



October 2019

HOT TOPICS

Celebrating our network

Opening of the Mick Tynan Memorial Bar at Elizabeth Valley

Volunteers and friends from around the Darwin rural area joined with the good folk from Elizabeth Valley Volunteer Brigade on 14 September to remember legendary volunteer firefighter Mick Tynan who passed away in 2015.

The Mick Tynan Memorial Bar is a beautifully crafted addition to the brigade's headquarters, and many a story of Mick's adventures (and occasional misadventures) were recounted at the official opening ceremony.

Mick and his wife Di Tynan were central to the creation of the brigade, and as the night wore on and the legend of Mick's exploits continued to grow, nothing even came close to topping the image of Mick running a drip torch at speed on horseback. A great night to celebrate the life of a pioneer volunteer firefighting in the Top End.



Mick Tynan's family at the official opening of the Mick Tynan Memorial Bar

Collaboration Celebration

On Wednesday 2 October, volunteers and staff from the Alice Springs NTFRS and Bushfires NT Brigades completed a joint fuel reduction burn along the Todd River in Alice Springs.

The planned burn commenced at 5.30pm along the western bank of the Todd, south of the Gap and targeted buffel grass fuel loads to protect nearby residential infrastructure and culturally significant red river gums from any unplanned fires later in the year.

This burn was a real community effort with the prison engaged to rake around the bases of the red river gums beforehand to protect them from any radiant heat and flames and both Northern Territory Fire and Rescue Service (NTFRS) and Bushfire brigade volunteers working together to achieve a successful outcome. Great effort to all involved.



Crews receiving their brief prior to undertaking burning operations

2020 Calendar Birds of Australia's Top End

Denise Lawungkurr Goodfellow has her 2020 version of the bird and wildlife calendar now available.

The aim of the calendar is to highlight some of the birds and habitat protected by our firefighters. All profits go to the Darwin River Volunteer Bushfire Brigade.

The calendars are \$18 each and are presently available from XPress Newsagent, Palmerston, The Bookshop Darwin, the Museum Shop, Museum and Art Gallery of the Northern Territory and the Berry Springs Shopping centre.

Or you can contact Denise Goodfellow directly at goodfellow@bigpond.com.au or 043 8650 835.



Farewell Lucas!!

The previous Community Engagement Coordinator and Project Officer who was responsible for developing the Volunteer Strategy, Lucas Fiddaman, has taken a 12 month development opportunity with the Department of the Chief Minister.

We wish Lucas all the best!

We welcome Tamara Rolph to the role, you can get in touch with Tamara on 8922 0847 or tamara.rolph@nt.gov.au



Mindful of Thankfulness

By Murph- Katherine Brigade

We hit the fire ground to protect life, property and the environment, without hesitation. As firefighting volunteers, this is what we do, and we do it for free.

To hear a thanks from a landholder is a delight, to receive an in-kind remuneration may take one's breath away! This is the case in Katherine recently following wildfires lasting days because of those ghastly, gusty winds. Our gratitude to all contributors is boundless on receipt of anything, even welfare of a 'sanga' and cold bottle of water is grand.

We thank those with generous hearts but I tend to think at the height of a disaster when fire is going every which way and resources seem thin on the fire line, there is total relief on seeing the arrival of landholders and neighbours who discerningly join the team with their outfit such as grader, bobcat, tractor and bucket/slasher, water trailer, slip-on unit or whatever. In addition, a graceful outfit, notable for pinpoint accuracy in cascading water onto the fire line, was a Bell Long Ranger toting a bambi bucket. In some areas it resembles the arrival of another brigade. And those who can't fight the fire come forth with food and refreshments.

All you selfless providers, regardless of what or when, are totally appreciated!

I truly trust I speak for all involved from Katherine Volunteer Bushfire Brigade, Edith Farms Volunteer Bushfire Brigade, Bushfires NT, NT Fire and Rescue and especially the fire victims.



THANKS EVERYONE!

Top end fire season efforts- Not all heroes wear capes

A massive thank you to our volunteers on their outstanding effort so far this fire season, there is no way to thank you all for the level of commitment that has been demonstrated when protecting your local communities. **THANK YOU**

Volunteer Survey

As a result of the Volunteer Strategy, Bushfires NT are undertaking a series of surveys annually. The first survey was released this month, a big thanks to those who took the time to do the survey!

The data we collect from these surveys will help Bushfires NT monitor progress of our commitments made in the Volunteer Strategy. This information will then allow us to make informed decisions to continue to change the way we do business and improve your experience as a volunteer.

Community Spirit

A huge thank you to local residents jumping in and providing help where they could from Katherine, Dundee to Humpty Doo locals have demonstrated real community spirit, just to name a few Josh Shultz from ProMech in Humpty Doo and his water tanker along with the Norbuilt gentleman and his water trailer who both attended the Thomas Road fire and allowed volunteers to fill water from their appliances.

A shout out to some of the residents on Lavington and Dundee Road whom assisted with their equipment in the mop up stage on September 15, 16 and 17.

Many more go unnamed but not unnoticed!



Dundee residents Colin, Alan & Mark with their equipment

Bushfires meets with brigades to discuss new funding and vehicle arrangements

Collene Bremner and Ken Baulch have been catching up with all brigades over the last few weeks to talk about changes to the brigade grants. They have also been explaining Bushfires NT's plans to upgrade the vehicle fleet in coming years.

The funding changes have come about because there is now a need for more clarity around the purpose of the funding, and we must be able to reassure government that the funds provided are in fact being used for the agreed purpose. There is a clear benefit for brigades in these new arrangements, Bushfires NT is committed to seeing all legitimate brigade operating costs covered by either grant funding or direct payment of costs. In the past, some brigades have found it necessary to conduct fundraising to cover some of their operating costs.

Changes to the vehicle fleet centre on a new Grass Fire Unit design. Following consultation with volunteers and other vehicle experts, a new design has been developed. This design will be trialled by building 3 prototypes for testing during the first half of 2020. After that we will seek feedback from brigades. The final layout will become the core design for new Grass Fire Units. Some of the key features that we have specified in this design include:

- an aluminium fabricated back to minimise weight and maximise water tank capacity
- removing any need to work on the back of the vehicle by making all systems easily accessible from the ground
- using a diesel powered water pump that is plumbed into the vehicle fuel system
- including a remote pump electric start/stop capacity operated from inside the cab (with a backup pull start)
- powered hose reel retraction system
- two spare wheels with a lift assist system
- a jack that will actually fit under the jacking point when the vehicle has a flat tyre!

The World Wide Web – EOC, Exchange9 Asia Pacific.

By Maggie Towers

Last month I attended the 'Exchange9 Asia Pacific' conference. The conference was held by the developers of Bushfires Emergency Management System (BEMS). Presentations were delivered over the first 2 days showcasing how different agencies have designed their emergency management platforms. A commonality between these agencies and Bushfires NT, is that our emergency management web platforms are created and hosted through the base product WebEOC. For example, Northern Territory Police Fire and Emergency Services use their own version of WebEOC, called WebEOC.

WebEOC is used by the Federal Government's Australian Medical Assistance Teams (AusMAT) who are based in Darwin. AUSMAT is a multidisciplinary health team incorporating doctors, nurses, paramedics, fire-fighters (logisticians), and allied health staff. They are designed to be self-sufficient teams that can rapidly respond to a disaster zone to provide lifesaving response. AusMAT responded to many disasters including cyclone recovery in Timor-leste and in the recovery of Cyclone Pam in Vanuatu. They have built 'boards' on their disaster management system to track volunteers and equipment. Their volunteer board includes information on volunteer training, their last vaccinations and passport details. They can use WebEOC to check if their volunteers are ready (or not) for international deployment. Their boards even capture each volunteer's PPE clothing size and issue date.

In Victoria, Victoria Police (VicPol) use WebEOC to manage their incidents. VicPol presented case studies analysing a number of terrorism incidents in Melbourne's central business district including the 2018 Melbourne stabbing attack. VicPol discussed how they managed information flow and capture through WebEOC. They also discussed operational lessons learnt.

Over in New Zealand, Maritime NZ are using WebEOC to manage marine oil spill preparedness and response. Maritime NZ have built boards specifically to track training and equipment. Those of you who have been involved in the development and launch of BEMS may find this fact interesting. In the United States, the Atlanta – Fulton County Emergency Management Agency created over 60 'boards' to manage a 5 day event, the national football league's annual championships, the Super Bowl. To place that in perspective for you, BEMS currently contains 6 boards.

Back in the NT, BEMS has been now live for over 12 months. A review was conducted in July, a number of staff and volunteers were consulted. We are now in the process of developing upgrades to make the system easier to use, and more effective at capturing and reporting data. There is so much potential for the future of our platform, but for now, we are working on making what we have work to the best efficiency for our users.



Bushfires Information Manager - Maggie Towers



FF1 Training delivery at Berry Springs

By Senior Fire Management Officer, Lee Gleeson

After a 5 day deployment to Batchelor assisting with IMT roles and readiness arrangements I travelled to Darwin on the Friday night in readiness to assist Ken Baulch with a FF1 Course at Berry Springs. This was the first time Ken and I were going to deliver this course together and me still being relatively new to the NT and with even less knowledge of the Top End, we knew, as Ken put it to all of the participants, that there would be ‘wrinkles’ as we delivered the training.

What a great meeting room and as we set up at 7.50am ready for an 8.00am start, the first of many wrinkles emerged, we were missing a “wire” that connects the laptop to the screen. Oh well while we waited we had the opportunity to introduce ourselves and complete the house keeping required for any formal gathering. It was evident early that we had a diverse and knowledgeable group of committed community members from LBVBB, DRVBB and BSVBB. We also had at our fingertips Haiden who helped us set up and kept all our props and the facility working at 100%.

From a dry central Australia to a humid and hot Top End I for one was loving the 2 air conditioners cranked up and keeping the room like a fridge, we had one participant though, sitting there in a singlet top that was almost shivering, nothing an overall jacket at the first break couldn’t fix.

I must say as the training progressed from 1 session to the next, I was impressed with the timing on the Agenda, I think for most of day 1 and 2 we were at worst 15 minutes out of whack. Impressive Ken!

What makes any course a success is not the presentations, or the quality of the presenters or even the welfare provided, but the participation of those being trained, what a great group, from the younger participants who asked some great and at times thought provoking questions, to the older generations who with their practical knowledge questioned the theory and commented how things they took for granted now made more sense. It is exciting when the conversations in the room involved everyone and participants and trainers had the opportunity to provide “war stories” to assist with the understanding of each session in the course. At this point I would also like to thank Kaz Purcival (DR07 / Captain) for her contributions throughout the 2 days, it is always advantageous to all of the participants to hear from the person that will lead them on the fire ground.

To hear firsthand what some of a captain’s issues are instils good practice from the get go and reassures our new fire fighters that they have great community leaders looking after them.

Yes, there were a number of “wrinkles” but at the end of the 2 days the community has acquired 12 new fire fighters that hopefully contribute to the safety of their respective communities for many years to come. I look forward to assisting with more training courses in the future and look forward to working with the training and engagement team to iron out some of the “wrinkles” as we go. Challenging each other with new concepts whether they be how a course is delivered or challenging each other with the actual content and concepts involved in firefighting by both participants and instructors will only increase the capacity of Bushfires NT staff and volunteers and will make us all better and safer firefighters moving forward.

On a personal note, I have delivered many FF1/ General Firefighter courses in my 30 years and it never ceases to amaze me that I learn something at every course, either from a fellow instructor or usually from a participant. What that continues to reinforce with me is that firefighting is a team effort and there is not one person that knows everything on a fire line. Every team member can contribute to the firefighting effort and that will ensure we are a strong team and a safer team if we do. We need to continue to encourage everyone’s voice on the fire ground and that will lead to an even stronger safety culture in a very dangerous profession.

Thanks to Krissy Riley and Ken for inviting me to assist and I look forward to helping out on any future courses.



Lee Gleeson presenting Fire Fighting 1 training



Our latest recruits

Cathedral Termite Mounds

By Dr Denise Lawumkurr Goodfellow, Darwin River VBB

My partner and I bought our Darwin River property in 2013. The previous owners had taken great care of the woodland covering the 20 acres and it was largely pristine and weed-free. But the middle strip from south to north was virtually bare, apart from a few trees and a couple of old cathedral termite mounds. It had been cleared years before for a native cypress plantation.

Then in 2006 a ferocious wildfire had come from the southeast, and after destroying the young cypress threatened the sheds and house. The original vegetation had not regrown, fearing a repeat fire the previous owners kept the area mowed short.

However, the substrate appeared to be sand sheet. Thinking of the fabulous plants and animals on other sand plains, such as that near the Howard River, I hoped that left alone this corner of our place might too produce some interesting wildlife. So we decided to discontinue broad scale mowing and clearing, except for a very wide firebreak around the buildings.

The wet seasons of 2014 and 2015 seemed to prove our strategy right. Metre-high native grasses covered the sandsheet, and dotted in between were little herbs and vines with purple, pink, yellow and white flowers. And there was little sign of gamba or mission grasses or other weeds.

We decided to let the experiment continue. Initially, the lack of live cathedral termite mounds on the property was a surprise as there are several magnificent specimens along nearby Spencer Road. I thought their absence from our place might have been due to the regular mowing, apart from styming building activity the weight of machinery would compress the extensive tunnels by which these grass-eating termites transport food underground.

We didn't know whether the cessation of mowing might help it recover. But one can hope, and we did. Cathedral or spinifex termites, *Nasutitermes tridiae*, are most closely related to species found in Papua New Guinea and South America, and entered this continent over the last 20 million years (Yeates and Arab, 2017).

The term 'nasute' is derived from the Latin *nasutus*, meaning 'large-nosed' and refers to a 'spout' protruding from the heads of those termites whose task it is to defend the nest. But instead of biting intruders these soldiers squirt a noxious fluid at them from their 'nose'.

In November 2016, there was a marked change to our grassland, one that absolutely delighted us. Among the new vegetation were several small cathedral mounds. By November, 2018 there were 39 such mounds.

Their rate of growth was hard to believe, many had reached a height of 2 to 3 metres and one towered above all others at 5 metres. That one grew a metre in less than a week at the end of October 2018 (Michael Stott, pers. comm.).

Other large mounds appeared further to the north and west. The mounds and their rapid growth attracted the interest of local entomologist, Dr Graham Brown who contacted Professor Emeritus Martin Williams and Professor Nigel Dempster of the University of Adelaide. Martin, a soil scientist, and Nigel, a nuclear physicist, wanted to research the mounds in order to explore some archaeological questions among others.

They flew to Darwin in mid-September with Nigel's student Kathryn McDonnell, to commence their research. The plan was to dig 2 trenches 1.5 metres deep, one leading to an old unoccupied mound and another to a live mound, and here I must add that without the assistance of our neighbours the research would not have happened. In the short time available I was unable to find a backhoe operator willing to travel to Darwin River.

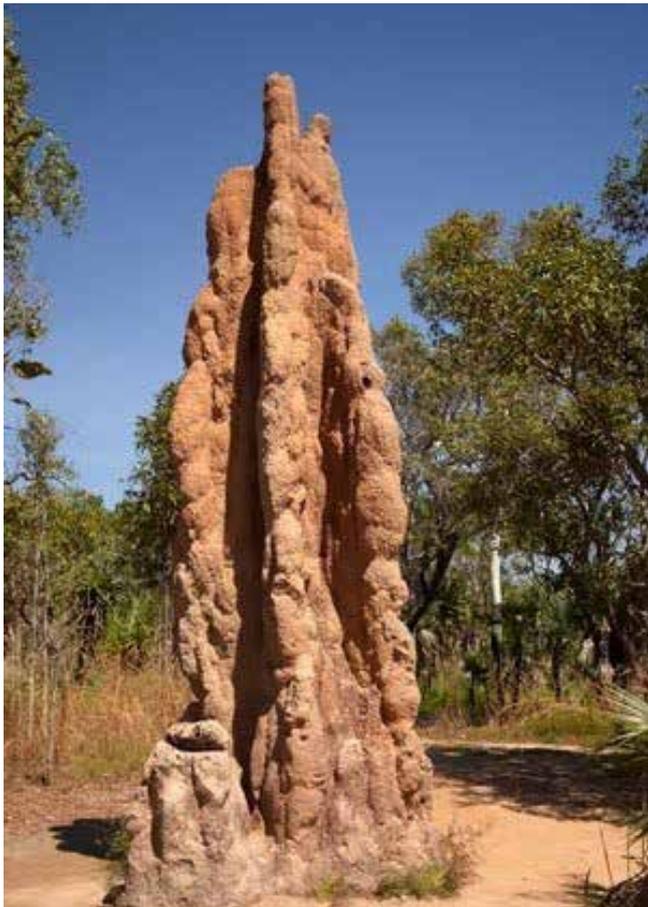
Then a local, Dave, came to the rescue with his excavator and guided by the scientists on where and how to dig, spent 4 hours working away. Thank you, Dave, and all our other neighbours who helped out. After the trenches were dug, holes were drilled for the measurement of OSL (Optically Stimulated Luminescence). This method of calculating age measures the light emitting from sand grains.

The scientists are now back at the University of Adelaide evaluating the results of this leading-edge research. On their way back to Darwin our visiting scientists were stopped by billowing black smoke on Cox Peninsula Road, Martin exclaiming that it was like entering "the jaws of doom". And that brings me to another point of this essay. Wildfire mitigation - could cathedral termites have a role to play? We found our termites to be remarkably effective at removing flammable material from the landscape. Indeed, every year, 60 to 70% of the grass surrounding our termite mounds has disappeared by the late dry season.

This capability is not unknown - the African termites studied by Wood and Sands (1978) also reduced ground cover, but only by 20%. Secondly, might these huge cathedral termite mounds reduce wind speed, thus slowing the spread of any fire?



Research into the potential of termite mounds in fire mitigation is well overdue. Meanwhile, we'll just continue to enjoy our splendid termite mounds and marvel at their continuing growth and the tiny creatures that made them. Wood, T.G. & Sands, W.A. (1978). The role of termites in ecosystems, *Production Ecology of ants and termites*. (Brian, M.V. ed.). Cambridge: Cambridge University Press. Pp. 245-293. Yeates, D.K. & Arab, D.A. (2017). Parallel evolution of mound-building and grass-feeding in Australian nasute termites, *Biology Letters*, 13(2):20160665, DOI: 10.1098/rsbl.2016.0665.



Picture of cathedral termite mound



Mental Health Matters

Remember the below resources are available for all volunteers and their families free of charge

Darwin Consultant Psychologists (t/a Kim Groves and Associates Pty Ltd)	Toll free: 1800 289 129 (NT only) Phone: 8941 5369 Email: dcp@dcpnt.com.au	Darwin: 5/90 Frances Bay Drive Tipperary Waters NT 0820
		Alice Springs: The Retreat Aurora Alice Springs Leichhardt Terrace Alice Springs NT 0870
Darwin Psychology Services	Toll free: 1800 789 205 Phone: 8932 8460 Email: reception@darwinpsychology.com.au	3/8 Woodlake Boulevard Durack NT 0830
EASA Incorporated	Darwin: Toll free: 1800 193 123 (NT only) Phone: 8941 1752 Email: easadarwin@easa.org.au	Darwin: Level 2 The Avenue (Above Karma Cafe) 217/12 Salonika Street Parap NT 0820
	Katherine: Phone: 8941 1752 Email: easadarwin@easa.org.au	Katherine: Block F (Room 3) Katherine Regional Training Centre 19 Second Street Katherine NT 0850
	Alice Springs: Phone: 8953 4225 Email: easaalicesprings@easa.org.au	Alice Springs: Jock Nelson Building 10/16 Hartley Street Alice Springs NT 0870
Industry Health Solutions	Toll free: 1800 432 303 (NT only) Phone: 8931 2842 Email: info@industryhealth.solutions	6/5 McCourt Road Yarrowonga NT 0830
Relationships Australia Northern Territory Inc	Darwin: Toll free: 1300 384 277 Phone: 8923 4999 Email: reception@ra-nt.org.au	Darwin: Level 2 Cavenagh Centre 43 Cavenagh Street Darwin NT 0800
	Katherine: Toll free: 1800 650 276 Email: receptionfrk@ra-nt.org.au	Katherine: 6 Katherine Arcade 15 Katherine Terrace Katherine NT 0850
	Alice Springs: Free call: 1800 634 405 (Remote areas) Phone: 8950 4100 Email: receptionas@ra-nt.org.au	Alice Springs: 4/11 Railway Terrace Alice Springs NT 0870
Wisemind Psychology	Toll free: 1800 166 180 Phone: 8981 5805 Email: admin@wisemind.com.au	2/7 Fannie Bay Place Fannie Bay NT 0820