

D. Lu

Number 30

March 2005



*Historical Studies  
Group*

*Newsletter*

## Contents

|   | Page |
|---|------|
| Editorial   | 2    |
| The dispersal of the Gideon Mantell library in New Zealand<br>Alan Mason                                  | 3    |
| 'GeoRef' as a Historical Tool - and echoes from the 18 <sup>th</sup> century<br>Heather Halcrow Nicholson | 18   |
| A note on Robert Alexander Farquharson, 1883 - 1959<br>Bill Waters  | 33   |
| Another view of the 'Novara' expedition. Alan Mason   | 36   |
| Notice: Back-copies of <i>Historical Studies Group Newsletter</i>   | 38   |
| " <i>Harold Wellman; a man who moved New Zealand</i> ".<br>- a biography by Simon Nathan. Order form      |      |

Editor: A.G. Hocken  
'East Riding',  
Whiterocks Road,  
RD 6-D Oamaru.

E-mail : [agh@ihug.co.nz](mailto:agh@ihug.co.nz)  
Telephone: 03) 434 8188

## *Editorial*

Welcome to the March 2005 edition of the Historical Studies Group *Newsletter*.

Firstly, I have to apologise to all subscribers, to Alan Mason specifically, for the ectopic caption, wandering independently of its picture, on page 11 of the September issue - not an auspicious start for an editor!

There have been a number of suggestions for modifications to the 'editorial format' and I think that I have incorporated these, providing some bibliographic information and facilitating the appraisal of contents of the issue.

It will be recalled that the September issue - spring time - was in green, hence the logical extension of this autumn issue to be in gold. I think it may be a useful annual range of colour code, should people wish to refer to back issues. An indefinite range of colours will not provide any useful index but the seasonal provides temporal variation. I am open to a plea that no colour variation at all is required, that a uniform spread on a shelf is the only localisation clue that readers require.

At this stage, I have enough material to provide half an issue for September 2005. I take this (only) opportunity to call for more material, please, before August of this year.

Tony Hocken  
Editor  
September 2005

Alan's pre-ambulatory quotes have so often provided nuggets in the past and this one allows me some self-indulgent recollection upon "How I discovered ecology". Alan provided,

In 1774 Nevil Maskelyne, the Astronomer Royal, carried out an experiment near Schiehallion, a mountain in northern Perthshire, [Now called Perth & Kinross - *Ed*] to "determine the attraction of mountains by deviation of the plumbline". From his results the density of the Earth was estimated to be 4.5, perhaps the earliest geophysical calculation.

It was early 1970s that I discovered that at somewhere about 3500 ft asl on Schiehallion, the heather underfoot gave place to lichens, a feature exploited and delightfully demonstrated by the moorland red grouse quite sharply giving way to the beautiful, mountain-dwelling ptarmigan.

agh

## *The dispersal of the Gideon Mantell library in New Zealand*

Alan Mason

★

How the Gideon Mantell library, papers, and fossil and rock collections came to be in New Zealand is recorded by Yaldwyn, *et al.* (1997, pp.397-407; Notes 1-17)

Regrettably, of these only the papers remain intact in their original condition and varying amounts of the remainder have now been lost. The rocks and fossils have suffered the most and less than half can now be identified. (Yaldwyn *et al.* 1997, note 13, p.416 ; Keyes 1997 p.6; Watters 1998) Together, these authors provide an account of the history of the Gideon Mantell fossil, rock, and mineral collections subsequent to their arrival in New Zealand. The following article deals with the Mantell books and, furthermore, only those books which Walter (1820-1895) gave away in his life time. The thousand odd volumes (Taylor 1946, p.916) which Walter's daughter-in-law gave to the Alexander Turnbull Library in 1927 would be a major study itself.

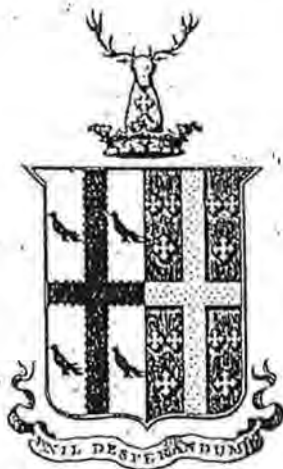


Gideon Algemon Mantell, 1790 - 1852.

The New Zealand Mantell fossils represent only a small remnant of those which Gideon collected in his lifetime. As early as 1817, he had donated specimens to the British Museum and other disposals followed (Cleevely 1983, p.195 and Cleevely and Chapman 1992).

**To my books ;** My faithful Counsellors, unchanging friends:  
To whom in sorrow, sickness and despair  
And when by grief oppressed my spirit bends  
To earth - with sure reliance I repair  
And solace find, and kindred hearts to share  
And sympathize with feelings which the cold,  
The proud and selfish, deem it weak to bear!  
Oh, ever let me sweet communion hold  
With ye, immortal shades of heav'nly mold!

On the other hand Gideon seldom, if ever, disposed of any of his books. The dedication page of Dean's *Mantell Bibliography* (Dean 1998, p.5) is a poem by Gideon, shown above, together with his bookplate, which he also used as a coat of arms (Cleevely and Chapman 1992, pp.309-310).



GIDEON MANTELL, F. L. S. & c.

*Castle Place, Lower.*

Some of Gideon's books were sold at auction after his death (Dean 1998, p. 251) but the bulk of his library was brought to New Zealand by his son Walter in January 1860. Between then and his death in 1895, Walter progressively donated parts of the library to various institutions and individuals but what proportion is not known. Since that time the recipients and their descendants have themselves further dispersed the volumes so that now they occasionally turn up on the second-hand book market.

I have located Mantell books in several New Zealand institutions but a major problem in my search has been the fact that, being old, (and therefore, in the eyes of many librarians, of little interest) much of the material is in off-library storage and librarians are sometimes unwilling to engage in the hassle of recovery.

#### Hector Library, Museum of New Zealand.

Walter Mantell was the first secretary of the New Zealand Society, established in 1851 (Bastings 1953, p.359) and in June, 1852, he gave some of his own books to the Society (see below, 'University of Canterbury') and sometime in the 1860's he gave some of his father's books to the Society's library. The Hector Library has on file a hand-written document, the first to pages of which are reproduced on the following two pages. The full list contains the titles of 142 volumes, many of them geological. It is not known how many were originally from the Gideon Mantell

[c. 1866?]

- List of Books from William  
Flora of N.Z. Hooker — 2 vols ✓  
Gold in Australia Erskine — 1 — ✓  
Distribution of Gold — 1 — ✓  
Gold Seekers Manual — 1 — ✓  
Lectures on Gold — 1 — ✓  
La Pérouse Exp<sup>n</sup> — 2 — ✓  
— do — do plates — 1 — ✓  
~~British Palaeozoic Fossils — 1 — ✓~~  
Missionary Voyage — 1 — ✓  
Dodo & its Kindred — 1 — ✓  
Flora Antarctica — 2 — ✓  
Muscologia Brit: — 1 — ✓  
Nereis Australis — 1 — ✓  
~~Second Visit to United States — 2 — ✓~~  
~~Travels in North America — 2 — ✓~~  
~~D'histoire Naturelle — 2 — ✓~~  
~~Paleontologie — 3 — ✓~~  
Aluminium pamphlet on 1 — ✓

First of two pages of the list held by the Hector Library, Museum of New Zealand, itemising the books presented to the Colonial Museum in the 1860's

Hartley Inst<sup>n</sup> (pamphlet on) 1 vol  
 Smithsonian Inst<sup>n</sup> 1 .. v  
 Islands of Western Pacific 1 .. v  
 Geological map of British Isles 1 .. v  
 Map of Australasia (large) 1 .. v  
 New Zealand Pilot ——— 1 vol  
 Hunters Journal ——— 1 .. v  
 Geology ——— 1 .. v  
 Athenaeum for '45 ——— 1 .. v  
 Geological Society's Transactions <sup>13</sup> 1 .. v  
 Geological Society's <sup>Reports</sup> Journals to 13 & 32, for  
 58 to 72 + from 74 to 80 1 .. v  
 In addresses to 1858 & 1864. ——— 1 .. v  
 Mureau's Voyage ——— 3 vol  
 Brit. Organic Remains ——— 1 .. v  
 Calceolari Museum ——— 1 .. v  
 M<sup>r</sup> Cullod's ~~Rock~~ West. Isl. Scotland 1 .. v  
 London Clay Chelonia over Shell — 1 .. v  
 Craig Mollusca road <sup>Journals</sup> 1 .. v  
 Geological Society's Quarterly <sup>Trans.</sup> 3 .. v  
 do do Proceedings <sup>45-47</sup> — 3 .. v

Second page of the Hector Library list, Museum of New Zealand.

library but some such as *The New Zealand Pilot* and Taylor's *New Zealand* were certainly not his.

The Zealand Society became the Wellington Philosophical Society in 1868 and then part of the New Zealand Institute, now the Royal Society of New Zealand. In 1990, the library of The Royal Society was transferred to the Hector Library of the Museum of New Zealand (Yaldwyn, et al. 1997, p.400 ) but when I visited the Hector Library in 2000 the only geology books from the list that I could find were the Transactions, Quarterly Journals, and Proceedings of the Geological Society of London and these are now in the Geology Library at the University of Auckland, see below. Perhaps Walter Mantell took the others back in 1876/77 when he actioned his "*intention to withdraw at your earliest convenience all my deposits in the Colonial Museum*". (Yaldwyn et al 1997, p.403) Since receiving the items in 1990, the Hector Library has disposed of some. In an inexplicable and astounding move it gave Gideon's own annotated copies of the earliest publications of the Geological Society of London to the University of Auckland, see below. Even more astounding is the University's description of the acquisition as "*a rescue operation*".

### Canterbury Museum

The Annual Report of Canterbury College for 1890-91 (Malet 1891) states,

The Hon. W.B. Mantell, of Wellington has made a very handsome gift to the Museum Library of more than one hundred volumes.

Unfortunately there are now only ten books that can be identified as Mantell items. Some of the remainder were given to the University of Canterbury in 1935 by Robert Speight, see 'University of Canterbury' below. Through the courtesy of Ms Josie Lang, Museum Librarian and Mr. Norton Hiller, Geologist, I was able to examine these ten volumes. Included in the selection were Gideon's copies of Richard Owen's reports on British fossil reptiles and mammals. (Owen 1840, 1842, 1844) They all carried annotations by Gideon but these are most common in Part II of 'Reptiles'. (Owen 1842) This part has recently been published in facsimile, edited by Dennis Dean. (Dean 1999a) A portion of page 139 is reproduced in "Fig. 4.", next page.

Amongst the other items are Gideon's copies of two classics - Lamarck's *Philosophie Zoologique* (1809) and Conybeare and Phillips' *Outline of the Geology of England and Wales* (1822). These carry few annotations but the Lamarck has a



mutilated state, but on examining the posterior part of the shaft, where on the internal side one might expect to meet with some remains of the base of the trochanter, I find the surface of the bone concave, and it diverges much more than I should suppose it would do if it had merely been continuous with the returning surface from the anterior part of the bone, if there had been no trochanter interposed to disturb the otherwise greater rotundity of the shape.

"This leads me to suppose that it once had one, and that it probably might have been formed like that in Nos. 1 and 2 in the British Museum. If they were not the bones of distinct animals, this might perhaps have been the case." Dated Horsham, Nov. 2nd, 1841. *Fudge!!*

The characters of the articular extremities of the femur which are obscured by the mutilated condition of the large specimen, are beautifully shown in the femur of a young *Iguanodon*, obtained from a pit near Ruspur, four miles north of Horsham. The rounded portion of the head extends inwards; it is indented at its anterior part by the commencement of a longitudinal broad channel, which extends down upon the shaft: the articular surface is not confined to the inwardly produced head, but extends over the whole proximal horizontal surface of the femur, expanding as it approaches the outer part of the head. The articular surface is circumscribed by a well-defined linear groove, which separates it from the longitudinal striated surface of the shaft of the bone. At the posterior and external angle of the articular proximal end of the bone, a longitudinal column, separated by a longitudinal groove from the main shaft of the bone, falls into that shaft a little lower down the distal end: here the shaft expands and becomes flattened from before backwards. The distal end is characterized by a deep and narrow anterior longitudinal groove, situated not quite in the middle, but nearer the internal condyle: there is a corresponding longitudinal groove on the posterior part of the distal end, which is wider than the anterior one, and in the middle of the bone, separating the two condyles, but inclining beneath, and, as it were, undermining the backward projecting part of the internal condyle; this is much more prominent than the external one, which is traversed or divided by a narrow longitudinal fissure. The articular surface is irregular and tuberculate.

|   | In. | Lines. | <i>G. Holmes's</i>   |
|---|-----|--------|----------------------|
| The lateral diameter of proximal end . . . . .                        | 2   | 8      | <i>about 1/2 in.</i> |
| The lateral diameter of distal end . . . . .                          | 3   | 0      | <i>this bone</i>     |
| Antero-posterior diameter of outer part of proximal end . . . . .     | 2   | 0      | <i>was in the</i>    |
| Antero-posterior diameter of outer part of internal condyle . . . . . | 2   | 3      | <i>is still to</i>   |

The femur of the *Iguana* differs as widely from that of the *Iguanodon* as does that of the Monitor or any other Lacertian reptile. The forms of the head and trochanter of the femur of the *Iguana* are just the reverse of those in the *Iguanodon*. The head of the femur in the *Iguana* is flattened from side to side, and its upper convex surface is extended from before backwards, making no projection over the gentle concave line leading from its inner surface

Fig. 4. Portion of an annotated page from Gideon Mantell's copy of Richard Owen's *Report on British Fossil Reptiles* Part 2 (1842). The Shorter Oxford English Dictionary gives one meaning of the word "fudge" as "stull and nonsense". Mantell here applies the term to a statement by George B. Holmes of Horsham included in Owen's Report.

double significance. Not only was it Gideon's personal copy but in May 1827 Gideon loaned it to Charles Lyell, who later wrote almost the entire second volume (1832) of his 'Principles' in response (Dean 1999b, p.203). Another interesting item is Roget's 1840 account of animal and vegetable physiology, which is interesting for several reasons. Firstly, Peter Mark Roget was one of the founders of the Geological

Society of London but he is remembered today as the author of Roget's Thesaurus. Thirdly, the fly leaf of volume 2 carries the annotation,

To  
Reginald Neville Mantell  
From his affectionate father  
August 11<sup>th</sup> 1840

Reginald Mantell (1827-1857) was Gideon's younger son and August 11, 1840 was his 13<sup>th</sup> birthday. I wonder what was the reaction of the thirteen year old Reginald to a gift of this nature. Evidently they did not have comics in those times.

Another significant point about this Roget item is that it was among the items donated to the New Zealand Society in the 1860's so it must have been one of the books taken back from the Museum by Walter in 1876/77. There were other books at the Museum that had Walter's name on the fly leaf, not Gideon's.

### University of Canterbury

In the Macmillan Brown Library at the University I located an informative copy of *Petrifications and Their Teachings* (Mantell, 1851). On the half-title page, in Gideon's handwriting is inscribed, "*Walter Mantell Esqu with the affectionate regards of the author Chester Square November 1851*". On the previous page in what appears to be Walter's handwriting are faint annotations which read

1. N.Z. Society June 52
2. A.C. S. Feby 53
- 3.
4. W.B.D.M.

The title page has two stamps, of which one is Walter's and the other the Canterbury Museum stamp with the date '1890' written inside. This last indicates that it was one of "*the more than one hundred volumes*" given to the Canterbury Museum by Walter in that year, see above. On the reverse of the title page is the handwritten note "*Pres Prof Speight Cant. Mus. Ack'd 30-7-35*", and finally, on the dedication page, is "*Warehouse QE 718.M2295*". These annotations enable the history of the book to be traced:-

In November 1851 Gideon sent it to Walter who, in June 1852 presented it to The New Zealand Society. The significance of "A.C.S Feby53" is not know but at some later time it came back into the possession of Walter. In 1890 Walter presented it to the Canterbury Museum and then, in 1935, Professor Speight who was curator of the Museum presented it to the University of Canterbury. The University later consigned it to their Warehouse, not realizing its historical importance.

Such a sequence of events is not untypical in the history of Gideon's library.

### Auckland City Library

The Rare Books Room at the Auckland City Library has nine packages of proof copies of books by Gideon Mantell. They were originally given by Walter Mantell to Sir George Grey who passed them on to the library as part of his gifts to that institution in the 1880's and 1890's. Unfortunately, the entire collection has become rather disorganised over the years. Pages are not in order and proofs for different books are sometimes mixed together in the one set of proofs. All the material relates to the last four years of Gideon's life, as the earliest date mentioned is 1848. Proof copies of earlier editions are held by the Alexander Turnbull Library. Most of the books are incomplete and unbound except insofar as being sewn in groups of sixteen pages by the printer. These groups are often duplicated and even triplicated, representing successive proof copies as Gideon's corrections in the first set of proofs are incorporated in the sequels.

The front page of each group usually has a printed sticker from Clay, the printer, reading,

18\_\_  
From R. Clay  
Printing Office  
Bread Street Hill

the exact date being filled in on the top line in manuscript. Gideon and Clay were fast workers. Proofs of pages 145 to 160 of *Petrifactions and Their Teachings* (Mantell 1851) were sent by Clay to Gideon on 13 July 1851. Gideon made his corrections and returned them to Clay who incorporated them in a second set of proofs which he sent to Gideon on 19 July - an example is shown on the following page. Clay's stickers for proofs of *The Medals of Creation* are dated from September 10 to November 10, 1852, the day that Gideon died.

attached by the external surface of the fangs to the inner ~~part~~ of the alveolar process (as is shown in *Lign. 49*); and there is no mesial ~~part~~ parapet of bone, the fangs of the teeth being covered only by the soft parts (*fig. 1, Lign. 49*). The successional germs do not, as in the Crocodile, spring up in the cavities of the mature teeth, and rise ~~up~~ through them, but are developed near the inner part of the base; and the pressure ~~occasioned~~ by their upward growth occasions the absorption of the fang of the old tooth, which is ultimately displaced, by the destruction of its adhesion to the ~~alveolar process~~. In *fig. 3, Lign. 49*, the position of a germ at the base of the fang is represented.

The teeth of the Iguana closely resemble in form, but not in structure, the perfect young upper teeth of the Iguanodon; they are very small, scarcely exceeding in size those of the mouse. (In *figs. 1; 2, Lign. 49*, the teeth are figured of the natural size.) In the Iguana the crown of the tooth never presents a worn or even surface; it is broken or chipped off by use, but not ground smooth as are the teeth of herbivorous mammalia. The reason is obvious: no existing reptiles are furnished with cheeks or moveable coverings to their jaws; they cannot perform mastication, but swallow their food whole.

LOWER JAW OF THE IGUANA.—*Lign. 49*.—Before I quit this subject, and enter upon the examination of the teeth of the Iguanodon, it will be convenient to explain the structure of the lower jaw in reptiles; and I select that of the Iguana, as it will not only serve to illustrate the osteology of that part of the skeleton, but also tend to elucidate the nature of the highly interesting fossils that will hereafter engage our attention.

In mammalia the lower jaw is composed of one bone on each side, and in many genera these pieces become united in front, and blended into a single bone in the adult animal; but in reptiles this element always consists of six distinct pieces on each side, and these several parts are variously

~~These are some of the large Monitors which are capable of performing a semi-rotatory motion of the back teeth, and in no living species of reptile is the trituration of the food effected as in the mammalia and the Iguanodon.~~

side  
2  
and  
3  
8/11  
Peters

12/1

12/1

A proof page from "Petrifications and Their Teachings", corrected by Gideon

University of Auckland

The Library at the University of Auckland has Gideon's own copies of *Transactions of the Geological Society of London*, complete from 1811, and its successor, the *Quarterly Journal*. These were recently obtained from the Hector Library at the

Museum of New Zealand, see above. There are few annotations. The Geological Society publications have the following notice pasted on the inside of the front cover,

THIS VOLUME  
was formerly part of the scientific library  
founded on 2 July 1851 for the benefit of  
New Zealand scientists,  
at the inaugural meeting of  
THE NEW ZEALAND SOCIETY,  
which was reconstituted as  
THE WELLINGTON PHILOSOPHICAL SOCIETY  
in 1868 and re-named  
THE WELLINGTON BRANCH OF  
THE ROYAL SOCIETY OF  
NEW ZEALAND  
in 1939

Many, but not all, of the volumes have Gideon's signature on the fly leaf and one, Volume 1 of the second series of the Transactions (1824), has his bookplate on the inside of the front cover. A number have "*Walter Mantell FGS 1857*" on the title page including some already signed by Gideon. Walter would have added his signature during his return visit to England. The article in the Quarterly Journal by Gideon on New Zealand fossil birds (Mantell 1848) has been annotated by Walter with corrections and comments.

#### Auckland Museum Library

This library holds an interesting bound volume of assorted items. The label on the spine reads "*Moa Pamphlets Vol 1*" and the catalogue reference is "QE 872. D5. Reserve NZ Collection". A label on the fly leaf indicates that it was presented to the Museum by E. Earle Vaile and a stamp inside the back cover states that it was catalogued by the Museum in August 1949. E. Earle Vaile was a major benefactor of the Museum in the first half of the last century. The hand-written index at the front of the volume is in the handwriting of Johannes C. Anderson and the binding of the volume is similar to that of other volumes owned by Anderson that I have seen. Johannes C. Anderson was the first Librarian at the Alexander Turnbull Library and held office from 1919 until 1937. At the foot of the index Anderson has written "*Gathered from odd sources and bound up together in 1929*". This is significant for the present study, for it is obvious that one of Anderson's "*odd sources*" had been the Mantell Papers, which had been presented to the Library a few years prior to 1929

and these, of course, were not Anderson's to give away. Most, if not all, of items 2 to 15 (figured below) could only have come from the Mantell papers. For example, Item 3. Twelve pages of closely-written handwritten corrections and comments by Walter on his father's New Zealand papers (Mantell 1848 and 1850). The wording suggests that the notes were intended for his father for incorporation in the latter's later account of New Zealand (Mantell 1851; 90-135).

- |            |     |   |
|------------|-----|---|
|            | 1.  | Illustration of moa as it was (Hochstetter),<br>Kiwi, and skeletons of moa and man.                                   |
| Hooker 139 | 2.  | Mantell on Fossil Remains from N.Z.<br>"Quarterly Journ. of Geol. Socy." 1 Aug. 1848                                  |
| Hooker 139 | 3.  | Mrs. Notes and Corrections to foregoing by W.B.P.M.<br>Separate edition of 2 as above.                                |
|            | 4.  | Owens on the Remains of Gigantic... Birds.<br>Proceedings of Geol. Socy. of Lond. 11 Jan. 1848                        |
|            | 5.  | Abstract of Mantell's Lecture on fossil birds   |
|            | 6.  | Mantell's Notice of Remains of Dinornis<br>"Quarterly Journ. of Geol. Socy." Aug. 1850                                |
|            | 7.  | Original drawings of some of sketches in<br>article 7 preceding   |
|            | 8.  | Map of coast, <sup>approx. North</sup> <del>between</del> northward   |
|            | 9.  | Note on Fossil Birds, "Illus. Lond. News", 18/4/50  |
|            | 10. | Original sketch for illus. of moa's foot in<br>note, "Illus. L. News" (10 above).                                     |
|            | 11. | Original drawing, man, moa, and kiwi  |
|            | 12. | Mantell's Note on moa in "Fourth Anniversary<br>meeting, Western Medical & Surgical<br>Socy. of London" 12 Apr. 1850. |
|            | 13. | Mantell, Lecture on extinct birds of N.Z.,<br>report from "The Witness" Sept. 5 Aug. '50                              |
|            | 14. | Mrs. note from "Quarterly Review", vol. 90, 1852,<br>p. 402, on Owens's identification of the bones.                  |
|            | 15. | Lecture by W. Mantell on Gigantic Birds of<br>N.Z. 3.1857   |

The first fifteen items on Johannes C. Anderson's compilation, "Moa Pamphlets", vol. I

Item 5. This bears Gideon's signature.

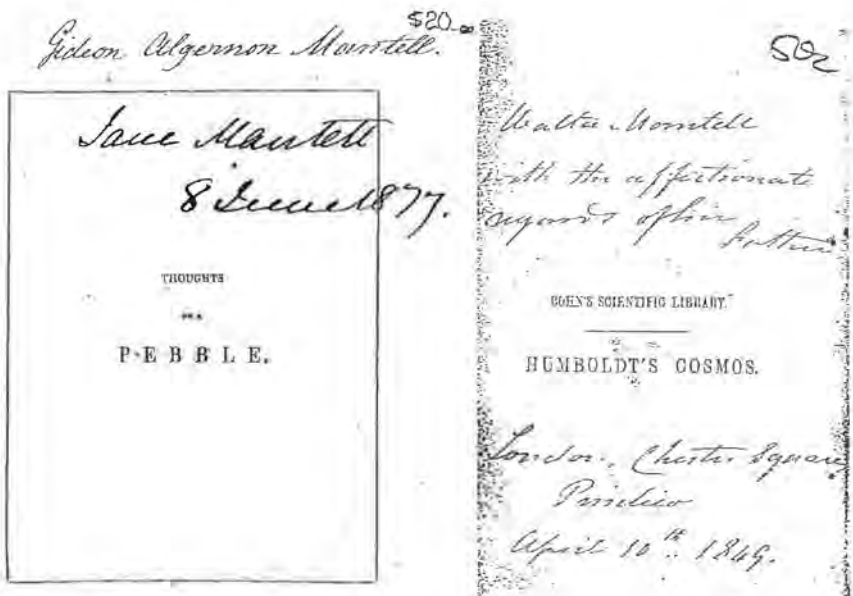
Item 6. This is a prospectus for "A Lecture on the Fossil Ostrich-Like Birds of New Zealand" that Gideon gave to the Marylebone Scientific Institution (Mantell [1848]). It is difficult to see how this could have come to New Zealand other than through the Mantell papers.

Item 7. A separate work of Mantell 1850 with annotations by Walter with cross references to Item 3 above.

Item 9. A hand-written map dated 1848 showing the coastal geology of East Otago from the Waitaki River to Otago Harbour. The handwriting seems to be that of Walter and it could be an original from his 1848 survey (Mantell 1850)

### The Ultimate Disposal - The Second Hand Book Market

The family's disposal of the Gideon Mantell Library, begun almost 150 years ago by Gideon's son, Walter, ended in 1927 when Walter's daughter-in-law donated all the remaining books and papers to the Alexander Turnbull Library. But even prior to that, the disposal had become a dispersal and some of the books eventually became the property of owners who, unaware of their significance, sold them on the second hand book market. Two examples are figured below.



**Left:** "Thoughts on a pebble", 8<sup>th</sup> ed., (Alan Mason) . With Gideon's signature, apparently given by Walter to his 2<sup>nd</sup> wife, Jane Hardwick, 8<sup>th</sup> June, 1877  
**Right:** Humboldt's "Cosmos", presented to Gideon by Walter, found in a 50c bin by Gary Tee!

In a Wellington bookshop I purchased a copy of Gideon's *A Day's Ramble in and about the Ancient Town of Lewes* (1846). Gideon's signature is on the fly and the title page is annotated "C.B. Izard from Matara Nov. 1867". "Matara" was Walter's



Maori nickname (Stevens 1969, p.49). Charles Beard Izard was born in Brighton, England, in 1829 where he may have been known to Gideon, as the latter lived in Brighton from 1833 to 1838. Izard was the founder of the New Zealand legal firm now known as Bell Gully (Anon. 1897, p.266).

## Conclusion

The Gideon Mantell papers, books and fossils, brought to New Zealand by his son, Walter, provide the most important source of information on the history of geology in the southern hemisphere. Yet, for well over one hundred years their significance went unrecognised in this country. It is only within the last twenty five years that there has been a change in attitude. Dennis Dean's research at the Alexander Turnbull Library and elsewhere has resulted in three books on Mantell (Dean 1998, 1999a and b) and several papers. The 'first' *Iguanodon* tooth (Yaldwyn *et al.*, 1997) lay gathering dust for most of its time in the Museum of New Zealand and the predecessors thereof, but is now referred to as the 'Holy Grail of Fossils' with an insured value of a million dollars (McCurdy, 2003).

However, this blossoming of interest has come too late for many of the fossils and other geological specimens (Yaldwyn *et al.* 1997; 406 and note 13; Watters, 1998) and, as this article has shown, it has also come too late for many of the books from Gideon's library. Here the initial responsibility must lie with Gideon's own son, Walter, who started the 'rot' by donating so many of the books to friends and institutions, a degradation compounded by the recipients and their descendants. Even within institutions, people such as Speight at Canterbury Museum and Anderson at the Turnbull, gave away items from their institution's Mantell collections. Furthermore, my researches have shown that very few of the institutions holding Mantell material today realise its significance.

More research is needed at the above institutions and elsewhere. There are many more Mantell books yet to be identified.

\* \* \*

## *Acknowledgments*

Thanks are due to the Librarians of the institutions visited and to Norton Hiller of Canterbury Museum for the opportunity to view the books. Jarg Pettinga advised me of the existence of Gideon's copy of Richard Owen's *Report on British Fossil Reptiles*



at Canterbury Museum. Dennis Dean drew my attention to the significance of certain items.

\* \* \*

### References

- Anon., 1897, *The Cyclopaedia of New Zealand*, Volume I, Wellington..
- Bastings, L., 1953. History of the New Zealand Society, *Trans Roy Soc NZ*, 80; 359-366.
- Cleevely, R.J., 1983. *World Palaeontological Collections*. British Museum (Natural History), London
- Chapman, S.D. 1992. The accumulation and disposal of Gideon Mantell's fossil collections and their role in the history of British Palaeontology. *Archives of Natural History*, 19; 307-364.
- Conybeare, W.D.; Phillips, W., 1822. *Outlines of the Geology of England and Wales*. London.
- Dean, D. 1998., *Gideon Algernon Mantell : A Bibliography with Supplementary Essays*. Scholars' Facsimiles & Reprints. New York,
- 1999a., *The First "Dinosaur" Book*. Scholars' Facsimiles and Reprints. New York.
- 1999b *Gideon Mantell and the Discovery of Dinosaurs*. Cambridge University Press.
- Keyes, I. W., 1997. The New Zealand Institute of Geological and Nuclear Sciences (ex Geological Survey) Collection of Gideon and Mantell. *Geol Soc NZ Historical Studies Group Newsletter*, No. 14; 3-9.
- Lamarck, J.B.P.A., 1809, *Philosophie Zoologique ou Exposition*. Paris.
- Lyell, C., 1832, *Principles of Geology*. Vol. II.
- McCurdy, D., 2003. Holy Grail of Fossils. *Geol Soc NZ Newsletter*, 131; 14-16.
- Malet, F. de C., 1891. *The Canterbury College, Christchurch, N. Z. Annual Report of the Chairman of the Board of Governors for the Year 1890-1*. Christchurch.
- Mantell, G. A. 1848. On the Fossil Remains of Birds Collected in Various Parts of New Zealand by Mr. Walter Mantell of Wellington. *Quart. Journ. Geol. Soc., London*. 4; 225-41.
- [1848] A Lecture on the Fossil Ostrich like Birds of New Zealand. (Prospectus only). Marylebone Scientific Institution. (Lecture to be given on Saturday March 25<sup>th</sup>)
- 1850. Notice of the Remains of the *Dinornis* and Other Birds, and of Fossils

and Rock-specimens, Recently Collected by Mr. Walter Mantell in the Middle Island of New Zealand. *Quart J. Geol Soc Ldn.*, 6: 319-343.

-- 1851. *Petrifactions and Their Teaching*. Bohn, London.

-- 1853 *The Medals of Creation*. (2nd edition) Bohn, London.

Owen, R., 1840. Report on British Fossil Reptiles (Part I). *Report Ninth Meeting British Association for the Advancement of Science*. 43-126.

-- 1842. Report on British Fossil Reptiles (Part II) *Report of the Eleventh Meeting of the British Association for the Advancement of Science*. 60-104

-- 1844. Report on the British Fossil Mammalia. *Report of the British Association for the Advancement of Science for 1843*. London

Roget, P.M., 1840. *Animal and Vegetable Physiology considered with Reference to Natural Theology*. London.

Stevens, J., 1969. John George Cooke and His Literary Connections. *The Turnbull Library Record*. 2(n. s.) No. 2; 40-51.

Taylor, C.R.H., 1946. The Alexander Turnbull Library; a brief description. *The New Zealand Year Book.*, pp. 1914-17.

Watters, W. 1998. Rock and mineral specimens from the Mantell Collection. *Geol Soc NZ Historical Studies Group Newsletter*, No. 16;12.

Yaldwyn, J.C.; Tee, G.J.; Mason, A.P., 1997. The status of Gideon Mantell's "first" *Iguanodon* tooth in the Museum of New Zealand Te Papa Tongarewa. *Archives of Natural History*, 24, 397-421.

*'GeoRef' as a Historical Tool*  
*(and echoes from the eighteenth century)*

Heather Halcrow Nicholson

\*

In 1998, I set out to trace the growth of geology in New Zealand and to find how much attention was given to the greywackes compared with the geology of younger rocks. 'The greywackes' are broadly those rocks forming the Mesozoic terranes of the Eastern Province (Mortimer, 2003), and feature as tracts J, T and Y along with their related regionally metamorphosed schists on the recently issued Geological Map of New Zealand (Smith Lyttle, 2004).

Henry Menard (1971) measured the rate of growth of geology in the United States by using students to perform the laborious task of combing geological bibliographies to count the number of pages published each year. Following Menard's example but lacking student assistants, I used *GeoRef*, then on CD, to count and sort references to published papers on New Zealand geology. *GeoRef* is a comprehensive geological bibliographic database published by the American Geological Institute as the *Bibliography and Index of Geology*, on CD, and online (Anon., 2004b). The database covers North American geology from 1785 to the present while that for the rest of the world, including New Zealand, dates from 1933. *GeoRef* excludes unpublished theses and unpublished and classified papers produced by local and national government agencies and private companies.

*GeoRef* obligingly counted the numbers of published papers on New Zealand geology and the database's automatic facilities made counting by year, topic, publisher and country of publication into an easy routine. 'Papers' included formal papers, abstracts, books, and chapters in books which meant that a single page abstract was given the same value as a substantial monograph. Although detailed page counts would give better results, counting papers furnished a fairly satisfactory method of measuring the growth of geology in New Zealand. The counts were also found useful for tracing publication patterns, the rise and fall of various geological sub-fields, the introduction and retirement of various ideas, and of changes in geological concepts. Each year's set of records generated by *GeoRef* were downloaded and printed so that I could quickly review them, delete unrelated references and adjust the counts. The sets of raw counts were manually recorded on

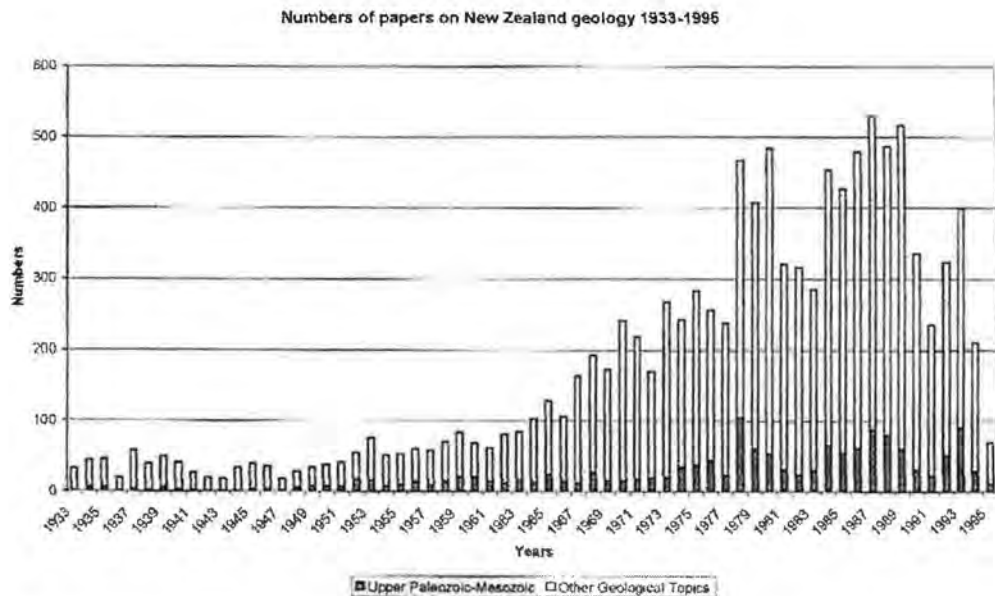


Figure 1: Numbers of papers published on New Zealand geology 1933-1995 showing the proportions of papers to do with the Upper Paleozoic and Mesozoic rocks compared with all other geological topics. For the sake of clarity, figures 2, 3, and 4 cover the years 1950-1995 only.

squared paper, copied into *Excel*® and bar charts drawn. Six years' later, in early 2004, the total counts were updated using *GeoRef* online (Figure 6).

### Choosing keywords

To find the numbers of papers on New Zealand geology published each year, the use of 'new-zealand' rather than 'zealand' removed references to the Netherlands and the only extraneous material was limited to a few overseas textbooks using New Zealand examples of geological phenomena. Counts were also made of:

- Papers on Carboniferous-Permian-Mesozoic greywackes,
- Conference papers.
- New Zealand publishers.
- Overseas publications.
- Growth of Geology in New Zealand

Experiments with key words showed that the simple keyword set 'Carboniferous or Permian or Mesozoic' was both too broad and too narrow to search for papers on the greywackes (Figure 1). Some papers on the petrology of the greywackes were missed because their records did not state their age, while using 'Carb\*' or Perm\* or Meso\*' as keywords produced many unwanted papers to do with coal, oil and water supplies. At length, the keyword set 'Carbonif\*' or Permia\* or Mesoz\* or gr?w\* or metagr?w\* or turbi\* or flysch or terran\* or schist' produced the required records. 'Terran\*' was needed to remove 'terrain' and 'terrace', while keeping 'terrane', 'terranes' and 'terranoLOGY'. This broad search brought in papers on the Murihiku terrane including the old Hokonui System, the Permian of Southland and Nelson and a number to do with the younger Cretaceous-Tertiary rocks. However, the term 'not Cretaceous' was unsuitable because it took out records of papers on the young Torlesse. Eventually, the limit to fine-tuning my search terms was decided by how many items I was prepared to type out during each search.

Sorting for New Zealand publishers was usually quite straightforward. However, while publications by the Department of Scientific and Industrial Research were readily found with the keyword 'dsir', recent publications by the Institute of Geological & Nuclear Sciences were surprisingly difficult to trace on *GeoRef* because 'IGNS' yielded nothing, and publications issued by the institute were found only by typing out the name in full. Then, the resulting abstracts had to be viewed and checked because, wherever they publish, the affiliation of the Institute's geologists are shown as 'Institute of Geological and Nuclear Sciences', and *GeoRef*

duly counts all their papers as though published by the Institute. The layout and style of the different fields in *GeoRef* sometimes changed between one CD Rom disk and the next, so that in one disk the *Transactions of the Royal Society of New Zealand* was shown in full, but in another it was recorded as *Trans. Roy. Soc. N.Z.* This required the invention of a new keyword, a repeat search, and again meant that I needed to sight every record in order to achieve reasonable accuracy.

### **Carboniferous-Permian-Mesozoic and the Greywackes**

Basement rocks occupy more than half the surface of the land mass of New Zealand with greywackes and schists together occupying about 42 per cent (Lauder, 1962). However, through the 1930s, little interest was taken in any of the 'undermass' including the fossiliferous West Auckland and Southland (Hokonui) rocks or the older basement rocks of Westland and Nelson (Figure 1). They were mentioned in 25 out of 296 papers and were only briefly described before attention was given to the younger and more comprehensible late Cretaceous and Tertiary rocks above them.

By 1950 a new interest in the older rocks including the 'Undifferentiated Jurassic-Triassic-Permian' (Marwick, 1948) began to grow rising to an unusual 34 per cent in 1952. However, of the 2800 bulletin pages published by the New Zealand Geological Survey from 1950 to 1969 only 7 per cent dealt with Mesozoic rocks of either 'the eastern facies' (the greywackes, Torlesse and Caples terranes) or 'the western facies' (Murihiku terrane). While an average of five papers a year were issued on the Permian-Mesozoic Hokonui facies (Murihiku), an average of fewer than two papers a year on the greywackes appeared (for example Lillie, 1951; Wellman, 1952; Brothers, 1956; Halcrow, 1956; Halcrow Nicholson, 2003: 236). On the other hand, it did mean that after a gap of over fifty years since McKay's brilliant studies of greywackes of the Wellington district, more attention was being paid to these puzzling rocks.

From the 1960s, more specialist papers to do with the structure, petrology and palaeontology of the greywackes began appearing along with those on sedimentology and geochronology. Output on the Carboniferous, Permian and Mesozoic rocks rose along with the increase in total output of geological papers through the 1970s and 1980s. However, production rarely amounted to more than 10 to 15 percent of total papers, rising occasionally to over 20 percent (as in 1961, 1963, 1978, and 1993).

### Role of Conference Papers in Geological Publications

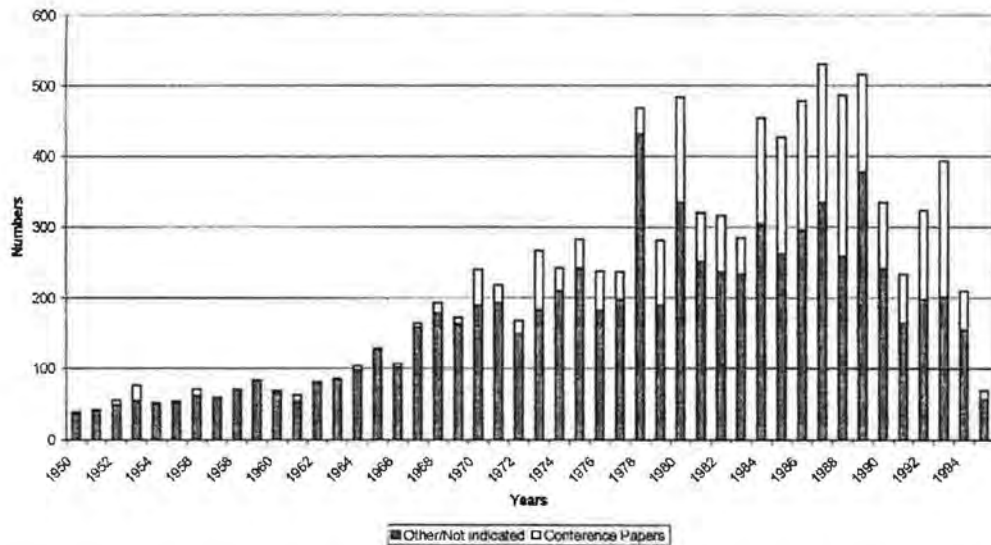


Figure 2: Conference papers 1950-1995. Conferences promote new research and increase geological productivity. The resulting papers form an important component of geological communication.

Numbers of papers published in New Zealand and overseas

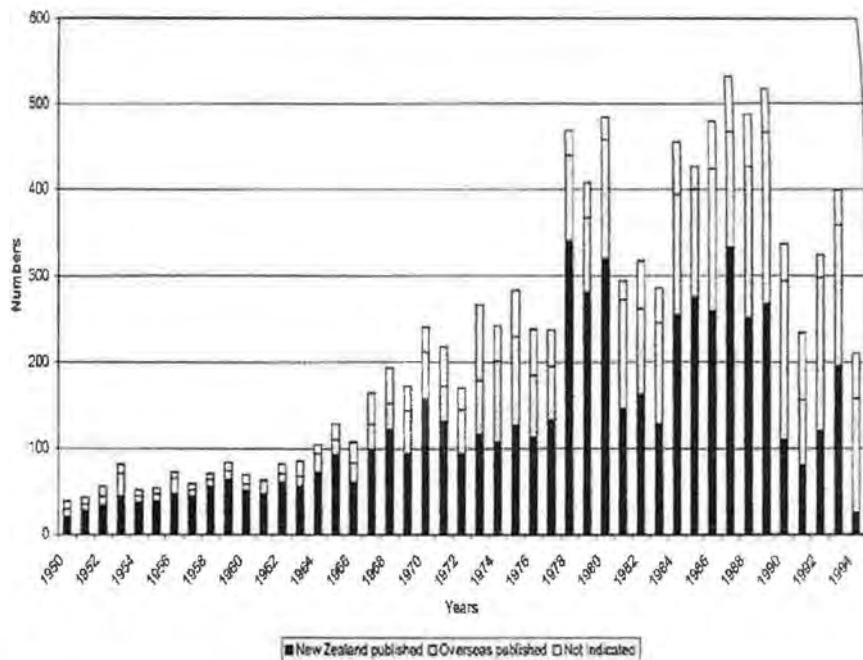


Figure 3: Most papers about New Zealand geology are published in this country although ever increasing numbers are published overseas.



### Conferences - Internationalisation of New Zealand geology

The spikes in Figure 1 and Figure 2 represent conference abstracts and field guides and are a sign of sociable information exchange between geologists as they travelled to take part in a wide assortment of professional conferences, symposia, projects, congresses, programmes, meetings, assemblies, seminars, workshops, and colloquia here and overseas. Conference abstracts and field guides produced by the Geological Society of New Zealand, along with the *Newsletter of the Geological Society of New Zealand* and the society's miscellaneous papers were often, but not always, recorded by *GeoRef*, causing the spikes on the charts (Figure 2). Their absence in some years is simply because for some reason or another *GeoRef* did not receive the material (Kay Yost, AGI, pers.comm.)

Before the second world war (1939-1945), few New Zealand geologists could afford the time or money to attend anything other than the biennial ANZAAS (Australian and New Zealand Association for the Advancement of Science) conferences. None took place during the war but recommenced in 1949 with the Seventh Pacific Science Congress held in New Zealand (Benson, 1950). As air travel became cheaper in the 1960s, New Zealand geologists joined the international scientific commuting circuit (Price, 1963: 85) to attend conferences and visit various institutions and research centres. Consequently, the proportion of papers generated by conferences increased from only a few percent in 1965 to 30 percent in 1980 when New Zealand geologists attended at least half a dozen international conferences.

New Zealand geological publishers (Figures 3, 4) include:

1. *Transactions of the New Zealand Institute* and its successor, *Transactions of the Royal Society of New Zealand*. These were very important outlets for New Zealand geologists until the late 1950s when *The New Zealand Journal of Geology and Geophysics* began publication. In later years the Society published a varying number of papers, many of which were based on student theses, from none in 1964 to a peak of 84 in 1989.
2. *The New Zealand Journal of Science and Technology*, followed in 1958 by the more specialised *New Zealand Journal of Geology and Geophysics*, both published by the Department of Scientific and Industrial Research. DSIR was the

## Geological Publishers in New Zealand

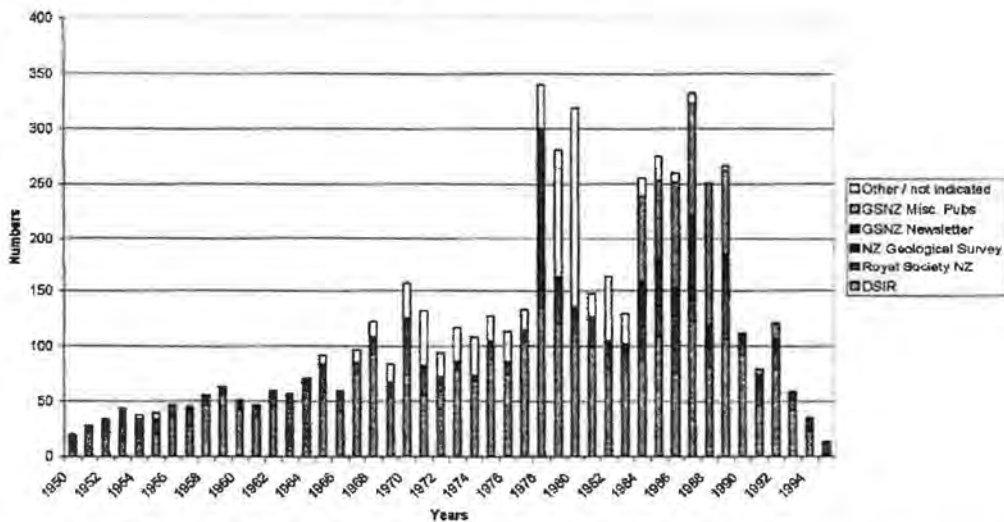


Fig. 4: New Zealand publishers of geological papers 1950-1995. Many GSNZ conference abstracts and field guides are listed as 'miscellaneous publications'. The large numbers shown as 'other' are probably GSNZ items. The 1978 peak represents the New Zealand Geological Survey's 'sumptuously produced, impressive reference publication' (Carter, 1980), *The Geology of New Zealand* (Suggate et al., 1978), in which each of the more than 130 units, all written by different authors, were recorded as separate papers.

major publisher of geological papers in New Zealand, but after 1978, publication rates fluctuated until the department was disestablished in 1990 (Galbreath, 1998). *The New Zealand Journal of Geology and Geophysics* is now published by the Royal Society of New Zealand.

3. Reports and bulletins issued by the New Zealand Geological Survey (Adkin and Collins, 1967: xii). Before the war the New Zealand Geological Survey was a comparatively minor geological publisher and during the war it published even less (Halcrow Nicholson, 2003:123) when many Survey staff were assigned wartime tasks (Wellman and Willet, 1942; Gage, 1994; Gage and Nathan, 1999). *GeoRef* contains no references to the *New Zealand Geological Survey Record*. The number of Survey publications increased until 1988 when output rapidly diminished. The New Zealand Geological Survey was wound up in 1990 (Mason, 1990) and combined with the Geophysics Division to form DSIR Geology and Geophysics. This was reconstituted in 1992 as the Institute of Geological and Nuclear Sciences, a Crown Research Institute (Galbreath, 1998).
4. Publications of the Geological Society of New Zealand. Since around 1970 the Society has become an increasingly important publisher, with its regular *Newsletter* as well as abstracts and field guides associated with its annual conferences, a range of miscellaneous publications, and articles carried by the *Newsletter* of the Society's Historical Studies Group.

### **Publishing Overseas**

Since earliest days New Zealand geologists have sought to publish overseas (for example Haast, 1864; Hector, 1865) as well as in various locally published provincial and central government gazettes, journals and newspapers. Through the twentieth century a substantial proportion of papers on New Zealand geology were published overseas mainly in Australia, the United Kingdom, the United States, and from about 1974, the Netherlands, reflecting the participation of New Zealand geologists in international science (Figures 3, 5). In the 1930s up to 40 per cent of geological output was published overseas, but this dropped to around 10 per cent in the war years. From then on, overseas publication grew in importance, and by 1989, nearly half of the papers on New Zealand geology were published elsewhere.

Overseas publication is often seen as having more status than publication in New Zealand and good for the geologists' careers. Nonetheless, they have been

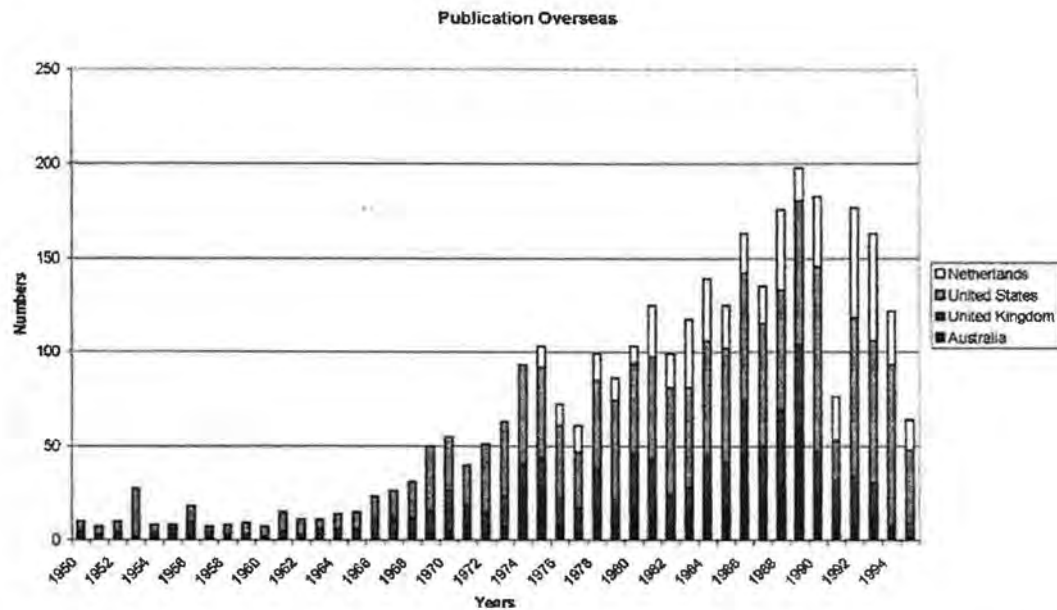


Fig 5: Most overseas papers to do with New Zealand geology had New Zealand authors and were published in the four countries shown above.

Total publications 1950-2003

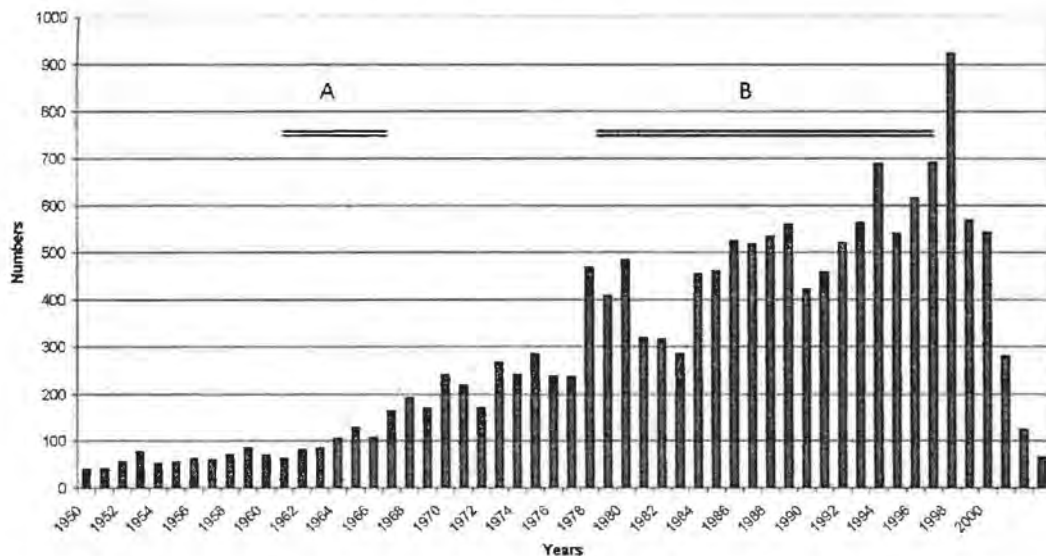


Figure 6: Chart showing the growth of geology in New Zealand over the years 1950-2004, indicating changes in geological output over 5 decades which included a world war, several periods of economic depression, and a great deal of economic experimentation. The two double lines indicate the different doubling rates of geological output between about 1962 and 1967 (A), and between the late 1970s and late 1990s (B).

urged to submit more papers to the *New Zealand Journal of Geology and Geophysics* rather than to second-tier overseas journals (Nathan, 1998). After all, Nathan explained, the New Zealand journal's editorial standard and publication times, along with its International Citation Index are better than many overseas journals and it has a considerable overseas readership. Moreover, publications placed in some of the more obscure overseas journals may never be seen by colleagues in New Zealand.

### **Growth of geology in New Zealand**

The growth pattern of geology in New Zealand is similar to that in the United States (Menard, 1971: 28-30, 40-41). There, geology was in a state of general 'stagnation' with steady output through the late 1920s and into the 1940s, followed by an upturn in the mid 1950s. In the 1930s New Zealand geologists turned out an average of 42 papers a year, dropping to about 32 papers a year in the war years (Figure 1). From a low of 19 papers in 1947 the output of papers doubled in the four years to 1951. From then on, the growth of geology accelerated, doubling each eight or nine years until around 1975. Growth appears to have been strongly checked in the late 1980s, with an abrupt drop in output signifying a matching fall in geological activity in this country.

At the beginning of 2004, I again counted the annual output of geological papers but this time used *GeoRef* on-line. I worked back as far as 1980 and grafted the new data onto the earlier set and extended the graph (Figure 6). The seeming drop in publication numbers in the early 1990s was indeed an artefact and geology has continued to grow, if unevenly. Besides the irregular inclusion of conference papers, the pattern of growth (Figure 6) is likely to be complicated by such factors as variable funding to DSIR. Less money was available each third (election) year when 'writing up' was done in preference to more expensive field work (Mike Johnston, pers.comm.). Publication rate is also affected when the time lag between submission and publication lengthens (Bernhard Spörli, pers.comm.). Further, these counts can tell us nothing about the productivity of individual scientists in the universities, IGNS, or in private companies. However, the overall rate of growth does appear to have slowed and between 1978 and 1998 it took 20 years for output to double (the 1978 peak represents *The Geology of New Zealand* (Suggate et al., 1978) and the 1999 peak is caused by the inclusion of numerous conference abstracts).

The changes in science policy over the last 15 years have been described as 'radical' and 'especially rigorous' in New Zealand (Cartner and Bollinger, 1997). These were based on a selection of mechanistic theories of the free market introduced by Adam Smith (1723-1790), who 'launched the doctrine of free enterprise' and 'the invisible hand' (Anon., 2004a). Ironically, Adam Smith and James Hutton (1726-1797), a leading founder of geology, were contemporaries and friends during the Scottish Enlightenment in eighteenth century Edinburgh (Baxter, 2003: 89). Geologists honour Hutton's genius and his original recognition of the concepts of unconformity (Tomkeieff, 1962) and of deep time (McPhee, 1981: 77). Nevertheless, the subsequent development of geological knowledge means that today's geologists do not explain geological processes using Hutton's theory of the Earth. In contrast, economists and politicians still employ many of Smith's ideas as reliable recipes for running a large, complex, modern society, although they are based on assumptions and conjectures developed within a smaller, simpler, proto-industrial environment (Smith, 1776).

Over two hundred years' after the deaths of Hutton and Smith, the application of the latter's theories in New Zealand has resulted in a serious reduction of funding for public science and of the number of working geologists. Will the growth rate of geological output in New Zealand slow down further or even decline? Could it revert to the unchanging steady state characteristic of the 1930s-50s? Is that such a bad thing? Is it necessary for a science to keep growing? Would geological knowledge keep on accumulating, regardless of the growth rate? Does a science progress even if the growth rate is flat? If geology loses momentum, might geologists again become enmeshed in fruitless disputes like the great sandstone classification rows of the 1950s and 60s (Halcrow Nicholson, 2003: 260-267)? In any case, the flagging growth rate in geological science is disconcerting in a land as abounding in calamitous geological surprises as New Zealand.

### *Acknowledgments*

My grateful thanks go to Mike Johnston and Bernhard Spörlí for their constructive criticisms of this paper and their advice.

## References

- Adkin, G. L. and Collins, B. W., (1967), A Bibliography of New Zealand Geology to 1950, *New Zealand Geological Survey Bulletin n.s. 65*, Lower Hutt. 244
- Anon., (2004a), Adam Smith; Economist and Philosopher, 1723 - 1790  
[www.lucideafe.com/library/96jun/smith.html](http://www.lucideafe.com/library/96jun/smith.html)
- Anon., (2004b), GeoRef Information Service, Website,;  
[www.agiweb.org/georef/about/](http://www.agiweb.org/georef/about/)
- Baxter, S. (2003), *Revolutions in the Earth: James Hutton and the true age of the World*, Phoenix, London.
- Benson, W. N. (1950), Meeting of the Geological Division of the Pacific Science Congress in New Zealand, February, 1949, *Interim Proceedings of the Geological Society of America 1950*, 11-13
- Brothers, R. N. (1956), The structure and petrography of greywackes near Auckland, New Zealand, *Transactions of the Royal Society of New Zealand*, 83, (3), 465-482.
- Carter, R. M. (1980), Book Review: The Geology of New Zealand, *Geology*, 8, 457-458.
- Cartner, M. and Bollinger, T. (1997), Science policy reforms: the New Zealand experience, *Social Studies of Science*, 27, 775-803.
- Gage, M. (1994), The New Zealand Geological Survey in World War II, *Historical Studies Group Newsletter*, 8, 21-23.
- Gage, M. and Nathan, S., (1999), A Geologist Remembers: Recollections of field work, *Geological Society of New Zealand miscellaneous publication 102*, Wellington. 52
- Galbreath, R. (1998), *DSIR: Making Science Work for New Zealand*, Victoria University Press, Wellington.
- Haast, J. (1864), On the Southern Alps of Canterbury, Middle Island, New Zealand, *Proceedings of the Royal Geographical Society*, 8, 55-58.
- Halcrow, H. M. (1956), Geology of Waiheke Island, Auckland, *Transactions of the Royal Society of New Zealand*, 84 (1), 51-69.
- Halcrow Nicholson, H. (2003), The New Zealand Greywackes: A study of changing geological concepts to 1985, PhD thesis, University of Auckland, Auckland, 440p.
- Hector, J. (1865), On the Geology of Otago, New Zealand, *Quarterly Journal of the Geological Society of London*, 21, 124-128.
- Lauder, W. R. (1962), The areas of rocks in New Zealand, *New Zealand Journal of Geology and Geophysics*, 5, 276-277.



- Lillie, A. R. (1951), Notes on the geological structure of New Zealand, *Transactions of the Royal Society of New Zealand*, 79 (2), 218-259.
- Marwick, J. (Ed.) (1948), *The Outline of the Geology of New Zealand*, Department of Scientific and Industrial Research, Geological Survey Branch.
- Mason, A. (1990), New Zealand Geological Survey (Deceased), *Geological Society of New Zealand, Historical Studies Group Newsletter*, 1, 5.
- McPhee, J. (1981), *Basin and Range*, Farrar, Straus and Giroux, New York.
- Menard, H. W. (1971), *Science: Growth and Change*, Harvard University Press, Cambridge, Massachusetts.
- Mortimer, N. (2003), New Zealand's Geological Foundations, *Gondwana II Symposium Proceedings*, 1-18
- Nathan, S. (1998), Editorial: Why publish your science overseas?, *Geological Society of New Zealand Newsletter*, 117, (November), 2.
- Price, D. J. D. S. (1963), *Little Science, Big Science*, Columbia University Press, New York.
- Smith, A. (1776), *An Inquiry into the Nature and Causes of the Wealth of Nations: edited with an introduction by Kathryn Sutherland*, World's Classics 1993, Oxford University Press, Oxford.
- Smith Lyttle, B. (2004), *Geological Map of New Zealand*, 1: 2,000,000, Institute of Geological and Nuclear Sciences, Lower Hutt
- Suggate, R. P., Stevens, G. R. and Te Punga, M. T. (1978), *The Geology of New Zealand*, 1, Government Printer, Wellington, New Zealand.
- Tomkcieff, S. I., (1962), Unconformity - an historical study, *Proceedings of the Geologists' Association*, 73, 383 - 417
- Wellman, H. W. (1952), The Permian-Jurassic stratified rocks [New Zealand], *International Geological Congress, Symposium sur les Series de Gondwana*, Alger, 13-24
- Wellman, H. W. and Willet, R. W. (1942), The geology of the West Coast from Abut Head to Milford Sound - Part 1, *Transactions of the Royal Society of New Zealand*, 71 (4), 282-306.

## *A note on Robert Alexander Farquharson, 1883 - 1959*

Bill Watters

\*

R.A. Farquharson was one of a number of brilliant students of mining and geology at the University of Otago who worked under James Park and Patrick Marshall during the early years of the twentieth century. Like his near contemporary A.M. Finlayson, Farquharson spent most of his professional life overseas, and in fact after his early years in Dunedin returned for only brief periods to this country.



He was born in Dunedin on 2<sup>nd</sup> May 1883 and educated at Mornington Primary School (Anon 1925) and Otago Boys' High School where he gained a University of New Zealand junior scholarship. At Otago University (1902-1906) he had an outstanding record, gaining several prizes, including the Ulrich Memorial Medal for mineralogy, the senior scholarship in geology, and in 1906 an 1851 Exhibition Scholarship and the Rhodes Scholarship. Of the last two, however, only one could he held, and he chose the latter, becoming the second Rhodes Scholar for New Zealand. He was a notable

sportsman, talented in both cricket and soccer; he represented Otago and New Zealand in soccer matches against New South Wales. Farquharson majored in geology and gained an M.Sc. for which his thesis was a study of the platinum-bearing placer deposit near Orepuki in Southland (see also below).

Under the terms of his Rhodes Scholarship, he was at Oxford University from late 1906 to 1909 and was a member of St John's College, where a fellow student was J. Allan Thomson, the first Rhodes Scholar from this country (Hornbrook 1996). Farquharson gained a B.A. in 1908 and, after his departure from England, an M.A.

(1912). During his stay in England he played soccer for Oxford University (1907-08) and also for Oxford City.

On his return to New Zealand he published his work on the Orepuki platinum-bearing gravels (Farquharson 1911). Evidently based on his Otago M.Sc. thesis, this has considerable detail on the general geology of the Orepuki and Round Hill districts, as well as the Waiau Valley. His conclusion was that the platinum recovered from the sediments - which was a by-product of gold working and was not present in sufficient amount to warrant mining for itself alone - was not derived from gabbro in the immediate vicinity, but came from serpentinite in the upper catchment of the Waiau River. His paper has been frequently referred to in the ensuing years, although the stated results of his research have been modified considerably by later, more detailed investigations of the origin and source of the platinum (e.g. Williams 1974, pp. 155-156; Cowden et al. 1990).

In 1911 Farquharson joined the Geological Survey of Western Australia and worked there as petrologist until 1922. Each year he contributed a section, generally 3-4 pages, to its Annual Progress Reports, comprising the results of petrological assignments for the Survey. He was also the author or co-author of three Geological Survey bulletins (Farquharson 1912; Feldtmann & Farquharson 1913; Saint-Smith & Farquharson 1913). The bulletin by Feldtmann and Farquharson dealt with the geology and ore deposits of the Kalgoorlie district while later papers (Farquharson 1914, 1923) were on aspects of the same field. It is of interest that his near contemporary at Otago and Oxford, J. Allan Thomson, also worked on the petrology of the Kalgoorlie field in about the same period as Farquharson, as part of an assignment for the prominent economic geologist, Dr Malcolm Maclaren (Hornibrook 1996; Mason 1998, pp. 9-11).

In 1922 Farquharson resigned from the Geological Survey of Western Australia to take up the positions of Government Geologist and Director of Agriculture in the colony of British Somaliland (now the northern part of the Republic of Somalia). In some features of landscape, climate and working conditions, including the use of camels in the field, this territory must have seemed familiar to someone coming from Western Australia. After ten years he was seconded to the Anglo-Abyssinian Boundary Commission until 1934. Later he was in charge of a water-supply development scheme for British Somaliland, under the auspices of the Colonial Development Fund. Geological publications during his time in Africa were an account of the geology and mineral resources of British

Somaliland (Farquharson 1926) and a paper on the occurrence of phosphate in the colony (1928).

Farquharson retired from his position in British Somaliland in 1938 and in the same year was awarded an O.B.E. for his varied accomplishments in the colony. He returned to live in Western Australia and died in Perth on 29 December 1959. Regrettably, despite enquiries from local geologists and the main newspaper, I have not been able to find out anything about the later part of his life in Perth. There is apparently no record of his having continued with any professional work after his return to Western Australia.

\* \* \*

### *References*

- Anon 1925: A notable scholar. Tribute to Farquharson in publication on the Diamond Jubilee of Mornington School, p. 55).
- Cowden, A., Ruddock, R., Reay, A., Nicolson, P., Waterman, P. and Banks, M.J.; 1990: Platinum mineralisation potential of the Longwood Igneous Complex, New Zealand. *Mineralogy and Petrology* 42: 181-195.
- Farquharson, R.A. 1911: The platinum gravels of Orepuhi. *Transactions of the New Zealand Institute* 43: 448-482.
- Farquharson, R.A. 1912: Petrological contributions to the geology of Western Australia 1. *Bulletin of the Geological Survey of Western Australia* 43: 1-100.
- Farquharson, R.A. 1914: Notes on the petrology of a portion of the North Kalgoorlie Field. *Geological Magazine*, Dec. 6, vol. 1: 107-114 and 148-157.
- Farquharson, R.A. 1923: Some additions to the knowledge of the geology of Kalgoorlie, with special reference to the occurrence of a porphyritic olivine picrite. *Journal and Proceedings of the Royal Society of Western Australia* 9: 23-33.
- Farquharson, R.A. 1926: Geology and mineral resources of British Somaliland. *Mining Magazine* 34: 265-276 and 329-340.
- Farquharson, R.A. 1928: Occurrence of phosphoric minerals in British Somaliland. In World resources of phosphates. *Proceedings of the 14<sup>th</sup> International Geological Congress, Madrid*, 2: 611-614.
- Feldtmann, F.R. and Farquharson, R.A. 1913: Contributions to the study of the geology and ore deposits of Kalgoorlie, East Coolgardie Goldfield, Part II. *Bulletin of the Geological Survey of Western Australia* 52: 1-85.

- Hornibrook, N. de B. 1996: Thomson, James Allan. In *The Dictionary of New Zealand Biography*, vol. 3, pp. 530-531. Wellington, Department of Internal Affairs.
- Mason, A.P. 1998: Editorial note to article on Charles Andrew Cotton by Graeme Stevens *Historical Studies Group Newsletter, Geological Society of New Zealand*, No.16: 9-11
- Saint-Smith, E.C. and Farquharson, R.A. 1913: Geology and mineral resources of Yilgarn Goldfield, Part I. *Bulletin of the Geological Survey of Western Australia* 49: 1-193.
- Williams, G.J. 1974: *Economic Geology of New Zealand*. 2<sup>nd</sup> edition. Melbourne, Australasian Institute of Mining and Metallurgy.

\*

### *Acknowledgements.*

I am grateful to the following for information about Farquharson: Dr R. Aspden, Wellington; Hocken Library, Dunedin; Turnbull Library, Wellington; Mr M. Riordan, Archivist, St John's College, Oxford; Geological Society Library, London; Otago Boy's High School Centennial Register, Dunedin, 1963; and Professor P.G. Harris and Dr J. Glover, Perth, Western Australia. The help given is acknowledged with thanks.

\* \* \*

### *Another view of the 'Novara' expedition.*

- from the *Sydney Morning Herald*, 6 January 1860

\*

Alan Mason

## ALLEGED OUTRAGE BY THE AUSTRIAN FRIGATE NOVARA.

A report has reached us of an outrage on the inhabitants of Stewart's Island, perpetrated by the Novara, Austrian vessel, which we hope, for the credit of science and for the honour of humanity, will be found to be incorrect. The statement, which has come to hand from a person who has been on the spot, amounts to this: that parties were despatched from the Novara to one of the islands, where they commenced a battue, sweeping away the pigs and poultry of the natives. When application was made for payment, the demand was treated with derision. So exasperated were the natives at these aggressions, that their first impulse was to form an ambush and destroy any boat's crew that might renew their attack. They were, however, warned that this would entail upon them a fierce revenge, and thus, in their conscious weakness, they were compelled to submit to a violence which is only aggravated by the relative position of the parties.

The inhabitants of this island (under 200) are in a higher state of civilization than most of the Polynesians. Generally, they are able to make themselves understood in English. Each family has its own dwelling, and the deportment of the people is highly decorous and inoffensive. It is difficult, indeed, to give credit to all the reports which

have reached us of their high state of civilization, in all its finer and more important characteristics. Their intercourse with the English, from time to time, has informed them of many subjects upon which they express themselves with considerable clearness and fluency.

The reputation of the Austrian Government is not such as to assure redress. It will be more easy to deny the fact than to make the reparation. We have specimens in the late war of the style in which Austrian commanders deal with parties who happen to fall under their power. The shocking slaughter of Lombard peasants, which filled Europe with such disgust, was not only admitted but defended.

It could not have been out of the power of the Novara to have made compensation for the provisions they preferred to steal. The treatment of the natives could only arise from the wanton contempt of native rights which has so often dishonored the ships of civilized nations.

Thank God, there is a public opinion which even the Austrian Government cannot altogether defy. A British officer would be covered with indelible disgrace if such offences could be brought home to him. The English flag would disown him. How deep, then, would be the dishonour that would fall upon any British expedition, sent out in the service of science - claiming the protection of the world on account of the sanctity and universal benevolence of its mission, and yet which should mark its progress with pillage, and leave behind it an intense hatred and resentment for unprovoked injustice.

\*

"Stewarts Island" mentioned in this newspaper report is obviously not our Stewart Island - Auckland was the only New Zealand port of call for the Novara. It is Stewart Island, the easternmost of the Solomons group which was visited in October 1858, prior to the Novara arriving in Auckland. Scherzer (1862, vol. 2\*) in his narrative of the Novara Expedition makes no specific mention of a visit to Stewart Island but that it was visited is shown by the following statement made in reference to the natives of nearby Malaita -

Although distant in a direct line N.W. only sixty miles from Stewart's Island and its inhabitants, they spoke an entirely different idiom, and were likewise distinguished widely from any of the latter in colour, make, and physiognomy. (page 598)  
Scherzer went on to say ,

That the inhabitants of Malaita were the wildest, most uncivilised race of men we had as yet encountered in our voyaging to and fro round the globe. (page 599).

This contrasted markedly with the *Sydney Morning Herald's* comment (paragraph 2 above) on the natives of nearby Stewart Island. So, who was correct? Scherzer's failure to make direct mention of a visit to Stewart Island and his remarks on the character of the Malaitans may be indicative of some unsavoury episode.

\*

#### *Reference*

Scherzer, K., 1862. *Narrative of the Circumnavigation of the Globe by the Austrian Frigate Novara*, 3 vols., 1861-3

## *Historical Studies Group Newsletter*

Some back numbers of the Newsletter, those produced under Alan Mason's stewardship, are available from him and the following may be purchased for \$5 each, including postage,

Number 5                      September 1992

Number 14                     March 1997

and Numbers 15 (March 1997) to 28 (March 2004) inclusive.

To enquire or purchase, please contact :

Alan Mason, 75a, Argyle Street, Herne Bay, Auckland.

Telephone: 09) 378 6981

It should be noted that, as the original Convenor of the Historical Studies Group of the Geological Society of New Zealand - and he is a Founder Member of that Society - Alan accumulated an extensive collection of archival material both text and graphic, which he has now passed to the Society's Archivist,

Ursula Cochrane  
Paleoecologist, Natural Hazards Group  
Institute of Geological and Nuclear Sciences  
PO Box 30-368, Lower Hutt  
Email: [u.cochran@gns.cri.nz](mailto:u.cochran@gns.cri.nz)  
Tel: 04 570 4532

## *Contents*

|   | Page |
|---|------|
| Editorial   | 2    |
| The dispersal of the Gideon Mantell library in New Zealand<br>Alan Mason                                  | 3    |
| 'GeoRef' as a Historical Tool - and echoes from the 18 <sup>th</sup> century<br>Heather Halcrow Nicholson | 18   |
| A note on Robert Alexander Farquharson, 1883 - 1959<br>Bill Watters                                       | 33   |
| Another view of the 'Novara' expedition. Alan Mason   | 36   |
| Notice: Back-copies of <i>Historical Studies Group Newsletter</i>   | 38   |
| " <i>Harold Wellman; a man who moved New Zealand</i> ".<br>- a biography by Simon Nathan. Order form      |      |

ISSN 1174 9989