

ARTIFICIAL WETLAND BIODIVERSITY IN DESERT COUNTRIES, EXAMPLE OF WADI HAM DAM IN FUJAIRAH EMIRATE, UAE - A CALL FOR A PROPER NATIONAL MONITORING OF UAE WETLANDS AND WATERBIRDS.

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Introduction

Artificial wetlands (i.e. salt pans, gravel pits, sewage ponds, fish farms) are attractive for waterbird species particularly in arid environments (Dugan 1993, Evans 1994, Scott 1995). In the United Arab Emirates (UAE), some of these artificial wetlands have been recognised as a hotspot for biodiversity, especially waterbirds, and some have benefited from official protection, such as Al Wathba Lake created by the release of wastewater from a treatment plant of the city of Abu Dhabi. In 1999 Al Wathba recorded the first breeding success of the Greater Flamingo (*Phoenicopterus roseus*) in the Arabian Peninsula since 1922 (Aspinall and Hellyer 1999, Javed and Khan 2003).

On July 21, 2009, we visited the Wadi Ham Dam "D" reservoir located behind the Fujairah Tennis Club (N 25.13778, E 056.29805). The reservoir is made of an auxiliary dam connected by a spillway collecting the discharge of the Ham Dam built in 1982 to minimise downstream flood risk and recharge groundwater levels at the entrance of Fujairah town (Fig 1.). To our surprise, the reservoir of Ham "D" Dam was still filled with water (Figure 2). As there is no stream or spring feeding the lake, the water present at the time of the visit was the result of heavy rainfall in March 2009. The water level scale indicated 3 metres. Four months later (October, 15, 2009), the water level was 1.40 metres.

Wadi Ham Dam D waterbirds

During the first visit, 11 Little Grebe (*Tachybaptus ruficollis*) including 2 chicks, 171 Black winged Stilt (*Himantopus himantopus*) including 4 chicks and 40 fledging juveniles, one Kentish Plover (*Charadrius alexandrinus*) in breeding plumage, as well as one pair of Little Green Bee-eater (*Merops orientalis*) and three pairs of European Bee-eater (*Merops apiaster*) were observed (Table 1). Subsequent visits showed the presence of Greater Flamingo (*Phoenicopterus roseus*), Whiskered Tern (*Chlidonias hybrida*) and even the endangered Black-tailed Godwit (*Limosa limosa*). Little Grebe and Black winged Stilt were the most numerous species. The September 6, 2009, visit revealed 5 Eurasian Teal (*Anas crecca*), suggesting a stopover on the lake during their migration, as well as the presence of a Dhofar Toad (*Bufo dhufarensis*), an endemic of the Arabian Peninsula.

In the UAE, Little Grebe and Black winged Stilt are opportunist breeders able to colonise ephemeral sites very quickly (Richardson 1990; Aspinall 1996; Richardson 2003; <http://www.uaebirding.com>). Nesting in the reservoir was possible due to several inlets surrounded by water preventing disturbance and predation (feral dogs mostly), as well as the abundance of aquatic food (mostly Copepodae and Chironomidae). Populations of both species are classified as "Least Concern" regionally and internationally (Delany *et al.* 2009; IUCN 2009; Porter *et al.* 2009).

A call for an updated wetland monitoring and protection

Because of the rapid development of the UAE, many wetlands mentioned a decade ago (Evans 1994; Aspinall 1995; Richardson and Aspinall 1998) have shrunk considerably or vanished, such as



Fig 1. Location of Ham Dam D reservoir in Fujeira, UAE.



Fig 2. View of Ham Dam reservoir (© Christophe Tourenq).

Jebel Ali in Dubai and Khor Al Beideh or Al Jazirah Khor in the Northern Emirates. Some of these wetlands are however still mentioned in the UAE Important Birds Areas (IBA) list (BirdLife International 2009).

The workshop on shorebirds of the 10th Conservation Workshop for the Fauna of Arabia (CAMP) organised by the Breeding Centre for Endangered Arabian Wildlife (BCEAW) and Environment and Protected Areas Authority (EPAA) of Sharjah, highlighted the urgent necessity to review and update Arabian wetland IBA datasheets and publish national IBA inventories and work towards legal protection of the key sites for species (Porter *et al.* 2009).

Since 2000, the year of the last waterfowl census organised in the UAE under the International Waterfowl Census (IWC) scheme from Wetlands International, there have been no officially published waterbird counts for the country with the exception of some book chapters (e.g. Javed 2008). The status of the only endemic bird of UAE: the White-collared Kingfisher (*Todirhamphus chloris kalbaensis*) inhabiting the only mangrove of the East Coast, is still based on the 44 pairs counted in 1995 and the maximum 15 birds in 2000 (Aspinall 1996; Richardson 2003). This mangrove has been under a lot of human pressure lately.

Updates are necessary for the conservation of wetland habitats and species and the application of two main international conventions signed by the UAE: the Convention on Biological Diversity (CBD) in 2000 (www.cbd.int) and the Ramsar Convention for the conservation and wise use of wetlands and their resources in 2007 (www.ramsar.org). For a sustainable development that does not curtail environmental benefits for future generations, it is imperative that UAE decision makers are well informed on environmental issues, on the conservation status of wildlife and its habitats, and in general, on the probable impacts of development on biodiversity.

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