

# GEOLOGICAL MAGAZINE

Edited by

O. M. B. BULMAN and S. R. NOCKOLDS

*assisted by*

PROFESSOR W. S. BOULTON

PROFESSOR O. T. JONES

PROFESSOR W. G. FEARNSIDES

DR. W. J. PUGH

PROFESSOR LEONARD HAWKES

PROFESSOR C. E. TILLEY

---

## CONTENTS

WALKER, M. The Development of a Diplograptid from the Platteville Limestone . . . . .	1
PADGET, P. The Stratigraphy of Cuilcagh, Ireland . . . . .	17
DEER, W. A. The Diorites and Associated Rocks of the Glen Tilt Complex . . . . .	27
ARKELL, W. J. Seven New Genera of Jurassic Ammonites . . . . .	36
HILLS, G. F. S. The Spread of the Continents . . . . .	41
KOLBUSZEWSKI, J. Note on Factors Governing the Porosity of Wind Deposited Sands . . . . .	48
BLUNDELL, C. R. K. Magnetometric Mapping for Haematite in South Wales . . . . .	57
KIER, P. M. A New Lower Carboniferous Echinoid from North America . . . . .	65

## CORRESPONDENCE

The Great Glen Crush Belt . . . . .	70
"Association pour l'Étude Géologique des Zones Profondes de l'Écorce Terrestre" . . . . .	70

## REVIEW

p. 71

## PUBLICATIONS RECEIVED

p. 72

## ANNOUNCEMENT

p. 72

STEPHEN AUSTIN & SONS, LTD.  
1 FORE STREET, HERTFORD, HERTS

# GEOLOGICAL MAGAZINE

founded in 1864

by the late Dr. H. Woodward, F.R.S., with which

is incorporated

## THE GEOLOGIST

(founded 1858)

---

Published every two months, price 32/6 per annum  
(single numbers, 7/6).

---

Subscriptions for 1953, inquiries relating to back stock, advertising, etc., should be sent to Stephen Austin & Sons, Ltd., Fore Street, Hertford, Herts.

---

### Instructions to Contributors.

Articles submitted for publication in the *Geological Magazine* should be addressed to the Editors at the *Sedgwick Museum, Cambridge*, not to the Publishers.

Manuscripts should be typewritten, double-spaced, and preferably with a wide margin, and should be carefully revised; they should be as concise as possible, and in no case should an article exceed 10,000 words. MS. must be accompanied by a short abstract, 50–100 words. References should not be given in footnotes, but arranged in alphabetic order of author's names at the end of the article; the author's name should be followed by date of publication, and the title of each paper should be given in addition to volume and page numbers of the Journal, thus:—

LAPWORTH, C. 1878. The Moffat Series. *Quart. Journ. Geol. Soc.*, xxxiv, 240–343.

References should be cited in the text by author's name and date, with page reference if necessary, in brackets:—(Lapworth, 1878, p. 339).

Illustrations should be so drawn as to allow reduction to a maximum size of  $6\frac{1}{2} \times 3\frac{1}{2}$  inches (the type-area of the Magazine) and originals must not exceed  $40 \times 22$  inches. Map lettering should be such as to be clearly legible after reduction (equivalent to 5-point as a *minimum* on reduction), while lettering on text-figures should in general be left in pencil for printing.

Authors will receive 25 reprints free of cost.

THE  
GEOLOGICAL MAGAZINE

VOL. XC OF WHOLE SERIES

JANUARY-DECEMBER, 1953

# GEOLOGICAL MAGAZINE

with which is incorporated

## THE GEOLOGIST

FOUNDED IN 1864 BY THE LATE DR. HENRY WOODWARD, F.R.S.

Edited by

O. M. B. BULMAN, Ph.D., A.R.C.Sc., F.R.S.

and

S. R. NOCKOLDS, Ph.D.

*assisted by*

PROFESSOR W. S. BOULTON, D.Sc.  
PROFESSOR W. G. FEARNSIDES, M.A., F.R.S.  
PROFESSOR LEONARD HAWKES, D.Sc., F.R.S.  
PROFESSOR O. T. JONES, M.A., D.Sc., F.R.S.  
PROFESSOR W. J. PUGH, O.B.E., D.Sc., F.R.S.  
PROFESSOR C. E. TILLEY, Ph.D., F.R.S.

Vol. XC of Whole Series  
JANUARY—DECEMBER, 1953

4510712

STEPHEN AUSTIN & SONS, LTD  
1 FORE STREET, HERTFORD, HERTS

**HERTFORD**

**STEPHEN AUSTIN AND SONS, LTD.**

## CONTENTS OF VOLUME XC, 1953

No. 1	JANUARY—FEBRUARY	PAGE
M. WALKER. The Development of a Diplograptid from the Platteville Limestone . . . . .		1
P. PADGET. The Stratigraphy of Cuilcagh, Ireland . . . . .		17
W. A. DEER. The Diorites and Associated Rocks of the Glen Tilt Complex . . . . .		27
W. J. ARKELL. Seven New Genera of Jurassic Ammonites . . . . .		36
G. F. S. HILLS. The Spread of the Continents . . . . .		41
J. KOLBUSZEWSKI. Note on Factors Governing the Porosity of Wind-Deposited Sands . . . . .		48
C. R. K. BLUNDELL. Magnetometric Mapping for Haematite in South Wales . . . . .		57
P. M. KIER. A New Lower Carboniferous Echinoid from North America . . . . .		65
CORRESPONDENCE.—The Great Glen Crush Belt, 70; "Association pour l'Étude Géologique des Zones Profondes de l'Écorce Terrestre," 70.		
REVIEW.—Earth Waves, 71.		
PUBLICATIONS RECEIVED.—72.		
ANNOUNCEMENT.—Special University Lectures in Geology, University of London, 72.		
No. 2	MARCH—APRIL	
T. M. THOMAS. New Evidence of Intra-Formational Piping at two Separate Horizons in the Carboniferous Limestone (Dibunophyllum Zone) at South Cornelly, Glamorgan . . . . .		73
N. R. WILLCOX. Zonal Variations in Selected Morphological Features of <i>Echinocorys scutata</i> Leske . . . . .		83
W. G. CHALONER. A New Species of <i>Lepidostrobus</i> containing unusual Spores . . . . .		97
E. B. BAILEY. Facies Changes versus Sliding: Loch Leven, Argyll . . . . .		111
W. G. HARDIE. Facies Changes versus Sliding—A Reply . . . . .		114
J. HOSPERS and P. L. WILLMORE. Gravity Measurements in Durham and Northumberland . . . . .		117
M. H. P. BOTT and D. MASSON-SMITH. Gravity Measurements over the Northern Pennines . . . . .		127
O. M. B. BULMAN. On the thecae of <i>Monograptus scanicus</i> Tullberg . . . . .		131
A. F. HALLIMOND and J. T. WHETTON. Magnetometric Mapping for Haematite in South Wales . . . . .		137
CORRESPONDENCE.—Magnetometric Mapping for Haematite in South Wales, 140; The Stone of the Ancient Assyrian Monumental Carvings, 141.		
REVIEW.—The Geological Survey of Great Britain, 142.		
PUBLICATIONS RECEIVED.—144.		
No. 3	MAY—JUNE	
C. E. TILLEY. The Nephelinite of Etinde, Cameroons, West Africa . . . . .		145
A. R. GINDY. Progressive Replacement of Limestone Inclusions in Granite at Ballynacarrick, Co. Donegal . . . . .		152
H. I. DREVER. A Note on the Field Relations of the Shiant Isles' Picrite . . . . .		159
R. JOHNSTON. The Olivines of the Garbh Eilean Sill, Shiant Isles . . . . .		161

	PAGE
G. R. MCLACHLAN. The Bearing of Rolled Garnets on the Concept of <i>b</i> -lineation in Moine Rocks . . . . .	172
L. R. WAGER. The Extent of Glaciation in the Island of St. Kilda . . . . .	177
I. D. MUIR. A Local Potassic Modification of the Ballachulish Granodiorite . . . . .	182
I. M. SIMPSON. <i>Daviesiella destinezi</i> (Vaughan), a Lower Carboniferous Index Fossil in North-West Ireland . . . . .	193
L. R. COX. Gastropoda from the Karroo Beds of Southern Rhodesia . . . . .	201
K. A. JOYSEY. A Study of the Type-Species of the Blastoid <i>Codaster McCoy</i> . . . . .	208
CORRESPONDENCE.—The Occurrence of Determinable Plants in the Lower Estuaries of Peterborough, 219; On Submarine Slumping in the Lower Ludlow Rocks of North Wales, 220; Accuracy in Geological Localities, 221; Gravity Measurements over the Northern Pennines, 221; Ludlovian Research Group, 223; The Scula of <i>Monograptus scanicus</i> Tullberg, 224.	
ANNOUNCEMENT.—Clay Minerals Conference : Missouri 1953, 207.	

## No. 4

## JULY–AUGUST

D. B. MCINTYRE and F. J. TURNER. Petrofabric Analysis of Marbles from Mid-Strathspey and Strathavon . . . . .	225
D. R. HUNTER. An Occurrence of Chrysotile Asbestos, Usushwana Valley, Mbabane District, Swaziland . . . . .	241
A. SPRY. Flow Structure and Laminar Flow in Bostonite Dykes at Armidale, New South Wales . . . . .	248
M. H. P. BOTT. Negative Gravity Anomalies over Acid "Intrusions" and their Relation to the Structure of the Earth's Crust . . . . .	257
K. A. DAVIES. A Basalt Flow and Feeding Dyke, N.E. Uganda . . . . .	268
L. E. WEISS. Tectonic Features of the Hecla Hook Formation to the South of St. Jonsfjord, Vestspitsbergen . . . . .	273
J. R. H. MCWHAIE. The Carboniferous Breccias of Billefjorden, Vestspitsbergen . . . . .	287
CORRESPONDENCE.—Gravity Measurements over the Northern Pennines . . . . .	299
REVIEWS.—The Dynamics of Faulting and Dyke Formation with Applications to Britain, 300; Structural Geology, 300; Outlines of Structural Geology, 300; Structural and Field Geology, 300; Principles of Invertebrate Palaeontology, 301; The World's Oilfields; The Eastern Hemisphere, 302; Invertebrate Fossils, 303.	
PUBLICATIONS RECEIVED.—304.	

## No. 5

## SEPTEMBER–OCTOBER

J. F. G. WILKINSON. Some Aspects of the Alpine-Type Serpentinities of Queensland . . . . .	305
W. SCHWARZACHER. Cross-Bedding and Grain Size in the Lower Cretaceous Sands of East Anglia . . . . .	322
W. J. ARKELL. Bajocian Ammonites Collected by Sir Henry Hayden Near Kampadzong, Tibet . . . . .	331
E. H. T. WHITTEN. Modal and Chemical Analyses in Regional Studies . . . . .	337
W. W. BLACK. Critical Sections in a Carboniferous Reef Knoll . . . . .	345
D. H. WILLIAMSON. Petrology of Chloritoid and Staurolite Rocks North of Stonehaven, Kincardineshire . . . . .	353
M. WALKER. The Development of <i>Monograptus dubius</i> and <i>Monograptus chimaera</i> . . . . .	362

	PAGE
REVIEWS.—Korallen aus dem Oberkarbon (Namur) des oberschlesischen Steinkohlen-Beckens, 374; Methods and Principles of Systematic Zoology, 374; Zoogeography of the Sea, 374; Falkland Islands Dependencies Survey: Scientific Reports 1-5, 375; La Mer, 375.	
PUBLICATIONS RECEIVED.—376.	
ANNOUNCEMENT.—University of London: Special Lectures, 330.	
No. 6	NOVEMBER-DECEMBER
G. WILSON, J. WATSON, and J. SUTTON. Current-Bedding in the Moine Series of North-Western Scotland . . . . .	377
F. E. EAMES. The Miocene/Oligocene Boundary and the Use of the Term Aquitanian . . . . .	388
O. C. FARQUHAR. From Dolerite to Diorite: Older Granite Activity near Ellon, Aberdeenshire . . . . .	393
S. I. TOMKIEFF. "Hutton's Unconformity," Isle of Arran . . . . .	404
I. D. MUIR. Quartzite Xenoliths from the Ballachulish Granodiorite The late W. N. CROFT. Breconian: a Stage Name of the Old Red Sandstone . . . . .	409
A. LAMONT. Records of Irish Trilobites and Brachiopods . . . . .	429
A. LAMONT. Records of Irish Trilobites and Brachiopods . . . . .	433
PUBLICATIONS RECEIVED.—437.	
REVIEWS.—Principles of Geochemistry, 438; The Earth, its Origin, History, and Physical Constitution, 438; International Geological Congress, 439; Summary of Progress of the Geological Survey of Great Britain and the Museum of Practical Geology for the Year 1951, 439; Deep-Sea Research, 440; Das Holzmadenbuch, 440; The Sea Coast, 441; Morphological Analysis of Land Forms, 441.	
CORRESPONDENCE.—A Temporary Section in the Malverns, 442; The Proscicula of <i>Retiolites geinitzianus</i> , 444.	
INDEX.—445.	