

severe and costly wildlife management problems. Some of these problems, including population eruption, excessive abundance and adverse impacts on vegetation have proved almost impossible to solve. Because of this, translocation of koalas will not be approved in Queensland except under a controlled scientific research approval aimed at expanding knowledge about wildlife translocation.

Koalas, although in decline, are generally widespread in Queensland and translocation is not necessary for population conservation at this time. The available resources for koala conservation are better directed at conservation of existing populations and habitat rather than establishment of new populations.

3.7 Koala rehabilitation

EPA, a number of zoos and vets and an extensive network of highly committed and trained volunteers provide rescue, rehabilitation and release services for koalas across Queensland.

EPA operates a comprehensive koala welfare, rescue and rehabilitation system through a wildlife ambulance, hospital and volunteer network. The Moggill Koala Hospital, which opened in 1990, is the only government-run facility of its kind in Australia. The koala ambulance transports sick, injured, orphaned and dead koalas. While more than 1000 koalas arrive at the hospital each year, the extent of their injuries and limited chance of recovery means only 30 percent are successfully returned to the wild.

There are some 2000 wildlife carers in Queensland. However, due to the special husbandry needs of koalas, in particular sick, injured and orphaned koalas, carers and rescue volunteers must meet stringent requirements and be specifically endorsed by the EPA or their rehabilitation group as a koala carer.

In 2003 Australia Zoo signed an agreement with the EPA to establish a koala hospital to service the northern suburbs of Brisbane and the Sunshine Coast. This privately operated facility works in concert with the Moggill facility, sharing information on treatments and injury, recovery and release data. A number of zoos in south-east Queensland also treat injured koalas and maintain contacts with wildlife rehabilitation groups to foster joeys.

There is potential for other koala hospital facilities to be developed in future. Such facilities would need to be by agreement with the EPA, working under guidelines aimed at maximising the return of koalas to the wild (see Appendix C).

Rehabilitation

The success of rehabilitation is dependent on the condition of the animal when it is admitted to care. Many animals are unable to be rehabilitated for a variety of reasons, including extent of injury, poor potential for treatment, quality of life after treatment and potential long-term suffering by the animal. Dead or euthanased animals undergo post mortem to investigate the cause of injuries or disease.

Animals can spend between one week and several months in care. Standard treatment commonly involves minor surgery and a regimen of antibiotics, anti-inflammatory and pain relief medication. Volunteers are heavily involved in day-to-day husbandry of koalas, particularly the cleaning and feeding of these animals. Juvenile animals are given an initial assessment at the hospital and then housed with foster carers until they are returned to large open air enclosures in preparation for release.

Husbandry requirements

Optimum husbandry standards are critical for successful rehabilitation of koalas (Carrick *et al.* 1996). Suitable housing requirements for animals undergoing treatment, including indoor, less-exposed, or semi-outdoor, well ventilated enclosures, are necessary to respond to individual needs of koalas during treatment. A daily supply of fresh high-quality eucalypt browse is considered essential for rehabilitation success, with a demonstrated decline in rehabilitation success if this standard is not achieved (Carrick *et al.* 1996). Facilities at koala hospitals and at individual carers premises must comply with minimum standards of husbandry.

The support and advice of a veterinarian is also important to koala rehabilitation. Any invasive first aid on a koala requires assessment by a veterinarian and administration of sedatives or pain relief drugs must be by approved, experienced wildlife persons or veterinarians with training in the treatment of koalas.

Table 3 Total admissions and releases from Moggill Koala Hospital

Year	Total admissions	Total releases back to the wild	Breakdown of the initial cause of admission and number rehabilitated and released			
			Car strike/released	Dog attack/released	Disease/released	Other/released
2002	1391	287	450/25	159/17	634/79	148/44
2003	1274	290	408/24	122/9	530/74	214/88

Data source – Moggill Koala Hospital record books

Aims for koala rehabilitation

- To provide for the rescue, treatment and rehabilitation of sick, injured or orphaned koalas.
- To return rehabilitated animals with high chances of survival to the wild.
- To maximise the successful rescue, treatment, rehabilitation and release of sick, injured and orphaned koalas.
- To provide requirements for the treatment, rehabilitation and release of rescued koalas.
- To involve wildlife rehabilitation groups, volunteers and other organisations in the rehabilitation of rescued koalas.
- To reduce injuries and fatalities of koalas from human activities.

Management strategies

- EPA will continue to co-ordinate a management system for the rescue, rehabilitation and release of sick, injured and orphaned koalas, in partnership with koala care groups and other organisations.
- EPA will continue to operate a koala hospital to facilitate the treatment and care of sick, injured or orphaned animals.
- EPA will maintain and build partnerships to provide wider access to koala care, including the establishment of privately operated koala care facilities.
- Privately operated koala hospitals must operate under an appropriate authority (i.e. rehabilitation permit) and must comply with established standards for the rescue, rehabilitation and release of koalas (see Appendix C).
- Guidelines for the fostering of koalas to endorsed carers will be developed in consultation with carer groups. The guidelines will address levels of experience required for different size classes of young, minimum husbandry requirements, holding and pre-release facilities, timing of release, and record keeping (see Appendix C).
- Rehabilitated koalas must be returned to the area from which they originated or to nearby habitat (see Appendix A).
- EPA will liaise with local government and other government agencies to reduce the number of koala injuries and fatalities through domestic animal controls, vehicle strike mitigation activities and appropriate planning guidelines in koala habitat areas.



Release

Koalas are treated and released as soon as practical so as to not disadvantage the animal by a lengthy absence from its home range. Once fully treated, koalas are returned to the area from which they originated or to nearby habitat. As far as possible, koalas should be released within one kilometre of the site of origin. It is believed that their prospects for survival are greater and impacts on resident koalas in constrained habitat are minimised if koalas are returned to the area from which they came. If the original habitat has been cleared, koalas are returned to the nearest intact area of eucalypt forest or woodland (see Appendix A).

3.8 Display of koalas

Koala colonies in zoos are one of the most popular visitor attractions and make an important contribution to the state, national and international tourism industry. They can also play an important role in educating visitors about the conservation and protection of koalas and their habitat. It is essential, therefore, that displays are maintained at high standards.

Studies of koala husbandry and health in captivity have highlighted three major issues as critical factors in maintaining healthy captive colonies of koalas (Carrick *et al.* 1996, Gordon 1996). These are:

- provision of adequate food supply and high nutritional standards;
- maintaining high standards of husbandry, including the employment of well-trained staff; and
- maintenance of animal health.

In 1995, a code of practice for managing captive koalas was approved under the *Nature Conservation Act 1992*.

The Code of Practice of ARAZPAQ – Minimum standards for exhibiting wildlife in Queensland (Part A Koalas Phascolarctos cinereus) (2003) sets minimum standards for captive koala management in Queensland.