pl. xxv. f. 1-9, 12	Lias	England	633		
— ? sp. Pl. xxv. f. 11			635		

ANNULOSA.

(*Insecta*.)

Beetle, elytron of. Pl. xiii. f. 8	Leaf-beds	Mull.	289
Cercopid, wing of. Pl. xiii. f. f. 9			

Name of Species.	Formation.	Locality.	Page.				
MOLLUSCA.							
(<i>Gasteropoda</i> .)							
Murchisonia angulata. Pl. xxiv. f. 1, 2	Carboniferous ...	Britain	} 621				
— kendalensis. Pl. xxiv. f. 3-5...				} 625			
— pyramidata. Pl. xxiv. f. 9 ...					} 627		
— spherulata. Pl. xxiv. f. 10 ...						} 629	
— tenuissima. Pl. xxiv. f. 11 ...							} 629
— Verneuiliana. Pl. xxiv. f. 6-8							
— zonata. Fig.	} 628						
Turritella ? sulcifera. Pl. xxiv. f. 12		Carboniferous ...	Ireland.....	} 630			

VERTEBRATA.

(*Pisces*.)

Chondrosteus acipenseroides. Pl. xxiii.	Lias	Lyme Regis.....	} 605	
Palæoniscoid scales. Pl. xxii. f. 9...	Keuper.....	Nottingham.....		} 539
Ptychodus decurrens. Pl. x. f. 1-10, 13	Cretaceous	England	} 123	
— paucisulcatus. Pl. x. f. 12 ...				} 127
— polygyrus. Pl. x. f. 11.....				
<i>Semionotus Brodiei</i> . Pl. xxii. f. 1-7	Keuper.....	Warwickshire ...	} 539	
— sp. Pl. xxii. f. 8	Keuper.....	Nottingham.....		} 539

(*Reptilia*.)

<i>Aristosuchus pusillus</i> . Pl. xii. f. 13, 14.....	Wealden	Isle of Wight ...	} 221
Galesaurus planiceps. Pl. i.....	Trias	South Africa ...	
<i>Heterosuchus valdensis</i> . Pl. xii. f. 7, 8	Hastings Sand .	Hastings	} 212
Hyperodapedon Gordoni. Pl. xxvi.	Trias	Britain.....	
<i>Omosaurus durobrivensis</i>	Kimmeridge ...	Britain.....	} 699
<i>Ornithopsis Leedsii</i>	Kimmeridge ...	Britain.....	
— ? sp. Fig.	Wealden	Isle of Wtght ...	} 156
<i>Patricosaurus meroeratus</i> . Pl. xii. f. 9-12.....	Greensand	Cambridge	
Rhynchosaurus articeps. Pl. xxvii.	Trias	Britain.....	} 699

(*Aves*.)

<i>Ornithodesmus cluniculus</i> . Pl. xii. f. 1-6	Wealden	Isle of Wight ...	} 206
---	---------------	-------------------	-------

Name of Species.	Formation.	Locality.	Page.
(Mammalia.)			
Balæna primigenia. Fig. 1 & Pl. ii. f. 1, 2	Crag.....	Suffolk.....	8
Balænoptera definita. Pl. ii. f. 3			11
Choniziphius planirostris. Pl. ii. f. 7			14
Equus, sp. Fig.	Pliocene	India	161
Eucetus amblyodon. Fig. 2	Crag.....	Suffolk.....	13
Globicephalus uncidens. Pl. ii. f. 11			16
<i>Hyotherium perimense</i> . Fig.	Pliocene	India	19
Hyperoodon, sp. Pl. ii. f. 6	Crag.....	Suffolk.....	14
Megaptera affinis. Pl. ii. f. 4			11
— minuta. Pl. ii. f. 5			11
Mesoplodon longirostris? Pl. ii. f. 8	Crag.....	Suffolk.....	15
Orca citoniensis. Pl. ii. f. 9, 10			16

EXPLANATION OF THE PLATES.

PLATE	PAGE
I. {	SKULL OF GALES SAURUS PLANICEPS, to illustrate Sir R. Owen's paper on that fossil 1
II. {	CETACEAN OOLITHS, &c., to illustrate Mr. R. Lydekker's paper on the Cetacea of the Suffolk Crag 7
III. {	GLYPHASTRÆA FORBESI, to illustrate Prof. P. M. Duncan's paper on that fossil 24
IV. {	SPECIMENS OF DIPHYPHYLLUM, to illustrate Mr. James Thomson's paper on that genus 33
VI. } VII. } VIII. }	TERTIARY CHILOSTOMATOUS BRYOZOA FROM NEW ZEALAND, to illustrate Mr. A. W. Waters's paper on those fossils ... 40
IX. {	STONE IMPLEMENTS FROM PONTNEWYDD CAVE, to illustrate Prof. T. McK. Hughes's paper on the Drifts and Caves of the Vale of Clwyd 73
X. {	DENTITION OF PSYCHODUS, to illustrate Mr. A. S. Woodward's paper on that genus 121
XI. {	ENGLISH NUMMULITES, to illustrate Prof. T. Rupert Jones's paper on those fossils 132
XII. {	ORNITHODESMUS CLINICULUS, HETEROSUCHUS VALDENSI, PATRICOSAURUS MEROCRATUS, and ARISTOSUCHUS PUSILLUS, to illustrate Prof. H. C. Seeley's papers on those fossils. 206, 212 216, 221
XIII. } XIV. } XV. } XVI. }	FOSSIL LEAVES &c. FROM ARDTUN, to illustrate Mr. J. S. Gardner's paper on the Leaf-beds and Gravels of Mull ... 270
XVII. {	MICROSCOPIC SECTIONS OF BANDED GNEISS, to illustrate Prof. T. G. Bonney's paper on the Older Rocks of Brittany..... 301
XVIII. {	TERTIARY CYCLOSTOMATOUS BRYOZOA FROM NEW ZEALAND, to illustrate Mr. A. W. Waters's paper on those fossils 337
XIX. } XX. } XXI. }	MICROSCOPIC ROCK-SECTIONS, to illustrate Mr. F. Rutley's paper on the Rocks of the Malvern Hills 481

PLATE	PAGE
XXII. { TRIASSIC FISH-REMAINS, to illustrate Mr. E. T. Newton's paper on Fishes from the Keuper of Warwick and Not- tingham	537
XXIII. { CHONDROSTEUS ACIPENSEROIDES, to illustrate Mr. J. W. Davis's paper on that fossil	605
XXIV. { CARBONIFEROUS MURCHISONIAE, to illustrate Miss Donald's paper on those fossils	617
XXV. { LIASSIC POLYZOA, to illustrate Mr. E. A. Walford's paper on those fossils	632
XXXVI. { REMAINS OF HYPERODAPEDON GORDONI and RHYNCHOSAURUS XXXVII. { ARTICEPS, to illustrate Prof. Huxley's paper on the former species	675
XXVIII. { PEDICELLARIE OF PELANECHINUS, to illustrate Mr. T. T. Groom's paper on <i>Pelanechinus corallinus</i>	703