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Australian Brumby Alliance (ABA) submission to the
2020 Royal Commission into National Natural Disaster Arrangements
27th April 2020

Q1. In your experience, what areas of the bushfire emergency response worked well?

- Early warning broadcasts seemed more efficient than the last major fires, but looking at the news it seemed that these warnings still underestimated the speed and ferocity of the fires, for example pictures of people standing in the sea and taking boats out on the water to escape fires that razed large coastal areas.
- There will be many other people well placed with accurate first had experiences at the firefighting fronts to inform the Bushfire commission.

Q2. In your experience, what areas of the bushfire emergency response didn't work well?

- It was so sad to read/see on the television and press just how such a catastrophic fire for some time only had Rural Fire Brigade support. These trained local volunteer firefighters were soon overwhelmed by excessively long hours they committed to work on a voluntary basis.
- We relied far too long on such limited firefighting resources before the Prime Minister or Premiers seemed to even recognise the immediate, catastrophic situation as a national emergency that required immediate, well resourced, additional firefighters. Also to assist essential back up resources such as food, water to drink or fight the fires, safety equipment, vehicles, fuel, aeroplane observers and water bombers etc.
- Even when the Prime Minister realised the fires were increasing in severity and spreading faster than the Rural Fire Brigade had any hope of tackling, it still took time to understand real-time needs and supply appropriate personnel, trucks and aerial support. It is tragic that so many people were fighting the fires without adequate help and the deaths of firefighters.
- Loss of electricity causing essential equipment to fail such as fridges, internet and NBN "land Lines" because NBN requires electricity to operate, inability to recharge mobile phones etc.
- Lack of safe exit roads to allow people to escape their properties, such as only one exit road, tress fallen across roads aggravated by no clearing of trees by road edges.
- People still lack knowledge of how to minimise fire risk and retain fire breaks on properties and seemingly slow to understand fire intensity such that they had time to plan a safe exit.
- (2003 A Nation Charred: bushfires report to the House of Representatives Select Committee) states that:
    - "influential environmentalists and academics, supported by inner-city residents not threatened by bushfires, and not responsible for bushfire management" and who
    - "in general advocate a hands-off approach to land management, where 'natural' events like bushfires are allowed to run free."

- It is so sad that these vocal hands off advocates have continued spreading their message in such an effective way that the hands off approach is deeply entrenched across all political parties and dominate policy making decisions.

An example of this 'hands-off' environmentalists, academics and urban residents appeared recently in The Conversation newsletter "**Smoke from autumn burn-offs could make coronavirus symptoms worse. It's not worth the risk"**, for example:

- It's not just humans – health impacts from smoke extends to wildlife, with smoke reducing their ability to mount an immune response and increasing their stress.
- The ecological effects of smoke can also compromise animal survival, including making it harder for them to forage.
- All things considered, it's not worth the health risk to conduct planned burns, logging regeneration burns or other burning this year while the pandemic continues to sweep through the country, particularly in areas close to towns such as the Yarra Valley.

While there are a few good suggestions in this Conversation article, it is disappointing the article still concludes that planned burning is not worth the risk. Our experience with such environmentalists is that they look for information to back their misplaced ideology. This article fails to consider the ultimate balance that frequent planned burns will result in minimum smoke as undergrowth has not had time to grow back. Such as pre 1788 Aboriginal fire regimes used to manage a mix of open grassland, treed areas and cultivating conditions for their herbs to thrive in.

If planned burns are denied to stop smoke effects on humans and animals; rapidly rising fuel levels will in a few years again result in catastrophic fires that will kill everything in its path.

Unfortunately the bushfire management policies advocated by rural firefighters and does not align with 'hands-off' environmental protection policies advocated by national park managers. This past summer has illustrated that the 'hands-off' approach has resulted in catastrophic losses for many wildlife species that could have been prevented by the implementation of land management policies with fire hazard reduction at the forefront.

Q3. In your experience, what needs to change to improve arrangements for preparation, mitigation, response & recovery coordination for national natural disaster arrangements in Australia?

The more fuel a fire has the hotter it burns, and the more areas linked together with high fuel loads, the faster fires will increase in intensity and so propel fire embers/fronts across even bigger areas.

One obvious solution to keep undergrowth down without causing smoke **is grazing**. The ABA argues that areas with higher wild horse grazing numbers were less affected by fire, but Parks Victoria and environmentalists actively refute this approach and consider what we identify as positives impact as a negative impact.

In May 2020, Parks Victoria will ground shoot 100's of wild horse in the eastern Victorian Alps siting the following three photos with a few horses and an additional three photos with no horses as evidence of horse damage.

Photo 1 credit Parks Victoria 27 Feb 2020

- Parks Victoria describes photo 1 as: “Horses in waterways on burnt landscape”, to use as evidence that wild horses must be immediately removed/shot.
- Whereas ABA describes photo 1 as: *Two* brumbies drinking at the edge of a stream, and standing on green grass that has not been burnt.

Photo 2 credit Parks Victoria 27-Feb-2020

- Parks Victoria describes photo 2 as: “poor condition horses damaging native vegetation” to use as evidence that wild horses must be immediately removed/shot.
- Whereas ABA describes photo 2 as: four brumbies in good condition (magnify photo) grazing on land separated by unburnt tracks that allowed grazed vegetation within them to be protected.

Figure 4. Cowombat Flat, Alpine National Park, 27 February 2020 – Horses grazing near fenced exclosure.

Photo 3 credit Parks Victoria 27-Feb-2020

- Parks Victoria describes photo 3 as: "horses grazing near fenced exclosure" to use as evidence that wild horses must be immediately removed/shot.
- Whereas ABA describes photo 3 as: a small mob of horses grazing in a broad expanse of short green unburnt grass and shrubs.

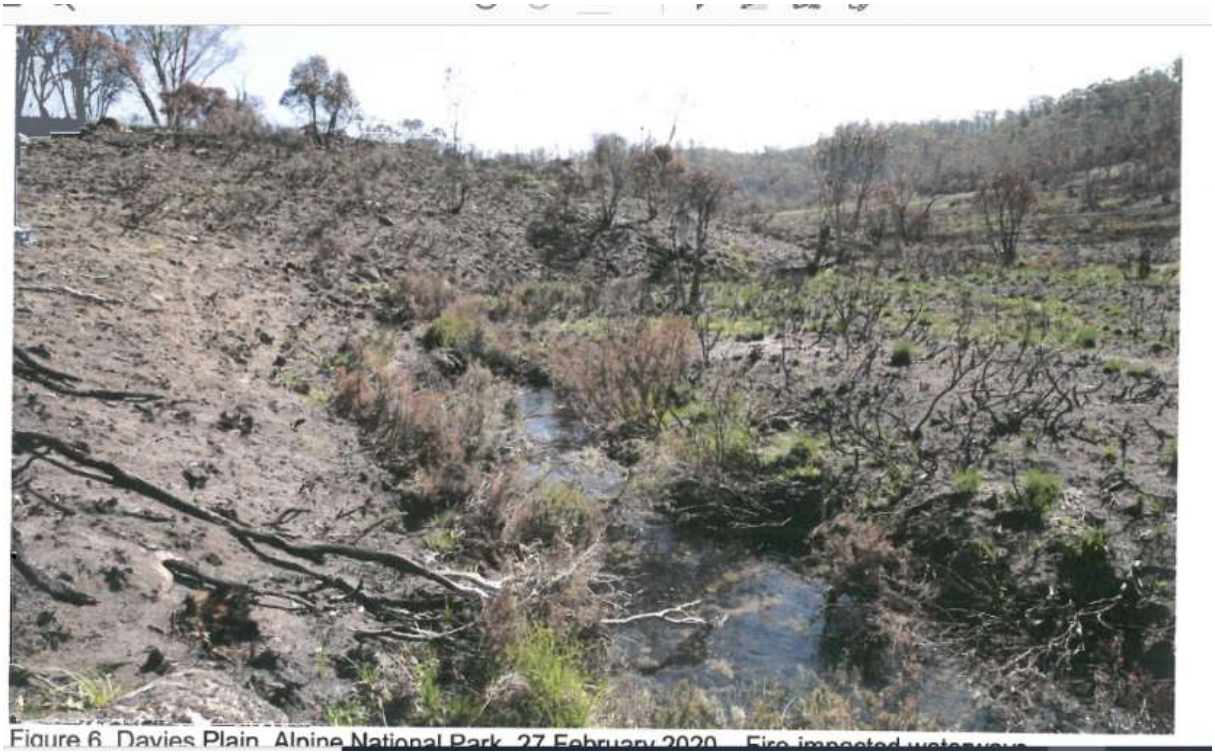
Figure 6. Davies Plain, Alpine National Park, 27 February 2020 – Fire-impacted waterways

Photo 4 credit Parks Victoria 27-Feb-2020

- Parks Victoria describes photo 4 as: "fire impacted waterways" to use as evidence that wild horses must be immediately removed/shot.
- Whereas ABA describes photo 4 as: burnt landscape with no Brumbies evident.

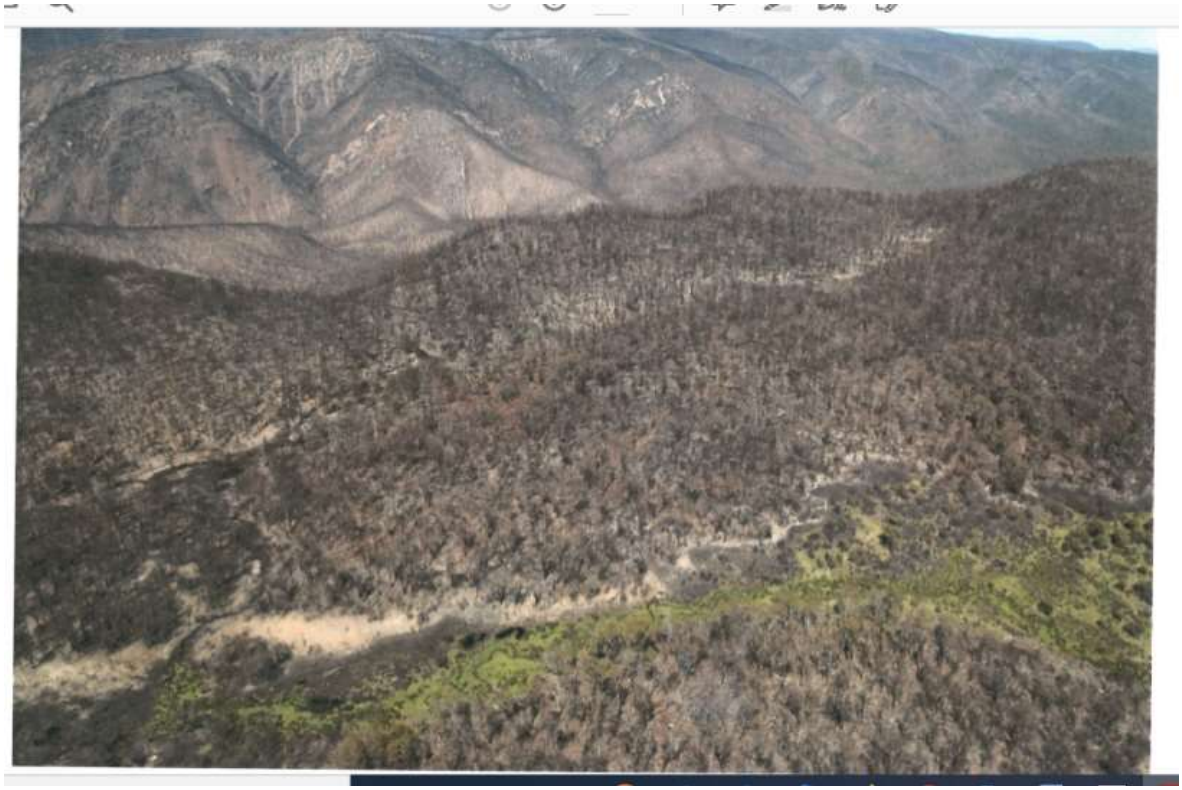

Photo 5 credit Parks Victoria 27-Feb-2020

- Parks Victoria describes photo 5 as: “fire extent”, to use as evidence that wild horses must be immediately removed/shot.
- Whereas ABA describes photo 5 as: burnt landscape with no Brumbies evident.

Photo 6 credit Parks Victoria 27-Feb-2020

- Parks Victoria describes photo 6 as: “fire impacted plain and moss-beds”, to use as evidence that wild horses must be immediately removed/shot.
- Whereas ABA describes photo 6 as: burnt landscape with no Brumbies evident.

Note: The ABA advocates for moderate horse densities in sustainable areas to be retained for their positive grazing attributes towards reducing fuel load; e.g. keeping the grass short, stimulating new green pick for birds, insects and native species to forage and benefit from, in addition to maintaining low fuel levels which have saved the taller shrubs from being burnt.

ABA advocates for an agreed sustainable number of wild horse populations to be retained for the benefits they bring to the wider environment. The impact of the Brumby must be viewed in the wider context of all grazing species, including the hundreds of thousands of wild deer roaming in the Victorian Alps. Note that the weight of a mature Sambar buck is comparable to the weight of a brumby.

For too long we have heard that "grazing does not reduce blazing", yet there are studies showing that grazing **does** reduce fire intensity and damage, as evidenced in Parks Victoria's photo 3 above with a small mob of horses grazing in a broad expanse of short green unburnt grass and shrubs.

The ABA has presented submissions to national park managers in NSW and Victoria over the past 10 years. ABA submissions agree that too many of any one species is not environmentally helpful. The ABA would like to emphasise that Brumbies have co-existed in this environment for 150-200 years without causing any flora or fauna to become extinct. The positive impacts that arise from wild horse 'conservation grazing' in sustainable population densities needs to be factored into any future holistic bushfire management plan.

Despite ABA's presentations, citing positive grazing impacts and highlighting studies to that effect, National Parks Management and environmental groups continue to use studies based on false or selective statements that support their view that grazing does not reduce blazing. This ABA submission wishes to reference the following positive examples:

- **Analyzing post-socialist grassland conversion in a traditional agricultural landscape – case study Croatia 2017 "**as part of the process of abandoning grazing and mowing, they are increasingly being encroached upon by shrubs and forests (Hellessen and Levin 2014; Meshinev et al. 2000; Vassilev et al. 2011, Tasser et al., 2007)."

- **2006 Fire Management in the Alpine Region** "He (Costin 1954) provided no evidence of the causes of fire damage and erosion, and his experimental data showed that a grazed and burnt plot had a much greater cover of grass and herbs than its unburnt and grazed counterpart (Costin 1954, Fig. 123)."

- **Silvers, L 1993**, 'The effects of grazing on fuel loads and vegetation in the Barmah Forest', Honours thesis, School of Environmental and Information Sciences, Charles Sturt University, Albury, NSW.

- **Davies, KW, Boyd, CS, Bates, JD and Hulet, A 2015**, 'Dormant season grazing may decrease wildfire probability by increasing fuel moisture and reducing fuel amount and continuity', International Journal of Wildland Fire 24: 849–856.

Q4. Is there anything else you would like to tell the Royal Commission?
It tragically seems that previous formal bush fire review recommendations have either been ignored, or initiated in a half-hearted manner only to diminish as policy makers bow in submission to 'hands-off' environmental pressure groups and urban dwellers who want the bush left unmanaged.

Many of these pressure groups wish to see the bush returned to the European concept of a pre-1788 condition. This philosophy is unrealistic and based on a European premise that before 1788 there

was no land management carried out by the Aboriginal peoples across Australia, when in reality the indigenous people used fire to manage vegetation for agriculture, hunting, regeneration and fire control. It is impossible to return areas to the climatic and ecological conditions that existed over 240 years ago especially in light of the impact of global warming on Australia's climate.

A pivotal management approach by environmentalists and urban dwellers is to shoot or destroy all introduced flora and fauna species therefore perceived as "bad", simply because they were not around pre 1788. This view is inconsistent when you consider that introduced deer, predominantly Samba, Fallow and Red Deer, are considered to be 'protected wildlife' for the purposes of the Wildlife Act 1975.

Unfortunately this approach goes further and actively resists any studies that are not consistent with the "unmanaged landscape" philosophy. See "Can trophic rewilding reduce the impact of fire in a more flammable world?" attached to this submission.

Frequent claims used by these pressure groups is that Brumbies crush vegetation, compact or disturb soil because of their weight and hard hooves, fails to acknowledge that three geographically widespread species of Australian Megafauna weighed 1,000–2,000 kilograms, and Megafauna Sthenurus had an extremely well developed, almost hoof-like, fourth toe.

See reference: http://en.wikipedia.org/wiki/Australian_megafauna
Australian Mega-Fauna had a range of heavy animals, including hoof-like feet.
1,000-2,000 kilograms on the Australian landscape;

- *Diprotodon optatum* up to two tonnes, it resembled a giant wombat.
- *Zygomaturus trilobus* bullock-sized, appears to have lived in wetlands.
- *Palorchestes azael* (the marsupial tapir) lived during the Pleistocene.
  100-1,000 kilograms - 9 species including on the Australian landscape;
- *Procoptodon goliah* grew 2–3 metres tall, and weighed up to 230 kilograms.
  10-100 kilograms - 23 species including on the Australian landscape;
- *Propleopus oscillans* carnivorous, 70 kg, 3 metres height with shearing/grinding teeth.

All Sthenurus had an extremely developed, almost hoof-like, fourth toe on the hind limbs, with other toes vestigial. Additionally, elastic ligaments between the toe bones gave this group improved spring and speed compared to modern kangaroos. http://en.wikipedia.org/wiki/Australian_megafauna

Q. Are you providing any supporting material/attachments? - If you are, please include it with your submission if possible. If you need to send it separately (by email or post), please ensure supporting material can be clearly identified as relating to your submission by including your name and your submission number (which will be sent to you immediately after you submit this form).

The Australian Brumby Alliance has provided 2 website links and has attached three papers to support its submission.

Website link to ABA Submission - 2003 A Nation Charred: Report on the inquiry into bushfires House of Representatives Select Committee into the recent Australian bushfires – Extracts
http://royalcommission.vic.gov.au/getdoc/977714b4-4610-4705-b0fd-d14859c23642/EXH.160.0001.pdf
The overwhelming view of the more than five hundred people who presented written and/or oral submissions to the Inquiry on the Recent Australian Bushfires was that proper land management, proper fire prevention principles and proper fire suppression strategies could have greatly limited the risk of these high intensity wildfires.

- The Committee heard a consistent message from around Australia: “there has been grossly inadequate hazard reduction burning on public lands for far too long”.
- Local knowledge and experience is being ignored by an increasingly top heavy bureaucracy.
- Firefighting volunteers are fed up with having their lives put at risk on fire trails that are blocked and inadequately maintained.
- There is a reluctance by state agencies to aggressively attack bushfires when they first start, thus enabling the fires to build in intensity and making them harder to control.
- Better communications between and within relevant agencies is long overdue.

We see the community divided over fire management and this divide, especially between urban and rural communities, is deepening. Familiar position-taking is occurring:

- **On one side** of the divide there are influential environmentalists and academics, supported by the ideology of inner-city dwellers who are removed from first hand risk from bushfires, and responsibility for bushfire management. These groups generally advocate a hands-off approach to land management, where ‘natural’ events like bushfires are allowed to run free.
- **On the other side** are rural people, fire fighters, foresters and land managers who are responsible for lives and livelihoods threatened by bushfires. The latter tend to advocate an interventionist approach, where steps are taken to minimise risks before fires start, as well as having a well-equipped rapid-response fire fighting force in place. (*p14*).

This divide is becoming institutionalised, and reflected in policy positions adopted by different agencies and political organisations. To add to the problem, responsibility for fire management is increasingly being taken out of the hands of land managers (who are trained to minimise threats and hazards) and placed in the hands of emergency services (people trained to respond to a disaster after it occurs). (*p14/15*) [Note: These days Hazard Reduction is a major part of emergency services training]

Website link to ABA Submission - https://theconversation.com/the-smoke-from-autumn-burn-offs-could-make-coronavirus-symptoms-worse-its-not-worth-the-risk-136230
The Conversation newsletter - The smoke from autumn burn-offs could make coronavirus symptoms worse. It’s not worth the risk - April 17, 2020 by Don Dryscoll, Brian Oliver, Courtney Alice Waugh, Marcel Klaassen and Veerle L. B. Jaspers.
Extracts:

- Smoke covered parts of Sydney after a hazard reduction burn in May 2019, causing the air quality index to plunge. It’s not just humans – health impacts from smoke extends to wildlife, with smoke reducing their ability to mount an immune response and increasing their stress. The ecological effects of smoke can also compromise animal survival, including making it harder for them to forage.
- What about protection? Planned burns can make firefighting easier for a few years after fire. But current rates of planned burning give little protection for houses when wildfires are driven by extreme weather.
- Planned burns within a few hundred metres of houses can give protection but must occur frequently, such as less than every five years. We shouldn’t expect towns to endure local smoke pollution this often.
- All things considered, it’s not worth the health risk to conduct planned burns, logging regeneration burns or other burning this year while the pandemic continues to sweep through the country, particularly in areas close to towns such as the Yarra Valley.
- Still, whether or not planned burns will change our total exposure to smoke from bushfires, the effects of climate change are definitely bringing more fire and with it more smoke.
- This means we can expect to have to deal with interactions between virus risks and smoke risks more often in the future.

Attached to ABA submission - Analyzing post-socialist grassland conversion in a traditional agricultural landscape – case study Croatia 2017.

Extracts:

- As part of the process of abandoning grazing and mowing, they are increasingly being encroached upon by shrubs and forests (Hellessen and Levin 2014; Meshinev et al. 2000; Vassilev et al. 2011, Tasser et al., 2007).
- An estimated 50% of all species in Europe depend on extensively managed habitats such as grasslands (Helessen and Levin 2014). Moreover, the increased rates of shrub encroachment which are a direct result of agricultural abandonment, lead to an increased risk of fire (Pavlek et al. in press; Nunes et al., 2005; Martinez et al., 2009) as well as changes in the landscape and potential loss of its cultural-historic values (Barankova et al. 2011, Shucksmit and Rønningen, 2011).
- The circumstances of increased education levels and the migration of the younger, educated work-force from rural areas to urban centres outside the county resulted in rural areas being abandoned and left to overgrow (Spevec 2009). Abandoned fields left to overgrowth first become grasslands, and then through secondary succession they become forests.

Attached to ABA Submission - 2016 The interaction of fire and mankind.

Extracts:

- The move by human populations from the countryside, where the use of fire is familiar, to living in cities where fire is contained, has been termed 'the pyric transition'. This has led to the demonization of fire despite the fact that many types of vegetation and the eco systems that they inhabit need fire in order to survive.
- These authors are able to show that the abundance and continuity of fuel is the most important variable in fire regimes in this area and that ancient human influence reduced widespread fire by promoting many small fires that ultimately reduced fuel continuity.
- The importance may not simply be how much burns but how it burns and much more informed political, environmental and scientific debate is needed.

Attached to ABA Submission - 2006 Fire Management in the Alpine Region.

Extracts:

- Costin (1954) considered that Aboriginal fires in the Monaro were mild and did little damage.
- The annual crop of grass was burnt off by aborigines, this tended to keep forests open and prevent open country from being overgrown.
- The Royal Commission inquiring into these fires reported that the principal cause was the dense shrubby condition of the forests, and that the amount of controlled burning done by the Forests Commission was "ridiculously inadequate" (Stretton **1939**).
- Costin (1954) claimed that burning promoted shrub invasion and caused massive erosion. He provided **no** evidence of the causes of fire damage and erosion, and his experimental data showed that a grazed and burnt plot had a much greater cover of grass and herbs than its unburnt and grazed counterpart (Costin 1954, Fig. 123).
- Minister Enticknap endorsed Costin's conclusion that burning by graziers was the most destructive human influence in the region. Neither recognised that extreme wildfires and mining operations had caused erosion.
- Prescribed burning was progressively reduced from the mid 1970's as NPWS policies increasingly restricted the annual programs, and the Scheme was disbanded in 1986 (Leaver and Good 2004). Severe wildfires in 1978, 1983 and 1988 caused substantial soil erosion.
- Some ecologists continued to hold the 'European' view and downplayed the role of Aboriginal burning, ignored the role of fires ignited by lightning in shaping our ecosystems, and failed to consider the relative impacts of intense summer wildfires compared to mild

autumn burns. They did not consider the ecological role of fire in maintaining the natural balance between trees, grasses and understorey shrubs.

- Prescribed burning has declined in response to pressure from 'environmentalists' and extensive severe fires are becoming more commonplace.
- Leaver and Good (2004) claimed that shrub invasion was promoted by low intensity fires, however fire exclusion and high intensity fires promote shrubs whereas low intensity fires favour established trees and grasses.
- Ecologists were perplexed when a fire killed alpine snow gum stands with 2 metre high shrub understorey but didn't kill adjoining stands with grassy understorey (Anon. 1977)