



Living Grasslands Conference

9 - 10 November 1996

Australian Botanic Gardens Canberra

*“ Native grassland conservation and
the art of the possible ”*

I want to take you around a circuitous route through native grasslands and their management and to place that activity into its proper niche in the wider world of natural resources management.

As we go, I'll tell you about my involvement in a community environment monitoring activity called the Community Grasses Project. That way we'll start with the macrocosm at bioregional scale ie. south-east Australia and work inwards toward the microcosm of the farm unit.

One thing I don't have to explain today is why native perennial grasses are significant - and it's a relief. John Ingalls wrote a piece of prose in 1872 with the title "In Praise of Grass" in which he said grass "bears no blazonry or bloom to charm the senses". In a world conditioned to self-advertisement, grasses just don't clamour for the attention of the casual observer - they're less extroverted. It's good to be with grass people.

I'll start by reviewing three contrasting ways to secure the future of native grasslands. The first is greening the people. I would rather leave it to others with a more objective view than mine to appraise how that approach is progressing. In grasslands as well as in the conservation / multiplication of trees and shrubs it's still a one step forward and two steps back affair.

The problem is that the enthusiasts don't have effective control over enough of the land resource - which is 85% privately owned. There is progress here and there, especially in regions where pluriactivity is advanced - (that is people devoting only part of their time and deriving only part of their living from the production of the land they own), but in regions where most of the land resource is being used by full-time farmers, the pressure on native vegetation is actually increasing rather than decreasing.

There are several causes for this alarming and seemingly irresistible charge but the most significant is the spiralling decline of the wool-growing industry. This prompts farm families with bills to pay to look for alternative sources of income. Motivating forces vary, but if one discretely interrogates, the strongest is the urge to meet medium-term family support goals; particularly the education of farm children for urban careers.

Everywhere I travel in my capacity as Chairman of Murray-Darling Basin Community Advisory Committee, I see expanding croplands. In non traditional agricultural regions even a hundred hectares of grain or oil-seed will return more than a sizeable sheep flock. You can see the incursions into upland grasslands clearly at this season of the year, particularly the canola paddocks because they are so lurid; often carved out of the landscape in an abstract patchwork fashion illustrating how earnestly farmers are exploiting every pocket of arable land.

There's the westward invasion of cereal farming into what was formerly regarded as rangelands, the horizon to horizon cotton fields of northern NSW and Southern Queensland and the probing fingers of irrigation channels seeking rice growing soils in what was formerly the most sacrosanct of all Australia's pastoral land, the south-west Riverina of NSW.

All these expansions, these changes to existing landuse systems are being pursued with urgent aggression - and they all precipitate the destruction of native vegetation.

Apart from the current epidemic of non-voluntary departures from rural industry, the pace of intergenerational change is pretty well constant in rural communities. There are fewer instances nowadays where land is remaining in the family. Frequently, areas of wilderness remained from generation to generation as little family sacred sites - historically significant places for having served to save the flock in some epic shearing-time blizzard or during a bleak lambing, a source of fencing and building material for generations if managed judiciously ; treasured too for less mercenary reasons as childhood haunts of generations of non-indigenous hunter-gatherers with a sense of place. Preserved like family heirlooms. There are no sentimental ties for the outsider who buys the property and demonstrates his territoriality in the traditional Aussie way as soon as he has the title deeds.

Not much progress being made in voluntary conservation for conservation's sake.

For which reason, you may applaud the relatively recent NSW land clearing regulation - SEPP 46. Yes, regulation makes both ecological and economic sense - it places a hiatus between the thought and the act of land alteration and thereby allows time for reflection on why the former owner left an area of land uncleared; for assessment as to whether the activity will in fact redeem the money invested in alteration; an opportunity for the saving but unwelcome intrusion of people with separate agendas. It makes economic sense too, for the State to control the rate at which vegetation is being lost, if at the same time it is investing tax- payers' money through the National Landcare Program and various farm-forestry programs in an endeavour to precipitate revegetation.

But - something is lost as well as gained. The six or seven years of "community involvement" evangelising that has accompanied the National Landcare Program, the Murray-Darling Basin Natural Resources Management Strategy, Catchment Management Programs in most States of Australia is founded on the creed of "Community Ownership". Ownership assumes choice. Ownership assumes a tiered process whereby the more altruistic set an example to the less innovative, the less conscientious. Through accepting ownership, communities and individuals have been empowered to participate in a Community / Government Partnership in which landusers have gained a fair degree of control over the pace of change, the direction of change and the priorities for pursuing change to the management of natural resources over which they have custodianship.

Regulation removes choice. Regulation thereby disempowers. Regulation doesn't reward altruism or generate peer pressure to conform to changing values. It may achieve its end, but without the stimulus of voluntary empowerment - conformity with the boundaries of the regulation become thought-free, choice-free parameters for all activities.

There is a third option. I'll use the Community Grasses Project as my example - not in a promotional sense because apart from raising our banner and announcing our presence as a rallying point for people with an interest in native grasslands - we haven't got much to show yet. Like native grasses, native grass research projects take a long while to establish.

The Community Grasses Project attempts to maximise gains for conservation while acknowledging the necessity to combine private interest and public good. The name "Community Grasses Project" is just a silly nickname that stuck because the project title was too wordy to use more than once; "Community development of perennial grasses for multiple ecological uses"!

The Uplands of the Murray-Darling Basin contain very few pristine native grasslands - which you know better than I. There are patches of native grassland large and small on most private properties and common lands - some are presumably surviving remnants of the continuous sweep of native grassland that formerly clothed the uplands, some are secondary having re-established from seed-bank or transported seed.

Over the whole of the temperate uplands, the common factor is - they are there, they are utilised, they appear to be more stable than their associated trees and shrubs - they are capable of expanding their domain.

There are two more important factors. This is terrain unlikely to be eligible for profound alteration (except in areas where it may be taken for urban and peri-urban subdivision) because the landuse options will remain limited. Its custodians generally acknowledge there is some economic value in native grasslands.

Here's where I'm likely to polarise my audience. We must not conclude that we have a growing congregation of converts to native grasslands and that with a little encouragement these people will allow their properties to revert to pre-European vegetation.

Farming families in the temperate uplands of south-east Australia may be attempting to augment their incomes with off-farm employment and as a consequence may be attracted toward less time consuming, low intervention farm-systems, but few are willing to revert to pre-European land-use systems. At best, most want production but may be willing to make some trade-offs in the interests of long term ecological sustainability.

In the Community Grasses Project we call it holistic grass-land management - matching landuse with land capability. We can't claim invention of this concept but acknowledging its presence was the breakthrough we needed to pursue our project objective "to accelerate the adoption of native low-input grasses".

Almost all properties in the uplands of south-east Australia, with a history of being operated as a commercial enterprise, consist of several land classes. They generally run from valley to hill-top and consist of some relatively robust foot-slopes, through the mid-slope to ecologically fragile land at the top.

Much as we might like to reclaim the nature conservation values of each land-class on each property, in reality we will have to settle for less. We will make surer progress by maximising the gains we can make for nature conservation in an economically sustainable landuse system.

Traditionally, the foot-slope paddocks have been the most altered landscape and still, with today's much reduced profits are the domain of exotic perennial and annual species. Although widespread application of phosphate fertilizer and selective herbicide has diminished, annual intervention is most likely to be practised here.

As we move up the slope there is generally a zone where paddock histories tell of annual fertilizer application during more prosperous times and where nowadays intervention is linked to commodity prices (remember we're in principally wool-growing country). There has been a spectacular recolonisation by native species in this zone during the last decade and it was this zone which demonstrated the economic benefits of native perennial species in the 1994 drought year.

Other species include the subterranean clovers which were sown in the fifties and sixties and their associated introduced annual grass species like barley grass and vulpia. Lots of common pasture weeds too like onion weed, cape-weed, dandelion, thistles etc.

Upslope from this point to the ridge-top is Community Grasses Project country. Here is the greatest potential for conservation as well as improved sustainable utilisation through improved management. These paddocks need a high level of thought inputs. Here the still unsolved mysteries lie. Except for the continuous battle with noxious weeds and feral animals, on most properties in the temperate uplands, these paddocks are not really "managed" at all - it's an out of sight place where stock are "bushed" - a waiting-room where they are sent to spell the foot and mid-slope paddocks.

Here there are unrecognised opportunities for nature conservation. Here summer active, deep rooted, native grasses can contribute to the interception of summer rainfall and compete with invasive weeds. This zone, which in a less knowledgeable era of natural resources management was characterised as "the recharge area" is complex. Although soils are generally thin, acidic and of low fertility, tiny pockets of deep robust soil are scattered about. The rock formations break up the terrain into a magical range of subtly differing environments.

Grassland reserves with the potential for rapid multiplication of leaf area to intercept summer rainfall are achievable in the high uplands. I do not believe artificially induced tree plantations will thrive and why should we bother when native perennial grasses are enthusiastic about providing the same function.

Within the holistic grassland concept, the management of lands of differing capability is integrated for both the ecological sustainability of native grasslands and the economic sustainability of the whole farm enterprise.

Harmonising management of high, medium and low intensity pastures over the whole farm is the key. During the essential native-grass rest periods, the sheep and cattle have to eat and there must to be an appropriate pasture resource elsewhere on that same land unit.

By pursuing excellent, high intervention conventional pasture management on the ecologically robust footslope paddocks, the landmanager gains economic elbow-room and a pasture resource over all land capability zones allowing each to be managed for ecological sustainability - high physical inputs down-slope, high intellectual inputs up-slope.

Please don't be too reassured this concept is spreading like serrated tussock in south east Australia - it's a fragile thing. Except for a few vociferous champions, most well trained scientists feel threatened by an holistic anything. Years of patient indoctrination by mentors and peers have implanted the reductionist urge so deeply it's almost impossible to dislodge. Many farmers too have an either-or mind-set, as a consequence of ingestion of information derived from reductionist science. Some still regard a paddock of native grass as a field to conquer.

Fortunately, Landcare Groups with a revegetation agenda have provided a focus for constructive dialectic. There is a strong, increasingly articulate strata of landmanagers with an innate instinct for the holistic approach. The Community Grasses Project has encouraged some to join us as paddock-scale scientists. The meticulously recorded observations of our participatory researchers on twenty-four properties should yield the knowledge we need to allow landmanagers to develop landuse systems toward the ecological sustainability of their native grasslands.

That's the first part of Community Grasses Project activity - its participatory research program. The second stage is to assist landmanagers to extend their native grasslands, using local provenance seed, gathered on- farm or from nearby common lands.

This Activity is named "Facilitating the Establishment of Native Grasslands". It has a modest one year of funds from the Land/Water sub-program of the National Landcare Program (not the Murray-Darling Basin Commission) but the principal source of funds has been ACT Electricity and Water. We are attempting to augment their grant from other sources.

This Activity invites participation at any scale, from the commercial enterprise to the peri-urban block "too big to mow and too small to farm". There's work for Friends of Grasslands too - in community education to ensure those hard-to-get-to part-time farmers learn that native is beautiful and the perpetual greensward from fence to fence is but another unrealistic dream - expensive, unreliable and demanding.

Briefly, "Facilitating the Establishment of Native Grasslands" is a response to the Community Grasses Project's dialogue with the community through our network of participants and the Landcare Groups of the temperate uplands. We asked them what impediments we needed to remove before re-establishing native grasslands became a routine farm operation.

The Community developed a formidable list of challenges ; availability of inexpensive, plentiful local provenance seed, reliable storage, sowing equipment, how and when to place seed, making a weed-free window that stays open long enough to allow seedlings a chance to establish and how to manage juvenile grasslands.

The first task, seed harvesting capability is pretty well in hand. Here at Australian National Botanic Gardens, our collaborating scientists led by Dr.Iain Dawson are working - or will be working on germination manipulation and on-farm storage. Numerous excellent inventive minds elsewhere are mind-modelling and testing innovative ideas. As funds become available we'll look for an appropriate researcher for each task.

We who are committed to securing the future of native grasslands need to learn from and continue to draw our inspiration from the characteristics of grasses .

Our strategies must be grass-like and who better to describe their eon-spanning successful strategies than the same John Ingalls I mentioned in my opening remarks. Allow me to close by sharing with you his fulsome prose, written as I said earlier in 1872 and entitled "In Praise of Grass".

" Grass is the forgiveness of nature - her constant benediction. Fields trampled with battle, saturated with blood, torn with the ruts of cannon, grow green again with grass and carnage is forgotten. Streets abandoned by traffic become grass-grown like rural lanes and are obliterated. Forests decay, harvests perish, flowers vanish but grass is immortal. Beleaguered by the sullen hosts of winter, it withdraws into the impregnable fortress of its subterranean vitality and emerges upon the first solicitations of spring.

Sown by the winds, by wandering birds, propagated by the subtle horticulture of the elements which are its ministers and servants, it softens the rude outline of the world. Its tenacious fibres hold the earth in its place and prevent its soluble components from washing into the wasting sea. It invades the solitude of deserts, climbs inaccessible slopes and forbidding pinnacles of mountains, modifies climates and determines history, character and destiny of nations.

Unobtrusive and patient, it has immortal vigour and aggression. Banished from the thoroughfare and the field, it bides its time to return and when vigilance is relaxed, or the dynasty has perished, it silently resumes the throne from which it has been expelled but which it never abdicates.

It bears no blazonry or bloom to charm the senses with fragrance or splendour but its homely hue is more enchanting than the lily or the rose. It yields no fruit in earth or air and yet should its harvest fail for a single year, famine would depopulate the world. "

Clive Thomas
26th October 1996