

SANDGROUSE

VOLUME 31(1) 2009



ORNITHOLOGICAL SOCIETY OF THE MIDDLE EAST
THE CAUCASUS AND CENTRAL ASIA



ORNITHOLOGICAL SOCIETY OF THE MIDDLE EAST THE CAUCASUS AND CENTRAL ASIA

OSME was founded in 1978 as the successor to the Ornithological Society of Turkey. Its primary aims are:

- To collect, collate and publish data on all aspects of the birds of the Middle East, the Caucasus and Central Asia.
- To promote an interest in ornithology and bird conservation throughout the Middle East, the Caucasus and Central Asia.
- To develop productive working relationships with governmental and non-governmental organizations with an interest in conservation and/or natural history in the region.

PUBLICATIONS

OSME publishes a scientific journal, *Sandgrouse*, containing papers, news and features on the ornithology of the OSME region.

MEETINGS

An Annual General Meeting is held at which guest speakers provide new perspectives on ornithology in the region.

PROJECTS

The Conservation & Research Committee grants funds to valuable projects that further knowledge and conservation of birds in the region. Priority is given to projects involving nationals from the OSME region.

MEMBERSHIP

OSME is open to all. For details of membership, subscription fees and how to join see www.osme.org.

MEBIRDNET

This is a discussion and information group moderated by OSME. To join see www.osme.org.

POSTAL ADDRESS

OSME c/o The Lodge, Sandy, Bedfordshire
SG19 2DL, UK.

VICE PRESIDENTS (AS AT FEBRUARY 2009)

Ali Adhami Mirhosseyni
Dan Alon
Ali bin Amer Al-Kiyumi
Imad Atrash
Akram Eissa Darwish
Sherif Baha El Din
Ramaz Gokhelashvili
Ghassan Ramadan Jaradi
Mona Ramadan Jaradi
Sergey Sklyarenko

COUNCIL (AS AT FEBRUARY 2009)

Michael Blair
Richard Bonser
Ian Harrison • *Secretary*
secretary@osme.org
Sharif Al Jbour
Guy Kirwan
Chris Lamsdell • *Advertising*
ads@osme.org
Richard Prior • *Publicity*
publicity@osme.org
Colin Richardson
Effie Warr • *Sales & Distribution (co-opted)*
sales@osme.org
John Warr • *Treasurer & Membership (co-opted)*
treasurer@osme.org
Geoff Welch
• *Chairman* chairman@osme.org
• *Conservation & Research* crf@osme.org

OSME CORPORATE MEMBERS

Avifauna
Greentours
NHBS
Rockjumper Birding Tours
Sarus Bird Tours
Sunbird

Registered charity no 282938

©2009 Ornithological Society of the
Middle East, the Caucasus and Central Asia.

www.osme.org



SANDGROUSE

VOLUME 31 (1) 2009

- 2 Preliminary comments on skua *Stercorarius* reports from Armenia. VASIL ANANIAN
- 6 Observations on the cooling behaviour, and associated habitat, of four desert lark species (Alaudidae) in two areas of Kuwait. GARY BROWN
- 15 Unexpectedly large number of Sociable Lapwings *Vanellus gregarius* on autumn migration in Turkey and some remarks on the stopover site. MURAT BIRICK
- 18 On the status and distribution of Thrush Nightingale *Luscinia luscinia* and Common Nightingale *L. megarhynchos* in Armenia. VASIL ANANIAN
- 24 First breeding record of Caspian Tern *Hydroprogne caspia* in Israel. NOAM WEISS, MIKOLAJ KOSS & REUVEN YOSEF
- 26 The timing of spring passage of soaring birds at Zait bay, Egypt. GUDRUN HILGERLOH, JAN WEINBECKER & INGO WEISS
- 36 Use of nest baskets by Long-eared Owls *Asio otus* in Israel. MOTTI CHARTER, YOSSI LESHEM & SHAY HALEVI
- 38 The first Collared Kingfisher *Todiramphus chloris* in Yemen. DAVID B STANTON
- 40 Food-dunking behaviour by a Eurasian Jay *Garrulus glandarius*. DONALD C DEARBORN & ANDREA B GAGER
- 42 First record of Masked Shrike *Lanius nubicus* in Armenia. MARTIN ADAMIAN & FRANCIS X MOFFATT
- 44 On the distribution and ecology of the Lesser Kestrel *Falco naumanni* in Armenia. VASIL ANANIAN
- 55 First confirmed breeding record of Spur-winged Lapwing *Vanellus spinosus* for Lebanon, 2006. GHASSAN RAMADAN-JARADI & THIERRY BARA
- 57 Weight gains by re-trapped passerine migrants at an artificially vegetated site, Eastern Desert, Egypt. GUDRUN HILGERLOH & BERND RADDATZ
- 61 Status of selected migrant species in Kuwait: observations and ringing, spring 1997. NIGEL CLEERE & DAVID J KELLY
- 65 First breeding of Black-winged Stilts *Himantopus himantopus* on Socotra, Yemen. AHMED SAEED SULEIMAN
- 68 Nesting tree utilisation by Brown-necked Ravens *Corvus ruficollis* in west central Saudi Arabia. PETER CUNNINGHAM
- 73 Breeding and food habits of a pair of urban Desert Eagle Owls *Bubo ascalaphus* in Hurghada, Red Sea coast, Egypt. ISTVÁN MOLDOVÁN & ATTILA D SÁNDOR
- 79 Erratum: Schweizer M & M Mitropolskiy. 2008. The occurrence of Crested Honey Buzzard *Pernis ptilorhyncus* in Uzbekistan and Tajikistan and its status in Central Asia. *Sandgrouse* 30: 161–163.
- 80 Review.
- 81 OSME News. GEOFF WELCH
- 83 News & Information. DAWN BALMER (COMPILER)
- 91 Around the Region. DAWN BALMER & DAVID MURDOCH (COMPILERS)

Photo above: Egyptian Vulture *Neophron percnopterus* southern Israel (just north of Eilat), April. © Paul Doherty

Cover photo: Short-toed Eagle *Circaetus gallicus* northern Israel (Hula valley), October. © Lior Kislev

Preliminary comments on skua *Stercorarius* reports from Armenia

VASIL ANANIAN

This paper examines reports of skuas *Stercorarius* from Armenia, following the review by Arkhipov & Blair (2007) of the occurrence of stercorariids in the OSME region, which includes the Caucasus. In the *Handbook of the Birds of Armenia* (Adamian & Klem 1999), produced by the Birds of Armenia (BOA) Project, the authors listed all existing *Stercorarius* claims from Armenia and accepted them as valid, with five records of Pomarine *Stercorarius pomarinus*, four of Arctic *S. parasiticus* and one record of Long-tailed Skua *S. longicaudus*. There has been no record of Great Skua *S. skua*. No additional details were provided to support the claims (Table 1), except for measurements of two specimens. The claims covered the period 1958–1989 and had been originally reported in Ayrumian *et al* (1968), Adamian *et al* (1969), Ayrumian *et al* (1975) and Melikian (1996).

Inspection of the original publications and the skua measurement data in the BOA Project archives ('skua datasheets'), led me to reanalyze the reports listed by Adamian & Klem (1999). These claims are numbered 1–10 in Table 1.

THE PUBLISHED REPORTS

Claim 1 Pomarine Skua. Ayrumian *et al* (1968) mentioned 1966 as the first occurrence of Pomarine Skua in Armenia, strangely overlooking the male specimen collected in 1958 by one of the coauthors. The skua datasheets (Table 2) showed that the 1958 specimen was initially misidentified (possibly as Arctic Skua, see below), and was reidentified as Pomarine Skua by M Scott in 1995. Adamian & Klem (1999) do not mention the specimen label correction, and referred to Gambarian & Adamian (1960) which presumably contains the specimen details. I was unable to locate the latter publication, but if it contains adequate information about the Pomarine Skua of 1958, surely this would not have been omitted by Ayrumian *et al* (1968). The measurements of wing, bill and tarsus of this specimen (Table 2) fall short of the lowest values for Pomarine Skua in Cramp & Simmons (1983) and are not dissimilar to those of Arctic and Long-tailed Skua in the latter reference.

An Arctic Skua claim, not mentioned in Adamian & Klem (1999), is found in Adamian *et al* (1969) and Ayrumian *et al* (1975), and is presented as collection of a specimen on 14

Table 1. Skua *Stercorarius* records from Armenia (Adamian & Klem 1999).

Claims	Species	Date	Location	Number of birds	Specimen available
1	Pomarine Skua	14 Sep 1958	Lake Sevan	1 collected	Yes
2	Pomarine Skua	20 Nov 1965	Lake Sevan	1 collected	No ¹
3	Pomarine Skua	17 Aug 1966	Lake Sevan	1 observed	No
4	Pomarine Skua	early Oct, probably 1966	Lake Sevan	1 shot by a fisherman	No
5	Pomarine Skua	11 Oct 1966	Lake Sevan	2 observed with 1 collected	No ¹
6	Arctic Skua	7 Apr 1989	Armarsh Fish Farm	1 collected	Yes
7	Arctic Skua	12 May 1989	Armarsh Fish Farm	2 observed	No
8 & 9	Arctic Skua	27 Jan 1967	Lake Sevan	2 observed 50 km apart during boat census	No
10	Long-tailed Skua	7 May 1968	Lake Sevan	1 adult observed	No

¹ In fact, specimen exists.

Table 2. Measurements of skua *Stercorarius* specimens, held at the Institute of Zoology, Yerevan. Reproduced from BOA Project datasheets¹.

Species (Claim)	Date	Location	Age	Sex	Wing ² (mm)	Tail ³ (mm)	Bill ⁴ (mm)	Tarsus (mm)	Specimen label author(s)
Pomarine Skua (1)	14 Sep 1958	Lake Sevan	ad	male	316	199	31.0	44.0	Adamian & Scott
Pomarine Skua (2)	20 Nov 1965	Lake Sevan	ad	?	348	143	38.0	55.0	Adamian
Pomarine Skua (5)	11 Oct 1966	Lake Sevan	juv	female	366	156	37.0	54.0	Adamian
Arctic Skua (6)	7 Apr 1989	Armash Fish Farm	ad	male	320	170	30.0	45.0	Melikian & Adamian

¹ Body length, wingspan and/or weight were available for some specimens, but are omitted here.

² Maximum length, ³ Total length and ⁴ Exposed culmen.

September 1968 near Martuni at Lake Sevan. Date and location of collection (including nearest town) are identical to the data for the 1958 Pomarine Skua specimen (Claim 1). It is quite possible that the year of collection was misprinted in the 1969 paper and the error remained in the 1975 paper.

Claim 2 Pomarine Skua. Measurements are present in the skua datasheets (Table 2), but were not included in Adamian & Klem (1999). This specimen was apparently available to Ayrumian *et al* (1968), but is not mentioned there. Perhaps the bird had remained unidentified or its identity was determined as other than Pomarine Skua. The measurements of its bill and tarsus suggest it to be a Pomarine, rather than any other *Stercorarius* species (Cramp & Simmons 1983).

Claim 3 Pomarine Skua. This observation by V Hakobyan is listed in Ayrumian *et al* (1968) as the first Pomarine Skua encounter in Armenia, but it lacks supporting details. Apart from the date and location of observation, they mentioned it was immature and among perched Armenian Gulls *Larus armenicus*.

Claim 4 Pomarine Skua. Adamian & Klem (1999) were uncertain about the specific date and year for this report, but it was cited as 'early October of 1966' by Ayrumian *et al* (1968), 'September of 1966' by Ayrumian *et al* (1975), while Adamian *et al* (1969) gave 29 September 1966 for this location (Noratoos village, Lake Sevan) and presumably this occurrence. The bird was shot by fishermen and was given to staff of Sevan Hydro-Biological Station (Ayrumian *et al* 1968). None of the sources present adequate descriptive details for this bird, except that it was an immature with predominantly brownish and ashy-grey plumage with buff feather edging. No measurements or specimen are apparently available, and it is unclear whether the authors examined the bird themselves, or that the published details were verbally reported to them by the hydro-biological station staff.

Claim 5 Pomarine Skua. The birds were observed in a flock with Armenian Gulls. The immature female specimen, collected by R Rafaelyan (Ayrumian *et al* 1968), is held in the Institute of Zoology collections, Yerevan, and was re-measured during the production of Adamian & Klem (1999), but these data were omitted from the latter publication and the collector's name was omitted from the skua datasheets. Measurements of its bill and tarsus suggest it to be a Pomarine, rather than any other *Stercorarius* species (Cramp & Simmons 1983), even though all values in the skua datasheets for this individual (Table 2) are different from those of the original publication (Ayrumian *et al* 1968). The second bird from this date was mentioned by Ayrumian *et al* (1968) as being an immature without further details, but was presumably considered to be a Pomarine Skua as the collected bird was identified as such.

Claim 6 Arctic Skua. Originally published in Melikian (1996), although this work was not mentioned in Adamian & Klem (1999). All of the available measurements of this bird overlap with adult male Long-tailed Skua measurements in Cramp & Simmons (1983), except for the wing, 2mm longer than the maximum value for Long-tailed, a difference possibly due to measurement error or technique.

Claim 7 Arctic Skua. The original source (Melikian 1996) did not present number of birds observed, but Adamian & Klem (1999) mentioned "two seen". No further details of the occurrence were presented and no proof was provided that the claimed birds were Arctic Skuas.

Claims 8 & 9 Arctic Skua. These two were seen on the same day but 50 km apart, and were listed without reference to publication or observers, although "boat census" mentioned for this event probably refers to the Armenian Institute of Zoology surveys in the mid 1960s. No descriptive details were provided to prove species identity or to eliminate the slight chance of a double-counted individual.

Claim 10 Long-tailed Skua. The only report of Long-tailed Skua from Armenia, a sighting, is presented in Adamian *et al* (1969) and Ayrumian *et al* (1975), but without details on the bird's age, plumage or circumstances of observation. Adamian & Klem (1999) specified the bird's age as adult, citing Ayrumian *et al* (1975).

DISCUSSION

It is well known that field identification of skuas is far from straightforward, a difficulty compounded by size variation and plumage morphs (Beaman & Madge 1998, Arkhipov & Blair 2007). Indeed, immature skuas lack absolute diagnostic field marks and require a lot of practice for positive field identification (Mullarney *et al* 1999). These circumstances appear to be underestimated in the Armenian skua claims, and initial misidentification of at least two of the four collected specimens combined with inaccurate specimen labeling, casts reasonable doubt on the field observations described above. Reports without substantiating details should not be discarded but be treated with appropriate caution. Expert examination of the four available Armenian skua specimens seems essential.

The only other skua report from Armenia refers to the observation of a pale juvenile Pomarine Skua on 7 September 2002 by Roy Beddard, Pascal Wink and VA near Lichk village on the SE shore of Lake Sevan. On that day the bird was seen quite close (approached and flew overhead) and in good light, which allowed RB and PW to identify it easily and immediately. Both of them are well familiar with all skuas, so there were no doubts and it didn't enter our heads to write a detailed description (with hindsight, a missed opportunity indeed).

ACKNOWLEDGEMENTS

Karen Aghababyan and Levan Janoyan from BOA Project (American University of Armenia) kindly provided the skua measurements. The trip to Lake Sevan in September 2002 was organized by Mark Finn (Birdwatching Breaks). Chris Bradshaw, Mamikon Ghasabyan, Nigel Redman, Victoria Ten and Pascal Wink helped with obtaining some references.

REFERENCES

- Adamian, MS, KA Ayrumian, BO Geilikman & NA Margarian. 1969. [About some changes in ornithofauna of Armenian SSR. Theses of reports: 8–11. Academy of Sciences of Armenian SSR], Yerevan. [In Russian]
- Adamian, MS & D Klem. 1999. *Handbook of the Birds of Armenia*. American University of Armenia, Oakland, CA.
- Arkhipov, V & M Blair. 2007. Skua (*Catharacta, Stercorarius*) occurrence in the OSME Region. *Sandgrouse* 29: 183–204.

- Ayrumian, KA, MS Adamian & NA Margarian. 1968. [On the occurrence of Pomarine Skua in Armenia]. *Ornitologiya* 9: 335–336. [In Russian]
- Ayrumian, KA, BO Geilikman & NA Margarian. 1975. [The state of ornithofauna in the basin of Lake Sevan and the prospects of restoring the resources of waterbirds in Armenia. Academy of Sciences of Armenian SSR. *Zoological digest*] 16: 31–64. [In Russian]
- Beaman, M & S Madge. 1998. *The Handbook of Bird Identification for Europe and the Western Palearctic*. Helm, UK.
- Cramp, S & KEL Simmons (eds). 1983. *The birds of the Western Palearctic*. Vol 3. Oxford University Press, UK.
- Gambarian, PP & MS Adamian. 1960. [Bird Migration (review)]. *Priroda* 6: 111–112. [In Russian]
- Melikian, KA. 1996. [Peculiarities of ecology and economic value of fish-eating birds at the fish farms of the Arax Valley. Candidate's dissertation. Institute of Zoology of the Armenian Academy of Sciences], Yerevan. [In Russian]
- Mullarney, K, L Svensson, D Zetterstrom & PJ Grant. 1999. *Collins Bird Guide*. Collins, London.

Vasil Ananian, 179 Bashinjaghian Street, Apt 23, 0078, Yerevan, Armenia. vasil.ananian@gmail.com

Observations on the cooling behaviour, and associated habitat, of four desert lark species (Alaudidae) in two areas of Kuwait

GARY BROWN

INTRODUCTION

Birds that occupy hot arid environments are confronted with acute problems of energy and water balance due to extreme stress factors such as lack of surface water, intense solar radiation and high ambient air temperatures (Williams & Tieleman 2001). In response to such demands, birds thermoregulate by both physiological and behavioural means to prevent their body temperature reaching the upper lethal limit of 46–47°C (Maclean 1996). According to Williams & Tieleman (2005), an important physiological adaptation in desert lark spp is the lower rate at which they metabolize energy compared with mesic species of the same family. Behavioural responses to thermal stress and high solar radiation include avoidance strategies such as seeking shade. This may not always be quite straightforward in sparsely-vegetated desert environments. Burrows of the large herbivorous spiny-tailed lizard *Uromastix aegyptius* are used as thermal refugia, during the hottest part of the day, by various desert lark spp in the Saudi Arabian desert (Williams *et al* 1999). These authors estimated that Hoopoe Larks *Alaemon alaudipes*, in this manner, could reduce their evaporative water-loss by as much as 81%. Shobrak (1998), also in the Saudi Arabian desert, noted male Hoopoe Larks at midday either under *Acacia* bushes avoiding direct sunlight or on top of them avoiding ground level heat. In addition, he observed birds prostrate themselves, facing into the wind, for a few seconds at a time on mats of the herb *Corchorus depressus* in summer during the heat of the day. He interpreted this behaviour to be thermoregulatory, considering the foliage to be cooler than the surrounding desert substrate. Cowan & Brown (2001) reported on similar behaviour of three desert lark spp (Dunn's Lark *Eremalauda dunni* (Plate 1), Bar-tailed Lark *Ammomanes cinctura* (Plate 2) and Temminck's Lark *Eremophila bilopha* (Plate 3) in Kuwait, but sitting on the desert gourd plant *Citrullus colocynthis*. This plant is morphologically similar to *Corchorus* (which does not occur in Kuwait) in that it too grows as dense mats adpressed to the ground. Furthermore, the birds apparently remain on the *Citrullus* mats for quite long periods during the hottest part of the day, rather than the fleeting visits mentioned by Shobrak (1998).



Plate 1. (left) Dunn's Lark *Eremalauda dunni*, 20 February 2007, SARS extension, Kuwait. © Gary Brown

Plate 2. (right) Bar-tailed Lark *Ammomanes cinctura*, 3 January 2008, Liyah, Kuwait. © Gary Brown



Plate 3. (left) Temminck's Lark *Eremophila bilopha*, standing on *Citrullus* mat, 31 August 2006, Liyah, Kuwait. © Gary Brown

Plate 4. (right) Black-crowned Sparrow-Lark *Eremopterix nigriceps*, male by pool, 26 April 2008, SARS extension, Kuwait. © Gary Brown

The present paper reports opportunistic observations, made 2005–2008 in two desert areas of Kuwait, of apparent cooling behaviour of Black-crowned Sparrow-Larks *Eremopterix nigriceps* (Plate 4), Dunn's Larks, Bar-tailed Larks and Temminck's Larks during the hottest part of the year (June to September), when diurnal ambient temperatures regularly exceed 40°C, and often reach 50°C.

METHODS

Observations were carried out in two study sites, described in more detail below: (1) the new 20 km² extension of the Sulaibiya Agricultural Research Station, SARS, of the Kuwait Institute for Scientific Research (KISR) at Kebd, central Kuwait, and (2) at a former gravel quarrying site in Liyah, north-central Kuwait ('Liyah'). The first site was visited at least once weekly from November 2004, the second at least once a month from this date. Birds displaying cooling behaviour in reaction to ambient temperature could be expected from late April to early October, when daytime temperatures of 40°C and above are recorded. Photographs of the birds showing apparent cooling behaviour were taken whenever possible.

A weather station is permanently installed in the SARS extension, providing data at 10-minute intervals on important climatic variables such as ambient temperature and rainfall. Temperature readings from the weather station corresponded very closely to those of the ambient-temperature gauge of the moving research vehicle, so that temperature for Liyah, where there is no weather data available, could be assessed. All air temperatures stated in this paper are shielded 'shade' temperatures.

ENVIRONMENT OF KUWAIT

Kuwait is a small (c18 000 km²) desert country located in the north-east of the Arabian peninsula. According to the Atlas of Desertification (Middleton & Thomas 1997), the climate of Kuwait can be classified as arid. Detailed information on the physical environment has been provided by Halwagy & Halwagy (1974a), and is summarised in the following. The landscape is flat to gently undulating, and rises almost imperceptibly from the coast to a maximum altitude of nearly 300 m in the southwest. The climate is characterised by hot, dry summers, when mean daily temperatures are about 35–37°C, and relatively mild winters. During the winter period, mean daily temperatures are about 14–16°C, with absolute temperatures dropping to nearly 0°C and occasionally just below during the coolest months (January & February). Rainfall occurs mainly during the winter and spring

months, November–April. Mean annual rainfall is c115 mm, with extreme values of 28 and 260 mm.

An overview of the vegetation has been provided by Halwagy & Halwagy (1974b). In brief, much of the desert environment should be occupied by open dwarf shrub communities or open grasslands (which include the sedge *Cyperus conglomeratus*). Desert annuals are a characteristic feature in years of high rainfall. The main growth period for plants coincides with the winter and spring period, and lasts for a maximum of c4–5 months.

In recent decades, the desert environment has been subject to severe degradation, mainly due to increased anthropogenic pressures, in particular massive overgrazing by domestic livestock (sheep, camels and goats), but also due to off-road driving, camping and the military activities associated with the liberation of Kuwait from the recent Iraqi occupation (Omar 2000, Brown 2003).

STUDY SITES

In 2004, KISR obtained a 20 km² tract of highly degraded desert directly abutting SARS (also 20 km²), c30 km southwest of Kuwait City. All livestock, camps and rubbish were removed from the new area in early 2004, and it was enclosed by a secure fence. At the time of enclosure, there was virtually no vegetation cover remaining, except for some heavily-grazed *Cyperus conglomeratus*. Since 2004, natural revegetation has taken place quite rapidly over the entire area, aided initially by several years of good rainfall. Two separate vegetation units are now discernible: one in which the perennial dwarf shrub *Moltkiopsis ciliata* as well as the perennial grasses *Centropodia forsskaolii* and *Stipagrostis plumosa* play an important role (*Moltkiopsis* community), mainly on shallow, gritty soils, and the other dominated by stands of the coarse sedge *Cyperus conglomeratus* (*Cyperus* community). The latter is characteristic of deeper, sandier substrates. A mosaic of these two main vegetation units occurs over large areas (Plate 5). Total perennial vegetation cover reaches 12% in the *Cyperus* community, but only about 2–3% in the *Moltkiopsis* community. Furthermore, because vegetation height in the *Moltkiopsis* community is much less (c10 cm, compared with up to 30 cm in the *Cyperus* community), the stands are much more open.

The vegetation of the original SARS area is markedly different in that it is mostly dominated by rather dense stands of the dwarf shrub *Rhanterium epapposum*, which grows to a height of 50–60 cm.

The former quarry site at Liyah, c60 km to the NW of Kuwait City, covers an area of c200 km² and, after cessation of quarrying activities, now presents itself as flat to gently undulating desert. As a broad generalisation, the site can be divided into two fairly equal-sized sections separated by a tarmac road. The northern section was heavily affected by excavation work and has recently been refilled and levelled. Natural vegetation regeneration is hardly proceeding in this section at all, except in the few depressions in which rainwater accumulates. Vegetation cover in most of the northern section is less than 0.5%. In the southern section, there has been impressive natural regeneration, locally at least, with



Plate 5. Typical sparse vegetation cover of the *Moltkiopsis* community, with the more dense vegetation of the *Cyperus* community in the background. The *Moltkiopsis* community is an ideal habitat for both Dunn's Larks *Eremalauda dunnii* and Black-crowned Sparrow-larks *Eremopterix nigriceps*. 11 March 2005, SARS extension, Kuwait. © Gary Brown

extensive stands dominated by the perennial grass *Stipagrostis plumosa*. On firmer, gritty substrates, the dwarf shrub *Moltkiopsis ciliata* is the dominant perennial, and it is usually accompanied by *Stipagrostis plumosa* in varying amounts. Vegetation cover varies according to location, but in general, it is between 0.5 and 5%. In the southern section, the relatively large number of animal burrows indicates that certain reptiles and mammals appear to be much more common there than in the north section.

Of particular interest are the several large but shallow depressions located in the northern section. During 2006, heavy rainfall was received on several days late in the spring (mid-April), leading to the creation of several temporary pools up to c0.25 km² in area that persisted for several weeks. On drying out, mass germination of the desert gourd *Citrullus colocynthis* was triggered, and a large number of large prostrate plants developed. Individual plants can easily exceed 2 m in diameter, and the mats can be so dense that the underlying substrate is not visible. The green of these and other plants in the depressions strongly contrasted with the otherwise virtually barren surroundings.

Depending on the availability of water, *Citrullus* is an annual or perennial. This cucurbit is remarkable in that it is one of the few species with the C₃ photosynthetic pathway to remain physiologically fully active during the hot summer months in Kuwait, and even flowers then. Furthermore, the leaves show none of the typical adaptations of desert plants, such as small size. Much the opposite, the leaves are among the largest (measuring up to 6 × 5 cm) of any wild species found in Kuwait. As mentioned by several authors (eg Lange 1959, Althawadi & Grace 1986), the plant transpires heavily to provide evaporative cooling of the leaves, with Lange (1959) reporting a reduction of up to 15.3°C compared with ambient air temperatures. Brown (2001) noted that it is highly dependent on a constant supply of subsurface water. Consequently, in years of unfavourable rainfall some plants will die off through lack of water.

RESULTS AND DISCUSSION

Black-crowned Sparrow-Lark

The Black-crowned Sparrow-Lark breeds in Kuwait and can be seen year-round especially in areas protected from overgrazing (Cowan & Pilcher 2003, Gregory 2005). Small numbers breed in Liyah (Brown pers obs), but a good site to see the species in Kuwait is the SARS extension.

Due to the substantial disturbance in the area that was to become the SARS extension, it is highly unlikely that the birds were breeding there before 2004, although it is possible that a few pairs may have been nesting in the original SARS area. According to E DeLima (pers comm), a single pair of birds began breeding in the newly protected SARS extension in an area of desert (c0.25 km²) that was irrigated in 2004. By 2006, several hundred pairs were breeding in the SARS extension, with by far the highest density in the irrigated site. This rapid colonisation of such a small area is quite remarkable, and reminiscent of the invasion and breeding of Dunn's Lark in the Arav'a valley, Israel, as described by Shirihai (1991). In the SARS extension, the species breeds in the *Moltkiopsis* community and open stands of the *Cyperus* community, but the former seems to be preferred. Most nests have been found at the base of *Cyperus* plants, which also occur as scattered individuals in the *Moltkiopsis* community.

Breeding numbers appear to have decreased somewhat during 2007 and 2008, possibly due to the distinctly low rainfall of the 2006/2007 and 2007/2008 seasons. However, a small pool was constructed in April 2007 immediately adjacent to the irrigated site that undoubtedly helped offset greater reductions in the breeding population, which was estimated to be in excess of 100 breeding pairs in early 2008. This pool is the most reliable place to see



Plate 6. Black-crowned Sparrow-Larks *Eremopterix nigriceps*, two females/juveniles by pool, 26 April 2008, SARS extension, Kuwait. © Gary Brown



Plate 7. Black-crowned Sparrow-Larks *Eremopterix nigriceps*, male, female and juveniles standing in the shade of the water supply tanks, 28 July 2008, SARS extension, Kuwait. © Gary Brown



Plate 8. Black-crowned Sparrow-Lark *Eremopterix nigriceps*, disturbed female that was sitting in the shade of a tyre, 17 July 2008, SARS extension, Kuwait. © Gary Brown



Plate 9. Black-crowned Sparrow-Lark *Eremopterix nigriceps*, male lying in the shade of a tyre, 17 July 2008, SARS extension, Kuwait. © Gary Brown



Plate 10. Juvenile Black-crowned Sparrow-Larks *Eremopterix nigriceps* apparently cooling on moist ground near the pool, 25 May 2007, SARS extension, Kuwait. © Gary Brown



Plate 11. Juvenile Black-crowned Sparrow-Lark *Eremopterix nigriceps* apparently cooling itself in a depression on moist ground near the pool, 24 May 2007, SARS extension, Kuwait. © Gary Brown

the birds during the summer months, when up to 80 adults and juveniles may be present at any one time (Plates 4, 6). Individual birds usually begin arriving by c08.00 h local time, when temperatures begin to rise above 35°C, and they remain in the vicinity throughout the day. Many of the birds rest in the shade of the immediately adjacent structure housing water supply tanks (Plate 7). Individual birds also seek refuge in the shade of car tyres which are used to mark out tracks in the area (Plates 8, 9). However, some birds, including



Plate 12. Adult male Black-crowned Sparrow-Lark *Eremopterix nigriceps* apparently cooling itself in shade on moist ground near the pool, 26 April 2008, SARS extension, Kuwait. © Gary Brown.



Plate 13. Adult male Black-crowned Sparrow-Lark *Eremopterix nigriceps* apparently cooling itself in a slight depression on moist ground near the pool (visible in background), 28 July 2008, SARS extension, Kuwait. © Gary Brown

adult males, females and juveniles, create small hollows in the damp/slightly moist ground immediately adjacent to the pool and will spend considerable periods of time there during the heat of the day, with their upper bodies fully exposed to the sun (Plates 10–13).

Dunn's Lark

Dunn's Lark was first recorded in Kuwait in 1987 and may be a regular breeder now. It has been observed at a number of sites including in the Sabah Al-Ahmed Natural Reserve (SAANR), but not in the south (Cowan & Pilcher 2003, Gregory 2005). As with Black-crowned Sparrow-Lark, perhaps the best place to see Dunn's Lark in Kuwait is in the SARS extension. Strangely, it appears to be absent from Liyah, which is quite near to SAANR, even though the southern section has a very similar vegetation structure to SAANR and the SARS extension.

It is highly unlikely that breeding occurred in the SARS extension before its protection. It has never been observed in the original SARS area, with its predominance of *Rhanterium epapposum*, probably because the area is too densely vegetated. In 2007, at least 20 pairs were estimated to be breeding in the SARS extension, possibly even more, although numbers were distinctly lower in the exceptionally dry spring of 2008. The species appears to prefer the low open vegetation of the *Moltkiopsis* community, as virtually all sightings have been reported from there. The species is frequently observed foraging on wide tracks in areas of that community. If disturbed, it will fly into *Cyperus* stands, but birds have not been seen feeding there. Its habitat preference appears to be for areas of low and very sparse vegetation. These are often highly degraded vegetation types or pioneer ones, the latter in the process of recovering from degradation.

The areas that Dunn's Lark inhabits offer few natural places where the birds can find effective shade. It is perhaps surprising that individuals in the SARS extension do not seem to take more advantage of those patches that do present themselves. Occasionally, birds are spotted in the shade of tyres that are scattered around the area, but even during the hot summer periods, most birds are still observed out in the open. Up until July 2008, there were fewer than 5 sightings of birds visiting the pool. However, on several occasions between 6 July 2008 and 3 September 2008, up to 2 birds could be observed at the pool in the early morning (08.15 h local time). One bird (Plate 14) sometimes remained for up to 30 minutes, allowing close approach in a vehicle (as close as 4 m). On one occasion (6 August 2008), the bird flew towards the vehicle and rested on moist ground in the partial shade of a log supporting the water inlet to the pool, just 2.5 m from the vehicle (Plate 15). When it was finally disturbed, it flew off into the shade of the water tanks, c20 m away. Again, the



Plate 14 (left). Dunn's Lark *Eremalauda dunni* by pool, 6 August 2008, SARS extension, Kuwait. © Gary Brown



Plate 15 (right). Dunn's Lark *Eremalauda dunni* apparently cooling itself in partial shade on moist ground near the pool, 28 July 2008, SARS extension, Kuwait. © Gary Brown

bird allowed close approach (c3 m) by vehicle, before flying off into open *Molthkiopsis* vegetation. On turning off the car engine, the bird gradually returned to the exact place from where it flew off, first walking then flying in short bursts. It was then observed and photographed for over an hour from a distance of c3–5 m. Shortly later, 3 other birds were seen in the open desert, less than 1 km away. During the period from 6 July to 21 August 2008, when I visited the pool weekly, what was almost certainly the same bird (identifiable by the distinctive pattern of small feather shafts surrounding the eye) would arrive at the water tanks by 08.15 h at the latest, at the same time as the first influx of Black-crowned Sparrow-Larks. Presumably, it was there every day resting in the shade. Temperatures at 08.15 h were rapidly rising above 35°C at this time of the year. If sufficiently cautious, the bird could be approached up to about 3–5 m, and if disturbed, it would soon return, as described above. On 21 August 2008, the bird arrived at 08.10 h, and was singing continuously from the shade for 30 minutes (before I left) in between bouts of preening and feeding. When I visited the pool on 3 September 2008, the temperature was still below 35°C at 10.00 h, and it was extremely humid. Two Dunn's Larks were drinking at the pool at c09.00 h, but there were no birds in the shade of the water tanks (except for a Eurasian Hoopoe *Upupa epops* and two Short-toed Larks *Calandrella brachydactyla*). The Dunn's Larks were quickly disturbed by the vehicle and flew off into open desert. At 10.00 h, one Dunn's Lark (possibly the same bird that was repeatedly seen by the water tanks over the previous weeks) was found resting in the shade of a tyre, about 250 m from the pool. It allowed close vehicular approach (c5 m), but eventually flew off. On returning to the same spot 10 min later, the bird was back again.

Bar-tailed Lark

Bar-tailed Lark is a breeding resident in Kuwait away from the coastal conurbation. It is regularly seen in various sites in northern Kuwait, usually in protected areas or in remote, less disturbed locations such as in the far west (Cowan & Pilcher 2003, Gregory 2005). It is regularly observed in Liyah, where it presumably breeds, but it is absent from SARS. In SAANR, both Bar-tailed and Dunn's Larks breed in the same general area.



Plate 16. Bar-tailed Lark *Ammomanes cinctura* on *Citrullus* mat, allowing close vehicular approach. The bird appears slightly alarmed, 27 August 2006, Liyah, Kuwait. © Gary Brown

In Liyah it has been observed mainly in the southern section in open *Stipagrostis* stands, but small groups of 4 or 5 birds have also been seen on virtually barren substrate in the north. On two occasions (at least), birds have 'mysteriously' disappeared whilst observing them in the southern section of Liyah. In both cases, it was found that they had entered *Uromastyx aegyptius* lizard burrows, presumably to protect themselves from the sun. Williams *et al* (1999) reported that entering these burrows is less frequent in the smaller larks (including Bar-tailed Lark) compared with the larger Hoopoe Lark, in Saudi Arabia.

In August 2006, a single bird, apparently cooling itself on a mat of *Citrullus colocynthis*, was observed on several occasions in a depression in the northern section (also by E DeLima, pers comm). A number of Temminck's Larks were also present on adjacent plants (see below). The Bar-tailed Lark allowed close vehicular approach and it was standing, or rather crouching, with its wings slightly open towards the wind (Plate 16).

Temminck's Lark.

Temminck's Lark appears to breed regularly in the west of Kuwait, mainly in the vicinity of Wadi Batin (Cowan & Pilcher 2003). I photographed adults feeding their young there on 13 April 2006. It seems that after the breeding season, many birds disperse to other parts of Kuwait, as they have been seen in Liyah, SAANR (where, according to Gregory 2005, the species has bred) and in the SARS extension.

In August 2006 it was possible to guarantee observation of Temminck's Lark in the northern section of Liyah because of a remarkably high concentration of up to 40 birds. They occurred in three nearby depressions containing *Citrullus colocynthis*. Air temperatures were generally around or above 40°C. Birds would remain standing, crouching or even sitting on the *Citrullus* mats, with wings held away from their body, allowing close approach by the vehicle (Plate 17). Presumably, these birds had all previously been sitting on the mats, before vehicular approach. Up to 3 birds were often present on any one mat. If disturbed, the birds would either soon return to the same plant, or fly over to the next one close by. Conversely, it was rare to find a bird that was not associated with a *Citrullus* mat during the hottest part of the day. Occasionally, birds would be spotted in the shade of dwarf shrubs such as *Astragalus spinosus*. In both 2007 and 2008, no gourd mats developed in the depressions due to a paucity of rainfall earlier in the season, and as a consequence, presumably, neither Temminck's Lark nor Bar-tailed Lark was seen there during the summer period.

The apparent cooling behaviour of birds sitting on prostrate plants that transpire heavily, such as *Citrullus colocynthis*, is directly comparable to that of Black-crowned



Plate 17. Temminck's Larks *Eremophila bilopha* on *Citrullus* mat, allowing close vehicular approach, 31 August 2006, Liyah, Kuwait. © Gary Brown



Plate 18. Temminck's Lark *Eremophila bilopha* by pool, 1 August 2007, SARS extension, Kuwait. © Gary Brown

Sparrow-Larks sitting in shallow hollows in moist ground in the SARS extension. In both cases, the upper body of the birds remains fully exposed to the sun, which is in marked contrast to birds that enter lizard burrows. Detailed studies are required to assess the relative importance and efficacy of these strategies.

Single Temminck's Larks are occasionally seen in the SARS extension, usually after the breeding season, in August and September, although one bird was observed 8 April 2008. All sightings (c10, all involving single birds) were from the vicinity of the small pool, and on several occasions a bird was photographed drinking there (Plate 18). The species also takes advantage of the shade of car tyres used to mark out tracks there.

ACKNOWLEDGEMENTS

Dr Edgardo DeLima (formerly Kuwait, now Manila, Philippines), provided very useful information on occurrences of larks in Liyah. Dr Salem Al-Hajraf (KISR, Kuwait) ensured easy access to the Liyah area. Various other colleagues at KISR are thanked for their support. I am particularly grateful to Dr PJ Cowan (Nizwa, Oman) for encouragement to write this paper and valuable comments on a draft manuscript.

REFERENCES

- Althawadi, AM & J Grace. 1986. Water use by the desert cucurbit *Citrullus colocynthis* (L.) Schrad. *Oecologia* 70: 475–480.
- Brown, GM. 2001. *Vegetation ecology and biodiversity of degraded desert areas in north-eastern Arabia*. Habilitation thesis. Rostock University, Germany. 190 pp.
- Brown, G. 2003. Factors maintaining plant diversity in degraded areas of northern Kuwait. *Journal of Arid Environments* 54: 183–194.
- Cowan, PJ & GM Brown. 2001. Prostrate desert gourd plants as apparent cooling sites for larks in heat of day. *Sandgrouse* 23: 59–60.
- Cowan, PJ & CWT Pilcher. 2003. The status of desert birds in Kuwait. *Sandgrouse* 25: 122–125.
- Gregory, G. 2005. *The Birds of the State of Kuwait*. George Gregory, Skegness, UK.
- Halwagy, R & M Halwagy. 1974a. Ecological studies on the desert of Kuwait. I—The physical environment. *Journal of the University of Kuwait (Science)* 1: 75–86.
- Halwagy, R & M Halwagy. 1974b. Ecological studies on the desert of Kuwait. II—The vegetation. *Journal of the University of Kuwait (Science)* 1: 87–95.
- Lange, OL. 1959. Untersuchungen über Wasserhaushalt und Hitzeresistenz mauretanischer Wüsten- und Savannenpflanzen. *Flora* 147: 595–651.
- Maclean, GL. 1996. *Ecophysiology of desert birds*. Springer, Berlin.
- Middleton, N & D Thomas. 1997. *World atlas of desertification*. UNEP/Arnold, London.
- Omar, SAS. 2000. *Vegetation of Kuwait*. KISR, Kuwait.
- Shirihai, H. 1991. The invasion and breeding of Dunn's Lark *Eremalauda durni* in the Arav'a valley, Israel. *Sandgrouse* 13: 7–13.
- Shobrak, M. 1998. Notes on the breeding and cooling behaviour of Hoopoe Lark *Alaemon alaudipes* in central Saudi Arabia. *Sandgrouse* 20: 53–55.
- Williams, JB & BI Tieleman. 2001. Physiological ecology and behavior of desert birds. *Current Ornithology* 16: 299–353.
- Williams, JB & BI Tieleman. 2005. Physiological adaptation in desert birds. *BioScience* 55: 416–425.
- Williams, JB, BI Tieleman & M Shobrak. 1999. Lizard burrows provide thermal refugia for larks in the Arabian desert. *Condor* 101: 714–717.

Gary Brown, Kuwait Institute for Scientific Research, Aridland Agriculture Dept., PO Box 24885, Safat 13109, Kuwait.
gmarbrown@yahoo.co.uk

Unexpectedly large number of Sociable Lapwings *Vanellus gregarius* on autumn migration in Turkey and some remarks on the stopover site

MURAT BIRICIK

On 12 October 2007, the author and Ercan Aslan went to Ceylanpınar district, SE Turkey, to attempt to locate a satellite-tracked Sociable Lapwing *Vanellus gregarius*. The satellite-derived coordinates, 37° 00' N, 39° 39' E, 503 m asl, were received from Dr Özge Balkız, a scientist at Doğa Derneği [Society for Nature], Ankara.

We reached the location about midday and although many kilometres around were checked, with the aid of 20–60×80 telescopes, no Sociable Lapwings were seen. The area was inside the Ceylanpınar State Farm for Agriculture (CSFA), very close to its northern boundary. There was a clear dissimilarity in landscape between the two sides of the northern border. Outside, the landscape consisted of small private fields between villages, whereas within were very large flat field blocks of brownish clayey soil with few settlements. Some uncultivated patches in the farm, especially on low hills, were using by grazing sheep.

Ceylanpınar SFA is c80×40 km and near Syria (Figure 1, Plate 1). Over 151 500 ha of CSFA are used for agriculture, of which c65% are fields and c30% natural steppes mainly used as meadow. Only c7% of the cultivated area is irrigated. Main grains/pulses produced are wheat and lentils, constituting c49% and c8% of the fields, respectively. The district has a dry continental climate, with a temperature range of -8.2 to 47.0°C and average annual precipitation of 267.8 mm though rainfall is rare early June to end of September (TIGEM 2008). CSFA is a Turkish Important Bird Area (Kılıç & Eken 2004) and Key Biodiversity Area (Eken *et al* 2006).

We decided next to check a neighbouring area in CSFA, where a number of Sociable Lapwing flocks had been observed in spring 2007 (Bozdoğan *et al* 2007). En route, through an area of large post-harvest ploughed fields, we did not detect our quarry species but did



Figure 1. Location of the Ceylanpınar State Farm of Agriculture, indicated by the yellow rectangle, in Turkey.

find a flock of six Cream-coloured Coursers *Cursorius cursor*, a scarce summer visitor (Kirwan *et al* 2008).

We found a very large flock of Sociable Lapwings at the intersection of four very large fields, 37° 05' N, 40° 02' E, 438 m asl, and observed the birds for 1.25 h just prior to sunset and darkness. They were mainly on the ground and feeding, walking together westwards and keeping at least 3–4 m between individuals. Some small groups, of c20–50 birds, flew from time to time separating from and then merging with the main group. These movements made obtaining an accurate count difficult: there were at least 1810 Sociable Lapwings present.

The fields, on which the birds were present, were for lentil production. On the ground were many seeds, presumably shaken out of the crop during harvesting. The soil surface was even and hard, as it had not yet been ploughed.

We watched the birds getting ready to spend the night. Birds positioned somewhat marginally, congregated gradually by walking individually or flying in small flocks towards the main group. A flock of c30 individuals flew from the aggregation, passed a few metres above us, and returned there, c300 m from the observers, as though they were checking that we posed no threat. Aggregation of the Sociable Lapwings became much more noticeable after sunset. In late dusk, movements increased considerably; both walking and flying individuals came together in a field, on a section quite far away from the roads. This movement took only some five minutes, just before darkness; thereafter all birds kept still.

The day after, we returned to the site about noon, having checked the most eastern part of CSFA for any additional flocks. The birds had moved to an adjacent field to the south. Illumination was much better. After repeated counts from a good viewpoint, we considered there were at least 3200 Sociable Lapwings present. The birds were relatively still, though the dispersal of the very large flock over a large area and heat haze made counting more difficult.

Subsequent to the count, we checked to see if any of the birds wore leg rings by driving the car as close as possible to several parts of the flock. We checked perhaps 800 birds and found four with colour rings, presumably placed on the birds in central Kazakhstan (Robert Sheldon *in litt*), though the satellite-tracked individual was not found.

All the birds were in non-breeding plumage, though some still had rufous feathers on the belly. Juveniles had mainly fresh feathers. Feathers found on plant stems also were newly grown in appearance and generally undamaged. The field's surface was scattered with lambs' faeces and lentil seeds.

For the globally critically-endangered Sociable Lapwing (IUCN 2007), Ceylanpinar SFA apparently plays a crucial role in Turkey especially during autumn migration. Lentil crops need to be dry in order to use a mechanical harvester and such harvesting causes a signif-



Plate 1. Location of the area in the Ceylanpinar State Farm of Agriculture where the autumn flock of Sociable Lapwings *Vanellus gregarius* in 2007 was seen, marked by the solid yellow circle. Note the large field blocks inside CSFA and the smaller private fields outside, mostly in the north.

icantly higher loss of seeds in comparison to harvesting by hand. Traditional agricultural practice outside CSFA leaves far fewer seeds.

ACKNOWLEDGEMENTS

I wish to thank Ercan Aslan for his companionship during the fieldwork, Doğa Derneği for financially supporting the trip and Özge Balkız for the coordinates, gained during Robert Sheldon's satellite-tracking research. My thanks go to Robert for his help in improving the text.

REFERENCES

- Bozdoğan, M, Ö Balkız & J Tavares. 2007. *Survey of Sociable Lapwing (Vanellus gregarius) in Southeastern Anatolia during early Spring 2007*. Doğa Derneği, Ankara.
- Eken, G, M Bozdoğan, S Isfendiyaroğlu, DT Kılıç & Y Lise (eds). 2006. *Türkiye'nin Önemli Doğa Alanları [Important Nature Areas of Turkey]*. Doğa Derneği, Ankara. [In Turkish]
- IUCN. 2007. *The IUCN Redlist of Threatened Species—World Conservation Union*. www.iucnredlist.org.
- Kılıç, DT & G Eken. 2004. *Türkiye'nin Önemli Kuş Alanları—2004 Güncellemesi [Important Bird Areas of Turkey—2004 Update]*. Doğa Derneği, Ankara. [In Turkish]
- Kirwan, GM, M Özen & B Demirci (compilers). 2008. Turkey Bird Report 2002–06. *Sandgrouse* 30: 166–189.
- TIGEM. 2008. *Tarım İşletmeleri Genel Müdürlüğü [General Directorate of Agricultural Farms]*. www.tigem.gov.tr. [In Turkish]

Murat Biricik, University of Dicle, Faculty of Science, Department of Biology, TR-21280 Diyarbakır, Turkey.
mbiricik@dicle.edu.tr

On the status and distribution of Thrush Nightingale *Luscinia luscinia* and Common Nightingale *L. megarhynchos* in Armenia

VASIL ANANIAN

INTRODUCTION

In the key references on the avifauna of the Western Palearctic and former Soviet Union, the breeding distributions of Common *Luscinia megarhynchos* and Thrush Nightingales *L. luscinia* in the Transcaucasus (Georgia, Armenia and Azerbaijan) are presented inconsistently, especially for the latter species. These sources disagree on the status of Thrush Nightingale in the area, thus Vaurie (1959), Cramp (1988) and Snow & Perrins (1998) considered it breeding in the Transcaucasus, while Dementiev & Gladkov (1954), Sibley & Monroe (1990) and Stepanyan (2003) do not. Its distribution in del Hoyo *et al* (2005) is mapped according to the latter view, but they note the species' presence in Armenia during the breeding season. Several other publications consider that the southern limit of Thrush Nightingale's Caucasian breeding range is in the northern foothills of the Greater Caucasus mountains (Russian Federation), while the Transcaucasus is inhabited solely by Common Nightingale (Gladkov *et al* 1964, Flint *et al* 1967, Ivanov & Stegmann 1978, Vtorov & Drozdov 1980).

Thrush Nightingale in Azerbaijan was classified as 'accidental' by Patrikeev (2004). The author accepted that the species had possibly nested in the past and referred to old summer records by GI Radde from the Karayasi forest in the Kura–Aras (Arax) lowlands, but Patrikeev found only Common Nightingale there in the late 1980s. Other earlier observers mentioned only the latter species for Azerbaijan in the breeding season. In Nagorno Karabagh, Common Nightingale was found by KA Satunin on 24 May 1912 near Magavuz village (Terter dis-



Plate 1. Common Nightingale *Luscinia megarhynchos* performing full territorial song, Vorotan river gorge, c15 km SSW of Goris town, Syunik province, Armenia, 12 May 2005. © Vasil Ananian

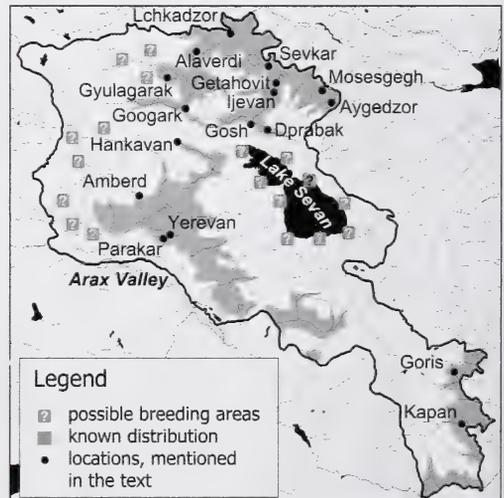


Figure 1. Distribution of Common Nightingale *Luscinia megarhynchos* in Armenia and locations mentioned in the text. © Vasil Ananian

Table 1. Specimens of Thrush Nightingale *Luscinia luscinia* from Armenia held at the Institute of Zoology of Armenia, Yerevan¹

Date	Sex	Location	Specimen Collector(s)	Lyaister & Sosnin (1942)
27 April 1937	♂	Yerevan	Sosnin	not mentioned
27 April 1937	♀	Yerevan	Sosnin	not mentioned
03 May 1929	♂	Yerevan	Sosnin & Vorobiev	
08 May 1948	♂	Yerevan	Manukyan & Dahl	
09 May 1928	♀	Yerevan	Sosnin & Stegmann	
10 May 1925	♂	Parakar	Sosnin & Vorobiev	
10 May 1925	♂	Parakar	Sosnin & Vorobiev	
10 May 1925	?	Parakar	Sosnin & Vorobiev	
12 August 1930	♂	Googark ²	Sosnin	noted as "1939"
12 August 1939	♂	Googark ²	Sosnin	
13 August 1938	♀	Getahovit ²	Sosnin	noted as "sex?"
17 August 1930	♂	Hankavan ²	Sosnin	noted as "July"
21 August 1937	♂	Alaverdi	Sosnin	noted as "July", "♀"
29 August 1938	?? ³	Dprabak ²	Sosnin	
29 August 1939	♂	Gyulagarak	Sosnin	noted as "♀"
03 September 1938	?	Gosh ²	Sosnin	noted as "♂"
05 September 1937	♂	Lchkadzor	Sosnin	not mentioned

¹The first four columns are reproduced from the species' datasheet in *Birds of Armenia (BOA) Project* archives, American University of Armenia, Yerevan.

² Place name from specimen label updated.

³Possibly male, see text.

tract) and 'many singing' was reported by EV Erikson in 1906 near Vank village, Khojavend district (Lyaister & Sosnin 1942). Both nightingale species are listed as breeding in Georgia (GCCW 2003). Only Common Nightingale is known to breed in Turkey and Iran (Roselaar 1995, Scott & Adhami 2006, Kirwan *et al* 2008).

The present paper reviews the Armenian literature, including key publications on the country's avifauna (Lyaister & Sosnin 1942, Dahl 1954, Adamian & Klem 1999), and summarizes recent observations 1999–2008.

THRUSH NIGHTINGALE IN ARMENIA: THE LITERATURE

Lyaister & Sosnin (1942), Dahl & Sosnin (1947) and Dahl (1954) all list Thrush Nightingale as breeding in Armenia. In the latter work, the author stated that Thrush Nightingale breeds in the northern and northeastern wooded regions of the country and is a common passage migrant in the Arax valley. This conclusion was based on the 17 specimens available from Armenia (Table 1) and additional observations by GV Sosnin as reported in Lyaister & Sosnin (1942): "8 May 1933, strong passage, Yerevan", "13 August 1938, two observed with one collected, Getahovit village", "27 August–1 September 1938, creaking at dawn with one male very quietly emitting only incomplete units of song at sunset on 29 August, Dprabak village", "27 April–8 May 1940, several singing in thickets of dog rose, Kapan town, not reported here before 27 April". In addition, a single specimen was collected in 1948 (Table 1, Dahl 1948a, 1948b, 1953).

Adamian & Klem (1999), as in previous Armenian publications, stated Thrush Nightingale to be an uncommon breeding species in Armenia. All encounters with nightingale species listed in Adamian & Klem (1999), 1963–1994 inclusive, came from the same observer and comprise 11 records of Thrush Nightingale (68 individuals in total) and an

observation of a single Common Nightingale. One of these is an extraordinary claim, of 28 Thrush Nightingales along a 5 km transect in Yerevan on 16 June 1989. These pre-1995 reports appear doubtful in view of recent data. In Table 2, only the 1995 sightings presented in Adamian & Klem (1999), from a team of observers, are summarized.

COMMON NIGHTINGALE IN ARMENIA: THE LITERATURE

This species was reported from Armenia for the first time by Lyaister & Sosnin (1942), who obtained six specimens: two late April specimens from the Arax valley and Yerevan, and two adult males and two juveniles shot 6–8 July 1938 near Mosesgegh village, NE Armenia. These comprise all specimens of this species held at the Institute of Zoology, Yerevan. The authors list observations by GV Sosnin of Common Nightingale from Mosesgegh village (“several singing in orchards on 6–9 July 1938, one collected”, “fledglings with incompletely grown rectrices on 7–9 July 1938”) and Aygedzor village in the same general area (“very common in orchards near a river, males actively singing on 23 June 1938”, “in a wooded gully on 2 July 1938”). Dahl (1954) concluded, apparently on the basis of this evidence alone, that the Common Nightingale is found on migration in the Arax valley, but breeds only in the wooded areas of northeastern Armenia.

The next reports of Common Nightingale available from Armenia are for 1995 (Table 2), with the exception of a single individual claimed in 1993 (Adamian & Klem 1999). These authors considered Common Nightingale to be a rare breeding species in Armenia and stated that it “breeds at higher elevations, occurring in lowlands during migration”. This conflicts with most of the locations listed under the 1995 breeding claims for the species (Adamian & Klem 1999, Table 2), as well as with recent data.

RECENT OBSERVATIONS

Since 1999 there have been numerous and regular field visits throughout Armenia, particularly during the breeding season and completely covering the country’s range of biomes and elevations. Teams of observers on many of the late spring/mid-summer trips have involved skilled expatriate birders. Apart from personal experience, identification of nightingales was aided with the use of standard field guides and sound recordings (Roché 1990, Jonsson 1992, Harris *et al* 1996, Beaman & Madge 1998, Mullarney *et al* 1999, Roché & Chevereau 2002, Schulze 2004) and detailed comparisons of vocalizations of the two species in Cramp (1988) and Simkin (1990).

These surveys produced two observations of Thrush Nightingale: two individuals seen near Dilijan town on 6 May 2007 (Roy Beddard *et al*), and two together were seen and heard

Table 2. Summary of sightings of nightingales *Luscinia* spp in Armenia in 1995, based on Adamian & Klem (1999). Reports were not sorted by season in that publication.

Species	Spring	Summer	Autumn	Notes on breeding
Thrush Nightingale <i>L. luscinia</i>	9 Mar–8 May: 5 reports of 11 birds (1–5 birds/report).	21 Jun–23 Jul: 7 reports of 19 birds (1–2 birds/report, 8 seen 21 Jun).	2 Aug–25 Sep; 20–24 reports of 39–43 birds (1–7 birds/report)	9 Mar, incomplete songs (c15 km SE of Kapan); 27 Apr, song of a male (c12 km E of Ijevan); 21 Jun, at least 8 singing males (Yerevan).
Common Nightingale <i>L. megarhynchos</i>	18 May–21 May: 2 reports of 2 birds (1 bird/report).	12 Jun–20 Jul: 10–11 reports of 19–21 birds (1–4 birds/report).	8 Aug–15 Sep: 6 reports of 6 birds (1 bird/report).	21 May, 12–13 Jun, 26–27 Jun: singing males (Kapan, Amberd and Sevkar); 25 Jun, a bird carrying food (Ijevan); 14 Jul, a pair with 2 young (Kapan)

creaking, one of which was quietly emitting fragments of song, near Norashen village, Lake Sevan, on 12 May 2008 (VA pers obs).

In contrast, Common Nightingale was found breeding in good numbers in all appropriate habitats over a large part of N, NE, C and S Armenia (Plate 1). This was from the lowest elevation in the country (c370 m) up to c2000 m asl, reaching highest densities in areas up to c1500 m asl. In the breeding season it is invariably observed and heard in the basins and valleys of the main Armenian rivers and their tributaries: Arax, Debed, Aghstev, Kasakh, Marmarik, Hrazdan, Azat, Vedi, Arpa, Vorotan, Goris, Voghji and Meghri (Figure 1). A similar abundance in the breeding season was observed in southwestern Azerbaijan, at various locations in Jabrayil, Fizuli, Qubadli and Zangilan districts (VA pers obs 1996–1998, 2007). Only Common Nightingale was found breeding in and around Yerevan (all city parks and Hrazdan river gorge within the city) and Kapan town (*contra* Adamian & Klem 1999), being very common at these locations.

DISCUSSION

By the mid-1950s there appeared to be no reliable evidence to suggest that Thrush Nightingale had bred in Armenia. Thus, Dementiev & Gladkov (1954) correctly attributed all Armenian records to migrants, unlike Cramp (1988), who cited Lyaister & Sosnin (1942) amongst others and possibly was additionally misled by the erroneous dates in the latter publication with regard to specimens from Hankavan and Alaverdi (Table 1). Adamian & Klem (1999) are also unconvincing in claiming Thrush Nightingale as breeding in the country. They listed summer 1995 observations (Table 2), but none of these necessarily indicate breeding. These latter observations come from locations and areas currently known to be inhabited by Common Nightingale and require confirmation. Overall, all of the available Thrush Nightingale records from Armenia are better explained as due to migration and the migratory habits of this species. These include passage dates in the Caucasus area, song during migration at stopover sites, immature non-breeding individuals overwintering and first singing attempts of young birds in August (Dementiev & Gladkov 1954, Cramp 1988). The incorrect attribution of the species as a breeding bird of Armenia by local authors (Lyaister & Sosnin 1942, Dahl 1954, Adamian & Klem 1997, 1999) is concurrent with an underestimation of the distribution and abundance of Common Nightingale in the country. These views have, unfortunately, been accepted by several western publications and are reflected in incorrect mapping (Cramp 1988, Snow & Perrins 1998, Beaman & Madge 1998, Mullarney *et al* 1999). It, however, remains unclear how the Common Nightingale was overlooked and under recorded for years by the dedicated field ornithologist GV Sosnin, as the species' natural breeding habitats in the country seem hardly to have altered since the early 1920s.

Sight identification of nightingales is normally far from straightforward and requires ideal viewing conditions. The *africana* race of Common Nightingale, inhabiting the Transcaucasus, is not well represented in field guides. As was shown by Loskot (1981), in contrast to previous claims, *africana* in breeding plumage is the darkest of all races, less rufous above and has colder and browner upperparts, uppertail coverts and rectrices. It is thus more similar to Thrush Nightingale than *eg* nominate *megarhynchos*. The diffuse breast band in *africana* is pronounced and brownish-grey (Harris *et al* 1996, VA pers obs), rather than the sandy-buff of nominate *megarhynchos* (Mullarney *et al* 1999). In the breeding season most nightingales are identified by song, rather than sight. Some individuals of Common Nightingale may sound unusual in emitting a richer song with repetitive delivery and a slower, more measured overall pace, making it more suggestive of Thrush Nightingale (Cramp 1988, Simkin 1990, VA pers obs). Initially, during our earlier surveys

in 2000, such individuals caused the misidentification of several birds near Goris, southern Armenia (Busuttill 2000). This was influenced by the misjudgment of field characters of *africana* and erroneous published data regarding nightingale distribution in Armenia. Subsequent awareness of this confusion and the discovery of Common Nightingale, not Thrush Nightingale, breeding in Yerevan have led to the present revision of the status of the two species in the country.

In conclusion, Thrush Nightingale is not known to breed in Armenia and its status should be reclassified as an “uncommon spring and autumn passage migrant”. Breeding by the species in Armenia is presumably not impossible, but there is no adequate substantiating data. The Common Nightingale is, in fact, a common and widely distributed breeder in Armenia. The proposed distribution of the species in the country, based on proven records and recent observations 1999–2008, is sketched in Figure 1.

The Common Nightingale’s habitats in Armenia are not very different from those throughout its European and Mediterranean range (Cramp 1988). In woodlands, it inhabits edges of clearings with undergrowth and damp soil, more usually near some water and in similar conditions in the parks of Yerevan and other large towns, also in orchards with bushes sited on slopes and at the bottom of river valleys in and around human habitation. It also occupies gallery woodlands with thickets along rivers in valleys and lower steep slopes of deep rocky gorges overgrown with dense shrub, as well as shady gullies and orchards with rivulets and patches of dense bush cover in the arid areas of southern Armenia.

ACKNOWLEDGEMENTS

I would like to thank all of my numerous co-observers, who visited Armenia during the last decade, particularly Chris Batty, Roy Beddard, Nik Borrow, Neil Bowman, Chris Bradshaw, Han Buckx, Simon Busuttill, Geoff Carey, Jaap Eerdmans, Mark Finn, Philip Heath, Nerses Kazanjian, Peter Kennerley, Paul Leader, Tom Lowe, Nigel Redman, Peter de Rouw, Marc Taily and many others. Some of the mentioned persons also helped with locating some references, as did Karen Aghababyan, Jan-Michael Breider, José Luis Copete, Daniel Klem, Jevgeni Shergalin, Victoria Ten, Mike Wilson and Pascal Wink. Karen Aghababyan provided the specimen data from BOA Project archives. I thank Roy Beddard for improving the English of an early draft.

REFERENCES

- Adamian, MS & D Klem. 1997. *A Field Guide to Birds of Armenia*. American University of Armenia, Oakland, CA.
- Adamian, MS & D Klem. 1999. *Handbook of the Birds of Armenia*. American University of Armenia, Oakland, CA.
- Beaman, M & S Madge. 1998. *The Handbook of Bird Identification for Europe and the Western Palearctic*. Christopher Helm, London.
- Busuttill, S. 2000. *Armenia Trip Report: June 5th-16th 2000*. www.osme.org.
- Cramp, S (ed). 1988. *The Birds of the Western Palearctic*. Vol 5. Oxford University Press, UK.
- Dahl, SK. 1948a. [Vertebrates of Pambak Range. *National Academy of Sciences of the Armenian SSR, Zoological Digest*] 5: 5–68. [In Russian]
- Dahl, SK. 1948b. [Materials on the vertical distribution of reptiles, birds and mammals in the valleys of Hrazdan and Marmarik rivers. *National Academy of Sciences of the Armenian SSR, Zoological Digest*] 5: 69–86. [In Russian]
- Dahl, SK. 1953. [Essay on vertebrates of Bargushat and Meghri mountain massifs. *National Academy of Sciences of the Armenian SSR, Zoological Digest*] 8: 5–65. [In Russian]
- Dahl, SK. 1954. [*Fauna of the Armenian SSR. Vertebrates*. Academy of Sciences Press], Yerevan. [In Russian]
- Dahl, SK & GV Sosnin. 1947. [*Identification Guide to the Birds of the Armenian SSR*. Institute of Zoology. Academy of Sciences Press], Yerevan. [In Russian]
- Dementiev, GP & NA Gladkov (eds). 1954. [*The Birds of the Soviet Union*.] Vol 6. Sovetskaya Nauka, Moscow. [In Russian]
- Flint, VE, RL Boeme, YV Kostin & AA Kuznetsov. 1967. [*Birds of the USSR*.] Mysl, Moscow. [In Russian]
- GCCW. 2003. *Checklist of the Birds of Georgia*. Georgian Centre for the Conservation of Wildlife (GCCW). www.gccw.org.

- Gladkov, NA, GP Dementiev, ES Ptushenko & AM Sudilovskaya. 1964. [*Identification Guide to the Birds of the USSR.*] Vyschaya Shkola, Yaroslavl, Russia. [In Russian]
- Harris, A, H Shirihai & DA Christie. 1996. *The Macmillan Birder's Guide to European and Middle Eastern Birds.* Macmillan, London.
- del Hoyo, J, A Elliot & DA Christie. 2005. *Handbook of Birds of the World.* Vol 10. Lynx Editions, Barcelona.
- Ivanov, AI & BK Stegmann. 1978. [*Concise Identification Guide to the Birds of the USSR.*] Nauka, Leningrad. [In Russian]
- Jonsson, L. 1992. *Birds of Europe, with North Africa and the Middle East.* Christopher Helm, London.
- Kirwan, GM, K Boyla, P Castell, B Demirci, M Ozen, H Welch & T Marlow. 2008. *The Birds of Turkey.* Christopher Helm, London.
- Loskot, VM. 1981. [On the subspecies of the Nightingale (*Luscinia megarhynchos* Brehm). Proceedings of the Zoological Institute. Academy of Sciences of the USSR. *Phylogeny and Systematics of Birds*] 102: 62–71. [In Russian]
- Lyaister, AF & GV Sosnin. 1942. [*Materials on Ornithofauna of Armenian SSR.*] *Ornis Armeniaca.* [Institute of Biology]. ARMFAN, Yerevan. [In Russian]
- Mullarney, K, L Svensson, D Zetterstrom & PJ Grant. 1999. *Collins Bird Guide.* Harper Collins, London.
- Patrikeev, M. 2004. *The Birds of Azerbaijan (Series Faunistica 38).* Pensoft, Sofia.
- Roché, JC. 1990. *All the bird songs of Britain and Europe.* 4 CDs. Sittelle, Mens, France.
- Roché, JC & J Chevereau. 2002. *Bird Sounds of Europe and North-West Africa.* 10 CDs. WildSounds, UK.
- Roselaar, CS. 1995. *Songbirds of Turkey: an atlas of biodiversity of Turkish passerine birds.* Pica Press, Mountfield, UK.
- Schulze, A (ed). 2004. *The Bird Songs of Europe, North Africa and the Near East.* 17 CDs. Musikverlag Edition AMPLE, Germany.
- Scott, DA & A Adhami. 2006. An updated checklist of the birds of Iran. *Podoces* 1 (1/2): 1–16.
- Sibley, CG & BL Monroe. 1990. *Distribution and Taxonomy of the Birds of the World.* Yale University Press, New Haven, CT.
- Simkin, GN. 1990. [*Songbirds.*] Lesnaya Promyshlennost, Moscow. [In Russian]
- Snow, DW & CM Perrins (eds). 1998. *The Birds of the Western Palearctic. Concise Edition.* Vol 2. Oxford University Press, UK.
- Stepanyan, LS. 2003. [*Conspectus of the ornithological fauna of Russia and adjacent territories (within the borders of the USSR as a historical region).*] Pensoft, Sofia. [In Russian]
- Vaurie, C. 1959. *The Birds of the Palearctic Fauna. Passeriformes.* HF & G Witherby, London.
- Vtorov, PP & NN Drozdov. 1980. [*Identification Guide to the Birds of the USSR Fauna.*] Prosveschenie, Moscow. [In Russian]

Vasil Ananian, 179 Bashinjaghian Street, Apt 23, 0078, Yerevan, Armenia. vasil.ananian@gmail.com

First breeding record of Caspian Tern *Hydroprogne caspia* in Israel

NOAM WEISS, MIKOLAJ KOSS & REUVEN YOSEF



Plate 1. The island, off the Eilat hotel district, 29 April 2008. © Mikolaj Koss

On 15 April 2008 a juvenile and an adult Caspian Tern *Hydroprogne caspia* were observed in Eilat, Israel. They were resting on an island (Plate 1) in the lagoon close to the 'North Beach', an area adjacent to the hotel district. The island is small with a few date palms growing on it. The banks of the lagoon are a well-frequented camping and barbecue site. The observation raised suspicions that the species had bred on the island, as it was very unlikely that a 2008 juvenile would move with its parent to Eilat at that time of year. The next day we observed two tourists that had swum to the island, a distance of c45 m, flush the juvenile bird and we saw that it was unable to fly. Its plumage was juvenile-barred on the upper body with white wedge-shaped streaks on the fore crown. We immediately also swam to the island and, as the bird was unable to fly, caught it easily with our hands. We found that the remiges were fully grown by blowing up the underwing coverts and examining the rachis sheathes. We ringed it, photographed the individual (Plates 2–4), returned it to the island and released it.

Subsequently, on 2 May, the ringed juvenile was seen pleading for food from an adult, and flying together with it as well as being fed by it. This was observed in the vicinity of the fish farms located in the northeastern part of the Israeli side of gulf of Aqaba, less than 1 km from the nest-island. We assumed that the adult was one of its parents.

The possibility that Caspian Tern might breed in Israel has been considered before. In 2007, there were several observations by birdwatchers in Eilat of juvenile Caspian Terns pleading for food from adults. Shirihai (1996) observed food-begging in 1989 but considered the species to be locally scarce in the northern part of the gulf of Aqaba, representing



Plates 2–4. The unfledged Caspian Tern *Hydroprogne caspia*, 16 April 2008, Eilat. © Mikolaj Koss

dispersal of non-breeders from Sinai and northern Red Sea areas. The closest known breeding site to Eilat is at the southern entrance of the gulf of Aqaba (Shirihai 1996). This is the first confirmed breeding record for the Eilat region.

The Caspian Tern is a monotypic, widespread breeder on most continents (Olsen & Larsson 1995). In the Western Palearctic, it breeds on sheltered continental coasts or inland waters, but the range of the species has declined in recent years (Snow & Perrins 1998). In the Middle East the species breeds on the islands scattered the length of the Red Sea and the Persian gulf. We consider this Eilat breeding record of Caspian Tern to be the result of more than a decade of open-sea aquaculture projects that resulted in artificially high densities of fish off Eilat's beaches. The recent removal of these fish cages will probably make the breeding of sea- and shore birds on the Eilat/Aqaba shoreline, including Caspian Tern and Striated Heron *Butorides striata* (Yosef *et al* 2002, Yosef & Zduniak 2005), less likely.

REFERENCES

- Olsen, KM & H Larsson. 1995. *Terns of Europe and North America*. Christopher Helm, London.
- Shirihai, H. 1996. *The birds of Israel*. Academic Press, London.
- Snow, DW & CM Perrins. 1998. *The birds of the Western Palearctic*. Concise edition, Vol 1. Oxford University Press, UK.
- Yosef, R & P Zduniak. 2005. Brood parasitism in Mangrove Heron (*Butorides striatus*). *Ostrich* 76: 91–92.
- Yosef, R, M Rydberg-Hedaen, L Mitchell & H Smit. 2002. Striated Heron *Butorides striatus* – a new breeding species to Eilat, Israel. *Sandgrouse* 24:134–135.

Noam Weiss, Mikolaj Koss & Reuven Yosef, International Birding & Research Centre in Eilat, PO Box 774, Eilat 88000, Israel. ryosef@eilatcity.co.il

The timing of spring passage of soaring birds at Zait bay, Egypt

GUDRUN HILGERLOH, JAN WEINBECKER & INGO WEISS

The timing of spring passage of soaring and gliding birds was studied on the western side of the narrowest strait in the southern gulf of Suez, at Zait bay. The study was based on systematic observations performed in spring 2007. The passage of the following species was recorded: Black Stork *Ciconia nigra*, White Stork *Ciconia ciconia*, White Pelican *Pelecanus onocrotalus*, Lesser Kestrel *Falco naumanni*, European Honey Buzzard *Pernis apivorus*, Black Kite *Milvus migrans*, Egyptian Vulture *Neophron percnopterus*, Short-toed Eagle *Circaetus gallicus*, Western Marsh Harrier *Circus aeruginosus*, Levant Sparrowhawk *Accipiter brevipes*, Eurasian Sparrowhawk *Accipiter nisus*, Steppe Buzzard *Buteo b. vulpinus*, Long-legged Buzzard *Buteo rufinus*, Lesser Spotted Eagle *Aquila pomarina*, Steppe Eagle *Aquila nipalensis*, Booted Eagle *Hieraetus pennatus* and Common Crane *Grus grus*. Measured migration density varied considerably from species to species, as a result of differences in density of migration and as some bird species are easier to detect than others.

On peak passage days, the percentage of passing individuals compared to the number recorded for the entire period was highest in Levant Sparrowhawk and Honey Buzzard, with 50% and more. The highest absolute numbers per season and largest flock sizes occurred in White Stork (average of 1000 individuals per flock). The duration of passage per species varied between 10 and 65 days for the central 90% of migrants. Species with immature birds passing later migrated in a wider time window (Steppe Eagle) than species with adults and immature birds migrating together (Common Crane). The extremely short passage period of Common Crane can also be explained by the fact that these birds congregate into huge flocks before migration. The dates of mean and peak migration correlated significantly with corresponding dates in Israel, but not duration of migration.

INTRODUCTION

Soaring and gliding birds depend to a large extent on updrafts during migration because of the high energetic costs of active flight (Alerstam 1990). Thus they avoid sea-crossings altogether or cross water at the narrowest point. One of these migration concentration points is situated at Zait bay (Figure 1), where soaring birds migrating along the East African flyway cross from mainland Egypt to Sinai (Grieve 1996, Baha El Din 1999, Christensen & Jensen 2002) or continue via Suez. The first systematic counts, performed in spring 2007 (Hilgerloh in press), provided an opportunity to analyse the timing of passage in soaring and gliding birds at this site.

The timing of soaring birds migrating along the East African flyway has been studied in Israel (Safrieli 1968, Leshem & Yom-Tov 1996, Shirihai 1996, Shirihai *et al* 2000), but not that part of the flyway on the western side of the southernmost gulf of Suez. The aim of this study is to report details of timing of passage of soaring and gliding species passing through the Zait bay area and to compare them with results reported from Israel.

METHODS

The data were collected to assess the risks to migratory soaring birds from a potential large onshore windfarm development. The study area was the coastal desert near Zait bay. In order to characterize the passage of the



Figure 1. The Sinai region. Zait bay to Eilat is c240 km and to Suez town c260 km, straight-line distance.

soaring birds through an area of $c700 \text{ km}^2$, a double row of observation points was established parallel to the NW–SE directed coast 5 km apart (28.17° N , 33.15° E to 27.73° N , 33.49° E), on the assumption that soaring birds can be detected up to at least 2.5 km away. Each row contained 13 sites at 5 km intervals. The observation points were situated between the foothills of the Red Sea mountains to the west and the gulf of Suez, the coastal Gebel El Zait range and Zait bay to the east (Plates 1–4). The main road from Hurghada to Suez was immediately to the east of the eastern row of observation points. The observation points were closest to the sea ($c2 \text{ km}$) in the far north and at Zait bay. The observation points were not manned continuously. Two teams of field workers performed the observations in shifts, using 10×40 binoculars and 20–60 magnification telescopes. A rotation schedule was set up, in order to get a data set representative of the entire study area. Observation periods lasted principally for 60 minutes during which time all birds sighted in any direction within the radius of 2.5 km from the observation site were logged (for details see Hilgerloh in press). Observations were performed 20 February–6 May 2007 for a total period of 604.4 hours. As migration in some species continued for a time after systematic observations had ceased, some median dates might be later than indicated.

Migratory soaring species where fewer than 20 birds were sighted, and local birds, are not included in this study. The Levant Sparrowhawk *Accipiter brevipes* is known to migrate to a small extent ($c10\%$) at night (Stark & Liechti 1993, Spaar *et al* 1998). For methodological reasons, individuals migrating at night were not recorded.

The timing of soaring bird spring migration at Zait bay was compared with spring observations in Eilat, Israel (Christensen *et al* 1981, Leshem & Yom-Tov 1996). Christensen *et al*'s (1981) observations were performed 20 February–17 May 1977 (phenological data were calculated by us on the basis of their published raw data). Leshem & Yom-Tov's (1996) study lasted several years, with observations mainly 14 February–31 May. As White Storks in spring mostly migrate west of Eilat, observations made on that route were used for comparison (Leshem & Yom-Tov 1996).

Correlations between dates of peak migration, median and mean migration and of duration of passage at Zait bay and Eilat were performed using the Spearman rank correlation test.

RESULTS

Passage dates

In spring, most migrants crossed Zait bay in March and April. Of the 17 species studied, 12 first appeared in February: Black Stork *Ciconia nigra*, White Stork *Ciconia ciconia*, White Pelican *Pelecanus onocrotalus*, Black Kite *Milvus migrans*, Egyptian Vulture *Neophron percnopterus*, Short-toed Eagle *Circus gallicus*, Steppe Buzzard *Buteo b. vulpinus*, Long-legged Buzzard *Buteo rufinus*, Lesser Spotted Eagle *Aquila pomarina*, Steppe Eagle *Aquila nipalensis*, Booted Eagle *Hieraaetus pennatus* and Common Crane *Grus grus* (Figure 2, Table 1). In two



Plate 1. The coastal Gebel El Zait range and, just visible further behind on the horizon across the gulf of Suez, the mountains of Sinai, to the east of the study area. © Ingo Weiss



Plate 2. The foothills of the Red Sea mountains, west of the study area. © Gudrun Hilgerloh



Plate 3. Some of the few acacias in the study area. © Ingo Weiss

species, Steppe Eagle and Common Crane, 50% of the migrants (to median date of passage) passed Zait bay before mid March. The species with the latest start (first sightings end March–mid-April) were Levant Sparrowhawk and European Honey Buzzard *Pernis apivorus*. In these species, the median date of passage was reached between mid-April and 2 May. Honey Buzzard was the only species with a median in May.

The median date correlated significantly with that of Christensen *et al* (1981) at Eilat (Spearman correlation test $n = 10$, $R = 0.88$, $t = 5.24$, $p = 0.0008$) and also the mean date ($n = 10$, $R = 0.908$, $t = 6.15$, $p = 0.0003$). In the Leshem & Yom-Tov (1996) longer term study from Eilat no median dates of passage were presented. However, comparing the mean passage dates at Zait bay with those of Leshem & Yom-Tov (1996) (Table 2) revealed a significant correlation (Spearman test $n = 9$, $R = 0.864$, $t = 4.551$, $p = 0.002$).



Plate 4. Undulating landscape in the northern part of the study area. © Ingo Weiss

Of globally endangered species, Pallid Harrier *Circus macrourus* and Spotted Eagle *Aquila clanga* were noted migrating through the study area. Pallid Harriers were observed 23 February–26 April with the median on 31 March ($n = 13$) and Spotted Eagles 14 March–16 April with the median on 11 April ($n = 9$).

Peak migration

Observed migration density differed considerably between species, not only as a result of differences in migration density but also as some bird species are easier to detect than others. The 17 species studied can be grouped into 4 classes according to the number of birds recorded on the peak passage day:

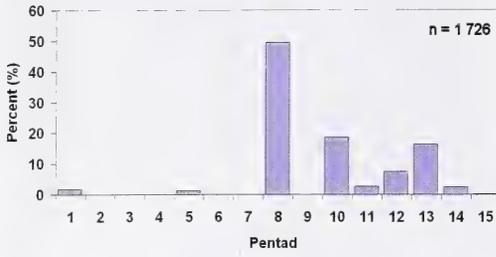
- Over 10 000: White Stork.
- Between 1000 and 10 000: Levant Sparrowhawk, Steppe Buzzard, Common Crane.
- From 100 to 999: White Pelican, Black Stork, Black Kite, Honey Buzzard, Steppe Eagle.
- Under 100, thus of less relevance at this site: Egyptian Vulture, Marsh Harrier, Eurasian Sparrowhawk, Long-legged Buzzard, Lesser Spotted Eagle, Booted Eagle, Short-toed Eagle.

The proportion of migrants of one species passing on the peak passage day varied between 11 and 79%. The highest percentages were registered in Levant Sparrowhawk and Honey Buzzard with 50% and more passing through in one day (Table 1, Figure 2).

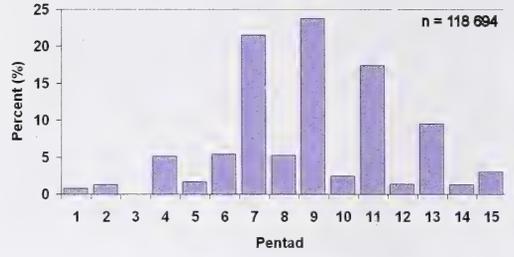
Table 1. Dates of first and last sightings (and duration of this period), dates of first and last sightings of the central 90% (and duration of this period), dates of the median and peak migration days, number of birds on peak migration day, percentage of total observed birds on peak migration day and total number of birds observed, Zait bay, Egypt, 2007.

	All sightings			Central 90%			Median date	Peak date	Numbers on peak day	Peak as % of all	Total
	from	to	days	from	to	days					
Black Stork <i>Ciconia nigra</i>	23 Feb	6 May	73	5 Mar	26 Apr	53	5 Apr	15 Apr	290	17.00	1709
White Stork <i>Ciconia ciconia</i>	23 Feb	6 May	73	11 Mar	26 Apr	47	3 Apr	22 Mar	25 561	21.20	120 745
White Pelican <i>Pelecanus onocrotalus</i>	21 Feb	6 May	75	27 Mar	28 Apr	33	31 Mar	27 Mar	335	18.60	1801
Lesser Kestrel <i>Falco naumanni</i>	17 Mar	6 May	51	19 Mar	2 May	45	2 Apr	20 Apr	5	25.00	20
European Honey Buzzard <i>Pernis ptilorivus</i>	17 Apr	6 May	20	26 Apr	5 May	10	2 May	2 May	687	49.70	1381
Black Kite <i>Milvus migrans</i>	23 Feb	6 May	73	20 Mar	25 Apr	37	5 Apr	31 Mar	344	20.70	1660
Egyptian Vulture <i>Neophron percnopterus</i>	26 Feb	2 May	68	27 Feb	2 May	65	11 Apr	5 Apr	11	17.20	64
Short-toed Eagle <i>Circus galkulus</i>	23 Feb	2 May	71	10 Mar	28 Apr	50	14 Apr	16 Apr	18	18.90	95
Western Marsh Harrier <i>Circus aeruginosus</i>	19 Mar	5 May	48	22 Mar	2 May	42	21 Apr	26 Apr	16	25.80	62
Levant Sparrowhawk <i>Accipiter brevipes</i>	30 Mar	2 May	34	15 Apr	26 Apr	12	26 Apr	26 Apr	6014	79.10	7600
Eurasian Sparrowhawk <i>Accipiter nisus</i>	1 Apr	4 May	34	4 Apr	2 May	29	21 Apr	26 Apr	15	19.70	76
Steppe Buzzard <i>Buteo b. vulpinus</i>	20 Feb	6 May	76	12 Mar	28 Apr	48	3 Apr	29 Mar	2983	12.70	23 539
Long-legged Buzzard <i>Buteo rufinus</i>	23 Feb	4 May	71	23 Feb	11 Apr	48	16 Mar	6 Apr	17	17.30	98
Lesser Spotted Eagle <i>Aquila pomarina</i>	20 Feb	6 May	76	25 Feb	28 Apr	63	1 Apr	11 Apr	46	23.60	195
Steppe Eagle <i>Aquila nipalensis</i>	20 Feb	2 May	72	22 Feb	17 Apr	55	6 Mar	25 Feb	186	10.60	1747
Booted Eagle <i>Hieraeetus pennatus</i>	28 Feb	6 May	68	28 Mar	2 May	36	21 Apr	26 Apr	20	16.90	118
Common Crane <i>Grus grus</i>	22 Feb	12 Apr	50	27 Feb	10 Mar	12	10 Mar	8 Mar	3923	24.70	15 906

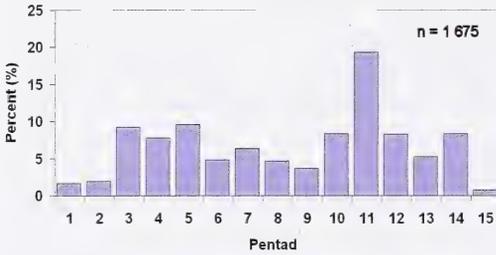
White Pelican



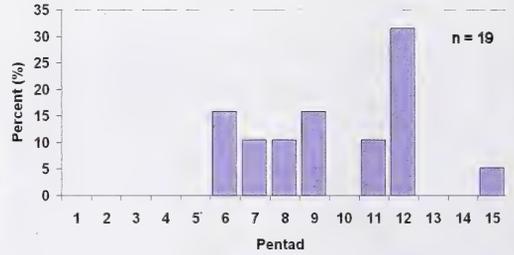
White Stork



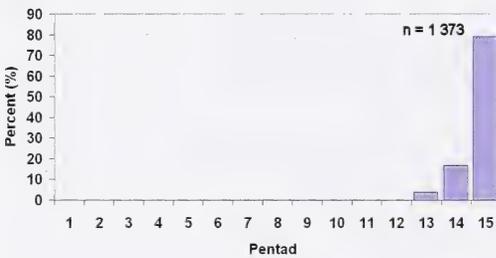
Black Stork



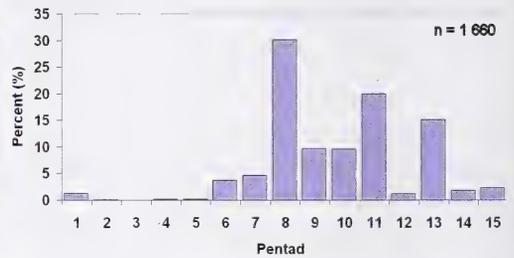
Lesser Kestrel



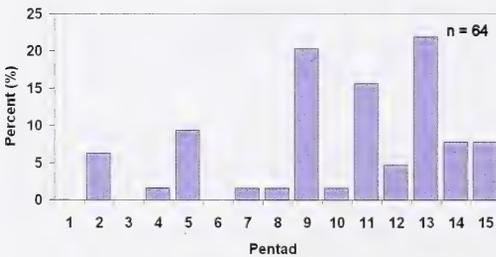
Honey Buzzard



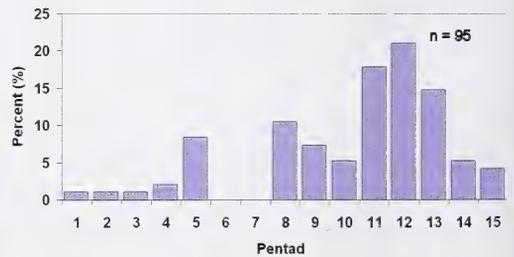
Black Kite



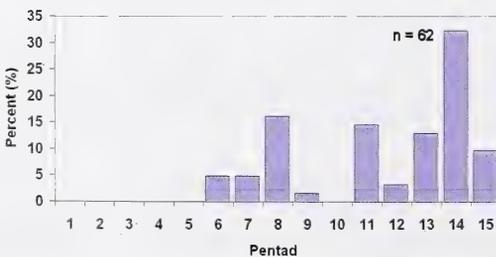
Egyptian Vulture



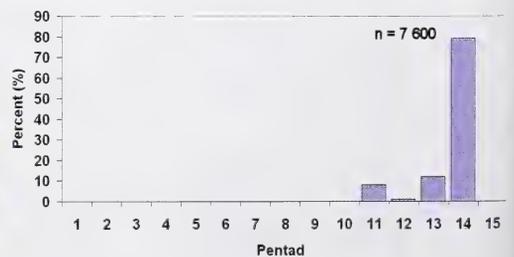
Short-toed Eagle



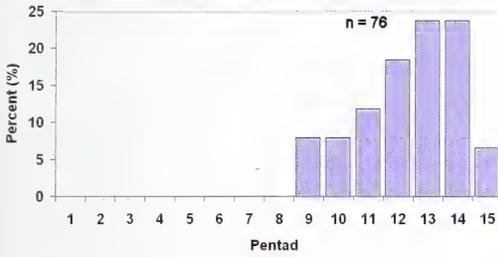
Marsh Harrier



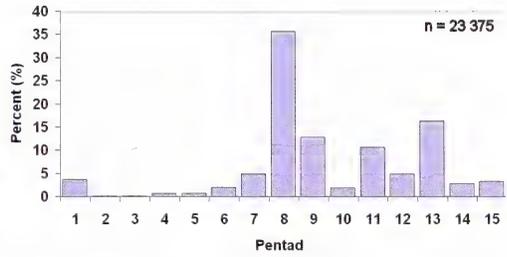
Levant Sparrowhawk



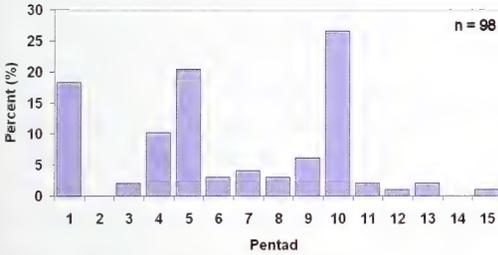
Sparrowhawk



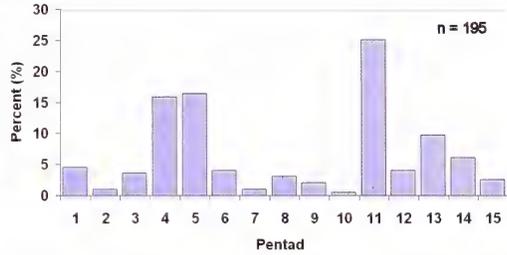
Steppe Buzzard



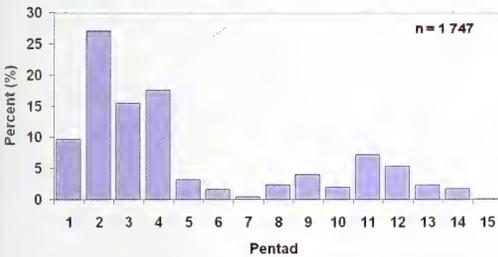
Long-legged Buzzard



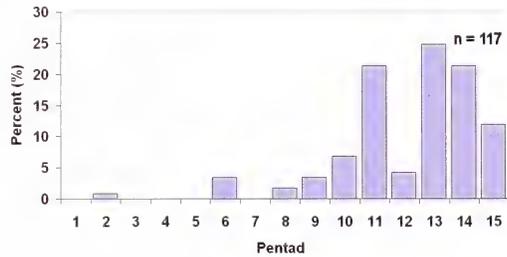
Lesser Spotted Eagle



Steppe Eagle



Booted Eagle



Common Crane

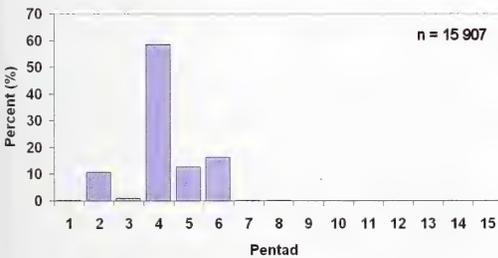


Figure 2. Timing of soaring and gliding bird migration at Zait bay, Egypt, as percentage of all birds of the species, 20 February–5 May 2007.

Pentads: 1, 20 Feb–24 Feb; 2, 25 Feb–1 Mar; 3, 2 Mar–6 Mar; 4, 7 Mar–11 Mar; 5, 12 Mar–16 Mar; 6, 17 Mar–21 Mar; 7, 22 Mar–26 Mar; 8, 27 Mar–31 Mar; 9, 1 Apr–5 Apr; 10, 6 Apr–10 Apr; 11, 11 Apr–15 Apr; 12, 16 Apr–20 Apr; 13, 21 Apr–25 Apr; 14, 26 Apr–30 Apr; 15, 1 May–5 May.

The entire passage of the Levant Sparrowhawk was achieved in a small number of very large flocks. The highest numbers on the peak day were recorded in the White Stork; these, however, contributed only 21% of the total number of White Storks observed in the entire season (Table 1). In non-flocking species such as Egyptian Vulture, Marsh Harrier, Booted Eagle and Short-toed Eagle, 17–26% of the birds migrated through the area on the peak day.

The day with peak numbers of migrants correlated significantly with the corresponding peak day of Christensen *et al* (1981) (Spearman $n = 10$, $R = 0.83$, $t = 4.17$, $p = 0.003$) and of Leshem & Yom-Tov (1996) (Spearman $n = 9$, $R = 0.89$, $t = 5.03$, $p = 0.002$) (Table 2).

Table 2. Date of median, mean and peak passage day and duration of the passage of the central 90% of migrants at Zait bay, Egypt, 2007, and in Israel (Christensen *et al* 1981, Leshem & Yorn-Tov 1996). In Israel, raptor counts were performed at Eilat and White Stork counts further west.

	Median date		Mean date		peak date		duration of 90% of passage (days)		
	Zait bay	Israel (Chr 81)	Zait bay	Israel (L & Y-T 96)	Zait bay	Israel (L&Y-T 96)	Israel (L&Y-T 96)	Zait bay	Israel (Chr 81)
White Stork	3 Apr		31 Mar	30 Mar	22 Mar	28 Mar	43	47	
Honey Buzzard	2 May	9 May	26 Apr	5 May	2 May	9 May	11	10	15
Black Kite	5 Apr	31 Mar	31 Mar	30 Mar	31 Mar	29 Mar	21	37	33
Egyptian Vulture	11 Apr	1 Apr	31 Mar	1 Apr	5 Apr	5 May	57	65	65
Short-toed Eagle	14 Apr	28 Mar	29 Mar	20 Mar	16 Apr	21 Mar	50	50	56
Western Marsh Harrier	21 Apr	9 Apr	11 Apr	11 Apr	26 Apr	12 Apr	42	42	62
Levant Sparrowhawk	26 Apr	20 Apr	15 Apr	24 Apr	26 Apr	24 Apr	9	12	9
Eurasian Sparrowhawk	21 Apr	11 Apr	28 Apr	13 Apr	26 Apr	10 Apr	29	29	29
Steppe Buzzard	3 Apr	8 Apr	29 Mar	3 Apr	29 Mar	31 Mar	25	48	30
Steppe Eagle	6 Mar	26 Feb	27 Mar	10 Mar	25 Feb	10 Mar	33	55	45
Booted Eagle	21 Apr	9 Apr	7 Apr	10 Apr	26 Apr	9 Apr	39	36	39

Flock size

Among raptors the greatest mean flock size was recorded in Levant Sparrowhawk (253 birds). All other raptor species migrated in small or very small flocks or singly (Table 3). However, birds often migrated in mixed-species flocks. Among the non-raptors, the White Stork, with an average of c1000 birds/flock, showed the largest mean flock size, followed by the Common Crane, with 150 birds/flock (Table 3).

Duration of passage

In general, the passage of the first and last 5% of the migrants was spread over relatively long periods. Sightings of the Common Crane, for example, were recorded over 50 days with the central 90% passing within 12 days. White Pelicans were observed over a period of 75 days, but the passage of the central 90% lasted 33 days (Table 1).

Time between first and last sighting of a species varied between 20 and 76 days (Table 1) with the central 90% of the migrants recorded in periods of 10–65 days. In the following, figures refer only to the central 90% of the migrants. The shortest passage period (10–12 days) was in Levant Sparrowhawk, Honey Buzzard and Common Crane, all flocking species. Non-flocking species such as Egyptian Vulture, Marsh Harrier, Booted Eagle and Short-toed Eagle had passage periods of 36–65 days (Table 1). Another passage pattern was displayed by White Stork and White Pelican, both species that form large flocks. The central 90% of both had a fairly long passage period, 33 and 47 days respectively.

A significant correlation between the duration of passage through the Zait bay area and Israel in 1977 (Christensen *et al* 1981) (Spearman $n = 10$, $R = 0.83$, $t = 4.21$, $p = 0.003$) was found but not with

Table 3. Mean flock size per species and confidence interval (eg European Honey Buzzards migrated through the area with an average flock size of 13.95 birds and 95% of their flocks varied in size between 9.24 and 18.66 birds), Zait bay, Egypt, 2007.

	N (flocks)	Mean number per flock	Confidence interval (-0.95%)	Confidence interval (+ 0.95%)
Raptors				
Lesser Kestrel	18	1.06	0.94	1.17
European Honey Buzzard	99	13.95	9.24	18.66
Black Kite	319	5.20	4.07	6.34
Egyptian Vulture	38	1.61	1.29	1.93
Short-toed Eagle	82	1.15	1.03	1.27
Western Marsh Harrier	51	1.22	1.07	1.36
Levant Sparrowhawk	30	253.33	85.33	421.34
Eurasian Sparrowhawk	66	1.15	1.04	1.27
Steppe Buzzard	1555	15.46	13.19	17.73
Long-legged Buzzard	52	1.88	1.11	2.66
Lesser Spotted Eagle	103	1.89	1.50	2.29
Steppe Eagle	410	4.26	3.41	5.11
Booted Eagle	84	1.40	1.19	1.62
Non-raptors				
Black Stork	74	23.18	16.38	29.97
White Stork	143	998.22	572.65	1423.78
White Pelican	25	75.04	38.13	111.95
Common Crane	106	150.07	110.68	189.46

that of the Leshem & Yom-Tov (1996) study (Spearman $n = 9$ $R = 0.60$, $t = 1.98$, $p = 0.09$) (Table 2).

DISCUSSION

In this study, the phenology of the passage of soaring and gliding birds close to the straits in the southern part of the gulf of Suez was investigated. The dates of peak and mean migration were similar to those in Israel (Christensen *et al* 1981, Leshem & Yom-Tov 1996). Timing of migration is related to various factors *eg* availability of food at the breeding grounds. A species feeding mainly on mammals in the breeding area (Steppe Eagle) was the one that expectedly passed first and the species passing last (Honey Buzzard) is insectivorous (Mebs & Schmidt 2006). However, the timing of other species (Table 1) is not so easy to explain.

The raptor observed migrating in the largest flocks (Levant Sparrowhawk) had one of the shortest passage periods. Similar findings are reported for the Broad-winged Hawk *Buteo platypterus* in America (Bildstein 2006, Newton 2008). Young birds are less inclined to migrate in large flocks than adults (Bildstein 2006). This pattern was seen in the Steppe Eagle, where adults formed mostly large flocks whereas immature birds migrated singly or in small groups (Hilgerloh *et al* unpublished data). Storks and other non-raptors displayed a different behaviour. Although the White Stork formed the largest flocks, its passage period was very protracted (Figure 2, Table 2), which reflects findings from Israel (Leshem & Yom-Tov 1996).

The duration of passage often depends on the timing of migration of immatures. Raptor species with a late migration of immatures were observed migrating through the study area for a longer period than those where immatures remain in the wintering quarters, con-

firming the results of Myers (1981) and Kjellén (1990). In spring, adults set off at first within a few days and the immatures of various ages follow later over a longer period, as shown for the Steppe Buzzard by Gorney & Yom-Tov (1994). In our data, this was best recognized in the phenology of the Steppe Eagle (Figure 2). Apparently, the wintering area of adult Steppe Eagles is separate from that of immatures, there being no overlap (Curry-Lindahl 1982). If most immature birds of a species remain on the wintering grounds (Honey Buzzard), its passage period may be expected to be as condensed as birds with short sexual maturation (Levant Sparrowhawk).

Common Cranes synchronise their migration by forming huge congregations before setting off, which goes far to explaining the short passage period we observed (Figure 2). As cranes are not averse to occasional stints of active flying rather than gliding and soaring (Pennycuik *et al* 1979), they are less dependent on thermals and are therefore in a position to cross the sea almost anywhere. It would appear, however, that cranes prefer to migrate from Zait bay directly across the gulf of Suez, presumably to conserve energy. At this migration bottleneck, we observed the highest concentration of Common Cranes ever recorded in Egypt (pers obs, Goodman & Meininger 1996).

The White Stork, migrating through one of its most important bottlenecks along the East African flyway, at Zait bay (Berthold *et al* 2001), also congregated in huge flocks. Unlike the Common Crane, the White Stork's passage period was long at Zait bay, which may to some extent be an effect of the extensive range of their wintering area (Elphick 2008).

A further consideration is the impact of energy strategies on migration timing. A species feeding extensively en route will migrate over a longer period than a species travelling on energy from fuel supplies accumulated before the journey. Contradicting earlier hypotheses, it appears that most soaring birds do, in fact, feed during migration. They hunt and feed either on a daily basis or opportunistically in times of poor migration weather (Nile *et al* 1996, Gorney & Yom-Tov 1994, Yosef 1996). And they pause to build up sufficient fat reserves whenever they are faced with crossing inhospitable areas (Yosef 1996). Towards the end of their journey, on approaching their breeding grounds, soaring birds often seek to replenish their energy reserves as capital for the breeding season, reflected in unequal migration speeds in Europe and Africa (Alerstam 2006, Hedenström 2006, Shamoun-Baranes *et al* 2006, Klaassen *et al* 2008). The nature of these strategies employed may vary both between and within species (Gorney & Yom-Tov 1994).

Among non-raptors, the White Stork was the species that rested in highest numbers around the coastal bays of Zait bay and nearby Ras Gemsa, where thousands of them spent the night before crossing the gulf of Suez (pers obs). Cranes and pelicans were also observed resting in the middle of the desert plain at the study area. In general, storks migrate lean (with low body mass and minimal fat deposits) and fly nearly every day for 8–10 hours, with a higher migration speed in Africa than in the Middle East and Europe (Berthold *et al* 2001, Shamoun-Baranes *et al* 2006). Consequently they need to refuel frequently.

Does the phenological data of this study reflect the usual pattern of spring passage at Zait bay? A comparison of our results with those of a study conducted over several years in Israel (Leshem & Yom-Tov 1996) revealed a strong correlation of passage dates. Further studies at Zait bay would be of interest.

ACKNOWLEDGEMENTS

We wish to thank the following ornithologists who carried out field work with us: G Pegram, J Rauhut, A Schreiber, D Sturm and K Wilson. F Ziesemer, K Wilson and F Liechti made critical comments. A Abdelmageed provided support in Egypt, E Niemann provided support during the entire study. Deutsche Entwicklungsbank (KfW) financed the field work and NREA (New and Renewable Energy Authority of Egypt) gave permission to publish these data.

REFERENCES

- Alerstam, T. 1990. *Bird migration*. Cambridge University Press, UK.
- Alerstam, T. 2006. Strategies for transition to breeding in time-selected bird migration. *Ardea* 94: 347–357.
- Baha El Din, S. 1999. *Directory of important bird areas in Egypt*. BirdLife International, UK.
- Berthold, P. 1990. *Vogelzug. Eine kurze, aktuelle Gesamtübersicht*. Wissenschaftl, Buchgesellschaft Darmstadt, Germany.
- Berthold, P, W van den Bossche, W Fiedler, E Gorney, M Kaatz, Y Leshem, E Nowak & U Querner. 2001. Der Zug des Weißstorchs (*Ciconia ciconia*) eine besondere Zugform auf Grund neuer Ergebnisse. *Journal für Ornithologie* 142: 73–92.
- Bildstein, K. 2006. *Migrating raptors of the world, their ecology and conservation*. Cornell University Press, Ithaca, NY.
- Christensen, S, O Lou, M Müller & H Wohlmuth. 1981. The spring migration of raptors in southern Israel and Sinai. *Sandgrouse* 3: 1–42.
- Christensen, KD & FP Jensen. 2002. *Atlas of bird migration at the Gulf of Suez, Egypt*. Ornis Consult Ltd, Ministry of Foreign Affairs, Danida, Copenhagen.
- Curry-Lindahl, K. 1982. *Das große Buch vom Vogelzug*. Paul Parey, Berlin.
- Elphick, J. 2008. *Atlas des Vogelzugs*. Hauptverlag, Bern.
- Goodman, SM & PL Meininger (eds). 1989. *The Birds of Egypt*. Oxford University Press, UK.
- Gorney, E & Y Yom-Tov. 1994. Fat, hydration condition, and moult of Steppe Buzzards *Buteo buteo vulpinus* on spring migration. *Ibis* 136: 185–192.
- Grieve, A. 1996. Spring raptor movements at Gebel el Zeit, Egypt. *Sandgrouse* 18 (1): 61–63.
- Hilgerloh, G. in press. The desert at Zait Bay/Egypt: a bird migration bottleneck area of global importance. *Bird Conservation International*.
- Hedenström A. 2006. Scaling of migration and the annual cycle of birds. *Ardea* 94: 399–408.
- Kjellén, N. 1990. Sex and age ratios in migrating and wintering raptors in Skane, southern Sweden. *Var Fagelvärld* 49: 211–220.
- Klaassen, RHG, R Strandberg, M Hake & T Alerstam. 2008. Flexibility in daily travel routines causes regional variation in bird migration speed. *Behavioral Ecology and Sociobiology* 62: 1427–1432.
- Leshem, Y & Y Yom-Tov. 1996. The magnitude and timing of migration by soaring raptors, pelicans and storks over Israel. *Ibis* 128: 188–203.
- Mebs, T & D Schmidt. 2006. *Die Greifvögel Europas, Nordafrikas und Vorderasiens*. Kosmos, Stuttgart.
- Myers, N. 1981. A test of three hypotheses for latitudinal segregation of the sexes in wintering birds. *Canadian Journal of Zoology* 59: 1527–1534
- Newton, I. 2008. *The migration ecology of birds*. Academic Press, Heidelberg.
- Niles, LJ, J Burger & KE Clark. 1996. The influence of weather, geography and habitat on migrating raptors on Cape May Peninsula. *Condor* 98: 382–394.
- Pennycuik, CJ, T Alerstam & B Larsson. 1979. Soaring Migration of the Common Crane *Grus grus* observed by radar. *Ornis Scandinavica* 10: 241–251.
- Safriel, U. 1968. Bird migration at Elat, Israel. *Ibis* 110: 283–320.
- Shamoun-Baranes, J, A Baharad, P Alpert, P Berthold, Y YomTov, Y Dvir & Y Leshem. 2006. The effect of wind, season and latitude on the migration speed of white storks *Ciconia ciconia*, along the eastern migration route. *Journal of Avian Biology* 34: 97–104.
- Shirihai, H. 1996. *Birds of Israel*. Academic Press, London.
- Shirihai, H, R Yosef, D Alon, G Kirwan & R Spaar. 2000. *Raptor migration in Israel and the Middle East (a summary of 30 years of field research)*. International Birding & Research Center in Eilat, Israel.
- Spaar, RR, H Stark & F Liechti. 1998. Migratory flight strategies of Levant Sparrowhawks: time or energy minimization? *Animal Behaviour* 56: 1185–1197.
- Stark, H & F Liechti. 1993. Do Levant Sparrowhawks *Accipiter brevipes* also migrate at night? *Ibis* 135: 233–236.
- Yosef, R. 1996. Raptors feeding on migration at Eilat, Israel: Opportunistic behavior or migratory strategy? *Journal of Raptor Research* 30: 242–246

Guðrun Hilgerloh, Institute of Zoology, Johannes Gutenberg University, Johannes v. Müllerweg 6, D-55128 Mainz, Germany. guðrun.hilgerloh@t-online.de

Use of nest baskets by Long-eared Owls *Asio otus* in Israel

MOTTI CHARTER, YOSSI LESHEM & SHAY HALEVI



Plate 1. Long-eared Owl incubating in a nest basket, April 2007, Israel. © Motti Charter

The breeding success of Long-eared Owls *Asio otus* has been well studied in Europe and the USA (Glue & Hammond 1974, Glue 1977, Village 1981, Garner 1982, Korpimäki 1992, Garner & Milne 1997, Henrioux 2002) but little is known for the east Mediterranean region (Manners & Diekmann 1997). In Israel, Long-eared Owl numbers have increased dramatically since 2002, with breeding taking place in many suburban and urban habitats (Dovrat & Merose 2005). This increase is probably linked to the increased number of Hooded Crows *Corvus corone*, whose nests are also the primary nest sites used by Long-eared Owls in Israel. Many farmers and ordinary citizens have complained about the crows causing serious damage or constituting a pest, and consequently programmes have been established to eradicate or reduce the number of crows in certain areas, which is likely also to reduce the number of breeding Long-eared Owls (Hadjisterkotis 2003). In Europe (Village 1981, Garner 1982, Garner & Milne 1997) nest baskets have been used successfully as alternative nest sites for Long-eared Owls, but this has never been attempted in Israel.

Here we present the results of a preliminary study to determine whether nest baskets can be used successfully by Long-eared Owls in Israel. In December 2006, sixteen 40 cm diameter nest baskets (steel basket with soft padding for the interior) were positioned at a height of six metres above the ground in eucalyptus trees bordering agricultural fields in the Yizre'el valley, northeast Israel. All baskets were visited weekly. For each breeding attempt (defined as a nest in which eggs have been laid, Steenhof 1987), we recorded, when possible, the date of egg-laying, clutch size, brood size (number of young observed less than 1 week after hatching), and number of young that left the nest ('branchers', Korpimäki 1992). Data are presented as means \pm SE. Six nest baskets (37.5%) were occupied, and later branched young, during the 2007 breeding season (Plates 1 & 2). Even though the baskets

were only placed in December 2006, the first was occupied just a little over two months after placement. Clutch size was 4.0 ± 0.4 ($N = 4$), brood size was 3.6 ± 0.7 ($N = 5$) and number of branchers was 3.0 ± 0.6 ($N = 6$). Mean laying date was April 1 ± 12.0 days, ranging from 26 February–18 May 2007 ($N = 6$). The addition of nesting baskets appears to have been a success. The percentage of occupation of nest baskets was similar to that reported in England during years of highest occupation (Garner & Milne 1997). An additional 72 nest baskets were positioned before the 2008 breeding season in the Yizre'el valley with similar results (M Charter unpub data). The provision of nest baskets for Long-eared Owls may play an important role in pest control, as small mammals, mainly rodents, typically form between 83–96% of the diet of the Long-eared Owl (Mikkola 1983, Yosef 1997, M Charter unpub data).



Plate 2. A nest basket with three Long-eared Owl young in a eucalyptus tree, April 2007, Israel. © Motti Charter

ACKNOWLEDGEMENT

We thank Hava Ravid for field assistance.

REFERENCES

- Dovrat, E & A Merose. 2005. Long-eared breeding survey. *Torgos* 33: 9–23.
- Garner, DG. 1982. Nest-site provision experiment for Long-eared Owls. *British Birds* 75: 376–377.
- Garner, DG & BS Milne. 1997. A study of Long-eared Owl *Asio otus* using wicker nesting baskets. *Bird Study* 45: 62–67.
- Glue, DE. 1977. Breeding biology of Long-eared Owls. *British Birds* 70: 318–331.
- Glue, DE & GF Hammond. 1974. Feeding ecology of the Long-eared Owl in Britain and Ireland. *British Birds* 67: 361–369.
- Hadjisterkotis, E. 2003. The effect of corvid shooting on the population of owls, kestrels and cuckoos in Cyprus, with notes on corvid diet. *Zeitschrift Fuer Jagdwissenschaft* 49: 50–60.
- Henrioux F. 2002. Nest-site selection of the Long-eared Owl *Asio otus* in northwestern Switzerland. *Bird Study* 49: 250–257.
- Korpimäki, E. 1992. Diet, prey choice, and breeding success of Long-eared Owls: effects of multiannual fluctuations in food abundance. *Canadian Journal of Zoology* 70: 2373–2381.
- Manners GR & J Diekmann. 1997. Long-eared Owl *Asio otus* breeding in north-west Syria. *Sandgrouse* 19:62–63.
- Mikkola H. 1983. Owls of Europe. T & A D Poyser, Calton, UK.
- Steenhof, K. 1987. Assessing raptor reproductive success and productivity. In: Giron Pendleton, BA, BA Millsap, CW Cline & DM Bird (eds). *Raptor management techniques manual*. National Wildlife Federation, Washington DC, pp157–170.
- Villagr, A. 1981. The diet and breeding of Long-eared Owls in relation to vole numbers. *Bird Study* 28: 215–224.
- Yosef, R. 1997. Diet of Long-eared Owls *Asio otus* wintering in the Khula valley, Israel. *Sandgrouse* 19: 148–149.

Motti Charter & Yossi Leshem, George S Wise Faculty of Life Sciences, Department of Zoology, Tel Aviv University, IL-69978 Tel Aviv, Israel. charterm@post.tau.ac.il

Shay Halevi, Moshav Ram-On 19205, Israel

The first Collared Kingfisher *Todiramphus chloris* in Yemen

DAVID B STANTON



Plate 1. Collared Kingfisher *Todiramphus chloris*, 4 October 2008, west coast of Yemen. © David B Stanton

Collared Kingfisher *Todiramphus chloris* is a highly variable and wide-ranging species that occurs from the Sudan eastwards through many countries across to American Samoa in the South Pacific. Taxonomists have described as many as 50 subspecies of which two, *T. c. abyssinicus* and *T. c. kalbaensis*, occur in the Middle East (Dickinson 2003). The former is known from Saudi Arabia's southern Red Sea coast while the latter has been recorded at Khor Kalba in the United Arab Emirates and Khors Liwa and Shinas of Oman (Dickinson 2003, Eriksen *et al* 2003, Porter *et al* 1996). A denizen of mangroves where it preys principally on crabs, the Collared Kingfisher has long been suspected as being present in the mangrove stands of Yemen's west coast.

On 3 October 2008, my wife Sharon and I visited the 'Ecotourism Camp' at Al Jar (16° 04' 25.26 N, 42° 50' 09.82 E) approximately mid-way between Al Luhayyah and Midi. Easily accessible by asphalted road from Abs, the camp is situated just above the high tide line at the northern extremity of Yemen's most extensive mangrove *Avicennia marina* forest. Extending 29 km to the south, this forest, Al Buhays, is up to 300 m in breadth and contains much unexplored habitat.

At around 09.30 h on the following morning, I flushed a turquoise bird of medium size from one mangrove into the lower branches of a second, near the camp. Looking at the bird from close range, through binoculars and telescope, it was instantly recognizable as a Collared Kingfisher. Digiscoping the bird proved somewhat challenging as it spooked eas-

ily and tended to alight in rather dense foliage. Nevertheless, it stayed within a relatively small area and I was eventually able to capture acceptable images (Plate 1).

On 24 October, I returned to the area with a group of students, teachers and Simon Aspinall. On the morning of 25 October, Simon, Maryam Hantash and I again spotted a Collared Kingfisher near the camp. Possibly the same individual that I had seen on the previous visit three weeks earlier, this bird was even shyer. It did, however, permit clear views for all three observers.

Description: A rather large kingfisher almost uniformly turquoise with a clear white collar when seen from behind. Perched, the chin, throat, cheeks, breast, and belly were clear white with a prominent white patch above the lores extending into a weak white supercilium. A broad dark eyestripe appeared black under the viewing conditions that prevailed. Its large, predominantly black, boat-shaped bill showed ivory on the proximal two thirds of the lower mandible. The bird's eye was black and the feet dark grey. Given that summer breeding Grey-headed Kingfishers *Halcyon leucocephala* would be passing through the area at this time, special care was taken to eliminate any possible confusion with this species.

Although the individual(s) observed at Al Jar may have arrived following dispersal from the breeding area in Saudi Arabia, local breeding can not be ruled out. The mangroves in the immediate area where the bird was recorded did not appear large enough to meet this species' nesting requirements. However, the PERSGA/GEF (2004) report on the status of mangroves in the Red Sea and gulf of Aden states that "... those in the inner parts of the stand [Al Buhays] are relatively undisturbed and grow 4–6 m high with a GBH [girth at breast height] of up to 100 cm." It thus seems likely that within the extent of mangrove forest along this coast are trees (or perhaps subterranean cavities or burrows) large enough to support breeding by Collared Kingfisher. Further research is obviously needed to determine the exact status of this species in Yemen.

ACKNOWLEDGEMENTS

Yemeni Minister for Water and the Environment, HE Abdulrahman al Eryani, generated the initial interest in visiting the area. Richard Porter and Simon Aspinall made valuable comments on the ms prior to submission.

REFERENCES

- Dickinson, EC. 2003. *The Howard & Moore Complete Checklist of the Birds of the World*. 3rd edition. Christopher Helm, London.
- Eriksen, J, DE Sargeant & R Victor. 2003. *Oman Bird List*. 6th edition. Centre for Environmental Studies and Research, Sultan Qaboos University, Oman.
- PERSGA/GEF. 2004. *Status of Mangroves in the Red Sea and Gulf of Aden*. PERSGA Technical Series No. 11. PERSGA, Jeddah.
- Porter, RF, S Christensen & P Schiermacker-Hansen. 1996. *Field Guide to the Birds of the Middle East*. T & AD Poyser, London.

David B Stanton, Yemeni Leopard Recovery Program, PO Box 2002, Sana'a, Republic of Yemen. ylrp@yemenileopard.org, yos@y.net.ye

Food-dunking behaviour by a Eurasian Jay *Garrulus glandarius*

DONALD C DEARBORN & ANDREA B GAGER

INTRODUCTION

Dunking of food in water is an interesting but uncommon behaviour in animals. One of the best-known cases involves the apparent social transmission of food-washing behaviour by primates, in which Japanese macaques *Macaca fuscata* washed sand from sweet potatoes (Kawai 1965). Despite the spread of food-washing behaviour in that particular case, food dunking in a broader sense remains uncommon, performed predominantly by some species of primates and birds.

In both primates and birds, dunking food in water appears to serve one of two functions: washing food to remove unpalatable coatings, or softening food to make it easier to eat (Wheatley 1988, Visalberghi & Fragaszy 1990, Morand-Ferron *et al* 2004). Washing is most often associated with foods that have been obtained from muddy or sandy sources, such as Killdeer *Charadrius vociferus* eating frogs (Schardien & Jackson 1982) or crab-eating macaques *Macaca fascicularis* eating fruit that researchers had deliberately coated with sand (Visalberghi & Fragaszy 1990). Softening has been reported most often for human-derived food items, such as wild Carrion Crows *Corvus corone* eating dry bread (Jones 1979) or captive monkeys eating pellets of commercial monkey chow (Visalberghi & Fragaszy 1990). The intention of these behaviours is generally not known but is instead inferred or assumed by observers.

Dunking behaviour has been reported from c40 species of birds, with disproportionate representation from the Icteridae (6 species reported) and Corvidae (8 species reported; Morand-Ferron *et al* 2004, Morand-Ferron 2005). Here, we describe an observation of food dunking by an additional corvid, the Eurasian Jay *Garrulus glandarius*.

BEHAVIOURAL OBSERVATION

At 12.45 pm local time on 5 April 2008, we observed a Eurasian Jay dunk and then eat an egg. In the Beit HaKerem residential neighbourhood of Jerusalem, Israel, an adult jay of unknown sex landed at a water dish on a balcony, c5 m away from us. The jay was carrying in its bill an immaculate white egg, ovoid in shape and c25–30 mm long. The egg was similar in size and appearance to a dove's, and Laughing Doves *Streptopelia senegalensis* were nesting in this neighbourhood.

Immediately upon arriving with the egg, the jay perched on a railing beside the water dish, leaned forward, and dunked the egg in the water twice. The bird's posture did not suggest that it was drinking from the water dish. The jay then promptly turned and flew c10 m to perch on a higher balcony, where it broke the egg open on a stone ledge and consumed the yolk and albumin. We used binoculars to watch the jay consume the egg, but our view of the stone ledge was partially blocked by the viewing angle. Thus, we could not determine whether the egg was broken open by initial contact with the stone ledge or by subsequent contact with the jay's bill. The egg appeared to be freshly laid or inviable, as there was no readily detectable embryo.

DISCUSSION

This observation of food dunking is noteworthy in two regards. First, this seems to be the only report of food dunking by a Eurasian Jay, adding to the corvids that perform this

behaviour. Crows, ravens, and jays might dunk food more often than other groups of birds, but they also might be more readily observed doing so because of their association with humans. Second, there are no reports of dunking eggs, though jays and other corvids are common nest predators (Andren 1992). Foods dunked by other species of birds include bread, pizza, crackers, potatoes, nuts, fruits, and dog food, plus an array of animals: worms, mollusks, crickets, frogs, rats, gophers, and birds (reviewed in Morand-Ferron *et al* 2004). In most of those cases, the authors suggested that the item was in need of softening or washing. In the case of crows, stickiness of the food item may be the cue that elicits dunking behaviour (Goodwin 1986). However, the egg that we observed did not appear to be cracked or covered with yolk, and it appeared clean. Furthermore, the jay broke the egg open before consuming the contents, *ie* the jay made no attempt to swallow the egg whole, though the egg may have been small enough to be consumed in this fashion. Thus, the function of egg dunking by this jay is unclear. Although this is a single incident, anecdotal observations of this type are useful to report because they facilitate the integration of disparate observations of rare behaviours into a comparative framework (*eg* Randler 2002, Morand-Ferron *et al* 2004).

ACKNOWLEDGEMENTS

This observation was made while DCD was a Fellow of the Lady Davis Trust, at Hebrew University of Jerusalem. We thank Salit Kark, Eran Banker and an anonymous reviewer for thoughts on the manuscript.

REFERENCES

- Andren, H. 1992. Corvid density and nest predation in relation to forest fragmentation—a landscape perspective. *Ecology* 73: 794–804.
- Goodwin, D. 1986. *Crows of the world*. University of Washington Press, Seattle.
- Jones, CG. 1979. Birds dunking food. *British Birds* 72: 189–190.
- Kawai, M. 1965. Newly-acquired pre-cultural behavior of the natural troop of Japanese monkeys on Koshima Islet. *Primates* 6: 1–30.
- Morand-Ferron, J. 2005. Dunking behavior in American Crows. *Wilson Bulletin* 117: 405–407.
- Morand-Ferron, J, L Lefebvre, SM Reader, D Sol & S Elvin. 2004. Dunking behaviour in Carib grackles. *Animal Behaviour* 68: 1267–1274.
- Randler, C. 2002. Avian hybridization, mixed pairing and female choice. *Animal Behaviour* 63: 103–119.
- Schardien, BJ & JA Jackson. 1982. Killdeers feeding on frogs. *Wilson Bulletin* 94: 87–89.
- Visalberghi, E & DM Fragaszy. 1990. Food-washing behavior in tufted capuchin monkeys, *Cebus apella*, and crabeating macaques, *Macaca fascicularis*. *Animal Behaviour* 40: 829–836.
- Wheatley, BP. 1988. Cultural behavior and extractive foraging in *Macaca fascicularis*. *Current Anthropology* 29: 516–519.

Donald C Dearborn, Department of Biology, Bucknell University, Lewisburg PA 17837, USA. don.dearborn@bucknell.edu

Andrea B Gager, School of Nursing, Jefferson College of Health Professions, Danville PA 17837, USA.

First record of Masked Shrike *Lanius nubicus* in Armenia

MARTIN ADAMIAN & FRANCIS X MOFFATT

The global breeding distribution of Masked Shrike *Lanius nubicus* covers Mesopotamia, Syria, Iran, Palestine, Israel, the southern Balkan peninsula and Asia Minor (including Cyprus), the wintering grounds being in NE Africa and southern Arabia (Dementyev 1954, Sokolov 1986, Mullarney *et al* 1999). It has a global population estimated to be 20 000–50 000 individuals and there is evidence of a population decline (Harris & Franklin 2000). In the Soviet Union territories, the first record of the species was in SE Turkmen SSR (Dementyev 1954).

On 30 May 2007, FXM, MA and Sylva Adamian observed on the southeastern slopes of Mount Aragats a pair of Masked Shrikes, the first record of this species in Armenia. Our group had been birding at altitudes between c700 m and c3000 m asl from 10.00 am mainly in the vicinity of Byurakan and Antarut villages. These villages are situated up to c1500–1700 m asl in an area of melon fields, vineyards, orchards and poplar trees. The more arid areas mostly contain wild rose *Rosa* sp bushes and a variety of dry mountain-steppe grasses and herbs (wormwood *Artemisia absinthium* is dominant). Byurakan astronomical observatory and Amberd meteorological station are sited at c1560 m and c2060 m asl respectively on the drier slopes above the villages.

About 200–250 m SE of Amberd meteorological station, there are two stands of dried-out and insect-infested acacia *Acacia pubina pseudocaucasica* trees (an introduced species) at c2050 m asl in an open grassy area scattered with boulders and wild rose bushes *Rosa canina*. The acacia stands are about 100 m from the lower edge of nearby oak woodland while the closest natural upper treeline here is above 2200 m asl. In this area at c16.00 h, FXM observed, from a distance of about 50 m, a bird with black and white markings perching in a shrike-like manner on top of one of the acacia trees. The bird dropped down abruptly, caught something and flew to the next tree. In flight, the bird's behaviour and appearance were reminiscent of Woodchat Shrike *L. senator*. When the bird alighted, however, it allowed lengthy, clear views using binoculars and after discussion we identified it as a Masked Shrike, a species with which FXM is very familiar having visited the southern Arava valley in Israel on around ten occasions in spring. The relatively subdued black coloration on the upperparts and the less intense orange wash on the flanks suggested strongly that this was a female.

Some 15 minutes later a second bird appeared and joined the female. By this time we had set up a telescope and were able to enjoy very clear, prolonged views of both birds at distances down to 20 m at times. The more intense black on the upperparts of the second bird, the white on the forehead, the black mask and the richer orange coloration on the flanks were typical of male Masked Shrike, illustrated nicely inside and, rather conveniently, on the cover of our field guide (Porter *et al* 1996).

Unfortunately, at about 17.30 h, after much excitement studying the birds, a relatively sudden and severe storm began, forcing our group to abandon birding for the day. Conditions prior to this had been good, with little wind and 4/8 cloud cover providing excellent viewing conditions. FXM and MA returned on 7 June and spent four or five hours searching for the birds but were unable to locate them.

ACKNOWLEDGEMENT

We thank Vasil Ananian for his comments on a draft of the ms including clarification of some aspects of habitat and topography.

REFERENCES

- Dementyev, DP.1954. [*Birds of the USSR*, vol. 6. Soviet Science], Moscow. [In Russian]
- Harris, T & K Franklin. 2000. *Shrikes & Bush-Shrikes*. Princeton University Press, NJ.
- Mullarney, K, L Svensson, D Zetterstrom & PJ Grant. 1999. *Collins Bird Guide*. Collins, London.
- Porter, RF, S Christensen & P Schiermacker-Hansen. 1996. *The Field Guide to the Birds of the Middle East*. T & AD Poyser, London.
- Sokolov, ZE. 1986. [*The Life of Animals*, vol. 6. Education], Moscow. [In Russian]
- Dr Martin Adamian, National Institute of Zoology, Hydrology and Ecology, Yerevan, Armenia.*
- Francis X Moffatt, 102 Norwood, Beverley, East Yorkshire HU17 9HL, England. frankmoff@googlemail.com*

On the distribution and ecology of the Lesser Kestrel *Falco naumanni* in Armenia

VASIL ANANIAN



Plate 1 (left). Adult male Lesser Kestrel, May, Armenia. © Vasil Ananian



Plate 2 (right). Adult female Lesser Kestrel, May, Armenia. © Vasil Ananian

Although global distribution and various aspects of the ecology of the Lesser Kestrel *Falco naumanni* are relatively well covered in the literature (Dementiev & Gladkov 1951, Cramp & Simmons 1980), little is known about the species from Armenia (Plates 1 & 2, Figure 1). The Lesser Kestrel is one of the most endangered raptors in the Western Palearctic and has dramatically declined throughout its range during the last few decades (Ferguson-Lees & Christie 2001). The species has apparently undergone similar decline in Armenia, as in historical sources it is reported as more widespread and common in the country. The present study describes recent observations at a breeding colony, as well as summarizing all available information from Armenia. The paper is based mainly on opportunistic observations.

HISTORY

The first reports of Lesser Kestrel from Armenia and adjacent areas of Turkey, Georgia and Azerbaijan were reviewed by Lyaister & Sosnin (1942). They cited various works on the Caucasian avifauna since the late 1870s and mentioned reports on presence of the species in the middle and lower course of the Kura and Arax rivers and the Javakheti plain (SW Georgia). They also reported the falcon to be common on the Armenian plateau (which extends especially over the Eastern Anatolia region of Turkey) and listed the discovery of large colonies in NE Turkey. In addition to reviewed literature, Lyaister & Sosnin (1942) described their own information from Armenia, including breeding evidence. Dahl (1954) briefly summarized the distribution and status of Lesser Kestrel in Armenia, based primarily on the book by Lyaister & Sosnin (1942) and other early works. There were very few subsequent records from Armenia (Adamian & Klem 1999) until recent years. The latter authors noted an observation of a copulating pair in 1995. A breeding colony in Syunik province was discovered in 2000 (Ananian *et al* 2002) and five years later another, smaller, colony was found in the same area, both on buildings (pers obs).

METHODS

Since its discovery in 2000, the first colony (colony A) in Syunik near Gorayk village, has been regularly visited throughout the breeding season as part of the itinerary of birdwatch-



Figure 1. Map of Armenia showing provinces and key locations mentioned in the text. © Vasil Ananian

ing tours and during general ornithological surveys in the province. Visits were usually combined with other studies and time spent near and in the vicinity of the colony varied from 0.5–4 h at various times of day. Prey items were identified visually *in situ* or later by examining photographs and pellets. The content of some accessible nests was not examined to avoid unnecessary disturbance. Birds at the second colony (colony B) had to be observed and counted from a distance as the colony is in a military camp.

Unpublished observations by foreign and local birders, all individual records from the last nine

years (partially so for 2006) and published data on the Lesser Kestrel in Armenia are summarized.

DISTRIBUTION AND POPULATION

In the early 1900s Lesser Kestrel was reported to be common, and locally a very common breeder, in the Arax valley from Aralík village (Iğdir province, E Turkey), Yerevan and its outskirts, and south-eastwards through Nakhichevan and north-east to the Jabrayil district of SW Azerbaijan (Lyaister & Sosnin 1942). In the breeding season, it is still occasionally observed in the Arax valley, but there is no modern-day proof of breeding there. Thus, in Ararat province (Figure 1) one bird was recorded near Artashat town on 7 May 1995 and another was at Armash fish farm on 21 May 1995 (Adamian & Klem 1999). A pair was seen at the Armash fish farm in late June 2005 (pers obs & Birdquest). In the same general area, a few kilometers SE of Armash, a flock of $c20$ birds, including males performing courtship feeding behaviour, was observed near an abandoned construction in mid-April 2006 and in May 2007 (K Aghababyan).

Dahl (1954), repeating a statement by Lyaister & Sosnin (1942), listed Lesser Kestrel as breeding in the Lake Sevan basin, but without details. This was possibly based on a single juvenile collected by GV Sosnin on 17 August 1938 near Shorja, NE shore of the lake. There have been surprisingly few records since, until recent times. Adamian & Klem (1999) listed a single individual for 1958, two sightings for 1993 and $c43$ records for 1995. Those observations in 1995 that suggest probable or possible breeding in other parts of Armenia include a record of copulating birds near Karinj in the east of Lori province, two birds on 8 May and three on 28 May in the north and south of Kotayk province respectively, one bird on 12 May in the SE of Aragatsotn province, one bird on 12 June in the NW of Gegharkunik

province and 1–15 individuals counted during 8–10 August in the NW of Shirak province (Adamian & Klem 1999). Breeding bird surveys at the latter area during April–July 2008 produced no records of the species (pers obs). Adamian & Klem (1999) considered the number of breeding pairs in Armenia to be 50–100 but this seems to have been a considerable overestimate.

The two colonies recently found in the NW of Syunik province, situated c7 km from each other, are the only known breeding sites in Armenia since 1928. Interestingly, two single individuals were recorded in that same general area on 19 May 1995 (Adamian & Klem 1999), suggesting that Lesser Kestrels possibly bred there before 2000. The size of colony A was estimated as c15–20 pairs in 2000 (Ananian *et al* 2002) and has apparently remained relatively stable since, although proper nest counts were not performed 2003–2005, and number of pairs was estimated from the count of adult birds. In 2007, there were at least 17 active nests at this site. At colony B, during the peaks of breeding seasons 2005–2008, c8–10 birds were always detectable perched and flying near the nesting site. The currently known breeding population of Lesser Kestrel in Armenia seems to be at least 17–20 pairs. Other breeding colonies may well exist.

On spring and autumn migration, Lesser Kestrel is still not uncommon in the lowlands and mid-elevations and occurs across most of Armenia, but seems to avoid wooded massifs in the NE and SE of the country. Migrating birds are usually recorded in groups of 1–15 individuals, but autumn parties not infrequently comprise 30–50 individuals (Lyaister & Sosnin 1942, Adamian & Klem 1999, Ananian *et al* 2002, K Aghababayan pers obs, VA pers obs).

PHENOLOGY

Spring migration of Lesser Kestrel appears to occur in Armenia from the last week of March at the earliest (Lyaister & Sosnin 1942, Dementiev & Gladkov 1951, VA pers obs), though Adamian & Klem (1999) listed a single report for 6 March. Spring passage of the species in the country takes place mainly in the first half of April though some birds apparently continue through to the end of the month (Ananian *et al* in prep). Autumn passage is observed from mid-August and continues to the last week of October, with the highest numbers reported throughout September (Lyaister & Sosnin 1942, Adamian & Klem 1999, VA pers obs).

The first local breeders are found at their breeding sites in Armenia from late March, when migrant birds are still on passage in the country. Thus, Lyaister & Sosnin (1942) reported occurrence of several pairs at a breeding site in Yerevan on 26 March 1930. In 2008, the first birds were seen at colony A on 29 March (K Aghababayan). At this site, arrival of breeders is apparently unsynchronized, as the maximum number of breeding pairs is not observed before 15–25 April in most years.

Likewise, the egg-laying period is equally prolonged in Armenia. In Yerevan (c1000 m asl), two clutches were collected on 14 May 1928, one of which consisted of three recently laid eggs, and the other had five eggs at an advanced stage of incubation (Lyaister & Sosnin 1942). The copulating pair near Karinj village (c1100 m asl) was observed on 9 May 1995 (Adamian & Klem 1999). At colony A (2164 m asl), copulation was recorded on 8 May 2008. At this colony, judging by the observations of downy nestlings (observed at the mouths of some nest holes), fledglings and dependent juveniles in some years, it is estimated that eggs are laid by various pairs there from the last week of April and throughout the first three weeks of May. These limited data, suggest that nest-site altitude has little or no influence on the timing of Lesser Kestrel breeding in Armenia.

At colony A, juveniles hunting in parties with adults are observed on average from mid-July onwards, while on a few occasions some fledglings with incompletely grown flight feathers are still found at the end of July. The birds are still attached to and visit the breeding site until at least about mid-August. Certainly, they are absent from the site from the second week of September, when possibly the same local breeders are found dispersed over the general area within several kilometers of the breeding site (pers obs).

HABITATS

During spring and autumn migration in Armenia the species uses a variety of habitats. It is seen in semi-deserts, arid mountain steppes, meadow-steppes and not infrequently observed in subalpine meadows, when crossing mountain ridges. Most often it is observed at c800–1500 m asl. Migrating Lesser Kestrels are attached here to open terrain, cultivated fields, flat or gently sloping and predominantly rocky areas sparsely covered with xerophytic scrub and vegetation, such as buckthorn *Rhamnus* sp, camel's thorn *Alhagi* sp, milk vetch *Astragalus* sp and wormwood *Artemisia* sp (Plate 3).

In the past, Lesser Kestrel was reported to breed primarily in semi-deserts and in small numbers in mountain steppes in Armenia (Dahl 1954). The two Syunik colonies are found on a highland plateau. The plateau is crossed by the Vorotan river, which is fed by several tributaries. The river valley is dominated by spurs of the Zangezur range on the west and south and by the Syunik upland on the north. There are a few man-made reservoirs in the Vorotan valley, and colony A is found near the northern bank of the largest of them, the Spandarian reservoir (Figure 1). The reservoir is at c2050 m asl, while the highest points of the surrounding mountains are at 2988 m asl (Mt Amulsar), 3093 m asl (Mt Siskatar) and 3221 m asl (Mt Bazenk). The relief around the reservoir is relatively gently sloping and is irregularly indented by ravines and the Vorotan tributaries descending down into the reservoir. The original vegetation around the



Plate 3. Transition zone between semi-desert and arid mountain steppe in the Arax river valley, a typical habitat in Armenia used by Lesser Kestrels on migration. © Vasil Ananian



Plate 4 (left). Environs of the Lesser Kestrel breeding sites, Vorotan river valley near the Spandarian reservoir, Armenia. © Vasil Ananian



Plate 5 (right). View from the Lesser Kestrel breeding tower, colony A, late April, Armenia. © Vasil Ananian



Left, top to bottom

Plate 6. The Lesser Kestrel breeding tower, colony A. The nests are situated along the edge of the main roof of the building as well as under the roof of the entrance with green doors. © Vasil Ananian

Plate 7. Female near nest entrance, main roof of the tower, colony A, April. © Vasil Ananian

Plate 8. Building situated near the main breeding tower, colony A. Lesser Kestrel nests are found in the larger holes of the concrete roof (mostly entered from larger entrances on the rear side), while some of the smaller-diameter holes are occupied by Common Starling. © Vasil Ananian



Spandarian reservoir is a meadow-steppe with associations of predominantly fescue *Festuca* spp, herd's grass *Phleum* sp, barley *Hordeum* sp, sedge *Carex* sp and clover *Trifolium* sp. Rose *Rosa* sp bushes are common in the area, particularly along the streams, in the ravines, near rock exposures and patchily in talus areas. In the Vorotan valley, at the Spandarian reservoir, there is a sparse stand of willow *Salix* sp trees and a few small man-made fish ponds fringed with reeds *Phragmites* sp. Large areas of the original landscape of the Vorotan valley are under agriculture and used for cereal cultivation and potato fields. Steeper parts of slopes up to the subalpine meadows are used for hay and pasturage (Plates 4 & 5). Average air temperature in the Spandarian reservoir area is 2–4° C in April and 12–14° C in July. Precipitation is 300–500 mm, April to October, with 50–100 mm July–August (Valesyan 2006). Patches of snow remain around the breeding site up to mid-April, while night frosts and hail are not uncommon even in summer.

The Syunik colonies, one of which is at 2345 m asl, are perhaps some of the highest known breeding sites in the Western Palearctic. The species is known to breed up to 2200 m asl in the Kopet Dag, Turkmenistan, and up to 3000 m asl in the Tien Shan (Dementiev & Gladkov 1951, Cramp & Simmons 1980).

NEST SITES

In Armenia, the Lesser Kestrel is reported to breed in holes and cavities of clayey cliffs,

on buildings, and in fissures in rocks and walls (Dahl 1954). The two nests found in Yerevan in 1928 were situated in walls of a building (Lyaister & Sosnin 1942).

Both of the Syunik colonies inhabit c18 m tall TV transmitter buildings. At colony A, the birds breed under the metal edge of the main roof (c18 m above the ground) of the building and under the roof of the entrance at c2 m above the ground (Plates 6 & 7). A few pairs breed in nearby lower buildings, occupying interstices under roofing slates and in horizontal borings in a concrete roof (Plate 8). Entrances of the various nests are, at the closest, c30–50 cm apart. Based on a few observations of brief conflicts between birds, it appears that some pairs may have a common entrance to reach their neighbouring nests. An entrance to one of the nests was a narrow vertical hole on the lower surface of the main roof overhang, without a suitable perch near the hole, but birds experienced no difficulties in entering straight in even with a large prey item in the beak.

NOTES ON BEHAVIOUR

In general, social pattern and behaviour observed on our short visits to colony A, *eg* courtship (Plates 9, 10), aerial activity and heterosexual behaviour, seemed largely consistent with Cramp & Simmons (1980). In one breeding season, a first-summer male was regularly seen delivering food to a nest, but it is unknown whether it was feeding its own chicks or assisting in the rearing of young of another pair (see Cramp & Simmons 1980).

The hunting and insect-hawking technique used at colony A is as described by Cramp & Simmons (1980), although insect



Plate 9. Male Lesser Kestrel during courtship feeding, with a Sand Lizard, mid-May, Armenia. © Vasil Ananian



Plate 10. The lizard (Plate 9) is then offered to the attracted female, mid-May, Armenia. © Vasil Ananian

hunting by walking about the ground and by night near artificial light were not observed. At colony A, the birds obviously preferred to hunt in a moderate to relatively strong wind. During short windless periods many birds remain perched on the tower or other elevated support, but with a gust of wind most or all of the perched birds leave to hunt. Insect hawking and eating in the air was observed in both breeding and migrant birds.

Near colony A, adult birds were never seen to land on a rock or on the ground, except when picking up terrestrial prey. The perches used are electricity pylons and, primarily, antennas and metal constructions on the buildings' roofs, window ledges and the fence around the transmitting station. Higher perches on the buildings are used for roosting. Groups of migrating birds, elsewhere in Armenia, are often found perching on electricity pylons, telegraph poles and wires (Plate 11).

Interactions with other species at colony A was noted for Common Starlings *Sturnus vulgaris* and Western Jackdaws *Corvus monedula*. The Starlings breed in smaller holes and fissures of the same tower and the falcons exhibit high tolerance to the species. Western Jackdaw does not breed at the tower, but small parties are always present around, visiting from nearby Gorayk village where they breed. Lesser Kestrel and Jackdaw were frequently seen perched close to each other in the vicinity of the kestrel nests, but only on one occasion did I observe a faint attempt by a female kestrel with prey in its talons to drive off an interested Jackdaw. Jackdaws were not seen to try to enter the kestrel nests or be mobbed by kestrels, although they were several times noted exhibiting passive kleptoparasitism, collecting fresh remains of kestrel prey (partially eaten or complete rodent bodies) found on the tower roof and near the bottom of the building.

A pair of Common Kestrels *Falco tinnunculus* regularly breeds on one of the buildings at the tower and shares a roof with a pair of Lesser Kestrels (Plate 12), but the only antagonistic behaviour observed between the two species was occasional and brief aerial



Plate 11. Migrant Lesser Kestrels frequently gather on telegraph poles and wires, September, Armenia. © Vasil Ananian



Plate 12. Fledglings of a pair of Common Kestrel *Falco tinnunculus*, colony A, early July. © Vasil Ananian

pursuits. Outside the breeding season, a mixed migratory party of Lesser Kestrels and Eurasian Hobbies *Falco subbuteo* was observed in September 2000 (Ananian *et al* 2002).

Colony A is exposed to the permanent presence of TV transmitter station personnel. Birds breeding at lower heights on the building invariably exhibit a degree of anxiety when people are seen nearby. The anxiety is accompanied with frequent calls and birds do not enter nests until personnel leave their close vicinity. At the breeding site adult birds of both sexes as well as chicks in the nests are highly vocal and the various calls noted are as described in Cramp & Simmons (1980). Vocalizations were not heard from migrant birds.

FOOD

In Aralik park, Turkey, Lesser Kestrels were feeding mainly on small rodents and lizards (Lyaister & Sosnin 1942). The stomach of a male collected in Yerevan on 3 July 1931 contained 6–7 sunspiders (Solpugidae) sp (Lyaister & Sosnin 1942). According to Dahl (1954), the diet predominantly consists of insects, including locusts, but they also catch spiders, lizards and small rodents.

Prey items taken in Armenia on migration include mantids *Mantis* sp, locust hoppers (Acrididae), bush-cricket (Tettigoniidae) and beetles (Scarabaeidae) (per obs). Vertebrate species taken in the breeding season include Sand Lizard *Lacerta agilis*, a shrew *Crocidura* sp (probably *C. guldenstaedti*, B Sheftel via N Formozov pers comm 2008) and Common Vole *Microtus arvalis* (Plates 13–18). Birds are apparently taken too, but perhaps only exceptionally. I once watched a male carrying a passerine (probably a lark *Alauda arvensis*/*Melanocorypha* sp or Corn Bunting *Emberiza calandra*) to a nest. Many passerines are hit by cars on the highway that passes quite close to colony A, so injured birds could easily be picked up by the kestrels.

The Lesser Kestrel's adaptability to prey abundance in the breeding season (Cramp & Simmons 1980) is well pronounced in Armenia. Early in the breeding season (late March–April) Common Vole is nearly the only prey item observed at colony A. Later, when the weather warms up and reptiles in the area become more active, Sand Lizards (or their tails) are offered to females by males during advertising courtship feeding along with voles. From May, insects are increasingly added to the diet and form the substantial part in July–August, particularly in years of mass emergence of large flightless locusts in the area. Then, pellets consist almost exclusively of chitin (Plate 19). Common Voles appear to be the dominant prey item of the breeding season, followed by locusts and other insects. The pellets (Plates 19 & 20) of Lesser Kestrel are c20–40 mm long and c15–20 mm in diameter. They are cohesive, laterally compressed, rounded at one end and more or less pointed at the other.

There is abundant prey for kestrels around colony A. Rodent colonies are profuse and widespread in the area, while the large locusts in some years are found at c1–3 per c9 m² densities. On all visits to the site and throughout each breeding season, most of the adult birds were seen carrying food and hunting successfully in the immediate vicinity of the breeding tower and thereabouts. All or at least the majority of individuals appear to be foraging within a radius of no more than c1 km from the tower, and are irregularly observed outside this limit. During nestling feeding in mid-June, an adult male was observed to deliver a vole or other prey item to the nest as often as once every 9–13 min, with the longest noted interval between deliveries c40 min.

Another indicator of sufficient prey availability is the amount of rodent, and less frequently lizard, remains found at the base of the breeding tower. These remains are commonly found there as complete bodies or their major parts. Many of the rodent bodies examined were beheaded or with just the brains eaten. On several occasions, in the middle



Plate 13. Prey items at colony A include bush-crickets ...
© Vasil Ananian



Plate 14. ... large flightless locusts ... © Vasil Ananian



Plate 15. ... Sand Lizard ... © Vasil Ananian



Plate 16. ... a *Crocidura* shrew ... © Vasil Ananian



Plates 17 & 18. ... and Common Vole. © Vasil Ananian





Plates 19 & 20. Lesser Kestrel pellets consisting mainly of insect chitin (left) and fur (right), colony A. © Vasil Ananian

of the breeding season, we have observed how a freshly caught vole, uneaten or with a partially-eaten head, was accidentally or deliberately dropped by an adult Lesser Kestrel, and ignored afterwards, despite it remaining within sight and access of the bird.

THREATS AND LIMITING FACTORS

The reasons for the Lesser Kestrel's apparent decline in Armenia since the early 1900s are not clear. Intensification of agriculture is likely to be the major cause of the decline as elsewhere throughout the species' range. Current post-Soviet farming practices around the Syunik breeding colonies are comparatively less intense. Repair of the breeding towers' roofs would block access for most pairs.

Accessible nests and fledglings of Lesser Kestrels at colony A could be attacked by Stone Marten *Martes foina*, Weasel *Mustella nivalis*, Red Fox *Vulpes vulpes*, Raven *Corvus corax*, Peregrine *Falco peregrinus* and other raptors. Dead young were recorded in the area on two occasions: a flightless chick and a juvenile with fully grown flight feathers were found at the base of the TV tower of colony A. The former had apparently fallen from a nest under the high roof, while the other died of unknown cause and showed no external injury. A juvenile Common Kestrel was found hit by a car on the highway near the TV tower.

Poaching is one of the major threats in Armenia for all breeding and migrating raptors. Although birds of prey are illegal to hunt in the country and are officially protected (Fundamentals of Republic of Armenia Legislation on Nature Protection, adopted by the Supreme Council of the Republic of Armenia on April 25, 1996), they are still shot for taxidermy or collected for other purposes. The location of the Syunik colonies is well known to local birders and zoologists. The TV tower personnel of colony A are informed about the species and 'keep an eye' on them, and access to the areas of the buildings at colonies A and B is restricted.

DISCUSSION

The Lesser Kestrel was not included in the Red Data Book of Armenia (Ayrumyan & Movsesyan 1987). Given its current global and national status, the species should be included in the forthcoming edition and appropriate measures for its protection should be developed and put in practice. One measure that has proved effective in other countries, is to provide the birds with artificial nesting supports through provisioning of suitable breeding towers with nest cavities, nest boxes and clay pots in appropriate habitats within protected areas (Catry *et al* 2007). Preliminary observations of abandoned barns and other constructions in some potentially suitable habitats in Armenia showed that the majority of

these constructions lack suitable cavities. Thorough surveys could reveal hitherto unknown Lesser Kestrel colonies especially in semi-desert and mountain steppe areas. It is particularly recommended that such surveys are carried out within the National State Reserves and National Parks of Armenia.

ACKNOWLEDGEMENTS

I would like to thank all of my many co-observers, among them Roy Beddard, Chris Bradshaw, Simon Busuttil and Mark Finn from Birdwatching Breaks and Nik Borrow and Nigel Redman from Birdquest. Nikolai Formozov and Boris Sheftel kindly helped with the identity of the photographed shrew. Karen Aghababyan provided his personal observations for use in this paper. Chris Bradshaw, Victoria Ten and Pascal Wink helped with obtaining some references.

REFERENCES

- Adamian, MS & D Klem. 1999. *Handbook of the Birds of Armenia*. American University of Armenia, Oakland, CA.
- Ananian, V, S Busuttil & M Finn. 2002. Recent observations of some rare breeding birds in Armenia. *Sandgrouse* 24: 46–48.
- Ananian, V, K Aghababyan & M Maregasparyan. In prep. A pilot survey of potential raptor migration watch sites in Armenia.
- Ayrumyan, KA & SO Movsesyan (eds). 1987. [*Red Data Book of the Armenian SSR*]. Hayastan, Yerevan. [In Russian]
- Catry, I, R Alcazar & I Henriques. 2007. The role of nest-site provisioning in increasing lesser kestrel *Falco naumanni* numbers in Castro Verde Special Protected Area, southern Portugal. *Conservation Evidence* 4: 54–57.
- Cramp, S & KEL Simmons (eds). 1980. *The Birds of the Western Palearctic*. Vol 2. Oxford University Press, UK.
- Dahl, SK. 1954. [*Fauna of the Armenian SSR. Vertebrates*. Academy of Sciences Press], Yerevan. [In Russian]
- Dementiev, GP & NA Gladkov (eds). 1951. [*Birds of the Soviet Union*]. Vol 1. Nauka, Moscow. [In Russian]
- Ferguson-Lees, J & DA Christie. 2001. *Raptors of the World*. Christopher Helm, London.
- Lyaister, AF & GV Sosnin. 1942. [*Materials on the ornithofauna of the Armenian SSR*. ARMFAN], Yerevan. [In Russian]
- Valesyan, L (ed). 2006. [*National Atlas of Armenia*. Vol. A.] Tigran Mets, Yerevan. [In Armenian]

Vasil Ananian, 179 Bashinjaghian Street, Apt. 23, 0078, Yerevan, Armenia. vasil.ananian@gmail.com

First confirmed breeding record of Spur-winged Lapwing *Vanellus spinosus* for Lebanon, 2006

GHASSAN RAMADAN-JARADI & THIERRY BARA

In the Middle East, the Spur-winged Lapwing *Vanellus spinosus* breeds in Syria (Kumerloeve 1962, 1967–69, Baumgart *et al* 1995), Cyprus (Flint & Stewart 1992, Stattersfield & Capper 2000), Turkey (Burfield & van Bommel 2004), Jordan (Andrews 1995, Shirihai *et al* 1999), Egypt (Goodman & Meininger 1989), Iraq (Allouse 1953), Saudi Arabia (Jennings 1981), Israel (Shirihai 1996, Shirihai *et al* 1999) and Yemen (Porter *et al* 1996) and is a vagrant to Kuwait (Gregory 2005), United Arab Emirates (Balmer & Betton 2004) and Oman (Eriksen *et al* 2003), and a scarce and irregular winter visitor to Iran (Scott & Adhami 2006).

In Lebanon, this species was once considered a vagrant (Cramp & Simmons 1983), an extremely rare passage migrant (Ramadan-Jaradi & Ramadan-Jaradi 1999), a rare passage migrant at Palm islands nature reserve (Figure 1, Ramadan-Jaradi & Ramadan-Jaradi 2001), but more recently (2003–4) was classed as a relatively common species (Ramadan-Jaradi *et al* 2005), during which period records strongly suggested breeding in summer, especially at: Aammiq, where a shot juvenile was seen hanging on the strands of a hunter's belt, 14 June 2003 (Ramadan-Jaradi *et al* 2005); on the Tyre Coast where the species was recorded May–July (GR-J), and at Cheikh Zennad where it was recorded March–June (GR-J, TB) and August (TB). Two birds chased two Hooded Crows *Corvus cornix* at the latter site on 26 May 1996 (TB).

A group of seven was at Aammiq on 24 April 1999, where display and attempted copulation was seen (Karin Boisclair-Joly in Richard Prior pers comm). Also: a pair was apparently holding territory at Aammiq in late March 2004 (Richard Prior pers comm), a pair was calling agitatedly and did not leave, SW lake Qaraoun 15 July 2005 (Colin Conroy & Richard Prior pers comm), and a pair was apparently incubating in a potato field alongside the seasonal ponds at Tel al Akhdar, north of Aammiq, 23 April–9 May 2006 (Richard Prior pers comm), unfortunately one of the pair was shot.



Figure 1. Map of Lebanon showing location of sites mentioned in the text.



Plate 1. Nest of Spur-winged Lapwing *Vanellus spinosus* at Ras el Ain in the Tyre Coast nature reserve, May 2006. © Farhat Farhat.

On 6 May 2006, two pairs of this unmistakable lapwing species were present at the organic farm of Ras el Ain in the Tyre Coast nature reserve. Ras el Ain has historic artesian wells and freshwater streams flow into the nearby sea. On 18 May, the Spur-winged Lapwings were not seen until immediately before sunset when one ran away in a crouched posture between cultivated legumes, suggesting a nest was nearby. Due to the encroaching darkness, we decided not to disturb the bird. On 22 May, GR-J received a telephone call from Dr Farhat Farhat, a non-birdwatcher who manages the organic farm. He had found and photographed, with his mobile phone, a nest containing a clutch of four eggs (Plate 1). On 30 May, from a nearby army tower, GR-J observed the nest whilst one of the parents was incubating the eggs. On 17 June, the nest contained one unhatched egg and sufficient shell fragments to suggest three chicks had hatched; meanwhile, a parent bird was feeding near a watercourse less than 100 m from us, most probably accompanied by chicks. All our attempts to find the second pair during this period failed. More recently, Spur-winged Lapwings were repeatedly reported frequenting the waterbody at Dbayyeh during summer 2007 (Shady Indary as reported to Birdtalklebanon@yahoo.com). TB visited the area on 1 September 2007 and photographed five birds there. All records of this species in Lebanon are within the period mid-February and late October, indicating that the Spur-winged Lapwing is a summer breeding visitor there.

REFERENCES

- Allouse, BE. 1953. *The avifauna of Iraq*. Iraq Natural History Museum, Baghdad.
- Andrews, I. 1995. *Birds of the Hashemite Kingdom of Jordan*. Andrews, Musselburgh, UK.
- Balmer, D & K Betton. 2004. Around the Region. *Sandgrouse* 26: 160–168.
- Baumgart, W, M Kasperek & B Stephan. 1995. *Die Vögel Syriens: eine übersicht*. Max Kasperek Verlag, Heidelberg.
- Burfield, I & F van Bommel (compilers). 2004. *Birds in Europe: population estimates, trends and conservation status*. BirdLife International, Cambridge, UK.
- Cramp, S & KEL Simmons (eds). 1983. *The birds of the Western Palearctic*. Vol 3. Oxford University Press, UK.
- Eriksen, J, DE Sargeant & R Victor. 2003. *Oman bird list, the official list of the birds of the Sultanate of Oman*. Edition 6. Centre for Environmental Studies and Research, Sultan Qaboos University, Muscat.
- Flint, P & P Stewart. 1992. *The birds of Cyprus: an annotated check-list*. British Ornithologists' Union, Tring, UK.
- Gregory, G. 2005. *The birds of the state of Kuwait*. Gregory, Skegness, UK.
- Goodman, SM & PL Meininger (eds). 1989. *The Birds of Egypt*. Oxford University Press, UK.
- Jennings, MC. 1981. *The birds of Saudi Arabia, a checklist*. Jennings, Cambridge, UK.
- Kumerloeve, H. 1962. Notes on the birds of the Lebanese Republic. *Iraq Natural History Museum Publication* 20–21: 1–81.
- Kumerloeve, H. 1967–1969. Recherches sur l'avifaune de la République Arabe Syrienne essai d'un aperçu. *Alauda* 36: 1–26, 190–207, 37: 43–58, 114–134, 188–205.
- Porter, RE, S Christensen & P Schiermacker-Hansen. 1996. *Field Guide to the Birds of the Middle East*. T & AD Poyser, London.
- Ramadan-Jaradi, G & M Ramadan-Jaradi. 1999. An updated checklist of the birds of Lebanon. *Sandgrouse* 21: 132–170.
- Ramadan-Jaradi, G & M Ramadan-Jaradi. 2001. The avifauna of Palm Islands Nature Reserve in Lebanon 1893–2000. *Lebanese Science Journal*, 2(1): 17–35.
- Ramadan-Jaradi, G, SP Waterbury & M Ramadan-Jaradi. 2005. Ornithological observations from Lebanon during 2003–2004. *Sandgrouse* 27: 69–73.
- Scott, DA & A Adhami. 2006. An Updated Checklist of the Birds of Iran. *Podoces* 1(1/2): 1–16.
- Shirihai, H. 1996. *The Birds of Israel*. Academic Press, London.
- Shirihai, H, IJ Andrews, GM Kirwan & P Davidson. 1999. A checklist of the birds of Israel and Jordan. *Sandgrouse* 21: 36–44.
- Stattersfield, AJ & DR Capper (eds). 2000. *Threatened birds of the world*. Lynx Edicions, Barcelona.

Prof Ghassan Ramadan-Jaradi, Faculty of Science (1), Lebanese University, PO Box 13–5292, Beirut, Lebanon. r-jaradi@cyberia.net.lb

Thierry Bara, 255 rue Saint-Jacques, 75005 Paris, France. tbara@free.fr

Weight gains by re-trapped passerine migrants at an artificially vegetated site, Eastern Desert, Egypt

GUDRUN HILGERLOH & BERND RADDATZ

European songbirds are known to migrate on a broad front towards their wintering quarters (Alerstam 1990). Birds wintering in oases of the Sahara or south of the desert have to cross vast areas of desert without opportunities to feed. Consequently their strategy consists in putting on fat reserves before they cross this barrier (Alerstam 1990). According to earlier desert studies, in NW Egypt, oases are very attractive for birds needing to replenish their fat reserves (Biebach *et al* 1986). In the light of this hypothesis, we present a small data sample documenting weight and fat reserves of migrants stopping at a sewage plant at Ras Shukheir and an olive plantation west of El Gouna, in the Eastern Desert, Egypt (Figure 1). All re-traps occurred at the sewage plant site.

METHODS

Between 7 September and 29 October 2006, birds were caught in mist nets at two sites in the Eastern Desert of Egypt. One site was at the sewage plant on the premises of the oil firm Gupco at Ras Shukheir (Figure 1, 28° 8.093' N, 33° 14.824' E). The vegetation around the waste water basins was copiously watered and consisted mainly of tamarisks, wild olives, acacias, dates, shrubs and grass. Mist nets of 5–9 m in length, with 4 pockets and a total length of 100 m were set up. On average, the mist nets were spread for three hours (Table 1). The other ringing site was 3 km west of El Gouna (27° 57.84' N, 33° 21.56' E) and vegetation there consisted mainly of planted olives.

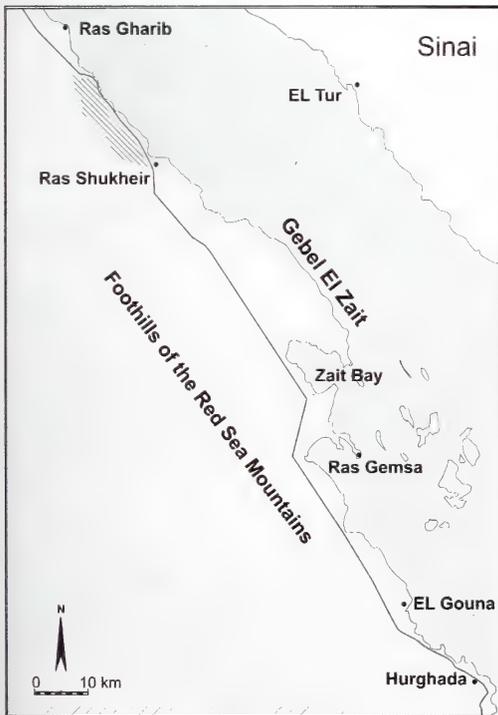


Figure 1. Location of ringing sites: at Ras Shukheir and near El Gouna, Eastern Desert, Egypt.

Table 1. Trapping dates and times in the morning when mist nets were open, at two sites in the Eastern Desert, Egypt, 2006

trapping date	mist nets open	
	sewage plant	olive farm
7 Sept	6.45–11.00	
8 Sept		6.13–9.00
12 Sept	6.10–8.55	
14 Sept		6.30–8.05
16 Sept	6.05–8.45	
18 Sept		6.15–8.45
20 Sept	6.15–8.10	
28 Sept	5.15–10.15	
3 Oct	5.30–9.10	
7 Oct	6.15–9.00	
15 Oct	5.30–10.30	
23 Oct	5.30–9.00	
26 Oct	5.30–10.00	
29 Oct	5.45–10.00	

Table 2. Number, weight and fat deposition (\pm SD) of all birds at first capture in mist nets at the sewage plant and olive plantation, 9 September–29 October 2006. If less than 4 birds were caught, the individual weights and fat scores are given.

		sewage plant		
		n	weight (g)	fat score
Scops Owl	<i>Otus scops</i>	1	85.9	1
Red-backed Shrike	<i>Lanius collurio</i>	5	25.38 \pm 5.7	0.6 \pm 1.4
Masked Shrike	<i>Lanius nubicus</i>	8	20.18 \pm 0.78	1.6 \pm 1.4
Sand Martin	<i>Riparia riparia</i>	3	14.8; 10.9; 12.3	5;0;2
Barn Swallow	<i>Hirundo rustica</i>	10	17.03 \pm 1.27	1.8 \pm 0
River Warbler	<i>Locustella fluviatilis</i>	9	13.91 \pm 0.21	1.4 \pm 0
Sedge Warbler	<i>Acrocephalus schoenobenus</i>	21	10.49 \pm 0.14	2.1 \pm 0
Reed Warbler	<i>Acrocephalus scirpaceus</i>	95	10.26 \pm 0.56	1.6 \pm 0.7
Olivaceous Warbler	<i>Hippolais pallida</i>	1	10.2	3
Willow Warbler	<i>Phylloscopus trochilus</i>	73	7.87 \pm 2.12	2 \pm 0.7
Chiffchaff	<i>Phylloscopus collybita</i>	52	7.22 \pm 0.85	1.8 \pm 2.1
Lesser Whitethroat	<i>Sylvia curruca</i>	33	11.57 \pm 0.43	2.5 \pm 0.7
Sardinian Warbler	<i>Sylvia melanocephala</i>	2	8.1; 8.3	1; 0
Bluethroat	<i>Luscinia svecica</i>	6	11.7 \pm 0.57	0.8 \pm 0.7
Redstart	<i>Phoenicurus phoenicurus</i>	3	18.5; 13.9; 15	4; 2; 2
Whinchat	<i>Saxicola rubetra</i>	2	12.3; 15.9	0; 1
Spotted Flycatcher	<i>Muscicapa striata</i>	3	14.7; 15.0; 13.1	2; 4; 2
Collared Flycatcher	<i>Ficedula albicollis</i>	1	9.4	0
Red-breasted Flycatcher	<i>Ficedula parva</i>	2	8.4; 8.0	1; 1
Pied Wagtail	<i>Motacilla alba</i>	2	15.2; 15.5	0; 0
Total		332		
		olive plantation		
		n	weight (g)	fat score
Reed Warbler	<i>Acrocephalus scirpaceus</i>	14	9.73 \pm 0.07	1.4 \pm 0
Olivaceous Warbler	<i>Hippolais pallida</i>	1	10.2	3
Willow Warbler	<i>Phylloscopus trochilus</i>	6	7.87 \pm 1.2	2 \pm 2.1
Wood Warbler	<i>Phylloscopus sibilatrix</i>	1	10.3	3
Lesser Whitethroat	<i>Sylvia curruca</i>	45	10.86 \pm 1.48	2.3 \pm 1.4
Thrush Nightingale	<i>Luscinia luscinia</i>	4	24.83 \pm 0.28	4 \pm 0
Total		71		

At the sewage plant, we trapped birds on 11 days and in the olive plantation, 3 days. Duration between ringing days varied between 3–8 days at the sewage plant and 4–6 days at the olive plantation (Table 1). Fat deposition was estimated according to a scale from 1 to 8 (Kaiser 1993).

RESULTS

In all, 23 species were trapped, including a Scops Owl *Otus scops*. At the sewage plant, Reed Warbler *Acrocephalus scirpaceus* was the most frequently caught species, followed by Willow Warbler *Phylloscopus trochilus*. At the olive plantation, Lesser Whitethroat *Sylvia curruca* was most frequent followed by Reed Warbler (Table 2).

At the sewage plant, a total of 332 birds were trapped (64.5% Reed Warbler, Chiffchaff *Phylloscopus collybita* and Willow Warbler) and at the olive plantation, 71 (87% Lesser Whitethroat and Reed Warbler) (Table 2). All migrants, except for Thrush Nightingale

Table 3. Re-trapped individuals, other than Reed Warblers, at the sewage plant: date and weight at first and last capture.

	date		weight (g)	
	first capture	last capture	first capture	last capture
Scops Owl	23 Oct	26 Oct	85.9	111.8
Masked Shrike	7 Oct	23 Oct	19.6	20.8
Masked Shrike	12 Sept	16 Sept	20.2	20.8
Willow Warbler	23 Oct	29 Oct	7	8.6
Lesser Whitethroat	12 Sept	20 Sept	9.9	13.2

Table 4. First and last capture data of Reed Warblers re-trapped at the sewage plant.

date		time difference	first weight	last weight	weight difference
First capture	last capture	(days)	(g)	(g)	(g)
7 Sept	12 Sept	5	9.2	10.4	1.2
7 Sept	12 Sept	5	9.5	10.2	0.7
7 Sept	12 Sept	5	9.9	11.3	1.4
7 Sept	12 Sept	5	9.8	11.1	1.3
12 Sept	20 Sept	8	9.2	11.3	2.1
12 Sept	20 Sept	8	9.4	11.6	2.2
12 Sept	20 Sept	8	9.0	11.6	2.6
12 Sept	16 Sept	4	10.8	11.8	1.0
12 Sept	16 Sept	4	9.1	10.3	1.2
12 Sept	20 Sept	8	8.2	11.7	3.5
16 Sept	20 Sept	4	9.6	11.3	1.7
16 Sept	20 Sept	4	9.8	12.2	2.4

Luscinia luscinia, had, on average, little fat deposition on arrival (Table 2). Re-trapped birds gained weight during their stay (Tables 3 & 4).

Reed Warblers arrived with a mean weight of 10.26 ± 0.56 g SD and was the species most often re-trapped (13%). Re-trapped Reed Warblers arrived with a mean weight of 9.45 ± 0.6 g. At their last capture, re-trapped Reed Warblers had a mean weight of 11.23 ± 0.6 g (Table 4, Figure 2). On average, they gained 1 g in weight in 3.5 days (Table 4).

DISCUSSION

This study confirms regular passerine migration through the Eastern Desert of Egypt. Clearly, migrants can stop at artificially vegetated sites there. Species that we caught in very small numbers, or not at all, do not necessarily use a non-stop migration strategy to cross the Sahara. Similarly, of course, the relative trapping frequency of the different species need not reflect abundances of species migrating through this area. An intermittent migration strategy is now assumed in trans-Saharan passerine migrants (Biebach *et al* 2000, Schmaljohann *et al* 2007). The majority of trans-Saharan migrants travel nocturnally through the desert and rest in the shade during the day (Biebach *et al* 1986, Schmaljohann *et al* 2007). This implies that these birds have enough fat deposition to continue without refuelling. The Spotted Flycatcher *Muscicapa striata*, however, depends on regular refuelling and feeds in oases/artificially-vegetated sites while Reed Warblers are supposed to gain sufficient fat reserves shortly before the desert crossing (Schaub & Jenni 2000). Distance calculations for Reed Warblers migrating along the West African route suggested they should, on average, be able to reach the southern border of the desert without refu-

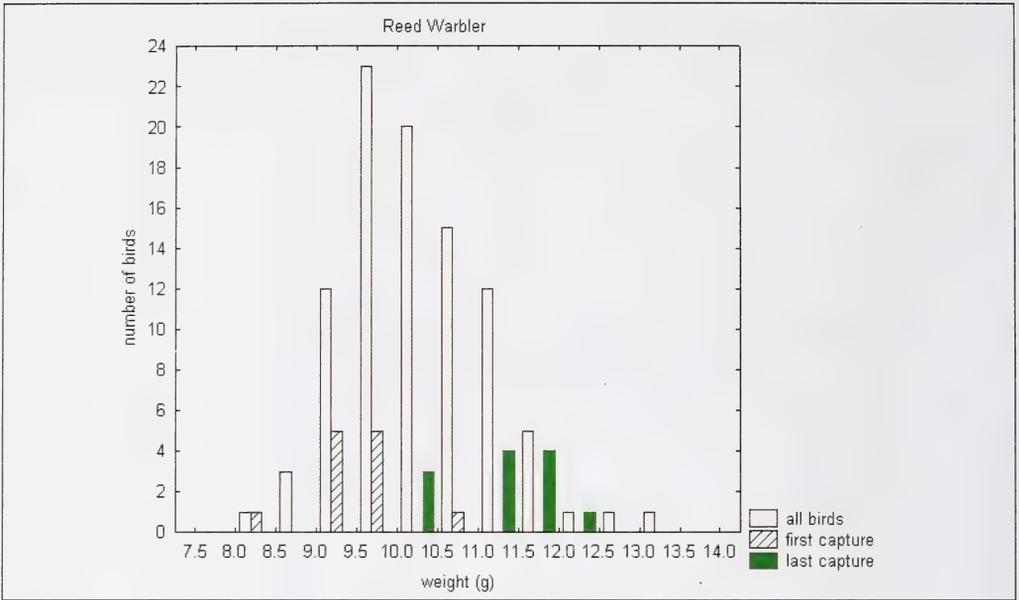


Figure 2. Weights of all Reed Warblers (open bars), of re-trapped birds at first capture (hatched) and at last capture (solid).

elling (Hilgerloh & Wiltschko 2000). Our study shows, however, that some Reed Warblers in the eastern Sahara need to refuel. In the same period, Lesser Whitethroats, the species that was the most frequent at the olive plantation, were also observed by us in large numbers in bushes at the golf course and around houses in El Gouna, east of the olive plantation. In the face of increasing desertification, man-made habitats may become of increasing importance for migrants.

ACKNOWLEDGEMENTS

We are grateful to Gupco for allowing us to set up the ringing station on their premises. We thank A Michalik, G Nikolaus, G Pegram, K Gauger and C Völlm for helping temporarily at the ringing stations. We thank K Wilson for critical comments and A Abdelmageed and E Niemann for giving support to this small study within the framework of a feasibility study for a wind farm complex. We thank the German ringing center, Vogelwarte Radolfzell, for providing the bird rings.

REFERENCES

- Alerstam T. 1990. *Bird migration*. Cambridge University Press, UK.
- Biebach, H, I Biebach, W Friedrich, G Heine, J Partecke & D Schmidl. 2000. Strategies of passerine migration across the Mediterranean Sea and the Sahara Desert: a radar study. *Ibis* 142: 623–634.
- Biebach, H, W Friedrich, G Heine. 1986. Interaction of body mass, fat, foraging and stopover period in trans-Saharan migrating passerine birds. *Oecologia* 69: 370–379.
- Hilgerloh, G & W Wiltschko. 2000. Autumn weight and fat deposition of passerine long-distance migrants in southern Spain and northern Morocco. *Ardeola* 47: 261–265.
- Kaiser, A. 1993. A new multi-category classification of subcutaneous fat deposits of songbirds. *Journal of Field Ornithology* 64: 246–255.
- Schaub, M & L Jenni. 2000. Body mass of six long-distance migrant passerine species along the autumn migration route. *Journal für Ornithologie* 141: 441–460.
- Schmaljohann, H, F Liechti & B Bruderer. 2007. Songbird migration across the Sahara: the non-stop hypothesis rejected. *Proceedings of the Royal Society* 274: 735–739.

Gudrun Hilgerloh, Institute of Zoology, Johannes Gutenberg University, Johannes v. Müllerweg 6, D-55128 Mainz, Germany. gudrun.hilgerloh@t-online.de

Status of selected migrant species in Kuwait: observations and ringing, spring 1997

NIGEL CLEERE & DAVID J KELLY

The first of our ringing studies in Kuwait was carried out between 1 October and 7 December 1995 (Cleere *et al* 2000). Our second survey, reported on here, covered the period 28 March–31 May 1997. Mist nets were used to catch and examine birds at two sites within Kuwait. The first was the Jahra Pool nature reserve 'JPNR' (29° 22' N, 47° 42' E), an area covering 250 ha of coastal sabkha, of which c70 ha was fenced off and closed to the public (Pilcher 1994, Cleere *et al* 2000). Within this enclosed part of the reserve was a large *Phragmites* reed bed and a 4–5 ha pool of open shallow water. The second site was an isolated date palm plantation surrounded by a thin border of trees and tamarisk at Wadi Al Rimam 'WRP' (29° 33' N, 47° 42' E). Different sections of the plantation were watered each day, resulting in varying water levels beneath the palms. The most recently watered areas held 10–12.5 cm of surface water, which would slowly drain into the soil, whilst other parts were merely damp and marshy. The constant rotational watering allowed luxuriant grasses and fresh *Phragmites* to grow beneath the palms. A total of 6008 birds of 60 species were caught and ringed during the study period, the vast majority of these being migrants passing through the country. Our findings for some of these species are compared with their known status in Kuwait prior to our study (Pilcher unpub). More recent status statements by Gregory (2005) are also presented.

SELECTED SPECIES

Golden Eagle *Aquila chrysaetos*

Recorded as an accidental visitor (Pilcher unpub). An immature bird observed soaring over JPNR on 7 April was the fourth record for Kuwait. Listed as a vagrant by Gregory (2005), with the latest report 22 February 1998.

Corncrake *Crex crex*

This secretive species is a scarce or uncommon passage migrant and rare winter visitor (Pilcher unpub, Gregory 2005). One bird was present in the trapping area at JPNR on 22 April, but was not caught.

Spur-winged Lapwing *Vanellus spinosus*

Rarely seen and only an accidental visitor (Pilcher unpub). A single bird was at JPNR on 30 March, our sighting being the fourth record for Kuwait. Listed as a vagrant (Gregory 2005), with the latest record 7 January 2000.

Egyptian Nightjar *Caprimulgus aegyptius*

Prior to our study regarded as accidental, with only three records between 1974 and 1986 (Pilcher unpub). None were caught during the study period, but one was at JPNR on 17 April. Subsequent observations (eg Gregory 2000, 2005) suggest that it is an uncommon passage migrant, and summer and winter visitor that might breed.

Alpine Swift *Tachymarptis melba*

Regarded as an accidental visitor by Pilcher (unpub). Three birds were seen over JPNR on 23 April. A scarce passage migrant according to Gregory (2005).

Eurasian Crag Martin *Ptyonoprogne rupestris*

Regarded as an accidental visitor (Pilcher unpub). No birds were caught during our field-work, but more than 30 birds passed over JPNR on 14 April. Recorded as a scarce passage migrant and rare winter visitor by Gregory (2005), who also listed the highest daily count as 30 seen at Shaab, Kuwait city, on the same date!

Common Grasshopper Warbler *Locustella naevia*

An accidental visitor (Pilcher unpub). Four birds of indeterminate race were caught at JPNR, with singles on 1, 6, 15 and 26 April. The status of this easily overlooked species remains difficult to assess. A scarce passage migrant (Gregory 2005).

River Warbler *Locustella fluviatilis*

A scarce passage migrant occasionally noted in April, but with most previous records in May (Pilcher unpub). During our study, we caught 11 birds between 5 and 12 May, mainly at WRP with only a single trapped at JPNR, on 8 May. Our data suggest that this secretive species may pass through in spring in a relatively short period of time, with small numbers occurring in suitable habitat. Listed as a scarce passage migrant by Gregory (2005).

Basra Reed Warbler *Acrocephalus griseldis*

An uncommon passage migrant, that breeds in small numbers at JPNR (Pilcher unpub). A total of 69 birds were caught and ringed between 14 April and 29 May, with birds present at both JPNR and WRP. It would appear that perhaps this species is more common than previously thought. Breeding was again confirmed at Jahra, females with a well-defined brood patch being caught on 25, 28 and 29 May. A common passage migrant and uncommon summer visitor (Gregory 2005).

Clamorous Reed Warbler *Acrocephalus stentoreus*

A common passage migrant (Pilcher unpub). Only one bird was trapped during the study, at JPNR on 20 April. During our previous survey, 13 birds were caught at JPNR between 16 October and 1 December 1995, including 2 that had been ringed in Kuwait in November 1991 (Cleere *et al* 2000). Our limited data suggest that this species might be less common in spring. Considered an uncommon passage migrant and scarce resident by Gregory (2005).

Marsh Warbler *Acrocephalus palustris*

A scarce to uncommon migrant in May and June (Pilcher unpub). Birds were caught at both JPNR and WRP and a total of 483 were ringed between 22 April and 24 May (Kelly *et al* 2001). This species can be difficult to identify in the field, but it seems obvious from our data that it is a common spring migrant, passing through in a relatively short period of time. Status upgraded to common passage migrant by Gregory (2005).

Icterine Warbler *Hippolais icterina*

Thought to be an accidental visitor (Pilcher unpub). During our survey, we caught birds at JPNR on 15 & 17 April and 3 May, and at WRP on 9 and 10 May. Our records confirm only that it can occur in very small numbers in spring. A scarce passage migrant (Gregory 2005).

Mountain Chiffchaff *Phylloscopus sindianus*

Two birds, probably of this species and which were thought to belong to the Caucasian race *P. s. lorenzii*, were trapped during our study, a single at JPNR on 28 March and another single at the same site on 12 April (Cleere *et al* 2004). Now thought to be a rare passage migrant and winter visitor (Gregory 2005).

Wood Warbler *Phylloscopus sibilatrix*

Recorded as an accidental visitor with no recent records (Pilcher unpub). A single bird was caught at WRP on 23 May. A scarce passage migrant (Gregory 2005).

Green Warbler *Phylloscopus trochiloides nitidus*

Prior to our study, there had been only one record in Kuwait (Pilcher unpub). Singles were trapped at JPNR on 30 April and at WRP on 9 May and two birds were caught at WRP on 23 May, suggesting that in spring it may pass through in very small numbers. Gregory (2005) treated this species as a rare passage migrant, but listed our captures erroneously.

Garden Warbler *Sylvia borin*

Previously listed as an uncommon spring migrant between March and May (Pilcher unpub). During our project, we caught this species at both JPNR and WRP, a total of 95 birds, between 30 April and 27 May. Our data suggest that this warbler is a relatively common spring migrant, although the short duration of passage is of interest. An uncommon passage migrant (Gregory 2005).

Barred Warbler *Sylvia nisoria*

An uncommon passage migrant (Pilcher unpub, Gregory 2005). We caught 26 birds, all at WRP, with the highest daily total being 11 on 5 May. It seems likely that this large warbler is a reasonably common migrant, at least in spring.

Eastern Orphean Warbler *Sylvia crassirostris*

Considered to be an accidental visitor (Pilcher unpub). During our survey, singles were trapped at JPNR on 31 March and 4 April and at WRP on 16 May. An uncommon passage migrant (Gregory 2005).

Ménétries's Warbler *Sylvia mystacea*

Although previously regarded as an uncommon passage migrant (Pilcher unpub), we trapped 20 birds at JPNR between 28 March and 12 April. In our previous survey, 13 birds were caught at JPNR between 1 October and 7 December 1995 (Cleere *et al* 2000). Our combined data therefore support Gregory's (2005) statement, a common passage migrant and scarce winter visitor.

Thrush Nightingale *Luscinia luscinia*

Thought to be an uncommon passage migrant (Pilcher unpub, Gregory 2005). A total of 11 birds were trapped between 30 April and 29 May, ten at WRP and one at JPNR.

Common Nightingale *Luscinia megarhynchos*

Considered to be a scarce to uncommon passage migrant (Pilcher unpub). Common Nightingales were recorded at both JPNR and WRP, with five birds caught between 29 March and 12 May. Three of the birds were identified as *L. m. megarhynchos*, one was indeterminate and one at JPNR on 28 March was thought to be *L. m. hafizi*. An uncommon passage migrant (Gregory 2005).

Dead Sea Sparrow *Passer moabiticus*

Not previously recorded in Kuwait (Pilcher unpub). A female of indeterminate race was caught and ringed at JPNR on 2 April and may have been one of the 7 birds seen and photographed at the same site the previous autumn, on 1 November 1996 (Gregory 2005). This attractive sparrow is considered a vagrant, with subsequent records in 1998 and 2003 (Gregory 2005).

Tree Pipit *Anthus trivialis*

An uncommon passage migrant (Pilcher unpub). This species was caught at both JPNR and WRP, a total of 19 birds between 8 April and 11 May. A common passage migrant and rare winter visitor (Gregory 2005).

Common Rosefinch *Carpodacus erythrinus*

A scarce passage migrant, that in spring occurs from March to May (Pilcher unpub). We caught four birds, a female at JPNR on 8 April and adults at WRP on 5, 16 and 31 May. Our data suggest that it remains scarce, as documented by Gregory (2005).

ACKNOWLEDGEMENTS

We dedicate this paper to our friend the late Professor Charles Pilcher, who organised and assisted all of our ornithological studies in Kuwait. Our ringing programme in 1997 was supported by a generous grant from the Kuwait Environment Public Authority. We are also greatly indebted to Stephen Rumsey, who kindly provided assistance throughout the project.

REFERENCES

- Cleere, N, D Kelly & CWT Pilcher. 2000. Results from a late autumn ringing project in Kuwait, 1995. *Ringings & Migration* 20: 186–190.
- Cleere, N, D Kelly & CWT Pilcher. 2004. A mystery *Phylloscopus* warbler in Kuwait. *Sandgrouse* 26: 143–146.
- Gregory, G. 2000. Primary moult in Egyptian Nightjar *Caprimulgus aegyptius* on autumn migration in Kuwait. *Sandgrouse* 22: 113–117.
- Gregory, G. 2005. *The birds of the state of Kuwait*. Gregory, Skegness, UK.
- Kelly, D, N Cleere & CWT Pilcher. 2001. Notch factor—a technique for separating Marsh Warblers *Acrocephalus palustris* from Reed Warblers *A. scirpaceus* on spring migration. *Ringings & Migration* 20: 289–291.
- Pilcher, CWT. 1994. Kuwait's Jahra Pool Reserve under threat. *Phoenix* 11: 18.
- Pilcher, CWT. Unpublished. A checklist of the birds of Kuwait.

Nigel Cleere, 2 Hawthorn House, Roundfields, Upper Bucklebury, Berkshire, RG7 6RQ, UK. cleere@churr.freereserve.co.uk
David J Kelly, Department of Zoology, Trinity College, Dublin 2, Ireland.

First breeding of Black-winged Stilts *Himantopus himantopus* on Socotra, Yemen

AHMED SAEED SULEIMAN

Despite visits by at least three previous ornithological expeditions, in the late 19th and 20th centuries, Black-winged Stilts *Himantopus himantopus* were not recorded on Socotra until March 1993 during the OSME survey (Kirwan *et al* 1996). Since then they have been recorded in increasing but fluctuating numbers by BirdLife International/Socotra Conservation Development Programme (SCDP) surveys. The highest count, a high count for any Middle Eastern wetland site, was 109 at Qalansiya estuary, NW Socotra, in February 2006 (RF Porter pers comm, Plate 1). Until the discovery of breeding on the island (Figure 1), the Black-winged Stilt was considered a recent winter visitor and passage migrant, but with some suggestion of year-round presence.

BREEDING OBSERVATIONS

Birds have been recorded during surveys at potentially suitable nesting areas: at Qalansiya estuary, Wadis Sheq and Sirhan (at Hadibu), Mateaf lagoon (SE Socotra), Qariyeh lagoon (N Socotra) and Wadi Zirage in the central highlands (Plate 2). The first indications of breeding behaviour were noticed on 23 February 2006 at Sirhan lagoon (Plate 3), close to Hadibu, where four pairs were engaged in territorial disputes.



Plate 1. Qalansiya estuary, February 2006, Socotra. © RF Porter

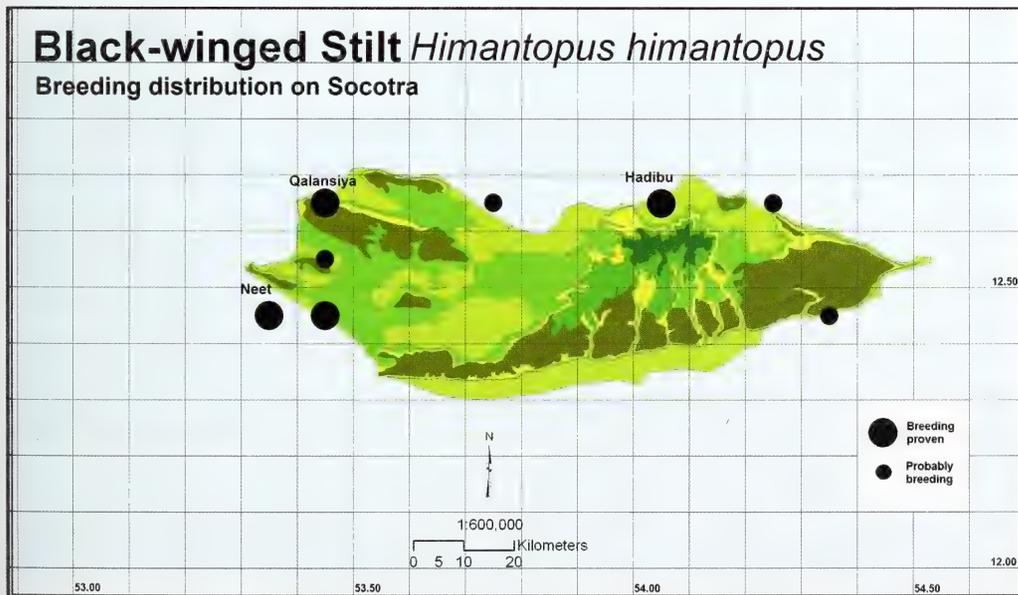


Figure 1. Breeding distribution of the Black-winged Stilt on Socotra, based on Porter & Suleiman (in prep). © RF Porter & AS Suleiman (SCDP/BirdLife International)



Plate 2 (left). Wadi Zirage, October 2008, Socotra. © RF Porter



Plate 3 (right). Author at Sirhan lagoon, February 2004, Socotra. © RF Porter



Plate 4 (left). Salt flats at Neet, February 2007, Socotra. © RF Porter



Plate 5 (right). Black-winged Stilt nest with two eggs, in stagnant pool, Neet, May 2007, Socotra. © Ahmed Saeed Suleiman

On 22 February 2007, RF Porter, Paul Scholte and I visited the coastal plain at Neet, SW Socotra, some 4 km long and 500 m wide and consisting of a series of low-lying areas that fill with seawater during the monsoon season (May–August), but then dry out (Plate 4). It is important for salt production. Here we observed several old, raised, mud nests on the dried out salt flats. From the description of the birds given to us by the local villagers, these were the nests of Black-winged Stilts. They told us the birds had nested during the summer monsoon. I revisited the site 28–30 May with Tabet Abdulah of SCDF. Whereas we have regularly visited this coastal area, this was the first visit during the monsoon season, when travelling by boat is impossible due to extreme wind speeds. On 29 May, 11 nests on slightly elevated clay mounds covered by dried algae, were found in the stagnant pools (Plate 5). The tops of the mounds were covered with small stones and dead mangrove leaves and twigs. Two nests contained two eggs. From the number of adults present we estimated that the number of breeding pairs was over 30.

Proof of breeding of Black-winged Stilts was also obtained at Sirhan lagoon. In 2007, two downy young c2–3 days old, were found on 11 May. In 2008, a nest with two eggs was found on 9 April, a chick on 12 April, two nests (two eggs, one egg) were found in May (built on palm-tree trunks), and one chick was observed then also. Breeding was also demonstrated at the Qalansiya estuary, where a pair was seen copulating on 17 February 2007 (RF Porter pers comm).

DISCUSSION

The Black-winged Stilt has undergone a significant change in status in Arabia in the last 50 years. It was previously regarded as a scarce migrant and winter visitor but now it is an increasingly widespread breeding bird (MC Jennings pers comm). Thus the discovery of breeding on Socotra is not unexpected. Colonisation from Somalia is perhaps unlikely, as there is only one known breeding record there (Ash & Miskell 1998). The current population on Socotra may be in excess of 150 birds and the breeding season on the island extends from at least mid February (when birds seen copulating) to June (when there must still be chicks if birds have eggs at the end of May).

The feeding and breeding areas of the Black-winged Stilt (and other waders) on Socotra are highly sensitive and vulnerable to man-made developments, especially as wetland habitats are rare on this predominantly arid island. In the last few years an asphalt road has been built across the mouth of one estuary where stilts are nesting, and across an inland lagoon where stilts occur. Two other estuaries are threatened by a proposed road. In addition, these roads and accompanying dams have blocked the connection between the channels and the sea, thus limiting the tidal nature of the lagoons. Their restoration should be a priority. According to the 2000 Socotra Conservation Zoning Plan (SCZP, Presidential Decree 275), Neet is a strictly protected area under the management of Yemen's Environmental Protection Authority and SCDP in close collaboration with local communities. It is very important that all wetlands on Socotra receive adequate protection especially through the SCZP, possibly with further assistance from organizations such as the RAMSAR Bureau. Yemen has recently become a signatory of the Ramsar Convention and its first designated site is Socotra's Ditwa lagoon. The conservation of wetlands will surely be further enhanced now that Socotra has become a World Heritage Site for its outstanding biodiversity.

Black-winged Stilts fiercely defend their young from human and avian intrusion, chasing off the invader with loud calls. In and around Hadibu, the introduced Indian House Crow *Corvus splendens*, an aggressive invader, is likely to predate the eggs and young of nesting waders and it is essential that its population continues to be subjected to the rigorous control programme of the Environmental Protection Authority.

ACKNOWLEDGEMENTS

I would like to thank Richard Porter for encouraging me to write this paper and helping with its preparation. I would also like to acknowledge the help I have received from my colleagues, especially Paul Scholte, but also Abdulfatif Sa'ad Amer, Abdulraqeb Shamsan Al-Okaishi and Nadim Taleb.

REFERENCES

- Ash, JS & JE Miskell. 1998. *Birds of Somalia*. Pica Press, Sussex, UK.
- Kirwan, GM, RP Martins, KM Morton & DA Showler. 1996. The status of birds in Socotra and 'Abd Al-Kuri and the records of the OSME survey in spring 1993. *Sandgrouse* 17: 83-101.
- Porter, RF & AS Suleiman. In prep. *The population and distribution of the breeding birds of Socotra*. BirdLife International/SCDP

Ahmed Saeed Suleiman, Environmental Protection Authority, Socotra Conservation and Development Programme, Socotra, Yemen. qamhem@yahoo.com

Nesting tree utilisation by Brown-necked Ravens *Corvus ruficollis* in west central Saudi Arabia

PETER CUNNINGHAM

Nesting tree utilisation by Brown-necked Ravens *Corvus ruficollis* was recorded in the Mahazat as-Sayd protected area, with most nests located in *Maerua crassifolia*, then *Acacia tortilis*. The mean above ground height of the nests was higher in *M. crassifolia* than *A. tortilis*. The median number of nests/tree was 1 and 2 for *A. tortilis* and *M. crassifolia* respectively, with most nests as single nests/tree in *A. tortilis* and 3 nests/tree making up 21.4% of the nests in *M. crassifolia*. Most nests were either in the same tree as, or within a radius of 500 m from, a Lappet-faced Vulture *Torgos tracheliotus* nest. Just over half the nests in the same tree were located beneath (ie entirely or partially covered by) the Lappet-faced Vulture nest (and most were located under the western and northern sides) while just below half were located away from (ie not covered), but still in the same tree.

INTRODUCTION

Although commonly observed throughout large parts of Saudi Arabia, Brown-necked Ravens *Corvus ruficollis* (Plate 1) are poorly known and their nesting tree utilisation is not well understood. Most references, when referring to trees as nesting sites for Brown-necked Ravens, indicate trees in general and only occasionally is the tree species mentioned (Aspinall 1996, Hollom *et al* 1988, Osborne *et al* 1996, Richardson 1990). Nest sites are extremely variable in location, but with thorny tree species preferred (Jennings 1998). This was supported by Shobrak (2005), who indicated that Brown-necked Ravens prefer *Acacia tortilis*, during a study on their breeding success in the Mahazat as-



Plate 1. Brown-necked Raven *Corvus ruficollis*, Saudi Arabia. © Robbie Robinson

Sayd protected area. This paper presents more data on their nesting tree utilisation and the apparent nesting association of Brown-necked Ravens with Lappet-faced Vultures *Torgos tracheliotus*, in the Mahazat as-Sayd protected area in west central Saudi Arabia (Plates 2 & 3).

STUDY AREA

This study was conducted opportunistically, during an ongoing study into the feeding ecology of Arabian Sand Gazelles (*Gazella subgutturosa marica*) in the Mahazat as-Sayd protected area (MSPA). MSPA is a flat arid desert steppe located c150 km northeast of Taif in west central Saudi Arabia (28° 15' N, 41° 40' E, elevation 900–1100 m asl) covering an area of 2244 km². Mahazat as-Sayd was designated a nature reserve in 1988 and fenced in 1989, mainly for the re-introduction of Arabian Oryx *Oryx leucoryx* and Asian Houbara Bustard *Chlamydotis undulata macqueenii* (Child & Grainger 1990, Haque & Smith 1996, Chassot *et al* 2005, Shobrak 2005). The climate is arid with annual rainfall highly variable ranging between 50–100 mm and occurring mainly March–May. Mean monthly minimum



Plate 2 (left). Brown-necked Raven *Corvus ruficollis* (smaller nest, below) and Lappet-faced Vulture *Torgos tracheliotus* (larger nest, above) nests in *Acacia tortilis*, Mahazat as-Sayd protected area, Saudi Arabia. © Peter Cunningham

Plate 3 (right). Typical Brown-necked Raven *Corvus ruficollis* nest (smaller nest, below right) surrounded by human refuse (mainly rags) with Lappet-faced Vulture *Torgos tracheliotus* nest above it, in *Acacia tortilis*, Mahazat as-Sayd protected area, Saudi Arabia. © Peter Cunningham

and maximum temperatures range between 2–21°C and 29–40°C. In general, the MSPA area is undulating sandy and/or gravel plains dominated by *Acacia tortilis* trees, with mean, maximum and minimum densities of *A. tortilis* and *Maerua crassifolia* estimated at 553, 2905 & 21 trees/ha and 0.16, 20 & 0 trees/ha, respectively (Gillet & Launay 1990). Other trees/shrubs, at lower densities, include *A. ehrenbergiana*, *A. oerforta* and *Lycium shawii* (Gillet & Launay 1990). With the exception of two small hills (Sha'fa al Janubi, 1033 m asl, and Sha'fa ash Shimali, 1013 m asl), no cliffs occur within MSPA. Potential mammalian nest predators include Gordon's Wild Cat *Felis silvestris gordonii*, Sand Cat *F. margarita*, Feral Cat *F. catus* and Ratel *Mellivora capensis*. The number and density of Brown-necked Raven and Lappet-faced Vulture nests in MSPA are not known, although they vary between years and seem to be at higher densities within MSPA (Newton & Newton 1996). According to Newton & Newton (1996), the typical inter-vulture nest distance of this species is mostly >2 km (majority between 3–6 km) apart.

STUDY METHODS

Whilst conducting feeding observations of sand gazelle, the locations of Brown-necked Raven and Lappet-faced Vulture nests opportunistically encountered were noted and returned to later, to collect certain nest details. For each Brown-necked Raven nest the following information was collected: tree species, height of the nesting tree, height of nest (and of Lappet-faced Vulture nest if in the same tree), position (under a Lappet-faced Vulture nest or not) and orientation (N, E, S & W) of nest in relation to any Lappet-faced Vulture nest and presence of a Lappet-faced Vulture nest within 500 m if not located in the same tree. Nest height above ground level was measured using a measuring pole, to the nearest 0.25 m. Observations were conducted during September and October 2008, *ie* the non-breeding season for both Brown-necked Ravens and Lappet-faced Vultures.

RESULTS

A total of 84 Brown-necked Raven nests were found (old and recent) with 50 located in *Maerua crassifolia* (n = 29 trees), 32 in *Acacia tortilis* (n = 23 trees), 1 in *Acacia ehrenbergiana* (n = 1 tree) and 1 in an artificial structure (windsock). The majority of these nests (59.5%) were in *Maerua crassifolia* trees and 53.8% of trees with nests were of this species (Table 1). Trees with more than 1 nest had a recently used nest and older nests.

Table 1. Nesting tree (n = 84 nests) utilisation by Brown-necked Ravens *Corvus ruficollis* according to tree species and number of nests/tree in the Mahazat as-Sayd protected area, Saudi Arabia, September and October 2008. Artificial: 1 nest located in windsock at landing strip. Trees with more than 1 raven nest had a recently used nest and older nests.

	<i>A. tortilis</i>	<i>M. crassifolia</i>	<i>A. ehrenbergiana</i>	Artificial
Nests (%)	38.1	59.5	1.2	1.2
Trees with nests (%)	42.6	53.8	1.8	1.8
1 nest/tree (%)	65.2	42.9		
2 nests/tree (%)	30.4	35.7		
3 nests/tree (%)	4.4	21.4		

The mean height of nests in trees (from the ground) was 2.54 m (SD = ± 0.38, n = 32) and 2.95 m (± 0.63, n = 50) for *A. tortilis* and *M. crassifolia* trees, respectively. The mean tree height of trees with raven nests was 3.08 m (± 0.39, n = 23) and 3.4 m (± 0.72, n = 28) for *A. tortilis* and *M. crassifolia*, respectively. Brown-necked Raven nests were significantly higher in *M. crassifolia* than *A. tortilis* trees (Mann-Whitney U-test, P < 0.001) with a significant difference in mean nest heights between all tree species observed (Kruskal-Wallis one way ANOVA on ranks, Dunn's Test P < 0.05). The variation in nest height as a function of tree height was positive for *A. tortilis* (Spearman Rank Order correlation 0.607, n = 32), *M. crassifolia* (0.839, n = 50) and both tree species combined (0.834, n = 82).

Most Brown-necked Raven nests were in the upper crowns (96.4%) with only 3 nests being located on top of trees (3.6%). The median number of nests/tree was 1 and 2 for *A. tortilis* and *M. crassifolia* trees respectively, with 65.2% of the nests as single nests in *A. tortilis* and 3 nests/tree making up 21.4% of the nests in *M. crassifolia* trees (Table 1).

Of the 84 Brown-necked Raven nests found, 50% (n = 42) were in the same tree as a Lappet-faced Vulture nest (n = 24) with 38.1% (n = 16) and 61.9% (n = 26) of these nests in *A. tortilis* and *M. crassifolia* trees, respectively. Of the remaining 42 nests, not in the same tree as a Lappet-faced Vulture nest, 66.7% (n = 28) were within a radius of 500 m from a Lappet-faced Vulture nest. Thus 83.3% of the Brown-necked Raven nests (n = 70) were either in the same tree as (n = 42), or within a radius of 500 m (n = 28) from, a Lappet-faced Vulture nest.

Just over half (52.4%, n = 22) of the Brown-necked Raven nests in the same tree as a Lappet-faced Vulture nest were beneath that nest (entirely or partially) and 47.6% (n = 20) were away from, but still in the same tree. Overall, there was no significant difference in nest height between Brown-necked Raven (BNR) and Lappet-faced Vulture (LFV) nests in the same tree (means ± SD; *A. tortilis*: BNR 2.54 ± 0.38 m, LFV 2.67 ± 0.48 m; *M. crassifolia*: BNR 2.95 ± 0.63 m, LFV 3.06 ± 0.52 m; Kruskal-Wallis one way ANOVA on ranks, Dunn's

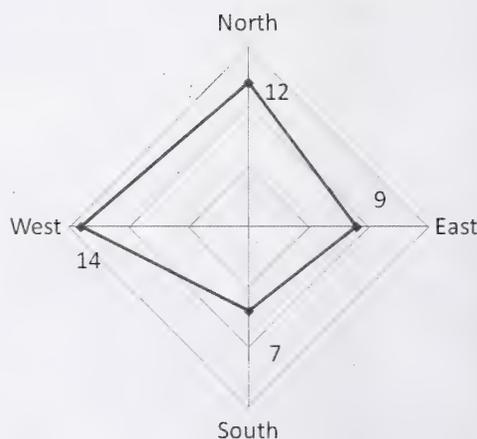


Figure 1. Nest orientation of Brown-necked Raven nests located partially or completely beneath a Lappet-faced Vulture nest in the Mahazat as-Sayd protected area, Saudi Arabia, 2008. Nest orientation refers to whether the nest was under the N, E, S or W section of the vulture's nest.

Test $P > 0.05$). Measured orientation of Brown-necked Raven nests located entirely or partially beneath a Lappet-faced Vulture nest indicated that 61.9% of the nests were located under the western ($n = 14$) and northern ($n = 12$) sides of the vulture nest (Figure 1).

DISCUSSION

The low *M. crassifolia* tree densities (Gillet & Launay 1990) and the higher occurrence of Brown-necked Raven nests associated with this tree species rather than *A. tortilis*, indicate its importance as a nest site. In a previous study in MSPA, Shobrak (2005), however, found the majority of his Brown-necked Raven nests in *A. tortilis* trees ($n = 24$), with the importance of *A. tortilis* as the favoured nesting site in Arabia supported by Jennings (1987). The discrepancy between Shobrak's (2005) and my results is difficult to explain. *M. crassifolia* is dominant in the east of MSPA, though Shobrak (2005) stated that he searched randomly throughout MSPA looking for raven nests. The Lappet-faced Vulture shows a preference for nesting and roosting in the eastern *M. crassifolia* dominated parts of MSPA (Newton & Newton 1996) and the apparent preference for *M. crassifolia* by Brown-necked Ravens may simply reflect that. There might be a thermoregulatory benefit as *M. crassifolia* is evergreen and generally taller than *A. tortilis*.

The apparent association of Brown-necked Raven nests with those of Lappet-faced Vultures is interesting, as corvids are known to show hostility at their own nesting sites towards raptors including Lappet-faced Vultures (Harvey & Harvey 1992, Jennings 1998, Bertran & Margalida 2004, Hockey *et al* 2005). Observations are needed during the breeding season to determine the level of interaction at dual nesting sites between the two species. The main benefit of associating with Lappet-faced Vulture nests is probably to scavenge around the nests, as Lappet-faced Vulture nestlings are "messy" feeders. According to Gavashelishvili & McGrady (2006), the presence of *Corvus* spp at carcasses signals relative security to vultures indicating that vultures might benefit from having ravens around although this does not necessarily imply associated breeding. According to Shobrak (2000), Brown-necked Ravens are the first avian species to locate carcasses in MSPA, probably assisting vultures in locating carcasses. It may also be that Lappet-faced Vultures are exhibiting a preference to nest closer to Brown-necked Ravens, to benefit from the latter's aggressiveness to other raptors (as potential nest raiders) or to benefit in the search for carcasses. According to Newton & Newton (1996), the survival rate of Lappet-faced Vulture eggs and chicks in MSPA is higher than that documented from Africa. Active breeding association has been documented for Peregrine Falcons (*Falco peregrinus*) with Common Ravens (*Corvus corax*), with the latter presenting early-warning cues against predators (Fabrizio *et al* 2004).

The orientation of the nests shaded by Lappet-faced Vulture nests suggests a nest site selection preference favouring the west and north, which might provide increased shade during the hotter parts of the day. The breeding season of the Brown-necked Raven is generally accepted as being February–April in Saudi Arabia (Richardson 1990, Aspinall 1996, Shobrak 2004) with nesting known as late as June (Jennings 1993, 1995). Shading during this period, especially the latter period with a dramatic increase in ambient temperatures, may increase successful incubation, hatching and fledging. Shobrak (2005) suggested that breeding earlier, in the cooler season, favoured the successful rearing of Brown-necked Raven chicks. It is possible that later nesting Brown-necked Ravens are more likely to site their nests under Lappet-faced Vulture nests, to benefit from the shade. Whether the north-westerly Shamal winds during the summer months (Bottomley 1996) have an effect on nest orientation also requires investigation.

ACKNOWLEDGEMENTS

I hereby acknowledge HH Prince Bandar bin Saud bin Mohammed Al Saud, Secretary General NCWCD, for his continued support towards conservation efforts in Saudi Arabia. My appreciation also goes to Ernest Robinson (Director KKWRC, Thumamah) and Mohammed Shobrak (Taif University) for supplying me with relevant literature and commenting on a draft of this note. I also thank Steve Newton (Birdwatch Ireland) for supplying me with a very relevant paper.

REFERENCES

- Aspinall, S. 1996. *Status and conservation of the breeding birds of the United Arab Emirates*. Hobby Publications, Dubai.
- Bertran, J & A Margalida. 2004. Interactive behaviour between Bearded Vultures *Gypaetus barbatus* and Common Ravens *Corvus corax* in the nesting sites: predation risk and kleptoparasitism. *Ardeola* 51: 269–274.
- Bottomley, N. 1996. Recent climate of Abu Dhabi. In: Osborne, PE (ed). *Desert ecology of Abu Dhabi—a review and recent studies*. Pisces Publications, Newbury, UK, pp36–49.
- Chassot, P, P Mésochina & S Ostrowski. 2005. Re-introducing of Arabian oryx in the Kingdom of Saudi Arabia: up-date on population size in two protected areas. *Re-introduction News* 24: 17–19.
- Child, G & J Grainger. 1990. *A System Plan for Protected Areas for Wildlife Conservation and Sustainable Rural development in Saudi Arabia*, Appendix II. National Commission for Wildlife Conservation and Development (NCWCD), Riyadh.
- Fabrizio, F, F Rizzolli, L Marchesi & P Pedrini. 2004. The importance of interspecific interactions for breeding-site selection: peregrine falcons seek proximity to raven nests. *Ecography* 27: 818–826.
- Gavashelishvili, A & MJ McGrady. 2006. Geographic information system-based modelling of vulture response to carcass appearance in the Caucasus. *Journal of Zoology* 269: 365–372.
- Gillet, H & C Launay. 1990. *Flora analysis of the Mahazat as-Sayd vegetation*. NWRC, Taif, Saudi Arabia.
- Haque, MN & TR Smith. 1996. Reintroduction of Arabian sand gazelle *Gazella subgutturosa marica* in Saudi Arabia. *Conservation Biology* 76: 203–207.
- Harvey, D & M Harvey. 1992. Breeding observations on the Brown-necked raven in Sana'a, Republic of Yemen. *Phoenix* 9: 16–17.
- Hockey, PAR, WRJ Dean & PG Ryan (eds). 2005. *Roberts' Birds of Southern Africa*. 7th edition. The Trustees of the John Voelcker Bird Book Fund, Cape Town.
- Hollom, PAD, RF Porter, S Christensen & I Willis. 1988. *Birds of the Middle East and North Africa*. T & AD Poyser, Calton, UK.
- Jennings, MC. 1987. Progress so far: brown-necked raven. *Phoenix* 4: 7.
- Jennings, MC. 1993. Progress so far: brown-necked raven. *Phoenix* 10: 5.
- Jennings, MC. 1995. *An interim atlas of the breeding birds of Arabia*. NCWCD, Riyadh.
- Jennings, MC. 1998. Brown-necked raven, *Corvus ruficollis*. *Phoenix* 15: 18–19.
- Newton, SF & AV Newton. 1996. Breeding biology and seasonal abundance of lappet-faced vultures *Torgos tracheliotus* in western Saudi Arabia. *Ibis* 138: 675–683.
- Osborne, PE, JA Norton & S Aspinall. 1996. Desert birds of Abu Dhabi. In: Osborne PE (ed). *Desert ecology of Abu Dhabi—a review and recent studies*. Pisces Publications, Newbury, UK, pp98–123.
- Richardson, C. 1990. *The birds of the United Arab Emirates*. Hobby Publications, Dubai.
- Shobrak, M. 2000. The role of avian scavengers in locating and exploiting carcasses in central Saudi Arabia. In: Chancellor, RD & BU Meyburg (eds). *Raptors at Risk*. WWGBO, Hancock House, UK.
- Shobrak, M. 2005. Breeding success of Brown-necked ravens *Corvus ruficollis* in the Mahazat as-Sayd Protected Area, Saudi Arabia. *Sandgrouse* 27: 152–157.

Peter Low Cunningham, King Khalid Wildlife Research Centre & Zoological Society of London, Thumamah, PO Box 61681, Riyadh, Kingdom of Saudi Arabia. pckkwrc@yahoo.co.uk

Breeding and food habits of a pair of urban Desert Eagle Owls *Bubo ascalaphus* in Hurghada, Red Sea coast, Egypt

ISTVÁN MOLDOVÁN & ATTILA D SÁNDOR

The breeding ecology and diet of an urban pair of Desert Eagle Owls *Bubo ascalaphus* was studied in Hurghada 2007/8, based on nest visits and prey remains. The primary breeding period of the Desert Eagle Owl is early spring, although the adult birds were present at the nesting place in December. Eggs were laid in January; however, a second clutch was apparently laid in May 2008. The diet comprised mostly mammals (78%) and birds (11.3%) with a small proportion of arthropods (9.2%) and reptiles (2.1%). The diet showed low diversity and consisted primarily of the Brown Rat *Rattus norvegicus*, House Mouse *Mus musculus* and Common Quail *Coturnix coturnix*, a temporally abundant migrant bird species. The mammalian component of the diet was the most important in terms of biomass (91.7%), with the Brown Rat dominating both by number (66.1%) and by biomass (89.1%). The results suggest that Desert Eagle Owls living in the outskirts of Hurghada are opportunistic feeders, relying on urban rodents.

INTRODUCTION

The Desert Eagle Owl *Bubo ascalaphus* is a regular resident in most of the desert regions of the Sahara and the Middle East (Cramp 1985). Although widely distributed and occurring around a number of desert oases, its habitat selection, breeding ecology and diet are poorly known compared to its European counterpart, the Eurasian Eagle Owl *Bubo bubo* (Jánossy & Schmidt 1970). Only anecdotal observations exist regarding the nesting period of the Desert Eagle Owl (Goodman *et al* 1986). Information regarding laying dates, number of nestlings and brooding time is also scanty (Goodman 1990). Studies performed have concentrated on food selection, mostly in the western and north-western regions of its distribution (Morocco: Lesne & Thévenot 1981, Vein & Thévenot 1978; Algeria: Biche *et al* 2001, Boukhamza *et al* 1994; Tunisia: Alaya & Nouira 2007) and in the east (Syria: Shehab 2004; United Arab Emirates: Cunningham & Aspinall 2001; Saudi Arabia: Evans & Bates 1993 and the eastern desert of Jordan: Amr *et al* 1997, Rifai *et al* 2000). There is a small account of its diet from Algeria (Tammanrasset, Hoggar mountains, Niethammer 1963) and a few studies from Egypt: Jánossy & Schmidt (1970) presented information on a few pellets collected in Saqqara, close to Cairo, containing less than two dozen animals; Goodman (1990) collected and analysed pellets from Kharga oasis, the first study of the Desert Eagle Owl diet in true desert habitats of Egypt; while Sándor & Orbán (2008) detailed a handful of pellets from Siwa oasis.



Plate 1. Landscape as seen from the nest entrance, Hurghada, Egypt. © István Moldován



Plate 2. Typical habitat in the nesting territory, Hurghada, Egypt. © István Moldován

The purpose of the present study was to collect information on the breeding ecology and phenology, habitat selection and diet of an urban pair of Desert Eagle Owls in the extreme east of the Egyptian Eastern Desert, in Hurghada, based on visual observations and prey remains.

STUDY AREA AND METHODS

A pair of Desert Eagle Owls was located in the suburbs of Hurghada (27° 13' N, 33° 48' E) and bred there in a rock crevice in 2007 and 2008. The nest was c100 m from a block of flats (Plate 1) in the outskirts of Hurghada. The habitat of the area (Plate 2) is hyperarid sandstone desert and is within the boundaries of a housing estate, with a mixture of non-native and local plant species (*Acacia raddiana*, *Hyphaene thebaica*, *Tamarix nilotica*, *Bougainvillea* sp bushes etc), and there is an artificial water hole with a typical reed bed (*Phragmites australis*) not more than 30 m from the nest site. There are several industrial and household refuse dumps in the surrounding area. Desert Eagle Owls were observed several times roosting on the top of a quarry site.

In each visit, the owls were located and nest site found by observing 'white-wash' (Penteriani & Delgado 2008) and pellets. Clutch size and laying date were not recorded because we avoided inspecting the nest in the period from mid-January to mid-March to minimize disturbance. All pellets and food remains were collected below the nest and on prominent rocks in the surroundings. The pellets were soaked in water and the bones of vertebrates and exoskeleton remains of arthropods removed from the pellets. The contents of each pellet were ascertained if possible, but a few pellets were broken and number of individuals per pellet not calculated. For identification of prey species, we used the skulls, mandibles, humeri and tibias of mammals, humeri and tarsometatarsi of birds and chelicerae, telsons and elytras of arthropods. Mammal and bird remains were compared to the authors' reference collection. Paired elements for each taxon were separated and the largest number of these was considered the minimum number of individuals (MNI) per taxon for the entire sample. Original animal biomass was calculated by multiplying the number of



Plate 3. Adult female Desert Eagle Owl *Bubo ascalaphus* near the nest, March 2007. © István Moldován

individuals of each species found in the pellets by the mean body mass (weight) obtained from the literature (Osborn and Helmy 1980, Hoath 2003) or from direct mass measurements of birds captured for ringing close to the study region (IM unpub). We calculated food niche breadth (NB) using Levins' (1968) equation: $NB = (1/\sum P_i^2) - 1$, where P_i is the proportion of prey in different categories (mainly by species). We calculated the mean prey weight (MPW) summing the product of the prey number and mean body weight and dividing by the number of prey items.

RESULTS

The birds were first observed on 8 March 2007, when a territorial male was observed. The nest was in a rock crevice, where the female (Plate 3) laid in a scrape in sand and was surrounded by food remains. The adult birds usually stayed close to the nest, warning when approached. No aggressive contact was noted. Three nestlings were present on 15 March. On subsequent visits, the nestlings were observed and two of them ringed on 07 April. The third was ringed on 27 April (Plate 4). On 9 May, only two of the ringed nestlings were present in the nest, though fully feathered and able to fly. The owls left the breeding area but were usually located nearby. No birds were observed from August through December. Two adults were present in the breeding area on 28 Dec 2007 and they used the same nest in 2008.

The site was visited several times in the period January–March 2008, and both adults were observed at the nest in most visits (Plates 5 & 6). There was one nestling. On 12 March the nestling was measured and based on its size considered to be 52–55 days old post-hatching (measurements of primary length, regression equations in Penteriani *et al* 2004). It is estimated to have hatched in early January 2008. The adults were observed until 20 April, when they were seen some 500 m NE of the nest site, together with the only



Plate 4. Downy youngster about to be ringed, 27 April 2007. © Jacek Chruściel

Table 1. Identified prey remains in Desert Eagle Owl pellets, Hurghada, Egypt. MNI, minimum number of individuals.

Prey species	MNI	Frequency (%)	Biomass (%)
<i>Rattus norvegicus</i> ad	44	11.64	23.78
<i>Rattus norvegicus</i> juv	203	53.70	65.83
<i>Mus musculus</i> ad	39	10.32	1.58
<i>Mus musculus</i> juv	10	2.65	0.27
<i>Gerbillus pyramidum</i>	1	0.26	0.04
Total mammals	297	78.57	91.51
<i>Coturnix coturnix</i>	22	5.82	5.95
<i>Charadrius alexandrinus</i>	1	0.26	0.11
<i>Charadrius dubius</i>	1	0.26	0.11
<i>Columba livia</i>	1	0.26	0.95
Alaudidae spp	4	1.06	0.38
<i>Hirundo daurica</i>	1	0.26	0.05
<i>Cisticola juncidis</i>	1	0.26	0.04
Sylviidae spp	4	1.06	0.16
<i>Emberiza</i> sp	1	0.26	0.07
Passeriformes spp	2	0.53	0.16
Total birds	38	10.05	7.97
Total reptiles	14	3.70	0.38
Tenebrionidae sp	5	1.32	0.01
Coleoptera sp	22	5.82	0.12
<i>Leiurus quinquestriatus</i>	2	0.53	0.01
Total arthropods	29	7.67	0.00
TOTAL	378		



Plate 5. Adult male Desert Eagle Owl *Bubo ascalaphus*, leaving the nest crevice, January 2008. © István Moldován

'nestling', found in a hole. The nest site was not visited again until 28 June, when one more, small, nestling was found. Based on its measurements it was 30–33 days old and apparently hatched in late May. A fully feathered juvenile (Plate 7) was present close by, presumably the earlier nestling of 2008.

A total of 378 individual prey were identified in the pellets, representing three rodent species, at least 10 bird species, one reptile and a minimum of four arthropod species (Table 1). Remains of a minimum of 349 individual vertebrate prey (92.3% of MNI) were found in the pellets. Mammals comprised 78.5% of the diet by number, birds 10%, reptiles (small agamid lizards) 3.7% and arthropods (coleopteran sp, tenebrionid beetle sp, two Death Stalker Scorpions *Leiurus quinquestriatus*) 7.6% by number. The Brown Rat was the most common prey, followed by House Mouse, Common Quail, then the beetles and lizards. All other species were represented by a few individuals and comprised less than 5% of the diet. Mammals made up to 91.5% by biomass, followed by birds 7.9%, while lizards and the arthropods constituted less than 0.5% together. The Brown Rat was the most important prey item both by number and biomass, juvenile rats making up 64.8% of the total biomass consumed. The Common Quail was the second species with an important share (6.4%), while all other categories together were below 5% of the total biomass. The prey diversity was extremely low (NB = 1.32), the mean prey weight was 97.9 g (SD \pm 89.17 g, n = 378).

DISCUSSION

The Desert Eagle Owl is a resident breeding bird in the desert regions of Egypt and it has been noted in several oases and cities, including Hurghada (Goodman *et al* 1986, Goodman & Meininger 1991). Its breeding period in Egypt is thought to be the spring, as fledglings were found in spring in Kharga depression (Al Hussaini 1959). The owl uses a wide range of habitats in Egypt, but is most commonly found in wadis and abandoned quarries, although pellets have also been collected from abandoned buildings (Jánossy & Schmidt



Plate 6. Adult male at a favourite roosting site, March 2008. © István Moldován



Plate 7. Juvenile at the age of 90 days (presumably the first 2008 youngster), April 2008. © István Moldován

1970). According to our Hurghada observations, the primary breeding period is winter to early spring, with adults present at the nesting place in December. In 2007 and 2008 laying apparently occurred in January, though laying appeared to have occurred again in May 2008.

The diet of Desert Eagle Owls varies, and samples collected at one site may contain a different selection of prey species than from another site, as is the case in Egypt. Jánossy & Schmidt (1970) found only rodents in the small sample collected close to Cairo, with House Rats *Rattus rattus*, two species of gerbils, and one jerboa *Jaculus orientalis*. The sample collected by Goodman (1990) from Kharga oasis showed a much broader food spectrum, with mammals (64.3% of species), birds (10%), reptiles (4.3%) and arthropods (21%). There, the most numerous prey species was the House Mouse, followed by Trident Horseshoe Bat *Asellia tridens* and the Common Gerbil *Gerbillus gerbillus*. The Common Gerbil was the dominant prey in the diet at Siwa oasis, with four more mammalian prey species, some birds and a large number of arthropods (Sándor & Orbán 2008).

In marked contrast to the studies above, the diet in Hurghada was dominated by one medium sized, human-commensal, rodent species, the Brown Rat. The other important prey species (in terms of biomass) was a common migratory bird, which migrates through the area in large numbers (IM unpub). The rest of the prey species were found only in small numbers, comprising less than 5% of all food consumed. The food diversity was low, which is typical for an urbanized species (McKinney 2008). Thus, Desert Eagle Owls in Hurghada in the breeding period are clearly opportunistic, feeding largely on urban rodents.

ACKNOWLEDGEMENTS

The authors are grateful to J Büki, M Thévenot and M Vălcu for their generous help in collecting references. The field assistance of Robert Lasecky and Jacek Chruściel was essential for our research. We would like to express our thanks to M Megalli and to the anonymous reviewer whose comments greatly improved an earlier version of the manuscript.

REFERENCES

- Al Hussaini, AH. 1959. The avifauna of Al-Wadi Al-Gadid in the Libyan Desert. *Bulletin of the Zoological Society of Egypt* 14: 1–14.
- Alaya, HB & S Nour. 2007. Le régime alimentaire de trois espèces de rapaces nocturnes en Tunisie: la chouette chevêche, la chouette effraie et le hibou grand-duc. *Ostrich* 78(2): 377–379.
- Amr, ZS, WN Al-Melhim & MA Youssef. 1997. Mammal remains from pellets of the Eagle Owl, *Bubo bubo*, from Azraq Nature Reserve, Jordan. *Zoology in the Middle East* 14: 5–10.

- Biche, M, M Sellami, R Libois & N Yahiaoui. 2001. Régime alimentaire du Grand-duc du désert, *Bubo ascalaphus* dans la réserve naturelle de Mergueb (M'Sila, Algérie). *Alauda* 69: 554–557.
- Boukhamza, M, W Hamdine & M Thévenot. 1994. Données sur le régime alimentaire du Grand-Duc ascalaphe (*Bubo bubo ascalaphus*) en milieu steppique (Ain Ouessera, Algérie). *Alauda* 62: 150–152.
- Cramp, S. 1985. *The Birds of the Western Palearctic*. Vol 4. Oxford University Press, UK.
- Cunningham, PL & S Aspinall. 2001. The diet of Little Owl *Athene noctua* in the UAE, with notes on Barn Owl *Tyto alba*, and Desert Eagle Owl *Bubo (b.) ascalaphus*. *Tribulus* 11(2): 13–15.
- Evans, M & P Bates. 1993. Diet of the Desert Eagle Owl in Harrat al Harrah reserve, northern Saudi Arabia. *Ornithological Society of the Middle East Bulletin* 30: 26.
- Goodman, SM. 1990. The food habits of the eagle owl (*Bubo bubo ascalaphus*) in Kharga oasis, Egyptian western desert. *Journal of Arid Environments* 18: 217–220.
- Goodman, SM & PL Meininger. 1991. *The Birds of Egypt*. Oxford University Press, UK.
- Goodman, SM, PL Meininger & WC Mullié. 1986. The Birds of the Egyptian Western Desert. *Miscellaneous Publications of the Museum of Zoology, University of Michigan* 172:1–91.
- Hoath, R. 2003. *A Field Guide to the Mammals of Egypt*. American University in Cairo Press, Cairo.
- Jánossy, D & E Schmidt. 1970. Die Nahrung des Uhus (*Bubo bubo*). Regionale und erdzeitliche Änderungen. *Bonner Zoologischer Beiträge* 21: 25–51.
- Lesne, L & M Thévenot. 1981. Contribution à l'étude du régime alimentaire du Hibou grand duc *Bubo bubo ascalaphus* au Maroc. *Bulletin de l'Institut scientifique, Rabat* 5: 167–177.
- Levins, R. 1968. *Evolution in Changing Environments*. Princeton University Press, NJ.
- Mckinney, ML. 2008. Effects of urbanization on species richness. A review of plants and animals. *Urban Ecosystems* 11: 161–176.
- Niethammer, J. 1963. Nagetiere und Hasen aus zentralen Sahara (Hoggar). *Zeitschrift für Säugetierkunde* 28: 350–369.
- Osborn, DJ & I Helmy. 1980. The contemporary land mammals of Egypt (including Sinai). *Fieldiana Zoology* 5 (ns).
- Penteriani, V & MM Delgado. 2008. Owls may use faeces and prey feathers to signal current reproduction. *PLoS ONE* 3(8): e3014.
- Penteriani, V, MM Delgado, C Maggio, A Aradis & F Sergio. 2004. Development of chicks and pre-dispersal behaviour of young in the Eagle Owl. *Ibis* 147: 155–168.
- Rifai, LB, WN Al-Melhim, BM Gharaibeh & ZS Amr. 2000. The diet of the Desert Eagle Owl, *Bubo bubo ascalaphus*, in the Eastern Desert of Jordan. *Journal of Arid Environments* 44: 369–372.
- Sándor, AD & Z Orbán. 2008. Food of the Desert Eagle Owl (*Bubo ascalaphus*) in Siwa Oasis, Western Desert, Egypt. *Zoology in the Middle East* 44: 107–110.
- Shehab, AH. 2004. Diet of the Eagle owl, *Bubo bubo*, in Syria. *Zoology in the Middle East* 33: 21–26.
- Vein, D & M Thévenot. 1978. Etude sur le Hibou grand duc *Bubo bubo ascalaphus* dans le Moyen-Atlas marocain. *Nos Oiseaux* 34: 347–351.

István Moldován, Constantin Romanu Vivu St, Bl 11/D, ap 8, Târgu Mures, Romania.

Attila D Sándor, Environmental Protection Agency, Str Podeni 10, Targu Mures, RO-540253, Romania. adsandor@gmail.com

ERRATUM

Schweizer M & M Mitropolskiy. 2008. The occurrence of Crested Honey Buzzard *Pernis ptilorhyncus* in Uzbekistan and Tajikistan and its status in Central Asia. *Sandgrouse* 30: 161–163.

The editor apologises for the omission of Table 1, which is reproduced in full below.

Table 1. Published records of Crested Honey Buzzard in Uzbekistan and Tajikistan and recent observations from Uzbekistan. (coll NUUz = Collection of National University of Uzbekistan, Tashkent).

Country	Date	Locality	Number of birds	Observer	Source
Uzbekistan	12 May 2007	Chimgan	1	S Rooke, Sunbird	unpublished
	18 August 2006	Pulathan	1	M Mitropolskiy	unpublished
	19 July 2006	Chaylisay	6	M Mitropolskiy	unpublished
	9 May 2006	Chimgan	20	Manuel Schweizer, Samuel Bachmann, Daniel Kreuzberg	unpublished
	8 May 2006	Masarsay	10	Manuel Schweizer, Elena Kreuzberg-Mukhina, Samuel Bachmann, Daniel Kreuzberg	unpublished
	8 May 2006	Chimgan	2	Manuel Schweizer, Elena Kreuzberg-Mukhina, Samuel Bachmann, Daniel Kreuzberg	unpublished
	3 November 2005	Dzhana-aryk	1	M Mitropolskiy	Mitropolskiy 2007
	18 May 1999	Chimgan	13	M Mitropolskiy	Mitropolskiy 2002
	9 May 1998	Humsan	1	M Mitropolskiy	Mitropolskiy 2002
	9 September 1970	Tashkent	1	AN Aupov, coll NUUz	Mitropolskiy <i>et al</i> 1987
	12 September 1966	Tashkent	1	R Meklenburtsev, coll NUUz	Mitropolskiy <i>et al</i> 1987
	18 October 1949	Tashkent	1	MM Ostapenko	Ostapenko 1960
	27 May 1948	Tashkent	1	R Meklenburtsev	unpublished
	Tajikistan	24 April 1969	Dushanbe	1	HH Mamsurov
13/19 September 1949		near Shahristan Pass	2	AV Popov	Popov 1950

REVIEW

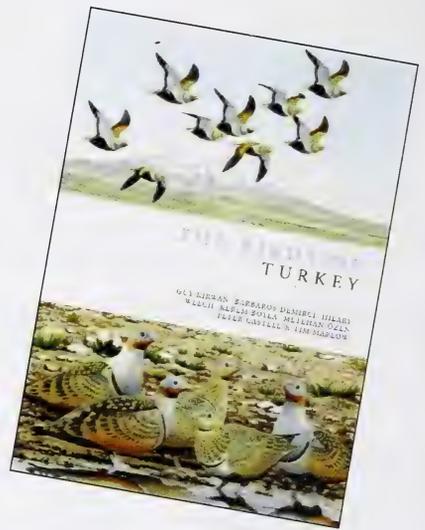
The Birds of Turkey

Guy M Kirwan, Barbaros Demirci,
Hilary Welch, Kerem Boyla, Metehan
Özen, Peter Castell & Tim Marlow
Christopher Helm/A & C Black. 2008.
512 pages, 32 colour plates,
distribution maps.
Hardback. £40.00
ISBN 978-1-4081-0475-0

Like many of us who visit Turkey regularly, the chance sighting of something that might be a little unusual causes me to consult Cees Roselaar's excellent *Songbirds of Turkey: Atlas of Biodiversity of Turkish Passerine Birds* (Helm, 2000).

On a recent March trip to Turkey I visited a beach east of Finike in Antalya province. I encountered Horned Larks *Eremophila alpestris*, which are common in Turkey but usually on steppe and generally at a high altitude. Were these Turkish breeders or could they possibly be wintering or migrant birds that breed further north? Plumage characters suggested they might not be Turkish breeders and it did not look from Roselaar's book as if there were records of birds that were not Turkish breeders. The point is that Roselaar's book has been something of a bible as it has provided detailed information on the taxonomy and distribution of all passerines found in Turkey, and to a generally high level of accuracy. A single volume source has not been available for non-passerines so it is a great pleasure to see the appearance of *The Birds of Turkey* as the species accounts now bring together a single reference source for all species. This alone makes this book indispensable.

The details provided within the species accounts are generally excellent and, within the constraints of coverage issues, are very good. The maps are clear and I think pitched at the right level. There are such huge gaps in distributional knowledge for many birds that a large amount of the 'black' or 'grey' must be deduction though this guesswork appears to have been conducted critically and with due care. I have been leading tours to areas rich in flora and butterflies and this I feel has given



me an insight into the wider avifauna of Turkey in the sense that I spent a lot of time off the beaten track, at least as far as birders are concerned. In fact, I have rarely met other birders in the field in Turkey in the past fifteen years. Certainly I can see few flaws in the species accounts of the mountain passerines of the east which, in my experience, are all really rather common if one spends time in the right habitats, and the species accounts more or less indicate this.

The choice of introductory chapters is worthy of comment. Sections on 'Modern Ornithology in Turkey', the very honest and welcome 'Gaps in our Knowledge' and the summary descriptions of 'Turkey's Ecoregions' are excellent in aim and, with the exception of the last, execution. The section on 'The Breeding Season' is oddly placed, perhaps this could have been an appendix, with the addition of sections giving overviews on 'Migration' and 'Population Trends'.

The description of Turkey's ecoregions is important and necessary and is generally at about the right level, each region's physical and vegetation characteristics, and the reason for their distinctiveness, given succinctly without encumbering us with unnecessary detail. However there are some careless errors here. Describing the Taurus and southwest Anatolia as supporting c950 plant species is rather wide of the mark, we could fairly aim to find that in a two week tour of the region. Rather worryingly, the Black Sea mountains are described as being 'geologically young having started in the last 5000-6000 years'.

Mountain building in this region started around 35 million years ago (late Eocene/Oligocene) and continued until as recently as about 3 million years ago (Pliocene). The description of the Zagros mountains contains much dubious description to areas around Shiraz (Iran) and beyond, and the mention of Asiatic Black Bear *Ursus thibetanus* as a part of what presumably should be a typical Zagros mountains fauna is unrepresentative. There is a remnant and very isolated population of this species in a remoter part of the Sistan Baluchistan mountains, which though a continuation of the same mountain arc that formed the Zagros, can hardly be called part of the Zagros. As far as I know the Asiatic Black Bear has not occurred historically in the Zagros, which are however occupied, rather sparsely, by Brown Bears *Ursus arctos*.

The photograph section is largely good but what is worrying is the number of duds. The Desert Finch *Rhodospiza obsoleta* has twigs across its head and its eye is obscured. The many landscape shots are useful and generally well chosen but again there are some unaccountably poor ones such as the Sivri Kaya shot which illustrates perfectly the impact of sunlight on the landscape.

It would be interesting to map the recording activities of birdwatchers, Turkish and foreign, over the past forty years. In fact, I find it rather strange that this hasn't been at least attempted as in other fields such as Lepidoptera, where Hesselbarth *et al's* magnum opus (*Die Tagfalter der Türkei unter Berücksichtigung der angrenzenden Länder*. Wagener, 1995) not only provides detailed maps for the collections and sightings of all butterflies recorded in Turkey but it also maps the movements of the collectors in detail showing clearly the areas where they have not spent much time or indeed ventured at all.

Overall the drawbacks are few and the book delivers well in terms of providing a thorough resource for information on the birds of Turkey. Anyone with a significant interest in the avifauna of this region will do well to get this book and will be pleased with what they get. The authors have done a very good job. However, I am left with a question. When will the database that this book provides be on the web?

Ian Green

A web page has been set up to disseminate updates and corrections to *The Birds of Turkey*, at <http://www.freewebs.com/guykirwan/turkeybookupdates.htm>.

OSME NEWS

Geoff Welch

Conservation and Research Fund changes

The following important changes have been made to the operation of the Conservation and Research Fund which should be noted by all applicants.

From 1 January 2009, applications will be considered three times a year with the following deadlines for submission: 31 January, 31 May and 30 September. Applicants will be notified of the decision within 3 months of the deadline *ie* in April, August and December. Therefore, please allow sufficient time between your application and the proposed timing of work.

All applications are considered by the Conservation and Research Fund sub-committee, currently Ramaz Gokhelashvili (Caucasus), Michael Brombacher (Central Asia), Richard Porter (Middle East), Rob Sheldon (Scientific Adviser) and myself, with recommendations, endorsed by OSME Council.

In order to support as many applications as possible, grants will be limited to a maximum of £500 but this will be reviewed on a regular basis depending on the success of fund raising activities.

Projects should be directed to one or more of the following subject areas:

- i) investigating the status of threatened or near-threatened species
- ii) attempting to further knowledge of existing Important Bird Areas (eg undertaking breeding censuses, visiting out-of-season to conduct systematic counts)
- iii) investigating potential new Important Bird Areas or little-known areas
- iv) conducting ecological studies of little-known species
- v) educational projects.

Priority will be given to projects involving nationals from the region and applicants are required to write up the results of their project for possible publication in *Sandgrouse*.

Revised Constitution

Although minor amendments have been made over the years, the Society's official Constitution registered with the UK's Charity Commission is dated 1981. Therefore Council has carried out an extensive revision of the Constitution so that it more accurately reflects both the current structure and functioning of OSME and UK charity legislation. The main changes in the new Constitution are in the name of the Society, to reflect the expansion of OSME's area of interest to include the Caucasus and Central Asia (though the Society will continue to be known popularly as OSME), and a clearer definition of the roles and responsibilities of Council members, the majority of whom are also legal trustees of the Society. Council very much hopes that the membership will endorse the revision and this will be voted on formally at the Summer Meeting in July and, if approved, submitted to the Charity Commission in order to update their records. A copy of the draft revision is available on the OSME web site and copies are available on request from the Secretary (please include an A4 self addressed envelope). Any comments on the revised Constitution should be submitted to the Secretary by Saturday 4 July 2009.

OSME Summer Meeting and AGM 2009

Following the success of last year's Summer Meeting, the 2009 Meeting and AGM will again be held at the BTO Headquarters (The Nunnery, Thetford, Norfolk IP24 2PU, UK) on

Saturday 18 July. There is ample free parking. The bus station is about 10 minutes walk away, and the railway station 15 minutes. Road access is via the A11 London-Norwich road, connecting with the A14 from the north and Midlands. Trains operate regular services on the Birmingham-Norwich line, and also to Cambridge and London Kings Cross.

Speakers will include Steve Cale on birding in North Cyprus, Ian Harrison on the Aden Wetlands and Geoff Welch on the Central Asia Important Bird Areas project. We look forward to seeing you there.

OSME needs you!

As with any charity, the day to day running of OSME relies on the time freely given by its Council members and in order to continue to develop the Society we are seeking new members to join Council, either as full members or in a co-opted role. Council members serve for 5 years and Council meets formally three times a year plus informally at the Summer Meeting/AGM and the British Birdwatching Fair. Whilst a knowledge of the birds of the OSME region is desirable, the most important attributes of Council members are having the time and enthusiasm to actively help maintain and promote the Society and good communication skills. The majority of OSME business is carried out by email. While some of these positions require regular attendance of meetings and, ideally, for the postholder to be based in the UK, others could be carried out 'remotely' and therefore may appeal to overseas members.

We are currently seeking to fill the following positions:

- *Treasurer*. Responsible for maintaining OSME's accounts, preparing the annual budget and liaising with the Charity Commissioners over financial and constitutional issues.
- *Membership Secretary*. Responsible for servicing the membership, primarily maintaining the membership database and coordinating the twice yearly mailing of *Sandgrouse*.
- *Sales Officer*. Responsible for running the small-scale OSME sales operation, both by mail order and at events.

- *Web site Manager.* Responsible for maintenance, updating, and facilitating the development of the OSME web site.
- *Librarian.* Responsible for maintaining OSME's small collection of reference literature, mostly difficult to obtain journals and unpublished papers and reports, and for dealing with occasional requests for information or access to the library from members.
- *Events Coordinator.* This is a new position and the postholder will be responsible for coordinating all aspects of OSME's attendance at key events, currently the Summer Meeting and the BirdFair, such as liaising with venue organisers, arranging staffing rotas etc.
- *Fund-raising Officer.* This is a new position and the postholder will be responsible for seeking core funding for the day to day operation of the Society, for the Conservation and Research Fund and for any specific projects that OSME may develop in the future.

If you are interested in any of the above positions, please contact the Chairman, Geoff Welch, at chairman@osme.org.

Feeling lucky?

In order to raise funds for both the core operation of OSME and the Conservation and Research Fund, thanks to the generosity of several sponsors, especially Opticron who have donated a telescope and tripod kit, OSME is running a major raffle in 2009 with some excellent prizes and we hope that members will support us by buying tickets themselves and selling them to friends and colleagues! Unfortunately, under UK Gaming legislation, raffle tickets can only be sold in the UK so we apologise to all of our overseas members that they are unable to participate, though those with access to a UK bank account are able to buy tickets. A book of tickets is enclosed with this copy of *Sandgrouse* (UK addresses only) and extra books can be obtained from Chris Lamsdell, 4 Hardings Close, Iver, Bucks SL0 0HL, UK.

NEWS & INFORMATION

Dawn Balmer (compiler)

ARMENIA

Atypical cranes discovered

In May 2008, Russian ornithologist VY Ilyashenko visited a small colony of Common Cranes *Grus grus* in southwestern Armenia, near the border with Turkey and Georgia. He discovered these cranes had clear morphological differences from typical Common Crane. The main differences are a white spot behind the eye and lack of red 'crown'. The taxonomic status of these cranes is currently being assessed. A female was ringed with a white plastic ring with black number 210 on the right leg and standard metal ring A223099 on the left leg. Birdwatchers are asked to look carefully at migrating and wintering Common Cranes in the Middle East for colour-rings. Records of nesting or wintering cranes from Turkey, Iran, Georgia and

Armenia are sought and details should be sent to Valentin Ilyashenko at eilyashenko@savingcranes.org.

EGYPT

Wind farm proposals in the migration bottleneck of Zait bay

Plans for a huge wind farm with 3000 MW output in the area of Zait bay, on the west side of the southernmost gulf of Suez, have been amended following a feasibility study that indicated heavy migration of soaring birds in both autumn and spring. The German Development Bank (KfW) commissioned the study which recorded 145 000 soaring birds in the autumn and 179 000 in the spring. An unexpectedly large percentage of birds were observed flying at or below 200 m or even resting on the ground. An alternative propos-

al was put forward whereby construction would be limited to the least critically sensitive areas in the north of the area. The German Development Bank adopted the alternative plan and the Egyptian authorities agreed to the new plan. The KfW is now in control of the situation and searching for a viable alternative site. (Contributed by Dr Gudrun Hilgerloh)

KAZAKHSTAN

World Heritage Site designated in Kazakhstan

Two of Central Asia's most important steppe-wetland Important Bird Areas (IBAs), Tengiz-Korgalzhyn and Naurzum have been recognised as a World Heritage Site. The UNESCO World Heritage Committee announced in July 2008 that they were to include the territory of "Saryaka—Steppe and Lakes of Northern Kazakhstan" into the list of UNESCO natural World Heritage Sites. The Tengiz-Korgalzhyn and Naurzum nature reserves, the two sites forming Saryaka, are located in the steppe zone of Kazakhstan and are two of the most important IBAs in Central Asia. Both are crucial migration stop-over sites for several million birds each year on the African-Eurasian flyway. They also hold large breeding populations of many globally threatened species. Naurzum is particularly important for Lesser White-fronted Goose *Anser erythropus* (Vulnerable), Red-breasted Goose *Branta ruficollis* (Endangered) and the Critically Endangered Siberian Crane *Grus leucogeranus*. The Tengiz-Korgalzhyn is used by an estimated 2 million waterbirds during migration, and is also a key site for global breeding populations of Dalmatian Pelican *Pelecanus crispus* (Vulnerable), Black-winged Pratincole *Glareola nordmanni* (Near Threatened) and Sociable Lapwing *Vanellus gregarius* (Critically Endangered). (Source: BirdLife International)

Significant funding obtained for Steppe conservation

At the end of October 2008, the GEF Council approved a 24 million US\$ project (with 2.2 million US\$ GEF funding) on steppe conservation and management in Kazakhstan. This project is part of the Altyn Dala initiative and

will not only create a number of large new Protected Areas in the steppe zone of Kazakhstan, most of which are IBAs, but also improve the management of existing sites and develop and apply concepts for a "landscape level management approach" outside the Protected Areas network. Large parts of this project will be implemented by ACBK, under contract from UNDP. (Contributed by Michael Brombacher, ACBK/RSPB)

First Annual ACBK Student Nature Conservation Club Network Conference, Karaganda, 22–24 November 2008

This event brought together more than forty students and advisers from ACBK's seven Nature Conservation Clubs and key staff from ACBK (Plate 1). The conference covered three main areas: the development of Clubs over the past two years; the implementation of four GEF Small Grant projects on the "Conservation of pilot Important Bird Areas (IBAs) by specially trained students and local communities"; and participation by students in ACBK and other scientific projects. Since April 2007 ACBK has established Clubs in universities and other institutes of higher education throughout Kazakhstan and these now have more than 130 members. Clubs are provided with up to date literature, optical and field equipment and there is an ongoing programme of training courses and field camps to increase the students' capacity for carrying out routine systematic monitoring and awareness-raising of their local IBAs. This first conference highlighted the importance of



Plate 1. ACBK Students' conference participants. © Zhana Aksartova/ACBK

this initiative for the future conservation of biodiversity in Kazakhstan and its organisation was supported by the Van Tienhoven Foundation and RSPB. (Contributed by Edith Mayer & Geoff Welch)

LEBANON

Report on Climate Change

The Society for Protection of Nature in Lebanon in partnership with Indyact has developed a project funded by the British Embassy. The aim of the project was to develop a preliminary scientific report highlighting the expected impact of climate change on biodiversity in Lebanon, and identifying indicator species for monitoring. The report 'Effect of Climate Change on Biodiversity in Lebanon' can be downloaded from www.spnlb.org/publications.php.

ISRAEL

International Spring Migration Festival

The 3rd International Spring Migration Festival will be held in Eilat from 23–30 March, 2009, which is the peak week of Israel's spring migration. For more information about the festival, please check the website: www.eilatbirdsfestival.com.

IRAN

Guide to Birds of Iran updated

The second edition of the book *Guide to the birds of Iran* prepared by Dr Jamshid Mansoori has been published. The new edition is fully revised with corrections to species status and distributions incorporated, species list re-ordered, new species added (new total 514), new photos and the book is lighter and smaller than the first edition.

JORDAN

Visiting Aqaba Bird Observatory

For those who are interested in getting more information regarding the Aqaba Bird Observatory, you can refer to the Jordan Society for Sustainable Development's website, www.jssd-jo.org, or you can email Aqaba@jssd-jo.org, info@jssd-jo.org or

Salam@jssd-jo.org regarding securing permits to visit the observatory. JSSD has an official agreement with all parties in Aqaba to facilitate entrance procedures for visitors.

SOCOTRA (YEMEN)

World Heritage Site

The Socotra archipelago was recently added to the UNESCO list of World Heritage Natural Sites. Many international organisations including BirdLife have long campaigned for the Socotra Conservation and Development Programme's submission for this prestigious designation. This designation is a culmination of the process which began when Socotra was declared a UNESCO Man and Biosphere reserve in 2003. Socotra is of universal importance because of its rich and distinct flora and fauna and high level of endemism. 37% of Socotra's 825 plant species, 90% of its reptile species and 95% of its land snail species do not occur anywhere else in the world. The site also supports globally significant populations of land and sea birds (192 bird species, 44 of which breed on the islands while 85 are regular migrants), including a number of threatened species. (Source: Birdlife International)

SYRIA

Website of Palmyra Society for the Protection of Environment and Wildlife operational

Palmyra is famous for its magnificent Roman ruins but the area also has some of the best birding in the Middle East; huge numbers of migrants pass through each season and accessible highlights include the relict colony of Northern Bald Ibis *Geronticus eremita* and Talila, Syria's first nature reserve. However, as roads improve and the human population expands into the desert, there is intense pressure on the local wildlife, with increasing grazing, hunting and water abstraction all degrading the environment. As a result, concerned Palmyrians formed Syria's first local conservation society, the *Palmyra Society for the Protection of Environment and Wildlife*, in autumn 2006. It has wide-ranging objectives including making local people more aware of

the environment and involving them in conservation activities. Its website, www.palmyrasociety.org, has just been set up with support from an OSME grant; its aims are to raise international interest in the area and to develop ecotourism. Anyone visiting Syria should find information useful for their trip; it is hoped to develop a gallery of photos of local birds and a database of records from the area. Local conservationists, trained during the Bald Ibis project, can be contacted via the Palmyra Society website; they will assist visitors to see the charismatic birds of the area such as Northern Bald Ibis, Griffon Vulture *Gyps fulvus*, Namaqua Dove *Oena capensis*, Mourning Wheatear *Oenanthe lugens* and 12 species of lark including Hoopoe Lark *Alaemon alaudipes*. Visitors can meet Haian Dukhan, secretary of the Society, at the Palmyra Tourist Office.

Birds of Syria Arabic field guide published

The first bird book for Syria was launched on 28 January 2009 (Plates 2 & 3). Written in Arabic, it has been jointly produced by the Syrian Society for the Conservation of Wildlife (SSCW) and BirdLife International. The guide covers a total of 393 species including Syrian Serin *Serinus syriacus* (Vulnerable), the Critically Endangered Sociable Lapwing and Northern Bald Ibis. This important publication will be used to encourage an interest in birds in Syria and provide a reference work for those engaged in surveys and wildlife conservation programmes.

"The release of the 'Birds of Syria' field guide gives a significant rise in hopes to pro-



Plate 2. The newly published Arabic language field guide, *Birds of Syria*.



Plate 3. Launch of the *Birds of Syria*, January 2009.

tect threatened birds in the country, and gives opportunity for the growing conservation efforts in Syria." Dr Akram Darwish (Vice Chair of SSCW).

"This is the first comprehensive fully illustrated field guide to birds of Syria that is published in local language as a critical conservation tool for conservation in Syria and the whole of Arabia." Ibrahim Khader (Regional Director of Middle East secretariat, BirdLife International).

The book was funded by the RSPB (BirdLife International Partner in the UK), OSME, the SGP (Small Grant Program) in Syria, Avifauna-Sweden, the World Bank and the John D and Catherine T MacArthur Foundation.

Captive breeding proposed for Palmyra's Northern Bald Ibises

A workshop on the conservation of the Critically Endangered Northern Bald Ibis has concluded that the Palmyra birds should be supplemented with juveniles taken from the expanding semi-wild population at Birecik, Turkey. The meeting was held in September 2008 in Palmyra, Syria, near the site where a relict population of the bird was discovered in 2002. The workshop was organised by the Syrian Society for the Conservation of Wildlife, Syrian Ministry for Agriculture and Agrarian Reform and the General Commission for the Management and Development of al-Badia, with participation and funding from BirdLife International's Middle East Secretariat, the Royal Society for the Protection of Birds (RSPB, BirdLife in the

UK), and Germany's Hanns Seidel Foundation.

The proposed captive Northern Bald Ibis aviary will be established within the Talila Wildlife Reserve, part of the al-Badia desertic steppe rangelands east of Palmyra, managed by the Syrian government and funded by UN's Food and Agriculture Organisation and others to restore the species to ecological health. The aim of the workshop was to identify the main problems affecting the Bald Ibis breeding colony, to propose practical solutions to these problems, and, develop and endorse a national Action Plan for Northern Bald Ibis conservation. Chris Bowden of the RSPB explained that captive breeding was a last resort, as there is no guarantee of success following a total breeding failure at the colony in the past year. "If fewer than two pairs attempt to breed next year, we will hit the emergency button. The Birecik birds are genetically similar, and so are the obvious source for supplementation".

Juvenile birds would be taken from Birecik to form a captive breeding colony, using adapted compounds that were previously used for captive breeding of Arabian Oryx. The project will draw on expertise from around the world, including Doga Dernegi (BirdLife in Turkey), and the Konrad Lorenz Forschungsstelle in Grünau, Austria, where a semi-wild colony has been established. The Syrian government, local Bedouins, former hunters and others are firmly committed to the survival of the Palmyra colony. (Source: BirdLife International)

Developments at Sabkhat al-Jabbul

Sabkhat al-Jabbul is the most important wetland in Syria and its only Ramsar site, of great importance for its birds at all times of the year. Breeding species include Greater Flamingo *Phoenicopterus roseus*, Iraq Babbler *Turdoides altirostris* and White-headed Duck *Oxyura leucocephala*, tens of thousands of duck winter and vast numbers of waders pass through on migration. Though it is nominally protected, there is still heavy pressure from hunting and the possible construction of a chemical works on its north side might cause disastrous pollution. Much of the Sabkhat is inaccessible and there are very few data from many areas; but in 2008 surveyors from the Royal Society for

the Conservation of Nature in Jordan have been carrying out monthly counts that will provide essential baseline data. The Syrian Society for the Conservation of Wildlife plans to open the first ecotourism lodge in Syria in 2009, in Jabbul village right on the edge of the wetland. This important development will act as a focus for study and conservation of the site and allow birders to link up with ecoguides from the town of Jabbul. Visitors will support the development of ecotourism in Syria; contact details will soon be available.

TURKEY

Poison blamed for deaths of Northern Bald Ibises

Three Critically Endangered Northern Bald Ibises were found poisoned in October 2008 in a remote Jordanian desert, hundreds of kilometres from their breeding grounds in Turkey. The three birds were being tracked by satellite after leaving Birecik, south-eastern Turkey, where one of only four colonies of Bald Ibis remains. The birds were found 32 km from the Jordanian capital, Amman. Autopsies have ruled out electrocution and shooting. Scientists are investigating the source of the poison and believe it may have been laid by chicken farmers in order to kill rodents. "The deaths are heartbreaking but they may not have died in vain. They came from a semi-captive population and the fact that they left the colony proves they haven't lost their migratory instincts", said Jose Tavares, the RSPB's (BirdLife in the UK) Country Programme Officer for Turkey. "The birds flew via Palmyra in Syria, where a tiny colony hangs on, which means birds we release from Turkey next year could join the group in Syria."

RSCN and BirdLife in the Middle East are cooperating with specialist labs in Jordan to identify the poison. Based on the results, they will take this up with the Ministries of the Environment and Agriculture to try and control use of this poison. Sharif Al Jbour of BirdLife in the Middle East, who found the dead birds, said: "We know where the adults go but it's crucial we follow the young birds' migration route so that we can protect them in winter and help them return to Turkey and Syria to breed." To solve the riddle, more

Turkish birds will be tagged next year by Czech expert Lubomir Peske. These birds will be followed to see if they join and boost the numbers of the tiny colony in Palmyra. The tracking project has boosted hopes for the Northern Bald Ibis in the Middle East with conservationists now more optimistic that they can re-establish a completely wild population in Turkey. (Source: BirdLife International)

UNITED ARAB EMIRATES

New website

UAE birding has a new website, www.uaebirding.com, and includes an interactive discussion-forum, a news page with RSS feed and a new photo section. (Contributed by Tommy Pedersen)

Migratory birds of prey to be protected

New measures to protect over 70 species of migratory raptors from threats such as habitat loss and degradation, persecution, accidental killing, and climate change were agreed in Abu Dhabi in October 2008 at a meeting organised by the Environment Agency of Abu Dhabi under the United Nations Convention on Migratory Species. This was the second of two meetings, the first was in October 2007 (see *Sandgrouse* 30 (1): 10). Following a joint initiative by the governments of the United Arab Emirates and United Kingdom, a Memorandum of Understanding has been concluded that will coordinate the protection of migratory birds of prey and owls found in Europe, Africa and Asia. The new measures will ensure that signatories focus particular conservation efforts on critical 'bottleneck' sites, including those identified as Important Bird Areas by BirdLife, where large numbers of raptors concentrate while on migration from breeding grounds in the north to wintering ones in the south. Furthermore, signatory countries will investigate and attempt to solve problems likely to be caused by human activities, and assist the recovery and re-introduction of bird populations where they have declined. (Source: BirdLife International)

Sooty Falcon tracked to Madagascar

A Sooty Falcon *Falco concolor* has been tracked from the UAE to its wintering areas in Madagascar by the Environment Agency-Abu Dhabi (EAD). This is the first satellite tracking of Sooty Falcon anywhere in the world. EAD fitted the Sooty Falcon with a satellite transmitter at its nest on islands in the Sila peninsula, Abu Dhabi emirate. The bird departed the UAE in October and was recorded flying over Saudi Arabia, Ethiopia, Kenya, Tanzania and Mozambique before crossing into Madagascar, its final destination for the winter, a journey of 6700 km. Sooty Falcon has recently been upgraded to Near Threatened owing to concerns that its population may be much smaller than previously thought, and in decline. A recent EAD breeding survey revealed a fall of 64% since 1994. They reported that the species had disappeared from several former nesting locations, and only six known breeding pairs remain. EAD scientists believe that the loss may be a result of disturbance from development and human presence during the nesting season. The UAE Sooty Falcon population is now critically close to extinction and requires immediate conservation action. BirdLife believes this monitoring will provide useful information to help conserve this species. (Source: BirdLife International)

OTHER NEWS

Zoology in the Middle East

Three recent issues of this excellent journal have included features on birds. Volume 43 has a paper on the status of Great Bustard *Otis tarda* in Kurdistan Province, Iran, based on data from 1975–2005. In 2005, only 10 Great Bustards were recorded in the whole province. The authors concluded that without effective conservation measures, it seems inevitable that the species will become extinct in the province, and perhaps the whole of Iran. Another paper analyses feeding specialization of urban Long-eared Owls *Asio otus* in Jerusalem, Israel. 13 species of bird were the most common prey group with House Sparrows *Passer domesticus* and Blackcaps *Sylvia atricapilla* being the most frequent prey species. Another paper reports on the feeding ecology and behaviour of Northern Bald

Ibises in Syria. Taking data from four breeding seasons, 2002–2004 and 2006, the home range used by the birds was estimated to be up to c450 km². In particular, the ibises were found to feed on larvae of Eastern Spadefoot Toads, together with ground beetles and grasshoppers. A ground mantis and an isopod, as well as lizards, may possibly be important components of the diet.

Volume 44 includes a paper on the breeding status of the Red-billed Tropicbird *Phaethon aethereus* on Jarnein island in Abu Dhabi emirate. In March 2007, extensive searches and mapping of tropicbird nests were carried out and 217 nests were recorded. Nearly 40% were with grown-up chicks while nearly 28% had adult birds, either incubating or tending downy chicks. Another paper discusses food diversity and niche-overlap of sympatric tits in the Hyrcanian plain forests in Iran. Gizzard contents of 241 specimens of Great Parus *Parus major*, Blue Cyanistes *Cyanistes caeruleus* and Coal Tits *Periparus ater* were collected so that the percentages of grit, plants and animal materials could be estimated and the plant and invertebrate species consumed identified. The re-introduction of the Ostrich *Struthio camelus* in Mahazat as-Sayd Protected Area in central Saudi Arabia is also reported. As the *syriacus* race became extinct in the wild during the mid-20th century, the most closely related subspecies, *camelus*, was chosen for the re-introduction. In 1988/9 a few individuals were obtained from Sudan from a private collection, and, in 1994, a few birds were translocated into a 25 ha fenced enclosure. The estimated population in Mahazat as-Sayd is now between 125 and 150 individuals.

Volume 45 includes details of the first survey of Audouin's Gull *Larus audouinii* colonies at Kleidhes islands, Cyprus. Breeding numbers were assessed during spring 2007. The colony on Kasteletta was small, holding six nests, and was abandoned early probably because of the presence of a much larger Yellow-legged Gull *Larus michahellis* colony. The colony on Zinaritou had 43 nests and a high breeding success. Another paper reviews year-to-year variation in clutch size and breeding success of Little Egrets *Egretta garzetta* at lake Poyrazlar in north-west Turkey between 2002–2005. Further details of *Zoology in the Middle East* are at [\[verlag.de\]\(http://www.kasperek-verlag.de\). Copies are also available from OSME Sales. \(Contributed by Keith Betton\)](http://www.kasperek-</p></div><div data-bbox=)

The Phoenix

The latest issue (number 25, January 2009) runs to 24 pages and includes articles on a wide variety of topics. Suspicions that Orphean Warbler *Sylvia hortensis* is breeding in northern Oman are discussed following observations around Jebel al Akhdar in 2008. There is an update on the reintroduction of Macqueen's Bustard *Chlamydotis macqueenii* to Abu Dhabi and also a Sooty Falcon survey in Oman in 2008. Accidental electrocutions of birds in Saudi Arabia are summarised as well. An interesting assessment is made of the final history of the last Arabian Ostrich with a review of some questionable records. As always there is an update on the Arabian Breeding Bird Atlas, and there are reviews of various publications on the region and short notes on interesting sightings, including breeding of Spanish Sparrows *Passer hispaniolensis* in Bahrain.

One issue of Phoenix is published each year. The subscription costs £25 for five issues and should be payable to ABBA/Phoenix at the following address: M C Jennings, Warners Farm House, Warners Drove, Somersham, Cambridgeshire PE28 3WD, United Kingdom. (Contributed by Keith Betton)

Wildlife Middle East—new issue

The latest issue of *Wildlife Middle East* was published in June 2008 and can be downloaded from www.wmenews.com. The editors are keen to encourage contributions from the Middle East, particularly Iran, Syria, Jordan, Bahrain, Turkey, Palestine, Kuwait, Iraq and Oman, for future issues. Please contact the editors with any ideas that you may have (editors@wmenews.com).

Central Asia Important Bird Area inventories published

After three years of intensive research, fieldwork, data collation and analysis, the first national IBA inventories for Kazakhstan (Plate 4), Uzbekistan and Turkmenistan were launched at BirdLife International's Global Partnership Meeting in Buenos Aires, Argentina, in September 2008 (Plate 5). Together the inventories, published in both

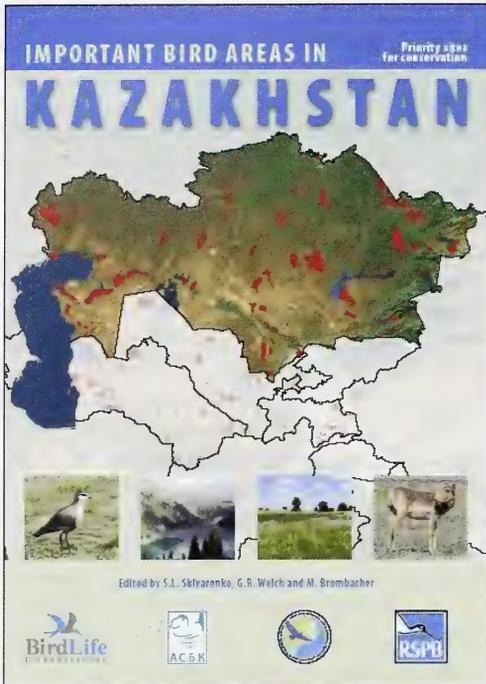


Plate 4. The first national IBA inventory for Kazakhstan, *Important Bird Areas in Kazakhstan*.



Plate 5. Central Asia IBA inventories launch in Argentina, September 2008. From left to right, Vitaliy Gromov (Director ACBK), Mike Rands (Director and Chief Executive, BirdLife International), Eldar Rustamov (IBA Coordinator, Turkmenistan), Sergey Sklyarenko (IBA Coordinator, Kazakhstan) and Roman Kashkarov (IBA Coordinator, Uzbekistan). © Michael Brombacher

English and Russian, document 219 sites of international importance: 121 in Kazakhstan, 48 in Uzbekistan and 50 in Turkmenistan. Publication of these inventories has filled an important gap in BirdLife's global network of IBAs. As well as providing information on the conservation importance of the sites, the inventories provide a valuable tool for plan-

ning long term protection of the rich biodiversity of the region. Copies of the inventories are available from the Natural History Book Service, www.nhbs.com. (Contributed by Geoff Welch)

The Phoenix: broader scope

With the Atlas of Breeding Birds of Arabia (<http://dspace.dial.pipex.com/arabian.birds>) effectively completed, the scope of Phoenix is to be broadened to accommodate papers on, for example, migration, notes on winter visitors or other non breeding groups, conservation or wider issues relevant to Arabian ornithology. News on breeding birds and their habitats is still welcomed. Contributions should be sent to the editor, Mike Jennings, at ArabianBirds@dsl.pipex.com.

Welcome AviCA

The worldwide database for bird observations, www.worldbirds.org, developed by BirdLife International and the RSPB, has recently been extended to include Central Asia. It is now possible to collect and analyse observations on frequency, distribution and the migration of birds and to look at long-term changes at the national, regional and international scale. AviCA can be accessed centrally via www.worldbirds.org/centralasia or separately for each country:

www.avica.uz (Uzbekistan)

www.avi-ca.org (Turkmenistan)

www.worldbirds.org/v3/centralasia.php?c=1
(Kazakhstan, soon www.avica.kz)

www.worldbirds.org/v3/centralasia.php?c=2
(Kyrgyzstan)

www.worldbirds.org/v3/centralasia.php?c=3
(Tajikistan).

The AviCA database currently contains 241 species that have been observed during 68 expeditions in Central Asia and has 42 registered users who have reported 1160 observations. So if you have observations from Central Asia, don't leave them languishing in your notebook, sign up, log on and make a valuable contribution to nature conservation. (Contributed by Anna Ten & Jens Wunderlich, Uzbekistan IBA Project)

AROUND THE REGION

Dawn Balmer & David Murdoch (compilers)

Records in *Around the Region* are published for interest only; their inclusion does not imply acceptance by the records committee of the relevant country. All records refer to 2008 unless stated otherwise.

Records and photographs for *Sandgrouse* 31 (2) should be sent by 15 June to atr@osme.org

ARMENIA

Breeding bird surveys in 2008 in extreme NW Armenia, near the border with Turkey and Georgia (lake Arpilich and adjacent areas, Shirak province), produced 43 new species recorded for the area. Of these, 27 were proven to breed there, including **Egyptian Vulture** *Neophron percnopterus*, **Booted Eagle** *Aquila pennata*, **Corncrake** *Crex crex*, **Eurasian Eagle Owl** *Bubo bubo* and **Barred Warbler** *Sylvia nisoria*. Significant breeding range extension for the country also noted here for **Little Bittern** *Ixobrychus minutus*, **Blue Rock Thrush** *Monticola solitarius* and **Meadow Pipit** *Anthus pratensis*. Territorial songs were recorded for **Spotted Crane** *Porzana porzana* and **Common Grasshopper Warbler** *Locustella naevia*. Good numbers of **Greylag Geese** *Anser anser* were observed at lake Arpilich, with a maximum of 38 (including juveniles) recorded. **Black Stork** *Ciconia nigra* was observed on several occasions in a rocky gorge, which is one of the two known breeding sites in the country. Arpilich is the only known breeding site in the country for **Dalmatian Pelican** *Pelecanus crispus*. Variable numbers (max 35) were recorded throughout the breeding season, but they did not breed in 2008 due to high levels of disturbance. Just two pairs of **Common Cranes** *Grus grus* bred in the area and both successfully raised young.

BAHRAIN

Four **Black Storks** *Ciconia nigra* on 31 Oct at the Diplomatic wadi were the first record for Bahrain. On 14 Jul, a **Eurasian Hobby** *Falco subbuteo* was recorded at Durrat Al Bahrain in southern Bahrain. A **Houbara Bustard** *Chlamydotis undulata* was at the Hamalah experimental farm on 13 Dec. A single **Crab**

Plover *Dromas ardeola* at Maharraq on 13 Aug was the first for several years. The 2nd record of **Indian Roller** *Coracias benghalensis* for Bahrain was at Badaan farm 5 Oct–15 Nov; the first record was in Aug 1996 at Dair. The 3rd record of **Green Bee-eater** *Merops orientalis* was at Badaan farm on 29 Nov; the first since several were recorded on the Hawar islands in 2000. Three **Dark-throated Thrushes** *Turdus atrogularis* were found on 20 Dec at Duraiz and the 7th record of **Chaffinch** *Fringilla coelebs* was a female that was trapped and ringed at Badaan farm on 29 Nov. A **House Bunting** *Emberiza striolata* at Badaan farm on 12 Sep was the first record for Bahrain.

CYPRUS

Two **White-headed Ducks** *Oxyura leucocephala* were at Larnaca sewage works from 13 Dec and there was one at Haspolat water treatment plant on the same date (7th & 8th records since 1995). A juvenile **Egyptian Vulture** *Neophron percnopterus* was at Akrotiri gravel pits on 19 Sep; this species is recorded less than annually. A juvenile **Levant Sparrowhawk** *Accipiter brevipes* was at Akrotiri salt lake on 14 Sep and a juvenile was seen at Zakaki on 5 Oct; these are the 11th & 12th records since 1996. An **Eastern Imperial Eagle** *Aquila heliaca* was recorded at Akrotiri environmental centre on 3 Oct and another was near Droushia on 10 Oct and will be the 3rd & 4th records since 1996 if accepted. The 6th record of **Pacific Golden Plover** *Pluvialis fulva* was at Paphos headland from 27 Aug–21 Oct. A juvenile **Red Knot** *Calidris canutus* at Larnaca sewage works on 27 Sep was the 12th record in 10 years. A **Caspian Tern** *Hydroprogne caspia* flew east along the coast off Polis on 18 Sep and is also the 12th record in 10 years. The 2nd **Laughing Dove** *Streptopelia*

senegalensis for Cyprus flew on to wires at Akrotiri on 13 Oct. A **Little Swift** *Apus affinis* reported over Cedar valley on 7 Jul will be the 10th record if accepted. On 5 Oct, a **Rook** *Corvus frugilegus* was at Fresh Water lake, Famagusta, and was only the 9th record since 1995. A **Booted Warbler** *Hippolais caligata* found at Paphos sewage plant fields on 29 Sep will be the 1st record for Cyprus if accepted and an **Upcher's Warbler** *Hippolais languida* at Marathounta on 16 Jul will be the 2nd record if accepted. An immature **Rose-coloured Starling** *Sturnus roseus* was found in an olive grove near the Akrotiri salt lake on 29 Aug and a **Rufous-tailed Scrub Robin** *Cercotrichas galactotes* was at Paphos lighthouse area on the same date and is only the 13th record since 1998. The 5th record of **Rufous-tailed Wheatear** *Oenanthe xanthopyrmyna* was at Agia Napa sewage works area on 19 September. A 1st-winter **Pied Wheatear** *Oenanthe pleschanka* was reported at Armou hills on 18 Oct and will be only the 4th record if accepted and a **Red-breasted Flycatcher** *Ficedula parva* at cape Greco on 2 Sep was the 8th record in 10 years. Three **Eurasian Tree Sparrows** *Passer montanus* at Polis reed-beds on 8 Oct was the first report for three years. Two **Rock Sparrows** *Petronia petronia* were trapped and ringed at Phinikas, near the Asprokremmos dam, on 21 Nov and then up to 14 were present at Marathounta 28 Nov–12 Dec; there have only been four previous records. A juvenile **Common Rosefinch** *Carpodacus erythrinus* near cape Andreas on 8 Sep will be the 8th record if accepted.

EGYPT

A trip to Abbasa fish farms, Sharqia gov, on 11 Jul recorded around 250 **Glossy Ibises** *Plegadis falcinellus* including some fresh juveniles. A local boy described nests on the ground amongst reeds; breeding of this species was suspected in the same area some 15 years ago. Up to 1500 pairs of **Squacco Herons** *Ardeola ralloides*, several thousand **Cattle Egrets** *Bubulcus ibis* in various colonies, ten **Grey Herons** *Ardea cinerea* and up to 1000 pairs of **Little Egrets** *Egretta garzetta* in scattered nesting sites were recorded on the same trip. A **Goliath Heron** *Ardea goliath* was at Wadi Lahami mangroves again, on 30 Jul. A **Striated Heron** *Butorides striata* was at



Plate 1. Pin-tailed Snipe *Gallinago stenura*/Swinhoe's Snipe *Gallinago megala*, 22 Oct 2008, Sharm el-Sheikh, Egypt. © Andrew Harrop

Hurghada on 13 Nov. A juvenile **Eurasian Griffon Vulture** *Gyps fulvus* was at the sewage pools at Sharm el-Sheikh on 27 Nov. **Cinereous Vulture** *Aegyptius monachus* is a rare passage migrant and winter visitor so records of two juveniles at Sharm el-Sheikh on 21 Nov and three juveniles at the sewage pools at Sharm el-Sheikh on 27 Nov are excellent observations. Also at the sewage pools at Sharm el-Sheikh on 27 Nov were a **Short-toed Snake Eagle** *Circaetus gallicus* (late date), a **Long-legged Buzzard** *Buteo rufinus*, a first-year **Eastern Imperial Eagle** *Aquila heliaca* and an adult **Bonelli's Eagle** *Hieraetus fasciatus*. A **Steppe Eagle** *Aquila nipalensis* was on the Nile below Edfu on 5 Nov. Two **White-tailed Lapwings** *Vanellus leucurus* were at Fares, on a marsh next to the Nile, on 24 Dec. A **Pin-tailed Snipe** *Gallinago stenura*/Swinhoe's Snipe *Gallinago megala* was photographed at Sharm el-Sheikh 'new pools' on 22 Oct and would be the first for Egypt if accepted (Plate 1). Up to 10 **Collared Pratincoles** *Glareola pratincola* were apparently nesting at Abbasa fish farms, Sharqia gov, on 11 Jul. Around 15 **African Skimmers** *Rynchops flavirostris* were on the Nile below Edfu on 5 Nov. A **Little Swift** *Apus affinis* at Sharm el-Sheikh on 22 Nov is an unusual date for this mainly spring passage visitor. A male **Wattled Starling** *Creatophora cinerea* was at Lahami Bay hotel, Hamata from 30 Oct–4 Nov at least. This species is a nomadic resident of eastern and southern Africa (and occurs in Sudan). A **Red-breasted Flycatcher** *Ficedula parva* was at the same loca-

tion on the same dates, at least. At St Katherine's monastery, near Sharm el-Sheikh, a **Palestine Sunbird** *Nectarinia osea* was recorded on 26 Nov. The first **Rock Sparrow** *Petronia petronia* for Egypt was a juvenile at Hurg'hada on 13 Nov. Around 50 pairs of **Lesser Masked Weaver** *Ploceus intermedius* were recorded in one *Typha*-dominated reed bed (with many nests) at Abbasa fish farms, Sharqia gov, on 11 Jul. A flock of 15 **Indian Silverbills** *Lonchura malabarica* were at Sharm el-Sheikh on 21 Nov; this species breeds in Eilat. A **Buff-bellied Pipit** *Anthus (rubescens) japonicus* was at St Katherine's monastery, in the El Malakhea area, on 26 Nov. Three **Trumpeter Finches** *Bucanetes githagineus* were at Komombo temple on 8 Nov.

GEORGIA

There were two records of solitary adult **Egyptian Vultures** *Neophron percnopterus* in eastern and southern parts of Javakheti upland: first was watched flying near Mt Biketnaya on 4 May and second was near the SE corner of Khanchali lake on 6 May. There are no known nesting sites in this area. At least 87 **Pallid Harriers** *Circus macrourus* were watched 10–16 April (total of c71 hours of observations) at Kobuleti lowland near Ochkhamuri village, Black Sea coastal lowland (northern part of Ajaria autonomous republic). This is a high count for this rare passage migrant. A **Radde's Accentor** *Prunella ocularis* was observed at rocky outcrops c0.5 km below Spasovka village on 11 May, Bugdasheni river gorge. There are very few spring records of this species (apparently a rare breeder in eastern Javakheti upland along Armenian and Turkish borders).

IRAN

A new breeding site for **Armenian Gull** *Larus armenicus* has been discovered on the islands of Meighan wetland (central Iran). Previously, Urumiyeh lake in NW Iran was the only known breeding site. A well preserved corpse of a male **Velvet Scoter** *Melanitta fusca* was found in Tooran, Semnan, on 15 Apr. A **Red-footed Falcon** *Falco vespertinus* was in the Kurang valley, Chelgerd, Zagros on 25 Apr and a **Houbara Bustard** *Chlamydotis undulata* was at Khosh Yelagh on 14 Apr. On 18 Apr c10 **Red-necked Phalaropes** *Phalaropus lobatus*

were at Maharlu, near Shiraz. There were 14+ **Black-winged Pratincoles** *Glareola nordmanni* at Gavekhoni, east of Isfahan, on 28 Apr 2007. At least 24 **Hypocolius** *Hypocolius ampelinus* were at Gavekhoni, E of Isfahan, on 20 Apr, with two there on 28 Apr 2007. An **Oriental Skylark** *Alauda gulgula* was at Khosh Yelagh on 12 Apr and a **White-winged Grosbeak** *Mycerobas canipes* was at Golestan on 7 Apr.

IRAQ

Several **Hypocolius** *Hypocolius ampelinus*, including family groups and adults feeding young, were recorded at Al-Asad in July.

ISRAEL

A **Red-necked Grebe** *Podiceps grisegena* was reported at Tishlovet reservoir on 10 Nov and will be the 5th record if accepted. The 10th **Black-winged Kite** *Elanus caeruleus* for Israel was at Urim, W Negev, on 20 Nov. The first **American Golden Plover** *Pluvialis dominica*, a juvenile, was at Ma'agan Michael from 21–30 Nov. At least two **Little Ringed Plovers** *Charadrius dubius* were wintering at Gesher ponds in the Jordan valley on 5 Dec, the fourth year they have over-wintered there. An adult **Lesser Yellowlegs** *Tringa flavipes* at Neve Eitan fishponds, Bet She'an valley, from 25 Sep–1 Oct was the 2nd record for Israel; the 1st record was in June 1977. The first breeding of **Bridled Tern** *Onychoprion anaethetus* for Israel and the Mediterranean involved a pair in courtship, copulating and apparently sitting on a nest on Nakhlie'eli island, N Mediterranean coast, from 7 Jul onwards. Six were off Eilat's north beach from 7 Jul onwards. An exceptional 30 **Pomarine Skuas** *Stercorarius pomarinus* were off Mikhmoret, Mediterranean coast, on 27 Jun. A **Paddyfield Warbler** *Acrocephalus agricola* was trapped and ringed at IBRCE, Eilat, on 8 October and at least six **Yellow Wagtails** *Motacilla flava* were wintering at the Gesher ponds, Jordan valley, on 6 Dec. On 3 Dec a **Dalmatian Pelican** *Pelecanus crispus* was reported migrating over Yesodot, Judean plains, and will be the 10th record if accepted. The fourth **Sykes's Warbler** *Iduna rama* for Israel was trapped and ringed at IBRCE, Eilat, on 21 Sep; the previous record involved one that over-wintered at Eilat in winter 1993/94. Winter 2008/09 produced several records of **Goldcrests** *Regulus*

regulus, with small groups seen at Hayarkon park (Tel Aviv), Biriya (Galilee), Elrom (Golan) and other sites. A male **Dark-throated Thrush** *Turdus atrogularis* was near Sde Boker, C Negev, on 14 Nov and is the 9th record for Israel. Two families of **White-throated Robins** *Irania gutturalis* were noted at Bul'an valley, Mt. Hermon, in early Jul and a **Black Scrub Robin** *Cercotrichas podobe* at Eilat city from 6 Dec onwards is the first winter record for Israel. There was an exceptional arrival of **Rufous-tailed Wheatears** *Oenanthe xanthopyrmyna* at the Judean desert: 2 at Wadi Heimar on 12 Dec, 2 south of Ein Gedi 20 Dec, 1 at Wadi Mishmar 26 Dec.

JORDAN

On 18 Nov, a juvenile **Black-legged Kittiwake** *Rissa tridactyla* was at Aqaba, five **Namaqua Doves** *Oena capensis* (two males, three females) were at Wadi Rum and two juvenile **Steppe Grey Shrikes** *Lanius meridionalis pallidirostris* were at the latter site.

KAZAKHSTAN

A maximum of nine **White-headed Ducks** *Oxyura leucocephala* were together at Tengiz-Korgalzhyn on 26–29 May and nine **Glossy Ibises** *Plegadis falcinellus* flew over the same site on 28 May which is probably the 3rd record for the area. A record of two **White Pelicans** *Pelecanus onocrotalus* at Sorbulak lake, Almaty oblast, on 22 Dec 2007 is the first winter record for Kazakhstan. Two **Crested Honey Buzzards** *Pernis ptilorhyncus* were observed leaving a morning roost at Aydarly village, Taukum desert, on 21 May; a total of 10 were recorded migrating over Kosmos station in Ili-Alatau national park, southern Almaty oblast, in May and 43 were at Topar lakes, in Almaty, on 12 May. An adult **Lammergeier** *Gypaetus barbatus* was near Big Almaty lake, Ili-Alatau NP, on 25 May; an **Upland Buzzard** *Buteo hemilasius* was near Kegen on 16 May; an **Eastern Imperial Eagle** *Aquila heliaca* was at Qanshengel on 19 May and a **Saker Falcon** *Falco cherrug* was seen at Surgaty plains on 16 May. On 23 May, an **Ibisbill** *Ibidorhynca struthersii* was at Big Almaty lake; two **Sociable Lapwings** *Vanellus gregarius* were at Tengiz-Korgalzhyn on 27 May and at least one **Pallas' Sandgrouse** *Syrhaptes paradoxus* was at Surgaty plains on

16 May. A **Black-headed Penduline Tit** *Remiz pendulinus macronyx* was at Topar lakes on 20 May and two **Crimson-winged Finches** *Rhodopechys sanguineus* were at Surgaty plains on 15 May.

KUWAIT

A **Crested Honey Buzzard** *Pernis ptilorhyncus* at Al Abra q on 1 Jan 2009 was an excellent record. The 5th record of **Stock Dove** *Columba oenas* was at the Pivot Fields on 1 Jan 2009 and the 6th record of Oriental Turtle Dove *Streptopelia orientalis* was at Al Abra q on 15 Nov. The first **Eastern Bonelli's Warbler** *Phylloscopus orientalis* for Kuwait was at Jahra farms on 12–17 Aug, with two present on the last date. The 2nd **Hume's Leaf Warbler** *Phylloscopus humei* for Kuwait was found in late Dec at Al Abra q and was still present on 1 Jan 2009. A **Yellow-browed Warbler** *Phylloscopus inornatus* was at Al-Abraq Al-Khabari on 3 October.

LEBANON

The autumn and early winter was notable for a significant increase in indiscriminate and illegal shooting throughout the country. The only noteworthy reports received were of three **Eurasian Curlews** *Numenius arquata* and a **Whimbrel** *Numenius phaeopus* at Al Mina, Tripoli, on 15 Sep, one **Eurasian Oystercatcher** *Haematopus ostralegus* at the same site on 26 Nov and ten **Ruddy Turnstones** *Arenaria interpres* there on 27 Nov. A **Carrion Crow** *Corvus corone* at Aammiq on 2 Dec is only the 2nd record for Lebanon.

OMAN

A single **Fulvous Whistling Duck** *Dendrocygna bicolor* at West Khor on 29 Aug is only the 3rd record for Oman. Four **Lesser Whistling Ducks** *Dendrocygna javanica* 24 Nov–9 Dec at Khor Mughsayl is also the 3rd record, the previous being in Apr 2000. Up to seven **Ferruginous Ducks** *Aythya nyroca* were at Khor Mughsayl, 13 Nov to at least 4 Dec, and one was at Khor Sawli on 9 Dec. **Wedge-tailed Shearwater** *Puffinus pacificus* is a rare species in Omani waters; a single bird was off Khor Rouri on 31 Oct, the first record for over two years. Two **Swinhoe's Storm-petrels** *Oceanodroma monorhis* were seen off Ras Janjari in the south on 8 and 12 Dec. The 9th

record of **Black Stork** *Ciconia nigra* occurred at Khor Mughsayl with two birds there on 7 and 13 Nov and single birds were seen at various locations in the Salalah area until at least 9 Dec. Three birds were also at Wadi Baqlat on 8 Dec. This is the 3rd consecutive winter that this species has been seen in Oman. **African Spoonbill** *Platalea leucorodia* is a very rare visitor to southern Oman; one seen at East Khor, Salalah on three occasions, 20 Nov–10 Dec, is only the 6th record. **Yellow Bittern** *Ixobrychus sinensis* is rare in winter so an adult at Khor Taqah on 25 Nov and one at Ayn Razat on 5 Dec are of note. Up to four **Intermediate Egrets** *Egretta intermedia* were in the Salalah area from 1 Nov onwards. Fifty **Sooty Falcons** *Falco concolor* were at Fahal island near Muscat on 27 Oct. A single **Amur Falcon** *Falco amurensis* was at Rahab farm, Marmul, on 2 Oct. An adult male and female **Lanner Falcon** *Falco biarmicus* were together at Al Beed farm on 8 Dec. Eighteen **Ospreys** *Pandion haliaetus* were at Raysut on 4 Dec. There were a number of records of **Crested Honey Buzzard** *Pernis ptilorhynchus* in November and December, all in the Salalah area: three birds on 2 Nov, one juvenile on 5 Nov, one dark morph juvenile on 20 Nov and five birds (two males and three females/juveniles) on 10 Dec. Eagle numbers built up gradually and by 26 Nov at Raysut rubbish tip there were 62 **Greater Spotted Eagles** *Aquila clanga*, 245 **Steppe Eagles** *Aquila nipalensis* and 26 **Imperial Eagles** *Aquila heliaca*. One *fulvescens* **Greater Spotted Eagle** was at Khor Rouri on 31 Oct. This has been an exceptional autumn for this species. A sub-adult **Lesser Spotted Eagle** *Aquila pomarina* was seen at Wadi Darbat / Khor Rouri on 9 Dec, the 10th record if accepted.

A single **Water Rail** *Rallus aquaticus* at Khor Mughsayl on 13 Nov was the first record of this species for two years. A **White-breasted Waterhen** *Amaurornis phoenicurus* was seen at Khor Rouri on 27 Nov and 9 Dec and another bird at Qitbit from 5–7 Dec. There was a single **Sociable Lapwing** *Vanellus gregarius* at Wadi Baqlat near Mirbat on 8 Dec and up to 24 birds at Jarziz farm, Salalah, from 27 Nov–19 Dec. A count of 240 **Pacific Golden Plovers** *Pluvialis fulva* at Sahanawt farm on 12 Dec was the second largest from Oman. Most of the few recent records of **Caspian Plover** *Charadrius asiaticus* have been from Sohar Sun

farms; six were there on 28 Oct but there was also a single at Al Baleed in Salalah on 3 Nov. Two **Knot** *Calidris canutus* at Khor Salalah on 9 Dec is only the 6th record if accepted. A juvenile **Pectoral Sandpiper** *Calidris melanotos* at East Khor, Salalah, on 2 Nov is the 9th record. **Small Pratincole** *Glareola lactea* is an infrequent visitor to Oman; two at Khor Taqah on 19 Nov and 5 Dec (with one bird on 10 Dec) and two at Sahanawt farm on 12 Dec were the first records for two years. A **Pomarine Skua** *Stercorarius pomarinus* off the Chedi hotel, Muscat, on 16–17 Aug is the only record. **Bridled Terns** *Onychoprion anaethetus* passed Khor Rouri at a rate of 450/hour on 31 Oct while 224 passed Ras Janjari in ten minutes on 4 Nov. A single **Sooty Tern** *Onychoprion fuscata* was off Muscat on 20 August. One **Brown Noddy** *Anous stolidus* was at Ras Janjari on 4 Nov and two at Khor Mughsayl on 7 Nov. The 5th **Red Turtle Dove** *Streptopelia tranquebarica* for Oman was at Sahanawt farm on 12 Dec. One juvenile **Rufous Turtle Dove** *Streptopelia (orientalis) meena* was at Al Jarziz farm on 2 Oct and a 2nd bird there on 5 and 13 Dec. A single **Pied Cuckoo** *Oxylophus jacobinus* was at Rahab farm, near Marmul, on 28 Sep, one in Salalah on 2 Oct and another at Khor Mughsayl on 18 and 24 Nov while there was a late record of **Dideric Cuckoo** *Chrysococcyx caprius* at Khor Rouri on 31 Oct. There was an **Asian Koel** *Eudynamis scolopaceus* at Qitbit on 2 Nov and another at Rahab farm on 6 Nov. A **Short-eared Owl** *Asio flammeus* was at Jarziz farm on 5 Dec and another, possibly the same bird, at Sahanawt farm on 12 Dec. A single **Egyptian Nightjar** *Caprimulgus aegyptius* was at Montasar on 6–7 Dec, the first record for two years. Five **Alpine Swifts** *Tachymarptis melba* were at Ayn Razat on 1 Nov; five were also seen at Wadi Mistal in the north on 25 Nov and four at Ayn Sahnawt in the south on 26 Nov. A single **Little Swift** *Apus affinis* was at Salalah East Khor on 4 Dec. The 5th record of **Pied Kingfisher** *Ceryle rudis* was at Qurm Park on 13 and 20 Dec.

A juvenile/first winter **Brown Shrike** *Lanius cristatus* was at Montasar on 4 Nov; this will be the first record for Oman if accepted. The 5th record of **Black Drongo** *Dicrurus macrocercus* was at Hilf, Masirah island on 4–5 Dec with the 5th record of **Streak-throated Swallow** *Petrochelidon fluvicola* there on 5 Dec. Five

Bimaculated Larks *Melanocorypha bimaculata* were at Sohar Sun farms on 28 Oct and a large flock of 100 was seen at Sahanawt farm, Salalah, on 12 Dec. Seven **Oriental Skylarks** *Alauda gulgula* were at Sohar Sun farms on 28 Oct, with one there on 15 Dec. One was also seen at Montasar on 6 Dec and two at Jarziz farm, Salalah, on 10 Dec. The 4th record of **Blyth's Reed Warbler** *Acrocephalus dumetorum* for Oman, a single bird, was seen at Ayn Hamran on 6 Nov. A **Hume's Leaf Warbler** *Phylloscopus humei* was at Montasar on 6–7 Dec with two at Qitbit on 6 Dec and one there the following day. A single **Yellow-browed Warbler** *Phylloscopus inornatus* was at Al Ghaftain resthouse, in the central desert, on 8 Nov. **Barred Warbler** *Sylvia nisoria* is rare in December so single birds at Khor Rouri on 2 Dec and Qitbit on 6 Dec are of note. A single **Brahminy Starling** *Sturnus pagodarum* at Al Ghaftain on 15 Oct is the 9th record. A record count of more than 100 **Common Nightingales** *Luscinia megarhynchos* was made in Wadi Darbat on 2 Oct. A **Red-tailed Wheatear** *Oenanthe (xanthopyrmyna) chrysopygia* along the Muscat–Quriyat road on 19 Aug was very early; this species is not normally seen in Oman, at the earliest, before the second half of September. A male **Pied Wheatear** *Oenanthe pleschanka* of the form *vittata*, which is rare in Oman, was at Sohar Sun farms on 30 Oct. **Richard's Pipit** *Anthus richardi* has been scarce in recent years but there were two at Khor Taqah on 28 Nov and one at East Khor, one at Khor Salalah and six at Jarziz farm all on 9 Dec. The 8th record of **Meadow Pipit** *Anthus pratensis* was at Sohar Sun farms on 1 Dec while a **Buff-bellied Pipit** *Anthus (rubescens) japonicus*, the 7th record, was at the same location on 30 Nov. Three **Yemen Serins** *Serinus menachensis* were at Ayn Razat, a new location for this species, on 4 Oct.

QATAR

There were three confirmed first records for Qatar this autumn, all photographed: an adult **Black-winged Kite** *Elanus caeruleus* at West Doha sewage ponds on 7 Sep, a male **House Bunting** *Emberiza striolata* at West Doha sewage ponds on 14 Sep and a female **Cotton Teal** *Nettapus coromandelianus* at Al Khor sewage ponds on 30 Nov (Plate 2). Bahrain recorded its first House Bunting 2 days earlier. At least ten **White Storks** *Ciconia ciconia*



Plate 2 (top). Cotton Teal *Nettapus coromandelianus*, 30 Nov 2008, Al Khor sewage ponds, Qatar. © Michael Grunwelt

Plate 3 (bottom). Pied Kingfisher *Ceryle rudis*, 9 Dec 2008, Abu Nakhla prison ponds, Qatar. © John Thompson

were seen together, mid-Sep to mid-Oct, at Al Rakkiyah farm pivot fields, the largest green area in Qatar. A male and female **Pied Kingfisher** *Ceryle rudis* were seen together at Abu Nakhla prison ponds, southeast of Doha, from early Oct onward and a 3rd bird might have been present (Plate 3).

NORTH CAUCASUS (RUSSIAN FEDERATION)

Essentuki lake held the first **Mountain Chiffchaffs** *Phylloscopus (lorenzii) sindianus* on 31 Mar and the first **Red-breasted Flycatchers** *Ficedula parva* on 26 Apr. Although it is the national emblem of the Caucasus/MinVodi region, **Short-toed Snake Eagles** *Circaetus gallicus* are infrequently seen, so one at Uchkeken on 5 Jul carrying a snake in its



Plate 4. Eurasian Nutcracker *Nucifraga caryocatactes*, 6 Oct 2008, Burgustan, North Caucasus (Russian Federation). © Jeff Gordon

talons was a welcome sight. Dombai is a ski resort in the Caucasus mountains; fortunately, the ski lifts are open all year, enabling birders to get to the high ground easily and cheaply. A **Krüper's Nuthatch** *Sitta krueperi* was seen en route in Teberda on 10 Jul. On 11 Jul, a family party of five **Caucasian Snowcocks** *Tetraogallus caucasicus* was seen beyond the 3000 m ski-lift terminus and on 12 Jul there were five **Crimson-winged Finches** *Rhodopechys sanguinea*, two **Alpine Accentors** *Prunella collaris* and many **Red-billed Choughs** *Pyrrhocorax pyrrhocorax* and **Yellow-billed Choughs** *Pyrrhocorax graculus* at the ski slopes. Five **Rock Sparrows** *Petronia petronia* were seen at Teberda on the way out of Dombai on 15 Jul. All the European vultures, including **Lammergeier** *Gypaetus barbatus*, are fairly common in the area, but nine **Cinereous Vultures** *Aegypius monachus* together on 7 Jul on the outskirts of Essentuki was exceptional. West of Pyiatigorsk is the Podkumok river, which is good for migrating raptors in autumn. On 24 Sep, 80 **Black Kites** *Milvus migrans*, two **Montagu's Harriers** *Circus pygargus*, six **Eurasian Sparrowhawks** *Accipiter nisus*, eight **Steppe Buzzards** *Buteo buteo vulpinus* and 400 **Steppe Eagles** *Aquila nipalensis* were noted in one hour. Totally unexpected were 15 **Eurasian Nutcrackers** *Nucifraga caryocatactes* on 6 Oct at Burgustan, Stavropol region, two at Essentuki lake on 13 Nov and one on 6 Dec, thousands of kilometres outside their normal range; all were believed to belong to the race *macrorhynchos* (Plate 4). An



Plate 5. Dalmatian Pelicans *Pelecanus crispus*, 25 Jan 2008, Divenoe rubbish tip, Manych wetland, Russian Federation. © Jeff Gordon

Eastern Bonelli's Warbler *Phylloscopus orientalis* was seen at Essentuki lake on 7 Oct.

The following records for 2008 from the Manych wetland, strictly speaking outside the OSME region, are included because of their exceptional interest. The east of the Manych wetland lies between 46°N and 45°20'N, in Stavropol region. The principal habitat is steppe lakes, which provide breeding sites for tens of thousands of waterbirds and steppe-loving species, wintering grounds for Anatidae and resting and feeding sites for a myriad of birds on passage. Most records come from around Divenoe, a large village in the centre of the wetland.

January found 64 **White-tailed Eagles** *Haliaeetus albicilla* at the Divenoe refuse site along with at least four wintering **Dalmatian Pelicans** *Pelecanus crispus* (Plate 5) and 18 **Rough-legged Buzzards** *Buteo lagopus* in the immediate area. By 3 Apr, the annual spring concentration of **White-headed Duck** *Oxyura leucocephala* totalled 1380; numbers do not peak until mid-April, with counts of 3850 on 6 Apr 2006 and 3640 on 8 Apr 2007. Also on 3 Apr, 36 **Great White Pelicans** *Pelecanus onocrotalus* had returned and **Dalmatian Pelicans** *Pelecanus crispus* numbered 23. On 4 Apr, the first two passage **Pallid Harriers** *Circus macrourus* and the first six returning **Demoiselle Cranes** *Anthropoides virgo* were noted and 130 **Smew** *Mergellus albellus* were present. **Terek Sandpipers** *Xenus cinerea* are frequently seen during both migration periods but counts of 32 on 24 May and 11 on 12 Jun indicate that non-breeders summer here; c7000

Black-tailed Godwits *Limosa limosa* on 14 Jun were returning migrants. A second nesting pair of **White-tailed Eagles** *Haliaeetus albicilla* was discovered in April; they successfully raised two young that fledged on 16 Aug. Eight pairs of **Levant Sparrowhawks** *Accipiter brevipes* were breeding in and around Divenoe. Post-breeding flocks of **Great White Pelicans** *Pelecanus onocrotalus* numbered 780 birds on 16 Aug and **Dalmatian Pelicans** *Pelecanus crispus* numbered 600 on 17 Aug. There were 900 **Demoiselle Cranes** *Anthropoides virgo* on 7 Sep, some of which could have been migrants joining up with the local breeding population. The now annual **Sociable Lapwing** *Vanellus gregarius* survey took place in September and was centred on the Chagraiskoje reservoir, in the east of the area at 45°20'N. Due to unavoidable difficulties at the main viewing site, the maximum daily count in 2008 was just 13 birds on 8–9 Sep, compared to 236 birds in 2006 and 252 birds in 2007. Also recorded during the survey were 45 000 **Ruddy Shelducks** *Tadorna ferruginea* and 8000 **Black-winged Pratincoles** *Glareola nordmanni* (compared to 28 000 in 2006), and a **Semi-collared Flycatcher** *Ficedula semitorquata*, photographed at the survey base at the Pioneer camp. Other migrants passing daily through the trees surrounding the Pioneer camp included **Red-breasted Flycatchers** *Ficedula parva*, **Thrush Nightingales** *Luscinia luscinia*, **Red-spotted Bluethroats** *Luscinia svecica (pallidogularis?)* and **Common Redstarts** *Phoenicurus phoenicurus*. Raptors passing through the survey area included 19 **Pallid Harriers** *Circus macrourus*, 51 **Steppe Eagles** *Aquila nipalensis*, one **Eastern Imperial Eagle** *Aquila heliaca* and 18 **Hobbys** *Falco subbuteo*. Wintering geese began to arrive on 23 Nov with 550 **Greater White-fronted Geese** *Anser albifrons* and 250 **Red-breasted Geese** *Branta ruficollis* joining the resident **Western Greylag Geese** *Anser anser anser*; **Whooper Swans** *Cygnus cygnus* had already begun to arrive. On 26 Nov there were nine **Bewick's Swans** *Cygnus (columbianus) bewickii*, an extremely rare winter visitor to the area, with 350 **White-headed Ducks** *Oxyura leucocephala* on the same stretch of water. The **Long-eared Owl** *Asio otus* roost at Divenoe hospital grounds held 80 birds on 28 Nov.

SAUDI ARABIA

Nine **Greater White-fronted Geese** *Anser albifrons* at Dhahran sprayfields on 13–22 Feb were considered to be wild birds and constitute perhaps the 3rd country record. A juvenile **Black Stork** *Ciconia nigra* was at Dhahran effluent lake on 18–19 Jul. This species is a vagrant in east Saudi Arabia with a handful of previous records. The reedbed roost of **Cattle Egrets** *Bubulcus ibis* at Dhahran effluent lake reached a new midwinter high of 244 birds on 27 Jan. Records from Sabkhat al Fasl, Eastern Province, included two **Corncrakes** *Crex crex* on 16 May and two on 23 May, four adults and a juvenile **Spotted Crake** *Porzana porzana* on 27 Jul, a male **Caspian Plover** *Charadrius asiaticus* on 25 Apr, one **Pacific Golden Plover** *Pluvialis fulva* on 31 Oct, three **Broad-billed Sandpipers** *Limicola falcinellus* on 12 Sep and a loose migratory flock of ten **Egyptian Nightjars** *Caprimulgus aegyptius* on 22 Aug with a further three on 5 Sep. A pair of **Pharaoh Eagle Owls** *Bubo ascalaphus* was at Dhahran hills from 23 Jul to 24 Oct. Six **Temminck's Horned Larks** *Eremophila bilopha* were at Saadawi, near Hafr Al Batin, on 7 Feb. **White-cheeked Bulbuls** *Pycnonotus (leucogenys) leucogenys* were common at Tabuk in northern Saudi Arabia in April; these were the first records of this exotic from Tabuk. A party of at least 20 **Yemen Serins** *Serinus menachensis* was feeding on rocky ground at As Shafa escarpment around 09.00 h on 9 May; a male was seen feeding a female. Shafa is one of the most northerly mountain sites for this species in Saudi Arabia. A male **Cinereous Bunting** *Emberiza cineracea* of the race *semenowi* was at Dhahran on 14 Apr; this is a very scarce spring migrant through Dhahran

SYRIA

Few birders have visited Syria in autumn and little information is available on the timing of autumn migration. Trips in late September–early October provided some useful records. Several substantial passages of raptors included over 250 **Lesser Spotted Eagles** *Aquila pomarina* and 300 **Levant Sparrowhawks** *Accipiter brevipes* north of Slunfe on 28 Sep and 10 000 **Common Buzzards** *Buteo buteo* over Sed Wadi Abied on 5 Oct. Large numbers of **European Bee-eaters**

Merops apiaster (up to 450/day) and **Blue-cheeked Bee-eaters** *Merops persicus*, **Tawny Pipits** *Anthus campestris* and **Red-backed Shrikes** *Lanius collurio* were passing through. Several wintering species were widespread, notably **Finsch's Wheatears** *Oenanthe finschii* and **Siberian Stonechats** *Saxicola (torquata) maura*; four **Siberian Stonechats** of the form *variegata* were at Sabkhat al-Jabbul on 3 Oct and **Hen Harriers** *Circus cyaneus* were noted on 5 Oct and 7 Oct. Most summer species had departed but **Syrian Serins** *Serinus syriacus* were still common at Bloudan on 13 Oct and at least 40 **Cream-coloured Coursers** *Cursorius cursor* were at Ar Ruweira on 9 Oct. The first Syrian record of **Red-breasted Flycatcher** *Ficedula parva* was only in 2001, but at least 50 were seen in the first week of October, showing that this species is actually a widespread passage migrant; these observations illustrate how little is known about Syria's birds.

Six **See-see Partridges** *Ammoperdix griseogularis* were recorded at Qalaat Sukkara in the Jebel Abdul Aziz on 9 Oct; this is a new site but few ornithologists have visited this remote mountain range. Six **Northern Goshawks** *Accipiter gentilis* were found at four heavily wooded sites in the coastal mountains 28 Sep–1 Oct. There have been very few recent records of the species from Syria but three sites are remote and not previously visited; a small breeding population is possible. **Ferruginous Duck** *Aythya nyroca*, **Marbled Duck** *Marmaronetta angustirostris* and **White-headed Duck** *Oxyura leucocephala* were at Mheimideh on 7 Oct and a new site for **Marbled Duck**, Sarat Al Mohasan, was found very close to Deir ez-Zor on 7 Oct. Singles of **Spotted Crane** *Porzana porzana* and **Terek Sandpiper** *Xenus cinerea* were seen near Palmyra on 23 April.

Five species of *Vanellus* were found in three days in the north-east, with a pair of **Red-wattled Lapwings** *Vanellus indicus* at lake Khatuniyah on the Iraqi border on 8 Oct, at least 95 **Sociable Lapwings** *Vanellus gregarius* at Ar Ruweira on 9 Oct and **White-tailed Lapwings** *Vanellus leucurus* at several sites. At Ar Ruweira there was also a party of falconers from the Gulf who professed to be training their **Peregrines** *Falco peregrinus*. **Red-wattled Lapwings** probably breed at several sites in

north-east Syria but it is unknown if the population is resident. A **Red-necked Phalarope** *Phalaropus lobatus* was at Mheimideh on 8 Oct; this species is a regular but scarce migrant through the Syrian interior. A local conservationist reported two male **Namaqua Doves** *Oena capensis* north of the Euphrates in April 2008, which would be the most northerly records from Syria, and four **Great Bustards** *Otis tarda* shot last winter near Deir ez-Zor. The bustards are likely to have been from the threatened Turkish population, which probably winters in small numbers in northern Syria. The corpse of a **Eurasian Scops Owl** *Otus scops*, discarded next to a mist-net near Qarietayn on 12 Oct was further evidence of the damage this illegal trade does to bird populations. A single **Little Swift** *Apus affinis* was at Sed Wadi Abied, a regular site, on 11 Oct. Several **Scrub Warblers** *Scotocerca inquieta* were singing at Deir Mar Musa on 12 Oct. A **Goldcrest** *Regulus regulus* near Kassab on 1 Oct is the first record for several years. Three **Citrine Wagtails** *Motacilla citreola* were in the roadside sedges at Mheimideh on 7 Oct; they have bred there and are probably resident.

TAJIKISTAN

A **White-tailed Lapwing** *Vanellus leucurus* in the marshes along the river Vakhsh near Yakkatut, Jomi district, on 18 May, was outside the known breeding area in the far south-west. Two **Little Forktails** *Enicurus scouleri* on 29 Jun south of Hakimi in the main Qaratogh valley, Shahrinaw district, were outside the breeding range outlined by Abdusalyamov in 1973. There is another recent sighting from the Qaratogh valley, from Lake Payron on 10 Jun 2007; these observations suggest that the species may breed in the Qaratogh valley. A female **White-throated Robin** *Irania gutturalis* in the Shurob range near Sanchaloni, Khovaling district, on 27 Jul was also outside the known breeding range.

TURKEY

Interesting waterbird records during the period were breeding **Marbled Ducks** *Marmaronetta angustirostris*, **Ferruginous Ducks** *Aythya nyroca* and **White-headed Ducks** *Oxyura leucocephala* all on the Doremec river, near Edremit, Van, on 2 Jul, where booming **Eurasian Bitterns** *Botaurus stellaris*

were also recorded. There were 30 **White-headed Ducks** at Cernek lake, Kızılırmak delta on 27 Oct, four **Velvet Scoter** *Melanitta fusca* at Aygir lake, Kars, on 22 Jun and a **Long-tailed Duck** *Clangula hyemalis* at İğneada, Kırklareli (13th record) on 10 Dec. There was also a report of 10 **Horned Grebes** *Podiceps auritus* at Bafa lake on 27 Jan 2007. Several records of late migrating raptors included a single **Lesser Spotted Eagle** *Aquila pomarina* at the Kızılırmak delta on 9 Nov, 15 **Common Buzzards** *Buteo buteo* at Vize, Kırklareli, on 24 Nov, with 16 at Çamlıca, Istanbul also on 24 Nov and 26 over Samsun on 26 Nov, and two **Short-toed Snake Eagles** *Circaetus gallicus* at Çamlıca on 24 Nov. More typical were single **Greater Spotted Eagles** *Aquila clanga* at Sarikum lake, Sinop, on 9 Nov and the Kızılırmak delta on 15 Nov. Three **Great Bustards** *Otis tarda* were near Kars on 26 Sep and 43 were at Bulanık, Muş, on 12 Oct. There was a single **Corncrake** *Crex crex* at Terkos lake, Istanbul, on 28 Sep and nine in the Kızılırmak delta on 27 Sep. Other interesting crane records were a **Little Crane** *Porzana parva* at the Kızılırmak delta on 14 Nov and two **Spotted Crakes** *Porzana porzana* at Mileyha, Antakya, on 22 Nov. A total of 105 **Sociable Lapwings** *Vanellus gregarius* were found at Bulanık on 12 Oct and there were 16 **Eurasian Dotterels** *Charadrius morinellus* at Kulu lake, Konya, the same day. A single **Great Snipe** *Gallinago media* was at Aras, Kars, on 25 Sep. The most outstanding wader records during the period were the 2nd–5th records of **Pectoral Sandpiper** *Calidris melanotos*, with one at Kozanlı, Konya, on 20 Sep, one at Kulu lake on 4 Oct and three at Yumurtalık, Adana, on 6 Oct. There were also notable high counts of **Cream-coloured**

Coursers *Cursorius cursor* and **Black-winged Pratincoles** *Glareola nordmanni* with 40+ of the former near Urfa on 30 Jun, with 35 still present on 14 Jul, and 380 of the latter at Kuyucuk lake, Kars, on 16 Sep. Two **Arctic Skuas** *Stercorarius parasiticus* at Filyos, Zonguldak, on 5 Aug were unseasonal. After several years with few or no records, there was a small influx of **Pin-tailed Sandgrouse** *Pterocles alchata* to the Urfa area with c100 in late May, seven on 30 Jun, seven on 14 Jul and one on 19 Jul (Plate 6). There were four records of **Short-eared Owl** *Asio otus* with singles in the Göksu delta on 4 Oct, at Bulanık on 12 Oct, the Kızılırmak delta on 31 Oct and at Erzurum on 17 Nov. Thirty **Blue-cheeked Bee-eaters** *Merops persicus* were at Bozova, Urfa, on 20 Jul and five at the Kızılırmak delta on 6 Sep. The 16th–19th records of **Isabelline Shrike** *Lanius isabellinus* were: singles at Filyos on 2 Oct, Yamansız (Antalya) on 5 Oct, Karkamış (Gaziantep) on 12 Oct and Balık lake (Antakya) on 12 Dec. **Great Grey Shrikes** *Lanius excubitor* were recorded at Kızılcahamam on 19 Oct, Vize on 26 Oct (two), 1 Dec (one) and 13 Dec (three) and Dortdivan, Bolu, on 10 Dec. The 2nd and 3rd records of **Eurasian Nutcracker** *Nucifraga caryocatactes* were a single at Erzurum on 23 Oct and two at Durusu, Istanbul, 16 Nov–8 Dec. The 6th record of **Yellow-browed Warbler** *Phylloscopus inornatus* was a bird trapped at the Cernek ringing station, Kızılırmak delta, on 17 Oct and there was a report of a **Greenish Warbler** *Phylloscopus trochiloides viridanus* from Aras, Kars, on 25 Sep (potential 6th record). Nine **Iraq Babblers** *Turdoides altirotis* were at Birecik on 15 Jul, with six on 19 Jul and the species now seems to be established in small numbers (Plates 7 & 8). 2008 was a good year for **Pale Rockfinches** *Carpospiza brachydactyla* in the south-east with a single near Ceyhan on 29 April followed by up to 300 near Urfa from late May to mid July. **Chestnut-shouldered Petronias** *Gymnoris xanthocollis* were recorded near Urfa (three on 30 Jun) and at Birecik (two on 19 Jul). Up to five **Richard's Pipits** *Anthus richardi*, and Turkey's first **Buff-bellied Pipit** *Anthus (rubescens) japonicus*, were at Mileyha 22 Nov–11 Dec. Turkey's first **Blyth's Pipit** *Anthus godlewskii* and 2nd **Olive-backed Pipit** *Anthus hodgsoni* were ringed at the Dicle ring-



Plate 6. Pin-tailed Sandgrouse *Pterocles alchata*, July 2008, near Urfa, Turkey. © Nizamettin Yavuz



Plate 7 & 8. Iraq Babbler *Turdoides altiostriis*, July 2008, Birecik, Turkey. © Nizamettin Yavuz

ing station, Diyarbakır, in 2006. At least 12 **Trumpeter Finches** *Bucanetes githagineus*, including juveniles, were near Zerneke Barajı in late Jun/early Jul where **Mongolian Finches** *Bucanetes mongolicus* were 'abundant'. A **Snow Bunting** *Plectrophenax nivalis* at Karaburun, Istanbul, on 13 Dec was the 9th record since 1992.

UNITED ARAB EMIRATES

The outstanding record was the first **Red-flanked Bluetail** *Tarsiger cyanurus* for Arabia, a first winter/female at Safa park from 7 Dec until the end of the month. A series of exceptional seabird records included several of **Lesser Noddy** *Anous tenuirostris*: one at Fujairah on 9 Aug, the 3rd UAE record, two on 10 Aug and three on 19 Sep, with the last sighting on 24 Oct. Others included the 3rd and 4th records of **Roseate Tern** *Sterna dougallii*, an adult at Khor Kalba harbour from 1 Oct with two adults on 4 Oct; the 3rd and 4th records of **Sooty Tern** *Onychoprion fuscata*, an adult with an immature at Fujairah on 9 Aug, with three birds on 22 Aug, last seen on 7 Nov; and the 10th record of **Long-tailed Skua**

Stercorarius longicaudus, at Fujairah, on 1 Aug. **Persian Shearwaters** *Puffinus (lherminieri) persicus* were present off the East Coast until the end of Oct, with a maximum of 920 on 10 Aug. A good number of **Brown Noddys** *Anous stolidus* were seen off Fujairah 31 Jul–24 Oct, with the highest count 19 birds.

Other interesting records (of single birds unless stated otherwise) were of **Eurasian Bittern** *Botaurus stellaris* at Safa park on 13 Oct; **Indian Pond Herons** *Ardeola grayii* at Khor Kalba from 9 Aug onwards, with the highest count eight on 24 Oct; **Crested Honey Buzzards** *Pernis ptilorhynchus* at Sila peninsula on 7 Nov and at Safa park on 10 Nov; **Golden Eagles** *Aquila chrysaetos* at Jebel Hafit on 25 Nov and Sila peninsula on 9 Dec; **Black-winged Kites** *Elanus caeruleus* at Sila peninsula on 7–9 Dec and near Abu Dhabi on 7 Dec, the first records from the UAE since 2002; **Sooty Falcons** *Falco concolor* at Dubai Pivots on 14 Aug and Fujairah National Dairy Farm on 23 Aug; **Little Crakes** *Porzana parva* at Fujairah NDF on 4 Oct and at Al Wathba lake on 15–22 Oct; **White-breasted Waterhen** *Amaurornis phoenicurus* at Dubai Pivots on 2 Dec; **Sociable Lapwings** *Vanellus gregarius* at Fujairah NDF from 15 Oct and at Ghantoot from 31 Oct; **Great Knot** *Calidris tenuirostris* at Khor Kalba on 21 Sep (the only record); **Long-toed Stint** *Calidris subminuta* at Al Wathba lake on 28 Nov; **Black-winged Pratincole** *Glareola nordmanni* at Fujairah NDF on 4 Oct; **Small Pratincole** *Glareola lactea* at Fujairah NDF on 4 Oct; and **Little Gull** *Larus minutus* at Khor Kalba from 12–20 Sep. A **Mediterranean Gull** *Larus melanocephalus* at Safa park from 10 Dec was the 9th UAE record. The 7th and 8th records of **Common Wood Pigeon** *Columba palumbus* were of a single at Fujairah NDF on 4 Oct and of three birds at Dubai on 9 Nov. Up to three **Oriental Turtle Doves** *Streptopelia orientalis* were at Fujairah NDF 19 Sep–31 Oct. The maximum count of 72 **Namaqua Doves** *Oena capensis* was made on Sila peninsula on 1 Aug. **Pied Kingfishers** were at Khor Zawra on 7–19 Nov, Ras al Khor on 18 Nov and Abu Dhabi on 30 Nov. The 4th and 5th records of **Brown Shrike** *Lanius cristatus* were from Jebel Hafit from 13 Nov until the end of the year and at Dubai Pivots on 2–5 Dec. Records of **Grey Hypocolius** *Hypocolius ampelinus* came from

Dubai Pivots, Ghantoot, Lulu island and Sila peninsula from 27 Nov. Singles of **Brown-throated Martin** *Riparia paludicola* were at Fujairah NDF on 12 Sep; **Mistle Thrush** *Turdus viscivorus* at Abu Dhabi on 6–10 Nov; **Ring Ouzel** *Turdus torquatus* at Sila peninsula on 7 Nov and **Dark-throated Thrush** *Turdus atrogularis* at Jebel Hafit on 15 Nov with two at Sila peninsula on 9 Dec. **Eurasian Stonechats** *Saxicola torquatus* were reported from 3 Nov onwards at several locations; this species seems to be becoming commoner. **Oriental Skylarks** *Alauda gulgula* were seen at Fujairah NDF, Dubai Pivot Fields and Sila peninsula from 19 Sep. Singles of **Grasshopper Warbler** *Locustella naevia* and **Savi's Warbler** *Locustella luscinioides* were at Fujairah NDF on 5 Sep, a **Moustached Warbler** *Acrocephalus melanopogon* was in Dubai Pivot fields on 17 Dec and a **Blyth's Reed Warbler** *Acrocephalus dumetorum* at Khalidiyah on 18 Oct. **Sykes's Warblers** *Iduna rama* were reported from Khor Kalba, July–December. There were singles of **Hume's Leaf Warbler** *Phylloscopus humei* at Safa park on 10 Nov and at Sila peninsula on 9 Dec. An **Olive-backed Pipit** *Anthus hodgsoni* was at Dabbiyah on 10 Nov with six birds at Safa park on 28 Nov onwards. The earliest UAE record of **Forest Wagtail** *Dendronanthus indicus* was from Khalidiyah on 14 Sep; another was there 10–15 Oct.

YEMEN

The first **White-collared Kingfisher** *Todirhamphus chloris* for Yemen was found in the mangroves at Al Jar Ecological camp on 4 Oct; it or another bird was still present in late October. These mangroves, like those in Saudi Arabia, support a population of **White-eyes** *Zosterops* sp, the identity of which remains uncertain. Four **Black-headed Herons** *Ardea melanocephala* were seen at Aden lagoons on 28 Oct along with 180+ **Abdim's Storks** *Ciconia abdimii* overhead. Three **Greater Spotted Eagles** *Aquila clanga* and a single **Eastern Imperial Eagle** *Aquila heliaca* were also present. A three-hour watch just north of Bab Al Mandab on 29 Oct produced 974 **Steppe Buzzards** *Buteo buteo vulpinus* and 3823 **Steppe Eagles** *Aquila nipalensis*, although thermals inland probably pushed the morn-



Plate 9. Indian Pond Heron *Ardeola grayii*, 25 Oct 2008, Wadi Hadibu, Socotra, Yemen. © RF Porter



Plate 10. Spotted Crake *Porzana porzana*, 26 Oct 2008, Wadi Hadibu, Socotra, Yemen. © RF Porter

ing total for all species to over 10 000. Four **Eastern Imperial Eagles**, nine **Short-toed Snake Eagles** *Circaetus gallicus*, five **Booted Eagles** *Aquila pennata* and a single **Bonelli's Eagle** *Aquila fasciatus* also passed over, and more than 3000 **Steppe Eagles** were preparing to cross from the tip of Bab Al Mandab to Djibouti next morning. Only one **European Honey Buzzard** *Pernis apivorus* and one **Levant Sparrowhawk** *Accipiter brevipes* were seen in three days spent at Bab Al Mandab; both were on 31 Oct. Raptor passage on 7 Nov included 15 **Lesser Spotted Eagles** *Aquila pomarina*, 1800 **Steppe Eagles** and one **Eastern Imperial Eagle**.

On 25 Oct, 300 **Crab Plovers** *Dromas ardeola* and 150+ **Eurasian Curlews** *Numenius arquata* were on the Red Sea coast at Al Jar. A **Short-eared Owl** *Asio flammeus* was at Bab Al Mandab on 7 Nov. Two **Grey-headed Kingfishers** *Halcyon leucocephala* were at Al Burrah on 24 Oct, a **Eurasian Cuckoo** *Cuculus canorus* flew south at Bab al Mandab on 31 Oct and five **Common Swifts** *Apus apus* were at Al Turbah on 26 Oct. A **Masked Shrike** *Lanius nubicus* was at Al Burrah on 24 Oct and a **Brown-throated Martin** *Riparia paludicola* at Aden marshes on 28 Oct. Over 700 **Greater Short-toed Larks** *Calandrella brachydactyla* were moving down the coast south of Hodeidah late on 25 Oct. A single **Common Whitethroat** *Sylvia communis* at Bab Al Mandab on 30 Oct was one of very few migrant passerines there. A late **Gambaga Flycatcher** *Muscicapa gambagae* was in Sana'a on 22 Oct and a **Richard's Pipit** *Anthus richardi* flew over observers near Hodeidah on 26 Oct.

SOCOTRA (YEMEN)

Several unusual herons were recorded in late Oct–early Nov, including the island's 3rd **Intermediate Egret** *Egretta intermedia* at Wadi Hadibu on 24 Oct, up to three **Indian Pond Herons** *Ardeola grayii* (Plate 9) and two **Great White Egrets** *Egretta alba* at two sites, a juvenile **Little Bittern** *Ixobrychus minutus*, the first for Socotra, from 25–27 Oct and a juvenile **Yellow Bittern** *Ixobrychus sinensis* at Wadi Hadibu on 29 Oct. Yellow Bitterns have now been seen on about five occasions since 1999, including both adults and juveniles, and it is just possible that they breed. Off the Ras

Hebak coast in late Oct and early Nov a spectacular feeding frenzy of **Brown Noddy** *Anous stolidus* and **Persian Shearwater** *Puffinus (lherminieri) persicus* reached a peak of 2500 and 800 respectively on 2 Nov. A **Yellow-billed Kite** *Milvus aegyptius* was watched over Hadibu on 25–26 Oct. A total of 341 **Egyptian Vultures** *Neophron percnopterus* was counted at dawn departing their roost sites on the cliffs and trees around the town. Could this be one of the largest roosts in the world of this globally endangered species? Small crakes (very rare on Socotra) were represented by a juvenile **Spotted Crake** *Porzana porzana* at Wadi Hadibu on 25–26 Oct (Plate 10) and a juvenile **Little Crake** *Porzana parva* at Qalansiya estuary on 27 Oct. During this period 4 **Whiskered Terns** *Chlidonias hybrida* were feeding at Sirhan lagoon and two adult **White-eyed Gulls** *Larus leucophthalmus* roosted at Wadi Hadibu from 29 Oct–5 Nov. On 26 Oct, a **Eurasian Golden Oriole** *Oriolus oriolus* was seen, only the 2nd record, and the island's first **Northern Wheatear** *Oenanthe oenanthe* was watched at the western end on 27 Oct.

Acknowledgements

The following assisted in the compilation of this review: Alexander Abuladze, Ahmad Aidak, Duha al-Hashimi, Vasil Ananian, Simon Aspinall, Raffael Aye, Sherif Baha El Din, Jamie Buchan, Wim D'Haeseleer, Frederik De Coster, Koen De Maere, Paul De Potter, Adrian Drummond-Hill, Wouter Faveyts, Dick Forsman, Chris Gardner, Chris Gent, Jeff Gordon, Ian Green, Ian Harrison, Andrew Harrop, Jan Heip, Pierre-Yves Henry, István Moldován, Mike Jennings, Brendan Kavanagh, DJ Kelly, Howard King, James Lambert, Paul Lewis, Graham Loble, Giovanni Massaro, Joost Mertens, Wouter Mertens, David Murdoch, Riens Niks, Mike Orr, Tommy Pedersen, Yoav Perlman, Mike Pope, David Porat, Richard Porter, Richard Prior, Diana Quiroz, Toby Roth, Colin Richardson, Randel Rogers, Gordon Saunders, Ahmed Saeed Suliman, Richard Saval, David Stanton, Mohammad Tohidifar, Machiel Valkenburg, Karen Wade, Geoff Welch, Nizamettin Yavuz, Emin Yoğurtcuoğlu and Elena Zubakina.

Dawn Balmer, 7 Fisher Way, Thetford, Norfolk, IP24 2LD, UK. dawn.balmer@bto.org

David Murdoch, Flat 3, 5 Eaton Crescent, Bristol, BS8 2EJ, UK. damurdoch@hotmail.com

GREENTOURS

NATURAL HISTORY HOLIDAYS

Relaxed & Friendly • Small Groups • Expert Guides • Est. 1993

70+ tours a year to fantastic destinations such as Georgia, where High Caucasus specialities include easy-to-see Caucasian Snowcock and Blackcock, Great Rosefinch and Gldenstdt's Redstart with abundant flowers and mammals (Tur & Wolf) too.

On our autumn Iran trip you will see Persian Gulf specialities plus abundant birds of prey, especially aquillias, huge numbers of wintering waders & wildfowl, also Shiraz, Persepolis and Minab

Also Tien Shan, Altai, Turkey, China, Taiwan, and many more

www.greentours.co.uk

tel 01298 83563



Promoting interest in, the study of and preservation of Britain's Birdlife

The Birdwatchers Spring Fair

& Wildlife Digital Photo Show 2009

Sponsored By Focus Optics The West Midland Bird Club
and Birds Illustrated magazine.

All the top names in
binoculars & scopes

Guided Bird Walks

Digiscoping
Workshops

Bird Clubs &
RSPB Groups

Outdoor Clothing
& Footwear

Illustrated Talks

All the Latest
Bird Books

Bird Art

Bird Prints

Ringing

Refreshments

Craft Centre

Wildlife Artists

Pond Dipping

Refreshments

Free Prize Draw



Join a Workshop
and photograph
OWLS
Book on arrival
at show

Saturday 30th May - Sunday 31st May
9.30am to 5.30pm (10am to 4pm Sunday)

Middleton Hall, Middleton, Tamworth, Staffs, B78 2AE
Admission: £3.50 per Adult (Children FREE)

FREE PARKING

www.birdwatchers-springfair.co.uk

Editor

Dr Peter Cowan, Department of Biological Sciences and Chemistry,
University of Nizwa, Sultanate of Oman • sandgrouse@osme.org

Editorial Advisers Simon Aspinall, Paul Goriup, Mike Jennings, Dr Stephen Newton

Photographic Editor Paul Doherty

Reviews Editor Keith Betton

Identification Consultants Arnoud van den Berg, Chris Bradshaw, Steve Madge, Richard Porter

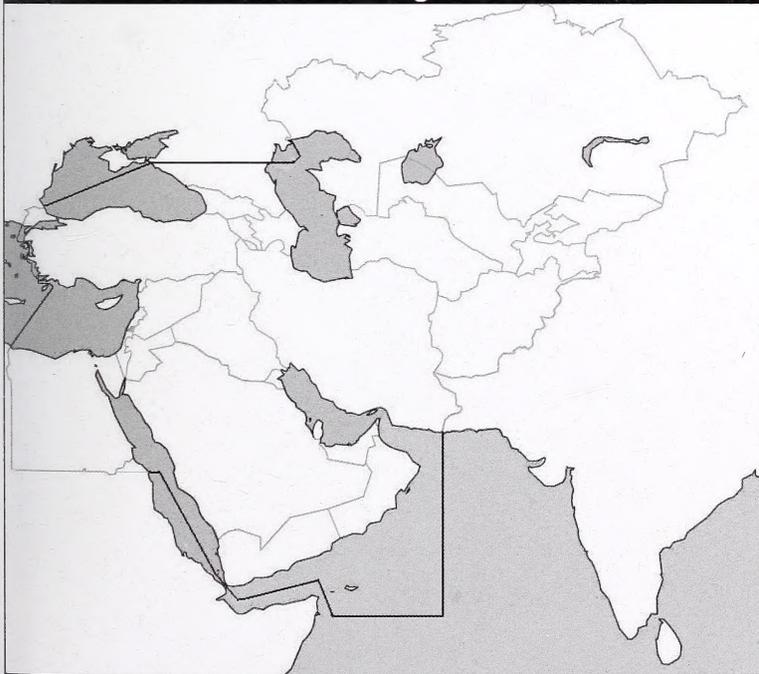
ADVICE FOR AUTHORS

The Editor will consider for publication papers and notes on the birds of the Middle East, Caucasus and Central/Middle Asia *ie* of Egypt, Israel, Palestine, Lebanon, Syria, Turkey, Cyprus, Jordan, Saudi Arabia, Yemen (inc Socotra archipelago), Oman, United Arab Emirates, Qatar, Bahrain, Kuwait, Iraq, Iran, Afghanistan, Armenia, Azerbaijan, Georgia, Russian Federation's North Caucasus (to 45°N), Kazakhstan, Kyrgyzstan, Turkmenistan, Uzbekistan and Tadjikistan. Papers which include, in addition, birds in areas outside the OSME region or which are concerned with the birds of areas of which the OSME region, partially or completely, is an important part *eg* the Saharo-Sindian region or Siberian–African flyways, will also be considered. Please consult the Editor if in doubt about the suitability of material.

All correspondence between authors and Editor, including initial submission of mss, will be by email. All mss must be in English (UK) and use Microsoft Word. Consult the current or recent issues of *Sandgrouse* for style conventions but apply minimal text formatting *eg* no rules, small caps or text boxes. All figure, table and plate captions should be in the text file, at the end of the ms. Tables can either be placed at the end of the Word document or be attached separately. All diagrams, maps, graphs and photos must be attached as individual files in a popular format (*eg* JPEG). Do not embed these in the text. The Editor encourages the submission of maps and colour photos.

Avian nomenclature and species sequence should follow the OSME Regional List, www.osme.org. Significant deviation requires justification in the text. All mss for publication are refereed.

OSME region



ISSN 0260-4736

Typesetting & layout
by Alcedo Publishing, Arizona
engli@mailsnare.net

Printed by
Crowes of Norwich, UK
sales@crowes.co.uk



Opticron

Binoculars, Telescopes & Accessories



AURORA BGA

Designed and manufactured to be smaller, lighter, sharper with a wider field of view and better close focus compared to any previous Opticron BGA model, the new Aurora BGA delivers the ultimate balance between size and weight, resolution and field of view currently attainable from this roof prism format.

Available in 8x42 Field 7.2° and 10x42 Field 6.5° with finished weights under 670g and a choice of finishes.

8x42 £739, 10x42 £739



"In all situations colour rendition was spot on, even in the duller of light. Light gathering power from the 42mm objective lenses was excellent and at dawn or dusk birds looked at were clear and sharp" – Steve Young, Birdwatch Aug '08

"Although I had reservations about the binoculars when I first got them, they have since become my main binocular, offering everything I could want, in terms of image, handling, build and weatherproofing in a top-end model. I have no reason to change back, or onwards, to anything else" – Martin Collinson, Dec '08

SEE WEB
SPECIAL
OFFER
FOR DETAILS

HR ED FIELDSCOPES

Re-designed and re-engineered without compromise, the HR ED deliver truly exceptional optical performance combined with sublime

handling and total reliability. Features include:

- New twin ED APO lens design
- New lightweight nitrogen gas filled magnesium body, fully protected in soft touch textured rubber armour
- Updated N-type coating throughout for maximum brightness and contrast
- Wide wheel focusing, retractable lens hood with integrated objective lens cover
- Large footprint +/- 90° rotating tripod sleeve
- Fully compatible with Opticron SDL, HDF & HR eyepieces
- Telephoto option for SLR photography
- 30 year guarantee

HR 66 GA ED or HR 66 GA ED/45 body £649

HR 80 GA ED or HR 80 GA ED/45 body £799

Eyepieces: SDL 18-54x/24-72x £229,

HDF T 20xWW/27xWW £129,

HDF T 28xWW/38xWW £149,

Telephoto HDF £149



For more information on the complete range of Opticron equipment and a copy of our current Catalogue call **01582 726522** or visit us online at **www.opticron.co.uk**

PO Box 370, Unit 21, Tilan Court, Laporte Way, Luton, Beds, LU4 8YR, UK Fax: 01582 723559 E-mail: sales@opticron.co.uk