

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 MONTRÉAL; 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. Rofé'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, Carluke .....	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>Halonia 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.