



**NATIONAL PARKS  
ASSOCIATION OF  
QUEENSLAND INC**

**“QUEENSLAND’S FORESTS AND PUBLIC  
PERCEPTIONS - TWO DECADES OF CHANGE”**

**FOURTEENTH  
ROMEO W LAHEY MEMORIAL  
LECTURE**

to the

**NATIONAL PARKS ASSOCIATION OF  
QUEENSLAND INC.**

by

**Dr Aila Keto**

**Wednesday 16 October 2002**

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**THE ROMEO LAHEY MEMORIAL LECTURE** honours the memory of the principal founder of this Association, Romeo Watkins Lahey. Born into a timber family with sawmilling interests around Canungra, he is remembered as a dedicated conservationist who succeeded in having the wonderful rainforests of Lamington Plateau and surrounds declared as National Park in 1915.

He saw that a visible, knowledgeable public involvement in the National Park movement was essential, and with others founded the National Parks Association in 1930. He remained our President for over 30 years, and was instrumental in convincing Government to declare many of the National Parks gazetted up to the 1970s.

#### **DR AILA KETO, AO, THE LAHEY LECTURER FOR 2002**



Dr Keto initially came to attention as a founder and principal spokesperson of the Rainforest Conservation Society, fighting for preservation of Queensland's dwindling remnant rainforests, before widening her interests to other important issues. For her outstanding contribution on environmental issues, Dr Keto is an Officer of the Order of Australia, an Honorary Life Member of the Australian Conservation Foundation, a former Queenslander of the Year, and a winner of the Premier's Millennium Award.

She had a major role in gaining world recognition for areas such as the Wet Tropics rainforests, Fraser Island and the Central Eastern Rainforest Reserves (CERRA). She facilitated one of the largest increases in the protected area estate in the history of Queensland conservation, by negotiating the historic 1991 South-East Queensland Forests Agreement with the Government, Queensland Timber Board and conservation groups. This brought 425,000 ha into the protected area estate, with the prospect of 300,000 ha more being transferred as logging is phased out over 25 years.

## **FOURTEENTH ROMEO LAHEY MEMORIAL LECTURE**

by Dr Aila Keto

### **QUEENSLAND'S FORESTS AND PUBLIC PERCEPTIONS - TWO DECADES OF CHANGE**

#### **INTRODUCTION: HAVE THINGS CHANGED IN THE LAST 130 YEARS?**

When I was invited to give this Romeo Lahey Memorial Lecture, I should have said 'no' because of the work and time I knew it would entail.

But it was such an honour, a privilege and an opportunity to pay respects to the National Parks Association — Queensland's oldest conservation organisation, one of historic significance, with members including the who's who of Queensland's history. It was an opportunity, too, to pay respects to the many heroic and historic figures who have spoken previously in this 32 year-old landmark lecture series.

There's also a special symbolism surrounding Romeo Lahey, the inspiration of this Memorial series and pioneer of National Parks in Queensland. Romeo and his American counterpart, John Muir, (whose legacy includes Yellowstone National Park, the world's first), were both sawmillers, of sorts.

This was not lost on me, given how so much of my life has centred on protecting forests from logging. My talk reflects on the changing perceptions about Forests and National Parks during the past two decades of my involvement in Conservation. But first, let's look at these last 130 years.

#### **NATIONAL PARKS ARE AN ENTIRELY HUMAN CONSTRUCT BASED ON OUR RESPONSE TO THE LOSS OF NATURE**

There was no need for a World or Earth Park when almost all the earth was "natural". We have created the need by destroying nature. Our response to the loss of, or changes to, the natural world reflects the entire history of the National Parks concept, and more latterly, World Heritage.

The genesis of the National Park concept in America 130 years ago (Yellowstone, in 1872) was anthropocentric. Nature was seen as valuable to us, to inspire or heal, or for hunting game. Whereas the beginnings of ecological consciousness did exist, the prevalent value was still utilitarian.

A great deal has changed in the intervening years. Queensland's population has trebled during my lifetime. The world population has escalated alarmingly to where, even a decade ago, we co-opted more than 40% of the earth's net primary productivity — the energy budget for all life on earth. The earth sciences, ecology, landscape ecology, island biogeography, phylogeography or evolutionary biology have advanced our knowledge of the natural world incredibly. Whether we have successfully transitioned from a primarily utilitarian, anthropocentric view of nature, in practice, to a more ethical respect of the existence of all life, remains to be seen. Five hundred years after Copernicus, I think we still think the sun revolves around us.

**CONSERVATION OF BIODIVERSITY IS NOW UNIVERSALLY ACCEPTED AS A CRITICAL OBJECTIVE**

Maintenance of biodiversity is the principle of modern conservation. Most states have biodiversity strategies and State of the Environment Reports, as does the Commonwealth. As well there are State of the Forests Reports, and the National Forest Policy Statement of 1992 and Queensland's recent Parks Plan. Biodiversity is well and truly on the agenda.

◆ **Queensland is the most richly endowed in remnant forests of any State**

Australia is one of the 12 most megadiverse countries in the world. Most of the species here are unique to Australia. Most of the biodiversity is concentrated in forests. Queensland also has 3 of the 7 World Heritage areas that are based on forests. We have almost a third (31.5%) of all the nation's forests; and we have more rainforest (72%), open forest (26%), and woodlands (32%) than in any other individual State. Queensland also has the highest diversity of fauna and flora. We have a very rich heritage indeed. However, we need to put this in context.

◆ **Forests are very rare and depleted in Australia**

This is a country as dry, leached and flat as they come. Yet moist, closed-canopy rainforests once dominated much of the land. They now cover only 0.46%. All forest cover barely reaches 5.7% of the 780 million hectares (Mha) land area. Deforestation since 1788 has halved the forest estate — 75% of all the vegetation in Southeast Queensland is lost or threatened; 60% of forests and almost 70% of rainforest are gone or threatened. In fact clearing of rainforest in Queensland, almost one million hectares, exceeds by four-fold that of all other states collectively, representing 80% of all rainforest clearing in Australia. What little remains is mostly highly fragmented and modified. Most of the large trees (the megafloora) have long gone, as have their megafauna counterparts.

◆ **Queensland's forests are the least protected of any Australian State**

As host to most of Australia's biodiversity, Queensland could be expected to have a heightened sense of responsibility to protect this rich heritage. Prior to the SEQ Forests Agreement (SEQFA), only 5.9% of forest and woodland was in reserves compared with the national average of 11.3%, 14.7% in New South Wales, 37.2% in Victoria, 18% in Tasmania, 22.8% in South Australia, or 12.5% in Western Australia. Most of the reserves are small, and it will take a long time for the many SEQFA forest additions to recover their structure and integrity.

**THE UNIVERSAL CHALLENGE IS "HOW MUCH IS ENOUGH?"**

Unless we want to go back to hunting and gathering, we know we cannot conserve biodiversity through National Parks alone. The big question asked all around the world is "How much is enough?"

Where we choose the balance between on- and off-reserve management will be crucial.

**WE HAVE GOT TO GET THE RULES RIGHT FOR MEASURING, PROTECTING AND MONITORING BIODIVERSITY**

The task of conserving Queensland's biodiversity is complex and enormous. There are 13 very broad landscape regions (varying from 0.75 Mha to 37 Mha in size); 1239 ecosystems; 8105 higher plant species; and 1573 vertebrates (173 freshwater fish, 120 amphibians, 442 reptiles, 612 birds and 226 mammals). These are distributed variously and variably across landscapes in a multiplicity of ecosystems in complex patterns of distribution, association and abundance. We know very little about the ecological or biological requirements of most species, and even less about their genetic diversity or population status.

The risks appear to be high, with large numbers of species (1708) either rare or already advanced along the trajectory to extinction — plants 1442 (18%); freshwater fish 5 (3%); amphibians 47 (39%); reptiles 83 (19%); birds 65 (10.6%); mammals 68 (30%).

The key objective is to ensure that all elements of biodiversity — from genes to landscapes — are viably conserved across their geographic range. How do we do it? Queensland is so megadiverse one can only practicably plan for a limited number of species in any detail. So subsets of species are chosen. Biological richness is represented by a small number of surrogates, and arbitrary bottom line conservation benchmarks are set. How effective is this?

## THE STATE PINS ITS ENTIRE STRATEGY ON SURROGATES AND SETTING TARGETS

### ◆ Surrogates

The Environmental Protection Agency (EPA) and Queensland Parks and Wildlife Service (QPWS) have adopted the **regional ecosystem** concept as their primary surrogate for biodiversity — the whole State edifice of conservation is based primarily on this strategy.

This is a high risk strategy because the core assumption has never been scientifically validated. There is little correlation between regional ecosystems and distributions of fauna, and maybe even flora. In the Brigalow Bioregion, 4% of the ecosystems cover 30% of the area and are defined by a small subset of overstorey species with little account of geographic variation in understorey species (often the major contributor to diversity), large disjunctions and edaphic variation.

Regional ecosystems are a useful but insufficient tool. They should only represent the first step in the process of reserve design and selection.

### ◆ Condition

Conservation status or ecosystem condition (i.e. endangered, of concern, not of concern) has taken on the connotation of "conservation value", rather than simply an indicator of management priorities (and even that is debatable). If we systematically slant conservation priorities towards the most threatened elements of biodiversity, an inevitable outcome will be a downwards slide towards all biodiversity reaching the same threatened status.

It is especially likely, and very concerning, when healthy ecosystems are labelled as of "no concern". The real world outcome will be to exacerbate pressures to clear them, when surely our real objective is to retain or achieve healthy ecosystems reflecting the full gamut of biodiversity and its capacity for ongoing evolution.

The Vegetation Management Act provides the only legal protection for regional ecosystems but is based on just one threatening process — clearing. If you consider other threatening processes (fragmentation, habitat modification from fire, grazing, logging, weed and pest invasions), the number of threatened ecosystems increases by 25%, from 490 to 607.

### ◆ Targets

**The 5-80 Rule:** The State's answer to the question "how much is enough" is apparently the 5-80 rule. QPWS has set the objective of protecting 80% of the State's regional ecosystems in reserves covering 5% of the State. I don't know where this minimalist approach has come from — the figures are utterly meaningless!

The State is signatory to the National Forest Policy Statement. This sets a target for dedicated and secure reserves of 15% of the pre-clearing extent of most ecosystems, but 100% of the existing extent for rare and endangered, and 80% for vulnerable ecosystems. I don't know on what basis the EPA's 5% has become "writ in stone", but it is clearly inadequate and has no grounding in science.

To illustrate the farcical nature of the 5-80 Rule, the target of 80% representation in the Brigalow Belt has been met (82%); even though at least 30% of regional ecosystems occurring in the Park Estate are represented by less than 1% of their remnant extent, some by only 1 ha! Yet they are all counted in the statistic. The same picture is more or less true for other bioregions.

**BAMM:** The EPA has more recently developed a potentially useful tool for biodiversity assessment — BAMM (Biodiversity Assessment and Mapping Methodology). At this point of time it has not been formally adopted by the Department, and there is no requirement for regional vegetation management committees to use the outputs from BAMM. The success of the tool will be critically dependent on the extent to which expert panels are seriously engaged. Otherwise all the limitations of Multi Criteria Analysis models apply, with the added risk of distorting priorities in the guise of science.

The BAMM methodology claims to provide consistent and reliable criteria that are transparent, objective and scientifically defensible. A key assumption of Western science is that it deals with facts not values. Science is portrayed as objective. Science can tell us what are the most probable results of certain actions but not whether we ought to take those actions. The blame for this misconception can go right back to Aristotle who, in his treatise *Metaphysics*, asserted "All men by nature desire to know". The words 'to know' carry an aura of absoluteness and objectivity. But the scientific paradigm is just as value-laden as any other. The very questions asked of science are value-laden. And the mechanistic tool for representing and prioritising biodiversity become clothed in a patina of science, jargon and complex technology portraying the process as the best that science can deliver.

The non-scientist including politicians and conservationists would find it impossible to detect the flaws, hidden assumptions and implicit value judgments without enormous analytical effort. As a consequence, there is every danger the results will be seen by governments as the final word, and work, necessary for decades. But, the very design of the questions and methods do not answer the challenge of how to conserve biodiversity viably with the capacity to naturally evolve. Instead the basic approach treats the State's biodiversity as though it were depauperate, unimpaired, and even expendable.

The primary criteria that deal with fragments are defined in such a way that virtually no areas large enough to be viable can meet the criteria. The upshot is we can have no confidence that the Parks, presently

comprising such a small percentage of the State, can achieve their primary objective of protecting biodiversity.

**IF THE PARKS ARE NOT GOING TO ENSURE VIABILITY OF OUR BIODIVERSITY, THE OFF-PARK STRATEGIES NEED TO BE GOOD, AND COST-EFFECTIVE**

The Queensland System relies very heavily on off-park conservation, with two of the principal mechanisms being:

- (1) Vegetation Management Act
- (2) Voluntary schemes such as Nature Refuges and Land for Wildlife.

**THE VEGETATION MANAGEMENT ACT AND CLEARING CONTROLS**

The Vegetation Management Act at present is not a successful tool to achieve off-park conservation strategies. It perversely consists of a legal device that ensures vegetation communities become even more threatened.

**◆ Woodlands**

The picture for woodland birds is especially grim all around Australia. Woodlands represent 73% of the total forest and woodland estate in Queensland. More than 90% occurs on private and leasehold land. Only 4% is protected in Park statewide, but this is very inequitably distributed bioregionally. In the Brigalow bioregion only 1.8% of the woodlands are protected in National Park, with most of the remainder occurring on private and leasehold land. Vegetation clearing controls are such that regional ecosystems of "no concern" can be cleared down to 30% of their pre-clearing extent. Of Concern communities can be cleared from anywhere just under 30% of pre-clearing extent down to 10% until close to endangered. Thus an additional 3.5 Mha of the remnant 11.7 Mha can be cleared legally until all occurrences on these tenures are, to all intents and purposes, threatened. The remaining remnant woodlands are grazed and regularly fired, radically changing the critical understorey habitat component of woodlands still further.

An indicator of likely impact on woodland birds comes from New South Wales, where the only detailed studies have been carried out.

Of the 44 woodland birds, 70% are extinct, threatened (endangered or vulnerable) or declining. These declines are progressively spreading into Queensland as the same land practices take their toll. Nine species of this assemblage in the Brigalow bioregion are extinct, endangered, vulnerable or rare and a further eight are 'of concern'.

**◆ Closed forests including rainforests**

The greatest tragedy has largely already occurred in brigalow communities. More than 90% of the pre-clearing extent of closed forest in the Brigalow bioregion — once totalling more than 10 Mha — is now gone or threatened. Clearing controls will not prevent another 60,000 ha meeting the same fate.

One could argue that all rainforests should be protected in National Parks given their relict nature, species richness and significance in the evolutionary history of the Australian flora. Inclusion of all rainforest on public land within National Parks would only increase National Park coverage from 4.1% of the State to 4.3%. Purchase of all of the 60% of rainforest unprotected on private and leasehold land is now out of the question, with strategic land purchases (large size, high integrity, linkage value) the only feasible option.

**◆ Open forests**

Almost 20% of all vertebrates depend on Old Growth Forests, especially for tree hollows. Hollow-dependent forest fauna have been critically affected by the almost complete loss of this resource. Less than 2% of SEQ original old growth forest remains. In the remainder only 2 to 3 live habitat trees/ha are left, when 8 to 12 or more may be required to maintain natural densities of glider populations.

In SEQ, none of the 58 pre-SEQFA National Parks with habitat suitable for Yellow-Bellied Glider (*Petaurus australis*) were large enough to support viable populations. Only 6 of the 51 National Parks with potential Greater Glider habitat could support viable populations.

**◆ Other indicators**

Almost half the higher plant species found only in Southeast Queensland are rare or threatened (~40%).

All the old lineages of rainforest frogs are seriously declining. Of the 18, 7 classed as endangered are missing — they cannot be found; the other 11 not yet classed as endangered are declining.

**LET ME LOOK AT THE EPA'S NATURE REFUGE STRATEGIES**

The strategy relies on cooperative agreements with private landholders to achieve conservation objectives as part of meeting its critical off-park conservation goals. So far, the program has signed on 87 properties totalling 53,275 ha at an annual cost of \$760,000. As properties accumulate, the costs escalate.

Whereas this is a highly commendable program, does it achieve the biodiversity objectives that clearly the Parks system is not delivering?

As an illustration, protecting biodiversity via the current program of Nature Refuges on private land in SEQ would take 100 years, costing an overall \$357million. Given the rate of clearing and modification of vegetation on private land, that is likely to offer too little too late. The program could be scaled up to deliver within a decade, but would need 80 full time equivalent staff to administer.

Also the program does not provide lasting security without further changes to legislation. The long-term security of Nature Refuges is essentially at the discretion of the Minister at the time, as distinct from National Parks which require a resolution of Parliament. One could find, despite spending more than \$350million, the effort was to no avail.

That is not to discount the value of the program and its capacity to educate. It is simply not the panacea for protecting Queensland's biodiversity securely.

### SUMMARY

- National Parks still remain the most effective and reliable mechanism we have for protecting the State's biodiversity.
- At the very minimum, a doubling of the present estate is required.
- The EPA needs to change its simplistic and misleading method of defining and setting conservation targets.

Whilst the present approach is in place there will be little further money from Treasury for acquisitions. After the glory days of Pat Comben, the pace has slackened and the money dried up.

That is not to say the challenge is easy. If all State Forest land outside plantations was transferred to the protected area estate as part of the Government's transition to plantations strategy, the maximum estate achievable would be barely 6.5% of the State's area — far short of the nationally agreed but minimal objective of 15%.

Achieving this objective through purchase of an additional 15 Mha of private or leased land would be prohibitively costly and thus unachievable. However, strategically targeted purchases for securing refuges, cores, connectors and highly threatened areas require budgetary allocations far greater than those of the present.

## FINAL STATEMENT

**Loss of biodiversity is the biggest environmental crisis in Australia.** Our forests are rare, rich, unique, but still highly threatened and poorly protected. Major increases in reserves will be necessary. One could argue that forests are so rare, significant and diverse that all should be protected. The Government's policy of transitioning logging out of publicly owned native forests will help very significantly. More will need to be done. Strategically targeted acquisitions are critically required. Management will need to get smarter to do more with less. There is a need for large roadless and trackless areas. Large areas will also need to be reforested and reconnected if biodiversity in Queensland is to be given its best chance to survive.



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