

the
volunteer
fire fighter

June 2022

Volume 14 No.1

Official magazine of the Volunteer Fire Fighters Association

🔥 Traditional Management 💧 Saving Our Forests



🔥 Our Megafires 💧 Logging & Bushfires



ECHO Boards and Products

Echo Boards & Products are an industry leader & supplier of custom built & standard steel items to builders, wholesalers & electricians. We manufacture and supply electrical switchboard products, such as meter boxes, NSW standard meter boxes, meter panels, tee off boxes, temporary meter boxes, panel surrounds, trays & covers, as well as custom switchboards in Sydney built to specification.



ABOUT US

Echo boards and products is a family run and operated Business, that focuses on providing high quality service and products. Management prides itself in the strong relationships that has built with their customers and employees. The team are committed to the manufacturing of a supply of high quality Australian owned and made goods. We provide an extensive range of electrical products like switchboards, Tee off Boxes, Cable Trays, Bakelite Panels Etc. Echo boards was established in 1988 and has been open for over 30 years. Located in the South West of Sydney the business has grown over time as it changed ownership in 2015 and now has over 20 employees.

WHAT WE STAND FOR

Echo Boards and Products believes in an ethical workplace as we maintain high values such as service quality, efficient communication, equality and diversity.

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OUR CONTRIBUTION TO THE COMMUNITY

Since 2014 Echo boards has been a proud supporter of camp quality. We have managed to contribute \$210,832.27 for the foundation. Our business fundraisers for the charity each year as we believe the children of our community are what will keep our futures bright.

Over the last three years the Echo Boards team has also given their support to the local firefighters in the community to acknowledge the work they do.



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Secretary: Greg Godde
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Neil Crawley
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Mr. Arthur Owens
– Former FRNSW Bushfire Officer & RFS FCO.
Mr. David Packham (Ret) – World Respected Bush
Fire Scientist – CSIRO.
Mr. Vic Jurskis (Ret) – B.Sc. (Forestry) Australian
National University, Vik was a Silviculturist with the
Native Forests Division of Forests New South Wales &
has written extensively on Forest Management Issues.
Mr. Roger Underwood (Ret) – Former District &
Regional Forester in WA & Author of numerous Books.
Professor Bill Gammage AM (Ret) – Academic
Historian, Adjunct Professor and Senior Research
Fellow at the Humanities Research Centre of the
Australian National University (ANU).
Mr. Barry Aitchison OAM – one of the high country's
most experienced bushman and firefighters,
former RFS FCO & Operations Officer.

Website

www.volunteerfirefighters.org.au

Social Media

Facebook:

www.facebook.com/NSW.VFFA

Youtube:

[www.youtube.com/channel/
UCISWIWC5WO46hgOgCYUXuIA](https://www.youtube.com/channel/UCISWIWC5WO46hgOgCYUXuIA)

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**The VFFA welcomes and encourages members to send
in any pictures, photos and articles of interest.**

Please email these to feedback@volunteerfirefighters.org.au

Cover Images: Tenterfield fire on the 6 Sept 2019, taken within 15 minutes from top left to bottom right.

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President's Report

They say that the world is becoming a smaller place but that is a misconception because it only seems that way as things become bigger.

Bigger bureaucracies, bigger social networks, and merged local councils are all examples of systems designed to streamline operations, save money, and help us communicate.

Bush Fire Brigades and Rural Fire Services are not excluded from the “bigger is better” mentality as the NSW State Government continues to build a city-centric fire service that often overlooks the needs of local people.

In an operational context, fire services use a forward command structure to help avoid missing the smaller details because they know that a state-based operations centre does not always obtain or fully understand the local context. Therefore, they have Fire Control Centres, Group Captains, and Captains.

Unfortunately, there has been a culture developing over many years where the state-based support structures, for routine business and emergency response operations have lost sight of the importance of local input.

A one-size-fits-all approach is not working, and we are witnessing a decline in the interest and engagement of volunteer firefighters, particularly in remote rural areas.

Where are we heading?

It is uncertain where the NSW Rural Fire Service is heading, and the destination may not be discovered until the politicians settle down, and take stock of the post-Covid losses, volunteer decline, and the costs associated with the alternatives that might include more paid firefighters who respond from larger towns.

Everything could change overnight with a new State Government, but I do hope for common sense as any government considers all the options.

The simple fact that volunteers do it for free remains a strong driving force, therefore the State Government may need to return some power to the people who volunteer.

The rise of the Mosquito Brigades

There are many individuals and groups of people engaging in freelance firefighting, going it alone, looking after their own place, and helping their neighbours, because they no longer want to be involved with the Rural Fire Service.

These groups of people became affectionately known as “the Mosquito Brigades” in the 2019 - 2020 fires.

As a point of interest, there have been concerns that uncoordinated freelance firefighting may result in a serious accident at some point in the future.

I have chosen to remain attached to my local Brigade, but I'm also part of the “go-it-alone bunch” with a truck, a slip-on and some of my own equipment. If it wasn't for the VFFA, I would probably have stepped away from the Rural Fire Service already.

The rise of the Mosquito Brigades has been driven by the frustrations experienced by many long-serving volunteer firefighters who are leaving the over-bureaucratic fire service behind. Many of them don't resign from the RFS, so they continue to make up the fanciful 75,000 volunteers strong Rural Fire Service.

The costs of walking away

I have often contemplated the costs of walking away from my local Brigade (my situation included).

I don't consider that my input is pivotable to the success of my Brigade, but if too many people walk away, brigades will be closed. Watch this space.

The VFFA is already reviewing claims of Brigade closures, and we are concerned that the NSW Government is not that concerned.

Will aviation save us?

Could it be that the direction of the Rural Fire Service is aligning with an aviation-focused approach with fewer volunteers and a greater dependency upon aviation firefighting strategies?

There is nothing wrong with the use of aviation to support firefighters, or even in an initial attack but aviation can never fully replace “boots on the ground”.

COVID vaccination mandates

This is a very interesting topic with mixed opinions that are tearing some Brigades apart.

As a point of interest, I'm triple vaxed but I openly mix with people every day and I don't request that they show me their vaccination status.

Would the NSW RFS refuse service delivery to members of the public who are not vaccinated or who choose not to disclose their vaccination status?

Why mandate the requirement for volunteers to disclose their vaccination status or even be vaccinated at all?

Who does the vaccination protect and how much impact does it have upon onward transmission? These factors may change with new variants.

On 22 April 2022, the NSW Government lifted Public Health Orders requiring mandatory COVID-19 vaccination for some sectors, instead recommending vaccine requirements be based on risk assessments.

At the time of preparing this report, the NSW RFS is maintaining the requirement for all staff and volunteers to be vaccinated.

Apart from a few Mandatory vaccination exemptions, all brigades must comply with the mandatory vaccination requirement and their members must be recorded as 'fully vaccinated' in the RFS system by 30 June 2022 to continue to operate without restriction.

Keep an eye on the VFFA website for further updates.

Keeping the VFFA alive

The VFFA is no different to any other volunteer group, and we need support and assistance to keep the wheels turning.

We are looking at extending our Executive Group so that we can better support our members.

Volunteers who would like to become involved in the VFFA are encouraged to contact our Secretary, Greg Godde, via email: secretary@volunteerfirefighters.org.au

Positions of interest might include:

- General membership (Available to all NSW RFS Volunteers)
- Regional Coordinators (Committee positions available to existing VFFA members)
- Media Officer (An Executive Committee position for a suitably qualified person)
- Social Media Officer (An Executive Committee position for a suitably qualified person)
- Web Site Management (An Executive Committee position for a suitably qualified person)

Note: The Executive Committee monitors all Committee and Executive Committee positions. The VFFA Secretary and Executive Committee oversees all VFFA operational matters.



Michael (Mick) Holton

President - Volunteer Fire Fighters Association

I am standing down as president at the next AGM, considerations for a new president are underway, contact Greg Godde with any ideas, suggestions or nominations.



From the Secretary's Desk

June 2022

Welcome to all our members and new members to another edition of the VFFA magazine.

You will now note that the magazine will not be published as a seasonable edition. We have decided that when we have enough items of interest for the members, we will put together a magazine and get it published.

The VFFA membership has been continually increasing at a steady rate with many new members trying to find traction and answers to questions on what direction the NSWRF is taking on the services of the volunteers which has affected the viability of many brigades.

It was great to get on the road recently and catch up with some of the members and discuss issues they are experiencing within the RFS. Due to limited time, I was not able to get around to a lot more members as I would have liked and talk of the issues that are impacting on the moral and teamwork within the brigade environment.

VFFA Annual General Meeting

The AGM will be held at the Peak Hill Ex-Services Club on Saturday 6 August 2022 commencing at 11 00 am. The agenda and more information will be published soon.

There will be a short service at the Peak Hill cemetery at the gravesite of Peter Cannon for those who were not able to attend his funeral last year after the AGM has concluded.

Covid 19+ and volunteering.

The Covid crisis has caused a lot of anxiety and stress to all walks of life, to many people and will no doubt affect the lifestyles we had before the pandemic started. Volunteers were no exception. Community surveys were conducted in many areas asking a series of questions on the social impact of Covid 19 with volunteers it could be summed up from one community survey (Mildura Rural City Council) 'Volunteering declined during COVID-19 because of restrictions and only half the people who reduced their

volunteering said they want opportunities to volunteer to help them recover'.

Volunteering in community organisations was on the decline before the pandemic hit and many organisations in small community towns were folding due to this lack of support. The NSWRF is not immune to this. The meaning of volunteering could be put as 'giving your time and abilities to aid others (usually a non-profit organisation) without the want of financial compensation. Volunteering is a service to your community with many organisations relying on volunteers to accomplish day to day objectives and to reach long term goals.

With Covid 19 now in the control stage many people are trying to get back into the normal mode by getting back to work, trying to find work, or fulfilling their past time such as a volunteer. The benefits of volunteers far outweigh any negative aspects, volunteering can help you gain confidence by giving you the chance to try something new and build a real sense of achievement. To be part of your community where you meet new people, take on new skills but above all face everyday challenges where you learn to overcome them and last but not least have fun on the way.

In our RFS community in the brigade environment we learn to work with each other and trust each other to have our back when we are called to incidents and work in an environment that is free from discrimination, vilification, and bullying.

Correspondence and discussion from many members raise its ugly head of the disunity and distrust in many brigades because of the covid restrictions and mandates placed on the brigades. There are many reasons why people cannot have a covid vaccination or do not want to get the vaccination. Who are we to judge their preference to live their lives in the relevant comfort and safety of their family and friends? Covid is here to stay, and we must live with it. Will we **"refuse service delivery to members of the public who are not vaccinated or who choose not to disclose their vaccination status** when we attend callouts?" No!

So why do we prejudice our volunteer members who are fully aware of their actions and take all the necessary steps to prevent

the transmission of the virus just as we all do when we get a case of the flu or feel sick before going to work.

The real sad case of the mandate in place where your vaccine status is to be recorded online, is the fact that many of the RFS volunteers who are fully vaccinated refuse to record their health details and will after 30 June 2022 will no longer be an active volunteer. In a brigade of 16 active members only 2 have recorded their vaccine status, of the 16 active members only 2 are not vaccinated, so as of 30 June 2022 if the current situation remains what happens to the rural remote brigade.? If the Government was serious about reporting your health status, then why was E-Health optional for you to have your health records logged onto the system and not compulsory?

Some Brigades have made up their own rules interpreting what the NSWRFs Commissioner has said in his messages to members on the Covid restrictions within the brigades and how exemptions can be made to keep a brigade operational and functional at the discretion of the captain for local responses. By giving a blanket 'No' to any member who refuses to provide evidence of their vaccination or has not had a vaccination by choice or reason is only being detrimental to the existence of the brigade.

This is not a perfect world, and nobody has a perfect answer.

Divide and Conquer.

There are only two ways to lead: you either divide and conquer, or you build and unite. Which leadership style is yours?

One way is by dividing people. Create a mutual adversary and lead a crusade to conquer it. Turn it into a do as I say or leave situation or denying brigade members course applications that would enhance their knowledge and understanding to gain further responsibility; the sense of urge unleashes unconditional support. Conquering, winning at-any-cost, is all that matters. It's my way or no way.

This is where people make vexatious and unfounded allegations to discredit other people that usually end up with an investigation being conducted concluding with a hearing with no substantiated facts supporting the original complaint. I have had the unenviable task of following such a situation through recently which in my mind the finding makes a mockery of the Code of Conduct and Ethics within the NSWRFs.

Another way to lead is by uniting people. Create a shared ambition and inspire people to build it with you. Turn it into a life quest; the journey to build something bigger than themselves unites people. The desire to leave a legacy is why people join a mission.

This is the brigade environment that encourages all walks of life to be part of the team that has good reliable leadership where no member is left behind. Regardless of any members position within the brigade everyone is treated the same and given the

same opportunities as every other member to learn and improve their knowledge and given the experience to one day lead the team into the future. Our new members are the cornerstone of the future of the brigades, with the guidance and knowledge from our experience, teaching and sharing our experience will set the foundation for a well-prepared team for the changes in the fire environment of the future.

Brigade meetings.

Another regular issue I have been receiving is the way some brigade meetings have been conducted and have been ridden rough shod by staff at District Office or Group Captains. Brigade Constitutions were developed to assist the Executive members on how best to run and operate the brigade in their day-to-day activities to ensure there is consistency across all brigade meetings.

The Brigade Management Handbook is a great tool which spells out in greater detail the sections of the Constitution and even gives examples and templates.

Use the QR to get your copy of the Brigade Management Handbook.



Brigade meetings are your meetings, for your members with your outcomes. Not the outcomes dictated by people outside the brigade structure. Read your Constitution, know and understand your Constitution and work within your Constitution. If there is something not in the Constitution develop your brigade rules and have them approved at a meeting and work towards a safe and harmonious brigade workplace.

I recently had the opportunity to visit and sit down with a brigade and some of its members and explain the fundamentals of the Constitution and how it correlates with the Brigade Management Handbook before an upcoming AGM. It was great to receive a report back from the Brigade that the AGM acquired a good outcome with a new Executive Committee and the members were looking forward to a revitalised brigade and strong support from their local community. Well done members, a little knowledge goes a long way.

Magazine articles.

We are always looking for articles from our members, whether they be brigade callout events, training days, fundraising or community support related events. We would really like to print good news stories from brigades and members with lots of photos and a couple of paragraphs to go with them.

Look forward to the next magazine with your articles.

Greg Godde
Secretary



The Imbalance of Power

It's hard to imagine a volunteer workforce subject to such an imbalance of power.

How you interpret the lack of legislated protections for Volunteers, will influence your view on Volunteer worker rights. Where are the volunteers protections? In the case of the NSW Rural Fire Service (RFS) Volunteer there are little to none. The RFS Commissioner Rob Rogers has sole discretion to afford, or not, the same rights that paid workers enjoy. He and his predecessor Shane Fitzsimmons have chosen the latter. The office of Federal Attorney-General and Minister for Industrial Relations, Senator the Hon Michaelia Cash responded in part to this author's questions on protections for volunteers stating :- "Generally speaking, state public sector employers in New South Wales (NSW) are not covered by the Fair Work Act."

After spending weeks pouring over the NSW legislations designed to protect workers rights, it is abundantly clear that the volunteers really are on their own to defend themselves.

In February this year, this author was made aware of details relating to a disciplinary hearing for a volunteer. From the outset it was clear the RFS Chief Superintendent conducting the hearing had neither read the SOP's governing hearings or had any intention to comply to those same rules. A pre-determined decision of guilt was apparent as the RFS went through the motions.

One can't help but wonder that if this was a paid employee of the RFS up on misconduct allegations, if there wouldn't have been a lawyer and union rep sitting each side of the accused. With the lack of a paid and legislated support mechanism to protect the rights of volunteers, the RFS takes full advantage of many volunteers lack of experience in interpreting the Service Standards, SOP's and legislations.

There are many parallels between this trial of a clearly innocent volunteer and the trial of Henry VIII's second wife Anne Boleyn in 1536. Both were tried and convicted in a kangaroo Court with a pre-determined outcome. Both were afforded no rights to representation and the evidence clearly fabricated against them. While the axe fell on poor Anne Boleyn- metaphorically our volunteer met the same fate.

Unfortunately, this is not a one off and many of the readers of this article know only too well the challengers' volunteers face in disciplinary hearings. It's behaviour of the RFS repeated many times.

National Party MP Steph Cooke was appointed the new Minister for Emergency Services in December 2021. Ms Cooke, a State Emergency Services (SES) volunteer herself has a great opportunity to address the lack of protections of volunteers in all our emergency services.

I took the opportunity to sit down and meet with Minister Cooke at Parliament House in February this year. Presented to the minister were dozens of letters from volunteers who have been victims of the RFS disciplinary system and how it has impacted them. It is impossible to dismiss the pattern of behaviour of the RFS in conducting disciplinary procedures.

As part of the meeting, I took the opportunity to prepare a proposal to amend the NSW Industrial Relations Laws to recognise the rights of volunteers to be the same as paid workers. It is important to stress this proposal was about equal rights NOT equal pay.

If you have ever gone to one of the statutory bodies legislated to protect the rights of paid workers you most likely have heard the well-practiced line-



Oh, you 're a volunteer! thank you for your service but we can 't help volunteers.

The RFS, Resilience NSW and the NSW Government know it only too well and take advantage of the Australian ethos to help out someone in need. While the paid are more concerned about their lunch break, their overtime and their promotion, the Australian Volunteer is always there on the front line to help out in any situation. There is a disturbing trend for volunteers to be used more and more in various roles that would normally be filled by a paid government employee. Cheap labour workforce that doesn't have rights, to fill Government jobs – What employer doesn't want a workforce like that?

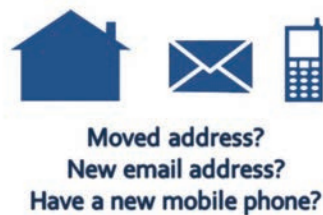
In recent years we have all seen the alignment of the RFS and Resilience NSW with corporate juggernaut NRMA Insurance. We have watched the ads on TV ending with "there's a place for everyone " Very subtle. It makes good business sense for NRMA to be seen on the same branding as the RFS.

NRMA Board members received a letter earlier this year expressing concern over the lack of rights and protections of volunteers. The Board was asked to speak out against the imbalance of power and to take action by supporting the before mentioned changes to the Industrial Relation Laws. As of writing the sponsors of the RFS and Resilience NSW have taken no action.

Without legislated protections for volunteers in disputes with the RFS, Australia's hard working volunteer workers are on their own to defend themselves against an all-powerful organisation.

Jeff Condren

The information in this article are the members own and do not necessarily reflect the views of the Volunteer Firefighters Association (VFFA). The VFFA respects all objective views of NSWRF members and members of the public, and any views or opinions are not intended to malign any group, club, organisation, company or individual. The VFFA is supportive of open dialogue, full transparency and we encourage others to come forward.



Are your Membership Details up to date?

Quite often we move House, we change Email addresses or Phone numbers and we struggle to think of everything and everyone to notify of those changes.

The last thing we want is that you miss out on getting your Volunteer Firefighter Magazine and emailed Newsletters....and sadly some are.

Please send us any updated contact details to our Membership Officer at:

membership@volunteerfirefighters.org.au

Australian emergency services are using what3words to locate incidents faster

Emergencies can happen anywhere, from hikers needing medical help in a park to uncontrolled fires burning in remote grasslands. In these situations, saying precisely where help is needed is crucial, but often very difficult for callers to communicate.

This is why all emergency services in Australia can use and accept what3words addresses to locate Triple Zero (000) callers. With just 3 words, callers can communicate their exact location to an emergency call handler, and first responders can navigate to that precise spot faster.

What is what3words?

what3words is revolutionising the way we think about location. Every 3 metre square in the world has been given a unique identifier made of three random words: a what3words address. For example, ///elderly.process.knees is a 3 metre square of sand along the Cooroong's 194 km beach.

How is what3words used by Australian emergency services?

what3words is integrated into the Emergency+ app and all of Triple Zero's Police, Fire and Ambulance services have trained staff who can use and accept what3words addresses from callers. Emergency teams also encourage local communities to be prepared by downloading the free what3words app and the Emergency+ app. what3words addresses have also been added to signs around Australia's coastline helping to raise awareness amongst local communities to provide a what3words address in the event of an emergency.

Craig Garraway, St John NT's Emergency Communication Center Manager from Ambulance Tasmania said 'We used the technology to locate a patient who had fallen on a walking track in Alice Springs. It's a valuable and simple tool to use for emergency services, particularly when locating patients in rural or remote areas.'

Learn more about how what3words is used by emergency services at [what3words.com/emergency](https://www.what3words.com/emergency)



Communicate exact incident locations with what3words

Download the free app



what3words has given every 3 metre square a unique identifier made of 3 words.

Use the free what3words app to easily find precise incident locations, and share them with responders and partner agencies.





Ladies Firefighter Training And Information Day 2021

Wallarroba Rural Fire Brigade

The aim of the day is to bring women firefighters together to share our collective firefighting skills, to encourage, empower and support one another whilst forming friendships in a trusted environment with a bit of fun and lot of laughter along the way.

As a female Captain of a small rural brigade with a membership of high moral and camaraderie we would attend incidents and notice some of our very capable volunteers from neighbouring brigades, standing back, and refraining from putting their ideas forward.

Over time some ideas came together, and a suggestion was made to my brigade about hosting an event for the women. A unanimous yes came from my team, both male and female. We had the support to start planning.

Alas, the very first ladies' firefighter training day was held between Groups 3&4 (Dungog Council) from the Lower Hunter Zone. Twenty-three women attended from seven brigades, some of whom had never met each other and after individual introductions and some light banter we were ready to begin the day.

Events held consisted of hose bowling, coupling to a truck, and delivering water to a target. We practiced our fire over run skills with fire blankets and cab protection sprays. Two wheelie bins were converted to shed structures, one full of treasures and the other full of flammable items (original drums but filled with water or sand). Both sheds were in theory, alright.

Once the practical training was completed, laughter included it was time to put our thinking caps on as we attempted some puzzles to activate thinking outside the box, to initiate good windscreen situation reports when first arriving at an incident.

The day concluded with a light lunch that consisted of a cuppa with an array of cakes supplied by the brigade with an informal discussion on the day's events and how things went. What really stood out on the day was the comradeship if a hand was needed by a less experienced team member. It was these less experienced team members, who throughout the day had the courage to step up and take the lead.

A suggestion box was available for any feedback from the days participants and if this event should continue on, each year. Feedback received from the ladies was very positive which reflected on the team building spirit and the skills learnt and practiced. That the day should be booked in every year and open to other brigades.

The day could not have gone ahead without the help of Mel, Lyn, Sue, Jo, the support of the men in the Wallarobba brigade and of course the amazing team of participants.

Thanks to all for joining our Lady Fire Fighter Training Day.

So very proud of the team of women.

See you all again in 2022.

RFS Volunteer Profile

More than 50 years of volunteering and still giving

Don Webster has been an integral member of the Kurrajong Heights Volunteer Rural Fire Brigade for the last 53 years.

He is a great bushman, fire fighter and all-round good bloke.

He has fought several large wildfire campaigns, mentored new members and is always happy to share his knowledge and experience.

Don has a great love of the bush, which is why he has spent his lifetime advocating for effective proactive fire management strategies.

Don's 53 year dedication to his community has been immense, and this has now extended to helping those affected by floods. Don assisted Hawkesbury residents during last year's floods and again this year.

Well done Don. We salute you.



Flooding across Richmond lowlands on 3/3/2022.



Don helping out at last year's flood clean up at Wisemans Ferry on 30/3/2021. The debris on the tennis fence shows the water during the flood was above Don's head.

Fire Investigation in the NSW RFS

Author: Shane Bryant

Interested in being a Fire Investigator in the RFS? Do I have the necessary skills for investigating fires?

Fire investigation in the NSW RFS is a journey that can be rewarding and at times frustrating. I guess with any activity, people are not told about all aspects of a particular role they may find themselves in.

My story started in 2006 when I was asked if I would be interested in being a fire investigator by the district manager. I had reservations as the previous district manager warned me about being called out at all times through the night. However, I completed the Wildfire course through the RFS and then completed the Structural course through Charles Sturt University. I have been an Authorised Fire Investigator for the RFS for 16 years. I have completed over 400 wildfire investigations, over 75 structural fire and a number of vehicle fires.

To be a fire investigator in the NSW RFS, they require CL qualifications and also Protect and Preserve Incident Scene. This is so you have an in-depth knowledge of fire behaviour and knowledge of Incident Management Teams and how they operate as you will work to support the Incident Controller.

Training

An Expression of Interest is submitted and should be supported by your district manager to the FICU of the RFS. Members are selected using a needs analysis of districts in the region they are situated.

The new Fire investigation course was released in 2019 and consists of a number of online training sessions in Wildfire then some face-to-face instruction. Assessments then will be both written assessment and field work and mentoring by an AFI. Wildfire will be completed firstly. Then a similar time for the structural course. Estimations of new trainees completing the course is minimum 12 months. The new course is set at Diploma level and with other units of competency FIs can receive the qualification.

After completion of the course and with recognition from the commissioner, you become a AFI (Authorised Fire Investigator).

Members can then further their skills by joining the CFI trainer, (<https://www.cfitrainer.net/?ReturnUrl=%2fLoggedIn%2fProgramsInProgress.aspx>), a division of the International Association of Arson Investigators. Here, short courses are delivered and tested with certificates issued. You do not have to be a fire investigator to register and receive the benefits from this training.

When you're an AFI, the RFS pays for your membership to the NSW Association of Fire Investigators where education sessions are useful in your role as a fire investigator. <https://www.nswafi.com.au/>

As there are no standards in Australia for Fire Investigation, Australian FIs use NFPA 921 and NFPA 1033 as guidelines which are available from the RFS library.

Being a FI

Fire Investigation is restricted to Origin and Cause of the fire. There are rules for the trigger of fire investigation in the NSW RFS and these include

Fire Investigation Criteria

1. Where persons die or are seriously injured. Fairly straightforward if there is a death or injury to a fire fighter or member of the public. The key word here is 'seriously injured' and the definition is found in the WHS Act. This includes a break to the skin and medical attention required.

2. If the fire or explosion is high profile, special interest or subject to extensive media attention; or Significant media interest should be obvious to the Incident Controller. Public interest can include fires that have been caused by the failure of appliances that may require further notifications. Eg: Insulation Fires, failed Gas bottles or Gas heaters etc. (Reports of appliance fires are forwarded to Fair Trading for notification).

Continued on next page >>

FIRE INVESTIGATION IN THE NSW RFS

3. Where property is destroyed or damaged by fire or explosion and the value is apparently in excess of five hundred thousand dollars (\$500,000) The monetary value is based upon the opinion of the Incident Controller based on the value of the damage caused by the fire. This should be the replacement value of the structure and its contents or in a wildfire situation, a pine plantation forest and its economic value.

3. A fire that results in the declaration of a Section 44; Reasonably straight forward the fire that results in a Section 44 must be investigated by an AFI not every fire under the 44 unless they fall into the Formal Investigation Criteria. A formal investigation is one requiring reporting.

4. Where it is apparent that the fire may be one of a series of maliciously lit fires in a particular location; or This is the situation where you have a number of fires in a similar area that are linked in some way and may indicate a serial arsonist.

5. Where a known person is suspected of causing the fire or explosion whether or not a charge is laid; or There is a witness or evidence that may lead to the person responsible for lighting the fire or the witness knows who lit the fire. This relates to illegal fires. This can include a neighbour alleging an escaped HR burn etc.

6. In a structural fire where the cause is not determined; or The cause is not obvious to the first attending crew. (If the cause is obvious and none of the other FI criteria is applicable a Formal Investigation is not required.)

7. A deliberate fire where there is a breach of the Rural Fires Act or Rural Fires Regulations that may result in prosecution or a penalty notice being issued and the landowner is denying lighting the fire. This criteria covers all fires that involve escaped Permit Burns, Escaped Hazard reduction burns, fires that were lit by a landowner but escaped their property and your persistent landowner that lights up every year without a permit. This Fire Investigation is crucial for the RFS, Police or Local Government to obtain sufficient evidence to prosecute the landowner. It will also enable a database to be compiled to prevent further reoccurrence by landowners.

8. In other circumstances on the direction of the Commissioner. This covers where it is directed that due to the identification of a possible arson problem in an area all fires for a period of time will be investigated. If you are still uncertain contact your Regional Operations Officer Fire Investigation or State Operations Officer Fire Investigation for clarification. If you are organising a local AFI you still need to say Yes to Fire Investigation in ICON this allows the allocation of the fire to the AFI. It is important that we start dealing with breaches of the Act and

Regulations so please have serious consideration to the Criteria for deliberate ignitions.

Activation

Fire Investigators are usually activated by the district office to attend fire scenes, examine the area and determine whether a formal report is required. If a district does not have a FI available, then neighbouring districts are utilised. If they still cannot secure an investigator, regions talk to one another to find an available investigator. The reasons above for investigation is that the Rural Fires Act states the Commissioner is responsible to investigate fire origin and cause.

The investigation starts at the acceptance of the job from to requiring officer. The FIs usually have a set time limit to get to the job as set out in the RF Act. Outside of this a Warrant is Secured for access.

Of to the job, sometimes you arrive and are able to speak with the Incident controller and other time your alone and other times you'll be completing joint investigation with police.

The job is a collection of photos that you talk about, indicators you see, mapping the fire scene, weather readings, taking measurements and recording all of this in an ICON report. Job done, not yet.

The service then requires the report to be produced in ICON which FIs have access to at home but it times out and is frustrating. I choose the district office for my reports as all available equipment and printer are there for your use. Submit your report, then it is checked by FICU currently but this will duty will go to the regions under the new structure. Job done, maybe?

Police might get lucky and catch an offender. Ring, Ring. Hello, this is Snr Constable, can you do a statement for me as we have caught an offender and are going to court. This is not uncommon but most investigators may never be required to complete one. Or, you investigated a fire at... on the And we require a statement for the coroner. This can develop into court appearances and the giving of evidence.

Fire investigators are deployed to S44 when fires in the state happen like the 2019-2020 fire season. I was deployed to Kempsey, then to Shoalhaven and then to Mudgee to complete a number of investigations in all three areas. Some were simple and one took three months of sifting through operational records, canvassing brigade officers as to what happened on the fire ground on the day up to 5 weeks past the fire.

What I like about being an AFI

The occasional travel, the methodology that I use to work out how the fire started and developed and the way it is reported so an average person can understand what I am talking about.

This is a specialised role and you have to be very committed to the reporting.

Shane Bryant

Authorised Fire Investigator

FICU 055.



Solar power fire



Evidence for below job



Bike in centre of room is the origin. The cause was failure of the battery pack on charge. Bike was a Fonzarilli electric. House two years new.

Trip down memory lane

CAT 9



The first fire fighting vehicle purchased by the Kurrajong Heights bushfire brigade was in 1953.

It was a short wheel-based Land Rover that came from a Navy ship.

It only had 3 seats, carried 100 gallons of water, and proved invaluable in our steep mountainous terrain.

It was the brigades only firefighting appliance for two decades.

The vehicle is still retained by the brigade for historical reasons.



Narooma 9
1970 - 1987



Narooma 9
Cira 1987 - 1997



Narooma 9
1997 - 2022



Narooma 9
2022



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Chris Berry: Manager of the Coolamon Fire Museum 0419 090 504
Michael Kell: Captain of Coolamon Fire & Rescue 0408 662 599
*** ENTER A TEAM OF 4 FOR THE FIREFIGHTERS FUN RELAY. ***



If you would like to be part of this amazing event by bringing Fire Engines, Classic Cars, Bikes, Displays or a Market Stall, please phone: Chris Berry 0419 090 504 or E- Mail: familyberry@bigpond.com





Saving our forests and controlling our climate

by Vic Jurskis

I'm all for saving forests. Unlike the Climate Change Enthusiasts, I learnt how to do it by working as a forester. Forty years ago, after I'd started working in the bush, Neville Wran commenced what has become a tradition amongst Labor Premiers by saving NSW's rainforests. They were actually quite safe then. Some were selectively logged and regenerated, some were preserved in Flora Reserves. All were protected from wildfire by the clean, open, grassy eucalypt forests around them – maintained by mild burning.

Bob Carr outdid Nifty Neville by a mile. In 2005, he 'saved' The Pilliga Scrub which had choked out open woodlands after graziers walked off the land a century before. Foresters had thinned the scrub, turning woody weeds into a valuable natural resource. On 3rd December 2009, Nathan Rees (remember him?) followed the lead and decided to save the new river red gum forests from the local communities who had created them. Christina Keneally rolled him the same day took all the 'credit'. More recently Dan Andrews has announced the phasing out of native forestry in Victoria. Black Saturday and Black Summer have given us previews of how that will work. By far the major proportion of forests that have been incinerated by megafires in recent decades were already 'protected' in National Parks. Only a miniscule portion was available for timber.

Now Mark McGowan has saved the forests of the Southwest. "This will be good for preserving carbon, for stopping the release of carbon into the atmosphere" he said. "There's millions upon millions of tons (that) will be preserved in the forests as part of this decision so it's an important climate initiative as well and shows Western Australia is doing our bit to assist with combating climate change as well."

Ironically, these were the only forests in Southern Australia that had a consistent history of sustainable fire management over the previous sixty years. Real empirical data from management over there clearly shows that a minimum of 8% of the landscape needs to be maintained by mild burning each year if we hope to contain fires in severe seasons. The maintenance is only good for 6 years. So, unless you're properly managing at least half the landscape, you will get firestorms and

megafires in bad seasons.

Unfortunately, the carbon accounting that backs our futile self-destructive climate control agenda is worse than the models produced to justify the agenda. None of the massive emissions from our unnecessary megafires are brought to account. Sustainable fire management would have huge effects in reducing emissions and genuine socioeconomic benefits, not to mention very substantial environmental gains.

Even without considering the inevitable fire disasters in unmanaged bush, sustainable timber production stores more carbon than locking up forests. Trees reach their maximum rate of carbon storage at a young age. Their growth rate declines before they reach a usable size. Harvesting native forest stores carbon in durable products off-site whilst maintaining maximum possible sequestration in the forest. Residues can be recycled as bioenergy.

Our lock it up and let it burn conservation paradigm is a disaster whichever way you look at it. Even the recent ABC Catalyst show on bushfires acknowledged that rainforests are burning because we don't manage our eucalypt forests properly.

It's ironic that the ALP abandoned bush workers sustainably harvesting a solar-powered resource long before they ditched coal-miners. But Mr McGowan's destruction of the industry whilst 'saving us from climate change' and boasting about keeping Australia's economy afloat with mining is breathtaking.



The Drift Of The Forests

Fire and Rabbit Damage a Problem

(Gippsland Times. Thursday 18 July 1946 Page 3.)

The following is the full statement by Cr. H. L. Treasure, one of the leading mountain graziers who gave evidence before the Forests Commission at the Maffra sittings before Judge Stretton. Cr. Treasure presented a case for the Grazers' Association and the Avon Shire Council, of which he is a member:

Cr. Treasure said: I am a grazier and work in conjunction with my sons on the Dargo High Plains. I have been there following this pursuit all my life.

We rent about 100,000 acres of rough mountainous country from the Crown, 5,000 acres of which we have fenced into nine paddocks with good substantial wire fences, erected under permission from the Lands Department. We have stable, garage, nine lots of stock yards, huts for camping, and two dwelling houses.

There is no erosion on or about the Dargo High Plains and it is false to say that cattle cause erosion in any shape or form. Cattle do not eat that coarse grass close enough to the ground to cause erosion, and if they did it would be disastrous to the owners, as cattle would not thrive. Where there is erosion in the lower hills it is caused definitely by rabbits. They are eating everything sweet and edible right up to the snow line. They have killed or are killing out all the sweet and luscious grasses and herbage, leaving only the very coarse and non-nutritious stuff, and thus rendering much of the hillsides almost bare.

If any scientist, could devise a plan or a scheme to exterminate the rabbits, the hills, in common with the inland country of Australia, would be troubled very little with erosion.

Where grass and vegetation has been destroyed, erosion will start, and the rabbit is slowly but surely doing the job. While the non-practical man can easily blame the cattle. But they are not doing it.

From the seventies until the year 1918 I do not remember a bad bush fire. Then the ridges and gullies were quite open and comparatively clear underneath the growing timber.

Grass was everywhere from the rivers to the mountain tops. There were miners, diggers, prospectors, and stock men all through the hills, and bush fires were very common, but they never killed any timber. The prospectors lit fires to clean up the country so that they may find reefs, while others seemed to start fires in the rough



places for the purpose of cleaning it up. Restrictions on burning did not seem to be enforced until about the year 1910.

It was impossible for a fire to burn far or fierce, and no growing timber was ever destroyed.

During the year 1918, after a period of little or no fires, we had a very bad fire during mid-summer, fanned by a north-west wind. This fire was travelling easily, 30 miles a day, and it

burned a lot of our fences about the Dargo Plains and killed a lot of good woollybutt timber; but fortunately, the cattle seemed to escape.

During the summer of 1926 we had another bad fire, which came from we don't know where and fanned by a north-west wind. This fire was going through the air in leaps of from five to eight miles by pieces of burning bark driven in the wind. It killed a lot more of the woollybutt timber, along with a fair amount of snow gums. It burned more fences, but very few cattle were caught in it.

Continued on next page >>

THE DRIFT OF THE FORESTS



The next and most disastrous fire that I ever knew or heard of was during January of 1939, after a period of 13 years in which was accumulated a great number of debris, such as dry grass, leaves, bark, fallen timber, undergrowth, etc. This fire almost cleaned up the balance of the woollybutt timber, including the young saplings that had grown after the 1926 fire. It also killed a large percentage of snow gum timber, and scarcely left a green leaf on any tree in its path. It destroyed considerably over 1000 head of cattle belonging to my sons and myself. It burned the greater part of our fences, and it was with great difficulty that we saved the homestead, through the strenuous efforts of eight men.

This fire travelled at from 50 to 80 miles in one day, going through the countryside.

Apart from the great loss of timber and lighting up many miles ahead, which will take from 80 to 100 years to grow up again, the mountain country through which this fire spread is practically ruined from a grazing point of view, as wherever the timber was killed the seedlings and suckers have grown so densely that it is impossible to ride through a lot of it, and cattle will not stay on it. I wish to point out that the woolly butt and mountain ash timber will, after being killed, only grow from seed - it never suckers. After a fire the young seedlings come up in millions and if a second fire takes the young saplings before they are old enough to flower and shed more seed, the timber would be finished for all time.

At the present moment the country burned by the 1939 fire is covered with millions of seedlings, which are from eight to fifteen feet high; and it would be most disastrous if another, fierce summer fire took them now. A light fire, however, would protect them. I would suggest that for the high mountainous country that judicious burning be reported to. For instance, during the autumn and spring (mostly in the autumn) that many patches and breaks be burned; and tills to be done by the grazier. I firmly believe that it will be impossible to prevent fires altogether.

They will start, and if by no other cause lightning will start them. I can honestly state that I know of a dozen different fires started by lightning, four of which were in my paddocks. If debris is hoarded up through the bush for a number of years, we are only making a cane for our own backs, and paving the way for a national destruction, namely, our forest timber.

It is now Seven and a half years since our last bad fire, and I look to the future with a little dread for the safety of the cattle, the young growing timber, the fences, etc.

If the grazier were to blame for all this destruction, I would say hunt him out, but I say that he is not to blame.

I do not say that graziers never light fires, but if he lights them at a proper time, he is warding off disaster, and I also feel quite sure that he is becoming more fire minded.

Another matter I wish to query is this: If the grazing leases in the mountain country is abolished; where are the supplies of beef cattle going to come from for fattening purposes? A very large percentage of these cattle are bred and reared in the mountains.

To put cattle there on agistment even would be most unsatisfactory; in fact, I do not hesitate to say that it would be a rank failure.



74 years later and still haven't learnt a thing from history.

Contributed by Mr. Glen Griffiths – West Nowra Rural Fire Brigade

Traditional Management

Author: Vic Jurskis



Araucarias in dry woodland maintained by traditional whitefellas' burning. Photo by Peter Stanton

Professor Bill Gammage's award winning book – *The Biggest Estate on Earth: how Aborigines made Australia* – doesn't explain how Aborigines originally made Australia. It's more about how our country was maintained after people changed fire regimes and vegetation, exterminating the megafauna, and creating new ecosystems that depend on human management.

How Australian Aborigines Shaped and Maintained Fire Regimes and the Biota :: Science Publishing Group

To manage these ecosystems sustainably we need to understand their ecological history: how they were made, how they were affected by natural climate change, how Europeans changed them.

Professor Bruce Pascoe's award winning *Dark Emu* cannot guide sustainable management because it misrepresents Australian history. For example, Pascoe writes that Surveyor General Mitchell "counts the houses and estimates a population of over one thousand. He's disappointed that nobody's home; it's obvious they have only just left, and the evidence is everywhere that they have used the place for a very long time".

In fact, Mitchell wrote "I saw two natives at a distance, making

the best of their way to the southward. We had this day noticed some of their huts ... The place seemed to have been in use for years, as a casual habitation. ... The natives invariably fled at our approach ... The native population is very thinly spread over the regions I have explored, amounting to nearly a seventh part of Australia. I cannot estimate the number at more than 6000 ; but on the contrary, I believe it to be considerably less".

Mitchell explored a large part of eastern Australia after Aborigines were decimated by a smallpox epidemic introduced by Macassan trepanners, which swept the country from Torres Strait to Bass Strait in 1789. His were the most comprehensive observations available to estimate the population immediately after European arrival and before it was affected by pastoral development.

A little more than eight times 6000 people would amount to a total population of about 50,000. Fire regimes, vegetation and fauna had already changed as a result of the greatly reduced Aboriginal population before the European "invasion" reached most of Australia.

Mitchell's explorations in Queensland were obstructed on seven occasions by dense acacia scrubs full of fallen timber with no grass to carry fire.

Continued on next page >>

TRADITIONAL MANAGEMENT

Strzelecki struggled for 26 days through 50 miles of dense young forests and ate koalas to survive because there were no kangaroos, emus or small game in the thick scrub. He was the only explorer to see koalas. When European ‘invaders’ started clearing the scrub 30 years later, they discovered spearpoints, stone axes, grindstones and clay cooking ovens showing that it was open country before smallpox. There were plagues of dingoes feeding on plagues of koalas.

When Curr squatted on the Central Murray in 1841, he deduced, from the size of trees growing in abandoned cooking ovens, that the Aboriginal population had been greatly reduced 50 years earlier.

Smallpox did not reach Tasmania, but diseases such as flu introduced by visiting sealers had similar impacts before European occupation. Robinson wrote:

“Many of those districts which had been formerly peopled by the Aborigines are now unoccupied; the once resident tribes being utterly extinct, a fact which was evinced by the dense overgrown underwood”.

Mitchell understood how Aboriginal burning maintained the landscape and described how things changed after it was disrupted on the Cumberland Plain. Gammage’s quotes in *Country* show this. But his collaboration with Pascoe seems designed to downplay whitefellas’ understanding of firestick ecology and embellish traditional Aboriginal knowledge, making it supernatural – something it is not:

I’m delighted to write this book with Bruce Pascoe. He enlarges minds ... offers fresh insight into the achievement of the people of 1788 and the failure of those who came later to do more than glimpse its scale and grandeur. ...

Trying to understand 1788 in simply Western terms is folly. It lets some researchers say in effect, ‘We can’t see why or how Aborigines did x or y, so they didn’t’

Bill accused me of this in our correspondence about mountain ash forest. In *The Greatest Estate* he claimed that it is a fire sensitive wet forest – “*Mountain Ash has thin bark and almost any fire kills it*” – which Aborigines regenerated with high intensity fires more than a century apart.

I wrote in *Firestick Ecology* that “Aborigines fired mountain ash in summer. *Mature, wide-spaced trees have a thick ‘stocking’ of rough bark up to fifteen metres above the ground that insulates them from the heat of fires. Even young regrowth forests with scrubby understoreys can withstand moderate fires in dry fuels under mild weather*”. Mitchell rode his horse to the top of Mount

Macedon through open forest of blackbutt, as it was then called, with trees averaging two metres in diameter.

Gammage corrected his mistake in *Country*. “*Mountain ash withstands moderate fire – that’s why tree butts are so often fire-blackened*”. But he prefaced the correction with “*Experts say that fires there can’t be controlled ... close to saying that because newcomers can’t control fire there, people in 1788 couldn’t*”.

Of course, the so-called experts that have the ears of government are wrong. But Gammage is equally wrong to lump experienced whitefellas, who know fire as a friend, in with the academics and fire chiefs who are causing our fire problems.

Gammage and Pascoe seem to have taken their cue from fairdinkum traditional burning expert Victor Steffensen’s reaction to what he calls “*Western science*” and “*the Western-trained mind*”. Steffensen contrasts reductionism against a “wholistic, interconnected” world view which, he argues, requires an understanding of Aboriginal spirituality.

I respect and admire Steffensen’s knowledge, his eloquence in sharing it and his quest for proper recognition of Aboriginal knowledge. Fairdinkum science is in perfect agreement with this knowledge of fire’s critical role in maintaining landscape health, safety, resilience and biodiversity. This is my quest as well, along with all the other non-Aboriginal holders of traditional knowledge.

The problem with land management in Australia is neither racial nor scientific. Our history clearly demonstrates that green academics and junk science are wholly responsible for massive and ever-increasing fire management problems including pestilence, holocaust, erosion, siltation, pollution, loss of biodiversity and massive preventable ‘greenhouse’ emissions. Not to mention death and destruction.

Gammage’s and Pascoe’s book totally ignores the real cause of Black Summer and fully embraces the Climate Cop-Out. It is divisive: “*In whitefella fire, controlled or not, species must take their chance. ... Species protection adds immense complexity to any fire plan. Today this complexity splits fires from greenies, often hostile to each other*”.

Ironically, Gammage refers to Black Friday 1939 and traditional burning by whitefellas to prosecute his black magic view of fire ecology. He quotes my good friend and mentor John Mulligan who was there when East Gippsland was spared death and destruction long after Aboriginal management was gone.

Despite extreme fire weather and many ignitions by lightning, the landscape was healthy and safe because graziers still maintained it. John, with his family, travelled unconcerned through the bush in a car that was repeatedly stalled by vaporization in the fuel lines as a result of the extreme temperatures.



including some rainforest species are invading the grassy country. But it's scrub, because the country can't support real rainforest.

You don't need to 'backburn', as Gammage inappropriately describes it, to protect rainforest.

There's nothing complex about using frequent mild fire to maintain a healthy, safe, diverse and resilient landscape. Alpine graziers maintained the tradition of burning country on their way home from summer pastures.

Cattle and brumbies didn't destroy the peat bogs. The bogs have been burnt and eroded, so that corroboree frogs are critically endangered, since grazing and burning were progressively excluded on the advice of green academics, not fairdinkum scientists.

Gammage claims that Aborigines made magic, such as arranging clumps of cypress pine on the Murray floodplains or turning rainforest into grassland. In *The Biggest Estate*, he wrote: "Climate, soil, altitude, aspect, nutrients ... they cannot explain all, or even most, 1788 landscapes". He's wrong, as I explained in *Firestick Ecology*. Aboriginal people did a great job by working with the natural environment not against it like modern academic wilderness warriors.

After Aborigines proliferated across the continent, rainforests survived where soils, topography and microclimate made them inaccessible to fire except during millennial scale droughts. Aboriginal people used the firestick to turn Araucarian dry rainforest on the Atherton Tableland into grassy woodland about 40,000 to 30,000 years ago.

But about 9,000 years ago, climate change made it too wet for them to burn. Thick forest reinvaded, then mixed eucalypt forest over rainforest was maintained by infrequent high intensity lightning fires for 2000 years, until eucalypts died out after a long interval with no fire.

When European pastoralists arrived, they managed the grassy forests and woodlands remaining in the drier areas on the west of the rainforest by grazing and burning. Araucarias still survive there as woodland trees. However, with reduced burning since the second half of the 20th century, a handful of trees and shrubs

It's not flammable unless there's a ladder of scrub to carry fire into the canopy when extreme conditions occasionally prevail. Murray pine grows on some sandhills where it has a competitive advantage over other species by virtue of its growth and rooting habits.

Gammage says that climate change is a real and urgent danger and that Black Summer "generated an unimaginable twenty pyrocloud storms, when fire takes over the weather". Pyroclouds are, of course, generated by fire, not climate, and history proves him wrong. He does a great disservice to Aboriginal people who maintained a healthy and safe landscape despite the rapid global warming and hugely rising seas that separated New Guinea, mainland Australia and Tasmania about 12,000 years ago.

The Settlement Drought in the early 1790s was our worst in 500 years and there were three consecutive extreme summers with high temperatures and searing northwesterly winds. Aboriginal fires were burning 24/7 to the northwest of Sydney and Parramatta. Fires reaching the European settlements were contained using hand tools and green branches. All that was lost was one hut, some gardens and fences at Sydney and another hut, out-buildings, and a stack of wheat at Parramatta.

In February 1791 at Parramatta, Tench reported temperatures in the high 40s when: "the north-west wind again set in, and blew with a great violence for three days. An immense flight of bats, driven before the wind, covered all the trees around the settlement, whence they every moment dropped dead, or in a dying state, unable longer to endure the burning state of the atmosphere. Nor did the perroquettes, though tropical birds, bear it better; the ground was strewed with them in the same condition as the bats".

Continued on next page >>

TRADITIONAL MANAGEMENT

But there were no firestorms and ember showers to destroy buildings clad with highly flammable bark and thatch, because biomass (fuel) was light and discontinuous. Nowadays, under similar or milder conditions, columns of fire engines and sorties of heavy waterbombers are unable to protect buildings clad with brick, steel and tiles.

The problem is not European invasion, but green academic nonsense. Gammage unaccountably neglects that part of our history where foresters realised the folly of their attempted fire suppression and applied adaptive management in response to pestilence and holocaust.

Things were bad in the mid 20th Century when thousands of hectares of hydroelectric catchments were aerially bombed with dangerous pesticides in diesel oil to control insect outbreaks and three Western Australian towns were destroyed by a megafire. Things are worse now because management has regressed again.

Only two decades after broad area burning, including aerial ignition, restored healthy and safe landscapes in the 1960s, academics raised theoretical objections to burning, because they confused biomass/fuel with biodiversity. Since then burning has been reduced and an ever increasing reserve system has been managed under a Lock It Up and Let It Burn 'conservation' paradigm. Our supposedly world's best forest management systems have been conceived in a wilderness mindset.

When human lives and 500 homes were lost in Canberra, the 2003 House of Reps Inquiry took advice from experienced land managers, black, white and brindle. It recognised that lack of mild burning was the problem. Fire chiefs and green bureaucrats boycotted that Inquiry and gave us the 2004 Council of Australian Governments (COAG) cover-up. So we got 'education', evacuation and emergency response instead of sustainable management. The inevitable consequence was unprecedented catastrophe.

Wilderness northwest of Sydney, which had been safely occupied by Aboriginal people without boots or overalls, through three consecutive extreme summers during the Settlement Drought, exploded in the Gospers Mountain Fire. It was the world's largest ever from a single ignition – by lightning. So 'furies and greenies', such as Greg Mullins and Lesley Hughes of the Climate Council, joined in the Climate Cop-Out. The Black Summer Royal Commission endorsed it.

Gammage asserts that *"Apart from a scatter of Aboriginal fire experts, almost no one today has the knowledge to use 1788 fire for fuel control and species protection. We must learn to burn and burn to learn. Climate change will make this harder"*.

That's adding insult to injury in respect of all the experienced land managers who gave evidence to the 2003 Parliamentary Inquiry and were excluded from the hearings of the Royal Commission.

But it's certainly true that academic experts and fire chiefs who have the ears of government don't know how to use fire. That's why we had Black Summer.

Victor Steffensen says *"It's not a good idea to manage country just for one species"*. He also says there's only one fire – the right fire. Victor knows that it's about ecological maintenance not about fuel reduction. Proper management prevents fuel from accumulating. He talks of upside-down country – thin on top and thick underneath, and sick trees growing in damp soils with lazy roots. We share an holistic view of caring for country.

Since the 1980s, not 1788, beautiful, healthy, safe, resilient and diverse bush has turned into sick, dirty and explosive scrub with plagues of animals such as koalas and psyllids that feed on sick trees. There are plagues of predators such as dogs and carpet snakes, or bellbirds, which feed on the leaf eating animals. The truly endangered fauna are those, such as small mammals, that rely on diverse grassy groundlayers which are being choked out by scrub.

Pestilence is happening across the country in forests sick from lack of mild fire. At the same time, millions of dollars are being thrown at academics to study these mysterious 'diebacks' that are, of course, supposedly a consequence of climate change rather than loss of resilience due to neglect.

Gammage's and Pascoe's book seems to part of a wider campaign. One of Professor Pascoe's colleagues at Melbourne Uni, Professor Michael-Shawn Fletcher, put a similar view on an ABC bushfires special. Our ABC, Aborigines, bushfires, climate change, koalas and rainforest | The Spectator Australia He recently co-authored a paper, touted as a "world-first" on The one-sided Conversation, purporting to show that our current fire problem is due to "colonial suppression of Indigenous cultural burning".

However, the sedimentary records they analysed clearly show the marked downturn in biomass burning after foresters reinstated mild fire in the 1960s. Recent sediment cores also show the charcoal signature of fires that have destroyed alpine bogs since traditional whitefellas' management was stopped. Trees, Climate Myths and Mismanagement – Quadrant Online Gammage and Pascoe neglected to mention it, as did the 'world-first' paper.

The problem is much larger now than then and it requires managers of all colours on all tenures to reinstate mild fire across the landscape. The problem is not lack of traditional knowledge. Land management is under the control of academics and fire chiefs who don't know firestick ecology. They've prevented traditional burning by blackfellas and whitefellas alike. As Noel Pearson said, the problem is *"the greenfellas putting their foot on our throats"*.

The logo for Davey, featuring the word "DAVEY" in bold, black, sans-serif capital letters on a yellow rectangular background with a white wavy line at the bottom.

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A background image of a port at sunset. On the left, there are stacks of red and blue shipping containers. In the center, a white truck is driving on a road. On the right, a large grey and red cargo ship is docked at a pier. A large crane is visible behind the ship. In the sky, a white airplane is flying. The sun is low on the horizon, creating a warm, golden glow.

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VOLUNTEER PROFILE



Captain Jo McDonald receiving her NSW Rural Fire Service Long Service Medal.

Volunteer Profile

Jo-Anne McDonald - Captain Wallarobba Rural Fire Brigade

Jo-Anne (Jo) McDonald joined the Wallarobba Bushfire Brigade in October 1998 as a new member. During the next couple of years Jo completed her bushfire training requirements and attended incidents such as fires and motor vehicle accidents to become a valued member of the Wallarobba Bushfire Brigade.

As recognition to her skills and knowledge she was elected at Deputy Captain in 2001, a position she held for only 12 months before she was elected to the position of Captain and still maintains today.

On the 23 March 2022 Jo received her NSW Rural Fire Service - Long Service Medal in recognition for the 24 Years of unrelenting and unselfish service she has provided to the local Wallarobba community, communities across NSW and the RFS.

Jo said "I was happy with my involvement as a brigade member, so I was somewhat surprised when I was unanimously voted in as Deputy Captain.



Captain Jo McDonald receiving her National Emergency Medal.

Being the only female in my brigade I was of the belief that the men would cast some doubt on my abilities. I never aspired to be Captain, however in 2002 the brigade members had other ideas.

Because of the enjoyment I got from giving and helping the community I was determined to learn all I could and be the best Captain I could be.

After many years I can now say, do not allow other people's doubts hold you back from your achievements. Achieve all you can and continue to show graciousness toward those who believe in you, your team."

National Emergency Medal.

During the campaign fires of 2019 / 2020 Jo McDonald and crews from the Wallarobba NSW Rural Fire Brigade attended many callouts locally and around the state to assist communities in need and distress.

Callouts included: -

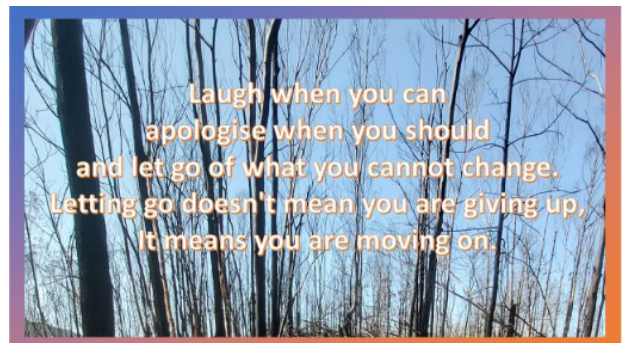
- 7th and 8th Nov 2019, Mid coast.
- 12th Nov 2019, Greta.
- 18th Nov 2019 Gloucester.
- 4th Dec 2019 Laguna and Keppies Rd.
- 27th Dec 2019, Putty Rd, Bulga.
- 30th and 31st Dec 2019 Mt Royal.
- 1st, 3rd, and 4th 2020 Mt Royal.

Restocking the station fridges and trucks, along with maintaining equipment and organising crews were also part of the daily routine during the fire season. I was a scribe for the Group Captains.

The destruction at Rainbow Flat would have surely been far worse if were not for the Wallarobba 7 crew, with the assistance of Paterson 1 and Flat Tops 7, as we became separated from our Group Captain when he headed off into dense smoke, taking our welfare with him. The Wallarobba Captain took charge and organised crews to work together, and collectively those brigades jointly saved numerous homes, businesses, and animals. A huge thankyou to the Coolongolook Roadhouse for preparing meals for a bunch of hungry, sooty, tired fire fighters.

On the 17 March 2022 Captain Jo McDonald was presented with her National Emergency Medal.

The Volunteer Firefighters Association (VFFA) welcomes all and any news articles from members and brigades that highlight your activities in assisting your community. The VFFA takes all articles on the honest and ethical information has been authorised by the brigade executive.



RFS CATERING VOLUNTEERS



Throughout the past fire season, we all saw so much action in so many places be it the North Coast, the Greater Sydney Region or the South Coast. For all of what we did & what we faced over far too many months, we could never ever have done what we did without the unwavering support of the most valuable component of our Volunteer force, we speak of our Catering Brigade Volunteers.

These people whilst not all older, most though are senior in age, these are people who have retired, people who have a semi-retired lifestyle, which gives them free time to contribute to their communities. Some are former front line fire fighters who realise that as we age, we can still make a real contribution through involvement with a Catering Group utilising their former brigade skills & local area knowledge whilst not placing their own health at too greater risk.

Regardless, no Army walks on an empty stomach and throughout the past fire season for as long as it dragged out, our Catering Brigades across NSW made one of the most incredible & historical contributions to supporting front line firefighters so that we could extinguish that monster that took so many homes & sadly, took too many lives.

We could begin to single out a few districts for their super sterling efforts however it wouldn't be fair so we simply want to say to every single individual member of our RFS Catering Team's across NSW, **Thank You** so much for the hours that **YOU** gave, for the time that **YOU** spent away from your own family, for getting up at some horrid early hour of the morning to cook breakfasts, for getting home very late at night after having prepared endless meals for those heading off early the next day and all done to support our wider firefighting family.

You are all such incredibly special people, we thank you & we love you dearly for what you do for us all.



Are your Membership Details up to date?

Quite often we move House, we change Email addresses or Phone numbers and we struggle to think of everything and everyone to notify of those changes.

The last thing we want is that you miss out on getting your Volunteer Firefighter Magazine and emailed Newsletters...and sadly some are.

Please send us any updated contact details to our Membership Officer at:

membership@volunteerfirefighters.org.au



“Kosciusko National Park: A habitat for mega fires”

A region undergoing permanent ecological change.

Author. Armen Arakelian

Between December and late January, I spent several days, collectively, walking the Indi-Pilot wilderness areas. At the time of my ecological assessment, it had been exactly two years since the devastating 2019-2020 Black Summer Bushfires.

Walking through this vast alpine and sub-alpine wilderness, between NSW and VIC, split by the deep sweeping valley shaped by headwaters of the Mighty Murray River, I was continuously confronted with the horrors of past seasons’ fires and the dense regrowth post the 2003 season. The impact of destruction was more severe in Kosciusko National Park’s declared Pilot Wilderness.

Though high country grasses and successive heath/shrub species have returned to the landscape, the high intensity fires, I’ve observed, have affected the soil nutrient and PH (alkaline) levels and in parts made the soil hydrophobic.

Regrowth/regeneration of endemic eucalyptus (snow gum, mountain gum etc.) is and will be extremely slow. The fires, similar to 2003, had crowned most of the remnant snow gum and mountain ash woodlands within the area I walked and camped. There is little or no epicormic growth on the bare skeletons that remain standing, with little lignotuber activity.

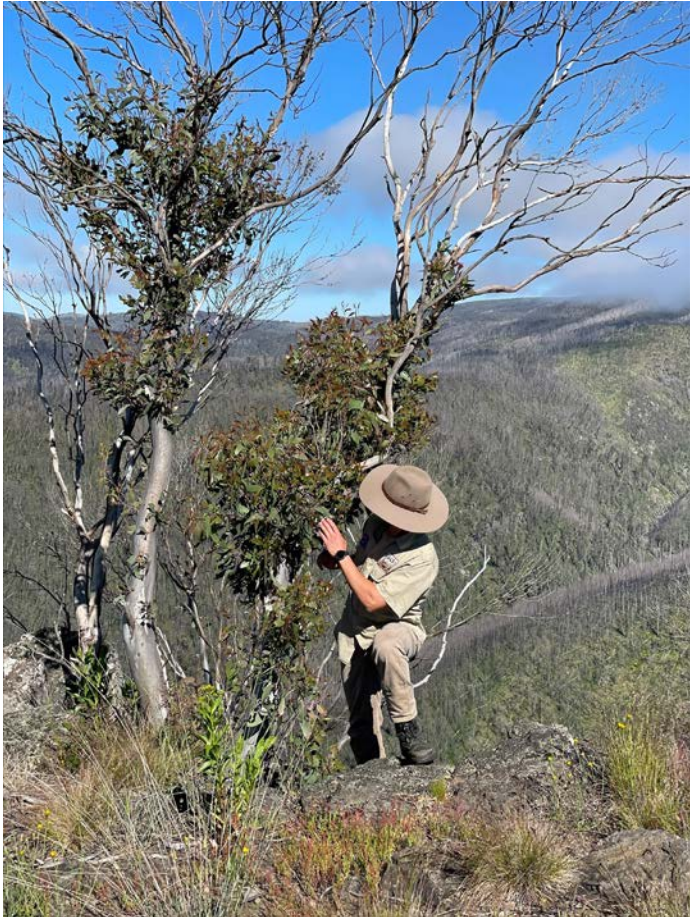
Most of the lignotubers are regenerating in close proximity to one another, compounded with increasing dry and drying fuel loads, creating an ecology that is conducive to higher intensity future fires.

Feral weeds and animals are returning to a landscape once made up of ancient snow gum and towering mountain ash woodlands. Evidence of rabbits have re-emerged, feral deer, goats, horse and pigs appear to have made their way back up to the region to graze on the desolate terrain, which was once a biosphere, protected nurtured by our ancient trees.

The devastating landscape continues to challenge my thoughts and perceptions on environmental management. With tens of thousands of hectares, as far as my eye can see, lying in permanent ecological ruin.

We must return to sensible management practices, which include regular cool burns overseen by LOCAL Indigenous - not the politically-driven ‘box/quota ticking’ indigenous involvement of the parks bureaucracy. The methods over the past few decades have consistently failed. We must never again subject our rare and endangered endemic species to such ferocity of fire again, because once they’re gone, they’re gone forever.





SouthEastTIMBERassociation

TO BURN OR NOT TO BURN?

The following photo essay may provide a different perspective on the questions as to whether we burn and if we do burn, how often. Perhaps the relevant question is not whether we burn but how do we burn.



Photo 1: Part of a fuel reduction burn (FRB) undertaken in April 2016. Fire had been excluded from this area of native forest for about 20 years, before fire was reintroduced in May 2010. A second low intensity burn was undertaken in May 2013 and the third in April 2016. During the three burns, part of the area had burnt three times, some had burnt twice, some once and a gully and surrounds in the middle of the block had not burnt at all.

On 4 January 2020, the Border Fire, which travelled a distance of about 38 kilometres from the Victorian Border to the outskirts of Eden passed through this fuel reduced area.



Photo 2: Taken on 7 January 2020 shows the aftermath of the fire. The whole area had been burnt by a ground fire. Crown scorch was limited to the understorey plants. Fire had burnt up the trunks of rough barked species but the canopy of the mature trees was not scorched.



Photo 3: Taken on 7 January 2020 shows the previously unburnt gully, where the understorey was scorched and coarse woody debris burnt, while the eucalypt canopy remained green.



Photo 4: Taken on 7 January 2020 shows an area thinned in 2010 and subject to the same burning regime as that shown in the earlier photos.



Photo 5: Taken on 20 April 2021 shows a Red Bloodwood (*Corymbia gummifera*) in flower, 15 months after the Border fire. Other bloodwoods within the FRB area were also flowering.



Photo 7: Taken on 30 July 2013, this photo shows an area subject to a low intensity fuel reduction burn in late April 2013. Three months after the burn, it was noted that there was extensive digging disturbance. A pre burn inspection had not revealed any disturbance in the litter layer between 5 and 8 centimeters deep with a fine fuel (less than 6mm diameter) loading of 25 tonnes per hectare. A motion camera was placed to monitor activity.



Photo 6: Taken on 20 April 2021 shows an area of forest immediately adjacent to the HRB area, that had not been fuel reduced for over 20 years. It is unlikely any surviving trees in this area will flower in the next decade. This impact is typical of more than one million hectares of forest with crown "fully affected" by high intensity fire in NSW in 2019-20. <https://www.environment.nsw.gov.au/-/media/OEH/Corporate-Site/Documents/Parks-reserves-and-protected-areas/Fire/fire-and-the-environment-2019-20-summary-200108.pdf>

If low intensity burning can reduce wildfire intensity and reduce the impact of bushfires on eucalypt flowering, are there other ecological benefits from managed burning?



Photo 8: Taken on 30 July 2013 shows a Long-nosed Bandicoot foraging for insects and fungi. Why has the low intensity burn stimulated significant bandicoot feeding activity, that was not present prior to the burn?



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Firestorms

Author: Vic Jurskis

Leading up to the Glasgow Climate Circus, ABC is ramping up their campaign to sacrifice our society and economy on the altar of green ideology. Of course, they're in cahoots with Flannery's Climate Council.

Aborigines survived tens of thousands of years of rapid climate change by keeping country clean, healthy and safe. Europeans created firestorms by allowing explosive 3D continuous fuels to accumulate.



In 2003, A Nation Charred accepted the knowledge and experience of land and fire managers across the country. The report of the Parliamentary Inquiry identified that lack of mild burning has set us up for uncontrollable megafires every time there's a bad season.

In 2004, a Fire Chief and two Professors produced the COAG report. They gave us a false narrative about "learning to live with bushfire". Since then, 200 people have tragically died for no reason. Now, we have 'education', emergency response and evacuation instead of sustainable land management.

Funding for fire engines, waterbombers and research comes from governments throwing money at problems rather than looking for practical solutions. COAG co-author Professor Robert Whelan set up a bushfire research industry at Wollongong University which receives multimillion dollar government funding. Following the 2020 Black Summer catastrophe, this juggernaut, under new director Professor Ross Bradstock, gave advice, not evidence, to the NSW Inquiry.

After the Bushfires Royal Commission was announced, it became a Royal Commission into 'Natural' Disasters. Contrary to its terms of reference, the Commission did not consider the all-important findings of the 2003 Parliamentary Inquiry. Instead, they endorsed the COAG report, lining us up for worse to come.

Now, ABC has produced an hour-long TV advertisement for Tim Flannery's Climate Council and its subsidiary – Greg Mullins' Emergency Leaders for Climate Action.

Episode 3 Firestorm : ABC iview

"Firestorm" features some of the academics and fire chiefs who gave us Black Summer and some fresh faces who also lack knowledge and experience of sustainable fire management.

As a taxpayer compelled to fund both the advertising and the massive running costs for the self-serving academic and paramilitary empires, I'm thoroughly disgusted. But it's hard not to admire the highly-skilled delivery of propaganda and junk science by our public broadcaster. Aunty inserted a few small grains of truth into a great pile of other stuff to create a pretence of plausibility. Almost the reverse of putting threepences into the Christmas Pudding.

The ABC climate campaign is seamlessly coordinated with commercial media from the same watermelon patch. Their TV program was closely followed by a Sydney Morning Herald story announcing the release of Mullins' book "Firestorm". <https://www.smh.com.au/culture/books/former-fire-chief-greg-mullins-faces-the-firestorm-again-20210918-p58stw.html?btis>

There surely won't be any argument about copyright for the catchy title, because our planet-saving heroes are clearly thicker than thieves.

Taxpayers' TV treated us to a lecture on millions of years of evolution whereby eucalypts have spread wildfire to gain dominance in Australia. We were told that the original Australians learnt how to manage these ancient fire-dependent forests.

In fact, Aborigines created a whole new system when they spread across the continent around 40,000 years ago. It depends on mild burning by people to recycle nutrients and maintain healthy trees and grasses. They virtually eliminated soft, nutritious dark green browse. So the megafauna perished.

<http://www.sciencepublishinggroup.com/journal/paperinfo?journalid=231&doi=10.11648/j.eeb.20200504.17>

ABC Climate Council's Professor Flannery made his name with a science-fiction book about Aborigines eating the megafauna. There is not a single shred of evidence for this and very much against it. But the Firestorm TV episode is unique in having Tim presenting a very pertinent scientific fact. I nearly fell off my chair when he told us the truth – that accumulation of woody fuels caused our

fire problems after Aboriginal burning was disrupted.



Flannery quickly covered his tracks by saying that it happened slowly. However, history contradicts his narrative. Our first megafire happened in the Strzeleckis soon after the Yowenjerre people were decimated by smallpox in 1789. Thick scrub quickly escaped from deep dark gullies. It took over the landscape and exploded in the next severe season around 1820.

After Europeans disrupted Aboriginal burning throughout Victoria, five million hectares were incinerated by the Black Thursday fires in 1851. A firestorm ignited the rigging of ship heading for New Zealand.

Of course, today's scene must be painted as much blacker than that, to sell the Climate Cop-Out. So academics and fire chiefs now point to the world record Gospers Mountain fire of Black Summer – more than half a million hectares. They tell us it was a combination of Global Warming and bad luck. Out of 19,100 lightning strikes in a big storm on 26th October 2019, only one started a fire.

Lightning strike #19,068 was in the Wollemi Wilderness. Supposedly no-one noticed until fire roared into the treetops. After that, a sortie of waterbombers couldn't stop it. Even then, the fire supposedly wasn't out of control, because it was still within so-called containment lines. A couple of weeks later, extreme weather arrived and a firestorm blew up. It was publicised around the world as evidence of catastrophic climate-change.

No mention that 230 years earlier, the Settlement Drought was Australia's worst in 500 years of palaeo-records. At the same time, there were three consecutive seasons of extreme fire weather – much worse than Black Summer. Back then, Aboriginal fires were constantly burning to the northwest of the European settlements. It wasn't wilderness, so there were no megafires and no disasters.

In December 1790, Watkin Tench recorded a temperature of 430C at Rose Hill, and NNW winds "like the blast of a heated oven". In February 1791, he wrote that:

"The north-west wind again set in and blew with a great violence for three days. At Rose Hill, it was allowed, by every person, to surpass all that they had before felt, either there, or in any other part of the world. An immense flight of bats, driven before the wind, covered all the trees around the settlement, whence they every moment dropped dead, or in a dying state, unable longer to endure the burning state of the atmosphere. Nor did the perroquettes, though tropical birds, bear it better; the ground was strewn with them in the same condition as the bats."

Despite continuing drought and extreme weather, on 5th December 1792, settlers were able to control wildfires using hand tools and green branches. A single hut in Sydney and another near Parramatta were burnt. They had thatched roofs.

These days, columns of fire engines and squadrons of waterbombers are unable to save houses with steel or tile roofs.

Firestorms explode from the wilderness in severe weather because it is wilderness, not because it is hot, dry and windy. Extreme weather is an inevitable natural occurrence. Aborigines survived it without boots, overalls, fire chiefs, fire engines, waterbombers, computer models or advice from academics.

The so-called experts have never made friends with fire. To do that you need matches, not computer models.

In the ABC climate commercial, Professor Tolhurst tells us that fire is as important to the bush as the sun and the wind and the rain, because it recycles nutrients and releases energy. That's absolutely true. But his expert modelling is used to restrict rather than encourage gentle burning.

The fatally flawed system designed by academics and fire chiefs in southeastern Australia ensures that a miniscule proportion of the landscape is managed. The models are used to decide where a little bit of burning can supposedly protect suburbs. But a little bit makes no difference. Firebreaks don't work and waterbombers don't work for the same reasons.

Our wide brown land of droughts and flooding rains is denied the mild fire that maintains resilience, health and safety. Tree roots can't cope with natural cycles of dry and wet. Trees decline in droughts and get even worse when soils are waterlogged. Scrub booms under sick trees creating an explosive mix of fuel and air from ground to canopy. 'Upside-Down Country' as Victor Steffensen calls it – thin on top and thick underneath.

ABC, Flannery Mullins and Co. add arrogant insult to grievous injury by lecturing us on traditional Aboriginal management. They clearly don't understand the difference between managing land and burning so-called firebreaks. After all their graphic footage, they seem unable to comprehend that firebreaks don't work.

Harry Luke clearly stated this simple fact in his seminal book on bushfires 60 years ago. It's the reason that Fire Chiefs and Academics so desperately need the Climate Cop-Out. Experienced land managers have the solution but not the ears of government, or more particularly the funds. We could easily prevent massive emissions from megafires and it would save us money.

ARE Drones, UAVs or RPAs PART OF OUR FUTURE?

We look at what they are and what they can do

By Jeremy Braithwaite

There are lots of different types of drone, or UAV (Unmanned Aerial Vehicle) or RPA (Remotely Piloted Aircraft) as they are more officially termed and in this article we have a look at what's out there and what sort of missions could be implemented using UAV technology. We also look at the limitations imposed by current regulations and what the potential is with a change in regulations.

In the first place a couple of principles:

- A UAV costs a fraction of the alternative cost of a helicopter or fixed wing aircraft
- As a result of the lower costs the UAV can perform missions that are uneconomic using piloted aircraft
- A UAV can be sent into places you would not risk a human piloted aircraft
- You cannot fly your UAV over a fire ground

UAV Entry Point and Certification

The entry point into the world of drones is a micro drone. It needs to weigh less than 250g and the process to get and fly one is quite straightforward. You need to get an ARN (aviation reference number), get accredited through a simple online process and a bit of study, and buy and register your drone. Mine is a DJI Mini 2 and has a 30 min battery life and a 4k camera. It's a rock steady camera platform and simple to fly.



You also need to understand and obey the drone safety rules:

- Only fly one drone at a time
- Always fly your drone in visual line-of-sight — this means:
- Flying only during the day
- Avoid flying through cloud, fog or smoke
- You can always see your drone with your own eyes — not by using goggles, binoculars or another device
- Not flying behind obstacles that stop you from always seeing your drone. For example, trees, buildings or other structures.

You **must not** fly your drone:

- Higher than 120 m (400 ft) above ground level — that's about the height of a 35-storey building or length of a football field
- Closer than 30 m to people — other than those helping to control or navigate your drone
- Over or above people at any time or height
- In a way that creates a hazard to another person, property or aircraft
- Near emergency operations
- In prohibited or restricted airspace (use a CASA-verified drone safety app to help you)
- Closer than 5.5 km to a controlled airport, which usually has a control tower

Heavier drones require more accreditation and certification but the requirement to maintain the aircraft in line of sight remains and seriously limits the missions that can be conducted. For example, even if the requirement to not fly over a fire ground were lifted for RFS members, the reality of flying in any forested area is that your line of sight is going to be seriously limited and thereby restrict what you can achieve. If you want to fly outside your line of sight

you need to prepare a special request to CASA which may or may not be approved. There is currently no provision for any form of blanket approval.

The regulations are managed by CASA and part of the issue in Australia is that there is no requirement in Australia to fit a transponder to your aircraft or to file a flight plan if you are only flying using Visual Flight Rules, as opposed to Instrument Flight Rules. If you are flying VFR you are required to look out of the windows and make sure you don't hit another aircraft or a piece of the planet. If transponders were used universally then you would receive a proximity warning and the transponder could provide aircraft's identification, position, velocity and altitude in response to an interrogation signal.

For the sake of this article let's assume that CASA had required all aircraft to be transponder equipped and that the regulations had been changed to permit autonomous and remote operations.

Let's have a look at some of the missions:

Camera and Sensor Platform



The following cameras and sensors can be fitted to a UAV:

- RGB (colour) camera
- Heat sensing cameras including IR, FLIR cameras and optical line scanners
- Lidar

Situational Awareness

The Carbonix Domani is built in Artarmon and has a 5kg payload, a 6,000 ft ceiling and a potential 10 hour endurance. It is capable of autonomous operation and a fleet of aircraft could potentially be operated by a single pilot in a fire control centre

The RGB camera provides situational awareness to firefighters on the ground and is flown by the brigade for this purpose. The vision can also be networked and as such be displayed on the public internet and in fire control rooms so that everybody understands what a fire is doing.

Automated Fire Detection

Once networked the RGB camera vision can be processed by AI specialists such as Alchera's Fire Scout service and be used for aerial fire detection. For example a UAV flying at 5,000 feet can potentially provide AI fire detection in real time across 30+ km in all directions. There is more information on the Fire Scout service here: <https://alchera.ai/en/solutions/aiir-firescout>

Ignition Investigation

Where High Risk Lightning is detected a UAV equipped with a FLIR camera can be used to determine whether a hot spot has been created by the lightning strike. The hotspot can smoulder for days and the UAV has an ability to get to places that can be hard for a RFS tanker to reach. Any hotspot that can be extinguished before a fire has started is incredibly valuable and we should remember that this approach could have completely avoided the Gospers Mountain Fire – the largest fire ever from a single ignition.

The same technology flown over ground or property after a fire has passed can quickly determine hotspots and has potentially a better view than hand help FLIR cameras.

Fireground Mapping

The RFS currently uses manned aircraft to complete line scans and determine the perimeter of the fire. A UAV piloted by a brigade has the potential to complete this activity in real time and the technology works even where smoke is present.

Vegetation Mapping

The Lidar Scanner can map fuel loads and would allow brigades to use the winter months to build a picture of the danger points that require hazard reduction. This approach could also have the potential to do hazard reduction much more selectively and efficiently and only tackle those specific areas that require it.

Accurate hazard measurement could be done regularly on the urban fringe and landowners could be advised of areas that required attention.

More Information

See more information on UAV payloads on this link: <https://carbonix.com.au/payloads/>

Continued on next page >>

DRONES *continued*

Hazard Reduction Igniters

This excellent article in the National Geographic discusses the use of drones for firefighting and specifically their use for dropping incendiary devices:

<https://www.nationalgeographic.com/science/article/fireball-dropping-drones-new-technology-helping-fight-fires>

This is possible in North America after the federal Wildfire Management Technology Act was signed into law to allow more drones to be used to fight wildfires.

The incendiary devices can be used for hazard reduction or back burn operations.

Fire Fighting

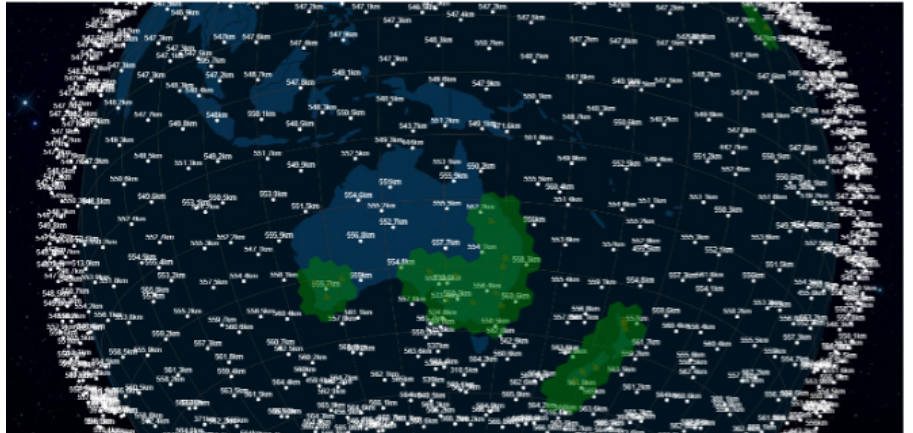


If you had a UAV with a 1,200l water capacity and the ability to suction that load up in 40 seconds and it was capable of being brigade deployable would you swap your Cat 7 or Cat 9 for it?

It's an interesting argument and one made more real by the announcement of the ACC Thunderwasp Firefighting drone.

Check out the product description here and see how the manufacturer clearly envisages semi-autonomous remote operation of a fleet of Thunderwasps:

<https://static1.squarespace.com/static/5bb5c7f7fb22a54fb9efff06/t/5d2655f5ece74f0001f2e955/1562793762060/Thunder-Wasp-Firefighting-Drone.pdf>



Network Support

Any form of autonomous operation will require the availability of a network that enables continuous reliable communication with the UAV. The Carbonix Domani for example is fitted as a standard option with a Silvus meshed network transmitter. This gives a range of 40km to 50km from a single mobile network transmitter to the UAV. The network can be deployed with multiple transmitters to provide coverage over a large area and this would then permit autonomous operation of a single or fleet of UAVs.

Another interesting option is the Elon Musk Starlink low earth orbit satellite service which is well on its way to full deployment and is capable of supporting mobile operations. This is the satellite map and the green shaded areas are believed to show the planned coverage.

Source: <https://satellitemap.space/>

In Summary

The UAV introduces a wealth of new opportunities in the bushfire detection and management space as well as in land management. If deployed at a brigade level it would allow the brigade to be much more self-sufficient and less reliant on scarce resources such as helicopters for a wide range of tasks including hazard reduction.

The use of the UAV for situational awareness on the fireground is exciting and with networked UAV's there is the ability to provide imagery directly into fire control and do near real time fire mapping and fire progression analysis. This translates to better resource management and information feed to the community.

Its clearly early days, and the chief impediment to UAV use and deployment remains with CASA. Let's hope that the regulation can move forward with the available technology. We certainly cannot plan any emergency deployment that are dependent upon lengthy bureaucratic processes.

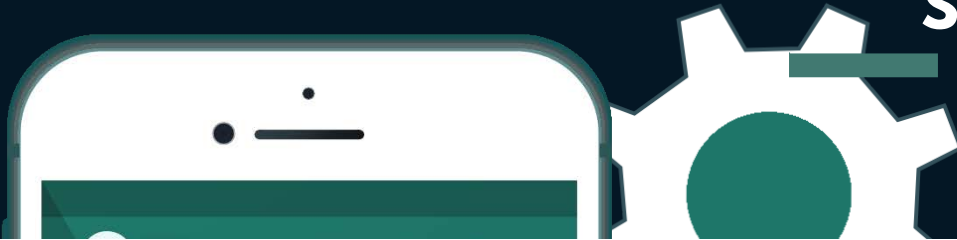


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Our Megafires are a Political, not a Climatic Crisis

By Vic Jurkis

People proliferated across Australia, which was then a part of Sahul, from about 40 000 years ago when megafauna finally disappeared long before the Last Glacial Maximum. Aboriginal burning initially turned much biomass into charcoal, reducing browse, changing vegetation and causing megafaunal extinctions. It created ecosystems whose health and safety depend on constant human input of mild fire.

Palaeology reveals that these human ecosystems survived thousands of years of sometimes extreme climate change without suffering holocaust or pestilence. When Europeans arrived, so did megafires. Our world-famous mammal extinctions and plagues of irruptive native plants and animals occurred before any hint of Anthropogenic Global Warming.

Mild burning of anthropogenic landscapes consumes relatively little biomass and produces relatively little charcoal. Although burning by people has typically been regarded as an ecological disturbance, the historical evidence, together with traditional Aboriginal knowledge, suggests that it is actually maintenance, essential to sustain our natural environment. People can reinstate resilient, healthy and safe landscapes irrespective of climate change.

Aboriginal burning was originally disrupted by the 1789 smallpox epidemic, especially in central Queensland and south Gippsland, and by flu in northeast Tasmania. Our first megafire was in South Gippsland around 1820, closely followed by Black Thursday 1851 when fires exploded across 5 million hectares of Victoria. Palaeology shows an unprecedented peak in 70,000 years of charcoal records at that time, before AGW was even thought of.

European pastoralists carried on Aboriginal tradition in some areas, notably the Alps. And no-one bothered to put out lightning strikes in the rough forested country. The situation worsened when Forest Services tried to suppress fire from early in 20th century. We suffered insect plagues and megafires such as Black Friday 1939 and Dwellingup 1961. We learnt and adapted. Mild fire was reinstated, using aerial and ground ignition, from the 1960s. Charcoal deposition declined as temperature increased.

Green Academics have disrupted sustainable fire management since the 1980s. They built huge empires in tandem with the Emergency Services after the COAG Inquiry by a fire chief and two professors in 2004. COAG effectively buried the findings of the Parliamentary Inquiry into the 2003 disasters when 500 homes were destroyed in our National Capital. Since then, the academics and fire chiefs have been routinely invited to mark their own cards in Inquiries.

The latest 'research findings' just add more fuel to the fire problem:

"New research released today has found climate change will expose larger areas of forest in coastal NSW to higher frequency and more intense fires, amplifying the changes to fire regimes brought about by the 2019/20 fires.

Leading researchers at the University of Wollongong, a partner at the NSW Bushfire Research Hub, conducted the research using the latest data on behalf of the NSW Natural Resources Commission.



According to the lead researcher, Emeritus Professor Ross Bradstock, “The 2019/20 fires mean now only 10 percent of forested areas are currently within their recommended fire frequency thresholds. We found half of the state forest and national park area is now classified as ‘vulnerable’ in coastal NSW. This means the 2019/20 fires effectively doubled the extent of vulnerable forested vegetation on these tenures.”

The research also modelled what would happen to the habitat of 24 threatened species under a climate change scenario of hotter temperatures and little change in rainfall. Of the 24 species, seven species are predicted to have their habitat reduced by over 75% by 2070.

NSW Natural Resources Commissioner Professor Hugh Durrant-Whyte said. “This is an important report, one that highlights consequences of the 2019/20 bushfires and future climate for NSW’s forests and provides guidance for future planning of our forests”.

It is effectively illegal in NSW to burn frequently and mildly enough to maintain a healthy and safe landscape. Eucalypt forests need gentle fire at intervals less than 6 years to support natural nutrient cycling and diverse open ground layers. The “recommended fire frequency thresholds” of the academics were originally known as the ‘Bradstock Intervals’. They are a very large part of the problem.

The Intervals incorporate an illogical, untenable theory based on false assumptions and a wilderness mentality. Here’s the theory:

There are some fire-sensitive plants that aren’t capable of resprouting after fires and consequently rely on reproduction from seed. If you burn the same patch of bush a second time before the new plants have reached reproductive maturity, you’ll eliminate the species.

The thing is that Aborigines used the firestick to confine fire sensitive species to deep dark gullies, wet areas or bare areas without continuous groundcover. That’s why the megafauna disappeared. The ‘fire-sensitive obligate seeders’ which the academics think they’re saving, need mild burning to protect their health and prevent accumulation of scrub, litter and/or rank growth that fuels unstoppable firestorms in extreme conditions.

The prime example is *Eucalyptus regnans*, now called mountain ash. It used to be called blackbutt because its stocking of rough bark was invariably black from mild fires lit by Aborigines and lightning. It grew in open mixed-aged forests. Major Mitchell rode his horse to the top of Mt. Macedon through blackbutt stands with trees averaging two metres in diameter.

Old photo of such a stand.

Megafires since mild burning was disrupted have converted most mountain ash forests to dense young even-aged stands choked with scrub. But there’s a research industry built on the myth that it’s a fire-sensitive species which will be eliminated by prescribed burning at intervals less than twenty years.



Blackbutt/mountain ash is now indeed threatened by frequent fire because the natural return interval of extreme fire weather is less than twenty years as it has been for thousands of years. The problem is simply that the academics who are advising government are frightened of fire. They don’t understand the difference between mild fires and wildfires because they’ve never learnt to use the firestick.

Gentle burning recycles nutrients, keeping soils, roots, trees and herbage healthy and safe. High intensity wildfires generate dense scrub that exacerbates the problems caused by our lock it up and let it burn ‘conservation’ paradigm. Traditional burning expert Victor Steffensen told NSW Koala Inquiry during the fires that we need mild burning as soon as possible after high-intensity fire to control the new scrub growth. NRC and their academic experts plan to use repeated satellite imagery to monitor scrub development as a measure of recovery!

The NRC publicity quoted Commissioner Professor Hugh Durrant-Whyte. It didn’t mention that he’s also NSW Chief Scientist charged with providing independent advice to the Government. I think it’s an interesting concept that one individual can provide independent advice at two levels in the same hierarchy.

I met with previous NRC Commissioner Dr. John Keniry to discuss my concerns about their sponsorship of academic research at the expense of adaptive management. After he retired, I corresponded by email with Acting Commissioner Dr. Neil Byron who was less accessible. When I learnt of the new Commissioner’s doubly independent role, I sought a meeting with Professor Durrant-Whyte, but received no response.

NRC runs elaborate and expensive ‘public consultation’ and advertising campaigns around their self-perpetuating research programs. It seems more like Public Insultation to me.



Professor David Lindenmayer. Photo: James Walsh/ ANU

Logging and Bushfires, Is There a Connection?

Peter Rutherford BSc (Forestry) - South East Timber Association Secretary

In August 2021, a research paper authored by Professor David Lindenmayer and others, titled Empirical analyses of the factors influencing fire severity in southeast Australia was published in Ecosphere.

The photo below, presumably supplied with the press release, appears to have been taken in some coastal heath type vegetation, not in the tall forests, which are typically subject to timber harvesting. Experienced forest scientists are curious to understand why the authors choose to select a photo that appears to have negligible relevance to the subject matter contained in the paper being promoted.

Is There is a Connection Between Bushfires and Timber Harvesting?

Bushfires and timber harvesting are connected in that both activities can occur in native forests. Harvesting is highly regulated, with a range of environmental protections, including exclusion areas and is confined to a small percentage of the native forest estate. Harvesting does not destroy houses, farms or livestock or totally denude water catchments.

Bushfires are unregulated, and do not respect boundaries of environmental protection areas. In dry summers and particularly in drought conditions, all eucalypt forests are potentially available to be burnt. Bushfires take a devastating toll on flora and fauna, livestock, farm infrastructure, houses, other community assets and at, times, kill and badly injure people caught in the fire path.

The Blue Mountains World Heritage Area (WHA) is "protected" by international and Australian legislation. Most, if not all the WHA has never been subject to harvesting, yet 79 percent of the WHA was burnt by the Gospers Mountain and other fires. At more than 512,000 hectares, the Gospers Mountain blaze is the biggest fire in Australia, to result from a single ignition source.

This fire would have been much greater in size, had it not run into fires from other ignition sources, including the Little L Complex and Three Mile fires. The total area burnt by the Gospers Mountain and adjoining fires was more than 1 million hectares.

Prior to the Gopsers Mountain fire, the largest fire from a single ignition source in Australia and the world was the Mangoplah fire in southern NSW, which burnt during late January and into February 1952. This fire affected large areas of agricultural land.



Image Courtesy of the ABC

The authors of this latest paper claim, "Our analyses suggest that forests managed for timber production near settlements may be at increased

risk of high-severity fire." However, an absence of harvesting did not protect more than half a million hectares of unharvested WHA forests from high intensity fire, nor the hundred homes burnt or thousands of residents traumatised by this fire.

Not only did the fire kill an estimated 143.1 million birds, mammals and reptiles, only extraordinary efforts saved the less than 200 Wollemi Pines that had survived tens of thousands of Aboriginal fire management. In addition, the International Union for Conservation of Nature (IUCN) — the official advisor to UNESCO states, "Many species that are attributes of the Outstanding Universal Value of the site were impacted by the fire." The conservation outlook for this site has been assessed as of "significant concern." This is a formal downgrade to the second lowest category in the world heritage ratings.

GBMWHA Native Fauna Impacted

Fauna	Number Impacted by GBMWHA Fire
Mammals (Excl. bats)	15.0 million
Birds	17.7 million
Reptiles	110.4 million
Total GBMWHA	143.1 million

GBMWHA Burnt

GBMWHA Burnt	Area (Ha)	Burnt (Ha)	% Burnt
Wollemi NP	502,600	380,826	76
Blue Mountains NP	269,200	196,381	73
Yengo NP	167,600	155,927	93
Kangangra-Boyd NP	71,600	62,646	87
Nattai NP	50,660	43,467	86
Gardens of Stone NP	15,120	12,693	84
Jenolan KCR	3,142	3,078	98
Thirlmere Lakes NP	662	292	44
Total GBMWHA	1,080,588	855,310	79

The 2019-20 fires in the Blue Mountains WHA, Kosciuszko National Park and numerous other parks, have resulted in extensive areas of unharvested forests being affected by crown fires and crown scorch. This confirms that per hectare fuel load and the three-dimensional structure of the lower storey or "ladder" fuels should have been considered by the authors.

These factors are directly measurable and can be used to calculate fire intensity, under given fuel moisture and prevailing weather conditions. Time since previous major disturbance is an inexact proxy for fuel load and does not take into account site productivity impacts on stand height nor the impact fuel build up following disturbance.

Stands of a particular age and species are taller on higher site quality than those on low quality sites. At a given fire intensity, a taller stand, whether due to age or site quality is less likely to be subject to crown burn/crown scorch than shorter stands. The taller the stand, at a given fire intensity and all other things being equal, the lower the risk of crown fire and the lower the apparent "severity" of the fire.

The height of fire affected stands is a variable that can be directly measured. Fire severity is a post event measure of the impact of fire on the burnt forest and the authors do not appear to have taken a key variable, stand height, into account in their analysis.

The use of secondary measures as detailed above, has been a feature of 21st century fire research and has the potential to lead to more speculative modelling and research conclusions than is the case with directly measurable data inputs.

Which is more fire resistant – an unmanaged, untouched forest or a well managed forest?

While government agencies and other organisations regularly pay their respects to Aboriginal elders past, present and emerging, the same cannot be said for the recognition of up to 60,000 years of Aboriginal fire management on continental Australia. The Mabo decision has not yet been translated into Australian environmental legislation or land management.

In NSW, the terra nullius ecological view was confirmed in 1987, with the gazettal of the NSW Wilderness Act. Wilderness is defined in part as:

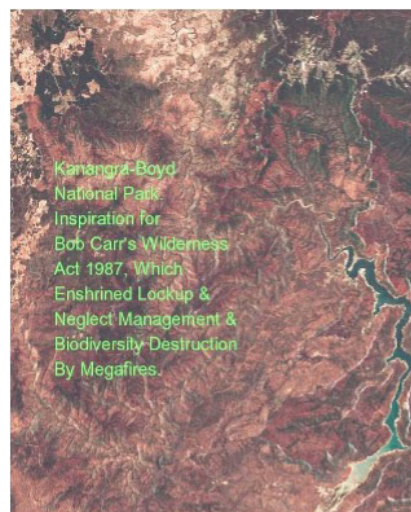
(1) An area of land shall not be identified as wilderness by the Director-General unless the Director-General is of the opinion that:

(a) The area is, together with its plant and animal communities, in a state that has not been substantially modified by humans and their works or is capable of being restored to such a state,

(2) In forming an opinion under subsection (1) the Director-General may consider any relevant circumstance, including:

(a) The period of time within which the area of land could reasonably be restored to a substantially unmodified state.

If the influence of Aboriginal fire management was accepted, the Wilderness Act would either need to be redrafted or else repealed, to allow Aboriginal fire regimes to be restored to designated Wilderness, as well as the broader native forest estate.



The 2019-20 fire season has demonstrated that unmanaged forest, including "wilderness" areas and associated biodiversity is at risk of being severely damaged by bushfires. The "precautionary principle," the terra nullius regulatory framework and enforcement by terra nullius regulators

promote a lockup and neglect management approach. Consequently, well managed forests are an increasingly scarce commodity.

Australian bushfires historic imagery from 25 January 1952.

Author: John O'Donnell

1951/ 1952 bushfire season.

The 1951/ 1952 bushfire season for the eastern states was a difficult bushfire season. Important details from the 1951/ 1952 bushfire season have been summarised from Cheney NP (1976) Bushfire Disasters in Australia, 1945–1975, Australian Forestry, 39:4, 245-268:

- During the 19 51-52 fire season, extensive areas were burnt in both forest and pastoral areas extending from central Queensland through eastern New South Wales and the mountain forests of Victoria to the South Australian border.
- This season was the most severe experienced in Queensland and New South Wales during the period of review (1945–1975).
- The total number of fires during this season in New South Wales was conservatively estimated by the Forestry Commission of New South Wales at around 5000 and the total area burnt at 4.5 million ha. This represents approximately 5.5 per cent of the total area of the State. The area of State Forest burnt was 0.53 million ha, 1.2 million ha was grassland while the remaining 2.77 million ha was low quality forest and timbered lands under a variety of ownership.
- Although the 1951-52 fire season in Victoria was milder than in New South Wales, State fire authorities rated it as the worst season since 1939. The total forest area burnt was 417,000 ha. There were 6 major forest fires, the largest burning 80 000 ha. Large areas of forest were burnt in east Gippsland, the Upper Murray, and the Western District.
- There is no detailed breakdown of the damage caused by fire during this summer but rough estimates of the total damage in the eastern States has put the figure at £150-230 million.

State library 25 January 1952 bushfire images.

There were thirty images in this 25 January 1952 collection. The author acknowledges the Mitchell Library, State Library of New South Wales and Courtesy ACP Magazines Ltd for these images. These images were donated by the Australian Consolidated Press, this is explained in the following administrative note: The Administrative / Biographical History. In September 1987,

ACP Magazines Ltd. (formerly Australian Consolidated Press) purchased Fairfax Magazines. Pix Magazine and its extensive photographic archive was included in the acquisition. Fairfax Magazines had in turn taken over Associated Newspapers and its subsidiary, Sungravure Pty Ltd, in the 1950s. The collection of historic photonegatives was presented to the State Library of NSW in September 2008 under the Taxation Incentives Scheme for the Arts Cultural Gifts Program.

Unknown locations of the imagery.

The author cannot ascertain the location/ s of the bushfires in these images, most likely in Victoria or NSW, possibly Queensland, or possibly a number of states. All bushfire images were burning on 25 January 1952.

The author would appreciate any advice as to the location and circumstances of the photos, noting the bushfires were 70 years ago. Details can be provided to:

johnodonnell1954@outlook.com

Sorting of this imagery.

As noted, there were 30 images in this 25 January 1952 collection, 16 of these have been selected for this article. The images have been sorted into three categories:

- Images of 25 January 1952 bushfire firefighting and techniques.
- Images of 25 January 1952 bushfire impacts on forests.
- Images of 25 January 1952 bushfire impacts on infrastructure.

The selected images are highlighted below under the three categories. Text explaining the images or addressing at issue is only used in a small number of cases below the image, as most of the images are self-explanatory.

Images of 25 January 1952 bushfire firefighting and techniques.

AUSTRALIAN BUSHFIRES HISTORIC IMAGERY



Bushfire Tower
Lookout

Note the man with
the knapsack in the
above image, on
the right-hand side
of image.



Note the heavy-duty fire line and the two knapsacks.



Continued on next page >>

AUSTRALIAN BUSHFIRES HISTORIC IMAGERY



Image above is likely starting to establish a fire break parallel to a road or timber harvesting.



Images of 25 January 1952 bushfire impacts on forests.



Images of 25 January 1952 bushfire impacts on infrastructure



Major bushfires in Australian history.

The 1851 Victorian bushfires.

Author: John O'Donnell.

The Black Thursday bushfires were a devastating series of fires that swept the state of Victoria, Australia, on 6 February 1851, burning up 5 million hectares. This was 170 years ago.

The weather conditions on 6 February 1851 were extreme, at midday on Thursday 6 February the thermometer at Charles Brentani's shop was 110°F (43.3°C) in the shade and 129°F (53.9°C) in the sun. Similar extremes were not reached again in Melbourne until 1876 (43.7°C in the shade), 1939 (45.6°C) and 2009 (46.4°C). Fuels were extremely dry. The bushfires on 6 February and at times after were intense and extensive, with up to 5 M hectares impacted. There are indications of very long distance firebrand movement in the 1851 bushfires as observed by Captain Reynolds.



Some key details on these bushfire as noted in Wikipedia Black Thursday bushfires information dated 23 August 2021:

The Black Thursday bushfires were a devastating series of fires that swept the state of Victoria, Australia, on 6 February 1851, burning up 5 million hectares (12 million acres; 50,000 square kilometres; 19,000 square miles), or about a quarter of the state's area. Twelve human lives were lost, along with one million sheep, thousands of cattle and countless native animals.

"The temperature became torrid, and on the morning of the 6th of February 1851, the air which blew down from the north resembled the breath of a furnace. A fierce wind arose, gathering strength and velocity from hour to hour, until about noon it blew with the violence of a tornado. By some inexplicable means it wrapped the whole country in a sheet of flame — fierce, awful, and irresistible." (Picturesque Atlas of Australasia published in 1886).

The Black Thursday bushfires, were caused in part by an intense drought that occurred throughout 1850 when the continent suffered from extreme heat. On 6 February 1851, a strong furnace-like wind came down from the north and gained power and speed as the hours passed. It is believed that the disaster began in Plenty Ranges when a couple of bullock drivers left logs burning unattended, which set fire to long, dry grass affected by the recent drought. The year preceding the fires was exceptionally hot and dry and this trend continued into 1851 (Kiddle, Margaret, 1980).

The weather reached record extremes. By eleven it was about 47 °C (117 °F) in the shade. The air cooled to 43 °C (109 °F) by one o'clock and rose to 45 °C (113 °F) around four o'clock. Survivors claimed the air was so full of smoke and heat that their lungs seemed to collapse. The air was so dark it made the roads seem bright ("Bushfires in Victoria 1851 Black Thursday". Romsey Australia). Pastures and plains became shrivelled wastelands: water-holes disappeared, creeks dried up, and trees turned into combustible timber.

Clouds of smoke filled the air; forests and ranges became one large "sheet of flames". The hot north wind was so strong that thick black smoke reached northern Tasmania, creating a murky mist, resembling a combination of smoke and fog (Maitland Mercury, and Hunter River General Advertiser (Tasmania), Saturday 22 February 1851). Homes, crops and gardens were consumed by the rushing fire leaving a quarter of Victoria in a heap of desolate ruins.

The community fled to water to escape the suffocating air around them, returning after everything was over to the sight of "blackened homesteads" and the charred bodies of animals that could not escape. The weather at sea was even "more fearful than on shore".[1] The intense heat could be felt 32 km (20 mi) out to sea where a ship came under burning ember attack and was covered in cinders and dust ("Black Thursday". The Argus. Melbourne. 28 June 1924. p. 6. Retrieved 25 October 2013).

Eventually, a southerly breeze and light rain cooled the surface ("Bushfires in Victoria 1851 Black Thursday". Romsey Australia).

Continued on next page >>

BUSHFIRES IN AUSTRALIAN HISTORY

The catastrophic fire caused the loss of human life, cattle, and land for miles and affected many regions including Portland, Plenty Ranges, Western Port, (Empire, Sydney 19 Feb 1851)] the Wimmera and Dandenong districts, Gippsland, and Mount Macedon. Farms across the region were destroyed, along with a number of settlements in Gippsland, Western Port, Geelong, Heidelberg and east to Diamond Creek and Dandenong. Three men from Mount Macedon lost their lives. Overall, the disaster resulted in the deaths of twelve people, one million sheep, and thousands of cattle over 60 to 80 kilometres (40 to 50 mi).

Intense bushfires are not uncommon in southern Australia. The region is one of the three most fire-prone in the world. Within the last two hundred years, the area has experienced and documented at least twenty-five major fires, beginning with Black Thursday in 1851.

Wikipedia listed the cause of the 1851 bushfires as heat wave and careless burning.

As outlined in an undated document contributed by Alexander Romanov-Hughes (Port Phillip Pioneers Group PPPG Member No. 52) titled "Black Thursday" Bushfires 1851:

....At sea, the weather was even more fearful than on shore. Captain Reynolds reported that, when 20 miles from the Laurences, the heat was so intense, that every soul on board was struck almost powerless. A sort of whirlwind, on the afternoon, struck the vessel, and carried the topsail, lowered down on the cap, clean out of the bolt rope, and had he not been prepared for the shock, the vessel, he had no doubt, would have capsized. Flakes of fire were, at the time, flying thick all around the vessel from the shore in the direction of Portland.

In summary, the 1850 winter and spring produced lush grass, hot weather dried the fuel, the intensity of the bushfires and extensive damage. The information also highlights the considerable distances that firebrands were carried. The references to "Flakes of fire were, at the time, flying thick all around the vessel from the shore in the direction of Portland" is very interesting. According to Wikipedia dated 27 August, 2021, the Lawrence Rocks are a group of two rocky islets, 6.8 ha and 1.5 ha in area, with an associated reef, 2.4 km south-east of Point Danger in western Victoria, Australia, and about 6 km south-east of the city of

Portland. It is not clear which direction Captain Reynolds was from "the Laurences", and where the fires were near Portland, but irrespective of this, these "flakes of fire" (likely firebrands), had travelled a considerable distance and possibly at the upper known range of firebrand travel, maybe greater.

According to the CFA website 29 August 2021, Major Fires 1851 Black Thursday locations included Wimmera, Portland, Gippsland, Plenty Ranges, Westernport, Dandenong districts, Heidelberg.

The website Bushfire Education Bushfires in Our History notes the locations for the 1851 bushfires as Portland, Plenty Ranges, Westernport, Wimmera and Dandenong and notes localities listed are indicative only.

There is a broad map of reported 1851 bushfire locations included in "Victoria's Bushfire History 1802 to Present" by Denis O'Bryan Director, Red Eagle Bushfire Protection Services September, 2018, refer below.

The reported locations are shown as circles on this contemporary map.



There is another broad map of reported 1851 bushfire locations included in Anniversary Bushfire Exhibit, 2018, An Interactive Qualifying Project Worcester Polytechnic Institute in partial fulfillment of the requirements for the Degree of Bachelor of Science, Sponsored by the Fire Services Museum of Victoria. Authors: Daniel Duff, Arkady Governik, Jacob Spada and Nicholas Janco, 12 December 2018. This map is highlighted below.



The weather conditions on the day were very hot and windy on 6 February 1851. There is inadequate information for the author to undertake fire danger index or intensity assessments for grasslands nor forests with accuracy, noting the lack of wind speed and humidity data, specific times of datasets and fuel loads. However, assessing all information in a subjective manner and the available data, the weather information, the references to fierce hot winds (and the importance of wind speed in fire danger indexes, the fire descriptions, the scale of devastation, the very large area of the bushfires, human loss and firebrands at sea, it is more than likely that the grassland and forest fire danger indices would have been extreme on 6 February 1851 and fire intensities of the bushfires likely very intense.

It is important to understand bushfire history before white man's arrival in Australia. There is good information within an article titled "The history of fire in Australia — and how it can help us face the bushfires of the future" ABC Radio National, by Monique Ross and Annabelle Quince for Rear Vision Posted Mon 10 Feb 2020 at 8:50am, updated Mon 10 Feb 2020 at 1:49pm.

KEY POINTS EXTRACTED FROM THIS ARTICLE AS DOT POINTS INCLUDE:

- This summer's horrific bushfires have felt more intense than ever, the threat more immediate and encompassing — but fires are not new in Australia. They have shaped our continent for thousands of years — and there are lessons in history to help us face the risks of the future. "We are the fire continent of the globe, so it's not surprising that we are so concerned about the future of fire as we go into hotter times," says Tom Griffiths, an Emeritus Professor of history at ANU. "The answers are always going to be local, ecological and historical."
- Indigenous Australians celebrated, hunted, cooked and fought with fire, and used it to manage the land. "What had

already been a fire continent became even more so with the work that was done by Aboriginal people over a long period with the fire stick," Professor Griffiths says. Indigenous land management practices included "cultural burning", which helps prevent fire risks and protects native habitats.

- "When European settlers and newcomers arrived they saw a cultivated landscape," Professor Griffiths says. "To those colonists it seemed like it had been prepared for them and their stock, it seemed like some piece of magic. "What they didn't realise is that it was actually an open, carefully managed landscape that had been created that way by Aboriginal people over a very long time."
- The carefully managed fire practices used by Indigenous Australians were drastically altered with the arrival of Europeans in 1788 — with disastrous consequences. "They removed the managers from the landscape. And so the land was let go wild, effectively, in a way it had never been wild for tens of thousands of years," Professor Griffiths says. Professor Griffiths says the British settlers reacted to bushfires with astonishment — back home, fire had been something for warmth and cooking, not land management. "They didn't know the power of the element that they had unwittingly unleashed," he says. He says the first record of this astonishment was Black Thursday in 1851, where "virtually the whole of the newly established colony of Victoria was alight".

Delving further into Aboriginal use of fire, there is important information in the paper "Human fire maintains a balance of nature" by Vic Jurskis Forests NSW Abstract (R.P. Thornton (Ed) 2011, 'Proceedings of Bushfire CRC & AFAC 2011 Conference Science Day' 1 September 2011, Sydney Australia, Bushfire CRC):

- Eucalypt forests are fire dependent ecosystems that were shaped by human burning over about 50 ka (Pyne 1991; Bowman 2003). Loss of species (e.g. Bowman 2003; Penman et al. 2008; Jurskis 2011), chronic decline of eucalypts (Jurskis 2005; Close et al. 2009, 2011; Jurskis et al. 2011) and megafires (Jurskis et al. 2003; Adams and Attiwill 2011) can occur with environmental changes in the absence of frequent burning. Human fire is essential to maintain diversity, resilience and fire safety in these forests.
- A perception of conflict between conservation of biodiversity and burning for socioeconomic protection persists in Australia. Numerous studies of 'impacts of burning' have concluded that burning depletes nutrients, simplifies vegetation structure by reducing woody vegetation and fallen timber, and threatens biodiversity. However ecological history shows that burning can

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maintain a dynamic balance in eucalypt ecosystems whereas nutrients, woody vegetation and fallen timber accumulate in the absence of fire, impairing their health, resilience, diversity and safety. Some recent studies of fire and nutrient cycling have elucidated the underlying processes and provided insights into the intervals between fires that can maintain health, resilience and diversity. Human fire is part of the 'balance of nature' in eucalypt ecosystems.

In this review the term ecological maintenance burning has been used rather than prescribed burning, controlled burning or hazard reduction burning, as well as cultural burning.

As extracted from "Prescribed burning in south-eastern Australia: history and future directions", 2020 by Morgan et al.:

The risks to human lives, property, biodiversity and the environment associated with wildfire are increasing in south-eastern Australia due to climate change, and the wider use of prescribed burning is essential for managing these. The increasing extent and occurrence of wildfire disasters in the region indicates that current fire management will not sustain the full range of ecosystem processes and biodiversity, nor reduce to an acceptable level the impact of wildfires on human lives and property. There is compelling evidence for the greater use of prescribed burning to reduce wildfire risks and impacts, rather than committing increasing resources to wildfire suppression.

In 1890, the explorer and naturalist Alfred Howitt reflected on the impacts of European settlement and farming on the pre-European fire regime. In a report to the Royal Society of Victoria, he recounted his extensive observations of the previous 25 years in eastern Victoria, linking a thickening of forest growth and an expansion of forest cover to the decline of Aboriginal influence on land management, thereby overturning a regime of regular light fire in favour of periodic but more intense and damaging blazes in heavier fuels (Howitt 1890).

The above research highlights many of the observations in this review in regards to open forests thickening very quickly in this period and following the 1851 bushfires. The above research by Morgan et al (2020), by Vic Jurskis, at Bolin Bolin and other research highlights the importance of mild Aboriginal cultural and ecological maintenance burning in the landscape keeping forests healthy, biodiverse with fuels at safe levels in that process. As noted by Morgan et al (2020), the current fire management will not sustain the full range of ecosystem processes and biodiversity, nor reduce to an acceptable level the impact of wildfires on human lives and property.

Noting that these bushfires were 170 years ago, identified learnings and observations at the time of the 1851 bushfires have been identified and are included in the full paper.



Conclusions.

The weather conditions on 6 February 1851 were extreme, at midday on Thursday 6 February the thermometer at Charles Brentani's shop was 110°F (43.3°C) in the shade and 129°F (53.9°C) in the sun. Similar extremes were not reached again in Melbourne until 1876 (43.7°C in the shade), 1939 (45.6°C) and 2009 (46.4°C). Fuels were extremely dry. The bushfires on 6 February and at times after were intense and extensive, with up to 5 M hectares impacted. There are indications of very long distance firebrand movement in the 1851 bushfires as observed by Captain Reynolds.

Vegetation, fuels and fuel loads build up very quickly following reduction in Aboriginal cultural burning practices. It is apparent in 1851 the fire landscape wasn't safe, given the 1851 bushfires scale and intensity. As noted by Howitt and other explorers, seedlings and regrowth was reduced after low intensity burns. As noted by Howitt in 1891 "After some years of occupation whole tracts of country became overgrown by forest and arborescent shrubs.

The importance of Aboriginal cultural burning/ ecological maintenance burning in setting up safe and healthy landscapes is critical, apply this across landscapes.

There was some awareness of precautionary bushfire measures for crops and grasses at the time of the 1851 bushfires. Other risk measures were used such as in the Wimmera and provision was made for a place for safety in case of fire. An Act to Restrain the Careless Use of Fire was passed in February 1854.

Noting that these bushfires were 170 years ago, the review has identified a number of learnings and observations in relation to the 1851 bushfires (considered before, during and after the 1851 bushfires) and also for the future.

Looking at this laterally, there are potential opportunities to review farm and local practices to further reduce bushfire risks for stock, houses, structures at the paddock, farm and local government level, identifying strategic areas for stock safety areas. The same applies for identifying refuge areas, establishing effective firebreaks and managing fuel loads on roads which are escape paths.

Another potential learning area is provision of fire training and PPE for key personnel who will be involved in bushfires protecting houses, structures and infrastructure and will defend their homes. There will always be a lot of people assisting in bushfire control and mop up, and it is better that these personnel are trained and have sound PPE when megafires arrive than not be.

Opportunities for improved fire management in Australia.

John O'Donnell

*The US Forest Service released the important document *Confronting the Wildfire Crisis A Strategy for Protecting Communities and Improving Resilience in America's Forests FS-1187a* (<https://www.fs.usda.gov/sites/default/files/Confronting-Wildfire-Crisis.pdf>) and associated documents in mid-January 2022. This positive USA fire development is summarised into key points below:*

- Annual US funding for fuels and forest health treatments has been limited and uncertain, and patterns of placing treatments have never approached the scale of the needed work.
- Many western USA landscapes are at grave and growing risk of extreme wildfire impacts due to a combination of accumulating fuels, a warming climate, and expanding development in fire-prone landscapes. Past land use practices, drought, and an overemphasis on fire suppression are also contributing factors. Each factor alone elevates the risk, but the layering of each factor on the next has increased the risk exponentially, reaching the crisis proportions we see today.
- In caring for the land, there is no substitute for wildland fire in fire-adapted forests. More than a century of research has shown that low-intensity fire reduces fuels across landscapes, slowing large wildfires and diminishing their severity. To restore forest health and reduce wildfire risk, a large multiorganizational workforce with expertise in proactive fuels and forest health management is needed for thinning forests, conducting prescribed fires, and using lightning fires and other “unplanned ignitions” to return fire to the land and restore forest health.
- This is the new wildfire reality facing much of the West (US): it is nothing less than a forest health crisis. A healthy forest is resilient— capable of self-renewal following drought, wildfire, beetle outbreaks, and other forest stresses and disturbances— much as a healthy person stands a good chance of recovering from a disease or injury.
- The Forest Service will work with partners to focus fuels and forest health treatments more strategically and at the scale of the problem, using the best available science as a guide.

With the support of our partners, states, Tribes and local communities, the Forest Service is collaboratively implementing this new strategy across jurisdictions and landownerships to protect communities, critical infrastructure, watersheds, habitats, and recreational areas.

- Under this 10-year strategy, we will work with partners to: Treat up to an additional 20 million acres on National Forest System lands; Treat up to an additional 30 million acres of other Federal, State, Tribal, and private lands; and Develop a plan for long term maintenance beyond the 10 years.
- Forest Service partners include Firewise, local fire safe councils, the Fire Adapted Communities Learning Network, and the Ready, Set, Go! Program.
- The US will focus on key “firesheds”— large forested landscapes and rangelands with a high likelihood that an ignition could expose homes, communities, and infrastructure to wildfire. Firesheds, typically about 250,000 acres in size, are mapped to match the scale of community exposure to wildfire. Together, they will treat the firesheds at highest risk first and, then, move on to other western firesheds, accelerating our treatments over 10 years.
- In addition to creating defensible space around homes and other buildings, communities can support land managers in conducting fuels and forest health treatments at the pace and scale needed to reduce wildfire risk.
- The (US) Bipartisan Infrastructure Law provides nearly \$3 billion to reduce hazardous fuels and restore America's forests and grasslands, along with investments in fire-adapted communities and post fire reforestation.
- The (US) National Cohesive Wildland Fire Management Strategy gives us a common policy for addressing the challenge of wildland fire management through its three central goals: (1) restoring fire adapted ecosystems on a landscape scale; (2) building fire-adapted human communities; and (3) responding safely and effectively to wildland fire.

Continued on next page >>

OPPORTUNITIES FOR IMPROVED FIRE MANAGEMENT

Bill Gabbert (2022) posted an article titled Forest Service announces 10-year initiative to increase fuel treatment in Wildfire Today on January 19, 2022 (<https://wildfiretoday.com/2022/01/19/forest-service-announces-10-year-initiative-to-increase-fuel-treatment/>), key points summarised:

- On September 29, 2021 in a hearing before the House of Representatives Agriculture Committee's Subcommittee on Conservation and Forestry, new USFS Chief Randy Moore said, "...We must actively treat forests. That's what it takes to turn this situation around. We must shift from small scale treatments to strategic science-based treatments across boundaries..."
- The Forest Service will work with other federal agencies, including the Department of the Interior, and with Tribes, states, local communities, private landowners, and other partners to focus fuels and forest health treatments more strategically and at a larger scale.
- The Bipartisan Infrastructure bill signed by the President November 15, 2021 authorized about \$2.42 billion for fiscal years 2022 through 2026 for fuels-related projects. (M = million)

\$100M, Pre-fire planning, and training personnel for wildland firefighting and vegetation treatments; \$20M, Data management for fuels projects and large fires; \$100M, Planning & implementing projects under the Collaborative Forest Landscape Restoration Program;

\$500M, Mechanical thinning, timber harvesting, pre-commercial thinning; \$500M, Wildfire defense grants for at risk communities; \$500M, Prescribed fires; \$500M, Constructing fuelbreaks; \$200M, Remove fuels, produce biochar and other innovative wood products

The positives out of these US policy developments and land management commitments for the US are many and include:

1. There is key federal legislation commitment in place for this work reducing fuel, increasing prescribed burning, improving forest health and expanding community mitigation work under the Bipartisan Infrastructure bill and other legislation.
2. There is firm commitment to this work through Confronting the Wildfire Crisis A Strategy for Protecting Communities and Improving Resilience in America's Forests and also the earlier National Cohesive Wildland Fire Management Strategy in place.
3. There is a generally good awareness of the forest fuel load issue across forests, at very high levels and changes in openness of forests since fire suppression became the focus.

4. There is improved funding to reduce fuel loads, prescribed burning, forest thinning and community protection.

5. The Forest Service is a key component of the program, in cooperation with other land management agencies, as is forestry and forest products.

6. There is active community involvement in fire management and this will increase. Forest Service partners include Firewise, local fire safe councils, the Fire Adapted Communities Learning Network, and the Ready, Set, Go! Program.

7. Optimising forest health is being actually considered and addressed.

8. Thinning is accepted as a sound option to improve forest health. Open forests from a century ago before fire restriction policies were put in place are important considerations.

9. Indian burning practices are being considered and addressed.

One concern with the approach adopted in the US is the focus on wildfire/ urban interfaces which misses large areas of the landscape. This is a critical issue when wildfires occur in untreated areas and move over large distances. Another concern is whether the major funding contribution is adequate considering the massive wildfire costs over the last few years in the US, especially on the west coast, it is understood that utility impacts alone have been huge and considerably greater than provided funding.

Meanwhile back in Australia, the wildfire situation is also not good and as time goes by it is getting worse. Considering Australia's situation against the nine positives out of the US policy developments and land management commitments, this is assessed below:

1. There is no such bill or similar bills across Australia in regards to the US bipartisan infrastructure bill, US National Cohesive Wildland Fire Management Strategy and other legislation. There is no effective, integrated nor broad federal/ state commitments in regards to what the US has committed to, reducing fuels, increasing prescribed burning, improving forest health and expanding community wildfire mitigation work.

2. There is limited funding and strategy for improving resilience in Australia's forests and protecting communities, irrespective of the fact we don't have a federal forest service. There are systems and opportunities to address this.

3. There is a poor consideration of the fuel load issue across forests and actual forest fuel loads in forests, at very high levels and heights and increasing. There is inadequate action addressing the fuel load issue and reducing community, infrastructure and fauna impacts from wildfires.

4. There is totally inadequate funding, focus and commitment for reducing fuel loads, undertaking prescribed burning, forest thinning and community protection. There is inadequate state funding for prescribed burning and minor federal funding to increase prescribed burning, noting areas of prescribed burning are very small and decreasing and communities are at risk. There is inadequate funding for prescribed burning for many land management agencies. On data I have, areas of annual prescribed burning in NSW have reduced since 2000, but were never at adequate levels across the 27 million hectares of forest in NSW, likely since the 1960's and 70's.

The 1998 NSW Auditor General performance audit report information refers to 600,000 hectares per year of prescribed burning (2.2 % of NSW forests) in NSW around the year 2000 in NSW. The prescribed burning of the 7 million hectares of NPWS land in 2020/ 21 was 53,145 ha, which is 0.76 % of NPWS lands. The incidence of large wildfires in Western Australian forests over the last 67 years data unequivocally show that when the area of prescribed burning trends down, the area of uncontrolled wildfires trends up, the ideal area of forest burnt annually appears to be about 8%.

5. In many states, forest services are being destroyed and skills of many forest services inadequately utilised. Thinning of regrowth forests and mild fire is a good option to reduce wildfire risk. There has been a loss of wildfire skills over the last 30 years, I and many others have seen this, particularly at mid to higher levels. This applies with wildfire control, backburning, prescribed burning and in some cases the use of aircraft in prescribed burning.

6. There is little active community involvement in fire management across Australia, only in a small number of cases. The wildfire impacts on towns and cities across Australia has been large over long period. Heavy investment in avenues such as the fire adapted communities, firewise, local fire safe councils, would be beneficial.

7. There is generally very poor actioning in regards to forest health and the decline of forest health across Australia's forests, mild fire is an important component of improving forest health and setting up healthy and landscapes. Completed research work by a number of experienced forest researchers clearly shows this. This includes research by Jurskis (2016) 'Dieback' (chronic decline) of *Eucalyptus viminalis* on the Monaro is not new, unique or difficult to explain"; Jurskis and Walmsley (2012) "Eucalypt ecosystems predisposed to chronic decline: estimated distribution in coastal New South Wales"; Jurskis (2005) "Eucalypt decline in Australia, and a general concept of tree decline and dieback"; Jurskis and Turner (2005) Eucalypt dieback in eastern Australia: a simple model; Turner et al (2008) "Long term accumulation of nitrogen in soils of dry mixed

eucalypt forest in the absence of fire"; Turner and Lambert (2005) titled "Soil and nutrient processes related to eucalypt forest dieback" clearly highlights the research is there to be adopted.

8. In many cases, thinning is not used nor allowed to improve forest health and yet is an important tool to maintain forest and tree health, reduce fuel loads and establish healthy and safe landscapes. This is occurring because land is being locked up, restrictions placed on forestry, state forest service reductions, fire restrictions, rules and other factors.

9. There is inadequate consideration of Aboriginal cultural burning in this country, note this is starting to change. Aboriginal people set up healthy and safe ecosystems across landscapes, noted by explorers, early settlers and Aboriginal people.

CONCLUSIONS.

There are very serious issues occurring in Australia restricting prescribed burning, thinning, improved forest health and healthy and safe landscapes.

It would be positive for Federal and State governments, politicians, agencies and local governments to step up in relation to these issues and learn from the developments in the USA.

In addition, it would be positive for the political parties, governments, politicians, agencies and local governments to address the failures in wildfire management by considering the above information and listening to skilled land management/ wildfire professionals (active and retired) in development of their policies. There is considerable opportunity for inter party cooperation and for taking a lead on these issues, especially considering the devastating wildfire impacts that have occurred.

Federal, and possibly state incentives, to increase prescribed burning, thinning and improve forest health are very good opportunities. Reviewing the Federal focus on part payment of emergency wildfire costs, when mitigation activities such as prescribed burning are very small/ inadequate, would be a good option, using that funding increasing incentive payments for sound prescribed burning operations meeting minimum targets.

It is opportune for communities to start pushing for community wildfire reforms and actions and setting up fire adapted communities.

The time for adaptive land management action is well past overdue, increasing mild prescribed burning, thinning and improving forest health across all forested landscapes.

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State forests have something for everyone

As a volunteer firefighter, you have no doubt spent a lot of time in the bush under challenging conditions.

However, nature also has a kinder side and can offer a wide range of recreational activities. State forests in particular accommodate forest users from across the community and offer a wide range of opportunities to recreate and reconnect with nature.

If you are a mountain biker, bushwalker, gold panner, runner, camper, hunter, 4WDer, trail bike rider, meditator, horserider, rock climber or forager, there is something for you on the two million hectare State forest estate. You can even bring the family dog!

Nature-based tourism supports our regions

State forests play a critical role in regional communities and economies, particularly when it comes to nature-based tourism.

NSW State Forests are sustainably managed for a variety of values, including ecological, recreational, Aboriginal culture, timber and social values.

State forests across NSW are magnets for people wanting to connect with our unique natural environment. From award winning attractions, to natural wonders, to adventure and excitement, there is something for everyone!

Camping on State forests

State forests provide many established camping areas. Some contain space for a number of tents or caravans, fireplaces and toilet facilities. Many State forests also have picnic sites with facilities such as tables and BBQs.

All State forests are free to camp in. Camping sites cannot be pre-booked or reserved and a maximum length of stay applies.

Campfires and firewood

In most areas, firewood is not provided, so you are advised to bring your own, or a gas BBQ.

As you can imagine, visitors need to be aware of fire regulations, especially Total Fire Bans and promptly report all bushfires to the emergency services by dialing triple zero (000).

Solid Fuel Fire Bans apply in many State forests over summer, banning campfires and barbecues using wood, charcoal or other solid fuel.

Camping is permitted in all State forests (except for Cumberland and Strickland State Forests). Camping is generally not permitted in picnic areas. Exceptions are rest areas in places where major highways pass through State forests.

Hiking and bushwalking

There are many interesting and challenging walking and hiking trails in NSW State forests, incorporating magnificent scenery and natural features.

Distances range from a few hundred metres to several hundred kilometres with varying degrees of difficulty.

Many popular walks such as the Great North Walk from Sydney to Newcastle and the Six Foot Track in the Blue Mountains are administered by Crown Lands and pass through State forests.

Take a look at important information when visiting state forests for tips on safety and sustainable recreation.

Plan your trip carefully, never walk alone and ensure someone knows your whereabouts.

Using roads in NSW State forests

State forests have an extensive network of roads and fire trails throughout. These serve a practical purpose – allowing access for timber harvesting and for protecting the forests from summer bushfires. They also provide access to the forests for the community including tourism and recreation – both to get to fantastic visitor sites or perhaps use four-wheel drives or trail bikes to explore the forest.

You are welcome to use State forest roads in line with the following conditions:

Normal road rules apply to State forest roads.

Drivers and riders must be licenced as required by law (this means no underage riding or driving).

Vehicles, including motorcycles, must be registered, the issued registration plate must be fitted and clearly displayed (this means unregistered bikes and ATVs are not permitted).

Riders must wear safety equipment as required by law.

Vehicles, including trail bikes and 4WDs, are only permitted on roads, formed vehicle trails and fire trails. Creating new tracks and bush bashing is not permitted. Single tracks through the bush, which may have been created by a previous rider, are not permitted. It is an offence for riders and drivers to both create or use single trails.



Single trails are not formed roads and are unauthorised trails unless written permission is given by Forestry Corporation.

You must obey any signage, directions and gates to ensure sensitive areas and assets are protected. Private properties adjoining State forests are respected; and your safety and that of other forest users is maintained.

Cumberland State Forest is Australia's only metropolitan State forest — camping, trail bike riding and 4WDing are not permitted at this forest.

Conditional registration of ATV or quad bikes does not apply to State forests and does not permit their use in State forests. For information on conditional registration of ATV or quad bikes visit the Roads and Maritime Service website (www.roads-waterways.transport.nsw.gov.au).

Protecting yourself and our roads

With 60,000 km of forest roads within NSW State Forests, we all need to protect our roads from unnecessary damage. Please treat our roads with respect and ensure they remain open for recreational use.

Avoid driving in wet weather conditions to prevent unnecessary damage to the road and environment

Slow down and respect all road users including trucks, vehicles, runners/walkers, cyclists, horse riders and dog walkers.

Please remember to drive cautiously. Plan your trip and know your route. Check the weather forecast for fire, wind, rain, flood and snow. Many of our roads are in remote areas with limited or no mobile phone reception.

Remember that these forests are working forests, roads are also used by trucks and other forest visitors. Other heavy equipment such as excavators, bulldozers and graders can be encountered in the forest at any time so always drive at a speed which will allow you to stop if you meet any other vehicles.

In profile: Niigi Niigi (Sealy Lookout)

Niigi Niigi (Sealy Lookout) is recognised as one of NSW's premier tourism attractions.

A gold medal winner in the NSW Tourism Awards, the popular spot is found in Orara East State Forest and showcases the natural beauty of Coffs Harbour.

It is also Coffs Harbour's first eco-certified tourism attraction and home to the famous Forest Sky Pier. The pier offers visitors an amazing panoramic view from mountains to the coast from 15 metres above the forest floor.

The Forest Sky Pier is complemented by an all-access undercover picnic area, picnic tables in surrounding forest and rainforest walking tracks.

Just 15 minutes from Coffs Harbour, Niigi Niigi also incorporates Giingan Gumbaynggirr Cultural Experience tours, helping people learn about culture and practices of the Gumbaynggirr people.

Visitors can also take an adventure with the Coffs Treetops, climbing, soaring and traipsing through the canopy.

Visitors should also take time to visit Gumgali Track at the adjacent Korora Lookout, a First People Interpretive Walk and experience that tells the Gumbaynggirr story of Gumgali, the Black Goanna. Visitors can also listen to the story in Gumbaynggirr language at the sound bar.



Image:
The 'good'
bushfire works its
way towards us.

When the Bushfire came, I Cheered!

Author: Geoff Walker

With the eastern seaboard currently ravaged by bushfires, what sort of an idiot would actually cheer when one worked its way down the peninsular where he lived? I did, and there were a lot of others who did the same.

To understand why, we must go back over more than a year when a winter bushfire got going to the west of the town. It did for us what the volunteer firies couldn't: it got rid of the ground fuel with minimal canopy scorch. No lives or property were lost. Had this 'good' bushfire not happened, the peninsular would have been obliterated the following summer when a firestorm with winds gusting to 100kph came our way. No fire fuel meant that it simply went out. Today, as thousands of Australians worry about the bushfire threat, we on the Tilligerry peninsular are safe. With only one year of fuel build-up, we have little to worry about.

When bushfire management passed from local control to government bureaucracies, the political influence of the green movement virtually stopped the off-season burn offs. This traditional practice dated back to the black man and his firestick management of the landscape. The European settlers adopted it as did farmers and local grassroots volunteer firefighters.

In researching my bushfire book: 'White Overall Days' I found that our local brigade averaged some 15 burn offs per year in the decade of the 1970s; nine in the '80s, a mere two or three in the '90s and similar numbers ever since. The reason for this dramatic fall-off in burn offs was the complex web of rules and procedures dumped on the local captains to comply with before they could do anything. They simply gave up as it was all too hard.

It was NSW Premier Bob Carr who proclaimed vast areas of the state of NSW as national parks. The problem was that they were not fire managed and have been devastated by uncontrollable firestorms. Lives and property have been lost as they roared out of

the forests into adjoining farmland and rural communities.

Several things have emerged from the current crisis. Greenie zealots are blaming coal mining and climate change for the fires. They refuse to concede that the green leaning management policies caused the fires in the first place by ensuring catastrophic fuel build-up. On the other hand, the vast number of ordinary sensible people now realize that cool burning delivers a far better environmental outcome than the wildfires. Even some of the self-serving bureaucrats are starting to talk mitigation rather than reactive suppression. Sadly, those wanting to sell stuff are in on the act and charred koalas now feature in advertisements for their products.

To continue down the current pathway of reactive firefighting means more of the same in the future. There will always be bushfires. They are an integral part of the Australian environment. We either manage them by controlled burning or suffer the consequences.

It is early December as I write this piece. The height of the bushfire season is not yet here. With dire weather predictions, what it will be like a month or two down the track does not bear thinking about!

The opinions expressed in this article are the members own and do not necessarily reflect the views of the Volunteer Firefighters Association (VFFA). The VFFA respects all objective views of NSWRFSA members and members of the public, and any views or opinions are not intended to malign any group, club, organisation, company or individual. The VFFA is supportive of open dialogue, full transparency and we encourage others to come forward.

AFAC22 taps into the power of human connection

In Adelaide on 23-26 August 2022, AFAC powered by INTERSCHUTZ, is set to delve into the issues defining and guiding the future of the fire and emergency management sector.

Now in its 27th year, AFAC22 will bring together leaders in research, technology, equipment and practice at Adelaide Convention Centre.

Working together to build resilience

This year, the AFAC Conference theme is Connecting communities. Creating resilience. Over four days, more than 100 conference presenters – including keynotes – will explore emergency management's unique role in connecting diverse communities.

The multi-streamed conference will incorporate the Institution of Fire Engineers (Australia) National Conference and the Australian Disaster Resilience Conference. International and local thought leaders and experts will look at collaboration, engagement and partnerships that form to bind people together. These links are enabled by technology and infrastructure that facilitate networks that are not limited by space, distance or time.

AFAC 22 will highlight how, through building connections, we are learning and working together to prepare for new challenges we face in a changing climate. We are sharing responsibility and are

building resilience in ourselves, our workplaces, our communities and the systems that support us.

The conference will explore how an inclusive approach across emergency management agencies, is integral to reducing risk and fostering resilience now and into the future.

The largest exhibition of its kind

Imagine over 12,000sqm of lifesaving, game-changing equipment on display and in action, each one vying for the attention of visitors. AFAC22 trade exhibition will feature the most comprehensive range of emergency management related exhibiting organisations from all over the world.

The exhibition space will include a number of zones designed to accommodate opportunities to view, experience and connect.

The Demonstration Zone will feature the latest equipment, technology and best practices – and include robotics, virtual reality firefighting equipment, rescue simulations and much more.

The Expo Stage will offer practical presentations aimed at helping those at the frontline of emergency management. Expect innovations and new technologies, mental health, wellbeing, community, resilience, trucks, PPE and more.

The Knowledge Centre is a central hub of research findings, including the popular poster displays. This is the place to meet other researchers and is a lounge area for conference speakers.

A future informed by research

The first day of AFAC22 is marked by the AFAC Research Day ahead of the traditional welcome and awards ceremony. This day is dedicated to revealing the latest research and utilisation that informs the work and practice of fire and emergency services.

“It is critical that the findings from the most up to date research informs the sector's practices to meet current priorities and prepare for future needs,” said AFAC CEO Rob Webb.

“Connecting and utilising evidence-based research with our practitioners is what keeps emergency management in a constant state of development and progress.”

Professional Development Day

Concluding AFAC22 will be the opportunity for people to enhance their understanding and ability through one-of-a-kind workshops and field trips.

An event like no other anywhere in the world, AFAC22 will once again bring the emergency management industries together in person – connecting communities and creating resilience.

For more details and to register your interest, go to afaconference.com.au



The poster for AFAC22 features a large image of the Adelaide Convention Centre at night. The AFAC22 logo is prominently displayed at the top, with the text 'powered by INTERSCHUTZ'. Below the logo, it states 'AUSTRALASIA'S LARGEST AND MOST COMPREHENSIVE EMERGENCY MANAGEMENT CONFERENCE AND EXHIBITION' and '23-26 AUGUST 2022 ADELAIDE CONVENTION CENTRE'. A row of icons represents various sectors: Fire, Emergency/Rescue, First Responders, Public Safety, Hazardous, Mining, and Fire Prevention. The poster lists several sponsors and partners, including AFAC, The Institution of Fire Engineers, Deutsche Messe, Adelaide Convention Centre, Government of South Australia, Australian Institute for Disaster Resilience, ISUZU AUSTRALIA, GAAM Emergency Products, babcock, and firetrail. At the bottom, it provides the website afaconference.com.au and the hashtag #afac22.

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Looking after volunteer firefighters' mental health Support when you need it

Looking after your mental health in your role as a volunteer firefighter may not be something you think about often. However, the nature of your work means you are likely to be exposed to distressing situations and potentially traumatic events, which may impact your mental health.

The levels of anxiety, depression, and suicide among police, emergency service and fire and rescue workers in general is too high and seems to be growing.

In 2014, *beyondblue* established the Police and Emergency Services Program to promote the mental health of police, emergency service and fire and rescue workers and reduce their risk of suicide. The program is for current and former/retired workers, volunteers and their families.

As part of this program, *beyondblue* is currently undertaking the National Mental Health and Wellbeing Study of Police and Emergency Services. This study involves active engagement with the sector to establish important national baseline measures and provide strong evidence about the issues affecting the mental health of police, fire and rescue, ambulance and emergency services and the best ways to provide support.

In addition, *beyondblue* provides a range of support and resources for police, ambulance, and fire and rescue workers to take action to manage their mental health and support colleagues they're concerned about. If you are struggling in your role as a firefighter or just with life in general, or if you are concerned about someone else, contact us and we'll point you in the right direction for further support.

Where to find more information

beyondblue

www.beyondblue.org.au

Learn more about anxiety, depression and suicide prevention or talk through your concerns with our Support Service.

☎ 1300 22 4636

✉ Email or 💬 chat to us online at www.beyondblue.org.au/getsupport

Heads Up

www.headsup.org.au

beyondblue's Heads Up website is all about supporting organisations to create mentally healthy workplaces. Access a wide range of resources, information and advice for all employees on staying mentally healthy at work.

✉ Email headsup@beyondblue.org.au

Police and Emergency Services Program

For more information about *beyondblue*'s Police and Emergency Services Program, visit www.beyondblue.org.au/pesresearch

For more information visit headsup.org.au/pes

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