

Fire - Top Priority for Tuckey's Proposed National Parks Inquiry.

Local people who use or border the Kosciuszko National Park talk about the need to open and keep clear the fire trails in the National Parks and with good reason. Communications and access are key issues in determining the efficacy of any disaster management operation. In terms of the combined fire fighting effort of the NSW Fire Brigade, Rural Fire Service, National Parks and Wildlife Service and volunteer services has been exceptional, protecting in many cases, property and infrastructure, but there have been losses.

One of the reasons mooted by people who live adjacent to the National Park is that the 'locked gate' policy and uncleared fire trails presents a major and unnecessary hazard, particularly during the recent bushfires. Although water bombing has its place, ready access via well-maintained and serviced fire trails is clearly a more affordable and potentially workable solution to protecting key natural, farming, tourism and infrastructure assets.

The question of open and clear breaks and access, is answered by National Parks and Wildlife Service Spokesperson Stuart Cohen who says

'The NSW National Parks and Wildlife Service objects strenuously to the suggestion that legitimate fire trails within Kosciuszko National Park are not in good condition or that gates are locked to local fire fighters. With rare exception, virtually 1,100 km of trails classified as fire trails are maintained annually throughout the park.'

Cohen contests that some trails such as the Greymare Fire trail is damaged through illegal access by pig hunters and that some trails have no strategic advantage and are not as such classified as fire trails.

Cohen asserts that 'The issue of fire trails and their maintenance is discussed regularly among the various agencies involved in the Bushfire Management Committee. Keys are issued to all agencies, which may have a legitimate reason to access them, particularly during a bushfire.'

Perhaps the real issue in terms of KNP is one of the divide between the service and its neighbours, still smouldering in the aftermath of devastating fires that essentially saw volunteer fire fighters combat unprecedented blazes, many times without sufficient support due to 'appliances' deployment to other fires. The salt in the wound for farmers is the massive loss of income, grazing land, stock and assets including hay sheds and fencing. The volunteers did not get paid and many farms, businesses and employees have a long climb out of the ashes back to their normally prosperous and happy lives.

Needless to say, there are always risks in primary production and small business, both mainstays of essentially rural / tourism communities, nevertheless in such circumstances, a pooling of monetary assets followed by a

more equitable distribution of resources, particularly wages would be the immediate salve for community relations.

Whether or not the broader community and the NPWS consider that the fire trails are well maintained or not, the fire trails access and maintenance issue will undoubtedly be raised by Federal Minister for Regional Services, Territories and Local Government Wilson Tuckey during his proposed inquiry into National Parks.

There would be little disagreement amongst his State and Local Government colleagues nevertheless, clearly looking to the long-term, Snowy River Shire Councillor Richard Wallace is keen to keep the agenda *apolitical* in order to concentrate on the issues to hand. Wallace wants to find workable, long-term strategies that will deliver the best results for the Kosciuszko National Park and Snowy Region farmers.

The issues are complex and, as knowledge about fire ecology and behaviour in particular increases, the 'broad prescriptive' approaches will ultimately give way to local knowledge and point-specific solutions taking into account topography, soils and vegetation, moisture conditions and wind behaviour for instance. Both Wallace and Snowy Tourism Manager David Last agree that farmers live in this region because they love and care for the land and the bush. It makes sense that farmers are actively engaged in the quest for better land management practices and clearly, to perform intensive, fire hygiene activities such as clearing trails, maintaining fences, managing weeds and feral pests.

Already, Tom Groggin Station actively pursues a cooperative policy with Victorian Government authorities, knocking out the weeds and controlling with the support of the 'Dog Man', the feral pests. However, there is still patent frustration in getting the message across about the wind and hence fire-specific behaviour in the Tom Groggin / Murray River borderland where the Station is effectively the fire-break and weed control centre for both sides of the river.

In terms of the long-view of KNP, the American experience of western-ridge, fire management practices may have some relevance, where terrain is one of the important factors in fire behaviour. However, prevailing winds vegetation and fuel loads are also important factors where winds sheet out of the Geehi Valley and gust across the Main Range tops area.

It is not an easy task and Minister Tuckey convened a meeting of State Forestry Ministers at the end of 2000, to be briefed by senior Australian fire fighters, who attended the USA forest fires. The message and experience, according to Tuckey, fell on deaf ears.

Now, Tuckey is keen to look at the overall management of National Parks including increasing the percentage burn and frequency of rotation of hazard reduction fire protocols.

'State Forests in NSW over the last seven years maintained a 15% hazard reduction program and in the same period, National Parks achieved about a 20,000 hectare burn. That is equivalent to a 0.5% fuel reduction on a 200 year rotation' he said.

Fergus Taylor, Spokesperson NSW Environment Minister Bob Debus said that, 'the Government and National Parks and Wildlife Service has an ongoing policy of hazard reduction as *one* of the components of reducing bushfires'.

'Hazard reduction is notoriously difficult to implement, more so, in the extreme drought conditions of the last 12 months' he said.

This is a position supported by the CSIRO Fire Bushfire Behaviour Management Unit where comprehensive studies seek to find answers to the Australian setting. Principle Research Scientist Phil Cheney believes that fuel loads are critical to fire behaviour and that there has to be planning for strategic hazard reduction.

'Prescribed burning, for fuel reduction is conducted during the autumn and winter months' he said. 'It's not something you do the day before the fire or even the year before. There has to be a program and culture that addresses a planned and systematic approach to fuel reduction.

The never-ending story is, according to Taylor, that 'We learn every year more about fire management. It is an ongoing study.'

The reflective view of the CSIRO is indeed that, the use of back-burning during the recent KNP fires was 'the only tool available and, depending on how close they were to the fire determined whether or not they could hold the line'.

Clearly, in ultra hot fires fuelled by strong winds, the lines become more difficult to hold.

Now, the 'line' has extended into a massive 2,000 kilometre front and an additional 20 lightning-ignited fires starting this week out between Tooma and Gundagai, mostly on private property, soon extinguished as a result of the considerable stand by resources.

Cheney says that 'The chances to hold the lines decrease day by day as the back burns get more extensive. There will be problems until there is rain or until the fires reach the grassland country where it is eaten out'.

In a drought year, with reduced pastures, this means that fire effectively runs out of fuel and this was a major factor in containing fires between the Snowies and Canberra.

'In a lesser drought year with good spring and pastures, the fire could run through to the coast' warns Cheney.

Hazard reduction or prescribed burning does have its merits and the CSIRO Bushfire Unit reckons its effectiveness depends on the structure of the vegetation.

Cheney cites anecdotal reports of difficulties containing spot fires in alpine ash and stringy bark country.

'Prescribed burning under somewhat milder conditions, reduces the intensity of the fire, the flame height and depth, the rate of spread and the spotting potential' he explains.

'As far as the alpine region is concerned, the CSIRO studies in the subalpine peppermint gum forests show that fuel can be reduced where there is accurate planning and preparation' says Cheney.

Fire planning depends on the management objectives, which clearly range from conservation through recreation to grazing or managing the perimeter of the National Park.

'Prescribed burning to reduce shrub cover and promote wider grass cover could be one objective' says Cheney, however that would only have a short-term benefit for about five years and fuel reduction may *not* be the primary reason for the treatment.'

'It's difficult to draw any conclusions about conditions in the high country prior to 1939' he says.

'There is some evidence that suggests that the Aboriginal burning created the extensive snow grass plains, which attracted the graziers in the first place. The graziers maintained this regime to a greater or lesser degree. The frequency of fire in those areas has reduced and the conditions now have more extensive fuel loads than ever before in history.'

The historical picture clearly difficult to ascertain, nevertheless John Banks from the ANU Department of Forestry attempts the best possible analysis in his paper "A History of Forest Fire in the Australian Alps". (*The Proceedings of the First Fenner Conference*, 'The Scientific Significance of the Australian Alps', Edited by Roger Good. Publ. Alpine Alps National Parks Liaison Committee 1989).

Banks notes in his paper, the principle sources of information and data on fire history including the 'people or folklore' history, which curiously aligns closely to the scientific evidence in terms of major fire events. The evidence for the Aboriginal use of fire appears to be contained for regeneration of open grasslands, for visibility and access throughs some forest areas, and occasionally for warfare or marking tribal territories. Inevitably, from time to time, out of control burns become major bushfires. The contention that the Monaro grasslands were created by the Aboriginal use of fire is not fully supported as there are ecological factors at play also, including the 'peri-glacial' geological formations and soil types variously specific to grasslands

and eucalypt species. There is no reason or evidence to suggest a 'fire sere' regime by Indigenous people and there would be little point in fireing the transiently populated snow-line areas, particularly the alpine zone, which was frequented primarily as a shared ceremonial meeting place coinciding with the annual Bogong Moth feast.

However, there is clear evidence that, on the arrival of pastoralists and prospectors, the incidence and intensity of fire increased in the region. This is supported by the recorded fire histories for the Brindabella Range, closely matching the tree core sampling instigated by the then Forester for the ACT and NT, Lindsay Pryor. The fire scars on snow gums indicate major fires in 1876, 1881, 1885, 1892, 1899, 1905, 1911, 1926, 1932 and 1939. The lower altitude alpine ash forests indicate fires in 1739, 1879, 1924 and 1933. The even-stand trees indicate a major fire around 1860 in the Brindabellas, possibly started by prospectors.

The emerging fire incident picture for the alpine region is that major fires follow hot and dry summers. Townsend observed forest fires below the Alps in 1846, the smoke 'obscuring the horizon in all directions' and complicating the task of surveying the high country (possibly why his description of the 'highest peak' more closely resembles Mt Townsend than Mt Kosciusko).

Although the historical information for the Alps is patchy, the dendrological (tree scarring) data conducted in the Brindabella Range indicates a major increase in the incidence of fire from about 1860 with 13 fires in 80 years, whereas there was only one fire in the previous 130 years. The tree scar evidence closely correlates to the historical record and the combined data reveals on average, a one in 4.9-year fire picture for 1860-1939.

Importantly, each site selected for fire scarring analysis has its own unique fire history as do trees with adjacent trees, like houses, having their own fire exposure and impact story to tell.

The SMA study of 1955 into fire and associated soil erosion in the Upper Tooma River showed that 20 of the 22 fires from 1750 fell into the post 1860 era.

A further comprehensive study of fire on the Brindabella Range cited by Banks showed a fire incidence of 12 /100 years prior to 1860 and 88 / 120 years post 1860, or a 5.5 fold increase in fires post pastoralism.

A Thredbo fire study shows a burn out prior to 1930 (1926 fire) with only the lower slopes affected and the upper slopes affected by the 1900 fire. The 1939 fire apparently, did not touch the Thredbo slopes and contemporaneously, the main resort ski slopes remain unscathed apart from a necessary, constructed firebreak and back-burn along the Funnel Web Ski Run

in the last few weeks to protect, primarily the Crackenback Development and Riverside Cabins.

Indeed, the recent fire burning from Dead Horse Gap towards Thredbo was slow and, in the absence of prevailing winds coupled with relatively higher moisture levels including the sporadic presence of sphagnum bogs, the fire tended to burn more deeply rather than move swiftly across the landscape.

The Banks sample of the old growth gums at Schlinks Pass (a periglacial site) date to 1700 and possibly fire-regenerated, with a major site disturbance around 1830, similar to the event evident in the Thredbo trees. Schlinks Pass can therefore be safely assumed to have been fire free for 140 years, the area protected by the almost constantly moist soil conditions.

Cheney elaborates on the conditions of the swamps and the aftermath of the high altitude fires.

'One of the greatest negative impacts of wide spread fire during drought is to change hydrological characteristic in upland swamps and meadows. The peat swamps subsequently suffer severe erosion that drains them further and makes them vulnerable to lighter fires' he said.

Arguably, the increased erodability of the swamps or 'sponges' of the high country water catchment system is a strong pointer towards protection against further damage through hooves and grazing for the next few years at least.

'From a scientific point of view in terms of working out prescribed fire regimes, peat bogs are high on the priority list' says Cheney.

'Normally, the bogs are moist and don't burn' he said.

Now, there is clear evidence of high altitude swamp destruction along the Brindle Bull Range east of Thredbo and in the Perisher Valley / Blue Cow region at least. This is worrisome considering the critical role the swamps and sphagnum bogs play in the water catchment equation for major river systems such as the Snowy, Murray and Murrumbidgee as well as habitat for native fauna.

As far as prescribed burning or hazard reduction is concerned, Cheney believes 'it has a place provided it is associated with a comprehensive fire management program including increased fire trails to contain the burns and substantial fire suppression as an ideal objective for KNP'.

From Tuckey's point of view, as well as the fire control regimes, weed and pest control, the matter of grazing leases is not yet off the cards, tempered perhaps by the CSIRO understanding of the now greater susceptibility to erosion of the swamps.

Although the science clearly suggests that alpine and most sub-alpine grazing is unsupportable, it may be useful to define localities and specific environments and perhaps, trial open forest grazing with limited stocking as is

the case with the Mount Hope lease held by Tom Groggin station. This may reduce forest floor fuel loads and open the country evidenced in the era where, as Tuckey explains, Joseph Banks is reported to have described the 'open' forests areas, perhaps maintained through periodic burning by Aboriginal peoples and grazed by native fauna.

Tom Groggin still holds a couple of limited stocking 'high country' leases, which are not in the true alpine area. Needless to say, the long dry, has seen less water in the creeks and waterholes at Mount Hope and indeed, across the alpine region. The drought followed closely by fire necessitated a rapid round up and removal of cattle from the fire-threatened ridges. Already, the Station estimates losses of up to 200 head of cattle as well as numerous brumby foals found dead in the bush, most likely unable to keep up with the mares as they fled from the fires.

It will be interesting to compare the strip grazing trials on the Bogong High Plains and the relative impact of the fires compared to the Kosciuszko experience as well as the more established issues of soil conservation, water retention and so on.

On the NSW boundaries, cattle have broken through the fence lines cut in 'fire suppression' activities by the NPWS. As well as fencing, the cattle will need sorting and drafting back to their home farms. It will take goodwill and cooperation on all sides to rapidly restore the fence lines and contain stock.

The problems pertaining to fire management in particular in state forests and national parks *do* have solutions provided there is the volition of all parties to sit around the table and talk honestly and openly. From the perspective of farmers, there are many shared issues with the NSW NPWS and room for discussion and collective solutions. Essentially, it is a story of the indigenous, historical, cultural and agricultural interface with the environment. The historic Cascades and Tin Mine Huts escaped the scorching and hopefully, many of the high country huts will be restored or rebuilt after the immediate and present danger has passed.

There is a place for both contemporary relationships with nature as well as the historic and mythological view. The huts are wonderful icons of past pastoral history as well as contemporary shelters and landmarks for bushwalkers and skiers. The stockmen and graziers still have an important role in the overall management of the park. Their experience, wisdom, and know-how is a real and living asset, as much as the scientific studies, the evidence of fire history and response of alpine soils to grazing and fire is a cool and critical component of future planning regimes. The fires *have* increased over the last 150 years and there is plenty of information to support the view. Nevertheless, we are living in the present and not the past so must interpret history and the data clearly and aim to return to the *pre-1860* lower incidence

of fires affecting national parks, clearly important natural and economic assets.

National parks are *not* the enemy of the people, nor should people be the enemy of nature. Nevertheless, there is plenty of post-fires reckoning to be had and no doubt Minister Tuckey's inquiry will deliver many positives, none the least, to open out plans of management review processes as well as prompt a more sober and cooler, historic and scientific perspective on fire incidence on the continent. As Councillor Wallace neatly puts it, 'We need the Park and the Park needs us.'