

## Bringing the Empty Quarter back to life: in 1972, the last remaining wild Arabian oryx disappeared--shot by poachers or captured for a private collection. However, thanks to captive-breeding and reintroduction programmes, this magnificent antelope has returned to the sands of the Empty Quarter.(southern Saudi Arabia)

by Malcolm Smith

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"Over there, about two miles away," Maartin shouted. Some fuzzy white shapes were all that was visible as I swept my binoculars across the shimmering plain. Were my eyes playing animal-shaped tricks in the spotlight brightness of the morning sun? Were these hazy objects pieces of rock or could they be the animals I'd travelled so far to find? "Seven oryx. All adults I think. They're browsing on some bushes." Maartin said.

I was in the Empty Quarter, the Rub' al-Khali in southern Saudi Arabia--an uninhabited desert the size of France--to assess the progress of the reintroduction of the Arabian oryx (*Oryx leucoryx*). With me were biologists Maartin Strauss and Eric Bedin, who are monitoring this strikingly beautiful, salt-white antelope for the Saudi National Commission for Wildlife Conservation and Development (NCWCD), the organisation that is responsible for its return.

We drove farther into the sands to get a closer view, buumping along grey-white gravel plains-shiqqats--between the exquisite folds of huge, sculpted dunes of pale-orange sand. Eventually we sifted them, seven oryx, the size of large deer, watching our every move. Their gorgeous dark eyes contrasted with their white coats and their enormous barley-sugar-twist horns caught the bright sun like skyward-pointing rapiers. Viewed side-on, it can seem as if they have only a single horn, the origin, some believe, of the unicorn myth.

"Four of them are wearing collars, which means they are released animals," whispered Maartin as we sat huddled in our Jeep, the sweltering heat building by the minute. "The other three must have been born here in the wild," he added with obvious pleasure.

Once found across the Arabian Peninsula--from Yemen in the south, to Iraq and Syria in the north and Israel in the west--the oryx's range was already contracting by the beginning of the 20th century. By the 1930s, it had been split into two separate populations and around 1950, the northern of these was extinct. Sport-hunting continued to drive their numbers down and in October 1972 the last six wild-living oryx were shot by poachers or capture for illegal sale--probably to a private zoo--in the Omani desert.

However, in 1963, thanks to the farsightedness of the then Fauna and Flora Preservation Society, three oryx had been captured and flown to the Phoenix Zoo in Arizona, USA. They were joined by six others from zoos and private Middle Eastern collections and so began a captive-breeding programme that, by 1977, had increased the herd to 100.

The first reintroductions took place in 1982 at Jiddat al-Harasis in Oman. In 1994, the Omani government created the 20,000-square kilometre Arabian oryx sanctuary, and by 1996 the Omani desert--which is contiguous with the Empty Quarter--held more than 400.

Then disaster struck. Another surge in poaching reduced numbers, so that by 1999 there were only 85 left and many were recaptured for more captive breeding. Earlier this year, it was announced that six female and about 100 male oryx remained in Oman's portion of the Empty Quarter. While action is being taken to apprehend poachers in Oman itself, its authorities are also engaged in discussions with the UAE to prevent trade outside the country.

The story in Saudi Arabia has been a happier one. Between 1990 and 1993, 72 oryx were released into the 2,240-square-kilometre fenced Mahazat as-Sayd Reserve. By May 2002, this population had reached about 500 and now a proportion are removed each year.

The success of this project led to the release of 149 oryx, in 17 social groups, into the 12,000-square kilometre Uruq Bani Ma'arid reserve in the northwestern Saudi Arabian section of the Empty Quarter between 1995 and 2002. "Around 200 oryx now roam wild in the west of the Empty Quarter, their breeding increasingly successful," says Stephane Ostrowski of the NCWCD's research centre at Tail, east of Jeddah. "Of the recorded deaths, 65 per cent have been caused by starvation, especially in the four-year drought to 2000, 19 per cent by fights between males and 13 per cent due to poaching."

The reintroduction has been both costly and time-consuming. Animals are bred in enclosures at the Taif Research Centre, where a thorough veterinary programme checks for, and eliminates, diseases such as TB. Genetic management has also been of major importance, helping

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to maintain the herd's genetic diversity and limit inbreeding.

Before release, the oryx make an eight-hour journey--in communal crates to maintain their social groups--to Uruq Bani Ma'arid, where they are held in a small pen for a few days. They are then moved into fenced, pre-release enclosures and provided with hay and water before being released to the wild after a month or more. Supplementary food and water is put out for a further month, but it generally isn't taken.

Like their human counterparts, the Bedu, Arabian oryx are nomadic. Often covering long distances in search of food, they may roam over areas of up to 2,000 square kilometres. They are superbly adapted to desert life, their hooves splayed for walking on sand and their pure-white coat reflecting the sun's rays. Perhaps not surprisingly, given that they live in one of the world's driest regions, they have the lowest water turnover of any hooved animal--four times lower than that of a camel. When water isn't available they can obtain enough from dew and from their food, which consists of bulbs, sandpaper-tough, sun-bleached grasses, sedges, herbs and spiny shrubs. During summer they markedly reduce their energy expenditure--already the lowest for any eutherian mammal--and typically feed before dawn and after sunset. In the heat of the day they dig shallow depressions in the shade in which to rest.

Standing more than a metre at the shoulder and weighing up to 124 kilograms, they are still the smallest oryx. They are usually found in groups of ten or fewer and can live for 15 years. Their reproduction appears to be tied to the availability of food--the Uruq Bani Ma'arid population experienced good rains in April 2002 and by February this year, 70 per cent of the observed females had calved. The young are born after a 240-day gestation period and weigh 2-8 kilograms. By four months of age, they are fending for themselves.

One cool evening when we returned to camp, a visitor was already drinking green, cardamon-heavy coffee with the local Bedu rangers employed to protect the animals. Mohammed, a Bedu of the Dawasir tribe in his 80s, had driven his pickup to our camp from his distant home. He recalled with fondness seeing oryx in the Empty Quarter half a century ago. His eyes brightened and he tapped his stick on the floor as he told us how the oryx would move

deeper into the sands in the cooler months and return to the edges in the fierce heat of summer. Once again, he said, oryx are rediscovering their old ways.

Early the next morning we were out looking across rows of dunes folded to the horizon. In the distance we spotted two oryx running like well-trained horses, clipping the white gravel with their hooves and sending up tiny dust clouds in their wake. It was Maartin, again, who noticed something different. Something small, almost sand coloured, running between the two adults. "It's a calf," he shouted. "It still has its fawn-coloured coat so it can't be three weeks old."

And there it was, little more than 30 centimetres tall, keeping metronome-like pace with its parents, hardly visible above the gravel as all three of them cantered elegantly along the edge of the shiqqat. This tiny calf provided the greatest symbol of hope for the survival of this impressive animal.

Malcolm Smith

As chief scientist and senior director at the Countryside Council for Wales, Malcolm Smith admits he's mostly desk-, train- or car-bound. "That's why I take every opportunity to get into the great outdoors," says Malcolm, who lives on the North Wales coast. The outdoors doesn't come much greater than the Empty Quarter, which Malcolm describes in his report on attempts to reintroduce the endangered Arabian oryx, on page 52. He has a special interest in deserts, so an invitation to visit Saudi Arabia, in particular the Empty Quarter and the Azir Mountains was "unmissable". Malcolm regularly writes on environmental and wildlife issues for The Times and Daily Telegraph among others.