

Friends of Mound Springs Newsletter



President's Message

It has been another active year for FOMS with a full field programme and quite a lot of work outside of trips and meetings on a variety of environmental and natural resource management issues.

Our hard working Secretary and Newsletter Editor Simon Lewis has summarised these in the following pages. In particular, the implications of the new Water Allocation Plan for the Far North Prescribed Wells Area are critically important for mound springs conservation. FOMS will continue its involvement with this work and will maintain its active interest in plans the State Government has to repeal the current *Pastoral Land Management and Conservation Act* 1989 and replace it with a new Act that many believe will be a step backwards in terms of responsible stewardship of the pastoral lands – by area, around 40% of the State.

FOMS has now been in existence for 15 years and to mark this it was a pleasure to present our founding members with National Parks gold passes. The passes provide liberal concessions for entry to parks and the use of facilities within them such as campgrounds and it is nice to see the State Government recognising the work of our volunteers in this way.

FOMS itself has been blessed from day one by having at its core a wonderful group of hard working and gifted individuals whose combined efforts have enable us to achieve a great deal in a relatively short

while. The quality of this contribution was again on display in the course of our first field trip for the year, the bench installed on the Woolwash Walk at Strangways Springs highlighting the woodworking skills of Bruce Gotch and Alan Williams. Our thanks to them and all the others who participated in the year's field programme, including our friends from the Arabana Ranger Team.

And finally, one of the reasons FOMS is able to do as much as it does is because we have a good success rate in grant applications. This year we have received separate grant funding to reprint our interpretative brochures for Strangways and the Peake, and to prepare a new brochure for 2022 to mark the 150th anniversary of completion of the Overland Telegraph Line – the brochures will be placed at Strangways and the Peake, both part of the chain of repeater stations established for the OT Line when it began transmitting in 1872.

Colin Harris, President, FOMS

In this edition we report on:

- **FOMS' collaboration with the Arabana Ranger team and the extension of the Ranger Program;**
- **FOMS' second visit to springs in the Lake Frome Supergroup;**
- **The new Water Allocation Plan for the Far North Wells Prescribed Area;**
- **The proposed new Pastoral Lands legislation**

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Arabana Ranger Program Extended

The Arabana Ranger Program was initiated in late 2019 with funding through the Australian Government. As noted in our last newsletter of September 2020, FOMS and the Arabana Rangers have developed a very successful and productive working relationship. Despite the restrictions associated with COVID-19, FOMS and the Arabana Rangers collaborated in two field trips in 2020. As described in the following item, this continued with a major joint field trip in June 2021.

There have been some personnel changes with the Ranger team: Head Ranger Micheal Stuart departed

in late 2020 and, since then, Micheal's brother Sam has been the main contact. Sam has recently been appointed Acting Head Ranger.

The Arabana Ranger Program was initially funded to 30 June 2021. However, some very good news was announced as that date approached – the Program has been funded by the Australian Government for a further seven years. This will enable FOMS and the Arabana Rangers to build on the already solid working relationship and to consider a broad range of partnership projects for mound springs conservation.

FOMS Collaboration with Arabana Rangers Program continues

In early June 2021, FOMS undertook its major working bee for the year in collaboration with the Arabana Ranger team. Sixteen FOMS members participated along with Arabana Rangers Sam Stuart, Liz Sindely and Keegan Solomon. As summarised below, joint activities included works at Strangways Springs, Freeling Springs / Peake Overland Telegraph site and Levi Springs, and fence maintenance and vegetation monitoring at springs fenced by the State Environment agency in the 1980s.

At Strangways Springs and Freeling Springs (the site of the Peake Overland Telegraph (OT) ruins) the Arabana Rangers and FOMS volunteers maintained walking trails established by FOMS in 2011. A bench seat was also installed on one of the walks at Strangways in memory of late FOMS helper Bill Giles

and new bollards were installed at the Peake OT carpark to manage vehicle movement.



The bench installation team. Front (L to R): Bernice Cohen, Liz Sindely, Sherrie Gotch, Anne Williams. Rear: Ross Smith, Alan Williams, Sam Stuart, Keegan Solomon, Bruce Gotch. Beresford Hill is on the LH horizon



Newly installed seat at Strangways



New bollards installed by the Arabana Rangers and FOMS at the Peake Overland Telegraph carpark.

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The protection of priority mound springs from disturbance by stock and feral animals has been an important objective and the most recent success story has been the fencing of Levi Springs, on the Peake pastoral lease, by FOMS in 2019 – in consultation with the Arabana Aboriginal Corporation, the Department for Environment and Water, Arid Lands NRM Board and lessees Williams Cattle Company. In the June 2021 working bee, FOMS and the Arabana Rangers applied some finishing touches to the 2.3km of fencing and carried out vegetation monitoring at a number of photo-points established in 2019. The spring vegetation has recovered strongly following stock exclusion.

FOMS and the Arabana Rangers also combined forces to check a number of springs fenced by the State Environment agency in the 1980s on the Peake and Nilpinna pastoral leases. Minor fence maintenance and vegetation monitoring were undertaken. The contrast between protected springs and nearby unprotected spring wetlands is quite marked. The common reed, *Phragmites*, continues to be dominant in most of the protected springs although there are early signs that this dominance is diminishing after 30 plus years of stock exclusion.



Arabana Rangers Keegan Solomon and Sam Stuart working on the Levi Springs fence

The June 2021 springs working bee is a very good example of a productive collaboration aimed at improved conservation of mound springs – involving a mixture of research, monitoring and on-ground protective works. FOMS has appreciated the ongoing support of the SA Arid Lands Landscape Board and the Department for Environment and Water and it has been a privilege to be closely associated with the Arabana Ranger Program.



Coolabah spring at Levi Springs at time of fencing, July 2019



Coolabah spring, June 2021, showing extensive regrowth of sedges.

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FOMS revisits Lake Frome Supergroup Springs

In August 2021, seven Friends of Mound Springs (FOMS) members visited several mound springs on Murnpeowie and Moolawatana pastoral leases, ENE of Lyndhurst. The group visited Reedy Springs, Petermorra Springs and Public House Springs on Murnpeowie and Twelve Springs on Moolawatana. FOMS visited the same springs (and others) in July / August 2020 but, on that occasion, only a limited amount of time was spent at Public House Springs. The August 2021 visit was prompted largely by the wish to conduct more thorough surveys at Public House Springs.

Reedy Springs

As noted in our Spring 2020 newsletter, Reedy Springs comprises an enormous sand mound several hundred metres in diameter. While some upper sections of the mound have dried out, much of it comprises active wetlands with bore-drain sedge (*Cyperus laevigatus*) and small open pools. *C. laevigatus* is the dominant wetland plant species and four bulrush (*Typha*) vents were also noted. The springs appeared to be in similar condition to that observed in August 2020. In 2016, researchers noted quite heavy stock impacts on the spring wetlands but FOMS' observations indicate that the springs are currently in better condition with less cattle impact.

Petermorra Springs

Petermorra Springs comprise a number of vents in a drainage line. The spring vegetation largely comprises bore-drain sedge, *Cyperus laevigatus*. The endangered salt pipewort, *Eriocaulon carsonii*, was noted on one low spring mound. As noted in 2020, these springs have been heavily impacted by cattle. The mound with *Eriocaulon* has been heavily trampled and it is feasible that continued impacts of this scale will lead to the disappearance of *Eriocaulon* from this site.



Reedy Springs – open pool on main mound



Typha Spring at Reedy Springs



Single mound with *Eriocaulon* at Petermorra Springs, also showing cattle impact

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Public House Springs

Public House Springs comprise an extensive array of springs situated along two main drainage lines. The predominant spring vegetation was again bore-drain sedge, *Cyperus laevigatus* but many mounds contained mats of salt pipewort (*Eriocaulon carsonii*). More than 200 spring vents have been recorded at Public House Springs.

The salt pipewort, *Eriocaulon* is a particularly significant plant – it is rated as endangered and, in South Australia, has been recorded at just three spring locations – Public House / Petermorra Springs, Twelve Springs on Moolawatana and Hermit Hill / Finniss Springs on Finniss Springs.

FOMS’ observations at all three locations in recent years indicates that Public House Springs have possibly the largest populations of *Eriocaulon* of the three locations. Also occurring at the springs is one of the bladderworts, *Utricularia fenshami*, a carnivorous plant that captures small organisms by means of a bladder-like trap.

Public House Springs were showing more impacts from cattle than seen in 2020 – pugging and trampling. Small patches of reeds (*Phragmites*) were also noted.



Top left: Public House Springs, August 2021.



Top right: Public House Springs, July 2020, showing less evidence of stock (cattle) impact than in 2021

Right: Another section of Public House Springs, further up drainage line



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Twelve Springs

As with Petermorra and Public House Springs, Twelve Springs are of longstanding interest to FOMS because of the presence of the endangered plant, salt pipewort, *Eriocaulon carsonii*. As noted in 2020, the *Eriocaulon* is largely restricted to two main spring vents where small patches of *Phragmites* also occur. A particular feature on this trip was the mound spring bladderwort, *Utricularia fenshami*, which was flowering quite profusely in the vicinity of the two *Eriocaulon* spring vents. As well as the purple-flowered form seen in 2020, there was also a paler lilac-coloured form and a white-flowered form. The presence of *Eriocaulon* and *Utricularia* means that Twelve Springs are botanically of great interest and importance.

The condition of the springs was judged to be similar to that seen in 2020. Donkeys are continuing to have significant impact.

An interesting but concerning observation on the return journey was extensive dieback of both redgum vegetation along gullies and creek-lines and mallee vegetation on hill-slopes in the vicinity of Mt Fitton. This is undoubtedly the result of an extended dry period but does prompt speculation about climate change and its effects on native vegetation.



Twelve Springs.

Above left: general view over spring vents.

Above: White-flowered form of *Utricularia fenshami* growing amongst bore-drain sedge.

Left: Spring vent with *Phragmites* surrounded by a mat of *Eriocaulon carsonii*

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New Water Allocation Plan Introduced

As many FOMS members will be aware, South Australia has legislation giving protection to water resources where those resources are considered to be at risk from over-use. Prescribed water resource areas in the State include the Far North Prescribed Wells Area which corresponds very closely with the portion of the Great Artesian Basin (GAB) in South Australia. The use of groundwater in the Far North Prescribed Wells Area is controlled through conditions set out in the Water Allocation Plan (WAP) for the area. Water users are given an annual water allocation and there are also other conditions that are designed to protect water-dependent ecosystems such as mound springs.

The first WAP for the Far North Prescribed Wells Area was adopted by the State Environment Minister in 2009. This has recently been revised to incorporate significant changes, with this revision being adopted in early 2021.

The revised WAP employs the use of buffer zones around GAB and partially GAB fed springs (Zone A: up to 5 km from a spring, and Zone B: 5 to 50 km from a spring, Figure 2.1). Conditions and principles are included regulating the extraction of groundwater within these zones aimed at protecting springs from reduced water pressure.

A significant new provision in the revised WAP relates to what are described as *priority springs*. In effect, if a spring is classified as a *priority spring* there is a requirement on the relevant land manager (eg pastoralist) to ensure that stock watering does not result in damage to the spring flora and fauna or geological structure. No springs have yet been classified as *priority springs* as the Department for Environment and Water and SA Arid Lands Landscape Board are still working on the criteria to underpin this aspect of the program. FOMS personnel are liaising with agency officers on this as the implications are very significant.



The new Water Allocation Plan aims to prevent this type of stock damage to priority springs

FOMS Brochures Updated

As most members know, FOMS volunteers established self-guided walks at Strangways Springs and the Peake Overland Telegraph site / Freeling Springs in 2011. Brochures were prepared describing features along those walks as well as a general mound springs brochure, and these were installed at on-site brochure dispensers.

However, the last ten years have seen some changes along the walking trails. Some of the plants referred

to in the brochures have died and, as noted elsewhere in this newsletter, new infrastructure has been installed. Accordingly, the brochures have been updated and a further print-run has been organised. The revised brochures will be installed on-site in 2022.

FOMS is very grateful to the SA Arid Lands Landscape Board for providing the funding for the brochure re-print.

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Concerns raised about proposed Pastoral Lands Legislation

Late in 2020, the SA Government announced its intention to introduce new legislation to replace the *Pastoral Land Management and Conservation Act 1989*. This has generated substantial concern as it is seen by many to significantly reduce the environmental safeguards associated with pastoral land management.

FOMS has made a submission to the State Government outlining our concerns. In broad terms, FOMS expressed concern about an emphasis on economic growth in some of the State's most arid and fragile ecosystems. Rather than focussing on growth, the emphasis should be on sustaining native vegetation for the mutual benefit of both the pastoral industry and natural ecosystems. This comment is especially relevant to mound springs which are highly susceptible to impacts by stock and feral animals. There is a real risk that an excessive and unrealistic focus on economic growth will lead to increased pressure on mound springs.

More specifically, FOMS expressed concern about the following aspects of the proposed legislation:

- The proposed increase in duration of pastoral leases to up to 100 years (currently 42 years)

and the risks associated with this where there is poor land management;

- The proposal for land condition assessments to be conducted every 10 years by via remote sensing methodologies, with ground assessments only undertaken if remote sensing shows a land degradation problem. FOMS doubts whether remote sensing will be adequate to detect some of the more subtle changes associated with stock pressure, including changes to mound spring vegetation. FOMS recommended that there should be a greater commitment to, and resourcing of, a regular on-ground assessment program.
- The proposed removal of a stocking maximum is seen to be a high-risk strategy in these fragile arid zone ecosystems.
- The proposal that the pastoral board will contain a majority of pastoral lessees with no requirement for any member to have good knowledge of the ecology of pastoral lands. This is in stark contrast to the current act which prescribes an appropriate balance of knowledge and expertise.

Our current understanding is that the State Government will not be introducing the legislation before the next State election, due in March 2022.

Joining Friends of Mound Springs

If you wish to become a member of Friends of Mound Springs, please contact Treasurer Elaine Smyth – see contact details below. The membership subscription is \$20 per household per calendar year.

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