

**Mammal Conservation in Western Australia**  
**Re-introduction Case Study**

**Dasyurus geoffroii - Chuditch**

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Since 1992 the Chuditch Recovery Team has authorised three translocations of the carnivorous marsupial *Dasyurus Geoffroii*. These re-introductions have been undertaken by team members assisted by CALM district personnel and volunteers. The chuditch released had been bred at the zoo as part of the recovery plan funded in different stages by CALM, Environment Australia (then ANCA), WWF, Alcoa and the Perth Zoo.

The first of these was undertaken in Julimar Conservation Park (24 000ha) north east of Perth and at that time thought to be to the outside of Chuditch distribution. Julimar is primarily a mixed forest of jarrah/marri/wandoo and was thought suitable for this species. This work has also received financial and logistical support from the Department of Defence due to the proximity of their Bindoon training facility.

Some 52 Chuditch were released in the period September 1992 to March 1993. Following some years of close monitoring by CALM Science personnel this population was found to be well established. During the most recent visit in July 1998 mean daily capture rates had risen to >9% (78 captures of 34 individuals). It is now common for most captured females to be found with pouches full of the maximum (6) young during the annual visit. Sightings by nearby landholders and unfortunately an increase in roadkills have also been recorded. Responsibility has now been handed over to CALM Mundaring for continued monitoring as part of their commitment to CALM's Western Shield program.

Following on from this success the Recovery Team decided to attempt to re-introduce chuditch back to areas well outside of their current distribution. The first such translocation took place in October 1996 when 40 captive bred chuditch were released into Lake Magenta Nature Reserve (108 000ha) some 400 km South East of Perth. This reserve contains large areas of eucalypt mallees and woodlands with surrounding heath and scrublands. It is considered to be semi-arid and historically would have been capable of supporting a diverse range of fauna. As per Julimar these animals were closely monitored, this time by staff from CALM Science and CALM Katanning. A combination of radio-tracking and trapping has been undertaken since then and a further 41 chuditch have been added to the original batch.

From the information gathered we could see that the released chuditch responded to their new found freedom in various ways. Some moved over considerable distance

(20km) in the space of a few days whilst others quickly established territories close to the release point.

This population appears stable although the threat from foxes and cats, which are regularly sighted around the reserve boundary, is ever present and some predation has occurred. Breeding occurred in the first year of release with several captures of offspring being recorded in 1997. Further monitoring will be conducted over the next few years and possibly some further research into the dietary and habitat requirements of chuditch in semi-arid areas such as Lake Magenta. This is important because all biological data known about the chuditch comes from forest areas where dietary and home range requirements may be quite different.

The ability of the Perth Zoo to successfully produce chuditch for this program has allowed additional translocations to be scheduled and in March 1998 a further 20 chuditch were released into Cape Arid National Park 150km beyond Esperance.. This translocation was designed to expand our knowledge of how chuditch would adapt to different habitats as the park is considerably to the east of Lake Magenta and contained a mix of coastal and semi-arid vegetation associations.

With the assistance of the resident CALM Ranger, these individuals were again closely monitored. This work produced some interesting information. Firstly, after a period of weight loss the chuditch returned to release weight within 4-6 weeks; For refuge they were found to prefer rabbit burrows both disused and those currently occupied; they did not mind tackling large prey as we observed the demise of rabbits, a young Goshawk and we found a feral cat claw in one chuditch scat.

A further 20 were released in late April and we have already observed the birth of the first generation of Cape Arid chuditch. The site will be closely monitored as feral cats have been sighted and trapped during this re-introduction phase and may pose a threat, particularly to the young animals born at the park. This cat presence is not surprising when you read passages from the old Israelite Bay jetty logbook that state; "arrived today: 100 cats - to keep the rabbits down".

We were also pleased that most stayed close to their point of release perhaps indicating that adequate food and shelter were available in that area. One exception was a male from the second batch who was captured by local CALM Wildlife Officers in a chook pen North west of Salmon Gums some 10 weeks after release. This adventurous individual had travelled over 180km "as the crow flies" and was found to be in excellent condition.

These translocations appear successful or likely to be so. Additional areas for future releases are currently being assessed, however all sites are still dependent on continued fox baiting, regular monitoring by CALM staff and careful management of the area to assist in the creation of vibrant and strong populations. It is envisaged that captive breeding will continue to be the primary source of Chuditch for this work in the foreseeable future

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# Mammal Conservation in Western Australia

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