Fifty years ago, even the Empty Quarter was known for its lovely oryxes and Idhmi gazelles (ref. *Arabian Sands*, by Wilfred Thesiger / 1948). Now, after nine years roaming in the wild in the Western Region of the Kingdom of Saudi Arabia, I am able to sum up my experience of the present wildlife, the one bred behind fences excluded. I mention that I am not a dedicated wildlife watcher staying alone and quiet at the same carefully selected spot with powerful binoculars, during hours and hours, in order to catch a wild animal on the move from its den to its favorite hunting ground. My pleasure is rambling with as many interested families as possible, from a car park to a peak, along a wadi, across harrats (lava fields), from a lonely Haj caravanserai to another. On the way I don’t restrict the bursts of joy from the children. Only technical music produced by noisy boxes is not warranted. In those conditions, what did we observe and where did it happen? Are the four quarters empty now, totally empty?

Inventory of today common wildlife

In the Hejaz. I do not know DESERT, nothing looking like the Empty Quarter in the south of the Kingdom or the *Grands Erg* in the eastern and western Algerian Sahara. I know either the townships with their wild cats around the dust bins, or the country with some wildlife and shepherds and goats everywhere. I don’t know uninhabited areas in Hejaz: when I stop anywhere feeling alone, before one hour has elapsed, I receive the visit of a local shepherd. On the flat top of Harrat Rahat, during a walking trip reconnaissance, my partners and I, we had a huge, black, uniform lava field in front of us.

At that time, long ago, we believed it lifeless, because conspicuously naked; no tree, no bush, no tents. We were wrong. Quickly a shepherd popped up from nowhere and invited us for tea. We walked 500m further, discovered a small depression with a few square metres of yellow soil, a tea kettle boiling on ambers in a corner. While serving tea, the shepherd started to speak about his everynight unfriendly neighbours, foxes, wolves, caracal lynxes, hyaenas.. The country is not empty! In alphabetical order, without any preference or dislike, here are the species I later saw with my own eyes in the country, be it on the Sarawat range or the Tihama plain or the table land east of Taif.

- Baboons / Hamadryas: plenty are visible every day on the Sarawat range, from Al-Hada pass to Al-Baha and Abbha. Overfed by the travellers, they are now a nuisance by their number and their new habit to enter the houses for scrounging food.

- Birds / Flamingoes: on Jeddah corniche, south of the port.
THE NUBIAN IBEX

OSTRICHES AT MAHAZAT ASAYD

A YOUNG GAZELLE

/ Hoopoes: Taif – Shafa.
/ Partridges: Khulays Al-Azizia.
/ Pelicans: Wadi Iiyab.
/ Vultures / Egyptian: “Sugar loaf”, south of Makkah bypass.
/ Weavers: Hadat ash Shams, Fayfah.
/ Caracal lynx: Sed Qusaybah / Harrat Khaybar.
/ Fox / Ruppell’s: Al Muway, Ushayra, Mada’ in-Salah and in the Turkish fort of Muwayleh, north of Duba port.
/ Gazelles: Farasan islands.
/ Lizards / Agamas: Taif-Shafa, Al-Hada donkey trail.
/ Spiny-tailed Dhab: Khaybar – Al-Ula road.
/ Scorpions: anywhere under stones.
/ Snakes / unknown species: escaping from the water stream of Wadi Guran; Shafa, disappearing in a tiny hole under a boulder; Mada’ in – Salah.

Unfortunately many other species are known by the kills only, displayed on the road side by the angry shepherds retaliating after the loss of several lambs. Have been seen hanging in a tree during the last four years:
/ Caracal lynx: Wadi Naman, south of the escarpment road.
/ Hyaenas / Striped: South of Makkah bypass; road from Mastura to Yanbu.
/ Wolves: Harrat Rahat; south Makkah bypass; road from Shuaybah to Al-Lith.

Some other species are regularly victims of the car traffic by night and the bodies noticeable in the morning on the road asphalt:
/ Gerbils: south Makkah bypass.
/ Hedgehog: Wadi Ghadirain.
/ Porcupine: Harithi pass, leaving plenty of nice needles of knitting size.

This sum up does not mention wild sheep, oryx, ibex, leopard, ostrich which I saw regularly in the 1959 – 1961 period in the Tindouf area, south of Wadi Draa on the south western border of the Algerian Sahara. Historically all these species are mentioned by the nineteenth century travellers visiting Hejaz.

The National Commission for Wildlife Conservation and Development in Riyadh took the measure of the problem and created several National Research Centres/NWRCs to struggle against an alarming decrease of the country wildlife. One NWRC is in the south-east of Taif, on the way to Sudayra village. In their own words, here is the Taif NWRC description by the NWRC staff.

**Origins and Aims**

The Taif NWRC was established in April 1986 to form one of the focal points for conservation efforts undertaken in the Kingdom of Saudi Arabia by the National Commission for Wildlife Conservation and Development.

Situated 30 km east of the city of Taif, at an altitude of 1400 m above sea level, the NWRC encompasses a 650 ha fenced reserve.
The Taif National Wildlife Research Center

or the struggle against final emptiness in the desert

of semi-desert Acacia savannah.

Animals at the NWRC are kept in fenced enclosures ranging in size from 0.5 to 100 ha. A total of 70 ha has been set aside as a botanical reserve within which studies are carried out on the recovery of natural vegetation from over-grazing by domestic livestock. The objectives of the NCWCD / NWRC include:

- captive breeding of endangered Saudi Arabian wildlife in support of species restoration programmes;
- the reintroduction of captive-bred animals into specially prepared protected areas within their former range in Saudi Arabia;
- post-release monitoring and ecological studies of reintroduced wildlife populations;
- participation in and support of wider conservation programmes, including the protection of wild animal populations, the study of ecological processes in desert habitats, protected areas management, and the encouragement of public support and participation in wildlife conservation through education and awareness projects.

Achievements and Prospects

During its first ten years, the NWRC has met its initial objectives. With a staff of nearly 100 people, the NWCR has succeeded in the captive propagation of the Arabian oryx, houbara bustard, red-necked ostrich, Nubian ibex and onager. Breeding populations of oryx, houbara and ostrich have been re-established in the wild.

NWRC field staff have contributed to conservation programmes within the large network of Saudi Arabian protected areas, from Harrat al-Harrah in the far north, Mahazat as-Sayd on the central plateau, to Raydah in the forested Asir mountains, and south to 'Uruq Bani Ma'arid on the edge of the Empty Quarter.

Public awareness materials specially prepared at the NWRC, such as video documentaries and exhibitions, have been used to take the conservation message to thousands of Saudi school children, and to Saudi citizens in cities, towns, and even the most remote mountain villages.

Over the next ten years the NWRC aims to continue the restoration of depleted populations through reintroductions into new protected sites, through habitat management, and through the protection and encouragement of remnant wild populations.

Other projects

As part of broader projects to document Saudi Arabia's biodiversity for the selection, protection and management of wildlife reserves, NWRC staff undertake and support research on a variety of wildlife, including plants, insects, birds, bats, foxes, sand cats, wolves and leopards, and on the ecological processes that regulate wildlife populations in the varied and sometimes harsh arid environments of Saudi Arabia.

Ostriches

Once roaming the desert plains in good numbers, the ostrich has been extinct in Saudi Arabia for fifty years.

The red-necked ostrich from Sudan is bred at the NWRC for introduction into protected areas. Currently a population of about 20 ostriches has been established in the Mahazat as-Sayd Reserve. In February 1997 the first ostrich chicks hatched in the wild.

Gazelles

Gazelles in Saudi Arabia were represented by three species: the Arabian gazelle, the dorcas gazelle and the sand gazelle. Wild populations of all three species have been reduced through unregulated hunting. The NWRC maintains a small herd of gazelle for public awareness projects.

Nubian Ibex

The numbers of ibex in the wild in Saudi Arabia have been drastically reduced by hunting. The ibex breeding programme at the NWRC was started with the donation of 26 animals from the San Diego zoo and Wild Animal Park. A small herd is kept in semicaptive conditions at the NWRC for public awareness programmes and for the possibility of releases into suitable habitat.

Houbara Bustard

The houbara bustard is a shy, omnivorous bird of open arid habitat, well adapted to the desert environment. As the main quarry for Arab falconers, the houbara has become a flagship species for wildlife conservation and sustainable use initiatives in Saudi Arabia.

The decline of the houbara bustard in Saudi Arabia has been attributed to over-hunting and to habitat degradation through over-grazing and agricultural development. Once a widespread breeding bird in Saudi Arabia, resident houbara numbers in the Kingdom have been reduced to a single population, protected in Harrat al-Harrah in the far North. NWRC staff work closely with Saudi wildlife rangers to monitor and protect this relict population.

To restore breeding populations of this desert bird in Saudi Arabia, His Royal Highness Prince Saud al Faisal initiated the houbara bustard captive breeding project at the NWRC. The main aim of this project was initially to establish a self-sustaining, captive-breeding population of houbara, capable of producing an annual surplus of chicks for reintroduction into suitable protected areas. Released houbara would form the basis of new, wild breeding populations.

The first houbara chicks hatched at the NWRC in 1989. Steady improvement of methods of artificial insemination and incubation, coupled with careful research on houbara reproductive physiology, diet and...
growth, ensured the production of sufficient birds for the first releases to take place in 1991. Between 1991 and 1996 a total of 190 houbara were released into the Mahazat as-Sayd Reserve. These birds began to breed in the wild in 1995, the first houbara nests in central Saudi Arabia in over 40 years.

After 10 years the NWRC is now capable of producing a large number of houbara each year. Around 250 houbara chicks were produced in 1996, bringing to over 1,000 the number of birds produced in the first seven years.

Oryx

A majestic, white desert antelope and possibly the basis for the myth of the unicorn, the Arabian oryx is able to thrive in even the most arid areas of the Arabian Peninsula. Despite these abilities, the Arabian oryx became extinct in the wild only 25 years ago, the last herd falling to the hunters' guns in 1972. The species was saved from extinction through captive breeding.

In April of that year 57 oryx were moved to Taif from the King Khaled farm at Thumamah. The NWRC now produces healthy, disease-free animals for reintroduction into the wild.

The first releases

Between 1990 and 1993, 30 oryx were released into Mahazat as-Sayd, a 2,200 km² fenced reserve situated 150 km north east of Taif. In six years the free-ranging population of oryx increased to over 250 animals.

Following the successful establishment of a self-sustaining oryx population in Mahazat as-Sayd, the NWRC undertook the reintroduction of oryx into Uruq Bani Ma‘arid, a 12,000 km² reserve on the western edge of the huge southern sand desert, the Rub al Khali.

Between 1995 and 1997, 83 oryx were released. Calves were produced almost immediately by the released animals, and within two years over 100 oryx roamed the reserve.

The oryx populations of Taif, Mahazat, Uruq Bani Ma‘arid are growing quickly with most females producing a calf every year.

Raptors

The Kingdom of Saudi Arabia occupies an important position along the migration routes and encompasses major wintering grounds for a number of raptors, including two eagles species: the imperial eagle and the steppe eagle.

NWRC research staff are investigating eagle movements with the aim of plotting migration pathways.

In 1992 an Argos satellite-tracking project was begun in collaboration with the World Working Group on Birds of Prey and with the NWCD. By 1997, 292 raptors had been leg-banded, and 22 eagles and 3 falcons had been fitted with satellite transmitters, permitting NWRC staff to follow these birds during migration.

Baboons

The hamadryas baboon is found throughout the south west mountains. Studies by NWRC staff on baboon diet, reproduction and behaviour have provided information to enable the management of baboon populations where they co-exist, and sometimes come into conflict, with human communities.

Onagers

Several subspecies of Asian wild ass once occupied an area stretching from the Arabian Peninsula through to China. In 1927 the Arabian subspecies, the Syrian wild ass, became extinct. Its nearest living relative is the onager from Iran. A small herd is kept at the NWRC.

Wildlife conservation awareness

NWRC favours an audience coming from the Secondary schools: when convinced of the national interest of protecting the endangered species, the children offer a support of the programme lasting longer. So the school staffs are invited to get in touch with the NWRC management in order to arrange an information action at the appropriate time. The Taif NWRC address is: P.O Box 1086 Taif Phone: (02) 7455188 Fax: (02) 7455176.

AN HYAENA KILLED BY SHEPHERDS

Part of the NCWCD Protected Area Network.

LOCATION OF THE NCWCD MAIN PROTECTED AREAS

A RUPPELL'S FOX

AN HYAENA KILLED BY SHEPHERDS