

Whether it is preserving the flora or the fauna, Oman is determined that progress shall not destroy its unique environment. The Sultanate has shown itself to be forward thinking in terms of its concerns about conservation and the environment - and the challenges they face as Oman's economy continues to expand and develop. A one-day seminar held in London in March, *Oman's Natural Heritage-Land, Nature and Culture*, was the first international event organised by the newly created National Field Research Centre for Environmental Conservation (NFRCEC), headed by Dr Saif Al Shaqsi. His hope is to develop inspired international relationships with other conservation specialists seeking the best way ahead beginning with the UK.

Oman's natural rich diversity
From the Hajar mountains where endangered tahr perch on rocky outcrops, to long sandy beaches where newly-hatched turtles brave numerous dangers to reach the sea, Oman is rich with ecosystems. Its unique array of fascinating and often enigmatic wildlife is attracting increased interest from conservationists. However, the country is also undergoing rapid development, which is encroaching on the natural, rugged landscape. Hotel and resort developments are key to tourism but projects such as the Yiti project, on one of the most beautiful unspoilt beaches in the world, which was aborted due to the Dubai financial crisis in 2009 - leaving behind an unfinished building site as well as a displaced community - do not enhance the future landscape of Oman.

Tourism development can however go hand in hand with conservation and nature as seen at the Barr al Jisrah resort; prior to embarking on the project, Atkins, one of the contractors on the project, conducted an environmental impact assessment, which identified a coral community that could have been damaged by the extensive building project. This resulted in the suitable coral being transplanted onto a man-made substrate in a location that would not be impacted by the construction. A total of 41 small concrete forms were created with rough faces with a number of openings to allow coral and reef organisms to be transplanted. In total over 200 coral colonies were relocated with every attempt made to minimise disturbance and abrasion. Not all conservation projects lead to the expected - and hoped for - results; the Oryx, which had been successfully bred in captivity and thus saved from extinction, once reintroduced into the wild, has not shown great reproductive progress, much to the disappointment of the international scientific community.

Other conservation projects revolve around birdlife, moths and butterflies, turtles, local humpback whales, now known to be indigenous to the regions' waters, as well as the myriad dolphins found in the Arabian seas around Oman.

Earthwatch's involvement
Funded by the Diwan of Royal Court for a six-year period, the Oman Earthwatch Programme (OEP) is an ambi-



Left: A baby turtle emerging from its egg
Below: An Omani farmer caring for his crop of Alfalfa, irrigated with water running from the falaj overhead.
Below: One of the myriad pods of dolphins frolicking in the Arabian waters

also leading four environmental field research projects focussing on critically threatened species and habitats in different parts of the country, and working directly with the Omani Ministry of Education, influencing environmental education at a national level. For conservation programmes to succeed there is a need to involve local communities and future generations.

Earthwatch is leading a study into the illusive Arabian Leopard in the Jebel Samhan region of southern Oman. Extensive camera-trapping is contributing to

understanding the local population of these impressive carnivores. Socio-economic and attitudinal surveys have been undertaken with local villagers, constituting the first work of this type in the area, and the results of these will be essential for planning and management of the local reserve. Field-based training has been run for local Ministry of Environment rangers, allowing them to gain greater knowledge about the leopard and its conservation. Educational materials have also been commissioned, linking the science of this important project to critical areas of the Omani National Curriculum. These are now being trialled in local schools.

Initiative & innovation
In the study area of Wadi Sareen, camera-trapping and safe physical trapping of Arabian tahr is determining population size, and rangers working in the Wadi Sareen Nature Reserve are actively involved in the project, contributing species data to the management and monitoring systems which have been put in place. A wider biodiversity inventory is also underway, as is an Oman-wide survey of the tahr, taking in Musandam, Jebel Misht, Jebel Kwar and Jebel Qahwan in Sharkia. Altogether this will provide a much clearer picture of the ecology and future conservation of this iconic and threatened species.

Two other initiatives include a juniper woodlands study in Jebel Shams and Jebel Akdhar, and a study of biodiversity, agriculture and livelihoods supported by the ancient falaj system in Oman. A research proposal for the conservation of fragile juniper woodland in the Jebel Akdhar region is currently being developed between Earthwatch, the NFRCEC, Oman Botanic Gardens and Sultan Qaboos University, whereas the falaj study is being developed jointly with Nizwa University.

The falaj system is also the focus of another project aimed at the possibility of using the waters to create specially designed ponds for fish farming

The falaj system forms the backbone of traditional irrigation in Oman as well as being a major part of village life; the water system generates income for the villagers via an extremely complex system of the time sharing of water use.

Fish farming project would be another means of cash creation and Dr Abdullah Saif Al Ghafri has come up with the innovative idea of developing such a project within these systems. The science behind it is complex involving aquaponics - a food production system that combines conventional aquaculture with hydroponics (cultivating plants in water) in a symbiotic environment. The scheme is currently only at the experimental stage but there are high hopes that farming Tilapia in the falaj system could become a future reality, offering villagers a new source of income and an incentive to remain in their locality, thus preserving the fabric of agricultural life in the countryside.

If Oman is to retain its natural beauty, whilst progressing into the 21st century, the engagement of local stakeholders via education is vital in order to preserve the country's spectacular biodiversity for future local and international generations to enjoy. ■



Preserving Oman's Natural Heritage



By Rhona Wells

tious programme operating at a national level encouraging and increasing environmental field research and education amongst Omani citizens. OEP is working to build the organisational capacity of the newly emerging National Field Research Centre for Environmental Conservation (NFRCEC) in Muscat, through staff training, data-management infrastructure, and input into its organisational strategy. At the same time, Earthwatch is

