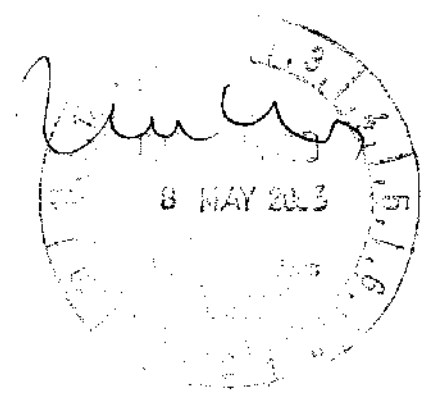


Warwick Nichols



6th May 2003

Mr Dundas
Committee Secretary
House of Representatives Select Committee on the Recent Australian Bushfires
Parliament House
Canberra
ACT 2600

Dear Mr Dundas,

Submission re Bushfires

INTRODUCTION

This submission is made with the intention of assisting the Committee determine the issues surrounding the phenomenon of bushfires, as they affect the natural and man-made environments.

It is made on the basis of long term experience, history, original and publicly available research as well as participating over a twenty year period in the activities of the volunteer fire fighting movement as it evolved towards its current position.

Much of its content reflects the personal views of one trained in applying and using scientific methods. As such, reactions to its content by those whose background and approach favours short term "green" ideals can be expected.

QUALIFICATIONS OF THE AUTHOR.

1. A 61 year old retired but very intellectually and physically active electrical engineer.
2. A past volunteer bush fire brigade (now RFS) deputy captain of twenty years standing.
3. A person seeking to conserve native bushland.
4. A long term experimenter with the dry sclerophyl bush land of the Hawkesbury region.
5. A person with long term experience and learning who has revised his views markedly from eschewing to supporting hazard reduction.
6. The husband of a scientist specialising in flora and fauna together with their botany and biology.

VIEWS OF THE AUTHOR

The author believes that:

1. Hazard reduction is not carried out currently at levels necessary for the survival of either the bush as it has evolved or its fauna.
2. Hazard reduction is not carried out currently at levels sufficient to give residents within and in proximity to bush land the peace of mind they enjoyed when they established residency.
3. Hazard reduction should be performed, depending upon weather conditions and consequent bush land litter levels, in the order of every three years
4. Contrary to views expressed by persons of influence during and after recent tragic losses occasioned by wild-fire, hazard reduction does not adversely affect natural bush land. Nor does it have no effect on the degree of damage afflicted by summertime fires.
5. Contrary to other views expressed by the same people, the fires of the past two years are not unprecedented. Those of us sufficiently long in the tooth remember Tasmania, Ash Wednesday in 1983 and the Hawkesbury region in 1967, and there have been many more. In most cases, these destructive fires followed long periods of failure to reduce hazards.
6. Australian bush land as it exists today is trending away from its state of 100 to 200 years ago, towards a different regimen in which wildfires will ultimately but irreversibly destroy it. The enhanced greenhouse effect will only accelerate this trend.
7. In its new guise, the Rural Fire Service has lost its effectiveness in providing communities with security from wildfire and the peace of mind that accompanied it. Politically oriented process reform in the RFS has resulted in the confounding of bushfire mitigation methods that are tried and true. Volunteers find themselves facing wildfire hazard because of denial of adequate hazard reduction; then in wildfire conditions they are limited to either standing before an uncontrollable fire front or following fire fronts to extinguish the ashes of properties destroyed by the fire. There appears to be no acceptance of locally based and knowledgeable volunteers back-burning to protect both themselves and property.
8. In New South Wales at least, this emasculation has come about as a direct result of ignorance and inexperience of political figures combined with the ignorance and inexperience of almost all staff of the NP&WS. It is contributed to by the perceived need of government department staff, to give politicians what they want rather than serve the overall public good, so that the employment contracts generated in a climate of economic rationalism will be renewed.
9. Hazard reduction of bush land within 8 km of a national park has all but failed. Legislation at least in NSW requires that before it may proceed, the NP&WS must be supplied with an environmental impact statement. When this is done, several weeks delay while officers of the service consider the merits. In most cases the application is rejected, but where approval is secured, the time delay means that the hazard reduction would be carried out in unsatisfactory weather conditions, so the application lapses. The legislative structure quite clearly has been imposed to give effect to the NP&WS preference not to allow fire in national parks and preferably in any other bush land. This attitude is misguided and erroneous.

It is fair to say that the author has turned his views around on this matter over a thirty year period, as his own ignorance and inexperience have been redressed. The factors

are addressed briefly in the body of this submission, the detail being too protracted for the purposes of this submission.

JUSTIFYING THOSE VIEWS

Hazard Reduction to Support Survival

Hazard reduction supports the survival of native flora and fauna as they have evolved, through avoiding their destruction by wild fire. On days of extreme hazard, the radiant energy created by burning litter amounts to some 5 Megawatts per metre of fire front. For the uninitiated, this corresponds to 5,000 single bar radiators at red heat, acting over a length of only one metre.

It is this energy that vapourises oil from green leaves and ignites it as it is propelled by fierce fire induced wind through treetops. Such energy levels can and do kill plants, even those that have evolved in fire regimens.

Evidence of pollens in deep coring studies reveals that one factor, apart from long term climate change, in the dominance of Eucalypt (and angophora) species in the Australian bush land is burning by aborigines. History informs us that their burning was largely by way of hazard reduction and the evidence of our eyes informs us that flora and fauna have survived this arrangement. Hazard reduction destroys neither flora nor fauna. Wildfire does both.

Three case histories are now presented that support the author's views.

Case History 1.

Between Bell and Newnes in New South Wales is a very sorry forest. Scarred by wildfire as long ago as around 1960, the bush has never recovered to its former state. Massive erosion occurred due to heavy rainfalls soon after the fire, reducing the ability of flora to recover. Those trees that survived remain fire scarred.

Case History 2.

One of several locations in the Hawkesbury region in New South Wales that were adversely affected by wildfire in 1967 was Bilpin in New South Wales. Clouds of gas igniting above them destroyed whole apple orchards. Most significant though was the destruction of perhaps thousands of Koalas. Long term residents report that before the fires it was difficult to sleep at night due to the koalas squabbling. Timber harvesters reported frequent sightings. Their population pressure was such that they had spread to the nearby eastern escarpment of the Blue Mountains. Discussion with NP&WS staff shows that they believe today's population is around one half dozen.

Case History 3.

A summer wildfire of 1975 encountered an area of bush that had been protected against all fire for 28 years, as an experiment by the author and several neighbours. The aim of the experiment was to allow high levels of litter to remain in place in order to counteract the population of the forest floor by low shrubbery. This aim was considered to better reflect the state of the local bush as the white man found it.

The reference point was the condition of the bush land in 1905, as it was described to the author in 1970 by an old hand. His description was that of open woodland, featuring only large trees with a floor predominantly of open grassland with only a

few shrubs. Although this description was anecdotal, it was considered to be closer to the conditions of around 1800, because it is recorded that the white man often used fire for clearing and hazard reduction, while aborigines continued their fire practices long after white occupation occurred.

This case history concerns a plant known as the Woody Pear. White settlement has seen the harvesting of seemingly all mature specimens in the Hawkesbury region, for use as fine veneer timber.

This plant possesses a very corky bark that burns easily in intense fires. When this occurs, the plant has the ability to send up new shoots from its lignotuber, hopefully to become a new tree. These new shoots can be destroyed even by hazard reduction burning, if it is intense. At time of commencement of the experiment, there were many immature shoots through the bush, but no mature plants.

During this 28 year period flower and fruit bearing saplings had grown to heights around 8 metres and trunk thickness to 100 mm. The understorey was notable for its lack of shrubbery, but it had not become open grassland at the time. There remained considerable dry and decomposing litter. The wildfire left only the lignotubers invalidating the attempt to restore the bush land to its natural state.

More Frequent Hazard Reduction

Case history 3 above reveals a fundamental flaw in the experiment's approach to restoration of the bush to its pre-white man condition. It sought to swamp understorey growth with overstorey litter. Although of green material, understorey shrubs contribute to fuel loads, however as the failed experiment showed, its lack was not sufficient to avoid the destructive effects of a wildfire. The conclusion to be drawn is that the opposite fire regimen would have been preferred. Frequent hazard reduction would have reduced both litter levels and understorey plant populations to the point where high intensity fires could not have been sustained and in every likelihood, the Woody Pear saplings would have survived. Low level hazard reduction does not destroy the lower, moister layers of broken down litter, thus avoiding soil erosion. In addition, they do not bring conditions that entrap fauna, thus allowing their preservation.

It can be seen from preceding discussion that the author considers a three year frequency as desirable for hazard reduction.

This position arises in consideration of the nomadic behaviour of the native aborigines. We are apprised that fires were set at the time a group moved from part of their territory when continued floral and faunal productivity demanded. It is quite likely that since nomadic behaviour is based upon seasonal factors that removal from a particular location was an annual occurrence. It is then likely, that consideration must have been given to annual burns. Even if it was decided to attempt a burn, if there had not amassed sufficient litter during the past season, a fire would not have proceeded. There could be seasons where this situation would prevail for two years, but it would be exceedingly unlikely that it would for three years. After that time, litter drop would be sufficient to sustain a burn and at levels where care would have been needed to avoid excessively hot conditions.

CONCLUSIONS and RECOMMENDATIONS

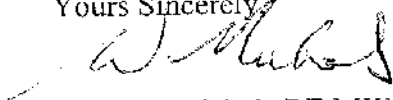
The author concludes that legislation that prevents hazard reduction at least on private property, regardless of its proximity to national parks should be repealed.

Further, hazard reduction should be performed every three years, especially where rural residential premises have been established.

The author recommends to the Committee that revised legislative framework be implemented, in order that:

- Hazard reduction can proceed where peace of mind of residents is at threat, as well as the safety of volunteer fire fighters
- Bush land floral and faunal conservation are enhanced
- RFS volunteers may carry out wildfire prevention rather than risk life and property damage in mitigating after effects.

Yours Sincerely,



Warwick Nichols BE MIE Aust