



THE  
*Mercian*  
*Geologist*

VOLUME 3, NUMBER 4  
September 1970



# THE MERCIAN GEOLOGIST

JOURNAL  
OF THE  
EAST MIDLANDS GEOLOGICAL SOCIETY

EDITOR:

*WILLIAM A. CUMMINS B.Sc. Ph.D. F.G.S.*

ASSISTED BY:

*DOROTHY M. MORROW, FRANK M. TAYLOR  
B.Sc. Ph.D. F.G.S.*

*R. JOHN A. TRAVIS*

VOLUME 3      NUMBER 4      SEPT. 1970



## CONTENTS

	<u>Page</u>
R.E. ELLIOTT	Simulation of a productive Coal Measures sequence. 319
P.R. INESON and F.A.M. AL-KUFAISHI	The mineralogy and paragenetic sequence of Long Rake vein at Raper Mine, Derbyshire 337
P.G. MORRIS	Holothurian spicules from the Lower Carboniferous near Waterhouses, North Staffordshire. 353
P.E. KENT	Problems of the Rhaetic in the East Midlands. 361
M.G. MORTIMER W.G. CHALONER and P.G. LLEWELLYN	Lower Carboniferous (Tournaisian) Miospores and Megaspores from Breedon Cloud Quarry, Leicestershire. 375
L.J. WILLS	The Bunter Formation at the Bellington Pumping Station of the East Worcestershire Waterworks Company. 387
L.J. WILLS and W.A.S. SARJEANT	Fossil vertebrate and invertebrate tracks from boreholes through the Bunter Series (Triassic) of Worcestershire. 399
Excursion Report:-	
E.A. FRANCIS	The Geology of the southern part of the Goyt Syncline, North Staffordshire. 415
Reviews	419
Secretary's Report	425
Index for volume 3	428

## THE MERCIAN GEOLOGIST

Journal of the East Midlands Geological Society

The journal first appeared in December, 1964. The following numbers have since been published:

Vol. 1	No. 1	December 1964	Vol. 2	No. 3	December 1967
Vol. 1	No. 2	June 1965	Vol. 2	No. 4	August 1968
Vol. 1	No. 3	January 1966	Vol. 3	No. 1	January 1969
Vol. 1	No. 4	September 1966	Vol. 3	No. 2	August 1969
Vol. 2	No. 1	January 1967	Vol. 3	No. 3	March 1970
Vol. 2	No. 2	June 1967			

The journal deals especially with the geology of the Midlands of England, but other articles have been accepted which are of current interest to geology generally. Manuscripts should follow the format of papers included in this number of the Journal and be sent to The Editor, "Mercian Geologist", at the address below.

In Vol. 1, there are 25 original articles, 5 general papers, 2 Presidential addresses, 10 excursion reports and a number of book reviews. It comprises 383 pages, 24 plates, numerous text figures, an index, title page and cumulative contents list.

Vol. 2, has a similar content, except that the second number of this volume was devoted to a bibliography of the geology of the Peak District of Derbyshire compiled by Dr. T.D. Ford and Dr. M.H. Mason. It contains 450 pages and 25 plates.

All parts of the journal, which is issued bi-annually, are available. It may be obtained by membership of the Society and by subscription as indicated below:-

Ordinary Membership	25/-	annually
Institutional Membership	25/-	annually
Joint Membership (Husband & Wife)	30/-	annually

Single copies are supplied at 15/- (12/6d to members). Multiple copies at 12/6d each. (Vols. 1 and 2 are priced at £3 2s 6d each complete).

Librarians in overseas institutions may care to take advantage of exchange agreements, whereby the "Mercian Geologist" is exchanged for other original geological journals. This exchange scheme is organised through the Department of Geology, University of Nottingham, England, and not through the Society. Write direct to Dr. F.M. Taylor.

All enquiries for current subscription rates and details of back numbers, should be addressed to:

Mrs. D.M. Morrow,  
Secretary, E.M.G.S.,  
54, Cyprus Road,  
Mapperley Park,  
Nottingham, NG3 5EB.  
England.

Overseas subscribers may care to use facilities offered by B.H. Blackwell, Broad Street, Oxford, England, or through booksellers and agents in their own country.