

THE
GEOLOGICAL MAGAZINE.

VOL. X.

JANUARY—DECEMBER, 1873.

THE
GEOLOGICAL MAGAZINE:

OR,

Monthly Journal of Geology:

WITH WHICH IS INCORPORATED

“THE GEOLOGIST.”

NOS. CIII. TO CXIV.

EDITED BY

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

PRESIDENT OF THE GEOLOGISTS ASSOCIATION.

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

PROFESSOR JOHN MORRIS, F.G.S., &c., &c.,

AND

ROBERT ETHERIDGE, F.R.S., L. & E., F.G.S., &c.

VOL. X.

JANUARY—DECEMBER, 1873.

LONDON:

TRÜBNER & Co., 57 AND 59, LUDGATE HILL.

F. SAVY, 24, RUE HAUTEFEUILLE, PARIS.

1873.

HERTFORD :

PRINTED BY STEPHEN AUSTIN AND SONS.

LIST OF PLATES.

	PAGE
I. Recent and Fossil Butterflies	2
II. III. Ancient Stone Implements of Great Britain	4
IV. Map of England with Isothermal Lines of July; <i>Conchicolites cor- rugatus</i> and Tubes of <i>Ortonia minor</i>	49
V. <i>Calceola sandalina</i> , Lamk., Devonian, Eifel	57
VI. <i>Rostellaria maxima</i> , Price, Gault, Folkestone	97
VII. <i>Halonia</i> , Lindley and Hutton	145
VIII. Microscopic Crystals observed by Prof. Hull in the Trap-rocks of Limerick	153
IX. To Illustrate Prof. Hull's Paper on the Microscopic Structure of Irish Granites	193
X. <i>Holaspis sericeus</i> , Lank., a New Devonian Fish-shield, Grey Corn- stones, Abergavenny	241
XI. To Illustrate Mr. Rofe's Paper on the Structure of the Crinoidea	262
XII. Contributions to Carboniferous Palæontology	385
XIII. The Sasso di Ronch, Dolomite Mountains	365
XIV. Head of Fossil Fish described by Prof. Traquair	552
XV. <i>Carinella cellulifera</i> , R. Etheridge, jun., Carboniferous Beds, Carlisle	433
XVI. Carboniferous Species of <i>Dithyrocaris</i> , Scouler	482
XVII. Sketch-map of Lough Derg	486

TABLE I. Analytical Table of the Genera of Graptolites, by C. Lapworth, F.G.S.
to face page 555.

LIST OF WOODCUTS.

	PAGE
Victoria Cave, Settle, Yorkshire.....	11
<i>Eurypterus (Arthropleura ?) mammatus</i> ; <i>Arthropleura (Euphoberia ?) ferox</i>	105
<i>Arthropleura armata</i> , Coal-measures, Saarbruck	107
<i>Arthropleura ferox</i>	110
<i>Euphoberia ? major</i> , from the Coal-measures, Illinois	111
<i>Halionia punctata</i> ; <i>H. gracilis</i>	151
Diagram of the Shields of the several Genera of Heterostracous Cephalaspidae	152
Reversed laminae of Schorlaceous Granite south of Carclaze Mine, Cornwall.	164
<i>Asterophyton Linckii</i>	216
<i>Calveria hystrix</i>	219
<i>Pentacrinus asteria</i>	221
<i>Pentacrinus Wyville-Thomsoni</i>	223
Diagrams to Illustrate Disturbances in the Earth's Crust	252, 254
<i>Conularia quadrisulcata</i> , Carboniferous series	295
Outline lateral view of the shield of <i>Holaspis sericeus</i>	331
Geological Problems.....	332, 333
Sketch of the Little Orme from the Shore.....	342
Mass of Smooth Limestone from the Shore at the Little Orme	343
Large Mass of Breccia from the Little Orme	343
The Drei Zinnen	366
The Aiguilles of the Schlern	368
Figures to Illustrate the occurrence of Hæmatite in the Carboniferous Limestone Beds near Cookstown, Co. Tyrone	401
<i>Pentacrinus priscus</i> from the Lower Devonian, near Torquay	426
Vertical Section of Bone of <i>Ganorhynchus Woodwardii</i> , Traquair. Magnified 48 diameters	554
<i>Lingula ovalis</i> , Sby., Kimmeridge Clay, Boulogne-sur-mer	574
Section of Cliff near Boulogne	574

TO OUR GEOLOGICAL FRIENDS AND THE
SCIENTIFIC PUBLIC.

The Tenth Volume of the GEOLOGICAL MAGAZINE, forming Decade I. of that Journal, is now completed. The New Year, 1874, witnesses the beginning of a "*New Series*," and the commencement of Decade II.

Looking back to the early days of this work, in 1864, we have to deplore the loss of many dear and distinguished friends and fellow-labourers in this branch of science who have passed from amongst us; but we gratefully recognize a large accession of new and able geologists and palæontologists, who have already rendered valuable aid to the GEOLOGICAL MAGAZINE.

We need and desire for the coming Decade the support of every Geologist in this Country, in the Colonies, and in America; and earnestly beg them to give us their subscriptions and contributions.

For ourselves, we assure them that no effort shall be wanting on our part to render the GEOLOGICAL MAGAZINE in every respect deserving of their continued support.

Annual Subscribers should send in their names and subscriptions to MESSRS. TRÜBNER & Co., 57 and 59, Ludgate Hill, London, E.C.

The GEOLOGICAL MAGAZINE can always be obtained through all Booksellers in town or country; but if any difficulty or delay arises through this method of procuring it, the Publishers will be happy to send it direct per post.

THE EDITOR.

LONDON, *December 23, 1873.*

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, should be sent addressed to the Editor, care of MESSRS. TRÜBNER & Co., 57 and 59, Ludgate Hill, London, 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 I. Decade II. "New Series," of THE GEOLOGICAL MAGAZINE, to be published monthly by Messrs. TRÜBNER & Co., the First Part of which will appear on January 1, 1874, price Eighteenpence each number.

Signature _____

Address _____

NOTICE.—The TENTH VOLUME of the GEOLOGICAL MAGAZINE, for 1873, will be ready in a few days, bound in Cloth, price 20s. Cloth Cases for Binding Vol. X. may be had, price 1s. 6d.

Vols. I.—X. may be obtained of Messrs. Trübner & Co. uniformly bound in Green Cloth, Gilt.

Vol. I.	1864.	11s.	Vol. VI.	1869.	20s.
Vol. II.	1865.	17s.	Vol. VII.	1870.	20s.
Vol. III.	1866.	20s.	Vol. VIII.	1871.	20s.
Vol. IV.	1867.	20s.	Vol. IX.	1872.	20s.
Vol. V.	1868.	20s.	Vol. X.	1873.	20s.

London: TRÜBNER & CO., 57 and 59 Ludgate Hill.