National Oceanography Centre

UNIVERSITY OF Southampton

National Oceanographic Library - Archive

Dr John C. Swallow Bequest Collection

held in the
National Oceanography Library
Archive

(Dr John and Mary Swallow Book Collection
held in the National Oceanographic Library)

Dr John Swallow
Physical Oceanographer

John Crossley Swallow, FRS (1923 –1994)

Dr Swallow is principally known for the development of neutrally buoyant floats, a method for measuring ocean currents in which a slowly falling sound source was tracked by sono-buoys at the surface with the source on the sea-floor, and for his discovery of the energetic variability of the deep ocean flow. Dr Swallow joined the National Institute of Oceanography in 1954. The first Swallow Float was constructed using a standard building site scaffolding tube whose dimensions were carefully adjusted to create with some simple electronics and nickel transducer. His first use of the floats was immediately successful in the eastern Atlantic, and yielded some of the facts oceanographers know now about the fluctuation of the deep currents there. A sideline of this research was the broadening of the National Institute of Oceanography's interest in precision echo-sounding, which was recognised at the time as a valuable navigational tool as well as for geophysical research. He predicted a southward undercurrent below the Gulf Stream. Henry Stommel (Woods Hole Oceanographic Institution) and John Swallow organized the Aries Expedition (1959/60) (named after the ketch that WHOI lent him for the work). This led to the clear identification of deep energetic eddies in the ocean, and contributed to a profound change in oceanographic thinking about circulation. His research radically altered the way we view the world's oceans and their dynamics.

Amongst his other achievements – his participation in the International Indian Ocean Expedition –Mid Ocean Dynamics Experiment which led to work on the circulation of the Arabian Sea and Equatorial Indian Ocean. He was prominent in planning the work in the Indian Ocean International Expedition (INDEX), and the resulting discoveries concerning the modes of evolution of the 'Somali Current' after the onset of the SW Monsoon.

He received many awards including the Prince Albert I (Monaco) Medal, and was elected Fellow of the Royal Society in 1968 for his geophysical work on the voyages of HMS *Challenger,* a survey ship of the Royal Navy that circumnavigated the World from 1950 to 1953 which included surveying in the West Indies and the Far East. It was on this mission, in 1951 that HMS *Challenger* surveyed the Mariana Trench near Guam, including the deepest known point in the oceans.

Contents

Main collection ……Archive B, Stack 11
Additional items added……Lists A & B, Archive B Stack 11
Index to Swallow Notebooks……...Following Additional items List A
Cruise data boxes…… Following catalogued items, list with locations, Archive B, Stacks 8 & 11

(Dr John and Mary Swallow Book Collection is held in the National Oceanographic Library)

Acknowledgement: Dr WJ Gould brought the collection together and catalogued the items.

List of items held in the National Oceanography Library Archive

Red Box HC 1 - Books

The Bombard Story – Alain Bombard 1953
Hydrographical Tables – Knudsen 1901
Octopus and Squid – J-Y Cousteau 1973
Darwin's Voyage – Charles Darwin 1907 2nd Edition
Biologist Philosopher Life and Writing of Alfred Russell Wallace – Wilma George 1964
Sailing Ships their history and development - G.S.Laird Klowes 4th Edition 1952
Aquatic Resources Hawaiian and Islands US Fish Commission Vol 23 1903 Part 2/1906
Aquatic Resources Hawaiian and Islands US Fish Commission David Starr Jordon and Barton Warren Evermann Part 1 Shore Fishes
The Explorers and Anthology of Discovery G.R.Crone 1962
Seismic Investigations at Sea JC Swallow Ph.D. thesis (To Maurice Hill 25 October 1950)
Pamphlet the Global Weather Experiment
Wild Life in the Sub Antarctic J.H. Sorrensen 1951
The North West Passage G.M. Thomson 1975
The Great United States Exploring Expedition William Stanton 1975
John Harrison and his timekeepers Rupert T. Gould R.N. 1958
Here is the weather forecast E.G. Bilham 1947
Polar Exploration William S.Bruce 1911
The Cruise of the Falcon E.F. Knight 1886
Arctic Expeditions from British and Foreign Shores D. Murray Smith 1877 (No covers)
A Partial Bibliography of the Indian Ocean W.H.O.I. 1962
A.S.R.E. Tech. Note TX/50/1 De Walden and Swallow

Red Box HC 2 Files

Notes and Drawings Indian Ocean Feb 94
Indian Ocean Correspondence May 86 – December 88
Misc. Correspondence with I.O.S.
Indian Ocean Meeting Miami November 19-20 1984
Text and Diagrams for I.O. Panel Delhi Jan 1985
Discovery Cruise 162 – CD Cruise 3/84 and 1/85
C.C.C.O IO Panel Delhi Jan 85
C.C.C.O Panel File 2 Starts April 84
Correspondence with Brenda
Stommel 1816 Non existent islands
JADE – 2 and Indian Ocean 1991/92
New Meteor Equatorial Atlantic October 1990
ASQ Life with NERC
HEYE Last Prog Oceanog paper
Indian Ocean Bibliography notes
On Being an Editor of Deep Sea Research
M.F. Maury Meiklejohn Memorial Notes
Florida Tropical Oceanography Conf November1965
Oxford Symposium Cartography 1963
Oxford Symposium Cartography 1963

Notes from Doug Webb re gliders
Ship Reports of Somalia
US WOCE Indian Ocean Review Panel
Challenger Society and Oceanography Society Correspondence
Ex CTD's in Indian Ocean July 1992
Vienna IUGG Meeting 1991
Indian Ocean and Climate March 1983
Correspondence Brookhaven Feb 1991
INDIGO Meeting Paris November 1987
Indian Ocean correspondence Sept 1993 onwards
Circulation of Indian Ocean Review Paper with Schott 1984 onwards
Indian Ocean and Climate CCO Panel June 81 to April 83
Indian Ocean and Climate April 83 to March 84

HC3 (Notebooks)

Big Sky Montana Jan 1980
WHOI Sept Oct 1980
SCOR WG 47/ICSU Feb 1980/Rhines talk Feb 1980
WOCE CP1 Nov 86
IO Panel Apr 87
IUGG SCOR WG 21 Aug 71
Press clippings
JOA Sept 76
Correspondence LHN Cooper
Notes for meeting AUWE May 1961
Election to Royal Society Personal Letters
IUGG Grenoble 1975
Discovery Surface Currents April/May 1971 Geoff Howe
Poisoned Sea and other misc. topics
Index correspondence
CINCWIO
FINE Workshop and Working Group 47
Bigelow Medal
JCS Rakestraw
IUGG 1975
Files Indian Ocean Notes and Data
Files Discovery Cruise 102 XBT's
Large waves and flooding in Maldives
Aries Decklog
Atlantis 2 XBT Data
South Equatorial Current
Station Data ARGO
Discovery – Bruce Hamon
Monaco museum List of science instruments (3 volumes)
International ice patrol Bulletins 17,21,23,24,25,27,28,29(x2)

HC 4 (Blue Label)
Discovery 102 Navigation

HC5

IIOE Data

HC6

Somali Current Historical

HC8
MEDOC 69

HC 9
Marion Dufresne ’85, ’86

HC 10
MD 44/49

HC 11

Historical Equatorial Jet and other climate related work
Discovery 164 RTP
HC12 INDEX Data Various Ships

HC 12
Miscellaneous data
(Added item via Pauline Simpson, Librarian NOL 2006 – Believed to be a Marianas Trench sounding profile,
but not validated (by John Gould or James Crease)

HC 13
IO current work with Molinari

HC14
Shackleton 1975

HC15
Indian Ocean Current Meter Stations

HC16
Discovery IIOE Sections (Box 2)

HC 18 Discovery 102

2 Boxes -4 card index boxes. Indian Ocean bibliography

1 Box - **Photographic slides and prints** of oceanographic cruises and scientific visits

Bradbeers 1
Yellow file WOCE in the Indian ocean
File INDEX occasional notes
File Somali current correspondence with Met office 1964 –
Letters re UK WOCE
Correspondence file WOCE planning
File INDEX 1976
File WOCE CP1
File relating to award of Bigelow medal 1962
File re Jon Rees (UEA) PhD
Copy of Rees PhD thesis
Correspondence with Doug Webb re "fast fish" profiler
File with letter of job offer from GERD to JCS 1954
Knox Gan data
AII surface currents Bob Munns
Brenda Deacon interview with JCS 1994 (R Met Soc)
Draft of "Existence Doubtful" (Henry Stonmmel)
Draft of " A view of the Sea" Henry Stommel
Green Box File HMS Challenger RTW cruise
Discovery BT logs IIOE 1964

Bradbeers 2
Photo of Admiralty group at Stonehouse 1945 (with M McKenzie)
Microfiche of IO surface currents
Arabian Sea XBTs HMS Hydra/HMS HECATE May June 1978
BT Section Indian ocean Anton Bruun and AII
Small note book JCS 1950
Life and activities of a physical oceanographer Norris Rakestraw
Photographs Aries etc.
Correspondence with Bruce Hamon
Photo of JCS Bermuda, Mode
Bermuda correspondence 1959 – 60
Bermuda current plots Aries
Gerold Seidler Ph.D thesis
File Indian Ocean Bibliography
Bermuda correspondence
NIO Library material
Somali Basin work – Green box file
Photos of HMS Challenger given to JCS by Dr Carruthers
Letters relating to Erica Dan IGY
Photographs Discovery 2
Photographs relating to JADE cruise
Misc. photographs HMS Challenger
Slides HMS Challenger
File AMSOC and Albatross
Early days with NS floats – slides and talk
Stommel medal talk and view graphs
Indian Ocean correspondence 1989-1993
Albatross file
File Indian Ocean circulation
Misc. letters from Henry Stommel
File – Phil Williamson

File – Challenger legacy 1995
CCCO Islamabad 1988
Marian Dufresne 1988

Lamont and Shaw Box

Green box file Oman 1988
Green box file misc. correspondence
Green box General indain Ocean Correspondence

Bradbeer 3
(*Books in Bradbeer 3 transferred/integrated with National Oceanographic Library stock)

Magazines with ocean articles

Met office admiralty weather charts
*Phys Geog of the sea- Maury
  Beaufort of the Admiralty- Friendly
*The sea- Miller
*The Sea Vol 3 - Hill
*Phys Ocean - Defant Vol 1 and Vol 2
*Monsoons of the Indian Ocean - Duing
*New world of the Ocean -Behrman
*Faroe Shetland Channel -Tait
*Boundary Layers -Bowden et al
*Bay of Bengal Arabian Sea - Rao
  Hill Phd Thesis
*Summerhayes and Thorpe
*Atlas of Arabian Sea
GEOSECS Atlantic
GEOSECS Pacific
POLYMODE Atlas
GATE Atlas

Stommel Photo
Meteor plaque
MD Plaque

Loose

Sundry large format Admiralty weather and ocean folios

Green file

MODE-1 Data box

MODE-1 (Mid-Ocean Dynamics Experiment) data RRS *Discovery* Cruise 53
(Includes: 9 log sheet, files & MODE-1 Density Program Operations manual March-June 1973,
NIO Cruise Report, 58 RRS *Discovery* Cruise 53, April-June 1973.Physical Oceanography
In the Western North Atlantic Ocean (contribution to MODE-1)
(NB: From J.Crease via Pauline Simpson – put with Swallow Bequest 2005)

2 Card Index Drawers – Mediterranean Deep Water Formation & Mediterranean Outflow

9 Atlases

Additional items added to collection

Additional items List A

Boxes of 2¼ slides. Subject matter annotated by John Swallow. Not all slides present

Box 1, Bermuda. Photographs taken during Aries Expedition 1959-60

Box 2, Ships Boston, Woods Hole Oceanographic Institution, Photographs taken in Bermuda during Aries Expedition.

Box 3, IIOE, Photographs taken during the International Indian Ocean Expedition (1-98 IIOE other photographs from various cruises including Erika Dan 1962

Box 4, CCG (Canadian Coastguard) *Hudson*, cruise Jan-April 1967, (work in Irminger Sea). Gosnold, July 1967, SCOR WG21, Current meter intercomparison.

Box 5, Various photographs, Northern Ireland, Woods Hole, Switzerland, Paris and Italy.

Negative from HMS Challenger (1931) round the world cruise 1950-3 (by John Swallow)
****Note below about HMS *Challenger***

1-16 Earlier film
17-29 New Zealand etc.
30-42 Funafutu etc.
43-58 title illegible
59- Misc.
Unnumbered Misc.

Marcovitch cigarette box (Bermuda 1950)
Churchmans No.1 Box (Negatives and prints)
Marcovitch cigarette box, Plymouth, April 1949 (Negatives and prints)
7 Note books (6 "Logs") and Swallow float
(Index to Notebooks follows this Additional list A)

**Note

HMS *Challenger* was a Royal Navy Survey ship. She was laid down in 1930 at Chatham Dockyard and built in a dry dock. Afterwards she was moved to Portsmouth for completion and commissioned on 15 March 1932.
She circumnavigated the World from 1950 to 1953 that included surveying in the West Indies and the Far East. It was on this mission, in 1951 that *Challenger* surveyed the Mariana Trench near Guam, including the deepest known point in the oceans, 11,033 metres (36,198 ft) deep at its maximum, near 11°21′N 142°12′E. This point had been named Challenger Deep after it was first surveyed in 1875 during an expedition by HMS *Challenger*. In January 1954, HMS *Challenger* returned to Britain, was paid off, and broken up at Dover.)

Index to John Swallow notebooks

Vol 1 Jan 57 - May 60

P1	Image 8	Preparing amplifiers
P4	Image 11	Float preparations Jan 57
P13	Image 22	Feb-April ‘57 Cruise (DII) Gulf Stream
P33	Image 44	Notes on Cambridge magnetometer
P86	Image 107	Mukluk Cruise July ’57 Spencer F.Baird
P125	Image 148	Calculation for long life floats
P129	Image 156	Preparing floats to send to New Zealand
P145	Image 182	DII May – July Cruise 1958
P185	Image 222	DII Nov-Dec 1958
P205	Image 242	Half year pinger design Preapartion for Aries Cruises
P230	Image 269	Woods Hole to Bermuda Aries June ‘59
P233	Image 272	Aries June 1959 Cruise 5
P240	Image 279	Aries July 1959 Cruise 6
P244	Image 283	Aries July 1959 Cruise 7
P251	Image 290	Aries August 1959 Cruise 8
P257	Image 296	Aries Aug-Sep 1959 Cruise 9
P261	Image 300	Aries Sept 1959 Cruise 10
P265	Image 304	Aries Sept 1959 Cruise 11
P266	Image 305	Aries Oct 1959 Cruise 12
P267	Image 306	Crawford Cruise 34 Oct 1959
P272	Image 313	Aries Nov 1959 Cruise 16
P276	Image 319	Crawford Cruise 34 November
P283	Image 326	Crawford Cruise 34 Nov-Dec 1959
P86	Image 329	Atlantis Cruise 252 Dec 1959
	Image 333	Aries Feb 1960 Cruise 21
	Image 335	Aries Feb 1960 Cruise 23
	Image 337	Aries Feb 1960 Cruise 25
	Image 339	Aries March 1960 Cruise 26
	Image 342	Aries March 1960 Cruise 28
	Image 344	Aries April 1960 Cruise 29
	Image 346	Aries April 1960 Cruise 30
	Image 351	Aries May 1960 Cruise 31
	Image 344	Some stats on IIOE?

Vol 2 May 60 – Jan ‘67

P1	Image 9	Aries May 1960 Cruise 32
	Image 13	Aries May 1960 Cruise 33
	Image 20	Aries June 1960 Cruise 34
	Image 28	Aries July 1960 Cruise 35
	Image 35	Aries July-Aug 1960 Cruise 36
	Image 40	Aries Aug 1960 Cruise 37
	Image 47	Preparations for work in Faroes-Shetland Channel
	Image 52	Discovery II, June-July 1961
	Image 76	Erika Dan Jan-Apr 1962
P 93	Image 103	Neil Brown salinometer notes
P 97	Image 109	Notes on visit by Dr Tyrrell Bell Labs
P105	Image 117	Notes on RRS Discovery shakedown Cruise Feb-Mar 1962
	Image 156	Second shakedown Cruise
	Image 160	Upwelling Cruise May-Aug 1963
	Image 200	IIOE 1964 Cruise (Feb-Sept 1964)
	Image 269	Discovery Cruise 5 Part 1 May 1965

	Image 279	Tests on Braincon CMs at Feltham
	Image 282	Discovery Cruise 10 (Feb-Apr 1966)
	Image 310	Notes on WHOI moorings as used on Hudson
	Image 317	Rearrangement of space on Discovery
		Running of labs
	Image 327	Cruise 6 June 65 notice

Vol 3 Jan 67 March 73

P1	Image 9	Hudson Jan - Apr 67
	Image 28	Calibrations of Plessey Current meters
	Image 34	SCOR Cruise WHOI July/Aug 67
	Image 52	Details of Oct '67 (CR20) moorings
	Image 62	Discovery Cr20 Oct-Dec 67
P85	Image 115	Vickers Venturer Sept'68
	Image 120	HMS Hydra Oct-Nov '68
	Image 134	HMS Hydra Dec'68-Jan '69
	Image 138	Discovery 25 MEDOC '69
P129	Image 163	Discovery 27
P135	Image169	Vickers Venturer NIO Cr 3 Jul '69
P145	Image 179	John Murray Oct '69
	Image 186	Discovery 31 MEDOC '70
	Image 208	Discovery 34 Air Sea Interaction
	Image 224	Discovery 37 Nov-Dec'70
	Image 241	Discovery 38 Jan-Apr'71
	Image 274	Discovery 44 Dec'71
	Image 286	Discovery 46 Leg 2+3 May '72
P255	Image 303	John Murray June 72
	Image 308	Discovery 49 JASIN 72
P85	Image 357	Ballasting floats Nov 72
	Image 372	Discovery 52 Feb 73
		Followed by various notes on early moorings
	Image 425	Notes on current meter inventory

Vol 4 Mar 73 - Jul 82

	Image 8	Discovery Cruise 53 (MODE-1)
		Rossby Fellowship at WHOI
	Image 46	MODE float notes WHOI Nov '73
	Image 75	Knorr Cruise 40 Apr 74
	Image 104	Shackleton Feb Mar 1975 (Indian Ocean)
	Image 124	Discovery Cr 70 (Topographic Expt)
	Image 140	Shackleton July Aug 1975
	Image 156	Atlantis II May-Jun 1976
	Image 202	Currents near hot salty holes 29 Oct 1976
	Image 206	Discovery Cr 81 Legs 1 and 2 Jan-Feb 1977
	Image 231	JASIN work plans
	Image 238	Discovery Cruise 86 JASIN 1977 Sept 7-30
	Image 255	Doppler shear meter (Tim Crocker)
	Image 259	Discovery Cruise 102 Indian Ocean May-July 1979
	Image 228	Discovery Cruise 117 Jan-Feb 1981
	Image 300	Discovery Cruise 130 June-Aug 1982

Vol 5 June 83 –

Image 8	Discovery Cruises 138 and 139 June Aug 1883
Image 33	Visit to NOAA/AOML and CMAS Miami Feb-Apr 1984
Image 65	Visit to Univ. Miami CMAS 9-22 Nov 1984
Image 70	Charles Darwin Cruise Feb Mar 1985
Image 88	Marion Dufresne Cruise April May 1985
Image 108	Visit to NOAA/CMAS 5-20 Oct 1985
Image 116	Marion Dufresne Cruise MD-49 (INDIGO-2 SINODE) Mar 1986
Image 137	Discovery Cruise 162 22Sept - 10 Oct 1986
Image 147	Notes on salinometry on board Columbus Iselin Jan 1987
Image 148	MEDOC ’87 Columbus Iselin
Image 173	Marion Dufresne JADE Cruise 30 July – 9 Sept 1989
Image 196	Discovery Cruise 189 Mar-Apr 1990
Image 230	Meteor cruise May June 1991

Vol 6 Dr Jim Crease Notes

Discovery Cruise 6, 1 June-1 July, 1962, North Atlantic Faroe Bank

Additional items List B

RRS Discovery /NIO contribution to First GARP Global Experiment (FGGE)
Orange File Discovery FGGE Cruise 1978-9 Cruise 94-104
Correspondence Relating to logistics and science of above Cruises to the South Atlantic and Indian Ocean Indian Ocean.
Orange file Discovery Cruise 102 Second File Starts 15 Feb 1979
Correspondence Relating to logistics and science of above Cruise to the Somali current region of Indian Ocean.
Pink folder
Relates to equipment used on cruises 94-104.. Particularly of interest are the General Oceanics multsamplers,
Orange file Notes and message
Correspondence to/from John Swallow relating to FGGE Discovery Cruises 94-104
Orange folder Cruise 102 Notes
Correspondence and scientific notes relating to SCOR WG21 (John Swallow Chair) 1972-6
6 folders of correspondence and notes to/from John Swallow and John Gould on the planning , execution and analysis relating the above experiment. One concerns criticism of the Plessey MO21 instrument.
Two reports of the above experiment (s)
Files relating to the early use of recording current meters by NIO
1) Orange folder with notes and reports on work in the N Biscay area aboard Vickers Venturer, Surveyor and RRS John Murray 1969-72
2) Pink folder notes on current meter performance (Gould)
3) Green folder Analysis of Faroe Shetland Channel moorings 1983-4
4) Green file Notes on moorings 1977
5) Loose papers (Gould)
6) Orange folder Notes on moorings 24 to 74 (1968-71)
7) Loose papers Gould correspondence with Walter Munk concerning internal wave spectra.
File Boxes in Data store marked JC Swallow
These may be of value in identifying Swallow archives
Folder Pinger Tracks
Original records from John Swallow relating to 1957 float tracking that revealed undercurrent beneath Gulf Stream
Report North Atlantic Pilot Ocean Monitoring Study (NAPOMS) 1980
This meeting June 1980 was a forerunner of plans for sustained ocean observations
Folder of John Swallow’s pre NIO papers
Swallow undergraduate course notes from GI Taylor and Edward Bullard
Assorted drawing instruments used by John Swallow
Copy of John Swallow’s PhD thesis.
Seismic Investigations at Sea, University of Cambridge, 1954

Dr John Swallow cruise data boxes (held in Archive B Stacks 8 & 12)

Box No.	Shelf	Type of box F=Fibre C=Cardboard)	Contents summary
1	50C5	C	Discovery 102 (May-July79) Logs
2	50C5	C	Discovery 102 (May-July79) Logs Navigation
3	50B2	C	IIOE 1964 Misc papers and logs
4	50B2	C	Misc Indian Ocean Discovery IIOE'64 data
5	50B4	C	Logs Discovery 81, 102, 117, 130, 138-9
6	50B5	C	IIOE Correspondence
7	50B5	C	Correspondence re: Indian Ocean 1976 -
8	50C1	F	MEDOC 79 (Discovery 31) TSD Recs
9	50C3	F	JASIN 77 (Discovery 86) PES & Floats
10	50C3	F	Discovery 81 Log books
11	50C5	F	HYDRA Jan 69 (MEDOC)
12	50C5	F	Discovery 70 Log sheets
13	50C4	F	MEDOC 69 Discovery
14	50C4	F	Discovery 86 JASIN 77
15	50C5	F	Discovery 31 MEDOC Logs
16	50C7	C	Correspondence 1967-69 re: Floats
17	50C7	C	Correspondence re; MODE
18	50D1	C	Swallow "dead" files 3
19	50D1	C	Swallow "dead" files 2
20	50D1	C	Swallow "dead" files 5
21	50D1	C	Swallow "dead" files 4
22	53H4	C	Captain Britton's India Ocean Data 4
23	53H4	C	Captain Britton's India Ocean Data 3
24	53H4	C	Captain Britton's India Ocean Data 5
25	53H4	C	Captain Britton's India Ocean Data 6
26	53H3	C	Captain Britton's India Ocean Data 1
27	53H3	C	Captain Britton's India Ocean Data 2
28	53G3	C	Mid Ocean Dynamics Experiment MODE 4
29	53G3	F	Mid Ocean Dynamics Experiment MODE 2
30	53G3	F	Mid Ocean Dynamics Experiment MODE 5
31	53G3	C	Mid Ocean Dynamics Experiment MODE 3
32	53G5	F	Float work 1955-58 & Challenger Seismics
33	53F4	F	Cr25 Discovery TSD Records
34	53F4	F	Hudson 67-Entic Dan 62 Logs
35	53F4	F	MEDOC 69/70
36	53F4	F	CTD/STD Discovery 25, 31, 53, (MEDOC/MODE)
37	53F4	F	ARIES Papers 1
38	53F5	F	ARIES Misc Logs
39	53F5	F	ARIES Papers 2
40	53F5	F	Bermuda 159/'60
41	53E3	F	Quadfased India Ocean Hydro & BT
42	53E3	F	Log Sheets Discovery 10/20 Moors 68-69
43	53E3	F	Quadfased Indian Ocean
44	53E3	F	Discovery 53 MODE
45	53E4	F	Discovery 44,46, 52 Logs
46	53E4	F	Shackleton '75 Indian Ocean

47	53E4	F	Medoc ’69 Discovery 25 & SD
48	53E4	F	Discovery 37, 38 Logs
49	53E5	F	Discovery 38 Biscay TSD Recs
50	53E5	F	Discovery 34 Log Sheets
51	53E5	F	Discovery 53 (MODE) Logs
52	53E5	F	Misc ARIES Papers
Un-numbered Label Marked ‘Misc’ (possibly 53/54)	53G5	C	Indian Ocean Files mainly IIOE 1963-64 and subsequent papers
			The following boxes marked “JCS/No.” not on original handwritten list
55	50C7	C	Discovery 10 BTDATA IIOE
56	50C7	C	Discovery 10 BT data IIOE
57	50C4	F	Discovery 10 IIOE ’63, ’63 Bridge Rough Logs
58	50C5	F	Discovery 10 IIOE Duplicate log sheets hydro stns
59	50C4	F	Discovery 10 IIOE ’64 DROM-TSP ’64 DB Stn logs, DRCM Work sheets, Misc Files
NB. 53 Not present			