

Gippsland Apiarists Association Inc (GAA) submission

24/6/2019

First we need to understand some of the history of our forests and the starting point should be the Alfred Howitt's observations of change with the disposition of the traditional owners and an end to their management of the land.

https://www.parliament.vic.gov.au/images/stories/committees/SCEP/Fire_Season_Preparedness/Submissions/Submission_45_-_The_Gippsland_Apiarists_Association-Attachment_1.pdf?fbclid=IwAR0wXxnl7qDMVCyvuxlt_u9PZ9YXXPCbT7wxU-gXXOctbxVHbNcjzUPJO3o

Our forests have changed from having a largely open and grassy understorey with widely spaced trees to thick scrub with far more trees per hectare. The changes that have occurred have resulted on forests that aren't easy to burn with low intensity fires.

How we believe Prescribed Burning should be conducted.

Various people have been making submissions to various agencies over the 50 year history of the Association on forest management issues and we have seen little improvement in policy in that with the exception that now the management agency (DWELP/Forest Fire Management Victoria) consult us in their planning of areas to be burnt prior to formulating a burn plan.

Taken from our submission to the Royal Commission into the Black Saturday fires 2009 in red-

At a meeting in Omeo on 28/11/08 convened by the East Gippsland Wildfire Taskforce Inc the following motion, or one of similar wording was passed-

That while supporting the need for far more protective burning we believe that present DSE burning is often far too hot and environmentally damaging and this doesn't need to be the case.

We ask the East Gippsland Wildfire Taskforce to consider drawing from the experience and knowledge of its members and to work with any supportive groups to formulate better methods of burning. These to be presented and explained to any relevant bodies.

A number of people have expressed concerns about the practice of burning selected blocks by lighting up the entire perimeter and then lighting the interior with aerial incendiaries at the same time. We believe this creates an

unnecessarily strong updraft which causes the fire to burn far too hot which is damaging to the soil, the vegetation and also traps both animals and birds.

It also creates conditions which can cause intense fires and spotting outside of the block intended to burn. As a result there is a need for large ground support crew and escapes are occurring more frequently than should be the case.

Anyone with fire fighting experience could look at the smoke plumes on the horizon over recent years from fuel reduction burns and realize that the fires are often much hotter than they should be for prescribed burning purposes.

Below is a smoke plume from a prescribed burn April 2012 in the Loch Sport National Park, what we have said about the method that prescribed burning is being done has been ignored and the burns have been environmentally damaging.



The intensity of the fire that that gave that smoke plume was likely caused by a number of factors, these are the amount of fuel build up over to a long a period since the last burn, increased germination because the last burn was too hot, that the burn was conducted too early in the season and the method described above of lighting up the perimeter then igniting the middle.

The devastation was what we would have expected from a summer wildfire.



And photo some time later



The burn escaped and burnt far more country than was meant to be burnt, their methodology of burning creates a very hot fire prone to spotting outside of the area intended to be burnt.

Another recent burn in the area with similar results also escaped



A massive, very old Banksia marginate cut down to contain the escape.



More from the GAA submission to the Royal Commission into the Black Saturday fires 2009-

These hot burns are affecting the health of the forest to the point that they are detrimental to beekeeping.

It is our belief that if a competent biologist or botanist studied the effects of burns conducted in the described manner they would identify very negative effects and as such these could be interpreted as proving prescribed burning is detrimental when if done properly it wouldn't be the case. This is particularly so with the unacceptably long period between prescribed burns which creates a much hotter burn. This creates a thick regrowth defeating the purpose and this regrowth is also detrimental to water yields. A grassy forest floor with widely spaced trees should be the intended long term result however we believe the present high density of eucalypts and understorey scrub is going to make this harder to achieve.

We accept that the practice of burning presently used by DSE has likely been developed as a result of criticisms of past burning whereby the perimeter has been lit, generally in the afternoon, and it has burnt in perhaps 50 metre and gone out in the evening leaving the block virtually unburnt. We have heard it stated on numerous occasions that the whole block is then "cross hatched on the map" and this is how DSE gets its figures for areas burnt when there has actually been very little done.

Many of the concerns above are shared by the Gippsland Environment Group who state in their submission to the Inquiry into Public Land Management Practices on Bushfires in Victoria following the fires of 2006/7-

"The manner in which they are burnt (areas subject to prescribed burning), is often similar to a coupe after logging. The edges are burnt and incendiary devices are shot into the middle (occasionally by helicopters) and this often results in high intensity fires occurring. Not only is this style completely unnatural, many animal species are unable to survive and escape due to being surrounded by fire. Fires should be lit as a front, which replicates a natural fire."

We support what they say in their submission except we believe the burning should be by multiple single ignition points creating small fires burning in a circle outwards. The updraught from a smaller fire lit in such a manner draws the flames away from the fuel and creates the lowest intensity fire achievable, this is particularly so if ignition points favour ridge tops in undulating or hilly country. Present burning creates a fire where the updraught fans the fire greatly increasing the fire intensity and is often on far too large a scale.

What effects are these very hot fires having on the forests? We draw this from our submission to the Parliamentary Bushfire Inquiry, presented 3/6/2007. What we said in 2007 is in blue-

What were the evolutionary process's working in the forests with such a mosaic pattern in pre-European times? Think of the understory of our bush as two competing ecosystems, grass and scrub. Grass has evolved to burn regularly to eliminate the competing scrub, but not evolved to burn intensively. The scrubby understory has evolved to burn hot to eliminate competing grass, but it hasn't evolved to burn as regularly.

Pre-European indigenous burning generally favoured grass and post European colonisation burning, with some exceptions has favoured fire promoting scrub. Present prescribed burns are too hot and this is counterproductive in that the burns are favouring fire promoting scrub and increasing the fire risk with the present fire frequency. It's not a case of using a sledge hammer to crack a nut, it is a case of missing the nut with the sledge hammer.

Some of the best examples of burning were the burning conducted by most of but not necessarily all of the early mountain cattlemen up to 1939 and the burning as described to us by the cattlemen who had cattle in the bush in far East Gippsland up till the 1950's when government stopped them.

What has been passed down to us anecdotally was of the cattlemen dropping wax matches from their horse's as they rode around, often as they mustered at the end of the season. The fires just trickled around with a very low flame height, often for many days. It was multiple single ignitions with small fires burning in a circle outwards.

Government burning prior to the Kirner Government helped protect biodiversity but likely was never to the high environmental standards of the early graziers.

While it is a complex subject we believe present burning where the perimeter is lit up and the interior bombed out likely the worst of any since European settlement of South East Australia. It appears to have no resemblance whatever to the understanding of indigenous burning we have from studies of the available literature or from what

has been proposed by indigenous practitioners such as Victor Steffenson who the GAA has the greatest respect for.

Recommendations

Taken from and modified from the submission to the Royal Commission into the Black Saturday fires 2009- Direct quotes from our submission to the Royal Commission are in red, changes made to it for this submission are in green.

We ask that the DSE consider modelling burning practices close to the Public/private land interface largely along the model developed in Western Australia by David Packham and others while taking into consideration the additional comments we have raised here.

In areas with adequate roading closer to settlement we believe the perimeter of the block should be burnt during autumn, winter or spring by someone lighting up along the road with a drip torch or similar. This should be done at a time of year, and during weather condition when it will go out of its own accord in the evening. Then, sometime following, it should be lit within the burnt perimeter from either the ground or from the air by helicopter (or fixed wing plane if this is effective). It should also be done at a time of year when it isn't going to burn too hot.

This would allow fires to be lit and slowly burn around for days with very minimal or no threat of escape. All of a block shouldn't be burnt in one go, if this has happened the conditions weren't favourable to the ideal low intensity burn. Every opportunity should be taken to light along ridge lines or any other situation where a fire would burn down hill.

We are basing our support of the above on an extremely successful system developed in Western Australia by David Packham and others, and as a recognition of its success, David was awarded an Order of Australia Medal. As we understand it, during the second stage when the incendiaries were being dropped from the air there wasn't usually a need for high level of ground support.

*Adapting it to Gippsland. In the more hilly country incendiaries dropped from the air should be generally targeted at ridge tops so the fire can burn down the slope as this will result in a much cooler fire. This will be most important when burning areas with a high fuel build up as a result of a long history of no fire. **The intent should be small fires burning out and not a circle burning in that traps both birds and animals.** We see the need to do much larger blocks than presently done as this would be much more cost effective, however these blocks should never be burnt out totally in one hit but under conditions where only a percentage of the area is burnt in any one season. In conditions*

where the fire burns large in a short time it is inevitably too hot would be detrimental to animal and bird life.

If fuel levels are low enough bush experience may allow fires to be lit near the riparian strip along creeks and gullies to burn up hill under conditions where it burns some distance before going out at night. This would be excellent protection for riparian vegetation and rainforest gullies but needs the bush experience we are rapidly losing.

While it has been correctly stated that we have lost a lot of local knowledge and this has had serious consequences we now have technologies that were not available in the past, aerial ignition being one and greatly improved weather forecasting another.

Aerial ignition could be a cost effective means of achieving very positive environmental gains if it was used correctly. Once a block is perimeter burnt then follow up with aerial incendiaries which should be during a time when it will burn slowly imagination to realize the difference for wildlife; fires aren't going to get anywhere near the crown under these conditions.

We should start at the public/private land interface and this will need both support from ground crews and local knowledge to best decide timing.

Once we have the public/private land interface burnt we should rely on local knowledge to tell us where winds dictate the greatest fire risk. In central Gippsland it would generally be from the north and west quarters and in the far east I'm told the greatest wind threat is from the west. We then should proceed across the map so that the area being burnt is to the north or west of the previously burnt area. Then, if we get the threatening winds and it gets out of control it is being blown back on to recently burnt areas.

People with private land adjoining public land should be assisted to burn back from their boundaries should they desire such assistance, either from the CFA with the discretion of the captain, or with the assistance of DSE. Should the CFA be involved then it creates excellent training opportunities. Should beekeepers require assistance with burning from their bee sites then the above assistance should also be available. If fuel loads can be significantly reduced from the foothills up to the alpine areas then the traditional burning practices carried out by the early mountain cattlemen can be reintroduced and would be an enormous benefit to the alpine environment.

Once the areas closer to settlement have had a protective regime of fire then we can work on the areas further back, out of sight and mind to most but of greatest importance for water catchment purposes. These can be burnt out by simply dropping incendiaries along the ridge tops and letting the fires meander around unchecked in the late autumn and early winter if it will still burn. With present heavy fuel loads discretion should be on the side of too late rather than too early as this allows a far greater area to be addressed. Where roads exist, these should be used to advantage. Using the Macalister as an

example, vast tracts of the remote areas could have been burnt each autumn and early winter and had this been done in the past then Glenmaggie wouldn't have lost the 7-8% of its capacity in the June flood following the 2006-7 fires. How much more capacity will be lost from already mobilized sediment following these fires no one seems to know, however many with bush knowledge, often accumulated over a number of generations know it should have been prevented.

We believe it is likely that there will never be agreement on seasonal timing and there will be debate on whether burning is best done in autumn, winter or spring and it is likely that different ecosystems have different ideals. There are deficiencies in our understanding such issues and it is important that all the diverse views are considered on their merit.

From our submission to the Parliamentary Inquiry of 2016-

The Gippsland Apiarists Association are against spring burning and believe Australia would not have evolved so many ground nesting birds if spring burning was part of their evolutionary background.

Low intensity burns are necessary to protect the biodiversity, water catchments, property and human life as well as create conditions whereby fires are controllable. This is clearly shown by-

Rod Incoll's Kilowatts per metre of fire front intensity chart



<http://elthamsdeathtrap.com/elthamsdeathtrap.pdf>

Burning should be more frequent in most but not all instances but it needs to be done in an appropriate manner which it isn't at present.

We also said in our Submission to the Royal Commission into the Black Saturday fires in 2009-

The GAA are opposed to target based burning programs but believe decisions should be made locally by foresters with the knowledge of how to produce the desired result. The desired result in many forest types is likely a grassy understory with some mainly mature shrub species amongst more widely spaced trees. It is also likely that indigenous burning patterns produced a mosaic effect of age groups of less mature shrubs with the intensity of fires in the grassy understory not killing the mature shrubs to any extent. We are also aware of accounts of indigenous burning keeping the fire out of riparian vegetation to provide cover for the game they hunted in a symbiotic relationship.

Obviously, under the above conditions fuel loads are not an issue and the grassy understory creates conditions whereby prescribed/ecological burning is much easier to conduct.

As well as opposing target based thinking rather than area achieved assessment in relation to accountability we see problems with thinking entirely in terms of fuel load. We should be thinking in terms of creating and managing a predominately grassy understory with a diverse range of shrubs and native ground plants. It should be well understood that this needs regular fire.

We stated our opposition to a target based approach once again in the Parliamentary Inquiry of 2016

The only change we can see following the Royal Commission and the Parliamentary Inquiry is that we are now seeing larger areas of public land being burnt in a manner that is clearly an environmental disaster.

Burns proposed or carried out this year in East Gippsland- Waygara of 2532 Ha and another of 15112 Ha. Another at Reformatory Rd/Aquarius Rd/ Kenny Rd

Photos taken from the Reformatory/Aquarius/Kenny's Roads burn show no notice has been taken of what we have been saying in submissions-



Epicormic growth on the trunks of trees only occurs when fires are far too hot and there is severe crown scorch which should never happen with a prescribed burn.

The panel would need to come into the forests with the members of the GAA to get an understanding of the environmentally damaging changes that are a result of inappropriate management practices and we would like to take the panel on such a tour. The area of the present burn would provide some very good examples.

Taken from our submission to the Parliamentary Inquiry of 2016-

In our own life times we have noticed a deterioration of health in the forests that has led to less frequent and less productive honey flows. From what has been passed down to us anecdotally, this has been going on from the early days.

We also believe budding and flowering cycles of the eucalypts should be taken into consideration when planning burns. Nectar and pollen are very important food sources for some native birds and animals and important in many breeding cycles.

We say these links support what our association has been saying-

<https://site.emrprojectsummaries.org/2012/01/26/three-action-research-projects-itraditional-knowledge-revival-pathways-fire-program-iikuku-thaypan-fire-management-research-project-and-iiithe-importance-of-campfires-to-effective-conservation-2/>

<https://site.emrprojectsummaries.org/2012/01/26/threats-to-native-bees-sugarbag-project-one-of-the-pathways-of-the-traditional-knowledge-revival-pathways-kuku-thaypan-fire-management-program/>

Modern burning is too hot and environmentally detrimental and this is supported by the above links.

We believe the government should bring Victor Steffensen to Victoria as a consultant and take him on an extensive tour of Victorian forests. We support what Victor has been saying and believe the future of the forest environment is dependent on changes towards following what he is advocating.

<http://www.sbs.com.au/news/article/2016/02/15/our-country-needs-burn-more-indigenous-fire-manager>

We believe traditional indigenous knowledge should be held in the highest regard and also every effort should be made to work with both traditional indigenous knowledge and modern fire science with the science such as that developed Western Australia's prescribed burning practices a few decades ago an excellent example. What comes out in the links above is that different ecosystems were treated different with different indigenous practices and we believe this needs to be understood. Note in the video that the predominance of the direction of the flames is inwards away from the fuel to be burnt and creating the lowest intensity fire possible. Modern government agencies often burn from the perimeter in and this creates the hottest possible fire due to the updraft sucking the flames onto the fuel.

We will finish with this link which may give an insight into how much our disrespect for the land is affecting more than the land-

<http://unisci.com/stories/20012/0628013.htm>

The burning by government agencies is simply a political response and not an environmental response and the environment is suffering greatly as a result, this has to change.