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THE WESTERN RINGTAIL POSSUM - A RESILIENT SPECIES OR ANOTHER TAXON ON THE DECLINE?

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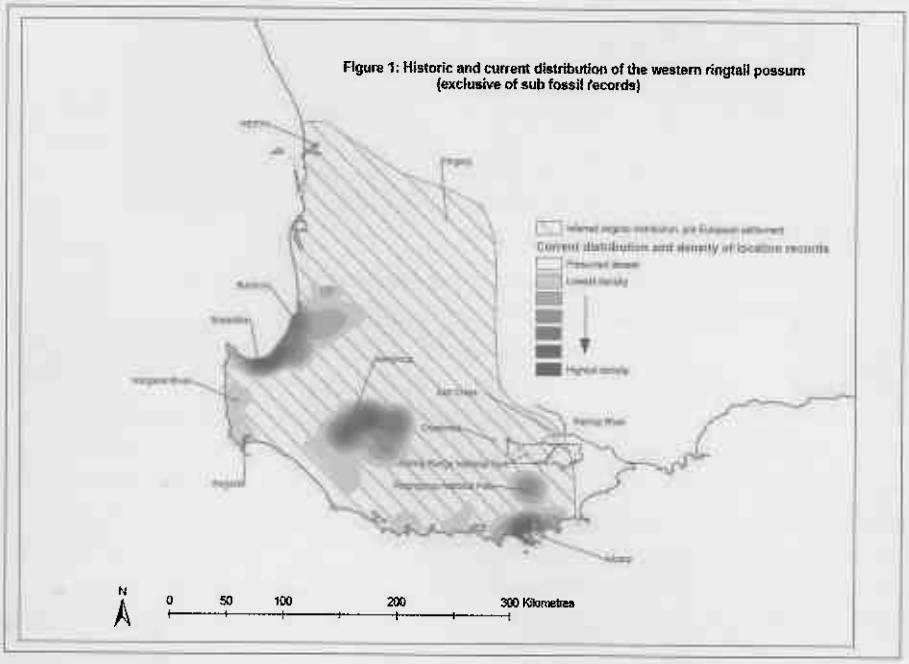
The western ringtail possum, *Pseudocheirus occidentalis*, known by its Noongar name of ngwayir, ngora, or wamp, is one of only two medium size arboreal marsupials from the south-west of Western Australia. It is immediately distinguishable from the common brushtail possum, *Trichosurus vulpecula*, which occurs over much of the of the ringtail's range. The ringtail is a smaller possum with smaller rounded ears. The fur or pelage of the ringtail is shorter than the brushtail's and varies from deep chocolate brown to grey over its back and shoulders and is usually creamish-white on the belly. The tail pelage is noticeably short-cropped and invariably has a creamish-white tip, although the extent of white varies from a few millimetres to over 70% of the tail length. Brushtail possums can also have white on their tail, and the amount of white on the tail can also vary, however, as the name suggests, the brushtail always has a thick, bushy tail. The tail length of the brushtail is usually 65 – 80% of the head/body length, whereas the tail length of the ringtail is approximately equal to the head-body length. Most strikingly, the ringtail has a truly prehensile tail which it uses as an additional limb.

Western Australian Museum (WAM) records and reliable historic accounts confirm the ringtail was once distributed widely within the south-west of Western Australia. Known locations included Tutanning Nature Reserve, near Pingelly, where in the 1970s it was regularly recorded in she-oak woodland. There are several WAM records from the early 1900s from the Cranbrook area. Records and specimens held by the Australian Museum show the western ringtail possum was collected from the Salt Creek / Palinup River area (formerly the Salt River) in 1869 by the museum collector, George Masters. Masters' records represent the southern-most, inland records for the western ringtail possum.

The fossil records indicate the western ringtail possum previously occurred as far north as Weelawadji Cave, near Geraldton and extended east as far as the Hampton Tableland.

The distribution of the western ringtail possum has now contracted to the wetter parts of the south-west of Western Australia. It is thought to be absent from the wheatbelt region and Palinup River area, however, there have been some recent unconfirmed reports from Pingelly and from the Stirling Range area.



Despite the decline in distribution, there are areas where the ringtail is locally common. High density populations are known to occur in Busselton townsite and the immediate vicinity, where vegetation consisting of peppermint, *Agonis flexuosa*, and tuart, *Eucalyptus gomphocephala*, woodland are present. Other localised concentrations of the western ringtail possum are in jarrah, *E. marginata*, wandoo, *E. wandoo*, and marri, *Corymbia calophylla*, forest at Perup and nearby areas, northeast of Manjimup, and peppermint woodland in the environs of Albany (Figure 1).

The western ringtail possum has shown considerable resilience and low density populations have been able to persist at several locations. Populations have recently been confirmed in the Harvey River area

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and these represent the northern most known extant populations. However, the security of these extremely low density populations is unclear. Concern for the possible decline in extent of occurrence of the western ringtail possum was first raised in the 1980s. In 1983 the western ringtail possum was listed as "fauna which is rare or likely to become extinct" in accordance with the Western Australian Wildlife Conservation Act 1950. It is listed nationally and internationally as a threatened species in the sub category "Vulnerable".

In recognition of the decline in distribution and in response to the need to release ringtails held by wildlife carers, a translocation program for the western ringtail possum commenced in 1991. The translocated possums were those which had been brought into care in the Busselton area. Once deemed sufficiently rehabilitated and suitable for release, these possums were fitted with radio collars and released at Leschenault Peninsula Conservation Park, immediately north of Bunbury. Prior to the first releases at Leschenault, a 1080 baiting program had been initiated for control of foxes. Results from monitoring showed the released possums had built and established regular use of dreys (constructed nest sites, usually built from peppermint foliage or other locally available plant material), established regular use of tree hollows and had produced young. Diurnal rest sites also included refuges on the ground in debris and fallen logs, under sedges and reeds and in disused rabbit warrens. The young produced were also monitored and were shown to survive to sexual maturity and in turn produce young. Spotlighting of the site in 1996 and 1998 confirmed the population was increasing. On the basis of what appeared to be translocation success, additional ringtails were translocated to Yalgorup National Park, south of Mandurah and Lane Poole Reserve, near Dwellingup. These sites were also baited for control of foxes.

The results from the Yalgorup releases were consistent with the results from Leschenault. The released possums built dreys and established regular use of these dreys and tree hollows. A noticeable difference from Leschenault was the regular use of grass trees, *Xanthorrhoea preissii*. The released ringtails were regularly recorded seeking diurnal refuge in the dense green fronds of grass trees. The individual grass trees preferred were those with overhanging foliage which enabled ringtails to access the grass tree from above. As was the case at Leschenault, diurnal rest sites were also recorded in fallen logs and debris on the ground. Spotlighting in 2002 confirmed the Yalgorup populations were increasing and follow-up spotlighting is planned this year.

The results from the Lane Poole releases were far from conclusive. Released ringtails did establish use of dreys and tree hollows. They also used a suite of diurnal rest sites, including grass trees. Young were produced, however, we were unable to confirm if young survived to sexual maturity. There was a continued and high loss of animals as a result of predation by chuditch, or western quoll, *Dasyurus geoffroii*. There have been no releases at Lane Poole since 1999.

The combined results were equivocal. Translocations to coastal sites appeared to be successful, however, the forest translocation cannot yet be seen as successful. Confounding the issue were the results from the 2002 spotlight transect monitoring at Leschenault. For the same spotlighting effort of 1996 and 1998, which resulted in 72 and 100 sightings respectively, the 2002 spotlighting resulted in only two sightings of the western ringtail possum. Further searches of the Leschenault site confirmed the Leschenault population of ringtails had declined. Possible reasons for the decline include changes to the 1080 baiting regime, competition with the common brushtail possum, prey switching (i.e. the predators present may have switched prey from the once very abundant rabbit, to the western ringtail possum), predation by cats, pythons, raptors, owls or chuditch (the chuditch was first recorded at Leschenault in 1998 and cats and pythons were also known to have been present prior to the translocation commencing) or disease (toxoplasmosis was detected in one individual western ringtail possum at the Yalgorup release site and cats are the definitive host for toxoplasmosis). The site may also turn out to be unsuitable habitat.

'Where to from here?'

TO BE CONTINUED NEXT ISSUE

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