

Hi,

It looks like we completed enough termite mapping during the 2020 winter to model the distribution of *Nasutitermes exitosus* mounds in the research site. The map which I hope will result, would show the probable density of *Nasutitermes* mounds, and thus could be included in our future analysis of goanna movements, alongside other environmental attributes such as aspect and altitude. To me that is a big deal. But more simply, the summary of what our sweep counts found is:

- We increased the number of mapped *Nasutitermes* mounds in Naas Valley to 196, from a total last year of about 35.
- *Nasutitermes* mounds are found on all aspects but are heavily concentrated on slopes of northerly aspect, i.e. from NE to NW (Figure 1). Slopes of the favoured aspect are uncommon because the Naas Valley runs north.
- *Nasutitermes* mounds in Naas Valley were at elevations from 600 m to 939 m. Mean = 796 ± 10.6 (95%CI). I suspect there are a few higher mounds in areas which were not searched above the two northmost sweeps.
- *Nasutitermes* mounds are restricted to the northern end of the Naas valley. Their density is obviously higher in the first 4 km of valley (Measurements are from the park boundary fence where it crosses Naas Ck, i.e. at the first gravel ford on Naas Valley Fire Trail. See Figure 1.). The most southerly *Nasutitermes* mound found so far is only 6 km from the park boundary. That most southerly mound is at the mean elevation for all *Nasutitermes*. There are slopes of suitable aspect and elevation further south but they have few or no *Nasutitermes* e.g. as seen on Sweeps 26 and 27 last Wednesday (Figure 2). Thus the distribution pattern of *Nasutitermes* within Naas Valley appears to be influenced by three factors, aspect, altitude and latitude. This does not necessarily apply outside Naas Valley.
- The highest density of *Nasutitermes* mounds recorded on any sweep count was 186 mounds/sq km.
- *Coptotermes lacteus* mounds are not used by goannas but are similar enough in general size and appearance to *Nasutitermes* that to find only *Coptotermes* is evidence that our searching would have found *Nasutitermes* mounds if they were present. We carefully searched the Upper Naas valley where goannas are abundant, for *Nasutitermes* mounds, but found only *Coptotermes*.

- In the upper valley, *Coptotermes* mounds are abundant on steep slopes of northerly aspect well above the level of the Naas Valley Fire Trail. Figure 3 illustrates *Coptotermes* mounds were abundant up to the limit of our searching at 1350 m ASL.
- Contrary to early impressions of a 'termite mound free' zone in the middle valley between the two mound building species, the most northerly *Coptotermes* found to date (found last Wednesday) is only 4.4 km inside the northern boundary of Namadgi, therefore the two species overlap by 1.6 km at least. However *Coptotermes* mounds are rare within the first 10 km inside Namadgi's northern boundary, then become abundant more than 15 km inside Namadgi, in the right sites (Figure 3). The maximum density of *Coptotermes* mounds recorded on a sweep count was 156 mounds/sq km.

Along the way this winter, as illustrated in the photos below (all taken last Wednesday except the ones of artefacts), we battled scrubby Blackthorn and Cough Bush; stretched a few tired muscles; admired flowers; appreciated the views; enjoyed Namadgi; learnt things about how to use GPS and mapping apps, and how to do water crossings in 4WD vehicles; ate plenty of muffins, scones and cakes; and found a number of aboriginal artefacts. My favourite artefact was a portable sandstone grinding tablet but probably the most important was a set of tool sharpening grooves in Swamp Creek found by Mike Bremers (photos below).

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Don Fletcher

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Figure 1: *Nasutitermes* mounds (red triangles) in searched areas of the northern Naas Valley, mostly inside the Namadgi boundary (black fence line).

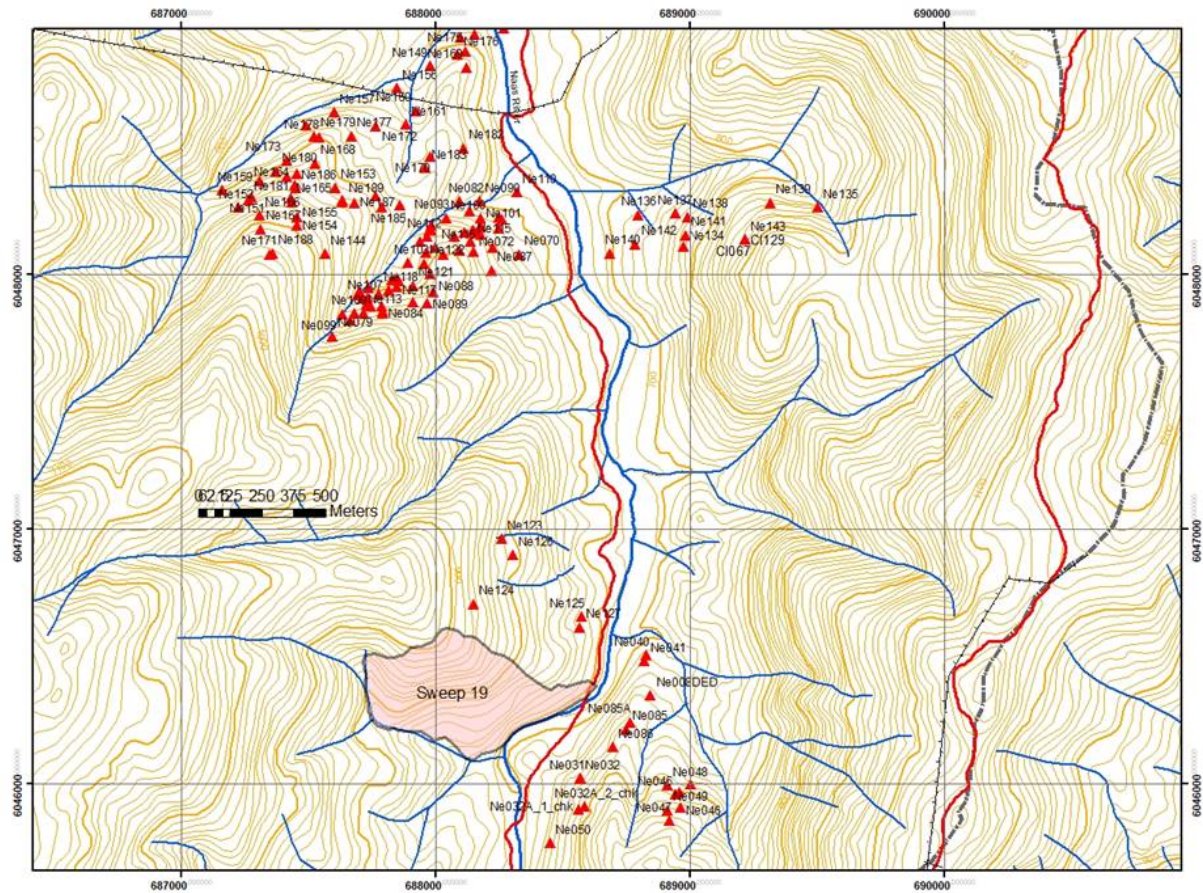


Figure 2: Sweeps 26 and 27 completed by 11 participants on Wed 16 Sept 2020. Green shading = indicative plan. Pink shading = area actually searched. There are only two *Nasutitermes* mounds (red triangles) inside the searched area. Tracked lines for selected participants are also shown.

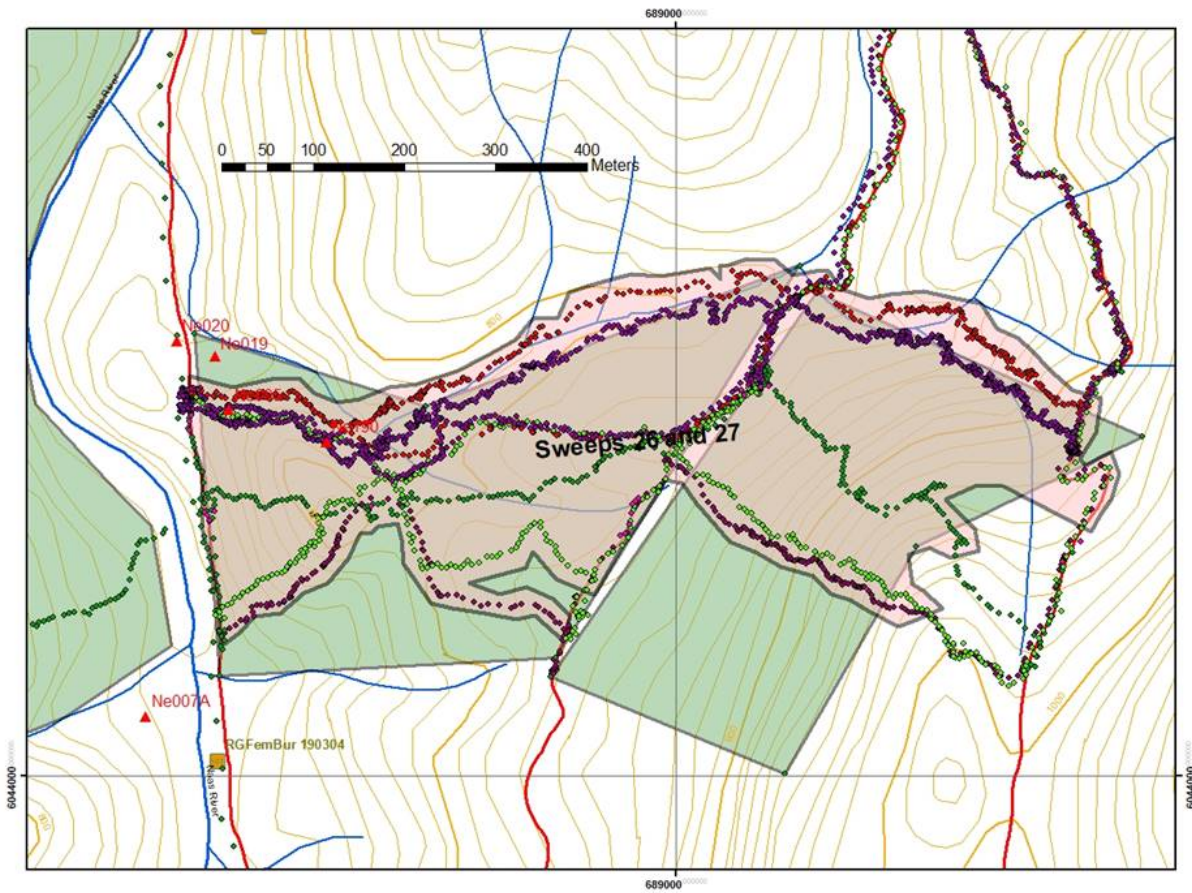
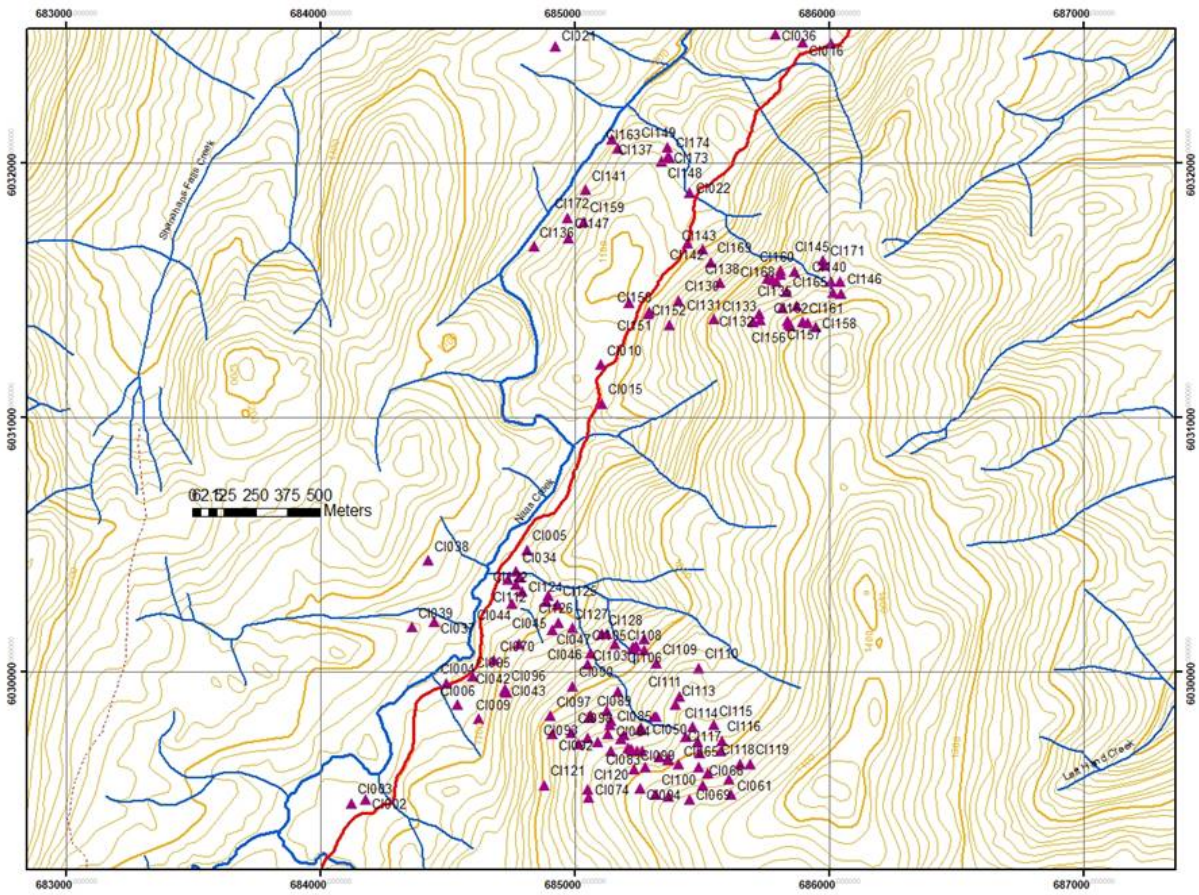
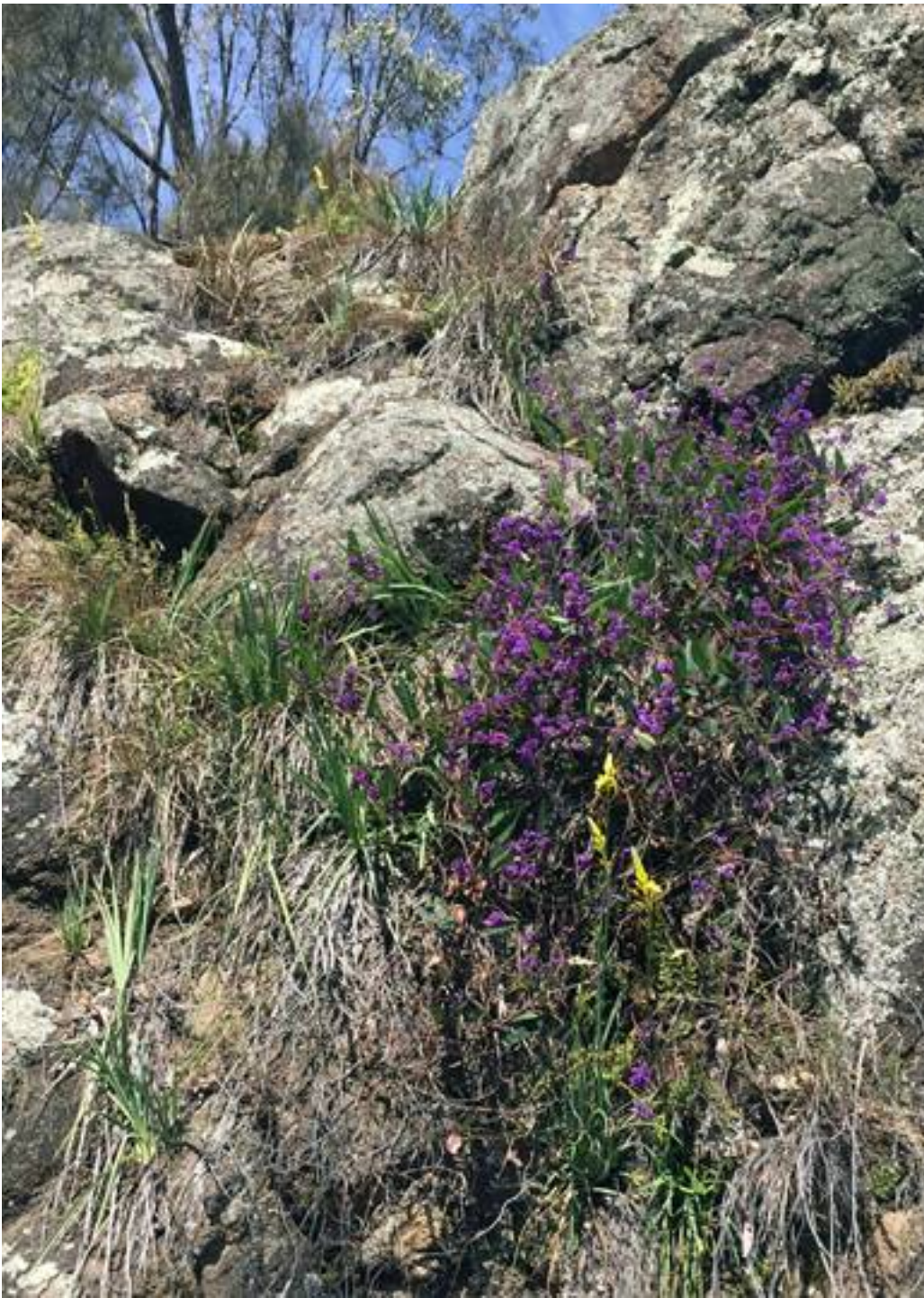


Figure 3: Distribution of *Coptotermes* mounds in two areas mapped in the upper valley. Areas above 1350 m ASL were not searched



Bulbine with Sarsparilla. Clematis to right. (Debbie Worner pics)





Looking for termites in the scrub

Where the hills are twice as steep and twice as rough (according to Banjo Patterson)



Two people in the scrub



Wandering back down to the cars



Predation of a nest of innocent scones, by hungry feral animals



Sandstone grinding tablet
Tool grinding grooves



Who this is in honour of. A Rosenberg's Goanna partly out of its winter burrow. Seen on sweep 15 in the upper valley (Trish McDonald pic)



Don Fletcher