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Candice qualified as a veterinary nurse in Australia in 2005, being awarded the Novartis Award for Outstanding Achievement in Veterinary Nursing in her qualifying year. She has worked extensively in Australia and the UK, primarily in referral nursing (Emergency & Critical Care). She attained the Diploma of Veterinary Nursing (surgical) in 2009, qualified as a trainer & assessor in 2015, and completed the ISFM Diploma in Feline Nursing in 2018. Candice is interested in most aspects of veterinary nursing but her passions are feline nursing, ECC, working with students (and wildlife nursing!) In January - February 2020, Candice was deployed to Wandandian and to Cooma, NSW as a VBB/AVERT volunteer.

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Out of the ashes: volunteer nursing Australia's bushfire affected native wildlife – part I

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ABSTRACT: The Australian Summer of 2019–2020 has brought us our worst bushfire season ever recorded, covering approximately 14 million hectares (34.6 million acres) of countryside, an area equivalent to almost 60% of the UK. A current estimate of losses includes 33 human lives, 3,000 homes and over 1 billion animals (wildlife, farm and domestic animals), including 8,000 koalas. Many of our native species were already threatened or endangered prior to the fires; their populations have now been decimated and their territories and food sources have been destroyed, leading to the starvation of many initial survivors.

Wildlife carers have been overrun with injured and orphaned wildlife, with assistance coming from numerous individuals and organisations within Australia and overseas. One such group is the Australian-based international animal charity Vets Beyond Borders (VBB) and its Australian Veterinary Emergency Response Team (AVERT).

Keywords: volunteering; veterinary nursing; Australian wildlife; bushfires; burns treatment; macropods

Introduction and background

In January 2020, as one of many millions of people shocked and appalled by the unprecedented and widespread impact our bushfires were having on our native wildlife, I was one of approximately 1,000 people who registered with AVERT. AVERT was launched in 2015 by VBB in order to create a database of experienced veterinary personnel who could provide assistance at short notice in times of natural disaster or animal disease outbreak within Australia (Vets Beyond Borders, 2020). Whilst VBB does not deploy volunteers directly, it makes introductions between groups requiring veterinary assistance and volunteers on its database. It assists with travel and other costs for its volunteers, and also provides direct assistance to animal groups where needed.

On a Friday night in January I was contacted by a rescue group working on the New South Wales (NSW) South Coast, with the request, “Can you be here tomorrow?” Before the weekend was over, I found myself relocated from Melbourne to the Wandandian Kangaroo and Wallaby Sanctuary, part of Wildlife Rescue South Coast Inc. (WRSC).

Wandandian is a small rural community 3 & ¼ hours’ drive south of Sydney, with a population of approximately 326 (Australian Bureau of Statistics, 2016). The Wandandian Kangaroo and Wallaby Sanctuary, run by Adrina Selles, is set on a private property with the family home, comprising 16.2 hectares (40 acres) bordering on National Park land. Fires threatened the community on multiple occasions, with the family and sanctuary being evacuated four times. The bushfires reached the sanctuary on New Year’s Eve 2019, affecting much of the bushland on the property and resulting in the deaths of previously rehabilitated and released macropods. Fortunately, the family home and surrounding buildings were left standing (Figure 1).

When I arrived in late January 2020, the population of the sanctuary was approximately 32 macropods, primarily Eastern Grey Kangaroos as well as Red Necked Wallabies and Swamp Wallabies. This group was comprised of two adult females, both with burns to their hind feet; the remainder were joeys of varying ages, some with burns and other injuries, with all the joeys having been orphaned. Earlier in January a “pop-up” triage clinic was established at the sanctuary, staffed by local and overseas



Figure 1. Views from the sanctuary's "home" area, showing how close the fires came to the buildings.

volunteers. At this time both physical resources and manpower was scarce, but with ongoing media coverage and increasing awareness, the sanctuary soon attracted countless visitors from within Australia and overseas. Many visitors brought with them donations of medical supplies and money, and offers to help with our 30+ patients. Several groups took video footage, with the intention of increasing awareness of the desperate plight of Australia's wildlife in their home countries. It has been estimated that 25% of all donations to Australia's bush-fire relief funds have come from overseas, demonstrating the impact that this disaster has had on people worldwide.

I was part of a volunteer veterinary team of three people (initially two vets and one nurse, then one vet and two nurses). Our clinic was located in a shed on the property and our patients were grouped into three main enclosures: two adult females, 19 young/injured joeys and 11 older/uninjured joeys. In addition, we usually had at least 1–2 patients being nursed in the house, two "pinkie" joeys who spent most of their time pouched inside, and several "soft-released" macropods on the property, who voluntarily returned to the home

area for food and water at dawn and dusk (Figure 2).

Nursing challenges

One main challenge was the nature of the entire situation and the fact that we were essentially a "pop-up" triage clinic with a constantly changing veterinary and nursing staff base. It was difficult to develop a routine with so many people coming and going, all of whom needed at least a basic initiation and handover regarding patients; they also needed pointers about how the whole set-up worked! Much of the time we were flying blind with regards to what treatment we were able to provide, how this might be achieved and who were we actually answerable to! This was especially true if we wanted patients to have diagnostics such as imaging or bloodwork...where do we get this done, do we need to pay for it, or how can we access the "Bushfire Fund" the public is donating to, does the provider get reimbursed from this fund or do we need to pay and we get reimbursed? It was all very confusing because small individual groups did not appear to have access to money that was being donated to central collection points, and we did not know how to go about

getting it. This was in part due to the unprecedented scale of the crisis, with large areas of our country on fire simultaneously local wildlife groups were not necessarily aware of how they could get assistance.

Another challenge was supplies: we actually ended up with huge amounts of stock from both local and overseas donors and it was like Christmas for us prising open boxes to see what goodies we had! We ended up with enough IV fluids, bandage and dressing materials, disposable gloves, "puppy pads", baby wipes and irrigation fluids to last a very long time (which they would be needed for) but we also received many items we would not use. Our shed was crammed full of boxes as donations kept coming in, and we needed to negotiate a path through a constantly changing maze and create a semblance of order to be able to find what we needed.

A major challenge was the extreme heat. Daytime temperatures ranged from the mid-30's to the mid-40's, with our clinic-shed reaching 48°C at times. It was extremely difficult to work in this heat, with fans blowing hot air at us and we were constantly moving our patients around the yard



■ **Figure 2.** Keeping cool the macropod way. Left: Two released Eastern Greys return for a swim. Right: "Sage", with newly healed hind feet burns, decides that standing in a water bowl is more effective than licking her legs to keep cool.

away from the sun, turning on the misting fans and sprinklers and hanging wet towels on the fence line. No one was left without easy access to water and we were frequently dipping macropod noses into bowls of water or Vytrate (electrolyte supplement, Jurox Animal Health) to remind our patients to drink. As a result of our cooling efforts, bandages became wet and muddy, but this was the lesser evil in such intolerable weather.

Some of our more vulnerable joeys were moved into the house to escape the heat; one bedroom was set up with playpens and was significantly cooler with an overhead fan.

We were fortunate to have a swimming pool on the premises and we frequently jumped into the pool fully-clothed for a quick cool-off, then squelched back to work in the dirt/mud. Our shed was swarming with flies and other insects, so each afternoon we took to covering our main work tables with a sheet to minimise the number of dead bugs falling into our stock (Figure 3).

In many ways the burns were the least of our patients' problems. At least we could see them and treat them. More difficult to address was the fact that we were working with wild animals, most of whom had never had human contact before. They had also suffered a huge trauma, and being in captivity contributed to this trauma. As much as we tried to keep their environment as natural as possible, we could not alter

the fact that all the joeys were orphans, their territory had been destroyed and they were now reliant on people for their basic welfare. Capture myopathy was our constant silent foe; combined with other unseen complications such as respiratory tract damage from smoke inhalation and the extreme heat, some of our patients were lost.

It was, of course, not only the animals who were traumatised. The entire community has been affected. Local wildlife carers have lived through these fires in the past, and as one of them said to me, "No one was interested in helping us after a fire before, and once the cameras pack up and leave we will stop being news, but we will still be dealing with the after-effects for many months". That really brought home to me the fact that for these people this is an ongoing reality, and they will need physical and financial resources for a long time to come.

Throughout my time at Wandandian, I experienced a real feeling of camaraderie and people doing what they could to help. On one morning, a large team of volunteers arrived to plant new trees on the property. Existing enclosures were improved to provide additional protection from the sun. Local helpers were recruited and starting training, in order to provide ongoing support with feeding and other duties. Overseas teams from Canada, the USA, New Zealand, Germany and South Korea, as well as local documentary crews, spent time at the sanctuary. People all over the

world were naturally horrified about the loss of so many animals. In addition to the humanitarian considerations of any animal suffering, regardless of species and whether they are threatened or endangered, one of the major drawcards to Australia for overseas visitors is our unique wildlife. 87% of Australia's mammalian species are unique to Australia (WIRES & NSW Environmental Trust, [n.d.](#)); add to that our native birds, reptiles and amphibians. The long-term effects on our native animals and their environment will not be known for some time.

Summary

Part of what has attracted such widespread attention is the sheer scale of the devastation to our country and our wildlife, and the length of time the fires continued to burn. To estimate that over 1 billion animals have lost their lives to the fires does not do justice to the reality of the suffering that has taken place. How do you imagine the suffering of billions? One thing I know is that the suffering of any one individual is intolerable, and that individual does not suffer any more or less, depending on how many others are suffering as well. To try to imagine the fear and pain that each individual has experienced, multiplied by 1 billion, is overwhelming, and if we focus on this it is easy to become demoralised and wonder if we are making any positive difference at all. It was devastating for me to see some of these beautiful kangaroos and wallabies suffering and dying in spite of our best efforts. They are creatures with



Figure 3. Our clinic, and some of the donated supplies we received.



Figure 4. "Sandy", our second-smallest pinkie, emerging from her pouch for a bottle (#supercute).

such wonderful temperaments and they frequently made me laugh (usually when they got the better of me!) as well as cry.

However, as one vet said to me, all we can do is give the animals a chance, and do the best for them we can with the resources we

have. Sometimes it is enough and sometimes it is not.

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I would like to donate payment for these articles to the Wandandian Kangaroo and Wallaby Sanctuary: anyone wishing to donate to them directly can do so via www.wildlife-rescue.org.au/ Both the sanctuary and Wildlife Rescue South Coast Inc. (to which the sanctuary belongs) can be found on Facebook. Treatment and rehabilitation of bushfire-affected patients, and raising of joeys to a weight necessary for them to



Figure 5. Hanging out in the joey yard.



Figure 6. “Twister” was found on a golf course with a pronounced right head tilt and was hopping in clockwise circles. The day I left, (right) his head tilt was almost resolved, and he was hopping in an impressive diagonal straight line.

survive upon release, takes many months and requires substantial ongoing resources. Thank you.

Disclosure statement

The author is a financial member of Vets Beyond Borders.

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