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# AUSTRALIAN VETERINARY JOURNAL



**TOXICITY OF  
CYTARABINE IN DOGS  
BRUCELLOSIS IN A  
BOTTLENOSE DOLPHIN  
HYDATIDS IN THE  
NORTHERN TERRITORY**

**LEARNINGS FROM THE  
SUMMER WE HAVE JUST HAD  
CORONAVIRUS: A  
VETERINARY PERSPECTIVE  
AVA ANNUAL CONFERENCE  
2020 - THE GRAND PURSUIT  
OF KNOWLEDGE**

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## NEWS

- N6 **News in brief**  
B Telfer
- N8 **Learnings from the summer we have just had**  
J Crawford
- N10 **Will you raise your hand?**  
C Snell
- N12 **Any change in the wind could mean destruction - the vets working on the bushfire frontline**  
P Tucak
- N14 **Celebrating our health and welfare leadership this World Vet Day**  
B Telfer
- N16 **Coronavirus: a veterinary perspective**  
S Reinisch
- N17 **The impact of climate change on the size of migratory birds**  
P Nunn
- N18 **AVA Annual Conference 2020 - the grand pursuit of knowledge**  
S Beetson
- N22 **In service to our wildlife - a day with Southern Cross Wildlife Care**  
J Brown
- N24 **From the desk of Dr Mark Schipp**  
M Schipp
- N25 **Menopause in orcas may be beneficial to calves**  
P Nunn
- N26 **Pulling together in times of crisis**  
J Murray
- N28 **Our Wild Life**  
P Tucak
- N30 **Ethical dilemma: the diabetic cat**  
L Marwedel & T Stephens
- N32 **Study reveals factors that increase the risk of opioid overdose in American dogs**  
P Nunn
- N33 **New year, new skills**  
J Byrne

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# “Any change in the wind could mean destruction” - the vets working on the bushfire frontline

Veterinarians Justin and Linden Daniel own Pambula and Eden Veterinary Clinics on the NSW south coast. Since New Year's Eve when Linden's mother lost her home in the fires which hit the Cobargo region, the start of 2020 will forever be etched in the Daniel's memories as their community was impacted by massive bushfires.

For Justin and Linden, the anxiety of those several long weeks was immense. Constantly checking their mobile phones for bushfire emergency warning updates. Being in a chronic state of readiness to evacuate, packing and unpacking their kids, pets and a small number of precious possessions. Assessing, treating or euthanasing wildlife, livestock and much-loved pets. Seeing

the impact on their community, acts of kindness shining through the dark smoke-filled sky.

As Linden explains, on the 4th of January the fire spread with incredible speed: “The whole sky went pitch black at 4 pm, the ash was so thick you could hardly breathe outside and everyone had to wear face masks. This was the second of the five times we evacuated, we thought that we would lose the Eden clinic and our house that night. By a stroke of luck, the winds changed at the last minute and the fire stopped short just before Eden. Since then another fire broke out about 30km from our house, it got so close to our property we could see the flames in the distance. It spread rapidly and again we evacuated. Fear

was always lurking as any change in the wind could mean destruction.”

The Daniel's Eden vet practice normally services the nearby Victorian town of Mallacoota, which was also hit hard by fires. After many frustrating bureaucratic delays, Justin was finally able to access Mallacoota where he and an associate vet provided pro-bono consultations and treatments. “I was approached by the local Australia Post worker - who didn't own pets, who said with tears in her eyes - you don't know how much it means to us you coming down here”, explains Justin, who firmly believes that vets have an important compassionate role to play in helping disaster-affected communities.

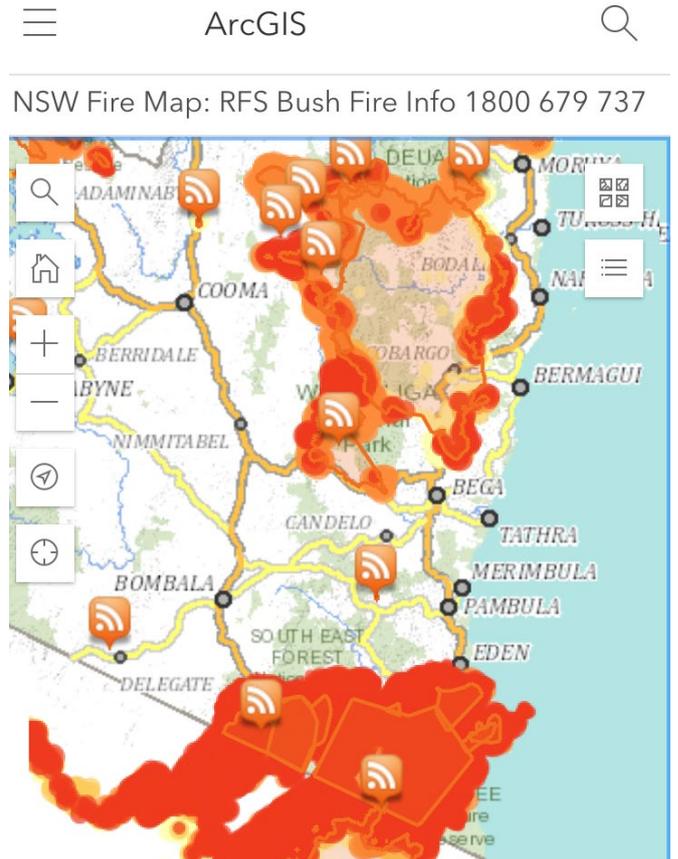
Justin also suggests that as a profession vets must advocate for better fire management, to highlight the advantages of slow burns and hazard reduction burns. He also thinks more could be done to train and accredit the veterinary community to be used as a task force for disaster response and disease control. “Having local vets ready and trained, who in turn were



directed by their district vet would immediately make available a large body of people with the necessary skills to be deployed in times of need, this model has the advantage of farmers and community members seeing familiar faces, and the local knowledge and personal relationships forged over years in communities can be used to advantage.”

For Linden and Justin, the important lessons learned include to have your home well insured, always have a full tank of firefighting water, and have a fire plan; when the fire is upon you, it becomes difficult to pack and think at the same time.

**Phil Tucak,  
Wildlife Outreach Vet**



# Our Wild Life

Veterinarians and wildlife agencies mobilised quickly to assist wildlife affected by recent large-scale bushfires in South Australia, New South Wales and Victoria. South Australian Veterinary Emergency Management (SAVEM) has been actively working on South Australian firegrounds since 20 December 2019 - firstly at the Cudlee Creek blaze which burnt 25,000 hectares in the Adelaide Hills, and then at the Ravine fire which burnt 200,000 hectares on Kangaroo Island.

SAVEM Coordinator and veterinarian Dr Rachel Westcott, explained that their initial work involved treating 'pet' livestock on the small landholdings found in the Adelaide Hills - including goats, alpacas, sheep, cattle and horses, as well as domestic pets, who presented with burns and respiratory injuries of varying severity.

By the fourth day of the response, wildlife began to emerge seeking water and food, and SAVEM's focus shifted to the assessment of kangaroos and koalas, with the occasional possum, bird and reptile. Most of the kangaroos assessed had suffered severe hindlimb burns and were euthanased. The koalas that presented were divided into

three main groups: those with minor burns to their face or to two limbs, were able to be sent into care with a competent licenced carer after veterinary assessment, secondly, those koalas requiring hospitalisation were given veterinary first aid and transported to the nearby Cleland Wildlife Park into the care of senior veterinarian Dr Ian Hough, and thirdly, those triaged as being too badly injured and with a poor prognosis were euthanased. Wildlife cases continued to present until well into the fifth week after the fire.

On Kangaroo Island, in addition to the tens of thousands of livestock which perished, initial estimates suggest up to 70% of wildlife on the island was lost. The Kangaroo Island fires escalated rapidly when a south-westerly change with dry lightning caused the fire to spread catastrophically. Two-thirds of the Island burned out of control for 22 days. SAVEM's first response team was on the ground on January 4th, and teams were rotated over the following three weeks with members working both on the fireground looking for injured wildlife, and others working in SAVEM's inflatable triage and treatment centre.

Dr Westcott said their triage centre received admissions of many different wildlife species, though predominantly koalas. "Other agencies working from our centre included staff from Kangaroo Island Vet Clinic, Army (Joint Task Force), ZoosSA, RSPCA and the Department for Environment and Water. The world's media flocked to the island and the SAVEM 'tent' as it is affectionately known, which has since been demobilised in readiness for future deployments."

Dr Felicity Stoeckeler from Kangaroo Island Veterinary Clinic was on the frontline of the wildlife response, and explained that the enormous numbers of wildlife affected would have quickly overwhelmed the capacity at the vet clinic, so the Kangaroo Island Wildlife Park owners stepped forward and began building enclosures as quickly as the animals were arriving.

Animals were collected from the fire grounds by official organisations, members of the public, landowners, Wildlife Network members and emergency services personnel. In the initial stages, upward of 60 injured animals were triaged each day. The overwhelming majority were koalas, with the land-dwelling

animals faring much more poorly. “We have had a handful of severely burned wallabies, kangaroos, possums, and goannas, and four perfectly healthy echidnas. Otherwise, there have been over 300 koalas, the final numbers yet to be determined,” said Dr Stoeckler.

Treating these animals, and providing support for the people who have been helping them will be ongoing for some time ahead as Dr Stoeckler highlights: “The experience has been overwhelming. The vast number of injured animals, media teams, donations, organised and unannounced volunteers, have been a constantly evolving challenge to navigate. Coming off the back of a few sleepless nights, fear for the lives and livelihoods of friends and family, fear for our homes, pets and safety - it has been an experience we will never forget.”

Evan Quartermain, Head of Programs for the Humane Society International - Australia, led a search and rescue team on the fireground. This was the scene they were confronted with: “We hit the ground running after seeing dozens of charred bodies and grounded koalas in need of help in the first plantation we entered. The air was thick with smoke, ash, and death, but we pushed it to the back of our minds as best we could and got on with search and rescue.”

“The macropods we found were most often euthanasia cases, alive but with their paws nothing but bone after being severely burned several days prior. Koalas were by far the animal we rescued most, often joeys far too young to be alone that we found low in trees or curled

into balls in the middle of clearings. It was an extremely confronting experience, the most devastating fortnight of my life as well as the best thing I’ve ever done. The level of suffering was immense and it breaks my heart to know similar situations are still playing out across huge areas of the country”.

The scale of the bushfire season is summed up by scientists from the Threatened Species Recovery Hub in their recent report ‘After the catastrophe, a blueprint for a conservation response to large-scale ecological disaster’ in which they note: “Long-established objectives for biodiversity conservation, and mechanisms to achieve them, may need to be reconsidered in response to the 2019-20 wildfires, especially under a future scenario of increasing impacts of escalating climate change. There may be a new normal, and recovery to pre-fire environments and species assemblages may be impossible.”

**Phil Tucak,  
Wildlife Outreach Vet**

