

2. Survey of waterbirds wintering in Tunisia, January 2003

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ABSTRACT. During a joint international expedition, there have been recorded between 18-31 January 2003 a total number of 83,653 water birds (belonging to 76 species) in 58 wetlands of Tunisia.

Key words: waterbirds, census, Tunis

INTRODUCTION

A joint international expedition took place in Tunisia between 18-31 January 2003. This project was financed by UNEP/AEWA within the framework of activities aimed at increasing the ornithological coverage of the winter range of the endangered Slender-billed Curlew *Numenius tenuirostris* one of the rarest birds in the world. It is clearly close to extinction and the current world population may not exceed 50 individuals. Besides research and awareness raising activities focused on the Slender-billed Curlew, the other aims of the expedition were:

- to survey wetlands that have received only relatively infrequent coverage in recent years,
- to carry out waterbird counts at all surveyed wetlands,
- to associate and coordinate efforts of European and North African surveyors.

The results of the waterbird counts and the reading of some colour marked birds wintering in Tunisia made it possible to increase the knowledge of the ecological role played by local wetlands within the Eurasian-African migration flyway, which had already been addressed in various papers [1, 2, 3, 4, 5].

METHODS

The list of participants is reported in **Table 1**.

Ornithologists taking part to the survey

Table 1

Name	Code	Profession / Institution
Azafzaf, Hichem	HA	IBA Monitoring Manager and co-ordinator of GTO, AAO, Tunisia
Dabbar, Adel	AD	Member of GTO, AAO, Tunisia
Dlensi, Habib	HD	Ornithologist and member, AAO -Sfax , Tunisia
Etayeb, Khaled S.	KE	Ornithologist, Environment General Authority, Libya
Gretton, Adam	AG	Ornithologist and professional ecologist, UK
Kiss, Botond J.	BK	Ornithologist, Danube Delta National Institute for Research & Development, Romania
Rouag, Rachid	RR	Ornithologist, El Kala National Park, Algeria
Smart, Mike	MS	Ornithologist and international consultant, UK
Zenatello, Marco	MZ	Ornithologist, Istituto Nazionale per la Fauna Selvatica, Italy

The team worked in two groups during the whole survey. Two vehicles (one 4WD) were used to transport the survey groups to the different sites. The counts of the sites were carried out on foot and the following field equipment was used during the survey: 5 telescopes, 1 GPS Garmin 12 XL, binoculars and field guides.

Survey and counting conditions were generally good, but heavy rainfall affected the counting conditions on 23, 25 and 27 January. Some sites were visited more than once, either because there was a need to verify whether there were Slender-billed Curlews present, or because survey conditions during the first visit were too bad to carry out a full survey.

During the survey a full census of 58 wetlands was carried out (Fig. 1 and Table 2)

List of sites visited during the survey

Table 2

No	Area	Date	Counting method	Team
1	Lebna water reservoir (IBA TN012)	19/01/2003	driving & walking	MS, MZ, KE, AD
2	Garaet El Haouaria	19/01/2003	walking	MS, MZ, KE, AD
3	Sebket Hammam El Ghezaz	19/01/2003	walking	MS, MZ, KE, AD
4	Oued El Haajar water reservoir	19/01/2003	walking	BK, HA,
5	Sidi Abdelmonem water reservoir (IBA TN008)	19/01/2003	walking	BK, HA,
6	Mlaâbi water reservoir (IBA TN006)	19/01/2003	walking	BK, HA,
7	Chibba water reservoir	20/01/2003	walking	MZ, AD, KE, HA
8	Sebkhet Korba – North (IBA TN014)	20/01/2003	walking	RR, MS, BK, AG
9	Sebkhet Korba - South (IBA TN014)	20/01/2003	walking	RR, MS, BK, AG
10	Sebkhet Chatt Az-Zouhour	20/01/2003	walking	MZ, AD, KE, HA
11	Sebkhet Lebna	20/01/2003	walking	MZ, AD, KE, HA
12	Sebkhet Tazerka	20/01/2003	walking	RR, MS, BK, AG
13	Sebkhet Maamoura	20/01/2003	walking	RR, MS, BK, AG
14	Soliman (IBA TN011)	21/01/2003	walking	HA, RR, KE, BK, AG, AD, MZ
		24/01/2003	walking	AG, KE, HA
15	Bezikh water reservoir	21/01/2003	walking	MS, KE, AD, RR
16	Sejoui - West (IBA TN010)	21/01/2003	walking	MS, KE, AD, RR
17	Sebkhet Halk EL Menzel (IBA TN017)	22/01/2003	driving & walking	HA, MZ, AD, RR
18	Sebkhet Sidi Khelifa (IBA TN016)	22/01/2003	walking	AG, MS, BK, KE
19	Sebkhet Assa Djiriba	22/01/2003	walking	AG, MS, BK, KE
20	Zaghouan aqueduct (IBA TN013)	23/01/2003	walking	MS, RR, MZ, BK
21	Bir M'cherga water reservoir	23/01/2003	driving & walking	MS, RR, MZ, BK
22	Garaet El Kebira	23/01/2003	walking	MS, RR, MZ, BK
23	Garaet El Hammada	23/01/2003	walking	MS, RR, MZ, BK
24	Sebkhet Kourzia	23/01/2003	walking	MS, RR, MZ, BK
25	Garaet Boucha	23/01/2003	walking	MS, RR, MZ, BK
26	Moussa El Chami water reservoir	23/01/2003	walking	AG, HA, AD, KE
27	Sidi Jdidi water reservoir	23/01/2003	walking	AG, HA, AD, KE
28	Oued Rmal water reservoir	23/01/2003	walking	AG, HA, AD, KE
		30/01/2003	walking	MS, BK, AG
29	Saab Ouediane water reservoir	23/01/2003	walking	AG, HA, AD, KE
30	Masri water reservoir (IBA TN015)	23/01/2003	walking	AG, HA, AD, KE
31	Garaet Mabtouh (IBA TN005)	24/01/2003	walking	MZ, AD, RR, BK
32	Ichkeul National Park (IBA TN002)	24/01/2003	driving & walking	MZ, AD, RR, BK
33	Khairat water reservoir	25/01/2003	walking	AG, HA, RR, KE
34	Moussa water reservoir	25/01/2003	walking	AG, HA, RR, KE
35	Sebkhet Ouled Aneur	25/01/2003	walking	MS, AD, MZ, BK
36	Sidi Ahmed (Onga)	26/01/2003	walking	MS, HD, HA, RR, KE, BK, AG, AD, MZ
37	Kneiss Islands - Erg El Ihoudi to El Guettaia (IBA TN032)	26/01/2003	walking	AG, HA, RR, KE, HD
38	Kneiss Islands - Erg El Ihoudi to Oued Smara (IBA TN032)	26/01/2003	walking	MZ, MS, AD, BK
39	Sebkhet Dreïaa (IBA TN034)	26/01/2003	walking	MS, HD, HA, RR, KE, BK, AG, AD, MZ
40	Mahres beach	27/01/2003	walking	HD, AG, HA, RR, KE,
41	Thyna salt-pans (IBA TN027)	27/01/2003	walking	MZ, MS, BK, AD

42	Intertidal area between Thyna and Nakta (12 km south of Thyna)	27/01/2003	walking	MZ, MS, BK, AD
43	Sebkhet El Jem	27/01/2003	walking	MZ, MS, BK, AD
44	El Haaouareb water reservoir (IBA TN023)	27/01/2003	walking	HD, AG, HA, KE,
		28/01/2003	walking	HD, AG, HA, KE,
45	Chrichira water reservoir	28/01/2003	walking	HD, AG, HA, KE,
46	Metbasta (IBA TN022)	28/01/2003	walking	MS, AD, MZ, BK
		28/01/2003	walking	AG, KE
		30/01/2003	walking	MZ, AD, KE
47	Sebkhet Kelbia (IBA TN020)	28/01/2003	driving & walking	HD, AG, HA, KE
48	Monastir salt-pans (IBA TN021)	28/01/2003	walking	MZ, BK, AD
49	Sebkhet Monastir	28/01/2003	walking	MZ, BK, AD
50	Sebkhet Ariana	29/01/2003	walking	MZ, BK, AD
51	LakeTunis & Lake Rades (IBA TN009)	29/01/2003	driving & walking	HD, AG, KE
52	Nebhana water reservoir	30/01/2003	driving & walking	HD, HA
53	Sahel water reservoir	30/01/2003	walking	HD, HA
54	El Ougla water reservoir	30/01/2003	walking	HD, HA
55	Oued El Kabir water reservoir	31/01/2003	walking	MZ, HA, AD
56	Wetland at a sand exploitation Rades	30/01/2003	walking	MS, BK, AG
57	Siliana water reservoir	31/01/2003	walking	MZ, HA, AD
58	Oued El Batta water reservoir	31/01/2003	walking	MZ, HA, AD

IBA = Important Bird Areas (Amari & Azafaf, 2001).

RESULTS

Lucky circumstances for the survey were the heavy rainfall which started about 2 weeks before the survey. The rainfall continued during the survey and transformed many temporary wetlands, which had been dry for more than 4 years, into suitable habitats for many wintering water bird species. But the heavy rainfall did also disperse some large waders, including Curlews, over a wider than usual area, decreasing the chances of recording them.

During the survey a total of 83,653 water birds belonging to 76 species and 18 families were recorded (Table 3). Special highlights were 129 White-headed Ducks *Oxyura leucocephala*, 34 Ferruginous Ducks *Aythya nyroca*, 4 Audouin's Gull *Larus audouinii*, all three globally threatened species, 5 Whimbrels *Numenius phaeopus*, 405 Spoonbills *Platalea leucorodia*, 8,116 Greater Flamingos *Phoenicopterus ruber*.

Even though a total of 1,481 Common Curlews and 5 Whimbrels were recorded during the survey, no Slender-billed Curlew was found.

Table 3

Table 3 – Total results of the survey

Species	Number
Podicipedidae	
<i>Tachybaptus ruficollis</i>	586
<i>Podiceps cristatus</i>	272
<i>Podiceps nigricollis</i>	647
Procellariidae	
<i>Puffinus (yelkouan) mauritanicus*</i>	325
Sulidae	
<i>Morus bassanus</i>	4
Phalacrocoracidae	
<i>Phalacrocorax carbo</i>	352
Ardeidae	
<i>Ardeola ralloides</i>	2
<i>Bubulcus ibis</i>	42
<i>Egretta garzetta</i>	92
<i>Egretta alba</i>	32
<i>Ardea cinerea</i>	331
Ciconiidae	
<i>Ciconia ciconia</i>	4

Species	Number
Burhinidae	
<i>Burhinus oedicephalus</i>	6
Charadriidae	
<i>Charadrius dubius</i>	2
<i>Charadrius hiaticula</i>	7
<i>Charadrius alexandrinus</i>	1332
<i>Charadrius morinellus</i>	85
<i>Pluvialis apricaria</i>	3161
<i>Pluvialis squatarola</i>	4318
<i>Vanellus vanellus</i>	1305
Scolopacidae	
<i>Calidris canutus</i>	401
<i>Calidris alba</i>	120
<i>Calidris minuta</i>	4341
<i>Calidris ferruginea</i>	3480
<i>Calidris temminckii</i>	2
<i>Calidris alpina</i>	11638
<i>Philomachus pugnax</i>	627

Threskiornithidae	
<i>Plegadis falcinellus</i>	13
<i>Platalea leucorodia</i>	405
Phoenicopteridae	
<i>Phoenicopiterus ruber</i>	8116
Anatidae	
<i>Anser anser</i>	11
<i>Tadorna tadorna</i>	1974
<i>Tadorna ferruginea</i>	2
<i>Anas penelope</i>	6744
<i>Anas strepera</i>	322
<i>Anas crecca</i>	2165
<i>Anas platyrhynchos</i>	619
<i>Anas acuta</i>	1057
<i>Anas clypeata</i>	2959
<i>Aythya ferina</i>	2339
<i>Aythya nyroca</i>	34
<i>Aythya fuligula</i>	108
<i>Oxyura leucocephala</i>	129
<i>Anatidae spp.</i>	1003
Rallidae	
<i>Gallinula chloropus</i>	9
<i>Porphyrio porphyrio</i>	18
<i>Fulica atra</i>	5064
Gruidae	
<i>Grus grus</i>	723
Recurvirostridae	
<i>Himantopus himantopus</i>	43
<i>Recurvirostra avosetta</i>	2944

<i>Lymnocyptes minimus</i>	3
<i>Gallinago gallinago</i>	88
<i>Limosa limosa</i>	284
<i>Limosa lapponica</i>	97
<i>Numenius arquata</i>	1481
<i>Numenius phaeopus</i>	5
<i>Tringa erythropus</i>	45
<i>Tringa totanus</i>	1447
<i>Tringa stagnatilis</i>	29
<i>Tringa nebularia</i>	83
<i>Tringa ochropus</i>	11
<i>Tringa glareola</i>	4
<i>Actitis hypoleucos</i>	42
<i>Arenaria interpres</i>	211
Stercorariidae	
<i>Stercorarius pomarinus</i>	2
Laridae	
<i>Larus melanocephalus</i>	244
<i>Larus minutus</i>	5
<i>Larus ridibundus</i>	4225
<i>Larus genei</i>	2118
<i>Larus audouinii</i>	4
<i>Larus fuscus</i>	321
<i>Larus cachinnans</i>	2438
Sternidae	
<i>Gelochelidon nilotica</i>	9
<i>Sterna caspia</i>	9
<i>Sterna sandvicensis</i>	118
<i>Chlidonias hybridus</i>	15
Total	83653

Colour-ring reading was carried out whenever possible. As a result, 30 marked Flamingos (10 from France, 5 from Italy, 15 from Spain) and one Spoonbill (from Italy) were read.

For Flamingo the results confirm that Tunisia represents a very important destination for many birds migrating across Central and Central-West Mediterranean. For Spoonbill, the coastal sites of the tidal Gulf of Gabès (and especially, from north to south: Thyna salt-pans; Kerkennah islands; Kneiss Islands/Oued Maltine; Sebkhet Dreïaa; Island of Djerba; Bahiret el Bibane) hold the largest concentrations of Spoonbills in winter (3000 - 4000 ind), but concentrations of up to 110 birds or more (hence reaching the 1% level of international importance) are also observed regularly in inland freshwater sites like Ichkeul or Kelbia, or at water reservoirs like Lebna. In summer, all these sites seem to hold groups of immatures which remain in Tunisia without returning to breeding sites, and thus play a major role as "kindergartens" for young Spoonbills. In addition, migrants use all these sites as staging points during their pre- and post-breeding migrations. The crossing of the Sahara is proved by observations of small numbers of Spoonbills (some of them colour-ringed) in such sites as the Inner Niger Delta, but the number of Spoonbills that cross the Sahara appears limited (few observations in the Tunisian oases of Kébili and Douz). The sighting in Tunisia of a marked Spoonbill from Romania highlights the fact that even the migration route which connects the Black Sea to NW Africa and the Arabian peninsula along the Eastern Mediterranean can occasionally stretch westwards to the Central Mediterranean. This fact is particularly important for the correct identification of bird (sub-) populations, and for the correct planning and evaluation of conservation/management projects.

ACKNOWLEDGEMENTS. We would like to acknowledge the following persons and Institutions: AEWA/UNEP for funding the project, AEWA's Executive Secretary Mr. Bert Lenten for his help, Mr. Mark Cocker for the original project idea and the first draft of the project proposal, Mr. Adam Gretton for reviewing the final project proposal and for all his helpful suggestions, Dr. Umberto Gallo-Orsi (BirdLife International & SbC working group) for providing valuable input to the project proposal and establishing the contact to the donor UNEP/AEWA, Ministère de l'Agriculture, de l'Environnement et des Ressources Hydrauliques - Direction Générale des Forêts (Tunisia) for giving authorization and support to the project, Association "Les

Amis des Oiseaux" (AAO) Sfax, APNES (Association pour la Protection de la Nature et de l'Environnement de Sfax) and Association "Les Amis des Oiseaux" (AAO) Gabès for their help in the organization of the local awareness-raising meetings, Association "Les Amis des Oiseaux" (AAO) for advancing funds and making a vehicle and field equipment available and to AAO's Projects Manager Claudia Feltrup-Azafzaf for organising logistics and providing administrative support to the project.

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Manuscript received: February 5th, 2007

Manuscript accepted: June 30th, 2007

Printed: October 2007

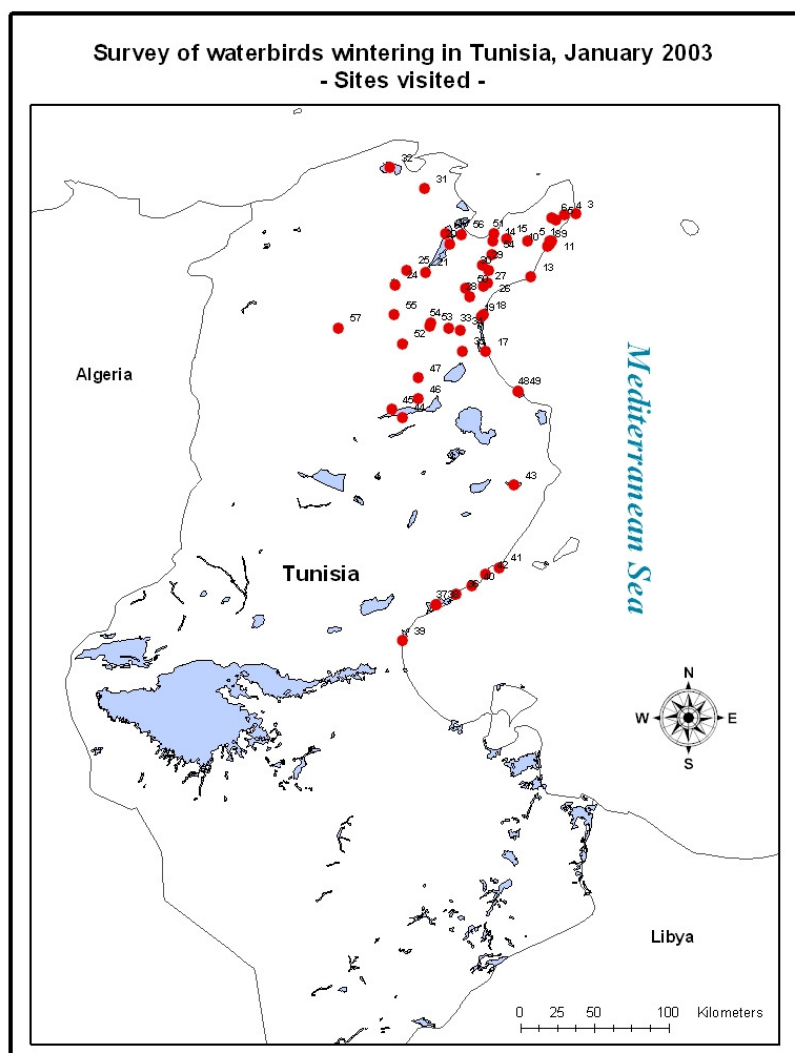


Fig. 1. Sites surveyed in January 2003.



Fig. 3. Water birds at Oued El Haajar water reservoir - North Tunisia (foto: © H. Azafaf)



Fig. 3. Young Spoonbill *Platalea leucorodia* at Thyna salt-pans (IBA TN027) – South Tunisia (foto: © H. Azafaf)