

**Second Field Fire Update from established data sites that were within the December 2019/January 2020 fire area**

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Since the start of the Kangaroo Island fires we have received hundreds of emails and letters from people seeking facts. One of their most common questions is “after the fire, where will the wildlife get water?”



Kangaroo Island experienced some heavy rainfalls the first week of February and we went back to the fire grounds two days later.

The rains enhanced the natural water ways on the fire grounds, providing additional drinking areas for wildlife. It also washed ash and silt off the fire

grounds and promoted more plant germination. Ephemeral pools and ponds appeared and frogs were recorded calling day and night. Thick knee curlew and white face heron, masked plover moved across the fire grounds feeding on emerging insects.



Our rain did not answer the question “If animals are not living near or cannot access a stream or natural pond, what is their source of water?”



Kangaroo Island has vast Eucalypt habitats. These range from the spectacular and verdant Red Gums to numerous species of mallee. Mature mallee can be hundreds of years old. The old parts are not the radiating trunks or limbs but the central ground level or some time subterranean lignotubers. Lignotubers can survive fire, wind, and flood and even “mechanized chaining of artificial land clearance.” The lignotuber is the plants genetic storehouse and life centre.



Many of the lignotubers develop cavities or natural reservoirs for moisture collected on leaves, channeled down branches, radiating trunks and terminating in hidden pockets of natural rainwater. We call these “water trees.” Water trees not only collect water when it rains, but they also collect and transport fog and morning dew to their reservoir. We extracted samples of the water we found. It was tea or coffee coloured, but tasted fine. The colour was not surprising since the water had “infused organic material” just like when people make cold processed tea or coffee.

We have observed and documented skinks, Rosenberg’s goannas, birds and macropods seeking out openings in the mallee lignotubers and digging out the water hole..



Working across the fire grounds a clear record of wildlife movement was recorded in the mud and ash. Tracks and scat left by kangaroo, wallaby, bandicoot, brush tail possum, feral cat and a multitude of invertebrates told the story of present and active introduced and native species.

The rains were followed by warm summer days and overnight a green mist of invigorated sprouts covered many of the hills and flats with what looks like “a green five o’clock shadow.” Kangaroos and wallabies came out of the surviving core vegetation and were observed browsing on the fresh green shoots.





The rains caused a spurt of growth to the yuccas deep within the fire zones. These new shoots are also being eaten by macropods as a food source. This evidence is found scattered around the plants as well as on the ground.



Colourful fire dependent molds and fungi continue to thrive on some plants and in the temporary ash pools of constantly changing levels of alkalinity and acidity. The resulting temporary soil profiles provide optimal conditions for many native plants including several rare species that have not been recorded since the last major event of this type. In nature, lightning strike fires such as this seasons are one of several natural “reset buttons.”



While surveying the fire grounds we visited properties and walked the land with our island neighbours. We found the remains of a large termite mound that had obviously overgrown a fallen log. The imbedded timber had burned and left the mound a mass of crumbling ash. Less than one meter away a new, vigorous and healthy termite mound was already recycling organic materials back into the soil. Our farmer neighbour shook his head and said “I wish we could bounce back as quickly as those buggers. If they can do it, so can we.”

