Chapter 16. The Scientist and Science Communicator

Introduction
As Bernard Hyams observed (see Chapter 14), Charles Fenner was a ‘scientist who would be an [educational] administrator’. In fact, he was more than a very competent academic scientist, he was also what is now known as an excellent science communicator. He wrote over 30 papers on various aspects of geography and geomorphology and lectured in geography at the University of Adelaide from 1927 until 1939. He also wrote textbooks on geography for both university and secondary school students and fortnightly articles on science for a Melbourne weekly magazine for 23 years, from which he developed three books of essays on science for a popular audience. And his interests went beyond science; he was also very interested in the history of early explorers of Australia. I cover these aspects of his life in this chapter, and as in Chapter 14, which deals with his career in education, I have added as Chapter 17 an abbreviated and edited version of the parts of his diaries that deal with science, especially physiography and human geography, on the overseas trips in 1931 and 1937. I have included a classified bibliography of his scientific papers and books at the end of this chapter; this does not include items that are listed in the references.

Studies of Physiography in Victoria, 1913 to 1916
As related in Chapter 13, in 1913 Charles Fenner was appointed Headmaster of the Mansfield Agricultural High School. Although there for only a little over a year, he used the opportunity to produce his first scientific paper, on the physiography of the Mansfield District. He had become an Associate Member of the Royal Society of Victoria in 1913 and it was published in their Proceedings. When he moved to the Ballarat School of Mines and Industries in 1914, he immediately undertook field studies in nearby Werribee Gorge, Bacchus Marsh and the Glenelg River, and produced substantial papers on these, for which he was awarded the degree of Doctor of Science (DSc) by the University of Melbourne in 1917.

Science Notes, by Tellurian
Early in 1916, while he was still in Ballarat, he came to an arrangement with a prominent Melbourne weekly magazine, The Australasian, to contribute an essay on some scientific topic each fortnight. These were called Science Notes, for which he adopted the pseudonym Tellurian. He continued writing these, even while on his overseas trips in 1931 and 1937, until he became Director of Education in 1939. During the 1937 trip, he wrote 18 essays for The Australasian,
two for *The Advertiser* and one for *The Argus*. In all he wrote some 620 essays, on a very wide range of topics. They provided the basic material for his three books of essays on popular science, *Bunyips and Billabongs*, *Mostly Australian* and *Gathered Moss*, each of which received excellent reviews.

**Books of Essays**

**Bunyips and Billabongs**

Published in 1933 by Angus and Robertson and illustrated with sketches by his eldest son, Lyell, this book contains 71 chapters, each based on one of his fortnightly articles in *The Australasian*. The foreword was written by the distinguished Professor of Anatomy in the University of Melbourne, Frederic Wood Jones, FRS, extracts of which are published in several of the 58 reviews I have been able to trace. They are worth quoting here:

Charles Fenner has laid us all under a debt, for he has, with an art that conceals art, made easy the entry into the great world of wonderment in Nature in which we are all free to wander and to speculate and to make intellectual and spiritual gain...Australia is fortunate that within her borders there is a man capable of leading youth towards a wonderment that makes for reverence in a sunset, a gum-tree, or a bandicoot; and who does this out of the fullness of his knowledge and not of mere uninstructed sentimentality...There will come a day when young Australians will be jealous of any interference with a fauna and flora so full of interest as is that of their native land...when that day is fully accomplished then it will be admitted that the writings of Charles Fenner took a large part in its advent.

**Mostly Australian**

This book is also based on the *Tellurian* articles; it was published by Georgian House in 1944 and contains 12 charming drawings by John Goodchild. It received excellent reviews and a World-Wide broadcast by Radio Australia in October 1947. Of the 61 chapters, most are on Australian topics, but 16 draw on experiences during his overseas trips in 1931 and 1937.

**Gathered Moss**

To explain the title and the contents of this book of essays, Fenner wrote in the Foreword:

Proverbs are usually true. But there are exceptions. It is not impossible for a rolling stone to gather some moss. Rolling stones have, indeed, the opportunity for gathering a wide variety of mosses. During a long life the author has been a rolling stone in two ways: first, in the realms of science and literature; and second among the peoples and places of the
world. There are two sections: Travel notes from an Australian viewpoint, and Science notes, with two or three chapters which are of neither travel nor science.


**Royal Society of South Australia**

Until the establishment of the Australian Academy of Science in 1954, the Royal Societies in each State were the principal homes of science in that State; national conferences were convened periodically by the Australasian (later Australian and New Zealand) Association for the Advancement of Science. Already an Associate Member of the Royal Society of Victoria, in 1917, just after he had arrived in South Australia, Fenner became a Fellow of the Royal Society of South Australia. He regularly attended its meetings, published in its *Proceedings* and took an active part in the deliberations of its Council. He was appointed Secretary in 1924, was a member of Council, 1925–27, Vice-President, 1928–29, President, 1930–31, Treasurer in 1932 and Honorary Editor of the *Proceedings*, 1933–37.

**Field Naturalists' Society**

Fenner joined the Field Naturalists' Society (FNS), initially the Field Naturalists' Section of the Royal Society of South Australia, in June 1917. He was elected Vice-President in August 1917 and was President from 1919 to 1921. He was active on the Committee and at evening meetings of the Society, and conducted many of their field trips. He was a member of the group which in 1921 designed the badge of the 'Field Nats', with bright red Sturt's peas (*Clianthus dampieri*) as the emblem. He also served as the representative of the FNS on the Flora and Fauna Protection Society for many years.

**Royal Geographical Society of Australasia (South Australian Branch)**

Besides the Royal Society of South Australia, Charles Fenner was very active was the Royal Geographical Society of Australasia (South Australian Branch), since 1996 called the Royal Geographical Society of South Australia. He joined the Society in 1921 and was made a Life Member in 1950. During this period he was active on the Council of the Society, being Honorary Secretary, 1925–33, Honorary Treasurer, 1930–31, and President 1931–32, but resigning on 14 February 1932 because of ill health. In 1933 the Society set up a Library and Publications Committee, which, under Fenner as Chairman, was extremely active, ‘at times assuming the role of virtual executive of the Society’ (Peake-Jones, 1985). This Committee soon spawned an Editorial Board. F. L. Parker was the first to bear the title of Editor, followed by Fenner from 1933–41.
Historical Memorials Committee

The Historical Memorials Committee, since 1982 known as the Geographical Heritage Committee, was established by the Royal Geographical Society in 1927. The initiative for its establishment had come from the Historical Memorials Committee of Victoria, which had written to the Director of Education in South Australia about the need to mark the routes of Australian explorers, notably Charles Sturt. Fenner was a member of this Committee, 1927–53, and Chairman, 1938–41. Besides articles on Nuyts and the Burke and Wills expedition, he took a particular interest in William Light, who planned Adelaide, and Charles Sturt, one of Australia's greatest explorers.

Peter Nuyts

Because of their early occupation of the Dutch East Indies (now Indonesia), most of the early explorers of Australia were Dutch sailors. Peter Nuyts, about whom Fenner wrote an article in 1927, was the first person to explore the south coast of Australia. A memorial obelisk commemorating the tercentenary of Nuyts' voyage was erected at Streaky Bay, on the west coast of Eyre Peninsula, in 1927; a plaque was added and unveiled in 1938.

Colonel William Light

In 1926, a year before the Historical Memorials Committee was formed, the home of Colonel William Light, who designed the city of Adelaide, was demolished to make room for a factory. Fenner wrote a short paper about it (see Bibliography, Historical). Several years later, in 1935, he arranged for the publication of Light's last diary and wrote the introductory notes accompanying that volume. In the 1980s, Thebarton Corporation initiated a proposal to rebuild Light's cottage. A newspaper report about this proposal (The Advertiser, 1987) prompted Dr John Tregenza, a professional historian, to produce another paper about the cottage (Tregenza, 1989), which was highly critical of Fenner's paper—'It is a remarkably confused paper'. In 1997, to make these papers more accessible to local people, the Thebarton Historical Society republished both articles (Ralph, 1997).

Captain Charles Sturt

Charles Sturt is widely regarded as 'the father of Australian Exploration'. Fenner worked for many years and in many ways to ensure that his contributions were not forgotten. In 1929, the centenary of Sturt's expedition down the Murrumbidgee and Murray River to the Murray mouth, he was President of the Historical Memorials Committee, and with the cooperation of officials from South Australia, Victoria and New South Wales, he organized a centennial memorial trip of that expedition. Excellent maps and accounts of the voyage were published.
and distributed, and granite or concrete memorials with appropriate bronze plaques were erected near every community of any size along the route.

In 1931, when he and Peggy visited England for the first time, he met Captain Anthony Sturt (Charles Sturt’s great-grandson) in London and later travelled by train to the home of Mrs Beatrix Sturt, daughter-in-law and biographer of Charles Sturt, at Bewdley, overlooking the valley of the River Severn. They went there again on their second trip in 1937, and subsequently corresponded for many years (see Chapter 17). In 1937, he persuaded Ivor Hele to paint a portrait of Sturt—on horseback in the central Australian desert in 1844—that was entitled ‘Sturt’s Reluctant Decision to Return’ and is now in the State Art Gallery of South Australia.

Mr W. J. Adey, the Director of Education, was in London in July 1936 and in his absence Fenner was Acting Director. On a motion by him, the Royal Society urged the government to preserve Charles Sturt’s home The Grange as a National Historical Memorial and offered to undertake and supervise the layout and planting of the surrounding grounds. On 28 July 1938 the government set up a committee to consider making the home a 'Charles Sturt National Memorial’, but it was some 20 years before the idea came to fruition. In 1944, the end of the war was in sight and the Society’s thoughts turned again to Sturt. The initiative came from Fenner, now Director of Education, and was successfully taken up by the Historical Memorials Committee, with the purchase of The Grange, built by Sturt in 1840 and his residence between explorations and a trip to England in 1847–49, until he returned to England in 1853. In 1982, The Grange, fully restored, was finally opened as an historic memorial of an early South Australian home and a famous Australian explorer and South Australian pioneer.

**Application for Chair in Geography, University of Sydney**

In the 1920s, there was only one chair in geography in an Australian university, occupied since 1921 by Thomas Griffith Taylor, as an Associate Professor. In 1928, Taylor, frustrated by the failure of the University Senate to promote him to a full professorship, moved to a full professorship in Geography at the University of Chicago. Fenner applied for the advertised position of Associate Professor in Sydney, with strong support from Sir Edgeworth David, the father of Australian geology, Mr W. T. McCoy, the then Director of Education in South Australia, Sir Douglas Mawson and others, but he was not selected. David wrote to McCoy on 14 May, 1929, as follows:

My dear McCoy,

As you were so kind as to give Dr Charles Fenner a strong testimonial for the Associate-Professorship at this University [Sydney], I regret that I cannot congratulate those of us like Sir Douglas Mawson, Dr Ward, Professors Skeats and Richards and yourself who supported Dr Fenner’s
candidature, on the success of our advocacy, for the Committee of advice in London comprising the leading geographers in the British Empire, placed Dr Fenner second on the list, stating officially that he was well qualified to succeed Prof Griffith Taylor, but that on the whole they preferred to recommend to our Senate a Mr Holmes, now in charge of Geography at Durham University. A reason that Prof J. W. Gregory of Glasgow in a private letter to me mentioned in favour of Holmes as compared with Dr Fenner was that he was 33 years of age, compared with Fenner's age of 45, and moreover Holmes had for 8 years been a phenomenally good teacher of Geography on the most up-to-date lines at British Universities. Nevertheless I feel strongly that the Committee of Advice did not fully appreciate the brilliance of Dr Fenner's work, and his great efficiency as a lecturer and organizer as we do. The report however of the Committee being unanimous it was hard to gainsay it and the Senate adopted it. I may add that in placing Dr Fenner second it placed him above two full Professors of Geography at other Universities [in the UK], which shows what a high opinion they have of Dr Fenner.

Yours sincerely,
T. W. Edgeworth David.

On 17 May, Mr McCoy sent a copy of David's letter to Sir William Mitchell, then Chancellor of the University of Adelaide, suggesting that ‘The information may be of use if the Council wishes to establish a Chair in Geography.’

In my opinion (FF), to some extent this choice represents 'cultural cringe' and also the fact that at the time Charles Fenner had never been to the United Kingdom. The situation might have been different if the position had been advertised after his visit in 1931 (see Chapter 17).

Lecturer in Geography, University of Adelaide

The year 2004 saw the publication of a Centennial Review of academic geography in South Australia (Harvey and Gale, 2004). Most of the information in this section is drawn from Gale's essay in that volume. The first teacher of geography in the University of Adelaide was John Miller Clucas, who died in 1930. He had been appointed as Librarian at the University in 1900, but undertook teaching geography in 1904, initially for the Diploma of Commerce course. By 1921, geography appeared to be established as a mainstream course, as Economic Geography I and II, still taught by Clucas. In 1928, however, it looked as though it was going to be scrapped. When Sir Grenfell Price heard of geography's possible demise he blew along to the Director of Education, who said 'You can
tell the Vice-Chancellor that if he abolishes geography he will lose the whole £5,000 from the Government for his night classes' (Kerr, 1983). As a result, the Vice-Chancellor, Sir William Mitchell, sent for the distinguished geographer Charles Fenner and put him in charge of a one-year scientific course. Helped by his friends in the Royal Geographical Society, Fenner did much to restore geography and set it on a permanent course. He remained in charge of geography at the University until the latter part of 1951, but was initially assisted, while he was abroad in 1931 and 1937, by F. C. (Clarrie) Martin, who was a teacher at Thebarton Technical High School. Martin was appointed lecturer in geography on a part-time basis when Fenner became Director of Education in 1939, with Fenner nominally in charge until 1951, when Graham Lawton was appointed reader in geography.

In 1960, a Charles Fenner Prize was established in the Department of Geography of the University of Adelaide, for the student with top marks in second year geography. It was first awarded in 1961, and has been maintained annually since then. I donated $5,000 to the University of Adelaide in 2003 to ensure that it would provide a reasonable value in perpetuity.
Books on Geography

Fenner's first book was published in 1931, shortly after he had been appointed Lecturer in Geography at the University of Adelaide. It was *South Australia—A Geographical Study, Structural, Regional and Human*, a book of 352 pages designed for university students and published by Whitcombe and Tombs Ltd, Melbourne. This book is still listed on the internet as a 'book worth reading'.

Three years later, in 1934, he used much of the material in this book to produce a second book, *An Intermediate Geography of South Australia*, of 163 pages, by the same publishers but designed for secondary school students. This proved very popular and went through eight editions. In 1956 and 1958, it was considerably revised and extended by members of the staff of the Geography Department of the University of Adelaide and produced as the ninth and 10th (revised) editions, still with Charles Fenner cited as the sole author, but titled *A Geography of South Australia and the Northern Territory*. The 10th edition was reprinted in 1960.

Australites

The first mention of these objects occurred in 1857, after the explorer Major Thomas Mitchell handed Charles Darwin a small and beautifully formed object of black glass, which Darwin thought was of volcanic origin. Fenner notes in one of his papers that he first saw an australite in 1907, just after he had enrolled at the Melbourne Teachers' College, but his serious interest in them began after conversations he had with Dr L. J. Spencer, of the British Museum, in 1931. He then became very interested in australites (see Australites in Bibliography, below) which are the Australian forms of tektites, small objects thought to originate either as debris arising from major meteor impacts on Planet Earth, or possibly of meteoric origin. He started serious work on these in 1933 and continued after his retirement in 1946, when he took up volunteer work in the South Australian Museum. He thought that they were glass meteorites, principally because of their very extensive distribution, found on the surface over an area of some five million square kilometres of the Australian continent (Figure 16.2), and the fact that their their front surface had melted and solidified again before hitting the earth (Figure 16.3).

Comment by FF: Now, 57 years after his last paper, there is clear evidence that australites, like all other tektites, resulted from a major meteor impact. Studies of australites and micro-australites — about 1 mm in diameter — which have been found in marine sediments to the north and northwest of Australia, reveal that all australites are the same age (770,000 years) and are of a similar composition. The Australasian strewnfield, as it is now called, extends into the land mass of southeast Asia and the consensus is that the meteor impact was probably in Cambodia (Koeberl, 1994). They are produced by non-equilibrium
shock melting of surficial rocks...and are then lofted into the atmosphere...quenched, and distributed over a geographically extended area, the strewnfield. Some tektites [notably australites] solidify in near-vacuum, re-enter the atmosphere and melt again, to form the ablation-shaped tektites' illustrated here in Fig. 16.3. It is interesting to note when Fenner was looking at the tektites in Professor Lacroix's collection in Paris (see p. 311) he commented on the Indo-Chinites, which had 'a wonderful regularity of form', although they were much larger than australites.

Figure 16.2. Map of Australia showing the ‘strewnfield’ of australites
Figure 16.3. Australites

Figure 16.3a. Cross section of an australite showing the original spherical shape and the flow-lines of the original sphere and the rim.

Figure 16.3b. Diagram of cross sections, illustrating the development of different forms of australite. Stage 1 is hypothetical, stages 2 and 3 are rarely found with the flange attached, stages 4, 5, and 6 are common forms.

Prizes for Scientific Work

At a time when prestigious awards were much less common than they are now, Charles Fenner received three awards for his geological and geographical work. In 1918 he received the first award of the Sachse Gold Medal of the Royal Geographical Society (Victorian Branch) for his 137-page paper on the physiography of the Werribee River area. It was handed to him by the Federal Minister for Home and Territories (Hon. A. Poynton) when he visited Adelaide on 1 August, 1920. There is a detailed account of the life of Mr Sachse in Gill (1962).
In 1929, he was awarded the David Syme Research Prize of the University of Melbourne for his 64-page paper *Adelaide, South Australia: a Study in Human Geography*. This was the basis for his subsequent books on the geography of South Australia. He (and I) were delighted when I was awarded the Syme Prize 20 years later, in 1949.

In 1947, he was presented with the first award of the most prestigious medal of the Royal Geographical Society of South Australia, the John Lewis Gold Medal, for his literary work on geography. Subsequent recipients include Sir Douglas Mawson and Sir Edmund Hilary. At the request of the President, C. M. Hambidge, the presentation was made by Dr J. Brooke Lewis. Fenner was made a Life Member of the Society the same year.

The Wongana Circle

With his interests in local Royal and Royal Geographical Societies, the Historical Memorials Committee and the Field Naturalists’ Society, Fenner had a busy life outside of his duties in the Education Department. He and his wife were also members of the Adelaide University Theatre Guild and the Dual Club. However, the social activity he enjoyed most was the Wongana Circle (‘wonga’ being the Aboriginal word for ‘to speak’). It was a social group comprising Adelaide intellectuals of different backgrounds (men only, still, in 2006; the wives prepare supper). It first met in 1934 and Fenner was a foundation member; he attended every meeting that he could. They used to meet for supper and conversation (talk, talk, talk) in each others’ homes, and they still meet. Members at various times during father’s membership included Professor Jack Wilkinson, who chaired the first meeting, Archibald Grenfell Price, Ray Hone, Hans Heysen, Henry Basten, Peter Karmel, Leonard Huxley, John Horner and many others.
Activities after Retirement

Some months after he had retired, when he felt well enough, Fenner undertook volunteer work in the South Australian Museum, helping with the displays of geological specimens and especially the very extensive collection of australites and other tektites held by the Museum. He carried on with this until he had a stroke in 1954, from which he partially recovered, but died on 9 June, 1955.

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