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Problem Solving in the Outback

Directions: Read the article below and create a title for it. Write down the actual title once it is provided. How close to the real thing was your title? Which one did you think was better and why? Next, use an orange colored pencil to go back through the article and put a star next to the important cause-and-effect relationships that you notice in this article & fact page.

Possible Title: _____

Real Title: **Australia's Camels Thrive on Climate Swings**

by Michael Sullivan

June 16, 2007

There are many exotic species native to Australia: The kangaroo, the koala, the kookaburra. But the camel is not among them.

Australia is now home to more wild camels than any other country on earth. An estimated 1 million of them are starting to push out of the desert and into populated areas and ranchland.

Camels were brought to Australia in the 19th century by European explorers and were used to "carry heavy loads to cross the dry and inhospitable lands," a video tells tourists outside Alice Springs in central Australia, where an hour-long camel ride costs about \$50.

The arrival of motorized transport in the 1920s made the camels obsolete. Shipping them back to India and Pakistan was too much work. A few thousand or so were turned loose and left to fend for themselves in the desert.

In another context, this might seem cruel and inhumane. But for the camels, it was pretty close to divine intervention.

"The Australian continent was heaven for camels," says Neil Burrows, science director at the Western Australia Department of Environment and Conservation.

They essentially have no competitors, he says.

"No predators, no threats, no disease," Burrows says. "They have to do the normal battle with the whims of weather, namely access to water is an issue. But because of their ability to travel long distances and to go long periods without water, they overcame that limitation, which most animals can't."

Some scientists say camels may be even better adapted to life in the outback than Australia's iconic desert species, the red kangaroo.

"When a drought hits red kangaroo populations, you see massive decline in the population," says Glenn Edwards is principal scientist for the Northern Territories Park and Wildlife Service based in Alice Springs. "So red kangaroo populations go up and down dramatically with the good and bad seasons, but we don't see that with the camels."

And there have been far fewer bad seasons recently, according to Burrows.

"Certainly over the last 10 or 15 years, the rainfall in arid zone has been above average or in some years well above average, and that provides extra vegetation growth, which provides extra food for the camels," he says.

Their populations have increased, which has had "an enormous impact" on vegetation during drought periods, which are common in the desert, Burrows adds. Ranchers have also felt the camels' impact.

Robin Mills, a rancher at Warrawagine Station, about 1,000 miles west of Alice Springs, says that more and more wild camels are wandering onto his property, tearing down fences and smashing troughs to get at water.

So far, Mills says, his camel problem is more of a nuisance than a real threat. But he expects things to get worse in a hurry for ranchers and the desert ecosystem.

The Park and Wildlife Service's Edwards is also worried about what might come next: "Possibly the extinction of some plant species. Possibly the disappearance of some wildlife species out of our deserts. And let's remember that the Australian deserts cover the majority of our country. So it's a reasonably serious issue, which will probably get worse with time unless we turn it around."

The Australian government has set up a commission to study the problem and find a way to solve it.

And time, those studying the problem say, is running out — with Australia's wild camel population set to double in the next eight years.

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<http://www.npr.org/templates/story/story.php?storyId=11123376>*

Other Camel-ish Headlines:

Wild camel population becoming a problem	The World Today	April, 2005
Australian Camel Problem	Chicago Tribune	2009
Pesky Camels Could Be a Boon to the Outback	New York Times	Sept., 2010
Australia's wild camel conundrum	CNN	Oct. 2010

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More Camel-y Facts:

Camels are scattered through the arid interior of Australia with an estimate of 50% in Western Australia, 25% in the Northern Territory, and 25% in western Queensland and northern South Australia.

The Conservation Commission of the Northern Territory survey in 1994 over the southern half of the NT indicated a population of approx. 60,000 camels. The 2001 survey by the Northern Territory Parks & Wildlife Commission has estimated the present feral camel population in the Northern Territory to be in excess of 200,000. The likely Australian population is now 600,000. The 2009 estimate was 1 million camels.

The camels brought into Australia were almost exclusively the one-humped camels (*Camelus dromedarius*) which are found in hot desert areas and are highly suited to the climate in Australia. Only about 20 of the two-humped camels (*Camelus bactrianus*) normally found in cold deserts were imported into Australia.

Central Australia used camels in the construction of the Overland Telegraph line, the supply of goods to Alice Springs and to cattle and sheep stations, missions and Aboriginal communities. Camels hauled wagons loaded with wool to the railhead at Oodnadatta, pulled scoops and ploughs to build dams or perform other heavy jobs.

Most of the camels were released in the mid 1920s, when motor vehicles began operating in the central areas of Australia. They established free-ranging herds in the semi-arid desert areas of Australia.

David Carter is a third-generation beef cattle producer who manages around 2,500 cattle on Wyangarie Station in Richmond in Australia's northern state of Queensland. He introduced camels to his ranch five years ago, and now owns 150 of them. "The camels we brought back were captured ferals and we tamed them down," he told CNN. Carter said the camels are a cost effective way for him to manage the woody weed on his 48,000 acres of land, which is essential for growing the grass that his cattle feed on. "Camels are cheaper than chemicals for weed control and better for the environment without question," he said. "If you can get a camel to do what a chemical otherwise would, it's a win-win." But there's a limit to how many camels are needed to control weeds.

Camel Company Australia is an award winning business operating camel safaris from Noosa's North Shore, Noosa Heads, on Queensland's Sunshine Coast.


The Outback Camel Company has been exploring all the Australian desert's since 1976 and has a heritage that stretches back to 1860, encompassing the golden years of camel based desert exploration. "We believe that packcamels are still the best way to explore Australia's

great deserts with the smallest environmental padprint possible. Our trips begin where the roads stop - there are no tracks or roads where we go and in most cases we are blazing a new path across the red dunes, alongside inland river systems, and across vast gibber flats and claypans.”

According to the U.N. Food and Agriculture Organization, the world market for camel milk could be worth as much as \$10 billion. And interest is growing: Emirates Industry for Camel Milk & Products, based in Dubai, is already selling its Camelicious brand milk widely in the Arab market and was approved in July by E.U. health regulators as the first major supplier to Europe.


Because of their size, camels can only be transported by single-deck vehicles. So, while they may be in overabundance in the center of the continent, transport costs to domestic markets — let alone international ones — are extremely high.

Australian camel problem



Camels in the outback

- Not native to Australia, first brought there in the 19th century
- Camels helped explorers travel the desert
- Now almost 1 million feral camels; population expected to double over next decade



Animal facts

Dromedary: Arabian camel, one hump
Bactrian camel: Asian, two humps

- **Life expectancy** 40-50 years
- **Size** 6 ft. 1 in. (1.85 m) at the shoulder and 7 ft 1 in (2.15 m) at the hump
- **Speed** 25-40 mph (40-65 kph)
- **Hump** Rises about 30 in. (75 cm) out of its body; reservoir of fatty tissue, not for water storage
- **History** Evolved in North America, later spread to most parts of Asia; humans first domesticated camels before 2000 B.C.
- **Special feature** Well adjusted to hot climates; withstands long periods without water due to series of physiological adaptations

Source: Australian Northern Territory Government, Animal Info, Australian Department of the Environment and Heritage, U.N. Food and Agriculture Organization Graphic: Jutta Scheibe, Junie Bro-Jorgensen © 2009 MCT

Sources:

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