

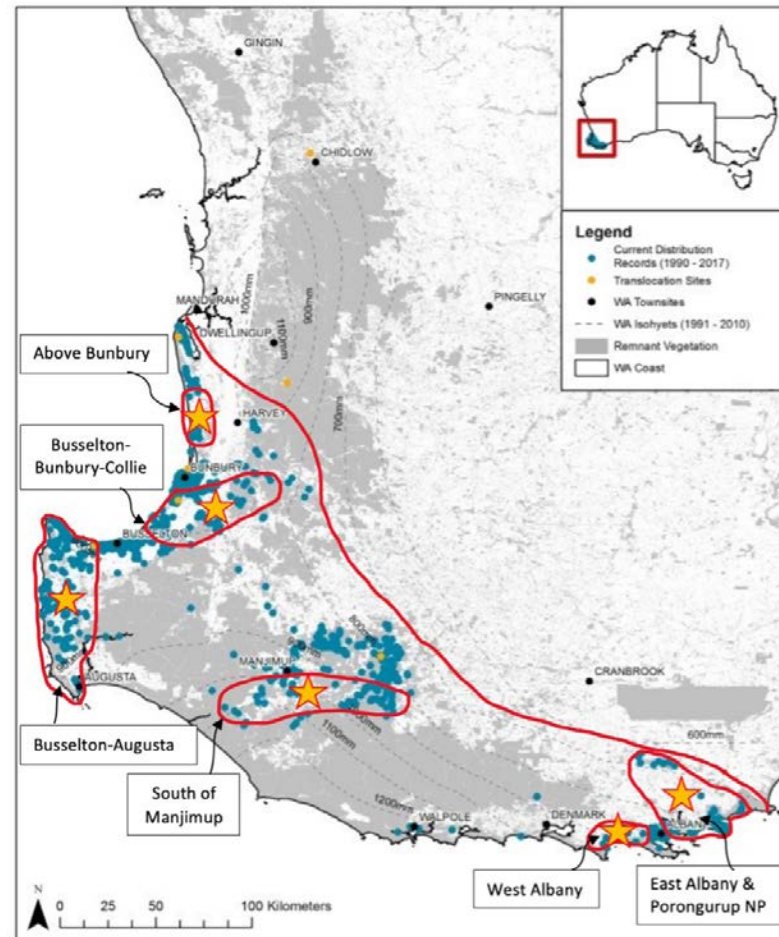
# Climate change impacts on the western ringtail possum *By Grace Marsh*

Western ringtail possums (*Pseudocheirus occidentalis*), or ngwayir, are nocturnal tree-dwelling marsupials found throughout the south-west of Western Australia. Despite efforts to conserve this critically endangered species, populations remain in decline across their range.

Like many native species, the western ringtail possum is impacted by several major threats, including habitat fragmentation and loss, inappropriate fire regimes, collisions with vehicles, and predation by feral animals. Additionally, the emerging threat of climate change is now likely driving additional decline in some populations. The drying climate and increasing temperatures predicted in the south-west are likely to exacerbate existing threats and create new pressures, further impacting the survival and recovery of the species.

My masters research project will aim to address and understand the threat of climate change to western ringtail possums. It is investigating patterns of adaptation to the environment and how these relationships may influence survival under climate change to help guide management decisions.

I am seeking approximately 90 tissue samples from deceased western ringtail possums from all shires across the south-west to fill gaps in existing genetic data. While samples from any location are very valuable, priority areas are shown on the map with a yellow star – these are locations where very little is known about the genetics of the resident populations.



This map shows the range of western ringtail possums across the south-west. I am looking for samples from deceased ringtails anywhere within this range, with particular interest in the labelled areas circled in red and marked with a star. Image – Adapted from White, Comer, and Wayne, 2021.



The western ringtail possum (above) is found across the southwest and can be identified by its long slender tail with a white tip and small rounded ears. The common brushtail possum (right) has a bushy tail and large pointy ears. Photos – Sean Buckley (above), M. Hovens (right).

You can help! If you encounter a deceased western ringtail possum please collect the animal or a subsample (a piece of ear tissue the size of a fingernail), freeze it below -20°C and record a detailed description of the location with GPS coordinates or map location. Then contact me to arrange storage and sample collection. Thank you!

## Contact

**Grace Marsh**

University of Western Australia

email [22711952@student.uwa.edu.au](mailto:22711952@student.uwa.edu.au)

phone 0413 068 928