GEOLOGY DEPARTMENT, BIRKBECK COLLEGE, E.C.4

THE

GEOLOGICAL MAGAZINE;

OR

Monthly Journal of Geology:

WITH WHICH IS INCORPORATED

"THE GEOLOGIST."

NOS. LXVII. TO LXXVIII.

RDITED BY

HENRY WOODWARD, F.G.S., F.Z.S.

HONORARY MEMBER- OF THE GEOLOGICAL SOCIETIES OF EDINBURGH, GLASGOW, AND NORWICH; CORRESPONDING MEMBER OF THE NATURAL HISTORY SOCIETY OF MONTREAL; AND OF THE LYCEUM OF NATURAL HISTORY, NEW YORK.

ASSISTED BY

VOL. VII.
JANUARY-DECEMBER. 1870.

LONDON:

TRÜBNER & Co., 8 and 60, PATERNOSTER ROW.

CH. DELEGRAVE BT CIB, 78, RUE DES ECOLES, PARIS.

LEIPSIC: F. A. BROCKHAUS.

TUBIN & FLORENCE: H. LOESCHER. NEW YORK: LEYPOLDT & HOLT.

1870.

HERTFORD:
PRINTED BY STEPHEN AUSTIN.

LIST OF PLATES.

PLATES	· · · · ·								PAGE
I.	Perforated Limestone, Birkrigg Common				•	•	•	•	1
II.	Transition from Mural to Involute Agate	•	•	•	•	•	•	•	10 49
III.	New Zealand Plesiosaurus	•	•	•	•	٠	•	٠	49 97
1 <u>7</u>	Restoration of Dimorphodon, Owen	•	•	•	•	•	•	•	
_∇.	Map of the Soils of Belgium Palæotherium magnum, Cuvier	•	•	•	•	•	•		149
VI.	Palæotherium magnum, Cuvier	•	•	•	•	•	•		153
VII.	British Palæozoic Echinodermata	٠	٠	•	•	•	٠		258
VIII.		٠	•	•	•	•	٠		204
IX.	Carboniferous Entomostraca, etc.	•	•	•	•	•	•		214
	Chart showing Path of the Ice in the Nor	rth	Se	a	•		•		270
XI.	Plan of Ballycummisk Mine, Co. Cork .	•	•	•	•	•	•		252
XII.	Section of ditto	•	•	•	•	•	•		252
XIII.	Plan of Coosheen Mine, Co. Cork	•	•	•	•	•	•		252
XIV.	Fossil Wood from Egypt	•	•	•	•	•	• _		3 06
	Sketch-maps to illustrate Miss E. Hodgs								
٠,	Granite-drift of Furness		•	•	•	•		•	32 8
XVI.	British species of the genus Dicranograpt	us					•		353
XVII.	XVIII. Italian Tertiary Brachiopoda.						•		359
XIX.	XX. Ditto				•		•		399
XXI.	XX. Ditto	•		•	•			•	460
XXII.	British Tertiary and Cretaceous Crustaces	L.							493
XXIII.	Crustaceans of the genus Cyclus from th	ie]	Bri	tisl	h C	arl	oon	t-	
	iferous Rocks, etc								554
Lithogra	phed Diagram to illustrate Mr. Medlicott	's r	оар	er	on	Fa	ult	s	
in S	trata	• -	•						473
	LIST OF WOODC	3 T	т	Ċ!					
	LIST OF WOODC	U	T	٥.					
	and brecciated Concretions								, 14
	presentations of two of the Hailstones wh				n G	leo	rgi	3.	
	ne 9th June, 1869				•		•	•	2 8
Restorati	on of Acanthodes	•	•	•	•	•	•	•	30
Horizont	al Sections across the valley of Cowden Bu	rn		•			•		5 7
Section of	f Millstone Grit at Sweeney, near Oswestr	y					•		69
Section s	howing the junction of the Millstone Grit	wi	th	the	C	arb	on	-	
ifero	us Limestone, in Craigforda Wood, near Os	swe	str	у			• -		69
Section a	howing ditto, at Carreg-y-big, near Oswestr	У	• •	•	•		• .	•	70
Pockets i	n the Millstone Grit at Sweeney, near Osw	est	ry			• - ,			71
	f Millstone Grit, with interstratified limes								
	shire.		•					•	73

	PAGE
Slab of shale covered with Dexolites gracilis, sp. nov	87
Section from Merrington Green to the river Perry, North Shropshire.	107
Section showing the relation of the Werf stream to re-assorted gravels	107
Diagram of a glacier,	175
Section from the Belgian Coast to the Higher Ardennes	201
Sections of Rhætic beds near Audlem 203,	204
	216
Supposed rib of Elephant	254
Rough section of lower part of Millers Dale, Derbyshire	268
Peninsula on which Pre-Historic dwelling was discovered near Seacliff,	
	270
	311
Hills of Silurian rock (Joyce County Hills), with long meteoric drift	
slopes	312
Flat-bottomed lugs cut into the north side of the Muilrea Hills	314
View of Wasdale Crag from the opposite side of Wasdale	
Cephalaspis Dawsoni, Lankr	397
	398
Machairacanthus sulcatus Brachiopoda of Portlandian age (1), from the Eastern Counties "Drift"	
Section from Folkestone to Foreness, Isle of Thanet: showing the	
	469
Diagram to illustrate the case of an assumed fault, where only a natu-	100
	476
	501
	501
	502
Section at the Lota Coal-lightes, Office.	506
	507
	551
= =	551
	552
	553
To the state of th	558
	560
New Forms of Brachiopoda from the Lower Greensand of Upware .	563
DMIAGMOOD ITO MOTE	
LIST OF PORTRAITS.	

GEOLOGICAL MAGAZINE.

TO OUR GEOLOGICAL FRIENDS AND SUPPORTERS.

The year, now so rapidly passing away, witnesses the completion of our Seventh Volume, and it is with no small degree of pleasure that we again record our annual thanks to those kind friends whose names have so often adorned these pages as our Contributors, and indeed, but for whose generous aid, we never should have reached our Seventy-eighth Monthly Number.

Happily for us, notwithstanding the terrible war going on so near at hand,—in which, alas! two of the greatest European nations, foremost in Arts and Sciences, are still engaged,—we have continued to enjoy the blessings of peace and to pursue uninterruptedly our scientific work.

It is, however, much to be feared, that both in France and in Germany, there will be, for a time at least, a considerable scientific dearth. Such being the case, it is earnestly to be hoped that the Geologists of other countries will, under their more favoured circumstances, endeavour to increase the quota of next year's work by greater activity, and by enlisting recruits to supply the losses sustained abroad.

Already we see new bands of Geologists subjugating hitherto unexplored regions to their peaceful sway, and realizing, in some instances at least, substantial rewards.

Thus British North America offers, not only Eczeon Canadense, but fresh fields of Coal and Gold to those who will go forth and win them.

The Cape Colony and Natal, though not very rich in either Coalor Gold-, have lately added the attraction of Diamond-fields, which seem likely to yield a fair reward to the explorer.

Australia—in addition to her metalliferous and Coaly treasures—has, during the past year, contributed a *living* representative, in its Queensland "Mud-fish," of the Old Devonian Crossopterygian Ganoids, with rhomboidal scales, found so abundantly at Dura Den, in Fifeshire.

The great Pacific railroad has opened up the geology of vast regions in the United States heretofore unknown, affording much new light as to the condition of the North American Continent in Secondary times. The Surveys of the United States, and those of our Indian possessions, continue to make known the vast natural resources of their respective countries, and by their labours to add greatly to geological science.

These we have had from time to time the pleasure to record, as also the work in progress upon our own Insular Surveys.

New facts and fossils continually turn up, needing to be published as speedily as possible.

To this useful work the Geological Magazine may honestly lay claim to have contributed largely; its pages and plates being stored both with geological and palæontological results of very considerable importance.

We therefore hope that our friends and Subscribers will continue to support our Journal as heretofore, and also will induce their brother-Geologists, not only to read—which we are sure they always do—but personally to become annual subscribers to the Geologican Magazine.

The Editor.

All Communications for the Geological Magazine should be addressed to the Editor, 142, St. Paul's Road, Camden Square, N.W.

Books for Review, and Parcels from abroad, may be sent addressed to the Editor, care of Messrs. Trübner & Co., 8 and 60, Paternoster Row, E.C.

Form for Subscribers to fill up and send to their Booksellers.

To

Be pleased to add my name to the List as a Subscriber for one copy of Volume VIII. of the Geological Magazine, to be published monthly by Messrs. Trübner & Co., the First Part of which appeared on January 1, 1871. Price Eighteenpence each number.

Signature	<u> </u>	 	 	
Address_		 	 	