

The Development and Status of the Syrian NBI population

Gianluca Serra



A relict colony of Northern Bald Ibis was unexpectedly discovered in the central Syrian desert in 2002 thanks to scientific decoding of traditional knowledge from the local community (Serra 2003; Serra et al. 2003). During 7 subsequent breeding seasons (2002-08), the 3, and then 2, breeding pairs of bald ibises have shown to be still vital and, when intensively protected, showed a higher average breeding success than that recently recorded in Morocco and that recorded in the past in Turkey (Serra et al. 2009).

An yearly specific protection program has been activated by the Syrian Ministry of Agriculture as early as 2002 under the technical assistance of BirdLife International, IUCN and FAO, and an Ibis Protected Area (IPA) was established in 2004 (Serra et al. *In prepar.*).

Recently the competence for IPA and the ibis protection program has passed to the Desert Commission, headed by Eng. Ali Hamoud who started to enthusiastically support the ibis conservation program. The program also enjoys the support of H.E. the Syrian First Lady as early as 2006.

During breeding seasons 2002-08 a total of 24 chicks have fledged and left the breeding area successfully - while breeding failures were recorded in 2005 and 2008. Between 2004 and 2007 a total of 5 immature ibises have made a return to the colony, separately and later than adults. As a consequence, 2 recruitment events have taken place (2006 and 2007), partly compensating for the gradual decrease in the number of adults (Serra et al. 2009).

Breeding adults arrive from migration during the second half of February, separately, and leave all together around mid July. They feed on overgrazed pastures at an altitude ranging from 400 to 900 m asl and feed mostly on *Tenebrionidae* beetles and other invertebrates found on the surface, on larvae found underground and on juvenile toads found at artificial reservoirs (Serra et al. 2008).

An ecotourism feasibility study for the Palmyra desert was prepared in 2007 by BirdLife Middle East (Serra 2007) and a socio-economic and cultural survey of the nomadic Bedouin

community living at the ibis breeding grounds has been carried out in November 2008 under an IUCN/DGCS project (Savioli 2009).

In 2006 three adult birds were trapped and equipped with satellite transmitters (PTT) which allowed tracking their migratory route when they left Palmyra in mid July. The birds migrated southward and, after a staging of 2 weeks in western Yemen, found their way to the central highlands in Ethiopia (Lindsell et al. *In print*).

Only 4 breeding adults were found during the surveys carried out by the Ethiopian Wildlife and Natural History Society and BirdLife / IUCN at the ibis wintering site during November 2006, October 2007, November 2008 and January 2009 (Serra et al. 2007; Serra et al. *In prepar.*). The ibis wintering home range resulted very much restricted (about 15 Km²) compared to the breeding grounds totaling several hundreds Km² (Serra et al. *In prepar.*).

Birds roost on an *Eucalyptus* tree shadowing a cluster of traditional huts (*tuguls*) and feed on pastures in strict contact with the local community during the day. Their diet is very similar to that described for the Syrian breeding grounds (Serra et al. *In prepar.*).

A socio-economic and cultural survey of the traditional agro-pastoral community living at the ibis wintering grounds in Ethiopia has been carried out during November 2008 and January 2009 (Kubsa 2009). Only medium-term threats to the birds could be recognized at the Ethiopian wintering grounds, linked to the poverty of the local community and the risks that pastures are reclaimed to agriculture in the future.

Because sub-adults have kept returning to the Palmyra breeding grounds in 2007, 2008 and 2009, it is clear that they winter in different areas than breeding adults. The same is supposed to apply for juveniles.

In fact, a first-year juvenile was photographed by a party of birdwatchers on Djibouti northern coast in January 2008. The same site was surveyed in January 2009 in cooperation with Djibouti Nature and in the framework of the IUCN/DGCS initiative, but no ibises could be detected (Serra et al. *In prepar.*).

Overall, it seems that the main short-term threats to this relict NBI colony, the last known wild survivors from the oriental population, are currently the following:

- chick raven depredation, human disturbance during settling and incubation, poaching and inbreeding depression at the Palmyra breeding grounds
- hunting and other unknown threats along the migratory route, especially across the Arabian peninsula.

Poverty and habitat ecological degradation fuelled by unsustainable exploitation of natural resources is a medium-term underlying threat shared by both the breeding grounds in Syria and the wintering grounds in Ethiopia (Serra et al. *in prepar.*).

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