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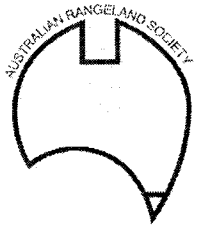

The Australian Rangeland Society

A CHANGING LANDSCAPE IN THE RANGELANDS – BIRDS AUSTRALIA GLUEPOT RESERVE

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ABSTRACT

Gluepot Reserve is Australia's largest community owned and managed conservation Reserve. Purchased by Birds Australia in July 1997, Gluepot Station was a marginal sheep property. By successfully combining the elements of biodiversity conservation through land management, scientific research and monitoring, environmental education and sustainable ecotourism, Gluepot Reserve has taken conservation management into a new era. The Reserve is providing an international 'model' to show that sustainable use of the landscape is both feasible and desirable. A highly successful program of this size and complexity is unique in Australian land management.

INTRODUCTION

Australia is one of the five most biodiverse nations in the world and yet we have one of the worst biodiversity extinction rates, having lost four frogs, 23 birds, 27 mammals and 61 species of flora since 1800. Presently there are a further 1595 species and 3000 ecological communities under threat. The major reasons for this disastrous species decline are: loss of habitat (primarily through vegetation clearance); changes in land use; introduction of feral animals and weeds and the resulting competition; altered fire regimes and a 'new player' on the scene, climate change. The loss of biodiversity has serious implications for the economy and society generally.

In an attempt to reverse biodiversity loss, Australia urgently needs to set aside larger areas of land for conservation. Presently only 10.52% of our land mass, or 81 million hectares, is in protected areas. Since 1997 the Australian Government, through the National Reserve System (NRS) has invested more than $80 million in the establishment of an additional 20 million hectares of protected areas. Partnerships have been the key to success of the NRS programme. Working with a wide range of partners, NRS helps them purchase, establish or maintain land for reserves. The emergence of non-government, non-profit land conservation bodies, such as the Australian Bush Heritage Fund, Birds Australia, Australian Wildlife Conservancy and Trust for Nature, has dramatically altered the manner in which protected lands are purchased and managed. Birds Australia Gluepot Reserve is an excellent example of 'the new wave' of protected areas, setting new standards in environmental protection and management.

GLUEPOT RESERVE

Birds Australia was one of the first non-government conservation organisations to purchase a 'landscape' size tract of land for conservation. Gluepot Station was established as a pastoral lease over 100 years ago, and was purchased by Birds Australia in July 1997 primarily to protect the critically endangered Black-eared Miner and other threatened species.

The Reserve is 54,000ha in size and is situated in the semi-arid zone, 64km from the River Murray in South Australia's Riverland. It is part of the largest block of intact mallee left in Australia and so the viability of threatened bird populations and other flora and fauna is high. The last major fire on Gluepot was over half a century ago in December 1950. Importantly,

some whole areas were not burnt at all during these widespread fires. Many of the trees within the mallee and Casuarina woodland are hundreds of years old with numerous hollows. Such old-growth habitat is essential for many species including threatened species. The Reserve is home to 18 nationally threatened species of birds, 53 species of reptiles and 12 species of bats, some of which are nationally threatened. There are few areas of the world that support such a concentration of threatened species.

The Reserve's overall management philosophy is to *"Effectively manage a large, internationally significant protected area for biodiversity conservation as an addition to Australia's National Reserve System and to develop a successful, financially independent program that will be a model for other community groups with small operating budgets (approximately $50,000)"*

Gluepot is operated and managed entirely by volunteers. A skilled 14 person volunteer Management Committee is responsible for all management issues. All management actions on Gluepot are driven by the Reserve's five year Management and Monitoring and Business Plans and the Reserve is manned on a continuous basis by Volunteer Rangers and Assistant Rangers.

Volunteers are the life-blood of the Reserve and come from all states of Australia and overseas. Since the Reserve was purchased in July 1997, to the end of 2005 volunteers had donated 157,175 hours and 991,420 km of mileage - that equates to an overall donation in time and mileage of $2.84 million. Over the past 6 years, the average for donated hours has been 21,790 per annum.

Incorporating the 'value-added' concept, Gluepot Reserve has developed by 'seamlessly' combining four crucial elements:

Biodiversity conservation through land management
The land management 'model' developed by Gluepot Reserve is now well recognised and both the German and Spanish governments and the larger Australian land conservation organisations have expressed interest in adopting the 'Gluepot Model' for the management of their larger reserves.

A number of important management initiatives have already had a dramatic effect on the vegetation and monitored biodiversity. The substantial reduction in grazing pressure, through the closure of all artificial watering sources, has led to a remarkable regeneration of vegetation across the Reserve. The last sheep were removed from Gluepot in April 1997 and following water point closures, goat numbers have reduced to insignificant levels while the kangaroo population appears to have fallen to a more 'natural' level. Re-vegetation of degraded dam sites, combined with a vigorous weed control program has been underway since 1999 and fox baiting is undertaken 3-4 times per year.

Populations of mammals, reptiles and birds are monitored at 75 sites and in 2001, a Western Pygmy Possum was located, the first sighting of this animal north of the River Murray since 1892.

The preservation and enhancement of the Gluepot mallee environment is a key element in the Reserve's Management & Monitoring Plan. Many of the management actions are dictated by the results of scientific research and monitoring projects undertaken, such as the Water Points PhD research in 1999-2001.

The entire 544 sq. km - with the exception of the homestead area - is under South Australian Heritage Agreement which ensures that the land will remain as a conservation reserve in perpetuity. The Reseve is also part of the National Estate and Australia's National Reserve System and is conserved as ***'critical habitat'*** under the EPBC Act, the first area of land on the Australian continent to be given such protection. Gluepot is a Land Partner of the Riverland Biosphere and thus operates under the guidelines of the UNESCO 'Man and the Biosphere Program'. A third of the Reserve has been set aside as 'core reference area' for research and conservation and is also used as a control area to gauge visitor impacts on other areas of the Reserve. The western two thirds is managed as a national park *conservation and recreation zone.* The management aims of these areas is to protect the natural environment and provide sustainable, dispersed recreation activities and small-scale recreation facilities without significant impact on natural processes.

Scientific Research and Monitoring:
The Reserve has been developed as 'A Quality Centre for Scientific Research', and presently attracts eleven universities and research institutes, a number of self-funded research scientists and Reserve personnel, all of whom conduct scientific projects on the Reserve. The development of the Reserve as a research centre has two objectives:

- To gain a better understanding of the mallee environment and in particular, threatened species, and doing so, increase awareness of the environmental issues surrounding this highly endangered area of Australian wilderness.
- To provide the opportunity for visitors to work alongside scientists in the field and in doing so, develop a better understanding of the eco systems and biodiversity that make up the mallee environment. Many of the research projects at Gluepot Reserve will help solve the problems of land degradation and loss of biodiversity and the educational component in this research is seen as a very important aspect of the work.

Five PhD research projects and a number of MSc and Honours projects have been conducted on the Reserve and these include research on the reptile population. The Reserve has been floristically mapped (Hyde, MK. 2001) and a project to install a permanent bat recording station at Gluepot is underway. This will be the first of its kind in Australia and will record and analyse bat calls 365 nights of the year.

Sustainable Ecotourism
Gluepot Reserve is one of the 'iconic' bird watching tourism destinations in Australia. To cater to the thousands of visitors, the Reserve has established four widely spaced camping grounds, each set in a prime birding area. 14 walking trails and one 'drive trail' have been developed and elevated bird watering troughs have been placed at five sites with high quality elevated bird hides being constructed, that overlook these troughs.

The Reserve has also provided visitors with a world-class visitor information centre funded by the South Australian Tourism Commission (SATC). Displays in the centre feature all aspects of the mallee environment including biodiversity, alternative energy, the weather, indigenous culture, research projects on the Reserve and other Riverland attractions. The Reserve has achieved Advanced Accreditation under the national Eco Certification Program and is fully accredited under the National Tourism Accreditation Program. To December 2005, Gluepot has received 27 major awards in the areas of science, conservation, the environment, ecotourism, the built environment and health. A 'Friends of Gluepot Reserve' was formed in February 2004, and has a membership of 100.

Environmental Education

In 2004, work commenced on the fourth 'element' of the Reserve's main objectives, 'environmental education' with the provision of high quality environmental two day courses and workshops led by 'professional' facilitators. Half of the Reserve shearing shed has been converted (by the Friends of Gluepot) into an Environmental Education Centre. The centre is composed of a large entrance/reception area, which contains a kitchen and dining room. Glass doors lead through to a large 'classroom' that retains many of the heritage values of the building, including the original shearing stands along one wall. These have been restored to original condition by volunteers and will remain (along with other heritage items) as a feature of the room. The centre is equipped with the latest audio-visual equipment and the first two courses ran in September 2005. There are 10 courses on offer during 2006.

CONCLUSION

To reverse the 'eventual path to extinction' of so many of our threatened species, scientists have determined that we urgently need to conserve at least another 22 million hectares of prime habitat across a wide range of ecosystems – this equates to almost three per cent of Australia's land mass. A number of conservation organisations and the NRS have taken up this challenge and are setting targets for land purchases. The Australian Bush Heritage Fund has set a 20 year target of seven million hectares (one per cent of Australia's land area) while the NRS is targeting to have examples of at least 80% of the number of existing regional ecosystems in each bioregion, represented in the NRS by 2010-2015.

A number of ecosystems across bioregions in the Rangelands are either not represented at all or are poorly represented in the few existing conservation reserves. As a result of changing economic circumstances, prolonged periods of drought and the likelihood of future issues relating to climate change, large tracts of land are becoming available for purchase throughout the Rangelands.

Gluepot Reserve, Bimbowrie Station Conservation Park and the recently purchased Boolcoomatta Station Reserve in the north east pastoral country, are excellent examples of efficiently managed conservation lands in the Rangelands. All are committed to working closely and in consultation with their neighbours and local and indigenous communities. All work under well developed management plans that contain performance and review indicators. These plans are usually developed in conjunction with public consultation.

The future of much of our threatened wildlife will depend to a large extent on how quickly we set aside and efficiently manage, the habitats required to sustain these species. The science has been done – we know what we have to do – all that is required is the will, the motivation and the commitment to make it happen.