

The 2019-20 bushfires and karst across Australia

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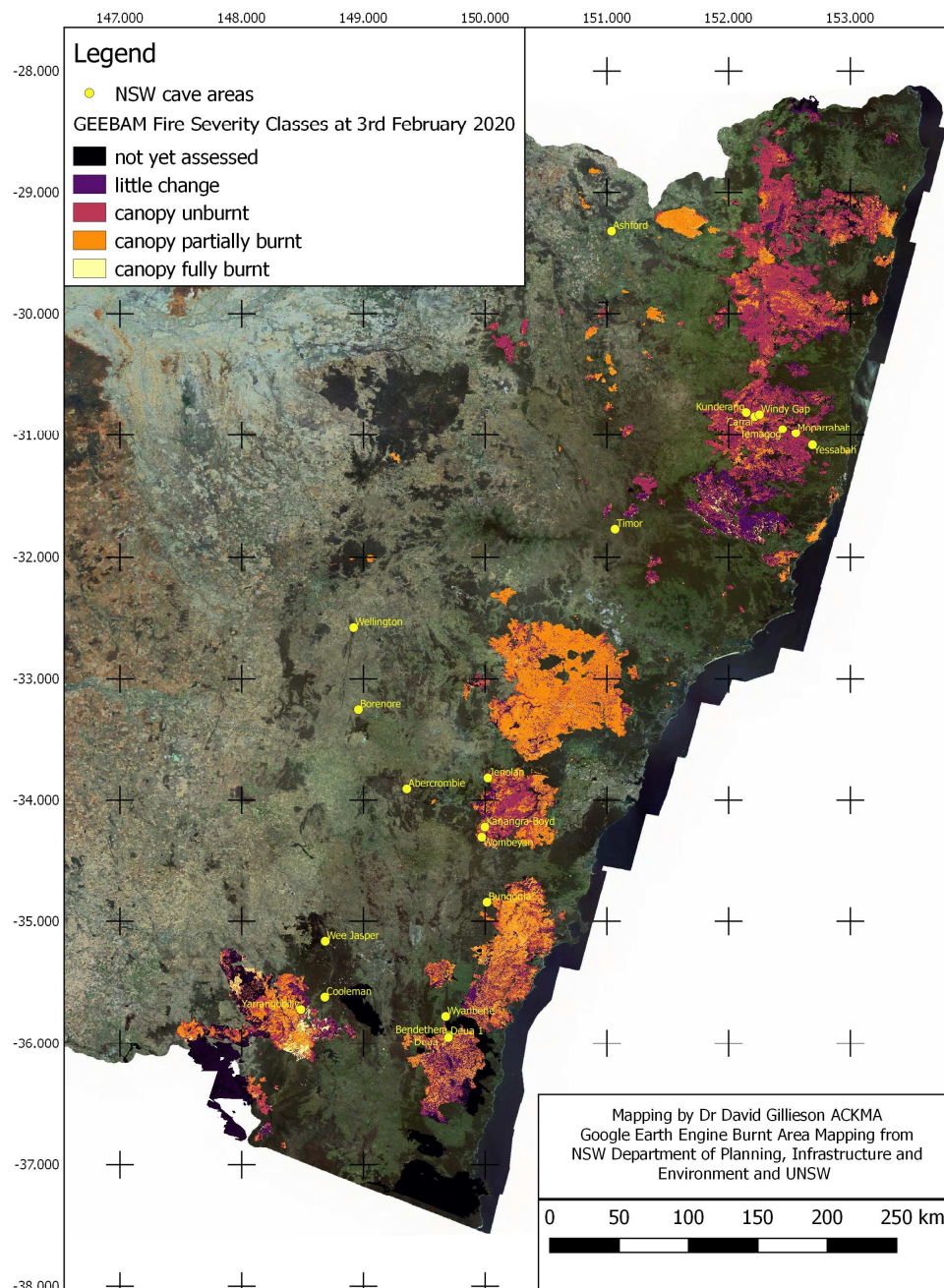
Some 13-16 million hectares have burnt across Australia since before July 2019. This figure excludes burning in the tropical savannahs – it is an area more than two times the size of Tasmania. In NSW fires burnt from July 2019 until early March 2020. To use a word, much overused this summer, this is unprecedented.

The damage is massive, and we will probably never know the full extent of the damage on karst processes and cave ecosystems due to minimal to nil baseline information in most places.

Besides their own close connections to the caves concerned, ASF and ACKMA members have close connections to the staff who manage the caves, guide tours and often have given decades of service and love to the reserves and other karst areas.

We know that this is a difficult time for all concerned and wish you strength.

Here's a summary of information from emails received over recent weeks and examination of fire maps plus phone conversations as at 7 March. However, the fire perimeters indicate just perimeters – in many areas the fires will burn patchily within those areas as can be seen from Dave Gillieson's map (below). It will be some time before we fully understand what has happened across southern Australia.



NEW SOUTH WALES

Jenolan

Jenolan was closed by fire on 18 December and reopened on 1 February only to be closed as a result of severe flooding with consequent severe sediments loads of silt, sand, gravel. It reopened on 23 February but with access only via the Two-mile Road (the Oberon side). The Five-mile Road is still closed owing to concerns about the stability of this road – essential for access by tour groups from the Sydney-side.

Miraculously the magnificent Jenolan Caves House was saved, with many of the local staff being part of the local fire brigade. The fire brigade building was burnt as was the cavers' cottage and two houses. The rare brush-tailed rock wallabies are being hand-fed in the caves area and via aerial food drops.



Fire on the ridge above Caves House, Jenolan (above)—Fire and Rescue NSW Station 411 Oberon Facebook Page

Yarrangobilly

If it was a miracle that Caves House at Jenolan was saved, it was an even bigger one that the historic Caves House at Yarrangobilly was spared. With a few well-prepared firefighters familiar with the precinct and additional sprinklers, the firefighters were ready to defend. A retreat to a cave was considered at one stage but not required. The area was burnt as recently as 2003 – in an area where a 50-60-year fire interval is expected. In addition, a hazard reduction burn eight months prior also reduced surrounding fuel loads. Yarrangobilly closed on 31 December and is expected to reopen for day visitors from Easter. The accommodation will reopen 1 July. Much, if not all, of the signage and outdoor interpretive material is gone. Access to the Thermal Pool is restricted indefinitely due to concerns about the stability of the road and the River Walk.



The former ticket office survived.
Photo: Bernadette Zanet



Recovery happening
as regrowth occurs.
Photo: Jackie Perry

Wombeyan Caves

In the Caves Australia 211 article we stated, 'Significant damage to vegetation, but it seems that infrastructure has been saved.'

The actual situation is far worse. Wombeyan's woes started with heavy snowfalls last spring which brought down many trees, followed by the fires which burnt much of the reserve but little infrastructure. But the floods have inflicted major damage to the electrical systems in Figtree and Junction Caves, filled Figtree with vegetation debris and sediments such that the 'craybacks' at the entrance to Victoria Arch were covered. NPWS staff are working to clear up this debris. Much sediment – up to 50 cm – has been deposited in the sheds and workshops. Kangaroo mortalities have been high.

Elsewhere

Many other cave sites in NSW including Bungonia, Church Creek, Tuglow, some Deua NP areas, southern Kosciuszko NP, Hunter Valley, Macleay Valley and its hinterlands have, or may have been impacted. Plus, many, many other more remote areas. Cooleman Plains has been impacted in part.

Virtually the only major areas not burnt are on the Western Slopes e.g. Abercrombie and Molong-Wellington.

QUEENSLAND

No information. Maybe Texas area?

SOUTH AUSTRALIA

Kelly Hill Caves, Kangaroo Island

Visitor Centre was lost – the toilets remain. Long-term caves manager Nick Heath lost his self-built home to the blazes while he was away firefighting. Not sure about Taylors Hill but karst in Flinders Chase NP has been burnt over. Research programs are being initiated here on karst processes and vegetation recovery.

Dave Gillieson tells us that the fires burnt most of the Flinders Chase park on the western end of the island but was patchy in the eastern half. Eastern boundary is close to Stunsail Boom River (which burnt a couple of years ago). West Bay Hollow, West Bay and the coastal karst up to Ravine des Casoars appear to be unburnt. CEGSA has plans to carry out detailed surveys in the Kelly Hill area to record karst features now exposed and assess vegetation recovery.

VICTORIA

Buchan and environs

Dale Calnin from Parks Victoria reported the Buchan Caves Reserve was directly impacted by the fire event on the evening of Monday 30 December and that the damage was significant and impact on reserve assets, huge.

Assets impacted include:

- Cabin 1 and Cabin 2 have been destroyed,
- Wilderness Retreats kitchen tent and three accommodation tents were destroyed as were the general assets within the retreat area,
- Two wooden bridges destroyed, the one between Spring Creek picnic area and the Royal Cave carpark, and the other between the Guide Room and Fairy Cave carpark,
- The Guide Room and old workshop were destroyed,
- The Fairy Cave entrance structure will need to be rebuilt,
- Various light and power poles in the reserve have been damaged,
- All walking track assets severely impacted, and
- The power beyond the visitor centre will remain off until further recovery works are completed.

The reopening of the Buchan Caves Reserve remains an extremely high priority for Parks Victoria. But further things happened.

Military personnel from Papua-New Guinea and Fiji have rebuilt the two bridges. The caves closed on 30 December and Royal and Federal Caves was expected to reopen on 7 March. Fairy Cave might take some time. Some picnic areas and some camping facilities have reopened.



Buchan Team Leader Hamish Hancock thanking the ADF members

Nicholas White from the VSA reports that fire burnt up to the Rimstone Cooperative accommodation Homeleigh fence, but the Country Fire Authority controlled it.

Rimstone also have some private cave reserves and the Scrubby Creek Cave property has been severely burnt. It is expected that boundary fences have been burnt but the condition of the new fencing around the Tufa Terraces is unclear. The Shades of Death property not touched.

The Potholes Reserve was severely burnt as were several private cave properties.

Nicholas assures us that the Nowa Nowa bat maternity cave in the Colquhoun Forest South of the Bruthen-Nowa Nowa Road was not burnt.

Many of the smaller east Victorian karst areas such as Limestone Creek, the Basin, Jacksons Crossing and New Guinea Ridge have almost certainly been burnt over.

WESTERN AUSTRALIA

Yanchep National Park

The reserve has been significantly burnt, but apparently no infrastructure lost. Research going on here.

Elsewhere?

Fire on the Nullarbor burnt over karst. There was fire around Balladonia. But no map or other information available.

RESPONSES

Some research scientists and ASF and ACKMA people have met via teleconference and many emails to discuss future research, monitoring and funding applications to follow up on the fires. Additionally, they have developed a proforma for cavers to report on fire impacts. Nicholas White has circulated some information regarding this. More to come on this but both ASF and ACKMA email lists have circulated the proforma. We urge you to complete with what information you can.

DONATIONS

To donate, please use the preferred methods on the ASF Karst Conservation Fund Website at <http://tinyurl.com/rtshbyt>

If you wish to donate via the GoFundMe system BE AWARE of the tip at the beginning of their process and be careful to over-ride the tip before you complete your donation; otherwise, the tip will be automatically added to your donation and go here: <http://tinyurl.com/wbqdec2>

All donations over \$2 are tax deductible and will receive a receipt from the KCF if required.

An earlier version of this article appeared in *Caves Australia* 211. We thank ASF for permission to build on the original article.



Driving into Jenolan to fight the fires.

Photo: Western Advocate