

Survey for *Thersites mitchellae* (Cox, 1864) (Mitchell's Rainforest Snail) at 771 Cudgen Rd, Cudgen, NSW



Prepared for the Project Director of Health Infrastructure

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Cover photo: *Thersites mitchellae* observed near Kingscliff Library at night on 23 March 2020.

Survey

The author visited the subject site on 24-25 March, 2020 and wandered throughout the conservation zone (Figure 1), concentrating search efforts where suitable habitat existed along the northern edge of the Tweed Valley Hospital site at night.

Results

Over the two nights a single juvenile specimen of *Thersites mitchellae* was found crawling on a palm frond (Figure 1) in the north eastern corner of the conservation zone along its northern boundary where it adjoins the intact swamp vegetation along the creek line. In addition, five other native snails and slugs were observed, these were *Fastosarion virens* (Pfeiffer, 1849) (Fine-speckled Semi-slug); *Sphaerospira fraseri* (Griffith & Pidgeon, 1833) (Fraser's Banded Snail); *Ramogenia challengerii* (Gude, 1906) (Challenger's Bristle Snail); *Gyrocochlea conjuncta* (Iredale, 1941) (Byron Bay Pinwheel Snail) and *Triboniophorus graeffei* Humbert, 1863 (Red Triangle Slug).



Figure 1. An aerial of the hospital site. The purple shading indicates the area surveyed and the yellow dot shows where the single living specimen of *Thersites mitchellae* was found during the current survey.



Figure 2. Juvenile specimen of *Thersites mitchellae* observed in the north eastern section of the conservation zone on the night of 24 March, 2020.

Discussion

Since the last site visit in May, 2019 there had been virtually no rainfall, until January, 2020 when higher than average rain fell across the site and general area which continued into February. This high rainfall led to the area being flooded, which further delayed the timing of the current survey on top of the delays due to the extended dry period in the latter half of 2019. In addition there has been extensive removal of weeds and non-native vegetation since January, 2020 in an effort to meet the requirements outlined in the BMP. However, the rapid removal of the non-native vegetation has significantly thinned and opened up the remaining vegetation in the conservation zone, resulting in the ground layer being more exposed and much drier than the surrounding more intact vegetation communities adjoining the conservation zone. Thus the conservation zone in its current state provides little suitable habitat for the known population of *Thersites mitchellae* present in the adjoining land to the north, but over time as the vegetation regenerates this should change.

It is recommended that a bush regenerator be engaged to undertake the replanting/regeneration works in the areas where weed removal has been undertaken. The feasibility and suitability of this should be reviewed to enable this regeneration to occur.