

PROCEEDINGS
OF THE
ROYAL SOCIETY OF EDINBURGH

Section **B** (Biology)

VOL. LXIII]

1948-49

[PART IV
(Last Part of Volume)]

JAMES HUTTON
1726-1797

Commemoration of the 150th Anniversary of his Death

PUBLISHED BY
OLIVER & BOYD
EDINBURGH: TWEEDDALE COURT
LONDON: 98 GREAT RUSSELL STREET, W.C.1

Price 12s. 6d.

ROYAL SOCIETY OF EDINBURGH

22, 24 GEORGE STREET, EDINBURGH, 2

THE PREPARATION FOR PUBLICATION OF PAPERS IN THE TRANSACTIONS AND IN THE PROCEEDINGS (SECTIONS "A" AND "B") OF THE SOCIETY

IN view of the high cost of publication, authors of papers are requested to write their communications in as concise a form as possible and to avoid excess of tables and illustrations.

An author is advised to retain a copy of his paper, as the Society cannot undertake any responsibility in relation to the custody of papers entrusted to it. The MS. must be easily legible, preferably typewritten on one side of quarto or foolscap paper and with pages numbered. *It must be absolutely in its final form for printing.* Each paper must be accompanied by a synopsis, the object being to provide readers or abstracters with a brief epitome of the paper. The synopsis will be printed in small type at the beginning of the paper, immediately after the "Contents", if any, and should not exceed 150-200 words.

This synopsis will not necessarily replace a "Summary of Conclusions", which will be printed, if required, as heretofore, in ordinary type at the end of the paper. A table of contents (for a long paper), references to plates, etc. must be in their proper places, and positions indicated for the insertion of illustrations that are to appear in the text. Names of genera and species should be in italics. Footnotes should be avoided where possible.

Additions to a paper after it has been finally handed in for publication will, if accepted by the Council, be treated and dated as separate communications, and may, or may not, be printed immediately after the original paper.

References to literature should be placed at the end of the paper, alphabetically arranged, under authors' names, with abridged titles of journals, thus:—

SANDEMAN, I., 1929. "The Fulcher Bands of Hydrogen", *Proc. Roy. Soc. Edin.*, XLIX, 48-64.

WHITTAKER, E. T., and ROBINSON, G., 1923. *A Short Course in Interpolation*, London.

Titles of papers should be quoted exactly, and all references to literature carefully checked by the authors before submitting the paper. References in the text should be made by quoting the author's name and the year of publication thus (Sandeman, 1929) or (Whittaker and Robinson, 1923), and adding the page when necessary.

All illustrations must be in a form immediately suitable for reproduction, preferably of a size to permit reduction to about two-thirds the linear dimensions of the original, and should be capable of reproduction by photographic processes. Drawings and diagrams to be reproduced as line blocks should be made with fixed Indian ink, preferably on fine white bristol board, free from folds or creases; smooth clean lines or sharp dots, but no washes or colours, should be used. Graphs should be on a squared paper ruled in *faint blue* lines, unless the lines are to be brought out. If the illustrations are on a large scale to be afterwards reduced, by photography, any lettering must be on a corresponding scale.

[Continued on page iii of Cover

JAMES HUTTON

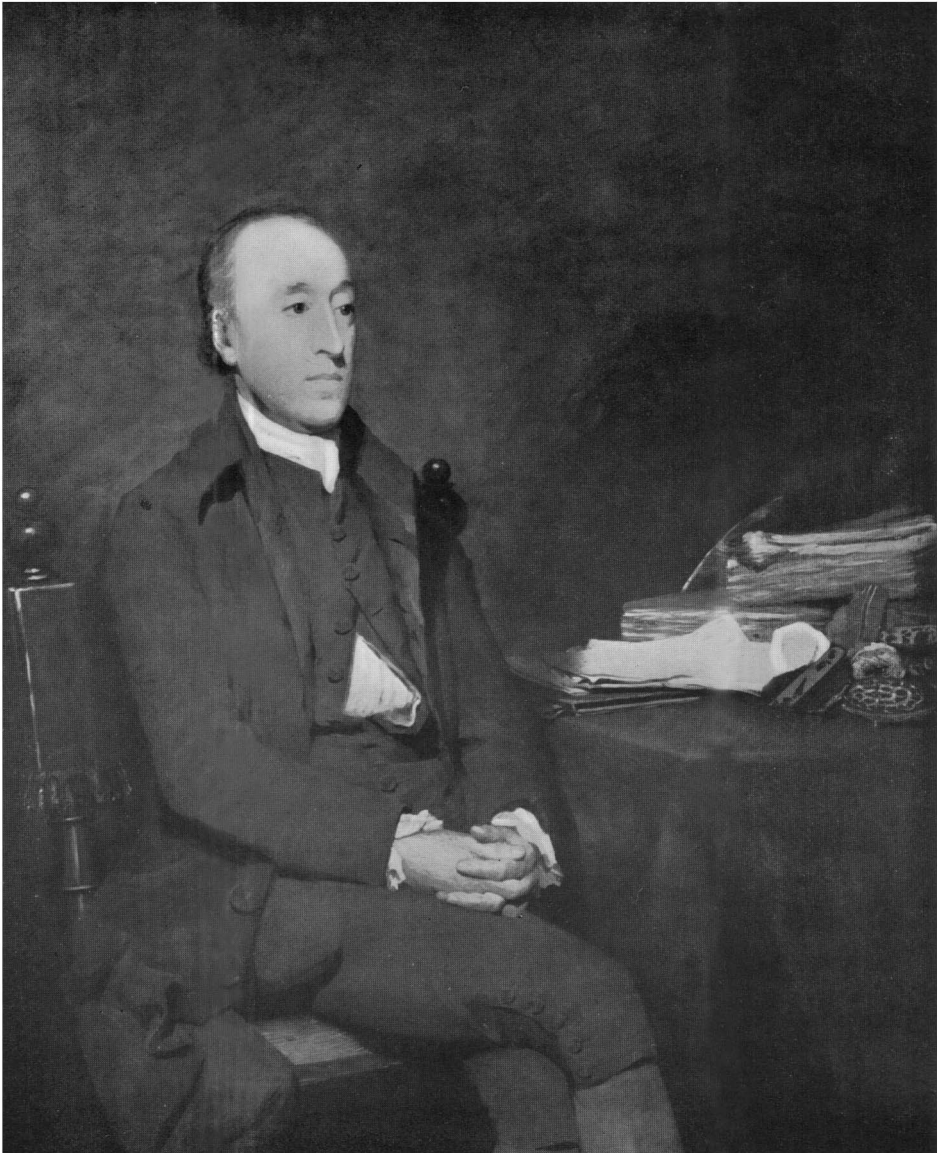
1726–1797

Commemoration of the 150th Anniversary of his Death

Part IV of Vol. LXIII of the PROCEEDINGS, SECTION "B"
OF THE ROYAL SOCIETY OF EDINBURGH

PUBLISHED BY
OLIVER & BOYD
EDINBURGH: TWEEDDALE COURT
LONDON: 98 GREAT RUSSELL STREET, W.C.1

1950



PORTRAIT OF JAMES HUTTON
(By RAEBURN)

[FRONTISPIECE

PREFACE

JAMES HUTTON, the Founder of Modern Geology, was born in Edinburgh on 3rd June 1726, and died there on 26th March 1797. On the occasion of the 150th anniversary of his death it was generally desired that a tribute should be paid to his memory in the country and city where his far-reaching discoveries had been made and his synthesis of the earth's workings expounded. A joint committee was appointed to consider the matter by the Royal Society of Edinburgh, Royal Physical Society, Geological Society of Glasgow, Edinburgh Geological Society, Royal Scottish Geographical Society, Geological Survey and Royal Scottish Museum. The committee recommended that a memorial publication should be undertaken, and that a tablet should be erected at Hutton's unmarked grave in Greyfriars Churchyard, Edinburgh.

On 3rd November 1947 an address dealing with Hutton's life and work was delivered before the Royal Society of Edinburgh by Sir Edward Bailey. This and other addresses and contributions from Dr Murray Macgregor, Dr G. W. Tyrrell, Mr V. A. Eyles, and Dr S. I. Tomkeieff are incorporated in the present part of the Society's *Proceedings*. On the same day, at noon, a memorial tablet was unveiled in Greyfriars Churchyard by the Lord Provost of Edinburgh, Sir John Falconer, before a representative gathering (Pl. I). In his final words at this ceremony the Lord Provost said: "It is for us to be grateful to men like Hutton, whose patient endeavours have made for the progress of the world. Here he now lies, in company with his great friend, Joseph Black, and on either side of him lie Lord Provosts Kincaid and Neilson. To this fragrant bed of memory his remains add lustre and renown, while the stimulus he gave to geological science and to the thought of his time renders us supremely grateful, and places his name amongst those of the illustrious sons of this great city."

Thanks are due to the Carnegie Trust for the Universities of Scotland for assistance in meeting the cost of publication of this part.

CONTENTS

	PAGE
Life and Times of James Hutton. By MURRAY MACGREGOR, M.A., D.Sc., F.R.S.E., F.G.S.	351
James Hutton, Founder of Modern Geology. By Sir EDWARD B. BAILEY, M.C., D.Sc., LL.D., F.R.S., F.G.S.	357
Hutton on Arran. By G. W. TYRRELL, A.R.C.Sc., D.Sc., F.R.S.E., F.G.S.	369
Note on the Original Publication of Hutton's <i>Theory of the Earth</i> , and on the Subsequent Forms in which it was Issued. By V. A. EYLES, B.Sc., F.R.S.E., F.G.S.	377
James Hutton and the Philosophy of Geology. By S. I. TOMKEIEFF, D.Sc., F.R.S.E., F.G.S. (Reprinted, by permission, from <i>Trans. Edin. Geol. Soc.</i> , XIV, Pt. II, 1948)	387

PLATES

Portrait of James Hutton, by Raeburn. (By kind permission of Lord Bruntisfield)	<i>Frontispiece</i>
PL.	
I. Hutton Memorial Tablet in Greyfriars Churchyard, unveiled by the Lord Provost of Edinburgh, Sir John Falconer, 3rd November 1947. On right, the Rev. D. W. P. Strang, Minister of Greyfriars Church, and Mr A. H. Balfour. (By permission of the Proprietors of <i>The Scotsman</i>)	<i>facing p.</i> 357
II. Sligh Houses Farmhouse, north-east of Duns, Berwickshire, where Hutton lived from 1754 to about 1768. (Geological Survey Photograph. Reproduced by permission of H.M. Stationery Office)	<i>facing p.</i> 358
III. Fig. 1. Unconformity along the River Jed, near Jedburgh. (Reproduced from a Woodcut in Hutton's <i>Theory of the Earth</i>).	
Fig. 2. Unconformity at Siccar Point, Berwickshire. (Geological Survey Photograph. Reproduced by permission of H.M. Stationery Office)	<i>facing p.</i> 365
IV. Reproduction of the Title Page of the <i>Abstract of a Dissertation concerning the System of the Earth</i> , by James Hutton	<i>facing p.</i> 380