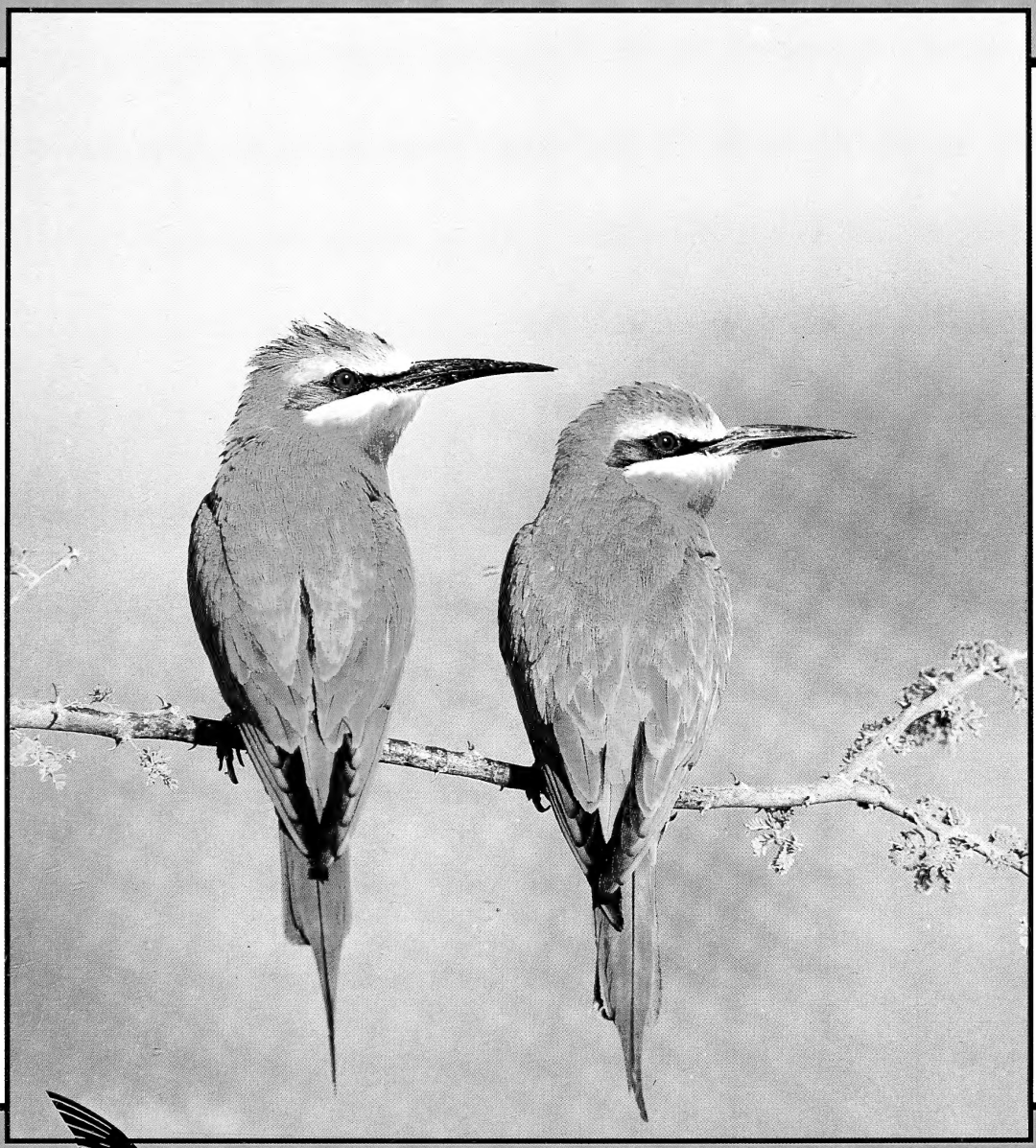
SANDGROUSE

Volume 20 (1) *1998*



ORNITHOLOGICAL SOCIETY OF THE MIDDLE EAST

OSME

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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.
- To promote an interest in ornithology and bird conservation throughout the Middle East.
- To develop productive working relationships with other governmental and non-governmental organisations with an interest in conservation and/or natural history in the region.

MEMBERSHIP

OSME is open to all, and its membership spans over 40 countries.

ANNUAL MEMBERSHIP

Individual £12
(£15 air mail outside Europe)

Family £15
(£18 air mail) for two, plus £3 for each additional family member.

Supporting £24
Cover the subscription of a national birdwatcher in the region (£27 air mail).

LIFE MEMBERSHIP

Individual £225
(£100 if 60 or over)

Family £300
for 2 members.

Please add £3 if payment is made in non-sterling currency. For details of payment by banker's order, and for any other information on the Society, write to the Secretary at the address below.

PUBLICATIONS

OSME publishes a scientific journal, *Sandgrouse*, containing papers, news and features on all aspects of Middle Eastern ornithology. Published twice yearly, it is issued free to members. Further copies are available for sale from OSME.

MEETINGS

An Annual General Meeting is held in London at which guest speakers provide new perspectives on ornithology in the region. There are also occasional special meetings, some taking place outside the UK.

PROJECTS

OSME organises field expeditions to collect data on birds in little-known parts of the region and in areas where OSME can assist by teaming up with local groups.

The Conservation & Research Committee grants funds to valuable field projects and desk studies which further knowledge and conservation of birds in the region. Grants have been awarded to over 30 projects since the Conservation & Research Fund was set up in 1982.

c/o THE LODGE, SANDY, BEDFORDSHIRE SG19 2DL, UK
OSME WEB SITE - http://www.osme.org

SANDGROUSE

Amended Table 1. to replace table which appears in *Sandgrouse* 20 (1): 67

Table 1. Breeding birds of four Yemeni Red Sea islands, March 1995. Figures are the estimated number of pairs present. * = 15 pairs of wings found, indicating predation; no live birds seen.

	Tikfash	Qusur	Jezerat Bawared	Kutman (eastern side)
				600
Brown Booby *Sula leucogaster*				
Striated Heron *Butorides striatus*	2			
Western Reef Heron *Egretta gularis*	5	10		
Goliath Heron *Ardea goliath*	1	1		
Osprey *Pandion haliaetus*	5	4		2
Kentish Plover *Charadrius alexandrinus*	4		2	
Sooty Gull *Larus hemprichii*				15
Caspian Tern *Sterna caspia*		5		
Saunders's Tern *Sterna saundersi*	15	2	3	
Brown Noddy *Anous stolidus*			*	
Chestnut-bellied Sandgrouse *Pterocles orientalis*	5			
Black-crowned Finch Lark *Eremopterix nigriceps*	widespread	2		
Hoopoe Lark *Alaemon alaudipes*	widespread	2		

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SANDGROUSE
Volume 20 (1)

Cover Photograph:
Blue-cheeked Bee-eater *Merops persicus*, taken by *Hanne & Jens Eriksen* at Sohar, Oman.

OSME is grateful for sponsorship from Julian Francis towards the cost of printing the colour photographs inside this issue.

OSME News

OSME/NHBS BOOK AWARD

OSME and the Natural History Book Service (NHBS) are pleased to announce a new book award available to Middle Eastern national birdwatchers. It will be awarded for the purchase of a book or books up to the value of £175 where it is difficult to obtain these in the country concerned. Applicants should submit the following details: their name, address, profession, reason for application and the amount requested to: OSME, c/o RSPB, The Lodge, Sandy, Beds SG19 2DL, U. K. All applications will be verified by OSME Council and all book and postage costs are generously being covered by NHBS. OSME is grateful to NHBS for providing this award to assist OSME in promoting birdwatching and conservation of birds in the Middle East.

OSME SITUATIONS VACANT

The **Advertising Officer**, although not considered a glamourous task, is very important for providing income to support the aims of OSME in stimulating birdwatching and conservation in the Middle East. The Advertising Officer contacts existing and potential advertisers to attract advertising in *Sandgrouse* and approaches other organisations for sponsorship and support for OSME's activities. Futher details of this role can be obtained from Andrew Grieve, Hillcrest, Whitgift, nr. Goole, East Yorkshire DN14 8HL, U. K. Tel. 01405 704665. E-mail <ag@netlink.co.uk>.

The **Treasurer** is required to provide accurate information on finances for the day-to-day running of the Society and ensure that Council's ideas are not beyond the Society's means. Experience of accountancy would be an advantage. Please contact the current Treasurer, Adrian Colston, for further information (tel. 01353 720274, e-mail <acolston@cix.compulink.co.uk> or write c/o OSME).

MIDDLE EAST BIRDING AND CONSERVATION ORGANISATIONS: AN UPDATE

In *Sandgrouse* 18 (2): 10-13, a directory of birding and conservation organisations in the Middle East was published. The following changes in information update that directory and are current at the time of going to press.

BAHRAIN

Bahrain Natural History Society
P.O. Box 1858, Manama, Bahrain.

CYPRUS

Birdline Cyprus
The telephone number is now 357-6-233707. The Information Centre is manned during both migration periods from 10-12.30hrs daily. Anyone visiting Cyprus requiring information is welcome to contact Jeff Gordon on Paphos (06)-232487.

KUWAIT

The Environmental Protection Council
This has now been upgraded as a government body, and is now the **Environment Public Authority**. (Director General: Dr. Mohammed Al-Sarawi)
P.O. Box 24395, Safat 13104, Kuwait.
Phone: +965-2452790. Fax: +965-2421993

Kuwait Journal of Science and Engineering
An internationally refereed journal, formerly *The Journal of the University of Kuwait (Science)*, welcomes papers on Middle Eastern ornithology.

SAUDI ARABIA

Please note telephone and fax numbers as follows:

i. **National Commision for Wildlife Conservation and Development, Riyadh**
Phone: +966-1-4418700
Fax: +966-1-4410797

ii. National Wildlife Research Centre, Taif
Phone: +966-2-7455188
Fax: +966-2-6455176

iii. King Khaled Wildlife Research Center, Riyadh
Phone: +966-1-4044412
Fax: +966-1-4011527

iv. Wildlife Sanctuary for the Gulf Region, Jubail
Phone: +966-3-3411700
Fax: +966-3-3412415

The NCWCD publishes the magazine *Arabian Wildlife* through Peter Vine and Trident Press, London. Enquiries and submission of articles should be made to Dr Iyad Nader, c/o NCWCD, or to the publishers in London.

NEWS & INFORMATION

compiled by Simon Albrecht

The aim of this section is to inform readers about events in the OSME region. It relies on members and others supplying relevant news and information. If you have anything concerning birds, conservation or development issues in the OSME area please send it to News and Information, OSME, c/o The Lodge, Sandy, Bedfordshire SG19 2DL, U. K.

This section is not intended as a definitive report or write-up of the projects concerned. Many of the projects are sponsored; such support is appreciated but is not generally given acknowledgement here.

GENERAL

Mideastenviro is an Internet bulletin board devoted to environmental issues in the Middle East. The list has c. 150 subscribers throughout the world and is run from the U. S. A. Subscription instructions are as follows: send an e-mail to <listproc@envirolink.org>; leave the subject line blank; in the body of the message, type 'subscribe mideastenviro your name' (this should be your real name or organisation name, not your e-mail address); you will receive an acknowledgement, which will include instructions on how to send messages to all list subscribers and how to leave the list if you wish to in the future.

Phoenix Issue 14 is now available. Mike Jennings is still keen to be receive new information even though he is in the process of writing up the final atlas. He is still interested in common species from well-watched places, as well as the rare and unusual. Data on clutch size, nest site and number of broods is still very patchy even for common species. It is hoped to continue the database after the atlas is published, in order to provide up-to-date information for future researchers. Send your information to: **Michael Jennings, ABBA Co-ordinator, 1 Warners Farm, Warners Drove, Somersham, Cambridgeshire PE17 3HW, U. K. Tel./Fax: 01487 841733. E-mail: arabian.birds@dial.pipex.com.**

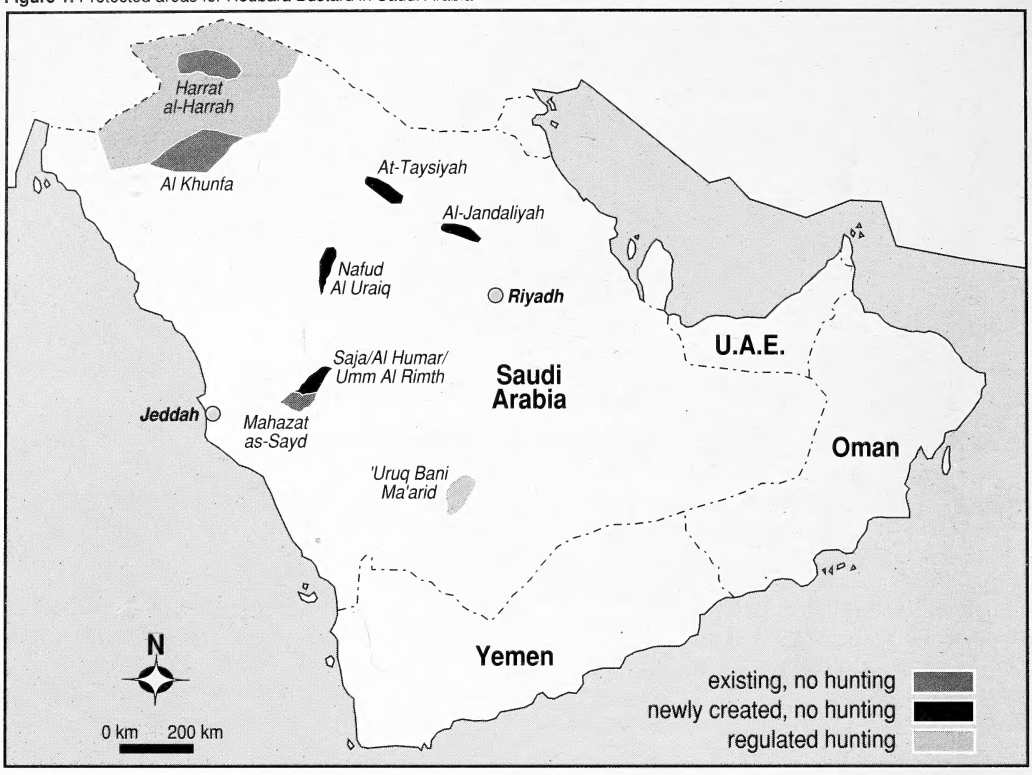
BAHRAIN

El Niño causes havoc for breeding Socotra Cormorants? Abnormally heavy November rains have had a catastrophic effect on the breeding of Socotra Cormorants *Phalacrocorax nigrogularis* on Sawad Al Janabiyah in the Hawar Islands, Bahrain. While the November average is 2 mm, over 60 mm of rain had fallen by late November 1997. Following heavy rain, 1000s of young chicks were found dead and tens of 1000s of nests abandoned. Nests with older birds seem to be unaffected. It has been suggested that there could be a connection between El Niño and the November thunderstorms.

SAUDI ARABIA

New protected areas for Houbara Bustards The National Commission for Wildlife Conservation and Development (NCWCD) has created three new Houbara Bustard

Figure 1. Protected areas for Houbara Bustard in Saudi Arabia



Chlamydotis undulata refuges in Saudi Arabia and extended one of the four reserves established by 1994 (see map). The aim is to protect migrant and resident Houbara Bustards from hunting and to provide safe sites for the release of captive-bred birds. National regulations for the hunting of bustards are difficult to enforce, which has in turn led to the establishment of reserves. Each new reserve has a core area of c. 10% where there will be no grazing or other disturbance. (Source: *Houbara News* 2)

TURKEY

Threats to Gediz Delta IBA We congratulate the President of Turkey and the Ministry of the Environment of Turkey for declaring, in April and May 1997, that the delta will become an international Ramsar site. However, we are extremely concerned to learn that the Chamber of Commerce and Industry of Izmir is planning to construct a large harbour and dockyard complex in the southern part of the delta. The construction site involves more than 50% of the critical habitat for breeding birds. The Chamber of Commerce and Industry of Izmir has asked the Minister for the Environment of Turkey to stop the process of declaring the Gediz Delta as a Ramsar site. They claim that the area has already lost its wildlife importance due to pollution in the Bay of Izmir and that their project will greatly improve Turkey's commercial capacity. There is also another dockyard project proposed by a private company in the northern part of the proposed Ramsar site. The Minister for the Environment of Turkey has asked for additional information from the Wetland Department of the Ministry so that he can make a final decision.

The Gediz Delta qualifies as a Ramsar site on the grounds of its rare breeding species and the large numbers of waterfowl that winter there. Breeding birds include Dalmatian Pelican *Pelecanus crispus*, Lesser Kestrel *Falco naumanni*, Stone Curlew *Burhinus oedicnemus*, Collared Pratincole *Glareola pratincola*, Spur-winged Plover *Hoplopterus spinosus*, Mediterranean Gull *Larus melanocephalus* and Little Tern *Sterna albifrons*. The delta also holds the largest of the two breeding populations of Caspian Tern *S. caspia* (103 pairs) and the third largest breeding population of Common Tern *S. hirundo* (2150 pairs) in the Mediterranean as well as the only known breeding site of Sandwich Tern

S. sandvicensis in Turkey. In winter, the delta is the only regular wintering site of Black Stork *Ciconia nigra* and Knot *Calidris canutus* in Turkey. The Gediz Delta is also very important as a feeding area for the Mediterranean Monk Seal *Monachus monachus*.

It has recently been established in European Law that it is illegal to draw the boundaries of a Special Protection Area so as to deliberately exclude areas proposed for development. The boundaries were drawn deliberately to exclude land already proposed for drainage. While Turkey is not a member of the European Union, it is a party to the Bern Convention on the Conservation of European Wildlife and Natural Habitats, so we hope that it will follow precedent and not exclude areas on the grounds that there is a proposal to use them for commercial development. Further development would destroy another part of Turkey's unique nature and wildlife heritage which is of international importance. Those wishing to support the protection of Gediz Delta can fax the President of Turkey and the Minister for the Environment of Turkey. They should congratulate them on their attempt to declare the area a Ramsar site, remind them of the site's importance for wildlife in Europe and underline that the proposed construction of harbour and dockyard complexes will completely destroy the nature of the Gediz Delta. Fax numbers: President of Turkey, Suleyman Demirel: + 90 312 427 13 30. Minister for the Environment of Turkey, Imren Aykut: + 90 312 286 26 51.

UNITED ARAB EMIRATES

Houbara Bustard to China and back The National Avian Research Center (NARC) has been attaching satellite transmitters (weighing 35 g) to Houbara Bustards *Chlamydotis undulata* to study their migration. Five wild Houbara were tagged in 1997. One of these, released in February, left UAE on 26 March and travelled 6600 km in 54 days stopping four times. It crossed Iran, Turkmenistan, Uzbekistan and Kazakhstan before settling for the summer in Xinjiang province, China. It experienced temperatures of up to 43.3°C in August and -8.5°C at night in September. In mid-September it started its return migration and arrived in Abu Dhabi 58 days later having followed a shorter route (5700 km). Its average speed was 30km/h with up to 1268 km covered between stopovers and 700 km flown in 24 hours. As a result of these findings there have been recent exchange visits with the Institute of Desert Biology and Pedology of the Chinese Academy of Science. An agreement has been reached on a three-year collaborative project by the Institute and the Environmental Research and Wildlife Development Agency (ERWDA) of which NARC is part. (Source: ERWDA, PO Box 45553, Abu Dhabi, UAE)

Houbara News is the Newsletter of the IUCN/SSC Houbara Specialist Group. Two issues have appeared and the third issue should appear in spring 1998. For further information contact: Dr Frederic Launay, Co-ordinator of Houbara Specialist Group, c/o National Avian Research Center, PO Box 10000, Sweihan, Abu Dhabi, UAE. Tel: 00 971 3 747555. Fax: 00 971 3 747607. E-mail: narc@emirates.net.ae. Website: www: http:\\www.narc.gov.ae

Arabian Wildlife A special Emirates edition was published in December 1997, to commemorate UAE's National Day. Commissioned by the UAE government, it includes reports on the conservation of Houbara Bustard *Chlamydotis undulata*, endangered Arabian mammals, Qarnein Island, Khor Kalba and eco-tourism in UAE. It is available, for £3, from Trident Press, 2–5 Old Bond Street, London W1X 3TB, U. K. (Source: Colin Richardson *in litt.* 1998)

Khor Kalba update Several sources have previously announced that an area encompassing the oldest stand of Black Mangrove *Avicennia marina* in UAE (and possibly Arabia) is to be officially protected. Khor Kalba, administered by the Government of Sharjah was first tabled for protection by the Ruler of Sharjah, H. H. Dr Sheikh Sultan al Qassemi following several representations made to him in 1992 and 1995. The site is important for its population of White-collared Kingfisher *Halcyon chloris*, the only breeding site of Booted Warbler *Hippolais caligata rama* in Arabia and its wealth of marine life and rare plants. Meetings were held in December 1997 between the nominated managers of the sanctuary, the Arabian Leopard Trust (ALT), and the local municipality regarding fencing off the area to prevent further damage by fishermen and 4WD vehicles. There are worries that without

on-site management a fence is likely to inhibit all visitors. Unfortunately the Ruler of Sharjah sees this reserve as an opportunity to develop the area for tourism and there are medium-term plans to create a 500 metre diameter boating lake adjacent to the mangroves and a series of boardwalks through the mangroves to enable tourists and school parties to view the birds. A management plan has not yet been agreed and could take at least two more years to implement, so there may yet be time to emphasise the concept of protection rather than development. Anyone wishing to comment on these proposals should write to The Ruler of Sharjah, H. H. Dr Sheikh Sultan bin Mohammed al Qassimi, P. O. Box 1, Sharjah, UAE. (Source: Colin Richardson *in litt.* 1998)

Hides at Khor Dubai Further steps are being taken to allow the general public access to one of the country's most important natural wetlands, Khor Dubai. Located almost within the heart of Dubai city, the 500 ha of mudflats has been difficult to approach due to the enthusiasm of police from the local Palace Guard who protect the flamingos from shooters. In November 1997, the Crown Prince of Dubai, after witnessing an increasing number of visiting birdwatchers trying to view the 12,000+ waterfowl which winter at the site, ordered the Department of Tourism to invite proposals for a birdwatching information centre and a number of hides. The Emirates Bird Records Committee are acting as consultants and it is hoped that work on the hides will commence this year. (Source: Colin Richardson *in litt.* 1998)

Dubai government produces birdwatching brochure A glossy brochure entitled *Dubai–the Birdwatchers Paradise* was published by the Dubai Department of Tourism and Commerce Marketing in summer 1997. It was commissioned in response to the growing interest from birdwatchers worldwide in visiting the UAE. Ten birdwatching companies from Europe currently organise tours to the UAE and 100s more birders visit independently. The text was written by Colin Richardson and Hanne and Jens Eriksen provided photos for the brochure, which can be obtained free from Government of Dubai, Department of Tourism & Commerce Marketing, 125 Pall Mall, London SW1Y 5EA, U. K. (Source: Colin Richardson *in litt.* 1998)

Emirates twitchers guide on the Internet It is now possible to keep up-to-date with rarity sightings in the UAE on the Internet. The Abu Dhabi-based daily *Emirates News*, which has been publishing a weekly feature entitled Twitchers' Guide since 1995, now has its own website. The guide, which summarises weekly sightings received by the Emirates Bird Records Committee (EBRC) is proving very popular with local and visiting birders who are now able to share their discoveries or take advantage of the information provided. However, the acceptance of all rarities are still subject to assessment by the EBRC and all visitors should not forget to submit their claims in writing. Twitchers Guide can be found on the Internet at uaeinteract.com.ae. For further information contact Colin Richardson, P. O. Box 50394, Dubai.

Oil spill off Umm al Quwain Four thousand tons of smuggled Iraqi fuel oil on its way to a UAE port leaked from a sunken barge following a collision with its tug c.20 km off Umm al Quwain on 7 January 1998. Most of the oil washed onto the white sand beaches or entered the mangrove-lined lagoons during a strong onshore wind, causing significant environmental damage. The authorities were very slow to react, although a number of desalination plants and fisheries research stations were immediately closed down. The complex of lagoons and islands at Umm al Quwain and its inshore islands are registered as an Important Bird Area (IBA) being home to several rare and locally endangered species, including the country's largest wintering flock of Crab Plover *Dromas ardeola* (300+ birds) and one of the only known wintering flocks in Arabia of Great Knot *Calidris tenuirostris*. One island holds 15,000 pairs of Socotra Cormorant, a species already persecuted by local fishermen. The dense mangroves on the smaller islands host breeding Western Reef Heron *Egretta gularis*, Striated Heron *Butorides striatus* and Clamorous Reed Warbler *Acrocephalus stentoreus* while over 10,000 shorebirds of 25 different species feed and roost on the mudflats from July–March. The area has not been fully surveyed for its wildlife, although it has been recommended for full protection as a wildlife sanctuary; recommendations thus far ignored by the Umm al Quwain government. (Source: Colin Richardson *in litt.* 1998)

REQUESTS for INFORMATION

Jordan Bird Report 1995–1997

A Jordan Bird Report for 1995–1997 is being compiled. If you have unpublished bird observations relating to this period, or significant records from prior to this, which have not been previously submitted to Ian Andrews or OSME, please forward these, as soon as possible, to: **Ian Andrews, 39 Clayknowes Drive, Musselburgh, Lothian EH21 6UW, e-mail: IJA@wpo.nerc.ac.uk.** All observations will be credited in the report. Reprints of published work discussing Jordan bird distribution and status are also welcomed and will be acknowledged. Sightings of birds in Jordan from Israel are also requested, including details of Lesser White-fronted Goose *Anser erythropus* (November 1993–February 1994), Yellow-billed Stork *Mycteria ibis* (17–18 April 1996), Demoiselle Crane *Anthropoides virgo* (20–21 March 1995), Black-headed Plover *Hoplopterus tectus* (11 April 1995) and Grey Hypocolius *Hypocolius ampelinus* (November 1989–February 1990). Photographs are also welcomed.

Imperial Eagle in Turkey

There are probably only 10–50 pairs of Imperial Eagle *Aquila heliaca* in Turkey. Dr Can Bilgin is currently researching the population size and habitat requirements of this globally threatened species in north-central Turkey. Records, not already published in Ornithological Society of Turkey Bird Reports (1966–75), *Sandgrouse* and other obvious sources, are requested. Information on date, locality, age and possible nest sites are all useful, and should be sent to: **Dr Can Bilgin, Department of Biology, Middle East Technical University, 06531 Ankara, Turkey. E-mail: cbilgin@rorqual.cc.metu.edu.tr.**

Fifth Pan-Mediterranean Seabird Symposium, Malta, 29 September–3 October 1998

This conference organised by MEDMARAVIS in conjunction with BirdLife Malta will discuss 'Monitoring and conservation of birds, mammals and sea-turtles of the Mediterranean and Black Seas'. Emphasis will be given to ecogeography as a conservation tool. Seabirds and species listed under the Barcelona Convention will receive most attention. Four half-day symposia are planned: distribution of little-known species; breeding distributions of seabirds and sea-turtles; at sea distribution of birds and mammals; and biological monitoring. Poster presentations are welcome and there will be a post-conference excursion. Joe Sultana and Pierre Yésou are co-directors of the event. Proposals for papers are welcome and should be sent to: **Pierre Yésou on fax. +33 2 40481401. E-mail: p.yesou@onc.gouv.fr.** To register contact: **BirdLife Malta, P. O. Box 498, Valletta CMR 01, Malta.**

Colour-ringed Mediterranean Gulls

As part of a Europe-wide programme, young Mediterranean Gulls *Larus melanocephalus* in Ukraine, Greece and Turkey are being fitted with black colour rings. The programme commenced in Ukraine in 1994 and in Greece and Turkey in 1997. Birds from the two latter countries are being fitted with rings engraved vertically with three characters: digit-letter-digit (e.g. 2A5). Readings should sent to: **Renaud Flamant, 23 rue de l'Orme, B-1040 Brussels, Belgium. Tel./fax. +32 2 7347355.**

Middle East guide auction

The Yemen Ornithological Society (YOS) are auctioning a unique copy of a *Field guide to the birds of the Middle East* by Porter *et al.* (1996), signed by the three authors with original bird portraits by the four artists on the facing page. Proceeds from the auction will be used to further conservation in Yemen. Bids exceeding US$500 are invited before 31 May 1998 and should be submitted to: **David Stanton, P. O. Box 2002, Sana'a, Republic of Yemen. Tel. +967 1 248309. Fax. +967 1 234438. E-mail: david.s@netqsi.com.**

Bald Ibis

We are currently undertaking a desk study of the Bald Ibis *Geronticus eremita* in an attempt to determine whether birds recorded in Ethiopia, Eritrea and southern Arabian peninsula originate from the Turkish colony at Birecik or undiscovered colonies further south. The assumption is that they are from Turkey but this has never been proven and recent records only confuse the situation. We would appreciate details of any unpublished observations, recent and historical, of this species away from known breeding sites in Turkey and Morocco. All contributions will be acknowledged. Contact: **Geoff & Hilary Welch, Minsmere Reserve, Westleton, Saxmundham, Suffolk IP17 3BY, U. K. Tel: + 44 1728 648298. Fax: +44 1728 648529. E-mail: welch@easynet.co.uk.**

Pale Rock Sparrow *Carpospiza brachydactyla*, a little-known Middle Eastern bird

GUY M. KIRWAN

Pale Rock Sparrow *Carpospiza brachydactyla* or Pale Rockfinch (Sibley & Monroe 1990, Beaman 1994) is a short-distance migrant whose main breeding range, Iran to westernmost Afghanistan, lies just outside the western Palearctic (as defined by *BWP*). Most West European birders, familiar with the species, will have gained their experience in east and south-east Turkey during the breeding season, or Israel on migration.

It is enigmatic in its taxonomic affinities, being retained within *Petronia* by some recent authors, e.g. Clement *et al.* (1993), Porter *et al.* (1996) but, at the other extreme, only tentatively retained as a passerid by Sibley (1996). Thus, it would appear to be an ideal candidate for some instructive and enlightening DNA research, in order to correctly establish its taxonomic affinities and ancestry. Currently, several aspects of its morphology suggest it to be an early offshoot from either the Passeridae, Emberizidae or Fringillidae. Nonetheless, at present, the resurrection by *BWP* of the monotypic genus *Carpospiza* for this wholly individual bird, appears entirely justifiable. In many morphological respects it is quite unlike a *Petronia* and in some characteristics it is closer to a *Fringilla* (Cramp & Perrins 1994, Snow & Perrins 1998). In the author's opinion, the newly coined Pale Rockfinch, appears to be the best-fit English name currently available, emphasising its unique atrributes and some Cardueline affinities, although, as noted by Beaman (1994), it is not always closely associated with rocky habitats, so this part of its name could also be revised.

DISTRIBUTION

Breeding

Pale Rock Sparrow breeds, semi-colonially, from south-east Turkey (westernmost observations near Demirkazik and in the Çukurova deltas, but latter certainly migrants, Kirwan & Martins 1994), south through Syria (where breeding remains unconfirmed but appears likely), Lebanon and Mount Hermon, northern Israel, where a small population breeds (Shirihai 1996), and east through north Iraq, Armenia (at 700–2300 m, the altitudinal limits during the breeding season) and Iran east to Afghani Baluchistan (Vielliard 1969, Evans 1994). Although recorded in Iran from late March and Turkey in the first half of April, it typically arrives in Armenia and Azerbaijan in the latter half of May and there are very few observations in Turkey before this time. Even at Mount Hermon, the southernmost regular breeding locality, the species typically arrives in the second half of May and departs in mid-July to mid-August.

In addition, there have been a number of confirmed breeding records from Arabia in recent years, where birds, apparently on spring passage, have been recorded singing and showing other evidence of nesting even as late as the end of June. Snow & Perrins (1998) report that it breeds in the Harrat Al Harrah reserve, northern Saudi Arabia in small numbers. Additionally, Walker (1981) discovered a later abandoned nest in Omani Dhofar in late February 1979, Jennings (1986, 1995) three nests with eggs and young between Al Ula and Khayba, north-west Saudi Arabia in mid-March 1986 and Elwonger (in Warr unpubl. ms.) observed copulation at Hadrah in spring 1987. Most recently, Nikolaus & Ash (1997) discovered a nest with four young on 27 April 1996 along the al-Hair river, Riyadh. In the United Arab Emirates, fledglings were being fed in August 1988 and 1993 (Aspinall 1996), and in Kuwait a juvenile was being fed by an adult in 1996 (*The Phoenix* 13: 3).

There are two confirmed breeding records from Jordan: an adult feeding two juveniles

Plate 1. Pale Rock Sparrow *Carpospiza brachydactyla*, near Goochan, Islamic Republic of Iran, 14 May 1977. (*R. F. Porter*)

Plate 2. Pale Rock Sparrow *Carpospiza brachydactyla*, near Goochan, Islamic Republic of Iran, 14 May 1977. (*R. F. Porter*)

at Wadi Dana on 18 May 1994 (Andrews 1995) and 11, including a pair displaying and another carrying nesting material, between Burqu' and Bga'aweah in mid-April 1995 (*OSME Bull.* 35: 71). The species may also have bred at Azraq in the 1960s (*BWP Concise*). In Egypt, Meinertzhagen collected one of a pair at El Arish on 2 June 1917 which showed evidence of breeding (Goodman & Meininger 1989). However, like all of Meinertzhagen's observations such evidence must, unfortunately, be treated with extreme caution (*Ibis* 139: 431). There is also a single anomalous July record in inland Eritrea (Cramp & Perrins 1994).

Wintering

Pale Rock Sparrow vacates the breeding areas between July–September, arriving in its Arabian winter quarters from October and north-east Africa from September, although rarely recorded in significant numbers there before December. It is unclear when Turkish birds leave the breeding areas: there is an extreme paucity of records beyond mid-July—when Israeli breeding birds commence departure—but few observers are active in south-east Turkey between August–March inclusive. Iranian breeders can remain as late as the third week of September.

The species winters in southern Iraq and western Saudi Arabia in varying numbers (from several thousand to just a few individuals), infrequently west to Israel and southern Sinai (Clement *et al.* 1993) and occasionally in central Arabia and Oman. There are single reports from Bahrain in November and January, and in the Eastern Province of Saudi Arabia at this season.

With the exception of the Meinertzhagen observation (above), there are few observations in Egypt, with Goodman & Meininger (1989) listing just two reports from October and one in April, and Clement *et al.* (1993) noting just six reports from this country. Nonetheless, it would be surprising if the species did not winter in parts of southern Egypt.

In Ethiopia, the species is regarded as a Palearctic migrant in arid lowlands (Urban & Brown 1971). Dowsett & Dowsett-Lemaire (1993) also list it as a migrant in Djibouti,

Eritrea (the coastal plain below 300 m is an important wintering area) and Sudan (where the coastal region and Blue and White Nile basins are important wintering areas) south to c.12°N (Clement *et al.* 1993). There is little information available on its wintering ecology, although it appears to favour cultivated areas in Eritrea, and there are apparently no records west of 30°50'E. Perhaps, like Cinereous Bunting *Emberiza cineracea* (whose wintering range is also imperfectly known), this species also winters in the Yemeni highlands, although there are only three confirmed records: in October, December and January (Morris 1992, Martins *et al.* 1996, Kirwan 1997), and two unconfirmed records from the country.

Migration and extralimital occurrence

Spring passage commences in mid-February and is prolonged, but with a noticeable peak in many areas (e.g. the Gulf coast of Arabia, Iraq, Israel and Syria) from mid-March to mid-April. In Arabia it is an uncommon to relatively common passage migrant, which is occasionally recorded in large numbers e.g.1,200 at Qarn Nazwa, UAE on 12 March 1996 (*Sandgrouse* 18 (2): 79) and over 400 near Sohar, Oman on 30–31 March 1995 (*Sandgrouse* 18 (1): 80), a situation mirrored in Israel, where the species can be common on passage in some years and almost absent in others. Return passage commences in late August, continuing until October when it reaches its wintering areas in south-west

Fig. 1. Map of the Isikli area, south-east Turkey. Reproduced from *A Birdwatchers' Guide to Turkey* with kind permission of Prion Ltd., Perry.

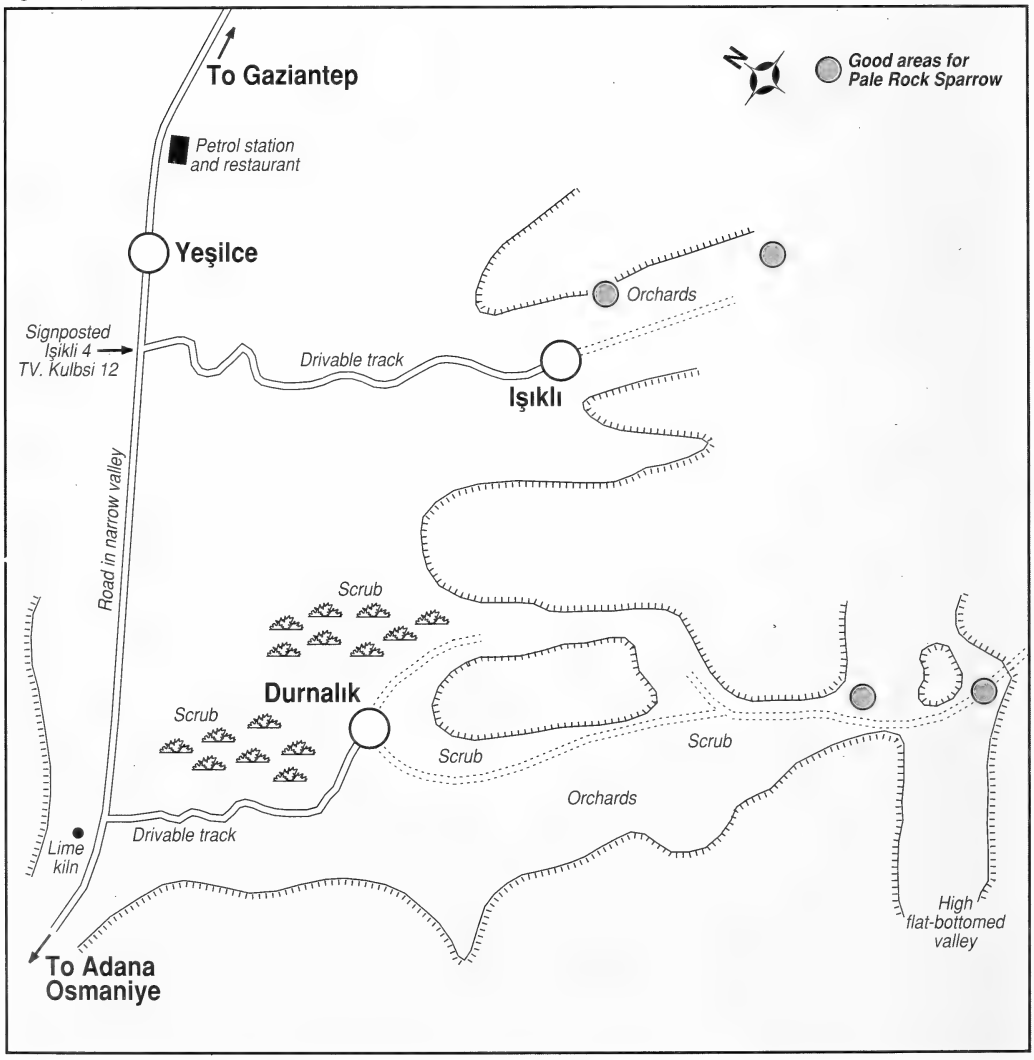


Plate 3. Pale Rock Sparrow *Carpospiza brachydactyla*. Dauka, Sultanate of Oman. September. (*Hanne & Jens Eriksen*)

Saudi Arabia. It is typically scarce in the Gulf states at this season, but can be numerous in central Saudi Arabia e.g. 100s were in the Riyadh area in August 1993.

Extralimital occurrences are few: there are three accepted and one recent report (*Birding World* 10: 135) of this species in Cyprus, all between 6 March–26 April and since 1984. Clement *et al.* (1993) note a record from Dagestan (the only report north of the Caucasus).

PLUMAGE AND IDENTIFICATION

No geographical variation is recognised: Roselaar (in *BWP* and 1995) notes that *C. p. psammochroa*, described by Reichenow from east Iranian Baluchistan and purportedly larger and paler, is merely an unusually bleached juvenile, which does not differ significantly from other such specimens from elsewhere within the species' range, and that no geographical variation in size and colour can be detected.

The identification of this rather attractive, if understated, species has been well-covered in a number of recent publications, particularly Clement *et al.* (1993) and Cramp & Perrins (1994), and is usually relatively straightforward.

FINDING PALE ROCK SPARROW

Although Pale Rock Sparrow breeds in small numbers on Mount Hermon, northern Israel, most birders' experience with this species is in south-east Turkey. However, even here, it is not necessarily easy to find the species, and many would-be observers come away empty-handed. As noted by Martins (1989), the species appears to be semi-nomadic or subject to irruptive movements in this region, and its appearances are difficult to predict.

Nonetheless, a handful of sites appear to be occupied in most years, of which perhaps the most reliable is in the vicinity of the small village of Işıklı, just west of Gaziantep. Here, the birds are most easily located on the rocky plateau summit, north-east of the village (see map). The lunar-like landscape also supports a number of other interesting species including: Cinereous Bunting *Emberiza cineracea*, Eastern Rock *Sitta tephronota* and Rock Nuthatches *S. neumayer*, Red-tailed Wheatear *Oenanthe xanthoprymna*, Desert Finch *Rhodospia obseleta* and, on at least three occasions, Trumpeter Finch *Bucanetes githagineus*.

ACKNOWLEDGMENTS

I am grateful to Effie Warr for access to her comprehensive ms. detailing published and unpublished records from Arabia, to Steve Madge and Rod Martins for assistance with some literature, and Jens Eriksen, Richard Porter and Dave Robinson for the excellent photographs which accompany this contribution.

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Birding in the Bekaa Valley, Lebanon

CHRIS AND ALISON WALLEY

For a generation, Lebanon has been effectively off-limits to birdwatchers due to recurrent political upheaval. Now, tourists are welcome and the opportunity exists to discover the country's ornithology. Much has changed: wetlands have been drained for agriculture; war has defaced some areas and a continuing military presence still makes others hazardous, but much remains to visit, particularly the Aammiq wetlands in the Bekaa Valley, the attractions of which are outlined here.

OVERVIEW

The Bekaa is an upland valley (c. 900–1000 metres) between the Mount Lebanon range and the Anti-Lebanon (see map). Its main towns are Zahle and Baalbek in the north, site of one of the most magnificent Roman temples in the Middle East. The northern Bekaa is very dry, almost semi-desert, whereas the southern part (south of the Beirut–Damascus road) is wetter and more undulating. Cereal, fruit and vegetable farming is extensive; grapes are an important crop and all Lebanon's wine producers are based in the Bekaa. Ammiq is the last remaining significant wetland in Lebanon, a remnant of much more extensive marshes and lakes that once existed. It is a designated Important Bird Area (IBA) and lies seven km south-south-west of Qabb Elias, south of the Damascus road. The most significant area of reed and open pools covers 280 ha, from the road to the Litani river. At present (late 1997) the marsh dries out by mid-July, with the exception of a few deep pools and ditches, and does not become wet again until late November or December. Most rain falls between mid-December and late March, remaining as snow on the higher mountains. It can, and does snow in the Bekaa itself.

Plate 1. Ammiq wetland, Bekaa Valley, Lebanon, March 1997. (*Chris & Alison Walley*)

Lying on one of the most important bird migration routes in the Middle East, it continues to be an important area despite being much reduced by drainage for agriculture. Rough grazing and cultivated land with drainage ditches support different vegetation and provide varied habitats. Key species of the marsh and grazing areas include some regionally threatened and declining species: Bittern *Botaurus stellaris*, Ferruginous Duck *Aythya nyroca*, Honey Buzzard *Pernis apivorus*, Lesser Spotted Eagle *Aquila pomarina* and Great Snipe *Gallinago media*, the latter a regular passage migrant. The total bird species list is probably greater than 200 but the area is very underwatched.

BIRDING THE AREA

By the road from Qabb Elias (A on map), there is a small pumping station and a line of willows, from where there is a good view across the most open stretch of water. A variety of commoner dabbling ducks can be seen in January–March; Little Grebe *Tachybaptus ruficollis* and Little Bittern *Ixobrychus minutus* breed, and Bittern *Botaurus stellaris* along with several other species of heron and egret are common in spring. Autumn raptor passage, which follows this side of the valley, includes Red-footed Falcon *Falco vespertinus*, Black Kite *Milvus migrans* and Hen Harrier *Circus cyaneus*.

To reach more central viewing points, take the main road south until the next left turn, beyond a large orchard. Eastern Bonelli's Warbler *Phylloscopus (bonelli) orientalis* and Black Redstart *Phoenicurus ochruros* have been seen here. The road approaches a red-roofed stables. A small poplar wood near the paddock by the stables is worth a look. Look for Spanish Sparrow *Passer hispaniolensis* in this area in spring. Turn left by the stables: the fields and ditches along this road can be full of migrants in spring including Bluethroat *Luscinia svecica*, which is regular in March.

At the third junction (B on map), turn left along the rough track towards a small white building and line of trees. The farmland here can hold Citrine Wagtail *Motacilla citreola*, Tawny Pipit *Anthus campestris* and Red-throated Pipits *A. cervinus*; Isabelline Wheatear *Oenanthe isabellina*, Calandra Lark *Melanocorypha calandra* and Woodchat Shrike *Lanius senator* in spring and summer. Graceful Prinia *Prinia gracilis* is resident in the drainage ditches and Fan-tailed Cisticola *Cisticola juncidis* occurs in spring.

Crossing a ditch by the reeds leads to a mound, on the other side of which is a deep pond (C on map). Follow its right-hand side to an old (shooting) hide, which provides a good vantage point for viewing the marsh. Birds seen or heard here include Little Crake

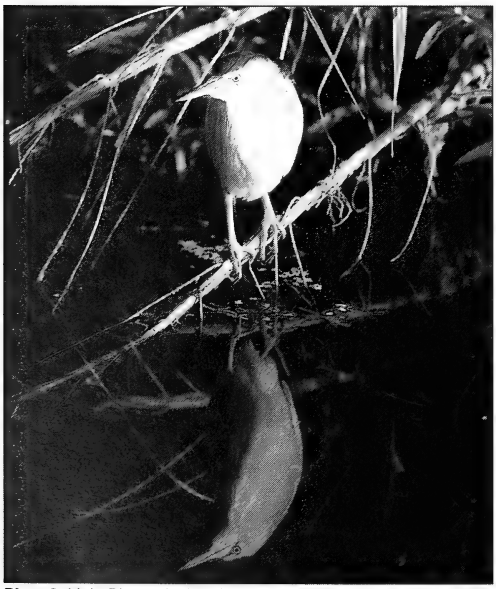


Plate 2. Little Bittern *Ixobrychus minutus*, male, Lesbos, Greece. (*David Kjaer*)

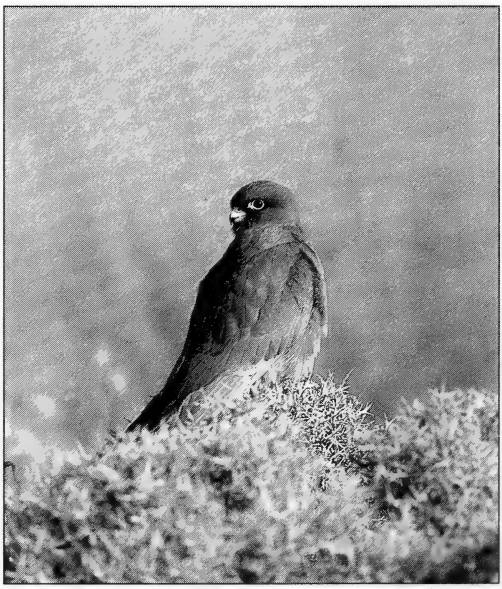


Plate 3. Red-footed Falcon *Falco vespertinus*, male, Lesbos, Greece. (*David Kjaer*)

Porzana porzana, Great *Gallinago media* and Jack Snipes *Lymnocryptes minimus* and a variety of other waders. Moustached *Acrocephalus melanopogon* and Great Reed Warblers *A. arundinaceus* probably breed. Huge flocks of swifts and hirundines pass over in spring and autumn, including Crag Martin *Ptyonoprogne rupestris*, Red-rumped Swallow *Hirundo daurica*, Alpine *Apus melba* and Pallid Swifts *A. pallidus*. It is also an excellent place for raptors and storks in spring. Over 19,000 White Stork *Ciconia ciconia* were recorded in two weeks in March–April 1997, as well as 500 Black Stork *C. nigra*. Raptors include Honey Buzzard *Pernis apivorous*, Egyptian *Neophron percnopterus* and Griffon Vultures *Gyps fulvus*, Short-toed Eagle *Circaetus gallicus*, Long-legged Buzzard *Buteo rufinus*, Lesser Spotted *Aquila pomarina*, Steppe *A. nipalensis*, Imperial *A. heliaca*, Golden *A. chrysaetos* and Booted Eagles *Hieraaetus pennatus*. In spring, raptors tend to travel along the edge of the Barouk range just below the snowline.

The line of trees between the reeds and the track from the stables is good for flycatchers, shrikes and redstarts. A Semi-collared Flycatcher *Fidecula semitorquata* here in spring 1997 was the first Lebanese record.

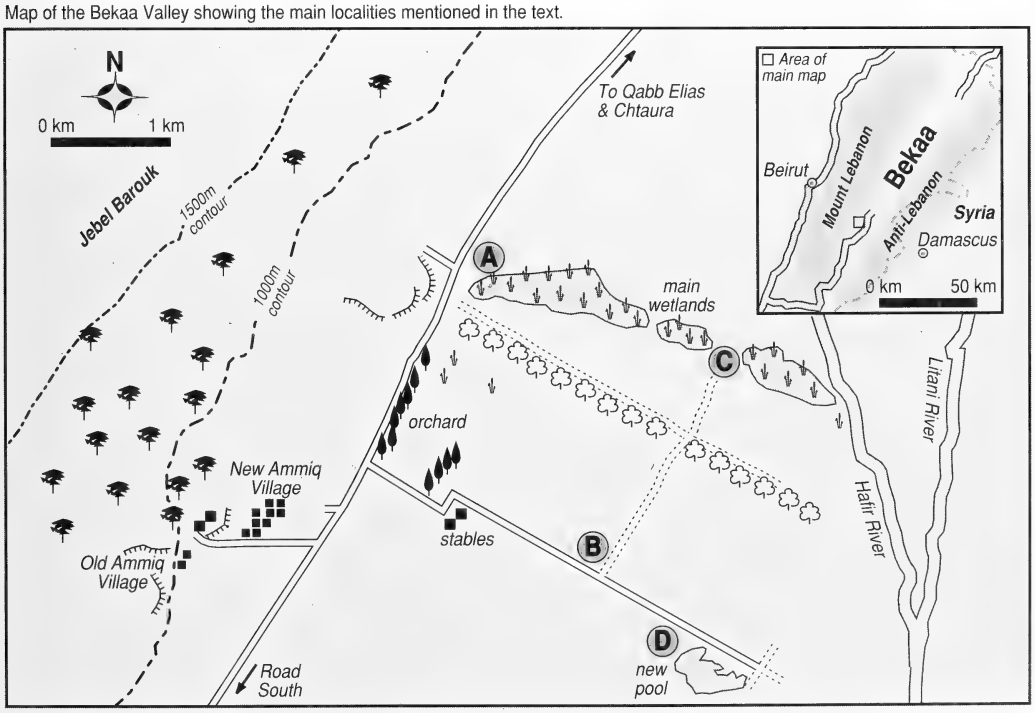
Returning to the road leading from the stables, turn left for a year-round pond (D on map). Little Grebe is resident here and Green Sandpiper *Tringa ochropus*, amongst other waders, may be seen.

To reach the woods behind Aammiq village, take the second turning right to the village from the main road south. Pass the houses and continue to the old village, destroyed by an earthquake in 1958. Park by the rocky track on the right after the first house. Follow this to three red-roofed houses and a wooded area. The old pine woods beyond the houses harbour Syrian Woodpecker *Dendrocopus syriacus* among other species. This is technically a private area but no problems for birdwatchers have been reported. Behind the old village is a gorge, best viewed by taking the track up from the red-roofed houses and walking across the open hillside. Rock Nuthatch *Sitta neumayer* is resident and Blue Rock Thrush *Monticola solitarius* and Eagle Owl *Bubo bubo* have also been seen.

LOGISTICS

In order to reach the Bekaa, do not hire a car. Lebanese driving is a law unto itself and, although signposts are increasing, it is still hard to find your way without knowing where you are going. Either take a service

Map of the Bekaa Valley showing the main localities mentioned in the text.



(shared) taxi (c. £2) from Beirut to Chtura, or an ordinary taxi (c. £10), then another taxi (£2) to the marsh. Hiring a car with a driver (c. $100 a day) will of course allow greater flexibility. Finding a hotel in the Bekaa is problematic. The nearest are in Chtura, but are expensive. Better is Zahle, although further away. There are no hotels in Qabb Elias, the nearest town to Aammiq. US dollars are widely accepted and it is possible to change money in most places. Traveller's cheques are not generally accepted because of the forgery risk and attract a premium for cashing them. Visa is now accepted in many places.

TIMING

Spring and autumn are the seasons in which to visit. Spring migration commences in early March and is largely complete by mid-May. Returning birds appear from mid-August, with very late movements occasionally evident in December. Species' routes appear to differ in spring and autumn: storks are only abundant in spring and pelicans only pass in autumn.

PROBLEMS

Hunting is officially banned in Lebanon but enforcement is another matter. Hunters can use ex-military weapons and are best avoided. Some places should not be approached e.g. army encampments. The Bekaa has many such, mostly Syrian. Watching at Ammiq is fine but it helps to carry a field guide to prove your interest. Do not bird the highest point of the road over the mountains from Beirut as there are a number of military positions here. Other unsafe areas include that south of Lake Qaroun, which is an Israeli-controlled zone. Landmines are rumoured but none have been proven in the Ammiq area. Unexploded ordnance is present but rare; suspicious metallic objects should be avoided.

CLIMATE AND CLOTHING

During winter and spring (until May) cold winds sweep off the snow-covered mountains into the valley. Torrential rain or snow may occur from late November until late April. Warm, windproof clothes are essential for the spring. Summer is hot and dry. Mosquitoes can be a problem between late spring and late autumn.

Plate 4. Rock Nuthatch *Sitta neumayer*. (*Gordon Langsbury*)

CONSERVATION

Moves to conserve Ammiq are underway through the Ministry of the Environment, United Nations Development Programme and the landowning family. Despite great environmental problems, largely caused by uncontrolled building expansion since 1991, some areas of Lebanon remain untouched. Numerous small environmental groups are struggling to preserve what remains and to increase consciousness of environmental issues. The Christian conservation group, A. Rocha, is working to establish Lebanon's first field study centre, in connection with Aammiq. The trust's U. K. office can provide details of Ammiq and assist visitors in contacting local conservationists. Their home page is http://www.arocha.org and includes news about Ammiq. Otherwise contact: A Rocha Trust, 3 Hooper Street, Cambridge CB1 2NZ, U. K. Tel./fax: 01387 710286. E-mail: a_rocha@compuserve.com.

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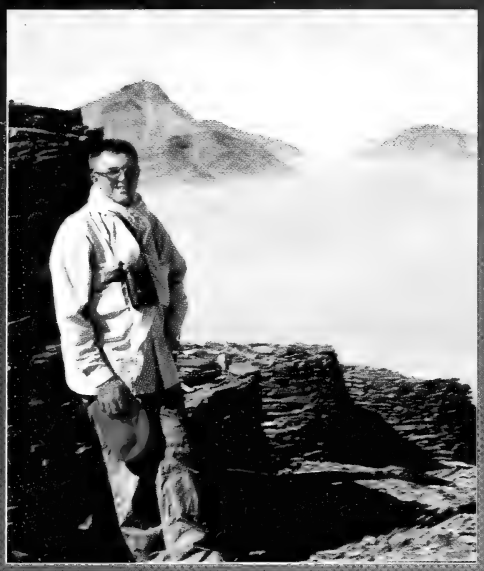
PROFILE



Mike Jennings

Mike Jennings will forever be associated with his brainchild, the Atlas of Breeding Birds of Arabia (ABBA), one of the most significant ornithological projects to be undertaken in the region.

Mike claims to be one of the last generation of birds-nesting country boys of the 1950s. His interest in the birds of the Middle East started in 1969, when he was posted to Bahrain by the U. K. Ministry of Defence. For two years he was a member of probably the first bird group in the region, which transformed knowledge of Bahrain's birds. While there, he met Effie and John Warr, and a lifelong friendship developed which has had a great impact on bird recording in the Middle East. He also visited Qatar, Saudi Arabia and Oman. In 1971, he returned to the U.K. via Iran and Turkey, where his experiences made such an impression that he made five further visits and held the post of Treasurer during the transition from the Ornithological Society of Turkey to OSME. He was posted to Riyadh, in 1975, for 2.5 years. Mike now started to mist-net birds at the local sewage lagoons, and slowly his interest changed from migrants to an increasing concern for breeding species and their distribution. During this period he added several 'firsts' to the Saudi list and demonstrated that other species were widespread and common in the area.

In 1977 he again returned to the U. K. and only visited the Middle East once (Masirah), between then and 1984. However he was active in Egypt and, after joining a Suez raptor survey in 1982, he led two expeditions to the islands at the mouth of the Gulf of Suez, which produced the most thorough knowledge of breeding species and numbers there to date.

In 1981, Mike produced *Birds of the Arabian Gulf* and *The birds of Saudi Arabia: a check-list*. With the idea for an Arabian Atlas firmly lodged, in 1984, from small and primitive beginnings, the project was started and has been his raison d'être ever since. As it has expanded and more people have become involved, Mike's personal priority has been to visit poorly recorded corners of Arabia to ensure as few coverage gaps as possible. To date he has undertaken 23 field surveys in 780 of the 1130 ABBA squares, and must qualify as the most widely travelled ornithologist in Arabia! He regards the Yemen offshore islands as the only major gap to be filled, and the publication of the Interim Atlas in 1995 demonstrated how comprehensive and professional the project has become. The definitive edition of the Atlas will be for Mike the fulfillment of a dream and the proud achievement of a formidable project, and will provide the basis of all future ornithology in Arabia.

Derek Harvey

PHOTO spot

Arabian and Radde's Accentors

This is a brief look at two little-studied accentors restricted to the OSME region: Radde's Accentor *Prunella ocularis*, which is patchily distributed in montane regions of Turkey, the Caucasus and Iran, and Arabian (more appropriately Yemen) Accentor *P. fagani*, the single Arabian endemic occurring only in the Yemen highlands of south-west Arabia.

Birding activity in both Turkey and Yemen has greatly increased over the last 20 years and Radde's Accentor is now known to be extensively distributed through much of eastern Turkey being regularly seen at several sites. In contrast, more than a few pairs of Arabian Accentors are seldom encountered (often at only a single locality) by birders on the 'Yemen circuit'. Here, the species is known from perhaps no more than five localities in a landscape where remaining suitable habitat is heavily degraded and restricted to tiny fragments. It clearly merits wider recognition and attention as a threatened species.

Both species, together with Brown Accentor *P. fulvescens* which breeds in the Himalaya and Tibetan plateau, form a group characterised by blackish or very dark brown lores, upper-cheeks, ear-coverts and crown; white supercilium, a very thin white crescent below the eye and a whitish rear ear-covert spot (in very fresh plumage); pale chin and throat; yellowish buff underparts and brown/black streaked upperparts. All breed (often in spiny xerophytic) montane scrub in seasonally dry subalpine environments within central and southern Asia. In view of such similarities, the suggestion that it is Black-throated Accentor *P. atrogularis* which is most closely related to Radde's, which seems to have acquired a life of its own in the literature, seems very strange. On morphological and zoogeographical criteria, Radde's and Arabian Accentors appear to constitute a previously unrecognised species-pair.

Plumage characters generally shared by Arabian and Radde's Accentors include a dark brown or blackish malar streak , yellowish buff breast and flanks, streaked sides of breast and flanks with central areas of the lower breast, belly, vent and undertail-coverts substantially paler.

A small number of published descriptions list features considered useful for distinguishing between the two species such as a tendency for Arabian Accentor to show 'warmer' upperparts, a substantially more distinct malar streak and slightly paler, more heavily streaked, underparts than Radde's while (adult) Radde's is thought always to lack streaking across the central breast. It is interesting to note that most of these features require judgement of matters of degree and that it has not been established that they are consistently shown by all individuals. At least some, probably most, adult male Radde's may (as in some illustrations) lack a malar streak entirely and, given the very small number of Arabian Accentors typically observed, it would seem desirable to examine more individuals in the field to establish that no such variation exists within this species also. Another apparently more consistent feature, the more strongly black crown and ear-coverts of Radde's (see plate 2), in contrast with the more brownish black coloration which has been suggested to be more typical of Arabian Accentor,might appear to be more consistently useful. However, the coloration of these feather tracts differs slightly between sexes in both species, females appearing less strongly contrasting and blackish. Additionally, while

Rodney P. Martins

six males (collected, before the breeding season, between late December and mid-February) in the BMNH all show extensive brown and black streaking on the crown, this can, as illustrated in plate 3, appear almost black in some individuals, especially in breeding plumage.

In short, intra- and inter-plumage variation is so little-known that it seems questionable whether published criteria are sufficient to enable observers to consistently discriminate between the two species, especially if faced with an unexpected individual in an unfamiliar situation. Surely, the location of the vast majority of observer encounters with these species has been a substantial aid to identification! A vagrant in (say) lowland Jordan, between the respective ranges of both birds, might well pose a taxing identification puzzle. To underscore this, it is perhaps worth noting that no information is available on distinguishing between juveniles and no differences in structural morphology have been suggested or documented.

Quite naturally, some readers will by now have begun to suspect that these forms simply represent two poorly differentiated disjunct populations of the same species—a position (nothing more) taken by some authors in the past. However, their songs differ. Therefore, despite the extremely limited extent of information on all aspects of the biology and ecology of both, at least one of the criteria demanded for 'diagnosibility' under the now much-discussed phylogenetic species concept is satisfied.

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Plate 1. View of Demirkazik, southern Turkey, habitat of Radde's Accentor *Prunella ocularis*. (*Leo J. R. Boon/Cursorius*)

The inclusion of colour in this Photospot has been subsidised by **Julian Francis**

Plate 2. Radde's Accentor *Prunella ocularis*, male, Turkey, June 1990. (*Richard C. Hart*)

Plate 3. Arabian Accentor *Prunella fagani*, male. Sumarah Pass, Republic of Yemen, December 1996. (*Dr Scott Kennedy*)

Plate 4. Arabian Accentor *Prunella fagani*, male. Sumarah Pass, Republic of Yemen, January 1997. (*Richard F. Porter*)

Plate 5. Arabian Accentor *Prunella fagani*, possibly first-winter, Sumarah Pass, Republic of Yemen, April 1996. (*Richard F. Porter*)

Sandgrouse 20 (1): 22–29 1998

The breeding birds of the Sharra Highland Plateau, Jordan

FARES KHOURY

The Sharra Highland Plateau is ornithologically one of the least explored areas in Jordan. A total of 44 resident and breeding species has been recorded above 1200 metres. Characteristic species include Calandra *Melanocorypha calandra*, Short-toed *Calandrella brachydactyla* and Crested Larks *Galerida cristata*, Tawny *Anthus campestris* and Long-billed Pipits *A. similis*, Isabelline *Oenanthe isabellina* and Black-eared Wheatears *O. hispanica*, Spectacled Warbler *Sylvia conspicillata*, Woodchat Shrike *Lanius senator* and Linnet *Carduelis cannabina*. In 1996, Short-toed Lark and Tawny Pipit were proved to breed for the first time in the area and Jordan. Some species, e.g. Lesser Kestrel *Falco naumanni* and Syrian Serin *Serinus syriacus*, are highly dependant on the habitat for feeding, although they breed outside the area. Threats to the area include agricultural intensification, quarrying and overgrazing.

INTRODUCTION

THE SHARRA MOUNTAINS, in south-west Jordan, are one of the least developed areas of the country. Nevertheless, agricultural activities and other forms of land use have shaped its landscape for thousands of years. Although the mountains contain a variety of habitats, of which some have recently been surveyed (RSCN 1995), only the plateau with its semi-cultivated steppes is considered here. In view of the rapid increase in human population and developments in the area, the site requires more adequate monitoring. This is the first analysis of the Sharra Highland Plateau avifauna, although brief visits were previously made by Hollom (1959), Mountfort (1965), Wallace (1984) and Andrews (1995). Parts of the study area are being considered by the Royal Society for the Conservation of Nature (RSCN) in a plan to create a buffer zone surrounding the Dana Wildlife Reserve, west of the Plateau (RSCN 1996).

GENERAL DESCRIPTION OF THE STUDY AREA

An area c. 100 km^2 (27 km x 4 km) between Ar Rashadiyya and Ash Shawbak, and representative of the Sharra Highland Plateau—a narrow area extending from At Tafila south to Ras en Naqab and east of the Rift Margins and west of the arid, interior desert plateau—was studied. It consists of flat or hill country at 1200–1636 metres above sea-level. The area is largely rocky, except where it has been cleared for cereal cutivation, with limestone or basalt substrates. Soils vary from deep Terra Rosa to yellow, steppe soils. Precipitation, falling mainly from November–April, varies with altitude and location, and ranges from 200–400 mm p.a. (Baierle 1993). Snow covers the highest areas for an average of at least eight winter days.

The vegetation is of steppic character with both Irano-Turanian and Mediterranean elements present (Baierle 1993). Three different communities of dwarf shrub are represented: (a) Mediterranean Batha steppe with *Ononis*, *Teucrium* and others is locally found where precipitation exceeds 250 mm p.a., (b) Thorn cushion communities with *Noaea*, *Cerasus* and *Astragalus* dominate in areas above 1500 metres where rainfall exceeds 300 mm p.a. and snow cover can be more prolonged, while (c) *Artemisia* steppe is mainly found in the southern half of the study area where rainfall is less and run-off greater. *Artemisia* steppe also dominates grazed areas. These dwarf shrub communities possibly represent the advanced stages of succession of long

Plate 1. Sharra Highland Plateau near Al Qadisiyya (1400 metres), Jordan. (*F. Khoury*)

abandoned fields, while scattered, remnant *Pistacia, Amygdalus* and *Crataegus* trees suggest the former occurrence of open steppe woodland (Baierle 1993). Extensive cereal cultivation is still practised, the fields being left unplanted in alternate years. Fallow fields develop a distinct plant community including *Achillea, Chenopodium, Picnomon, Cousinia* and *Lactuca* (Baierle 1993).

Ar Rashadiyya, Gharandal, Al Qadisiyya and Nijil are the largest of the few towns and villages in the study area, the population of which are sheep- and goat-herders, and cultivate the surrounding land. Nomadic Bedouins usually remain from March–October. Sheep, goat and camel grazing is generally intensive, and signs of overgrazing were locally evident during the observation period. Traditional cultivation of wheat and barley is still extensive, while more intensive orchard farming is increasing around the villages. The limestone quarries which supply Ar Rashadiyya cement factory have locally caused wholesale habitat destruction, and the factory itself is causing environmental problems by discarding polluted water into a nearby wadi. In the past, tree-cutting, hunting and other activities have damaged wildlife, such that only remnant trees remain, and certain species e.g. sandgrouse *Pterocles* spp., Chukar *Alectoris chukar* and Hare *Lepus capensis* have disappeared or decreased.

METHODS

The area was visited on at least three days per week from November 1995–October 1996. Only resident and breeding species are included in this paper, winter visitors and migrants are omitted. For several species an estimate of the number of breeding pairs in the entire study area (100 km^2) is given. These numbers result from a combination of direct counts, estimates and calculations based on line transects and spot counts (see Bibby *et al.* 1993).

RESULTS

A total of 44 species was recorded during the 1996 breeding season. These are presumed to breed either in the study area, or its surroundings. Thirteen species certainly bred (marked B in the following list), 16 probably breed (b) and seven possibly breed (b?) in the study area itself. Birds only using the Plateau for feeding are marked (F).

In addition, six species not recorded during the 1996 breeding season, can be considered potential breeding species, as they breed in similar Middle Eastern habitats, including Black-bellied *Pterocles alchata* and Pin-tailed Sandgrouse *P. orientalis*, Red-rumped Wheatear *Oenanthe moesta* and Pale Rock Sparrow *Petronia brachydactyla*. The highest areas are potential breeding habitat for Northern Wheatear *Oenanthe oenanthe* and Rock Bunting *Emberiza cia*.

SYSTEMATIC LIST

Griffon Vulture *Gyps fulvus* **F**
Resident in groups up to three. Breeds on high cliffs outside the study area (RSCN 1995).

Short-toed Eagle *Circaetus gallicus* **F**
Uncommon migrant and summer visitor, breeding west of the study area (RSCN 1995), but occasionally reaching the edge of the Plateau in search of food.

Long-legged Buzzard *Buteo rufinus* **b**
A few are resident. Breeding possible on the small cliffs of Jabal al Ata'ta (1636 m), where an adult was regular in summer.

Bonelli's Eagle *Hieraaetus fasciatus* **F**
A pair occasionally hunting over the Plateau, especially at Al Qadisiyya, and one was at Ash Shawbak on 10 August. Breeds in the rift margins and cliffs west of the study area (RSCN 1995).

Lesser Kestrel *Falco naumanni* **F**
Summer visitor, breeding on cliffs west of the Plateau, e.g. at Dana village, Wadi Hamra, Busayra and Ash Shawbak, where at least 42 pairs were recently estimated to breed (RSCN 1997). Feeds mainly in Plateau fields adjacent to breeding sites, and the area is of significant importance for this threatened species.

Kestrel *Falco tinnunculus* **b**
Present throughout, probably breeding locally where suitable nest sites occur. Juveniles recorded in summer.

Chukar *Alectoris chukar* **B**
Local resident breeder. A few regularly observed at Ar Rashadiyya, max. 17 on 10 October.

[Sandgrouse sp. *Pterocles* sp. **b?**
Local people report that, in the 1960s, sandgrouse bred to the east of Al Qadisiyya and eggs were collected in their thousands. Species likely to breed in such habitat are Pin-tailed Sandgrouse *P. alchata* and Black-bellied Sandgrouse *P. orientalis*. During the study period, no sandgrouse were recorded.]

Rock Dove *Columba livia* **F (b?)**
Very common resident. Breeding and roosting areas are mainly west of the study area, but huge numbers feed on the Plateau and arid areas to the east.

Turtle Dove *Streptopelia turtur* **F**
Summer visitor, breeding in woods west of the Plateau. Between June–September, large numbers feed in cereal and fallow fields on the Plateau.

Laughing Dove *Streptopelia senegalensis* **B**
A local resident in villages.

Eagle Owl *Bubo bubo* **b**
Rare resident. Singles on several occasions, seen flying over the road at night at Al Qadisiyya. Local villagers report it to be resident in hills east of Al Qadisiyya and it also breeds just west of the study area (RSCN 1995).

Little Owl *Athene noctua* **b**
A dark plumaged bird at Al Qadisiyya on 10 October, and a pale individual north of Ash Shawbak on 20 December. Although Andrews (1995) did not include this area in the species' breeding range, it probably does so in view of the suitable habitat of marginal cultivation, boulders and scattered trees present in the study area.

Alpine Swift *Apus melba* **b**
Uncommon migrant and summer visitor, from February–November. In April–May, pairs at cliffs near Busayra, and flocks up to 30 over Al Qadisiyya in June–July.

European Bee-eater *Merops apiaster* **b?**
Common migrant and scarce summer visitor. Frequent on west edge of the Plateau near Al Qadisiyya. It breeds west of the study area, e.g. around Barra (pers. obs.).

Hoopoe *Upupa epops* **b**
Apparently a summer visitor with at least five pairs present in the study area. Although breeding was not proven, it is believed to breed in small numbers. Andrews (1995) did not include this area in the species' breeding range.

Desert Lark *Ammomanes deserti* **b**
Recorded in the breeding season at Ash Shawbak and Ar Rashadiyya, where a few pairs may breed. Usually at lower altitudes.

Calandra Lark *Melanocorypha calandra* **b**
Probably local and rare breeder. Recorded from early April–late May, when up to ten singing males and pairs were recorded east and south of Al Qadisiyya, often with Short-toed Larks. Not previously known to breed this far south (Andrews 1995).

Short-toed Lark *Calandrella brachydactyla* **B**
Common summer visitor, from early April–late October. Singing in April–May over cereal fields throughout the study area, with the highest density around Al Qadisiyya. By late June, groups of up to 50 including juveniles on fields around Ar Rashadiyya and Al Qadisiyya. Over 1000 pairs estimated to breed in 1996. Although breeding was suspected in the 1960s (Wallace 1984), this is apparently the first breeding record in southern Jordan (Andrews 1995) and is probably the southern limit of its Middle Eastern breeding range (Porter *et al.* 1996).

Crested Lark *Galerida cristata* **B**
Common resident. A nest on 3 April on the edge of a field south of Al Qadisiyya. Andrews (1995) noted the species as scarce in the Sharra Highlands, but in 1996 the study area's breeding population was estimated at 2000 pairs.

African Rock Martin *Ptyonoprogne fuligula* **b?**
Common resident undertaking seasonal movements. Present between April–October. Although local breeding cannot be ruled out, its main breeding sites are west of the study area.

Tawny Pipit *Anthus campestris* **B**
At least five pairs bred in 1996: four singing males around Al Qadisiyya, a pair in cereal west of Ar Rashadiyya from late March into April and a pair with one young feeding in fallow fields south of Al Qadisiyya on 15 June. Although breeding was previously suspected (Hollom 1959), this is the first breeding record in Jordan (see Andrews 1995).

Long-billed Pipit *Anthus similis* **B**
Singing males and pairs from March–October usually on uncultivated rocky slopes, often with Spectacled Warbler. Appears much more common on the western slopes below the Plateau; the breeding population of the Plateau itself may not exceed 20 pairs. Usually resident in breeding areas, but not recorded in the study area in winter, suggesting movement to lower areas.

Recorded on rocky slopes with scattered shrubs, whilst Tawny Pipit occurred in flatter, more open habitat, often in fallow fields or on the edges of cereal fields. The two species breed in the same area near Jerusalem (Gancz 1996).

Yellow-vented Bulbul *Pycnonotus xanthopygos* **b**
Not recorded breeding in villages and orchards of the study area, though present in some during the breeding season.

Isabelline Wheatear *Oenanthe isabellina* **B**
Principally a summer visitor, from late February–early October, preferring flat, open areas with some bare ground and often in fallow fields surrounded by rocky boulders. Numbers swollen by migrants, especially in spring, and one overwintered at Wadi as Sidd. An occupied nest hole was discovered in Wadi Ras al Khawr, and four pairs feeding fledged juveniles were at Ash Shawbak and Ar Rashadiyya between mid-April–early May. The study area is of significant national importance for this species, as it lies at the core of its limited breeding range in Jordan (Andrews 1995). The breeding population is c. 500 pairs.

Black-eared Wheatear *Oenanthe hispanica* **B**
Common migrant and summer visitor, principally to field edges with scattered trees and shrubs, and avoiding open *Artemisia* steppe. Juveniles noted in June. Up to 600 pairs were estimated to breed in 1996. This is a newly mapped part of its range in Jordan (see Andrews 1995).

Mourning Wheatear *Oenanthe lugens* **B**
Local summer visitor or resident with up to ten pairs at Al Fajij and Ash Shawbak, usually below 1300 metres, along small wadis and around ruins. In winter, birds apparently descend to lower areas.

Blue Rock Thrush *Monticola solitarius* **b**
Local and rare resident with up to five pairs at Ar Rashadiyya, Al Qadisiyya and on the western edge of the Plateau, mainly on slopes of basalt. More common on the western slopes below the Plateau.

Scrub Warbler *Scotocerca inquieta* **b?**
Usually at lower altitudes, but occasionally recorded just below 1300 metres on the west edge of the Plateau, where it may breed.

Spectacled Warbler *Sylvia conspicillata* **B**
Mainly a summer visitor throughout the study area from February–October. In winter, most descend to lower areas. Two pairs were nest-building in low scrub at Ash Shawbak, mid-April–early May, while a pair and fledged juvenile were at Ar Rashadiyya in early June. Principally occurs in low scrub with scattered bushes and trees. Up to 500 pairs were estimated to breed in 1996.

Sardinian Warbler *Sylvia melanocephala* **b**
A pair throughout the breeding season in an abandoned farm south Ar Rashadiyya cement factory. The farm's area was c. 10 ha. and, unlike the surrounding grazed areas, it contained a rich ground and shrub layer with high grass (*Hordeum, Phalaris*) and scattered trees (*Amygdalus, Olea*).

Great Tit *Parus major* **b**
A few regularly seen in high *Crataegus* shrubs near a pine plantation north-west of Ar Rashadiyya and in *Collutea* thickets north of Al Qadisiyya. More common in woodland just west of the study area.

Woodchat Shrike *Lanius senator* **B**
Recorded throughout the area in pairs, later some with juveniles. It preferred areas with scattered trees and high shrubs. In 1996, up to 300 pairs were estimated to breed. A new area, not mapped by Andrews (1995).

Raven *Corvus corax* **b? (F)**
A resident, regularly recorded in singles or pairs throughout the study area. Up to eight from September–October near Ar Rashadiyya. These records are of significant national importance, as they represent the first certain sightings in the country since the 1960s (Andrews 1995).

They were larger and had more massive bills than Brown-necked Ravens *Corvus ruficollis*, with which they are potentially confused. Additionally, the calls and upside-down display flight were typical of the species.

Fan-tailed Raven *Corvus rhipidurus* **F**
Common resident west of the study area (RSCN 1995). Groups of up to 60, together with Ravens, occasionally visited a dump west of Ar Rashadiyya.

Tristram's Grackle *Onychognathus tristramii* **F**
Common resident west of the study area. Flocks of up to 20 occasionally visited the villages and orchards of the Plateau.

House Sparrow *Passer domesticus* **B**
Common, but local, resident in villages and farms throughout the area.

Spanish Sparrow *Passer hispaniolensis* **B**
Rare and probably irregular summer visitor. Three, including a pair with a nest in a *Pistacia* tree on the edge of a field, is the first breeding record in southern Jordan (Andrews 1995).

Rock Sparrow *Petronia petronia* **b**
Fairly common, but local resident. Breeding not proven, but singing males and pairs in suitable habitat. At least 100 pairs estimated to breed on the western, rocky edge of the Plateau and around Ash Shawbak and Ar Rashadiyya.

Syrian Serin *Serinus syriacus* **F**
Resident, but not breeding in the study area. It breeds in open woodlands just west of the Plateau (600–650 pairs estimated in 1996, pers. obs.). Flocks of up to 60 in the study area, especially from summer–early winter, usually frequented fallow fields and steppe areas with scattered trees, as well as orchards and waste ground in and around villages. Smaller numbers in winter, as most descend to lower areas.

Goldfinch *Carduelis carduelis* **b? (F)**
Common resident, principally breeding in woodland west of the study area, although local breeding in orchards in the study area probably occurs. In summer and autumn, groups of up to 50 at suitable feeding localities. In winter, numbers are probably augmented by migrants.

Linnet *Carduelis cannabina* **b**
Relatively common resident, in pairs or small groups up to 10. Breeding almost certainly occurs in the study area, and has been proven in open woodland just west of the Plateau. At least 200 pairs estimated in the study area. In winter, numbers are augmented by migrants.

Desert Finch *Rhodospiza obsoleta* **b?**
Occasionally seen or heard in summer and autumn around Al Qadisiyya, and six feeding at a farm near Ar Rashadiyya on 20 October. Although breeding cannot be ruled out, there is no further evidence from the study area. These were probably migrants and/or occasional visitors from nearby breeding populations, e.g. it occurs along the Desert Highway, c.30 km south-east of the study area, during the breeding season (pers. obs.).

Cretzschmar's Bunting *Emberiza caesia* **b**
Local and rare summer visitor at Ar Rashadiyya and Al Qadisiyya, where two singing males on slopes with scattered shrubs. It is, however, a common breeding species on the western slopes just below the Plateau.

Corn Bunting *Emberiza calandra* **b**
A territorial male near Ar Rashadiyya from April–June is the first published evidence of breeding in the Sharra Highlands (Andrews 1995), although the breeding population may not exceed a few pairs. Common in winter.

DISCUSSION

The habitat studied differs from other steppe-like habitats in the region due to its origin, geographic location, altitude (above 1200 metres) and climate. Although the study area's primary vegetation is believed to have been steppe woodland, the present dwarf shrub communities are largely secondary, and followed clearance for agriculture (Baierle 1993). Grazing and other factors disturb natural succession and probably lead to the dominance of certain shrub species. Nevertheless, secondary-derived steppes possess distinctive bird communities which have developed alongside the expansion of man's farming activities (Goriup 1988).

The Plateau possesses a distinctive bird community consisting of species found only or largely in steppic and cultivated habitats and including Short-toed, Crested and Calandra Larks, Tawny Pipit and Isabelline Wheatear—the area being of national importance especially for the latter two species. Moving west to east, along an altitudinal gradient from the Rift Margins onto the Plateau, the bird community changes very rapidly; the Plateau with its distinctive bird community thus contributes to the diversity of the Highlands as a whole. The cereal fields, often left fallow and surrounded by scrub, scattered trees and boulders support a relatively diverse avifauna, especially if small areas are left ungrazed. These have a more diverse and heterogenic vegetation and attract species such as Sardinian Warbler.

Many species, which breed or roost outside the study area, are also dependant on the steppe habitat for food, e.g. Lesser Kestrel and Syrian Serin. The destruction of these sites could dramatically decrease local populations of these endangered and vulnerable species.

Traditional landuse, which produced the present steppe, is being slowly superseded by intensive farming methods, especially monocultural apple orchards, causing habitat loss. Semi-arid steppic habitat represented in this study is vulnerable to further degradation and desertification; signs of overgrazing are evident in many areas. Goriup (1988) considered overgrazing to be a major problem for Middle Eastern steppes. The establishment of a buffer zone around the adjacent Dana Reserve (RSCN 1996), where grazing is to be controlled, remnant trees protected and traditional rather than intensive farming encouraged, is the first step towards conservation, the goal of which should be the improvement of the socio-economic situation of local people and conservation of habitats and natural resources.

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The effects of disturbance on migrant waders at Eilat, Israel

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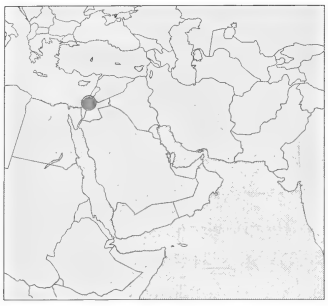

Eilat is central to the migration of many Eurasian birds. Four wader species were observed on salt ponds, in order to better understand effects of disturbance on staging behaviour. A time-budget regime of continuous three-minute sampling periods was utilised and comparison made between undisturbed, non-reacting disturbed, and reacting disturbed waders. Humans caused a reaction in 64% of sampling periods, vehicles 42%, jets 3%, and natural predators 96%. A decrease in time spent at rest and increase in feeding and flight times was noted in reacting Redshank *Tringa totanus*, Little Stint *Calidris minuta*, Black-winged Stilt *Himantopus himantopus* and Ringed Plover *Charadrius hiaticula*, suggesting that waders must increase their energy intake to compensate for energy lost in flight and not conserved during resting, or that feeding usually occurs at sites susceptible to disturbance. The percentage of time spent vigilant decreased in Redshank, Little Stint and Black-winged Stilt, indicating that vigilance is often abandoned in favour of flight in disturbed waders. Natural barriers, islands and limited access are recommended to reduce the effects of human disturbance on migrant waders.

INTRODUCTION

LOCATED AT THE JUNCTION of three continents, Israel functions as a land bridge for birds migrating south from Eurasia to Africa in autumn and north to their breeding grounds in spring (Safriel 1968). Eilat, in the Syrio–African Rift Valley and at the northern fringe of the 2000-km Saharo–Arabian desert belt, is an ideal staging area for migratory birds (Shirihai & Christie 1992, Yosef 1995). Waders concentrate on the complex of highly saline salt ponds north-east of Eilat. The only abundant fauna are brine shrimp *Artemia* spp., the major wader food source. In the xeric surroundings of Eilat, no other suitable feeding habitat is available to migrant waders, with the exception of the Red Sea shoreline.

The salt ponds are accessible to the public, allowing birdwatchers, tourists, and workers from the salt factory close approach to the waders. In addition, the salt ponds are situated very close to Eilat airport, where low-flying aircraft are common. The authors analysed the effect of human-induced (vehicles, people and aircraft) and natural (feral cats and dogs, raptors) disturbances on the staging behaviour of migratory waders. It was expected that vehicles with tourist groups would cause the greatest disturbance, and we hypothesised that disturbances would cause waders to decrease their feeding time and increase vigilance.

METHODS

Four species which migrate through the region in large numbers (Shirihai 1982) were studied: Redshank *Tringa totanus*, Little Stint *Calidris minuta*, Black-winged Stilt *Himantopus himantopus* and Ringed Plover *Charadrius hiaticula*.

Time-budgets of the staging waders' behaviour were obtained using three-minute sampling periods of continuous observation. Waders not observed continuously for the full three minutes, either because they flew or walked out of sight, were not included in the behavioural analysis but were recorded as reacting when flying from a disturbance. The waders' location along the ponds or on islands was also noted.

Six behavioural categories were used: feeding, preening, vigilance, flight, interacting

and resting. Birds sitting or sleeping were considered at rest. Birds not engaged in any of these behaviours were considered vigilant, hereafter referred to as vigilance. All potential disturbances that occurred during the sampling period and their effect on the waders' behaviour were recorded. A bird was considered as reacting when a disturbance caused a sudden change in behaviour, e.g. preening or feeding to vigilance or flight.

Data were separated into: control (C)—waders not exposed to a disturbance during the three-minute sampling period; reacting (R)—waders demonstrating behavioural change after exposure to disturbance; and non-reacting (NR)—waders exposed to disturbance but not exhibiting a noticeable behavioural change. The Student's t-test and analysis of variance was used in statistical analyses. Statistical significance was inferred if $p < 0.05$.

RESULTS

Disturbance occurred during 848 (51.9%) of the 1633 three-minute sampling periods (i.e. 83.1 observation hours); 66.2% of these disturbances caused a reaction. The presence of people caused most disturbance among all wader species (63.7%, n=248). Waders reacted 42.3% (n=52) of the time to vehicles and 3.2% (n=2) of the time to aircraft. In contrast to human-induced disturbances, natural disturbances almost always caused a reaction (95.2%, n=260).

Most waders were noted resting in less accessible areas of the salt ponds. If possible, they retreated to islands within a pond when high human-induced disturbance occurred. Waders already occupying islands tended to react less than those on the salt pond banks.

Redshank were 30% more likely to react to disturbances than not; people caused most reaction, in comparison with other human-induced disturbances. Moreover, a high percentage of these R birds flew out of sight and were not observed for the full three-minute sampling period. R, compared to C, birds spent a significantly higher percentage of time feeding (80.9% vs 63.0%) and in flight (8.3% vs 0.6%), and a lower percentage resting (0.2% vs 19.8%) and on vigilance (8.7% vs 13.5%) (Fig. 1).

Little Stint was seven times as likely to react to disturbance than not. Again, among the human-induced disturbances, people caused greatest disturbance. However, fewer birds flew out of sight during the sampling period. As with Redshank, R birds spent a significantly higher percentage of time feeding (69.4% vs 63.9%) and in flight (21.7% vs 1.9%), and a lower percentage at rest (0.0% vs 19.6%) and on vigilance (6.0% vs 11.9%) than C birds (Fig. 2).

Reacting Black-winged Stilt spent a higher percentage of time feeding (77.7% vs 62.4%) and in flight (5.7% vs 1.0%), and a lower percentage at rest (0.0% vs 9.4%) and on vigilance (13.7% vs 24.6%) than C birds (Fig. 3). As with Little Stint, R birds did not rest.

Ringed Plover followed the pattern observed in the other three species of increased feeding and flight time and decreased resting time in R and C birds (57.4% vs 38.9%, 3.8% vs 1.0%, 0.0% vs 17.3%, respectively). This species shows a similar behaviour pattern to Little Stint and Black-winged Stilt, with R birds spending no time at rest. However, little difference in the percentage of time devoted to vigilance between R and C birds (36.1% vs 33.1%, Fig. 4) exists. Although the percentages are not statis-

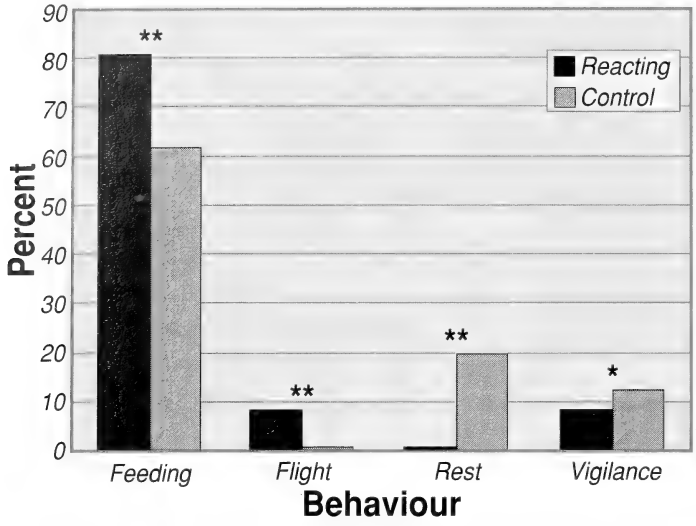

Fig. 1. Behavioural reactions of Redshank *Tringa totanus* to disturbances. *Asterisk denote statistical significance.*

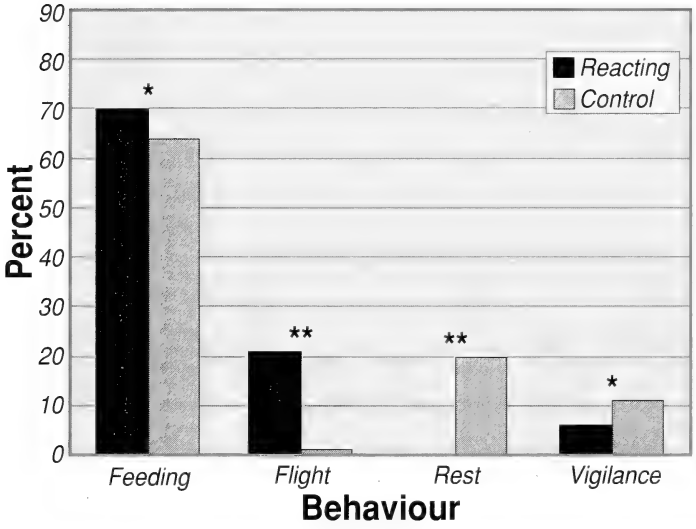

Fig. 2. Behavioural reactions of Little Stint *Calidris minuta* to disturbances. *Asterisk denote statistical significance.*

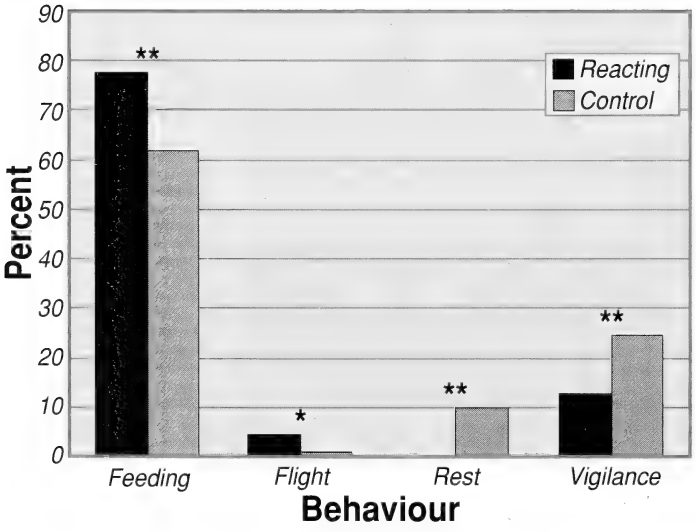

Fig. 3. Behavioural reactions of Black-winged Stilt *Himantopus himantopus* to disturbances. *Asterisk denote statistical significance.*

tically significant, they conform to the trend in behaviour set by the other three species.

NON-REACTING WADERS

In all species studied, the amount of time spent feeding was higher for NR birds than R or C birds, although such percentages were not always significant. The amount of time NR birds spent in flight was similar to C birds. Resting times of NR birds were similar to R birds. No pattern was found for the time spent on vigilance (Fig. 5).

DISCUSSION

Based on the disturbance categories described by Hockin *et al.* (1992), Eilat's salt ponds can be termed an 'active high level infrequent' area, i.e. most birds are displaced for short periods before returning to feed and rest. However, increased human use of the site, and consequently increased human disturbances could result in decreasing use of the site by birds, echoing the findings of Tuite *et al.* (1984), who reported on the short-term disturbances of recreational activities and their effects.

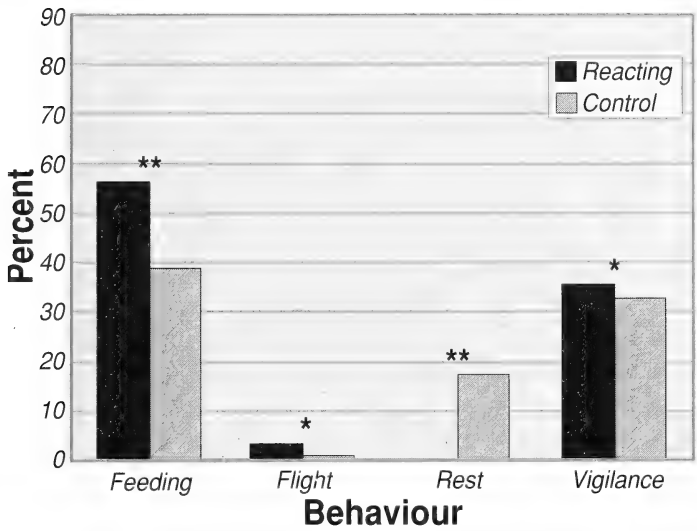

Fig. 4. Behavioural reactions of Ringed Plover *Chardrius hiaticula* to disturbances. *Asterisk denote statistical significance.*

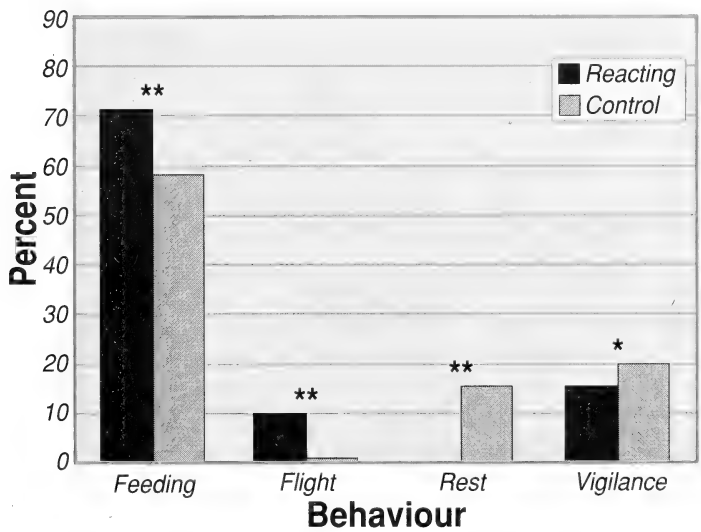

Fig. 5. The overall behavioural reactions of disturbed waders at Eilat. *Asterisk denote statistical significance.*

Waders in this study reacted to natural disturbances much more consistently than human-induced ones. However, fewer natural disturbances (n=271) than human (n=577) were encountered. Migratory waders apparently do not recognize aircraft as a threat, as this human-induced disturbance did not effect their feeding or resting behaviour, concurring with the findings of Burger (1981). There was, however, a moderate reaction to vehicles and a high level of reaction to people. Waders at Eilat are relatively acclimatised to a certain degree of vehicular disturbance, similar to that documented for Great Crested Grebes *Podiceps cristatus* in Switzerland (Keller 1989).

In the four species, a clear behavioural pattern emerges between R and C birds (Figs. 2–5). Contrary to our hypothesis, R waders devoted more time to feeding and less time to vigilance than did C waders. They also demonstrated an increase in flight and a decrease in resting. The assumption that a disturbance would directly lower the feeding time of waders, by forcing them to spend more time on vigilance and escaping disturbance, was therefore incorrect. The observed behavioural pattern can be explained in two ways. Because R birds spent more time in flight and less at rest, energy could not be stored as might be expected in staging birds. To counter this energy expenditure, these birds needed to feed longer than C birds. An additional explanation for the higher level of feeding in these birds is that feeding occurs at sites most susceptible to disturbance. In addition, our observations demonstrate that feeding did not occur in less accessible areas of the salt ponds. Our results corroborate those of Burger (1993) who studied Piping Plover *Charadrius melodious* and Sanderling *Calidris alba*. The feeding behaviour of these two species was also altered, but in a radically different way. These birds were forced to feed almost continuously at night as diurnal feeding was impossible due to disturbance.

The pattern of vigilance of R birds deviates from the expected pattern, as vigilance time decreased in Redshank, Little Stint, and Black-winged Stilt (Figs. 2–5). In addition, there is a strong negative correlation between time spent on vigilance and in flight in R Redshank and Little Stint. This negative correlation indicates that two opposing behavioural strategies are employed against perceived risks. Vigilance, which can be interspersed with feeding, is utilised until the predation risk exceeds the total energy cost of flight and the site's inherent advantages (i.e. good feeding). The lower vigilance times demonstrate that vigilance becomes a less profitable strategy for disturbed birds at the salt ponds. Migratory birds, which spend little time at any staging site and do not become habituated to common disturbances, would logically reflect this pattern. Wintering birds have the opportunity to become acclimatised to disturbance and can therefore rely on vigilance as a primary protective strategy.

Ringed Plovers did not fall into this pattern. This species intersperses feeding with considerable vigilance, often making it difficult to distinguish the two. Rather than feeding for an extended period before switching to vigilance, it examined its surroundings after every 1–2 pecks. As a result, it tended not to fly away in response to disturbance so much as the other three species.

Ringed Plover *Charadrius hiaticula* by D Powell

Using flight and rest as indicators, it may be possible to classify NR waders as those birds least affected by disturbance. These birds were not sufficiently disturbed to induce flight (as in R birds), but they are not so oblivious to potential risks that they rested. If one considers the increased feeding, it is also likely that these birds did not feel sufficiently threatened to fly away. Therefore, it is impossible to be sure whether NR birds were affected by disturbance.

Owing to the rapid development and increasing levels of pollution at coastal staging areas, the Eilat salt pans are an important stopover for migratory waders. The conservation implications for long distance migrants, which are especially dependent upon staging and stopover areas for successful migration (Myers 1983), can be critical. Given the proximity of the salt ponds to Eilat, access by people is frequent. Due to the degree of reaction caused by people, efforts should be made to limit public access. As this is not always possible, a compromise should be reached which allows public access to the site yet does not disturb the birds; this has been successfully realised in many nature reserve designs (Hockin *et al.* 1992).

In order to mitigate human and vehicle disturbance to migrant waders, barriers such as low trees, high banks and hides can be used to physically separate observers from birds, whilst still allowing observers to watch birds (Hockin *et al.* 1992). Natural barriers have the advantage of not being user-dependent, guarding against all people entering the area, not just birdwatchers who do not seek to cause disturbance, and can be selected to provide a food source for other migrants. Furthermore, the distance between humans and waders appears to be a factor in the latter's reaction level. Providing 'islands' in the centre of the salt ponds or erecting minimum distance markers, informing visitors not to pass beyond a certain point, would provide a needed safety distance, particularly for resting birds, while still allowing observation.

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Video monitoring observations of a Houbara Bustard *Chlamydotis undulata* nest in Mahazat as-Sayd Reserve, central Saudi Arabia

RICHARD F. MALONEY

Quantitative observations of female Houbara Bustard *Chlamydotis undulata* behaviour at the nest are rarely recorded. Details of a female's movement and behaviour during seven days of video-taping at a nest in central Saudi Arabia are presented.

INTRODUCTION

HOUBARA BUSTARD *Chlamydotis undulata* is a desert steppe species found throughout west Asia, the Middle East and north Africa. In Saudi Arabia it is uncommon, breeding only in the extreme north, and migrants wintering throughout the country (Seddon *et al.* 1995). Little is known of their breeding in the wild, although their breeding biology in captivity is well-studied (Saint Jalme & van Heezik 1996). The National Wildlife Research Center has been releasing captive-reared Houbara Bustards into the 2200 km^2 Mahazat as-Sayd reserve (22° 10′ N, 41° 50′ E; 220 km north-east of Taif) since 1993. An established group of c. 30 resident free-ranging wild

Plate 1. Female Houbara Bustard *Chlamydotis undulata*, sitting on nest with transmitter visible, Mahazat as-Sayd reserve, central Saudi Arabia. (*Richard F. Maloney*)

birds have been fitted with solar-powered radio-transmitters to record movements. Two nests were found in April 1995 (Gelinaud *et al.* 1997), and four nests in 1996. Observational data from a nest using remote video monitoring are presented.

METHODS

The nest was found after locating the signal of a three-year old female in the same location on several occasions. It was tracked by a vehicle mounted with a five-metre high four element yagi antenna, and was found on 10 April 1996 sitting on a nest containing one egg. Video monitoring equipment was placed at the nest-site on 14 April and the nest monitored during ten days, until 5 May. All behaviours of the nesting bird were clearly visible on the tapes. The following variables were recorded: mean time on and off the nest per day; proportion of time spent on and off the nest during each hour of the day; the female's direction of approach and departure relative to the nest; behaviours on and near the nest; nest fate; and weather conditions (temperature, wind, humidity, rain).

RESULTS AND DISCUSSION

A total of 63 hrs 31 mins of tape was recorded during 10 days. Only days 1–7 are included in further discussion as the female deserted the nest on the seventh night and the egg was found to be infertile (the nest was due to hatch before 2 May, and analysis of radio-tracking locations revealed she had probably been incubating since 1 April). The desertion was apparently unrelated to the camera's presence.

MEAN TIME ON AND OFF THE NEST PER DAY

On three days, mean incubation and time off the nest intervals were determined (Table 1). During the day, the female stayed on the nest for long periods, with only a few short intervals away from the nest. The longest period on the nest was 7 hrs 16 mins 39 secs, whereas the shortest was 3 min 39 sec, both on day 3. In comparison, the longest time the female was absent from the nest during the day was 61 min 7 sec on day 5, whereas the shortest absence was 11 min 50 sec.

Table 1. Mean period of time (mins) spent on and off the nest by a single female Houbara Bustard *Chlamydotis undulata*. Data are only included where two or more complete one hour time periods were observed.

		mean	std. deviation	N
Day 2:	On nest	100.9	97.6	4
Day 2:	Off nest	26.7	17.4	4
Day 3:	On nest	78.8	141.8	6
Day 3:	Off nest	24.0	12.5	6
Day 5:	On nest	230.4	291.7	2
Day 5:	Off nest	36.2	23.2	3

PROPORTION OF TIME SPENT ON AND OFF THE NEST PER HOUR

The female spent most of the day on the nest, especially in mid-morning to mid-afternoon, spending increasing time off the nest in late afternoon and early evening, possibly on short foraging expeditions. Schulz *et al.* (1991) also found that a captive female spent much of the hottest part of the day on the nest, although behaviour was possibly modified by the regular morning and evening feeding times. Launay *et al.* (1997) recorded similar activity patterns for a female observed during 3.5 days in Uzbekistan, although the maximum time the female stayed on the nest was only 4 hrs 7 mins between 09.53 and 14.00 on the first day.

DIRECTION OF APPROACH AND WHEN LEAVING THE NEST

The female was seen to leave the nest on 15 occasions and approach it 19 times. Invariably, the female's movements to or from the nest were fast and direct when two metres away (this being the limit of angle of vision of the camera). Most movements to and from the nest were to the east, regardless of time of day, perhaps because of the closeness of the nearest cover in this direction.

BEHAVIOUR ON AND NEAR THE NEST

The female exhibited few behaviours on the nest or in its vicinity. Egg-turning and shuffling were the only behaviours recorded where the female stood up during an incubation stint. A general pattern of behaviour was as follows:

The female rapidly approaches the nest at a run or fast walk, stops directly above the egg, lowers onto egg and shuffles. During this phase the bird may turn around 1–5 times and may also turn the egg with her bill by rolling it back and forth. The shuffle and egg-turning phase lasts c. 29.3 ± 16.4 sec (N = 60). The female then sits quietly, initially with her neck extended and looking around, but after a few minutes retracting her head to adopt a posture with neck and head close to body. She continues to look around at regular intervals while sitting, occasionally turning the egg, shuffling and facing a new direction, with these movements occurring once every 69.8 ± 181.8 mins (i.e. 0.86 ± 0.33 turns per hr).

This compares closely with a mean time between turns recorded from captivity of 73.2 ± 120 mins (0.82 ± 0.5 turns per hr) (Schulz *et al.* 1991). Usually, c. two minutes before leaving the nest, she raised her head, looking in all directions, then rapidly left the nest in a low crouch. The bird did not preen or leave the nest briefly, neither did she stand and shade the egg at any time during the day.

FEMALE BEHAVIOUR RELATED TO WEATHER CONDITIONS

The female modified her behaviour in response to rainfall, and remained on the nest in the hottest part of the day (10.00–15.00). Mornings were fine and calm with increasing cloud by midday, and on two days there were brief rain showers. Rain on 26 April was especially heavy, completely inundating the area for 16 mins, and taking 36 mins to drain. During this time the female remained on the nest, facing into the wind with her head lowered. Maximum temperatures during April and May ranged from 33–37°C. In April there were daily afternoon thunderstorms, but May was mainly hot and fine with lower humidity.

CONCLUSIONS

These data support previous suggestions that only the female incubates the egg; no other Houbara were recorded at the nest site. Few behaviours were recorded from the female in the vicinity of the nest. Nest approaches were fast and direct, and the bird would usually turn the egg and shuffle (an apparent comfort movement) before resuming incubation. Apart from spells away from the nest the female remained vigilant, frequently turning its head, with hourly egg-turning and position changes. The female spent long uninterrupted periods during daylight on the nest, over four hours was common, without feeding. Presumably, incubating females forage more at dawn, dusk and night, and this was partially confirmed on the two occasions when recordings lasted until sunset; the female frequently left and returned to the nest at dusk. Continuous monitoring over the full 24 hr period on several nests, using remote infra-red video cameras is required to gain a more meaningful insight into behaviour and time budgets of nesting Houbara, and to determine rates of predation and predator identity.

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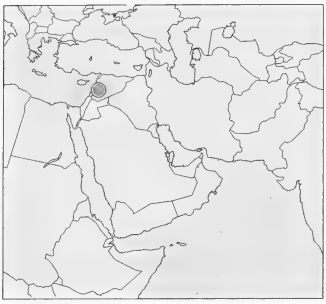
Selected records from Cheikh Zennad, a coastal wetland in north-west Lebanon

THIERRY BARA



New information on the birds of north-west Lebanon is presented. All observations were at Cheikh Zennad (34°36'N, 35°59'E). The area was visited 28 times, at regular intervals, between 8 April 1996–14 June 1997. Eight new species in Lebanon were recorded: Pacific Golden Plover *Pluvialis fulva*, Curlew Sandpiper *Calidris ferruginea*, Curlew *Numenius arquata*, Bar-tailed Godwit *Limosa lapponica*, Terek Sandpiper *Xenus cinereus*, Gull-billed Tern *Gelochelidon nilotica*, Black-bellied Sandgrouse *Pterocles orientalis* and Citrine Wagtail *Motacilla citreola*. Seventeen other species recorded were of interest and details of their records are presented here.

INTRODUCTION

PUBLISHED DATA ON THE birds of Lebanon are very limited, although Kumerloeve's (1962) synthesis has been updated by several major contributors including Benson (1970), Tohmé & Neuschwander (1974 and 1978), Macfarlane (1978), Khairallah (1991), Evans (1994) and Scott (1995). Lebanon's former extensive wetlands, both coastal and in the Beka'a valley, have nearly all been drained for agricultural reasons. At present, the only remaining wetlands are either remnants of the ancient swamps or man-made reservoirs.

Table 1. Lebanese wetlands mentioned in the recent ornithological literature

	Latitude	Longitude	Altitude	Type	Area
Palm Islands	34°30'N	35°46'E	0 m	Islands off Tripoli	30 ha
Khaldé Pool	33°49'N	35°30'E	0 m	Small pond near Beirut airport	
Qaraoun Resr.	33°35'N	35°44'E	800 m	Man-made Dam	1000 ha
Ammiq Swamp	33°44'N	35°47'E	865 m	Temporary swamp	280 ha
Tanayel Lake	33°47'N	35°52'E	870 m	Small private reservoir	6 ha
Aanjar Swamp	33°45'N	35°56'E	880 m	Temporary swamp	25 ha
Yammouné Lake	34°07'N	36°01'E	1400 m	Small mountain lake	unknown

The subject of this note, a wetland at Cheikh Zennad, has apparently never been mentioned in the literature. This area is situated in extreme north-west Lebanon, on the Mediterranean coast, close to Cheikh Zennad village (34°36'N, 35°59'E). It consists of man-made ponds, which produce salt by seawater evaporation. There are other salt works on the Lebanese coast, especially south of Tripoli, but their ponds are of concrete and uninteresting for birds. At Cheikh Zennad, next to the small, concrete salt-gathering basins, there are large, muddy ponds in which salinity is progressively increased. Water depth varies from 0–30 cm, but the ponds are seldom totally dry (as was the case on 30 November 1996). The mud contains significant food resources for birds. North of the mudflats, the river Nahr el Ostouane runs into the Mediterranean Sea while the surrounding land is cultivated.

Adjacent areas of nearby Syria are poorly explored for birds, but the wetland and Important Bird Area (IBA) of Buhayrat al-Laha (Evans 1994 and Scott 1995) lies close to the border. Exchanges between both wetlands could happen and partly explain the

fluctuating numbers of waterbirds outside migration periods. Nevertheless, a short visit to this Syrian site on 27 April 1997 revealed that it was almost entirely drained, and few birds were present.

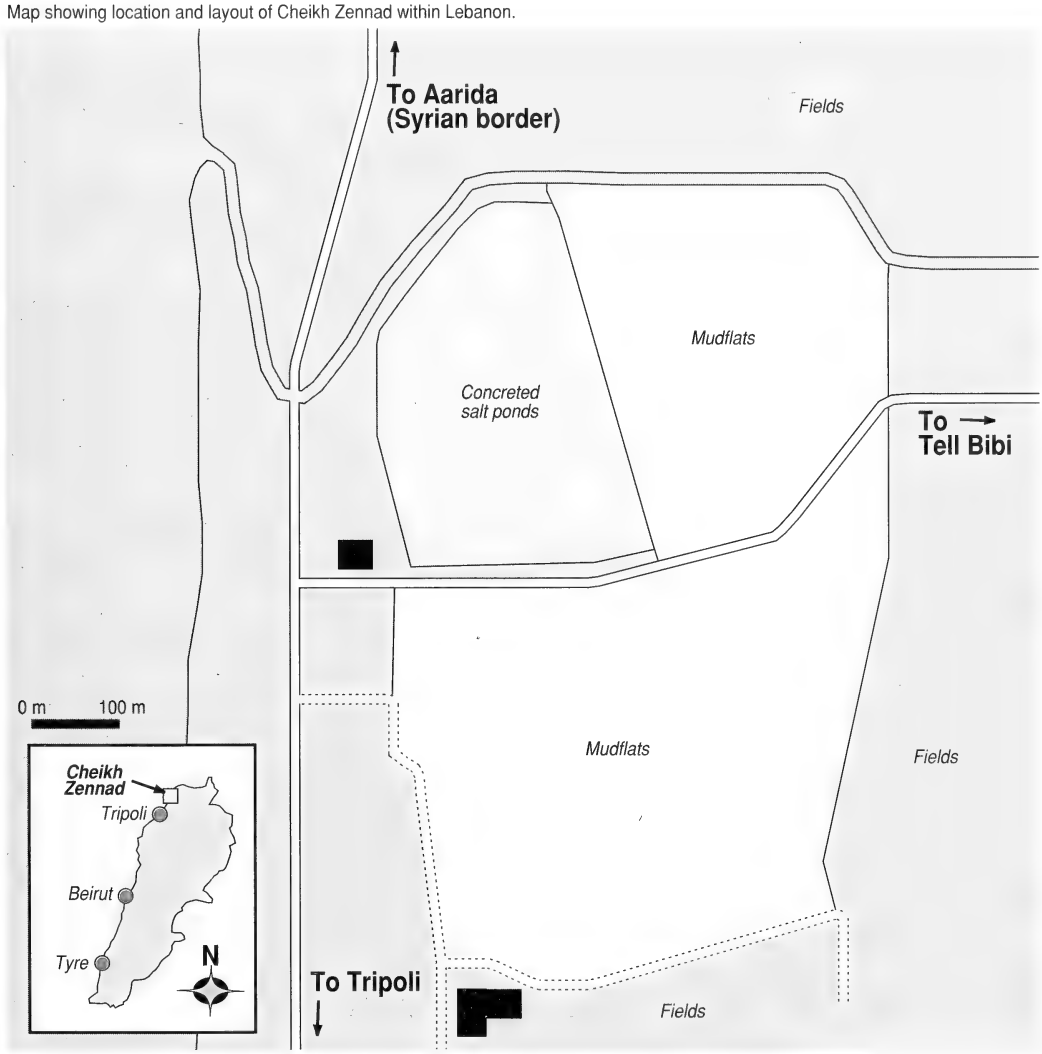
Despite a 1995 law prohibiting all hunting in Lebanon, birds are regularly shot at Cheikh Zennad. Consequently, birds were often disturbed and counting made almost impossible.

OBSERVATIONS

Visits took place throughout the year, between April 1996–June 1997. Using a car, the birds could be approached without disturbance, but some areas had to be surveyed on foot. Waders are particularly well-represented at Cheikh Zennad. The man-made basins provide similar conditions to natural mudflats with copious and easily accessible food.

Very low number of raptors and storks were recorded passing over Cheikh Zennad. This could be partly attributed to incomplete coverage, but is most likely to result

Map showing location and layout of Cheikh Zennad within Lebanon.



from the physical features of the region. North of Tripoli, the mountains diverge from the coast, forming the Akkar Valley. Thus soaring birds tend to cross into Syria north of Mount Lebanon and south of Jebal as Sahiliyah, more than 20 km east of Cheikh Zennad.

NEW SPECIES IN LEBANON

Pacific Golden Plover *Pluvialis fulva*
One on 12 October 1996. Vagrant in adjacent countries (Porter *et al.* 1996). Discovered feeding with three Grey Plover *Pluvialis squatarola*; with binoculars, it was first thought to be a European Golden Plover *Pluvialis apricaria*. Before the bird could be scrutinised with a telescope, it flew away giving a clearly disyllabic call, unlike that of European Golden Plover. Returning, the bird flew overhead, allowing a photograph to be taken, showing the greyish underwing and toes extending beyond the tail-tip, to be taken. Unfortunately, it was not seen again and it was not possible to make a detailed description of the bird. Although these two features, plus the call, appear to secure the identification, future records of the species in Lebanon should be documented in order to fully substantiate its occurrence in the country.

Curlew Sandpiper *Calidris ferruginea*
Recorded 16 times at Cheikh Zennad, with a maximum of 32 on 1 September 1996. Surprisingly not certainly reported in Lebanon (Kumerloeve 1962, Benson 1970).

Curlew *Numenius arquata*
One on 21 April 1996 and two on 30 April 1996. Subsequently, three at Damour on 4 September 1996. Rather scarce in adjacent countries.

Bar-tailed Godwit *Limosa lapponica*
One on 12 May 1996. Scarce in adjacent countries.

Terek Sandpiper *Xerus cinereus*
One on 18 August 1996. Rare in adjacent countries.

Gull-billed Tern *Gelochelidon nilotica*
One over Qaraoun Reservoir on 15 August 1996 and two at Cheikh Zennad on 17 April 1997. Tristram's report last century is generally considered unconfirmed (Kumerloeve 1962, Benson 1970).

Black-bellied Sandgrouse *Pterocles orientalis*
A flock of 18 was seen on 16 November 1996 after two days of strong east winds. This flock could have involved Turkish or Cypriot breeding birds which winter in Syria. There is just one previous record of sandgrouse in Lebanon (although the habitat in the northern Beka'a Valley would appear favourable); a Pin-tailed Sandgrouse *Pterocles alchata* at Ammiq on 15 August 1975 (Macfarlane 1978).

Citrine Wagtail *Motacilla citreola*
A male and female on 21 April 1996. Uncommon but regular in adjacent countries.

SPECIES RARELY SEEN IN LEBANON

Great White Egret *Egretta alba*
At Cheikh Zennad: one on 15 September 1996, three on 12 October 1996 and two on 26 October 1996. A rare migrant (Kumerloeve 1962). Other recent records in Lebanon are: ten at Ammiq Swamp on 17 Marsh 1996 and 28 at Qaraoun Lake on 27 October 1996 with 15 there on 1 December 1996 (pers. obs.).

Glossy Ibis *Plegadis falcinellus*
At Cheikh Zennad: singles on 30 April 1996, 20 July 1996, 15 September 1996 and 17 April 1997. Previous records: a undated specimen (Kumerloeve 1962), at Anjar in August and early

September 1973 (Tohmé & Neuschwander 1974), 48 at the Ammiq Swamp in April 1974 (Tohmé & Neuschwander 1978), seven on 27 April and one injured bird on 8 May 1975 at Ammiq (Macfarlane 1978).

Oystercatcher *Haematopus ostralegus*
One at Cheikh Zennad on 8 April 1996. One specimen from Khaldé Pool, near the airport, south of Beyrouth [Beirut] on 2 April 1955 (Nevins, in Kumerloeve 1962).

Cream-coloured Courser *Cursorius cursor*
Four at Cheikh Zennad on 1 September 1996. This species has not been reported in Lebanon for c. 40 years, until it was rediscovered at Qaa (northern Beka'a) on 10 June 1975 (Macfarlane 1978). Five birds were in the same area, on the Hermel steppe (northern Beka'a) on 11 August 1996 (pers. obs.).

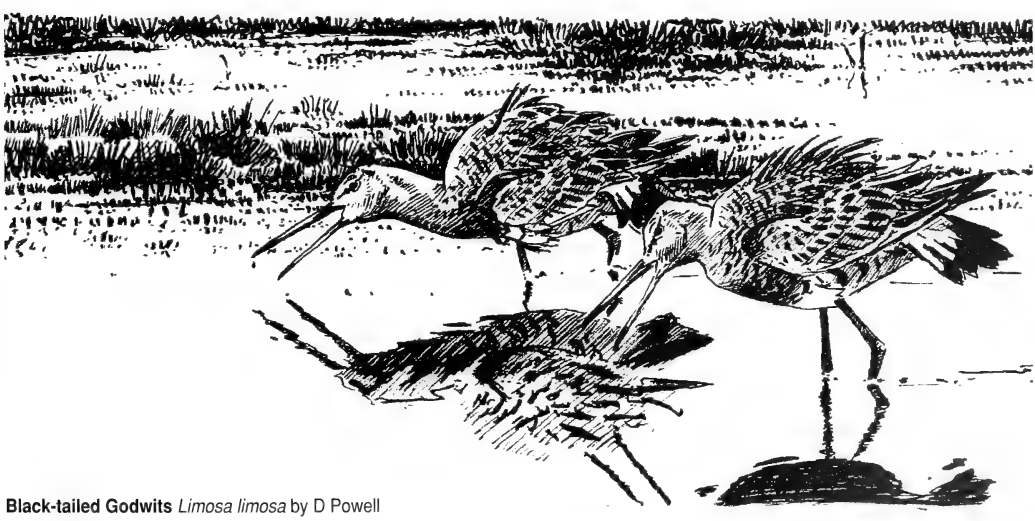
Greater Sand Plover *Charadrius leschenaultii*
At Cheikh Zennad: one on 21 April 1996, three on 20 July 1996 and two on 10 August 1996. Collected by Van Dyck near Beyrouth [Beirut] on 31 July 1877 and on 25 August 1877 (Kumerloeve 1962). Two on the shore near Saida on 24 April and four next day (Benson 1970).

Sanderling *Calidris alba*
Four at Cheikh Zennad on 15 September 1996 and eight on 29 September 1996. Only one previous record, on the shore south of Beirut in late spring 1876 (Van Dyck, in Kumerloeve 1962).

Temminck's Stint *Calidris temminckii*
Recorded four times at Cheikh Zennad, with a maximum of three on 30 April 1996. A few at the Ghadir River estuary on 28 August 1954 (Kumerloeve 1962), one at Joub Jannine on 15 August 1974 and one at Qaraoun on 8 May 1975 (Macfarlane 1978).

Broad-billed Sandpiper *Limicola falcinellus*
Recorded seven times at Cheikh Zennad, with a maximum of 18 on 1 September 1996. The only previous Lebanese record is of one at Yammouné Lake in autumn 1964 (Benson 1970).

Black-tailed Godwit *Limosa limosa*
Recorded six times at Cheikh Zennad, with a maximum of five on 5 April 1997. Considered a vagrant in Lebanon (Cramp & Simmons 1982); Macfarlane (1978) reported two at Ammiq on 17 March 1975, and reported in autumn from Syria, near the Lebanese border (MacLaren, in Kumerloeve 1962).



Black-tailed Godwits *Limosa limosa* by D Powell

Whimbrel *Numenius phaeopus*
Singles at Cheikh Zennad on 3 August 1996 and 12 October 1996. Hollom (1959) noted the species on Nakl Island (= Palm Island) on 9 May 1956 and recorded at Ras Beirut in August 1974 and August 1975 (Macfarlane 1978).

Spotted Redshank *Tringa erythropus*
Recorded seven times at Cheikh Zennad, with a maximum of six on 12 May 1996. Considered a vagrant in Lebanon (Cramp & Simmons 1982); Macfarlane (1978) saw three at Ammiq on 3 April 1975, and reported in autumn from Syria, near the Lebanese border (MacLaren, in Kumerloeve 1962).

Great Black-headed Gull *Larus ichtyaetus*
One at Cheikh Zennad on 15 Decembre 1996. One in October 1958 (Flach 1959) is considered unconfirmed (Benson 1970, Kumerloeve 1972). At Ras Beirut, Macfarlane (1978) recorded two on 5 March and five on 15 March 1975.

Slender-billed Gull *Larus genei*
At Cheikh Zennad: an adult and a second-summer on 21 April 1996, a second-summer on 30 April and 12 May 1996, an adult on 22 March 1997 and nine adults on 5 April 1997. Very few previous records (Benson 1970).

Audouin's Gull *Larus audouini*
At Cheikh Zennad: a second-summer and three immatures on 3 August 1996, one adult on 10 August 1996 and five on 25 August 1996. Stenhouse (1904) saw this species on Nakl Island (= Palm Island) on 4 July 1893 with one on 20 June 1895. On the second occasion, a colony of 15 nesting pairs with young almost ready to fly was present. Subsequently, there have been just two records: three on 3 October 1958 (Flach 1959, in Kumerloeve 1962) and 18 on Palm Island on 3 April 1973 (Tohmé & Neuschwander 1974). It is worth noting that Cheikh Zennad is 23 km north-east of Palm Island, where access is now controlled, and breeding is again a possibility.

Armenian Gull *Larus armenicus*
Eight seen at Cheikh Zennad on 22 March 1997 and one on 5 April 1997. Recently split from Herring *L. argentatus* and Yellow-legged Gull *L. cachinnans* which probably explains the lack of previous data for Lebanon. Shirihai (1996) reports that the species winters in the eastern Mediterranean Basin, including Lebanon, without giving further details for Lebanon, and four were at Tyre in October 1996 (G. Ramadan Jaradi pers. comm.).

Black Tern *Chlidonias niger*
Two records at Cheikh Zennad: singles on 8 September 1996 and 12 October 1996. Recorded in August and September 1974 at Qaraoun Reservoir (Macfarlane 1978). One over the Qaraoun Reservoir (southern Beka'a) on 15 August 1996 (pers. obs.).

Pied Kingfisher *Ceryle rudis*
One at Cheikh Zennad on 8 April 1996. Has bred at Anjar (Tohmé & Neuschwander 1974), but considered now as a rare winter visitor (G. Ramadan Jaradi pers. comm.).

Water Pipit *Anthus spinoletta*
Three at Cheikh Zennad on 1 November 1996. Kumerloeve (1962) indicates that although it is probably not a very rare migrant, substantiated records are few. Macfarlane (1978) mentions at least three at Ammiq on 17 and 19 March 1975. One at Dahr el Baidar (the col between Beirut and the Beka'a Valley) on 31 March 1996 (pers. obs.) is therefore also significant.

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The first Mute Swan *Cygnus olor* and Radde's Accentor *Prunella ocularis* in Jordan

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DURING DECEMBER 1997–January 1998, we made a 3.5 week birdwatching trip to Egypt, Israel and Jordan. Among the highlights was the discovery of two birds previously unrecorded in Jordan: Radde's Accentor *Prunella ocularis* and Mute Swan *Cygnus olor*.

Mute Swan *Cygnus olor*

On the afternoon of 2 January 1998, we approached the Azraq qa'(a large mudflat) from the north, and whilst searching through the flocks of waders and 1000s of ducks feeding in the shallow water, we noticed four swans *Cygnus* sp. south-east of where we were standing. Due to the distance and unfavourable light, we could not identify them to species and so drove closer. From a point, c. 200 metres from the birds, we were able to identify them as first-winter Mute Swan.

All four had the brownish grey plumage typical of first-winter swans. Their bills were dark with black bases and were held pointing slightly downwards.

The species' nearest breeding sites are in Turkey. It winters in Turkey, north Iran and irregularly on Cyprus, and has also been recorded south to north Egypt, Iraq and east Arabia. In Israel, it is an irregular winter visitor with occasional invasions, e.g. up to 300 birds in winter 1984–85 (Shirihai 1996). There is an unconfirmed report of this species from Azraq in winter 1968–69, but it has not been accepted onto the Jordan list (Andrews 1995). In addition, Sutari (1996) states that the species is an irregular and rare winter visitor to Azraq and the Jordan Valley but this is unsubstantiated by records.

Radde's Accentor *Prunella ocularis*

On 31 December 1997, whilst searching for Syrian Serin *Serinus syriacus* in the terraced gardens near Dana village we noticed an accentor at the edge of one of the grass fields in the eastern part of the gardens. Our immediate impression was that it was a Radde's Accentor. The bird was not shy, and we were able to observe it for ten minutes at ranges down to ten metres, whilst it fed on the ground near some small shrubs. It then flew off and disappeared into a hedge further down the slope.

We immediately noted the black ear-coverts and crown, with a contrasting broad white supercilium. The belly and flanks were greyish brown, the mantle and back brown and it had darker streaks on the flanks, mantle and back. Closer inspection revealed that the throat was off white with no traces of black. There were, however, dark spots on the sides of the throat, forming an indistinct malar stripe. The breast was an unmarked orange-buff colour.

Radde's Accentor could be confused with first-winter Black-throated Accentor *P. atrogularis*, which can lack an obvious black throat (e.g. Alström 1991, 1995). However, the white throat without any dark feathers, indistinct malar stripe and broad white supercilium bordered by all black ear-coverts and crown eliminates the latter species. The lack of any yellowish tones on the supercilia and throat excludes Siberian Accentor *P. montanella*.

Radde's Accentor breeds in south (Taurus) and east Turkey and Iran, in low shrub in rocky montane areas at 2000–3000 metres (*BWP Concise*). There is some dispersal south and to lower altitudes in winter. Since 1970, it has been a regular winter visitor, principally between 25 October–15 March (one mid-August record), to a small number of localities in northern Israel but with large annual variations and absences in some years (Shirihai 1996). It has also reached Syria at this season (*BWP Concise*).

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Breeding survey of White-headed Duck *Oxyura leucocephala* on the Central Plateau, Turkey

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THE BREEDING STATUS AND distribution of the White-headed Duck *Oxyura leucocephala* on Turkey's Central Plateau has recently been reviewed (Kirwan 1994, 1995). Its population was initially believed to be at least 150 pairs, but this was subsequently considered over-optimistic, due to the drainage of Hotamış and Ereğli marshes. During 7 July–21 August 1996, the authors counted this species at 19 wetlands in this region. White-headed Duck in Turkey, at this time, are resident breeders or non-breeders. Most sites were visited twice, with counts being made over at least two days on each occasion. Male, female and juvenile numbers were recorded separately. The results are summarised in Table 1 (adapted from Robinson *et al.* 1996). The survey suggests that the 1996 breeding population was lower than previous population estimates. However, juveniles were observed at Karamık and Ereğli marshes, whose continued suitability for breeding has been questioned. Much further work is required to establish the degree of intra- and inter-season variation in counts, and to understand their causes. Intensive study of a few sites for at least one season would be particularly valuable, allowing the reliability of single counts as estimates of actual populations to be assessed. Burdur Gölü was also surveyed. An estimate of more than 100 males and 25–50 females (13–16 August) was made. These birds were non-breeders or post-breeders, given the absence of breeding habitat around the lake. Many males at Kulu Gölü are unlikely to have bred in the area and, as the water-level did not reach the reeds at Süleymanhacı Gölü, birds there are also unlikely to have bred on site.

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Table 1. Summary of survey results. Past records = previous published observations of juveniles. Max. count or potential = maximum number of males (m), females (f) and juveniles (j) observed or, where no White-headed Duck were seen, the potential of the site for breeding as determined by the presence of water and reedbeds (change in water-levels due to drainage schemes may lead to rapid change in status). * = difficulty distinguishing females from juveniles.

Site	Grid Reference	Past records	Max. count or potential
Akkaya Baraji	39° 12'N 34° 25'E	yes	no
Akşehir Gölü	38° 30'N 31° 25'E	no	yes
Bolluk Gölü	38° 32'N 32° 56'E	no	no
Çol Gölü	39° 18'N 32° 53'E	no	no
Eber Gölü	38° 40'N 31° 10'E	no	yes
Ereğli marshes	37° 31'N 33° 45'E	yes	9m 10f 5j
Esmekaya Gölü	38° 15'N 33° 28'E	no	yes
Gogenç Gölü	38° 11'N 32° 38'E	yes	no
Hotamış marshes	37° 35'N 33° 03'E	yes	no
Karamık marshes	38° 24'N 30° 45'E	yes	0m 4f 6j
Kozanli Gokgöl	39° 01'N 32° 50'E	yes	7m 3f 7j
Kulu Gölü	39° 05'N 33° 09'E	yes	52m 21f 0j
Moğan Gölü	39° 47'N 32° 48'E	no	1
Samsam Gölü	39° 05'N 32° 45'E	no	no
Seyfe Gölü	39° 12'N 34° 22'E	no	no
Süleymanhacı Gölü	37° 20'N 33° 05'E	no	3m 1f 0j
Sultanhani marshes	38° 32'N 33° 30'E	no	no
Sultansazlığı	38° 17'N 35° 11'E	yes	0m 2f* 9j*
Uyuz Gölü	39° 15'N 32° 55'E	yes	3m 3f* 3j

[1] No White-headed Duck were seen during our survey but a juvenile was seen by Cem Kiraç, July 1996.

The first Great Knot *Calidris tenuirostris* in Yemen

AAT SCHAFTENAAR

IN THE EARLY MORNING of 15 October 1997, I was birdwatching the mudflats at Al Khawkhah, Yemen when I noticed a Great Knot *Calidris tenuirostris* resting amongst a group of gulls and terns. The bird's size, long bill, dark centres to the mantle and scapular feathers and dark spotting on the flanks and breast, made identification as a Great Knot relatively straightforward, despite my lack of field experience of the species. From Hollom *et al.* (1988), I learned that there were no previous Yemen records and thus set about obtaining a description. The bird afforded good views from c. 25 metres in good light for c. 10 minutes before it flew off to join a large flock of waders on a nearby mudflat, where I was unable to re-locate it. I searched for it again the following morning but the bird could not be re-found.

Size and shape. Larger than nearby Curlew Sandpipers *Calidris ferruginea* and approximately the same size as Pacific Golden Plover *Pluvialis fulva*. Bill longer than head and apparently slightly decurved toward the tip. Recalled Red Knot *Calidris canutus* in overall shape but with seemingly longer legs, slimmer neck and more attenuated rear, giving a slightly more slender appearance. Wing-tip protruded beyond tail-tip.
Head. Grey-white with brown spotting. Dark cap formed by larger brown spots on centre of crown.
Upperparts. Generally dark due to dark centres to mantle and scapulars. Irregular pale grey spots on rest of upperparts suggesting moult into first-winter plumage. Rump white, in flight strongly contrasting with back. Uppertail pale grey and therefore providing less contrast with rump.

Underparts. White with prominent blackish spots on upper breast and flanks. More concentrated spots on breast forming broad breast band, and spotting even denser on breast sides and neck.
Wings. Primaries black, tertials brown with cream white fringes. Coverts as tertials but with broader cream white fringes. Folded wing paler than mantle. In flight, a thin and inconspicuous wingbar was noted on the upperwing. Underwing not seen.
Bare parts. Eye dark, contrasting with the otherwise relatively pale face. Bill dark brown, appearing black at distance. Legs grey tinged greenish.
Call. No vocalisations heard.

Great Knot breeds in north-east Siberia, east of the Lena River and is a long-distance migrant, primarily to southern Asia (from Pakistan east to New Guinea) and Australia (*BWP Concise*). Much smaller numbers migrate south-west to the Arabian Gulf, principally to Oman (max. 1100 in winter 1989–90: OBRC 1994) and the United Arab Emirates (max. 607 in September 1994: Richardson & Aspinall 1996), with two records from Bahrain (Hirschfeld 1995) and c. five in the Eastern Province of Saudi Arabia (max. 107 in Tarut Bay in April 1991: Evans & Keijl 1993). That a single should reach Yemen is relatively unsurprising, especially in the light of other Western Palearctic records from Britain, the Netherlands, Germany, Norway, Spain, Israel and Morocco (*BWP Concise*).

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The first breeding record of Swift Tern *Sterna bergii* in Egypt

PETER CASTELL

On 20 JULY 1997, I chartered a boat and crew at Hurghada in order to visit some of the islands at the mouth of the Gulf of Suez, a journey of 5–6 hours. On the morning of 21 July, we landed on a spit at the south end of Gezirat Umm el Heimat, where there was a dense colony of c. 750 pairs of Lesser Crested Tern *Sterna bengalensis*. On closer approach, it became apparent there were also 25 pairs of Swift Tern *Sterna bergii* present.

The terns occupied a narrow flat strip of higher sandy ground, c. two metres above sea-level and c. 20 x 5 metres in size, separated from the sea by a low, flat strip of sand and rock, c. 50 metres long by 15 metres wide. The latter was almost entirely covered in sticky tar and debris, melting in the late morning heat. At least 50 young terns were stuck in this, nearly all of them dead and wholly blackened. A few were barely alive, hopelessly trying to struggle free. The young of both species are very similar and it was not possible to positively identify these birds.

The nest scrapes of the terns were c. 25–30 cm apart. Virtually all of the several hundred occupied Lesser Crested Tern scrapes contained one egg (or a single newly hatched young); c. eight contained two eggs.

Plate 1. Swift *Sterna bergii* and Lesser Crested Terns *S. bengalensis* nesting on Umm el Heimat, Red Sea, Egypt, July 1997. Note the tar/oil on the neck of one of the Swift Terns. (*Peter Castell*)

Swift Tern lays much larger eggs than Lesser Crested Tern (62 x 43 mm compared to 52 x 36 mm: Cramp 1985). The 12 Swift Tern eggs in the mixed colony were, therefore, immediately and easily identified. Each scrape contained a single egg. They were all on the seaward edge of the colony, immediately adjacent to the tar beach. Three were very close together, the others were in a scattered line along the colony edge. The eggs of both species were extremely variable in colour and markings.

Approximately half of the Lesser Crested Tern clutches had hatched, and several hundred young birds, all less than a week old, were gathered together, just north of the tar beach. There were also 12–13 young Swift Tern, each attended by an adult (or adults), c. 20 metres north of the main colony, principally on higher rocky ground; these were less than a week old.

The nearest known colonies of Swift Tern are in the Arabian Gulf and the southern Red Sea, but they have long been suspected of breeding at the mouth of the Gulf of Suez and on the islands off Hurghada, although Jennings *et al.* (1985), in a major survey, found only circumstantial evidence of breeding. In April–May 1983, a total of 139 adults—130 on Ghanim, four on the Ashrafi Islands, a pair on South Geisum, two on Gezirat Umm el Heimat, and one on Giftun el Saghir—were found. In September–October 1984, 45 adults—39 on the Ashrafi Islands, four on Gezirat Umm el Heimat, one on Gezirat Umm Magawish and one at sea—were present. It was concluded that breeding was likely on the Ashrafi Islands and possibly South Geisum. Hoath *et al.* (1997) also found no evidence of breeding but saw ten birds between 10–14 June 1994, four at the south tip of North Geisum and six on South Geisum, but they did not visit Gezirat Umm el Heimat.

The circumstantial evidence suggests that Swift Terns have probably bred in small numbers on these islands for many years. The long boat journey from Hurghada requires a sturdy boat, but most islands are fringed with coral and a small inflatable is necessary for landing.

This first definite breeding record demonstrates the vulnerability of young terns. An up-to-date survey, of the type conducted by Jennings *et al.* (1985) but undertaken in the peak breeding season, is urgently required.

Plate 2. Nest and egg of Swift Tern *Sterna bergii*, Umm el Heimat, Red Sea, Egypt, July 1997. (*Peter Castell*)

Plate 3. Swift Tern *Sterna bergii* at c. 3–4 days old, Umm el Heimat, Red Sea, Egypt, July 1997. (*Peter Castell*)

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Whiskered Tern *Chlidonias hybridus* breeding in the Nile Delta, Egypt

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THE NILE DELTA LAKES in northern Egypt, in particular Lakes Burullus and Manzala, are the most important known wintering areas for Palearctic-breeding Whiskered Tern *Chlidonias hybridus* (Goodman & Meininger 1989). Over 44,000 were counted in winter 1989–90 (Meininger & Atta 1994).

Most birds depart the delta in March–April, but 100s are present until early May, and small numbers have been reported at Lake Manzala in July–August (Goodman & Meininger 1989). Although Ticehurst (1912) reported that several Whiskered Tern were at Lake Maryut on 15 May 1909 and according to local people 'many arrive there towards the end of the month and breed in reed-beds', Goodman & Meininger (1989) stated that there was no conclusive evidence that it had bred in Egypt.

In spring 1990, 100s were present at several localities in the southern part of Lake Manzala until at least 24 May, when observations ceased. Although birds were seen displaying and carrying fish, there was no proof of breeding (Meininger & Atta 1994).

On 7 June 1997, JV visited Lake Maryut in a small fishing boat, accompanied by a local fisherman. In a large, open and shallow (< 0.5 m) part of the lake, within two km of Alexandria city limits, the submerged aquatic vegetation, probably principally *Potamogeton pectinatus* became so dense, that the boat almost got stuck. Here, c. 12 Whiskered Tern appeared, vigorously alarming and regularly performing 'attacks' on the boat, approaching to within one metre. On returning, at least 30 birds were found attending c. 20 nests in a loose colony, built on floating aquatic vegetation. The nest contents were not examined, principally because JV was unaware that this would be the first documented breeding of the species in Egypt. Although the local guide gestured 'eggs, good to eat', the difficulty in accessing this site probably made it a relatively safe breeding place.

Whiskered Tern bred in north Israel until the early 20th century (Shirihai 1996). The nearest regular breeding areas to the Nile Delta are in Turkey (Cramp 1985). This observation confirms that the species breeds, at least irregularly, in the Nile Delta. Breeding in other lakes seems likely. It lends support Ticehurst's (1912) statement that the species bred at Lake Maryut nearly 90 years ago. The breeding fauna of these lakes is still very poorly known (Meininger *et al.* 1986, Goodman & Meininger 1989, Meininger & Atta 1994) and breeding Whiskered Tern (and perhaps other species) may have escaped notice. Unfortunately, throughout the delta lakes, habitat destruction through reclamation, urbanisation and pollution is occurring so rapidly that, in some cases, we will probably not even know what has disappeared.

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Notes on the breeding and cooling behaviour of Hoopoe Lark *Alaemon alaudipes* in central Saudi Arabia

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THE DISTRIBUTION AND general biology of the Hoopoe Lark *Alaemon alaudipes* are reviewed by Cramp (1988); Jennings (1995) provides details of these behaviours in Arabia. Here, some observations of the breeding and cooling behaviour of the species are presented. The observations were made between 1992–1997 in the Mahazat as-Sayd reserve, a 2244 km^2 fenced area in the central-west region of Saudi Arabia, at 22° 00′–22° 30′N 41° 28′–42° 13′E. The majority of the habitat in the reserve is open sandy gravel plain. The reserve has been protected since 1989 primarily for reintroduction of the Arabian Oryx *Oryx leucoryx* (Greth & Schwede 1993).

Breeding observations

Male Hoopoe Larks displayed each year from late February–July, with an exceptional record of an adult carrying food to the nest in October 1992 (Newton & Newton 1997). This was due to exceptional rainfall in August that year, resulting in an extended breeding season. Felemban (1989) recorded similar extension of the breeding season after an exceptional rainfall on Farasan Island, south-west Saudi Arabia. In Mahazat as-Sayd reserve, most nests were recorded in February–June: two nests with three eggs were on the ground; four nests with 3–4 eggs were in vegetation (two on *Panicum turgidum*, a common grass in open sandy gravel habitat over much of the reserve); and two nests, containing one and three eggs, were in open sandy areas in *Haloxylon saclicornium* bushes.

One pair was observed over two days, and visited twice a week subsequently, during which time copulation and nest-building were recorded. Copulation started when the female approached the display area of the male and stood 10–15 m away from him, stimulating the male to increase his display frequency. The female then crouched with wings partly open, then hovered, during which time the male came closer and mounted her back to copulate. Copulation took place several times daily, with a mean length of 3.7 seconds (n = five). After each copulation, the female ruffled her feathers and moved towards bushes within the male's

Plate 1. Hoopoe Lark *Alaemon alaudipes*, cooling by prostrating itself on *Corchorus depressus*, Mahazat as-Sayd reserve, central Saudi Arabia. (*Mohammed Shobrak*)

Plate 2. Hoopoe Lark *Alaemon alaudipes*, nesting in *Panicum* grass, Mahazat as-Sayd reserve, central Saudi Arabia. (*Mohammed Shobrak*)

territory. The female selected a small clump of *Panicum* sp. grass and started to nest-build beside it, while the male continued displaying nearby.

Males were observed incubating at two nests found between 12.00–14.00 hrs. As soon as the nests were approached by an observer the male left and started to display. In contrast, flushed females returned immediately to incubate the eggs without fear of human presence.

Cooling behaviour

Hoopoe Larks were recorded displaying and foraging throughout the day, even during summer when maximum ambient temperatures in the shade could reach 46°C. At midday, males nesting between displays were observed standing under *Acacia* bushes avoiding direct sunlight or on top of them avoiding ground-level heat. However, in summers 1992–1994, the species was occasionally observed prostrate and facing into the wind, for a few seconds at a time, on mat-like *Corchorus depressus* plants, between 12.00–16.40 hrs. *Corchorus depressus* is a prostrate perennial herb which grows very close to the ground forming dense mats

Plate 3. Hoopoe Lark *Alaemon alaudipes*, nesting on the ground. Mahazat as-Sayd reserve, central Saudi Arabia. (*Mohammed Shobrak*)

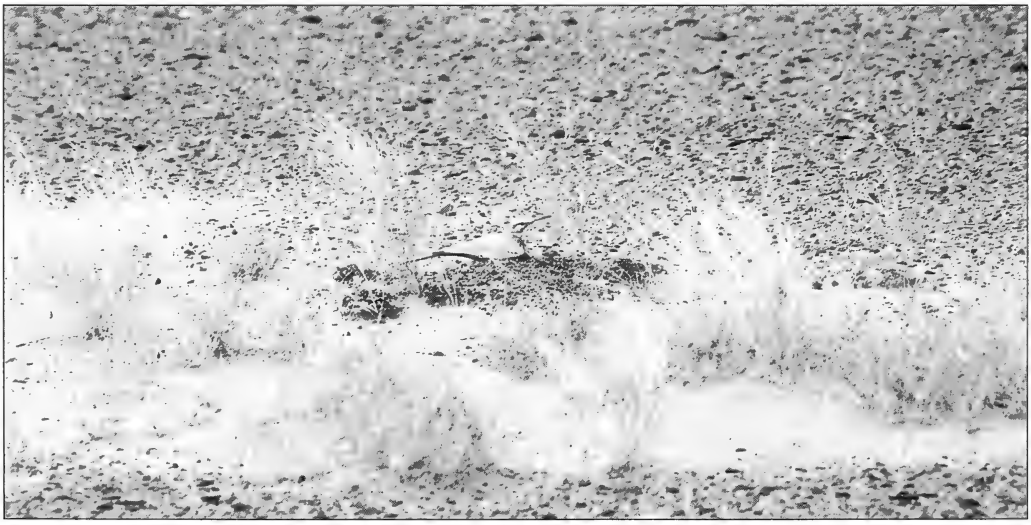

Plate 4. Hoopoe Lark *Alaemon alaudipes*, resting on *Corchorus depressus*, Mahazat as-Sayd reserve, central Saudi Arabia. (*Mohammed Shobrak*)

(Mandaville 1990). The dark green leaves are abundant and set on thick, sturdy branches. Their surface felt cooler than other plants in the area, as it appeared to generate a more humid microclimate. I interpret this behaviour to be a thermoregulatory cooling mechanism when the lark presses its body against the relatively cool, damp foliage.

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The first Banded Martin *Riparia cincta* in Saudi Arabia

C. M. SAUNDERS AND G. G. WEBBON

ON 3 OCTOBER 1996 a Banded Martin *Riparia cincta* was observed associating with a flock of hirundines—composed of Barn Swallows *Hirundo rustica* and Sand Martins *Riparia riparia*—feeding over alfafa fields c. four km south of the southern limit of Riyadh, Saudi Arabia. The bird was first noticed when the flock settled on an electricity cable, where it appeared noticeably bulkier than both other species perched on the same wire. The bird was watched for several minutes, through binoculars and a telescope, at a range of c. 15 metres.

Description. Seen from behind, the bird appeared bulkier than an adjacent Sand Martin, although similarly proportioned. The general coloration was earth-brown, whilst the tail was square-tipped. When viewed from the side and front, the similarity to Sand Martin was reinforced by the overall proportions, shape and size of the head and bill and their coloration. It was estimated to be at least 2.5 cm longer than Sand Martin. The underparts were white, excepting a brown breast band. The main differentiating feature—a white triangular shaped patch above the eye—was clearly seen. When subsequently observed in flight, its pattern was straight and parallel to the ground, with the wingbeats deeper and slower than in Sand Martin. No calls were heard.

Reference to Hollom *et al.* (1988) clearly identified the bird as Banded Martin, due to the bird's size, tail shape, flight method, underparts pattern (although we did not note the white underwing-coverts) and white area above the eye. This is the first record in Saudi Arabia of a species which is a widespread resident and intra-African migrant, from Ethiopia south to Zambia and Malawi (Keith *et al.* 1992). There is one previous record in the Middle East: one at Bajil, Yemen in March 1982 (Cornwallis & Porter 1982).

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Colour polymorphism in Eleonora's Falcon *Falco eleonorae*

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Approximately 70% of adult Eleonora's Falcon are light-coloured and 30% dark-coloured. Only 2% of juvenile birds are dark morphs but a further 28% develop the dark coloration when one year old. Although coloration apparently represents a polygenic trait, dark and light plumage is inherited in a Mendelian fashion. 'Dark' figures as a dominant trait. Available data on the abundance of both morphs with respect to annual fluctuations, sex or geographical location do not permit an unequivocal statement on the adaptive value of morph polymorphism. Colour photographs illustrate the range of plumage polymorphism in Eleonora's Falcon. This paper represents part 23 of a series on Eleonora's Falcon

INTRODUCTION

ALTHOUGH ELEONORA'S FALCON *Falco eleonorne* is a regular migrant through the Middle East (Ristow *et al.* 1992), it is rarely observed probably because many have difficulties in identifying this rare species. Here, we aim to illustrate and quantify plumage variation in *F. eleonorae* in order to facilitate its identification in the field.

At all seasons, individuals can be sexed morphometrically—as in all falcons, females are larger than males—but this is usually only possible when birds are captured (Wink *et al.* 1982). At least during the breeding season, perched adult males can be distinguished in the field by telescope through their lemon-yellow eyerings and ceres and orange-yellow tarsi and toes, whereas in the female these features are dull grey or greenish yellow (Plate 1).

Although it is generally accepted that Eleonora's Falcon has two distinct colour morphs—light and dark—detailed analysis has revealed substantial variation within these phases (Krüper 1864, Heinroth 1899, Vaughan 1961, Walter 1979, Clark 1981). Plumage variation in the undertail- and underwing-coverts has not been described in detail. This paper places particular emphasis on these characters. Naturally, those parts of the plumage—face, breast, belly, undertail-coverts, underwing-coverts—visible to the bird's mate or competitor during ground display, vary to some degree between individuals. Patterns of streaks, spots and fringes gradually diminish from light female ◊ light male ◊ dark female ◊ dark male. For convenience, the description begins with light morph females.

LIGHT MORPH ADULTS

Typical **light morph females** (Plate 3a) show whitish cheeks, whilst the chin is cream-coloured finely streaked with dark. Ear-coverts are dark brown; the whitish area is never as large as in Hobby *Falco subbuteo* (compare Plate 3, *Sandgrouse* 18 (2): 42). Dark shaft streaks on the breast and belly have broad yellow or orange-buffish webs, the breadth of the shaft streaks being reduced on the flanks and in the transition area from belly to undertail-coverts. The base colour of the undertail-coverts is pale or cinnamon-brown, the shaft streaks terminating in subterminal triangular spots (reaching nearly to the edge of the web). The colourful sides of the greater underwing-coverts face the primaries, so from below only the grey base, concolorous with the primaries, is visible. Yellow buffish tips and spotted edges occur on both webs of the

Plate 1. Portraits of Eleonora's Falcons *Falco eleonorae*: **a)** adult light morph male; **b)** adult light morph female; **c)** adult dark morph male, note colour of cere and eyerings is the same as in 1a; **d)** fledgling of the rare homozygous dark morph ('DD') with completely black mandibles. (*Dietrich Ristow*)

outer primary coverts and on one web of the inner primary coverts, but only on the tips of the outer greater secondary-coverts. Nearer the axillaries, the tips become broader and a few spots appear along the feather edge. However, in the stretched wing, the greater underwing-coverts in the area of the secondaries are hidden beneath the median coverts. The median coverts by means of their dark base colour form a striking contrast line on the underwing, and their buffish tips and spots are much more obvious. Again, spot size and number decrease towards the carpal area, the same tendency being observed for the edges or fringes of the lesser underwing-coverts. At the axillaries, the buffish edge spots have increased to such a size and are spaced so regularly that they almost form a barred pattern.

In some females, the ground colour is buffier. In others, the shaft streaks on breast and belly are broader, but the light edges on the webs are always present. Additionally, these individuals show less buff on the underwing-coverts. In a few females, only the two central undertail-coverts have a subterminal dark spot, or only a brown shaft section. Adult females commence moulting their remiges by shedding the fourth primary and fifth secondary in September. A moult gap in late autumn and winter indicates an adult (or a yearling?). When the adults return to the Mediterranean at the end of April, their plumage is fresh and they appear uniformly dark grey when seen from above, males only slightly blacker than females. With time, this colour gradually becomes slightly browner as it is bleached by the sun. Bleaching enhances the contrast within the faint barring of the uppertail-coverts, such pattern being much more obvious in females than in males of any morph.

Light morph males typically lack the buffish component in their plumage. Thus the contrast between slate-grey, white, and cinnamon is increased compared to light morph females, giving the males a brighter appearance (Plate 2c). The missing buffish colour is the reason for the paler tail pattern of the males. The shaft streaks, present on breast and belly, disappear towards the tail. Leg feathers and undertail-coverts are red-cinnamon. The undertail-coverts in some birds are uniform in coloration, but more than half of males also show slate-grey tips or brown shaft streaks, especially on the two central feathers. Typically, the median underwing-coverts are black and become black-grey towards the axillaries; tips and spots are reduced and dirty brown compared to light morph females. In some males, the underwing quite closely resembles female coloration. In c. 3% of light morph males, the dark streaks on breast and belly become confluent, producing a black belly in extreme cases (Plate 2a). Some median underwing-coverts have buffish tips in these males, but spots are almost non-existent.

DARK MORPH ADULTS

A typical **dark morph female**, except for the cream-coloured chin, is completely dark brown or coal-black, and slightly lighter on the breast and belly having some buffish spots (Plate 3b). However, if lighter spots or even broad streaks can be discerned, then the moustachial stripe can also be recognized, characteristics which apply to more than 10% of dark females. All undertail-coverts may be uniformly dirty brown or barred, but the central ones can be dark grey whilst the outer ones show the broad subterminal triangular dark spot. Alternatively all may show a subterminal spot. These spots always reach the edge of the web, a detail relevant when determining the morph of nestlings (see below). The median underwing-coverts occasionally show the same distribution of fringes and spots as in light morph females, the buffish areas being darker. Most dark females have black median underwing-coverts, only the inner ones showing dark buffish tips and dark buffish spots on the axillaries.

Typical **dark morph males** are blacker than dark females, appearing black when observed at distance. On closer view, some males show dark shaft streaks on the breast. Undertail coverts can be dirty brown with darker tips or simply black. The greater underwing-coverts are grey as in light morph birds, but are lacking tips or spots. The median coverts are black and have no dots or only faint dots; in the latter case such dots are also present on the axillaries. Approximately 1% of dark morph males show an enlarged whitish chin area or are grey-brown all over making the dark 'beard' visible in the malar region (Plate 2b). Such a male might be mistaken for a dark morph female by an inexperienced observer, especially in case of a young bird when the yellow colour of the cere is relatively faint. Such males may be more common in the west of its range, as could be implied from Clark's (1981) description.

JUVENILES

All fledglings have very characteristic pale buffish tips on back, wing and tail feathers (Plate 4a). The bars on the tail feathers reach across both webs, whereas in adults the bars are restricted to the inner web only. Generally, the central rectrices are uniform, although bars of varying contrast can be found in some birds (juveniles as well as adults). Colour of cere and eye-rings is similar to adult females. A geographical difference applies to juvenile tail feathers of birds from Crete and Morocco: the rufous bars of Moroccan birds have a stronger red component than those from Crete.

A detailed description of how to classify juvenile Eleonora's Falcons into the main morph categories has been given by Wink *et al.* (1978) and Clark (1981) who discovered independently that morph is inherited according to Mendelian laws, and that dark is the dominant trait. If the abbreviations D=dominant dark and l=recessive light are used, a simple genetic model would distinguish the genotypes 'll', 'lD' and 'DD'. 'DD' and 'lD' develop dark morph adults whereas ll produces only light birds.

The general coloration of the 'll'-genotype (Plate 4b) is slightly paler than the 'lD'-juvenile, a distinctive difference easily noted in the hand. In addition, the distribution of dark brown spots on the undertail-coverts of 'll'-juveniles varies considerably, but these stripes or triangular spots do not extend to the edge of the web. On the other hand, in 'lD'-juveniles such bars extend to the feather edge so that their ends are visible in normal feather positions (Plate 4c).

Within a colony, the frequency of 'll'-juveniles is c. 70% and that of 'lD'-juveniles 28%. The remaining 2% of 'DD'-juveniles can be easily identified as fledglings by their overall black appearance (ignoring the feather tips) (Plate 4d). Once again variation between individuals exists, the contrast of the bars on the undertail-coverts varies in intensity and the dark bars may be wide enough that the lighter stripes almost disappear. The mandibles are totally black (Plate 1d) whereas in all other morphs (at any age) only the tip of the bill is black. This conspicuous black bill colour develops at 10–12 days. A 'DD'-chick may be a sibling to an 'll'-chick, a regular occurrence when both parents belong to the heterozygous dark 'lD'-morph. DD-chicks have been noted throughout the breeding range of the species, from Cyprus to the Atlantic coast. To our knowledge, however, nobody has properly identified a 'DD'-adult. Do they represent those few dark adults which we have seen in the field without barred tail? A ringed 'DD'-juvenile male was found dead six years later in a Cretan colony, but unfortunately, the carcass was already too decomposed to allow a detailed colour determination.

First moult is in May–September of the second calendar year when the yearlings attain adult plumage. Breast feathers moult prior to belly feathers. Birds with a dark

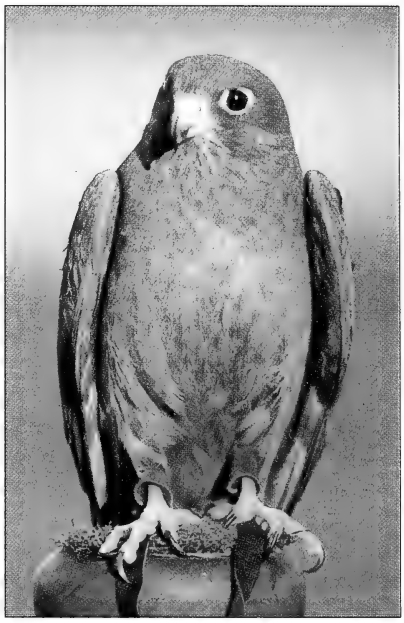

Plate 2. Adult male Eleonora's Falcons *Falco eleonorae*: **a)** exceptional light morph male with black belly; **b)** exceptional dark morph male with such soft coloration that the moustachial stripe is discernible; **c)** Typical light morph male. Intermediate forms to that shown in 2a, as well as that in 3a, are known. (*Dietrich Ristow*, except b, *A. L. Clark*)

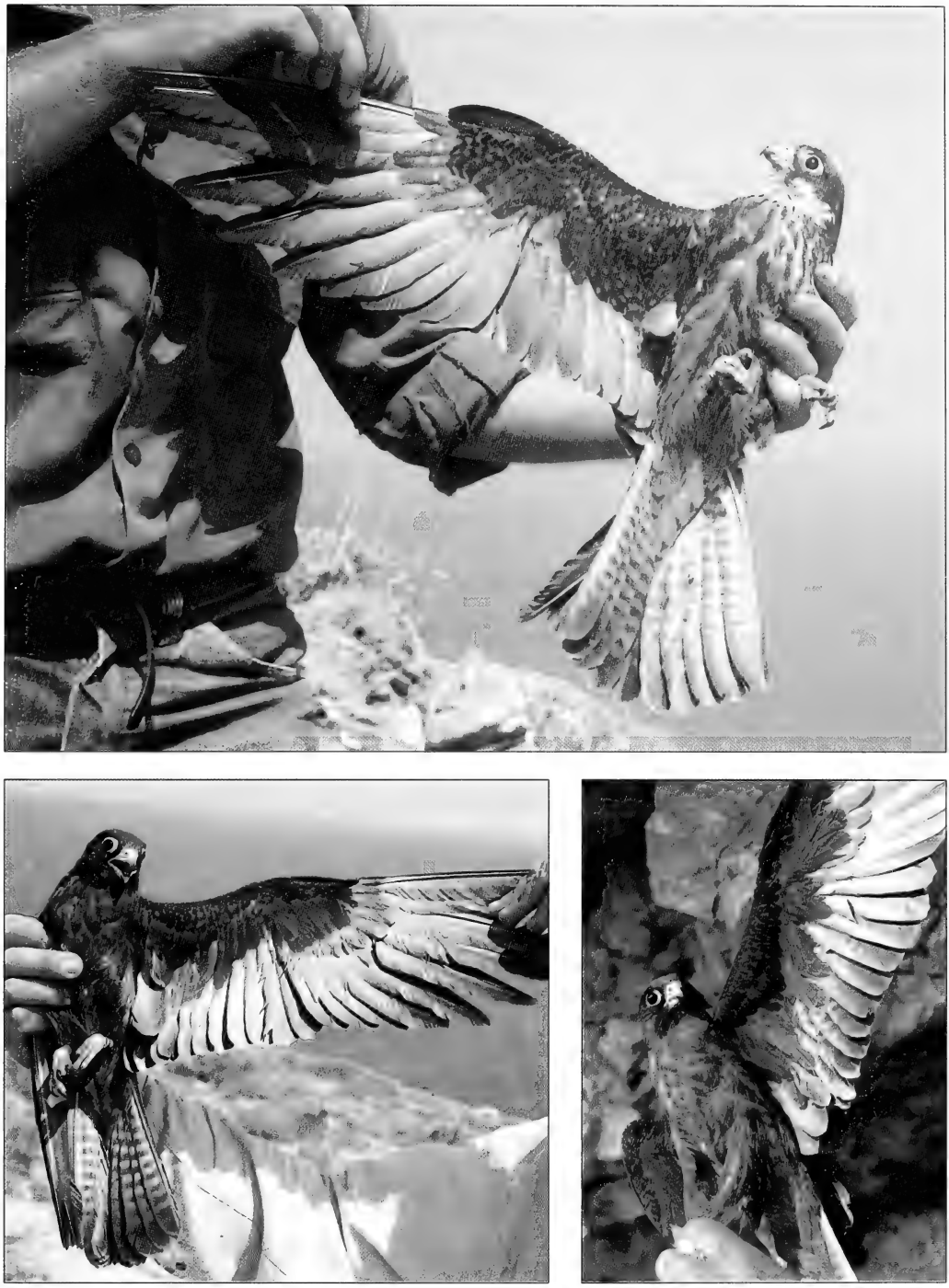

Plate 3. Adult female Eleonora's Falcons *Falco eleonorae*: **a)** typical light morph female—slightly lighter coloured females with a buff background colour exist which show even clearer underwing patterns, and there are also slightly darker females with an intermediate plumage coloration as compared to the males of 2a and c; **b)** typical dark morph female, note that the bill and eyerings appear the same as in 1b and 3a, moustachial stripe not discernible and tail barring is similar to light morph birds in 2c and 3a—dark morph males show the same brown plumage as this bird (compare 1c) or are even blacker, their lower belly and undertail-coverts may be more rufous than in this female, or simply black; **c)** very rare female phenotype: this bird, which is at least three years old, is believed to be a dark morph because of its undertail-coverts—there are a number of dark morph females with face to belly coloration intermediate between this and the bird in 3b, and with underwing coloration similar to 2c. (*Dietrich Ristow*)

mottled breast represent '1D'-yearlings, which are recognizable in this phase even at some distance. Because back feathers, uppertail-, undertail- and lesser underwing-coverts moult prior to remiges and rectrices, and the light buffish feather tips of the fledgling phase are usually abraded by this time, yearlings resemble adults quite closely in the breeding season. But as the tertials and their coverts are moulted last, for any morph the buffish bars at the transition from wing to back are indicative of yearlings until September. During the breeding season, yearlings disperse widely, sometimes far inland, thousands of miles from their breeding cliffs (Ristow *et al.* 1992). Therefore, their moult feathers with the conspicuous bars on the inner web of the remiges are rarely found in the breeding colonies.

ADAPTIVE VALUE OF DARK OR LIGHT COLORATION?

Certainly, coloration is a polygenic trait generating a diversity of intermittent types. However, the degree of plumage polymorphism in Eleonora's Falcon allows dimorphism into 'light' and 'dark' as a simple, but adequate model for most purposes. As to the adaptive value of the morphs, our knowledge is very poor. It has been shown that morph frequency in juveniles is the same as in adults and that pairing systems of adults are statistically random with respect to morph (Wink *et al.* 1978). Morph ratio across the species' breeding range appears relatively constant (Table 1); the exceptionally low dark morph frequencies recorded at the Columbretes and Morocco B3 locations, confirmed by different observer groups, are no doubt real, but we lack a plausible explanation.

Long term observations on morph ratio and sex are available from only one location (Crete K8, a colony with >500 birds) (Table 2). The fluctuations over the years are larger than one would expect in a species for which territorial site tenacity and a possible maximum age of 16 years in the wild have been demonstrated (Ristow *et al.* 1979, Ristow *et al.* 1989). Basic questions such as morph frequency in relation to colony size, nest density, survival rate, breeding success, predator dependence, infestation with parasites or climatic conditions have not been addressed yet. As 'dark' is a dominant trait which seems to be in balance with 'light' under natural conditions, there should be a selective factor which favours the character 'light'. The nature of this selection remains to be discovered in future research.

ACKNOWLEDGEMENTS

The authors are indebted to the Greek Ministry of Agriculture for permitting field studies in Crete. A. L. Clark kindly provided Plate 2b.

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Table 1. Geographic variation of the frequencies of light and dark morphs in Eleonora's Falcon *Falco eleonorae*.

Location*	Year	Sample n	Light %	Dark %	Reference
Cyprus	1957	32	75	25	Vaughan (1961)
Crete K5	1944	50?	70	30	Sielmann et al. (1956)
	1957	25?	80	20	Makatsch (1958)
Crete K9	1985	38	76	24	unpubl.
Crete K10	1985	170	71	29	Ristow et al. (1989)
Crete K12	1981	38	79	21	unpubl.
Sardinia	1972	50?	83	17	Mocci Demartis (1973)
Balearic Is.	1975–6	221	80	20	Mayol (1977)
Columbretes	1964	34	94	6	Bernis et al. (1966)
	1985	32	97	3	Dolc Garcia *et al.* (1987)
Morocco B3	1966	23	96	4	Walter (1979a)
	1972	126	97	3	Clark (1981)
Morocco B2	1959	200	74	26	Vaughan (1961)
	1966	136	82	18	Walter (1979a)
	1969	64	72	28	Walter (1979a)
	1972–4	300	75	25	Clark (1981)

*Following the 1978 resolution of the Raptor Research Foundation Inc., for conservation reasons precise breeding locations are omitted. Abbreviations as used by Walter (1979b) are given where appropriate.

Table 2. Fluctuations of morph frequency within an Aegean colony (Crete K8) of Eleonora's Falcon *Falco eleonorae*.

Year	Sample n	Light %	Dark %	Percentage of dark morphs male	female
1965	146	68	32	41	25
1969	55	73	27	23	30
1975	112	74	26	25	26
1977	137	66	34	45	26
1979	70	77	23	20	25
1980*	64	59	41	48	34
1981*	37	57	43	54	37
1982	81	70	30	43	22
1983	192	70	30	29	30
1985	316	72	28	30	26
1986	100	61	39	44	35
1988	310	68	32	30	34
1990*	27	74	26	20	29
1991	116	75	25	38	20
1997	163	75	25	37	17

* data perhaps biased due to unsystematic recording

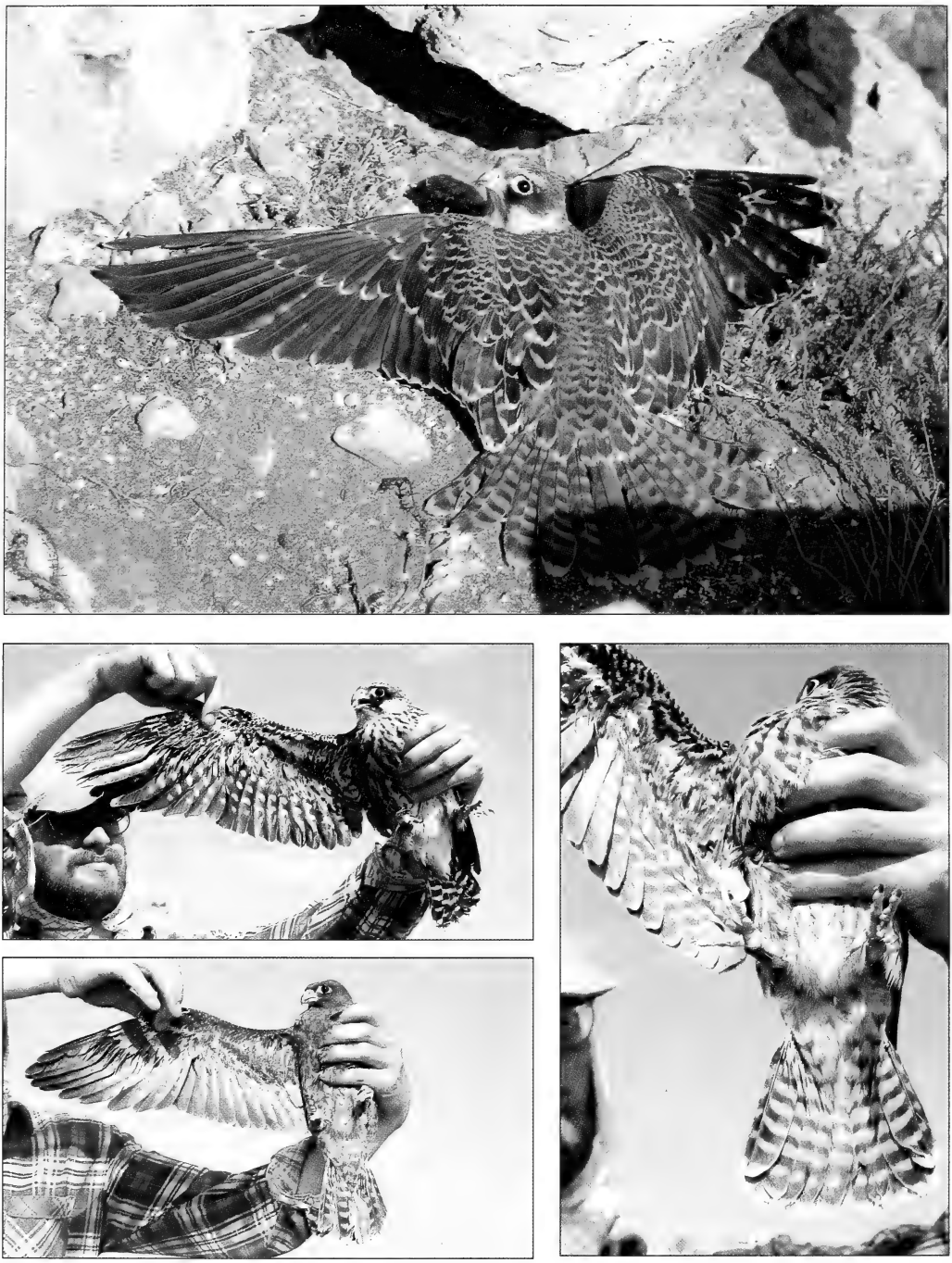

Plate 4. Fledgling Eleonora's Falcons *Falco eleonorae*: **a)** juvenile sun-bathing—feather tip pattern of this homozygous light bird ('ll') is the same as in other morphs, but the pale buff colour becomes increasingly darker in heterozygous and homozygous dark juveniles: it is almost self-evident that the head pattern resembles that of adults 1a and 1b, as the face pattern of a juvenile Hobby *Falco subbuteo* resembles that of the adult; **b)** homozygous light juvenile, brown spots on the undertail-covert shafts are not normally visible—at one year old such juveniles moult into the plumage shown in 2c/3a; **c)** face and underwing pattern of heterozygous dark juveniles ('ID') is similar to 4b, but the shaft streaks on breast and belly are broader, with the brown bars on the undertail-coverts extending to the edge of the web—when one year old, this group will moult into the plumage depicted in 3c; **d)** homozygous dark juvenile ('DD'), the dark central portion of breast and belly feathers is expanded in such a way that it almost occupies the entire feather, see 1d for bill details—the light tips to the rectrices in all juveniles (4b, c and d) help to identify this age group among birds flying overhead. (*Dietrich Ristow*)

The birds of some of Yemen's Red Sea islands

R. F. PORTER AND DR OMAR AL-SAGHIER

FROM 17–22 MARCH 1995, RFP, OA-S and Dr Scott Kennedy, visited four Red Sea islands north and west of Al-Hudaydah. Ornithological information on the 31 island complex is sparse, nonetheless it qualifies for inclusion as an additional Important Bird Area (IBA) to the 57 already identified in the Republic of Yemen (Evans 1994). The four islands visited were Tikfash (where we camped), Qusur (three visits), Bawared (one visit) and Kutman (where we didn't land due to rough seas). Tikfash and Kutman have coral cliffs to c. 35 metres, otherwise the islands are low, flat and sandy. Vegetation is generally sparse, mostly *Suaeda* sp. and *Salsola* sp., and a small mangrove *Avicennia marina* swamp on Tikfash.

Breeding birds

Breeding birds are summarised in Table 1 (figures based on systematic counts on all islands). The behaviour of the Brown Boobies *Sula leucogaster* on the coral cliffs on the east side of Kutman suggested they were about to nest. Small numbers were seen resting on all other islands, and many were at sea. A Goliath Heron *Ardea goliath* on Qusur was on an empty nest. Osprey *Pandion haliaetus* was abundant. Three nests were found at the east end of Tikfash, one of which was one metre high, clearly indicating successive use over many years. Qusur held at least eight nests, but we estimated only four pairs to be present; one had three eggs. It would be unsurprising if the whole island complex held over 100 pairs. A Barbary Falcon *Falco peleginoides* may have been a local breeder. Sooty Gulls *Larus hemprichii* were paired and displaying on Kutman island's cliffs but the only White-eyed Gulls *L. leucopthalmus* were flocks loafing on Qusur (60) and Tikfash (40). More interesting were two pairs of Yellow-legged Gull *L. cachinnans* off the coral cliffs of Kutman. Although no nests were found, Caspian Terns *Sterna caspia* on Qusur probably had eggs as they constantly dive-bombed us in their territories. Predated Brown Noddies *Anous stolidus* strongly indicated a breeding colony on Bawared. A later visit, in e.g. June or July, would prove other tern species to be nesting, including Swift *Sterna bergii* (up to 200 loafing on Tikfash), Lesser Crested *S. bengalensis* and White-cheeked Terns *S. repressa*. Small numbers of Pink-backed Pelican *Pelecanus rufescens* and Spoonbill *Platalea leucorodia* were present in mangroves on Tikfash, suitable breeding habitat. Also here were several singing African Reed Warbler *Acrocephalus baeticatus*.

Plate 1. Osprey *Pandion haliaetus*, at nest off Yemen, March 1995. (*Dr Scott Kennedy*)

Table 1. Breeding birds of four Yemeni Red Sea islands, March 1995. Figures are the estimated number of pairs present. * = 15 pairs of wings found, indicating predation; no live birds seen.

	Tikfash	Kutman	Qusur	Bawared
Striated Heron *Butorides striatus*	2			
Western Reef Heron *Egretta gularis*	5		10	
Goliath Heron *Ardea goliath*	1		1	
Osprey *Pandion haliaetus*	5		4	
Kentish Plover *Charadrius alexandrinus*	4			2
Sooty Gull *Larus hemprichii*				15
Caspian Tern *Sterna caspia*			5	
Saunder's Tern *Sterna saundersi*	15		2	3
Brown Noddy *Anous stolidus*				*
Chestnut-bellied Sandgrouse *Pterocles orientalis*	5			
Black-crowned Finch Lark *Eremopterix nigriceps*	widespread		2	
Hoopoe Lark *Alaemon alaudipes*	widespread		2	

Non-breeding birds

Among non-breeding species were: 50 Crab Plover *Dromas ardeola*, 100 Bar-tailed Godwit *Limosa lapponica*, 80 Curlew Sandpiper *Calidris ferruginea*, 140 Lesser Sand Plover *Charadrius mongolus*, 100 Turnstone *Arenaria interpres* and 21 Great Black-headed Gull *Larus ichthyaetus*, whilst at sea three Arctic Skua *Stercorarius parasiticus*, two Persian *Puffinus persicus* and eight Wedge-tailed Shearwaters *P. pacificus* were observed.

Caspian Terns *Sterna caspia* by D Powell

Comment

These observations are relevant to proposals currently being considered to introduce tourism to some Red Sea islands. Such a move poses a serious threat to breeding colonies. Further research and study of breeding species on these islands is needed, in order that informed advice may be given to the relevant authorities and plans agreed to protect sites during the breeding season. For other observations relevant to these islands see Evans (1989), Evans (1994) and Phillips (1982).

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Phillips, N. R. (1982) Observations on the birds of North Yemen in 1979. *Sandgrouse* 4: 37–59.

R. F. Porter, BirdLife International, Wellbrook Court, Girton Road, Cambridge CB3 0NA, U. K.
Dr Omar Al-Saghier, AREA, P. O. Box 87148, Dhamar, Republic of Yemen.

REVIEWS & Recent Literature

Adamian, M. S. & Klem, D. Jr. (1997) *A field guide to birds of Armenia.* American University of Armenia, Oakland, California. pp 223, 61 colour plates, 348 distribution maps, £29 (field cover), £33 (hard cover).

As the dust jacket boldly announces, this book is 'the most accurate, comprehensive, and technically sophisticated publication on the birds of Armenia, and Caucasia in general', and, as such, it deserves to be on the bookshelves of all those with a serious interest in the distributions of Western Palearctic birds. Produced by an international team, it presents an eye-catching design amongst the near-deluge of field guides currently hitting the market.

The book can be broadly divided into three sections. The introductory chapters which, in addition to covering conventional field guide themes e.g. bird topography and identification fundamentals etc., discuss bird conservation and the history of ornithological research within the country, are followed by the species accounts, with facing page plates painted by a team of first-rate British artists, including Clive Byers, John Davis, Ian Lewington and Chris Rose. For those readers who consider obtaining a book on the strength of the plates alone, this work should certainly provoke a second look; almost all are of a very high standard with strong background contents. Worthy of special remark are the ten largely superb raptor plates, the nuthatches and allies, and many of the Fringillidae. Some of the other passerines are a little less imbued with life, but nonetheless all are still of sufficient calibre to fulfill their purpose. Bird names are in both Armenian and English, but the text, which covers subspecies' occurring in the country, adult and juvenile plumage descriptions, similar species, behaviour, habitat, food, nest and eggs, and typically occupies 6–12 lines, is entirely in English. The species distribution maps, which occupy the third major section of the book, will be of most value to researchers. These, at first, appear almost bewildering in their complexity, due to the large quantities of data presented within each, but assume greater user-friendliness with time. Species name and broad status is presented in the bottom left corner of all maps, which are also cross-referenced to the relevant plate. The range of years, e.g. 1981–1995, from which documented records were used to compile each map is shown in the upper right corner. Black dots indicate such documented occurrences, whilst broad distribution is indicated by four colour-coded and easily defined abundance categories: common, uncommon, rare and possible.

The book concludes with a glossary, indices of English and Armenian bird names; and a checklist of all species recorded. Whilst, I am sure many OSME members will not visualise this work as an essential purchase, it deserves to succeed. Certainly, amongst English language publications, few field guides can claim to present so much new information, as well as being illustrated to such a high standard.

Guy M. Kirwan

Lefranc, N. & Worfolk, T. (1997) *Shrikes. A guide to the shrikes of the world.* Pica Press, Mountfield, Sussex. pp 192, 16 colour plates, 24 distribution maps, 26 line drawings, £25.

By now, most birders will surely either be confirmed collectors or disinterested spectators of the current populist monograph series'. This, the latest offering from the Pica Press stable, will probably neither gain new advocates of the genre, nor disappoint those religiously acquiring each new title as it appears. However, for those whose horizons do not stretch beyond the confines of the

Western Palearctic, the fact that this title contains just nine species (including two vagrants) of relevance (with a tenth, Bay-backed Shrike *Lanius vittatus*, occasionally wandering to eastern Arabia), all of which are covered by the appropriate volume of *BWP*, will surely be a disincentive to purchase. Previous reviews, within *OSME Bulletin* and *Sandgrouse*, have outlined the scope and features common to this particular series, thus here I concentrate on this book's usefulness to a Middle Eastern audience.

Firstly, for those species with which I am familiar, the author is to be congratulated on his text which, with a few generally insignificant exceptions, is polished, readable and up-to-date. Tim Worfolk's attractive and uncluttered plates are pleasing and seemingly largely accurate, although they lack significant background embellishment, unlike his line drawings here, which suggest a good series of plates could have been made real works of art, not just functional identification aids. The publisher is to be praised for heeding the oft-repeated criticism of the maps in previous volumes, by incorporating political boundaries and additional geophysical features. As a result, the distribution maps have improved significantly.

For those concerned with taxonomy, Lefranc adopts a generally conservative approach e.g. the two (sub)species of Chinese Grey Shrike *Lanius sphenocercus* are treated as one species, despite their radically different appearance, and *L. i. phoenicuroides* remains subsumed within Isabelline Shrike *L. isabellinus*, *contra* the findings of Kryukov (1995) and Panov (1995), who advised specific recognition for this taxon (see *Sandgrouse* 19 (1): 74). Minor criticisms of the text concern the fact that the only record of Southern Grey Shrike *L. meridionalis* in Turkey, based on a now untraceable specimen, is not mentioned; passage dates for those species occurring in Turkey are usually omitted, despite their availability and use of similar information for other Middle Eastern countries; and, from personal observations and also *contra* Roselaar (1995), I suspect that the westernmost extent of the *niloticus* race of Woodchat Shrike *L. senator* is placed too far west.

Nonetheless, despite such minor points, this is a creditable piece of work, which successfully captures the interesting life histories of the three genera of shrikes. If you lack *BWP* and/or any of the other major distributional surveys which cover the family, invest in this volume.

Guy M. Kirwan

Magnin, G. & Yarar, M. (1997) *Important Bird Areas in Turkey.* Doğal Hayatı Koruma Derneği, Istanbul. pp 313, several colour photographs and line drawings, 84 maps, $30.

This is the most important publication about the conservation of Turkish wildlife to have ever been produced. Doğal Hayatı Koruma Derneği (the Society for the Protection of Nature in Turkey) have shattered the image of a large, predominantly pastoral country containing a great variety of untarnished habitats and commensurate bird populations. The list of IBAs describe a depressing litany of ecological disasters caused by the rapid economic development of the last 25 years. The worst offender has been and still is, the monolithic state irrigation and water company, DSI. Nearly all of the important wetlands and lakes, mainly for their huge numbers of wintering waterfowl, have the scars of drainage ditches and concrete irrigation channels, canalised rivers and polluted waterways. The only good news is that some large reservoirs have recently been found to be important for wintering waterfowl. What is so pleasing is that the contents, layout and overall production standards of this work are of such excellent quality and a model for other IBA inventories. This book is therefore an excellent riposte to the continuing environmental degradation, by establishing the first credible evidence and arguments for the conservation of key wildlife sites within Turkey.

The total of 97 IBAs within the inventory is an increase of 18 on *Important Bird Areas in Europe* (Grimmett & Jones 1989), through omissions and the finding of new sites often from exhaustive surveys by the authors. All national IBA inventories are drawn up using standard methods and criteria to ensure parity between countries. The authors state that coverage is complete for large wetlands,

reasonable for small wetlands and most poorly known are mountain, forest and steppe habitats; the south-east and east of the country are the most poorly covered regions for all habitats because of the political unrest. Of the 97 IBAs, most are wetlands but there is an increasing proportion of forest and steppe sites for remnant populations of Black Vulture *Aegypius monachus*, Great Bustard *Otis tarda* and Lesser Kestrel *Falco naumanni*. It is a depressing sign that these habitats and their birds are now so rare that they now receive site-based conservation concern.

There are very useful introductory paragraphs on IBA concept and development in Turkey, plus background socio-economic data, history of wildlife conservation legislation, a short conclusions chapter and various useful appendices. These provide essential context for the bulk of the book, which comprises the 97 site accounts together with a map showing the location and habitats, using rather elegant and original graphics. For each site there is standard information on site name and location, plus three sections entitled 'Site Description', 'Birds' and 'Conservation Issues'. The amount of information on the first two is variable but standardised. The more important 'Birds' section succinctly lists those species that qualify the site under IBA criteria and sometimes other useful 'additional bird information'. The state of knowledge of a site (the more important wetland sites are the best known) as well as its degree of current threat reflects the length of the 'Conservation Issues' section; Akdağ, a recently surveyed forest site for Black Vulture receives five lines but the Göksu delta receives two pages. Given that the total survey time at Akdağ is probably less than 24 hours and for Göksu must run to many man-years, the former is getting the better deal. This also illustrates that well directed survey work in, for instance, a two week trip, can produce very valuable results.

If you are interested in Turkish birds then buy this book. If you visit Turkey, perhaps check with DHKD which IBAs or potential IBAs are priorities for re-survey. Whatever you manage to do, send them your data and observations plus photographs of any current threats. If you travel with a holiday company then try to encourage them to make a donation for every IBA that you visit. Above all, take this book and the desperate plight of IBAs in Turkey seriously. The Turkish government has; the day that the book was officially launched (with both English and Turkish versions) in spring 1997, the government announced that five wetlands were to be notified as Ramsar sites. A brilliant achievement!.

Stephen Parr

Morgan, J. H. & Shirihai, H. (1997) *Passerines and passerine migration in Eilat.* International Birdwatching Centre Eilat Tech. Publ. Vol. 6 No. 1. pp 50, 210 colour photographs, IS50.

The permanent ringing station operated by the International Birdwatching Centre at Eilat, estalished in 1984, is believed to be the only regularly operated ringing site in the Middle East. Since its establishment, regular ringing has been undertaken in spring and autumn of every year, except autumn 1987 when ringing was not permitted. This booklet presents an analysis of data accumulated on passerine and near-passerine (plus Quail *Coturnix coturnix*) migration at Eilat during 1984–1993, with a few additional records up to 1996 also included. The majority of species accounts draw on trapping records but, despite the best efforts of the authors, sight records have had to suffice for some species.

The introductory sections cover general aspects about the migration of passerines through Eilat, the habitats available, operation of the ringing station and methods of data analysis. These sections provide an interesting discussion of passerine migration in the area and although there are a few typographical errors, they did not detract from my understanding of the text. The main substance of the booklet is taken up with some general conclusions about passerine migration at Eilat and the species accounts, which vary in length from a couple of lines for accidental species (e.g. Dusky Warbler *Phylloscopus fuscatus*), to a page for common migrants (e.g. Chiffchaff *P. collybita*). Each account contains a brief statement of status of the species at Eilat and a summary of data collected by the ringing station. Most accounts include a graph depicting the pattern of passage split into five-day periods.

These provide a clear view of the main passage periods, with additional text providing further explanation where necessary. Where sufficient data exists, the differing timings of passage by males and females or different populations are also discussed. Details of measurements collected from captured birds are also provided and will provide a useful data source for future researchers.

A selection of 21 high quality colour photographs, the majority of which have been taken in the hand, are included in the centre of the booklet. Most of these involve some of the more difficult to identify species, e.g. Small Skylark *Alauda gulgula* and Hume's Short-toed Lark *Calandrella acutirostris*, and help to break up the species accounts and provide the reader with useful reference material.

In conclusion, this well-produced booklet presents a thoroughly interesting discussion of passerine and near-passerine migration through Eilat and can be recommended to anyone with an interest in Middle Eastern ornithology and migration in general.

Chris Bradshaw

Welch, H., Rose, L., Moore D., Oddie, B. & Sigg H. (1996) *Where to watch birds in Turkey, Greece and Cyprus.* Hamlyn, London, pp 216, 8 colour plates, £16.99.

Green, I. & Moorhouse, N. (1995) *A birdwatchers' guide to Turkey.* Prion Ltd, Perry, pp 122, £10.95.

These two books, published approximately a year apart, effectively compile the experience of many birders in Turkey (and here I review the former's treatment of birding in this country, not Greece and Cyprus). The Welch *et al.* guide covers 74 Turkish birding sites as well as four archaeologic sites where interesting birdwatching is to be had, and four mountain passes located between major sites. Turkey is treated in five geographic regions; a short introduction to each is presented, with sketch maps showing the major roads. Each site is briefly introduced and strategic information is given under 'timing','birds' and 'access'. For most of the more difficult-to-find places, meticulous site maps and approximate locations for sought-after species are given. Text and maps are fairly accurate and up-to-date. One criticism is that the site introduction often mentions several species not listed in the species section which itself often includes species rare at the site and may be a source of confusion for the inexperienced reader. Prized species are illustrated in eight relatively accurate colour plates, but are haphazardly grouped and of very limited use. Nevertheless the guide has possibly the most extensive coverage and is the most up-to-date publication for any birder planning to visit Turkey.

The Green & Moorhouse guide follows the basic template of the other national guides published by Prion, with well-prepared and useful sections on travelling to and in Turkey in general and covering a number of other subjects ranging from visas to camping and food to people and language. Thirty-seven main sites and a number of minor sites are grouped into seven geographical regions. Each site account is neatly arranged with accurate and useful information on location, accommodation, strategy, birds and other wildlife. Most site accounts also have neat and accurate maps. Site accounts are followed by a useful selected species section where selected key species are cross-referenced to the sites. The book also includes a not too up-to-date coded birdlist which omits e.g. Olive-backed Pipit *Anthus hodgsoni* and Long-tailed Shrike *Lanius schach*, and sections on conservation, further reading and a selected bibliography.

Comparing the two guides, both have advantages and disadvantages, and birders with different priorities might find either useful. The former guide is more expensive and slightly less user friendly, but is more up-to-date with more detailed maps and has much more extensive Turkish coverage (as well as including Greece and Cyprus). Birders expecting to visit all three countries, Turkish residents or those planning repeated or prolonged stays in Turkey will find it value for money. The latter guide has a more

limited coverage and is slightly less up-to-date, but is cheaper, very neat and easy to use and includes more comprehensive general information on Turkey and non-avian wildlife at specific sites. Birders visiting Turkey for a limited time and principally seeking the standard specialities may favour it.

Y. Sancar Baris

ALSO RECEIVED

Kinzelbach, R. & Kasparek, M. (eds.) (1997) *Zoology in the Middle East Volume 14.* Kasparek Verlag, Heidelberg.

The first 1997 volume of *Zoology in the Middle East* contains the usual variety of papers on mammals, birds, reptiles and insects in the region. The bird section has three papers: the breeding biology of Spur-winged Plover *Hoplopterus spinosus* (in the Gaza strip), breeding waterbirds in the Gediz Delta (western Turkey) and aspects of coastal migation off Cape Elea (Cyprus). Two of the mammal papers also possess ornithological interest: a study of Eagle Owl *Bubo bubo* pellets from Azraq (Jordan) and the mammals of the huge Harrat al-Harrah protected area in the Saudi Arabian basalt desert—one of the last strongholds of the Houbara Bustard *Chlamydotis undulata macqueeni* in Arabia.

Ian J. Andrews

Kinzelbach, R. & Kasparek, M. (eds.) (1997) *Zoology in the Middle East Volume 15.* Kasparek Verlag, Heidelberg.

Of special interest to birders are the first reports in Egypt and the Western Palearctic of African Grey Hornbill *Tockus nasutus* and Crimson-rumped Waxbill *Estrilda rhodopyga*, and only the second record of African Silverbill *Lonchura cantans* in Egypt, outside the Gebel Elba area. All were in December 1996 in the Kitchener island area of Aswan. However it is possible that all three records may relate to escaped individuals. Other ornithological papers discuss Little Owl *Athene noctua* diet in Jordan and a significant movement of raptors in Yemen. Also of interest are records of Striped Dolphin *Stenella coeruleoalba* in southern Turkey and the Naked-bellied Tomb Bat *Taphozous nudiventris* in Jordan.

RECENT LITERATURE

Compiled by Guy M. Kirwan & Effie Warr

This review, which is produced annually, principally covers papers published in the West European literature considered to be most relevant to birders resident in the region. All were published in 1997 unless otherwise stated. Papers dealing with aspects of the following topics are usually included: status and distribution, breeding biology, taxonomy and identification. Papers co-written by more than two authors are referenced to the lead author's name alone. The compilers would welcome the submission of material for potential inclusion, preferably by sending a reprint, alternatively the citation and a summary of the contents. These should be sent via the Society's address: OSME, c/o The Lodge, Sandy, Beds SG19 2DL, U. K.

Regional

Alström, P. & Mild, K. The identification of the Water Pipit complex: *Anthus spinoletta, A. petrosus, A. rubescens* and Rosy Pipit *A. roseatus*. *Limicola* 11: 1–24 [*in German*].

Alström, P. & Mild, K. Identification of Blyth's Pipit *Anthus godlewskii*. *Limicola* 11: 97–119 [*in German*].

Bahat, O. (1996) Tracking Griffon Vultures in the Middle East. *World Working Group on Birds of Prey and Owls Newsletter* 23–24: 28.

Barthel, P. H. Short comments on identification of Audouin's Gull *Larus audouinii*. *Limicola* 11: 286–295 [*in German*].

Clark, W. S. Identification of perched Montagu's and Pallid Harriers. *Birding World* 10: 267–269.

Corso, A. Variability of identification characters of Isabelline Wheatear. *Dutch Birding* 19: 153–165.

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Cowan, P. J. What is a desert bird?. *Bull. Brit. Orn. Club* 117: 299–303.

Cowles, G. S. George Latimer Bates 1863–1940: an investigation into the history of his unpublished 'Birds of Arabia' manuscripts. *Archives of Nat. Hist.* 24: 213–235.

Forsman, D. & Shirihai, H. Identification, ageing and sexing of Honey-buzzard. *Dutch Birding* 19: 1–7.

Frede, M. & Langbehn, H. A contribution to the identification and distribution of the Armenian Gull. *Alula* 3: 102–108.

Goriup, P. D. The world status of the Houbara Bustard *Chlamydotis undulata*. *Bird Conserv. International* 7: 373–397.

Hockey, P. A. R. & Aspinall, S. J. Why do Crab Plovers *Dromas ardeola* breed in colonies? *Wader Study Group Bull.* 82: 38–42.

Kennerley, P. R. Dark Common Terns. *Dutch Birding* 19: 283–284 [*discusses the identification of the subspecies* tibetana, *a potential vagrant to the Middle East*].

Kirwan, G. M. (1996) The status of the Red Knot, *Calidris canutus*, in the Middle East. *Zool. Middle East* 13: 17–23.

Leisler, B. *et al.* Taxonomy and phylogeny of reed warblers (genus *Acrocephalus*) based on mtDNA sequences and morphology. *J. Orn.* 138: 469–496.

Madge, S. Identification of Hume's Warbler. *Brit. Birds* 90: 571–575.

Martens, J. & Steil, B. Reviergesänge und Speziesdfferenzierung in der Klappergrasmücken-Gruppe *Sylvia* [*curruca*]. *J. Orn.* 138: 1–23 [althaea *and* minula *are viewed as separate species on the basis of analysis of territorial songs*].

Olsen, K. M. & Shirihai, H. Field identifi cation of White-cheeked Tern. *Alula* 3: 150–159.

Osborne, P. E. *et al.* Migration of the Houbara Bustard *Chlamydotis undulata* from Abu Dhabi to Turkmenistan; the first results from satellite tracking results. *Ibis* 139: 192–196.

Pegoraro, K. Waldrapp: die letzten Lebensstunden einer Vogelart. *Der Falke* 44: 36–41.

Sangster, G. Trends in systematics. Species limits in flamingos, with comments on lack of consensus in taxonomy. *Dutch Birding* 19: 193–198.

Sangster, G. Trends in systematics. *Acrocephalus* and *Hippolais* relationships: shaking the tree. *Dutch Birding* 19: 294–300.

Small, B. Head pattern of Blyth's Pipit. *Dutch Birding* 19: 189–190.

Cyprus

Flint, P. Coasting migration of waterbirds at Cape Elea, Cyprus. *Zool. Middle East* 14: 69–72.

Frost, B. Raptor migration: Akrotiri revisited. *Royal Air Force Orn. Soc. Newsletter* 63: 7–10.

Oates, J. Finding Demoiselle Cranes in Cyprus. *Birding World* 10: 258.

Egypt

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Robel, D. Records of the Grey Hornbill (*Tockus nasutus*), Crimson-rumped Waxbill (*Estrilda rhodopyga*) and African Silverbill (*Lonchura cantans*) in Egypt. *Zool. Middle East* 15: 33–35.

Israel

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Uhlig, R. & Uhlig, S. Observations on the ethology of Tristram's Grackle (*Onychognathus tristramii*). *Mitt. Zool. Mus. Berlin 73 Suppl.: Ann. Orn.* 21: 163–165.

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Yosef, R. (1996) Raptors feeding on migration at Eilat, Israel: opportunistic behavior or migratory strategy?. *J. Raptor Res.* 30: 242–245.

Yosef, R. Reactions of birds to an earthquake. *Bird Study* 44: 123–124.

Yosef, R. Reactions of Grey Herons (*Ardea cinerea*) to seismic tremors. *J. Orn.* 138: 543–546.

Yosef, R. Clues to the migratory routes of the eastern flyway of the Western Palearctic – ringing recoveries at Eilat, Israel [I – *Ciconiiformes, Charadriiformes, Coraciiformes,* and *Passeriformes.*] *Vogelwarte* 39: 131–140.

Jordan

Al-Melhim, W. N. *et al.* On the diet of the Little Owl, *Athene noctua*, in the Safawi area, eastern Jordan. *Zool. Middle East* 15: 19–28.

Andrews, I. J. Birding in Jordan. *Dutch Birding* 19: 49–60.

van der Vliet, R. & de Lange, R. 'Basalt Wheatear'. *Dutch Birding* 19: 18–19.

Saudi Arabia

Combreau, O. & Smith, T. R. Summer habitat selection by houbara bustards introduced in central Saudi Arabia. *J. Arid Environment* 36: 149–160.

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Turkey

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of White-headed Ducks at Burdur Lake, Turkey. *Threatened Waterfowl Specialist Group News* 9: 16–18.

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[*House Sparrows occupying nests in House Martin colony*]

United Arab Emirates

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Yemen

Berthold, P. *et al.* Satelliten-Telemetrie beim Weißstorch *Ciconia ciconia*: Wanderung eines Ost-Storchs in den Süd-Jemen. *J. Orn.* 138: 546–549
[*Yemen*]

Kasparek, M. On the migration of raptors through Yemen. *Zool. Middle East* 15: 29–31.

Around the Region

compiled by
Pete Davidson and Guy M. Kirwan

Records in *Around the Region* are published for interest only; their inclusion does not imply acceptance by the records committee of the relevant country. Some records have been authenticated, including all those from Cyprus and Oman, and these are indicated. All records refer to 1997 unless otherwise stated.

Records and photographs for *Sandgrouse* 20 (2) should be sent, by July 15, to Around the Region, OSME, c/o The Lodge, Sandy, Bedfordshire SG19 2DL, U.K.

Bee-eaters
Merops apiaster
by D. Powell

The ninth **Great Crested Grebe** *Podiceps cristatus* in UAE was at the Emirates Golf Course on 20 March. Interesting records from a pelagic off al-Mukalla, south Yemen on 1 November included the second country records of **Black-bellied Storm-petrel** *Fregetta tropica* (single) and **Pale-footed Shearwater** *Puffinus carneipes* (five), in addition to 40 **Jouanin's Petrel** *Bulweria fallax* and 55 **Wilson's Storm-petrel** *Oceanites oceanicus*. Significant seabird records from Israel involved a single **Leach's Storm-petrel** *Oceanodroma leucorhoa* off Jaffa, Tel Aviv on 10 December with 45 off there on 12 Janaury 1998, and, more incredibly, a first-stage immature male **Lesser Frigatebird** *Fregata ariel*, the first record for the Western Palearctic if accepted, over Eilat North Beach on 1 December (*Birding World* 10: 454). Three **Sooty Shearwater** *Puffinus griseus* off Fujeirah on 15 May and a **Brown Booby** *Sula leucogaster* off there on 12 April were the third records in UAE. A Brown Booby at Abu Zenima, Egypt on 27 December was the most northerly record ever in the Gulf of Suez, whilst 24 **Shag** *Phalacrocorax aristotelis* at Iswayla Island (a potential breeding area) near Marsa Matruh on 3 January 1998 is the largest number noted in Egypt.

A **Pink-backed Pelican** *Pelecanus rufescens* was at Bet Shean Valley fishponds from 6 May–21 July at least, the sixth record for Israel, and a **Yellow-billed Stork** *Mycteria ibis* at Ma'agan Mikhael on 20 July constitutes the 19th record. Following photos taken by Jens Eriksen, the following records of **Yellow Bittern** *Ixobrychus sinensis* have been accepted as the first in Oman (and the Middle East): singles at Khor Taqah on 20 July 1984, Salalah on 9 June 1986 and Khor Rouri on 21 June 1996, with three at Salalah on 29 May 1997. Also in Oman, there was an **Intermediate Egret** *Egretta intermedia* at Sohar from 19 December until the year end. There was still a **Black-headed Heron** *Ardea melanocephala* at Aden marsh, south Yemen on 30 October. In Egypt, three **Black Stork** *Ciconia nigra* were south of Aswan on 11 December; Goodman & Meininger (1989) list only two relatively recent winter records (in 1952 and 1979). In Oman, one at Raysut on 23 January was the second country record. **Greater Flamingo** *Phoenicopterus ruber* rarely features in these reports, therefore it is of interest to record that c. 20,000 were at Jabbul

saltlake on 2 December, the largest number ever recorded in Syria (2400 **Shoveler** *Anas clypeata* recorded there on the same day also appears to be the largest ever country total). Records of **White-fronted** *Anser albifrons* (sixth) and **Lesser White-fronted Goose** *Anser erythropus* (first), **Cotton Teal** *Nettapus coromandelianus* (fifth) and **Red-crested Pochard** *Netta rufina* (sixth) in UAE in November 1996 have recently been accepted. Five **Ruddy Shelduck** *Tadorna ferruginea* at Ramtha on 17 November was the 22nd record in UAE (and one of six records, one of which has been accepted, during 1997), whilst a **Red-breasted Merganser** *Mergus serrator* on the sea off Umm al Quwain on 7 December was the third country record; the others were in October 1972 and November–December 1988 (Richardson & Aspinall 1996).

The third **Crested Honey Buzzard** *Pernis ptilorhyncus* in Saudi Arabia was photographed at Thumamah, Riyadh on 1–2 October (*Dutch Birding* 19 (5): 256); the first two were in October 1994 (Symens *et al.* 1996) and in UAE the fourth and fifth records were at Bateen Gardens on 23 January and Mushrif Park on 2 January 1998. Three records of **Black-shouldered Kite** *Elanus caeruleus* in UAE will be the 5–7th records if accepted. A **Shikra** *Accipiter badius* reported at Ramtha tip in mid-December 1996 is potentially the second record for UAE (although an escape may have been involved), whilst single **Goshawks** *A. gentilis* at Hamraniyah on 14 November and Al Wathba around 22 November were the fifth and sixth records. Yet another new species for the Emirates, if accepted as a wild bird, would be a **White-eyed Buzzard** *Butastur teesa* at Nadd al Sheba on 8–9 December, but local opinion favoured a captive origin for this individual (*Birding World* 10: 454). UAE's seventh **Lesser Spotted Eagle** *Aquila pomarina* was at Ras al Khaimah airport on 26 December 1996 (the record at Ramtha tip on 25 October–20 December 1996, incorrectly stated to have been the ninth record–*Sandgrouse* 19: 77–was the sixth), and three **Golden Eagle** *A. chrysaetos* were also seen in UAE in December 1996 (the 5–7th records, two of which have been accepted). Four Lesser Spotted Eagles at Ta'izz sewage farm on 28 October, with one still present on 9 November is perhaps only the second reliable record from Yemen. The first record of the rufous phase of **Booted Eagle** *Hieraaetus pennatus* in Cyprus involved one in the Kyrenia mountains on three dates between 4–19 September (see Plate 1). A count of 150 **Lesser Kestrel** *Falco naumanni* at Ras al Khaimah on 16 April is the largest flock of this globally threatened species to have been recorded in UAE, and a **Merlin** *F. columbarius* at Al Ghar lake on 14 December was the 15th record. A **Sooty Falcon** *F. concolor* at Al Midman, Yemen on 25 October was more than 50 km inland.

In Yemen, single **Little Button Quail** *Turnix sylvatica* were heard at Al Qutay, on 24 October and Al Midman the following day. A **Baillon's Crake** *Porzana pusilla* on Das Island, UAE was only about the sixth country record since 1987. Migrant **Corncrakes** *Crex crex* were at Burdur Gölü, Turkey on 21 August and in Abu Dhabi on 11 October (the first UAE record since 1995). The 6–7th records of **White-breasted Waterhen** *Amaurornis phoenicurus* in UAE were at the Emirates Golf Course on 17–18 December and Safa Park on 24–27 December. A **Little Bustard** *Tetrax tetrax* at Mushref Palace Gardens, Abu Dhabi, on 17 December 1996 awaits confirmation as the first UAE record of this globally near-threatened species. The eighth record of **Common Crane** *Grus grus* in UAE involved two at Al Ain camel track on 12 December–7 January 1998. In western Saudi Arabia, a total of at least 12,000 **Demoiselle Crane** *Anthropoides virgo* flew south over Jeddah between 15–20 September.

Two **Crab Plover** *Dromas ardeola* at Ma'agan Mikhael on 20 July has been accepted as the third record in Israel (*Brit. Birds* 91: 44). A **Great Stone Plover** at Schnaas on 20 January was the fifth Omani record. An unseasonal **Black-winged Pratincole** *Glareola nordmanni* was at Sabkha al-Fasl, Saudi Arabia on 12 June, whilst the fourth Yemeni record involved two first-winters at Ta'izz sewage lagoons on 8 November (previous records were in April 1993 and October 1996), and the eighth **Little Pratincole** *G. lactea* in UAE was at the Emirates Golf Course on 16 December–26 January 1998 at least. Five of the latter species were at Khor Taqah, Oman on 30 November–1 December. The second **Three-banded Plover** *Charadrius tricollaris* in Egypt and the Western Palearctic was well-watched at Aswan on 14 December. The first, at Gebel Asfar, Cairo on 5–26 March 1993, has never been formally described although a photograph has been published (*Birding World* 6: 100). The third **Kittlitz's Plover** *C. pecuaris* in Cyprus, one in summer plumage at Koulia Reservoir on 10 and 12 March 1995, the first **Pacific Golden Plover** *Pluvialis fulva*, at Zakaki marshes in August 1995, and a **White-tailed Plover** *Chettusia leucura* at Akrotiri on 7 March 1996 have all recently been accepted (*Cyprus Orn. Soc. (1957) Ann. Rep.* 43). In Israel, there was a Pacific

Plate 1. Booted Eagle *Hieraaetus pennatus*, rufous phase, Kyrenia mountains, Cyprus, September1997. (*Peter Flint*)

Golden Plover at Kefar Rupin on 4–27 September and, in UAE, a **European Golden Plover** *P. apricaria* at Khor Dubai on 28 October–9 November. An adult **Red-wattled Plover** *Hoplopterus indicus* which remained at Dhahran refuse tip between 4–26 December was c. 13th record in the Eastern Province of Saudi Arabia. The second record of **Spur-winged Plover** *H. spinosus* in Bahrain involved two birds at Badan on 18 November (*Birding World* 10: 420); the first was in August–October 1984 (Nightingale & Hill 1993). UAE's ninth **Sociable Plover** *Chettusia gregaria* at Abu Dhabi golf course on 13–15 January closely followed the eighth record, of two, at Dibba on 30 November 1996. Numbers of wintering **Great Knot** *Calidris tenuirostris* at Khor al Beidah, UAE, had risen to 32 by 24 January, and two **Knot** *Calidris canutus* at Al Jazeerah Khor on 13 April will constitute the fourth record in UAE, if accepted. The 11–12th **Long-toed Stints** *Calidris subminuta* in UAE were at Mafraq on 25 April and Dhayah on 27 September, and, in Yemen there were singles at Taiz marsh on 28 October and Amria on 8 November. In November, a **Long-billed Dowitcher** *Limnodromus scolopaceus* remained at Sohar, Oman (*Dutch Birding* 19: 305), the only previous Middle Eastern record was also in Oman, in 1985–6 (OBRC 1994). The fourth **Red-necked Stint** *C. ruficollis* in UAE was at Musaffah on 7 November. The fifth and sixth records of **Curlew** *Numenius arquata* in Syria were of three at Jabbul saltlake on 21 November and five at Tel Efendi, Euphrates on 4 December. In Oman, a **Grey Phalarope** *Phalaropus fulicarius* was at Khor Rouri on 25 February.

An exceptional count of 4000 **Sooty Gull** *Larus hemprichii* was made along Fujeirah seafront on 15 May, the largest number ever recorded in UAE and 10% of the estimated world population. A **Mediterranean Gull** *L. melanocephalus* at Ramtha lagoons on 17–20 February was the third record in UAE (although, with the rejection of a formerly accepted record from Ramtha tip in January 1995, none have been ratified by the Emirates Bird Records Committee) as was a **Little Gull** *L. minutus* off Kalba on 13 November, but rarer still was a **Great Black-backed Gull** *L. marinus*, also at Kalba on 19 March, which was potentially the first country record. On Cyprus, where there are few previous records, a Great Black-backed Gull was at Larnaca salt lake on 19 February 1996 and, in Turkey, one was at the Göksu Delta on 2 November. Four **Lesser Crested Tern** *Sterna bengalensis* at Abu Zenima on 27 December was the first midwinter record in Egypt. Two **Sandwich Tern** *Sterna sandvicensis* off Tartus on 13 April 1995 is the first Syrian record (Baumgart *et al.* 1996). This addition to the Syrian list is not unexpected, given that the species winters in the eastern Mediterranean and Syria has received little ornithological coverage to date. If confirmed, a **Black Tern** *Chlidonias niger* at Abu Dhabi Eastern Lagoon on 11 August will be the fourth record in UAE.

Plate 2. African Skimmers *Rhynchops flavirostris*, Abu Simbel, Egypt, April 1997. (*Andrew Grieve*)

The first **Pin-tailed Sandgrouse** *Pterocles alchata* in UAE, present at Khalidiyah from 8 May, is considered to be of suspect origin. In Saudi Arabia's Eastern Province, a high count of 110 was noted at Jubail on 3 February. Also in UAE, the fourth and fifth records of **Oriental Turtle Dove** *Streptopelia orientalis* were at Abu Dhabi on 20 September and on Das Island on 8–12 October, whilst the first report of **Red Turtle Dove** *S. tranquebarica* came from Hamraniyah on 21 October (but its origin is considered suspect). **Namaqua Dove** *Oena capensis* was proven to breed in UAE for the first time in 1997, in the Western desert in July. At Eilat, there was an **African Collared Dove** *S. roseogrisea* on 19 October, the seventh record in Israel. **Hume's Tawny Owl** *Strix butleri* was heard calling in Wadi Ashawq, near Salalah, Oman on several occasions between September–November. A **Short-eared Owl** *Asio flammeus* at Hodeidah on 12 November was approximately the seventh country record. Interesting nightjar records from Yemen included single **European Nightjars** *Caprimulgus europaeus* near Zabid on 27 October and al-Mukalla on 1 November, and the 2–4th country records of **Egyptian Nightjar** *C. aegyptius*: at Al Nakhayla, 20 km south of Hodeidah, where ten were found roosting on the beach on 26 October, with groups of 14 and ten at Katf Aseifra on 13 and 21 November. Also significant was a **Nubian Nightjar** *C. nubicus* discovered near Neot Hakikar, Israel on 8 September. The 12–13th **Alpine Swifts** *Apus melba* in UAE were at Bateen Gardens on 16 April and Jebel Hafit on 18 April. The sixth **Little Swift** *A. affinis* for Cyprus was at Pano Platres on 6 May 1996 (*Cyprus Orn. Soc. (1957) Ann. Rep.* 43: 42; date was incorrectly given as 24 May in *Sandgrouse* 19: 78) and the 15th for UAE at Al Ain on 13 April has been accepted. At Dhahran, there was a **White-breasted Kingfisher** *Halcyon smyrnensis* on 25–26 December, only the third record for the Eastern Province, whilst a long-staying **Indian Roller** *Coracias benghalensis* at Al Khobar, between 10 November–19 December at least, constituted the fifth Eastern Province record. It was photographed on 27 November. The fourth White-breasted Kingfisher in UAE was at Dhayah on 17–23 January 1998 and the 9–11th records of **Pied Kingfisher** *Ceryle rudis* in the same country were made between October 1996–January 1998. Recently accepted are two records of **Blue-cheeked Bee-eater** *Merops superciliosus* on Cyprus in 1996: singles at Asprokremmos Dam on 2 May and at Paphos lighthouse on 10 May (*Cyprus Orn. Soc. (1957) Ann. Rep.* 43: 42). The fifth **Koel** *Eudynamys scolopacea* in UAE was claimed in Abu Dhabi on 25–26 July.

A transect of Yemen's Empty Quarter on 4 November produced 15 **Dunn's Lark** *Eremalauda dunni*; this species

Plate 3. African Collared Dove *Streptopelia roseogrisea*, Gebel Elba area, Egypt, March 1997. (*Andrew Grieve*)

appears to be regular in this area, although this is only the eighth country record. The first Dunn's Lark in UAE, in March 1996, has recently been accepted. Approximately ten **Bar-tailed Desert Lark** *Ammomanes cincturus* between Sukhne and Deir ez-Zor, in the eastern desert, on 18 April 1995 (Baumgart *et al.* 1996) was the fourth record in Syria, whilst the fifth record involved one at Shabha Qanawar, south of Damascus on 22 November. Now regular in small numbers in UAE, there were five **Small Skylark** *Alauda gulgula* at Dibba on 14 November, but a **Calandra Lark** *Melanocorypha calandra* in Abu Dhabi on 2–18 December was only the second country record and 14 of the latter at Al Qutay on 12 November is the first published Yemeni record. Two Small Skylark at Sohar on 31 October–1 November were, perhaps surprisingly, the first Omani record and up to 100 **Bimaculated Lark** *M. bimaculata* were at the same locality from 18 November. The second **Wire-tailed Swallow** *Hirundo smithii* in UAE was at the Emirates Golf Course on 14–26 January 1998. There are five previous published records of **Richard's Pipit** *Anthus richardi* from the Eastern Province of Saudi Arabia, thus four in sprayfields at Dhahran on 12 December was a significant record. Another, of this species, was recorded at Aden marsh, south Yemen on 30 October; its status in south-west Arabia remains enigmatic. Two **Blyth's Pipit** *A. godlewskii* were at Al Hababb, UAE on 18 October and another was at Al Wathba on 13 November, whilst the 18–20th **Olive-backed Pipits** *A. hodgsoni* were recorded between 31 January–8 May. The 1–5th records of **Buff-bellied Pipit** *A. rubescens* for UAE involved singles at Al Ghar lake on 26–28 December 1996, Ruwais on 26–27 December 1996, Al Wathba on 3 January, Umm am Nar golf course on 22 January and Fujeirah on 29 December: all await ratification. In Israel, there was one at Shizzafan sewage farm on 17–18 November. Bateen Wood also hosted UAE's ninth **Forest Wagtail** *Dendronanthus indicus* on 7 April, whilst the 10–11th were in Abu Dhabi on 7–8 November and from 12–31 December.

A **White-cheeked Bulbul** *Pycnonotus leucogenys* in a park in Tehran, Iran, and another in Karaj, 30–40 km west of Tehran, during the summer (dates not specified) would represent a considerable northward extension of the species' Middle Eastern range, assuming they were not of captive origin. In UAE, wintering **Grey Hypocolius** *Hypocolius ampelinus* numbered over 200 at a roost south of Dubai on 10 January and 88 were at Ghantoot on 17 November. Baumgart *et al.* (1995) list just one dated record of **Alpine Accentor** *P. collaris* in Syria: one at Krak des Chevaliers on 29 November is the second. A very unseasonal **Robin** *Erithacus rubecula* (rare even in winter) was in Abu Dhabi, UAE, from 29 May, whilst one in Deffi Park, Jubail, Saudi Arabia on 25–30 November was more usual, the species having been recorded in this area in three of the last four winters. A first-summer **White-throated Robin** *Irania gutturalis* at Land of the Kings tourist complex on 15 July was the seventh for Cyprus, and the first outside spring. Following the third record in November 1996, there was another Israeli record of **Pied Stonechat** *Saxicola caprata*: a female photographed at Kibbutz Lotan on 4 November, whilst the second Cypriot record of this species, a female, was claimed at Paphos on 23 November (*Dutch Birding* 19: 306). Accepted as the first record for the UAE is a **Blackstart** *Cercomela melanura*, in Abu Dhabi, on 14 April. A female **Black-eared Wheatear** *O. hispanica* at Wadi Digla on 25 December was the first midwinter record in Egypt. A **Mourning Wheatear** *Oenanthe lugens* was at Ras al Khaimah, UAE (where it is a scarce or uncommon visitor), on 24 January. **White-crowned Black Wheatears** *O. leucopyga* on Das Island on 26 January, 7 March and 3–15 April were the 4–6th records in UAE and a **Finsch's Wheatear** *O. finschii* near the Emirates Golf Course on 27 October the 14th record. Two records of White-crowned Black Wheatear from Yemen last autumn were significant: a first-year on 5 November and an adult and first-year on 29 November (*Dutch Birding* 19: 306; no localties provided). In Israel, one then three **Red-tailed Wheatear** *O. xanthoprymna* were in the Eilat area from 9 December into 1998. Two **Red-rumped Wheatear** *O. moesta* at Hammam, near Alexandria, on 2 January 1998 confirms the species' presence on the Eygptian north coast although it is considered to have undergone a large decline in recent years. The seventh **Moustached Warbler** *Acrocephalus melanopogon* for UAE was at Ain al Faydah on 26 January and two were at the same place on 13 December, whilst the species was discovered breeding at Jubail, Eastern Province, Saudi Arabia in May, along with that province's second confirmed breeding record of **Reed Warbler** *A. scirpaceus* at Sabkha al-Fasl in June, and the third breeding record of **Great Reed Warbler** *A. arundinaceus* at a new locality, Khafrah Marsh. A Moustached Warbler at Sharm el Sheikh on 29–30 December was the first midwinter record in Egypt, as was a Great Reed Warbler at the same place on the latter date. A **Blyth's Reed Warbler** *A. dumetorum* reported at Khalidiyah on 8 May is potentially UAE's 13th record, whilst

in the Jubail area of Saudi Arabia there were singles on 3, 7 and 9 October, the first records for the Eastern Province. A **Paddyfield Warbler** *A. agricola* was trapped and ringed at Kefar Rupin on 10 October, the c. sixth Israeli record. A **Booted Warbler** *Hippolais caligata* was at Jubail, on 2 November. Twenty-six **Olive-tree Warbler** *H. olivetorum* in Wadi Shachamon near Eilat was a record Israeli count. An **Arabian Warbler** *Sylvia leucomelaena* at Wadi Taba on 29 December was the third record in Sinai. A **Garden Warbler** *Sylvia borin* near Al Haima on 23 October was perhaps only the second Yemeni record. The third **Greenish Warbler** *Phylloscopus trochiloides* to have been recorded in UAE was at Khalidiyah, on 8 May, whilst the second **Dusky Warbler** *P. fuscatus* in Israel was trapped and ringed at Beer Sheva on 18 October (*Birding World* 10: 382). A **Hume's Yellow-browed Warbler** *P. humei* at Ras al Khaimah constituted the 26th record of this species whose occurrence is becoming more frequent in the UAE. Khalidiyah also produced a **Radde's Warbler** *P. schwarzi* on 8 May, only UAE's third record of this *Phylloscopus* more often associated with autumn vagrancy in the Western Palearctic.

A **Wallcreeper** *Trichodroma muraria* was at Krak de Chevaliers on 29 November, the first published Syrian record for many years, although there is at least one other recent record from the same locality. A **Nile Valley Sunbird** *Anthrepetes metallicus* at Qitbit on 3 December is the most northerly record in Oman and most easterly in Arabia. The second and third **Steppe Grey Shrikes** *Lanius pallidirostris* in Israel were at Yotvata on 1 and 27 November and km 33 north of Eilat on 22 November. A **Black Drongo** *Dicrurus macrocercus* reported at Khor Kalba on 12 December was only the fifth UAE record and the first since 1991. A flock of c. 20 **Bank Mynah** *Acridotheres ginginianus* just north of Riyadh on 13 July 1996 pre-date the only previous reported occurrence in Saudi Arabia (see *Sandgrouse* 19: 159). There is one previous record of **Coal Tit** *Parus ater* in Syria; three at Slenfe, in the north-west highlands, on 12 April 1995 becomes the second, whilst two pairs of **Red-fronted Serin** *Serinus pusillus* at Russafa on 16 April 1995, were only the third record (Baumgart *et al.* 1996). On Cyprus, there was a **Pale Rock Sparrow** *Petronia brachydactyla* at an unstated locality on 23 April and an adult male **Trumpeter Finch** *Bucanetes githagineus* on 21 April (*Brit. Birds* 91: 54–55). **Goldfinch** *Carduelis carduelis* rarely features in these reports: the third UAE record involved three on Das Island on 27 January. Two or three **Pine Bunting** *Emberiza leucocephalus* were at Wadi Dana on 31 December, the second Jordanian record. The first was in December 1995 (Minshull 1996). A **Cinereous Bunting** *E. cineracea* at Al Jazeerah Khor on 21 March, and two on Das Island, UAE, on 11 April constitute the country's 21–22nd records, whilst an adult of the race *semenowi* was north of Al Khobar, Saudi Arabia on 29 August. The following records of **Reed Bunting** *E. schoeniclus* are significant: at Umm al Quwain on 20 March (fifth UAE record); a male at Jubail, Saudi Arabia on 7 March and one at Sidi Abd el Rahman on 2 January 1998 (sixth Egyptian record).

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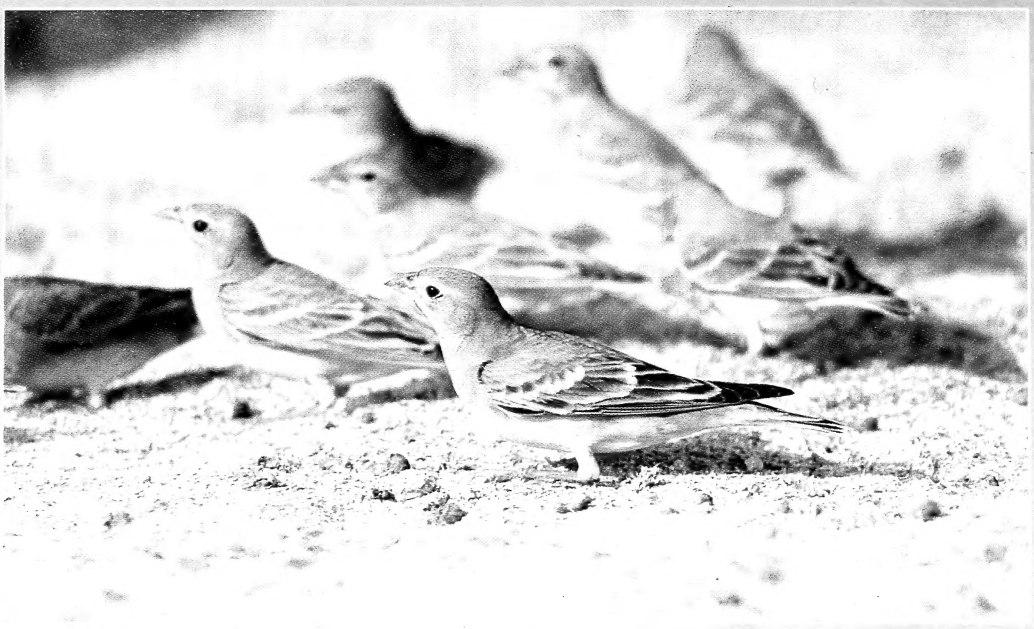

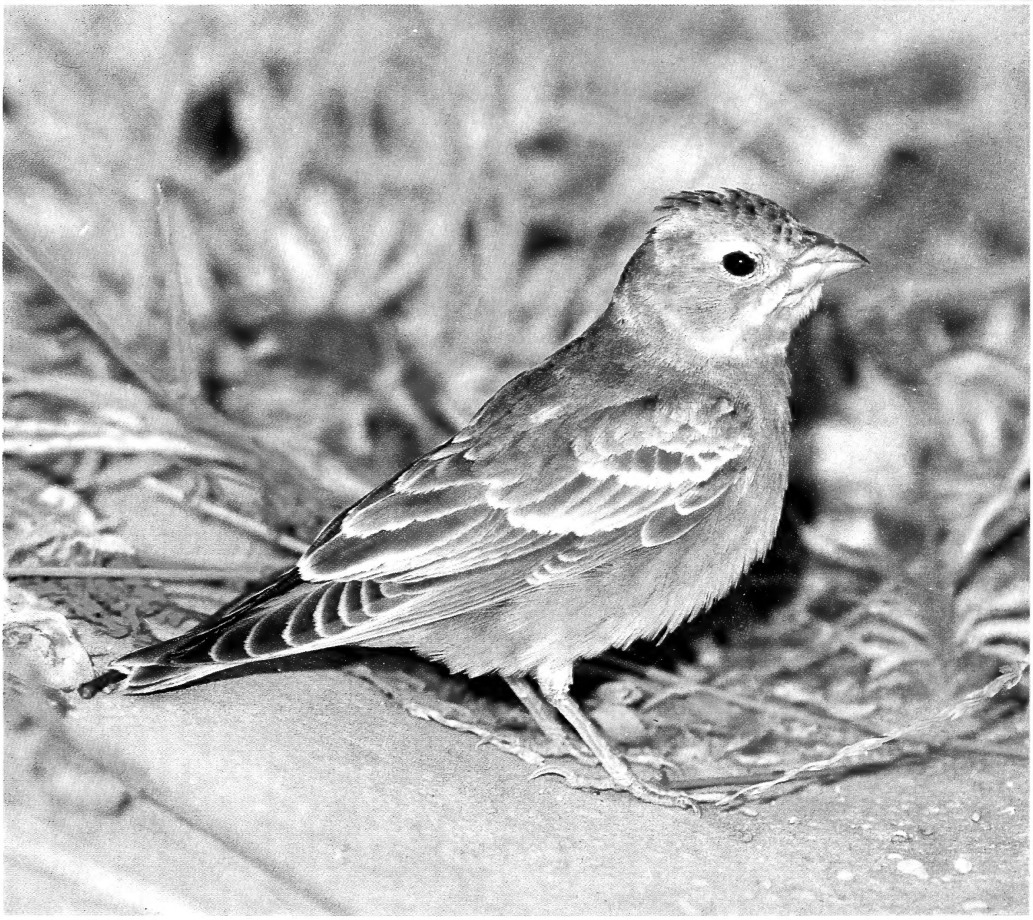

Plate 4 (top). Pale Rock Sparrows *Carpospiza brachydactyla*, Sir Bani Yas, Abu Dhabi, United Arab Emirates, April 1994. (*Dave Robinson*)
Plate 5 (bottom). Pale Rock Sparrow *Carpospiza brachydactyla*, Dauka, Sultanate of Oman, September. (*Hanne & Jens Eriksen*)