

R.O. Chalmers, Commemorative Papers (Mineralogy, Meteoritics, Geology)

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Lin Sutherland

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Samuel Stutchbury and the Australian Museum

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ABSTRACT. Samuel Stutchbury arrived in Australia in November 1850 as Mineralogical Surveyor. Although coming from a position as Curator of a large museum in Bristol, he had wide experience of coal and metal mining and field geology. As a young man he had spent the years 1825 to 1827 in the Pacific, including several months in the Sydney region.

In a period of less than five years, under extremely difficult conditions, he mapped an area of some 80,000 km² of eastern Australia, extending from Sydney as far north as Gladstone. His work is buried in official reports and in his journals.

Although well regarded by the common miners and landholders, who asked for his assistance, his work was undermined to some extent by the lack of appreciation by officials, and by ill-informed press statements.

Stutchbury's relations with the Australian Museum were strained for a time by accusations that he was giving them poor specimens, while collecting material to sell in Britain, a matter which he vehemently denied. His collections were displayed in the Museum to enthusiastic crowds in 1855, but they seem to have since vanished.

However, the list of his minerals was found at the Museum in 1907, and provoked some interest. Much earlier, some of the minerals collected by Stutchbury and the accompanying documentation attracted the attention of John Calvert, who passed the materials off as his own to show his knowledge of the Australian mining scene, and probably to support his dubious mining ventures.

BRANAGAN, D., 1992. Samuel Stutchbury and the Australian Museum. Records of the Australian Museum Supplement 15: 99–110.

Oliver Chalmers has often expressed his admiration for Samuel Stutchbury, the first person to identify stilbite: "...immediately underlying the soil is a vein of flesh-coloured stilbite, foliated and crystallised, the crystals ranging from one to two and a half inches in length...". This was in 1853 at Garrawilla, south west of Gunnedah, one of Chalmers's happy hunting grounds

(Chalmers, 1979).

It is unnecessary to extol Oliver Chalmers' virtues as a mineralogist; however Stutchbury's abilities in this field, and his other geological endeavours, are remembered only by a few present-day geologists. This festschrift seems therefore to be an appropriate place to pay homage to the work of one of Chalmers's important predecessors.

Stutchbury's appointment

Well before the New South Wales goldrushes there was interest in employing a geologist or mineral surveyor to assess the colony's mineral potential. Earlier appointees such as Adolarius Humphrey, who acted from 1803 to 1814 (Vallance, 1981), and John Busby, from 1823 to 1837 (Walsh, 1966) had been diverted from the original intentions of their appointments.

The 1840s saw an awakening in Britain of the possibility of valuable resources in the colonies, and the success of the Geological Survey of Great Britain, under Henry De la Beche, acted as a focus for official requests and recommendations for staff, as various parts of the British Empire sought the appointment of experts (Stafford, 1984). Joseph Beete Jukes went to Newfoundland in 1839, William Logan to Canada in 1842, Thomas Oldham to India in 1850.

By 1849 the administrators in New South Wales had joined the queue, and De la Beche was reluctantly facing the possible loss of another member of trained staff. Jukes, then working in Wales, declined the offer to go to New South Wales, and Henry Bristow accepted (Mozley, 1965).

However, not long before his scheduled departure

Bristow withdrew, and De la Beche was left in a dilemma. His problem was solved when he approached Samuel Stutchbury (Fig.1), Curator of the Museum of the Bristol Philosophical Institution, who accepted.

Stutchbury, then aged 54, was appointed Mineralogical Surveyor for New South Wales in June 1850, and arrived in Sydney on November 16, 1850 (Mozley, 1965; Branagan & Vallance, 1976). Apparently the Reverend W.B. Clarke (Fig.2) had put his own name forward for the job and was somewhat upset when he did not get the appointment (see below). On November 4, 1850, just prior to Stutchbury's arrival in Sydney the Sydney Morning Herald (SMH) carried a long article on Geological Surveys which explained the structure and activities of the British Survey, but added regarding New South Wales: "...it is now understood that a naturalist of some eminence, Curator of a Museum in England, is to come out but it is very unlikely that that gentleman will feel himself ready to undertake a geological survey; though mighty useful as an observer and collector. There might perhaps have been found in the colony the means of carrying out the designs of Government in this respect, without going further and faring worse; but it is certain that for some time to come the colony must be content to wait for anything more



Fig.1. Samuel Stutchbury.

official than what the zeal and intelligence of volunteer services may supply...". We will return to this article and its aftermath later.

Stutchbury's Background

Samuel Stutchbury was born on January 15, 1798, son of Joseph and Hannah Stutchbury of Dove Court, London. Unlike some of his brothers he was not educated at Christ's Hospital school, but on January 3, 1820 he became assistant to William Clift, Conservator of the Hunterian Museum at the Royal College of Surgeons in London (Fig.3) (Dobson, 1954; Crane, 1983), where he gained a good reputation because of his keenness and commonsense. However, despite (or perhaps because of) his marriage to Hannah Louisa Barnard in August 1820, he seems to have got itchy feet, and a few years later joined the Pacific

Pearl Fishery Company's expedition to the Pacific as naturalist.

In the course of this adventure, from July 1825 to May 1827, Stutchbury spent several months in the Sydney area early in 1826. Here he caught living *Trigonia* in the harbour, and thus began a myth (about the shellfish clapping its valves together and leaping overboard!) which is perpetuated in several Australian Museum publications (Waite, 1899; McMichael, 1956), but which Stutchbury's own journal fails to substantiate. Stutchbury also did some interesting geological work in New Zealand and various Pacific islands, including Tahiti, where he identified and collected a variety of minerals, shells and other marine organisms (Branagan, 1984, 1992a).

In 1831 Stutchbury was appointed Curator at the Bristol Philosophical Institution, where he remained until 1850, but there was more to that job than 'mere curating'. Stutchbury quickly earned a reputation in Bristol for his systematic arrangements of minerals,



Fig.2. Reverend W.B. Clarke.

fossils and various zoological groups, and he established contacts with other museums and scientific institutions and individual scientists throughout Britain and continental Europe. Stutchbury also encouraged ships' officers and seamen to bring specimens to the museum from exotic places, publishing a small book advising how and what to collect, and how to preserve the specimens (Stutchbury, 1832).

More relevant to his later Australian employment was the experience Stutchbury gained in fieldwork. He spent time in the field whenever possible with De la Beche during the early days of the latter's appointment to survey geologically the south-west of England (De la Beche, 1846). Throughout the 1840s he also became involved in mapping the Somerset Coalfields, particularly the mines owned by the Duchy of Cornwall,



Fig.3. William Clift.

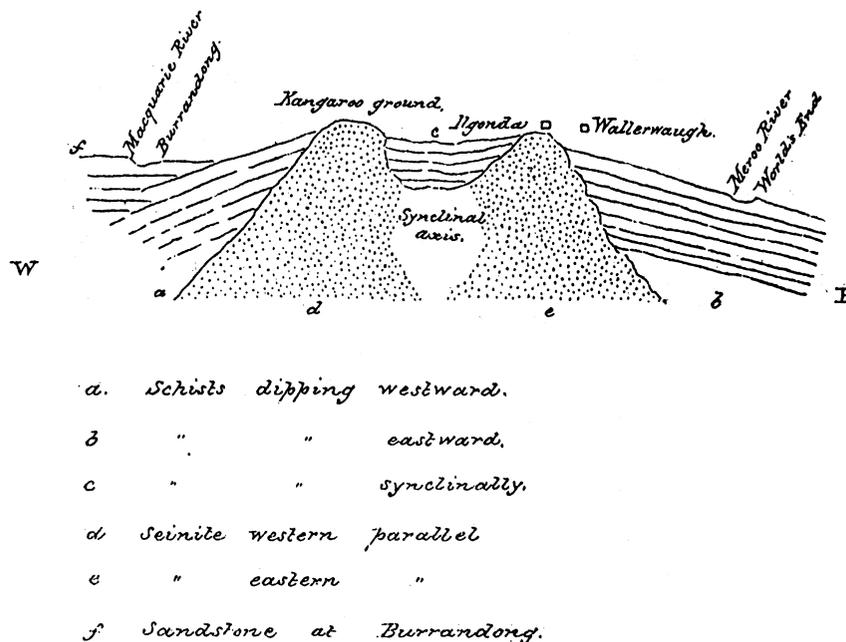


Fig.4. Cross-section from Burrendong to Meroo.

and he was also called on to examine some of the Duchy's metal mines in Cornwall. Thus, by the late 1840s Stutchbury was very experienced indeed in a wide variety of geological fields, both practical and theoretical.

Beginning the Survey

The Governor was away from Sydney when Stutchbury arrived, so rather than wait around he set off for Newcastle to inspect the coal mines there. He compiled a report recommending, among other things, longwall mining and the setting up of systematic records of mining, and commented on the changes which had occurred at Newcastle since his previous visit in 1826 (Stutchbury, 1850; Branagan, 1972; Branagan, 1984).

On January 18, 1851 Stutchbury set out for Bathurst and the beginning of a survey which would keep him away from Sydney for the next three and a half years. It turned out to be a time of great significance for Australia with the beginning of the gold rushes.

Gold had been found earlier and the Victoria Mine, near Adelaide, had opened in 1846 (Drexel, 1982), but the complicated royalty/ownership laws of New South Wales made it seem hardly worth prospecting

for gold in that colony. Stutchbury was looking at what seemed to be more useful resources (the iron and copper deposits near Carcoar), when on May 1, 1851 he read in the newspaper of the purported discovery of gold at Ophir, and the activities of Edward Hargraves and his associates (Blainey, 1969; Mitchell, 1972; Branagan, 1975).

The Colonial Secretary, Edward Deas Thomson, wrote to Stutchbury several days later ordering him to contact Hargraves and to examine the alleged find. Stutchbury first met Hargraves at Coombing near Carcoar, and was shown 4 ounces of gold. He went with Hargraves to Ophir on May 14, noted the presence of gold, and, as the only Government official, tried to establish some semblance of order, in addition to getting a hasty look at the local geology and writing a report for Deas Thomson. He got little thanks for his trouble then nor in the next year or so. Thomson seems to have wanted a tame prospector rather than a geologist and had no interest in, or understanding of, Stutchbury's attempts to establish the origin and nature of the ore bodies from which the alluvial gold was derived (Stutchbury, 1851; Branagan & Vallance, 1976).

However, Stutchbury persisted and in the next six months traversed 'among mountains and defiles', almost every creek from Ophir north and east to the Turon, finding, in addition to ordinary minerals and rocks, platinum and diamonds. His diaries and reports are quite

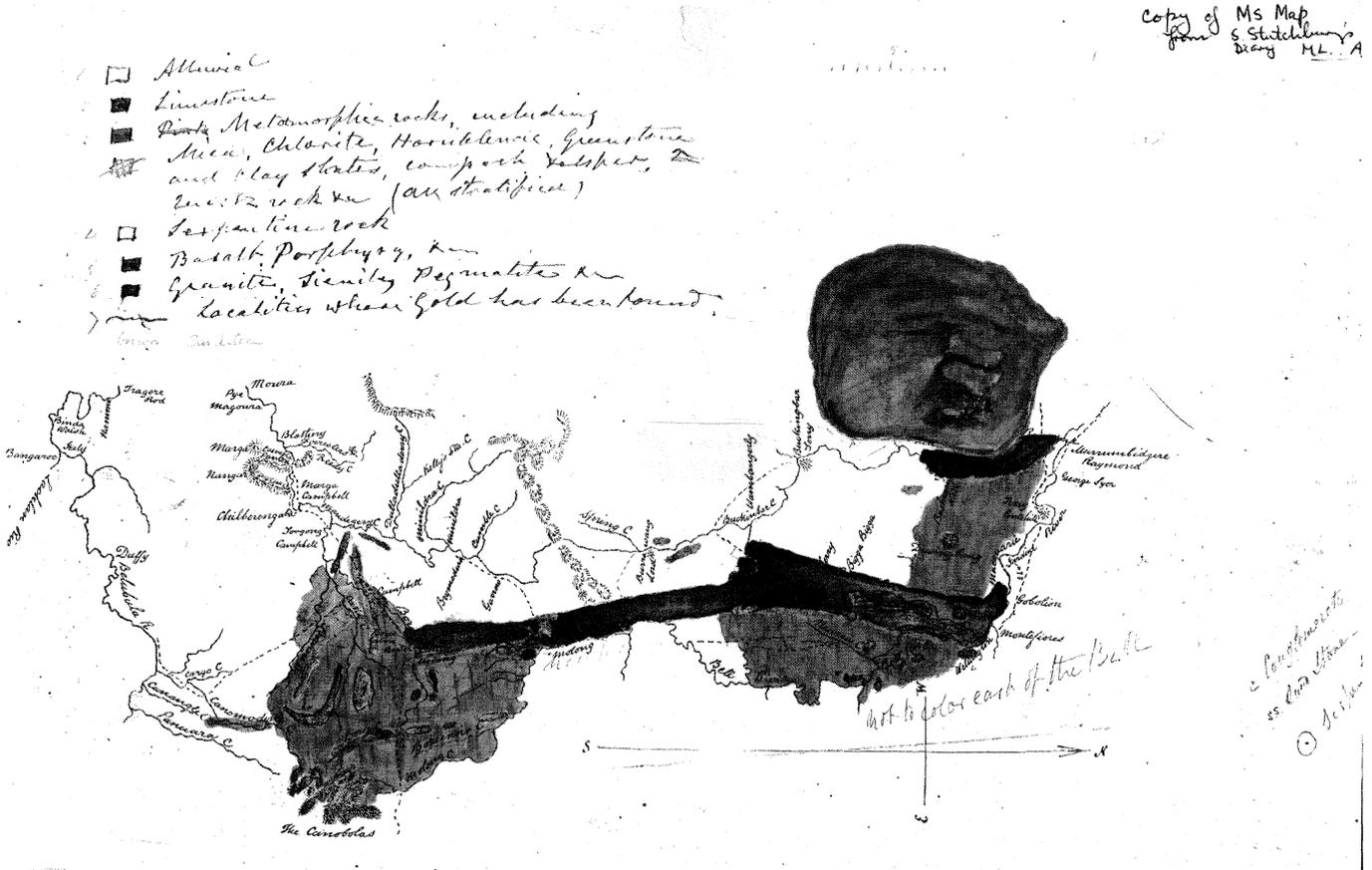


Fig.5. Geological map - Orange to Wellington.

specific and it is possible to follow his tracks very closely. He recorded many things. For instance, Chivas (1976) points out that Stutchbury's description of the Copper Hill mine north of Molong is virtually the first ever made of a porphyry-copper deposit. Near Burrendong one can find a gully with a good exposure of Permian glacials (although he did not call them that), sitting on the older Palaeozoic rocks, which he has recorded carefully (Fig.4), and his regional mapping shows a good understanding of the broad geological picture (Fig.5).

It is not possible in this paper to deal with all of Stutchbury's geology and his adventures, as he worked his way north-west to Dubbo, thence across to Narrabri and the Nandewars, collecting and identifying rocks, minerals and fossils, and recording other natural features such as timber, flora and fauna, particularly birds. He suffered from the extraordinary wetness of the 1851/1852 season, his clothes perpetually wet, his notes and materials spoilt, carts bogged, and horses straying or becoming lame. The flooded Cudgegong River cut him off from his camp for three days, and he was forced to consider spending one night in a tree! (Stutchbury, 1850-1853).

Eventually, late in 1853, he made his way to Brisbane, where the coal measures caught his attention (Fig.6) (Whitmore, 1981). At this time, because of some ailment, he was unable to sit on his horse, so he hired a boat to explore the islands of Moreton Bay.

The Sydney Morning Herald Article

Early in August 1851, when Stutchbury was at Wellington, he received from Andrew Ramsay of the Geological Survey of Great Britain (Fig.7) a copy of a letter written by Ramsay to the editor of the Sydney Morning Herald on March 31, 1851. While acknowledging the general tone of the article about the Geological Survey of Great Britain, which had appeared the previous November (mentioned above), the letter went on to point out that Stutchbury's scientific acquirements were "...apparently much underrated by your informant..." and that he

"...enjoys a well deserved and extensive reputation as a geologist...he is an excellent mineralogist and well acquainted with the ores of metals...the Colonial Government has been peculiarly fortunate in acquiring his services..."

In a personal footnote to Stutchbury, Ramsay remarked: "...I hope you won't think me too officious, but an article in a Sydney paper raised my wrath. It gave a capital account of our surveys and tagged on to it a remark that a naturalist and not a geologist had been sent to Australia and therefore they could not enjoy the benefit of a geological survey. A man can say more for a friend than the friend can say for himself. Logan has found a tortoise in lower Silurian in Canada..." (Ramsay, 1851). The letter was not published.

On the same day in August that he received Ramsay's letter, Stutchbury noted in his diary: "...also received a letter from the Rev. W.B. Clarke dated the 23rd July but strange to say the post-mark bore the date of Aug.1st viz. 3 or 4 days after the arrival of the English mail...". Clarke had of course written the original article and perhaps was trying to correct his faux-pas, as his friend, the editor of the Sydney Morning Herald, had no doubt shown him Ramsay's letter. However, I have never seen Clarke's letter to Stutchbury and can only guess as to the contents. It was probably to save Clarke from embarrassment that Ramsay's letter to the Herald was never published, so Clarke's article continued to haunt Stutchbury, and probably Clarke as well.

The saga of criticism continued as Stutchbury noted in his diary on November 12, 1851: "...see from S.M.H. Mr. Cowper moves in the Legislative Council that all papers re the Geological Survey be tabled... heard a report I was not very competent for the office of Government Geologist...Colonial Secretary says the reports would satisfy Mr. C. of the erroneous nature of the rumour...similar to the article in the S.M.H....authorship traced to a certain Revd. gentleman, who shall be nameless...and it could only have had its origin in the bitter and disappointed feelings of the writer at his application for the appointment to Sir H. De la Beche not having been complied with..." (Stutchbury, 1850-1853).

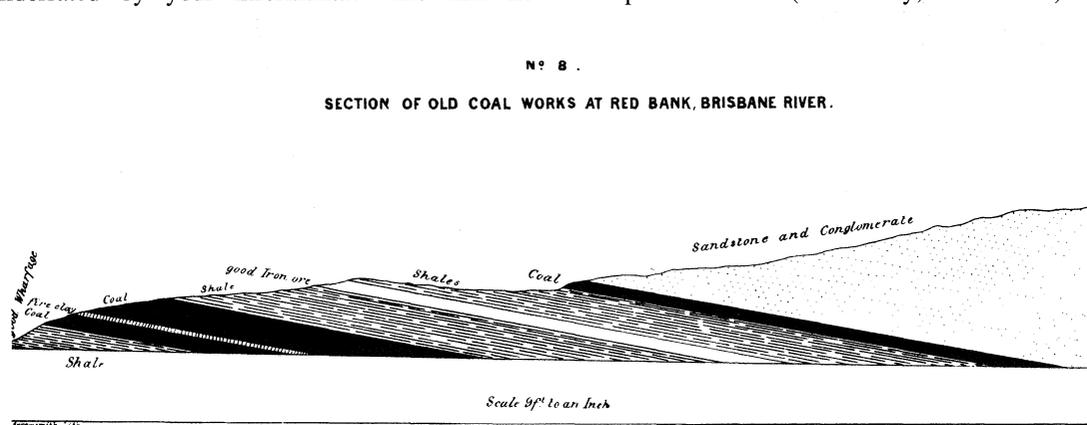


Fig.6. Coal geology near Brisbane.

The Survey Concluded

Early in 1854 Stutchbury left Brisbane for Gladstone. By this time he had recognised a basal series of slates and schists (Silurian or older), together with greenstones, and fossiliferous limestones of Devonian age overlain by coal measures (Carboniferous). Granites intruded the older rocks while basalts occurred discontinuously over all the other rocks (Fig.8).

Stutchbury was also quite ill, and in September he took ship for Gladstone, leaving his assistant William Curtis to continue overland with horses and drays, and with orders to record observations and collect specimens. Stutchbury's illness persisted, and early in January 1855 he left Gladstone on board Tom Tough, bound for Sydney. By this time his mapping had covered an area of some 80,000 km² of eastern Australia, a very considerable achievement (Fig.9).



Fig.7. Andrew Ramsay.

Stutchbury and the Australian Museum

In Sydney Stutchbury busied himself at the Australian Museum cataloguing his material, arranging duplicate sets, writing reports and completing his maps.

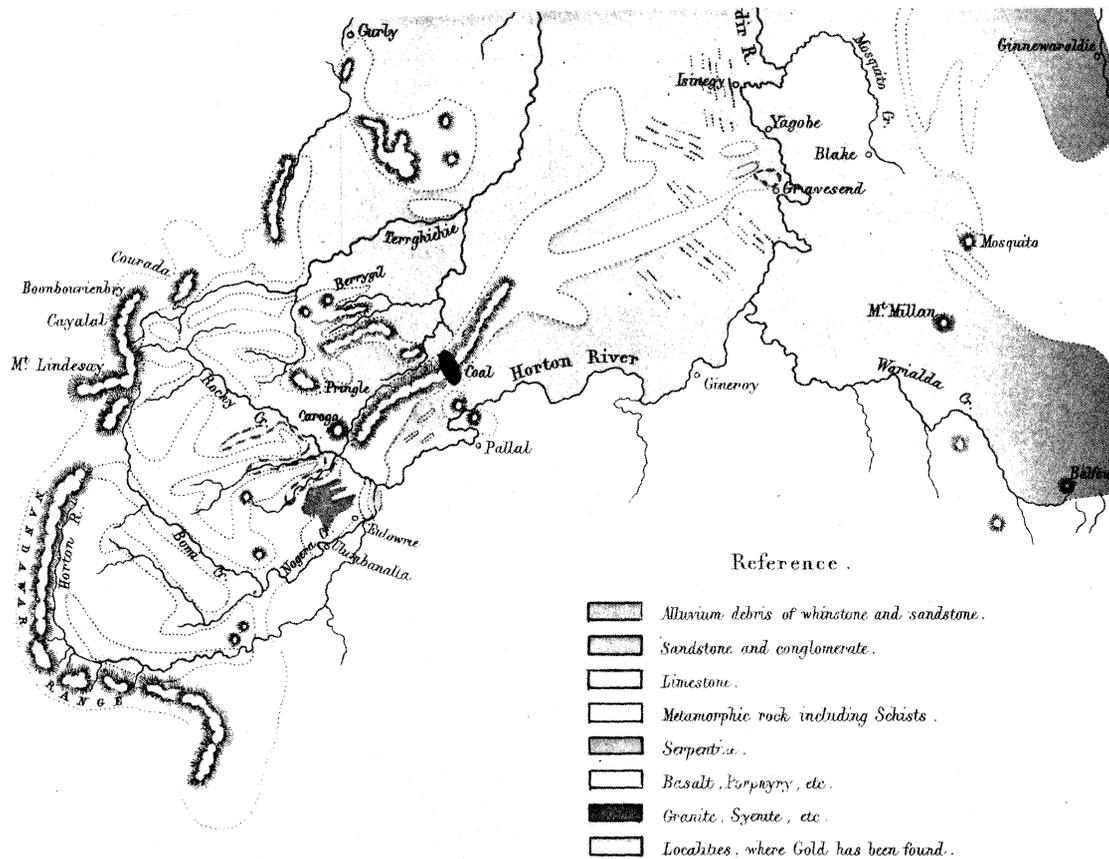


Fig.8. Stutchbury's mapping.

He had initiated a relationship with the Museum by writing on March 1, 1851 to its Committee of Superintendence, mentioning that he had opened several new copper mineral sites and suggesting that the Museum establish a collection devoted to economic geology. However, relations with the Museum were never cordial and Stutchbury did not receive acknowledgment of any of the boxes of specimens that he sent in the course of four years; the first arriving in June 1851, another in December 1851, and three in January 1853. Of the thirteen despatched, "...only nine could be found within the walls of the Museum, the four missing containing the most important specimens...".

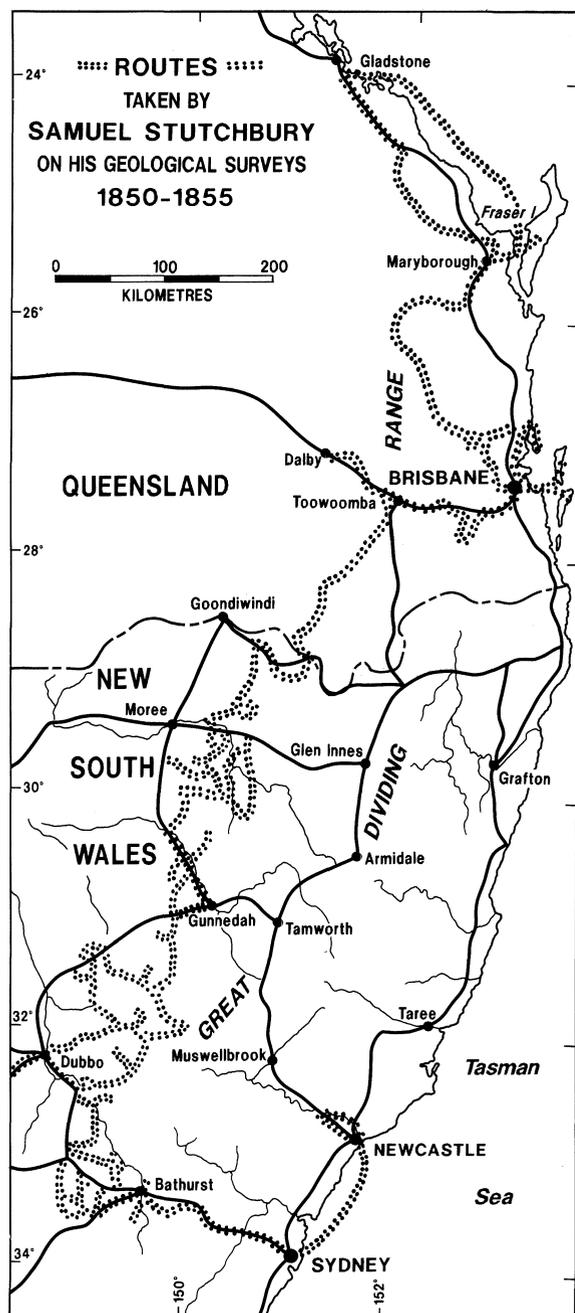


Fig.9. Stutchbury's route.

He was therefore distinctly displeased in September 1854 to read in the newspapers that George Macleay (Fig.10) had claimed in the NSW Parliament that the specimens sent by Stutchbury were "...of the most worthless and trashy nature..." and were unlabelled. Macleay added that it was "...rumoured Mr. Stutchbury is now making collections of a very different character and he [Macleay] was anxious to know whether they were to be appropriated to the public use or to his [Stutchbury's] own...", matters which made the usually imperturbable Stutchbury respond quite heatedly by complaining first to Deas Thomson about his treatment by letter, and then publicising it widely by sending the letter to the editors of the Sydney and Brisbane papers, which did not please Deas Thomson (Stutchbury, 1854; Stutchbury, 1854-1855).

Stutchbury pointed out that the thirteen cases were "...not yet opened, and therefore not examined by the Honourable Member, even if he were competent to decide the question [of their value]. I have not a single specimen retained for myself (as yet), but that I have a few duplicates awaiting my disposal upon my arrival in Sydney, where they are now deposited...only article I have sent to England being 12 ozs. of gold, obtained by purchase, from 12 different locations in the Western Goldfield. This small packet was selected with care so as to represent a commercial constant of the Western Goldfield, and was sent at an early period for the purpose of getting the Imperial Office report of the value by assay, which as soon as received I communicated to the Bank of Australasia and others interested...I have collected, at considerable expense, specimens in most branches of natural history, the distribution of which will now depend on circumstances...".

Macleay backed up his previous attack with a letter to the Sydney Morning Herald on the following day (December 1, 1854), enclosing a letter from W.S. Wall, Curator of the Museum, which had been the basis of his original question in Parliament. Wall's letter claimed "...it is understood these collections do not afford the means of representing the geology of any one district of the colony...".

However, matters were eventually sorted out, duplicate sets being sent off to the Hobart Museum and to England (for Stutchbury), and a display opened in Sydney, Stutchbury noting, with some satisfaction, that the specimens were "...too numerous to place on the Board room tables...therefore remain in the gallery of the museum...". This display attracted many visitors to the museum, and much favourable comment.

Stutchbury made a special note concerning the fossil bones which he had found in the Darling Downs (Fig.11) "...there are several entirely new forms...they should be allowed to go to England for description, or drawings and casts should be placed at our disposal. If the latter meets the views of the Trustees, the original specimens can be retained where they and all unique forms should be, viz. within the walls of the Australian Museum..." (Stutchbury, 1853). This statement about the retention

of type specimens in Australia is a refreshing contrast with the general attitude, which persisted amongst some scientific workers in Australia for many years, that the material rightly belonged in Europe. Some nine years earlier Ludwig Leichhardt expressed the same, then, quite unconventional sentiment (Leichhardt, 1846) about similar fossils from the same area. It may be significant, in this respect, that Leichhardt had met Stutchbury in Bristol, and through him had met Richard Owen in London (Branagan, 1990b).

Stutchbury's Mineral List

Although Stutchbury's Sydney collection seems to have vanished, (and even the duplicate set in Hobart, which may have been used to pave the road outside the Museum [D. Gregg, personal communication]), a list of the specimens was found in 1907 at the Australian Museum, Charles Anderson, Director of the Museum, noting on the list at the time that it looked an interesting collection (Stutchbury, 1855; Anderson, 1907). The collection, and particularly the missing boxes, seem to have proved of great interest to John Calvert (Fig.12), who was a confidence trickster on such a large scale that it earned him the epithet 'Lying Jack' in the

London Mining Journal and other publications of the period. Sherborn (1940), from personal knowledge, called him 'an unscrupulous blackguard'. Calvert's extraordinary claims about his contribution to Australian mining have him opening up the copper fields of South Australia in the 1830s, years before they were discovered, finding diamonds in vast quantities in Central Australia, predicting and finding gold in all the right places during the 1840s, and generally outdoing Baron Munchausen in his various exploits on the Australian mining fields. Calvert claimed never to have "...worn the 'college blinkers'...", but, nevertheless became, according to one biographer "...one of the greatest mining experts of this or any age..." (Hill, 1894).

Exactly how and when Calvert got his hands on Stutchbury's notes (and possibly specimens) has not been established, but Calvert's smooth tongue opened many doors, and he may have been involved in the confusion about the missing boxes at the Museum. Calvert seems to have delighted in obfuscation, covering his tracks throughout his life. P.G. Embrey and T.G. Vallance have unravelled much of his nefarious career, and a manuscript is in preparation (T.G. Vallance, personal communication).

Calvert, according to Sherborn (op cit) 'appropriated' the W.D. Saull collection from the Metropolitan Institute in London, and seems to have had



Fig.10. George Macleay.

no compunctions about likewise appropriating Stutchbury's material, incorporating parts of Stutchbury's list with lists from various other sources (Unknown), and passing them off as his own work, and evidence of his great experience in the Australian mineral fields, (Calvert, 1853; Calvert, 1855(?); Vallance,

1989). Stutchbury was probably not aware of this act of recognition of his expertise as he left Sydney virtually unnoticed on December 6, 1855.

Stutchbury's illness late in 1854 probably contributed to his decision to return to England. The poor treatment he had received from officialdom - relatively poor pay

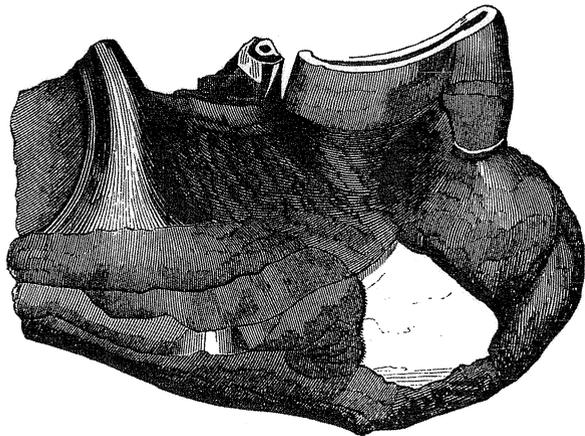


Fig.11. Diprotodon fossil - Darling Downs.

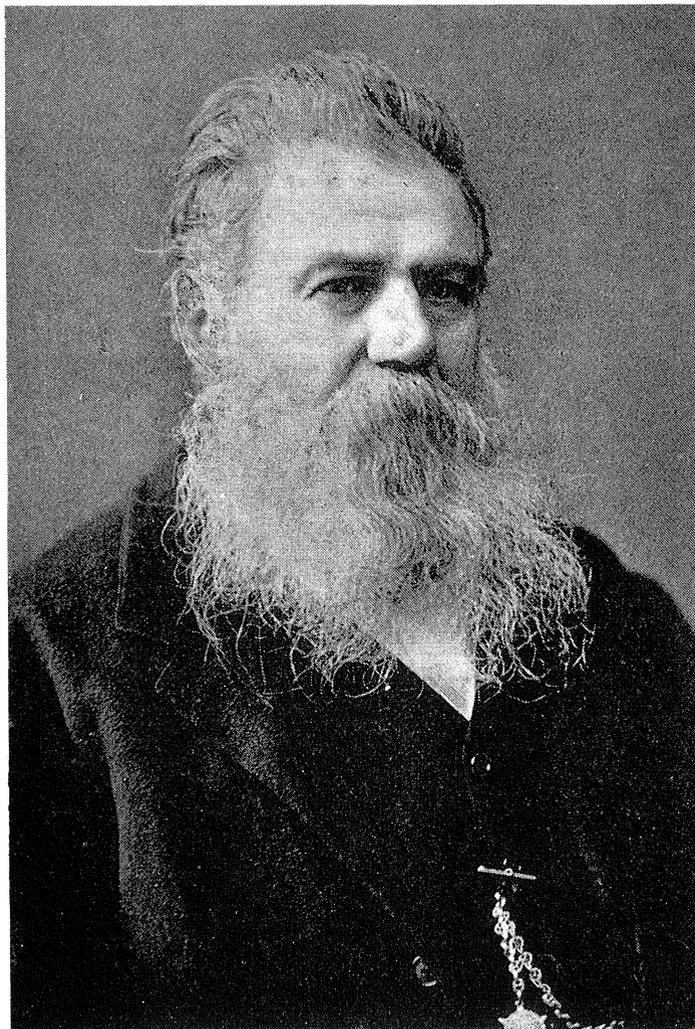


Fig.12. John Calvert.

in the inflated goldrush period, quibbling over accounts and equipment, misguided attempts to turn him into a prospector, and general neglect and criticism - certainly did not help, and he was undoubtedly homesick. There does not appear to have been a time limit on his survey (as there was later for Charles Gould's Tasmanian survey), so the decision to terminate the survey was probably Stutchbury's. In his letter of resignation he proposed to write a summary report on his return to England. This does not seem to have eventuated.

Stutchbury's last years were dogged by illness and a sense of frustration. There was no work with the British Survey, now in charge of Sir Roderick Murchison, although he was sympathetic to Stutchbury, and Stutchbury had to be satisfied with small consulting jobs, examining coal mines. He died in 1859.

The lack of knowledge by Australian geologists of Stutchbury's work stems partly from how he worked and published. Although he met officials and scientific men, including Reverend W.B. Clarke, only in his last few months in Australia did he spend much time in Sydney. Unlike Strzelecki, who spent an equivalent time in Australia, and Jukes who made a briefer visit, Stutchbury did not publish a book about his travels - a sure way in those days of being remembered.

Clarke spent nearly 40 years in Australia, and apart from his several books, published in local journals. He was also a good self-publicist through effective use of the local newspapers. It is natural therefore that he has remained before the public as the 'Father of Australian Geology'. While Stutchbury was in Australia, Clarke felt that his position as spokesman on geological matters was threatened. Later, when Stutchbury had departed, we find Clarke acknowledging the value of Stutchbury's work.

Samuel Stutchbury's legacy to Australian geology consists of 16 quarterly reports, together with maps and sections, and a standard of fieldwork in difficult conditions that few of us would care to emulate today; and of course that first discovery of stilbite.

Jack & Etheridge (1889) dedicate their monumental work on Queensland geology to Stutchbury, Clarke and Daintree, in that order. The priority is, I believe, most just. More recently Bryan (1954) and Whitmore (1981) have recognised the value of his pioneering work in Queensland. His name is perpetuated in several Recent and fossil organisms (Branagan & Vallance, 1976; Branagan, 1984, 1992b).

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the Stutchbury mineral list in the Archives of the Australian Museum.

Archivists and librarians in many institutes have been enthusiastic in unearthing original Stutchbury documents. In the preparation of this paper I owe special thanks to the Alexander Turnbull Library, Wellington, New Zealand and the Mitchell Library, Sydney.

I am grateful for the very useful critical reviews of a first draft of this paper by Dr T.A. Darragh and an unnamed reviewer.

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