

Catalogue of the papers and correspondence of

**Robert Millner Shackleton FRS**

(1909-2001)

by Timothy E. Powell and Peter Harper  
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Title: Catalogue of the papers and correspondence of Robert Millner  
Shackleton FRS (1909-2001), geologist

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## GENERAL INTRODUCTION

### PROVENANCE

The material was received for cataloguing from the Library of the Geological Society of London in August 2007.

### OUTLINE OF THE CAREER OF ROBERT MILLNER SHACKLETON

Robert Millner Shackleton was born in Purley, Surrey, on 30 December 1909. He was educated at the Quakers' (Society of Friends) Sidcot School in Somerset and the University of Liverpool, graduating B.Sc. Geology with First Class Honours in 1930. He went on to research at Liverpool under P.G.H. Boswell on the geology of the Moel Hebog area of Snowdonia in North Wales (Ph.D. 1934), then won a Beit Fellowship at Imperial College London 1932-1934. In 1935 he was appointed Chief Geologist to Whitehall Exploration Ltd in Fiji but returned to Imperial College as Lecturer in Geology in 1936.

In 1940 Shackleton was appointed a geologist in the Mining and Geological Department of Kenya, as part of the wartime strategic planning programme. He surveyed widely throughout Kenya producing reports for the Geological Survey of Kenya on the areas of Malikisi, North Kavirondo, Nyeri, the Migori Gold Belt, and Nanyuki and Maralal. His studies extended into the geometry of the orogenic belts of East Africa and the volcanism that produced the Rift System. In 1942 the archaeologist Mary Leakey discovered prehistoric human artefacts at Olorgesailie, a lower Palaeolithic (Acheulean) site southwest of Nairobi. In the mid-1940s Mary and L.S.B. Leakey excavated the site and Shackleton collaborated with the investigations, preparing geological maps of the area around the Olorgesailie site and the area between Olorgesailie and Ngong.

Shackleton returned to Imperial College in 1945 and was offered a Professorship there. However, he thought the department too unmanageable and in 1948 returned to Liverpool as the Herdman Professor of Geology. In his time in the Herdman chair, he re-organised the Liverpool geology department and put it at the forefront of geological research in Britain. In 1962, in order to increase his opportunities for research in Africa, Shackleton became Professor of Geology in the University of Leeds and joined the staff of the Research Institute of African Geology (serving as Director from 1965 until retirement). For the year 1970-1971 Shackleton was Royal Society Leverhulme Visiting Professor of Geology at the Haile Selassie University, Addis Ababa, Ethiopia. He formally retired in

1975 but was Research Fellow at the Open University from 1977 until his death and remained very active in field geology.

Shackleton's influence on his profession was profound. His achievements were recognized by the award of the Silver Medal of the Liverpool Geological Society (1957) and the Murchison Medal of the Geological Society of London (1970), and his election to the Fellowship of the Royal Society (1971). His Royal Society citation recorded that he was:

'Well-known for his contributions to the study of crystalline rocks, more particularly of rock deformation and large scale tectonics. A versatile pioneer in investigation of the Caledonides of Wales and western Ireland, of Rift Valley volcanicity and Pre-Cambrian tectonics. His papers and discussions have influenced much recent work in these fields in which he has trained many of the younger British workers.

Of particular importance have been his work on Tertiary volcanics in Kenya, his understanding of the Pre-Cambrian of eastern and central Africa and his accounts of Dalradian structures and deposits'.

Shackleton produced some 160 scientific papers and through encouragement of younger colleagues exerted a deep influence on several generations of geologists. He had an extremely wide knowledge of his subject, from the origins of the Earth to the evolution of man. Although his earlier work had focused on the British Isles, he developed a particular interest in the geology of East Africa. Shackleton initiated structural studies across orogenic belts in Tanzania-Zambia-Malawi (in the late 1960s), major studies across the Limpopo Belt and adjacent Archaean greenstone belts of Zimbabwe-Botswana-South Africa (in the 1970s) and projects across the orogenic systems of Egypt, Sudan and Kenya (in the early 1980s). Just prior to his death he was working on a detailed compilation of the Pre-Cambrian geology of East Africa. Shackleton's interests were global, however, and continuing research interests included the Pre-Cambrian geology of Arabia and the tectonics of the central and western Himalayas. At the age of 75 he led a pioneering Royal Society geological traverse across Tibet, in collaboration with the Academia Sinica, Beijing.

Shackleton died on 3 May 2001. He married three times and left five children (two sons and three daughters), including the distinguished geoscientist Professor Sir Nicholas Shackleton (1937-2006).

#### DESCRIPTION OF THE COLLECTION

Section A, Biographical, is very slight. It includes obituaries and a copy of the Royal Society Biographical Memoir of Shackleton.

Section B, Notebooks, includes the main numbered sequence of Shackleton's notebooks of geological fieldwork from 1929 to 1988. These record his work throughout the world, with particularly good coverage of Shackleton's research in Kenya in the 1940s, Ireland from the late 1940s onwards, Fiji in the 1950s, Scotland and North Wales from the 1950s, and southern and east Africa in the 1960s. The numbering is not chronological and some of the enumeration may date from after the notebook was used. The sequence is not complete, a number of notebooks were missing. There is also a sequence of numbered notebooks running from I to X, covering Shackleton's work in Fiji, November 1935-August 1936 as Chief Geologist to Whitehall Exploration Ltd. Unnumbered notebooks include a pocket notebook used by Shackleton to record his attendance, while still an undergraduate, at the 15th International Geological Congress held in Pretoria, South Africa, 1929, and a conference notebook for 'The Fourth IGCP 348 (The Mozambique and related belts) Field Meeting in Ethiopia and Eritrea March 15-25, 1996'.

Section C, Maps and photographs, is divided into four. The first subsection presents material documenting the geology of Moel Hebog, in North Wales. Shackleton's Ph.D. was on the geology of this area and he returned to Moel Hebog later in his career. Accordingly the material may have originated from a number of visits, although it certainly includes postgraduate research work. The second subsection, Kenya, includes the bulk of the maps. They principally cover Shackleton's surveying 1940-1945. He worked throughout Kenya producing reports for the Geological Survey of Kenya on the areas of Malikisi, North Kavirondo (1944), Nyeri (1945), Migori Gold Belt (1946), and Nanyuki and Maralal (1946). This subsection also includes maps of the Ologesailie site and surrounding area. There are a few figures from the 1950s and later relating to his ongoing work in East Africa, particularly on the geology of the Rift Valley. Maps of Great Britain and Ireland comprise the third subsection. These are mostly Ordnance Survey six inch (1:2,500) and one inch (1:63,360) maps, annotated by Shackleton. The majority are of Scottish sites and appear to have been used from the 1930s to the 1950s. The section is completed by composite panoramic photographs from Tibet in the 1980s.

Section D, Tryweryn Dam Consultancy, documents Shackleton's service advising Liverpool Corporation on the geology of the site of the Llyn Celyn reservoir in Merionthshire, North Wales. In 1955 Liverpool Corporation announced its intention to build a reservoir near Bala to assure Liverpool's water supply. The plan was approved in 1956 and an enabling Act of Parliament was passed the following year. Despite an opposition campaign headed by Welsh Nationalists, the dam building went ahead and the reservoir was opened in October 1965. The material includes reports, Parliamentary proceedings and Shackleton's correspondence with J.H.T. Stilgoe, Water Engineer of Liverpool Corporation.

#### LOCATIONS OF OTHER MATERIAL

The British Geological Survey, Keyworth, Nottingham holds Shackleton's field slips from North Wales, and a little other material.

The Papers of Glynn Ll. Isaac, at the National Anthropological Archives, Smithsonian Institution, Washington D.C., USA, include Shackleton's original drawings and sections from Olorgesailie, Kenya.

For more information see A.3.

T.E. Powell  
Bath  
December 2007

SECTION A	BIOGRAPHICAL	2001-2007, n.d.
A.1	Obituaries  M. Coward, <i>Independent</i> , 19 May 2001; M. Casey, <i>The Reporter</i> , University of Leeds, 4 June 2001; B.E. Leake, <i>Geological Journal</i> vol. 38 (2003).	2001, 2003
A.2	'Robert Millner Shackleton 30 December 1909-3 May 2001' by J.F. Dewey and B.E. Leake, <i>Biographical Memoirs of Fellows of the Royal Society</i> vol 50 (2004), 285-297	2004
A.3	Information on location of Shackleton archive material held elsewhere	2007
A.4	'Bungalow Prints wanted'. Wallet so inscribed.  Three negatives of photographs of ?family holidays	N.d.

**SECTION B**

**NOTEBOOKS, B.1-B.171**

**1929-1996,  
n.d.**

Nearly all the notebooks are labelled or inscribed on the title or spine. These titles are reproduced in the catalogue entries.

B.1-B.148	MAIN SEQUENCE
B.149-B.158	FIJI NOTEBOOKS
B.159-B.167	UN-NUMBERED NOTEBOOKS
B.168, B.169	S. MARCHANT'S NOTEBOOKS
B.170, B.171	INDEX

**B.1-B.148**

**MAIN SEQUENCE**

**1929-1995**

This sequence of Shackleton's numbered field notebooks, running from 1 to 148, covers Shackleton's geological fieldwork from 1929 to 1988. The numbering is not chronological and some of the enumeration may date from after the notebook was used. The sequence is not complete, a number of notebooks were missing including 2-8, 11-13 and 70-72. It is hoped that these notebooks will be located so gaps have been left in the catalogue accordingly.

All are pocket-sized and most have hard covers. Many bear evidence of use in the field: water-stained pages, dirt marks, and general wear and tear. They contain field notes, cross-sections and sketches, maps, lists of specimens. There may also be the occasional portrait and landscape sketch. A note of title inscription (generally on spine or front cover) is given in the catalogue entries.

At B.170 is a card index box listing the notebooks and the geographical locations covered.

Dating in the notebooks cannot be relied upon. The day of the month and year do not always correspond and occasionally the decade is wrong, eg. [19]67 for [19]76 in B.115.

**Notebooks, B.1-B.171**

B.1	<p>'R.M.S. 1 Carnedd's'</p> <p>Also includes notes on strata of Radstock district, Somerset; notes on N.L. Bowen's <i>Evolution of Igneous Rocks</i> and other notes on the literature. Used at the back for list of specimens 1-263.</p> <p>The Carnedd's are a mountain group in Snowdonia. The range includes Moel Hebog, the subject of Shackleton's Ph.D. thesis.</p>	1929, 1930, n.d.
B.9	<p>'RMS 9 Kenya (1)'</p> <p>The notebook is also labelled 'Kenya 1946 Kariandusi Kinangop' and 'Kariandusi Kinangop I'.</p> <p>Work August-September.</p>	1946
B.10	<p>'RMS 10 Kenya (2)'</p> <p>The notebook is also labelled 'Kenya 1946 Kariandusi Kinangop II Nairobi-Cairo'.</p> <p>Work September.</p>	1946
B.14	<p>'RMS 14 Kenya (6)'</p>	1946
B.15	<p>'RMS 15 Kenya (Macalder)', and inside front cover 'Notebook RMS 15 (Kenya 7)' and 'Kenya Jan 1951 a) Notes on flight over Turkane b) Macalder Mi'</p> <p>Most of the notes are on Macalder Mine.</p>	1951-1952
B.17	<p>'RMS 17 Ireland'</p> <p>Work in County Wicklow.</p> <p>Observations start at '225' suggesting this continues work begun in notebook 16 (not found at time of cataloguing).</p>	N.d.
B.18	<p>'RMS 18 Ireland' and inside front cover 'IRELAND III'</p> <p>Work in Counties Wexford, Laois and Offaly.</p>	N.d. /...

**Notebooks, B.1-B.171**

/...	Observations start at '320'.	
B.19	'RMS 19 Ireland' and inside front cover 'R.M. Shackleton. J.C. Harper'  Sections taken at Derrymore Glen, County Kerry.	N.d.
B.21	'RMS 21 Ireland (6)'  Work in Counties Donegal and Mayo, March-April.	1947
B.22	'RMS 22 Ireland'  Work in Counties Mayo and Donegal, July-August.	1947
B.23	'RMS 23 Ireland (8)'  Work in County Donegal, March-May.	1948
B.24	'RMS 24 Ireland' and 'Donegal Sheets 17, 18. April 1949'  Only a few pages at beginning and end of notebook used, for work in County Donegal.	1949
B.25	'RMS 25 Ireland' and inside front cover 'Ireland 1949'  Work in Counties Waterford and Mayo, 1949, August 1950.	1949, 1950
B.26	'RMS 26 Ireland' and 'Ireland 1951, 1953, 1954'  Work in Sperrin Mountains (County Derry) and County Donegal August 1951; County Donegal 1953, July 1954, August 1956, 1966.	1951-1966
B.28	'RMS 28 Fiji (1949) 1' and '[...] Navua Gorge'  Work July-August.	1949

**Notebooks, B.1-B.171**

B.29	'RMS 29 Fiji (1949) 2' and '[...] Traverses from Namuamua [?] Suva - Tam[?avua]'	1949
	Work August.	
B.30	'RMS 30 Fiji (1949) 3' and 'Nuku trav[erse]. Wainikovu-Wainivad[...]. Namuamua-Sabata'	1949
	Work August.	
B.31	'RMS 31 Fiji (1949) 4'	1949
	Work around Namuamua, August. Includes expenses, lists of photographs taken.	
B.32	'RMS 32 Fiji (1949) 5' and 'Waibogi'	1949
	Work August.	
B.33	'RMS 33 Highland border'	1950-1951
	Sections from Stonehaven, Aberdeenshire, to River North Esk and area, 1950; work on Arran and Dunkeld, Perthshire, March-April 1951.	
B.34	'RMS 34'	1946
	Work in the Llyn Peninsula, North Wales, the Lizard, Cornwall, and Sutherland.	
B.35	'RMS 35'	1947-1948
	Includes work in Aberdeenshire; Counties Donegal and Mayo, August 1947; Charnwood, Leicestershire, June 1948; Port-na-Blagh, County Donegal, September 1948.	
	At back is draft ?report of meeting.	
B.37	'37 Llyn'	1950
	Work May.	/...

**Notebooks, B.1-B.171**

- I...* Includes notes on specimens.
- B.38 'RMS 38 Ireland' N.d.  
Work in Counties Antrim and Donegal.
- B.39 'RMS 39 Scotland' 1951-1952  
Work in various locations in Scotland, August 1951,  
Easter 1952.  
Paginated, with list of contents at front.
- B.41 'RMS 41 Kenya' and 'Nairobi District I' 1944  
Work January-February, November.
- B.42 'RMS 42 Kenya' and 'Nairobi District II Sheet 51 (also  
Nyeri area, sheet 43)' 1944, 1945  
Work October-November 1944, January 1945.  
Paginated with index at front.
- B.43 'RMS 43 Kenya' and 'Olorgesailie (1) 1946' 1946  
Loose material intercalated includes Shackleton's  
personal notes on work done, work in hand and future  
plans.  
Olorgesailie was the name given to a group of Acheulean  
sites in Kenya.
- B.44 'RMS 44 Kenya' and 'Olorgesailie (2) 1946' 1946
- B.45 'RMS 45 Kenya' and 'Kenya 1947. Magadi & S. of Ngong' 1947  
Work December.

**Notebooks, B.1-B.171**

- |      |  |                 |
|------|--|-----------------|
| B.47 | 'RMS 47 Anglesey'  | 1949-1955       |
|      | Work in Anglesey December 1949; Liverpool Geological Society Easter vacation excursion 1951; January 1952; Easter vacation expedition March 1954; August 1955. |                 |
| B.48 | 'RMS 48'   | 1949, 1951-1952 |
|      | Paginated with index at front.   |                 |
|      | Work in Fiji, Hawaii, 1949; the UK (Arran, Anglesey etc), 1951-1952.   |                 |
| B.49 | 'RM Shackleton 49 Scotland'  | 1952-1953       |
|      | Paginated with index at front.   |                 |
|      | Work in Stirlingshire (Ben Lui, Aberfoyle etc) and Perthshire (Dunkeld).   |                 |
| B.50 | 'RM Shackleton 50 N. Wales & Local'  | 1952, 1953      |
|      | Paginated with index at front and loose notes intercalated at back of notebook.  |                 |
|      | Work June-November 1952, May, August 1953.   |                 |
|      | 'Local' refers to Alderley Edge, Cheshire.   |                 |
| B.51 | 'RM Shackleton 51 Morocco'   | 1952            |
|      | Work September-October.  |                 |
| B.52 | 'RMS 52'   | ?1951           |
|      | Work in Ayrshire (Girvan) and Dumfries and Galloway, April.  |                 |
|      | See C.71.  |                 |
| B.53 | 'RMS 53 Ireland' and inside front cover 'Ireland (Donegal) 1953'   | 1953            |
|      |  | /...            |

**Notebooks, B.1-B.171**

- /... Work March-April.
- B.54 '54 Scotland' 1953, 1954  
Paginated with index at front.  
Work in Perthshire and southern Highlands, June 1953,  
May 1954.
- B.55 '55 Fanad' and 'Notebook 55 Fanad Letterkenny and Malin Head' ?1954, 1956, 1957  
Work in County Donegal.
- B.56 'Notebook 56 Scotland' 1954-1956  
Paginated with index at front.  
Includes work in the Highland border region, June 1954,  
April 1955, April-May 1956.
- B.58 'Notebook 58 N. Wales Dam Sites' 1955x1965  
Work at Dolanog, Tryweryn and other sites.  
This work relates to Shackleton's consultancy in respect  
of the Tryweryn Dam and Reservoir 1955-1965. See  
section D.
- B.59 '59 Spain 1955' 1955  
Paginated with list of contents at front.  
Work in Asturias and the Pyrenees, July 1955.
- B.60 'Notebook 60 Anglesey' and inside front cover 'Field book 60. Anglesey March 1955' 1955  
The initial entries are more in the form of an account than  
the usual brief notes and sketches.

**Notebooks, B.1-B.171**

- |      |  |                     |
|------|--|---------------------|
| B.61 | '61 Anglesey' and inside front cover 'Notebook 61 Anglesey Aug. 1955'  | 1955, 1978          |
|      | Also includes notes on Bangor and Dolanog (borehole logs). At end of the Welsh notes are brief notes on work in Devon and Cornwall May 1978.   |                     |
| B.62 | '[...] 62 Spain' and inside front cover 'Notebook 62 Spain 1956 Galicia'   | 1956, 1971          |
|      | Also used from page 91 for notes 1971.   |                     |
|      | Paginated with list of contents at front.  |                     |
| B.63 | '63 North Wales' and inside front cover 'North Wales 1956 on'  | 1956, 1957          |
|      | Paginated with list of contents at the front.  |                     |
| B.64 | '64 Bray Ser; Scotland. Fanad. Ethiopia 1970'  | 1956, 1957,<br>1970 |
|      | Work in Counties Wicklow and Donegal, Ireland, 1956 and 1957; Schiehallion ?1957; Ethiopia, October 1970.  |                     |
| B.65 | '65 Ireland'   | 1956                |
|      | Work in Counties Wicklow, Galway and Donegal.  |                     |
| B.66 | 'Egypt 66' and 'Notebook 66 Egypt'   | 1948-1949           |
|      | Used for notes on work in Ireland, September 1948; 'Interview with ESSO geologists', Rome December 1948; work in Egypt, December 1948-January 1949.                                    |                     |
|      | Includes work in Kharga, with 'Conclusions' suggesting Shackleton's principal research was in connection with the water supply to Kharga and other oases in the eastern Libyan Desert. |                     |
| B.67 | 'Notebook 67 Egypt: Aswan' and inside front cover 'Aswan. Jan 18- 1949'  | 1949                |
|      | At back is list of specimens.  |                     |

**Notebooks, B.1-B.171**

- |      |   |                  |
|------|---|------------------|
| B.68 | 'Notebook 68 Egypt'   | 1949             |
|      | Work at Barramiya, eastern Egypt, January-February 1949.  |                  |
|      | Lists of specimens at front and middle, and list of photographs at back.  |                  |
| B.69 | 'N. Wales 1958 69' and inside front cover 'Notebook 69 N. Wales 1958- Tryweryn. Hebog'                                    | 1958, 1961       |
|      | Includes work relating to Shackleton's consultancy in respect of the Tryweryn Dam and Reservoir 1955-1965. See section D. |                  |
|      | At back are notes and loose list of participants on ?Geological excursion.  |                  |
| B.73 | '73 Scotland'   | ?1962, 1963      |
|      | Paginated with list of contents at the front.   |                  |
|      | Includes work in Ballachullish, Argyll and Austwick, Yorkshire.   |                  |
| B.74 | '74 Alps' and inside front cover 'Alps 1958'  | 1958             |
|      | Includes notes on Swiss and Italian Alpine areas.   |                  |
| B.75 | 'Notebook 75 Spain 1960'  | 1960             |
|      | Paginated with index on first page.   |                  |
|      | Work August-September.  |                  |
| B.77 | 'Notebook 77 Malin Head' and inside front cover 'Ireland 1958'  | 1958, 1961, 1967 |
|      | Work in County Donegal 1958, Ulster April 1961, Horton June 1967.   |                  |

**Notebooks, B.1-B.171**

- |      |   |             |
|------|---|-------------|
| B.78 | 'Wales (Cambrian) 78' and 'Dinorwic'.<br>Work March.  | 1960        |
| B.79 | '79' and inside front cover 'Notebook 79 Garvellachs'<br>Work in the Inner Hebrides: the Garvellachs, Scarba and Lunga May ?1956; Jura August 1969. | ?1956, 1969 |
| B.80 | '80 Spain 1962' and inside front cover 'Galicia'<br>Paginated with index inside front cover.<br>Work August.  | 1962        |
| B.81 | 'Leeds Local' and inside front cover '81. Local-Leeds'<br>Work October.<br>Shackleton was appointed Professor of Geology at Leeds in 1962.          | 1962        |
| B.83 | '83. Scotland 1963-5'<br>Paginated with list of contents inside front cover.<br>Work in Argyll and Bute (Loch Awe area), June 1963, 1965.           | 1963, 1965  |
| B.84 | 'R.M.S. 84' and inside front cover 'Scotland June 1963'<br>Paginated with list of contents at front.<br>Work in Argyll and Bute.                    | 1963        |
| B.85 | 'Notebook 85 Africa 1963. Uganda Kenya N. Rhodesia S. Rhodesia'<br>Work August-September.<br>At back are lists of films taken.                      | 1963        |

**Notebooks, B.1-B.171**

- |      |  |                     |
|------|--|---------------------|
| B.86 | 'Notebook 86 Vredefort Malawi Kenya Anglesey<br>Mauretania Denbighshire Khartoum/Athens'   | 1963, 1969,<br>1970 |
|      | Chiefly work in southern Africa September-October<br>1963. The notes on Anglesey, Mauretania ?1970,<br>Denbighshire 1969, Sudan 1970 are brief.  |                     |
| B.87 | Inside front cover 'Notebook 87 Tryweryn Pen-yr-Orsedd'  | 1962, 1963          |
| B.88 | Inside front cover 'Notebook 88 [...] North Apennines May<br>1965 NW Donegal with WSP 1965 Leeds students - W.<br>Sharpe 1965 Central Donegal with WSP March 1966<br>Connemara 1969 SE Ireland ReC 1969' | 1965-1969           |
| B.89 | 'Notebook 89 West Africa 1965'   | 1965                |
|      | Includes work in Sierra Leone and Ghana, ?notes on<br>proceedings of geological conference. March-April.   |                     |
| B.90 | Inside front cover 'Notebook 90 Rhodesia (Urungwe)<br>1965'  | 1965                |
|      | Includes notes on proceedings of geological conference;<br>LGA [?Liverpool Geological Association] excursion May<br>1965; work in Rhodesia August 1965.  |                     |
| B.91 | Inside front cover 'Notebook 91 Rhodesia 1965'   | 1965                |
|      | Work September.  |                     |
| B.92 | 'Notebook 92. Cyprus Ethiopia Uganda Malawi Tanzania'  | 1966                |
|      | Work May, August-October.  |                     |
| B.93 | 'Notebook 93 Tanzania 1966 with McFarlane (Serengeti)<br>& with J.V. Hepworth'   | 1966                |
|      | With itinerary for 4-26 September 1966 inside front cover.   |                     |

**Notebooks, B.1-B.171**

- |      |   |                    |
|------|---|--------------------|
| B.94 | <p>Inside front cover 'Notebook 94' and on first page, with list of contents '[...] Ghana 1968 Ingleton Schiehallion 1970'</p> <p>Work in Ghana January-March 1968; Ingleton, n.d.; Schiehallion, July 1970.</p> <p>Paginated.</p>  | 1968, 1970         |
| B.95 | <p>Inside front cover 'Notebook 95' and on first page 'Notebook 95 1968. Ghana'</p> <p>Work in Ghana and Nigeria, April.</p>  | 1968               |
| B.96 | <p>'1968 Notebook 96. Saudi Arabia Uganda Kenya Tanzania'</p> <p>Work July-August.</p>  | 1968               |
| B.97 | <p>'1968 Notebook 97. Tanzania Malawi Ethiopia'</p> <p>Work in Tanzania subtitled 'Dodonna-Manyoni-Itiqi', August-September.</p>  | 1968               |
| B.98 | <p>'Notebook Uganda 1969' and inside front cover 'Puturia conference. Uganda'</p> <p>Notes on proceedings of geological conference in Puturia, India; work in Uganda. July-August.</p>  | 1969               |
| B.99 | <p>'Notebook 99 Scotland (1965, 1972) Kenya (Kindaruma)'</p> <p>Work in Scotland December 1965-July 1967 and '4th year Easter Field Trip 1972', and Kenya July 1967. Includes Shackleton's 'Conclusions - Preliminary' on work in Kenya.</p> <p>Incomplete pagination with list of contents at front.</p> <p>Shackleton appears to have visited Kenya to advise on mining problems.</p> | 1965-1967,<br>1972 |

**Notebooks, B.1-B.171**

- |       |  |                  |
|-------|--|------------------|
| B.100 | 'Notebook 100. Egypt 1963/4 Libya Schiehallion'  | 1963-1964        |
|       | Chiefly used for notes on the literature on Egyptian geology.  |                  |
| B.101 | 'Notebook 101 Schiehallion area'   | N.d.             |
|       | The notebook bindings have come apart and in the process the pages disorganised.   |                  |
| B.102 | 'Notebook 102 Ethiopia Devon + Cornwall Fell & Cox (1971) Anglesey (1973) Devon & Cornwall 1980'   | 1971, 1973, 1980 |
|       | Work in Ethiopia January-February 1971; Devon and Cornwall March-April 1971 and November 1980; Anglesey March 1973.  |                  |
| B.103 | 'Notebook 103 Africa - Afar, Ethiopia 1970'  | 1970             |
|       | Work November-December.  |                  |
| B.104 | 'Notebook 104 Scotland Eriska Banffshire Lewisian 1970 Field Class. S England Channel Islands 1974. Ireland 1977' and inside front cover 'Oct 1968 with J. Treagus [...] | 1968             |
|       | Work in Scotland November 1968; Channel Islands April 1974; Ireland (County Mayo) June 1977.   |                  |
| B.105 | 'Notebook 105 Africa 1972 Swaziland Rhodesia Botswana Vredefort Kariba'  | 1972             |
|       | Paginated with index inside front cover.   |                  |
| B.106 | '106' and inside front cover 'Wisconsin Mayo (with Adrian Phillips) 1974 India (with Bill Fyfe) 1974'  | 1974-1975        |
|       | Work November-December 1974, April 1975.   |                  |
|       | At back are notes, possibly for general study of African and Middle East geology.  |                  |

**Notebooks, B.1-B.171**

B.107	'Notebook 107 Stockport Charnwood, Church Stretton'  Includes record of trial boring at Stockport, Cheshire, February.	1962
B.108	'Notebook 108 Scotland Outer Hebrides Balmacara Glen Strae'  Includes many sketches - of dancers, baby, landscapes - and two watercolours.	N.d.
B.109	'Notebook 109 May 1967. Socotra Abd el Kuri S. Arabia'	1967
B.110	'110 Peru 1975'  Used at the front for notes on ?conference proceedings, work in Atico area of Peru. January-February.	1975
B.111	Inside front cover 'Notebook 111 Brittany Field Trip 1973 Brittany 1974 Spain 1974 Brittany 1974 Spain & Portugal 1977'	1973, 1974, 1977
B.112	Inside front cover '112'  Work in northern Spain (Cantabria, Asturias, Galicia), July-August.	1974
B.113	'113 S Africa (Rhodesia Botswana SW Africa Transvaal 1975'  Work July-August.	1975
B.114	'[114] S.Africa 1975 Spain & Portugal 1975' and 'Localities 483-772'  Work in the Transvaal August 1975; northern Spain August-September 1975.	1975

**Notebooks, B.1-B.171**

- |       |   |           |
|-------|---|-----------|
| B.115 | '115 France 1975 Brazil 1975 Sudan 1976'<br><br>Work in France 1975, Brazil November 1975, Sudan January 1976.  | 1975-1976 |
| B.116 | '116 1972 Kindaruma Transvaal & Botswana. Brittany Anglesey. 1976 Egypt'<br><br>Work in Kindaruma, Kenya, 1972; Anglesey May 1973; Brittany July 1973; South Africa July-August 1973; Egypt October 1976. | 1972-1976 |
| B.117 | '117 Tanzania 1977'<br><br>Work March.  | 1977      |
| B.118 | '118 Brittany 1970'<br><br>Work July.   | 1970      |
| B.119 | '119 Cantabria 1976 S.W. England 1976 1979 1980'<br><br>Work in Cantabria, Spain June-July 1976, Devon and Cornwall October 1976, July 1978, November 1979, November 1980.                                | 1976-1980 |
| B.120 | '120'<br><br>Work in Brazil, mainly east coast region, September-October.<br><br>Paginated with list of contents inside front cover.  | 1977      |
| B.121 | Inside front cover 'Notebook 121' and 'Brazil 2'<br><br>Paginated with list of contents inside front cover.<br><br>Work October-November.   | 1977      |

**Notebooks, B.1-B.171**

- |       |   |            |
|-------|---|------------|
| B.122 | '122 Saudi Arabia Oman'   | 1978, 1980 |
|       | Larger format notebook.   |            |
|       | Work in Saudi Arabia and Oman, February 1978; Oman December 1980.   |            |
| B.123 | '123 Devon & Cornwall 1978' and 'SW England'  | 1978       |
|       | Chiefly work in Cornwall, May.  |            |
| B.124 | '124 Kariba Salisbury Lusaka'   | 1971-1972  |
|       | Work in Rhodesia and Zambia, related to Kariba North and South Banks schemes.   |            |
|       | Chiefly borehole logs. Also includes drafts of letters from Shackleton <i>re</i> results of his surveying and detailed notes on previous reports. |            |
|       | The North Bank Scheme was the construction of a hydroelectric power station.  |            |
| B.125 | '125'   | 1980, 1983 |
|       | Paginated with index inside front cover.  |            |
|       | Work in the United Arab Emirates and Sudan, January-February 1980; Connemara, Ireland, May 1983.  |            |
| B.126 | '126 Spain 1980 Loc[ation]s 901-916'  | 1980       |
|       | Work in ?Galicia, August.   |            |
| B.127 | '127 Tanzania 1981'   | 1981, 1992 |
|       | March-April 1981, May 1992.   |            |
| B.128 | '128 Tibet 1980'  | 1980       |
|       | Paginated with incomplete list of contents on second page.  |            |

/...

**Notebooks, B.1-B.171**

- /... Work May-June.
- B.130 '130 Egypt 1979' 1979  
Work in Qena region of Egypt, January-February.  
Includes later notes added in square brackets.
- B.131 '131 Egypt 1979 1980 Cyprus 1979' 1979, 1980  
First pages headed 'Egypt 1979 II'.  
Work in Eastern Desert, Egypt, February-March 1979  
and February-March 1980; Cyprus, March-April 1979.
- B.132 '132 Kenya 1981' 1981  
Work in eastern Kenya, February-March.
- B.133 '133 Scotland 1980 Shetland 1980 Durham 1981 1980, 1981  
Shetland 1981'  
Paginated with list of contents inside front cover.
- B.134 'Notebook 134 Egypt 1982' 1982  
Work in south eastern Egypt, March.
- B.135 'Notebook 135 S. Oman 1982' 1982  
Paginated with list of contents inside front cover.  
Work January-February.
- B.136 'Notebook 136 China 1982 Oman 1983 (loc[ation]s 232-  
353' 1982, 1983  
Work in Beijing, Nanjin and Guyang areas in China,  
November-December 1982; north-east Oman, January  
1983 (the list of locations continues those in notebook  
135). /...

**Notebooks, B.1-B.171**

- /... At back of notebook are Shackleton's notes of topics, possibly for future research/publications.
- B.137 'Notebook 137 Oman 1983' and inside front cover 'Huqf-Haushi area locs 352-382 NE Oman locs 380-452 Huqf-Haushi (helicopter) locs 453-560' 1983
- Continues from notebook 136. There are two visits to Oman recorded, one February-March and another November-December.
- Larger format notebook.
- B.138 'Notebook 138 Pakistan 1983' 1983
- Work in North West Frontier Province of Pakistan, August.
- Larger format notebook.
- B.139 'Notebook 139 Oman 1984' 1984
- Continues from notebook 137, locations 563-970. Work chiefly in ?central Oman, January-February.
- B.140 'Notebook 140 Newfoundland Melange Conf. 1984' 1984
- Chiefly notes taken during Geological Society of America Penrose Conference excursions, June 1984.
- B.141 'Notebook 141 Oman 1985 [Locations] 1134-1277 R1-257' 1985
- Work February-March. Possibly continues from notebook 139 (but lacks records of locations 971-1133).
- B.142 'Notebook 142 Tibet 1985/1' 1985
- Work in southern Tibet, June.
- This and the following two notebooks were compiled by Shackleton as part of a two month Royal Society/Academia Sinica sponsored geotraverse of the

**Notebooks, B.1-B.171**

Tibetan plateau.

B.143 '143 Tibet 2 1985' 1985

Work June-July.

B.144 '144 Tibet 1986' 1986

Work in eastern and southern Tibet, September.

B.146 '146 Morocco 1983' 1983

Chiefly work in Taza, Fez and Chefchaouen areas, September.

B.147 '147 Scotland Portugal 1985' 1985, 1995

Work in Ballachulish, Argyll, March 1985; Portugal, May 1985; Natal, South Africa, May 1995.

At back is list of planned future geological work.

B.148 '148 Ireland, Oman, Tanzania' and inside front cover 'Ireland 1988 Oman 1990 Tanzania 1990' 1988, 1990

Work in County Donegal April 1988; Oman, January 1990; Tanzania, August 1990.

At back is draft article, possibly to accompany new edition of tectonic map of Africa.

**B.149-B.158 FIJI NOTEBOOKS 1935-1936**

This sequence of numbered notebooks running from I to X, covers Shackleton's work in Fiji, November 1935-August 1936, as Chief Geologist to Whitehall Exploration Ltd. The notebooks bear considerable evidence of having been used in the field, with scribbled text and extensive water damage that has rendered many pages illegible. Some have had pages cut or torn out.

**Notebooks, B.1-B.171**

The sequence lacks notebook IX. It is hoped that this notebook will be located so a gap has been left in the catalogue accordingly.

B.149	'Fiji I'	1935-1936
	Used November 1935-January 1936. Locations 1-492.	
B.150	'Fiji II'	1936
	Used from January 1936. Locations 493-869.	
B.151	'Fiji III'	1936
	Locations 884-1133.	
B.152	'Fiji IV'	1936
	Locations 1138-1478.	
B.153	'Fiji V'	1936
	Used ca May. Locations 1496-1717.	
B.154	'Fiji VI'	1936
	Used ca June. Locations 1726-1845, 1892-2099, 3001-3[0]49. See B.155 for locations 1849-1891.	
B.155	'Fiji VII'	1935-1936
	At the front this notebook was used as a more formal record of work 21 December 1935-5 May 1936. Entries from June are more scrappy and record locations 1849-1891 and 3949-4047.	
B.156	'Fiji VIII'	1935, 1936
	Used at the front for notes November 1935, thereafter	

**Notebooks, B.1-B.171**

from August 1936 to record locations 4060-4373 (with later corrected numbering up to 4571).

B.158	'Fiji X'	1936
	Used ca July-August. Locations 3850-4252 and 4578-4908.	
<b>B.159-B.167</b>	<b>UN-NUMBERED NOTEBOOKS</b>	<b>1929-1996, n.d.</b>
B.159	'South Africa Intl Geol. Congress 1929'	1929
	Pocket notebook used for record of travel to South Africa, notes of conference excursions, lists of specimens and photographs and accounts. July-August.	
	Shackleton attended the 15th International Geological Congress held in Pretoria, South Africa, while still an undergraduate.	
B.160	'Miscellaneous I. S. Kavirondo March 1944. Gem Sept 1944 Kitere Dec 1944'	1944
	Softback field notebook used for work in Kenya, March-November.	
B.160A	'Maralal 5'	1944
	Softback field notebook used for work in northern Kenya, July-August.	
	See also C.19, C.28, C.33.	
B.161	'Sheet 44'	1945
	Softback field notebook used for work in Kenya, February-March.	
B.162	'Islay (1956)'	1956

**Notebooks, B.1-B.171**

Loose leaf sketchbook, lacking original binding. Includes annotated map of section of Islay.

B.163 'Brittany Sept. 1972 Crozon area' 1972  
Lacks covers. Most pages missing.

B.164 Pocket notebook ?1970s  
Lacks covers. Used for work in Spain and Portugal.

B.165 Conference notebook for 'The Fourth IGCP 348 (The Mozambique and related belts) Field Meeting in Ethiopia and Eritrea March 15-25, 1996' 1996  
Used for notes on proceedings and excursions.

B.166 'R.M. Shackleton Specimens 1-[1949, original entry inked out]' N.d.  
Used for recording specimens 500-1949, although many numbers have no specimen listed.

B.167 Pages from notebooks found loose 1932, 1949, n.d.

**B.168, B.169 S. MARCHANT'S NOTEBOOKS 1950**

Two notebooks used by S. Marchant for work in Connemara, County Galway, Ireland, July-September 1950.

Marchant was based in the Geology Department, University of Birmingham.

B.168 Inscribed on first page 'Field Book I'  
Paginated with detailed index on first and last pages. Continues in B.169.

**Notebooks, B.1-B.171**

- |                     |  |             |
|---------------------|--|-------------|
| B.169               | Notebook II  |             |
|                     | Paginated with detailed index on last page. Continues from B.168.  |             |
| <b>B.170, B.171</b> | <b>INDEX</b>   | <b>N.d.</b> |
| B.170               | Card index to field notebooks  |             |
|                     | This contains cards listing Shackleton's main sequence of field notebooks (B.1-B.148) in reverse chronological order. It includes entries for notebooks not found. |             |
| B.171               | Lists of Shackleton's notebooks arranged by region or country  |             |
|                     | These lists do not record notebooks missing from the main sequence at B.1-B.148, so were probably compiled later than the card-index at B.170.                     |             |

SECTION C	MAPS AND PHOTOGRAPHS, C.1-C.108	early 1930s- ?1984
	C.1-C.9	'MOEL HEBOG THESIS ETC'
	C.10-C.51	KENYA
	C.52-C.107	GREAT BRITAIN AND IRELAND
	C.108	TIBET
<b>C.1-C.9</b>	<b>'MOEL HEBOG THESIS ETC'</b>	<b>early 1930s, n.d.</b>
	Shackleton's Ph.D. was on the geology of Moel Hebog in North Wales. He returned to the area later in his career and this material may come from a number of visits.	
C.1	Manuscript map of area	early 1930s
C.2-C.4	'Photos Moel Hebog'. Contents of Shackleton's envelope so inscribed: photographs from Moel Hebog  Photographs of landscape, geological features and samples (different sizes). Some identified on verso.  3 folders.	early 1930s
C.5	Letter from W.G. Fearnside, 3 March, referring to geological work in North Wales	1934
C.6	'Carnavonshire [sic] - Moel Hebog Tracings etc'. Contents of Shackleton's envelope so inscribed  Traced maps, etc.	early 1930s
C.7	'Hebog - struct. maps'. Contents of Shackleton's envelope so inscribed	N.d.  /...

**Maps and photographs, C.1-C.108**

- l...* Includes letter from C.D.R. Evans referring to Moel Hebog fossils donated to the Institute of Geological Sciences by Shackleton.
- C.8 Print-out of list of 'Cambrian and Ordovician fossils from the Moel Hebog area, Snowdonia, in the R.M. Shackleton Collection' by A.W.A. Rushton and S.P. Tunnicliff N.d.  
Incomplete, lacks pages 2-6. With manuscript note attached of 'Localities wanted'.
- C.9 'Hebog area Spare 6". WGF[earnside]'s Ffestiniog map'. Contents of Shackleton's envelope so inscribed N.d.

**C.10-C.51**

**KENYA**

During the Second World War Shackleton was seconded to the Kenyan Mining and Geological Department undertaking a strategic mineral survey. He surveyed widely throughout Kenya producing reports for the Geological Survey of Kenya on the areas of Malikisi, North Kavirondo (1944), Nyeri (1945, Report no 12), Migori Gold Belt (1946, Report no 10), and Nanyuki and Maralal (1946, Report no 11).

In 1942 the archaeologist Mary Leakey discovered human artefacts (mainly hand tools) at Olorgesailie, an Acheulean (lower Palaeolithic) site southwest of Nairobi. Between 1942 and 1947 Mary and L.S.B. Leakey excavated the site. Shackleton collaborated with the Leakeys' investigations by mapping the Olorgesailie site. He prepared a 1:10,000 scale coloured geological map of the area around the Olorgesailie site and a geological map of the area between Olorgesailie and Ngong (1:50,000 scale) for an archaeological conference in Nairobi organised by L.S.B. Leakey. These maps were only later published, in 1978.

The bulk of the maps presented here date from the 1930s and 1940s. The dates given refer to the date or approximate date of the creation/publication of the map rather than its use by Shackleton, although in many cases the two may be identical.

A few maps include other areas of East Africa.

*l..*

**Maps and photographs, C.1-C.108**

- /... For notebooks used in this period see B.9, B.10, B.14, B.15, B.41-B.45, B.160, B.161.
- C.10-C.42 'Kenya. Miscellaneous maps'. Contents of large card 1913-1954  
folder so inscribed  
Mostly printed maps.
- C.10 Kenya General 1941, n.d.  
3 pieces.  
Tracing of Mozambique and other belts round Lake Victoria, n.d.; mineral survey map of Kenya, n.d.; 'Provisional Geological Map of Kenya' 1:1,000,000 (four sheets pasted together and fabric backed), 1941.
- C.11 Rift Valley 1939, n.d.  
2 pieces.  
Map of Central part of the Rift Valley, from *Quarterly Journal of the Geological Society*, vol. 95 (1939) mounted on hardboard; section of eastern flank of the Rift Valley south of Nairobi (2 sheets) n.d.
- C.12 Gilgil 1941-1945,  
n.d.  
7 pieces.  
1:50,000 map of Gilgil, 1945; 1:25,000 maps of Gilgil N.W. 1943, N.E. 1944, S.W. 1943 and S.E. 1944; Gilgil South Extension 1:25,000, 1941; detailed manuscript (pencil and ink) map of 'area [that] adjoins SE corner of 1:25,000 "Gilgil S. Extn" ', n.d.  
The S.E. and S.W. Gilgil maps bear heavy manuscript annotation by Shackleton.  
The S.W. map is printed on verso of British copy of French map of Tannarive (Madagascar), 1:1,000,000; the N.W. map on verso of copy of map of Diego Suarez (Madagascar), 1:100,000.

**Maps and photographs, C.1-C.108**

- |      |  |            |
|------|--|------------|
| C.13 | Kakamega   | 1933, n.d. |
|      | 2 pieces.  |            |
|      | 1:62,500 map, 1933; photocopy of part of geological map partly hand-coloured, n.d.   |            |
| C.14 | Kiahera Hill & Kathwanga   | 1950       |
|      | Geological map from the <i>Quarterly Journal of the Geological Society</i> , vol. 106 (1950).  |            |
| C.15 | Kitale   | 1946       |
|      | 1:500,000 map.   |            |
| C.16 | Legetet  | 1944       |
|      | 2 pieces.  |            |
|      | 'Sketch map of the limestone deposits, Legetet, near Muhoroni', 1:15,625; annotated 'Sketch map of the Koru limestone deposit, including farm boundaries around Legetet' 1:15,625. |            |
| C.17 | Longonot   | 1945       |
|      | 1:50,000 map.  |            |
| C.18 | Malakisi   | ca 1944    |
|      | 'Schematic structural map of the Malakisi area', 1:125,000.  |            |
|      | 'Based on field work done in Nov-Dec 1943 Robert M. Shackleton Geologist'.   |            |
| C.19 | Maralal  | 1946, n.d. |
|      | 2 pieces.  |            |
|      | 1:500,000 map, 1946; 1:125,000 annotated composite map comprising photocopied sections sellotaped  |            |

**Maps and photographs, C.1-C.108**

together, n.d.

See also C.28, C.33.

- |      |   |            |
|------|---|------------|
| C.20 | Migori  | ca 1942    |
|      | 3 pieces.   |            |
|      | 'Geology of the Migori area (South Kavirondo)' sheets I and II, 'Geologically surveyed between Sept 1940 & Sept 1942 by Robert M. Shackleton (Geologist)', 1:125,000; 'Geology of the Migori Gold Belt Sheet III Makuru', 'Geologically and topographically surveyed by Robert M. Shackleton Geologist', 1:125,000. |            |
| C.21 | Mombasa   | 1946       |
|      | 1:500,000 map.  |            |
| C.22 | Mount Kenya   | 1944, n.d. |
|      | 4 pieces.   |            |
|      | Fabric-backed 'sketch map by Humphrey Slade & Raymond Hook' of Mount Kenya, ca 1:100,000, 1944; 1:250,000 map, 1944; Shackleton's manuscript map of 'North West side of Mt. Kenya', 1:25,000, n.d.; fabric-backed map of area round Mount Kenya, 1:21,120, n.d.   |            |
| C.23 | Mumas   | 1928       |
|      | Fabric backed map with extensive annotation, 1:250,000.   |            |
| C.24 | Nairobi   | N.d.       |
|      | 1:62,500 map, extensively annotated by Shackleton.  |            |
| C.25 | Lake Naivasha   | N.d.       |
|      | Outline sketch map of geological in Lake Naivasha area.   |            |

**Maps and photographs, C.1-C.108**

- |      |   |                |
|------|---|----------------|
| C.26 | Nakuru-Njoro-Elmenteita   | 1954           |
|      | Fabric backed geological map by G.J.H. McCall, 1:100,000. Annotated by Shackleton.  |                |
| C.27 | Nanteddu (Rift Valley)  | N.d.           |
|      | Composite map comprising photocopied manuscript map sections sellotaped together. Annotated by Shackleton.  |                |
| C.28 | Nanyuki and Maralal   | 1945           |
|      | Provisional geological map, 'Geologically surveyed by Robert M. Shackleton', 1:250,000.   |                |
|      | See also C.19, C.33.  |                |
| C.29 | Ndeiya  | 1946           |
|      | 1:50,000 map.   |                |
| C.30 | Negheli   | 1946           |
|      | 1:500,000 map.  |                |
| C.31 | Ngong   | N.d., pre-1946 |
|      | 2 pieces.   |                |
|      | Ngong Training Area, 1:50,00, annotated by Shackleton, n.d.; 'Geological sketch map of the area south of Ngong', hand-coloured and annotated, with note '1946 work in this area not yet plotted', 1:50,000. |                |
|      | See also C.46.  |                |
| C.32 | Nyeri   | 1945           |
|      | Provisional geological map, 'Geologically surveyed by Robert M. Shackleton', 1:125,000.   |                |

**Maps and photographs, C.1-C.108**

C.33	Rumuruti, Maralal	N.d
	Composite map comprising photocopied manuscript map sections sellotaped together.	
	See also C.19, C.28.	
C.34	Sekerr and Cherangani	N.d.
	Manuscript geological map, ca 1:37,000.	
C.35	South Kavirondo	1939
	Simplified geological map, 1:125,000.	
C.36	Uasin Gishu	1913
	1:250,000 map.	
C.37	Untitled maps and sections	N.d.
	5 pieces.	
C.38-C.42	Figures for publication/s	N.d.
	Maps and sections on photographic paper, tracing paper and photocopies.	
C.38	'Figure 1'	
	3 pieces.	
C.39	'Figure 2'	
	5 pieces.	
C.40	'Figure 3'	
	5 pieces.	

**Maps and photographs, C.1-C.108**

- |            |   |                          |
|------------|---|--------------------------|
| C.41       | 'Figure 4'<br><br>5 pieces.   |                          |
| C.42       | Other<br><br>8 pieces.  |                          |
| C.43       | 'Olorgesailie Archaeological Reserve'. Contents of large card folder so inscribed.<br><br>4 pieces.<br><br>Olorgesailie enclosed area sheet 1; Olorgesailie enclosed area sheet 2; Olorgesailie Prehistoric Reserve, key to colours used on 1:600 geological plan, by Shackleton, 1946; 'Fig 1. Geol. of the Olorgesailie sector of the Gregory Rift', post-1958. | N.d., 1946,<br>post 1958 |
| C.44, C.45 | Olorgesailie Area 1:10,000 maps & sections'. Contents of large card folder so inscribed.  | 1946                     |
| C.44       | Maps<br><br>5 pieces.<br><br>Maps of the geology of Olorgesailie archaeological reserve, 1:10,000. The first is signed 'RM Shackleton Aug 1946'.  |                          |
| C.45       | Sections<br><br>7 pieces.<br><br>Six sections given as 1:100; one as 1:25,000 (horizontal).   |                          |
| C.46       | 'Area between Olorgesailie & Ngong'. Contents of large card folder so inscribed<br><br>6 pieces.<br><br>Manuscript map of the Geology of the country between Olorgesailie and the Ngong Hills, by Shackleton, ca 1945, 1:50,000; manuscript Geological map of the area  | 1942, ca<br>1945-1946    |

**Maps and photographs, C.1-C.108**

between Olorgesailie & Olesayeti by Shackleton, August 1946, 1:50,000; manuscript Geological sketch map of the area south of Ngong, 1945, 1:50,000; two parts of printed 1942 maps of Ngong area, annotated by Shackleton, 1:50,000; map of Kariandus mine, annotated by Shackleton, 1:1,000 (in two parts).

See also C.31.

- |           |   |            |
|-----------|---|------------|
| C.47      | 'Macalder. Tracings of Cross Sections. Used in report sent to CDC Nov 1953'. Contents of card folder so inscribed.  | 1952-1953  |
|           | Shackleton's manuscript 'Notes on cross-sections'; Core Log Sheet from Macalder-Nyanza Mines Ltd, 1952; tracings of cross-sections.   |            |
| C.48-C.51 | Miscellaneous   |            |
| C.48      | 'Olorgesailie'. Contents of file so inscribed: letter to Shackleton on his geological map of Olorgesailie, from T. Jorstad, National Museum of Natural History, Smithsonian Institution, Washington DC, USA, 26 June 1995; copy of map; Shackleton's manuscript sections. | 1995, n.d. |
| C.49      | Manuscript map of Kariandusi archaeological site by Shackleton  | N.d.       |
|           | Annotated 'One of Leakey's sites on E margin of Rift NE of Nanyuki. Leakey's interpretation not confirmed'.   |            |
| C.50      | Printed map of Magadi District, southern Kenya, annotated by Shackleton, 1:250,000  | 1916       |
| C.51      | Printed geological map of Malawi, annotated by Shackleton, 1:1,000,000  | 1966       |



**Maps and photographs, C.1-C.108**

I...	2 folders.	
C.68	'6" Forfar 12 18'	N.d.
C.69	'6" Forfar 13'	N.d.
C.70	'Forfarshire' and 'Prosen Water Noranside-Glen Ogil'	N.d.
C.71	'Girvan'  Includes 6 inch map of Girvan (1910), extensively annotated and inscribed 'B. Leake Liverpool 'Varsity 4th March 1951'.  See B.52	ca 1951
C.72	'6" Herefordshire Beacon' and '3rd Yr Civ. Eng. 1939 ICST'	1939
C.73	'Kincardineshire 7 SE 11 NE, SW. Coast N. of Stonehaven (Skateraw, Muchalls)'	N.d.
C.74	'Kincardineshire 11 NW 19 NW' and '16/1 & 16/3 taken out RMS 4/7/50'	N.d.
C.75	'Kincardineshire 14/SE. 15/SW, SE. 16/NW, SW Stonehaven Coast Section & K16/1&3'	N.d.
C.76	'Llanderfel W.A. Cummins? Gelligrin RMS'  Some of the maps bear detailed geological notes on verso.  See also C.90.	N.d.

**Maps and photographs, C.1-C.108**

C.77-C.79	'North Bute & neighbouring part of Argyll'  3 folders.  See also C.55-C.61.	N.d.
C.80, C.81	'Perthshire 62 NW, SW 72 NE, SE 73 NW' and '(Dunkeld)'  2 folders.  See also C.62.	N.d.
C.82	'Perthshire 84 NW Craiglea'	N.d.
C.83	'Perthshire 94 SW'	N.d.
C.84	'6" Tryweryn'  See section D.	N.d.
C.85-C.92	'Miscellaneous 6" maps'. Contents of Shackleton's folder so inscribed  The folder contained envelopes of 6 inch maps in similar format to those at C.52-C.84.	1937-1946, n.d.
C.85	'Ashover, Derbyshire Pt I. 1937 1938 1939'	
C.86	'Austwick 1946'	
C.87-C.89	'6" maps Lizard'  3 folders.  C.89 is 'Lineation and strike of the Lizard Rocks', ?by Shackleton, manuscript rough draft and 4pp typescript, with manuscript list of references and printed figure.	N.d.

**Maps and photographs, C.1-C.108**

C.90	'Llandderfel area near Bala. A.D. Stewart & party'  Two of the maps bear detailed geological notes on verso.  See also C.76.	N.d.
C.91	'N. Wales dam sites 6" maps Montgomeryshire. Dolanog & Banwy sites'  Includes 1:2,500 map of Dolanog.	N.d.
C.92	Llangadfan  6 inch maps sellotaped together, found loose.	N.d.
C.93-C.95	'Loch Awe Creran'. Contents of Shackleton's folder so inscribed  6 inch maps, tracings, most annotated by Shackleton, some dated 1966.  3 folders.	ca 1966
C.96	'Miscellaneous Scottish maps (Unpublished)'. Contents of envelope so inscribed  One piece dated 1958.	1958, n.d.
C.97-C.107	Ordnance Survey maps  These are printed one inch (1:63,360) maps, annotated by Shackleton.  The dates given refer to the publication date of the map rather than its use by Shackleton.	1922-1956
C.97	Loch Linnie, sheet 46	1956
C.98	Loch Etive & Glen Coe, sheet 54	1947

**Maps and photographs, C.1-C.108**

C.99	Killin and Loch Rannoch, sheet 55	1947
C.100	North Jura and Firth of Lorne, sheet 60	1925
C.101	Oban and Loch Awe, sheet 61	1946
C.102	Loch Lomond, sheet 66	1945
C.103	Island of Bute, sheet 71	1945
C.104	Stranraer, sheet 90	1945
C.105	Llandudno and Denbigh, sheet 42	1922
C.106	Anglesey, sheet 106	1953
C.107	Northern Montgomeryshire Site of possible dam noted.	1947
<b>C.108</b>	<b>TIBET</b>  2 pieces.  Mounted composite panoramic photographs, with tracing paper overlay, inscribed 'Grey volcanics [...] valley N.E. of Lhasa - Day 2'.	<b>?1984</b>

**SECTION D**                      **TRYWERYN DAM CONSULTANCY, D.1-D.20**                      **1955-1966**

In 1955 Liverpool Corporation announced its intention to build a reservoir near Bala in Merionethshire to ensure the city of Liverpool had a sufficient water supply. Despite many objections, as the reservoir would drown the village of Capel Celyn and a number of hill farms, Liverpool Corporation approved the plan in 1956 and an enabling Act of Parliament was passed the following year. Despite a continued opposition campaign, headed by Welsh Nationalists, the dam building went ahead and the reservoir was opened in October 1965. It had the capacity to hold 16,400 million gallons of water.

Shackleton advised Liverpool Corporation on the geology of the site.

See also B.58, B.69, B.87, C.84.

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|-------------------------------|--|------------------|
| D.1                           | Correspondence from J.H.T. Stilgoe, Water Engineer of Liverpool Corporation <i>re</i> proposed boreholes                                       | 1955             |
|                               |  |                  |
| D.2                           | 'Preliminary Geological Report. Proposed Upper Tryweryn Dam Site' by Shackleton  | ?1955            |
|                               |  |                  |
| D.3                           | 'Report by Binnie, Deacon & Gourley, MMICE to the Chairman and Members of the Water Committee Liverpool Corporation on a New Source of Supply' | December<br>1955 |
|                               |  |                  |
| Retained in original binding. |  |                  |
|                               |  |                  |
| D.4                           | 'River Tryweryn, North Wales Water Supply Scheme - Upper and Lower Dam Sites Seismic Survey', Soil Mechanics Ltd                               | January 1956     |
|                               |  |                  |
| Retained in original binding. |  |                  |
|                               |  |                  |
| D.5                           | 'River Tryweryn, North Wales Water Supply Scheme V - Upper Dam Site Seismic Survey', Soil Mechanics Ltd  | August 1956      |
|                               |  |                  |
| Retained in original binding. |  |                  |

**Tryweryn Dam Consultancy, D.1-D.20**

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|-----------|---|------------|
| D.6       | 'Site Investigation for the Upper Tryweryn Dam Site, North Wales Water Supply Scheme, Nr Bala, Merionethshire', Soil Mechanics Ltd                        | March 1957 |
|           | Retained in original binding.   |            |
| D.7       | Correspondence from J.H.T. Stilgoe <i>re</i> draw-off and overflow plans and further geological investigations.   | 1957, 1958 |
| D.8-D.11  | 'Liverpool Corpn - Tryweryn Bill'   | 1957       |
|           | Material relating to Liverpool Corporation Act, 1957, including work on Tryweryn reservoir.   |            |
| D.8       | Petition against the Bill with letter from Liverpool Corporation asking for Shackleton's opinion, April 1957, with proof of evidence given by Shackleton. |            |
| D.9, D.10 | Evidence to Select Committee, May 1957  |            |
|           | 2 folders.  |            |
| D.11      | Copy of the Act   |            |
| D.12      | Correspondence with J.H.T. Stilgoe  | 1961-1963  |
|           | Includes letters arising from Shackleton's site visits, <i>re</i> borehole samples and reports on work in progress.                                       |            |
| D.13      | Material from 'Inauguration of Llyn Celyn (the regulating reservoir on the Afon Tryweryn)'  | 1965       |
|           | Brochure from ceremony; mounted colour photograph of the reservoir.   |            |
| D.14      | Letter from J.H.T. Stilgoe to Shackleton <i>re</i> final report   | June 1966  |
|           | Stilgoe replies to Shackleton's news that he has found it 'impossible to produce [his] final report'.   |            |

**Tryweryn Dam Consultancy, D.1-D.20**

D.16	'Notes on embankment design changes' 3pp photostat.	1962
D.17	Drill hole logs	1961
D.18-D.20	'Tryweryn. Useful maps, plans'. Contents of Shackleton's folder so inscribed: maps and plans of the reservoir site, borehole locations, etc 3 folders.	1955-1960s