  
10/6/03

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

Submission to the Select Committee's Enquiry on the Recent Australian Bushfires

Dear Sir

The following is my submission to the Select Committee's Enquiry on the Recent Australian Bushfires.

### **Introduction and Summary**

- (a) **Extent and impact of the bushfires;**  
Previous major fires
  
  - (b) **Causes of and risk factors contributing to the impact and severity of the bushfires;**
    - Real causes**
      - Drought
      - Multiple lightening strikes
      - Human resources
  
    - Myths**
      - Fuel reduction burning
      - Grazing
      - Logging
      - Tracks/trails
  
  - (c) **Environmental impact of prescribed burning**
    - Fire and biodiversity
    - Physical effects
    - Conclusion
- References**

## **Introduction and Summary**

Fire is an inevitable part of the Australian environment, it is complex and challenging, sometimes necessary and at times extremely dangerous. Along with Australia's aridity and salinity, fire is probably the most difficult aspect of the environment to manage. The solution will only occur when Australians are mature enough to realise that Australia's environment is unique and to maintain it, politicians and managers will have to come to terms with Australia's history in order to develop a strategy to maintain the environment for future generations, after all, the present generation is supposed to be caretakers of the land, just as the Aboriginals were, for future generations.

Human action may change the timing or intensity of bush fires, but when the requisite conditions exist, the bush will burn. In the past some of the bush normally burned as a result of wild fires and still burn, some infrequently and at various intensities. Global warming, human management, miscalculations and excesses have changed this pattern. The major culprits have been logging, grazing and fire suppression.

### **Today, we face two distinct challenges in responding to bushfire risks:**

1. Fire threatens property and communities in an increasing percentage of each state as people move into the bush and its fringes, and as development in the bushland is permitted;
2. Away from structures, much of the bush and forests are at risk from abnormally hot fires owing to extensive build-up of woody material, including small trees, scrub and litter on the forest floor and a combination of droughts, high temperatures and lightning. While great uncertainty surrounds how and whether human intervention can alleviate fuel buildup, we know quite well how to safeguard property and communities. Immediate action is needed to continue to safeguard property and communities and to allow better, less crisis-driven decision making about suppressing future fires and when to let them burn and how to protect the environment and maintain species diversity.

### **(a) Extent and impact of the bushfires - Previous major fires**

Over the past 60 years considerable research has been devoted to the history, frequency, causes and management of bush fires. It is acknowledged that south-eastern Australia is one of the three most fire-prone places on earth, yet whenever there is a large fire event each is treated as being exceptional no doubt because more property, communities and people are involved, and there are a plethora of media organisations with their sensationalist journalism.

Australia's climate, vegetation and topography ensure that fire is a frequent occurrence as can be seen from the following list of major bushfires for south-east New South Wales and Victoria: 1851, 1898, 1905/6, 1912, 1914, 1925/26, 1932, 1939, 1942, 1943/4, 1952, 1965, 1968, 1969, 1972, 1977, 1980/81, 1983, 1985, 1997, 1998, 2002/3. From this list it can be seen that major fires are frequent, on average one every 6.4 years, although the range is as long as 47 years to as short as 1 to 3 years during periods of more frequent drought. Minor fires occur with much greater frequency and are controlled. In drought-prone Australia and in particular SE Australia, bushfires are neither exceptional or unusual. The longest apparent period between major fires (47 years) was during the final stages of the last cold period, a period called The Little Ice Age. This was coincidentally during Australia's early white settlement and early land clearing period. Much of SE Australia has been subjected to repeated fires both natural and man-made. It is the combination of both fires and

their frequency which has seen much flora and fauna modified or destroyed and in areas such as Wilsons Promontory, tree species have almost been wiped out.

**(b) Causes of and risk factors contributing to the impact and severity of the bushfires - Real causes - Drought**

There is no doubt that the prime cause of the major 2003 bushfires was the 2002 drought, a situation exacerbated by global warming, a natural phenomena accelerated by industrialisation and the burning of fossil fuels. Major Australian droughts over the past 100 years have been found to be associated with El Nino, the warming of the equatorial Pacific Ocean which occurs every 3 to 7 years.

Australia since white settlement has been subject to many severe droughts, but the 2002/3 drought was exceptionally severe. During this period Australia experienced its worst drought since reliable records began in 1910. The average Australian rainfall for the nine months March-December 2002 was the lowest ever during this period. It appears that official records commenced after the disastrous 1898/1912 drought.

Added to this extremely dry period was the high 2002/03 summer temperature. Temperatures had been significantly higher than during other drought years being one degree centigrade higher. The lower rainfall saw a conversely higher temperature. The causal link between low rainfall/high temperature and fire is a significant increase in evaporation rates. This promoted an increase in the loss of soil moisture and the drying out of vegetation, watercourses and alpine bogs. The SE area of NSW like much of Victoria's NE had been suffering from a prolonged dry period for several years. In the local area (Monaro) rainfall and rainfall patterns had changed with much moisture being lost due to winds and frosts. The water table has been dropping for the past 25 years or so as is evidenced by the many lakes on Monaro having been dry for many years. With such long dry periods it was not surprising to see the vegetation of the high country severely stressed. Such vegetation is highly combustible and the lightning strikes of January 2003 provided the ignition. Once a fire was started, drought conditions meant that undergrowth, ground cover and leaf litter was extremely dry, even the vegetation along the rivers and streams, in wet sclerophyll forests, moist gullies and the alpine areas. These conditions meant that much more fuel was available creating hotter fires which moved into those moist areas not normally burnt.

I walked across the Kosciusko National Park in November 2001 and 2002 (again in April/May 2003 post fire) while there was a great deal of snow on the ground. In 2001 it was necessary to wade a number of streams yet in 2002 I was able to easily negotiate the rivers and streams without getting wet feet. In 2003 it was possible to step across these same rivers and streams. In 2001 I had wet feet and muddy boots for the greater part of a 720 kilometres walk while in 2002 and 2003 I had wet feet only if it rained or snowed. It was very obvious to me in November 2003 that the alpine areas and high country was tinder dry and it would not take much to start a fire. Consequently, when the fire arrived in the alpine, sub-alpine and montane forest areas woody plant communities and considerable areas of snow grass and bogs were burnt, some areas being completely devastated.

**Multiple lightening strikes**

There were many multiple lightening strikes in Victoria and New South Wales resulting in fires in most the mountainous areas of NE Victoria, and SE New South Wales and the ACT, fires which placed great strain on fire fighting resources of the states with fires occurring in several areas within a short time of each other. The remoteness and ruggedness

of the country made their control virtually impossible. Nonetheless there were back burns developed which in instances did more damage than the fires and fire trails were bulldozed as if they were going out of fashion. Where fires were being driven by wind, ember storms developed and no amount of fire trails was going to prevent the spread of fires from these embers. This especially applies to those fire trails cut all over the national parks. It is a different situation on private land where much of it has been cleared or partly cleared for grazing and was grazed. Even this was not necessarily going to stop the fires progress.

The economics and practicality of maintaining equipment and adequate strike forces indefinitely to counter similar situations such as those which occurred in 2003 would not be realistic. The economics of the world today would prevent the high level of maintenance necessary for such resources. With the prospect of global warming and the potential for more frequent bush fires a mechanism needs to be developed to match resources with seasonal conditions. It may be a states responsibility for the control of but the Federal Government has a responsibility for the funding and possible purchase of common equipment.

### **Human resources**

Unfortunately the trained resources necessary to combat the 2003 fires were stretched to the limit. It is unfortunate that a great number of people involved in controlling the fires have vested interests in the area and no matter what the outcome of the fires, parks and forest managers are accused of being incompetent and have been mismanaging their areas for years. Fortunately, park managers devoted their meagre resources to protecting private property while the parks were let burn except for several historic sites in Kosciuszko National Park where firebreaks were bulldozed around them eg; Farm Ridge Hut and stock yards ruins, Mackay's Hut and Pocket's Hut.

### **Myths - Fuel reduction burning**

*Fires are more severe today because we do not follow the past practices of Aboriginals and mountain stockmen*, a statement repeatedly made by grazing interests and many in the surrounding rural communities. Claims are made that the Aboriginal fire regime was frequent and on a large scale. There is no doubt that the Aboriginals did burn, but they, like any responsible community successfully managed their environment not destroyed it.

Many people quote the frequency of fires and the smoke sighted by early explorers surveyors and travellers but few comment on the likes of Mitchell, Strzelecki, Hume, Brodribb, Murray, Townsend, Clark, McMillan to name a few, who at the same time, had difficulty in making their way through the Australian bush as it was not all open. Some even had to let their pack animals loose in the bush or slaughter them as there was not enough feed for them at that time. History is liberally littered with environmental references such as smoke and fires, water and drought, bush, thick scrub or impenetrable scrub such as McMillan, Strzelecki, Brodribb and others encountered in Gippsland. Not only are references made to the environment in this manner but also as to rain and flood conditions such as the disastrous floods at Gundagai. References are made to country which was rotten, meaning it was very wet. Lake George is also a historical reference point for droughts and rain. Early settlers and travellers describe the low or almost non-existent water was in the lake and how the lake bed was so dry and cracked that for many years it was crossed regularly on the way to Bungendore and Queanbeyan, then there are references to the lake being stocked with fish. Others refer to the endless bush yet Mitchell on his survey journey from Sydney to Portland was able to drag a bullock dray there and return leaving a trail which pastoralists and settlers

were able to follow.

If, as is claimed by many, the bush was burnt by the aboriginal people and it has only scrubbed up since the Aboriginals removal then why was it that woodlands and forests of which we can only see small remnants, consisted of well spaced very large trees of multiple age with spreading limbs. The larger trees being several hundred years old as were many in the high country prior to the 2003 fires. Aboriginal burning practices appear to have been prevalent in grasslands and heath lands but were uncommon in the forests of the Divide, Gippsland and the Otways, areas where many of the worlds tallest trees once grew. The open areas are likely to have been the result maturity due to lack of disturbance not of interference. This situation was still evident at several locations in Kosciusko National Park prior to the 2003 fires.

*Fires are more severe today because we do not follow the past practices of Aboriginals and mountain stockmen.* Dendrochronological studies of fire scars on Snow Gums indicate that there was a substantial increase in fire frequency in the high country after 1860. Frequent burning of the high country commenced shortly after grazing commenced. It took only a few decades before voices began to be raised against grazing and grazing practices in the high country as a result of the damage being wrought to the alpine country, even the Stretton Royal Commission in Victoria into the disastrous 1939 fires criticised grazing groups for their burning. It would appear that major fires in the high country were rare, occurring once or twice in a hundred years. Burning or lack of burning can develop a similar looking forest understorey. Reduction burning can eliminate many species from the undergrowth communities especially those which are slow to mature while lack of burning allows the shorter lived species to die out but leave a seed bank in the soil.

In January 1986 as I walked near Mt Pinnabar I was surprised at the vast difference in the understorey of the two adjoining Alpine Ash (*E. Delegatensis*) or Mountain Ash (*E. Regnans*) forests, one section had been burnt in 1939 and the other remained untouched. The burnt section consisted of a close, young, uniform growth forest with very thick understorey while the untouched forest consisted of well spaced, very large trunked trees and almost no understorey. Early settlers spoke of the ease in which it was possible to travel through much of the country.

With climate warming, especially during the past 50 to 70 years, there has been a surge in Snow Gum (*E. pauciflora*) and Black Sallee (*E. stellulata*) growth right across the high country. Other woody species such as the commonly called Needle Bush or Mountain Needlewood (*H. lissosperma*) have also been developing across the sub-alpine snow grass plains, cold-air drainage hollows and valleys. In areas not subject to repeated burning for green pick the forest is similar to an "English Park" of very large snow gums with spreading limbs, little under-story and a mat of snow grass. Where high country woodlands were burnt during successive grazing seasons and after the 1939 bushfire trees in some areas have now regenerated to such an extent that it was almost impossible before the 2003 fire to walk through them.

Continued grazing and burning of the New South Wales alpine country after the devastating 1925/26 fires and prior to the devastating 1939 fire did little or nothing to prevent or alleviate the 1939 fire. In parts of the alpine and sub-alpine country areas prior to 1939, grazing had destroyed much of the ground cover. In the 1939 fire, the ember storm saw burning embers carried for many kilometres creating multiple spot fires as it went as occurred in 2003.

It has been my experience since 1954 and during my extensive walking particularly

throughout the Kosciusko National Park to observe the recovery of plant communities across the snow country. Where the alpine countryside appeared like a harsh, bare, rocky moonscape it has now become soft as recovering plant communities grow over the smaller rocks and boulders. Across the more open snow grass and alpine country of central Kosciusko National Park the 2003 fires also burnt scattered trees, patches of woody plants, dried out heathland and bogs, much of this country also being burnt in 1939.

For fuel reduced areas to be effective they need to be near the resource being protected or to be strategically located where possible. The burning of vast areas as many demand, is both physically and economically impractical and is potentially highly environmentally damaging. Fuel reduction burns and or wild fires are no panacea for protecting property as was experienced during the 2003 fires. Many areas had been recently burnt and still the areas were burnt again. Several areas had been burnt four times in the past 20 years. The only reliable options in protecting property is good building design, ensuring that flammable material in near any building is removed or kept to a minimum, people and equipment are prepared. In some instances, such as the alpine and subalpine country, "prescribed" burning reduces grass cover thereby encouraging the growth of the more flammable shrubs increasing the fire risk. As with grazing a consequence of burning the snowgrass sward is its replacement by more fire prone shrubs. This reaction was very evident from South Rams Head right across into the Jagungal Wilderness area.

The severe conditions of 2003 meant that such fuel reduced areas as there was, were of less use. In the remote or mountain areas or towns where severe fires threatened during such hot windy weather it is debatable as to what use these areas would have been. Although areas subjected to fuel reduction burning may have been less than desired by some, had the previous years been more moist and cooler additional burning may have been conducted.

### **Grazing**

Many claim that grazing did no damage to the high country and that it prevents fires. One has only to examine the photographic evidence contained in photographs taken by B.U. Byles (Forestry and Kosciusko NPWS libraries) on his 1931/32 summer reconnaissance of the mountainous part of the River Murray Catchment in New South Wales across the western area of what is now Kosciusko National Park from near Mt Jagungal. Transport through this country was only by horse. Byles found that due to the strenuous nature of the work and the somewhat poor natural feed available in the mountains he had to have frequent changes of horses. The collection of photographs held by the Kosciusko NPWS documenting the damage and recovery after the restoration conservation work and the removal of stock from the snow country has to be seen for one to appreciate the damage precipitated during the grazing era. Now that the 2003 fire has destroyed grass and shrub cover the old, very badly eroded, multiple stock tracks criss-crossing the park are very visible, some continuing to erode. Although there was a severe fire through this country in the summer of 1925/26 grazing continued yet this fire did virtually nothing to prevent the spread of fires in 1939 with much of the Snow Gum and heathland country being burnt to ground level although parts of the grassland were burnt but less severely. Some of the moss beds which caught fire smouldered for weeks afterwards.

Byles photographs indicate that there had been considerable growth of woody plants in the high country. Sheep (which graze much closer to the ground than cattle) and cattle had been grazing the high country at the time of these fires, yet after all of this repeated summer grazing and stockmen's fires to promote green pick it did nothing to stop the summer fires.

The movement of very large groups of stock backwards and forwards across the high country established regular stock routes which were followed each season. The immediate country beside the routes was heavily grazed by each passing group of stock then at the end of the season the country was fired for the following seasons green pick. It has been recorded that in summer, stockmen would burn bogs drying them out so that they could be made negotiable. The first extensive area to be withdrawn from grazing was the Kosciusko summit area of some 4000 ha in 1944, on account of the locally very serious erosion there and the increasing erosion hazard.

### **Logging**

Many claim that the consequences of logging have no detrimental effects on the environment and that it reduces the risk and damage caused by bush fires. Logging and burning create a situation whereby there is a rapid development in the biomass readily available for fire fuel thereby creating the resource for devastating forest fires. Much mature timber is ringbarked or felled so as to create a uniform growth forest, habitat is destroyed to the point that nesting boxes have been placed in forests to save populations of Leadbeaters Possum.

### **Tracks/trails**

It is claimed that tracks and trails facilitate the management and control of fires and that the track network for vehicle access to the fire areas was inadequate and that the track system should be upgraded and extended.

No amount of track or trails is going to prevent fires such as those of 1939 or 2003. No mention is made of the fact that these tracks or trails promote the spread of exotic plants such as English Broom and Blackberries into the bush and National Parks such as has been happening in the national parks and state forests of Victoria. In Kosciusko National Park where the trails had been allowed to regenerate for environmental considerations the exotic plants were much less evident. These tracks and trails promote the movement of feral animals and illegal users through the bush and National Parks. Tracks also provide greater access to and a continuing demand for greater access to the bush and National Parks thereby facilitating further environmental damage by way of erosion and pollution. All users claim to love the bush, no doubt that this is true, but only a very small percentage of these users have any respect for the bush.

One thing is for certain, the criteria for wilderness has, in Kosciusko National Park, been severely compromised with the construction and reconstruction and the manner of construction of fire trails several of which had been allowed to regenerate. The manner of drainage of these new tracks is such that one would think that now after the fire there was to be a flood. The drainage ditches often referred to as speed humps or more appropriately tank traps are in many instances poorly sited and constructed and in all cases environmentally destructive. On the tracks I walked along in April/May 2003 which had been in existence previously had few humps. Now there are many and they are large enough to make driving over them difficult. From anyone's perspective, they are monsters. These trails are in the Jagungal and proposed Table Mountain Wilderness areas and the Bimberi Nature Reserve. Given the ferocity of the 2003 fires across the Kosciusko National Park, the adequacy of tracks and vehicle access could hardly be blamed for such widespread destruction. KNP like Victoria is riddled with tracks and in Victoria it is no more than 5km to a track. Although the Stretton Royal Commission Report on the disastrous 1939 Victorian fires was written over

60 years ago it made no mention then that insufficient tracks and trails effected the fires outcome, now 60 years later and after the Snowy Mountains Authority there is a much more vast track and trail system, yet the fire could not be stopped.

(c) **Environmental impact of prescribed burning - Fire and biodiversity**

South East Australia is an area of highly diverse ecosystems which range from semi-arid mallee and sand hill country in the west to the mountains of the Divide and the eastern coastal fringe. The habitats vary across this range from mallee and salt bush to rain forests, from open woodlands, heathlands and grass lands to the alpine country. These habitats reflect the effects of burning some being more flammable than others such as the grasslands and heathlands, dry forests and woodlands which burn frequently while others such as rainforests and tall wet forests may not necessarily burn at all. Although the greater part of Kosciusko National Park was burnt there was a mosaic or patchwork of unburnt forest which provided a refuge from which species can spread out to re-colonise burnt environments. The biodiversity of this country is so variable that to impose a single burning regime will reduce the biodiversity of supporting ecosystems. The key to preventing such an ecological disaster is to develop flexible and diverse burning regimes that can mimic natural conditions similar to those under which particular species have evolved. It may be necessary to deliberately burn very specific areas in order to sustain the continued existence of some species such as ground parrots at Barren Grounds, Wilsons Promontory and South West Tasmania. It is simplistic to assume that a blanket broadscale prescribed fuel reduction program is the key to limiting future wild fires across an entire range of ecosystems. Any attempt at hazard reduction burning of the high country will invariably increase the development of woody shrubs and consequently increase the biomass available for future damaging fires.

**Fuel reduction**

To maintain a low biomass or fuel level as the vocal people want would mean that larger areas be burnt, more frequent fires in many areas, more frequent than nature allows for. In many instances fire means more fuel, more intense fires, and loss of habitat and biodiversity. Although these burns are set in the cool autumn period, because of their frequency they have and continue to destroy old growth, habitat trees. One fire may not necessarily destroy the tree but several will. As old hollow trees are burnt they become weakened then fall and finally completely destroyed. Without these frequent fires these old habitat trees would stand for many years.

It is irresponsible to attempt to control nature in the manner white Australians have been doing since 1788. The environment continues to be degraded or destroyed for short term gain to such an extent that Australia, which possibly had the greatest species range of any country, has the reputation of having the greatest species loss of any country in the past 200 years and maybe the country with the least species remaining in the near future.

Frequent fires have the potential to significantly alter the structure and species diversity of any plant community. In the alpine country some species such as Alpine Buttercups and Snow Daisies may take many years to recover while a single fire event may destroy the Mountain Plumb Pine an important food source for the Mountain Pigmy Possum. Some small mammals may be advantaged by frequent fire while others such as the Mountain Pigmy Possum will be greatly disadvantaged as fires remove protective cover and food supplies. Within the bird community there is a wide range of habitat requirements many of which are destroyed by ill planned broad scale burning. Suitable habitat for many birds such



as those which require tree hollows takes up to 60 or more to develop while habitat for some of the ground parrots requires a fire frequency of 4 to 15 years to maintain their habitat while others such as the Rufous Bristle bird requires frequencies from 6 years to develop a habitat structure.


Much criticism has been levelled at park managers who are accused of being incompetent and are mismanaging the parks and that fires come from the parks onto private land. The 1939 fires were much more disastrous than 2003 yet by 1939 there had been extensive logging in the forests and grazing in the high country. There were only a few national parks and in Victoria a good network of tracks and trails existed but in New South Wales, especially in the mountains there were few. In the Snowy Mountains it was not till the late 1940's and 50's that tracks, trails and roads were developed, many by the Snowy Mountains Authority. Greenies and environmentalists had not been invented then. Today these groups take the brunt of the antagonism and campaigns are run by vested interests against the bush and people who love and respect the bush and want to see what little there is left protected. The total inaccuracy of their statements can be seen when additional national parks or reserves are proclaimed or when limitations to their damaging activities in parks are to be controlled by legislation such as a wilderness area declaration.

Claims that most of the fires start in parks is rather ridiculous. In Victoria for example since 1900 how were 13 out of 19 majors fires able to spread when national parks were less than 1% of the state. In New South Wales less than 5% of the state is designated as national parks or reserves. People seem to conveniently forget that there is a large section of each state which are forests set aside for the logging industry. The statistical history of fires since 1900 indicates that the majority of fires started in state forests and on private land. Conversely it would appear that fires in states forests and private land are a greater threat to national parks than are fire in national parks to private land holders.

Anyone looking at the 2002/03 fires must take a historical perspective and examine the statistics and land tenure for a true perspective. Some 38% of the burnt area in 200/03 was in national parks and nature reserves but opponents of national parks used this figure in an attempt to attack and discredit park management. In 2002/3 ignition of many fires was by lightning, some were by man. How can this in any way be blamed upon park mangers?

### **Conclusion**

Uncontrolled wildfires and unplanned fires may eliminate critical habitat and populations of endangered and threatened wildlife. On the other hand, the absence of a particular successional aged habitat possibly created by fire may result in a population decline and a threat to species. Diversity of regimes and habitat is the key to any management policy. If prescribed burning regimes are not developed to maintain specific habitats then biodiversity will suffer at the cost of a significant reduction in species. To preserve the environment for future generations it is time the scientific communities advice was heeded rather than advice being driven by sensationalism and ill informed vested interests. All love the bush, but unfortunately, very few have any respect for it.

  
Ian Haynes

30/4/03

## References

- G. Borschmann, (1999) *The Peoples Forest, A Living History Of The Australian Bush*, The Peoples Forest Press, Blackheath.
- W.A. Brodribb, (1978) *Recollections Of An Australian Squatter*, J Woods, Sydney.
- R.A. Buchanan, (1989) *Bush Regeneration, Recovering Australian Landscapes*. TAFE NSW.
- N. P. Cheney, CSIRO Division of Forestry (1995) *Bushfires An Integral Part of Australia's Environment*. Year Book Australia, 1995
- A.B. Costin and D.J. Wimbush (1979) Trends in Vegetation at Kosciusko, *Aust. J. Bot.* 27:6)
- A.B. Costin, M. Gray, C.J. Totterdell, D.J. Wimbush, (1979) *Kosciusko Alpine Flora*, CSIRO/Collins, Sydney.
- A. Crawford, (1925) *Eighty-five Years in Australia*, John Sands, Sydney.
- B. Fagan, (2000) *The Little Ice Age*, Basic Books, New York.
- K. J. Frawley ed, *Australia's Alpine Areas management For Conservation*, National Parks Association of The ACT, 1986.
- R.B. Good, (1992) *Kosciusko Heritage, The Conservation Significance Of Kosciusko National Park*, NPWS, Sydney.
- R.B. Good, P. Grenier eds, *The Australian Alps*, *Revue De Geographie Alpine*, Paris.
- W.K. Hancock, (1974) *Discovering Monaro, A Study Of Man's Impact On His Environment*, CUP, London.
- J.B. Kirkpatrick (1994) *International Significance Of Natural Values Of The Australian Alps*, A Report To The Australian Alps Liaison Committee.
- Kosciusko National Park, (1998) *Fire Management Plan (Draft) Kosciusko National Park*. NSW, NPWS.
- Kosciusko National Park, *Kosciusko, Your Park, Your Plan*, Kosciusko National Park Plan of Management Review, NSW, NPWS 2004-2024.
- P. Latz, (1995) *Bushfires And Bush Tucker, Aboriginal Plant Use In Central Australia*, IAD Press Alice Springs.
- G. Mosley, (1988) *Australian Alps World Heritage Nomination Proposal*, Victorian National Parks Association Inc.
- National Parks And Wildlife Service, (2000) *Southern Wilderness Assessment Report*, Southern Directorate Conservation Planning And Programs Division, NSW.
- G. Petersen, (1993) *George Petersen's Kosciusko*, Articles From Snow Revelry, *Journal of the Snow Revellers Club*.
- S. Pyne, (1991) *Burning Bush. A Fire History of Australia*, Henry Holt, New York.
- D. Reid, (1905) *Reminiscences of David Reid*
- B. Scougall ed, (1991) *Cultural Heritage Of The Australian Alps*, Australian Alps Liaison Committee, Canberra.
- G. Wilson, (1968) *Murray Of Yarralumla*, OUP, London.