



World Wide Fund for Nature Australia
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Conservation of Vineforests in South-East Queensland

Final Report - 1996 WWF South-East Queensland Vineforests Project

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EXECUTIVE SUMMARY

In 1991, the World Wide Fund for Nature (WWF) funded a study of 232 vineforest sites in the South-East Queensland Bioregion, in association with the Queensland Herbarium. The study culminated in the publication of *The Vineforest Plant Atlas for South-East Queensland*, and identified 63 vineforest stands of high conservation value and 122 regionally threatened flora species.

The 1996 WWF South-East Queensland Vineforests project was developed to use the results of the 1991 study to promote the conservation and management of the Vineforest Atlas high conservation value sites. Funding for the project was provided by a Federal 'Save the Bush' grant. The project was conducted by Vineforest Liaison Officer Bruce Boyes, under the direction of an Advisory Committee consisting of representatives from the Department of Environment, the Department of Natural Resources, and the conservation movement.

Proposals were developed to further the conservation management of high-priority vineforest sites. Implementation of each of the proposals developed is now underway. Once these proposals are implemented all 12 sites will have better protection. Additionally the project has improved the conservation of 9 of Queensland's endangered plants.

Other key outcomes of the project include the establishment of a demonstration site near Maryborough (Teddington Weir); an extensive public education and awareness campaign to promote the conservation of vineforests, including fliers, talks, newsletter articles, and public displays; and substantial progress towards funding for financial assistance for landholders who conserve vineforests.

The extensive public education and awareness campaign and exhaustive networking between groups and individuals involved in vineforest conservation has meant that the 1996 Vineforest Project has been highly successful in generating a high level of State Government, Local Government, landholder and community support for the conservation and active management of vineforest scrubs in the South-East Queensland Bioregion. The project objectives have been successfully met and the project will continue with funding from other sources.

Many joint ventures have been initiated and WWF is pleased to be able to provide continued support for stakeholder involvement in protection of vineforests through 1997. In a period of just over 2 years the initial funding of \$24,850 from the Save the Bush Program will result in conservation work totaling over \$115,000.

WWF Australia would like to thank the many people who have contributed to the project, especially the Vineforests Project Advisory Committee for support and assistance that was outstanding. Without the advice and help of Paul Sattler, Peter Bostock, Paul Forster, Bob Skitch, Peter Lawson, Steve Barry, Andrea Leverington, Dr. Aila Keto and Imogen Zethoven the achievements of the 1996 WWF Vineforests Project would not have been possible.

RECOMMENDATIONS

The following recommendations can be made to assist vineforest conservation in the South-East Queensland Bioregion:

1. Substantial funding is urgently required from the Queensland and/or Federal Government for the provision of financial assistance to landholders who protect and manage areas of remnant vegetation.
2. The Queensland Government must work towards a flexible system of conservation management agreements including the registration of Local Government Conservation Agreements on land titles.
3. The Queensland and Federal Governments must actively encourage nature-based tourism as an alternative industry in rural areas.
4. To achieve gains in conservation the Queensland Conservation movement must stop dealing with the *symptoms* and start working to find solutions to the *causes* of vegetation clearance.
5. Substantial funding is urgently required from the Queensland and/or Federal Government for investigation into, and implementation of, appropriate methods for the management of threats to vineforests from weeds and fire.
6. Substantial funding is urgently required from the Queensland and/or Federal Government for further flora and fauna surveys and conservation actions in vineforests.
7. Nature conservation planning in Queensland must take a bioregional approach.
8. The Queensland Department of Environment should investigate alternative options to acquisition of environmentally significant areas. One option would be a program similar to that operated by the Trust for Nature in Victoria.

1. INTRODUCTION

In 1991, the World Wide Fund for Nature (WWF) funded a study of 232 vineforest sites in the South-East Queensland Bioregion, undertaken in association with the Queensland Herbarium by P.I. Forster, P.D. Bostock, L.H. Bird and A.R. Bean. The study culminated in the publication of *The Vineforest Plant Atlas for South-East Queensland*. The Vineforest Atlas identified 63 significant vineforest sites and 122 regionally threatened flora species.

The 1996 WWF South-East Queensland Vineforests Project was a follow-up of the 1991 study. The results of the 1991 study were used to promote the conservation and management of the Vineforest Atlas Significant Sites, carried out by Vineforest Liaison Officer Bruce Boyes under the direction of an Advisory Committee consisting of representatives from the Department of Environment, the Department of Natural Resources, and the conservation movement.

Since the publication of the Vineforest Atlas, five additional Significant Sites have been identified, and three non-significant Vineforest Atlas sites have been reclassified as Significant Sites. This brings the total number of Significant Sites to 71.

Specific action on all of the 71 significant sites was beyond the resources of this project. For this reason, sites were prioritised to "high-priority", "medium-priority", and "low-priority" according to significance and threat levels. Priorities have been decided in consultation with the authors of the Vineforest Plant Atlas and other stakeholders.

10 high-priority sites were identified for initial action, based on significance and threat levels. For sites to be classified as a "high-priority" they had to satisfy a least two of the following criteria:

- The site features endangered and/or vulnerable plant species that are not at present securely conserved.
- The site features a vineforest community that is rare or unique or has been largely cleared, or the site is in a geographical area where most vineforest has been cleared.
- The site faces serious and immediate threats.

Two further high-priority sites were added during the course of the project bringing the number of sites for action to 12.

2. PROJECT OBJECTIVES

Project objectives were decided in consultation with the authors of the Vineforest Atlas, the Advisory Committee, and other stakeholders.

General Objectives

General Vineforest Conservation. To promote the improved conservation of all vineforests throughout the South-East Queensland bioregion, including the vineforests identified in the Vineforest Plant Atlas for South-East Queensland.

Specific Vineforest Conservation. To promote the improved conservation of vineforests identified as "Significant Sites" in the Vineforest Plant Atlas for South-East Queensland and subsequent surveys.

Specific Objectives

1. Promote vineforest conservation and the WWF Vineforests Project through a series of demonstration sites. The demonstration sites will be in strategic locations throughout the Project region, on sites with cooperative landholders and/or land managers.
2. Implement an education and publicity program about vineforest conservation and the WWF Vineforests Project. This will include articles in Landcare and community group newsletters, presentations to Landcare and community groups, newspaper articles, and displays at rural field-days and conferences.
3. Research general impediments to private vineforest conservation and link the WWF Vineforests Project to solutions. Where no solutions are available, recommend policy changes.
4. Research specific impediments to conservation for the "Significant Sites" and work with the landholders and/or land managers to encourage the implementation of solutions. The research will include air photo assessment, cadastral referencing, site visits, the initiation of Nature Refuge Agreements, and extensive liaison with the landholder and/or land manager, community groups, Local Governments, and State and Federal Government Departments.
5. Resources permitting, initiate the collation of fauna data for vineforest sites. The Vineforest Plant Atlas for South-East Queensland identified 63 "Significant Sites" based on flora significance, but a proportion of the remaining 169 Atlas sites are likely to have fauna significance. These sites should be identified and protected to the same degree as sites with flora significance.

3. PROJECT OUTCOMES

This section documents the outcomes and achievements of the project in the context of the Project Objectives.

3.1 Promote vineforest conservation and the WWF Vineforests Project through a series of demonstration sites.

Proposals were developed for three demonstration sites. Funding from sponsors was required to develop the sites and provide interpretive materials. One site, Teddington Weir, has now been funded and negotiations continue with potential corporate sponsors for the two other sites.

The Teddington Weir proposal succeeded because the sponsor has a direct interest in the site, whereas with Olsen's Capricorn Caverns and the Berlin Scrub Nature Refuge, proposals were prepared to try and suit an unknown sponsor. To facilitate opportunities for further Teddington Weir type successes in the future, much of the responsibility for sponsorship needs to rest with on-ground project officers. This considerable additional workload has had an effect on other work areas, but the developing success of the Teddington Weir project makes this work worthwhile.

Olsen's Capricorn Caverns

Olsen's Capricorn Caverns, north of Rockhampton are well known for spectacular limestone formations and significant threatened bat species. However The Caves area also features approximately 300 hectares of significant vineforest (Vineforest Atlas Site 1). A range of threatened flora species are present, including the endangered fern *Tectaria devexa*. This fern grows in the darkened cave entrances.

The owners of Olsen's Capricorn Caverns, the Augusteyn family, have been very progressive in regards to conservation issues. They have been carefully managing their caves and vineforest areas, and have been actively promoting vineforest conservation (Refer Appendix 3). Much of the vineforest management work has involved the control of the invasive exotic madeira vine *Anredera cordifolia*, and research into control measures.

A sponsorship proposal incorporating a public awareness campaign for *Tectaria devexa*, the preparation of a Recovery Plan for one of the threatened species at the site, construction of an interpretive display, and the preparation of an information pamphlet about vineforests has been prepared. Unfortunately, the initial sponsorship fell through at a late stage in the negotiations. Subsequent to this, discussions were held with a number of large companies in Gladstone. It is proposed that this will be pursued in the 1997 phase of the project.

Berlin Scrub Nature Refuge

The Berlin Scrub Nature Refuge, in the Lockyer Valley west of Brisbane, was the very first such agreement between the Queensland Government and a private landholder, and serves as a great example to other landholders (Refer Appendix 3). Berlin Scrub is a highly significant vineforest community featuring a range of threatened flora and fauna. Present are the Black-breasted Button-quail and the Wonga pigeon, and the plant species *Notelaea lloydii* and *Capparis mitchellii*.

A sponsorship proposal was prepared for construction of an access road, fencing an area of scrub, initiating weed management in the fenced area, signage, and a field day. Unfortunately, as with the Olsen's Capricorn Caves demonstration site proposal, the Berlin Scrub demonstration site sponsorship proposal fell through at a late stage in the negotiations.

A number of large companies operating in the area west of Brisbane were contacted. Another three proposals were prepared and forwarded to potential sponsors. Unfortunately, serious problems emerged with access to Berlin Scrub, making public access almost impossible. This made the high level of community involvement required by many corporate sponsorship guidelines very difficult to achieve.

Because of the public access problems, the final proposal returned to the focus of the original proposal, which was on fencing and weed management. This proposal will be followed up in the 1997 phase of the Vineforests Project.

Teddington Weir

The Olsen's Capricorn Caverns and Berlin Scrub Nature Refuge proposals meant that demonstration site plans were underway for the northern and southern ends of the Project region. A third site was required somewhere in the centre of the region. A study of the Steve Barry and Garry Thomas publication *Threatened Vascular Rainforest Plants of South-east Queensland* revealed a possible location in the Wide Bay Burnett region with good strategic potential in relation to other significant sites. The site selected was Teddington Weir, on Tinana Creek south of Maryborough.

As a public recreation area, Teddington Weir represents an outstanding location for educating the public about dry rainforest conservation issues, and about the WWF South-East Queensland Vineforests Project. The Weir supplies Maryborough's water supply, and is a popular recreation area for the residents of Maryborough and surrounding districts.

The vineforest communities at Teddington Weir feature high species diversity, including a range of rare and threatened species. Present are the endangered species *Cossinia australiana*, and the vulnerable species *Fontainea rostrata*, *Quassia bidwillii*, and *Xanthostemon oppositifolius*.

The Wide Bay Burnett Electricity Corporation was recommended as a potential sponsor. A draft proposal was prepared in consultation with Wide Bay Burnett Electricity Corporation Environment Officer Steve Martin and local vineforest enthusiast Greg Smyrell. Key components of the proposal were to raise and insulate the powerline cable in the section of the

easement passing through the vineforest, commence replanting in the easement, construct an interpretive walking trail, and establish a management committee. On October 2, 1996, the Wide Bay Burnett Electricity Corporation advised that they had approved the proposal. The approved project budget allowed for \$13,000 for powerline works and \$5,000 for the interpretive trail, easement rehabilitation, and trail brochure.

In parallel to the work carried out with the sponsor, considerable liaison work has been carried out with Maryborough City Council, who are the trustees for the site. As well as the approval of the demonstration site interpretive trail, Council was also asked to consider entering into a Nature Refuge Agreement for the Teddington Weir site. After consideration, Council gave full approval to the demonstration site component, and appointed a Sub-Committee to handle Nature Refuge Agreement negotiations.

The Wide Bay Burnett Electricity Corporation has advised that the powerline works will be carried out in the April 1997. WWF will arrange the construction of the interpretive trail by Australian Trust for Conservation Volunteers (ATCV) during July 1997, and will hold an official opening ceremony.

3.2 Implement an education and publicity program about vineforest conservation and the WWF Vineforests Project.

Project fliers and information distribution

Three promotional fliers were prepared in the early stages of the project. These were:

1. "Helping landholders to look after remnant scrubs... a win-win approach". This flier was aimed primarily at landholders and the Landcare movement (Refer Appendix 3).
2. "Our forgotten forests... endangered species on the brink". This flier was aimed primarily at the general public and the conservation movement (Refer Appendix 3).
3. "Can your company give landholders a helping hand?" This flier was aimed at potential sponsors, and was distributed with a copy of WWF's "Corporate Relationships" booklet.

The "Helping landholders to look after remnant scrubs... a win-win approach" flier and the "Our forgotten forests... endangered species on the brink" flier have been widely circulated.

These fliers have proven to be very successful. For example:

- A landholder with an unsurveyed scrub remnant made contact after seeing a flier. The scrub remnant, at Pine Creek, Electra, near Bundaberg, proved to be quite significant, with the landholder wanting to enter into a Nature Refuge Agreement. This site has been added to the high-priority sites list.
- People involved in remnant scrub work have made contact after seeing the fliers, and valuable networking and information exchange has resulted.

- A landholder with a patch of remnant bunya/hoop pine scrub in the Yarraman area has also made contact as a result of the fliers, as have several members of the general public.

The third flier, "Can your company give landholders a helping hand?" was circulated initially but was later abandoned in favour of personalised letters to individual companies, which have proven to be much more effective.

Other information distributed included copies of articles and a report discussing Vineforest Atlas co-author Lloyd Bird's Woogaroo Scrub restoration project (Refer Appendix 3), and information about the Lockyer Watershed Management Association (LWMA) Vegetation Project Subcommittee and remnant vineforest conservation projects (Refer Appendix 3).

Community group newsletters and other publicity

Articles about the project were prepared for the newsletters of Ipswich Envirocare, the Wide Bay Burnett Conservation Council, and the Toowoomba and Region Environment Council.

An article was prepared and run in the July-September 1996 edition of the WWF Australia magazine *Wildlife News*.

Respected palaeobotanist Dr. Mary White, author of the well-known *Greening of Gondwana* will include a section on the project in her new soon-to-be-released book. The WWF South-East Queensland Vineforests Project will be used as an example of a successful community based approach to conservation.

Attempts were made to have an article on the project included in the Queensland Country Life newspaper and the project featured on the ABC television program *Landline*. Both of these attempts were unsuccessful.

Good publicity has also been generated by the work on the high-priority sites.

Events and Conferences

The Vineforest Liaison Officer attended the Queensland Landcare Conference in Bundaberg in July 1996. The conference proved to be an excellent networking event, allowing good contacts to be made with Landcare and Conservation group members, potential sponsors, and representatives from Local Authorities and State Government Departments. A copy of the "Helping landholders to look after remnant scrubs... a win-win approach" flier was included in the information satchel given to all conference delegates. A short presentation on the project was given at an information session held during the conference.

A display was set up at the launch of Burnett Catchment Care in November, 1996. The Burnett Catchment features a large number of significant vineforest sites. As well as Vineforests Project information, the display also featured Lockyer Watershed Management Association (LWMA) Vegetation Projects information, with the hope that it might stimulate similar activities in Burnett.

Two presentations about the vineforests project were given to the Lockyer Watershed Management Association (LWMA), as part of ongoing interaction with that group.

The WWF Vineforest Liaison Officer spoke at a meeting of the Brisbane Rainforest Action and Information Network (BRAIN), a group very active with on-ground vineforest conservation in the Brisbane area. BRAIN was very keen to hear about the WWF Vineforests Project, and is keen to network with other groups also actively involved in vineforest conservation, such as the Lockyer Watershed Management Association (LWMA).

The final event of the 1996 WWF South-East Queensland Vineforests Project was a tour of the Lockyer Valley organised by the Vineforest Liaison Officer, focusing on the excellent remnant vineforest conservation work of the Lockyer Watershed Management Association (LWMA). Forty five people attended, including representatives from Ipswich Envirocare, the Brisbane Rainforest Action and Information Network (BRAIN), the Queensland Herbarium, Greening Australia, the Toowoomba and Region Environment Council (TREC), Bundaberg Landcare, the Department of Environment, the Lockyer Watershed Management Association (LWMA), and the Society for Growing Australian Plants (SGAP). Based on the success of the tour, more such activities are planned for the 1997 phase of the project.

3.3 Research general impediments to private vineforest conservation and link the WWF Vineforests Project to solutions.

The work on the “general impediments to private nature conservation” strategy has focused primarily on the activities of the Lockyer Watershed Management Association (LWMA). LWMA, which is the Lockyer Landcare Group and Queensland’s first Landcare Group, has had a strong interest in remnant vegetation over the years, particularly remnant vineforests (scrubs).

The experiences with LWMA have allowed the development of an excellent understanding of key impediments to rural vineforest conservation, particularly on private lands, together with solutions that can be implemented. These issues are discussed in the following sections.

LWMA Vegetation Projects

The group now has an active involvement in the conservation of 5 vineforest scrub remnants - Dick Scanlan's Berlin Scrub Nature Refuge, "A Touch of Paradise" remnant, the Welk remnant, Nelson's remnant, and Dwyer's Scrub Conservation Park. This work represents the greatest amount of on-ground vineforest conservation work being carried out by a rural community throughout the entire project region, an outstanding effort.

During 1996 LWMA formed a Vegetation Project Subcommittee (Refer Appendix 3). The Vineforest Liaison Officer has been an active member of the Vegetation Project Subcommittee, participating in meetings, events, and working bees. It is only through participation in this way that a proper understanding can be gained of the issues faced by the rural community in trying to conserve remnant vegetation. This sort of understanding cannot be gained by working "9 to 5" in the isolation of an office.

The first projects of the Vegetation Project Subcommittee have been weed management and replanting at Nelson's remnant, and the fencing of the Welk Remnant. The Vineforest Liaison Officer has also assisted LWMA through arranging an Australian Trust for Conservation Volunteers (ATCV) weeding project at the "A Touch of Paradise" remnant.

Giving bushland a value

From the work with LWMA, it has become evident that a key impediment, if not *the* key impediment, to vineforest conservation on private lands is that natural vegetation has little or no value, particularly economic value, to the rural community. Sometimes, because of the way rates or taxes are levied, natural vegetation can actually become a liability.

The clearing of dry rainforest communities in the Vineforests Project region is now at a minimum, but is still a problem. Where areas are still being cleared, it is happening for several reasons. Amongst the rural community, there are still a few farmers clearing scrub (vineforest) purely because it has been done by previous generations. Most clearing by farmers, however, is for purely financial reasons - to increase the land area that can be farmed. The other major cause of clearance is subdivision in rural areas.

Overcoming these problems involves education about the benefits of the natural environment to farming practices and better Local Government regulations to discourage subdivision in bushland areas. But the most success comes from giving natural vegetation a value.

Social value

Natural vegetation can be given value in a number of ways. There is social value, for example, sentimental reasons or pride generated from the interest of others. Some will keep a patch of scrub because previous generations of the family had decided to keep the patch. This is the case with Rachel Hill's scrub at Pine Creek, Electra, near Bundaberg. Some will keep scrub because of a developed interest in its conservation values. This is the case with Dick Scanlan's Berlin Scrub. Others keep a patch of scrub because of the interest other have shown in it. In this way, LWMA has been able to encourage landholders to keep remnants. An example is the Welk remnant, located near Dick Scanlan's Berlin Scrub. Over time, Dick Scanlan's interest in his neighbour's remnant has engendered an interest by its owner, Albert Welk. This interest has been amplified by naming it "The Welk Remnant" after its owner and leading guided tours through the remnant. Albert's interest is now so great that he has consented to LWMA fencing his remnant to exclude his cattle. His obvious pride in showing off the remnant that now bears his name is the reason for his interest.

However, pride is often not enough. A landholder at Yarraman with a bunya/hoop pine vineforest remnant made contact as a result of the project fliers. The scrub patch had been kept by previous generations, and the current landholder wishes to continue to retain it for sentimental reasons. However, after four years of drought he came close to having to sell it for timber. Fortunately, recent rains have meant that the landholder has been able to keep his head above water and the scrub remnant has been saved. However, the scare of nearly going under means the landholder wants to keep the block as an insurance policy against future disasters. The landholder has stated that he is not interested in the idea of a Nature Refuge Agreement, or even having the block surveyed, unless there is some sort of financial incentive for him to

keep it. There would be some who would say that the landholder should place the well being of future generations ahead of his family's immediate interests. However, this attitude overlooks basic survival needs. If your own and your family's survival is at risk, you understandably care about little else.

Financial Value

The work with LWMA revealed two primary ways of giving natural vegetation a financial value.

The first is through nature-based tourism. LWMA has been running its Lockyer Landcare Guided Tours program for a number of years (Refer Appendix 3). Apart from being an enjoyable experience to those involved, the tour guides and properties involved are paid for their time, and LWMA receives an income.

The tours visit several patches of scrub and guided trails have been done for two of them, “A Touch of Paradise” remnant and “The Welk Remnant” (Refer Appendix 3). The inclusion of these remnants, both of which are on private land, in the Guided Tours program has given them a value beyond their social value. As most of the remnant scrub areas in the South-East Queensland Bioregion also coincide with areas of high scenic value, nature-based tourism has great potential.

A second way of giving natural vegetation a financial value is to give landholders direct financial assistance. A popular method is rate rebates to landholders who set aside areas of vegetation. The amount of financial assistance is often not very large, but every little bit helps, and it is often enough to make a landholder decide on the side of the natural vegetation. At an LWMA meeting to discuss setting up the Vegetation Project Sub-committee, a Laidley Shire Councillor present received much praise from the farming community for the Council's decision to waive rate payments on Dick Scanlan's Berlin Scrub Nature Refuge.

An alternative to rate rebates is direct payment to assist landholders to tackle management problems such as weed infestation. Several Local Authorities are already implementing these sorts of assistance packages. Brisbane City Council (BCC) has introduced an innovative Voluntary Conservation Agreement (VCA) scheme where landholders receive financial assistance in return for signing a written agreement to protect their natural vegetation (Refer Appendix 3).

The BCC scheme relies on funding from Green Levy payments collected through the rates process. Management assistance schemes like this can only operate where there is a large enough rate base. For small rural Councils, assistance would be difficult without some form of finance from an external source.

Another excellent scheme is operated by Logan City Council (Refer Appendix 3). Under this scheme landholders within designated conservation areas can receive up to a 50% rates concession if they agree to rezone their land to a conservation zoning. Cooloola Shire Council has also recently initiated a conservation incentives scheme. Other South-East Queensland Councils are expected to follow the lead set by these Councils.

Obstacles to incentive-based conservation

There has been a widespread belief that the rural community has a deliberate plot to destroy every last piece of native vegetation. While there might be an element with this mentality, the example of LWMA shows that this attitude in no way characterises the whole of the rural community.

As a consequence of this seriously misguided "farmers are the enemy of conservation" perception the approach to vegetation conservation has often relied on the use of a "big stick". This has given rise to backlash from people who are already pushed to the limit by drought, low commodity prices, disappearing services, a lack of meaningful community consultation, and other pressures. People who could have been encouraged to adopt native vegetation conservation end up fighting against it, purely because they feel threatened. Nobody wins, least of all the native vegetation.

Unfortunately, the strong left-wing social agenda that has become entwined into the agenda of the environmental movement in Australia has to date been actively working against incentive-based solutions, teaching as it does that the only way to save the planet is to completely abandon the consumer economy. This dual agenda is actually undermining conservation efforts in Australia, as conservation measures imposed without any consideration for the landholder just result in a backlash against conservation. Governments then end up being forced to bury what had appeared to be solid gains for conservation.

Fortunately, this situation is now changing as many within the conservation movement realise the gains that can be made through cooperative work towards appropriate resourcing of vegetation managers.

Progressing incentive-based conservation measures

Progressing the notion of financial incentives for vineforest conservation has been a major focus of the project. Considerable support for this course of action has come from the Advisory Committee.

At the suggestion of Brisbane City Council, the Vineforest Liaison Officer approached the Local Government Association of Queensland (LGAQ) with a view to convening a workshop on incentive-based conservation at the 1996 Local Government Association Conference. This approach was unsuccessful, however, a motion in support of Voluntary Conservation Agreements was put to the conference and supported.

The idea of incentive-based measures for vineforest conservation has been advocated extensively with the Queensland Department of Environment. The Queensland Government has indicated strong support for such schemes. A speech to Parliament by the Hon. Frank Carroll MLA, Member for Mansfield (Refer Appendix 3), prompted the Vineforest Liaison Officer to write to the Hon. Brian Littleproud MLA, Minister for the Environment, in support of the Government's Plans. A positive response was received. The information supplied in the letter will be followed up in the 1997 phase of the Project.

A Trust for Nature, similar to the Victorian Trust for Nature, could provide a suitable vehicle for the delivery of such assistance.

RECOMMENDATION 1. Substantial funding is urgently required from the Queensland and/or Federal Government for the provision of financial assistance to landholders who protect and manage areas of remnant vegetation.

Local Government conservation agreements, such as the Brisbane City Council Voluntary Conservation Agreements, are currently not able to be registered on perpetuity on land titles. Such registration is desired by many landowners. Some landowners will be understandably reluctant to secure their conservation agreements in perpetuity and a more flexible approach where the financial assistance offered is tied to the length of the agreement has potential to encourage these landowners to enter into long term agreements. The Victorian Trust for Nature again provides a model for such agreements.

RECOMMENDATION 2. The Queensland Government must work towards a flexible system of conservation management agreements including the registration of Local Government Conservation Agreements on land titles.

Opportunities for nature-based tourism in rural areas are at present stifled by Local Government Planning Schemes, a lack of definitive nature-based tourism legislation, a lack of awareness about the scenic attributes of vineforest areas, and a lack of financial support and assistance from government. For example, LWMA was unsuccessful in gaining further National Landcare Program funding for the LWMA Education Subcommittee co-ordinator at a critical time in the evolution of the Landcare Guided Tours program. The tours program was progressing towards becoming self-funding, and a number of the tourist venues were on the verge of putting on paid part-time staff, creating local employment opportunities and economic growth in an area that desperately needs it. Aside from its direct benefits for natural vegetation, tourism offers significant benefits for the rural economy and rural employment. Nature-based tourism issues will be further pursued in the 1997 phase of the Project.

RECOMMENDATION 3. The Queensland and Federal Governments must actively encourage nature-based tourism as an alternative industry in rural areas.

Much education is needed in order to break the stereotypes about the attitude of the rural community to remnant vegetation. If the conservation movement is to succeed in removing the threat of clearance, it must stop dealing with the *symptoms* and start working to find solutions to the *causes* of clearance. The best sort of education is interaction, and it is here that another valuable role of rural tourism is seen. With this in mind, the Vineforest Liaison Officer organised a WWF Rainforest Tour of the Lockyer Valley. This tour succeeded in broadening the outlook of the urban conservationists who attended. Based on this success, more such tours are planned for the 1997 phase of the project.

RECOMMENDATION 4. To achieve gains in conservation the Queensland Conservation movement must stop dealing with the *symptoms* and start working to find solutions to the *causes* of vegetation clearance

Management issues

Financial assistance to landholders for management issues is a big incentive for vegetation retention. However, it can't stop there. Landholders and community groups must be able to implement tried-and-true management methods with what are limited resources, otherwise failure will result, and failure will soon lead to disillusionment, and then degradation and the risk of clearance. Unfortunately, for many of the remnant scrub management issues there are no clear cut solutions.

In the Lockyer, as in most areas, weeds and fire are the biggest problems. Weeds and fire arguably represent a much greater threat to the vineforests of the South-East Queensland Bioregion than does clearance.

For the two biggest weed problems in the Lockyer vineforests, which are madeira vine and green panic grass, no long-term solutions are currently available. Attempts to control both have been unsuccessful, despite the very best efforts of those involved. The madeira vine infestation in the Dwyer's Scrub Conservation Park is now at a level where it seriously threatens the conservation values of the site. A senior rainforest botanist who viewed the site recently remarked that the situation is so bad that "it is a waste of time having this area as a Conservation Park." Much more work - research and trials - is urgently required. A sponsorship proposal for madeira vine research was unsuccessful, however other avenues for weed research will be pursued in the 1997 phase of the project.

Late in 1996, a number of fires burnt out of control in the southern Lockyer Valley, damaging several vineforest areas in the process. Burning lantana on a very hot day is cost effective for farmers and will provide at least twelve months of relief from high levels of infestation. However, these very hot fires cause significant damage to the vineforest remnants in the area.

The practice of firing is placing the long-term survival of vineforest remnants at risk. However, to just ban fires, as some advocate, will not solve the problem. The fires are lit for a reason, and that reason must be addressed if a genuine, workable, long-term solution is to be found. A ban will just result in an understandable backlash. The real solution is to allocate substantial resources to the successful control of lantana.

RECOMMENDATION 5. Substantial funding is urgently required from the Queensland and/or Federal Government for investigation into, and implementation of, appropriate methods for the management of threats to vineforests from weeds and fire.

A Seriously Neglected Ecosystem

The number of seriously endangered plant species in the South-East Queensland vineforests is alarming. The high-priority sites that have been the focus of the specific site work for this Project feature nine endangered plant species, many of them endemic, and all with total populations of less than 150 plants. These species have not had a public profile, while large amounts of public attention is focused on species that are, by comparison, well conserved.

Another serious issue is that there are still many vineforest sites in South-East Queensland as yet unsurveyed for flora, and even more unsurveyed for fauna. Based on the number of new endemic species located during surveys in recent times, these unsurveyed areas are potentially highly significant.

Addressing the neglect

Fortunately, the situation is slowly changing, but there is a long way to go. In recent times, the Department of Environment has been doing some excellent vineforest conservation work. The conservation status of a number of sites has been improved by conversion to Nature Refuge, Conservation Park, National Park, or Scientific Area and further flora and fauna survey work has been carried out.

The Department of Environment Central Coast Region has taken an excellent initiative with regard to community awareness with the publication of *Introducing Dry Rainforests - A Guide to the vine thickets and forests of Queensland's central coast and hinterland*. This is an outstanding publication, addressing in an easy to read way the lack of awareness about vineforests. While many scientific papers have been written about these communities, few publications providing informative botanical detail for the non-specialist reader are available. Copies are available from the Naturally Queensland Centre for the price of \$14.95 (as at December 1996).

As well as the work by the Department, there is an increasing interest amongst the scientific community in carrying out more research work. More Landcare and community groups are also getting involved, to complement the excellent work being done by groups and individuals like the Lockyer Watershed Management Association (LWMA), Lloyd Bird (Woogaroo Scrub), Arnold Rieck (Rosewood Scrub), and the Brisbane Rainforest Action and Information Network (BRAIN). Bundaberg Landcare recently received National Landcare Program (NLP) funding to carry out a vineforest species propagation project in the Isis and Woongarra Scrubs around Bundaberg.

Vineforest plant species are ideal for garden plants and street planting because of their attractiveness and tolerance to dry conditions, but are largely ignored by the horticultural industry. This issue is addressed by the *Introducing Dry Rainforests* book, and it is also pleasing to see that Ipswich City Council is embarking on a major program to use local vineforest species for street tree planting. This is a very commendable initiative. Ipswich City Council has also included vineforest protection in its "Enviroplan" initiative.

Vineforest plant species have also been extensively planted in the Bundaberg Botanical Gardens, and in Clocktower Park at Childers.

However, despite all this good work, we are still only scratching the surface. If we are to conserve the vineforest ecosystem, then much more survey, research and conservation work is required.

RECOMMENDATION 6. Substantial funding is urgently required from the Queensland and/or Federal Government for further flora and fauna surveys and conservation actions in vineforests.

Benefits of a bioregional approach

The groups working on vineforest conservation in the South-east Queensland bioregion have largely been working in isolation from each other. This has meant they have not been able to benefit from the experience and skills of other groups and have a poorly defined understanding of how their work fits into a bigger biological picture.

This is a reflection on how nature conservation planning has been implemented to date. Planning that is based on catchments, local government boundaries or government department regions is hampered by administrative hurdles in the quest for optimum environmental outcomes. Much of the success of the SE Queensland Vineforests Project can be attributed to its bioregional approach.

RECOMMENDATION 7. Nature Conservation planning in Queensland must adopt a bioregional approach.

3.4 Research specific impediments to conservation for the "Significant Sites" and work with the landholders and/or land managers to encourage the implementation of solutions.

Development of proposed conservation measures for high-priority sites.

Initially 10 high-priority sites were selected for action based on an assessment of significance and threats. A familiarisation tour of 8 of the 10 high-priority was carried out with Vineforest Atlas co-author Paul Forster. The knowledge of the geography, significance, threats, constraints and opportunities for the eight sites gained during the familiarisation tour, together with some follow up research and liaison on all 10 sites, allowed the development of proposed conservation measures for each site.

The two sites not visited were Vineforest Atlas Site 9 - Struck Oil, 6km E of Mt. Morgan and Vineforest Atlas Sites 185, 189, and 199 in the Darlington Range/Wongawallan area of the Gold Coast hinterland. Struck Oil landholders Ian and Cathy Herbert and the Department of Environment Central Coast Region provided initial advice regarding Vineforest Atlas Site 9 - Struck Oil, 6km E of Mt. Morgan. Initial advice on Vineforest Atlas Sites 185, 189 and 199 was obtained from the Steve Barry and Gary Thomas publication *Threatened Vascular Rainforest Plants of South-east Queensland*. This publication was also invaluable in development of proposed conservation measures for Vineforest Atlas Site 45 - 1km SW of Booyal; the Theebine/Glenwood/Gunalda vineforests; Vineforest Atlas Site 42 - SF832 Stanton 10km NNE of Booyal; and Teddington Weir.

In researching the sites, extensive use was made of the excellent resources made available at the Department of Natural Resources Landcentre, Woolloongabba. These resources included the BLIN (Basic Land Information Network) database, topographic maps, aerial photographs, and technical advice.

As the project progressed, Teddington Weir (the demonstration site) and Pine Creek Electra (the property of Rachel Hill near Bundaberg) were added to the high priority sites list bringing the number of sites from 10 to 12.

Success of conservation measures

The conservation measures implemented so far for all of the sites have been successful. For most of the sites, the implementation of the conservation measures has progressed well beyond the initial objectives.

Entry of site information on GIS

The only location information for sites listed in the Vineforest Atlas is a single point identified by latitude/longitude and a grid reference. Ideally, this information should be expanded to provide a full geographic representation of the particular vineforest area. As each site is worked on, there is an opportunity for the site information to be entered onto a GIS (Geographic Information System) database. The Australian Rainforest Conservation Society had hoped to have facilities available late in 1996 but has been postponed until 1997. The information could also be entered onto Department of Environment GIS databases during 1997 if that was required.

Implementation of proposed conservation measures for high priority sites.

Vineforest Atlas Site 9 - Struck Oil, 6km E of Mt. Morgan

Site Details: A combination of unreserved freehold and leasehold land and Unallocated State Land covering at least 100 hectares. Features the endangered species *Cossinia australiana* and *Decaspermum* sp. (Mt. Morgan N. Hoy AQ455657). Also features a range of vulnerable and rare species including *Graptophyllum excelsum* and *Hernandia bivalvis*. Threatened by proposed mineral extraction and weed infestation.

The Herbert property, Lot 175 on Plan RN1529, contains some vineforest. To the north of the Herbert property is Lot 13 on Plan LN841734, which is now the Bouldercombe Gorge Resources Reserve. The Bouldercombe Gorge Resources Reserve contains a large area of vineforest, and is the location of Vineforest Atlas Significant Site 8. To the south of the Herbert property is Lot 20 on Plan LN587, which contains a large 90 hectare remnant of vineforest. To the west of Lot 20 is a series of small allotments containing vineforest. These small allotments are the location of Vineforest Atlas Significant Site 9.

Proposed Conservation Measures: Investigate conversion of Unallocated State Land Lot 20 to either Conservation Park or leasehold with a Nature Refuge Agreement. Investigate solutions to mineral extraction problem. Encourage landholder involvement in WWF program through the Olsen's Caves demonstration site.

Implementation: The Herberts have entered into a Nature Refuge Agreement for Lot 175. Because of mining exploration interests, the Nature Refuge Agreement will have a management plan similar to the one for Bouldercombe Gorge Resources Reserve, designating vineforest areas as high significance zones where mining should not occur.

Lot 20 was determined as the next priority for conservation, having as it does a large area of vineforest (90 hectares) and, although not yet fully surveyed, known populations of both of the endangered species. A proposal for the conservation of Lot 20 was forwarded to the Department of Natural Resources (DNR). A supplementary proposal, recommending conversion to Resources Reserve, was forwarded directly to the Rockhampton office of DNR.

The proposal is being investigated, and verbal advice has been given to the effect that the proposal is likely to be supported. If successful, this will create a large continuous conservation area consisting of the Bouldercombe Gorge Resources Reserve, the property of Ian and Kathy Herbert, and Lot 20.

The small freehold allotments to the west of Portion 20 are the next priority. The best approach here will be to encourage the landholders to enter into Nature Refuge Agreements in return for financial assistance (rate rebating and management assistance). This will be pursued in the 1997 phase of the Project.

Vineforest Atlas Site 45 - 1km SW of Booyal

Site Details: Unreserved freehold or leasehold land covering approximately 6 hectares. Features the endangered species *Cossinia australiana* and the vulnerable species *Cupaniopsis shirleyana* in an area where the vineforests have been almost completely cleared. Threatened by weed infestation and clearance for agriculture.

Proposed Conservation Measures: Property is reportedly up for sale. Investigate if this is the case. If it is, look at possibilities for purchase (Government, Bush Heritage Fund, etc.) and conversion to Conservation Park, followed by the implementation of a community-based management program. If not, approach landholders to discuss possibility of Nature Refuge Agreement and assistance to manage weed problem and fence out cattle.

Implementation: In November 1996, the property containing this site was listed for sale. Acquisition proposals have been submitted to the Australian Bush Heritage Fund and to the Queensland Department of Environment. Because the remnant is only part of the property, a couple of options other than a standard acquisition are presented. One is to purchase the property, apply a Nature Refuge over the vineforest, and resell it with the Nature Refuge in place. Another option is to purchase the property, subdivide off the vineforest, and resell the remainder of the property. The acquisition proposals recommend the investigation of these options.

RECOMMENDATION 8: The Queensland Department of Environment should investigate alternative options to acquisition of environmentally significant areas. One option would be a program similar to that operated by the Trust for Nature in Victoria.

Vineforest Atlas Sites 185, 189, and 199 - Darlington Range, Wongawallan

Site Details: Unreserved freehold or leasehold land covering approximately 150 hectares. Features a large range of endangered and vulnerable species including *Planchonella eerwah* and *Fontainea venosa*. Threatened by weeds, fire and the risk of clearance.

Proposed Conservation Measures: Liaise with local vineforest expert Glen Leiper regarding possible conservation measures.

Implementation: The work in this area commenced with plans to work towards the conservation of just one vineforest remnant. However, after discussions with Glen Leiper, several visits to the area, and discussions with Bill McDonald from the Queensland Herbarium and Dr. Wendy Drake from Department of Environment Southeastern Region, it was decided that it would be best to work towards the protection of all significant vineforest areas in the Gold Coast hinterland, and that the best way to achieve this would be through an incentive-based scheme operated by the Local Council. Discussions in this regard were held with Gold Coast City Council. The Council showed a strong interest in this idea, particularly if funding assistance could be obtained from the State or Federal Government. As this funding is possible in 1997, the conservation of this area will be further pursued in the 1997 phase of the Project. Possibilities in the area are further enhanced by the declaration of Vineforest Atlas Significant Site 189 as a Nature Refuge. Community-based conservation works could be undertaken at this site as a way of raising the profile of vineforest conservation in the area.

Glenwood/Theebine/Gunalda Area Vineforests

Site Details: Unreserved freehold or leasehold land covering approximately 300 hectares. Features the endangered species *Cossinia australiana*, the vulnerable species *Fontainea rostrata*, and the rare species *Choricarpia subargentea*. Threatened by weed infestation and clearance for agriculture.

Proposed Conservation Measures: Promote vineforest conservation through a demonstration project in the area. Investigate the possibility of Nature Refuge Agreements.

Implementation: The work in this area commenced with plans to work towards the conservation of just one 60 hectare vineforest remnant. However, an examination of aerial photography and several visits to the area revealed the existence of several other large remnants of vineforest. In consultation with the Advisory Committee, it was decided that it would be best to work towards the protection of all these areas, and that the best way to achieve this would be through an incentive-based scheme operated by the Local Council. The best time to approach the Local Council would be in the 1997 phase of the Project, following the extensive publicity that will accompany the opening of the Teddington Weir demonstration site, and hopefully following the receipt of State and/or Federal Funding for rate rebates and management assistance.

Vineforest Atlas Site 63 - Binjour Plateau, 4.5km S of Binjour

Site Details: Roadside remnant covering less than 1 hectare. Features the vulnerable species *Pomaderris clivicola* and the rare species *Bertya pedicellata* in an area where almost all the vineforest has been cleared. Threatened by road maintenance activities and weed infestation. A revised status of endangered is pending for *Pomaderris clivicola*.

Proposed Conservation Measures: Approach local government to discuss management of site and encourage them to enter into a Nature Refuge Agreement. Involve community in some way, possibly in conjunction with the other Binjour site (SF172 Binjour Plateau).

Implementation: In the early stages of the Project, possibilities for this site were discussed with Australian Trust for Conservation Volunteers (ATCV) Queensland Manager, Phil Harrison. ATCV had funding available for educational projects, and an educational project at the site involving schools in the area was a possibility. Phil followed this idea up and found considerable support, particularly from the Binjour Plateau Primary school, which is only a short distance from the site.

Coinciding with an ATCV/WWF decision to proceed with the site project, a letter was received from a vineforest enthusiast at Bundaberg, who indicated an interest in the Vineforests Project. Information was sent in return and then the Vineforest Liaison Officer met with Maureen Schmitt. Following the meeting, it was decided to engage Maureen to carry out the Binjour Plateau Project.

The school held their first day at the site on November 8, 1996, which went very well. During the day, the students were educated about threatened species issues and their own threatened species site. Erosion/weed growth monitoring pegs were installed at the site, and three bottle trees were planted. The school had already raised these from local provenance seed. As a result of the day, the Binjour Plateau Primary School has agreed to adopt the site. The local newspaper published an article prior to the day, and a follow-up article. A second day will be held at the site in May 1997. Australian Trust for Conservation Volunteers (ATCV) have been thanked for providing funding for the activity.

In parallel to the work carried out with Binjour Plateau Primary School, liaison work has also been carried out with Gayndah Shire Council, who are the responsible authority for the site. Council was also asked to consider entering into a Nature Refuge Agreement for the site. Council gave in-principle approval to a Nature Refuge Agreement. To progress the Nature Refuge Agreement, the threatened species on site need to be mapped. Arrangements are underway for the site to be mapped by a surveyor.

The conservation of this site will be followed up in the 1997 phase of the project. Maureen Schmitt has since been appointed to carry out a vineforests project for Bundaberg Landcare.

SF583 Wietalaba, Monto District Forestry

Site Details: State Forest and possibly adjacent unreserved freehold or leasehold covering approximately 400 hectares. Features two endangered species that are endemic to the site: *Oldenlandia* sp. (Wietalaba N. Gibson 1344) and *Rhodamnia* sp. (Calliope N. Gibson 1335).

Threatened by fire on the western margin. The last fire burnt to the edge of the section of vineforest containing the *Rhodamnia*: another fire of similar intensity would probably result in the extinction of this species.

Proposed Conservation Measures: Survey vineforest to determine extent of endangered species. Approach forestry to discuss conversion to National Park (preferred outcome), Conservation Park, or Scientific Area.

Implementation: The conservation of this site has been pursued through discussions with Monto District Forestry. These discussions have revealed that the area containing the endangered *Oldenlandia* and *Rhodamnia* fortunately coincides with an area that will not be logged because it is too steep. Consequently, there appear to be no obstacles to the declaration of a Scientific Area. The Vineforest Liaison Officer has prepared a draft Scientific Area proposal. Once this draft has been sanctioned by Monto District Forestry, the Queensland Herbarium, and Department of Environment Central Coast Region, it will be forwarded to the Department of Natural Resources (DNR) Rockhampton for progression towards approval. Because of the likelihood of populations of the *Oldenlandia* and *Rhodamnia* also being present in other parts of the vineforest within this State Forest, it has been recommended that as much as possible of the vineforest is included in the Scientific Area. Fire breaks and fire management strategies have also been recommended.

Information about this site will also need to be fed into the Regional Forest Agreement process for South-East Queensland. This process is about to commence.

Funding for the surveys to locate additional populations of the *Oldenlandia* and *Rhodamnia* was unsuccessfully sought from the Federal Endangered Species Program.

SF391 Bulburin, Monto District Forestry

Site Details: State Forest covering approximately 10 hectares. Features a large range of endangered and rare species including the vulnerable species *Macadamia jansonii* which is endemic to the site. Threatened by weed infestation and fires. Additional threat to *Macadamia jansonii* from collection of plant material.

Proposed Conservation Measures: This 10 hectares of vineforest is part of a larger area of mostly degraded vineforest covering in excess of 6000 hectares. A large portion of the vineforest adjacent to Granite Creek is proposed for conversion to Scientific Area. Forestry will be encouraged to extend the SA to include the *Macadamia jansonii* site, to implement fire and weed management, and strategies for discouraging site visitation.

Implementation: The conservation of this site has been pursued through discussions with Monto District Forestry. These discussions have revealed that the area containing the endangered *Macadamia jansonii* coincides with a flora and fauna protection area in the Management Plan Granite Creek of March 1994. The whole of the Pine Creek catchment, and not just the *Macadamia* site, falls within the flora and fauna protection area. Although the management plan is apparently no longer in force because of the Regional Forest Agreement Process, the fact that the area has had a flora and fauna protection designation means that there should be no obstacles to the declaration of a Scientific Area. The Vineforest Liaison

Officer has prepared a draft Scientific Area proposal. Once this draft has been sanctioned by Monto District Forestry, the Queensland Herbarium, and the Department of Environment Central Coast Region, it will be forwarded to the Department of Natural Resources Bundaberg for progression towards approval. To provide adequate buffering to the *Macadamia* site it has been recommended that the whole Pine Creek catchment be included in the Scientific Area. This will have the added benefit of not accurately pinpointing the site. Pinpointing the site would be likely to encourage collection of plant material. Fire breaks, fire management strategies, and weed management have also been recommended.

Information about this site will also need to be fed into the Regional Forest Agreement process for South-East Queensland. This process is about to commence.

SF172 Binjour Plateau

Site Details: State Forest covering approximately 10 hectares. Features a range of endangered and vulnerable species including two newly identified species that are endemic to the site: *Fontainea* sp. (Binjour P. Forster 14130) and *Zieria* sp. (Binjour P. Forster 14134). Most of the vineforest has been cleared from this area. Threatened by grazing, and by fire on the western margin, which is the section of vineforest containing the vulnerable species *Bertya opposens*.

Proposed Conservation Measures: Encourage conversion to Scientific Area, implementation of fire management strategies, and fencing to exclude cattle. Encourage propagation of endangered species and reintroduction at suitable locations. Encourage awareness of vineforest conservation issues, possibly in conjunction with other Binjour site (Site 63 - Binjour Plateau, 4.5km S of Binjour).

Implementation of Proposed Conservation Measures: The conservation of this site has been pursued through discussions with Monto District Forestry. The discussions revealed the existence of two other areas of similar vineforest in the same section of State Forest. One is approximately 10 hectares in the size, the other approximately 5 hectares. The endangered *Zieria* has been located in the 10 hectare patch, with the 5 hectare patch yet to be surveyed.

All three patches of scrub fortunately coincide with an area that has been zoned as flora and fauna protection area. Consequently, there appear to be no obstacles to the declaration of a Scientific Area. The Vineforest Liaison Officer has prepared a draft Scientific Area proposal. Once this draft has been sanctioned by Monto District Forestry, the Queensland Herbarium, and the Department of Environment Central Coast Region, it will be forwarded to the Department of Natural Resources Bundaberg for progression towards approval. The flora and fauna protection area also contains a patch of significant eucalypt forest containing *Eucalyptus melanoleuca* which is listed as rare under the Nature Conservation Act. It has been recommended that this patch also be included in the Scientific Area. It has also been recommended that substantial areas of adjacent open eucalypt forest zoned for timber production be included in the Scientific Area to act as a buffer zone and corridor connection between the patches. Fire breaks, fire management strategies to protect the scrub, and the cessation of grazing have also been recommended.

Information about this site will also need to be fed into the Regional Forest Agreement process for South-East Queensland. This process is about to commence.

Koolkoorum Creek, adjacent to Vineforest Atlas Site 28

Site Details: State Forest and possibly unreserved freehold or leasehold land covering approximately 20 hectares, adjacent to the 980 hectare Scientific Area 54, SF121 Degalgil. Features a range of rare and vulnerable species in vineforest along Koolkoorum Creek. A number of the concentrations of these species are outside the Scientific Area on land that may be either State Forest or unreserved freehold or leasehold. Threatened by weeds, grazing, and fire: a recent fire has already destroyed a large section of the vineforest.

Proposed Conservation Measures: Investigate tenure of vineforest adjacent to Scientific Area. If forestry, encourage extension of Scientific Area. If unreserved freehold or leasehold, encourage landholder to enter into a Nature Refuge Agreement. Encourage implementation of fire and weed management strategies and the fencing out of cattle.

Implementation of Proposed Conservation Measures: The tenure of the site was investigated through a study of the Department of Natural Resources Basic Land Information Network (BLIN) and a second visit to the site.

Tenure was found to be primarily leasehold, with a small component of freehold and a small component of State Forest. To initiate conservation action for the site, the Department of Natural Resources has been asked to investigate possibilities for the leasehold component. Landholder issues will need to be accommodated in any conservation action. For example, access to water and shade will be required for stock.

This site will be followed up in the 1997 phase of the project.

Vineforest Atlas Site 42 - SF832 Stanton, 10km NNE of Booyal

Site Details: State Forest covering approximately 1 hectare. Features a range of endangered and vulnerable species including the endangered species *Alectryon ramiflorus* which has a very small population. Has been converted to a Feature Protection Area and fenced, but is still threatened by weeds, insect attack, and fire.

Proposed Conservation Measures: Encourage suitable community group in the area to adopt the site and implement weed management. Encourage adjacent landholders and forestry to implement fire management. Encourage propagation of *Alectryon ramiflorus* and reintroduction at suitable locations.

Implementation: For the conservation of this site and the endangered species *Alectryon ramiflorus* the Vineforest Liaison Officer has been working in conjunction with the Department of Environment Central Coast Region. Central Coast Region has funding for Recovery Plan preparation and is establishing a Recovery Team. To complement this, the Vineforest Liaison Officer linked the Bundaberg Landcare Vineforest Propagation Project to the Recovery Team. The Vineforest Liaison Officer has also written to the Secretary of the Isis District landcare Group, who is also the Secretary of the local branch of the Canegrowers

industry organisation, asking them to consider an involvement in a Canegrowers sponsored project that identifies suitable private and public land sites around Childers for the reintroduction of *Alectryon ramiflorus*, and then carries out revegetation at those sites. This will be followed up in the 1997 phase of the Vineforests Project.

Teddington Weir

Site Details: Water reserve on Tinana Creek south of Maryborough. Features the endangered species *Cossinia australiana*, and the vulnerable species *Fontainea rostrata*, *Quassia bidwillii*, and *Xanthostemon oppositifolius*. Threatened by fire and weeds.

Proposed Conservation Measures: Establish a demonstration site to encourage an awareness of vineforest conservation and the WWF Vineforests Project. Encourage Maryborough City Council to enter into a Nature Refuge Agreement.

Implementation of Proposed Conservation Measures: The demonstration site project is well advanced, and Maryborough City Council has given in-principle support to a Nature Refuge Agreement. Further funding for the site has been sought from the Federal "Corridors of Green" program.

Pine Creek Electra

Site Details: Unreserved freehold with approximately 6 hectares of vineforest fronting Pine Creek, a tributary of the Burnett River. This is the last remnant of the vineforests of the Electra area, and features the vulnerable species *Cupaniopsis shirleyana*. The vineforest is in good condition with minimal weed invasion and some minor disturbance to soils and vegetation from grazing.

Proposed Conservation Measures: Landholder made contact with the Vineforest Liaison Officer as a result of a project flier. Landholder is keen to enter into a Nature Refuge Agreement.

Implementation: To initiate conservation action, a flora survey was carried out by Vineforest Atlas co-author Paul Forster. The survey revealed that the site is highly significant. The Vineforest Liaison Officer will assist the landholder to enter into the Nature Refuge Agreement in the 1997 phase of the Vineforests Project, in conjunction with the Bundaberg Landcare Project Officer.

3.5 Resources permitting, initiate the collation of fauna data for vineforest sites.

Data for SEQ2001 part of project region.

A written request was made to the Department of Environment Naturesearch section for fauna data for Vineforest Atlas sites within the SEQ2001 part of the Vineforests Project region. This collation was a very large task, and coincided with a restructuring of the Naturesearch section. Consequently, the information took a long time to compile. The information obtained will be very useful in the 1997 phase of the project.

Fauna data for remainder of Vineforests Project region.

Department of Environment Central Coast Region advised that a comprehensive survey had been compiled for areas outside the SEQ2001 region. This survey is *Vertebrates of Dry Rainforest of South and Mideastern Queensland*, by Alan Horsup, Cameron James, and Gary Porter, 1993. This information will also be very useful in the 1997 phase of the project.

3.6 Advisory Committee

An Advisory Committee comprising government and community representatives was maintained for the length of the project. The Advisory Committee provided direction and advice for the project through a series of meetings and direct consultation by the Vineforest Liaison Officer. The Advisory Committee membership remained dynamic throughout the year, so that people with appropriate knowledge were brought on to the committee as required.

The first meeting was held on October 17, 1995; prior to the commencement of the Project. An informal meeting was held at the commencement of the Project, with three formal meetings held during the project. These were held on April 24, 1996; August 8, 1996 and November 22, 1996.

4. CONTINUATION OF PROJECT IN 1997

Shortly after the commencement of the 1996 South-East Queensland Vineforests Project, an application was submitted for further funding from the National Landcare Save the Bush program. This application was unsuccessful.

Later in 1996, an application was prepared and submitted to the Rothwells Trust. Advice was received in early 1997 that this application had been successful, paving the way for the 1997 phase of the Project to commence in February 1997.

Because of the success of the 1996 Vineforest Project in conserving threatened plant species, the Queensland Department of Environment has invited WWF Officer Bruce Boyes to initiate plant and ecosystem recovery for the new Threatened Species and Ecosystems Unit. The Department of Environment has generously granted \$10,000 of additional funding to facilitate this partnership.

6. CONCLUSION

Liaison was carried out with landholders and land managers for 12 high priority sites and proposals developed to further the conservation management at each site. Implementation of each of the proposals developed is now underway. Once these proposals are implemented all 12 sites will have better protection. Additionally the project has improved the conservation of 9 of Queensland's endangered plants.

An extensive public education and awareness campaign and exhaustive networking between groups and individuals involved in vineforest conservation has meant that the 1996 Vineforest

Project has been highly successful in generating a high level of State Government, local authority and landowner support for the conservation and active management of vineforest scrubs in the south-east Queensland Bioregion. The project objectives have been successfully met and the project will continue with funding from other sources.

Many joint ventures have been initiated and WWF is pleased to be able to provide continued support for stakeholder involvement in protection of vineforests through 1997. In a period of just over 2 years the initial funding of \$24,850 from the Save the Bush Program will result in conservation work totalling over \$115,000.

APPENDIX 1: SUMMARY OF FINANCIAL & IN KIND SUPPORT

The following departments, organisations and individuals are thanked for their support of the WWF South-East Queensland Vineforests Project. The \$24,850 Save the Bush grant successfully generated in kind support totalling \$44,820. This was made up of \$18,550 direct financial support (in addition to the Save the Bush grant funding) and \$26,270 operational support.

Financial Support

1. **The Wide Bay Burnett Electricity Corporation** for providing sponsorship for the Teddington Weir Demonstration Site, south of Maryborough. This sponsorship totals \$18,000, being \$13,000 for the erection of a new low-impact powerline \$5,000 for easement revegetation and the construction of an interpretive trail. Thanks to Wide Bay Burnett Electricity Corporation Environment Officer **Steve Martin** for his excellent liaison work.
2. **The Australian Trust for Conservation Volunteers (ATCV)** for generously sponsoring a community-based project at the Binjour Plateau road reserve site (Vineforest Atlas site 63). The \$500 sponsorship was used to run a Threatened Species Day at the site for the Binjour Plateau Primary School, together with a follow-up day to be held early in 1997. Thanks to ATCV Queensland Manager **Phil Harrison** for arranging the sponsorship.
3. **Mrs. Rosemary Slorach** from Brisbane for the generous donation of \$50 towards the project.

Operational Support

1. **The Vineforests Project Advisory Committee** for support and assistance that was outstanding. Without the advice and help of **Paul Sattler** (Qld Dept. of Environment Conservation Strategy Branch), **Peter Bostock** (Qld Dept of Environment, Queensland Herbarium), **Paul Forster** (Qld Dept of Environment, Queensland Herbarium), **Bob Skitch** (Qld Dept of Natural Resources), **Peter Lawson** (Qld Dept of Environment Southeastern Region), **Steve Barry** (Qld Dept of Environment Central Coast Region), **Andrea Leverington** (Qld Dept of Environment Conservation Strategy Branch), **Dr. Aila Keto** (Australian Rainforest Conservation Society), and **Imogen Zethoven** (Qld. Conservation Council) the achievements of the WWF Vineforests Project 1996 would not have been possible. (Approx. 120 hours at \$15/ hr = \$1,800).
2. **The Queensland Department of Environment Southeastern Region** for supplying a motor vehicle through a low-cost leasing arrangement. Many thanks to **Paul Sattler**, **Rob Hughes**, **Peter Lawson** and **Vic Adams** for organising this special vehicle arrangement, which has been a key ingredient in the success of the Vineforests Project. Without the use of a reliable vehicle, traveling the large distances throughout the project region would have been difficult. Thanks also go to **Elizabeth Stark**, **John Pysden**, **Lyn Engeham**, **Fiona Thorpe** and **Karen Francis** from the **Department of Environment Southeastern Region Support Services Unit** who were responsible for

the day-to-day administration of the vehicle arrangement. (Approx 10 hours at \$15 per hour = \$150; vehicle running costs approx. \$2,000).

3. **The Queensland Department of Environment Southeastern Region** for generously providing office facilities at the Southeastern Region Conservation Resource Unit, Moggill. Thanks to **Paul Sattler** and **Peter Lawson** for organising and providing office facilities, which included phone, fax, photocopying, message taking, and mail service. Thanks to Administrative Officers **Madeline Christensen, Michelle Gadd,** and **Jill Angus** for excellent office support at Moggill. (Approx. 30 hours at \$15 per hour = \$450; use of office equipment approx. \$2,000).
4. **The Queensland Department of Natural Resources** for providing mapping facilities for the project, which included access to topographic maps, aerial photographs, and the computer database BLIN (Basic Land Information Network). Thanks to **Bob Skitch** and **Geoff Edwards** for arranging these facilities. (Approx. 10 hours at \$15 per hour = \$150; use of BLIN and maps approx. \$800).
5. **The Queensland Herbarium** for providing a computer with all Vineforest Plant Atlas for South-East Queensland site listings on hard disk. Thanks to **Peter Bostock** (Queensland Herbarium) for arranging this. (Computer cost approx \$500).
6. **Paul Forster** (Queensland Herbarium) for a three day tour of inspection of vineforest sites needing high-priority conservation action. (Approx 24 hours at \$15 /hr = \$360).
7. **The Lockyer Landcare Group - Lockyer Watershed Management Association (LWMA)** for providing a unique opportunity to develop an understanding of the key impediments to vineforest conservation and the solutions that can be implemented to overcome these impediments. Very special thanks to **John Miles, Max Roberts, Dick Scanlan, Robert Bauer, Trudy Townson, Bruce Ford, Steve Barakin, Andrew Davidson, Steve Fox, Steve Harper, Dan and Tanya Murphy, Kate Steele, Richard and Catherine Johnson, and Jim Kerr and Judy Whistler** for great advice and assistance. (Approx 100 hours at \$15 per hour = \$1,500).
8. **Woogaroo Scrub Project Coordinator Lloyd Bird** for supplying inspirational material about his vineforest restoration project on Woogaroo Creek, south of Camira between Brisbane and Ipswich.
9. **Ipswich Envirocare Assoc. Inc.** for the generous loan of their Canon word processor - bubblejet printer unit for the term of the project. (approx. cost \$1,000).
10. **The Australian Trust for Conservation Volunteers (ATCV)** for generously providing a free-of-charge weekend activity at the "A Touch of Paradise" remnant in the Lockyer Valley. Thanks to **ATCV Queensland Manager Phil Harrison** for arranging the weekend, and to **Weekend Projects Coordinator Steve Fox** for running the weekend. Thanks to the volunteers who participated. (Approx 102 hours at \$15 per hour = \$1,530).

11. **The Binjour Plateau Primary School** for keenly participating in the Binjour Plateau roadside remnant site (Vineforest Atlas Site 63) threatened species activities, and agreeing to adopt the site to ensure that it is cared for in the long-term. Thanks to school teacher **Andrea Whelan** for facilitating the school's participation in the activity. (Approx 30 hours at \$15 per hour = \$450).
12. **Maureen Schmitt**, vineforest enthusiast from **Bundaberg Landcare** for leading the Binjour Plateau road reserve site (Vineforest Atlas Site 63) threatened species activities.
13. **Greg Smyrell**, vineforest enthusiast from **the Wide Bay Burnett Conservation Council Maryborough Branch** for his ongoing advice and assistance with the Teddington Weir Demonstration Site Project. (Approx 25 hours at \$15/hr = \$375).
14. **The Wide Bay Burnett Conservation Council, Ipswich Envirocare, and The Toowoomba and Region Environment Council** for publishing articles about the project in their newsletters.
15. **The Queensland Landcare Conference Secretariat** for facilitating the inclusion of the Vineforests Project flier "Helping landholders to look after remnant scrubs...a win-win approach" in the information kit given to all conference delegates.
16. **Burnett Catchment Care** for facilitating a Vineforests Project display at the official launch of Burnett Catchment Care, held at the Booyal hall west of Childers. Thanks to **Landcare Coordinator Heather Beever** for arranging participation.
17. **The Department of Environment Southeastern Region Conservation Resource Unit** for ongoing advice, support and assistance; and the opportunity for input into the work of the Department. Thanks to **Peter Lawson, Dr. Wendy Drake, Peter Lehmann, Ross Patterson, Derek Johnson, Rayelene Klohs, George Krieger, Harry Hines, Kim Morris, Shelley Sullivan, Anne Spearritt, Dr. Greg Gordon, Cathy James and Frances Hrdina**. (Approx 30 hours at \$15 per hour = \$450).
18. **Andrea Leverington** from the **Department of the Environment Conservation Strategy Branch** for advice regarding Nature Refuge Agreement processes.
19. **The Queensland National Parks and Wildlife Service Central Moreton District Office** for ongoing advice, support and assistance, and the opportunity for input into the work of QNPWS Central Moreton. Thanks to **Des Jones, Guy Thomas and Mark Daly**. (Approx 30 hours at \$15 per hour = \$450).
20. **Monto District Forestry** for assistance and cooperation with the development of Scientific Area proposals. Thanks to **Dennis Rolfe, Keith Watson and staff** for an excellent effort. (Approx 20 hours at \$15 per hour = \$300).

21. **Tom Crothers** from the **Department of Natural Resources Bundaberg** for advice in regard to the Scientific Area proposals and the Koolkorum Creek site.
22. **Damian Kennedy** from the **Department of Natural Resources Rockhampton** for progressing the proposal for the conversion of the Struck Oil site to Resources Reserve. Thanks to **Geoff Edwards** from the **Department of Natural Resources Brisbane** for facilitating the link with Department of Natural Resources Rockhampton. (Approx 10 hours at \$15 per hour = \$150).
23. **Ian Hislop** and **Leo Ryan** from **Brisbane City Council** for information about Councils' innovative Voluntary Conservation Agreement Scheme, advice on progress of the implementation of the scheme, and advice on how to introduce such schemes in other local government areas. (Approx 4 hours at \$15 per hour = \$60).
24. **Tim Ellis, Senior Acquisitions Officer** from the **Department of Environment Conservation Strategy Branch** for preparing an introductory letter to Gayndah Shire Council regarding the idea of a Nature Refuge for the Binjour Plateau roadside remnant site, and an introductory letter to Maryborough City Council regarding the idea of a Nature Refuge for Teddington Weir. (Approx 4 hours at \$15 per hour = \$60).
25. **Maryborough City Council** for approving the **Teddington Weir Demonstration Site Project** and giving in-principle support to the idea of a Nature Refuge for Teddington Weir. Thanks to **Maryborough Councillor Bev Carruthers-Turner** for her excellent work in progressing the Demonstration Site and Nature Refuge proposals. Thanks to **Tom Ryan, Maryborough Council Parks and Gardens Officer**, for supporting the proposals. Thanks to **Doug Lupton, Maryborough Council Plant Engineer**, for advice regarding signage and carparking, and for arranging for ATCV personnel to camp in the pump station compound at Teddington Weir. (Approx 30 hours at \$15 per hour = \$450).
26. **Gayndah Shire Council** for giving in-principle support to the idea of a Nature Refuge for the Binjour Plateau road reserve site. Thanks to Gayndah Shire Council Chief Executive Officer **Bob Slatter** for assistance with advancing the Nature Refuge proposal. (Approx 15 hours at \$15 per hour = \$225).
27. **Glen Leiper**, vineforest enthusiast from Beenleigh, for advice regarding the vineforests of the Darlington Range - Wongawallan areas.
28. **Olsen's Capricorn Caves** for advice on their work with the conservation of their vineforest, and for agreeing to participate in the Vineforests Project as a proposed demonstration site. Thanks to the **Augusteyn family** for their excellent assistance. (Approx 20 hours at \$15 per hour = \$300).
29. **Ian and Cathy Herbert** from the "Belgamba" property at Struck Oil, near Mt. Morgan, for advice on the conservation of vineforests in the Struck Oil area. (Approx 20 hours at \$15 per hour = \$300).

30. **The Brisbane Rainforest Action and Information Network (BRAIN)** for inviting the Vineforest Liaison Officer to be guest speaker at one of their meetings.
31. **Greening Australia Queensland** for ongoing advice and assistance. Special thanks to GAQ extension officer **Jim Johnson**.
32. **Mary E. White**, respected palaeobotanist and author of the well known *Greening of Gondwana* for the opportunity to contribute to her forthcoming book.
33. **Pam Morrison**, from the **Department of Environment Naturesearch Section**, for compiling fauna survey information for vineforests within the SEQ2001 region. (Approx 12 hours at \$15 per hour = \$180).
34. **Neil Kershaw** and **Geoff Sinclair** from the **Department of Environment Central Coast Region** for initial advice regarding the direction of the Vineforests Project in relation to the Central Coast region. (Approx 4 hours at \$15 per hour = \$60).
35. **Bill McDonald** from the **Queensland Herbarium** for advice on the content of the project fliers.
36. **Dr. Gordon Guymer** from the **Queensland Herbarium** for permission to reproduce the drawing of *Alectryon ramiflorus* in the "Our forgotten forests... endangered species on the brink" flier.
37. **Michael Brown** from the **Department of Primary Industries** for permission to reproduce the "Control of Exotic Vines" drawing in the "Helping landholders to look after remnant scrubs... a win-win approach" flier.
38. **Maria Vandergragt** from the **National Threatened Species Network** for advice and assistance regarding threatened species recovery. (Approx 4 hours at \$15/hr = \$60).
39. **WWF Australia Head Office** in Sydney for support, advice, and assistance during the project. Thanks to **Dr. David Butcher**, **Dr. Ray Nias**, **Jamie Pittock**, **Deirdre Moor**, **Scott Lyall** and **Philippa Walsh**. (Approx \$2856).
40. **WWF Vineforest Liaison Officer Bruce Boyes**, whose contribution to the project included the following: extra time to take the project to five or six days a week for much of the project (c.\$8,500), payment of some accommodation during fieldwork because of a shortfall in the travel budget (c.\$550), payment of most meal costs during fieldwork because of a shortfall in the travel budget (c.\$750), payment of postage during fieldwork (c.\$50), payment of phone calls during fieldwork (c.\$100), donation to Ipswich Envirocare for use of word processor/printer unit (\$50), cleaning of Department of Environment vehicle (c. \$60), and stationery (c.\$100).

APPENDIX 2: NOTES ON TENURE

In this report it has been necessary to use tenure terminology which is consistent with the *Vineforest Plant Atlas for South-East Queensland*. Some of this terminology is not consistent with tenure terms defined in the *Land Act 1994* and the *Land Title Act 1994*. For the purpose of this report the following definitions apply:

1. **Unallocated State Land:** Land owned by the State that has not been allocated for any purpose, that is, it has not been granted in freehold title or leased or reserved for any purpose. Before the *Land Act 1994* and the *Land Title Act 1994* it was called Crown Land and often described as Vacant Crown Land (VCL).
2. **Reserve:** Land owned by the State which is reserved for a particular purpose.
3. **Unreserved freehold and/or leasehold:** Freehold and State leasehold land over which there is no Nature Refuge Agreement or other form of conservation protection.
4. **Resources Reserve:** In accordance with the *Queensland Nature Conservation Act 1992*, a Resources Reserve is managed to:
 - (a) Recognise and, if appropriate, protect the area's cultural and natural resources.
 - (b) Provide for the controlled use of the area's cultural and natural resources (for example, controlled mining activities may be allowed).
 - (c) Ensure that the area is maintained predominantly in its natural condition.

Commercial forestry operations are not allowed in a Resources Reserve.

APPENDIX 3: EDUCATIONAL & PROMOTIONAL MATERIALS

Our forgotten forests... endangered species on the brink.



Introducing the World Wide Fund for Nature (WWF) South-East Queensland Vineforests Project

What do you first think of when asked to name some endangered species?

Chances are your list features the likes of the Bilby or the Koala. The plight of endangered animals like these has become well known. Thankfully, a growing number of Australians now understand the importance of saving our rich variety of species, our "bio-diversity", from extinction.

But does your list include *Planchonella eerwah* or *Alectryon ramiflorus*? Did you know that these plant species are in as much danger of extinction as many well-known endangered animals? And did you know that they are found right here in South-East Queensland?

Alectryon ramiflorus is a small tree with only about 25 plants left. It is found in a tiny remnant of what was once the extensive "Isis Scrub", near Childers. Nearly all of the Isis Scrub was cleared for sugar-cane cultivation. *Alectryon ramiflorus* is now on the brink of extinction: fires, weeds and insect attack currently threaten its survival.

Planchonella eerwah was presumed extinct until it was rediscovered in 1980 in the mountains south of Ipswich. The largest population occurs there, with about 60 plants found in "Scott's Scrub" at Flinders Peak. *Planchonella eerwah* produces an edible fruit, known locally as the "Flinders Plum".

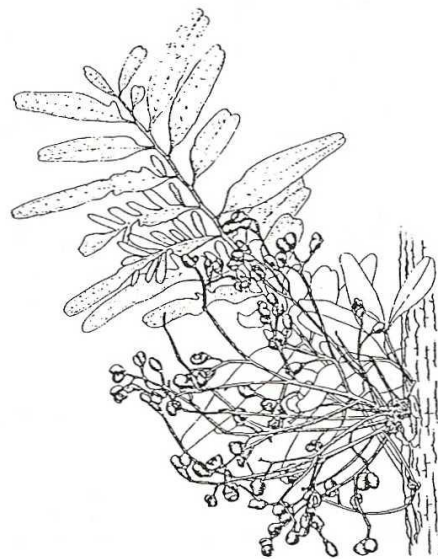
The Dry Rainforests

Mention "rainforest" and most people think of places like the Lamington Plateau, in the high mountain ranges of the Gold Coast hinterland. The word "rainforest" has become synonymous with the lush, moist "subtropical rainforest" that makes up a large part of this area.

However, "subtropical rainforest" is only one of several different types of rainforest found in South-East Queensland. Others include "lowland subtropical rainforest", a moist rainforest found in lowland coastal areas, and four types of "dry rainforest" or "dry vineforest". These "dry rainforests" are known by various names,

including "bottle-tree scrub", hoop-pine scrub", "softwood scrub", or just "scrub".

The largest stands of "subtropical rainforest" in South-East Queensland are well protected. By contrast, our "dry rainforests" and "lowland subtropical rainforests" have been largely cleared, and typically exist only as small remnants. *Alectryon ramiflorus* and *Planchonella eerwah* are just two of the many threatened species found in our dry rainforest remnants. These remnants require urgent attention, and that's what the WWF South-East Queensland Vineforests Project is all about.



Alectryon ramiflorus

WWF and Vineforest Conservation

In 1991 the World Wide Fund for Nature (WWF) funded a study of "dry rainforests" in a region from the NSW border to just north of Rockhampton and inland for about 150km. The study resulted in the publication of the *Vineforest Atlas for South-East Queensland* by Paul Forster, Peter Bostock, Lloyd Bird and Tony Bean. The current WWF South-East Queensland Vineforests Project is a continuation of the original work.

A win-win approach

The South-East Queensland Vineforests Project aims to raise the awareness of dry rainforest conservation issues, and to assist landholders and government with the conservation of significant dry rainforests. WWF is working with landholders to achieve solutions that result in both a win for dry rainforest remnants and a win for landholders. This project is not about taking land away from private landholders. Dry rainforest remnants can be well managed if they stay in private ownership, particularly if the owners are rewarded financially for keeping and managing their remnant, and are assisted with overcoming major management issues like weed infestations or feral animal problems.

WWF believes that landholders who look after areas of dry rainforest should be rewarded for doing so. This project will see WWF working with Councils and the State and Federal Governments with the aim of obtaining financial incentive funding for dry rainforest landholders. The Queensland Department of Environment and Queensland Department of Natural Resources are already helping the project by providing WWF's Vineforest Liaison Officer with office facilities, research facilities, and transport assistance. WWF will assist landholders and

landholder groups, such as Landcare Groups, with management issues using funding from corporate sponsorship, Government grants, or donations. To show landholders how WWF can help them, a series of demonstration projects is being established. For remnants on public land, such as those in State Forests, WWF will encourage community groups to adopt the remnants. WWF will look for funding to assist the groups with management issues.

Queenslanders lend a helping hand

The South-East Queensland Vineforests Project is proudly supported by Queenslanders. Through generous donations and sponsorship, the community and our corporate helpers make it possible for WWF to help remnant dry rainforest landholders. Our donors and sponsors benefit from an association with one of the world's best known logos: the panda symbol. WWF is the world's largest and Australia's most credible conservation organisation. WWF works with the public and companies in a number of ways from tax deductible donations to high profile sponsorships and promotional use of our Panda logo. The more donations and sponsorship, the more landholders that can be helped.

We need your help!

Please help this vital project! Volunteers, donations and sponsorship very welcome! Would your community group be interested in adopting an endangered species vineforest site in your area? For more details, please phone WWF Vineforest Liaison Officer Bruce Boyes on (07) 3202 0224, or mail the form below to Bruce Boyes, WWF Vineforest Liaison Officer, C/- Queensland Department of Environment Moggill Offices, PO Box 42, Kenmore, Qld, 4069.

<input type="checkbox"/>	Please contact me about the WWF South-East Queensland Vineforests Project.
<input type="checkbox"/>	Please find enclosed my donation to the WWF South-East Qld Vineforests Project (make out cheques and money orders to "WWF Australia").
<input type="checkbox"/>	Please contact my company about WWF's Corporate Relationships Program, and opportunities for sponsoring the South-East Qld Vineforests Project.
Name _____	
Company Name (if applicable) _____	
Address _____	
Telephone () _____	Facsimile () _____

Acknowledgments: The drawing on the previous page is reproduced from *Austrobaileya* 2:333 (1987) by permission of the Queensland Herbarium.

Helping landholders to look after remnant scrubs... A win-win approach.



Introducing the World Wide Fund for Nature (WWF) South-East Queensland Vineforests Project

The South-East Queensland Vineforest Project aims to help landholders to protect important areas of dry rainforest scrub. This project will see the World Wide Fund for Nature (WWF) working with landholders to achieve outcomes that respect and take into account their rights and concerns. WWF will work towards solutions that result in both a win for scrub remnants and a win for landholders.

This project is not about taking land away from private landholders. WWF believes that scrub remnants can be well managed if they stay in private ownership, particularly if the owners are rewarded financially for keeping and managing their scrub, and are assisted with overcoming major management issues like weed infestations or feral animal problems.

Financial rewards

WWF believes that landholders who look after areas of scrub should be rewarded for doing so. This project will see WWF working with local Councils and the State and Federal Governments with the aim of obtaining financial rewards for scrub landholders. The Queensland Department of Environment and Queensland Department of Natural Resources are already helping the project by providing WWF's Vineforest Liaison Officer with office facilities, mapping facilities, and transport assistance.

Management assistance

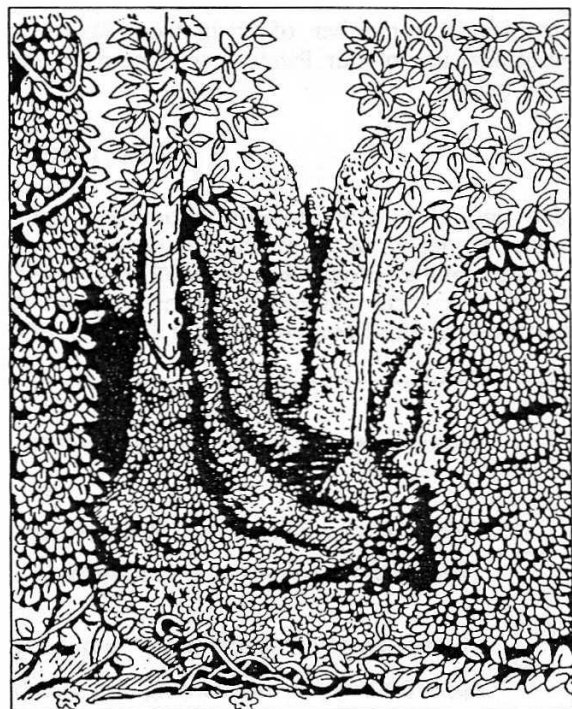
As well as working towards financial rewards, WWF will be assisting landholders and landholder groups, such as Landcare Groups and Progress Associations, with management issues. To do this WWF, in conjunction with the landholder or landholder group, will seek private company sponsorship or Government grants. Activities - WWF will seek funding for include employing work teams to remove weeds, building fences to control feral animals or stock, planting woodlots as buffer zones, or whatever else may be needed.

The Dry Rainforests

Mention "rainforest" and most people think of places like the Lamington Plateau, in the high

mountain ranges of the Gold Coast hinterland. The word "rainforest" has become synonymous with the lush, moist "subtropical rainforest" that makes up a large part of this area.

However, "subtropical rainforest" is only one of several different types of rainforest found in South-East Queensland. Others include "lowland subtropical rainforest", a moist rainforest found in lowland coastal areas, and four types of "dry rainforest" or "dry vineforest". These "dry rainforests" are known by various names, including "bottle-tree scrub", hoop-pine scrub", "softwood scrub", or just "scrub".



Forest infested with exotic vines - a management issue where WWF can help

The largest stands of "subtropical rainforest" in South-East Queensland are well protected. By contrast, our "dry rainforests" and "lowland subtropical rainforests" have been largely cleared, and typically exist only as small remnants. These remnants provide habitat for very important animals like Coxon's Fig Parrot and the Black-Breasted Button-Quail. Scrubs

can also be very beneficial for property management. Scrub areas can provide windbreaks, and erosion and salinity control. Many important and useful plants grow in the scrubs. Some offer commercial opportunities as sources of food, or medicines – a number are even being researched for cures to AIDS and cancer. Unfortunately, we have lost most of our once extensive scrubs, pushing many plants and animals to the verge of extinction. It is important to try and look after what we have left. That's what the WWF South-East Queensland Vineforests Project is all about.

WWF and Vineforest Conservation

In 1991 the World Wide Fund for Nature (WWF) funded a study of "dry rainforests" in a region from the NSW border to just north of Rockhampton and inland for about 150km. The study resulted in the publication of the *Vineforest Atlas for South-East Queensland* by Paul Forster, Peter Bostock, Lloyd Bird and Tony Bean. The current WWF South-East Queensland Vineforests Project is a continuation of the original work.

In the Toowoomba region, WWF has been working in conjunction with the Lockyer Landcare group on a number of projects. Lockyer Landcare's new Vegetation Projects Subcommittee has projects up and running for several remnants. This is a very commendable effort – keep up the good work Lockyer Landcare!

Queenslanders lend a helping hand

The South-East Queensland Vineforests Project is proudly supported by Queenslanders. Through generous donations and sponsorship, the community and our corporate helpers make it possible for WWF to help remnant dry rainforest landholders. Our donors and sponsors benefit from an association with one of the world's best known logos: the panda symbol. WWF is the world's largest and Australia's most credible conservation organisation. WWF works with the public and companies in a number of ways from tax deductible donations to high profile sponsorships and promotional use of our Panda logo. The more donations and sponsorship, the more landholders that can be helped.

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Please help this vital project! Volunteers, donations and sponsorship very welcome! Would your community group be interested in adopting an endangered species vineforest site in your area? For more details, please phone WWF Vineforest Liaison Officer Bruce Boyes on (07) 3202 0224, or mail the form below to Bruce Boyes, WWF Vineforest Liaison Officer, C/- Queensland Department of Environment Moggill Offices, PO Box 42, Kenmore, Qld, 4069.

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<input type="checkbox"/>	Please contact my company about WWF's Corporate Relationships Program, and opportunities for sponsoring the South-East Qld Vineforests Project.
Name _____	
Company Name (if applicable) _____	
Address _____	
Telephone () _____	Facsimile () _____

Acknowledgments: The drawing on page 1 of this flier has been provided by the Department of Primary Industries, Queensland, from their Tree Note F3 published by the DPI Queensland.

Olsen's Capricorn Caverns

Self-guided Dry Rainforest Walk

Post No.1. What happens when a tree falls in a forest?

When a tree falls, light is allowed to penetrate the canopy layer and filter to the ground. The extra light promotes the growth of juvenile species which eventually replace the fallen tree and rejuvenate the rainforest. Juvenile trees have to compete with weeds whose growth is also promoted by the extra light.

Post No.2. How does a fallen tree help the forest?

Organic debris is an essential component of all living ecosystems. Decaying leaves and logs in a rainforest replenish and rejuvenate the soil. The recycling of organic nutrients promotes the growth of juvenile species. The dead wood provides infrastructure for a range of species, including algae, moss, lichen and fungi. A fallen tree provides essential and protective shelter for much of the rainforest fauna.

Post No.3. Why are there vines in the rainforest?

Dry rainforest is characterised by the presence of vines. Most are thick and woody stemmed but are unable to support their own weight. Specialised characteristics to aid climbing include twining (coiling around tree), scrambling (use thorns, prickles and recurved hooks to grab and anchor), and tendrils (threads to coil around tree and draw closer to support). Can you find the three types at this site? Vines are effective in climbing to the canopy, filling in the gaps and maintaining the rainforest microclimate. They represent a specialised niche species.

Post No.4. Why is remnant dry rainforest diminishing?

Dry rainforest vegetation is not bush fire tolerant. Where fire is prevalent, the rainforest has been replaced by more open eucalypt forest and woodland. This is characterised by the presence of eucalypts, a grass dominated understorey, and a lack of woody vines. The eucalypt forest represents a decrease in species diversity. From the sign post look left and right, compare the density of the vines.

Post No.5. Kirsty's Camp

The Olsen children enjoyed playing in the forest. This camp-site was built by Kirsty Olsen, the great grand-daughter of John Olsen (cave discoverer) in her childhood years.

Post No.6. Why is the dry rainforest called a Semi Evergreen Vine Thicket?

A dry rainforest consists of two layers: a continuous enclosed canopy of trees and shrubs penetrated by taller scattered emergent trees. A characteristic of many rainforest species is the loss of leaves in dry conditions. This limits water loss during drought and has led to the term Semi-Evergreen being used. Other adaptations to drought include small leaves, leaves with thick waxy cuticles, prickles and thorns. Woody vines are well represented in a dry rainforest and thus the name Vine Thicket.

Post No.7. What are the human impacts on dry rainforest?

Residential development, mining, agriculture, grazing and fire all contribute as human impacts on dry rainforest. The rainforests are now vulnerable to attrition from bushfires and clearing. After disturbance has occurred weeds are better able to compete with native vegetation for space, nutrients and sunlight. Common weeds include rubber vine, mothers of million, corky passionfruit vine, lantana, Madeira vine, and deadly nightshade.

Nature Walk Guidelines

Please follow the designated track

Please observe but do not touch

Do not litter the Dry Rainforest

Woogaroo Scrub Project preserving flora and fauna for future generations

LLOYD BIRD, Woogaroo Scrub project coordinator, writes about the exciting revegetation work being carried out around Springfield, the site of a new city near Ipswich.

South east Queensland is experiencing rapid urbanisation and increasing population pressures. While extensive tracts of relatively intact bushland remain in close proximity to Brisbane and Ipswich, urban expansion will eventually result in the loss of much of this green space.

The development of an entirely new city – to be known as Springfield – is a major project attracting much attention. Incorporated in the design of the city are a number of green belts and wildlife corridors aimed at conserving important flora and fauna habitats. Opossum, Woogaroo and Mountain Creeks serve as major drainage lines within the Springfield development. A fringing rainforest known as the Woogaroo or Goodna Scrub once extended from the Brisbane River to Goodna upstream for five kilometres. The lower reaches of Opossum Creek also contain small fragmented patches of disturbed rainforest.

Historical value of Woogaroo Scrub

The Woogaroo Scrub was a popular destination for early botanists and naturalists. Many took the train to Goodna, where they alighted and spent time exploring the rainforest. A report on one of these field trips dated May 24, 1889 records the party being led by the famous botanists F M Bailey and J M Simmonds, and many of the plant species recorded that day can still be found along Woogaroo and Opossum Creeks.

The fragmentation problem

Timber getting, agricultural pursuits and fires have resulted in fragmentation of the closed forest over time. Valuable timbers, including hoop pine (*Araucaria cunninghamii*), red cedar (*Toona australis*), black bean (*Castanospermum australe*) and bumpy ash (*Flindersia schottiana*) were logged almost to the point of extinction. Invasive tree species such as camphor laurel (*Cinnamomum camphora*) and Chinese elm (*Celtis sinensis*) rapidly colonised

disturbed areas.

During the planning process, Springfield Land Corporation Pty Ltd decided to encourage involvement by residents, schools and the scouting association in a number of environmental projects aimed at retaining important habitats to conserve local flora and fauna. A scheme was formulated to regenerate riparian vegetation fringing Opossum Creek, including both disturbed dry rainforest and tall open forest.

The vegetation

A vegetation survey carried out prior to the start of the project recorded 130 closed forest species present within a small area. Located at the base of a steep ridge facing south, the creek flat had the advantages of being a fire-proof environment, was sheltered from dessicating winds and was easily accessible. Chinese elm and camphor laurel trees – noted for their ability to rapidly colonise disturbed rainforest – were luckily confined to the immediate stream banks.

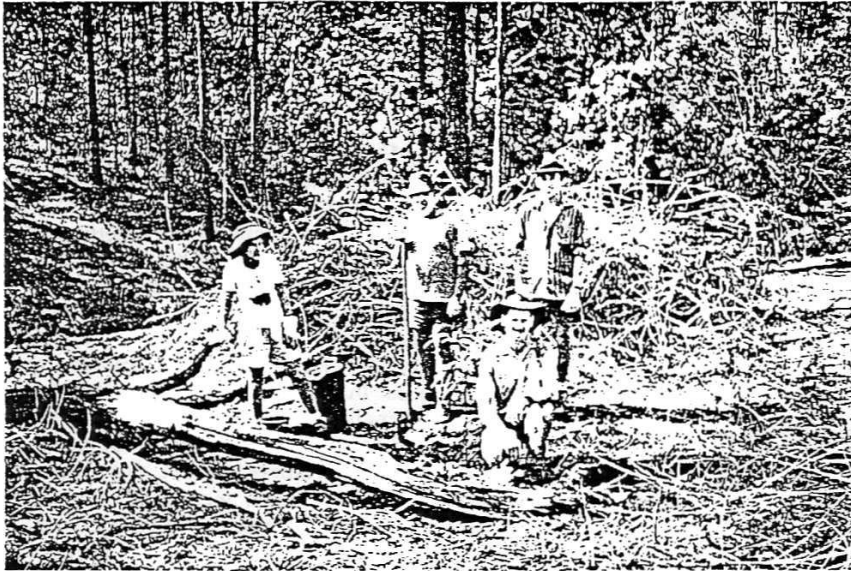
Dense lantana (*lantana camara*) dominated the understorey. The decision to remove this invasive weed by hand, rather than use mechanical methods or herbicides, was a wise one, as numerous native seedlings were uncovered during clearing. Minimum soil disturbance curbed the number of weed and grass species which would have invaded the area. Initial funding was provided by Springfield to upgrade an access track and engage the Australian Trust for Conservation Volunteers (ATCV) to remove lantana and other weeds. A combined submission for a Save the Bush community grant to conserve remnant vegetation by the Ipswich branch of the Society for Growing Australian Plants (SGAP) and Moreton Shire Council resulted in further funding.

The project

Altogether a period of five weeks was occupied with the removal of lantana and weeds, and planting trees, with a number of local people contributing labour and plants on a regular basis. Redbank Plains High School students are propagating the material collected during field trips to Opossum Creek, and plants raised will eventually be used in the revegetation of the scrub. Only those species known to occur in similar dry rainforest will be used to enrich existing vegetation.



▲ ATCV helps out at Opossum Creek



▲ Clearing lantana (*Lantana camara*) at Opossum Creek

Chinese elm and camphor laurel are at present being injected with herbicide rather than being physically removed. This method will decrease the chances of erosion while the area awaits restoration with native species occurring naturally in riverine rainforest.

Drought conditions currently prevailing in south east Queensland have curtailed the planting of tubed stock in any great numbers. Waterholes along Opossum Creek dried up five months ago so available water has had to be used sparingly and had to be carried to the site in containers. Although watered during the initial planting, all stock has to depend on its ability to survive until rain arrives.

The right plant in the right place . . .

Use of the right plant in the right place, combined with copious amounts of mulch, has resulted in minimal losses up to the present time.

Immediate planting after the brushing of lantana into a humus-rich soil contributes towards optimum survival rates. Many rainforest seedlings were noted once lantana was removed. Species included silky oak (*Grevillea robusta*), blackwood (*Acacia melanoylan*), white cedar (*Melia azedarach*) and kamala (*Mallotus philippensis*).

Early explorers of the Brisbane area noted in their journals that rainforest formed fringing vegetation along many of the area's rivers and creeks. Although remnants are often fragmented and degraded, they represent an important biological resource worthy of preservation and restoration.

Scrub treasures

On a recent expedition to a patch of Woogaroo Scrub, Dr David Lin, from Queensland University of Technology, found plant material of the rainforest tree *Sarcomelicope simplicifolia*. Dr Lin is presently researching the medicinal potential of a number of species found in cloistered forests in south east Queensland.

A number of other plant species from the Woogaroo Scrub have been collected for similar purposes during the preceding years. The discovery of two rare frog species along Woogaroo Creek emphasises the value in preserving remaining fragments of rainforest. An undescribed *Plectranthus* species (*Nature coleus*) has also been located on sandstone outcrops adjacent to Opossum Creek.

Communities working together for the future

The restoration of sections of the Woogaroo Scrub is a genuine attempt by a cross section of the community to involve itself in conserving our dwindling natural resources. Hopefully the enthusiasm generated by this project will result in the formation of a Woogaroo Creek Catchment Association involved in a number of nature-based activities including tree planting, bird watching and bush walking.

Rapid urbanisation must not allow us to lose sight of the fact that, along with larger tracts of bushland, many small specialised habitats – such as Opossum Creek – are a vital link in preserving diversity of flora and fauna for the enjoyment of future generations.

Community involvement key to Woogaroo success

The Woogaroo Scrub Project, featured in the last issue of *The Growing Idea*, aims to restore an area of fragmented riverine rainforest and a surrounding flat along Opossum Creek. The area, near Ipswich in South-east Queensland was originally part of the Woogaroo or Goodna Scrub. The area now lies within Springfield a new city development between Ipswich and Brisbane. Incorporated into the design of Springfield are extensive greenbelts and wildlife corridors which will help to conserve important flora and fauna habitats. Volunteer Karin Hall has been helping the project and outlines the progress so far.

When the project started in late 1992 areas up from Opossum Creek were heavily infested with lantana (*Lantana camara*) and along the creek bank itself the exotic "weed" trees camphor laurel (*Cinnamomum camphora*) and Chinese elm (*Celtis sinensis*) dominated. A large number of the camphor laurel and Chinese elm have now been poisoned with herbicide.

Lantana Clearing

Tackling the "walls" of lantana at first appeared to be a major undertaking. However within a year the majority of it has been cleared. A large amount of work was initially and progressively carried out by the Australian Trust for Conservation Volunteers (ATCV) and the rest by local volunteers.



▲ Local volunteer group and myself centre (blue shirt and dark blue shorts) taking a break after clearing lantana

All the lantana has been cleared using hand tools such as brush hooks, machetes and secateurs. The reason for this was the numerous native seedlings such as white cedar (*Melia azedarach*), silky oak (*Grevillea robusta*) and blackwood (*Acacia melanoxylon*) under the lantana which would have been destroyed using machinery. The lantana was cut back near the base which was either dug out or left for follow up poisoning with herbicide.

You might think this activity is fraught

with the danger of disturbing snakes. Although various snakes have been spotted at Opossum Creek they are usually only encountered by someone first entering an area. They are not normally seen when lantana is being cleared by a group. Bites from giant jumping ants have occurred when areas around their nest are disturbed. (A video camera has been needed to capture the moment as the unsuspecting victims usually jump much higher than the ants).

After lantana is removed the soil is left in good condition with a thick layer of mulch. Slopes are also left with this rich soil as the lantana has prevented it from being washed away. During the recent drought this mulch has helped keep alive the hundreds of trees, shrubs and vines planted in cleared areas. These plants were given only small amounts of water when planted as Opossum Creek has been dry for over a year. All the water that was used for planting has been brought into the area in containers. Hardier species were planted on the slopes and ones requiring more water planted nearer the creek in moisture pockets.

Propagation

A number of rainforest plant species endemic to Opossum Creek are either not available through commercial nurseries or only in limited quantities. In order to restore the area with enrichment planting many species are being propagated by ►



▲ A local volunteer, Eddie Hirning, in front of a 'wall' of lantana at Opossum Creek

◀ local volunteers and Redbank Plains High School students. Seeds and cuttings from local sources are used when possible, however some original species have disappeared and in these cases propagating material from other locations is being used. Species planted at Opossum Creek are endemic to similar riverine rainforest within a 40km radius. The exception being some rare species such as *Corchorus cunninghamii*.

Species that are currently being propagated include: pavetta (*Pavetta australiensis*), corkwood (*Duboisia myoporoides*), whalebone tree (*Streblus brunonianus*), round lime (*Microcitrus australis*), hairy psychotria (*Psychotria loniceroides*) and kangaroo apple (*Solanum aviculare*).

Preserving Plant Diversity

The restoration of the remnant rainforest at Opossum Creek is important in helping to preserve the diversity of local plant species some of which have medical potential. Some species could also have potential in the food industry. For example

the round lime is currently being trailed by orchardists in the USA as a root stock. It could be developed by the fruit industry here in Australia.

Koala Habitat

A surrounding flat next to Opossum Creek is also being restored. Various *Eucalyptus* species particularly koala food trees such as the Queensland blue gum (*Eucalyptus tereticornis*) and the gum topped box (*E. moluccana*) are now being planted. On a recent visit a koala was spotted climbing up a camphor laurel tree. Hopefully the planting of these *Eucalyptus* trees will not only encourage koalas to the area but also aid in their survival.

The Future

The involvement in the project by local schools, the scouting association and various community groups is being encouraged. A Woogaroo Creek Catchment Association may be formed in the future. It is hoped that the area will be enjoyed by people and a refuge for wildlife.

**WOOGAROO OR GOODNA SCRUB.
WOOGAROO AND OPOSSUM CREEKS GOODNA.
COMMENTS ON THE EARLY HISTORY AND PRESENT DAY FLORA.**

At the beginning of European settlement the Woogaroo Scrub occupied the flood plain - major drainage lines and Sandstone outcrops fringing Woogaroo and Opossum Creeks for a distance of approximately six kilometres upstream from the Brisbane River. A survey map dated 1869 indicates substantial tracts of Rainforest occurring on flats and drainage lines in the vicinity of the junction of Woogaroo and Opossum Creeks. Red Cedar (*Toona australis*) Black Bean (*Castanospermum australe*) and Hoop Pine (*Araucaria cunninghamii*) are noted as valuable timber species occurring in the scrub. Small disjunct communities of stunted hardier Rainforest species occurred upstream on Woogaroo and Mountain Creeks Rainforest species also remain as scattered individuals along Happy Jack Gully a tributary of Woogaroo Creek. Based on recent surveys and information gleaned from the records of early botanists and naturalists it can be assumed that the Woogaroo Scrub was originally Riverine rainforest on the moist alluvial loams with Dry rainforest (Hoop Pine Scrub) occupying drier and less fertile sites. Rainforest species usually indicative of Riverine rainforest surviving as occasional individuals along Woogaroo Creek include Silky Oak (*Grevillea robusta*) Red Cedar (*Toona australis*) Pepperberry (*Cryptocarya obovata*) Black Walnut (*Beilschmiedia obtusifolia*) Watkins Fig (*Ficus watkinsiana*) Native Frangipani (*Hymenosporum flavum*) Brush Cherry (*Syzygium australe*) Rose Satinash (*Syzygium francisii*) Lilly Pilly (*Acmena smithii*) and Mallettwood (*Rhodaninia argentea*). Dry Rainforest species associated with Hoop Pine (*Araucaria cunninghamii*) include Kamala (*Mallotus philippensis*) Yellow Tulip (*Drypetes australasica*) Foambark (*Jagera pseudorhus*) Native Olive (*Notelaea longifolia*) Hard quandong (*Elaeocarpus obovatus*) Cheese tree (*Glochidion ferdinandi*) Native Croton (*Croton insularis*) Brush Teak (*Toechima tenax*) and Celerywood (*Polyscias elegans*). Species composition of the Woogaroo Scrub was similar to Riverine and Dry Rainforest once found fringing the Brisbane River and along streams in the Brisbane area. Early explorers of the Brisbane River, Oxley, Cunningham and Fraser all noted Rainforest taxa in their logs and journals and commented on the magnificent closed forest overhanging the waterways. Large tracts of Rainforest which once clothed the banks of the Brisbane River in the vicinity of Goodna have now disappeared into the annals of history. The "Black Bean" scrub at Riverview, "Moggill Scrub" at Priors Pocket and the Wolston Scrub fringing the Brisbane River from Goodna to Jindalee have either been totally cleared or exist as tiny fragmented patches. Positioned between the fledging communities of Ipswich and Brisbane early Goodna represented an important staging point for coaches plying between the two burgeoning cities. A demand for Rainforest timbers, grazing and agricultural land quickly led to the clearing of creek and river flats downstream on Woogaroo Creek. Rainforest species logged for their valuable timbers included Red Cedar (*Toona australis*) Silky Oak (*Grevillea robusta*) Black Bean (*Castanospermum australe*) Crows Ash (*Flindersia australis*) Yellowwood (*Flindersia xanthoxyla*) Hoop Pine (*Araucaria cunninghamii*) and Bumpy Ash (*Flindersia schottiana*).

An issue of the Queensland Times in 1878 notes that large amounts of timber from the Redbank Plains area was being taken to the wharf at Goodna and shipped to

Brisbane. It is recorded that timber was also towed back upstream to Ipswich.

Dry Rainforest also known as Vine Forest is noted for its diversity of large woody vines sometimes developing into an impenetrable tangle much to the annoyance of timbergetters and pioneers intent on felling the scrub. Climbers of Woogaroo Creek include Water Vine (*Cissus antarctica*) Wonga Vine (*Pandorea pandorana*) Headache Vine (*Clematis glycinoides*) Roundleaf Vine (*Legnephora moorei*) Waxflower (*Hoya australis*) Blood Vine (*Austrosteenisia blackii*) and Knot Vine (*Hippocratea barbata*). Early settlement of the lower reaches of Woogaroo Creek quickly heralded the demise of the most luxuriant section of the scrub. Although sporadic logging occurred upstream in the Rainforest the rugged terrain restricted the harvesting of timber to the accessible flats. Scrub survived along the creek until relatively modern times when the advent of modern machinery and dwindling supplies of timber provided the incentive to log remnant patches along the creek. Early in the century due to its accessibility by road-rail and water Goodna and the Woogaroo Scrub was a mecca for visiting botanists and naturalist groups collecting and recording the diverse flora and fauna of the scrub. Still on file at the Queensland Herbarium is a record of a visit by train on the 24 May 1889 to the Goodna Scrub by the Field Naturalists. Members of the excursion included botanists F.M. Bailey, J.F. Shirley and J.H. Simmonds. All except two of the twenty nine plant species recorded during the outing have been collected during recent surveys. W.D. Francis a botanist renowned for his knowledge of Rainforest trees also visited and collected in the Woogaroo Scrub. Published in 1929 his book *Australian Rainforest Trees* is still recognised as an early classic on species which occur in closed forest. Illustrations of three Rainforest trees *Beilschmiedia obtusifolia*, *Aphananthe philippensis* and *Bridelia exaltata* were photographed in the "Goodna Scrub" in the early twenties. The present day Woogaroo Scrub is a sad reflection of its previous pristine glory.

Logging and clearing for grazing, agricultural pursuits, increased fire regimes and introduction of exotic tree and weed species have all contributed to decimation of the Scrub. Nevertheless fragmented patches remaining on rock outcrops, sheltered gullies and fringing the flood plain of Woogaroo and Opossum Creeks represent an extremely valuable resource for both aesthetic and scientific purposes. A number of remnants cling tenaciously to Sandstone boulders or survive on skeletal soils derived from the Bundamba - Ipswich coal measures. Weathering to a coarse infertile soil the Sandstone around Ipswich usually supports Eucalypt or Heath type communities. Little or no Rainforest is known to occur elsewhere on this Sandstone in the vicinity of Brisbane or Ipswich. At the present time in excess of two hundred species of plants known to occur predominantly in Rainforest have been noted along Woogaroo and Opossum Creeks. With increasing recognition of the potential of Rainforest flora as a valuable asset, conservation and regeneration of remnant patches should be given top priority by both the government and the community. Remnant Rainforest of the Woogaroo Scrub has yielded a number of plants at present being researched for medicinal purposes both in Australian and overseas. Among these are *Alyxia ruscifolia*, *Stephania japonica*, *Sarcomelicope simplicifolia*, *Castanospermum australe* and *Pentaceras australis*. *Austromyrtus hillii*, *Rhodamnia argentia* and *Rhodomyrtus psidioides* were also collected for evaluation of essential oils either of scientific or commercial value. A request by the New Zealand Agricultural Department for seed

of *Diospyros* species growing in South-east Queensland led to collections from Woogaroo Creek of *Diospyros australis*, *Diospyros geminata* and *Diospyros fasciculosa*. Closely related to the valuable commercial fruit Persimmon (*Diospyros kaki*) it was hoped to utilise the hardy local species as rootstock. *Microcitrus australis* (native citrus) has also been considered as a rootstock for commercial citrus species. Growing interest in bush medicines and wild foods may lead to the study and cultivation of many more Rainforest species at present unused. Over a century ago J.H. Maiden in his book *The Useful Nature Plants of Australia* nominated a plenitude of uses for our indigenous flora by both Aborigines and Pioneers. Two species listed as Rare and Threatened are recorded from Opossum Creek. These are *Marsdenia coronata* and *Sarcochilus dilatatus*. *Plectranthus* sp. (Ormeau) recorded from only a few small disjunct populations in South-east Queensland occurs on Sandstone boulders adjacent to Opossum Creek. A common shrub fringing Opossum Creek and drainage lines *Baeckea virgata* is under revision and this form may be eventually described as a new species.

Other relatively uncommon species associated with riparian communities along Woogaroo and Opossum Creeks are *Teucrium argutum*, *Selaginella brisbanensis*, *Hibiscus splendens*, *Stephania aculeata* and *Trichosanthes subvelutina*.

A report by the Field Naturalists following a trip to the Goodna Scrub in 1889 includes the comment, *Hibiscus splendens* in fruit, this tall scrub is rare in Brisbane. Since the clearing of Lantana (*Lantana camara*) during regeneration of degraded Riverine and Dry Rainforest at Opossum Creek regrowth of *Hibiscus splendens* is occurring naturally. The diverse vegetation fringing Woogaroo and Opossum Creeks provide both a source of food and shelter enabling the survival of a number of fauna species under increasing pressures from destruction of habitat and urbanisation in South-east Queensland. Both streams and their tributaries are of major importance as wildlife corridors providing a link between the Brisbane River and extensive tracts of bushland to the south in the vicinity of White Rock, Spring Mountain and Mt Flinders.

Public interest and awareness of the recreational, environmental and aesthetic values of remnant bushland especially in urban areas is clearly indicated by increased usage of these open spaces. Walking, birdwatching, educational and bushcare oriented activities are appropriate uses for these green belts. Towards the turn of the century a favoured meeting place for pioneer inhabitants of the Goodna - Redbank Plains area was a huge Whalebone tree (*Streblus brunonianus*) on a creek flat bordering Woogaroo Creek. Known as the "Picnic Tree" it was situated where the Redbank Plains - Greenbank track crosses Woogaroo Creek. Little remains to indicate this historic site except charred beams of the wooden bridge which once spanned the creek and occasional Rainforest species in nearby sheltered gullies. In an increasingly urbanised society these remnant tracts of bushland represent a valuable irreplaceable asset to be treasured by the present and future generations.

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Establishing a Nature Refuge

by Richard Scanlan

Introduction

To commence this talk on establishing a Nature Refuge, I will take you back to the days of my youth. I have lived in the Lockyer Valley for the whole of my life (71 years), as did both of my parents before me. Even as a school boy, I loved to hear my father speak of his days as an axeman and how he and other men of the day would fall the scrub trees that covered the hills.

When the early settlers selected land in the Lockyer Valley in the 1880s and 90s the tree coverage consisted of two main types. An estimated 80% of the valley was covered with eucalypt type forest while the remainder was covered with softwood scrub. This scrub could also be described as dry rainforest or vine thicket. Most of the scrub areas were to be found on the hills to the South of the valley.

Clearing by the Early Settlers

The forest areas were ring barked by the early settlers, whereas the scrubs were completely felled by the axe. When the scrub was felled, fired and grassed, the land was found to be rich in nitrogen and had a good carrying capacity for beef and dairy cattle. Many of the early settlers turned their attention to these scrubby hills. As a result of their hard work, many succeeded in making a good living.

Between about 1890 and 1940, most of the scrubs were felled, and when I grew to manhood in the early 40s, there was not much of it left. However, it was my dream to prove that I was a real man by felling scrub as my forebears had done. My dream did come true. In 1950, I purchased a large piece of land, 446 acres, which was covered with mostly softwood scrub and a small amount of Brigalow scrub. It cost me two pounds per acre.

In those days, conservation was not an issue. My only thought at the time was to clear the scrub and plant it with grass so I could establish a herd of beef cattle. This is precisely what happened. During the next 15 years, with some help, I felled all but about 70 acres. By that time the lantana was growing up behind me and I felt it was time to call a halt.

By the year 1970, soil erosion and land slipping had become a serious problem and I slowly came to the conclusion that I had been responsible for land degradation. This was the worst where the hills were the steepest.

In 1976, I was elected as a Laidley Shire Councillor and a few years later I became involved with a group known as the "Lockyer Watershed Management Association" (L.W.M.A.). By this time my attitudes had completely changed from what they had

been many years earlier. The L.W.M.A. was concerned with such things as soil conservation, water quality, establishment of nitrogen rich pastures and the restoration of natural vegetation.

Establishing a Nature Refuge

My friends in the L.W.M.A. had always shown a keen interest in my 70 acres of scrub as well as in other patches throughout the valley. A “remnant vegetation” sub committee was formed and there was a growing interest in the subject. I personally conducted several walks through my patch of scrub. At the time, we were told that Government legislation to establish fauna reserves was in place, but it was not satisfactory for this reason:- It protected the animals and birds, but it did not protect their habitat. In other words, the trees in a fauna reserve could all be felled. What then would become of the animals and lizards, the birds and the bees that relied on the trees for food and protection?

To cut a long story short, word eventually came to us that the Qld Government was considering legislation that would correct this anomaly. Finally the *Nature Conservation Act 1992* was passed in the Qld Parliament, in October of that year. In short, their object was to establish what was to be known as “Nature Refuge” conservation agreements with landholders. Such agreements, to be drawn up by the landholder and the Department of Environment and Heritage would be legally binding and would totally protect the flora and fauna in perpetuity. The landholder would retain ownership of the property.

My next move was to make application to the Department for my scrub to be declared a Nature Refuge. This application was dated 12th October 1992, so it can be seen that we did not waste any time. Within the weeks following, I had a visit from officers of the Department who had to assess whether my block of scrub had ecological value and was suitable for such a declaration. Mr Ron Turner and Mr Greg Siepen duly arrived and an on site inspection was made. They were convinced that it conformed with all requirements.

It soon became obvious that this was to be the first “Nature Refuge” declared under the new legislation and it was important that everything be done correctly. We had to clearly define exactly where the boundaries of Nature Refuge would be. The total area of the property was 446 acres. About 110 acres of this was to become refuge and about 70 acres of that was virgin scrub. On the Eastern side and the South side, the property boundaries were used. A stone gully was declared its Western boundary and the Northern boundary was a line between two points that were clearly established. It was at this time we decided to name it the “Berlin Scrub” Nature Refuge. Firstly, “Berlin” was my wife’s maiden name and secondly, several families by that name had lived in the area since 1920.

During the following months I had several visits from Mr Turner and other department officers to finalise an agreement. Very simply we sat down at our dining room table and worked out an agreement that was satisfactory to all concerned. It would not be possible, here, to tell you all the matters agreed upon, but I will touch on just a few:

1. I must make reasonable efforts to prevent the spread or invasion of pests and weeds of a foreign nature.
2. I may allow certain animals in certain situations to enter the land (this could include cattle).
3. I may provide access to the land to special interest groups for nature based recreation.
4. I may not permit the removal of any trees from the property. However, I could remove fallen branchwood for domestic firewood, excluding hollow logs and limbs.
5. I must not plant any trees or plants other than local indigenous stock.
6. I must not allow 4 wheel drive vehicle or trail bikes on the property.

Officers of the Department compiled a great deal of other relevant information following on site inspections of the scrub. This included the general topography, soil types etc. 53 kinds of birds were identified and over 120 plant species were listed. Finally after all legal aspects had been considered, the agreement was completed. It was then signed on the one hand by Mrs Molly Robson, Minister for the Environment and Heritage, by my wife (Doris) and myself as the owners.

What is the future of conservation outside nature reserves?

The Lockyer Watershed Management Association is currently negotiating with Shire Councils to preserve small areas of remnant vegetation which have survived on unused and remote road reserves. We have also shown an interest in similar patches of vegetation on private lands, where we have received co-operation. By working to protect and preserve these areas, we demonstrate to the local community that they are of value. By so doing we generate a far greater interest by all concerned.

In conclusion

I am proud of my Nature Refuge and have great pleasure in showing it to special interest groups. However, it is not possible to have every little patch of trees “declared” under the Act. I firmly believe that no patch of trees is too small or insignificant to be declared “One’s Own Private Nature Refuge”. The pride of ownership can be much the same.

R.A. Scanlan

Article from
"Gatton, Lockyer and Brisbane Valley Star",
Wednesday, July 31, 1996, Page 4.

Hands-on landcare now group formed

A VEGETATION projects sub-committee of the Lockyer Watershed Management Association was formed last Thursday night.

The committee is to work "hands on" on landcare projects.

Chair of the committee, Stephen Barakin said the committee's specific objective would be to focus on achievable bush regeneration and other conservation projects which demonstrated sound landcare practices and had community educational benefits.

Mr Barakin said the committee would be on the job immediately with a number of projects already in place including the management of Nelson's Remnant at Blenheim with support from the Laidley Shire Council and Welk's Remnant in co-operation with the Welk Family.

"The term remnant refers to a patch of bushland that represents the native plant communities which existed before clearing took place and as a result provide a valuable link with the past.

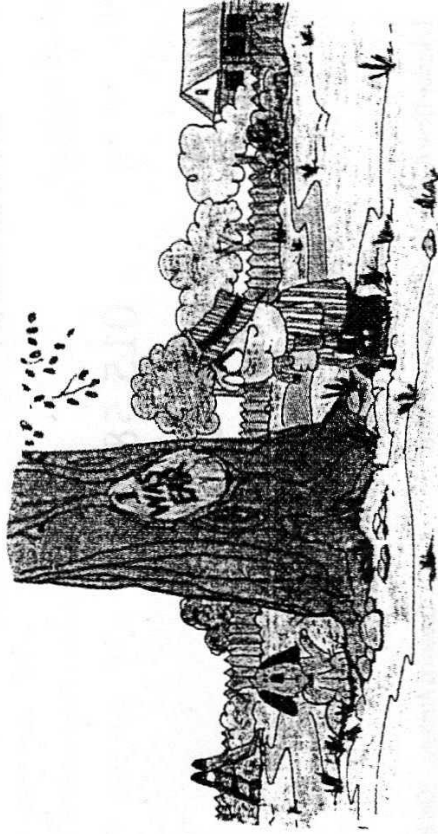
Mr Barakin invited anyone interested in landcare and vegetation conservation to join the new group.

Residents, who believe they may have a patch of remnant vegetation are requested to contact the sub-committee.

For further information contact Mr Barakin after hours on 074 622 229 or Andrew Davidson at the Lockyer Catchment centre during business hours on 074 65 4400.

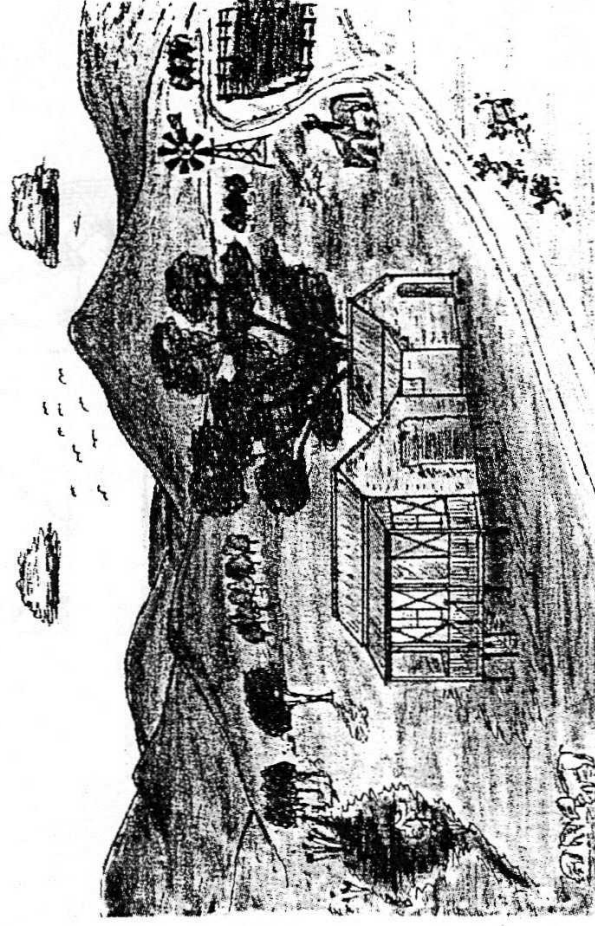
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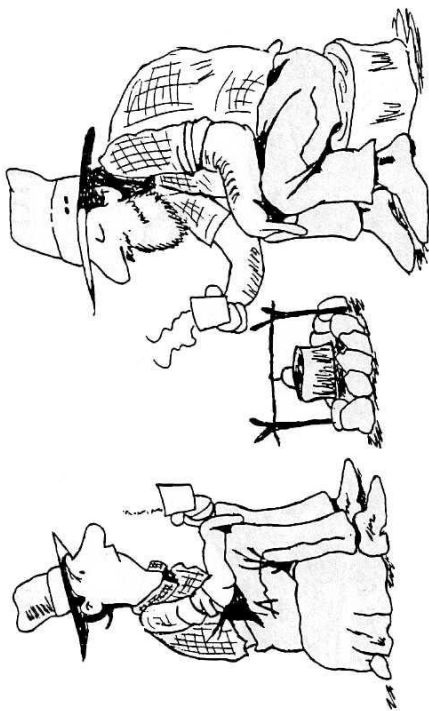
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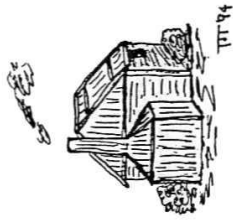


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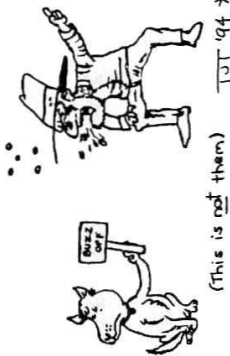
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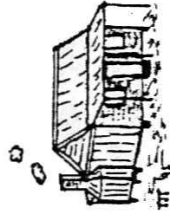
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Overnight or longer: Minimum of 10 people. For "overnighters" we like to keep your tour group to "mini bus size" - small and friendly (eg 15 - 20).

Here's 2 ways to take advantage of our packages deals:



Get together your own group of friends, family, or a club you belong to, etc or Enquire about our special "advertised" packages and join with other families.



Package Deals for Groups Include:



Lockyer Landcare Tour Leader and On-site Guides



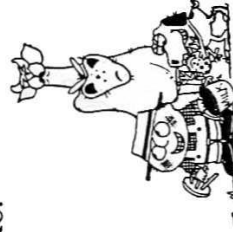
Access to a number of properties



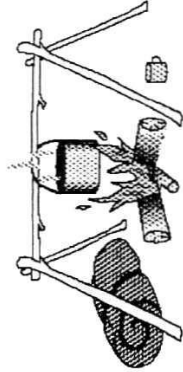
All meals and morning/afternoon teas



Relevant booklets



If staying overnight or longer, we also include:



A 'Country-cooked' meal at night - (eg camp oven roasts, punch, desserts, billy tea and damper).

An old fashioned night-time gathering in a nice relaxing location

Overnight accommodation with host families, (our speciality!) includes breakfast; or in cabins or motels. Camping can be arranged, if preferred.

"Learning through enjoyment"



Enjoy full or half day guided tours or extend your visit to an "overnighter" or longer. Visit some wonderful places, on private properties you would not otherwise see.



Your family will enjoy seeing "Landcare" on real farms. Bask in the hospitality of some fair dinkum friendly people, who have generations of knowledge and experience behind them.



Our group package deals mean you can leave your wallet and worries behind. Thanks to the country spirit of working together you can simply relax and enjoy yourself at a number of interesting locations.

The Lockyer Watershed Management Association Inc and Greening Australia (Qld) Inc worked together in the Lockyer back in 1985. Now, more than a decade later, Greening Australia is proud to promote "Lockyer Landcare Guided Tours" run by LWMA.



Established in 1981, the LWMA is Qld's first Catchment Care/Landcare group and one of the very first in Australia. Thousands of people, including many from interstate and overseas, have enjoyed "Landcare Tours" in the Lockyer.



Greening Australia, established in 1982, encourages all Australians to retain, regenerate and replant appropriate vegetation to help achieve a healthy environment in urban and rural areas.

Lockyer Landcare Guided Tours and Country Stays are suitable for all ages and interests.

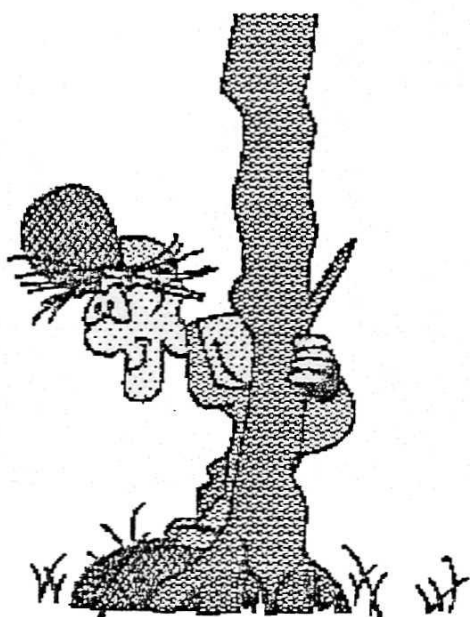


"Just a touch ..."

"A Touch of Paradise"

On Rob and Bonnie Bauer's Property

Make friends with some of the "personalities" in a patch of scrub. This landcare activity trail and accompanying booklet will help you to become acquainted.



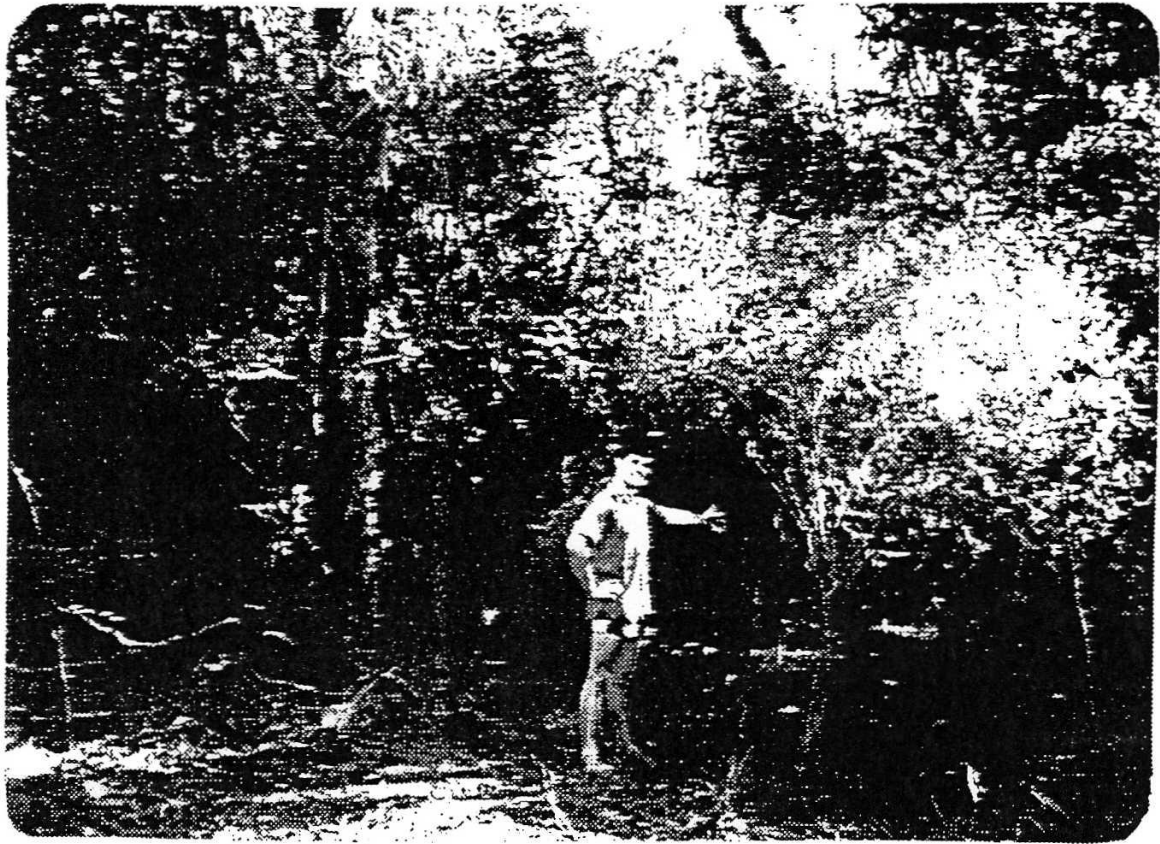
By Trudy Townson and Max Roberts, 1994

(from Lockyer Land Care - LWMA Inc)



WELCOME TO "THE WELK REMNANT"

By: Gary Brassington



Follow the trail (and your tour guide) and look for the numbered markers near the various plants. Learn more about them and the history of the area in this booklet.



Please feel free to ask questions.



Attachment 1

VOLUNTARY CONSERVATION AGREEMENT POLICY

1. The Brisbane City Council Voluntary Conservation Agreement (VCA) Policy provides the basis for the protection through management of bushland or other wildlife habitat outside Council owned or controlled Parks and Urban Nature Reserves, or other public reserves. It allows for the Council to enter into agreements with private land holders. A VCA is a contract between the Brisbane City Council and the land holder, outlining those land management activities which are permitted or prohibited and any financial arrangements that may be involved.
2. Council will only select a site for a VCA at the discretion of its delegate, if it is assessed by its delegate as fulfilling one or more of the following criteria:
 - high regional or local conservation status for vegetation types located on the property eg vegetation types and/or sites identified in publications of the State Government (eg Conservation Assessment of the SEQ2001 Region, Vine Forest Plant Atlas of South East Queensland) or Brisbane City Council (eg Conservation Atlas);
 - the existence of rare, threatened or otherwise significant wildlife and habitat;
 - high conservation status due to the function of the land in a broader environmental context (e.g. corridor links or proximity to Council owned Urban Nature Reserves); and
 - potential for a land holder to play a leadership role in promoting improved environmental management practices in the local community.
3. The exercise of selection criteria will be consistent with the intended outcomes of the Brisbane Green Space System, as set out in the Brisbane 2011 Plan.
4. Council has two types of VCAs:

General

- Deed of Agreement.
- Financial assistance (cash grant):
 - cash equivalent to a percentage of property valuation attributes* (35% maximum or \$1000 - whichever is less)

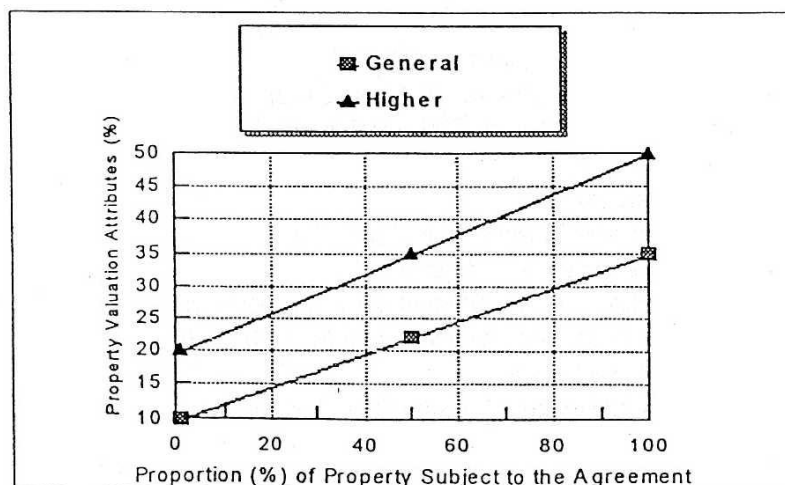
Higher

- Deed of Agreement.
- Rezoning to the Conservation Zone.
- Financial assistance (cash grant):
 - cash equivalent to a percentage of property valuation attributes* (50% maximum or \$1500 - whichever is less);
 - rezoning costs; and
 - up to \$1000/year (for up to two years) for management expenses associated with the terms of the Agreement (cash or material).

**Property valuation attributes" means that proportion of the general rate for the whole of the property as is attributable to that part of the property the subject of the VCA as determined by the Director, Environment Management

5. The VCA will specify the area of the property subject to the conditions of the Agreement, by use of a detailed map.
6. The VCA will specify, by way of a schedule, the following details:
 - a) the conservation and management objectives for the area subject to the Agreement;
 - b) the duration of the Agreement;
 - c) the type of Agreement to be entered into (General or Higher);
 - d) details of any works needed to be undertaken and associated conditions¹;
 - e) details of the annual payment to the landowner;
 - f) requirements of the vendor when selling a VCA property; and
 - g) the permitted and prohibited uses of the area subject to the Agreement.
7. As part of the Agreement, Council may agree to pay the landowner an annual cash grant from the Bushland Levy as specified in the schedule, calculated according to:
 - a) the type of Agreement (General or Higher);
 - b) the proportion of the property subject to the Agreement as related to property valuation attributes (see Figure 1); and
 - c) additional management expenses (first two years only - maximum \$1000 for a Higher VCA only).

Figure 1.
Financial assistance in relation to the proportion of the property subject to the Agreement.



¹The 'works' identified in paragraph 5(d), refers to appropriate land management practices, in accordance with the conservation and land management objectives, including such items as fencing, management of environmental weeds, erosion control measures and revegetation.

8. "Higher" Voluntary Conservation Agreements will specify that:
- a. the Council will initiate rezoning of the land, the subject of the Agreement, to the Conservation Zone;
 - b. the landowner agrees not to raise objection to this proposed rezoning and to indemnify the Council in respect of any claim or any payment made by the Council for injurious affection; and
 - c. all rezoning costs will be met by the Council.

RESIDENTIAL CONSERVATION ZONE

RATES CONCESSION

Introduction

Council's initiative of introducing a Residential Conservation Zone into the Town Planning Scheme for the City of Logan incorporates an undertaking to provide for a general rate concession for properties zoned as such. This incentive is currently based upon the location of the designation within either of the Strategic Plan conservation designations (referred to as Conservation "A" and "B").

It is considered that this rate concession will offer some incentive to enter into the zone and

provides recognition of the fact that the land will be managed in a manner which provides for habitat retention/enhancement.



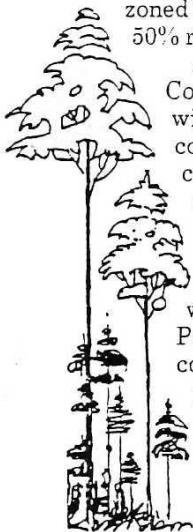
Level of Concession

A property wholly included within the Conservation "B" designation on the Strategic Plan Map and zoned Residential Conservation will initially receive a 25% rate concession.

A property wholly included within the Conservation "A" designation on the Strategic Plan Map and zoned Residential Conservation will receive a 50% rate concession.

A property partly included in both the Conservation "A" and "B" designations will initially receive a 25% rate concession. Properties included in a conservation designation and another designation (eg. Rural) will be required to justify why a concession (25%) should extend to whole of their land and not simply to the portion included within the Conservation designation.

Properties receiving a 25% rate concession will have the opportunity to proceed to a 50% level, pending satisfactory progress in fulfilling the conditions associated with the rezoning of the land to the Residential Conservation Zone. Rate concessions will not be retrospective.



Progression

Progression from a 25% to a 50% rate concession can occur. This will be based upon compliance with conditions attaching to the rezoning approval, but principally upon the progress of rehabilitation/revegetation of the land.



The objective is that the land must be actively progressing toward a state similar to that of the Conservation "A" designation lands.

A five (5) year period will have elapsed prior to inspection by Council officers to determine whether rehabilitation/revegetation has been sufficient to warrant progression. This will generally be evidenced from a substantial return of natural plant communities/regrowth and/or the significant growth and establishment of regrowth/planted vegetation. Other conditions will not generally be the basis upon which progression will occur, though non-compliance will affect the ability of lands to progress. Should a landholder reasonably believe that their progress has been substantial in a lesser time than expected, an earlier inspection may be arranged to determine progression. All inspections for and recommendations regarding progression will be reported to Council.

Loss of Concession

Council reserves the right to remove or downgrade any concession as referred to herein should the landholder or occupier fail to comply with the conditions attached to the rezoning approval. Council will give ample warning of such consideration in writing to the landholder together with opportunity for explanation. If compliance cannot be achieved, Council will consider the termination or downgrading of the concession.



For More Information

Call Logan City Council's Planning & Development Department on (07) 826 5269 or write to Chief Executive Officer, Logan City Council, PO Box 226, Woodridge Qld 4114.

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Mr F. CARROLL

SPEECH BY MEMBER FOR MANSFIELD

Reproduced from Hansard

Voluntary Conservation Agreements

Mr CARROLL (Mansfield) (12.19 p.m.): Today I want to mention as a matter of public interest the voluntary conservation agreements which can be entered into between private landowners and levels of our Government to preserve land which has valuable flora and fauna and any remaining habitat for that. I have diligently and forthrightly examined issues appearing for the three levels of Government affecting Queenslanders and their wishes to conserve worthwhile native flora and fauna in their natural habitat. This is not easy when we strive to respect and minimise interference with the important rights of landowners to enjoy that land and their homes for which they have worked so hard.

I have spoken several times in this House on these issues and how they are handled in regard to the people of the electorate of Mansfield. Today I have the pleasure of congratulating the city council and our Government's Department of Environment on significant steps taken last week towards replacement of at least one acquisition proposal with a plan to set in place a voluntary conservation agreement with the landowners. It appears that there will be two agreements there to ensure that the Brisbane City Council and the State Government are satisfied that the landowners will be compliant with the long-term conservation of these particular lands.

I know that the history of some of the acquisition proposals has been heated and stressful. I hail the news that I received last week as a real breakthrough. I am confident that both levels of Government here will reach valuable agreements with the landowners. I think that the conclusion of voluntary conservation agreements on these particular lands in the electorate of Mansfield will demonstrate the good faith of environment officers and advisers in both levels of Government that I have mentioned. I believe it will also be an interesting opportunity for some of the various conservation groups to show their sincerity.

Voluntary conservation agreements on private lands, including areas that may be established as part of tenure conversions to ensure Crown stewardship of key areas, represent a significant aid to future nature conservation strategies. Even though there is a significant amount of goodwill for some people to enter into agreements of the type that I have mentioned without reward, it is recognised that, for the system to be implemented extensively, there needs to be some threshold incentive on some occasions. Many of these voluntary conservationists believe that the execution of agreements of this type will enhance the value of their land in the future and will protect the conservation and enhancement work that they undertake. I believe that voluntary conservation agreements will be a badge of approval and that these properties will be sought after by people who really believe that that particular attractive land will be protected.

My interest in these agreements was inspired by an interest in the issues of how best to conserve koala habitat. I have been encouraged by some of my constituents who have been very hardworking and very earnest in their efforts to find a satisfactory resolution of what appears to be an intractable dispute. I will always do my best to assist people who are sincere and hardworking in an effort to deal with big public issues.

As a forerunner to the possible introduction of pro-active off-park conservation programs where financial incentives are provided to encourage people to enter into VCAs, the Department of Environment is currently investigating two schemes. The first one is in the mulga lands, where applications are currently being invited for land-holders to enter into VCAs with financial assistance to protect

key types of habitat, for example, riparian corridors, particularly endangered ecosystems or known habitats of rare and threatened species. This has been made possible with a \$100,000 grant from the Australian Nature Conservation Agency.

The second scheme is a proposal that, in areas such as where retention of mahogany glider habitat is critical, to investigate the possibility of providing a short-term rebate to local government to adopt a differential rating scheme for areas protected as nature refuges. This would apply to specific targeted parcels of known mahogany glider or other key habitat. Both of those examples—one dealing with the conservation requirements of a more extensive particular type of landscape and the other with the specific habitat requirements of a particular species—will play a vital role in the development of integrated regional conservation strategies and will complement the development of a representative reserve system to protect the kind of biodiversity that I have mentioned.

To date, two nature reserves have been established, and another 30 are in the pipeline. I believe it is important that the debate and the public examination of the issues relevant to these be fully open and honest. I have made comment on that aspect of it before. If it is not, then the members of the public will be unwilling to cooperate. The first nature reserve is the Berlin Scrub near Laidley, which has been strongly supported by the local council, which has offered a 100 per cent rate rebate for the area that has been gazetted. This has been a far-sighted action by that shire council to encourage conservation on private land. Although many ecosystems are conserved within the protected area estate on Crown land, others are not represented and occur only on privately managed land. I am told that over two-thirds of Australia—approximately 500 million hectares—is managed by private land-holders, so there is a need for a consistent and integrated approach to nature conservation on leasehold, freehold and Crown lands.

It has become increasingly obvious that the protected area reserve system is not adequate if Australia is to retain current levels of biodiversity and meet its obligations under the Biodiversity Convention. The National Strategy for the Conservation of Australia's Biological Diversity—Commonwealth of Australia 1996—recognises the need for conservation of biodiversity on private land given that the threats to biodiversity extend across administrative and tenure boundaries. That strategy notes the need for increasing the standards of management and protection and also the levels of technical and financial assistance. The strategy seems to recognise the need to establish voluntary wildlife refuges and to negotiate conservation agreements and heritage agreements between owners, managers and Governments. These need to be backed up with sufficient resources, including trained facilitators, on at least a regional basis to assist in the implementation scheme.

Apart from the National Strategy for the Conservation of Australia's Biological Diversity, a number of other documents have reflected the need for nature conservation on private land. Many rural land-holders and communities are aware that protecting remnant vegetation and increasing the amount of natural or semi-natural habitat on their farms can add to the long-term economic viability of their farms through decreased soil erosion, conservation of water and biological pest control. However, the benefits of land protection measures accrue not only to the land-holders but also to the local community and to the wider society, so there should be a proper place for investment of at least some public funds in this resource for our future.

We cannot rely on national parks alone to conserve that native flora and fauna which we might think worthy of preservation. Governments of all levels must

proceed cautiously with Government-imposed conservation measures. That is why I am very pleased to acclaim the serious commencement of a program of voluntary conservation agreements in this State. Many national parks have become islands of natural plants and animal communities within the broad regional landscape. Unfortunately, wildlife knows no boundaries, so a broad-scale conservation approach is the only effective way, if the majority of land-holders incorporate nature conservation objectives in the management of their lands adjoining. This is an area where our Government wants to work by negotiation and agreement. I commend the Honourable the Minister, Brian Littleproud. I know that, with his leadership, we shall have open and honest dealings.

Time expired.

<End of speech>