COMMONWEALTH OF AUSTRALIA

DEPARTMENT OF NATIONAL DEVELOPMENT

BUREAU OF MINERAL RESOURCES GEOLOGY AND GEOPHYSICS

RECORDS:

PALAEONTOLOGICAL INVESTIGATIONS, PAPUA AND NEW GUINEA. A REVISION OF THE LIST IN B.M.R. REPORT 20, WITH ADDITIONS TO THE END OF 1965.

BY IRENE CRESPIN AND G.A.V. STANLEY

RECORD 1965/186

5928/65

PALAEONTOLOGICAL INVESTIGATIONS, PAPUA AND NEW GUINEA.

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FOREWORD

Shortly after the discovery of oil in Australia at Rough Range, Western Australia, in December 1953, Dr. Irene Crespin prepared a comprehensive list of the many palaeontological reports (mainly micropalaeontological) written by Commonwealth authorities between 1927 and 1952 (Crespin, 1956). The main purpose of this publication was to indicate the work done and information available, and further to promote the search for oil.

The original list prepared for the Territory of Papua and New Guinea was subsequently revised and amended by the late G.A.V. Stanley. He was responsible for collecting a large amount of the material listed.

The new list includes other publications on palaeontological investigations, and as much as possible of the unpublished information prepared between 1951 and 1965. It was decided to issue this information because of the current interest in the Territory of New Guinea of some of the major exploration companies.

INTRODUCTION

Many of the first reports by the Commonwealth Palaeontological section on samples from the Territory of Papua and New Guinea were included in the four volumes of the report on the activities of the Anglo-Persian Oil Company (1929-30). The fossils from these samples formed the nucleus of what was to become a very comprehensive collection of Territory material.

Earlier reports had been written, however, on material which subsequently became part of the Commonwealth Palaeontological collection: fossils collected from localities in the Gulf of Papua by Dr. Arthur Wade were listed in his "Report on Petroleum in Papua" in 1914, and fossils and fossiliferous rocks included in the collection of J.E. Carne were studied by Frederick Chapman and the results incorporated in a report: "Collection of Cainozoic Fossils from the Oilfields of Papua", (Territory of Papua, Bulletin No. 5, 1918).

The reports which follow are listed hereunder in the same manner used in B.M.R. Report No. 20 (Crespin, 1956).

Date	Report title and Collector of Samples	Number of Samples
REPORTS BY F. CHAPMAN:		
24/6/22	Report on two samples of Washings from Tertiary Beds at Popo. 1 p. (The samples are from 810 feet and 955 feet in Popo No. 1 Bore. G.A.V.A.)	2

Date	Report title and Collector of Samples	Number of Samples
26/6/23	Report on the fossiliferous contents and age of a collection of green muds and marls from Iowa River Papua. Anglo-Persian Oil Company. 1 p.	3
16/1/26	Report on a Geological and Microscopical Examination of Samples of Blue Mudstone from the Papuan Oilfields at Popo, Well No. 2. (In fact Popo No. 3. See also Report dates 7/2/38). 4pp.	6
REPORTS BY F. CHAPMAN, assisted by IRENE CRESPIN.		
4/1/28	Report on Samples from Bore at Head of Hohoro Creek, Hohoro District, Papua. New Guinea Oil Co. (Samples from 0 to 1,157-feet). 4pp.	5
7/2/28	Report on Samples of Strata from a Bore sunk by the Ormildah Oil Development Company Limited, Marienberg, New Guinea. (1,200 to 1,390-feet). 18pp. (See also Report dated 19/6/29).	36
8/5/28	Report on Rock and Fossil Specimens from Oriomo, Western Division, Papua. A.P.O.C. (R.K. Richardson)(Outcrop specimens, also from Wohomul and Maremosab Bores). 8pp.	9
18/6/28	Report on Samples from Kerema, Papua. Papuan Petroleum Co. (W.G. Woolnough)(1 from Aipa Hills, 3 from Kerema) 3pp.	4
16/7/28	Report on Samples from Woroi Ridge, Imbi Limestone and Maremosab Bore, Papua. Anglo-Persian Oil Company (hereinafter denoted: A.P.O.C.)	13
15/8/28	Further List of Fossils from Maremosab Bore, Oriomo. A.P.O.C.	8
25/8/28	Report on Samples from Hohoro, Vailala River, Papua. New Guinea Oil Co. (From Scout Bores Nos. 1,2,3,4,5,6,7, and 2 specimens from Hohoro No. 1 Bore). 4pp.	9
29/8/28	Report on samples from I.E. Hills, Kerema, Papua. Papuan Petroleum Co. (F.G. Forman). 3pp.	15
12/9/28	Report on the probable Age and Fossil Content of Samples of Chert from the Port Moresby Series. A.P.O.C. (W.M. Gray and R.K. Richardson). 3pp.	
24/9/28	Report on Five Samples from I.E. Hills, Kerema, Papua. (Papuan Petroleum Co. Ltd.) (F.G. Forman). 3pp.	5

Date	Report title and Collector of Samples	Number of Samples
16/10/28	Report on Fossil Samples from Cape Vogel Peninsula, Papua. A.P.O.C. (S. Papp). 2pp.	16
13/3/29	Report on Samples from Bore A3G, Oriomo, Western Division. Oriomo Oil Ltd. (27 to 890-feet) 12pp.	59
19/4/29	Report on a Series of Fossils from Blue Marl Group of the Aitape Area. A.P.O.C. (J. Nason-Jones) 7pp.	71
10/5/29	Report on a Series of Rock Specimens and Fossils collected by Dr. Simon Papp from the Territory near Marienberg, New Guinea. A.P.O.C. (S. Papp). 7pp.	8
16/5/29	Report on a Series of Rock Specimens and Fossils from the Aitape Area, New Guinea. A.P.O.C. (J. Nason-Jones) 9pp.	22
28/5/29	Report on a series of fossils from the Barum River area, New Guinea. (R.K. Richardson). 11pp.	56
19/6/29	Report on Samples from the Ormildah Companifs Oil Bore, at Marienberg, New Guinea. Ormildah Oil Development Co. Ltd. (1,415 to 2,595 feet). 6pp. (See also Report dated 7/2/28).	30
8/7/29	Report on Four Samples from Port Moresby, Papua. A.P.O.C. (R.K. Richardson). 3pp.	4
8/7/29	Report on Three Samples of the Bōioro Limestone, Port Glasgow, Papua. A.P.O.C. (R.K. Richardson) 2pp.	3
25/7/29	Report on a Further Series of Fossils and Rock Specimens from Barum River, New Guinea. A.P.O.C. (R.K. Richardson) 8pp.	19
6/8/29	Report on Five Samples from Matapau, New Guinea. Oriomo Oil Ltd. (J.F. Foster) 3pp.	5
20/8/29	Report on Six Samples from Port Moresby and Bootless Inlet, Papua. A.P.O.C. (B.K.N. Wyllie). 4pp.	6
24/9/29	Report on a Series of Rock Specimens and Fossils from the Aitape Area, New Guinea. A.P.O.C. (J. Nason-Jones). 10pp.	47
28/9/29	A Report on a Further Collection of Rock Specimens from Aitape Area. A.P.O.C., (J. Nason-Jones). 5pp.	19

Date	Report title and Collector of Samples	Number of Samples
22/10/29	Report on a Series of Samples from Matapau, New Guinea. Oriomo Oil Ltd. (J.F. Foster). 6pp.	30
18/11/29	Report on Fossils and Rock Specimens from the Wanimo and Aitape Areas, New Guinea. A.P.O.C. (J. Nason-Jones) 9pp.	75
8/2/30	Report on a Collection of Fossils and Rock Specimens from the Wanimo and Aitape Areas, New Guinea. A.P.O.C. (J. Nason-Jones). 8pp.	33
2/3/30	Report on Fossiliferous Rocks from Port Moresby, Delena, Yule Island, Boira, Red Scar Head and Oroi, Papua. A.P.O.C. (J.N. Montgomery) 20pp.	1,114
26/3/30	Supplementary Report on Samples from the Wanimo and Aitape Areas, New Guinea. A.P.O.C. (J. Nason-Jones) 8pp.	51
7/5/30	Supplementary Report on Samples from the Aitape Area, New Guinea. A.P.O.C. (J. Nason-Jones) 4pp.	17
4/9/30	Report on No. 7 Bore Matapau, New Guinea. Oil Search Ltd. (15 feet to 1,331 feet) 17pp.	-
23/10/30	Report on Collection of Surface Rock Samples from Matapau, New Guinea. Oil Search Ltd. (J.F. Foster) 4pp.	56
2/2/31	Complete List of Fossils in the J. Nason-Jones Collection from Aitape and Wanimo Areas, New Guinea, now in the Commonwealth Palaeontological Department, National Museum, Melbourne. 8pp.	-
23/3/31	Report on Samples from No. 9 Bore, Matapau, New Guinea. Oil Search Ltd. (0 - 254 feet) 3pp.	39
23/4/31	Report on a Series of Rock Samples from Matapau, New Guinea. Oil Search Ltd. (G.A.V. Stanley) 13pp.	125
19/6/31	Report on Further Samples from No. 9 Bore, Matapau, New Guinea. Oil Search Ltd. (254 feet to 510 feet) 4pp.	25
24/8/31	Report on a Collection of Rocks from Matapau, New Guinea. Oil Search Ltd. (G.A.V. Stanley) 21pp.	140

Date	Report title and Collector of Samples	Number of Samples
28/8/31	Note on a Supplementary Collection of Specimens from Paniri Creek, Aitape Area, New Guinea. (P.S. Hossfeld) 4pp.	-
18/1/32	Report on a Series of Rocks and Fossils from Matapau Area, New Guinea. Oil Search Ltd. (G.A.V. Stanley)(Includes also 6 specimens from the mouth of the Markham River at Lae) 17pp.	230
10/2/32	List of fossils collected by H.T. Mayo in 1921 from the Dandrawad (= Danawata Creek) and Selamin (= Salaminara Creek). A.P.O.C. 3pp.	-
29/2/32	Report on Rock Sample from Heliwam Creek, Matapau, New Guinea. Oil Search Ltd. (G.A.V. Stanley) 1p.	1
12/6/33	Report on a Series of Rock Specimens and Fossils from the areas of the Sepik River, Aitape, Matapau and New Britain, Mandated Territory of New Guinea. Oil Search Ltd. (G.A.V. Stanley)(Include 13 specimens from Gasmata, New Britain) 24pp.	185
7/8/33	Catalogue of fossils from Papua and the Mandated Territory of New Guinea in the Commonwealth Palaeontological Collection. (Carne, Wade, A.P.O.C. and Oil Search Ltd. Collections to date). 18pp.	-
22/2/34	Report on a further Collection of Rocks and Fossils from the Sepik District, Mandated Territory of New Guinea. Oil Search Ltd. (G.A.V. Stanley) 33pp.	378
22/2/34	Additions to the List of Fossils already received from the Finsch Coast Series, Mandated Territory of New Guinea. Oil Search Ltd. (G.A.V. Stanley) 4pp.	-
27/6/34	Report on a further Collection of Rocks and Fossils from the Sepik River District, New Guinea. Oil Search Ltd. (G.A.V. Stanley) 8pp.	42
27/2/35	Report on a further Collection of Rocks and Fossils from the Sepik District, New Guinea. Oil Search Ltd. (G.A.V. Stanley) 15pp.	70
11/11/35	Report on Shells from a layer of Black Sand on the banks of the White River, Papua, at an altitude of 2,725 feet. (Collected by Messrs. Hides and O'Malley. Age, Pleo-Miocene).	-

Date	Report title and Collector of Samples	Number of Samples
REPORT BY IRENE CRESPIN:		
8/7/36	Report on a Series of Rocks from the North Coast of the Gazelle Peninsula, New Britain. Govt. Geologist, New Guinea. (Talele Islands; and mainland opposite Talele Islands; near Vunalama, west side of Ataliklikun Bay) 3pp.	6
28/10/36	Report on a further Collection of Rocks and Fossils from the Sepik District, Mandated Territory of New Guinea. Oil Search Ltd. (G.A.V. Stanley) 8pp.	40
26/11/36	Report on two fossil shells from Saruwaged Ranges, Morobe District, Territory of New Guinea. Govt. Geologist, New Guinea. (Cast of Cardium (Trachycardium) sp. and Cast of Antigona). (Age: Plio-Pleistocene) 1p.	2
19/1/37	Report on a Collection of Fossiliferous Rocks from the Upper Langimar River, 5,000 feet above sea level, and 25 miles West of Otibanda Station, Watut River, Territory of New Guinea. (Government Geologist, Rabaul.) 3pp. (See also Report dated 8/4/41).	8
27/1/37	Report on a Series of Rocks and Fossils from Mandated Territory of New Guinea. Oil Search Ltd. (J.N. Montgomery et al.) 12pp.	47
12/3/37	Report on Molluscan Shells from south of Kernam (Kelnom), Sepik District, Mandated Territory of New Guinea. Oil Search Ltd. (A.K.M. Edwards). 1p.	1
5/4/37	Report on a Fragment of Limestone from Puri River, Papua. Oil Search Ltd. (S.W. Carey). 1p.	1
9/6/37	Report on Rock Specimens from the Puri River, Papua. Oil Search Ltd. 2pp.	2
30/7/37	Report on a Collection of Rocks and Fossils from Mandated Territory of New Guinea (Chimbu, Mt. Hagen and the Sepik District). Govt. Geologist, New Guinea. 5pp.	5
10/9/37	Report on Rock Specimens from near Rabaul, Mandated Territory of New Guinea. Govt. Geologist, New Guinea. (Cape Tavui; N. Side of Kabaira Bay; Undal River; and Ramasaki Village). 4pp.	4

Date	Report title and Collector of Samples	Number of Samples
10/1/38	Report on two Limestones from Gisi on the River Mai Kussa, 68 miles West of Daru, Western Papua. Island Exploration Co. (Pliocene). 2pp.	2
25/1/38	Report on a Collection of Rock Specimens from the Strickland River, Papua. Prime Minister's Dept. and Institute of Anatomy. (Very worn ammonite, 2 others probable organic origin only). 1p.	3
7/2/38	Report on samples from No. 2 Bore Popo, Papua. A.P.O.C. (0 to 2,681 feet). (In fact No. 3 bore, Popo)(See also Report dated 16/1/26) 9pp.	54
2/3/38	Report on a Collection of Limestones and Fossils from Western Division of Papua. Island Exploration Co. (Oriomo, Tully River, Palmer River, and Black River) 8pp.	10
14/4/38	Report on a Series of Fossiliferous Rocks from Papua. Oil Search Ltd. (Puri, Kererus, Sirebi, Er'erier) 19pp. (See also Addendum dated 8/11/38).	63
18/5/38	Report on a Series of Rock Specimens from Watom Island, New Guinea. Govt. Geologist, New Guinea. 2pp.	6
31/5/38	Report on samples from Papuan Apinaipi No. 1 Bore, Papua. Papuan Apinaipi Co. (Inawafunga or Jokea-Apinaipi Dome). (22 feet to 509 feet). 16pp.	92
20/6/38	Notes on a Collection of "Durofix" Peels from Limestone Pebbles, from Namblo River near the Watwatin Junction, Sepik District, New Guinea. Oil Search Ltd. (G.A.V. Stanley). 1p.	12
23/6/38	Report on Samples from No. 3 Bore, Bamu, Western Papua. Papua Oil Development Co. (10 to 565.6 metres). 17pp.	76
27/6/38	Report on No. 1 Bore, Bamu, Western Papua. Papua Oil Development Co. (2 to 522.5 metres). 22pp.	94
18/7/38	A Collection of Rock Samples from Western Papua. Island Exploration Co. (Morehead River, Kabantrail, Wai Bri, Darai Hills, Mai Kussa River, Omari River, Turama Scarp, and Hawoi River) 11pp.	32

Date	Report title and Collector of Samples	Number of Samples
8/8/38	Report on samples from No. 2 Bore, Bamu, Papua. Papua Oil Development Co. (25 to 374.4 metres). 10pp.	70
8/8/38	Report on Further Samples from No. 1 Bore, Bamu, Papua. Papua Oil Development Co. (577.4 to 651.6 metres) 1p.	6
10/8/38	Report on Samples from No. 4 Bore, Bamu, Papua. Papua Oil Development Co. (12.5 to 317 metres) 10pp. With: Correlation of Bores Nos. 1, 2, 3 and 4 Bamu, Western Papua. 3pp.	57
11/8/38	Report on a Collection of Rocks and Fossils from the Sepik District, Mandated Territory of New Guinea. Oil Search Ltd. (G.A.V. Stanley) 13pp.	51
22/8/38	Report on samples from the Apinaipi Dome, Gulf Coast Area, Papua. Papuan Apinaipi Co. 7pp.	65
24/8/38	Report on No. 5 Bore, Kikori, Papua. Papua Oil Development. (15 to 610.8 metres). 14pp.	116
8/9/38	Report on No. 2 Bore, Apinaipi Dome, Papua. Papuan Apinaipi Co. (55 feet to 545 feet) 5pp.	28
14/9/38	Report on Two Collections of Fossils from the Madang Area, Mandated Territory of New Guinea. Island Exploration Co. (Samples OA-66, and RO-36) 4pp.	2
14/10/38	Report on a collection of Fossils from Maimai Dome, Mandated Territory of New Guinea. Oil Search Ltd. (G.A.V. Stanley) 38pp.	268
7/11/38	Report on a Collection of Fossiliferous Rocks from the Madang Area, New Guinea. Island Exploration Co. 28pp.	79
8/11/38	Note on Rock Samples from the Sirebi River, Papua. (This is an addendum to Report dated 14/4/38). 1p.	-
10/11/38	Report on a Collection of Fossiliferous Samples from the Gulf of Papua area, Papua. Oil Search Ltd. (Era River; Sa'ori Cr; Iowa River; Purari River; Kuku Cr.; Haia Cr.; Toa Cr.; Mena River; Suai Cr.;) 38pp.	351

Date	Report title and Collector of Samples	Number of Samples
14/11/38	A Collection of Rock Samples from Western Papua. Island Exploration Co. (Morehead River; Kaban Trail; Darai Hills; Mai Kussa River; Omati River; Turama Scarp; and Hawoi River). 4pp.	32
14/11/38	Duplicate Specimens from Bores in Papua examined for the Papua Oil Development Co. (Nos. 1, 2, 3, 4 and 5 Bores, Bamu and Kikori) 3pp.	32
15/11/38	Report on a Collection of Rocks from the Bainings, Gazelle Peninsula, New Britain. Govt. Geologist, New Guinea. 2pp.	11
18/11/38	Report on No. 1 Scout Bore, Oiapu, Papua. Papuan Apinaipi Co. (34 feet to 749 feet). 15pp.	163
24/11/38	Report on a Collection of Rocks from Permit 4 area, Western Papua. Island Exploration Co. (Kiunga area) 4pp.	11
28/11/38	Report on Rock Samples from Galley Reach Area, W. of Aroa River, Papua. Papua Oil Development Co. 3pp.	7
14/12/38	Report on a Collection of Rocks from Western Papua. Papua Oil Development. (Wawoi River; Upper Bamu River; Bamu River; Aramia River; Soari River; Paibun Cr; Iamu Cr.)(Sample prefix: GW) 5pp.	30
14/12/38	Report on a Collection of Rocks from Western Papua. Papua Oil Development (Bamu River; Wawoi River; near Wawoi Falls; Wawoi River, not far from Bamu No. 4 Bore; Biaia River). (Sample prefix: GM) 6pp.	35
14/12/38	Critical Notes on S.W. Carey's Report on the Palaeontology of the Gulf of Papua Area. 3pp.	-
27/1/39	Report on a Collection of Rocks from Western Papua. Island Exploration Co. (Iamiga; Palmer River; Tully River; Fly River, above Kiunga; ditto, near Gaima; Black River; Black River Hills; Hawoi River; Iehi area; Barikewa area; Oriomo; Mabaduan; and Mai Kussa River) 17pp.	91
3/2/39	Report on Further Samples from No. 1 Scout Bore, Oiapu, Papua. Papuan Apinaipi Petroleum Co. (756 feet to 1,124 feet) 7pp.	61

Date	Report title and Collector of Samples	Number of Samples
20/2/39	A Collection of rocks from Western Papua. Island Exploration Co. (Permits 2 & 4) (Kikori River, above Sirebi River; Iehi Area; Omati River; Turama River Scarp; Darai Hills; Elevala River; Ok Tedi River; Ok Birim River; Wai Mungi Hills and River; Tully River; and Surprise Creek) 10 pp.	38
6/3/39	Report on Conrad No. 6 Bore, Purari, Papua. Papua Oil Development. (11.7 to 780 metres). 16pp.	42
16/3/39	Report on a Further Collection of Fossils from the Maimai Dome, Mandated Territory of New Guinea. Oil Search Ltd. (G.A.V. Stanley) 43pp.	380
3/4/39	Report on samples from Conrad No. 7 Bore, Purari, Papua. Papua Oil Development. (10 to 295 metres) 6pp.	55
13/4/39	Report on Further Samples of Fossils and Fossiliferous Rocks from the Maimai Dome, New Guinea. Oil search Ltd. (G.A.V. Stanley) 48pp.	421
1/6/39	Report on a Collection of Fossiliferous Rocks from New Britain (Talasea and Gasmata). Govt. Geologist, New Guinea. 2pp.	7
6/6/39	Report on a Collection of Fossiliferous Rocks from New Britain and New Ireland. (Talasea, Kokopo, Namatanai). Govt. Geologist, New Guinea. 3pp.	7
6/6/39	Report on a Collection of Fossiliferous Rocks from New Britain, Territory of New Guinea. (Gasmata). Govt. Geologist, New Guina. 2pp.	4
14/9/39	Report on a Collection of Fossiliferous Rocks from Western Papua. Island Exploration Co. (Wai Wi-er River; Palmer River, Track to Mt. Miabiom; Mt. Mabiom; Black River, Wai Mungi River; Tully River; Strickland River; and 18 samples from the Tauri River, at Hell's Gate Gorge). 10pp.	60
29/9/39	Report on No. 2 Scout Bore, Oiapu, Papua. Papuan Apinaipi Petroleum Co. (16 feet to 522 feet) (All unfossiliferous, tuffaceous and volcanic material). 1p.	-
29/9/39	Report on No. 3 Scout Bore, Oiapu, Papua. Papuan Apinaipi Petroleum Co. (22 feet to 892 feet).	41

Date	Report title and Collector of Samples	Number of Samples
8/11/39	Report on a small Collection of Samples from Papua. (Permits 2 and 4). Island Exploration Co. (Turama River; Paibuna River; Omati River; and Ok Mart River) 3pp.	8
30/1/40	Report on a Collection of Rocks and Fossils from the Madang District, New Guinea. Island Exploration Co. 36pp.	315
1/2/40	Report on No. 4 Scout Bore, Oiapu, Papua. Papuan Apinaipi Petroleum Co. 4pp.	42
6/5/40	Revision of Material described in F. Chapman's "Report on a Collection of Cainozoic Fossils from the Oilfields of Papua" together with other undescribed samples in the Wade Collection 1915. Bull. Terr. Papua. No. 5. 1918	-
29/5/40	Report on a Collection of Fossiliferous Rocks from the Madang Area, Mandated Territory of New Guinea. Australasian Petroleum Co. 28pp.	182
6/6/40	Report on a Collection of Rocks from the Chimbu-Mount Hagen, Mandated Territory of New Guinea. Govt. Geologist, New Guinea, and L.C. Noakes. 10pp.	90
1/7/40	Report on a series of Cores and Cuttings from No. 1 Test Bore, Oiapu, Papua. Papuan Apinaipi Petroleum Co. (1,200 feet to 2,129 feet). 5pp.	56
9/7/40	Report on Three Core samples from No. 1 Test Bore, Oiapu, Papua. Papuan Apinaipi Petroleum. (2,014-2,015 feet; 2,078-2,079 feet; and 2,130-2,131 feet). 1p.	3
28/8/40	Report on Further Samples from No. 1 Test Bore, Oiapu, Papua. Papuan Apinaipi Petroleum Co. (2,190 feet to 2,490 feet) 4pp.	25
30/10/40	Report on Further Samples from No. 1 Test Bore, Oiapu, Gulf Division, Papua. Papuan Apinaipi Petroleum Co. (2,491 feet to 2,565 feet). 2pp.	9
10/2/41	Report on Samples of Rocks taken from the Wall of No. 1 Test Bore, Oiapu, Papua. Papuan Apinaipi Petroleum Co. (488 feet to 1,300 feet). 1p.	9

Date	Report title and Collector of Samples	Number of Samples
11/2/41	Report on a Collection of Fossils from New Guinea obtained by J.R. Black during the Mount Hagen-Sepik Patrol. Govt. Geologist, New Guinea. 4pp.	27
3/3/41	Report on a Small Collection of Fossiliferous Rocks from New Ireland, Territory of New Guinea Govt. Geologist, New Guinea. 3pp.	13
31/3/41	Report on Samples from Northern Exploratory Well No. 3, Oiapu, Papua. Papuan Apinaipi Petroleum Co. (12 feet to 140 feet). 2pp.	14
8/4/41	Amended Report on Limestone Samples from the Upper Langimar River, 5,000 feet above sea-level, and 25 miles west of Otibanda, Watut River, Territory of New Guinea. (See also Report dated 19/1/37) 1p.	1
10/4/41	Report on Further Samples from No. 1 Test Bore, Oiapu, Papua. Papuan Apinaipi Petroleum Co. (2,555 feet to 2,769 feet). 2pp.	14
30/4/41	Report on a Sample of Limestone from Wedge Hill, Oiapu, Papua. Papuan Apinaipi Petroleum Co. 1p.	1
5/5/41	Report on Further Core Samples from Northern Exploratory Well No. 3, Oiapu, Papua. Papuan Apinaipi Petroleum Co. (146 feet to 225 feet). 1p.	9
5/5/41	Report on Ten Pit Samples from the vicinity of Northern Exploratory Well, No. 3, Oiapu, Papua. Papuan Apinaipi Petroleum Co. 2pp.	10
7/5/41	Report on Four Rock Samples from near the Putput Plantation, Gazelle Peninsula, New Britain. Govt. Geologist, New Guinea. 2pp.	4
7/5/41	Report on a Collection of Fossiliferous Limestones from the Upper Ramu area, New Guinea. Govt.Geologist, New Guinea. 2pp.	8
10/6/41	Report on Further Samples from No. 3 Exploratory Well, Oiapu, Papua. Papuan Apinaipi Petroleum Co. (325 feet to 665 feet). 1p.	12
10/7/41	Report on Further Samples from No. 3 Exploratory Well, Oiapu, Papua. Papuan Apinaipi Petroleum Co. (671 feet to 1,205 feet). 1p.	15

Date	Report title and Collector of Samples	Number of Samples
15/9/43	Fossiliferous Rocks from Ok-Ti River, Western Papua. (Leo Austin) B.M.R. Records 1943/48 2pp. (See also Palaeontological Bulletin No. 3, 1938)	5
29/6/49	Note on supposed oil-bearing sand received from the Administration of Papua and New Guinea. Records 1949/84. (Palaeontological Series No. 12) 1p.	1
18/8/49	Micropalaeontological Examination of Rock Samples from the Lesi and Oiapu Structures, Papua. (M.A. Condon). Records 1949/88. (Palaeontological Series No. 16). 9pp.	64
17/1/51	Micropalaeontological Examination of Limestone Samples from Rigo District, Papua. (A.K.M. Edwards) Records 1951/2. 2pp.	2
20/2/51	Micropalaeontological Examination of a Limestone from Numa-Numa-Balbi Track, Bougainville, Solomon Islands Group. (A.K.M. Edwards) Records 1951/18. 1p.	1

In Report No. 20 the last entry for Papua-New Guinea was dated 20/2/51. In order to bring the list up to date the following items are now added:

B.M.R. Bulletins:

1938: No. 3	Crespin, Irene:	The Occurrence of Lacazina and Biplanispira in the Mandated Territory of New Guinea, and: A Lower Miocene Limestone from the Ok Ti River, Papua. 16pp.; 3 Plates (Photomicrographs, and Locality Map). Dept. of the Interior. Commonwealth Government Printer, Canberra.
1962 No. 62	Belford, D.J.:	Palaeontological Papers. 1. Miocene and Pliocene Planktonic Foraminifera, Papua-New Guinea. 50pp. 8 Plates.

B.M.R. Reports:

1956 No. 25	Crespin, Irene, et al.: (Includes):	Papers on Tertiary Micropalaeontology. 77pp.
	Paterson, S.J. and Kicinski, F.M.:	An account of the Geology and Petroleum Prospects of the Cape Vogel Basin, Papua. pp. 47-70. 2 Plates; 3 Tables.
	Kicinski, F.M. and Belford, D.J.:	Note on the Tertiary Succession and Foraminifera of Manus Island pp. 71-75. 1 Plate, Geological Map (1:506,880). (See also Records, 1954/69.)

	Kicinski, F.M.:	Note of the Occurrence of some Tertiary Larger Foraminifera on Bougainville Island (Solomon Islands). pp. 76-77.
1954/14	Brunnschweiler, R.O.:	Lower Cretaceous Fossils from Papua and New Guinea. 1p. (A Neocomian echinoid from near Mullins Harbour, and Albian or Cenomanian lamellibranchs from Wapenamanda.)
1954/34	Kicinski, F.M.:	Micropalaeontological Examination of Rock Samples (collected by J.E. Thompson) from the Nigo-Nigo River area (Mullins Harbour-Wedau Reconnaissance), Southeastern Papua. 2pp. (8 specimens. 2 are assigned to the Upper Senonian, 6 to the Upper Eocene.)
1954/69	This Record is reprinted in Report No. 25 (1956) q.v.	
1955/8	This Record is reprinted in Report No. 25 (1956) q.v.	
1955/9	Kicinski, F.M.:	Micropalaeontological Examination of Rock Samples from Buna-Kokoda Area, Eastern Papua. 4pp. Map (1:253,440). 1 Table (Distribution Chart). (21 specimens, collected in 1953 by the Land Research and Regional Survey Section of C.S.I.R.O.: Pliocene and Miocene age.)
1955/36	Crespin, Irene:	Fossiliferous Limestone from Menapi Bay, Cape Vogel Peninsula, Papua. 2pp. (A specimen, collected by L.J. Brass of the Archbold Expedition. Age: Pleistocene.)
1955/46	Crespin, Irene and Belford, D.J.:	Foraminifera from the Upper Sepik River, Western New Guinea. 3pp. (9 Specimens, collected by Enterprise of New Guinea Gold and Petroleum Development N.L. party. Ages range from an Upper Oligocene - Lower Miocene pebble, to Upper Miocene. Mesozoic macrofossils not determined.)
1955/96	Crespin, Irene and Belford, D.J.:	Micropalaeontological Examination of Rock Samples from the Cape Vogel Area, Papua. 6pp. (107 specimens, collected by J.E. Thompson. Of these, 62 were unfossiliferous. The others range in age from Lower Miocene to Pliocene.)
1956/20	Crespin, Irene and Belford, D.J.:	Micropalaeontological Examination of Rock Samples from the Upper Sepik-August River Area, New Guinea. 5pp. (49 specimens, collected by Enterprise of New Guinea Gold and Petroleum Development N.L. party. Age: Miocene. Some with abundant derived Cretaceous (Globotruncana).
1956/100	Crespin, Irene and Belford, D.J.:	Fossiliferous Rocks from Central Highlands, New Guinea. 3pp. (10 specimens, collected by N.J. McMillan and J.E. Johnson from the Bundi, Watabung and Asaro Areas.)

1956/117	Crespin, Irene and Belford, D.J.:	Further Collection of Fossiliferous Rocks from the Central Highlands, New Guinea. 4pp. (19 specimens, collected by N.J. McMillan from the Watabung-Asaro and Daulo-Asaro Areas. 1 specimen only "last of Benabena". Age: Eocene to Middle Miocene.)
1957/29	Belford, D.J.:	Micropalaeontological Examination of Samples from the Tubu Area, Permit 22, Papua. 4pp. (26 Specimens from west of Kaufana, collected by Papuan Apinaipi Petroleum Co. Ltd. party.)
1957/91	Crespin, Irene and Belford, D.J.:	Micropalaeontology of Rock Samples from the Central Highlands, New Guinea. 6pp. 1 Map (1:126,720). (158 specimens, collected by N.J. McMillan and J.E. Johnson. Incorporates also Records 1956/100 and 1956/117. Age: Upper Cretaceous to Miocene.)
1958/9	Belford,D.J.:	Micropalaeontology of Samples from Kaufana No. 1 Well. 6pp. (Cuttings from the Kaufana No. 1 Well, drilled by Papuan Apinaipi Petroleum Co. Ltd. 12 Samples, 40 to 600 feet - Age: Pliocene to Middle Miocene. ? Samples, 640 to 3,348 feet - poor faunas - Age: probably Lower Miocene.)
1958/32	Belford, D.J.:	Micropalaeontology of Samples from Yule Island, Lakekamu River and Popo Areas, Papua. 4pp. 1 Figure (Comparative correlation table). (24 specimens collected by Mines Administration Pty Ltd party.)
1958/94	Belford, D.J.:	Micropalaeontology of Samples from the Kerema-Karova Creek and Malalaua - Saw Mountains Areas, Papua. 8pp. (25 specimens collected by Mines Administration Pty Ltd party.)
1959/99	Belford, D.J.:	Lower Miocene Foraminifera from the Milne Bay Area, Papua. 2pp. Locality Map. (11 specimens collected by J.E. Thompson, from the Nigo-Nigo River. See also Records 1954/14 and 1954/34.)
1959/105	Belford, D.J.:	Miocene Foraminifera from the Wira Anticline Puri-Purari Area, Papua. 6pp. (21 specimens collected by K.H. Morgan of Mines Administration Pty Ltd. Age: Lower Miocene to Pliocene.)
1959/112	Ludbrook, N.H.:	Rock Specimens with Mollusca from the Musa River Area, Papua. 2pp. (Palaeontological Appendix to report by Smith, J.W., and Green, D.H.)(4 specimens from the Domara River Beds). Age: Pleistocene.)
1959/157	Belford, D.J.:	Foraminifera from Middle Purari River Area, Papua. 4pp. (18 specimens, collected by K.H. Morgan, of Mines Administration Pty Ltd. Age: Miocene.)
1960/15	Belford, D.J.:	Foraminifera from the Kompian Area, Eastern end of the Central Range, New Guinea. 2pp. (9 specimens of limestone from the Kompain or Kompiam Area, Lai and Sau Rivers, collected by D.B. Dow. Age: Eocene to Lower Miocene. This report is included as a Paleontological Appendix to Record 1961/73, by D.B. Dow, q.v.)

1961/104 Crespin, Irene: Foraminiferal Rocks from the Nassau Range, Netherlands New Guinea. 5pp. (12 specimens, collected by D.B. Dow. Age: Eocene to basal Lower Miocene.)

1962/32 Belford, D.J.: Palaeontological Appendix to report by Corbett, D.W.P. 1p.
(List of Rock Samples collected in the Lower Ramu-Atitau Region for which a definite age can be given. 15 Specimens, collected by the Land Research and Regional Survey Section of C.S.I.R.O. Age: Lower Miocene to Pliocene.)

1962/120 Lloyd, A.R.: Palaeontological Determinations of Specimens from between Pondo and Keravat, Gazelle Peninsula, New Britain. 2pp. (Appendix 2, to report by Carter, E.K. 11 Specimens. Age: All Miocene, except 1, possibly Eocene-Oligocene). (See also Record 1963/91.)

1963/31 Skwarko, S.K.: Mesozoic Fossils from Ramu 1:250,000 Sheet area, Territory of New Guinea. 7pp. 1 Table (Distribution of (macro) fossils in the Jimi and Kana Formations.)

(21 "Collections", collected by D.B. Dow and F.E. Dekker in 1962. Age: Upper Triassic to Upper Jurassic). (The above is incorporated as Appendix 2 in Record 1963/84 by Dow, D.B., and Dekker, F.E.)

1963/91 Lloyd, A.R.: Foraminifers and other fossils from the Tertiary of the Gazelle Peninsula, New Britain. 8pp. 3 Plates (Maps).
(11 specimens collected by E.J. Best. Also a re-examination of 18 specimens collected by E.K. Carter, and previously described in Record 1962/120. Age: Lower and Middle Miocene.)

1963/170 Belford, D.J.: Foraminifera from Mutare No. 1 Bore, Papua. 4pp. 1 chart (distribution of foraminifera) Age: Lower Cretaceous - ? Recent.)

1964/6 Terpstra, G.R.J.: Age determinations of limestone samples of Woodlark Island, Papua. 6pp. Locality map. 1 Table (Distribution of Foraminifera). (20 specimens, collected by D.S. Trail, from the Nasai and Suloga Limestones. Age: Lower Miocene, with derived Eocene foraminifera.)

1964/105 (Appendix) Lloyd, A.R.: Upper Miocene Foraminifera in Specimen from Damsite "A", Lower Warangoi River, New Britain. (Appendix 2 to Record 1964/105 by E.K. Carter and J.P. MacGregor, 2pp.)(1 Specimen of coralline limestone collected by E.K. Carter.)

1965/102 Belford, D.J.: Foraminifera from the Port Moresby area, Papua. 5pp. Locality list with formation names, air photo references, 1:50,000 Sheet and metric grid references. (43 specimens collected by K.R. Yates and R.Z. de Ferranti, Astrolobe Mineral Field. Age: Upper Cretaceous to Lower Miocene, 20 samples unfossiliferous.)

1965/103 Belford, D.J.: Foraminifera from Wuroi No. 1 Well, Papua. 3pp. (7 Cores. Age: Lower Miocene.)

1965/110 Terpstra, G.R.J.: Outcrop samples, Bougainville Island T.P.N.G. 2pp. Locality map. (20 samples collected by J.G. Speight, C.S.I.R.O. Age: Lower Miocene - 2 samples; Lower to Middle Miocene - 6 samples, remainder indefinite.)

1965/233 Belford, D.J.: Foraminifera from outcrop samples, Star Mountains, Papua-New Guinea. 2pp. (22 samples collected by D. Cooke. Age: Lower Miocene - 8 samples; Jurassic or Cretaceous - 1 sample; remainder indefinite or unfossiliferous.)

1966/66 Terpstra, G.R.J.: Micropalaeontological examination of outcrop samples from Bougainville T.P.N.G. 7pp. Locality map. (38 samples collected by D.H. Blake, Y. Miezitis, and F.S. Chong from Bougainville and Buka Islands. Age: Lower Miocene - 19 samples; rest indefinite.)

B.M.R. Miscellaneous:

Memoranda to the Chief Geologist: Copies of the following memoranda on palaeontological determinations (listed hereunder) are included at the end of this Record as Appendix I.

6/3/58 Dickins, J.M.: Jurassic Pelycypods from the Kubor Ranges, New Guinea. File 151, PNG/1, Part 1, 2pp. (Collected by Dr. E. Reiner, C.S.I.R.O. Division of Land Research and Regional Survey. Buchia malayomaorica. Age: Upper Jurassic.)

6/8/58 Belford, D.J.: Samples collected north of Finschhafen by D.B. Dow. File 151, PNG/1, Part 1, 1p. (19 specimens. Locality: Masaweng River. Age: Upper Miocene (11 specimens only), others indefinite.) (See also B.M.R. Records, 1958/78.)

28/5/59 Belford, D.J.: Samples from Misima Island, New Guinea, submitted by Mr. H.L. Davies. File 151, PNG/1, Part 1, 1p.
(2 specimens. Age: Miocene.)

13/11/59 Belford, D.J.: Sample from New Guinea, forwarded by D.B. Dow. File 151, PNG/1, Part 1, 1p. (1 specimen from the headwaters of the Lamari River. Age: Lower Miocene.)(See B.M.R. Records, 1963/64.)

17/2/60 Brown, W.T.: (Letter to Dr. C.S. Christian, Land Research and Regional Survey Section, C.S.I.R.O., from W.T. Brown, Assistant District Officer, Telefomin, Western Highlands, reporting fossils (? ammonites) at a locality 5° 04' South, 141° 40' East, on Blucher Range Fourmile Strat. Map.) File: 151 PNG/1, Part 2, Folio 15.

18/2/60	Dickins, J.M.:	(Memorandum to Chief Geologist identifying ammonites from the Telefomin Area, forwarded by J.F. Ivanac). File: 151 PNG/1, Part 2, Folio 11. (Material fragmentary, but probably Macrociphalites Keenwensis, Boehm. Age: Middle or Upper Jurassic.)
23/6/60	Belford, D.J.:	Samples from New Guinea forwarded by D.B. Dow. File 151 PNG/1 , Part 2, Folio 22. (2 specimens of limestone from near Sonofi, Eastern Highlands. Age: Lower Miocene.)
9/11/60	Skwarko, S.K.:	Age of Fossils from the vicinity of Lake Trist, New Guinea. File 151 PNG/1, Part 2, Folio 30. (From the Sampa Beds. Age: Cretaceous.)
20/2/61	Belford, D.J.:	Foraminifera limestone from Menyamya, New Guinea. File 151 PNG/1, Part 2, Folio 32. (1 specimen collected by L. Hastings, Assistant District Officer, Menyamya, from southern slopes of Miwi Valley. Age: Eocene.)
24/2/61	Belford, D.J.:	Samples from Woodlark Islands, collected by D.S. Trail. File 151 PNG/1, Part 2, 2pp. (10 specimens. Age: 8 Lower Miocene; 2 unknown.)
15/8/61	Crespin, Irene:	Fairfax Estate Water Bore, Papua. File 151 PNG/1, Part 2, Folio 55. (8 samples from between 44 feet and 97 feet. Age: probably Middle Miocene.)
-/-/61	White, Mary E.:	Note on Plant Fossils from the Wapenamanda district, Papua. File: 151/PNG/1, Part 2, Folio 60. (Stem fragments and impressions of leaf fragments with Dicotyledonous venation. Age: probably Tertiary or younger.)
27/9/61	Crespin, Irene:	Foraminiferal Limestone from the Ramu Gorge, New Guinea. File 151/PNG/1 Part 2, Folio 64. (1 specimen collected by D.B. Dow. Age: Lower Miocene.)
7/3/62	Terpstra, G.R.J.:	Foraminiferal Limestone from head of the Kapau River. File 151/PNG/1, Part 2, Folio 76. (1 specimen, collected by G. Buchanan, Mines Division. Age: Middle Miocene.)
1/5/62	Cox, L.R.:	Preliminary Report on Triassic Bivalves from New Guinea. File 151/PNG/1, Part 2, Folios 79-81. (4 localities. Specimens collected by D.B. Dow. Age: Triassic.)
11/2/64	Belford, D.J.:	Samples from the Marshall Lagoon Area, Papua, collected by G.F. Brouxhon. File 151 PNG/1, Part 2, Folios 122-123. (5 specimens. Age: 3 Pliocene; 2 indeterminate.)
1/12/64	Belford, D.J.:	Sample from the Mengi River, collected by R.G. Horne. File 151 PNG/1, Part 2, Folio 128. (1 specimen. Age: indeterminate.)

3/12/64 Belford, D.J.: Sample from the Lower Warangoi River, Gazelle Peninsula, New Britain, collected by J.R.L. Read. File 151 PNG/1, Part 2, Folio 130. (1 Specimen. Age: Pliocene.)

7/1/65 Belford, D.J.: Samples from the Port Moresby area, Papua, collected by K.R. Yates and R.Z. de Ferranti. File 151 PNG/1, Part 2, Folio 133. (43 specimens. Age: Upper Cretaceous; Eocene; Lower Miocene.)

22/7/65 Terpstra, G.R.J.: Samples south New Ireland, collected by D. French. (12 samples. Age: Oligocene - 1 sample, Miocene or younger - 1 sample, rest - indeterminate.)

Other publications based upon material from Papua-New Guinea belonging to the Commonwealth Palaeontological Collection:

F. Chapman and Irene Crespin:

1932 - Rare Foraminifera from Deep Borings. Part III. Proc. Roy. Soc. Vict. 44 (1) n.s. 92-99, pls. 11-13 (Larger foraminifera from Tumleo Island; Mabam River, and from No. 7 Bore, Matapau.)

Irene Crespin:

1940 - Note on the present knowledge of the Tertiary in Papua and the Mandated Territory of New Guinea. Proc. 6th Pac. Sci. Cong. (San Francisco) 1939. 2, 529-530.

1950 - Australian Microfaunas and their Relationships to Assemblages elsewhere in the Pacific Region. J. Paleont., 24, (4), 421-429.

1959 - Microfossils in Australian and New Guinea Stratigraphy. J. Roy. Soc. N.S.W., 92, (4), 133-147, pls 1-2.

1962 - Lacazinella, a new genus of trematophore foraminifera.

Micropaleontology, 8, (3), 337-342, pls. 1-2 (Material from near Chimbu Aerodrome.)

S.K. Skwarko:

1963 - New Mesozoic Fossil Occurrences in New Guinea and their Stratigraphical Significance. Aust. J. Sci., 26 (1), 24.

APPENDIX I

Copies of notes from Bureau of Mineral Resources

Files 151 PNG/1, Part 1 (closed),

and 1965/6729 (previously 151 PNG/1, Part 2)

JURASSIC PELECYPODS FROM THE KUBOR RANGES, NEW GUINEA

The fossils (Sample No. R.294[☆] B.M.R. Registered No. F21,620) were collected and forwarded for examination by Dr. E. Reiner of the C.S.I.R.O. Division of Land Research.

The material contains a single recognizable species which can be identified as Buchia cf. malayomaorica Krumbeck (1923), and shell fragments with a prismatic structure similar to that found in Inoceramus. The specimens from New Guinea figured and described by Glaessner (1945, p.154, pl.6, figs. 5, 6, 7a-b) as Buchia malayomaorica (Krumbeck) have been borrowed from the Geology Department of the University of Melbourne for comparison. Glaessner's specimens appear to be identical with those collected by Reiner but both sets of specimens differ slightly from the specimens figured by Krumbeck (1923). It is difficult to say whether this difference is due to intra-specific variation or to a specific difference. Because of this I would prefer to compare the New Guinea specimens to Krumbeck's species rather than identify them specifically.

Although in Timor Buchia malayomaorica is recorded by Krumbeck in rocks of Oxfordian age and Glaessner (1945, p.155) considered his New Guinea specimens to be of Oxfordian age, the writer, in the absence of corroborative evidence, would only assign an Upper Jurassic age to the present specimens. This is based on the opinion that in general, a correlation of stages over long distances based on a single species of pelecypod is not reliable. In this case the record of Buchia cf. malayomaorica in the Kimmeridgian of New Zealand (see Marwick, 1953, p.11) emphasizes the need for caution.

Glaessner's specimens include material collected by Osborne from the headwaters of the Fly River and by Noakes from the Whagi Valley. Noakes specimens are from the Maril Shales (see Rickwood, 1955, who also records Buchia malayomaorica). It seems likely that the present specimens are from the same formation.

References

GLAESSNER, M.F., 1945 - Mesozoic Fossils from the Central Highlands of New Guinea. Proc. Roy. Soc. Vict., 56, 151-168.

KRUMBECK, L., 1923 - Zur Kenntris des Juras der Insel Timor Sowie des Aucellen-Horizontes von Seran und Buru. Palaeont. Timor, 12 (20).

MARWICK, J., 1953 - Divisions and Faunas of the Hokonui System (Triassic and Jurassic). Geol. Surv. N.Z. Paleont. Bull., 21.

RICKWOOD, F.K., 1955 - The Geology of the Western Highlands of New Guinea. J. geol. Soc. Aust., 2, 63-82.

(J.M. Dickins),
Palaeontologist.

☆ Reference for Sample No. R.294.
C.S.I.R.O., Resources Survey: Goroka - Mt. Hagen 1957 - Geological Specimens. Air photo reference: Map - Wagi 1:33665, Run No. 3, Photo No. CAJ 22-5093, north-facing slopes of Kubor Ranges south-west of Kami Village: Quadrant D: X - 1.00 ins; Y - 3.40 ins.
Map Reference: Division of National Mapping, Canberra, Wagi - 1:33665; Latitude 5°52'S; Longitude 144°31'E.

6th August, 1958

SAMPLES COLLECTED NORTH OF FINSCHHAFEN BY D.B. DOW

Nineteen samples from this area were forwarded for examination. There is no information on the exact locality of each sample, or on the relative stratigraphical position of the samples.

Samples MR.5, MR.6, MR.7, MR.8, MR.10, MR.12, MR.14, MR.15, MR.22, MR.23, and MR.31 are regarded as upper Miocene in age. These samples contain abundant foraminifera, with large planktonic species dominating the assemblage. Species identified are:-

Orbuline universa, Globorotalia menardii, G. scitula, Globigerinoides trilobus, G. sacculiferus, Globigerina bulloides, G. subcretacea, Pulleniatina obliquiloculata, Sphaeroidinella seminulina, Gumbelina globulosa, Bolivina dilatata, B. quadrilatera, Loxostomum karrerianum, Gyroidinoides soldanii, Pullenis bulloides, Nodosaria arundinea, Trifarina bradyi, Siphonodosaria lepidula, Cassidulina subglobosa, Nonion pompilioides, N. nicobarense, Uvigerina hispids, U. cf. peregrina, Pleurostomella alternans, Eggerella bradyi, Planulina wullerstorfi, Anomalina glabrata, Eponides umbonatus, Reussella spinulosa, Bulimina rostrata, Ehrenbergins pacifica, Gibicides bertheloti.

Samples MR.24, MR.25, MR.28 and MR.32 contain only rare very small planktonic species and rare small benthonic forms (Bolivina sp., Astrononion sp.). It is not possible to give a definite age determination for these samples.

The age of samples MR.11, MR.18, MR.19 and MR.27 is also indefinite. These samples, of silty limestone or calcareous mudstone, contain abundant planktonic species and very rare benthonic forms. The specimens are poorly preserved and encrusted. The "Puri Limestone" of western Papua contains a similar foraminiferal assemblage. This formation is known to be of "f1-2" age, that is upper part of the lower Miocene, but the present samples are not necessarily of this age.

I should like to have, if possible, some information on the relative stratigraphical position of these samples, in order to determine the relationships of these assemblages.

D.J. Belford

28th May, 1959

Samples from Misima Is., New Guinea

Submitted by Mr. H.L. Davies

Two samples were submitted, one a limestone and the other a ? tuffaceous siltstone.

The limestone, sample P.282, contained abundant foraminifera, mainly Amphistegina sp., with very rare Elphidium sp. frequent Globigerinidae and indeterminate smaller foraminifera, and also echinoid spines and algae.

Sample P.283 contained abundant poorly preserved planktonic foraminifera (Globigerina, Globorotalia, Orbulina) and rare benthonic foraminifera.

It is not possible to give anything other than a general Miocene age to these samples.

D.J. Belford

SAMPLE FROM NEW GUINEA FORWARDED BY D.B. DOW

One sample, labelled K.57, was forwarded for micropalaeontological examination by D.B. Dow. This sample, from the headwaters of the Lamari River, is a coarse-grained limestone containing larger foraminifera, bryozoa, algae and echinoid spines. Foraminifera identified are:

Lepidocyclina (*Nephrolepidina*) *ferreroi* Provale
L. (*N.*) *verbeeki* Newton and Holland
L. (*N.*) sp. cf. *sumatrensis* (Brady)
Miogypsina polymorpha Rutten
M. sp. cf. *kotoi* Hanzawa
Miogypsinoides dehaartii Van der Vlerk

2. This sample is placed in the lower part of the "fl-2" stage (lower Miocene).

(D.J. BELFORD)

CANBERRA. A.C.T.

13th November, 1959.

Territory of Papua and New Guinea

File: 34-2/314.

Sub-District Office,
Telefomin,
Sepik District.

17th February, 1960

Dr. C.S. Christian,
Chief of the Division of Land
Research and Regional Survey,
Commonwealth Scientific Research
Institute Organization,
CANBERRA.

Dear Sir,

On a recent patrol from Telefomin I collected a number of shell fossils in the Donner and Om Rivers.

There seems to be little interest in them in the Territory but possibly C.S.I.R.O., or some organization may have some interest.

The fossils vary - I have about twenty and can obtain more. The largest is approximately eight inches in diameter, three inches thick and appears to be a nautilus. The smallest is an almost complete impression of a small shell about half an inch in diameter. Some are moulds - some the opposite. All are in a greyish-black basalt-like stone.

All the stones were obtained from the river banks and beds at approximately 4,500 feet altitude. The map reference of the area is 5 degrees 4 minutes South, 141 degrees 40 minutes East and is covered by the Blucher Formil Strat.

If you have any interest in them I could forward by sea mail. No charges are involved.

Yours faithfully,

(W.T. Brown),
Assistant District Officer

18th February, 1960.

THE CHIEF GEOLOGIST:

The Ammonites from the Telefomin area (Registered Number F21, 195) forwarded by J.F. Ivanac are rather fragmentary but appear to belong to the same species as specimens in the palaeontological collections identified as Macrocephalites Keeuwensis Boehm. These latter specimens were collected from the Upper Sepik area by J.R. Black, Mt. Hagen-Sepik Patrol No. 3. The age appears to be Middle or Upper Jurassic.

(J.M. DICKINS)
Palaeontologist

SAMPLES FROM NEW GUINEA FORWARDED BY D.B. DOW

23rd June, 1960.

Two samples of limestone, collected by D.B. Dow from the head of the Ramu River, near Sonofi, Kainantu one mile area, New Guinea have been examined. The first sample, labelled K.89, contains the following foraminifera:

Austrotrillina howchini
Spiroclypous margaritatus
Borelis pygmea
Lepidocyclina (Trybliolepidina) sp.
Elphidium sp.
Planorbulinella sp.
Indeterminate smaller foraminifera (Miliolidae etc.)

The second sample, labelled K.90, contains:

Spiroclypeus margaritatus (abundant)
Lepidocyclina (Eulepidina) sp.
Cycloclypeus sp.

These two samples are of Lower Miocene ("e" stage) age. In Papua, Borelis pygmea is regarded as an indicator of the basal part of the Lower Miocene; on the available evidence, I regard K.89 as the older of the two samples.

(D.J. BELFORD)

9th November, 1960

AGE OF FOSSILS FROM VICINITY OF LAKE TRIST, NEW GUINEA.

The dating of Lake Trist collection has been made difficult by poor preservation accentuated by considerable distortion of the limited number of specimens available for research.

The fossil assemblage, which consists of pelecypods, gastropods, a barnacle and a small fragment of an ammonite - mostly hitherto undescribed species - is definitely Mesozoic, and unlikely to be older than Middle Jurassic or younger than Middle Cretaceous.

There are definite, though limited, affinities between the Lake Trist fauna and the fauna from Snake River (about 40 miles to the north west) which Glaessner thought to be probably Middle Cretaceous in age. The similarity is seen in the common occurrence of Tibia (?) morobica Glaessner, Cardium sp. and Ashcroftia sp., the last two not necessarily the same species as described by Glaessner. Respective lithologies are also alike.

The apparent differences between the two faunas are, however, of sufficient magnitude to discourage definite correlation being made at this juncture.

Thorough collecting is desirable if closer dating is to be forthcoming.

(S.K. SKWARKO)

20th February, 1961

FORAMINIFERAL LIMESTONE FROM MENYAMYA, NEW GUINEA.

A sample of limestone collected by Mr. L. Hastings, A.D.O. Menyamya was forwarded for palaeontological examination by D.B. Dow. Larger foraminifera are abundant and are identified as Discocyclina spp. (including D. dispansa), Nummulites sp. and Alveolina sp. The age is Eocene.

(Sgd.) D.J. BELFORD.

EXAMINATION OF SAMPLES FROM WOODLARK ISLAND, COLLECTED BY D. TRAIL, 1960.

by

D.J. Belford

Sample 9. Abundant larger foraminifera, rare algae.

Lepidocyclina (Eulepidina) papuanensis Chapman
L. (Nephrolepidina) sumatrensis Brady minor Rutten
L. arcuata Scheffen
Spiroclypeus margaritatus (Schlumberger)
Amphistegina sp.
Planorbulinella sp.

Sample 17. Rare larger foraminifera and indeterminate smaller foraminifera, rare algae, very rare echinoid spines.

Spiroclypeus sp.
Elphidium sp.

Sample 147401. Rare larger foraminifera, frequent indeterminate smaller foraminifera, rare algae, corals.

Spiroclypeus sp.
Austrotrillina howchini (Schlumberger)

Sample 147402. Abundant larger foraminifera, rare indeterminate smaller foraminifera, frequent algae.

Lepidocyclina (E.) papuanensis Chapman
Spiroclypeus margaritatus (Schlumberger)
Austrotrillina howchini (Schlumberger)
Elphidium sp.

Sample 147403. Abundant larger foraminifera, rare indeterminate smaller foraminifera, rare algae.

Lepidocyclina (E.) papuanensis Chapman
L. (?N) sp.
L. (E.) andrewsiana Jones and Chapman
Spiroclypeus margaritatus (Schlumberger)
Elphidium sp.
Operculina sp.

These five samples are all Lower Miocene ("e" stage, Aquitanian), in age.

Sample 56. Abundant fragments and worn specimens of larger foraminifera, abundant algae, rare echinoid spines.

Lepidocyclina (E.) papuanensis Chapman (one broken specimen and fragments)
L. (N.) sp. of L. (N.) parva Oppenoorth
Spiroclypeus sp.
Amphistegina sp.

This sample is of andetrital limestone; the identifiable foraminifera indicate a Lower Miocene age and there is no evidence to suggest that they have been derived into younger sediments.

Samples 54 and 147419. These two samples contain only planktonic foraminifera, abundant in Sample 54. These foraminifera are in themselves insufficient for definite age determination; the field occurrences indicate that these samples are also of Lower Miocene age.

Sample 147434. Very rare and very poorly preserved foraminifera

? Nodosaria sp.
? Globigerinid.

Age unknown.

Sample 147441. Very rare and very poorly preserved indeterminate fragments of foraminifera. Age unknown.

D.J. Belford.
24.2.1961.

FAIRFAX ESTATE WATER BORE, PAPUA

Eight samples taken between the depths of 44 feet and 97 feet from a water bore on Fairfax Estate, about 10 miles north-west of Port Moresby, were received from Peter Pritchard for micropalaeontological examination.

These samples which consisted of glauconitic siltstone and gritty siltstone, contained numerous planktonic foraminifera including several species of Globigerina, and benthonic forms.

The assemblage is characteristically Miocene and the age is most probably Middle Miocene.

Irene Crespin.
15/8/61.

NOTE ON PLANT FOSSILS FROM THE WAPENAMANDA DISTRICT, PAPUA

by Mary E. White

Locality: (Approx.) 143°43', 5°40'S.
"Road cutting in base of cliffs on N.W. bank of Lai River, about 1/2 mile on the Wapenamanda side of the new suspension bridge, and a few miles E. of Wapenamanda."

The plant remains in these specimens are fragmentary.

(i) Impressions of stem fragments with surface carbon, such as those illustrated in Figure 1, are indeterminate.

(ii) Impressions of fragments of Dicotyledonous leaf venation are not complete enough for close identification. Figure 2 illustrates the largest example. Strong lateral veins are seen with areas of net-venation between them. No midrib is present on any of the fragments and there is no indication of the size or shape of a complete leaf.

An age determination of Tertiary or younger can be made on the presence of Dicotyledonous leaves of this sort.

Figure 1

Indeterminate stem fragments.
Specimen F. 12874
Magnification X 2.

Figure 2

Dicotyledonous leaf fragment
Specimen F. 12875
Magnification X 2.

27th September, 1961

FORAMINIFERAL LIMESTONE FROM RAMU GORGE, NEW GUINEA

A sample (K.133) of foraminiferal limestone from the Ramu Gorge, 1 1/2 miles east of Kainantu, was received from D. Dow for micro-examination.

In hand specimen the limestone contained segregations of tests of larger foraminifera including Spiroclypeus and Lepidocyclina, with these two forms being scattered throughout the limestone.

In thin section, the limestone contained numerous small angular quartz grains, numerous tests of Spiroclypeus, a few test of Lepidocyclina and some calcareous algae.

The foraminifera recognized are:

Spiroclypeus tidoenganensis Van der Vlerk
Spiroclypeus margaritatus (Schlumberger)
Spiroclypeus orbitoideus (Douville)
Lepidocyclina (Nephrolepidina) angulosa (Provale)
Lepidocyclina (Nephrolepidina) sumatrensis (Brady)

The above assemblage of larger foraminifera is typical of that found in the Lower Miocene ("e" stage) of the Indo-Pacific region. A similar Spiroclypeus limestone was collected by Dr. N.H. Fisher in 1941 from south-west of Kaiapit, Upper Ramu area. Spiroclypeus-rich limestones also occur near St. Anna's Mission, Tumleo Island, Aitape.

(IRENE CRESPIN)

FORAMINIFERAL LIMESTONE FROM HEAD OF KAPAU RIVER - NEW GUINEA

A sample of foraminiferal limestone from the head of the Kapau River, collected by Mr. G. Buchanan and submitted by D.B. Dow, has been examined.

The sample contains the following foraminiferal species:

Lepidocyclina
Elphidium sp.
Cibicides sp.
Discorbis sp.
Clavulinoides
Eponides sp.

It also contains corals, algae and some ostracoda.

The material is unfortunately not well preserved and no specific determinations have therefore been carried out.

All the material available has been used for thin sectioning and more material would be needed before an attempt could be made to determine specifically the larger foraminiferal species of Lepidocyclina.

The age of the sample is probably ? Middle Miocene.

(G.R.J. Terpstra)
7/3/62

L.R. Cox Report
1/5/62

GEOLOGICAL INTRODUCTION

by

D.B. Dow

The fossils were found in calcareous greywacke in the Jimi Valley during a geological reconnaissance by the Bureau of Mineral Resources, Canberra, Australia, in March 1961. No geological work had previously been done in the region which adjoins the northern boundary of an area mapped by F.K. Rickwood between 1950 and 1953 (Rickwood, 1955).

The Jimi River rises on the western slope of Mount Wilhelm (15,400 feet) in the Western Highlands of New Guinea, and flows north-westwards to the Sepik River. The region is very rugged, but access is relatively good as two airstrips suitable for light aircraft have recently been constructed in the Jimi Valley, and there is a network of graded Administration walking tracks serving the region.

STRATIGRAPHY:

The Triassic rocks crop out along the Jimi Valley for a distance of at least 28 miles (Plate 1). They are faulted against probable Cretaceous beds to the north and possible Permian beds to the east, but their westerly extent is unknown. To the south they underlie, apparently conformably, a sequence of shale and fine-grained greywacke which is correlated with the Upper Jurassic Maril Shale of Rickwood. Buchia malayomaorica and Inoceramus cf. haasti were recognised by the writer near the top of the Maril Shale in the headwaters of the Kawn River.

The Triassic rocks are predominantly medium-bedded to massive greywacke and calcareous greywacke, with interbedded shale and siltstone. Pebble and cobble conglomerate are common in the lower part of the beds, and basic volacnics, probably deposited in the sea, occur at the top of the sequence immediately underlying the Maril Shale. The total thickness of the Triassic rocks is over 2,000 feet.

The Triassic fossils were collected from the lower half of the sequence. Mn22, Mn28, and Mn29, appear to be from about the same stratigraphic position, but Mn26 is probably higher in the sequence.

About 25 miles to the south of the fossil localities near Minj in the Wahgi Valley 1,000 feet of Maril Shale, disconformably overlie Permian Kuta Group (Rickwood, 1955.)

References: RICKWOOD, F.K., 1955 - The Geology of the Western Highlands of New Guinea. J. Geol. Soc. Aust., 2, pp. 63-82.

PRELIMINARY REPORT ON TRIASSIC BIVALVIA FROM NEW GUINEA

By L.R. Cox

The fossiliferous material which is the subject of this report comes from four localities (Mn22, Mn26, Mn28, Mn29) along the Jimi River, New Guinea. The rock is a hard grey limestone with patches of softer decalcified material. Some of the fossils retain their original shell, but where decalcification has taken place they are in the form of internal and external moulds. Three species, belonging to the Bivalvia, are identifiable generically and may be recorded as Gervillia cf. elongata Mansuy, Gervillella sp. nov., and Costatoria sp. nov. One or two other forms are represented in the material, but only by ill-preserved and generically indeterminate specimens.

The presence of a representative of the myophoriid genus Costatoria (the most abundant species in the material) establishes the age of the formation as Triassic. The relatively large size of this shell suggests that it is of Upper Triassic age as species of comparable size do not appear to be known from earlier beds. A second species seems to be closely comparable to Gervillia elongata Mansuy, which occurs in the Upper Trias of Tonkin. The following are notes on the three species mentioned.

1. Gervillia cf. elongata Mansuy (Locality Mn22).

The material includes two internal moulds of an elongate Gervillia, both slightly more than 50 mm. long. The better preserved of these is very similar to the type-specimen of Gervillia elongata, from the Upper Trias of Na Cham, Tonkin, as figured by Mansuy (1919, Mem. Serv. geol. Indochine, vol. 6, fasc. 1, p.7, pl. 1, fig. 17), but is too imperfect to be identifiable with certainty.

2. Gervillella sp. nov. (Locality Mn26).

The material consists of two left valves which occur in association, the smaller being partly covered by the larger. The latter is an obliquely elongated, moderately broad, rather febbly inflated valve about 50 mm. long, with the posterior and ventral margins converging towards the subangular postero-ventral corner of the shell. The broad, scarcely protruding umbo lies a little anterior to the middle of the hinge-margin. There are a large, acutely pointed anterior wing and an obtuse posterior wing, neither well demarcated from the body of the valve. An obtusely rounded ridge, marking the most inflated part of the shell, runs from the umbo towards the postero-ventral corner. The surface bears low concentric undulations. The hinge-structure cannot be seen.

The most closely comparable described species appears to be Gervillella mytiloides (Schlotheim), a variable form from the Lower and Middle Trias of Europe and S.W. Asia. In most specimens of G. mytiloides the shell is considerably narrower than in the shell now reported upon, but relatively broad examples of the species, such as the one figured by Tommasi (1896, Palaeont. italica, vol. 1, pl. 3, fig. 11a) show some approach to it. None quite so broad as the present specimen has, however, been figured. The posterior wing, moreover, is less obtuse in G. mytiloides and concentric undulations are less marked.

3. Costatoria sp. nov. (Localities Mn26, Mn28, Mn29).

This species is represented by a number of imperfect specimens, some retaining part of the actual shell, the majority incomplete internal or external moulds. It is a relatively large member of the Myophoriidae, the best specimen being about 65 mm. long. The flank is ornamented with about 12 unevenly spaced radial ribs of unequal strnegth. Concentric ridges cross the ribs as well as their intervals. A very prominent marginal carina delimits a flat posterior area bearing about 12 rather unevenly spaced radial riblets. A squeeze reproducing the dentition has been prepared from the mould of the interior of a left valve. The median tooth is stout but simple, lacking the

groove found in the corresponding tooth in members of the Trigoniidae. The teeth, moreover, are not transversely crenulated, as in that family.

The species seems best referred to the Myophoriid genus Costatoria Waagen, its flank ornament bearing some resemblance to that of the widespread but much smaller species Costatoria inaequicostata (Klipstein), from which it differs in its radially ribbed posterior area.

The new species has no close affinity with the rather similarly ornamented trigoniid genus Minetrigonia Kobayashi and Katayama, founded on a species from the Upper Trias of Japan and known to be represented by the New Zealand Upper Triassic species "Myophoria" nuggetensis Trechmann, which is of about the same size.

11th February, 1964

Samples from the Marshall Lagoon Area, Papua, Collected by G. Brouxhon

Five samples numbered P/1134, P/1134a, P/1145, P/1148 and P/1148b, collected by G. Brouxhon from the Marshall Lagoon area, about 80 miles east of Port Moresby, Papua, have been examined for microfossils. A geological sketch map shows the beds from which the samples were taken as Quaternary in age; the results of palaeontological examination do not conflict with this.

No microfossils were found in samples P/1134 and P/1145; the remaining three samples contain abundant foraminifera, the fauna being dominated by species of Operculina, Elphidium and Pseudorotalia. A combined list of the foraminiferal species identified is as follows:

Operculina ammonoides (Gronovius)
O. gaimardi d'Orbigny var.? (see Brady, 1884, plate 112, figures 3-9)
O. sp. cf. O. philippinensis Cushman
Elphidium craticulatum (Fichtel and Moll)
E. crispum (Linno)
Pseudorotalia schroeteriana (Parker and Jones)
Amphistegina sp.
Globigerinoides quadrilobatus (d'Orbigny) immaturus Le Roy
Hastigerina aequilateralis aequilateralis (Brady)
Orbulina universa d'Orbigny
Neoeponides subornatus (Cushman)
"Eponides" subhaidingeri (Parr)
Nonion sp. cf. N. elongatum d'Orbigny
Sigmoidella elegantissima (Parker and Jones)
Sigmavirgulina tortuosa (Brady)
Bolivina sp.
Textularia spp.

This assemblage is regarded as not older than Pliocene in age; however, there is no reason to suggest that the Quaternary age of the beds as mapped should be revised.

Reference

BRADY, H.B., 1884 - Report on the Foraminifera dredged by H.M.S. "Challenger" during the years 1873-1876. Challenger Reps., Zool., 9, pp. I-XXI, 1-814.

(D.J. Belford)

SAMPLE FROM THE MENGI RIVER, NEW GUINEA

One sample, labelled RB89, collected by R.G. Horne from the Mengi River, New Guinea, has been received for palaeontological examination. No Foraminifera or other microfossils have been found in this sample and its age is not known.

D.J. Belford

3rd December, 1964.

SAMPLE FROM THE LOWER WARANGOI RIVER, NEW BRITAIN

A sample collected by J.R.L. Read during geological investigation of the Lower Warangoi hydro-electric scheme, Gazelle Peninsula, New Britain, has been received for palaeontological examination. This sample, which is from the base of the stratigraphic sequence in the ridge forming the divide between the Warangoi and Sigula Rivers, contains abundant foraminifera, ostracoda and mollusca.

Foraminifera identified are:

Globigerinoides quadrilobatus (d'Orbigny) immaturus LeRoy
G. bollii Blow
G. ruber (d'Orbigny)
Globigerina bulloides d'Orbigny
Globorotalia cultrata (d'Orbigny)
Pulleniatina obliquiloculata (Parker and Jones)
Geminospira bradyi Bermudez
Florilus elongatus (d'Orbigny)
Siphoninoides echinatus (Brady)
Brizalina patula Belford (MS)
B. vescistriata Belford (MS)
B. sp.
Rectobolivina limbata (Brady)
R. fasciata Belford (MS)
Siphogenerina sp. cf. S. costata Schlumberger
Sigmavirgulina tortuosa (Brady)
Amphistegina sp. cf. A. lessonii d'Orbigny
A. sp.
Operculina ammonoides Gronovius
O. gaimardi d'Orbigny?
Elphidium craticulatum (Fichtel and Moll)
E. advenum (Cushman)
E. spp.
Ammonia maculosa Belford (MS)
Asteroratalia ? sp.
Neoeponides parantillarum (Galloway and Heminway)
Cancris aurilculus (Fichtel and Moll)
"Eponides" subhaidingeri (Parr)
"E". praecinctus (Karrer)
Sphaerogypsina globulus (Reuss)
Pseudorotalia schroeteriana (Parker and Jones)
P. gaimerdi (d'Orbigny)
P. sp. cf. P. catilliformis (Thalmann)
Discorbinella bertheloti (d'Orbigny)
Cancris bodjongensis (LeRoy)
Triloculina tricarinata d'Orbigny
Quinqueloculina bicostata (d'Orbigny)
Spiroloculina eximia (Cushman)
Pyrgo sp. cf. P. elongata (d'Orbigny)
Cymbaloporetta bradyi (Cushman)
Reussella aculeata Cushman
Textularia conica d'Orbigny
T. spp.

This sample is regarded as Pliocene in age.

(D.J. BELFORD)

ASTROLABE FIELD PARTY, 1964.

SAMPLES FROM PORT MORESBY AREA

Forty-three samples collected by K.R. Yates and R.Z. de Ferranti were submitted for micropalaeontological examination. The purpose of this note is to make available the ages determined for the samples, to assist in the preparation of the geological map. A full report listing the faunal content of the samples and discussing the ages assigned to them is to be written later.

The ages determined are as follows:

Upper Cretaceous: Y.98, Y.105, Y.105a, Y.113.

Eocene: Y.102, Y.104, Y.105, Y.106, Y.112, Y.114, Y.118, Y.293, Y.296 Z.093, Z.44, Z.274. (N.B. Two ages for Y.105).

Evidence not definite, but probably Eocene: Y.51, Z.126, Z.132, Z.147, Z.472.

"e" stage of East Indies classification:

Y.297 (with derived Eocene); Y.311; Z.538 (with derived Eocene).

Detrital limestone, probably "e" stage:

Y.289.

No Foraminifera found, age not known:

Y.12, Y.39, Y.54, Y.55, Y.59, Y.116, Y.129, Y.255, Y.282, Y.283, Y.291, Z.016, Z.48, Z.183, Z.384, Z.385, Z.455, Z.463, Z.464.

D.J. Belford.
7.1.65.

SAMPLES SOUTH NEW IRELAND

by

G.R.J. Terpstra

INTRODUCTION

Samples have been received from South New Ireland submitted by Mr. D. French (1:250,000 Regional Mapping program Sheet S.B. 5603, Serial No. 2046).

According to the list received the following numbers were originally to be submitted for palaeontological examination:

6432/4, 5, 6, 10, 12, 18, 21, 24, 39, 40, 41, 43, 44, 61, 62, 63, 67, 70, 82, and 83.

Actually received for examination have been:-

6432/4, 5, 6, 18, 24, 40, 41, 43, 44, 67, 70 and 83.

OBSERVATIONS

6432/4 Jaulu River (Exact location unknown). Black fine-grained volcanic rock with grey fossiliferous inclusions. In section Globigerina sp. and coral fragments have been observed. No age determination can be made.

6432/5 Tougat River (9500125W., 469825E).

White massive coral limestone. A few foraminifera and coral fragments have been observed in sections. No age determination can be made.

6432/6 Tougat River (exact location unknown).

Massive volcanic rock with fossiliferous inclusions.
In section tests of lamellibranchs have been observed, no age determination can be made.

6432/18 Metlik plantation area (9484525W, 4900000E.)
Boundary of light grey volcanic rock and limestone.
The sample appears to be a nummulitic rock containing Camerina cf. fichteli (Michelotti). The age of the rock is Oligocene.

6432/24 Maton River Siltstone (9526000N, 470,000E)
Cross bedded siltstone.
No microfossil have been observed.

6432/67 King River (exact location unknown).
Contact volcanic rock and limestone. The limestone contains coral fragments. No age determination can be made.

6432/70 Topaio Side Creek (exact location unknown)
Silt and lignite.
No foraminifera have been observed.

6432/83 Muliama (9550625N, 494125E).
White coral limestone.
This is an Amphistegina limestone containing also coral fragments. The age of the sample is not older than Miocene, but could well be younger.

The samples 6432/40, 41, 43 and 44, from Tamai Rivers, consist mainly of Brown Coal and have been passed on to Dr. Evans, for possible palynological examination.