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DEPARTMENT OF ENVIRONMENT AND CONSERVATION

WATSNU

The newsletter of the

Western Australian Threatened Species and Communities Unit

Department of Conservation and Land Management

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EDITOR'S NOTE

Since our first issue was published we have received many positive comments and I wish to thank everyone who has passed on their responses.

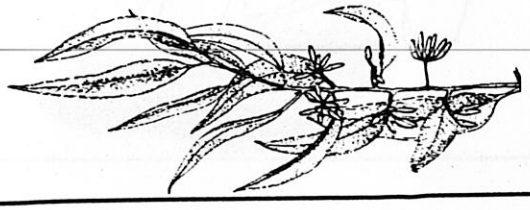
Our second issue mainly encompasses summaries of the annual reports of recovery teams for species and communities.

There is an article from Jean-Paul Orsini, Coordinator of the WA Threatened Species Network.

A very interesting article, which has been written by John Blyth, is about the enigmatic Night Parrot.

In line with WATSCU policy of keeping in touch with the districts and regions of CALM, a visit to the south west region has just been completed by Andrew, Andrew and John. They visited the CALM offices in Bunbury, Manjimup, Albany, Katanning and Narrogin, during which a range of matters were discussed. Andrew Burbidge also visited Karratha.

WATSCU will be holding a conference for government agency staff on the 22 and 23 March. Those who will be attending will be WATSCU members, WATSCU Associates, TSC Management Committee members, Chairs of Recovery Teams and appropriate CALM Region and District staff.



RECOVERY TEAM 1993 REPORTS

The following are the summaries of Annual Reports of Recovery Teams. These are submitted to CALM's Corporate Executive and, where Commonwealth funding is provided, to the Australian Nature Conservation Agency (ANCA).

All the Reports show considerable progress in successfully implementing recovery and research actions and we wish to thank ANCA for the support they have given us.

Matchstick Banksia

Funding from the Commonwealth Government's Endangered Species Program was received during 1993, allowing the commencement of implementation of the Recovery Plan for the Matchstick Banksia (*Banksia cuneata*) during the 1993-94 financial year.

The inaugural Recovery Team meeting was held on 30 November 1993. Its aim was to introduce team members to the plan and to decide actions for 1994.

Funding for 1993-94 is $65 000.00 and is planned to be allocated to the following actions:

1. Establish a Recovery team.
2. Acquire land for conservation of *B. cuneata*.
3. Erect rabbit proof fencing on all private property locations.
4. Implement rabbit control programs within all populations.
5. Control salinity on populations at threat.
6. Improve the habitat of populations.
7. Collect seed for permanent storage and seedling planting.
8. Monitor populations and survey populations.
9. Re-introduce seedlings onto private property adjacent to extant road verge population.

Wongan Triggerplant

Negotiations between CALM and the Water Authority over the future tenure and management of Reserve 16418 commenced in August, 1993 and will continue in 1994. The rehabilitation of the gravel pit on Reserve 16418, which will now commence independently of the tenure negotiations, should be completed by Spring 1994.

Surveys undertaken to locate new populations of *Stylidium coroniforme* were unsuccessful. Surveys of known populations showed that all populations had suffered a decline, with the greatest losses occurring in populations 1 and 5.

Seeds collected in 1993 from the five populations will be placed into long term storage at the Threatened Flora Seed Centre. Seeds collected in 1992 were used to research mechanisms that trigger natural regeneration.

Laboratory and field trials determined that seed dormancy appears to be longer than previously suspected. Laboratory trials using gibberellic acid were most successful in breaking dormancy followed by such methods as nicking, bleaching and potassium nitrate treatment. Germination rates for seeds treated by these methods improved when they were exposed to an extended period of higher temperature followed by a temperature reduction. These results suggest that a combination of physical and chemical factors, such as soil disturbance, and ageing and weathering, may explain the patterns of germination observed in the wild.

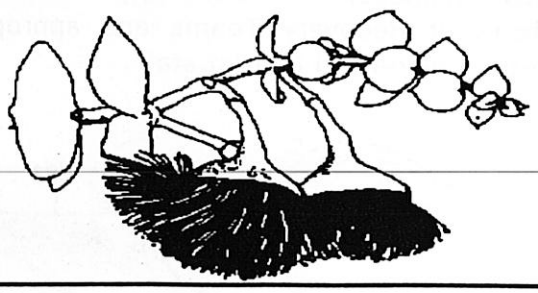
An information brochure on the species and recovery plan is in preparation. A rare and threatened flora garden is to be established in the grounds of the Wongan-Ballidu Shire offices in 1994, following a site survey undertaken by Kings Park and Botanic Gardens in 1993.

Rose Mallee

The Rose Mallee (*Eucalyptus rhodantha*) Recovery Plan is on target with the population enhancement phase due to commence in winter 1994. Some 1600 seedlings are being propagated at the RGC Mineral Sands Limited Nursery at Eneabba for planting into stands at Watheroo and Three Springs. Acquisition of land at Watheroo supporting the largest pure stands of this species is nearly finalised and rabbit-proof fencing will be installed around the area once the boundaries have been surveyed. Degraded areas have been selected for rehabilitation and weed control strategies formulated. Buffers will be installed along vulnerable boundaries and associated species that support pollinators will be introduced by direct seeding. At Three Springs the gravel pit in the centre of one of the populations has been landscaped in preparation for seedling introduction.

Public awareness of the efforts to conserve the Rose Mallee has been increased with schools in the Three Springs - Watheroo area supplied with seedlings for planting on Arbor Day. Articles on the Recovery Plan have been published in the local newspaper the Central Districts Gazette, CALM News and the WATSCU Newsletter.

The conservation status of this species was significantly improved when five new populations, with a total of more than 300 plants, were reported by local farmer and Recovery Team member Bob Scott. The populations occur on private property north-east of the other Watheroo stands over a range of about 5 km. The largest population is in an extensive area of uncleared bushland while the four smaller populations occur nearby in remnant vegetation along paddock boundaries. Presumed hybrids between the Rose Mallee and the Pear-fruited Mallee (*Eucalyptus pyriformis*) were found in the populations, lending support to the hypothesis that *E. rhodantha* var. *petiolaris* is a hybrid.



Chuditch

This report covers the second year of implementation of the Chuditch recovery plan. Financial support continued from ANCA's Endangered Species Program and the World Wide Fund for Nature (utilising a grant from Alcoa) and good progress has been made on several actions. The trial into the effects of fox baiting on Chuditch in the jarrah forest has been completed, demonstrating that fox control enhances the conservation of Chuditch, as well as other forest mammals. In fox baited areas, population densities approximately three times that of unbaited forest have been achieved for Chuditch. It will now be possible to commence broadscale fox control in the jarrah forest. The translocation of Chuditch to Julimar Conservation Park has also been successful with most animals surviving, establishing home range areas within six weeks and breeding in the first year. There was some evidence of cat predation at Julimar and this may be a potential problem for translocations of Chuditch to semi arid areas. CALM is now proceeding with its plans to reconstruct the mammal fauna of this area with re-introductions of Brushtail Possums, Woylie and Quenda. The captive breeding program was successful in 1993 with 20 young born to five females. These will be used for a translocation to the Bindoon military training area, north of Julimar. The recovery plan was revised during 1993 to reflect changes to the recovery criteria regarding the necessity to monitor semi arid populations. Changes to actions relating to the site of the first translocation, assessing the impact of prescribed burning, monitoring in semi arid areas and captive breeding were also made.

Orange-bellied and White-bellied Frogs

Implementation of the Recovery Plan for the Orange-bellied (*Geocrinia vitellina*) and White-bellied (*G. alba*) Frogs has been proceeding for two years and through the efforts of the Recovery Team considerable progress has been made on a number actions identified in the plan.

Thorough surveys of the creeklines were completed in 1993 and resulted in 3 new populations of *G. alba* being discovered. Further surveys for *G. vitellina* reinforced the very restricted distribution of this species with no new populations being recorded.

Significant gains into our understanding of the ecology and biology of these frogs were achieved during the year.

Work towards achieving the land tenure changes proposed in the plan was undertaken with a submission being presented to CALM's Corporate Executive. The outcome of this should be known early in 1994 and if approved will make a substantial contribution towards securing the long term future of habitat for these species.

However, without doubt the most notable achievement during 1993 was the almost universal support the Recovery Team and the objectives of the Recovery Plan received from landholders with populations of *G. alba* on their properties. Whilst all had been cooperative in the past and permitted recovery team members access for survey and monitoring activities, the team had some hesitation about approaching landholders to fence off the sections of their creeklines containing frogs, thus preventing their stock from grazing these areas. Happily, I am able to report that as at December 1993, approx 90% of landholders have given initial agreement to permitting conservation fences to be established on their land to protect the frogs and their habitats. Work on pegging appropriate alignments and construction of the fences will be a major goal in 1994.

Noisy Scrub-bird

During 1993 a Draft Management Plan for Two Peoples Bay Nature Reserve was prepared and released for public comment. When the public submissions to the plan have been completed a revised plan will be prepared. This is expected to be ready for consideration by Corporate Executive in mid-1993 and will be presented together with an updated Noisy Scrub-bird Recovery Plan. Commonwealth funding for the Noisy Scrub-bird Recovery Program was sought in 1992 on the basis of the Draft Recovery Plan. This application was successful and funds were available in 1993 to augment those available from CALM. A large part of these funds allowed for employment of a Technical Officer for the Noisy Scrub-bird program.

Two territorial male scrub-birds were found to have persisted on Bald Island for 12 months after the initial transfer and two more males and two females from the Mt Gardner sub-population were

released on the island in June and July 1993. Additional males were also added to the Mermaid release area. In the Mt Taylor area, where scrub-birds had been released between 1990 and 1992, nine singing males were present possibly representing the first sign of local breeding in that area. Altogether, the proportion of singing male scrub-birds derived from translocated birds reached 42.8% in 1993.

Monitoring of all the singing male scrub-birds in the management zone between Oyster Harbour and Cheyne Beach resulted in a total count of 397. The overall population can be divided into five subpopulations. The two largest subpopulations (Mt Gardner and Mt Manypeaks) each contained more than 150 singing males in 1993. A very large increase in singing males was found at Mt Manypeaks and birds from that area have begun to spread up the Waychinicup River. Monitoring of the parent population revealed no apparent effect from the removal of birds for translocation.

In the Lakes area of Two Peoples Bay Nature Reserve where a decline in numbers has been taking place since 1988 the number of singing males was only slightly less than in the previous year. This suggests the possibility that the scrub-birds in this area may soon begin to recover. Recolonisation of some areas was observed but other areas, previously spared were depleted. Winter rainfall in 1993 was not significantly greater than average and produced no flooding of the lake margin habitat.

Numbat

A Numbat Recovery Team was established in 1993 to oversee the writing and implementation of a Recovery Plan for the Numbat. The writing of the Recovery Plan is well under way, and will be finished early in 1994. The Numbat is now limited to two surviving populations (Dryandra and Perup) and five re-introduced populations in various stages of establishment. The Dryandra Numbat population has undergone a decline in 1993 but densities still exceed those found in the early stages of the translocation program. Research will be carried out in 1994 to establish the cause of this decline. Dryandra was again used as a source for translocation in 1993. The Perup population was surveyed for the first time in 1993, and sighting reports indicate that it is expanding. The re-introduced Boyagin population appears now to be self-sustaining, and sighting rates there are now of the same order as those at Dryandra. Numbats were translocated to Karroun Hill, Batalling and Yookamurra (S.A.) in 1993. These translocation projects are still at the stage where success can only be measured by the survival of radio-collared animals. Research into the genetics of the two surviving populations has commenced. Captive breeding at Perth Zoo has been successful this year for the first time and has bolstered the colony there.

Woylie

This is the second annual report of the Recovery Team established to oversee the implementation of a plan to recover woylies in South Australia and Western Australia. The team met twice, in July and in December.

There have been some changes to the team: Keith Morris has joined it as he will be working with woylies in three areas, Stephanie Maxwell has replaced Sally Stephens as ANCA's representative (although Sally attended both 1993 meetings) and CALM's Swan Region has been invited to nominate a member because translocations are planned into sites within that Region.

During 1993 a second edition of the plan has been written. The reasons for the revision as well as a summary of the plan objectives, recovery criteria, required actions and costs are presented in this report.

The objective of the first plan was "Down listing to vulnerable within 10 years...." The second edition has a life of two years from January 1994. The team intends to review the status of the woylie in December 1995, and hopes that by then it can recommend down-listing.

Some of the actions during 1993 and the application for funding for 1994 were based on elements of the second edition. ANCA has agreed to the new funding requirements for 1994.

In Western Australia known woylie populations have thrived. Preparation has been made to research the effects of various forest management practices on the species so that prescriptions can

be varied, if necessary, to allow recovery of the species across all land tenure types. This research will commence in early 1994. This is particularly pertinent to CALM plans to commence fox control (Operation Foxglove) over much of the northern Jarrah forest. Preparation has also been made for translocation of woylies to Julimar Conservation Park.

In South Australia, populations were monitored (and blood samples taken for genetic analysis) on the four islands inhabited by woylies. All were thriving although two populations on islands with carrying capacities of 20 to 30 animals have a doubtful long-term viability. The Yookamurra population is being monitored by Sanctuary staff with the help of SADELM.

Preparations are more or less complete for the translocation of WA woylies to the mainland at Venus Bay peninsula, South Australia, and more WA animals will be introduced to the two large island populations if the results of genetic analysis indicate a high loss of variability compared to wild WA stocks (all SA animals originated from WA and have been through bottle-necks)

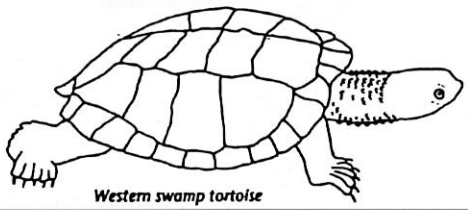
Shark Bay Mouse

This report covers progress with the implementation of the Shark Bay Mouse Recovery Plan during 1993. Phase one of the recovery plan (research into the population size, distribution and biology of the Shark Bay Mouse) has been carried out successfully. In the past year modifications have been made to the Shark Bay Mouse Recovery Plan resulting in the translocation of Shark Bay Mice to Doole Island (now phase two of the Recovery Plan) rather than Heirisson Prong (now phase three) as stated in the original recovery plan. Two translocations took place to Doole Island; one in June (27 mice - 14 males and 13 females) and another in August (16 mice - 7 males and 9 females). Twelve animals from the first release and six from the second were fitted with radio collars for monitoring post release. The mice have occupied the entire 350 ha island and some breeding has taken place, resulting in at least 16 new animals. Some mortality occurred; two mice are thought to have been taken by birds of prey, one female (with four young) was killed when their burrow collapsed and one animal from the second translocation died prior to release. The presence of *Varanus gouldi* and *Morelia stimsoni* on Doole Island was confirmed; these are potential natural predators of Shark Bay mice. This translocation will be continue to be monitored for one year before translocations to the mainland are undertaken.

Western Swamp Tortoise

Work on the Western Swamp Tortoise Recovery Plan proceeded satisfactorily during 1993. The Recovery Plan was formally approved by CALM's Corporate Executive and the National Parks and Nature Conservation Authority and is to be forwarded to the Minister for the Environment for his approval in 1994.
Highlights during 1993 include:

- The Ellen Brook Nature Reserve population was studied intensively. Twenty four animals were captured, a record for a single year. Population estimates suggest that numbers are slowly increasing in the reserve, with a total of between 30 and 35 being likely.
- Two nests located at the end of 1992 were monitored with temperature and moisture probes. Each nests produced one hatchling. A further 10 hatchlings were located from other nests.
- A University of Western Australia Honours student, Ms Juliet King, studied tortoise temperature selection during winter. She found that the time animals spent in warm microclimates was positively correlated to the weekly rate of increase of their condition index.
- During the spring of 1993, six females and four males were tracked. All six females with radio transmitters produced eggs. A seventh female was found just after completing her nest. This leaves only one adult female at Ellen Brook Nature Reserve for which no data on eggs could be obtained in 1993. Five of the seven females produced clutches of three eggs, one a clutch of four and one a clutch of two eggs.



Western swamp tortoise

- In late 1992, 33 eggs were placed in the Zoo's incubators, including one from Ellen Brook Nature Reserve. Of these, four embryos died before hatching and one egg was infertile. Twenty eight hatchlings were produced.
- Half of the fox-proof fence around Twin Swamps Nature Reserve was constructed, with funding from ANCA's Feral Pests Program.
- The WA Water Authority constructed a bore and installed a pump and pipelines to enable supplementation of two swamps at Twin Swamps Nature Reserve. Because groundwater contains more dissolved salts than rain water, a project was designed and implemented to monitor swamp productivity, especialy of the aquatic invertebrates that are eaten by the tortoises.

Lake Toolibin

Given that the Recovery Plan was only completed in November 1992, and that there is an inevitable "start up" delay, progress has been satisfactory. A major difficulty with implementation has been the unusualy long period for which the Lake has been inundated.

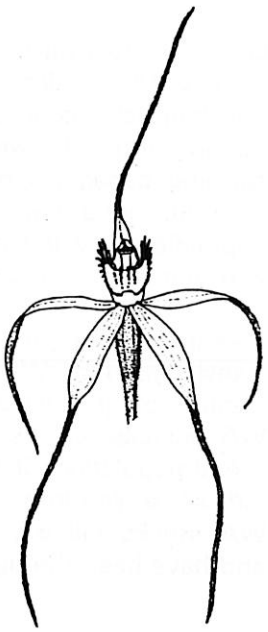
The Recovery Plan has proved to be an invaluable basis for action, and has helped to improve coordination of recovery tasks. Both the Recovery Team and Technical Advisory Group have proved very successful in their roles, and together they have been a spur to effective action.

With few exceptions, progress has been made in all areas identified for action in 1993. However, the level of task achievement outlined in the Recovery Pan is not achievable given current resources. These issues will be addressed in more detail during 1994.

WATSCU PERSONALITIES

ANDREW BROWN

The second in our series on our WATSCU staff is Andrew Brown who is a native orchid devotee and the Botanist of our Unit.



Born in England in 1951 Andrew had just turned one year old when his parents emigrated to Australia. Settling at Kelmscott (a country town in 1952) Andrew and his family spent their early years in what was predominantly a small rural community. Large areas of uncleared bushland occurred nearby and as he lead an active outdoor life Andrew spent many happy hours exploring these areas. It was not long before he began to take notice of the native birds, plants and animals. Even in these early days of his life he was fascinated by the seasonal changes in the vegetation, noting the flowering of different plant species as the seasons came and went. This led him to gain an appreciation of the native flora and it was at this time that he began to notice Western Australia's dainty terrestrial orchids. In his final years at primary school Andrew was actively encouraged by his headmaster to take a more focussed interest in the natural sciences and on being shown a copy of *Orchids of the West* by Rica Erickson he became hooked for life on these fascinating plants.

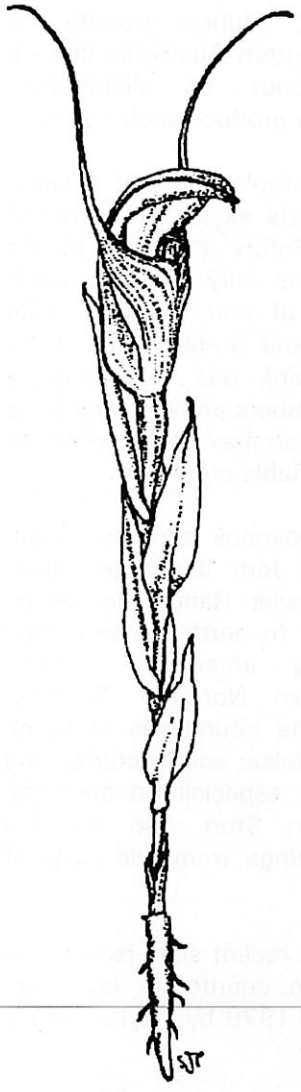
Some years later Andrew met two other orchid enthusiasts, Ron Oliver and Noel Hoffman, and they together formulated the first plans for producing a comprehensive book on the native orchids of Western Australia. Although Ron dropped out due to work commitments Noel and Andrew continued with the proposal.

Although Andrew spent the early years of his working life as a painter, in what was then the Public Works Department, he never lost his love of the Western Australian flora and at every opportunity got out into the bush. He often thought about getting a job which would allow him to pursue his interest in this area and in this regard had his first break in 1980 when offered the position of horticulturist in charge of the Herbarium garden. He quickly settled into that position and within a few years the garden became a

showpiece of over 1000 different native plant species. Whilst working in the garden Andrew studied part time for a *Certificate in Horticulture* with the view of increasing his knowledge of the Western Australian flora.

In 1984 Andrew's interest and increasing knowledge in the Western Australian orchidaceae resulted in the co-authoring with Noel Hoffman of the first edition of *Orchids of South-west Australia*. This became compulsory reading for anybody interested in the study of our native orchids.

Andrew 's next career change came in 1985 when he commenced work as a Technical Officer with the newly formed Department of CALM. Working with Steve Hopper in the Research Division's Flora Conservation Unit, Andrew participated in numerous field trips to all corners of the State and soon developed a comprehensive knowledge of the localities, habitats and biology of many threatened plant species that are found in Western Australia. At this time he also actively worked on the taxonomy of the Western Australian orchid flora with Steve Hopper. This has resulted in the writing of a major paper in which some 140 new species and subspecies will be described, and new combinations of our orchid flora made. It is hoped that the paper will be published late in 1994. In those early years at CALM Andrew was also a member of the Wildflower Industry Review Committee (WIRC) and co authored the WIRC report on the Wildflower Industry.



Andrew continued to work principally in the flora conservation area until 1992 when Steve Hopper was appointed Director of Kings Park. His time was then effectively split 50/50 between the Science and Information Division's Species Conservation Section and the newly formed Western Australian Threatened Species and Communities Unit (WATSCU).

Within WATSCU Andrew has primary responsibility for threatened flora. He is at present concentrating on developing priorities for threatened plant conservation research and management, developing and implementing Recovery Pans or Interim Wildlife Management Guidelines for the most threatened plant species, developing a photographic catalogue of threatened flora, fauna and communities and promoting threatened plant species conservation.

His Science and Information role includes working with Sue Patrick in preparing District Flora Management Programs (he is currently working on Programs for the Moora and Geraldton Districts and the development of a quadrat-based monitoring system for threatened flora.

Over the years Andrew has given numerous talks to Wildflower Societies, Naturalist Clubs and Orchid Groups, including a major paper to the 12th Australian Orchid Conference, and has published many scientific papers and popular articles on orchids, threatened flora and nature conservation issues. These include the *Landscope* articles, *Orchids of the Stirling Range, Endangered - The Dwarf Bee Orchid, Alluring Orchids* and *Threatened With Extinction*, a colour lift out in the *1991 Western Australian Year Book* and a chapter in the recent CALM publication, *Mountains of Mystery, a natural history of the Stirling Range*. Andrew is also one of the authors of *Western Australia's Endangered Flora.* His continuing interest in orchids resulted in the publishing in 1992 of the second edition of *Orchids of South-west Australia*. Even more comprehensive than the first edition this book contains colour photographs and text describing some 320 different orchid taxa that are indigenous to south-west Western Australia.

Andrew is currently a member of a number of flora recovery teams, the Endangered Flora Consultative Committee (EFCC) and, outside of CALM, is Vice President of the W.A. Native Orchid Study and Conservation Group and a member of the Australian Orchid Foundation.

Andrew's other interests include badminton, tennis, table tennis, nature photography, bush walking, gardening and travel.

The National Threatened Species Network

by Jean-Paul Orsini

WA Coordinator NTSN

The National Threatened Species Network (NTSN) is a non-government community-based network promoting the conservation and recovery of endangered species and their habitat in Australia. It is a component of the federal Endangered Species Program (ESP), is administered by the Australian Nature Conservation Agency (ANCA) and World Wide Fund for Nature Australia (WWF), and is represented by a co-ordinator in each state and the Northern Territory. The NTSN supports community education and participation on endangered species conservation and provides an important information resource to a wide range of individuals and conservation groups.

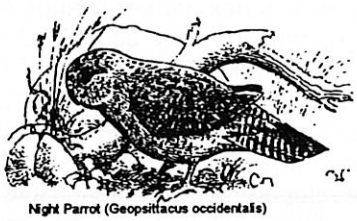
Since its establishment three and half years ago, the Western Australian NTSN has developed regular exchanges with over 220 community groups, research bodies and government agencies throughout the state and around Australia. Its mailing list numbers over 500. The WA-NTSN makes submission on state and national strategies, management plans and legislation. It provides community input to government on endangered species-related issues and feeds back information to the community (such as the progress of recovery plans and the new Commonwealth Endangered Species Protection Act).

Over the last eighteen months, the WA-NTSN has developed a community-based conservation project for the endangered Malleefowl in Western Australia. The Malleefowl Preservation Group was established in June 1992 and has grown to 200 supporters throughout the South-West. A three-year project funded under the National Landcare Program has been initiated and a part-time Project Officer has just been appointed. A Community Action Plan and a Research Plan for Malleefowl conservation in the Gnowangerup district have been produced recently. Active involvement is spreading in other areas of the wheatbelt with the support of local Land Conservation District Committees.

In 1994, the NTSN will be promoting increased community input and involvement in the recovery of Western Australian threatened species and communities. The NTSN produces a national newsletter called "The Web" and a WA newsletter called "Wanted alive". For more information on the National Threatened Species Network in Western Australia, please contact Jean-Paul Orsini, WA co-ordinator, on (09) 384 3756.

THE NIGHT PARROT: NO LONGER "PRESUMED EXTINCT"

by John Blyth



Night Parrot (Geopsittacus occidentalis)

The Night Parrot (*Geopsittacus occidentalis*), is listed as a threatened species in Western Australia under the Wildlife Conservation Act. A recently developed procedure for ranking threatened species suggests that the Night Parrot should be ranked as Critical and probably given the highest priority for recovery action of any Western Australian bird - if we knew enough about its distribution, movements and ecology to produce such a plan!

Amongst professional ornithologists and amateur birdwatchers alike few birds excite more interest than the Night Parrot. Before the turn of the century many reports (but only 23 specimens) came from a vast area of arid Australia, with records from every mainland State. There seems little doubt that the bird has undergone a considerable decline in numbers and/or range since that time. Nevertheless, there have still been many reports of sightings, of variable credibility.

Historically, collected specimens and most sight records have come from four large but widely separated areas: the Gawler Ranges in central South Australia; far north to north eastern South Australia and adjoining areas of western Queensland and southern Northern Territory; around the junction of the boundaries of South Australia, New South Wales and Victoria; and central Western Australia, especially in the north eastern Gascoyne. Glenn Storr also recorded several unconfirmed sightings from arid parts of the Kimberley.

The most widely accepted recent sight-record was of four birds in salt lake country in far north-eastern South Australia in 1979 by the late Shane

Parker, then Curator of Ornithology at the South Australian Museum. The first confirmed record for over 80 years was a roadkilled specimen collected near Boulia in northwestern Queensland in 1990. Coincidentally, there had been a growing number of unconfirmed reports from the Mount Isa-Cloncurry region inland from the Gulf of Carpentaria, about 150 km north of Boulia, over the last fifteen or so years.

A very recent paper in the journal *Emu* describes seven separate sightings of Night Parrots in a relatively small area of the Mount Isa uplands south of Cloncurry, during the period from March 1992 to June 1993. The senior authors, Stephen Garnett and Gabriel Crowley, (currently implementing a recovery plan for the Golden-shouldered Parrot, *Psephotus chrysopterygius*) have examined all of the sites where their co-authors claim to have seen Night Parrots. Although no single plant species, soil type or other characteristic was present at all sites, most observations were at sites which had combinations of gravelly surfaces, the presence within a few hundred metres of well grown spinifex (*Triodia molesta)*, and free water available within a kilometre or so. The sightings were also consistent with the idea that Night Parrots are definitely nocturnal (even though they show no obvious physical adaptations to such a lifestyle) and suggested that they may be active throughout the night.

Stephen Garnett has also recently written a draft research plan for the Night Parrot, for the Queensland Department of Environment and Heritage. Initially, the intention is to focus on the area of the Mount Isa uplands around where the above sightings have been made. In March 1994, they intend to begin to test various methods of searching for Night Parrots, to find a reliable way of establishing their presence in an area, and then to use these methods to establish the extent of the population and to begin a monitoring program. Once more information about the local distribution, movements and habitat preferences of the species has been obtained, a detailed ecological study could begin with the aim of providing the basis for conservation management.

Historically it has been assumed that the Night Parrot is probably a highly nomadic species, moving widely about the arid zone to find suitable habitat. Shane Parker and others have suggested that there may be a more or less seasonal movement from spinifex grasslands, once the seed resource is depleted, to the samphire flats of salt lakes. Because of the assumption of nomadism, it has also often been assumed that it would be extremely difficult to develop management plans for the species.

Assumptions of highly nomadic behaviour have also been made over the years about two other little-known parrots of the arid zone, the Princess Parrot, *Polytelis alexandrae*, and the Scarlet-chested Parrot, *Neophema splendida*. Recent evidence is starting to suggest that there are areas where these species can be found from year to year, and where at least some proportion of the population appears to be resident. In very good years the two species may expand their range greatly and in drier conditions may shrink back to the relatively limited places which act as refuges.

As for Princess and Scarlet-chested Parrots, the types of habitats in which Night Parrots have been recorded appear to be wide spread across arid Australia. Nevertheless, in the light of the comparative concentration of historical sightings, and the many recent reports, over several years, coming from a quite restricted area of north-western Queensland, it seems possible that the Night Parrot may also have key areas on which its populations depend (and where any necessary management, such as predator control, should be concentrated).

A reading of both very old and very new literature on the Night Parrot suggests that one cannot just expect to obtain chance sightings of the species by being in the right place at the right time. This is a small, cryptically coloured and secretive bird which appears to be genuinely nocturnal and to hide almost totally, in either dense spinifex or samphire, during the daylight hours. (Although the Garnett *et al.* paper referred to above includes one sighting of two birds in a low bush just before sundown.) Thus, deliberate searching, especially by spotlight at night, is likely to be needed if attempting to determine whether or not the Night Parrot occurs in a particular area. Daytime sightings have almost always involved birds flushed, from spinifex or samphire, by chance or deliberately through a beating process.

Western Australia does not have the advantage of an accumulation of recent sightings from a specific area. Nevertheless, a logical first step towards developing a recovery plan for the species in Western Australia would be concentrating search efforts on those areas which appear to have the right combination of habitat features now and be in the same general area as historical sightings. A good starting point would be the north-east Gascoyne and adjacent areas, inland to the

proposed Carnarvon Range National Park and areas south and south west of it, down to Lakes Nabberu, King and Gregory.

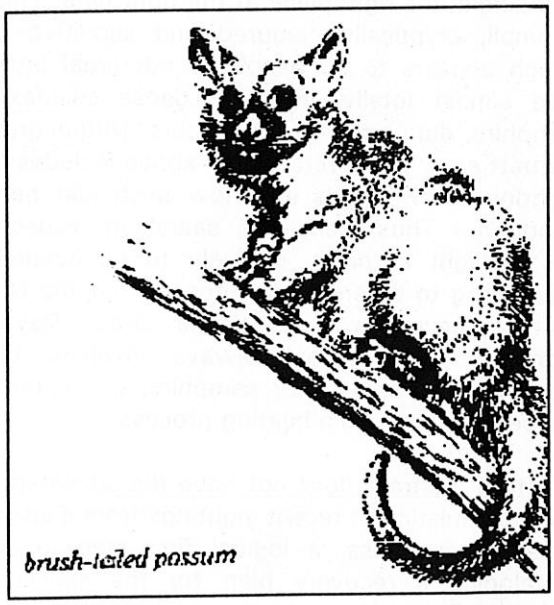
In the near future WATSCU is hoping to begin a few preliminary steps, at low cost, towards finding out whether, and where, populations of Night Parrots still exist in Western Australia.

R&I LANDSCOPE CONSERVATION VISA CARD

The R&I LANDSCOPE Conservation Visa card was launched on 7 June 1993 by the R&I Bank. Every time the card is used a percentage of the transaction goes towards an Endangered Species Conservation Trust Fund set up by the bank.

So far there has been a strong response from the public and there is a likelihood that over 4,000 cards will be issued by June this year. The R&I Bank made an additional payment to the Trust Fund of $1,000 to recognise the issue of the first 1000 cards.

The species that will benefit first from the funds are the Corrigin grevillea, the Wyalkatchem foxglove, the western ringtail possum, the Lancelin Island Skink and one threatened ecological community - Lake Toolibin, a freshwater wetland to the east of the town of Narrogin.



brush-tailed possum

APPLICATIONS FOR ANCA ENDANGERED SPECIES PROGRAM FUNDING 1994/95

ANCA has advised that the closing date for this program (and other ANCA funding programs) has been put forward to 30 April.

This year, applications will be dealt with in a two phase process:

Phase 1 - An outline of your application containing a summary of the proposal and a budget is to be lodged with WATSCU ***by 18 March 1994.*** (No late applications accepted!) The applications will then be reviewed and ranked by a committee.

Phase 2 - The applications which have been accepted by the committee are then to be transposed into a detailed application which is then to be lodged with Andrew Burbidge by ***15 April 1994*** for approval by the relevant Directors before forwarding to Canberra.

Application guidelines have been sent out to CALM staff and WATSCU Associates.

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