

GOANNA PROJECT UPDATE - Early April 2022

Few participants

In response to the increasing prevalence of Covid in Canberra, we continued the 'one household per car' rule. Unfortunately this restriction coincided with the prolonged flooding of the Naas River and the near-impassable condition of the Naas Valley Fire Trail (NVFT), so the number of participants was greatly restricted. Since the last update, only two high-clearance 4WD vehicles have entered the area, i.e. only two people have been available for field work, John Brickhill and myself. In particular, several students who have persistently expressed interest but who do not own cars, were completely ruled out. However there were odd times when Mark, Quentin and others managed to take SUVs onto the site.

The good news in recent days is that the river height dropped sharply at the end of March to 0.00 m at the Caloola Concrete Crossing. At the same time, Cord Civil, contracted to PCS, repaired the road and all river fords from Caloola as far as the turnoff to Max and Bert's hut site, to the extent that even a 2WD vehicle could now be taken along the northern third of NVFT. Ironically the timing almost coincided with goannas retreating to winter burrows, so there is less field work left to do, but for what work remains, we can again invite other people to participate.

Success at long last with some female GPS tracking

Four females continue to wear their GPS packs. (We started with six females in the hope of ending with five.) In recent weeks we managed to capture three and reglued their backpacks in preparation for winter. This included the elusive M7 (pictured below), by far the most difficult goanna in the project, but the only female for which we have two years of movement data. In all four cases we downloaded GPS data, thus we now have a full season of home range and movement data for four females. Hooray! It has been a four year struggle to get this. Some new tricks were learned in recent weeks. One is to use a piece of garden hose that can be manipulated to pass deep into bendy goanna burrows. The hose carries a WiFi antenna inside it to enable us to download GPS data when there is no download signal reaching the ground surface. The stripes on the outside of the hose also act as a visual guide for our burrow scope so we can see the best way ahead and know when the garden hose is approaching the goanna.

And we reached the least accessible male, goanna 14

Boggy sections of road in the southern part of the valley have either been repaired using massive amounts of imported rock, or have dried out, thus we were able to search for and find Goanna 14 and download an entire summer of data. Unfortunately we did not get to see his backpack which may be about to shed. There is just a little time remaining to try to remedy that before he makes himself inaccessible in his winter burrow.

Movement patterns apparent

Data from Goanna 18 showed that in December - January he again travelled over the Clear Range to Bumbalong and back, thus spending the mating season at an altitude 400m lower than his home range, which is at 1150 m on the Naas River. In contrast, none of the three males or four females migrated whose home ranges were in 'the *Nasutitermes* zone', below 900m. Goanna 18 also seems to have made his usual small autumn movement uphill to wintering quarters but Goanna 14, which lives in the same area, has not. We are watching to find out whether any of the females move to separate winter quarters.

Software issues

The program for downloading data and reprogramming collars has not been working fully, which prevented us from complete all required tasks on the goannas we encountered. In the last few days the problem was diagnosed by Jan, the Software Engineer in the Czech Republic, as obsolete firmware in our base stations. I received and installed the latest version from Quentin at Telemetry Solutions, which fixed the problem. What a huge relief! Now we can return to each animal and reset the GPS programs for each one, so as to reduce battery consumption over winter.

Environment Grant Application

The closing date for ACT Environment Grants has been extended by two weeks. However our application is almost finalised, thanks to good work mainly by Rosemary and Don and helpful comment from others.

Waterfall

While returning from catching M7, John and I diverted slightly to look at a section of river we had heard 'roaring' on previous trips. Indeed it contained a waterfall, with the entire Naas River plunging several metres through a slot. The fall is big enough to stop trout, so if the river is not already trout free above this point, it could be made trout free in the expectation that it would remain that way, enabling native fish to persist in what would be the longest trout-free stretch of river in the ACT. (Upland fish species such as Galaxids generally survive only in trout-free sections.) The waterfall is more than 17 km below the Naas Bridge on Boboyan Rd, and more than 10k upstream of the Caloola Concrete Crossing, a fish barrier installed in 2019 by the Fire Unit in PCS apparently without environmental approvals.

Don Fletcher 0428 48 9990

Figure 1: Someone utterly lost, and desperately seeking the answer in his computer? JB Pic

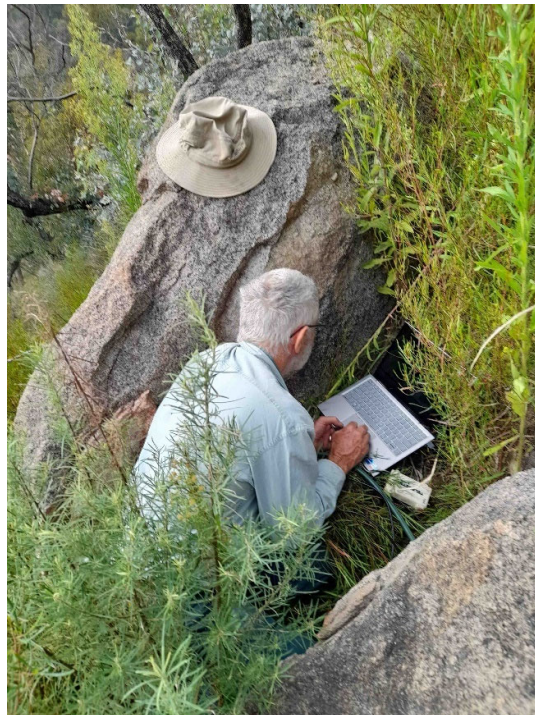


Figure 2: (left) Who knew the Naas River had a waterfall (~3.0-4.5 m high)? It is roughly opposite Max and Bert's Hut site, 10 km upstream of the Caloola Concrete Crossing and >17 km below the bridge on Boboyan Rd. This drop would be impassable to trout, hence if trout were eradicated or not present above it, they would not recolonise, thus providing the longest trout-free stretch of river in the ACT. (right) Naas Falls and surrounds.



Figure 2: Don holding little M7 in a bag while trying to reprogram her GPS schedule for the winter season. Her special little 'enhanced nano' GPS was provided gratis by Telemetry Solutions. A second unit was purchased for ~\$3,000. JB pic.



Figure 2: John waiting for the glue to dry on M7's GPS pack. She is the smallest goanna in the study yet travels widely.



Figure 5: A burrow of Goanna 14 is under this rock. Garden hose has been inserted to carry the WiFi aerial right to the GPS pack on the goanna, as well as a fibre scope to see when we get near the goanna. (Burrows have been found up to 4.8 metres long.) The other items include (from the left) radio-tracking equipment, a stake with the burrow number on it, a re-writable photo label card, a pot of glue, and a goanna bag.

