

NOTE

The 'Devil's rope': flying-foxes in barbed wire fences

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The wildlife-friendly fencing project was born of the frustrations of rescuing thousands of flying-foxes from barbed wire fences, and knowing they were a small proportion of the wildlife that meet a cruel end in this way. Over 70 different Australian wildlife species have been recorded entangled in this 'Devil's rope', the term used in the late 1800s by cattle ranchers on the prairies of USA.

Most animals die a cruel death on the wire; others are rescued but face euthanasia as they can never be released. A lucky few survive to be rehabilitated back to the wild. This is an animal welfare issue. Some of the species commonly entangled in barbed wire fences are listed as threatened, including three bat species—Spectacled and Grey-headed flying-foxes *Pteropus conspicillatus* and *P. poliocephalis*, and the Ghost bat *Macroderma gigas*, Australia's largest microchiropteran. This is a species conservation issue. The third issue is that entanglements are preventable, and therefore we are morally obliged to act.

The Threatened Species Network of the World Wide Fund for Nature announced funding for the project on Threatened Species Day, September 2006.

The first action was to develop the website www.wildlifefriendlyfencing.com so that the project could be readily communicated to as wide an audience as possible. The website format also means information can be easily updated as the project progresses. Input and photographs were sought from wildlife carers and biologists around Australia. Online forms were developed so that carers can report entanglements and the project coordinators can learn a lot more about entanglement. We know that most bats, gliders and birds get caught on the top strand of a barbed wire fence, though it is not uncommon for the second strand to be involved as well. There are tremendous forces involved when an animal hits the fence, and many have fractures. We also know that the high-risk areas for entanglement for bats are ridgelines, over and near watercourses, near feed trees, newly erected fences, and during windy weather. See <http://www.wildlifefriendlyfencing.com/WFF/Home.html>.

The project focuses on all forms of fencing that are unfriendly to wildlife, not just barbed wire. This includes fencing that prevents animals moving freely in the landscape, such as those too close around wetlands which prevent cranes from landing and taking off. Koalas get their heads caught in mesh fences as they try to move around their territories. Kangaroos are often hung in fences, their legs caught between the 2 upper strands (of plain or barbed wire). Loose monofilament netting thrown over backyard fruit trees is another type of fencing

that causes horrific injuries to flying foxes. An exciting development in June 2007 has been the agreement with most leading outlets in Australia to 'trade out' and not restock monofilament netting. The monofilament netting will be replaced in stores by white knitted netting, with advice about tensioning the netting on a frame. We advocate a 'bounce test', that netting should bounce wildlife off it rather than entangle it. Bats are still likely to get caught in loose knitted netting but the injuries will be a lot less severe. White is the preferred colour as bats are more likely to see it at night than the alternative black netting. Not a lot is known about the colour vision of flying foxes, but since much of the fruit and blossom on which they feed is pale in colour, it is presumed that white will be seen more readily. Entanglement in netting and barbed wire are the two major reasons for bat rescues in Australia.

The project is being coordinated by the Tolga Bat Hospital www.tolgabathospital.org situated near Cairns in northern Australia, with Bat Rescue Inc www.batrescue.org.au as partners further south. However, much of the implementation of the wildlife-friendly fencing strategies relies on the involvement of a broad range of organizations, such as natural resource management, conservation, wildlife rescue and protection, animal welfare, rural industries, farmer groups etc. A surprising number of entanglements occur in urban areas, on security fencing around industrial areas, golf courses, and sewerage treatment works etc. Security fencing has to meet particular Australian Standards, and so the issue is complex.

The communication materials for the project include brochures, posters, car stickers, t-shirts and a short film. The Mahogany Glider, and the Spectacled and Grey-headed flying foxes, are the flagship species for the project. Distribution of information and communication materials will occur through the broad range of organizations and media.

The most difficult part of the project is developing case studies for wildlife-friendly fencing. We are seeking landowners whose fences entangle wildlife to join the project, and we have funding to help them modify fences to make them wildlife-friendly. Landowners in the project will be able to display a sign indicating their involvement. The case studies serve to demonstrate that it is possible to have wildlife-friendly fencing for a range of livestock in a range of terrains. We will be providing information for landowners about the wildlife in their area that are likely to be affected by fences and asking them to let this guide their decisions about what sorts of

fencing to use. The wildlife-friendly fencing guidelines are based around 2 strategies:

1. Remove / replace / cover barbed wire, and / or
2. Improve the visibility of the fence

The first strategy involves a number of options:

- Do not use barbed wire at all, especially on the top strand.
- Cover the barbs on existing fences, especially in entanglement hot spots. This can be done fairly easily with a device that splits polypipe longitudinally and this then fits around the barbs. It has been done extensively in one part of Australia.
- Use electric fencing.
- Use high-tension plain wire in suspension fencing.

- Remove the fence in some entanglement hot spots and re-erect it elsewhere; for example, just below a ridgeline rather than at its peak.

The second strategy can involve:

- Use of white electric fence tape (new or used) as the very top strand of a fence. It is far more visible, by its colour, width and that it flickers in the wind. This was suggested by a landowner in the project and is being trialed on his property. He wants to continue using barbed wire, but has his fence posts of sufficient height that the top strand of barbed wire is about 100 mm (4 inches) down the post and the electric fence tape runs along the top of the post. He has found it extremely quick and easy to erect, and so it is a practical option for all new fences.
- Part of the project is to work with outlets for electric fencing, and provide bins for people to deposit their old



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fencing tape. It is quite common for the tape to get damaged and lose its conductivity, and so be useless for its original purpose.

- Use of white nylon fencing products developed for horse fencing. This is an expensive alternative for non-horse owners, but warranted in some hotspot areas. One product absorbs the sun's energy during the day, and literally glows in the dark at night.
- In short spans of fencing, use of bunting, flagging, old CDs. The idea is to create a visual (and audible if possible) warning to nocturnal wildlife.

The scope of the project is enormous, and we can only hope to raise awareness about the issue, and begin to overcome the inertia for change by showing landholders that they have options that allow them to fence effectively and also safely for wildlife. Animal welfare is increasingly on the political agenda, so a level of optimism surrounds the project. It is hoped that barbed wire rescues will become an uncommon event for future Australian wildlife carers, and that many of the normal horrors of today will eventually be regarded as abnormal.