

THE  
GEOLOGICAL MAGAZINE

OR,

Monthly Journal of Geology:

WITH WHICH IS INCORPORATED

“THE GEOLOGIST.”

NOS. DXXXV TO DXLVI.

GEOLOGY DEPARTMENT

BIRKBECK COLLEGE

PRINTED BY

HENRY WOODWARD, LL.D., F.R.S., F.G.S., F.R.M.S.,

LATE OF THE BRITISH MUSEUM OF NATURAL HISTORY; PRESIDENT OF THE  
PALÆONTOGRAPHICAL SOCIETY; ETC., ETC.

ASSISTED BY

PROFESSOR J. W. GREGORY, D.Sc., F.R.S., F.G.S.,

DR. GEORGE J. HINDE, F.R.S., F.G.S.,

SIR THOS. H. HOLLAND, K.C.I.E., A.R.C.S., F.R.S.,

PROFESSOR W. W. WATTS, Sc.D., M.Sc., F.R.S., V.P.G.S.,

DR. ARTHUR SMITH WOODWARD, F.R.S., F.L.S., Sec. G. Soc.,

AND

HORACE B. WOODWARD, F.R.S., F.G.S.

NEW SERIES. DECADE V. VOL. VI.

JANUARY—DECEMBER, 1909.

LONDON:

DULAU & CO., LTD., 37 SOHO SQUARE, W.

1909.

**HERTFORD :**

**PRINTED BY STEPHEN AUSTIN AND SONS, LTD.**

## LIST OF PLATES.

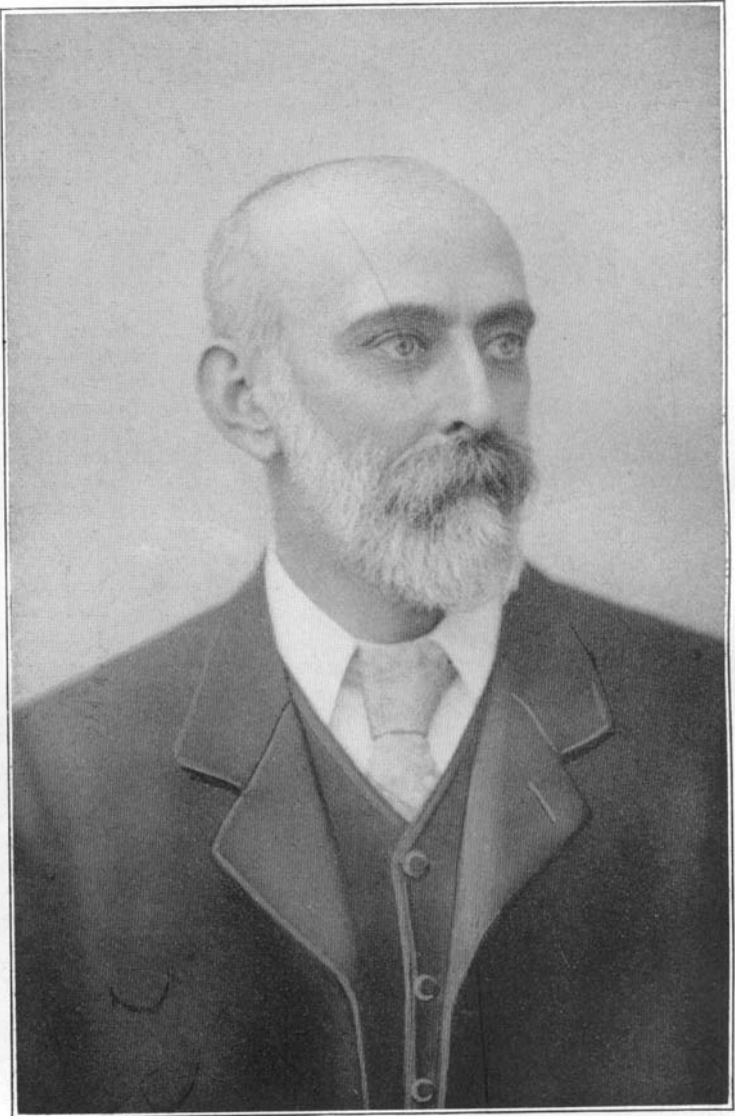
PLATE	FACING PAGE
I. Portrait of J. J. Harris Teall, M.A., D.Sc., F.R.S., F.G.S. . . . .	1
II. <i>Puzosia curvatusilecata</i> , sp. nov., Turonian, Marlow, Bucks . . . . .	68
III. <i>Phacops (Trimerocephalus) pentops</i> , sp. nov., Devonian, Cornwall ; <i>Allorisma concinna</i> , sp. nov. . . . .	97
IV. Wind-cut pebbles from Permian of Elgin, Moray, and North Island, New Zealand . . . . .	103
V. Portrait of the late G. H. Kinahan, M.R.I.A. . . . .	142
VI. Dental apparatus of <i>Discoidea cylindrica</i> (Lamk.) . . . . .	152
VII. Trilobites from Devon and Cornwall . . . . .	204
VIII. <i>Tetracrinus (?) felix</i> , sp. nov. . . . .	209
IX. Portrait of R. H. Traquair, M.D., LL.D., F.R.S., V.P.R.S.E., F.G.S. . . . .	241
X. Microphotographs of Basic Plagioclase Felspars near Lennoxtown	251
XI. Microphotographs of Basic Plagioclase Felspars, Kilpatrick Hills and Arthur's Seat . . . . .	256
XII. Thin Sections of Granophyric Diabase from the Kilsyth-Croy District, Dumbartonshire . . . . .	309
XIII. <i>Pleuropholis lævissima</i> , Egerton, Solenhofen, Bavaria . . . . .	310
XIV. New Chalk Bryozoa (Polyzoa) . . . . .	338
XV. The Tarntaler Köpfe . . . . .	340
XVI. The ridge of the Nederer ; Reckner (Serpentine), Kahlewand (Dolomite) . . . . .	342
XVII. The scree-cone (Issl) under the Lower Tarntal ; Head of the Lower Tarntal . . . . .	344
XVIII. Lake, lower end of the Upper Tarntal ; Ridge north of the Mieselkopf . . . . .	346
XIX. Sketch-map of Egypt . . . . .	353
XX. Nubian Sandstone Fossils from Egypt . . . . .	388
XXI. <i>Inoceramus Balli</i> , sp. nov., from the Nubian Sandstone of Egypt .	392
XXII. Chalk Bryozoa (Polyzoa) . . . . .	398
XXIII. Chalk Bryozoa (Polyzoa) . . . . .	400
XXIV. Pumices and Pumiceous Scoria from explosive eruptions, Monte Somma and Vesuvius . . . . .	440

PLATE		FACING PAGE
XXV.	Pumices and Pumiceous Scoria from explosive eruptions, Monte Somma and Vesuvius . . . . .	442
XXVI.	Cephalopods from the Tarntal Köpfe, in Tyrol . . . . .	446
XXVII.	Sections of the Orange Grove Granites . . . . .	554
XXVIII.	<i>Bothrodendron</i> ; <i>Hastimima</i> . . . . .	485
XXIX.	View of mouth of the Aberedw Valley . . . . .	491
XXX.	Portrait of William Boyd Dawkins, M.A., D.Sc., F.R.S., F.S.A., F.G.S. . . . .	529
XXXI.	Palæolithic Flint Implement from the Cambridgeshire Gravels, near Hildersham . . . . .	536

## LIST OF ILLUSTRATIONS IN THE TEXT.

	PAGE
Cephalic shield or carapace of <i>Limulus Woodwardi</i> , Watson, sp. nov. . . . .	15
Sketch-map showing Pulau Ubin and Changi, Singapore . . . . .	18
Dyke-like mass of enstatite-vogesite in the hornblende-granite of Pulau Ubin, Singapore . . . . .	20
Map showing distribution of erratics in neighbourhood of essexite intrusion	27, 29
Section across the Hill of Beath near Dunfermline, Fife . . . . .	57
<i>Cricetus vulgaris Runtonensis</i> , n.subsp., Norfolk Forest Bed . . . . .	111
Map showing distribution of land and water in the Atlantic region during early Devonian times . . . . .	147
Sketch-map showing probable directions of the sediment-bearing currents in Bunter times . . . . .	163
Microscopic section of corundum-bearing rock . . . . .	166
<i>Amphibamus grandiceps</i> , Cope . . . . .	218
Section across the Bovey Basin through Heathfield . . . . .	260
Map, North-Eastern Soudan . . . . .	267
The Loop of <i>Dielasma</i> (seven figures) . . . . .	273
Diagram of borings in Derbyshire and Notts Coal-field . . . . .	290, 292
Sketch-map showing position of borings in Derbyshire and Notts Coal-field . . . . .	294
Diagrammatic Section across the Kilsyth-Croy Area . . . . .	301
Map of the vicinity of Port Sudan . . . . .	312
<i>Homalostega anglica</i> . . . . .	337
Diagram illustrating the section of the Tarntal Mass . . . . .	339
Sketch-map of district between Tarntaler Köpfe and Matrei . . . . .	341
Mandible of <i>Tetrabelodon dinotherioides</i> , sp. nov., Andrews . . . . .	348
Sketch to illustrate a common mode of occurrence of 'Laterite' . . . . .	350
<i>Myotragus balearicus</i> , gen. et sp. nov. . . . .	386, 387
Profile of skull of <i>Tapinocephalus atherstoni</i> , Owen . . . . .	401
Palatal aspect of skull of <i>Tapinocephalus atherstoni</i> , Owen . . . . .	402
Key Map showing position of Birch Tor, Haytor, etc. . . . .	403
Geological Map of Birch Tor Mining District, Dartmoor . . . . .	404
Microphotograph of Specular Iron-Tinstone . . . . .	406
Diagram illustrating structure of magnetic iron-ore deposits at Haytor . . . . .	408

	PAGE
Diagram showing theoretical shells of contraction, compression, and fissuring on the earth's crust by process of cooling . . . . .	436
Sketch-map showing course of pipe-line across the 'Permian' beds between Hagley and Frankley . . . . .	448
Sketch-map showing <i>Spirorbis</i> -limestone outcrop in Keele Beds, Warwickshire	453
Portrait of Professor T. Rupert Jones, F.R.S., F.G.S. . . . .	481
Body-segments of <i>Eurypterus hibernicus</i> , Baily . . . . .	487
Diagrammatic sketch of country around Aberedw . . . . .	492
Sketch-map showing river-distribution in Mid-South Wales . . . . .	510



Yours faithfully  
J. G. S. Seal