

INTENSIVE FAUNA SURVEYING OF CENTRAL SYRIAN DESERT AND CAPACITY BUILDING OF LOCAL COMMUNITY (2000-04)



Project FAO/DGCS Italian Cooperation project (GCP/SYR/009/ITA), based in the millenary oasis of Palmyra, in operation between 1996 and 2004, was aimed at assisting the Syrian Ministry of Agriculture and Agrarian Reform (MAAR) in **initiating biodiversity conservation in the country** through development of **the first operational protected area (*al Talila*)**, steppe **habitat rehabilitation** and **raising the ecological awareness locally**.

During period 2000-04, a wildlife team composed by trainees from the local community and from MAAR staff, lead by biologist Dr Gianluca Serra, was established with the aim of **detecting and documenting the key naturalistic and biodiversity assets of the central Syrian desert** – through carrying out a long-term fauna and reconnaissance survey. This baseline information was deemed as important in order to develop the *al Talila* protected area in terms of management and ecotourism potential.

A number of new and interesting fauna species were detected and discovered by the wildlife team, like for instance:

- 1 new species of beetle (Coleoptera, *Aphodidae*) (Della Casa, *in prepar.*)
- 1 new butterfly record *Papilio demoleus* (Beniamini *et al.* 2007)
- 1 new snake record (Black Cobra *Walterinnesia aegyptia*: Sindaco *et al.* 2006)
- 9 globally threatened bird species and 21 potential new bird records for Syria (Serra *et al.* 2005 a & b)
- 2 new mammal records (Serra *et al.* 2007).

The surveying efforts **culminated in the discovery in April 2002 of a surviving relict colony of Northern Bald Ibis** (NBI) *Geronticus eremita* (Serra 2003), quoted by BirdLife International as “arguably the most significant ornithological discovery in the last 30 years anywhere in the Middle East” (Bowden *et al.*, 2002). This extensive desert survey also paved the road to another ornithological discovery of international relevance, taken place in eastern Syria in February 2007 (Murdoch and Serra 2006): **the long-sought staging grounds of the Critically Endangered Sociable Lapwing** (*Vanellus gregarius*), eventually found by a Dutch-Syrian team led by Remco Hofland (see related BirdLife International news).

While enthusiastically leading the above mentioned long-term fauna survey, day by day, G. Serra was able **to build the naturalistic & conservation capacity of some selected local people** (MAAR staff, hunters and indigenous pastoralists). By “infecting” them with the germ of the passion for nature, the ecological awareness and naturalistic appreciation of these people has flourished and raised significantly: slowly they started to realize that they were becoming the first Syrian trained and certified conservationists and eco-guides - and that also the responsibility on their shoulders was growing...

A publication titled “From Indifference to Awareness” (Serra *et al.* 2003 b) was published by the UN-FAO with the aim of describing the raising of the ecological awareness among the local community through the implementation of the project. A total of 7-10 indigenous and local people were involved in the conservation field work, with the aim of in-service train them

as birdwatching and eco-guides and conservationists, and also to teach them the English language. Gradually, they have become highly motivated and skilled in bird field identification and fluent in English. One of them, among the most authoritative hunters of Palmyra, was converted into a passionate birdwatching guide and a fervent anti-hunting campaigner nationally. This work experience with local community was defined “an example of good practice in conservation” by the Dana Declaration Standing Committee and the World Alliance of Mobile Indigenous Peoples (WAMIP).

These pioneer locals from Palmyra are most probably the first people in Syria making a living out from nature conservation: they have shown, and they are showing every day to all the other desert dwellers, that not only hunting wildlife is profitable but also protecting and appreciating it can be profitable as well (a quite innovative idea locally!): the main difference being that the first practice is unsustainable in the short and medium term (wildlife in the Syrian desert has been already extensively extirpated) while the second practice is sustainable and helps the desert ecosystem remain alive in the benefit of future generations.

The fact is that the livelihood of most of the people living in the Syrian desert is still predominantly based on the natural resources and ecological services (e.g. the pastures for the livestock, shrubs for firewood, water for irrigation and drinking *etc.*).

N. BALD IBIS CONSERVATION SAGA 2002-09



N. Bald Ibis (NBI), **one of the rarest bird globally**, since 1994 listed as “Critically Endangered” by the IUCN’s Red List (BirdLife 2004), until 2002 was known as surviving in the wild only in a few scattered colonies in Morocco - for a total of about 100 breeding pairs (Bowden *et al.* 2003). That same year a relict colony of 7 individuals of this bird species, belonging to a sub-population separated from the Moroccan one centuries ago, was **unexpectedly discovered in Syria** (Serra 2003) - from where it was believed it had become extinct more than 70 years before (Aharoni 1928-29, Safriel 1980).

The news attracted the attention of the conservation community and of international media: NBI suddenly “reappeared” in Eurasia where it had been declared extinct in 1989 (last NBI colony known, the one from Birecik, Turkey). Post-1989 occasional NBI sightings in western and south-western Arabia had led some to believe that an **NBI “lost colony”** was possibly still breeding somewhere in Arabia or Eastern Africa: this mysterious breeding colony had

been even emphatically defined as the **“Tutankhamun’s tomb” of Arabian ornithology** (Martins 1993).

The successful **decoding of the traditional naturalistic knowledge** of the Bedouin nomads, crucial to discover the NBI relict colony of Palmyra (Serra *et al.* 2003), triggered an interesting international debate about the need to include this type of knowledge in the scientific naturalistic surveying and research (Blair 2005). In particular, it was the “confession” by a Palmyra hunter about the killing of an ibis in the late 1990s which draw the attention of Serra on the chance that the ornithological literature might have been wrong in listing the NBI as extinct from Syria since long time ago.

If the NBI as a species was already listed as Critically Endangered before this unexpected discovery, the handful of ibises breeding in the middle of the Syrian desert could be well defined as “Hyper-critically Endangered”: certainly, in 2002 NBI suddenly became **the rarest and most threatened bird (animal?) of the Middle East**.

The discovery was especially significant from a conservation point of view, as it revived the hopes to **save this iconic species in its native habitats of the Middle East**. Information collected during extensive surveying evidenced that this bird was most likely **a common and awe-inspiring sight of *al Badia* landscapes until only 20 years ago** (Serra *et al.* 2003 a). In fact these fascinating birds have always co-existed with the herds of the Bedouin nomads since time immemorial: these people, not only use a specific name for the bird in their idiom (“*nug*”) - only elder pastoralists still recall it - but they still use this name to identify several desert sites.

This bird has always had **symbolic and cultural values** attached **in the whole region**. The ibis in general was a **symbol of wisdom** according to the ancient Egyptians (hence the ibis-headed god of wisdom and knowledge *Toth*). NBI in particular was known by ancient Egyptians as shown by its unmistakable graphic representation in 4500-year-old hieroglyphs: NBI was actually the incarnation of the spirit *akh* who was responsible for escorting the soul of the departed to the after-life.

In fact, **the handful of ibises discovered in Palmyra are the last living descendants of those revered by pharaohs**. These ancient myths about the ibis and the NBI are still alive in the region: Muslims from southern Anatolia (Turkey) still believe that NBI used to guide the souls of the departed towards the *Mekkha* (the holy town in Saudi Arabia); moreover, an elder Bedouin of Syrian desert reported to the wildlife team in 2003 that its tribe used to held the NBI as a symbol of wisdom. NBI seems even cited in the Old Testament as the legendary messenger of fertility released by Noah from the ark. NBI can be regarded as a **keystone species of the Syrian *al Badia*, not only culturally but also ecologically**.

In the past this bird species certainly used to play **an important ecological role** within the Syrian steppe land: being a relentless insectivore, it was probably key in controlling the insect populations of the steppe, and in so doing maintaining the ecological health and productivity of the pastures on which the nomads rely on for their livelihoods. Interestingly, MAAR recognized the beneficial role of the ibises for agriculture in decree n. 28 issued in 1967.

The last NBI survivors of Palmyra are a flagship (and a stark symbol) of the **dramatic and still on-going desertification of the Syrian steppe ecosystem** which affects in first place the indigenous mobile people, whose livelihoods completely rely on its natural resources– the same resources also key for the survival of ibises: cultural and biodiversity heritage of the Syrian desert are both critically endangered due to a complex cocktail of problems ultimately reflected in the current over-grazing of pastures, uncontrolled and extensive uprooting of shrubs as firewood and uncontrolled (& illegal) hunting.

The ibis protection program, in operation in the Palmyra desert since the year of the discovery (2002), have involved the traditional indigenous people (i.e. Bedouins pastoralists from *amur* tribe) and Palmyra hunters (Bowden *et al.* 2002, Serra *et al.* 2003 b), receiving international acknowledgements at the 2004 **Bangkok IUCN World Conservation Congress**. The awareness on the global/national importance of these birds has been steadily raising in the country since 2002. A 400-Km² **Ibis Protected Area (IPA)** was established by MAAR in spring 2004 (Serra 2002). The inauguration by H.E. Mrs Asma al-Assad, the Syrian First Lady, of a photo-exhibition in Damascus in October 2006 ("Syrian al Badia: a cultural and natural heritage under threat") clearly indicated that the issue had become of **national relevance** in the country.

The primary problem to the survival of this invaluable NBI colony is that **adults are still decreasing steadily** (from 7 in 2002 to 5 returned in early 2009) while fledged young, migrating to their unknown wintering grounds in July, seem to reappear in very low numbers the following years at the Syrian breeding grounds. An **ibis protection program** against hunting and disturbance has been implemented successfully during periods **2002-2004 (MAAR/FAO/DGCS)** and **2006-07 (MAAR/BirdLife/RSPB)** (Serra and Peske 2006 b).

Differently from the Moroccan ibises, which are living in resident colonies, the Syrian ibis survivors are migratory: a behavior that makes them unique globally, but also very vulnerable from a conservation point of view. The protection program appeared to be not sufficient: the fact is that the creature had to be protected also in the rest of its unknown range. The only way to discover the rest of the distribution range of this species was **to trap and tag with a satellite transmitter** one or more birds.

Following a determined advocacy campaign in Syria during the winter 2005-06, which even prompted the **direct interest and support from H.E. the Syrian First Lady**, as already mentioned, a field mission was implemented in 2006 which succeeded in trapping and tagging three adult ibises: the migratory route and the wintering grounds of the NBI colony was therefore unveiled during July-August 2006, and followed on-line by bird enthusiasts from all over the world (thanks to a web page prepared by RSPB): the ibises flew southward over 3000 Km to reach a remote site on the Ethiopian highlands, at an altitude of about 2700 m asl, where they spent almost 6 months (Lindsell *et al.* 2009).

A preliminary survey (National Geographic, RSPB, Ethiopian Wildlife and Natural History Society), conducted in the Ethiopian wintering grounds in November 2006 (Serra *et al.* 2007), found only the four adults in place, evidencing that **1st year young and sub-adults winter separately from adults** in a still unknown site. Another 2 expeditions were carried out in November 2008 and January 2009 (in the framework of an IUCN/DGCS NBI project, Serra *et al. in prepar.*). These 3 field visits showed that the adult NBIs entirely rely on pastureland and that no immediate threat is present at the wintering site.

Sightings of NBIs on the **Ethiopian highlands** were not uncommon in the past: some of these records are as early as from the nineteenth century (Welch and Welch 2004). Interestingly, the two most recent records of NBIs in the region (Eritrea in 1994, and Ethiopia highlands in 1977) are from sites where the tagged birds have passed by during the past winter. The 3 tagged ibises returned to their Syrian breeding grounds in February 2007, using a partly different route. One of the four adults (the untagged one) was lost during the return migration, evidencing that there are threats in place along the migration route. The same has happened during return migration in February 2009 (Serra *in prepar.*).

Another interesting fact clearly emerged: the Ethiopian wintering grounds of adult ibises are significantly smaller (ca. 15 Km²) than the Syrian breeding grounds (ca. 400-600 Km²) (Serra *et al.*

in prepar.). The site of **Djibouti coast** where a young first-year ibis had been photographed in January 2008 has been extensively searched in January 2009, with no detection (Serra *et al. in prepar.*).

Recently released **NBI International Action Plan** (Jimenez Armesto *et al.* 2006), and the NBI National Action Plan for Syria that will be hopefully soon prepared, must be implemented as a matter of urgency before it is too late. From the survey done in Ethiopia wintering grounds, it appears clear that if we want to save the eastern population, in the years to come we have **to focus on the breeding grounds in Syria and on the migratory route along Arabia peninsula**. Known threats at breeding grounds in Syria are reduced but still present. Moreover, **socio-economic issues** should not be neglected: in fact, the indigenous local community living at the NBI breeding grounds in Syria live on a subsistence economy and their livelihoods depend on the unsustainable over-exploitation of natural resources due to a complex array of reasons independent from their will.

IPA and its indigenous local community (mainly from *amur* tribe) hold a good potential for promoting the revitalization of the traditional customary pasture management system known as *hema system*. Once (and if/when) secured the survival of this globally valuable and unique piece of Middle Eastern biodiversity, **responsible and small-scale ecotourism in the Palmyra area** could become a mean to promote sustainable development and raise much needed ecological awareness locally. Potential for ecotourism in the Palmyra desert has been recently assessed, through an initiative by BirdLife International, and **a feasibility study** has been produced (Serra 2007).

Due to the successful protection efforts of past years (2002-04; 2006-07), the **natural recruitment of the colony**, not recorded in years 2002-04 (Serra 2005) **revitalized starting from 2004**: since then a total of 8 sub-adults have returned to the colony (2004-07), partially compensating the loss of adults in past years (Serra and Peske, 2006 b, Serra *et al.* 2009). A semi-captive population of about 20 pairs of NBIs, most likely belonging to the same genetic stock of Syrian relict colony, are kept by Doga Dernegi (BirdLife partner in Turkey) in the village of Birecik (Southern Anatolia), not far from the Syrian border.

Despite a number of technical and conservation concerns still unresolved (IAGNBI 2004), there is growing consensus among the IUCN's International Advisory Group on Northern Bald Ibis (IAGNBI) that the Syrian colony could be soon **supplemented and reinforced with Turkish individuals**, mainly with the aim of reducing in-breeding risks: a feasibility study is in preparation (Fritz *et al.*, In prep.). This project stands now at an exciting turning point: it could be **the last chapter of the long-term decline of NBIs in the Middle East OR the beginning of a spectacular (almost miraculous) recovery plan**.

Restoring a viable population of NBI in Arabia and Eastern Africa, starting from the last surviving wild birds of Palmyra, could turn to become **a world-class conservation achievement**. Similarly ambitious conservation projects have been attempted on mainland only in the USA so far (for example restocking of California Condor and Sandhill Crane).

Following protection successes of 2006 and 2007, a significant setback occurred in 2008, when the ibis colony failed the breeding – in similar circumstances than in 2005 - under a BirdLife/RSPB assistance project. Four chicks died suddenly disappearing from their nests due to unclear reasons. Consequently, also the planned trapping and satellite tagging of young birds also failed.

At the same time an **IUCN pilot initiative - funded by DGCS/Italian Cooperation** (and partly by the Netherlands and Finnish embassies in Damascus), aimed at developing the IPA, started in autumn 2008. A socio-economic and anthropological survey was carried out in

December 2008 and two expeditions at ibis wintering grounds in Ethiopia and in Djibouti have been implemented during November 2008 – January 2009.

Meanwhile, in autumn 2008, a new institution has taken over the responsibility of ibis protection and IPA management: the **Desert Commission**, headed by Eng. Mr. Ali Hamoud. A new era of fruitful cooperation with this news institution is expected, and both IUCN and BirdLife are ready to support it.

by G. Serra - April 2009

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