

KUWAIT TURTLE CONSERVATION PROJECT: TOWARDS KNOWLEDGE AND PROTECTION

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Introduction

Kuwait is a small country situated in the northwestern shore of the Arabian Gulf. Mainly an oil-producing country, it is not known for its soft, sandy beaches and a thriving coral reef, or for its sea turtle populations that live and reproduce there. And yet, all this exists, rendering its small offshore islets very important for marine biodiversity in the area. A closely intertwined relationship has always existed between the land and the sea. Pearling and fishing traditionally dominated Kuwait's maritime activities. Today, some seventy trawlers catch what are amongst the most important shrimp catches in the world, exporting many tons all over the world. Land reclamation projects and development have modified the marine environment of the mainland, and home-grown yacht tourism has reclaimed the islet of Kubbar, which once provided nesting grounds for turtles (Meakins and Al-Mohanna, 2004), today only hosting nesting swift tern populations. Despite this, turtles are still observed swimming around Kubbar. In the last forty years, the population in the country has increased tremendously, and in Kuwait Bay alone, more than 10 square kilometres of intertidal habitat has been filled in for power generation stations, port development projects, recreation and commercial concerns to meet the needs of a developing society with over 60% of its population under 24 years of age (Al-Yamani et al, 2004).

In the framework of the Kuwait Turtle Conservation Project, sponsored by the TOTAL Foundation and TOTAL Kuwait and with the cooperation of the Voluntary Work Center Kuwait and The Scientific Center, researchers are now attempting to unravel the mysteries of sea turtle presence in the area. Population assessment, species assessment, nesting seasons and public awareness are some of the project's challenges.

What has been known for years was that Hawksbill (*Eretmochelys imbricata*) and Green turtles (*Chelonia mydas*) have been spotted nesting on offshore, uninhabited atolls like Umm Al-Maradim and Qaru (Meakins and Al-Mohanna, 2004). A beach in the Mina as Zour area has been hosting Hawksbill nesting grounds for several years as well, while the occasional Loggerhead (*Caretta caretta*) had been caught in fishermen's nets or a Leatherback's carcass (*Dermochelys coriacea*) found on beaches. Given the difficulty of access to the offshore islands most times of the year, mainly due to unpredictable weather conditions, the Kuwait Turtle Conservation Project took up the challenge to try and access the Islands by all means and monitor, as much as possible, in most months of the year. In cooperation with the Coast Guard, which mans the stations of Umm Al-Maradim and Qaru year-round, some results have arisen.

After almost one year of project life, the number of turtles nesting on each island every year is still unknown, but as research progresses it is hoped that this uncertainty shall be lifted. In July and August 2008, researchers on Qaru Island found 36 Green turtle pits. In November 2008, 50 pits in total were seen on Qaru, two of which were too small to be Green turtle nests. Could Hawksbills have nested here too?

Only Greens were observed nesting in Qaru in July and August 2008. Likely prompted by scorching sand temperatures of 48 Celsius, they dig enormous body chambers and lay their eggs. Due to the notorious Sarayyat winds in September and October, the team was unable to go to the island in search of hatching activity. The Coast Guard, however, spotted several green turtle hatchlings in the last day of August and photographed them, as did a team of divers who were friends of the Voluntary Work Center. No other reports for hatchlings were given in 2008.



Fig1. Qaru Island, July 2009. Rescuing a "stuck" turtle (Husain Al-Qallaf/KTCP).



Fig2. Nesting turtle tracks, Qaru Island (Husain Al-Qallaf/KTCP).

In Umm Al-Maradim, where both Green and Hawksbill turtles nested before the construction of the new Coast Guard marina, nesting season had not started by March 2009 and it certainly seemed long over in July 2008. Seven potential nests were observed on Umm Al-Maradim in July 2008. A hatchling's track, which did not seem to reach the sea, was observed as well, a fact that is not surprising given the massive bridled terns (*Sterna anaethetus*) colony which is nesting in the bushes right by the turtle nesting grounds. Bridled terns remain in search of food all night especially in view of a protein-rich hatchling to feed nesting and incubating parents at that time of the year.

The KTCP team's objectives for 2009 include:

- Population assessments.
- Species per island and per season to be determined.
- Interactions with predators and weather to be studied.
- Further investigation of coral reef.
- Satellite tracking.
- Nest monitoring with the aid of i-button* technology.
- Environmental education and press material.

The project will be ongoing until at least July 2011 and hopes to provide regular updates about its results and observations in Kubbar, Qaru and Umm Al-Maradim.

* i-buttons are small electronic devices inserted into turtles' nests

References:

Al-Yamani F., Bishop, J. et al, *Oceanographic Atlas of Kuwait's Waters*, Kuwait Institute for Scientific Research, Environment Public Authority, Kuwait 2004, 9.

Meakins, R. and Al-Mohanna, S., *Sea Turtles of Kuwait*, Center for Research and Studies on Kuwait, 2004, 89.