



SAVING OUR SNAKE-NECKED TURTLE

Summary of the results of the project
for the Shire of Denmark 2023



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Acknowledgement of Country

The *Saving Our Snake-Necked Turtle* project team would like to acknowledge the traditional custodians of the land on which this research was conducted, the Whadjuk, Wardandi, Goreng, and Menang people of the Noongar Boodjar. We recognise their continued connection to the land and waters of this beautiful place and acknowledge that they never ceded sovereignty. We pay our respects to them and their cultures; and to elders both past and present.

Disclaimer

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Background

This report details the results and management recommendations of the 2023 *Saving Our Snake-Necked Turtle* project specific to the Shire of Denmark. The *Saving Our Snake-Necked Turtle* project partnered with 20 local councils in 2023. 'Turtle Trackers' was supported by 14 of those councils and 'Turtle Tracker' teams protected turtles and their nests at 16 wetlands. Turtle population surveys were undertaken at those 16 wetlands and an additional 18 wetlands. For the overall background, methods, results and discussion of the project please see the main report.

Results

Turtle Survey

Little River

A total of one turtle was captured at Little River on the 30th of November 2023 (Figure A3.3). Overall CPUE was 0.01 turtles/trap/hour, ranking 34th among sampled wetlands (Figure A3.4). The single captured turtle was an adult male with a carapace length of 199 mm (Figure A3.5). Due to the single capture, a sex-ratio could not be calculated, nor could average body condition. As zero females were captured, reproductive status could not be assessed.

Approximately 1500 fishes were captured during the turtle survey. Species captured included goby (undetermined species) (~1100), hardyhead (*Leptatherina wallacei*) (~20), sea mullet (*Mugil cephalus*) (~300), tailor (*Pomatomus saltatrix*) (~50), and yellow-eye mullet (*Aldrichetta forsteri*) (~20). Approximately 8500 shrimp (*Palaemon australis*) were also captured.

Discussion and Management

Little River

The lack of turtles and abundance of estuarine fish captured suggests that the Little River site was likely saline at the time of sampling. The lack of turtles captured in a saline environment is not surprising, as when inhabiting saline environments freshwater turtles have been found to reduce feeding by up to 30% (Bower et al., 2016). Thus, where possible it is likely that

turtles would seek out habitats with less saline water (Burbidge, 1967). It is possible that at other times of year (winter/early spring) the water may be less saline, and turtles utilise the Little River. Additional sampling is required to determine if, when and how turtles use Little River. As Little River appeared to be quite a natural system there are limited recommendations that can be made for freshwater turtles.

Limitations

The data collected during the turtle population survey has provided a valuable snapshot of the Little River turtle population (or lack thereof). However, the data were collected during a single trapping session. This limits any potential inferences. Continuation of the partnership with the *SOSNT* project will provide yearly turtle population surveys that will monitor any changes that occur in the population because of management actions. Additionally, initiating support and training of 'Turtle Trackers' and analysis of the data they collect will increase knowledge on habitat use and threats around Little River (or other Denmark wetland/s) and allow comparison between annual hotspots, that can be used to further inform management.

References

- Bower, D. S., Scheltinga, D. M., Clulow, S., Clulow, J., Franklin, C. E. & Georges, A. (2016). Salinity tolerances of two Australian freshwater turtles, *Chelodina expansa* and *Emydura macquarii* (Testudinata: Chelidae). *Conservation Physiology*, 4(1), cow042. <https://doi.org/10.1093/conphys/cow042>
- Burbidge, A. A. (1967). *The biology of south-western Australian tortoises*. PhD The University of Western Australia.