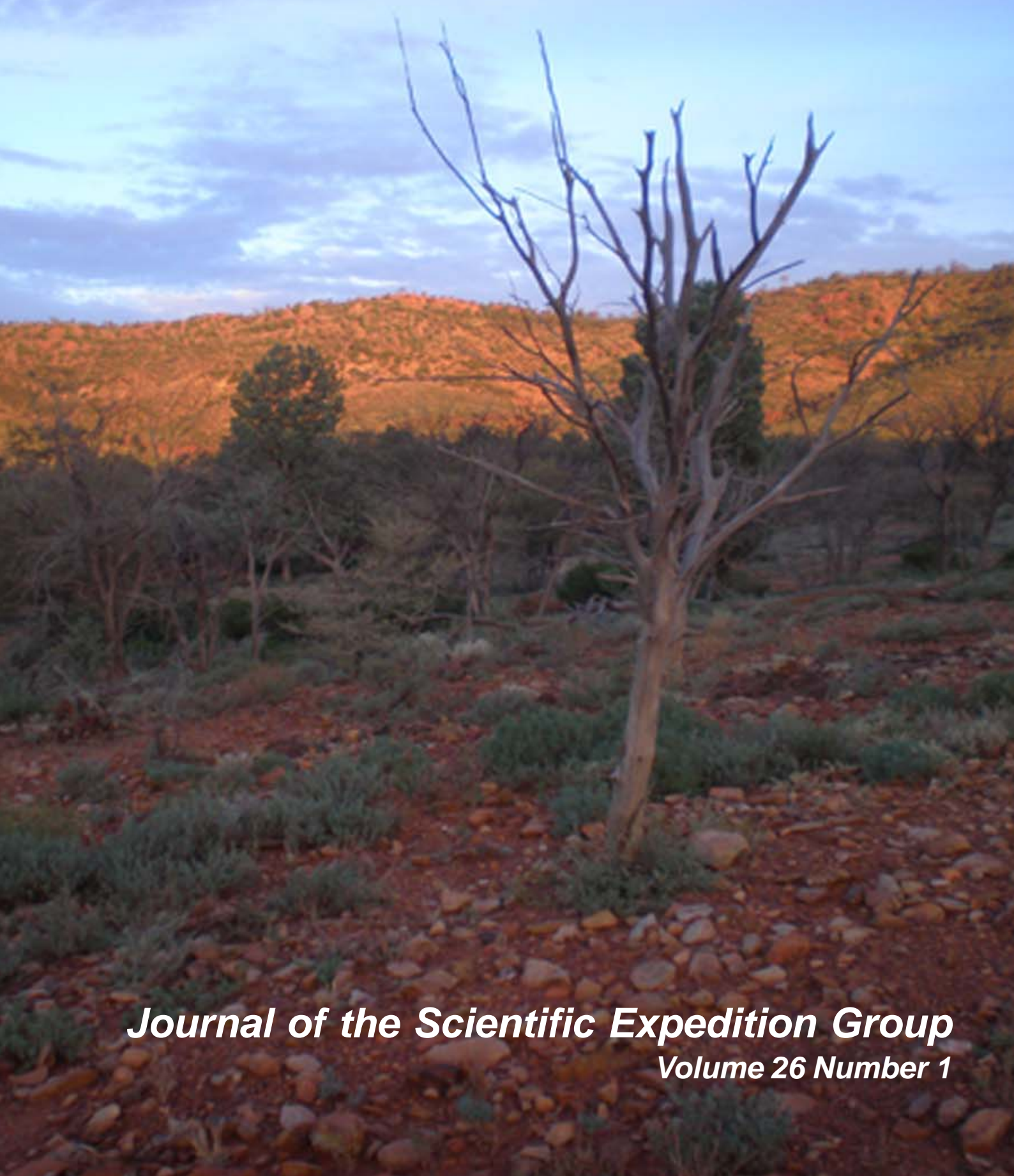


# *SEG*ments



*Journal of the Scientific Expedition Group*  
Volume 26 Number 1



# SEGments



## Scientific Expedition Group Inc.

Volume 26 Number 1, June 2010.

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# Editorial: Science and Art

Before the first Europeans came to Australia, the aboriginal population represented their plants and animals on the walls of caves as a way to provide illustrations of the environment. These indigenous Australians use their art for story telling, religious and cultural reasons.

The early European explorers brought scientists and artists to this continent to record the flora and fauna. One of the most noted naturalist was Sir Joseph Banks. He took part in Capt. Cook's first voyage to Australia and along with the artist Sydney Parkinson, worked on the *Florilegium* that was finally published in colour between 1980 and 1990 by the British Museum. Above is a sample of the artistic representations of a local plant from that collection.



Scientific art illustration has a long tradition in Australia as a way to record biological environments. In the early editions of *SEGments*, many illustrations and pencil sketches were done by the editor Tony Flaherty.

Today in the era of digital cameras some of the traditional methods are not as popular. On our SEG expeditions we are lucky to have many good amateur photographers as well as professional ones, like Duncan MacKenzie and Nicholas Birks, to record the flora, fauna and landscapes which have appeared throughout the publications and on many front covers. We also have good artists like Sue Kneebone, Annette Vincent and Andrew Barr who spend time during expeditions, drawing and painting their impressions of the landscape and the biodiversity.

During the 2010 SALA festival, Annette Vincent and Andrew Barr will have open studios displaying art work that depicts some of the landscapes of recent SEG expeditions. Annette has also produced an Arkaroola Landscape calendar for 2011 as a fund raising venture for SEG. Contact her by email for details at [ann.vin@bigpond.net.au](mailto:ann.vin@bigpond.net.au)

Chris Wright, OAM was honored this year for his work with SEG. For more than 20 years he has organized the Vulkathunha- Gammon Ranges Scientific Project (V-Grasp)

The first article by Sue Kneebone and her recent joint art exhibition at the SASA Gallery in May 2010 called "*Naturally Disturbed*" were inspired by her expedition to Scrubby Peak in 2007. Sue writes about the Yardea pastoral lease which was managed by her great grandfather Arthur Bailey. In her art exhibition family photographs are used in a provocative manner to stir the viewer to reflect on the clash arising from different perceptions of memory and history.

The second article by Garry Trethewey recounts the Autumn expedition to the Gammon Ranges for the ongoing important VGRASP project.

John Love has written a short report about the Wallaby colony in the Gammon Ranges.

The Nature Foundation SA has just acquired the Witchelina Station near Marree in South Australia. This last article outlines the benefits and future management plans for the region by the Nature Foundation SA.

I wish to express my personal thanks to Conrad Denyer for his hard work, writing and editorship over the last few editions of *SEGments*.



Plant sketch by Andrew Barr

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**Editor: Andrew Barr**

**Email:** [Andrew.Barr@unisa.edu.au](mailto:Andrew.Barr@unisa.edu.au)



## Christopher Wright OAM

Chris Wright was in the Australia Day lists of people awarded the Order of Australia, and has since been invested at Government House with his Medal. For more than 20 years he has organized the Vulkathunha- Gammon Ranges Scientific Project (V-Grasp) for SEG. It started in 1988 with the installation of a pluviometer to measure rainfall on the Gammon plateau. This required several trips to install it and get it running properly, a small fit party driving 700 km from Adelaide to the base of the Gammon Ranges, bushwalking up to the plateau for several days, and servicing the equipment. This is still repeated 3 times each year.

Over the years other jobs were added, more pluviometers were installed, a stream guage recorder was installed in Arcoona Creek and monitoring activities added including vegetation, water, feral goats and Yellow-footed Rock Wallabies. The data collected from this remote region have contributed a great deal to the understanding of rainfall patterns and associated environmental responses to drought and climate change. The latest additions have been mobile phones that send out rainfall reports, a valuable addition to the records of the Bureau of Meteorology, where Chris

worked as a hydrologist for many years. He is now a hydrologist in the Natural Resources Management department. As well as driving this marathon V-Grasp program for 22 years, Chris has also been quietly working behind the scenes helping troubled youths, assisting refugees, helping at a soup kitchen, and being responsible for music at his church. He is a worthy recipient of the award.

**Richard Willing, SEG president**

# SCIENTIFIC EXPEDITION GROUP INC

## NOMINATION FOR COMMITTEE POSITION

Committee for 2010 -11

*(Closing date for nomination is - August 6, 2010 )*

I, ..... Being a financial member of the Scientific Expedition Group for the year ending 30 June 2010 nominate

..... for the position of  
.....

Signed by Proposer .....

I, ..... Being a financial member of the Scientific Expedition Group for the year ending 30 June 2010 accept the nomination

Signed by Nominee.....Dated .....2010



# Land at the Margins: Yardea Station and the Gawler Ranges

*Sue Kneebone*

In 2007 I participated on the Scrubby Peak SEG biosurvey as a volunteer. I was particularly interested in the Gawler Ranges National Park as this was once part of the Yardea pastoral leasehold managed by my great grandfather Arthur Bailey from 1903 to 1916. From my SEG experience I was keen to piece back together the history of this pastoral frontier from late nineteenth and early twentieth century historical texts, archives and newspaper articles.

The explorer Edward John Eyre (1815-1901), the first European to visit the region, wrote a scathing account of the Gawler Ranges country after traversing the ranges in 1839 and again in 1840-41. His journal entries did not encourage pastoral settlement in what he perceived as a barren and desolate landscape:

... the ... most remarkable fact connected with this range, was the arid and sterile character of the country in which it was situated, as well as of the range itself, which consisted entirely of rugged barren rocks, without timber or vegetation. There was not a stream or a watercourse of any kind emanating from it; we could find neither spring nor permanent fresh water, and the only supply we procured for ourselves was from the deposits left by very recent rains, and which in a few days more, would have been quite dried up. The soil was in places quite saline, and wherever water had lodged in any quantity (as in lakes of which there were several) it was quite salt.<sup>1</sup>

It was not until the late 1850s that the South Australian Government showed any interest in the Gawler Ranges and commissioned Stephen Hack to explore the north-west interior of the state. Hack had a pecuniary interest in reporting the finding of good pasture as he was promised double his £300 salary “should you succeed in opening up available country”.<sup>1</sup> Unlike Eyre, Hack relied heavily on Aboriginal guides to find rockholes and small creeks that he could not have seen otherwise. Many place names in the Gawler Ranges are Aboriginal names recorded and mapped by Hack, including Yardea which reputedly means “place of rushes”.<sup>2</sup> However, when his references to Aboriginal people fell off in his journal, so too did his “discoveries” of water and use of Aboriginal names. Without guides, the tougher search for water made his horses footsore and Hack

curtailed the expedition. He wrote: “From what I have gathered from the natives, I feel certain of the existence of a very extensive tract of good well-watered country to the north, but I think there may be considerable difficulty in finding a route to it without the assistance of the blacks in finding the watering places.”<sup>3</sup>

Close to the time Hack was exploring the western part of the Gawler Ranges, the Commissioner of Police, Major Peter Warburton (1813-1889), was exploring the area nearer Lake Gairdner. Like Eyre, Warburton’s report was discouraging, remarking that the very limited water supply had its source solely from rock holes which evaporated in the heat of summer. Hack’s favourable survey proposing that the country could support at least 225,000 sheep was countered by Warburton’s more pessimistic assessment suggesting that the small amounts of water could support only very small flocks of sheep but that “even this was doubtful, and the experiment far too hazardous for any but a man who had more sheep than he knew what to do with”.<sup>4</sup> However, responding to Hack’s optimistic report, the Government went ahead with the experiment of “opening up” the Gawler Ranges to pastoralists. The area’s average 10-inch (250-millimetre) annual rainfall was over time considered “sufficient for all reasonable pastoral purposes, though falling short of agricultural requirements”;<sup>5</sup> the soil itself was generally deemed naturally fertile enough for crops but for the want of rain.<sup>6</sup> A third of the ranges country, however, was said to be “quite useless” for either growing or grazing.<sup>7</sup>

It was a hesitant start, with the first lease taken up at Yardea by Dr Browne in 1862 but rescinded after an independent report by a Mr J Bonnin in the dry year of 1863 advised against the development. Yardea was then claimed from the mid-1860s by George Main and John Acraman who took up a leasehold of 800 to 1000 square miles and under various managers established the station.<sup>8</sup> An Aboriginal man named Numilty accompanied the first two station hands sent to Yardea when Main and Acraman took up the run in the 1860s. Numilty apparently acted as a guide, with his knowledge helping them find water, but whereas he was able to leave Yardea without difficulty alone and on foot, a mounted worker with poor eyesight known as Edmondson became lost and perished. “Black trackers” drafted in at Paney were able to follow Edmondson’s trail, despite the elapse of several weeks,

until wind blew away his tracks. His remains were eventually found six months later on Koolamerrika Hill, about eight miles north-east of Yardea Station. His body was identified by the clothes and buried close to the head station at Yardea.<sup>9</sup>

From the late 1870s, under the management of Thomas Partridge, Yardea was enclosed with sheep-proof fencing, which allowed for the entire run to be turned over to the sheep without need of shepherds and therefore for the flock size to increase markedly. By the 1880s up to 80,000 sheep occupied Yardea's 800 to 1000 square miles of which 300 square miles were never stocked and 200 used only for winter grazing.<sup>10</sup> Two decades later these large sheep numbers would be described as "the overstocking ignorance of the old leaseholders".<sup>11</sup> Rabbit plagues and the large numbers of sheep provided easy pickings for dingoes. Thus dingo numbers also rose and the consequent loss of sheep increased year after year, so much so that "the proprietors realized that the country was untenable unless some means were adopted to cope with the dingo trouble."<sup>12</sup> By the early 1890s the original lease holders Main and Acraman abandoned Yardea due to the severe dingo problem and "preposterous rentals" in an economic depression which prohibited the expenditure on a dog proof fence.<sup>13</sup>

Drought killed off the rabbits, and Yardea's manager Thomas Partridge also recalled that "we paid the blacks, in one season, for over 100,000 rabbit scalps, and kept men constantly employed poisoning all over the run".<sup>14</sup> Nonetheless, the damage had been done, with vegetation that fed sheep stripped by the rabbits: Partridge told in the 1890s how "all over Yardea ... all the bluebush and saltbush has been killed by the rabbits, and most of the scrub bushes are dead", even in areas that had "never had a hoof of sheep on it".<sup>15</sup>

After Yardea was abandoned due to the high rents, Andrew Tennant leased the run from about 1894, but took possession for only two years and then abandoned it. In that time his stock numbers fell from 12,000 sheep to only 150 head of cattle due to drought, economic depression and vermin. The story was repeated on surrounding runs, with whole areas deserted by pastoralists to become a breeding ground for dingoes.<sup>16</sup> The effects of rabbits then dingoes cut the amount of stock Yardea could carry by a third; other stations lost up to three-quarters of their stock or carrying capacity. To counter the dingo threat to their livelihoods, leaseholders poisoned rock holes, initially with arsenic then later with strychnine, and sought government

assistance on bounties. But with extensive unoccupied crown lands nearby and with many runs abandoned, large areas were left unoccupied in which dingoes multiplied unmolested.<sup>17</sup> In late 1903, at a time of high demand and high prices for sheep, Yardea was taken up by James Grey Moseley with his station manager, my great-grandfather Arthur Bailey, holding a one-quarter stake in the £6000 business. The Yardea lease – which by then included Paney, Yartoo and the old Pondana and Cacuppa stations – was held under the name of J.G. Moseley, but when they acquired the Thurlga lease (which also included Yarinda) around 1907, Moseley's and Bailey's names appeared jointly on the lease.<sup>18</sup> The number of dingoes was still so substantial in the early 1900s to require construction of the dog fence around Yardea and neighbouring properties before the lessees "got all the dingo out".<sup>19</sup> The dog fence erected early in Bailey's tenure as Yardea manager soon proved effective, reflected in the comments of a visitor: "That paddocks can thus be made secure, and that sheep can be successfully carried, is once again established on the proportion of old Yardea station, where Mr. J.G. Moseley's lambing percentage was as good this last season as was ever the case in the days of the old regime."<sup>20</sup>



**Figure 16: Dog Fence, Gawler Ranges<sup>21</sup>**

In 1916 Moseley sold the Yardea lease to A.J. and P.A. McBride with about 40,000 sheep. The flock size around 1916 was the largest in Moseley's and Bailey's time, but they seem to have sold the stock cheaply, perhaps because of the 1914-15 drought in which they lost 10,000 head.<sup>22</sup> The sale price of £72,000 or £78,000, up from the £6000 Moseley and Bailey paid for the lease, reflects Yardea's expanded size and much improved viability because of the dingo fence and



better dams and wells built under Bailey's management.



**Figure 17: Yardea Dam wall overflowing, 1905.<sup>23</sup>**



**Figure 17: Yardea Dam, empty, 2007<sup>24</sup>**

### **Disruption and Dispossession**

Changes of land use with the introduction of pastoralism in the mid to late nineteenth century disrupted Aboriginal lives in the Eyre Peninsula and West Coast area. Sheep and cattle displaced native fauna and reduced traditional food supplies, kangaroo shooters vastly reduced availability of game, and the introduction of agriculture closer to the coastal areas in the 1890s meant a more intense land use, reducing native fauna and flora and leading to starvation for many Aboriginal people.<sup>25</sup>

The identities and numbers of Aboriginal people in the Yardea area in the late nineteenth century remain unclear. Few dedicated ethnographic or archaeological expeditions were taken in the Gawler Ranges area when such research had been encouraged by the concepts of evolution in the late nineteenth century. Philip Jones,

senior researcher of Aboriginal material culture at the South Australia Museum, notes there is a lot to be done in terms of “reconstituting” the material culture of the area as there are only a few small collections of Aboriginal objects from the region that were donated or sold to the museum in the 1870s and 1890s.<sup>26</sup>

An attempt by Norman Tindale to map Aboriginal territories as they existed before the disruption of white settlement has located Yardea at the western corner of Banggarla (Pangkala or Pangulla) country, close to country of both the Wirangu to the west and Nauo to the south, with the Kokatha some distance to the north-west. But as the Aboriginal people suffered large numbers of deaths with the onset of white settlement, the Kokatha and Banggarla are believed to have moved south and south-east through the mid-nineteenth century. The Kokatha have been referred to as the “Gawler Range tribe”, and by the late nineteenth century the Kokatha and Wirangu are believed to have held joint ceremonies in the ranges. It appears, then, that although the Yardea area may once have been Banggarla land, by the mid to late nineteenth century it may have become the country of the Kokatha and Wirangu.<sup>27</sup> All three groups appear to have lived in parts of the Gawler Ranges in the last two centuries with the exact boundaries between groups possibly moving. However, the pastoral activity and the establishment of European settlements tended to draw these groups out of the ranges and towards coastal settlements such as Streaky Bay, Fowlers Bay and Port Augusta and later towards the mission settlement at Koonibba.

Pastoralism not only reduced the availability of native flora and fauna, but just as importantly, grazing stock put great pressure on available water supplies, so much so that at Yardea over the years, pastoralists spent much effort and expenses on sinking wells and digging dams. James Grey Moseley reminisced about his early pioneering days for a newspaper article with the following recollection going back to about 1864:

... in the very early pioneering days in the Gawler Ranges, where my brother and I had taken up country ... I put in some long, hard years sinking for water, and I knew what it was to beat a drill for long hours in that red granite country. Many hundredweight kegs of powder and many hundred of pounds of dynamite have I blown away up there. It was there I gained my first knowledge of the blacks and learnt the Pangulla language.<sup>28</sup>

The introduction of large numbers of grazing animals came at the exclusion of Aboriginal people and the native animals that had relied on the scarce amount of surface water available. This often led to stock theft by Aboriginal people for food or as resistance to dispossession, followed by retaliation by settlers.<sup>29</sup> The first police camp in the ranges was at Paney from 1864 to 1872, consisting of a canvas tent in which the troopers slept and a brush hut under which they did their cooking, “and close handy was a stout post in the ground, and to this prisoners were chained.”<sup>30</sup> The role of police troopers on these outstations was to deal with conflict between white settlers and Aboriginal people. A National Parks and Wildlife report also notes that there is little doubt that the troopers at Paney and Yardea police station spent a part of their time rounding up Aboriginal people for transfer to the Fowlers Bay ration depot.<sup>31</sup> Within a generation of contact, Aboriginal people were either moved off their lands or had to live a fringe existence to keep in contact with their country, including taking on various forms of white men’s work.<sup>32</sup> In 1872 the camp moved to Yardea and there a stone police station was built in 1883, costing £700, but police left the ranges two years later.



**Figure 18: Ruin of old gaol behind Yardea police station built in 1883.<sup>33</sup>**

In 1896 when the east-west telegraph line was re-routed through the Gawler Ranges, the abandoned Yardea police station was put to use as the only post and telegraph office in the district. In 1898 after the Yardea pastoral property had been deserted due to drought and vermin, the three operators of Yardea telegraph station were described as leading “a rather lonely life ... now the runs are practically abandoned all around them”.<sup>34</sup> A letter about the life of telegraphist Herb Kirk conveys in some detail the dire circumstances of the times. The Gawler Range country surrounding Yardea prior to 1896 was the centre of vast pastoral interest, but

many leaseholders were ruined through drought, and the ravages of dingoes and rabbits. “The bunnies even climbed ti-trees in search of food and slipped into small forks where they became firmly wedged and perished by the score. Mice also wrought havoc and only tinned food withstood their attacks – they even ate the lead of rifle bullets down to the brass cases to obtain more of the bees wax which covered the bullets.”<sup>35</sup>

Yardea Station still operates as a pastoral lease running about 10,000 sheep. Dingoes in the area are few in number, but goats and rabbits remain a problem. The telegraph station buildings and original homestead once inhabited by my forebears still remain and are currently used for workers’ accommodation. In 2002 the Gawler Ranges National Park was proclaimed, which includes the former pastoral property of Paney Station which was part of the Yardea leasehold during Arthur Bailey’s time. The park is approximately 1660 square kilometres and spans the transitional zone between the agricultural and pastoral regions of northern Eyre Peninsula. Numerous native fauna species within the park are at the extreme edge of their natural distribution, making this area a crossroads for species to the north, south, east and west. Species of conservation significance that are now rare or vulnerable in the area include the malleefowl, grasswren, greater long-eared bat and the yellow-footed rock wallaby.<sup>36</sup> The national park is also a crossroad where “agriculture meets pastoralism, the outback meets settled areas and ancient volcanic rock meets recent dune formation.”<sup>37</sup>

## Endnotes

1. O.K. Richardson, appointment and instructions to Mr S. Hack, 24 April 1857, in “Explorations of Mr. S. Hack”, SA Parliamentary Papers, 1857-8, Vol 2. No. 156.
2. Geoffrey H. Manning, Manning’s Place Names of South Australia (Adelaide: Gilling Printers Pty Ltd, 1990), p. 350.
3. Hack, 19 September 1857. “Explorations of Mr. S. Hack”
4. A.C. Robinson, K.D. Casperson, P.D. Canty and C.A. Macdonald, “A Biological Survey of the Gawler Ranges, South Australia in October 1985” (Adelaide: National Parks and Wildlife Service, 1988), p. 21.
5. “Through the Gawler Ranges: A much-neglected country”, The Advertiser, 20 October 1906, p. 8
6. “Through the Gawler Ranges: From Streaky Bay to Port Augusta”, The Adelaide Chronicle, 27 October 1906, p. 40
7. Thomas Partridge, 2874, “Minutes of Evidence of the Vermin-Proof Fencing Commission”, SA Parliamentary Papers, 1893, Vol.2, No.59



8. "The late Mr Main", *The Register*, 7 January 1905, p. 7; N.A. Richardson, *The Pioneers of the North-West of South Australia 1856 to 1914* (Adelaide: W.K. Thomas & Co/The Register Office, 1925), p. 11; "North and north-west of Port Augusta", *The Observer*, 26 January 1924, p. 16.
9. "North and north-west of Port Augusta", *The Observer*, 26 January 1924, p. 16; Richardson, *Pioneers of the North-West*, pp. 11-2
10. "North and north-west of Port Augusta", *The Observer*, 26 January 1924, p. 16; Richardson, *Pioneers of the North-West*, pp. 12-13; "Mr A.W. Cocks: Bush Experiences Recalled", *The Register*, 27 June 1924, p.4; "The late Mr Main", *The Register*, 7 January 1905, p. 7; Thomas Partridge, 6216-6218, "Minutes of Evidence of the Pastoral Lands Commission", 1897, SA Parliamentary Papers, 1898, Vol 3, No 77
11. "Through the Gawler Ranges", *The Adelaide Chronicle*, 27 October 1906, p. 40.
12. "North and north-west of Port Augusta", *The Observer*, 26 January 1924, p. 16
13. Richardson, *Pioneers of the North-West*, pp. 12-8.
14. Partridge, 2841, "Minutes of Evidence of the Vermin-Proof Fencing Commission"
15. Partridge, 2831-2840, *Ibid*; Partridge, 6321, "Minutes of Evidence of the Pastoral Lands Commission"
16. E.L. Batchelor, "With the Pastoral Commission", *The Advertiser*, 22 April 1898, p. 6; "Minutes of Evidence of the Vermin Proof Fencing Commission", pp. 79-88 *passim*.
17. Batchelor, "With the Pastoral Commission", *The Advertiser*, 22 April, 1898, p. 6. See also Partridge, 6303, "Minutes of Evidence of the Pastoral Lands Commission". Hunters were paid a 20-shilling (£1) bounty per dingo scalp (10 shillings for half-breed dingoes).
18. Richardson, *Pioneers of the North-West*, pp. 14-18; "J.G. Moseley and Arthur Bailey, Partnership Agreement", December 1903, copy held in Kneebone family papers; William Briggs Sells, 5476-5496, and Partridge, 6209, "Minutes of Evidence of the Pastoral Lands Commission"; maps of pastoral leases 860, 1019, 1225 and 1239, pastoral plan 7, 47/32 (1207-005) and 46/19 (1207-008), Department of Lands records, SA Lands Services Group. Arthur Bailey was also listed as manager of Yardea and leaseholder of Thurlga in the 1909 SA Legislative Council electoral roll, Northern District, subdivision of Flinders, Yardea polling place, State Library SA.
19. "North and north-west of Port Augusta", *The Observer*, 26 January 1924, p. 16; P.C. Fitzgerald, "Notes on exploration and farming in Gawler Ranges", unpublished notes and reminiscences, State Library of South Australia.
20. "Through the Gawler Ranges: A much-neglected country", *The Advertiser*, 20 October 1906, p. 8.
21. Photograph by Sue Kneebone, 2007. Taken at Scrubby Peak on Scientific Expedition Group field trip Scrubby Peak was part of Yardea pastoral lease at the time of J.G. Moseley's and Arthur Bailey's tenure.
22. Winifred Kneebone, letter, 8 October 1937, in Kneebone family papers
23. Photograph by W. R. Evans, State Library of South Australia, digital collection. Catalogue ref: B54221.
24. Photograph by Sue Kneebone, 2007.
25. Peggy Brock, *Outback Ghettos: Aborigines, Institutionalisation and Survival* (Cambridge: Cambridge University Press, 1993), pp. 64-6.
26. Personal correspondence from Philip Jones, 13 June 2008.
27. Norman B. Tindale, *Aboriginal Tribes of Australia: Their Terrain, Environmental Controls, Distribution, Limits and Proper Names* (Canberra: Australian National University Press, 1974), 134-136 and map 2; *The Encyclopaedia of Aboriginal Australia: Aboriginal and Torres Strait Islander History, Society and Culture*, ed. David Horton (Canberra: Aboriginal Studies Press, 1994), Vols.1 and 2, pp. 92, 555, 1016, 1190; Brock, *Outback Ghettos*, pp. 63-6
28. "Tales of the Natives. Incidents of the Early Days. Romance and Legend. A Pathetic Love Story. Chat with Mr Moseley MP," *The Advertiser*, 13 September 1913, p. 6
29. Reynolds, *The Other Side of the Frontier*, pp. 93,156-173. There were also likely to have been other common rupturing effects of European settlement: introduced diseases; sexual abuse of women; fragmentation of social and ritual events at which marriages were organised, disputes settled and society and culture regenerated.
30. Richardson, *Pioneers of the North-West*, p. 75
31. A.C. Robinson et al, "A Biological Survey of the Gawler Ranges, South Australia in October 1985", p. 17.
32. *ibid*, pp. 1-6
33. Photograph by Sue Kneebone, 2007
34. Batchelor, "With the Pastoral Commission", *The Advertiser*, 22 April 1898, p. 6
35. Herb Kirk, "Herb Kirk's Outback Adventures," *The Australian Postal Clerk*, 1940(Exact date unknown). Copy held by A. Morris, Yardea Station.
36. Department of Environment and Heritage, *Gawler Ranges National Park Management Plan*(Adelaide: Government of South Australia, 2006), p. 15
37. Scientific Expedition Group, *Expedition Scrubby Peak*, September 2007 (Adelaide: Scientific Expedition Group, 2007), p. 1

The Autumn trip to the Gammon Ranges was done on 23 - 27 April 2010. I had a lovely time. Carly Tozer, Michelle Trethewey, Steve Gatti, John Abbenante and Jenny Awbery were all wonderful company.

Two 4WD vehicles and 6 people met at Copley for lunch, and then started toward the “station pluvios”, ie 3 automatic rain gauges on sheep stations close to Copley.

There was evidence of recent strong flow in Windy Creek, in places around 200m across and 30 - 40 cm deep, but easily passable to North Moolooloo homestead. From there, however, the creek was narrower and steeper sided, and crossing became impossible, so North Moolooloo and Pfizners Well went unchecked. That’s OK. Experience has taught us that if something can go wrong it will, and so the pluvios have redundant systems built in. Data gets sent to Adelaide by a NextG connection, and it also gets collected in a logger (think of a great big USB memory stick). Solar power is backed up by a battery. So we can afford to miss one trip.

We seemed to have timed our trip on the Copley - Balcanoona Rd just right, following the grader which smoothed all the washed out creek crossings for us.

Next we tried Maynard’s Well, which had had even more rain, but with care at creek crossings and road washouts, turned out to be easily accessible. That done, we made our way to Exclosures Camp, in the Gammons.

Owieandana, the property through which we access our camp, has been bought by Operation Flinders Foundation. OFF appears sympathetic to SEG’s aims & needs. Along with a change of ownership, OwieanDANa seems to have changed it’s name to OwieANDana. There’s a sudden influx of new money, buildings, paint, and satellite communications. Only a couple of days before, there had been a large truck with an ablutions block on top stuck in a creek. Quite novel.

Our driving was uneventful til 1km short of Exclosures camp. Then the recent rain and lush green growth conspired to hide a brand new, wheel sized, vertical sided gutter. Probably lucky that we were travelling at some speed, so we bounced over it rather than into it. Lots of loud noises from both under the bonnet and inside the cabin. (After a noisy trip home, it turned out the engine mounts had both torn in half.) The other vehicle had a slow flat tyre due to faulty recent valve repair, then it’s battery loosened & slid onto air conditioner pulley, rubbing a hole in cell 6. Toyota



Figure 1: John & Jenny identifying macro-invertebrates.



tough, the battery continued to work with 5 intact cells, and the 12v compressor got it's first real action.

Overall, there was evidence of several distinct and localised rain events over the past few months. Patches of new growth, patches of germinating seedlings, blue lawns of 10cm high River Redgum seedlings, patches of flowering and seeded ephemerals like datura, and patches of bare dry ground.

On Friday night at Exclosures Camp Steve noticed a curl snake (*Suta suta*) between the cars. He didn't seem overly concerned, although when a few large stomping boots came along he did curl up under a bush with his head hidden, a characteristic pose for curl snakes when they feel threatened. So our photos lack head or tail, but I think shiny scales are pretty anyway.

### Saturday

In the morning, Exclosure pluvio was serviced, and one of it's loggers removed for upgrading on return to Adelaide. (What's this "exclosures" business? Small plots with different kinds of fences to keep out different kinds of herbivours, so we can see the effect on different kinds of plants.)

The Stream Gauge was serviced. There was a small amount of water, and lots of 1 - 2 cm Streambank Froglets (*Crinia riparia*) around this pool, small, knobby, dark brown & black. Every other frog we saw on this trip, millions of them, were Desert or Red Tree Frog (*Litoria rubella*), looking like little blobs of coffee icing outlined in chocolate. On previous trips I'd seen them bigger and skinnier, but these were obviously little fat babies.

Because of the rain we didn't need to do the "Water Walk" that seems to have become standard lately. The Water Walk is a day spent carting 60 litres of water up to our other camp, and returning to our cars. So we started the walk up the creek to Vandenberg straight away. Woodcutters Well was far less salty to taste and looked more clear and inviting than on other trips. Similar for The Seeps, and there were a couple of pools between the two.

At South Branch junction the party split, Carly, Michelle and Steve going to Arcoona South Pluvio while John, Jenny and Garry continued more directly to Vandenberg with the intention of locating a water drop Dept. of Environment and Heritage (DEH) had informed us of, and finding a suitable storage space for the water.

The Arcoona South party enjoyed seeing all the frogs in ephemeral pools and identifying foot prints of various animals. At the junction of Arcoona Creek and Arcoona South Creek, Steve found a dried fish carcass 11cm long. Soon after, at a 90 metre long pool, John saw similar fish, alive, as well as clear dingo and emu tracks.

At Wild Ass Waterhole more fish were seen, around 10cm long. Spangled Perch (*Leiopotherapon unicolour*) grow to about 30 cm. Apparently neither they nor their eggs survive drying out. They breed quickly and head upstream (or vice versa) in any



**Figure 2: Typical creek in station country, Photograph by C. Tozer**

shallow or fast flowing water as soon as it appears. Quote from the web "swimming up muddy tyre tracks" Although they are endemic on lots of other creeks further north, Lake Eyre forms a salty barrier, so there must always have been at least some water somewhere in the system between Arcoona Creek to Lake Eyre at any time. John Love found a dead one a few km downstream a year or two ago, again after rain.

Wild Ass was full of clear water, visibility to 1 metre and was surrounded by lots of lush green growth. Photos all round, every one a winner. John and Jenny did macro-invertebrate monitoring ( see figure 1) and as seems to be the case, were surprised at how engrossing it was. Little tiny water bugs through a magnifying glass look as good as anything on the Discovery Channel.

Around 4.00pm that afternoon the South Branch party arrived at Vandenberg. Good water was found across the creek just under the cave. A quick trip was made to two helicopter landing sites we'd defined on a previous trip. We had intended checking and measuring 4 x 100 litre water barrels we expected had been dropped off by DEH, but we couldn't find them. Just before dusk we wandered up to do SAMBOT pluvio and look at SAMBOT waterhole, which remarkably was full and running slowly.

### **Sunday**

Pleasant and uneventful photopoint and Plateau Pluvio trip. "Photopoint" means we take the same photo twice a year, for the last 20 years, to observe changes. We finished down Grandfield Creek, past pretty pools and small waterfalls. After a rest at Vandenberg we did a proper GPS guided grid pattern search looking for the water barrels. No luck.

### **Monday**

Up and away by 8.15 am, an easy walk back to Exclosure Camp, a snack, and off to do Arcoona Pluvio and the regular Wallaby Walk, looking for Yellow Footed Rock Wallabies. More luck than usual, we saw 2 or 3 animals, (perhaps the same one repeatedly). Then packed up for the trip home.

On the way from Owie to the main road, we saw a dingo. Apparently land holders have different opinions

about the costs & benefits of the dog fence, so not all cooperate in it's maintenance. Many in the North Flinders area are loosing sheep and so several large properties as well as DEH are doing a massive cooperative poisoning.

Getting late, ANZAC weekend, no fuel at Copley, but at three minutes to five the Leigh Creek servo was still open, so fuel was obtained. Michelle had rung North Moolooloo and found the house creek track had been rebuilt, but we were not confident about the next crossing, and decided to leave those pluvios til next time. We left for Edeowie Station, where we stayed overnight, and in the morning John, Jenny, Carly & Steve left, while Garry and Michelle used the station's vehicle pit to do some panelbeating of bent bits underneath the Ford, and then had a look up Edeowie Gorge, the North West outlet of Wilpena Pound. Again, the patchiness of the rain was apparent, and the gorge was as dry as I'd ever seen it.

**End note:** see [http://www.bom.gov.au/cgi-bin/wrap\\_fwo.pl?IDS60163.html](http://www.bom.gov.au/cgi-bin/wrap_fwo.pl?IDS60163.html)  
find "Northern Flinders"

**Contact:** [garrytre@bigpond.com](mailto:garrytre@bigpond.com)

For those who are interested, there is a more "official" report with a bit more housekeeping and technical stuff, and I have more photos of most things mentioned above.

## **Volunteers Wanted**

**for our next two VGRASP Expeditions**



**Dates:**

**Aug 12-19 contact:** [chris.wright@adelaide.nrm.sa.gov.au](mailto:chris.wright@adelaide.nrm.sa.gov.au)

**October 1- 5 contact:** [garrytre@bigpond.com](mailto:garrytre@bigpond.com)



A regular feature of the Vulkathunha-Gammon Ranges Scientific Project (VGRASP) is monitoring a colony of yellow-footed rock wallabies on Arcoona Bluff. The procedure is to follow a defined transect up 'Wallaby Creek' and down 'Evasive Creek', two small tributaries that flow down from Arcoona Bluff to Arcoona Creek. This monitoring was instituted in 1996 by Peter Bird, who devised forms for recording sightings of wallabies and other vertebrates, and advice on how to distinguish between yellow-footed rock wallabies and euros. It was intended that on each VGRASP visit to the project area, two walks should be done, one in the morning and one in the afternoon, not necessarily on the same day.

Peter also devised a report form for recording sightings of all large animals - wallabies, euros, goats, etc - in other places in the Arcoona Creek catchment.

Peter, who is employed in the Department for Environment and Heritage (DEH), has supplied some statistical information from the reports that he has received. From January 1996 to April 2006, 31 walks were done on 24 visits - only 7 visits included two walks. The maximum number of wallabies seen on one walk was 4 (in April 1999 and April 2001). On 16 walks, at least 1 was seen.

There is a clear seasonal variation in sightings. Autumn seems to be the best time for wallaby watchers, followed by spring. There were less in summer and least in winter. Peter has not received any reports since April 2006.

Observations by Christine Arnold, who also works in DEH, have led her to conclude that the main colony lives on the north side of Arcoona Bluff and what we see on the Wallaby-Evasive Creeks transect is an overflow.

### Some conclusions

- ◆ The monitoring is worth continuing.
- ◆ From now on, the instructions for normal VGRASP visits to the Gammons will include only one wallaby walk.
- ◆ Leaders will be asked to include the animal sighting record forms in the leader's report of each visit, so they will not go astray.
- ◆ Revision of the forms is in progress with the intention of making it possible to fill them in electronically, so that they can be sent as email attachments to interested people.

### Contact:

jlove@internode.on.net



Figure 1: Yellow footed rock wallabies in the Cleland Wildlife park



**Figure 1: Arid Witchelina Landscape (Photo: Alex Nankivell)**

The acquisition of Witchelina Station creates the largest private nature reserve in South Australia. At 421,900 ha, it is considerably larger than the combined areas of two other major conservation reserves in this region, the Flinders Ranges and Gammon Ranges National Parks. This is a very significant addition to arid land conservation in South Australia. It will protect several threatened species, ecological communities and geological landscapes not previously protected in the National Reserve System.

The management of Witchelina by Nature Foundation SA will also provide for the protection of areas of cultural and historical significance. The conservation of Witchelina will:

- protect a significant proportion of the Willouran Ranges, an important refuge for arid zone species, that extends from the northern Flinders Ranges through the Denison, Davenport, and Central Ranges and into the Northern Territory;
- protect the habitat of several species and ecological communities identified as under threat in the SA Arid Lands Biodiversity Strategy;
- significantly increase the protected areas status of three distinct bioregions: Flinders-Lofty Block, Gawler and Stony Plains; and Witchelina;

- create a significant core area in the northwest of the Flinders-Olary Naturelinks Corridor.

This is a protected area, managed for nature conservation as a part of Australia's National Reserve System. It conserves important native habitat, plants and animals for the benefit of all Australians.

To purchase this significant property, Nature Foundation SA assembled a comprehensive funding package. The package included a major contribution from the Commonwealth's Caring for our Country program together with very considerable contributions from the South Australian Government and the following five resource companies who elected to discharge their environmental offset obligations through this project.

- Santos Ltd
- Beach Energy Ltd
- Victoria Petroleum NL
- Epic Energy Ltd
- Stuart Petroleum Ltd

We acknowledge their important contribution to arid land recovery.



## The Witchelina Landscape

Witchelina comprises a magnificent outback expanse extending from Lake Torrens in the south to Marree in the north. With a total of 421,900 hectares (or 4,219 sq kms), it spans three bioregions, including the most westerly outcrop of the Adelaide geosynclines– the Willouran Ranges. Within these three bioregions, the property covers three very distinct biological associations – Willouran, Mulgarie and Marree – which in turn are divided into nine land systems. All this means that the conservation of the property is a very significant win for biodiversity in this part of the state.

Below is a series of descriptions, running south to north, that encapsulate the variations in the landscape of Witchelina.

- Salt lake frontage transitioning to sandy or clay flats with areas of Lignum and Swamp Cane Grass between widely spaced dunes;
- Extensive dunefields with Black Oak, Native Pine and swales of Mulga with annual grasses;
- Stoney hills and flats with Bladder Saltbush and Mitchell Grass intersected by large creeks with River Red Gums and Coolabah draining to floodplains with Old Man Saltbush and Samphire;
- Hills with Red Mallee and Dead Finish, stoney valleys with Red Gum lined creeks and plains with Bladder Saltbush and Bluebush;
- Groves of Bullock Bush on hills, with stoney plains of low Bluebush and annual grasses;
- Gibber tableland country with Curly Mitchell Grass associated with gilgais and where large rivers dissect mesas bearing scattered Mulga.

## Flora and Fauna found to date

While the property has been unavailable in the past for Department for Environment & Heritage biological surveys, the state biological database nonetheless records a number of threatened species found on the property.

Research carried out on a neighbouring property to the south has shown, through examination of owl pellets, that 23 species of small native mammals once inhabited the region with only seven species remaining today and one uncertain. Species that are thought to be extinct include the Burrowing Bettong, Mulgara, Golden Bandicoot, Western Barred Bandicoot, Pigfooted Bandicoot and Desert Rat-kangaroo.<sup>1</sup>

We expect, when we undertake further survey work, to uncover many threatened species on the property. Given that it spans the northern to southern and eastern to western extremities of range for a variety of species, many in the South Australian scientific community are hopeful of finding populations of plants and animals not previously known to exist in this area.

## The Future of Witchelina

In order to maintain our management commitment to this exciting and important conservation project, Nature Foundation SA is hard at work on strategies that will set Witchelina on a path to steady recovery of its biosystems.

Total grazing pressure from feral animals and domestic stock represents the greatest threat to biodiversity values within these bioregions. The de-stocking of Witchelina and ongoing management of feral herbivore populations, mainly goats, will over time create not only a significant environmental benefit, but importantly, a sustainable benefit.

Building these environmental gains will take several decades and this management responsibility represents a significant commitment by NFSA that will require considerable ongoing resources.

We are greatly encouraged by the interest shown by our neighbours and the local outback community and we look forward to a cooperative working relationship. We are also heartened by the interest shown in the project by the scientific community and we also thank Primary Industries & Resources SA (PIRSA), SA Chamber of Mines & Energy (SACOME), the Native Vegetation Council, the SA Arid Lands NRM Board and the SA Department for Environment and Heritage for their ongoing support.

The management of this conservation reserve will be guided by a management committee which will involve local indigenous interests, local communities and scientific and government representation. Witchelina is very much a new project for Nature Foundation SA but it is one we can approach with confidence given the support that we have been shown.

## Endnote

1. Tunbridge, D (1990). *The Story of the Flinders Ranges Mammals*. Kangaroo Press

**Photo:** Alex Nankivell

**Article Contributions from:** David Moyle AM, Jim McHugh, Alex Nankivell & Angela Hawdon

# **Scientific Expedition Group Inc.**

## **Annual General Meeting**

### **2010**

September 3rd at 7:00 pm

**We will be honoured by the presence of our Patron:**

**His Excellency Rear Admiral K.J. Scarce AO CSC RANR,  
Governor of South Australia**

**Speaker: Dr. David Paton AM**

***“The Natural History of the Coorong and Lower Lakes”***

Location:

**UNLEY CIVIC CENTRE**

**Oxford Terrace**

**181 Unley Rd.**

(Behind the Unley Town Hall)





SCIENTIFIC EXPEDITION GROUP

## EXPEDITION BIMBOWRIE 2010



You are invited to join us on this years Expedition to Bimbowrie Conservation Park near Olary in the eastern part of South Australia. This area is not only rich in mineral and geological interest but is home to some rarely seen birds (Plains Wanderer & Thick-billed Grass Wren), Yellow-footed Rock Wallaby colonies, and a variety of interesting and unusual plants (Purple-wood etc). The purpose of the Expedition is to conduct a comprehensive biodiversity survey of all the life forms of the area and will include vegetation, invertebrates, reptiles, mammals (including bats at night) and birds.

This is a great opportunity for people of all ages and expertise to observe and participate in professionally conducted field survey work with experienced biologists and natural historians.

You won't need any special scientific skills - just a love of exploring the bush and learning about its many inhabitants in an area not generally open to the public.

Dates:- The Expedition departs early on the morning of Sunday 10th. October 2010 and returns on Saturday 23rd. October.

Accommodation:- On this survey, we will be based at the Bimbowrie Shearer's Quarters with all the home comforts including showers. We will also be able to make use of the shearer's kitchen and dining room.

For those who prefer things a little tougher, there are plenty of camping spots.

Costs:- at present, total cost including food, transport and all activities is estimated to be about \$650.

To register your interest please phone Trent Porter on 82789078 A/H or e-mail [trentasaurus@bigpond.com](mailto:trentasaurus@bigpond.com)

Student concessions may be available depending on sponsorship.

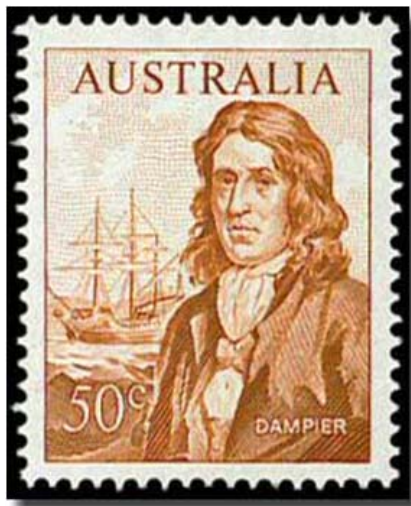
# Book Reviews

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## **A Pirate of Exquisite Mind: The Life of William Dampier: Explorer, Naturalist and Buccaneer**

Preston, Diana & Preston, Michael 2005,  
Corgi Books, London. 511 pages. ISBN –0 552 77210 0 (paperback)

When I was at school I collected first day covers. These were issued on the first day that a new stamp was released and one of my favourites was a set of famous early Australian explorers. This stamp series was originally issued in pounds, shillings



and pence and then reissued after the change to decimal currency. The William Dampier stamp (above) was one of this series and these stamps helped spark my lifelong interest in the exploits of the early European exploration of Australia.

So when I recently came across a biography of William Dampier entitled “A Pirate of Exquisite Mind” I jumped at the chance to learn more about this fascinating explorer. What a combination – explorer, naturalist and pirate all in one! This is a great book and it really made me wonder about why you would bother writing fiction when you can delve back into history for the most amazing stories of courage, endurance and determination.

This biography was written by the London couple Diana and Michael Preston. They are both Oxford trained historians who not only researched extensively to uncover the information to compile this biography but also set out to retrace some of Dampier’s more significant voyages so they could get a feel for the places he visited. This leads to a level of insight about a 300 year old explorer not normally part of biographies of this type.

William Dampier was born in Somerset in 1651 and is

believed to have died around 1715 in London. In between he squeezed in an incredible life as an explorer, travel writer, pirate, hydrographer, natural scientist and naval officer. In “The Life” the Prestons give voice to this wonderful journey through partitioning their book into five parts: The Adventurer; The Buccaneer; The Traveller; The Celebrity and The Ancient Mariner.

Dampier explored the world in a way that only a few people had prior and many today will never experience. He spent time in the West Indies, circumnavigated the world three times and was one of the first Europeans to visit the Australian mainland. This was some 70 years before Captain Cook “discovered” Australia. All the way through these travels Dampier kept wonderful diaries of events, cultures, rituals and language unknown in Europe at the time.

His legacy to the English language is immense with some 1000 words having their addition to the Oxford Dictionary attributed to Dampier. These include barbecue, chopstick and soy sauce. Also Dampier wrote extensively about the oceans he travelled across and added much to our knowledge of hydrography.

On returning from his extensive travels Dampier wrote up his travels in a series of influential books that had a lasting impact. This impact made an impression on many important scientists and writers of the early 18<sup>th</sup> century. These include Charles Darwin who carried Dampier’s works on his trip in the Beagle and Jonathan Swift, the author of Robinson Crusoe.

The Prestons have created a comprehensive and illuminative biography with some excellent maps and illustrations which bring to life the fascinating exploits of William Dampier. Samuel Taylor Coleridge identified his “Exquisite Mind” after reading his travel writings and this biography neatly addresses Dampier’s pirate days and his life “full of contradiction, contrast and moral ambiguity”.

**Conrad J. Denyer**  
**Flinders University**





# SEGments



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## SCIENTIFIC EXPEDITION GROUP

The Scientific Expedition Group (SEG) came into being at a public meeting on 21st August 1984. Members receive regular information on SEG activities and expeditions. Membership is open to any persons, family or organisation interested in the following aims:

- \* The promotion and running of expeditions of a scientific, cultural and adventurous nature.
- \* The furthering of knowledge, understanding and appreciation of the natural environment.
- \* Promotion of the values and philosophy of wilderness.
- \* Enabling people to learn the skills required for planning and running expeditions, and to develop sound field techniques.

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### APPLICATION FOR MEMBERSHIP AND MEMBERSHIP RENEWAL for 2011

#### SUBSCRIPTIONS

Adult member - - - - - \$30.00

Concession cards/ student----- \$15.00

Family membership - - - - - \$30.00

Corporatemembership - - - - - \$35.00

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Address . . . . .

. . . . .

Telephone (H) . . . . . (W) . . . . .

E-mail . . . . .

Details of scientific, cultural, and adventuring or other relevant skill or interests you may be prepared to share with the group:

. . . . .

Send a cheque ( Scientific Expedition Group Inc.) with a Photocopy of this page to

The Secretary

Scientific Expedition Group Inc.

P.O. Box 501

Unley S.A.

5061

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# Visit the Scientific Expedition Group Website



[http://www.communitywebs.org/  
ScientificExpeditionGroup/default.htm](http://www.communitywebs.org/ScientificExpeditionGroup/default.htm)



# ***SEGments***

