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Final report on a fourth winter ornithological survey in Libya 20 - 31 January 2008

By Abdulmaula Hamza, Almokhtar Saied, Essam Bourass, Jaber Yahya, Michael Smart, Nicola Baccetti, Pierre Defos du Rau, Habib Dlensi and Hichem Azafzaf

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1. Background

Winter ornithological surveys, mainly of wetlands, have been organised in Libya in January 2005, January 2006 and (at a slightly later date) in February 2007, under the aegis of the Environment General Authority (EGA) of Libya and of the Regional Activities Centre/Specially Protected Areas of UNEP's Mediterranean Action Plan (Azafzaf *et al* 2005; Azafzaf *et al* 2006a; Etayeb *et al* 2007; Smart *et al* 2006). A fourth winter survey was organised in January 2008, once again under the aegis of these two bodies, and with essentially the same Libyan and non-Libyan participants. A preliminary report giving an immediate summary of the findings and recommendations of the 2008 survey has already been produced (Hamza *et al* 2008b). The present final report reproduces the basic data from the preliminary report, with additional material and comment received since the publication of the preliminary report.

2. Objectives and areas covered

The objectives of the survey were:

(1) To identify possible wintering grounds of the Slender-billed Curlew *Numenius tenuirostris*, and to obtain further up-to-date information on the status in Libya of this Critically Endangered (CR) species, under threat at global level, which is the subject of an AEWA Memorandum, and is included in Appendix II of the Mediterranean Action Plan.
(2) To repeat the surveys of the previous winters, with coverage of additional sites in the southern oases. The surveys are intended to contribute to improved application of the RAC/SPA Action Plan on Birds, and to provide EGA with basic information for conservation of wetlands and water birds in Libya.
(3) To provide further training in ornithological survey and identification techniques for Libyan staff of EGA. This aspect assumed a larger importance than in previous years, with more EGA staff taking part and a larger fleet of vehicles available.
(4) To follow up the surveys, made in July 2006 and August 2007, of nesting sites of Lesser Crested Tern *Sterna bengalensis* at Geziret Ghara, Geziret Al Elba and Sebkhet Jeliana, Benghazi; well over 95% of the Mediterranean breeding population of Lesser Crested Terns nest in Libya (Azafzaf *et al* 2006b; Hamza *et al* 2008a), so the possible presence of wintering terns was of interest.

The coverage concentrated on important sites identified in the earlier winter surveys, notably those along the coast from Farwa in the west near the Tunisian border, through the Gulf of Sirt to Benghazi and Sebkhet Al Kuz. The coastal areas of the Jebel Akhdar north and east of Kuz, to Derna, Tobruk and the Gulf of Bumba, which had been covered in 2005 and 2006 but not 2007, were not covered in 2008. Instead, greater attention was paid to inland sites of the Libyan desert: the oases of Jaghbub (visited in 2005) and Ghadames (visited in 2007) were not covered, but Houn (visited in 2006) was visited again, and sites around Sebha and Brak, both much further south at 27°N, were visited for

the first time and provided some surprising observations. Thus a very large amount of travelling was undertaken in a short time (over 4,000 kilometres in ten days).

During the visit to Sebha, the group had the opportunity to meet the Director General of EGA, and to have a far-reaching discussion with him of the results of the surveys, of possible future studies (during spring migration and the breeding season) and of practical wetland conservation measures.

Some of the dams in the north (mainly in the Plain of Jeffara) were also visited, but held rather few birds because of the extremely high water levels in a winter of high rainfall.
Details of the programme, of the participants and of other persons met, are given in the Appendices.

3. Results of the survey

Full details of species of water birds and non-water birds recorded and of the totals of each observed at each site visited, are given in Appendices 4 and 5. A total of 53,632 water birds of 74 species was recorded in 2008; this compares with water bird totals of 29,996 in 2005, 51,698 in 2006 and 39,303 in 2007.

Nearly all major sites covered in previous years were covered again; these include a range of coastal sites, mainly brackish or saline lakes: Farwa Lagoon, Sebkhet Boukamesh and Sebkhet Al Mangoub (Zuwara saltpans) in the far north-west; Ain Wadi Kaam and Wadi Kaam Dam, west of Misrata; Sebkhet Qasr Ahmad, Taourgha Springs and Ain Hishah, all in the coastal Taourgha complex south of Misrata; Sebkhet Sultan and other coastal wetlands around the Gulf of Sirt; coastal wetlands just south of Benghazi, including Kerkoura, Gamines, Ganfouda and those in the immediate area of the city - Sebkhet Jeliana (called “Benghazi Lake” or “Benghazi Lagoon” in previous reports), Sebkhet Al Thama and Sebkhet Esselawi and Ain Azziana; and, north of Benghazi, Sebkhet Al Kuz. In addition inland sites at Houn and Sebha were visited. For site descriptions, see the reports on earlier surveys, notably the 2005 report (Azafzaf *et al*. 2005) As noted above, sites north and east of Kuz (notably the Ramsar sites of Sebkhet Ashagiga and Sebkhet Azzarga and wetlands of the Gulf of Bumba, in particular Ain Al Ghazala and Sebkhet Temimi) were not covered this year for lack of time.

In general, the observations confirmed the findings of the previous surveys:

1. **Cormorants:** A total of 1,525 Cormorants *Phalacrocorax carbo* was noted (comparing with 1,972 in 2007, 994 in 2006 and 1,150 in 2005), mainly in coastal sites with, as usual, the biggest concentrations around Farwa, Tripoli and Benghazi, but eleven far inland in the desert wetlands around Houn, recalling the 13 Cormorants recorded at the oasis of Jaghbub in 2005.

2. **Herons:** As in previous years, four species of heron proved to be relatively numerous. In the case of Cattle Egret *Bubulcus ibis* 471 individuals were observed (against 383 in 2007, 332 in 2006 and 169 in 2005). The species is a recent coloniser in Libya, which often feeds on dry areas far from wetlands, and is best censused at roosts, so numbers may have been under-estimated. In all years there have been concentrations around Benghazi (notably at the rubbish disposal site at Ganfouda); in 2008, when Sebha was visited for the first time, 220 were found roosting deep into the desert at the sole large pool at Hajara. As for Little Egret *Egretta garzetta*, 76 were found (against 71 in 2007, 122 in 2006, and 80 in 2005). Numbers of Great White Egret *Egretta alba* reached 28 (22 in 2007, 54 in 2006, 16 in 2005). Finally, 95 Grey Herons *Ardea cinerea* were recorded, compared with 64 in 2007, 92 in 2006 and 133 in 2005. One of the features of previous surveys was the presence of small numbers of heron species normally considered to winter south of the Sahara: Purple Heron *Ardea purpurea*, Squacco Heron *Ardeola ibis* and Little Bittern *Ixobrychus minutus*. This year a single Purple Heron was found, well to the south at Sebha (against five in 2007, eight in 2006 and two in 2005), but Squacco Heron (one in 2007, two in 2006 and 2005) and Little Bittern (eleven in

2006) were not recorded in 2008, though the latter, a particularly secretive species usually identified in winter by call, may have been overlooked.

3. **Ibises, Spoonbills and Storks:** A total of 39 Glossy Ibises *Plegadis falcinellus* was found in 2008, confirming that the species winters in Libya in small numbers (12 in 2007, 70 in 2006, one in 2005), almost all records coming from Taourgha Springs; one of the noteworthy observations of the August 2007 survey of offshore islands had been the numbers of passing Glossy Ibis, 155 in all (Hamza et al 2008a). Similarly, wintering of Spoonbill *Platalea leucorodia* was again demonstrated by the observation in 2008 of 134 individuals (compared with 86 in 2007 and 2006, and 99 in 2005); the largest numbers are found along the tidal coast round Farwa, with small numbers at the springs of Taourgha and Al Hishah, and another smaller concentration in the Benghazi wetland complex (notably Jeliana and El Thama); several rings have been read near Benghazi, where it is possible to approach to within a short distance of the birds. This year no White Storks *Ciconia ciconia* were observed (against 28 in 2007 and six in both 2006 and 2005), but the breeding colony near Benghazi was not visited, and conditions for observation were poor (heavy rain) during the visit to Taourgha.

Cormorant *Phalacrocorax carbo* on El Thama (Photo: H.Azafzaf)

Team members on Taourgha Springs (Photo: H.Azafzaf)

4. **Flamingos:** Numbers of Greater Flamingos *Phoenicopterus roseus* wintering in Libya vary in line with the numbers present at Sebkhet Boukamesh near the Tunisian border; if there is water at Boukamesh there will be Flamingos, if not the total decreases. In 2008, a total of 2,288 were recorded, with the biggest concentration of 1,500 at Boukamesh, 372 at Al Kuz, and about 150 each at Taourgha and Jeliana. This compares with a total of 724 in 2007, when Boukamesh was dry and the biggest concentration of 527 was at Al Kuz. In 2006 on the other hand, the total of 2,920 included counts of 1,767 at Boukamesh (where there was extensive water) and 515 at Al Kuz. In 2005, with Boukamesh dry, the biggest groups were of 527 at Al Kuz and 101 at Al Hishah.

5. **Ducks:** Numbers of surface-feeding and diving ducks are modest, and found mostly on artificial freshwater wetlands like dams or on sites with some inflow of fresh water, such as Taourgha, Al Hishah or the Benghazi complex. A total of 3,557 ducks was recorded (against 2,610 in 2007, 2,877 in 2006 and 1,146 in 2005). Most were surface feeding ducks, the vast majority of them in the general area of Benghazi (Jeliana, El Thama, Azziana, Al Kuz). There were also 521 Shelducks *Tadorna tadorna*, mainly at Boukamesh, Qasr Ahmed, Al Hishah and Al Kuz (against 403 in 2007, 303 in 2006 and 107 in 2005), but no Ruddy Shelducks *Tadorna ferruginea* (only one individual of this species has been recorded in four years, emphasizing its scarcity in Libya). Numbers of diving ducks were also low, with a total of only 350 (mainly Pochard *Aythya ferina* with some Tufted Ducks *Aythya fuligula*; as in previous years the main site for Pochard was the Benghazi wetland complex including Jeliana and El Thama). The most numerous duck, as in all previous years, was Shoveler *Anas clypeata* (with 1,972 birds, easily the highest total of the four years, over 1,000 of them at

the Benghazi complex); Teal *Anas crecca*, again as in all previous years, came second (with 363 birds the only other surface-feeding duck whose numbers reached three figures); numbers of Pintail *Anas acuta*, at only 44, were much lower than in previous years when totals varied from 154 to 452. Once again, no Garganey *Anas querquedula* were found (in previous years a lone individual was noted in February 2007), so this species clearly does not winter in any numbers in Libya. Numbers of ducks were small on freshwater pools round oases far inland like Houn (100 individuals) and at Hajara near Sebha (203); thus the concentrations of ducks which had been thought possible at wetlands round desert oases did not materialize. Once again, small numbers of the two world-threatened species, Marbled Duck *Marmaronetta angustirostris* (see below) and Ferruginous Duck *Aythya nyroca*, were found; the total of 26 Ferruginous Ducks was found at six widespread sites (including the two major southerly desert sites of Houn and Sebha), so numbers at one site never reached double figures.

6. **Cranes:** Observations of Eurasian Crane *Grus grus* were again made at a number of sites spread all over the country, though counts were less complete than in previous years, as it was not always possible, because of time and weather constraints, to obtain full counts of birds coming to roost in the evening. A total of 161 cranes was observed (against 486 in 2007, 595 in 2006 and 246 in 2005); seven at Sebkhet Gatoufa near Farwa were the first observation in four years of cranes in the far northwest of Libya; wintering flocks were again found at the traditional sites in the Gulf of Sirt at Taourgha, Al Hishah and Kerkoura (though not this year inland at Houn). This confirms the findings of previous surveys that fair numbers of cranes regularly winter in Libya.

7. **Waders:** Numbers were again appreciable with 10,521 individuals of 31 species, (against 5,669 of 31 species in 2005, 6,340 of 30 species in 2006 and 8,796 of 29 species in 2007). Three species numbered more than a thousand individuals (these had been the commonest waders on each previous survey): Kentish Plover *Charadrius alexandrinus* (1,100 individuals), Little Stint *Calidris minuta* (1,219) and Dunlin *Calidris alpina* (3,553). Three other wader species occurring in notable quantities were: Eurasian Curlew *Numenius arquata* (932 individuals), Redshank *Tringa totanus* (454 individuals) and Black-winged Stilt *Himantopus himantopus* (243 individuals). The numbers of all six of these species were similar to those recorded in previous surveys. Ruff *Philomachus pugnax* were noted in larger numbers than in the three previous years, with a total of 518, largely because of a flock of 448 at Kerkoura. Numbers of Golden Plover *Pluvialis apricaria* were lower than in previous years, partly because the usual wintering flock at Kuz was not found, partly because Sebkhet Gfanta, important for this species in previous years, was not visited; two other dry ground waders, recorded in small numbers in previous years, Lapwing *Vanellus vanellus* and Dotterel *Charadrius morinellus* escaped the observers this year. Two species were recorded for the first time in four years: White-tailed Plover *Vanellus leucurus* (see below) and Terek Sandpiper *Xenus cinereus*. Other waders, rare in Libya in winter but recorded in ones and twos in most of the last three surveys, were: a single Greater Sand Plover *Charadrius leschenaultii* at Kerkoura; eleven (!) Bar-tailed Godwits *Limosa lapponica* at high tide near Farwa; and once again a Whimbrel *Numenius phaeopus* at Tripoli. The main sites for waders (holding more than a thousand waders) were: the tidal site of Farwa Lagoon and the coast between Farwa and Ras Ajdir near the Tunisian border (over 1,500 waders); Sebkhet Qasr Ahmed near Misrata (2,000 waders); then, in the area of Benghazi, Kerkoura (over 1,000), Ain Azziana (just over 1,000) and Al Kuz (about 1,200). Numbers of waders recorded at Taourgha (visited in very unfavourable wet conditions), Al Hishah and the Benghazi wetland complex (Al Thama and Jeliana) were relatively low – each in the low hundreds.

8. **Gulls:** Once again, the survey demonstrated the importance of Libya for wintering gulls and terns, notably the world-threatened Audouin's Gull *Larus audouinii* (one of the 15 threatened bird species listed in the RAC/SPA Action Plan for Birds) which nests only in the Mediterranean, and also Pallas's Gull *Larus ichthyaetus*, Lesser Black-backed Gull *Larus*

fuscus (mainly from Scandinavian breeding populations) and Pontic /Caspian Gull *Larus cachinnans*. The total number of gulls observed, at 33,229 individuals, was as in previous years about 60% of the total number of water birds counted (22,757 gulls in 2007; 34,859 in 2006; and 19,236 in 2005); many of them have adapted to feeding at waste disposal sites, notably the one at Ganfouda near Benghazi where the largest concentrations were found once again. Audouin's Gull on the other hand is a pelagic species and practically all records came from beaches and coastal lagoons: in 2008, 362 were noted, mainly at Kerkoura and Al Mangoub salinas near Zuwara (where a colour ringed bird was noted, see below); this compares with 272 in 2007, 670 on 2006 and 344 in 2005, when the major sites were Qasr Ahmed and Sebkhet Sultan, together with Kuz and Kerkoura, nearer Benghazi. Pallas's Gull is a visitor in small numbers (there were no Libyan records before 2005) from the eastern Mediterranean and western Asia; eight were seen in 2008 (six each in 2007 and 2006, four in 2005). By far the most numerous species was Black-headed Gull *Larus ridibundus*: 26,422 in 2008 (as against 12,159 in 2007, 21,491 in 2006 and 14,137 in 2005). Fewer Slender-billed Gulls *Larus genei* were discovered this year, some 2,300 (compared with 4,973 in 2007; 7,616 in 2006; and 893 in 2005). Among the three closely related large gulls, Yellow-legged Gull *Larus michahellis* was found mainly in the west around Tripoli (total of 505, compared with 56 in 2007, 506 in 2006 and 1,582 – perhaps an overestimate – in 2005). Numbers of Lesser Black-backed Gull reached 1,734 (compared with 2,779 in 2007, 1,438 in 2006 and 1,425 in 2005); ringing recoveries indicate that most Lesser Blackbacks wintering in Libya are of the subspecies *intermedius* which breeds in north-west Europe (see below). The third member of this trio, Pontic or Caspian Gull, was found mainly in the east around Benghazi where numbers recorded were 993 in 2008, 2,160 in 2007, 2,629 in 2006 and 535 in 2005; limited coverage of the area east of Benghazi may explain the lower figure in 2008.

9. **Terns:** As in previous years, several species of wintering terns were recorded in coastal sites. The vast majority of the Caspian Terns *Sterna caspia* (2008 total of 44, compared with 55 in 2007, 42 in 2006 and 38 in 2005), were once again in the tidal area around Farwa; (very small numbers have previously been recorded at Ain Ghezala and Sebkhet Temimi, east of Tobruk, which were not visited in 2008). Once again the most widespread species was Sandwich Tern *Sterna sandvicensis* whose numbers in 2008 totalled 159, compared with 83 in 2007, 122 in 2006 and 101 in 2005. The small wintering population of Whiskered Tern *Chlidonias hybridus,* observed almost exclusively at the Benghazi wetland complex of Jeliana and El Thama, numbered 48 this year, compared with 65 in 2007, 53 in 2006 and 77 in 2005. For the second year running, a few wintering individuals of Lesser Crested Tern, almost the entire Mediterranean population of which breeds in Libya (Hamza *et al* 2008a), were seen at Al Mengoub Salinas.

10. **Wintering of Palearctic species:** This year's survey provided further details of wintering in Libya by Palearctic species which normally winter south of the Sahara. Among these (especially further south at Sebha) were not only waders like Little Ringed Plover *Charadrius dubius* and Wood Sandpiper *Tringa glareola* which habitually winter in small numbers north of the Sahara (e.g. Isenmann *et al* 2005), but also Turtle Dove *Streptopelia turtur*, Red-throated Pipit *Anthus cervinus* and Blue-headed *Wagtail Motacilla flava*. As in previous surveys, large numbers of singing Reed Warblers *Acrocephalus scirpaceus* were found in practically all major reed-beds, not only in the far *s*outh but in coastal sites in the north; windy weather foiled plans to mist net some of these birds to investigate their sub-specific status and morphology. Interestingly, recent information (Hamid Rguibi pers. com.) indicates that Reed Warblers have also been discovered in winter in coastal wetlands of Moroccan Atlantic wetlands. These repeated observations of Reed Warblers which are normally found well south of the Sahara in midwinter (instead of singing - and therefore presumably holding territories - in reed-beds all over Libya) remain one of the enigmas of Libyan ornithology and should certainly be investigated in detail as soon as possible.

11. **Non-waterbirds:** While the main focus of the survey was on waterbirds, records were also kept, as in previous surveys, of non-waterbirds (see Appendix 3). The highlights of these observations may be summarised as follows. A single Pallid Harrier *Circus macrourus* (a world endangered species) was recorded at Taourgha, as in previous years. Some 30 Marsh Harriers *Circus aeruginosus* were recorded, ten of them in the roost at Taourgha. For the first time in four years Spotted Sandgrouse *Pterocles senegallus* was recorded, some 200 birds in small flocks along the road to Sebha; this suggests that this once common bird of desert habitats has decreased in Libya, as in Tunisia (Isenmann *et al* 2005). A Turtle Dove was recorded at Sebha, as were small numbers of Blue-headed Wagtail and Red-throated Pipit. The members of the party spent many (un)happy hours trying to decide whether desert hirundines were Crag Martin *Ptyonoprogne rupestris* or Pale Crag Martin *Ptyonoprogne obsoleta.*

One of the key target species, as in the three previous surveys, was the Slender-billed Curlew (critically endangered and another of the 15 RAC/SPA listed species), whose tiny surviving world population (of only about 100 individuals) is believed to winter somewhere in brackish habitat in the Mediterranean. Sadly, the survey again failed to find any, though as in previous visits, fair numbers of the larger Eurasian Curlew were found. Closer investigation of these flocks of Eurasian Curlews, which might contain some Slender-billed Curlews, would undoubtedly be worthwhile, especially at roosts. The survey team now has a good understanding of how to plan and carry out winter surveys for this species, and of which Libyan sites should be targeted, so as to be as cost-effective as possible.

Considerable attention was devoted, as in previous years, to reading of coloured plastic rings on birds' legs, and a total of 20 rings were seen: of these, one was on a Great Cormorant, 14 on Greater Flamingos (one of the 15 RAC/SPA species), two on Spoonbills, one on a Lesser Black-backed Gull, one on an Audouin's Gull and one on a Sandwich Tern (another RAC/SPA species).

The Cormorant (observed in the middle of Tripoli harbour) had been ringed as a chick in June 2005 at a colony in the Danish Baltic and was the first reading of a colour ring from this country in Libya; this recovery complements the recovery at Farwa in 2007 of a Cormorant ringed on the Baltic coast of Russia.

The 14 Flamingo rings came from: Spain (three from the Ebro colony and two from Andalucia); Camargue, France (four); Sardinia, Italy (three); Algeria (one, the first Algerian-ringed Flamingo to be recovered in Libya); and Turkey (one). Several of them had been observed in Tunisia on their way to Libya; e.g. Ebro X|ATD and Sardinian MVCT, both born in summer 2007, were recorded in Tunisia on the same day in November 2007, then seen at Taourgha. Two young French birds had clearly arrived early in Libya and were spending their early years in the country: FTHJ, born in July 2005, was seen at Jeliana in August 2006, February 2007 and January 2008, while FXDP, born in 2006, was noted in the Benghazi area in February 2007 and January 2008.

Once Flamingos reach maturity, they wander much further, and older birds invariably have more complicated life histories. Thus DFHL, born in France in 1999, was at Jerba near the Tunisian border with Libya in 2000 and 2002, and returned to the Camargue in 2004 before reappearing in Libya in 2008. French DZFV, born in 2001, had been recorded in Tunisia in 2004, then at Al Hishah in January 2006; it returned to Sfax in Tunisia in May 2006 before being seen for a second time in Libya in 2008. Of the two Andalucian birds, 6|26, born in 1996, had been seen in Tunisia in 1999, had appeared at the Ebro colony in 2002 and the Turkish colony in 2004, before being noted in Libya during the January 2006 survey; in summer 2006 it was a probable breeder at the Algerian colony before returning to Libya in January 2008. 0|VIL, born in 2000, on the other hand, had been recorded in Sicily from 2002 to 2003 before an appearance in Tunisia, then a return to Sicily; in 2005 it was a probable breeder in Algeria and in 2006 in Andalucia; in 2007 it was in Algeria again before making its first appearance in Libya, at Taourgha on 23 January, then at Al Hishah on 24 January, a journey of 40 kms in a day.

Both the ringed Spoonbills had been recorded in previous winters in Libya, and indeed at exactly the same site in Benghazi: IAZX, ringed in Italy in 2003, had been seen by both the 2005 and 2006 surveys and was found again in 2008; it had returned to the neighbourhood of the colony in Italy in the summers of 2005, 2006 and 2007. Here is a clear illustration of fidelity to both nesting colony and wintering area. The second bird, 9Z from Serbia, ringed in 2004, had been seen in January 2006 and was found again in January 2008, but so far there is no indication of observations at the breeding colony in summer.

The Lesser Blackback had been ringed as an adult in May 2007 in Brabant in the Netherlands, near the North Sea coast and was another first sighting in Libya from this country of this species. Colour rings read in previous years on Lesser Blackbacks have come from the Finnish Baltic (two) and from Norway (three); one of the Norwegian birds was of the subspecies *graellsii* ringed at 70° N in the extreme north, and two were of the subspecies *intermedius* ringed much further south at 58°N in the province of Vest Agder; there is also a recovery of a metal ring from Vest Agder in Misurata (Nils Helg Lorentzen, pers. com.). The Danish ringing authorities have kindly forwarded details of nine old metal-ringed Lesser Blackbacks recovered in Libya, all ringed in the Baltic from 1936 to 1967. All these recoveries paint a picture of a strong south-easterly movement of Lesser Blackbacks, from northwest Europe to wintering grounds in the eastern Mediterranean. However, more recent recoveries of Danish ringed birds however come mainly from the Atlantic coast as far south as Portugal and Morocco (Kjeld Tommy Pedersen, pers. com.).

The Audouin's Gull came from Greece (see below).

The Sandwich Tern was at least two years old when ringed in March 2007 at Comacchio, in the northern Adriatic in Italy.

Full details of all these recoveries, which provide further valuable illustrations of the origins of birds wintering in Libya, are given in Appendix 5. It is certain that many more rings might have been read if the participants had been able to dedicate more time to detailed observation of flocks of birds; however, with the priority given to a comprehensive survey of a large number of sites, this was not possible.

A number of interesting new findings emerged:

1. A ring read on an Audouin's Gull at Sebkhet Al Mangoub near Zuwara was definitely of Greek origin. The bird had been ringed as a chick in the nest in the islands of the southeast Aegean in June 1998. The earlier surveys had found considerable numbers of Audouin's Gulls wintering in Libya, rather surprisingly as the species had been considered to winter mainly in the Atlantic. Previous reports had speculated that the Audouin's Gulls wintering in Libya might be from the Greek breeding population, and this observation of a Greek ring represents a definite confirmation (another Greek recovery is known from Jerba just across the Tunisian border – D. Portolou pers. com). This finding could prove important for conservation of the Greek breeding population of this species (the third largest in the world after those in the Ebro Delta in Spain, and in Italy).

2. A small number of Cranes were seen in the Farwa area. In previous years, cranes had been noted in the Taourgha, Al Hishah, Brega, Kerkoura and Houn areas, but this was the first observation from the north-west, hardly surprising given that large numbers winter in neighbouring Tunisia (Isenmann *et al* 2005).

3. The observation of a flock of 12 Marbled Duck at Taourgha Springs was particularly welcome. Bundy (1976) knew of no definite records in Libya; Gaskell (2005) reported singles near Tripoli and Benghazi, and the 2007 survey found a single at Taourgha. The survey participants had long surmised that this species - which breeds in considerable numbers in Algeria and Tunisia and winters in the oases around Douz in southern Tunisia

(Isenmann *et al* 2005) - might winter in Libya too, so this record provides a confirmation of this hypothesis.

4. Observations inland in the south confirmed the rapid spread of Cattle Egret in Libya. Small numbers of individuals were seen by day at Houn and Brak, and many more may have been present, since a group of over 200 came to roost at dusk at Sebha.

5. The first visit to Sebha produced totally unexpected observations of two vagrants, both first observations for Libya: a White-tailed Plover, an Asiatic species, and a Blue-winged Teal *Anas discors*, a species of North American origin (though the latter may just possibly have been a bird that had escaped from a zoo in Europe and flown south with other migrant ducks).

6. In the area of Gamines, south of Benghazi, the observers met two groups of local falconers, who confirmed that, in the Gamines area in particular, but in some other areas of Libya like Ajedabiya too, there is an active popular falconry culture. Of the four falcons seen, three were Lanner Falcons *Falco biarmicus* ("gernaz" in local dialect) and one was a Barbary Falcon *Falco peregrinoides* ("shahin" in local dialect); most were said to have come from the south of Libya near the border with Sudan, but one Lanner was reported to come from a nest in the immediate area; the preferred quarry species were Stone Curlew *Burhinus oedicnemus* and hare.

Trumpeter Finch *Bucanetes githagneus* on Shouiref (Photo: E. M. Borass)

White-tailed Plover *Vanellus leucurus* on Hajara, Sebha (Photo: E. M. Borass)

Finally, the survey confirmed the finding of previous years that many of the wetlands visited were under considerable pressure from the country's rapid economic social and economic development. In particular at the rich wetland complex in and around the city of Benghazi, the pace of change is rapid, and many sites seem to be undergoing in-filling or reclamation. Elsewhere, at Farwa, there is talk of major infrastructure projects; at Al Kuz, the *Tamarix* and *Juncus* borders are being reclaimed and covered with concrete; while at Kerkoura, the *Arthrocnemum*, *Juncus* and mudflat fringes are being used as a practice/training ground by the army, with ecologically destructive excavation works. In the recommendations below, the survey team suggests that urgent attention should be given by the Libyan environment and planning authorities to the preservation of key elements of Libya's biological diversity and wetland heritage.

4. Recommendations

(a) Future ornithological surveys

After four winters, the basic task of carrying out broad countrywide surveys of Libyan wetlands, to investigate their importance for wintering water birds, may be considered to be largely completed, though of course monitoring of numbers present should continue every winter in future. It is

suggested that future ornithological work, rather than undertaking long journeys throughout Libya, should concentrate on the following more detailed tasks:

- Further training of Libyan researchers in species identification and survey techniques, so that they can carry out monitoring themselves in future.
- More detailed and comprehensive studies at sites with good numbers of wintering water-birds like Farwa or the Benghazi complex, aimed at understanding how the birds use each site. Such site-specific surveys would be better adapted to a proper search for Slender-billed Curlews, through detailed examination of Eurasian Curlew roosts.
- Ornithological surveys at other periods of the year (notably during spring migration and the breeding season).
- Above all, surveys in support of urgent conservation measures at the major wetlands identified (see Recommendations (b), (c) and (d) below).

(b) Practical conservation measures at important wetlands identified by the surveys

The four winter surveys, together with previous published studies of Libyan wetlands, have provided basic data on which wetland conservation measures could be based. It is suggested that the Libyan authorities give urgent consideration to immediate practical and legislative measures to conserve their country's rich biological diversity and heritage. Such measures could include:

- Establishment of new nature reserves under national legislation
- Development of management plans and training staff to manage such sites
- Designation of additional sites for the List of Wetlands of International Importance under the international Ramsar Convention on Wetlands, to which Libya is already a Contracting Party; two Libyan wetlands in the Jebel Akhdar National Park have already designated for the Ramsar List. The secretariat of the Ramsar Convention, with the support of WWF International, has recently been particularly active in promoting designation of additional Ramsar sites in North Africa; Morocco has currently designated 24 sites for the Ramsar List, Algeria 42, while Tunisia has recently increased its number of designated sites from one to twenty. Both Algeria and Tunisia have produced attractively illustrated atlases on their Ramsar wetlands. It appears clear that, if Libya wished to designate additional Ramsar sites, it could count on moral, administrative, scientific (and indeed financial) support from international wetland conservation organizations.
- Designation of sites as Special Areas of Mediterranean Importance, under the Barcelona Convention, to which Libya is also a Party.

(c) Priority wetlands for conservation measures

The following Libyan wetlands undoubtedly meet the criteria for designation as wetlands of international under the Ramsar Convention

- Farwa Lagoon
- Sebkhet Boukamesh
- Sebkhet Al Mangoub
- The Taourgha complex (including Taourgha Springs; Al Hishah; Sebkhet Qasr Ahmed)
- Sebkhet Sultan
- The Kerkoura complex (Sebkhet Kerkoura, Sebkhet Gamines)
- The Benghazi complex (Sebkhet Jeliana, Sebkhet Al Thama, Sebkhet Esselawi, Sebkhet Ain Azziana)
- Sebkhet Al Kuz
- Geziret Ghara
- Gulf of Bumbah from Umm al Qurami to Ain al Ghazala, including especially Geziret Al Elba and Sebkhet Temimi

- Hajara, Sebha (even though this is an artificial site whose future status may change, it plays a hugely important role as a desert wetland, supporting large numbers of trans-Saharan bird migrants, not to mention other forms of flora and fauna).

The table below presents a preliminary assessment of the official Ramsar criteria under which each of the above sites could qualify as wetlands of international importance in the sense of the Ramsar Convention. The criteria are given in full in Appendix 6. In all cases the relevant biogeographical region is the Western Palearctic.

Site name	Crit. 1	Crit. 2	Crit. 3	Crit. 4	Crit. 5	Crit. 6	Crit. 7	Crit. 8	Crit.9
Farwa	Rare		Yes	Winter birds				Fish nursery	
Boukmesh	Rep.		Yes	Winter birds		Ph ros			
Mangoub	Rep.	L. aud	Yes	Winter birds					
Taourgha	Rare/Rep	L. aud M. ang Ay.nyr C. pall	Yes	Winter birds					
Sultan	Rep.	L. aud	Yes	Winter birds					
Kerkoura	Rep.	L. aud	Yes	Winter birds					
Benghazi	Rep.	Ay.nyr C. alex	Yes	Winter birds		S. ben			
Kuz	Rep.		Yes	Winter birds					
Ghara	Rep.		Yes	Breed birds		S. ben			
Bumbah	Rep.		Yes	Winter birds		S. ben			
Hajara	Rep.	Ay.nyr	Yes	Migrant birds					

(d) Possible immediate wetland conservation measures

The participants suggest that, if the Libyan authorities accept the recommendation that new wetland conservation measures might be taken, they might wish to begin with immediate action at remote, administratively uncomplicated sites where the current development pressure is limited, such, for example, as: the island nesting sites of Lesser Crested Terns at Geziret Ghara and Gezirat Al Elba (Meininger *et al* 1994; Azafzaf *et al* 2006b); Al Hishah; the Kerkoura complex; Sebkhet Al Kuz; and Sebkhet Sultan. In parallel, they might begin negotiations with the planning authorities at more complicated urban sites where there is greater development pressure, but which are crucial to Libya's heritage and conservation of biological diversity, such as Farwa, the Taourgha complex or the Benghazi complex. The Benghazi complex presents a special challenge since it is extremely rich in biodiversity, and situated practically in the centre of a major city, and therefore has huge potential for educational programmes on biological diversity and raising of public awareness; the educational and cultural demonstration aspects of at least part of the site (Sebkhet Jeliana perhaps?) might be given priority.

(e) Training of Libyan experts and establishment of a national data base

The reports on the previous surveys in 2005, 2006 and 2007 all emphasized the need for continued training of Libyan ornithological experts and researchers, and for the creation of a centralized data base to collect, store and analyse data on Libyan birds. Training and data management remain an essential basis for effective management and conservation of Libyan biological diversity and heritage.

(f) Publications

The considerable body of data collected in the course of the four winter surveys could be used to produce a series of publications:

- A summary of the findings on water birds of the 2005 and 2006 surveys has already been published in the international journal "Wildfowl and Wetlands".
- It was unfortunately not possible to carry out the plan, mentioned in the 2007 report, to produce an update on water birds and an account of non water-birds observed, for publication in the "Bulletin" African Bird Club; it is now intended that an article of this kind (incorporating an update of water-bird observations since 2006 and an account of non water-birds since 2005) should be published in the course of 2008.
- Enough data (not only basic bird information, but also a variety of photographs) is now available for preparation of information for arousing awareness among the public of the values and interest of Libyan wetlands and water birds. If the Libyan authorities so desire and if resources are made available, posters on water birds in Libya, and/or an Atlas on Libyan wetlands could be prepared (preferably in Arabic versions) for wide distribution in Libya.

(g) Extension of the scope of ornithological surveys in North Africa

Detailed surveys of wetlands and water birds - with recent avifaunas for Morocco (Thévenot *et al* 2003*)*, Algeria (Isenmann & Moalli 2000) and Tunisia (Isenmann *et al* 2005) - have been carried out recently in most countries of North Africa. As yet however, information on the numbers and distribution of water birds in Egypt remains very limited. For effective application of the RAC/SPA Action Plan on Birds, and for better understanding of the populations of many water birds, improved information is urgently needed from this country. It is therefore suggested that RAC/SPA should approach its Egyptian Focal Point and propose the organization (perhaps in winter 2008/09?) of a midwinter survey of Egyptian wetlands and water birds, using the international team which has been developed during RAC/SPA winter surveys in Tunisia and Libya in the last five years.

Appendix 1: Programme

Saturday 19 January: Arrival of the five non-Libyan participants in Tripoli
Planning meeting with Libyan participants

Sunday 20 January: Travel Tripoli - Boukamesh
Survey of Sebkhet Mellita and Sebkhet Al Mangoub

Monday 21 January: Survey of Farwa Lagoon, Sebkhet Boukamesh, Sebkhet Boubesla, Wadi Ghan Dam and Wadi Zaret Dam
Further ring reading at Sebkhet Al Mangoub

Tuesday 22 January: Further ring reading efforts at Sebkhet Al Mangoub
Travel Boukamesh - Misrata
Survey of Ain Wadi Kaam and Wadi Kaam Dam

Wednesday 23 January: Survey of Taourgha Springs and Sebkhet Qasr Ahmad

Thursday 24 January: Travel Misrata - Ajedabia
Survey of Al Hishah Springs and Sebkhet Sultan

Friday 25 January: Travel Ajedabia - Benghazi
Survey of Kerkoura, Gamines, Sebkhet Jeliana and Sebkhet Al Thama

Saturday 26 January: Survey of Sebkhet Esselawi, Sebkhet Ain Azziana, Sebkhet Al Kuz
Additional ring reading at Sebkhet Jeliana and Sebkhet Al Thama

Sunday 27 January: Additional ring reading efforts at Sebkhet Jeliana
Travel Benghazi - Houn

Monday 28 January: Survey of Sebkhet al Hammam, Houn
Travel Houn - Sebha
Survey of Hajara, Sebha

Tuesday 29 January: Survey of wetlands round Brak
Travel Sebha - Tripoli

Wednesday 30 January: Survey of Wadi Al Mjenin Dam
Ring reading, Tripoli
Final round-up meeting

Thursday 31 January: Departure of non-Libyan participants

Appendix 2: Persons met

Persons marked with an asterisk * took part in the survey

Environment General Authority

Director General and Secretary of the People's Committee:	Dr Mahmoud ALFALLAH
Director of National Conservation Department:	Mr Ali ALKEKLI
*Head of Marine Conservation Section:	Abdulmaula HAMZA
* Researcher, Marine Conservation Section:	Almokhtar M. A. SAIED
* Head of Protected Areas section:	Essam M. BORASS
* Researcher, Protected Areas section:	Jaber YAHYA
* Misrata Branch:	Mohamed ZAED
* Misrata Branch:	Ali Abdallah SWALIM
* Misrata Branch:	Salah BEKI
* Sorman Branch:	Anees ALMAGOUSE
* Sirt Branch:	Mhemed ABOENA
* Benghazi Branch:	Ali MDAIES
* Sebha Branch:	Abdul Allah MOAD

* Drivers: Usama GRBAJ, Hasen BENJEDO, Abdulallah ALAWEMERE, Fawze GAROOZ, Adil ALWAER

Environment Friends Society, Houn

* Kamal ABUZAID

Volunteers, Brak

* Hamza ABDULKADER
* Ebrahim ALAJELE

Non-Libyan participants

* Hichem AZAFZAF	(RAC/SPA consultant, Tunisia)
* Pierre DEFOS DU RAU	(ONCFS, France)
* Habib DLENSI	(RAC/SPA consultant, Tunisia)
* Nicola BACCETTI	(INFS, Italy)
* Michael SMART	(RAC/SPA consultant, UK)

Appendix 3: Full details of all species of waterbirds counted

Waterbird species / Site			Sebkhet Mellita	Sebkhet Al Mangoub salinas	Tripoli, Bab El Bahr	Tripoli, harbour	Wadi Ghan Dam	Wadi Zaret Dam	Sebkhet Al Mangoub, salina	Coast Farwa-Ras Ajdir including Gattaya Island	Farwa Lagoon	Sebkhet Boubesla east	Sebkhet Boubesla west	Sebkhet Boukamesh	Sebkhet Gatoufa	Sebkhet Zolton	Wadi Kaam dam	Ain Wadi Kaam	Sebkhet Al Mangoub, east	Tajoura from main road looking towards sea	Sebkhet Kasr Ahmed	Taourgha Springs	Wadi Mrah	Al Hishah	Gbeba	Sebkhet Hassila	Sebkhet Sultan + Seb. El Amra	Chott el Bedin	Gamines + Jarrothe	Essebre beach	Kerkoura	Sebkhet Fairouz	Sebkhet Ganfouda	Sebkhet Nakhil	El Thama	Jeliana	Sebkhet Garyounes I	Ain Azziana	Al Kuz	Bou Dzira	El Mgarin	Esselawi	Garyounes hotel	Garyounes II	Ben Jawad	Benghazi Harbour	Hajara, Sebha	Sebkhet el Hammam (Houn)	Mechroua Bir II, Brak	Pool near Mechroua Brak	Reed-bed Brak	Wadi Al Mjenin Dam	Total
N°	Scientific name	Date of visit - january 2008	19	20	20	20	20	20	20 & 21	21	21	21	21	21	21	21	22	22	22	22	23	23	24	24	24	24	24	25	25	25	25	25	25	25	25 & 26	25 & 26	25 & 26	26	26	26	26	26	26	26	27	27	28	28	29	29	29	30	
1	*Tachybaptus ruficollis*	Little Grebe	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	9	3	0	0	0	0	10	0	0	6	0	0	5	4	0	0	0	0	42
2	*Podiceps cristatus*	Great Crested Grebe	0	0	0	3	0	0	0	6	155	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	3	0	0	0	0	1	0	0	0	0	0	0	0	0	0	178
3	*Podiceps nigricollis*	Black-necked Grebe	0	0	0	0	0	0	0	6	46	0	0	0	0	0	0	17	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	75	20	0	19	1	0	1	0	0	16	0	0	0	0	0	0	0	0	202
4	*Morus bassanus*	Gannet	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	8
5	*Phalacrocorax carbo*	Cormorant	0	0	72	0	0	0	0	340	262	0	0	0	0	0	0	12	0	0	5	2	0	0	0	0	0	0	0	1	4	0	0	0	486	10	0	42	0	25	150	0	74	12	0	15	0	11	0	0	0	2	1525
6	*Bubulcus ibis*	Cattle Egret	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	12	0	0	0	0	0	0	0	0	0	180	0	7	0	0	18	9	20	0	0	0	0	0	0	220	2	0	0	0	0	471
7	*Egretta garzetta*	Little Egret	0	0	6	0	0	0	0	6	8	0	0	0	0	0	0	1	0	0	0	6	0	8	0	1	0	0	0	0	0	0	0	19	0	0	3	0	1	9	0	0	0	0	0	3	5	0	0	0	0	76
8	*Egretta alba*	Great White Egret	0	0	0	0	0	0	0	1	7	0	0	0	0	0	0	1	0	0	0	4	0	1	0	0	0	0	0	0	0	0	0	10	0	0	2	0	0	1	0	0	0	0	0	0	1	0	0	0	0	28
9	*Ardea purpurea*	Purple Heron	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
10	*Ardea cinerea*	Grey Heron	0	0	2	1	1	0	2	7	17	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	1	0	0	0	0	0	0	28	0	1	5	0	0	1	0	0	0	0	0	3	21	0	0	0	1	95
11	*Plegadis falcinellus*	Glossy Ibis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	35	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	39
12	*Platalea leucorodia*	Spoonbill	0	0	0	0	0	0	0	16	97	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	134
13	*Phoenicopterus roseus*	Greater Flamingo	2	0	0	0	0	0	0	0	0	0	0	0	1500	0	0	0	0	0	0	26	158	0	54	0	20	5	0	0	0	0	0	0	0	140	0	11	372	0	0	0	0	0	0	0	0	0	0	0	0	0	2288
14	*Tadorna tadorna*	Shelduck	0	0	0	0	0	0	0	0	0	0	0	0	165	0	0	0	0	0	0	115	8	0	83	0	0	0	0	0	0	0	0	0	0	0	9	137	0	0	4	0	0	0	0	0	0	0	0	0	0	521
15	*Anas penelope*	Wigeon	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	10	16	0	0	0	0	0	0	0	2	0	0	2	2	0	0	0	0	36
16	*Anas strepera*	Gadwall	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	4	21
17	*Anas crecca*	Teal	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	25	0	0	0	0	0	20	0	0	0	167	0	5	0	0	0	0	0	0	0	0	0	75	45	0	0	0	15	363
18	*Anas discors*	Blue-winged Teal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
19	*Anas platyrhynchos*	Mallard	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	5	0	0	0	1	37
20	*Anas acuta*	Pintail	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	0	0	0	0	0	0	0	0	0	25	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	44
21	*Marmaronetta angustirostris*	Marbled Duck	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12
22	*Anas clypeata*	Shoveler	0	0	0	0	0	30	0	0	0	0	0	0	0	0	0	217	0	0	0	55	0	52	0	0	0	0	0	0	0	0	0	640	442	0	115	242	0	0	0	0	32	0	0	105	40	0	0	1	1	1972
23	*Aythya ferina*	Pochard	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	260	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	284
24	*Aythya nyroca*	Ferruginous Duck	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	5	0	0	0	0	0	0	0	0	0	0	5	6	0	0	0	0	26
25	*Aythya fuligula*	Tufted Duck	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40
26	*Anas sp.*	Anas Sp.	0	0	0	0	0	0	0	0	200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	200
27	*Gallinula chloropus*	Moorhen	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	12	0	0	0	0	0	1	0	0	0	0	0	30	0	0	0	30	0	81
28	*Rallus aquaticus*	Water Rail	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2
29	*Fulica atra*	Coot	0	0	0	0	0	41	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	300	257	0	0	0	1	2	0	0	65	0	0	40	7	0	0	0	3	736
30	*Grus grus*	Crane	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	40	0	83	0	0	0	0	0	0	31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	161
31	*Haematopus ostralegus*	Oystercatcher	0	0	0	0	0	0	0	19	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	41
32	*Himantopus himantopus*	Black-winged Stilt	0	0	0	0	0	0	12	0	0	0	0	0	0	0	0	1	0	0	0	61	49	0	23	0	0	0	0	2	0	0	0	30	25	19	11	5	0	0	5	0	0	0	0	0	0	0	0	0	0	243
33	*Recurvirostra avosetta*	Avocet	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	45	0	0	0	0	0	0	0	0	0	0	0	0	0	49
34	*Burhinus oedicnemus*	Stone Curlew	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
35	*Charadrius hiaticula*	Ringed Plover	0	0	1	0	0	0	0	0	13	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	1	0	7	0	0	0	42	0	5	0	0	2	0	0	0	0	0	0	0	0	0	0	81
36	*Charadrius dubius*	Little Ringed Plover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	8
37	*Charadrius alexandrinus*	Kentish Plover	2	0	1	0	0	0	8	12	74	0	0	3	10	20	0	0	0	0	0	300	0	3	105	0	0	138	0	20	0	53	3	66	0	10	50	30	12	152	0	0	28	0	0	0	0	0	0	0	0	1100
38	*Charadrius leschenaultii*	Greater Sand Plover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
39	*Pluvialis apricaria*	Golden Plover	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
40	*Pluvialis squatarola*	Grey Plover	0	1	0	0	0	0	0	44	40	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	1	0	3	0	4	1	0	0	2	20	2	18	19	0	0	0	0	0	0	0	0	0	0	0	165
41	*Vanellus leucurus*	White-tailed Plover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
42	*Calidris alba*	Sanderling	0	0	1	0	0	0	0	0	12	0	0	40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	3	10	10	0	0	4	0	0	0	0	0	0	0	0	0	0	81
43	*Calidris minuta*	Little Stint	0	0	4	0	0	0	4	0	0	0	0	248	16	8	0	0	0	0	0	150	0	0	60	0	0	10	0	23	0	45	0	0	0	50	20	10	530	5	0	0	30	0	0	0	0	6	0	0	0	0	1219
44	*Calidis temminckii*	Temminck's Stint	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2
45	*Calidris alpina*	Dunlin	0	0	16	0	0	0	4	378	844	0	0	20	0	50	0	0	0	0	0	100	0	0	460	0	0	5	0	23	0	527	10	0	0	200	222	30	292	180	0	0	192	0	0	0	0	0	0	0	0	3553
46	*Calidris sp.*		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1380	0	0	0	0	0	0	0	30	0	0	0	0	0	0	0	0	0	370	0	0	0	0	0	0	0	0	0	0	0	1780
47	*Philomachus pugnax*	Ruff	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	63	0	0	0	0	0	0	448	0	0	0	3	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	518
48	*Numenius arquata*	Curlew	0	0	0	0	0	0	31	212	75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	2	0	66	0	39	0	21	0	0	0	37	4	436	0	0	0	0	0	0	0	0	0	0	0	932
49	*Lymnocryptes minimus*	Jack Snipe	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	3	3
50	*Gallinago gallinago*	Snipe	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	5	0	4	0	25	0	37			
51	*Limosa limosa*	Black-tailed Godwit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
52	*Limosa lapponica*	Bar-tailed Godwit	0	0	0	0	0	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
53	*Numenius phaeopus*	Whimbrel	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
54	*Tringa erythropus*	Spotted Redshank	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
55	*Tringa totanus*	Redshank	0	0	1	0	0	0	8	13	42	0	0	0	0	0	0	0	0	0	0	30	1	1	18	0	0	2	2	9	0	21	0	2	0	13	10	2	137	19	0	0	123	0	0	0	0	0	0	0	0	454
56	*Tringa nebularia*	Greenshank	0	0	0	0	0	0	0	3	9	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	23
57	*Tringa ochropus*	Green Sandpiper	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	7	0	0	2	0	12
58	*Tringa glareola*	Wood Sandpiper	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	10	0	0	8	0	0	0	0	0	0	0	0	12	0	0	0	5	0	36
59	*Xenus cinereus*	Terek Sandpiper	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
60	*Actitis hypoleucos*	Common Sandpiper	0	0	1	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2	3	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	17
61	*Tringa stagnatilis*	Marsh Sandpiper	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
62	*Arenaria interpres*	Turnstone	0	0	1	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	106	0	0	0	10	6	0	3	0	0	0	0	0	0	0	0	0	0	0	0	137
63	*Larus melanocephalus*	Mediterranean Gull	0	0	5	40	0	0	90	245	48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	135	0	0	2	0	0	0	1	143	0	0	0	0	0	0	0	0	0	710

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Appendix 3: Full details of all species of waterbirds counted

Waterbird species / Site		Sebkhet Mellita	Sebkhet Al Mangoub salinas	Tripoli, Bab El Bahr	Tripoli, harbour	Wadi Ghan Dam	Wadi Zaret Dam	Sebkhet Al Mangoub, salina	Coast Farwa-Ras Ajdir including Gattaya Island	Farwa Lagoon	Sebkhet Boubesla east	Sebkhet Boubesla west	Sebkhet Boukamesh	Sebkhet Gatoufa	Sebkhet Zoltan	Wadi Kaam dam	Ain Wadi Kaam	Sebkhet Al Mangoub, east	Tajoura from main road looking towards sea	Sebkhet Kasr Ahmed	Taourgha Springs	Wadi Mrah	Al Hishah	Gbeba	Sebkhet Hassila	Sebkhet Sultan + Seb. El Amra	Chott el Bedin	Ganines + Jarrothe	Essebre beach	Kerkoura	Sebkhet Fairouz	Sebkhet Ganfouda	Sebkhet Nakhil	El Thama	Jeliana	Sebkhet Garyounes I	Ain Azziana	Al Kuz	Bou Dzira	El Mgarin	Esselawi	Garyounes hotel	Garyounes II	Ben Jawad	Benghazi Harbour	Hajara, Sebha	Sebkhet el Hammam (Houn)	Mechroua Bir II, Brak	Pool near Mechroua Brak	Reed-bed Brak	Wadi Al Mjenin Dam	Total
N°	Scientific name	Date of visit - january 2008	19	20	20	20	20	20	20 & 21	21	21	21	21	21	21	21	22	22	22	22	23	23	24	24	24	24	24	24	25	25	25	25	25	25	25	25 & 26	25 & 26	25 & 26	26	26	26	26	26	26	26	27	27	28	28	29	29	29	30	
64	*Larus minutus*	Little Gull	0	0	0	0	0	0	0	0	0	0	1	0	0	0	17	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	4	3	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	29
65	*Larus ridibundus*	Black-headed Gull	0	0	400	0	0	0	600	0	50	0	0	0	0	0	0	0	0	22	0	0	0	0	0	0	0	0	5	100	1	350	16200	0	532	940	0	3486	22	10	3	1500	1100	400	0	700	0	1	0	0	0	0	26422
66	*Larus genei*	Slender-billed Gull	0	0	0	0	0	0	200	1588	312	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	1	1	0	0	135	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2300
67	*Larus audouinii*	Audouin's Gull	0	0	0	0	0	0	119	0	2	0	0	0	0	0	0	1	0	0	0	0	0	0	6	0	6	0	1	0	205	0	0	2	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	362
68	*Larus fuscus*	Lesser Black-backed Gull	20	0	20	6	0	0	350	95	177	0	0	0	0	0	0	2	0	0	0	0	0	0	45	0	5	0	22	10	3	10	670	8	30	0	0	2	38	0	0	53	166	0	0	2	0	0	0	0	0	0	1734
69	*Larus michahellis*	Yellow-legged Gull	3	0	5	1	0	0	15	70	88	0	0	0	0	0	0	7	0	0	4	0	0	0	4	0	24	0	0	0	1	2	250	0	0	0	0	0	0	0	6	25	0	0	0	0	0	0	0	0	0	0	505
70	*Larus fuscus / Larus michahellis*	Lesser Black-backed Gull/Yellow-legged	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20
71	*Larus cachinnans*	Pontic Gull	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	94	0	30	0	480	15	60	0	0	10	0	0	0	270	34	0	0	0	0	0	0	0	0	0	993
72	*Larus cachinnans/ Larus michahellis*	Pontic/Yellow-legged Gull	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	66	0	0	0	0	0	0	50	0	0	0	0	0	0	116
73	*Larus ichthyaetus*	Pallas Gull	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	6	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
74	*Larus sp.*	Gull Sp	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30
75	*Sterna caspia*	Caspian Tern	0	0	0	0	0	0	8	6	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	44
76	*Sterna bengalensis*	Lesser Crested Tern	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
77	*Sterna sandvicensis*	Sandwich Tern	0	0	20	4	0	0	71	0	0	0	0	0	0	0	0	6	0	6	0	0	0	0	2	0	1	0	0	0	5	5	0	0	0	0	0	9	9	0	0	0	16	0	0	5	0	0	0	0	0	0	159
78	*Chlidonias hybridus*	Whiskered Tern	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	30	0	2	0	3	0	0	0	0	0	11	0	0	0	0	0	0	48
79	*Alcedo atthis*	Kingfisher	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	3
Total			27	1	559	55	2	100	1526	3098	2644	1	1	1976	33	78	255	63	6	28	2193	424	4	1084	64	35	204	2	309	111	1591	382	17869	26	3218	2285	141	4919	2173	60	184	2241	1536	538	1	783	552	153	4	2	64	27	53632

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Appendix 4: Full details of Non-Waterbird species counted

N°	Scientific name	Non -Waterbird species / Site	Sebkhet Mellita	Sebkhet Al Mangoub salinas	Rgaat	Tripoli, Bab El Bahr	Tripoli, harbour	Wadi Ghan Dam	Wadi Zaret Dam	Sebkhet Al Mangoub, salina	Coast Farwa-Ras Ajdir including Gattaya Island	Farwa Lagoon	Jeffara plain SW of S. Zolton	Sebkhet Boubesla east	Sebkhet Boubesla west	Sebkhet Boukamesh	Sebkhet Gatoufa	Sebkhet Zolton	Ain Wadi Kaam	Boukamesh Guest House	Sebkhet Al Mangoub, east	Tajoura from main road looking towards sea	Wadi Kaam dam
		Date of visit - january 2008	19	20	20	20	20	20	20	20 & 21	21	21	21	21	21	21	21	21	22	22	22	22	22
1	*Circus cyaneus*	Hen Harrier	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	*Circus aeruginosus*	Marsh Harrier	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
3	*Circus macrourus*	Pallid Harrier	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	*Circus sp*		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	*Buteo rufinus*	Long-legged Buzzard	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
6	*Pandion haliaetus*	Osprey	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	*Falco biarmicus*	Lanner Falcon	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	*Falco tinnunculus*	Kestrel	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	1	2
9	*Coturnix coturnix*	Common quail	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	*Alectoris barbara*	Barbary Partridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	*Pterocles senegallus*	Spotted Sandgrouse	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	*Columba livia*	Rock Dove	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0
13	*Streptopelia decaocto*	Collared Dove	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	*Streptopelia turtur*	Turtle Dove	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	*Streptopelia senegalensis*	Laughing Dove	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	2	1	0	0	0
16	*Athene noctua*	Little Owl	0	0	0	0	0	0	0	2	0	1	0	0	0	2	0	0	0	0	0	0	0
17	*Caprimulgus Sp*	Nightjar Sp	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	*Apus Apus/ Apus pallidus*	Common/Pallid Swift	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	*Upupa epops*	Hoopoe	0	0	1	0	0	0	0	2	0	0	0	0	0	0	0	0	1	0	0	0	1
20	*Ammomanes cincturus*	Bar-tailed Desert Lark	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	*Galerida cristata*	Crested Lark	2	0	0	0	0	0	1	0	0	10	5	0	2	4	0	4	0	0	0	0	0
22	*Alauda arvensis*	Skylark	0	0	0	0	0	0	0	24	6	5	80	0	0	110	0	0	0	0	0	0	0
23	*Calandrella rufescens*	Lesser Short-toed Lark	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	*Hirundo rustica*	Swallow	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	*Ptyonoprogne rupestris*	Crag Martin	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	*Hirundo fuligula*	Rock Martin	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	*Delichon urbica*	House Martin	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	*Anthus cervinus*	Red-throated Pipit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	*Anthus pratensis*	Meadow Pipit	0	0	0	5	0	0	0	0	0	17	0	1	0	0	1	0	20	0	0	0	0
30	*Motacilla cinerea*	Grey Wagtail	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31	*Motacilla flava*	Flava Wagtail	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
32	*Motacilla alba*	White Wagtail	0	0	0	1	0	0	0	1	1	0	5	0	0	0	0	0	0	0	0	0	0
33	*Erithacus rubecula*	Robin	0	0	1	0	0	0	0	0	0	0	1	0	4	2	0	0	10	2	0	0	0
34	*Phoenicurus moussieri*	Moussier's Redstart	0	0	0	0	0	0	0	0	0	2	0	0	0	4	0	0	0	0	0	0	0
35	*Phoenicurus ochruros*	Black Redstart	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
36	*Oenanthe moesta*	Red-rumped Wheatear	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
37	*Oenanthe deserti*	Desert Wheatear	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
38	*Oenanthe leucura*	Black Wheatear	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	5
39	*Oenanthe leucopyga*	White-crowned Wheatear	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
40	*Saxicola torquata*	Stonechat	0	1	2	0	0	0	0	0	0	4	0	0	2	2	0	0	6	2	0	0	3
41	*Monticola solitarius*	Blue Rock Thrush	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
42	*Turdus merula*	Blackbird	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
43	*Turdus philomelos*	Song Thrush	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
44	*Cisticola juncidis*	Fan-tailed Warbler	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0
45	*Acrocephalus scirpaceus*	Reed Warbler	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0
46	*Sylvia melanocephala*	Sardinian Warbler	0	0	0	0	0	0	0	0	0	6	0	0	4	0	0	0	5	0	0	0	0
47	*Sylvia atricapilla*	Blackcap	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0
48	*Scotocerca inquieta*	Scrub Warbler	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
49	*Phylloscopus collybita*	Chiffchaff	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	15	0	0	0	0
50	*Turdoides fulvus*	Fulvous Babbler	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
51	*Alaemon alaudipes*	Hoopoe Lark	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
52	*Lanius meridionalis*	Southern Grey Shrike	0	0	0	0	1	0	0	0	0	2	3	0	1	0	0	0	2	0	0	0	3
53	*Corvus ruficollus*	Brown-necked Raven	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
54	*Sturnus vulgaris*	Common Starling	0	0	50	0	0	0	0	0	0	0	0	0	0	19	0	0	0	0	0	0	475
55	*Passer domesticus*	House Sparrow	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
56	*Passer hispanoliensis*	Spanish Sparrow	0	0	30	25	0	0	0	0	0	55	0	0	50	0	0	0	0	0	0	0	0
57	*Acanthis cannabina*	Linnet	0	0	1	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0
58	*Bucanetes githagneus*	Trumpeter Finch	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
59	*Serinus serinus*	Serin	0	0	3	0	0	0	0	0	0	0	0	0	0	7	0	0	3	5	0	0	0
60	*Carduelis carduelis*	Goldfinch	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61	*Carduelis chloris*	Greenfinch	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
62	*Emberizs striolata*	House Bunting	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
63	*Emberiza schoeniclus*	Reed Bunting	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0
64	*Milaria calandra*	Corn Bunting	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total		3	1	92	34	2	1	2	29	9	109	94	1	63	154	1	6	97	11	0	1	490

N°	Scientific name	Taourgha Springs	Kasr Ahmed centre	Sebkhet Kasr Ahmed	Misrata town centre	Wadi Mrah	Al Hishah	Gbeba	Sebkhet Hassila	Sebkhet Sultan + Seb. El Amra	Chott el Bedin	Sebkhet Nakhil	Gamines + Jarrothe	Hotel Amal Ifriquia Ajedabia	Essebre beach	Sebkhet Fairouz	Sebkhet Ganfouda	Kerkoura	Sebkhet Garyounes I	El Thama	Jeliana	Garyounes hotel
	Date of visit - january 2008	23	23	23	23	24	24	24	24	24	25	25	25	25	25	25	25	25	25 & 26	25 & 26	25 & 26	26
1	*Circus cyaneus*	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
2	*Circus aeruginosus*	10	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	1	0	2	0
3	*Circus macrourus*	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	*Circus sp*	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	*Buteo rufinus*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	*Pandion haliaetus*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	*Falco biarmicus*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	*Falco tinnunculus*	4	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	1	0
9	*Coturnix coturnix*	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	*Alectoris barbara*	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	*Pterocles senegallus*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	*Columba livia*	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	23	0	0	0	0
13	*Streptopelia decaocto*	0	5	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0
14	*Streptopelia turtur*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	*Streptopelia senegalensis*	5	0	0	0	0	6	0	0	0	2	0	0	0	0	4	0	3	0	0	0	0
16	*Athene noctua*	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	*Caprimulgus Sp*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	*Apus Apus/ Apus pallidus*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	*Upupa epops*	2	0	2	0	0	0	1	2	0	0	0	0	0	0	0	0	3	0	0	0	0
20	*Ammomanes cincturus*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	*Galerida cristata*	5	0	20	0	0	0	0	2	0	0	0	2	0	0	0	1	11	0	0	0	0
22	*Alauda arvensis*	0	0	360	0	0	0	0	0	300	0	0	50	0	0	0	0	10	0	0	0	0
23	*Calandrella rufescens*	1	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	8	0	0	0	0
24	*Hirundo rustica*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	5	0
25	*Ptyonoprogne rupestris*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	*Hirundo fuligula*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	*Delichon urbica*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	*Anthus cervinus*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	*Anthus pratensis*	0	0	3	0	0	3	0	0	0	0	0	1	0	0	0	0	4	0	0	10	0
30	*Motacilla cinerea*	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
31	*Motacilla flava*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
32	*Motacilla alba*	55	0	7	0	0	2	0	10	1	0	0	0	0	0	0	10	8	0	0	3	0
33	*Erithacus rubecula*	5	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
34	*Phoenicurus moussieri*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
35	*Phoenicurus ochruros*	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	1	1	0
36	*Oenanthe moesta*	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0
37	*Oenanthe deserti*	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
38	*Oenanthe leucura*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
39	*Oenanthe leucopyga*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
40	*Saxicola torquata*	4	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	1	2	0
41	*Monticola solitarius*	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0
42	*Turdus merula*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
43	*Turdus philomelos*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
44	*Cisticola juncidis*	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
45	*Acrocephalus scirpaceus*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
46	*Sylvia melanocephala*	5	0	2	0	0	3	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
47	*Sylvia atricapilla*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
48	*Scotocerca inquieta*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49	*Phylloscopus collybita*	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0
50	*Turdoides fulvus*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
51	*Alaemon alaudipes*	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0
52	*Lanius meridionalis*	0	0	3	0	0	0	0	3	4	3	0	0	0	0	0	3	2	0	0	0	0
53	*Corvus ruficollus*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
54	*Sturnus vulgaris*	50	0	3	0	0	800	0	0	0	0	0	0	0	0	0	4000	1000	0	0	0	0
55	*Passer domesticus*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	4
56	*Passer hispanoliensis*	30	0	100	0	0	200	0	50	20	0	0	0	0	0	0	50	0	0	0	0	0
57	*Acanthis cannabina*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
58	*Bucanetes githagneus*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
59	*Serinus serinus*	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
60	*Carduelis carduelis*	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
61	*Carduelis chloris*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
62	*Emberizs striolata*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
63	*Emberiza schoeniclus*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
64	*Milaria calandra*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total	188	5	527	10	1	1019	1	70	327	13	0	65	3	0	14	4064	1089	1	12	24	5

N°	Scientific name	Garyounes II	El Mgarin	Esselawi	Ain Azziana	Al Kuz	Bou Dzira	Ben Jawad	Benghazi Harbour	Acacia raddiana place	Hajara, Sebha	Road before Sebha	Sebkhet el Hammam (Houn)	Brak-Shouiref	Mechroua Bir I, Brak	Mechroua Bir II, Brak	Near Brak	Pool near Mechroua Brak	Reed-bed Brak	Sebha town	Shouiref	ErGhiat	Wadi Al Mjenin Dam	Total
	Date of visit - january 2008	26	26	26	26	26	26	27	27	28	28	28	28	29	29	29	29	29	29	29	29	30	30	
1	*Circus cyaneus*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
2	*Circus aeruginosus*	1	0	1	2	3	0	0	0	0	3	0	2	0	0	0	0	0	1	0	0	0	0	30
3	*Circus macrourus*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4	*Circus sp*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5	*Buteo rufinus*	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	3
6	*Pandion haliaetus*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7	*Falco biarmicus*	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
8	*Falco tinnunculus*	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	2	0	0	22
9	*Coturnix coturnix*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
10	*Alectoris barbara*	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
11	*Pterocles senegallus*	0	0	0	0	0	0	0	0	0	0	200	0	0	0	0	0	0	0	0	0	0	0	200
12	*Columba livia*	0	0	0	32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	66
13	*Streptopelia decaocto*	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13
14	*Streptopelia turtur*	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
15	*Streptopelia senegalensis*	0	0	3	5	10	0	0	0	0	30	0	10	0	0	20	0	0	0	0	0	0	0	103
16	*Athene noctua*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	10
17	*Caprimulgus Sp*	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
18	*Apus Apus/ Apus pallidus*	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
19	*Upupa epops*	1	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	1	19
20	*Ammomanes cincturus*	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	6
21	*Galerida cristata*	0	0	0	4	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	91
22	*Alauda arvensis*	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1045
23	*Calandrella rufescens*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19
24	*Hirundo rustica*	10	0	0	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	41
25	*Ptyonoprogne rupestris*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
26	*Hirundo fuligula*	0	0	0	0	0	0	0	0	0	100	0	3	0	0	2	0	0	5	2	0	0	0	112
27	*Delichon urbica*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
28	*Anthus cervinus*	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	6
29	*Anthus pratensis*	0	0	0	3	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	78
30	*Motacilla cinerea*	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
31	*Motacilla flava*	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	5
32	*Motacilla alba*	0	0	0	0	5	0	300	0	0	25	0	4	0	0	1	0	1	0	0	0	0	5	445
33	*Erithacus rubecula*	0	0	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	33
34	*Phoenicurus moussieri*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	7
35	*Phoenicurus ochruros*	0	0	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	13
36	*Oenanthe moesta*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
37	*Oenanthe deserti*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
38	*Oenanthe leucura*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	10
39	*Oenanthe leucopyga*	0	0	0	0	0	0	0	0	3	10	0	5	0	0	2	0	0	3	0	0	0	0	23
40	*Saxicola torquata*	0	0	0	10	10	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	1	68
41	*Monticola solitarius*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
42	*Turdus merula*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
43	*Turdus philomelos*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
44	*Cisticola juncidis*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	16
45	*Acrocephalus scirpaceus*	0	5	0	0	0	0	0	0	0	50	0	20	0	0	0	0	0	25	0	0	0	0	104
46	*Sylvia melanocephala*	0	0	0	5	9	0	0	0	1	0	0	2	0	0	3	0	1	2	0	0	0	0	50
47	*Sylvia atricapilla*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
48	*Scotocerca inquieta*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
49	*Phylloscopus collybita*	1	0	0	24	4	0	0	0	0	200	0	20	0	0	5	0	2	0	0	0	0	0	275
50	*Turdoides fulvus*	0	0	0	0	0	0	0	0	0	10	0	5	0	0	10	0	0	0	0	0	0	0	26
51	*Alaemon alaudipes*	0	0	0	0	0	0	0	0	0	0	1	0	2	0	0	0	0	0	0	0	0	0	12
52	*Lanius meridionalis*	0	2	4	9	7	0	0	0	0	0	0	3	0	0	2	0	0	0	0	0	0	0	57
53	*Corvus ruficollus*	0	0	0	0	0	0	0	0	0	0	10	0	25	0	0	20	1	0	0	0	0	0	56
54	*Sturnus vulgaris*	0	0	30	50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6477
55	*Passer domesticus*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14
56	*Passer hispanoliensis*	0	0	50	10	0	0	0	0	0	3000	0	0	0	0	20	0	0	0	0	0	0	0	3690
57	*Acanthis cannabina*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	16
58	*Bucanetes githagneus*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	4
59	*Serinus serinus*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	33
60	*Carduelis carduelis*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	10
61	*Carduelis chloris*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
62	*Emberizs striolata*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2
63	*Emberiza schoeniclus*	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
64	*Milaria calandra*	0	0	0	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12
	Total	13	7	90	175	190	0	300	0	4	3441	211	83	29	0	65	20	5	44	2	4	9	48	13378

Appendix 5 : Details of rings read

Phalacrocorax carbo

Resightings of ringed Cormorant(s) *Phalacrocorax carbo sinensis*

Ringed as chicks in Denmark. Observations from the Vorsø colony have not been included.

Ring colour: HV=White, GR=Green, RD=Red, ST=Black, BL=Blue, GU=Yellow.

Ringing data:

Colour-ring:	GR 7NN	**Colony:**	MÅGEØERNE
Metal-ring:	COPENHAGEN 2H1702	**Coordinates:**	55.35N-10.07E
Ringing date:	16-06-2005	**Sex:**	(HAN=MALE, HUN=FEMALE)

Sightings:

Date	Site	Coordinates	Province		Country	Observer
30-01-2008	BAB EL BHAR, TRIPOLI	32.54N-13.12E	TRIPOLI	LIBYA	MIKE SMART	

Platalea leucorodia :

Spatola Nero **IAB**

Platalea leucorodia **IAZX** **P0010157**

Pullus ringed on 13-04-03 at Valli di Comacchio 4440N1210E
(Comacchio, Ferrara) Italia by S. Volponi, M. Fasola

OBSERVATIONS:

Date	*Locality*	*Province details*	*Country*	*Coordinates*	*Remarks*	*Observer*
27-06-03	Valle Santa	Argenta, Ferrara	Italia			**De Faveri, Scaf, Fari, Camp**
23-07-04	Bahiret el Bibane		Tunisia	3300N1115E	group of 7 ad. And 2 juv.	**H. Azafzaf**
09-01-05	Benghazi Lagoon	Benghazi	Libia	3205N2003E		**Etayeb, Azafzaf, Dlensi, Smart**
09-08-05	ex-risaie Bentivoglio (Mezzacasa)	Bentivoglio, Bologna	Italia	4439N1125E	gruppo di 54 a riposo - ore 14	**L.Golinucci**
26-01-06	Benghazi Lagoon	Benghazi	Libia	3205N2003E	flock of 10	**K. Etayeb, M. Moussa, M. Smart**
28-01-06	Sebkhet El Thama	Benghazi	Libia	3209N2006E	roost of 25	**M. Smart**
16-06-06	Valli di Comacchio - ex Valle Mezzano	Comacchio, Ferrara	Italia	4437N1208E	coop Bellini	**M. Bonora, C. Zini**
13-05-07	Valli di Comacchio - Valle Umana	Argenta, Ferrara	Italia		foto	**R. Sauli**
20-05-07	Valli di Comacchio - ex Valle Mezzano	Comacchio, Ferrara	Italia	4437N1208E	NEI RIPRISTINI	**P. Vacilotto**
26-01-08	Sebkhet El Thama	Benghazi	Libia	3209N2006E	flock of 14	**M. Smart, A. Saied**

Phoenicopterus roseus:

Sens de lecture de haut en bas

HISTORIQUE DE VIE - observations envoyées par Hichem AZAFZAF (observations faites par Hichem AZAFZAF et Almokhtar SAIED)

Flamant rose bagué le 28.07.1999 (poussin) , Etg. du Fangassier - Bouches-du-Rhone - FRANCE (N43°25'40", E04°37'44")

Bague plastique : DFHL en Noir sur fond Jaune. Bague Métal : P9857
Sexe determiné à partir de tests génétiques : Femelle

Date	Bague	Sexe	Lieu d'observation	Comportement / Statut	Commentaires	Observateur(s)	Kms
01.12.2000	DFHL		Jerba, Baie de Guellala - Medenine - TUNISIE (N33°44'29", E10°49'27")			Martin ZIMMERLI	1201
21.01.2002	DFHL		Jerba, Baie de Guellala - Medenine - TUNISIE (N33°44'29", E10°49'27")			Pascal RAEVEL et Camille DUPONCHEEL	1201
22.01.2002	DFHL		Jerba, Baie de Guellala - Medenine - TUNISIE (N33°44'29", E10°49'27")			Pascal RAEVEL et Camille DUPONCHEEL	1201
04.09.2004	DFHL↓		Etg. de Gines - Pont de Gau - Bouches-du-Rhone - FRANCE (N43°29'10", E04°25'15")			Cyril VILAR	2416
23.01.2006	DFHL↓		Birket Um al Azz, Taourgha Springs - LIBYE (N31°59'19", E15°11'53")		In group of 156 birds, all checked for rings	Hichem AZAFZAF et Almokhtar SAIED	4002

Sens de lecture de bas en haut

HISTORIQUE DE VIE - observations envoyées par Hichem AZAFZAF (observations faites par Hichem AZAFZAF et Almokhtar SAIED)

Flamant rose bagué le 18.07.2001 (poussin) , Etg. du Fangassier - Bouches-du-Rhone - FRANCE (N43°25'40", E04°37'44")

Bague plastique : DZFV en Noir sur fond Jaune. Bague Métal : X1576
Sexe determiné à partir de tests génétiques : Mâle probable

Date	Bague	Sexe	Lieu d'observation	Comportement / Statut	Commentaires	Observateur(s)	Kms
20.07.2004	DZFV↑		Salines de Thyna - Sfax - TUNISIE (N34°38'00", E10°43'00")			Med Ali CHOKRI	1106
23.01.2006	DZFV↑		Ain Al Hishah - Baladiyat Misratah - LIBYE (N31°36'55", E15°16'11")		143 ind. (all checked)	Hichem AZAFZAF et Ibrahim TABOUNI	1645
07.05.2006	DZFV↑		Salines de Thyna - Sfax - TUNISIE (N34°38'00", E10°43'00")		Yellow ring. About 2000 ind.	Mike SMART et Hichem AZAFZAF	2182
23.01.2006	DZFV↑		Birket Um al Azz, Taourgha Springs - LIBYE (N31°59'19", E15°11'53")		In group of 156 birds, all checked for rings	Hichem AZAFZAF et Almokhtar SAIED	2691

Sens de lecture de bas en haut

HISTORIQUE DE VIE - observations envoyées par Habib DLENSI (observations faites par Habib DLENSI et Essam BOURASS)

Flamant rose bagué le 26.07.2006 (poussin) , Etg. du Fangassier - Bouches-du-Rhone - FRANCE (N43°25'40", E04°37'44")

Bague plastique : FXDP en Noir sur fond Blanc. Bague Métal : X4572
Sexe inconnu

Date	Bague	Sexe	Lieu d'observation	Comportement / Statut	Commentaires	Observateur(s)	Kms
09.02.2007	FXDP↑		Sebkhet Al Thama - Baladiyat Benghazi - LIBYE (N30°09'00", E20°06'00")			Ali Abdallah SWALIM et Pierre DEFOS du RAU	2009
26.01.2008	FXDP↑		Ain Azziana - Baladiyat Benghazi - LIBYE (N32°12'00", E20°09'00")			Habib DLENSI et Essam BOURASS	2237

Sens de lecture de haut en bas

HISTORIQUE DE VIE - observations envoyées par Habib DLENSI (observations faites par Habib DLENSI et Hichem AZAFZAF)

Flamant rose bagué le 27.07.2005 (poussin) , Etg. du Fangassier - Bouches-du-Rhone - FRANCE (N43°25'40", E04°37'44")

Bague plastique : FTHJ en Noir sur fond Blanc. Bague Métal : X4140
Sexe inconnu

Date	Bague	Sexe	Lieu d'observation	Comportement / Statut	Commentaires	Observateur(s)	Kms
02.08.2006	FTHJ ↓		Benghazi Lagoon, Sebkhet Jellana - LIBYE (N32°05'00", E20°03'00")		A total of 70 flamingos was recorded. Read with Hichem AZFZAF	Khaled S. ETAYEB et Abdulmaula A. HAMZA	1843
09.02.2007	FTHJ ↓		Benghazi Lagoon, Sebkhet Jellana - LIBYE (N32°05'00", E20°03'00")		Group of 156 birds	Abdulmaula A. HAMZA et Hichem AZAFZAF	1843
25.01.2008	FTHJ ↓		Benghazi Lagoon, Sebkhet Jellana - LIBYE (N32°05'00", E20°03'00")			Habib DLENSI et Hichem AZAFZAF	1843

Sens de lecture de bas en haut

HISTORIQUE DE VIE - observations envoyées par Hichem AZAFZAF (observations faites par Hichem AZAFZAF et Almokhtar SAIED)

Flamant rose bagué le 29.07.2007 (poussin) , Çamaltı Tuzlası, Gediz Deltası - Izmir - TURQUIE (N38°30'34", E26°54'32")

Bague plastique : TDTN en Noir sur fond Blanc. Bague Métal : F655
Sexe inconnu

Date	Bague	Sexe	Lieu d'observation	Comportement / Statut	Commentaires	Observateur(s)	Kms
26.01.2008	F655		Benghazi Lagoon, Sebkhet Jellana - LIBYE (N32°05'00", E20°03'00")		Observed with Mike SMART, when it flew white plastic ring seen, but not read.	Hichem AZAFZAF et Almokhtar SAIED	945

Sens de lecture de bas en haut

HISTORIQUE DE VIE - observations envoyées par Hichem AZAFZAF (observations faites par Hichem AZAFZAF et Habib DLENSI)

Flamant rose bagué le 04.08.2007 (poussin) , Saline di Macchiareddu - Cagliari (Sardegna) - ITALIE (N39°13', E09°02')

Bague plastique : MVHJ en Noir sur fond Blanc. Bague Métal : E0010112
Sexe non identifié

Date	Bague	Sexe	Lieu d'observation	Comportement	Commentaires	Observateur(s)	Kms
21.06.2007	MVHJ ↑		Saline di Macchiareddu - Cagliari (Sardegna) - ITALIE (N39°13', E09°02')	A la colonie	In asilo	Sergio NISSARDI	0
25.01.2008	MVHJ ↑		Benghazi Lagoon, Sebkhet Jellana - LIBYE (N32°05'00", E20°03'00")			Hichem AZAFZAF et Habib DLENSI	1269

Sens de lecture
de bas en haut

HISTORIQUE DE VIE - observations envoyées par Hichem AZAFZAF (observations faites par Hichem AZAFZAF et Almokhtar SAIED)

Flamant rose bagué le 29.07.2006 (poussin) , Saline di Macchiareddu - Cagliari (Sardegna) - ITALIE (N39°13', E09°02')

Bague plastique : MTPZ en Noir sur fond Blanc. Bague Métal : E0009214
Sexe non identifié

Istituto Nazionale per la Fauna Selvatica

Date	Bague	Sexe	Lieu d'observation	Comportement	Commentaires	Observateur(s)	Kms
20.08.2006	MTPZ↑		Saline di Macchiareddu - Cagliari (Sardegna) - ITALIE (N39°13', E09°02')	A la colonie		Sergio NISSARDI	0
23.01.2008	MTPZ↑		Birket Um al Azz, Taourgha Springs - Baladiyat Sawfajjin - LIBYE (N31°59'19", E15°11'53")		In group of 158 birds, all checked for rings	Hichem AZAFZAF et Almokhtar SAIED	976

Sens de lecture
de haut en bas

HISTORIQUE DE VIE - observations envoyées par Hichem AZAFZAF (observations faites par Hichem AZAFZAF et Almokhtar SAIED)

Flamant rose bagué le 04.08.2007 (poussin) , Saline di Macchiareddu - Cagliari (Sardegna) - ITALIE (N39°13', E09°02')

Bague plastique : MVCT en Noir sur fond Blanc. Bague Métal : E0010073
Sexe non identifié

Istituto Nazionale per la Fauna Selvatica

Date	Bague	Sexe	Lieu d'observation	Comportement	Commentaires	Observateur(s)	Kms
21.08.2007	MVCT↓		Saline di Macchiareddu - Cagliari (Sardegna) - ITALIE (N39°13', E09°02')	A la colonie	In asilo	Sergio NISSARDI	0
29.08.2007	MVCT↓		Saline di Macchiareddu - Cagliari (Sardegna) - ITALIE (N39°13', E09°02')	A la colonie	In asilo	Sergio NISSARDI	0
16.11.2007	MVCT↓		Sebkhet Sejoumi - Tunis - TUNISIE (N36°46', E10°09')		Juvenile plumage	Mike SMART	289
23.01.2008	MVCT↓		Birket Um al Azz, Taourgha Springs - Baladiyat Sawfajjin - LIBYE (N31°59'19", E15°11'53")		In group of 158 birds, all checked for rings	Hichem AZAFZAF et Almokhtar SAIED	992

Sens de lecture
non renseigné

HISTORIQUE DE VIE - observations envoyées par Hichem AZAFZAF (observations faites par Hichem AZAFZAF et Almokhtar SAIED)

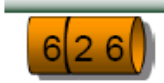
Flamant rose bagué le 15.07.2000 (poussin) , Laguna de Fuente de Piedra - Malaga - ESPAGNE (N37°06'31", W04°46'20")

Bague plastique : 0|VIL en Noir sur fond Blanc. Bague Métal : 10-08286
Sexe inconnu

CSIC

JUNTA DE ANDALUCIA
Consejería de Medio Ambiente

Date	Bague	Sexe	Lieu d'observation	Comportement	Commentaires	Observateur(s)	Kms
02.02.2002	0|VIL		Saline di Trapani - Trapani (Sicilia) - ITALIE (N38°00', E12°31')			Renzo IENTILE	1522
16.04.2002	0|VIL		Saline di Trapani - Trapani (Sicilia) - ITALIE (N38°00', E12°31')			Renzo IENTILE	1522
10.06.2002	0|VIL		Saline di Trapani - Trapani (Sicilia) - ITALIE (N38°00', E12°31')	A la colonie		Francesco CIULLA	1522
27.06.2002	0|VIL		Saline di Trapani - Trapani (Sicilia) - ITALIE (N38°00', E12°31')			Renzo IENTILE	1522
07.01.2003	0|VIL		Saline di Trapani - Trapani (Sicilia) - ITALIE (N38°00', E12°31')			Renzo IENTILE	1522
21.06.2003	0|VIL ↓		Lagune de Korba - Nabeul - TUNISIE (N36°41'00", E10°56'00")			Mike SMART	1725
04.12.2004	0|VIL ↓		Pantano di Vendicari - Siracusa (Sicilia) - ITALIE (N36°48', E15°06')			Renzo IENTILE	2095
25.07.2005	0|VIL		Garaa Ezzemoul (Sebkhet Ez Zemoul) - W. Oum el Bouaghi - ALGÉRIE (N35°53'57", E06°33'35")	Reproducteur probable	Incubating/lecture rapide	Boudjéma SAMRAOUI et Mouloud BOULEKHSSAÏM	2865
15.03.2006	0|VIL ↓	M	Laguna de Fuente de Piedra - Malaga - ESPAGNE (N37°06'31", W04°46'20")	Sans précision		Araceli GARRIDO AGUILERA	3865
27.04.2006	0|VIL ↓	F	Laguna de Fuente de Piedra - Malaga - ESPAGNE (N37°06'31", W04°46'20")			Juan Aguilar AMAT	3865
26.06.2007	0|VIL ↓		Bazer Sakra - W. Setif - ALGÉRIE (N36°07'00", E04°43'00")		foraging	Mouloud BOULEKHSSAÏM	4737
23.01.2008	0|VIL ↓		Birket Um al Azz - Taourgha Springs - LIBYE (N32°00'00", E15°19'00")		In group of 158 birds, all checked for rings	Hichem AZAFZAF et Almokhtar SAIED	5812
24.01.2008	0|VIL ↓		Ain Al Hishah - Baladiyat Misratah - LIBYE (N31°38'55", E15°16'11")		In group of 51 birds, practically all adults, no others ringed	Hichem AZAFZAF et Essam BOURASS	5852



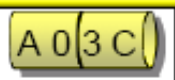
Sens de lecture
non renseigné

HISTORIQUE DE VIE - observations envoyées par Hichem AZAFZAF (observations faites par Hichem AZAFZAF et Almokhtar SAIED)

Flamant rose bagué le 10.08.1996 (poussin) , Laguna de Fuente de Piedra - Malaga - ESPAGNE (N37°06'31", W04°46'20")

Bague plastique : 6|26 en Noir sur fond Orange. Bague Métal : 9-024281
Sexe estimé a partir des observations : Femelle

Date	Bague	Sexe	Lieu d'observation	Comportement	Commentaires	Observateur(s)	Kms
26.07.1999	6|26		Sebkhet Sejoumi - Tunis - TUNISIE (N36°46', E10°09')			Mike SMART	1323
02.06.1999	6|26		Sebkhet Sejoumi - Tunis - TUNISIE (N36°46', E10°09')			Mike SMART	1323
28.05.2002	6|26 ↑		Punta de la Banya, PNDE - Tarragona - ESPAGNE (N40°34'44", E00°40'47")			Alan R. JOHNSON	2246
29.05.2002	6|26 ↑		Punta de la Banya, PNDE - Tarragona - ESPAGNE (N40°34'44", E00°40'47")			Alan R. JOHNSON	2246
31.05.2002	6|26 ↑		Punta de la Banya, PNDE - Tarragona - ESPAGNE (N40°34'44", E00°40'47")			Alan R. JOHNSON	2246
09.05.2004	6|26 ↑	F	Çamaltı Tuzlası, Gediz Deltası - Izmir - TURQUIE (N38°30'34", E26°54'32")	A la colonie	Feeding	Özge BALKIZ	4494
10.05.2004	6|26 ↑		Çamaltı Tuzlası, Gediz Deltası - Izmir - TURQUIE (N38°30'34", E26°54'32")	A la colonie	Standing	Özge BALKIZ	4494
23.01.2006	6|26 ↑		Ain Al Hishah - Baladiyat Misratah - LIBYE (N31°38'55", E15°16'11")		143 ind. (all checked)	Hichem AZAFZAF et Ibrahim TABOUNI	5795
25.01.2006	6|26 ↑		Sebkhet Ras Lanouf - Baladiyat Ajdabiya - LIBYE (N30°23'25", E18°39'48")		RINGS READ IN A GROUP OF 13.	Hichem AZAFZAF et Mokhtar MOUSSA AMOUR	6147
13.06.2006	6|26 ↑		Garaa Ezzemoul (Sebkhet Ez Zemoul) - W. Oum el Bouaghi - ALGÉRIE (N35°53'57", E06°33'35")	Reproducteur probable	nesting	Boudjéma SAMRAOUI et Moussa HOUHAMDI	7426
29.06.2006	6|26 ↑		Garaa Ezzemoul (Sebkhet Ez Zemoul) - W. Oum el Bouaghi - ALGÉRIE (N35°53'57", E06°33'35")	Reproducteur probable	with chick	Riad NEDJAH et Mouloud BOULEKHSSAÏM	7426
05.07.2006	6|26 ↑		Garaa Ezzemoul (Sebkhet Ez Zemoul) - W. Oum el Bouaghi - ALGÉRIE (N35°53'57", E06°33'35")	Reproducteur probable	Inc.	Mouloud BOULEKHSSAÏM et Tayeb BENSACI	7426
23.01.2008	6|26 ↑		Birket Um al Azz - Taourgha Springs - LIBYE (N32°00'00", E15°19'00")		In group of 158 birds, all checked for rings	Hichem AZAFZAF et Almokhtar SAIED	8341



Sens de lecture
de bas en haut

HISTORIQUE DE VIE - observations envoyées par Hichem AZAFZAF (observations faites par Hichem AZAFZAF et Almokhtar SAIED)

Flamant rose bagué le 11.08.2006 (poussin) , Garaa Ezzemoul (Sebkhet Ez Zemoul) - W. Oum el Bouaghi - ALGÉRIE (N35°53'57", E06°33'35")

Bague plastique : A0|3C en Noir sur fond Jaune clair. Pas de bague Métal
Sexe inconnu

Date	Bague	Sexe	Lieu d'observation	Comportement / Statut	Commentaires	Observateur(s)	Kms
23.01.2008	A0|3C↑		Birket Um al Azz, Taourgha Springs - LIBYE (N31°59'19", E15°11'53")		In group of 158 birds, all checked for rings	Hichem AZAFZAF et Almokhtar SAIED	906

Sens de lecture de haut en bas

HISTORIQUE DE VIE - observations envoyées par Almokhtar SAIED (observations faites par Almokhtar SAIED et Hichem AZAFZAF)

Flamant rose bagué le 01.07.2007 (poussin) , Punta de la Banya, PNDE - Tarragona - ESPAGNE (N40°34'44", E00°40'47")

Bague plastique : X|937 en noir sur fond blanc. Bague Métal : 1015367
Sexe inconnu

Parc Natural del Delta de l'Ebre

Date	Bague	Sexe	Lieu d'observation	Comportement / Statut	Commentaires	Observateur(s)	Kms
23.01.2008	X|937 ↓		Birket Um al Azz, Tacurgha Springs - LIBYE (N31°59'10", E15°11'53")		In group of 158 birds, all checked for rings	Almokhtar SAIED et Hichem AZAFZAF	1608

Sens de lecture de haut en bas

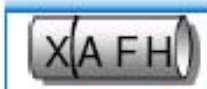
HISTORIQUE DE VIE - observations envoyées par Hichem AZAFZAF (observations faites par Hichem AZAFZAF et Almokhtar SAIED)

Flamant rose bagué le 01.07.2007 (poussin) , Punta de la Banya, PNDE - Tarragona - ESPAGNE (N40°34'44", E00°40'47")

Bague plastique : X|ATD en noir sur fond blanc. Bague Métal : 1016628
Sexe inconnu

Parc Natural del Delta de l'Ebre

Date	Bague	Sexe	Lieu d'observation	Comportement / Statut	Commentaires	Observateur(s)	Kms
16.11.2007	X|ATD|		Sebkhet Sejoumi - Tunis - TUNISIE (N36°46', E10°09')		Juvenile plumage	Mike SMART	923
23.01.2008	X|ATD|		Birket Um al Azz, Tacurgha Springs - LIBYE (N31°59'10", E15°11'53")		In group of 158 birds, all checked for rings	Hichem AZAFZAF et Almokhtar SAIED	1626



Sens de lecture de haut en bas

HISTORIQUE DE VIE - observations envoyées par Hichem AZAFZAF (observations faites par Hichem AZAFZAF et Habib DLENSI)

Flamant rose bagué le 01.07.2007 (poussin) , Punta de la Banya, PNDE - Tarragona - ESPAGNE (N40°34'44", E00°40'47")

Bague plastique : X|AFH en noir sur fond blanc. Bague Métal : 1018530
Sexe inconnu

Parc Natural del Delta de l'Ebre

Date	Bague	Sexe	Lieu d'observation	Comportement / Statut	Commentaires	Observateur(s)	Kms
25.01.2008	X|AFH|		Benghazi Lagoon, Sebkhet Jeliana - LIBYE (N32°05'00", E20°03'00")			Hichem AZAFZAF et Habib DLENSI	1966

Larus fuscus:

Printed: zaterdag 2 februari 2008

Ringing data

Arnhem .5420037 R - BJ Kleine Mantelmeeuw Larus fuscus

Age & sexe : > 4 cy male
Ringing date : 2-5-2007
Ringing place : Moerdijk (Tetra Pak), Noord-Brabant, NL 5141.00 N 436.00 E
Ringer : Roland-Jan Buijs
Remarks :

Recoveries

Date	Recovery site					Remarks	Observer
5-6-2007	Breda-Noord (Wuiloverslag), Noord-Brabant, NL	5.136,00	N	446,00	E	colourring read	Roland-Jan Buijs
21-1-2008	Sebkhet Al Mangoub (Salinas), Zuwara, LIBIE	3.254,00	N	1.207,00	E	colourring read	Hichem Azafzaf

Roland-Jan Buijs, Philips van Dorpstraat 49, 4698 RV Oud-Vossemeer, The Netherlands

HELLENIC BIRD RINGING CENTRE

Recovery of Ringed Bird

Ring:	Athens (GRA) P...001197
Species:	*Larus audouinii*
	Audouin's Gull
Sex:	Unknown
Age at ringing	Pullus (in or near nest)

Additional marks:
Red colour ring JD4 on right leg, metal ring on left leg

RINGING DETAILS

Date:	23 June 1998 Exact date
Place:	[confidential], South-East Aegean, Aegean Isl., Greece 36°40'00" N 027°20'00" E ±100 km
Ringer:	V. Goutner
Notes:	Ring put on bird by S. Papoulia.
Our Ref.:	08/001

EURING Code 2000: GRAA0P...00119701BB0588005880N0ZUUU01U00990230619980----GR80+364000+027200050990400000000000000

FINDING DETAILS

Date:	20 January 2008 Exact date
Place:	Sebkhet Al Mangoub west, Libya 32°54'00" N 012°09'00" E
Condition:	Alive and probably healthy, released after capture
Circumstances:	Bird identified from coloured or numbered leg-ring(s).
Finder:	Hichem Azafzaf
Reporter:	D. Portolou, N. Bacetti, M. Smart
Notes:	In adult plumage. Finder's Tel: 216 71 701 664 / 00216 98 207 238; Address: 11, rue Abou el alla el maari, Cité El houda, 2080 Ariana, Tunisia (azafzaf@gnet.tn)
Our Ref.:	08/001

EURING Code 2000: GRAA0P...00119704BC2499905880N0ZUUU01U00990200120080----LT00+325400+012090007810401447258034 98

Distance: 1447 km Direction*: 258° Elapsed Time: 3498 days (9 years 6 months 28 days)

**Direction is for departure from ringing site*

06-Feb-08

Istituto Nazionale per la Fauna Selvatica

Ozzano dell'Emilia, 26/06/2008

We are glad to report the recovery of a ringed bird.
Here below you will find all ringing and recovery details.

Identification

metal ring:	IAB U....65377
other marks:	coloured leg ring; added; inscription:LV; ground colour:blue; inscription colour:--; position:bottom left; reading direction:downwards
species:	Sandwich Tern, *Sterna sandvicensis* (Latham, 1787) [06110]
taxonomy:	*Sternidae, Charadriiformes*

Ringing

	Ringer: Talamelli Adriano
date (dd.mm.yyyy):	27.03.2007 (Accurate to the day) time: 20
sex:	U - unknown
age:	(6) - after 2nd year: full-grown bird hatched before last calendar year; year of birth unknown
place:	Salina Di Comacchio - Comacchio (Ferrara - Italy) [IA32]
coordinates:	lat.: 44° 39' 44,6'' N (44,66) lon.: 12° 11' 54,38'' E (12,2) (Accurate to the given co-ordinates)
morphometrics:	Max chord=306 mm; Weight=236 g; Tarsus=26,5 mm; Bill=59,7 mm; Bill method= Tip to feathers;

Recovery

	Finder: Talamelli Adriano
date (dd.mm.yyyy):	08.04.2008 (Accurate to the day) time:
sex:	U - unknown
age:	(0) - age unknown, i.e. not recorded
other marks:	coloured leg ring; already present; inscription:LV; ground colour:blue; inscription colour:--;
place:	Cesenatico - Cesenatico (Forlì E Cesena - Italy) [IA33]
coordinates:	lat.: 44° 11' 44,74'' N (44,2) lon.: 12° 24' 31,79'' E (12,41) (Accurate to the given co-ordinates)
morphometrics:	
condition:	(8) Alive and probably healthy and released by a ringer.
circumstances:	(81) Bird identified from coloured or numbered legring(s).

Derived data:

distance from ringing place: 54,51 km
direction from ringing place: 162,08 °
elapsed time from ringing: 378 days
i.e. 13 days, 0 months, 1 years

EURING code:

IABA0U....6537704BC0611006110H0--UU00U-----080420080----IA33+441136+012244608810400054162003 78

Best regards,

EPE
Euring Protocol Engine
mailto: recoveries@infs-epe.it
website: www.infs-epe.it

Italian Ringing Centre
Istituto Nazionale per la Fauna Selvatica
Via Ca' Fornacetta, 9
I-40064 - Ozzano dell'Emilia (BO)

Recovery 1

Finder: Basso Marco

sex: U - unknown age: 0 date: 18.6.2007 (Accurate to the day) time:

Other marks: coloured leg ring; already present; inscription:LV; ground colour:blue; inscription colour:--; reading direction:downwards

place: Barena Ca Manzo - Chioggia (Venezia - Italy) [IA39]

coordinates: lat.: 45° 14' 21,91'' N (45,24) N lon.: 12° 14' 13,27'' E (12,24)
(Accurate to the given co-ordinates)

morphometrics:

conditions: 8 circumstances: 81

distance from previous encounter: 64,23 km

elapsed time from previous encounter: 83 days

direction from previous encounter: 2,7 °

i.e. 23 days, 2 month, 0 years

IABA0U....6537704BC0611006110H0--UU00U-----180620070----IA39+451434+012141908810400064002000 83

Recovery 2

Finder: Azafzaf Hichem

sex: U - unknown age: 0 date: 25.1.2008 (Accurate to the day) time:

Other marks: coloured leg ring; already present; inscription:LV; ground colour:blue; inscription colour:--;

place: Sebkhet Fairouz - (Libya - Libya) [LT00]

coordinates: lat.: 32° 2' 0'' N (32,03) N lon.: 20° 1' 0'' E (20,02)
(Accurate to the given co-ordinates)

morphometrics:

conditions: 7 circumstances: 81

distance from previous encounter: 1614,54 km

elapsed time from previous encounter: 221 days

direction from previous encounter: 152,76 °

i.e. 11 days, 7 month, 0 years

IABA0U....6537704BC0611006110H0--UU00U-----250120080----LT00+320160+020006007810401559151003 04

Recovery 3

Finder: Talamelli Adriano

sex: U - unknown age: 0 date: 8.4.2008 (Accurate to the day) time:

Other marks: coloured leg ring; already present; inscription:LV; ground colour:blue; inscription colour:--;

place: Cesenatico - Cesenatico (Forlì E Cesena - Italy) [IA33]

coordinates: lat.: 44° 11' 44,74'' N (44,2) N lon.: 12° 24' 31,79'' E (12,41)
(Accurate to the given co-ordinates)

morphometrics:

conditions: 8 circumstances: 81

distance from previous encounter: 1505,65 km

elapsed time from previous encounter: 74 days

direction from previous encounter: 336,08 °

i.e. 14 days, 2 month, 0 years

IABA0U....6537704BC0611006110H0--UU00U-----080420080----IA33+441136+012244608810400054162003 78

Final derived data:

overall distance covered: 3184,42 km

elapsed time from ringing: 378 days

direction from ringing place: 162,08 °

i.e. 13 days, 0 months, 1 years

Appendix 6: Ramsar criteria for identifying wetlands of international importance

Group A of the Criteria. Sites containing representative, rare or unique wetland types

Criterion 1: A wetland should be considered internationally important if it contains a representative, rare, or unique example of a natural or near-natural wetland type found within the appropriate biogeographic region.

Group B of the Criteria. Sites of international importance for conserving biological diversity

Criteria based on species and ecological communities

Criterion 2: A wetland should be considered internationally important if it supports vulnerable, endangered, or critically endangered species or threatened ecological communities.

Criterion 3: A wetland should be considered internationally important if it supports populations of plant and/or animal species important for maintaining the biological diversity of a particular biogeographic region.

Criterion 4: A wetland should be considered internationally important if it supports plant and/or animal species at a critical stage in their life cycles, or provides refuge during adverse conditions.

Specific criteria based on waterbirds

Criterion 5: A wetland should be considered internationally important if it regularly supports 20,000 or more waterbirds.

Criterion 6: A wetland should be considered internationally important if it regularly supports 1% of the individuals in a population of one species or subspecies of waterbird.

Specific criteria based on fish

Criterion 7: A wetland should be considered internationally important if it supports a significant proportion of indigenous fish subspecies, species or families, life-history stages, species interactions and/or populations that are representative of wetland benefits and/or values and thereby contributes to global biological diversity.

Criterion 8: A wetland should be considered internationally important if it is an important source of food for fishes, spawning ground, nursery and/or migration path on which fish stocks, either within the wetland or elsewhere, depend.

Specific criteria based on other taxa

Criterion 9: A wetland should be considered internationally important if it regularly supports 1% of the individuals in a population of one species or subspecies of wetland-dependent non-avian animal species.

Appendix 7: Bibliography

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