

“Its Gnow or Never”: a case study of community action for malleefowl conservation in the wheatbelt area of Western Australia

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Concern for the decline of the malleefowl *Leipoa ocellata* Gould, 1840, in the Gnowangerup Shire, Western Australia, led to the formation, in August 1992, of the Malleefowl Preservation Group Inc. (MPG) which currently supports a membership in excess of 1500 individuals (January 1998). The group’s activities are carried out on a volunteer basis addressing projects such as annual field surveys and monitoring, community awareness, school education, feral animal eradication programs, re-establishment of native vegetation on farms and wildlife corridors.

Introduction

In Western Australia 70% of all Declared Rare Flora (flora declared under the West Australian Wildlife Conservation Act 1950-93 as “rare” or “threatened with extinction”) are found outside conservation reserves (Hopper et al., 1990). Similarly, many native fauna species are also found on private land (Kennedy, 1990, 1992; Hoser, 1991; Garnett 1992a, b).

The malleefowl *Leipoa ocellata* Gould, 1840, is classified as “vulnerable” under the Commonwealth Endangered Species Protection Act 1997 schedule as amended 1997, and “rare or likely to become extinct” (schedule 1) under the Western Australian Wildlife Conservation Act 1950-91.

Local concern for the decline in malleefowl led to the formation of the Malleefowl Preservation Group in August 1992 as a sub-group of the Gnowangerup Land Conservation District Committee. The MPG is based in Ongerup, a small farming community of 160 residents situated 400 kms southeast of Perth, or 170 kms northeast of Albany, Western Australia. This area is considered a successful wheat and sheep farming district. However, like many other Australian rural communities it has witnessed a declining human population and loss of community services. Reduction of remnant vegetation as a result of clearing and burning have created increased salinity, soil and wind erosion. In facing these issues, changes in farming practices have resulted in an increased responsibility by farmers for the protection of their environment and Australia’s biodiversity.

The Noongar (West Australian aboriginal) name for the malleefowl is “Gnow”. The malleefowl or “Gnow” has significant cultural and heritage values to our community in the Gnowangerup Shire. A life size carving of the malleefowl, our shire faunal emblem is displayed in the council office foyer. The malleefowl is also the central focus on our local promotional shire vehicle registration plate, school and Land Conservation District Committee emblems.

On Ground Activities

At the inaugural meeting of the MPG in 1992, it was widely accepted that the main threats to malleefowl survival were loss of habitat, introduced animals and weeds and lack of community awareness. In an effort to address these issues the following grass roots objectives have been identified and acted upon.

Community action plan

In 1994 the Community Action Plan for Malleefowl Conservation in the Gnowangerup, Ongerup and Borden areas (Western Australia) was developed with the assistance of the Threatened Species Network (WA) and funded by the Gordon Reid Foundation for Conservation. This document provided a starting point and guideline for MPG members and regional community groups to commence a coordinated conservation strategy. In addition, a postal drop information pamphlet, "Can the Farmer and the Malleefowl be Friends" was distributed to local areas to increase awareness, advertise the unique qualities of the malleefowl and suggest ways the community could assist in malleefowl conservation on private land.

Field study surveys

The decline and local extinction of malleefowl populations throughout the wheat-belt areas of Western Australia, scant information on Western Australian malleefowl populations and habitat requirements, and the need to record population changes has resulted in the establishment of MPG monitoring surveys in the Gnowangerup and Jerramungup shires. Five field study sites on both private and reserve land have been identified and mapped since 1993 (fig. 1). These sites range from small isolated private remnants to 300 ha sites in large reserves exceeding 4,000 ha. Monitoring of malleefowl mounds, topography and soil type, fox baiting, corridor establishment, associated vegetation studies, and invertebrate and mammal trapping surveys have been the focus of our attention. Surveys of known malleefowl mounds in three study areas in the Gnowangerup Shire have provided documentation and monitoring of nine breeding malleefowl pairs. The vulnerability of an isolated high density remnant supporting eight active malleefowl mounds (representing 88% of the Gnowangerup Shire's monitored malleefowl breeding activity) is of great concern to the local community.

The logistical and coordination requirements of malleefowl mound surveys in dense remnant vegetation thickets requires volunteer dedication and determination. During the last four years an estimated 150 volunteers from many parts of the state have assisted in surveys covering a total area of 1,000 ha. The physical effort of systematically searching thick and often inhospitable remnant vegetation has been described in many ways by volunteers via the MPG "Malleefowl Matter" newsletter.

Loss of habitat

The loss of habitat and remnant vegetation decline have resulted in local extinctions of the malleefowl (Frith, 1962). The rapid clearing and burning of remnant vegetation for cereal grain and sheep farming in the mallee areas of southern Australia has contributed to land degradation resulting in wind and water erosion and increasing

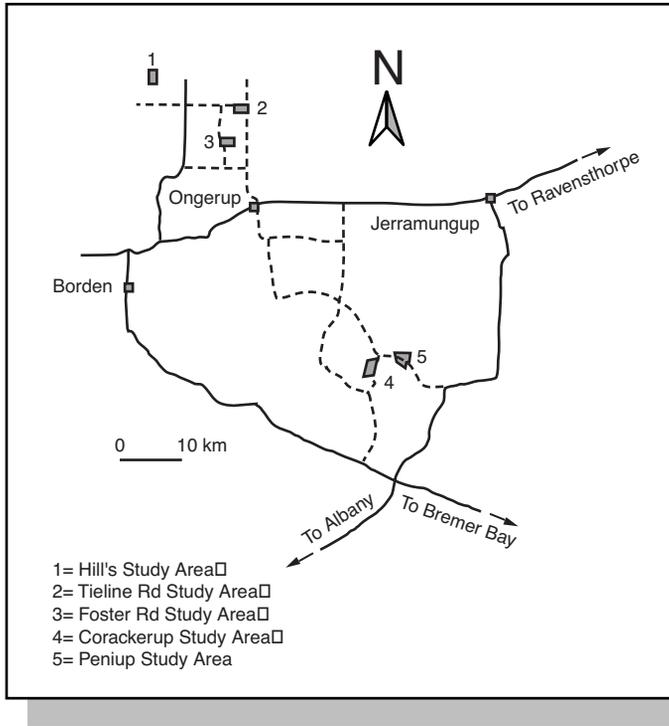


Fig. 1: Location of malleefowl study areas in the Gnowangerup and Jerramungup shires.

salinity. This loss of vegetation has now been recognized as a major contributor to increased salinity threatening the sustainability of remaining remnant vegetation. In addition the introduction of goats (*Capra hircus* Linnaeus, 1758), rabbits (*Oryctolagus cuniculus* (Linnaeus, 1758)), environmental weeds and farm animals on unfenced remnants is contributing to vegetation decline.

Fires

Wide scale fires are considered a serious threat to malleefowl, destroying their habitat and increasing their vulnerability to predation by foxes (*Vulpes vulpes* (Linnaeus, 1758)), cats (*Felis catus* Linnaeus, 1758), and raptors (Tarr, 1965; Cowley et al., 1969; Benshemesh, 1990, 1992). The burning of habitat also results in loss of leaf litter required for mound building. This creates unsuitable breeding habitat in addition to temporary soil and wind erosion until the vegetation has regenerated sufficiently to provide ground cover and wind protection. Bush fires were lit as part of land clearing practices and large fires were experienced frequently in this and many west Australian shires during the period 1930-1955 when the area was "opened up" for farming settlers. Today fire breaks along private farming property boundary fences are now law in the Gnowangerup Shire as a means of protecting private farming properties in the heat of the Australian summers. The fire breaks are either ploughed or sprayed and provide "burning back" opportunities as a method of fire control. The

MPG encourages farmers to provide additional fire breaks around remnant vegetation as a means of increasing malleefowl protection.

Corridors for wildlife

The vulnerability of a high density breeding population of five to six active mounds per square km in a small 138 ha isolated privately owned remnant vegetation area was recognised by MPG members and farmers. The significance of this breeding population, the lack of connecting corridors and the sighting of malleefowl utilizing a degraded unfenced corridor led to the erection of 21 kms of fencing as a "corridor for wildlife" in 1996 (fig. 2). This project, coordinated by members of the MPG, was carried out with the assistance of seven landholders who allocated part of their land for the corridor and the Australian Trust for Conservation Volunteers (ATCV). Fencing material and volunteer costs were funded by the Gordon Reid Foundation for Conservation. The aim of this project was to provide a link to nearby reserves for malleefowl chick migration. Where possible existing paddock boundary vegetation was utilized and local species of trees, shrubs and understory were planted in re-vegetation sections. Current funding guidelines to landholders for remnant vegetation fencing has resulted in a focus of riparian and existing saline areas. This project differs considerably in that it addresses a specific corridor connection between major reserves and in doing so utilizes remnant vegetation within that area. Monitoring of bird activities, growth and survival of planted vegetation and records of malleefowl sightings have commenced as part of a long term survey of the effectiveness of a proposed "Corridor for Wildlife" network.

Remnant vegetation decline

The loss of large areas of remnant vegetation in the wheatbelt areas of Australia is attributed to the local extinction of malleefowl (Frith, 1962). Further degradation of existing bushland through fires, stock grazing, salinity and the introduction of weeds and animals has resulted in the decline of remnant vegetation in the Gnowangerup Shire. In recent years, one of the most significant protective actions farmers have made for nature conservation is the fencing of remnant areas on private property through Land Conservation District Committee coordination and subsidized funding projects.

Road verges

The mapping of existing roadside vegetation, weed infestation and corridor values has been documented in a recent survey completed by the MPG in June 1997 in the Gnowangerup Shire. This was a joint MPG, Roadside Conservation Committee and Gnowangerup Shire project involving 25 local volunteers. The information collected will be made available to the Gnowangerup Shire council and community to assist in roadside vegetation protection, management, enhancement and long term planning for improved road corridors.

Introduced threats to malleefowl populations

The malleefowl's ground dwelling lifestyle creates many predator opportunities from birds of prey to introduced foxes and cats. Research in the wheatbelt of New

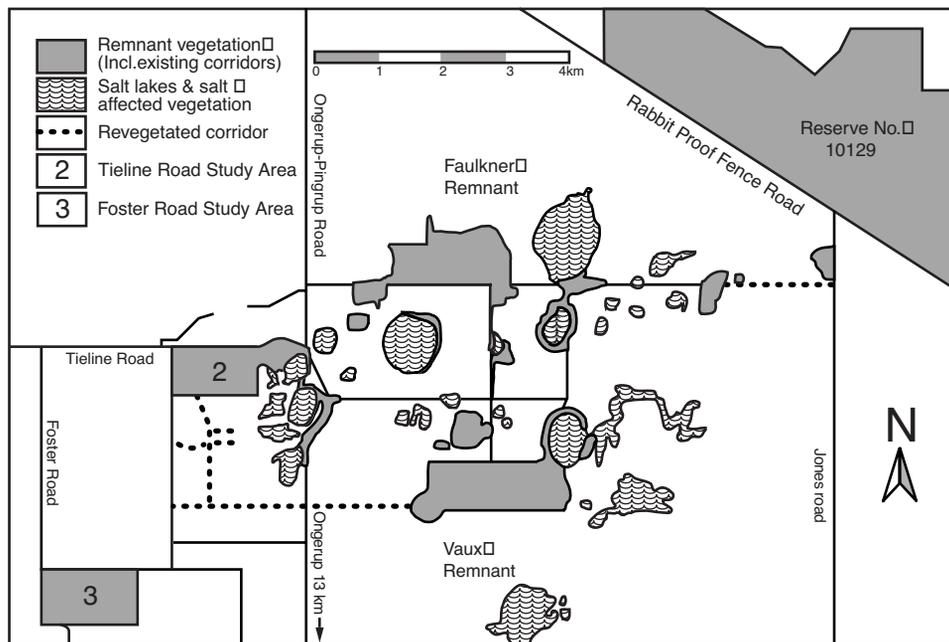


Fig. 2: Location of wildlife corridors near the Tieline and Foster Road study areas.

South Wales by Priddel and Wheeler (1994) revealed high mortality of released captive-raised malleefowl. 31 malleefowl chicks ranging in age from 8 to 184 days old were released into a 558 ha mallee remnant area. None survived longer than 107 days with 55-68% predated by introduced animals, principally foxes (Priddel & Wheeler, 1994).

Kitless kat klinikks

In 1995 the death of a malleefowl chick was reported to the MPG by a local farmer. The loss was attributed directly to the family cat. The documented cat predation of malleefowl chicks (Priddel & Wheeler, 1994) along with this local example gave rise to an increased awareness in cat predation of native fauna. In March 1996 a free "Kitless Kat Klinik" was coordinated by members of the MPG resulting in 26 cat sterilizations. The aim of the project was to encourage responsible cat ownership as part of a Community Awareness program for malleefowl conservation. Community members utilizing the Kitless Kat Klinik opportunity were each given a "Thank you for being a responsible cat owner" folder containing information pamphlets on cat biology, breeding habits, known predation of wildlife and "cat care" suggestions to assist in the protection of native species.

Feral animal baiting and monitoring

The Gnowangerup and Jerramungup Land Conservation District Committees have introduced twice yearly fox and rabbit baiting programs on private land. The MPG encourages the continuation of such baiting programs and where possible pro-

vides incentives and assistance for increased landholder participation. The use of 1080 poison (sodium monofluoroacetate) as a method of fox and rabbit control has been the preferred baiting choice. This selection has resulted from a) recognition of the wide range of tolerance to 1080 by many Western Australian native fauna including the malleefowl and b) the detoxification of 1080 by soil microorganisms.

In May 1995, members of the MPG attended a "1080 Authorisation Course for CALM Volunteer Fox Baiting" conducted by the Agricultural Protection Board (APB) and the Department of Conservation and Land Management (CALM). This program has been continued on a regular basis to provide MPG members with updated information and authorization to enable the implementation of a 1080 quarterly fox baiting and monitoring program in a CALM reserve. A total of 215 permanent bait stations have been established and numbered at 200 metre intervals throughout this reserve including a 300 ha malleefowl breeding monitoring site. Depending on seasonal conditions, dried meat baits or injected domestic hen eggs have been distributed on a three monthly bases as a buried bait. In 1996 CALM introduced additional aerial fox baiting to this reserve as part of operation "Western Shield". The collation of MPG bait station survey results will continue on a quarterly baiting basis with the assistance of Resource Protection Program staff (formally known as the APB) and will provide valuable monitoring data over a 4,334 ha remnant vegetation area.

Impact of rabbit calicivirus (RCV) on malleefowl populations

At the time of writing (January 1998) the general feeling from WA farmers as to the effect of RCV to reduce rabbit populations has been one of disappointment. The rabbit is seen as a direct threat to malleefowl populations through competition for food and habitat destruction. Ongoing rabbit eradication, in conjunction with fox controls, must continue to be given a high priority by landholders to address land degradation, threats to native species, remnant vegetation decline, success of revegetation projects and improved nature conservation.

Community awareness

Promotion of nature conservation on farms in addressing the threats to our "flagship" species, the malleefowl and subsequent projects undertaken by members of the Malleefowl Preservation Group Inc are an essential element of the group's Community Action Plan implemented in 1993. The purchase of a portable display board, video footage and malleefowl taxidermy specimens have resulted in a professional and effective community awareness program conducted on a state wide basis. The response has been in a large membership and support network kept fully informed of the group activities in the regular publication of the group's newsletter, "Malleefowl Matter". In addition, a great deal of voluntary effort has been directed to the School Education Program resulting in 45 visits/learning sessions to Western Australian schools for the period 1993-1997.

Malleefowl merchandise

As a means of increasing community awareness and providing revenue fund raising opportunities, the MPG have promoted the sale of t-shirts, jumpers, postcards

and children's books. This opportunity has also been offered to similar groups such as the North Central Malleefowl Preservation Group (based in Wubin/Dalwallinue).

Community conservation trust fund

In 1996 the MPG became a Registered Environmental Organization enabling the formation of a trust fund as a tax deductible incentive for donations of \$2 and over towards statewide malleefowl conservation.

The First Five Years

The history of the MPG has been one of research, conservation and increased awareness. The "First Five Years" report currently in final draft stage is a detailed and documented record of MPG research, methodology and community projects. It details the successes and failures, recommendations and future plans of a rural based community group. The aim of this publication is to make available information for members and other interested community groups as a guide to rural conservation as well as to provide encouragement for agency and community joint efforts as a means to create increased participation in nature conservation.

Conclusion

The malleefowl has proved an effective flagship species as a community awareness tool. This highly respected megapode species has given the community of the Gnowangerup Shire a sense of ownership and has created expanding incentives for additional nature conservation in the low rainfall wheatbelt areas of Western Australia. The actions described in this paper have demonstrated the potential of a community-driven initiative. The projects undertaken by the MPG have been carried out on a 90% volunteer basis providing a model for an effective and very efficient use of government funding and sponsorship support.

Conserving the malleefowl, other threatened species and ecological communities is an integral and essential part of retaining our biological diversity. Conservation involves everyone. The MPG has shown how a community and agencies can work together towards a common goal. Landholders and community groups have much to offer and much to gain by becoming long term caretakers of the malleefowl and its environment.

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