

Colonial history of Talaroo Hot Springs

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Abstract

Talaroo Hot Springs are a unique environmental feature to Far North Queensland and Australia. The spring mound has a long geological, ecological and anthropogenic history. A review of the available information on the natural history of Talaroo Hot Springs identified several historical accounts. The aim of this note is to document these. Early colonial visitors to the springs identified their unique natural history and unfortunately their encouragement to preserve this uniqueness was not acted on until the Traditional Owners converted the area to an Indigenous Protected Area over a century later.

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Talaroo Hot Springs is situated in Far North Queensland, (Latitude: 18.119025°S; Longitude: 143.961207°E) (Fig. 1). The springs are a mounded complex of vents which discharge hot water (up to 63°C) from a semi-confined aquifer that is heated at depth by granitic rock (McGregor & Sendall 2017). The spring mound is formed by the biomineralisation of the carbon dioxide-rich water to form travertine (a calcium carbonate) (McGregor & Sendall 2017). The discharging water forms several watercourses which meander a short distance to the Einasleigh River (Negus *et al.* 2020).

The first colonial record from the area near Talaroo was the Jardine Brothers expedition which journeyed down the Einasleigh River in 1864; travelling and camping close to, but not encountering the springs (Byerley 1867). The oldest known record of the springs is documented in *The Brisbane Courier*, in a short piece by an author with the pseudonym “Botanist” (Botanist 1878). The article describes the mound with hot water flowing from nine “wells” with stalagmites on the inner walls of the vents and a thin layer growing from the edges into the centre. Characteristic vegetation on the mound is described as grasses, rushes and sedges (including *Setaria glauca*, *Xerotis longifolia*, *Lappago racemose*, *Indigofera linifolia* and *Indigofera*



Figure 1. Map of Far North Queensland indicating the location of Talaroo Hot Springs.

pratensis) with a stand of *Melaleuca* sp. and immediately adjacent to the mound were bloodwood (*Eucalyptus corymbosa*), box (*Tristania* sp.), and several species of eucalyptus, with orchids, a *Capparis* vine and the fern *Acrostichum aureum*. The fauna on and around the mound was only mentioned as those that had died in the hot water, (“frogs, lizards, snakes, turkeys, and kangaroos”) which were evidenced by their remains (Botanist 1878).

Other late 19th century documents mentioning the Einasleigh Springs (as they were previously named) include an article in the first volume of the Proceedings of the *Royal Society of Queensland* published in 1884. This volume includes a number of articles on natural history including one by Edward Palmer (a pastoralist, anthropologist and a member of the Queensland Parliament) on the hot springs and mud springs of the Flinders River (Palmer 1884). The article mentions boiling springs on the Einasleigh River and analysis of the water by a Government Analyst (Mr Mar) indicated it was alkaline, carbonated and the mound substrate was mostly made up of soda (Table 1; Palmer 1884).

The author suspected that Edward Palmer was the source of information on the presence of the springs gained by early Queensland Government Geologist, Robert L. Jack who mentions a State Member in his report on the development of artesian bores in the Etheridge and Croydon goldfields (Jack 1890a). Alternatively, Jack may have learnt of the springs via Arthur Vogan who Jack moved a “vote of thanks” to, for his presentation on travels through Queensland at the Royal Geographical Society of Australasia (New South Wales) in 1888 (Unknown 1888). Jack visited the springs in November 1889 (Jack 1890a). A subsequent Geological Survey progress report presented to the Queensland Parliament discusses Jack’s visit to the springs with details of water

Table 1. Early chemical analysis of the Talaroo mound substrate (Palmer 1884).

Measure	Percentage
Soda	37.54
Lime	2.8
Oxide of iron	2.19
Sand	31.72

chemistry also analysed by the Government Analyst Mr Mar (Table 2), and a detailed description and measurements of the mound (Jack 1891). In particular, Jack (1891) describes the presence of five vents (as opposed to the nine wells observed by the Botanist in the earlier *Brisbane Courier* article) and interestingly mentions dead dragonflies and other fauna around the rim of each vent with some in the initial stages of being fossilised by carbonates. Jack also presented to the Australasian Association for the Advancement of Science in 1890 on these same findings (Jack 1890b).

Arthur J. Vogan (an explorer, naturalist and journalist) visited the springs as part of an expedition across Queensland. Vogan recorded information and collected samples as well as sketched the mound and wrote to several newspapers and magazines on his findings (e.g. *The Illustrated London News*, Unknown 1889; Fig. 2). He also presented a paper to the Royal Geographical Society of Australasia (New South Wales) after his visit describing how he learnt about the existence of the springs from the local clerk to the Divisional Board, a Mr Cook who had visited the location several years beforehand (Vogan 1888). In his address, Vogan provides a brief description of the springs and comparisons to other hot springs in Queensland and across the world including the nearby Innot Hot Springs and proposed that they resulted from previous volcanic activity in the area (Vogan 1888).

Table 2. Early water chemistry analysis from Talaroo (Jack 1891).

Water quality measure	Quantity (mg/l)
Carbonates of calcium and magnesium	106.99
Carbonates of sodium and potassium	272.86
Chlorides of sodium and potassium	558.22
Total fixed salts	938.07
Volatile matter	47.93
Total solids	986.00
Sulphuric acid	trace
Sulphuretted hydrogen	37.49



Figure 2. Sketch of Talaroo Hot Springs by Arthur Vogan.

Note the naming of individual spring vents along the bottom of the sketch. Source: retrieved from <http://nla.gov.au/nla.obj-136188312/view>, accessed 12 July 2021.

In a letter to a newspaper many years later Vogan responded to an erroneous article (Unknown 1921) that the springs had disappeared and admonishes the Queensland Tourist Bureau on its lack of recognition of the site and pleads with the Queensland Government to protect the spring mound from destruction (Vogan 1921). Ironically, the same reply article discusses a biological specimen collected from the hot spring terraces as being identified by the New South Wales Government Botanist and Director of the Botanic Gardens in Sydney, Joseph Maiden, as a sponge. The author suspects that this sponge is misidentified and is in fact the stromatolite-forming cyanobacteria that creates the barrages along the rim of the terraces (Fig. 3). The cyanobacteria are now formally described in the scientific literature: *Ewamiania thermalis* gen. et sp. nov. (Cyanobacteria, Scytonemataceae) (McGregor & Sendall 2017).

A reply to both these articles is by an author with the pseudonym “The Onlooker” that mentions a visit to the springs site in 1891 (Onlooker 1921). The Onlooker describes the initial colonial lease of the springs to William Crisp (a Georgetown publican and baker) who ran a guesthouse at the site and used the springs as a spa that had “healing waters” (Onlooker 1921). However, the location of Talaroo being remote and difficult to access is likely to have prevented the regular visitors that used other similar springs for hydrotherapy (Griggs 2013) and interest in the springs likely diminished and knowledge of their presence faded. William Crisp held the lease until approximately 1894 (Onlooker 1921).

Since these early colonial records of the late 19th century, the springs and surrounding landscapes were incorporated into various pastoral properties including Dagworth Pastoral Run, Eveleigh No. 2 and Talaroo Holdings. At some stage during the later 20th century the immediate spring mound



Figure 3. Stromatolite-forming cyanobacteria *Ewamiania thermalis* at Talaroo hot springs superficially looks similar to a freshwater sponge. Photo: Glenn McGregor.

area was voluntarily made a nature reserve and was used as a tourist park with camping facilities in close proximity. Since 2012 the broader Talaroo property has been destocked of cattle and is now managed by the Ewamian Aboriginal Corporation. Talaroo is now formally declared as a Nature Refuge under the *Nature Conservation Act 1992* and is an Indigenous Protected Area to be managed for the protection of natural and cultural values in accordance with the guidelines of the International Union for the Conservation of Nature (Ewamian Aboriginal Corporation 2017).

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