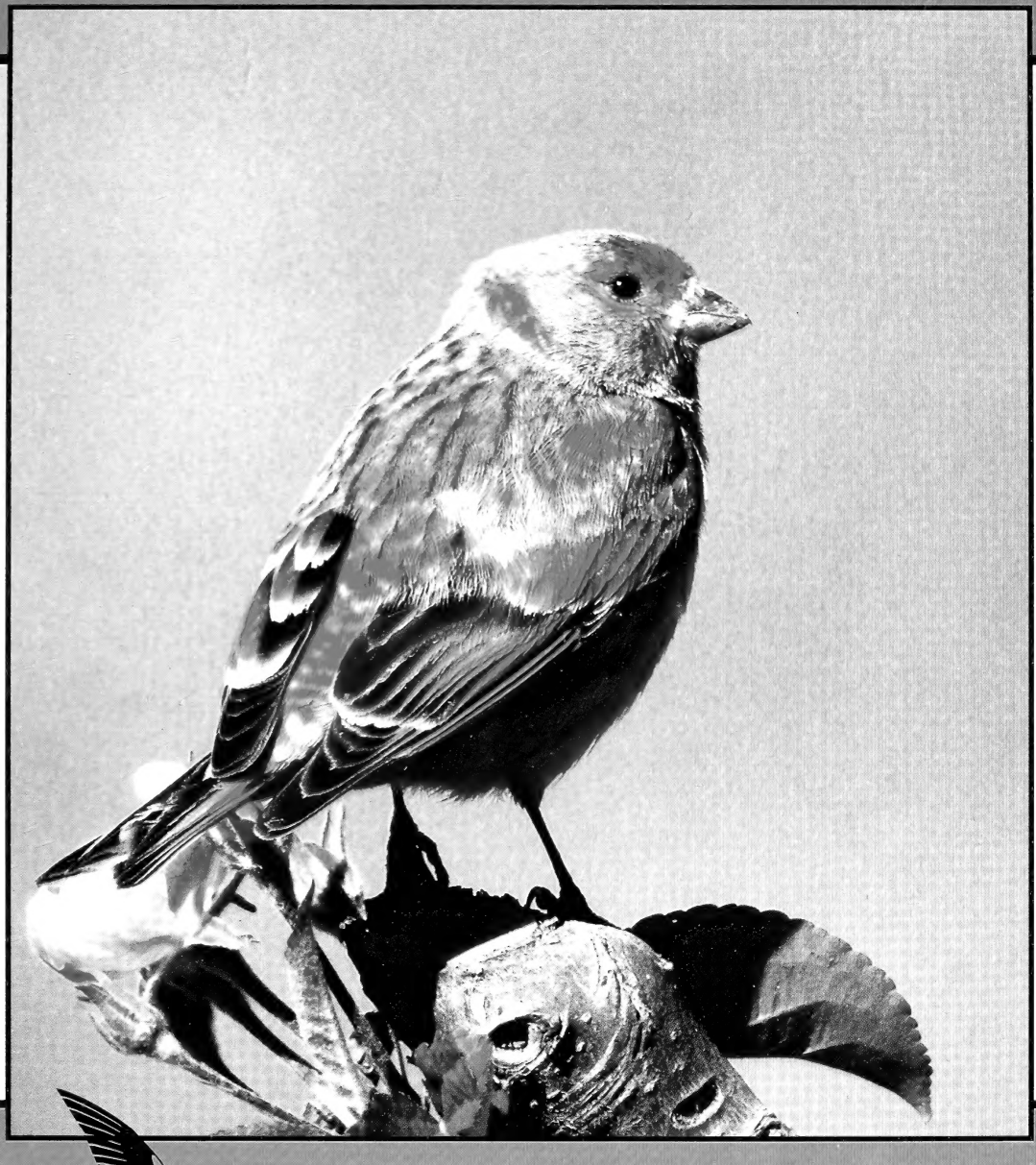
SANDGROUSE

Volume 29 (1) *2007*



ORNITHOLOGICAL SOCIETY OF THE MIDDLE EAST,
CAUCASUS AND CENTRAL ASIA

OSME

ORNITHOLOGICAL SOCIETY OF THE MIDDLE EAST, CAUCASUS AND CENTRAL ASIA

OSME

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.

OSME CORPORATE SPONSORS

MEMBERSHIP

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

ANNUAL MEMBERSHIP

Individual
£15 *(UK address)*
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Write to the Membership Secretary at the address below for a membership form detailing methods of payment and also rates for Family, Supporting and Life membership. For any other information on the Society, write to the Secretary at the same address.

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 45 projects since the Conservation & Research Fund was set up in 1982.

MEBirdNet Email Discussion Group

This is an e-mail mailing list (moderated by OSME) that discusses birds and birdwatching in the Middle East, Caucasus and Central Asia. Subjects include research, conservation, bird news, recent records, identification, requests for information and exchange of information. To join the mailing list, send an empty e-mail to: MEBirdNet-subscribe@yahoogroups.com.

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OSME WEB SITE - http://www.osme.org

SANDGROUSE
Volume 29 (1)

Cover Photograph:
Syrian Serin, *Serinus syriacus*,
May 2006, Syria
© Aurélien Audevarde.

EDITORIAL

A long-overdue landmark has been reached with the publication in Arabic of *Birds of the Middle East*, long the mainstay not only of English-speaking birdwatchers and ornithologists in the field within the OSME Region, but also of editors of *Sandgrouse*! OSME News gives more details of this and another newly-published bird book in Arabic, *The Birds of Iraq*. OSME Council would like to express their admiration for the enormous amount of work carried out by so many people in the production of these two books, and they note the tremendous amount of goodwill of so many individuals and organisations that made the projects succeed. My personal wish is that all countries in the OSME Region will have their own national field guides before very long. I am delighted to record that a new journal of Ornithology, *Podoces*, has appeared in Iran, edited by the hard-working Abolghasem Khaleghizadeh. *Podoces'* subtitle, 'West and Central Asian Ornithological Journal' concisely explains its remit – contributions are in English or Farsi. This issue of *Sandgrouse* continues the Iranian them from 28 (2).

The OSME website is being re-hosted and will be much improved as a result, although the work necessarily has postponed planned modifications to allow the OSME Region List to be made available on the Web. If the OSME website still does not feature the ORL by the time you read this, I can provide an interim version (including the underlying rationale) if requested via ed@osme.org, but this will have to be a part of a 'zipped' package to reduce the overall size to allow its transmission to small dial-up accounts.

This issue of Sandgrouse has more pages as standard, but the new layout is governed by the way the printer has to allot and cut the pages for binding. Bear with us this time if the layout of some colour pictures is awkward.

Mike Blair

OSME News

GREENTOURS BECOMES OSME CORPORATE SPONSOR

OSME is delighted to announce that Greentours has joined as a Corporate Sponsor. Founded in 1994, Greentours is a wildlife tour operator which arranges holidays to many destinations including a dozen or so tours in the OSME region to various parts of Turkey, Iran and Kazakhstan. The company aims to provide tours that are all about great wildlife (not just birds), great scenery and not too much strenuous exercise. Greentours takes initiatives such as using recycled paper, through to donating binoculars, telescopes, tripods and field guides to local guides in areas where these are scarce. In 1996 Greentours found a new breeding bird for Turkey (Corncrake!) and in 2004 they discovered Turkey's first Plain Leaf Warblers. In 1999, a marsh in the Turkish Lake District held a surprise - an umbellifer new to science, and since then they have added a number of new species to Turkey's already exceptional flora. For more information about Greentours look at http://www.greentours.co.uk

OSME SUMMER MEETING 2007

The 2007 OSME Summer Meeting will be held on Saturday 7 July in central London. Once again it will be held in the head office of the Association of British Travel Agents, 68-71 Newman Street, London WIT 3AH. A full programme of speakers will be published on the OSME website in the spring.

CAN YOU HELP OSME WITH SALES?

We are always looking to involve more people in our work. In particular we want to hear from those who can spare a few hours each

week to assist with straightforward administrative tasks. In particular we are looking for a volunteer to organise our sales goods. This will involve dealing with requests for journals and other items that we offer and arranging for them to be despatched. You would need some storage space for the journals and ready access to a post office. Although we need to be kept up to date on progress you do not have to attend any meetings!

CAN YOU HELP US TRANSLATE OUR WEBSITE?

We are keen to translate the main information pages of our website into several languages – including Arabic, Hebrew, Turkish and Farsi. We may also look to translate summaries of a number of important papers that are on the site. This is not something that we can allocate funds to achieve, but with the help of Members we hope to dramatically improve access to OSME for people for whom English is not a familiar language. If you can help in any way please contact Keith Betton by emailing chairman@osme.org

OSME CONSERVATION AND RESEARCH FUND

The Society has awarded grants to a number of projects in the region over recent months. The grants come from the Conservation and Research Fund, which is used to support a wide range of conservation, survey and educational projects. Recent awards include:

- £315 to Vickie Jones towards the costs of a study of the ecology of the Cyprus Warbler
- £1057 towards the cost of publishing in Arabic a book on the Birds of Iraq (see below)
- £1000 to Henning Kunze towards the costs of mounting a ten-week expedition to Masirah Island in Oman to assess bird migration (see below).
- £850 for translating into Arabic the results of the 2004 OSME-supported expeditions of the Syrian wetlands
- £129 for translating into Arabic the recent paper (published in *Sandgrouse* 28(2) on the internationally important wetland of Sabkhat al-Jabbul for use in enhancing protection for the site
- £1500 to the Working Group for International Waterbird and Wetland Research towards the cost of an expedition to carry out a major census along the Gulf coast of Iran
- £500 for the Working Group for International Waterbird and Wetland Research towards an expedition to establish wader numbers at Bar al Hickman in Oman.
- £625 to the Istanbul Birdwatching Society towards their Survey of Soaring Bird Migration at the Bosphorus

Plate 1. Cover of *Birds of the Middle East* in Arabic, by RF Porter, S Christensen & P Schiermacker-Hansen, translated by Saeed Mohamed, published by SPNL, Beirut, Lebanon.

NEW ARABIC FIELD GUIDE NOW AVAILABLE

Following a short delay the new Arabic version of *Birds of the Middle East* was launched in Beirut in January. Speaking at the launch, main author and former OSME Chairman, Richard Porter congratulated the Society for the Protection of Nature in Lebanon for their work in overseeing the project. He described it as a great boost for bird conservation in the region. Identical in design to the English version of the title, free copies this softback book are being distributed to schools, clubs and wildlife departments throughout the region. OSME will have copies for sale in the spring. Watch the OSME website for details. Members who are visiting the region and think that they might have the opportunity to distribute a small number of copies to worthy recipients are invited to contact OSME with their plans.

BIRDS OF IRAQ IS PUBLISHED

OSME is proud to have been associated with the creation of this new Arabic book which it is hoped will be widely received by universities, schools and government departments in Iraq. Published by Nature Iraq with BirdLife International, this softback book is a cut-down version of *Birds of the*

Plate 2. Cover of *Field Guide to the Birds of Iraq* in Arabic, by M Salim, RF Porter, S Christensen, P Schiermacker-Hansen and S Jbour, published by Nature Iraq & BirdLife International, Amman, Jordan.

Middle East - itself now launched in Arabic with OSME's support. Illustrating around 375 species found within Iraq's borders the book was funded by a range of international agencies and trusts, with Swedish tour operator Avifauna channelling its financial support through OSME's Conservation and Research Fund. OSME will have copies for sale in the spring. Watch the OSME website for details.

MASIRAH EXPEDITION

A summary of Henning Kunze's preliminary findings is most interesting. "From 14 Sep to28 Nov 2006, we caught nearly 700 birds of a good variety of species including (Oman's first) Taiga Flycatcher, 4 Forest Wagtails (3rd+ record for Oman), 2 Koel, 1 Green Warbler, 1 Plain Leaf Warbler, 9 Blyth`s Reed Warbler (3rd+ record for Oman). Although the last-named species had very seldom been seen before, the numbers indicate that it might be a regular migrant through Oman. Additionally, the data we obtained on the Chiffchaff and Lesser Whitethroat complexes are very interesting and I attach great importance to their analysis. Furthermore, we had many retraps, which I hope will enable me to evaluate stopover ecology in some detail, especially about Tree Pipits. I am glad to say that the project was not limited because of a shortage of birds but rather to lack of manpower".

APPLICATIONS FOR PROJECT SUPPORT ARE INVITED

We welcome applications for grants from our Conservation and Research Fund, to support research projects in the region. Projects should be directed to one or more of the following subject areas:

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

Priority will be given to projects involving nationals from the region and applicants are required to write up the results of their project for possible publication in *Sandgrouse*. For further information contact Mrs Pat Bartley by emailing grants@osme.org

GIFT AID HELP TO OSME

Many UK members have enabled OSME to reclaim 28% of the value of their membership subscription in taxes from the UK government. It costs these members nothing more than a signature on a simple form declaring that UK tax has been paid and authorising OSME to claim it back. There are still quite a lot of UK members who have not signed a Gift Aid form. These are readily available and declarations may also be made by telephone by calling the Treasurer, John Warr, on 01442 822108 or by e-mailing treasurer@osme.org

BRITISH BIRDWATCHING FAIR 17-19 AUGUST 2007

Once again OSME will be exhibiting at the British Birdwatching Fair at Rutland Water in the UK. There are several ways members might help. We would welcome any items for the tombola (books, CDs and other birding items). These can be brought to our AGM on 7 July or to the OSME stand at the Fair. We would also welcome any assistance on the stand during the Fair. Please make any offers to Keith Betton on 01252 724068 or chairman@osme.org. OSME will hold an informal get-together for members and supporters on the Friday night at 1900 hrs at the Falcon Hotel at Uppingham. An optional dinner will also be held there costing about £25 per head. Anyone wishing to attend that should inform Keith Betton. Once again we would like to recognise the generous support of Carl Zeiss for their assistance in subsidising our stand rental costs which enables the majority of our takings to be used for conservation purposes. For more information about the Fair look at http://www.birdfair.org.uk/

WATERBIRD POPULATION ESTIMATES – 4TH EDITION

Given that the West Asian Flyways cut through the OSME Region, this book is of particular interest to OSME. In the 4th edition, Wetlands International provides worldwide estimates of the numbers and trends of waterbird populations in a comprehensive update of the 3rd edition of 2002,

covering 878 waterbird species. Details are: *Waterbird population estimates, 4th edn.* 2006. 239pp. ISBN (10 digit) 90-5882-031-9; (13 digit) 978-90-5882-031-0. Available from Natural History Book Service, 2-3 Wills Road, Totnes, Devon TQ9 5XN, United Kingdom, customer.services@nhbs.co.uk, www.nhbs.co.uk.

OSME COUNTRY CONTACTS

The following people are birders resident in the countries listed and are able to offer advice to anyone visiting their area. A number of details have changed since we last published the list a year ago. If you do not have access to e-mail, please contact John Bartley on +44 (0) 1636 703512 in order to obtain a postal address.

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Keith Betton
OSME Chairman

ERRATA *SANDGROUSE* 28 (2)

Brush, T. 2006. Common Sandpiper *Actitis hypoleucos* nesting on Mount Erciyes, Kayseri Province, Turkey. *Sandgrouse* **28 (2)**: 163-164. In this short note, a photo (**Plate 2**) supplied by the author separately from the text was not of the nest of a Common Sandpiper (Thanks to Peter Castell and others for the correction), but probably of the nest of a lark. The text of the short note noted the presence of a Common Sandpiper within 0.5m of this nest on the author's first visit, but the photo was taken 3 days later on a second visit when Common Sandpiper was not seen. Whether or not the photographed nest was the same nest as seen on the first visit, the title of the short note is now inappropriate because the proof of nesting is lacking. For information, the adjacent Plate illustrates a Common Sandpiper's nest (Courtesy Peter Castell).

Nest with 4 eggs of Common Sandpiper *Actitis hypoleucos*, 21 June 04, Turkey © *Peter Castell.*

In this short note, there is also a correction to a citation, which should have read:

Karakaş, R and A Kılıç. 2004. The Birds of Dicle Dam (Diyarbakır). *Turkish J. Zool.* **28**:301-308.

NEWS & INFORMATION

compiled by Dawn Balmer & Keith Betton

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 in the OSME area please send it to News and Information, OSME, c/o The Lodge, Sandy, Bedfordshire SG19 2DL, UK, or send it to the appropriate e-mail address shown inside the front cover.

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.

BAHRAIN

Bird ringing

Regular bird ringing is now being carried out in Bahrain by Brendan Kavanagh. You can find out more about the ringing activities at www.hawar-islands.com/blog/gen_stub.php. The first bird trapped during the autumn, on 15 November 2006, was a retrap adult male Hypocolius *Hypocolius ampelinus* at the Saar roost, having been ringed on 17 November 2005 at the same site. (Contributed by Howard King).

CYPRUS BIRD REPORT 2005

2005 was an amazing year for bird observations in Cyprus with over 25,200 records of 290 species being submitted by around 110 observers. A privately funded expedition studying the migration at Cape Greco in autumn produced an amazing 3374 records during nine weeks of observations (see also Roth & Corso, p79 this issue). Ringing activity was at a peak in April, and at Prodromi Reedbeds unusually large numbers of Sedge and Eurasian Reed Warblers and Blackcaps were trapped, marking major migration of the species. Two papers are included on the first records of Temminck's Horned Lark and Paddyfield Warbler. It was a very good year for BirdLife Cyprus as an organisation, because they gained partnership designate status of BirdLife International. This is a very positive step in their progress towards full partnership. This is an excellent 173 page report with colour photographs throughout. http://www.birdlifecyprus.org

EGYPT

A new website, set up by Tomas Haraldsson has recently been launched. Tomas lists his records over four winter seasons (2002-2006) and provides a gallery of photographs. The website is: www.tomasharaldsson.se/ INENGLISH.htm

IRAN

Avian Influenza conference

A workshop "Regional Inception Workshop for Central Asian countries on Avian Influenza" was held in Tehran on 30 October – 2 November 2006. The workshop was organized by the Food and Agricultural Organization (FAO) and representatives (mainly chief veterinary officers) from Afghanistan, Azerbaijan, Iran, Kazakhstan, Kyrgyzstan, Pakistan, Tajikistan, Turkey and Uzbekistan participated in the workshop. The main objective of this workshop was to discuss the principles and strategic considerations developed under the Global Strategy for the progress control of Avian Influenza and the Strategic Framework for HPAI prevention and control in Asia and the Pacific for the Asian Development Bank. Those principles will lead to the promotion of surveillance activities at regional level and to the development of a shared approach for the prevention and control of HPAI. (Contributed by Abolghasem Khaleghizadeh).

IRAQ

Old Iraq Records

John A McGeoch, who is associated with many observations in Iraq in the 1950s, responded to the recent appeal for old Iraq bid records by passing to the editor preprints of two papers, one from *Ibis* and one from *Ardea*, which have been sent, in electronic form to Mudhafar Salim in Iraq. We are indeed grateful for John's gesture, and we hope that others will be inspired to dig into their papers gathering dust in the loft!

ISRAEL

The Jerusalem Bird Observatory
Volunteers are wanted for bird monitoring in the spring, and help with maintenance. Volunteers who would like to help with monitoring and ranger work in the Gazelle Valley would need a bit of Hebrew. No accommodation provided. Please contact: Amir Balaban for further information (e-mail: amirbalaban1@013.net, telephone: + 972-52-448879, fax: + 972-2-6541725) or view their website at www.jbo.org.il

IRDC Bulletin 5:01
The Israeli Rarities and Distribution Committee (IRDC) have recently published their latest bulletin on rarities in Israel. It can be viewed online at: www.israbirding. com/irdc/

LEBANON

Birdtalk Lebanon was set up in 2005, with the aim of encouraging any Lebanese birdwatchers and naturalists, and any foreigners living in or visiting Lebanon to post their sightings, or raise bird-related topics for discussion. OSME encourages anyone visiting, or considering visiting Lebanon, to join in and help develop interest in a country that, up to now, has had few birdwatchers, despite the superb migration spectacle that can be witnessed each spring and autumn. To join, go to birdtalk-lebanon-subscribe@yahoogroups.com, and to post a message, to: birdtalklebanon@yahoo groups.com.

SYRIA

Northern Bald Ibis wintering in Ethiopia
The three Northern Bald Ibis *Geronticus eremita* trapped and fitted with satellite tags in June 2006 near Palmyra spent the winter in Ethiopia and have returned to Syria. You can follow the progress of the Bald Ibis at: www.rspb.org.uk/ tracking/ northern_bald_ibis.asp. The exact locations have been altered to provide security for the birds.

TURKEY

Turkish birdwatchers' conference
The 9th Turkey Bird Watching Conference, held from 2-5 October in the Middle East Technical University, Ankara, was organised in cooperation with Doğa Derneği (BirdLife Turkey) and Middle East Technical University Bird Watching Group. Critical Ecosystem Partnership Fund supported this year's conference. Over 150 birdwatchers from all over Turkey attended. Bird groups presented papers on the first two days. Topics included the history, future and philosophy of bird watching in Turkey, KuşBank (web-based bird record database), bird conservation efforts in Kırmıtlı-Osmaniye, the Bird Atlas in Gediz Delta, White Stork monitoring and conservation project, Corncrake survey in Posof, monitoring raptor migration in spring 2006 at the Bosphorus, bird photography, bird trips to eastern and south eastern Turkey, the poisoning of wildlife and saving globally threatened birds. A separate session was held about factors affecting birds, with the participation of a speaker from ministry of agriculture. Annual Bird Watching Conferences aim to share the national and international knowledge and experience of bird watching groups and to encourage the spread of bird watching around Turkey, especially at universities. These important conferences generate bird research and conservation efforts among a new generation of Turkish ornithologists and birdwatchers. (Contributed by Eray CAGLAYAN, eray. caglayan@dogadernegi.org, Caretaker Officer, Doğa Derneği, PK. 640, 06445, Yenisehir, Ankara, Turkey. www.dogadernegi.org).

REQUESTS FOR INFORMATION

Sociable Lapwing sightings
RSPB, working with a number of BirdLife Partners including the Association for the Conservation of Biodiversity in Kazakhstan (ACBK), the Russian Bird Conservation Union (RBCU) and the Bombay Natural History Society (BNHS), is currently working on a UK Government Darwin-Funded project on Sociable Lapwing *Vanellus gregarius*. As part of this research, they are putting together a database of all previous sightings of this species, to allow them to assess migration routes, breeding and winter distribution and habitat use. They would be grateful to receive

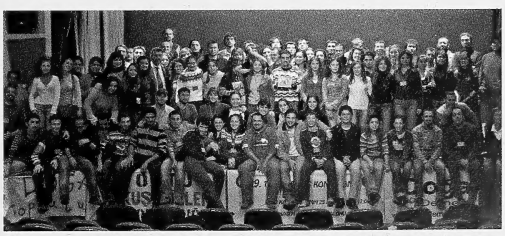

Plate 1. Post-conference, Ankara Turkey, *© Eray Caglayan*

any records at all, of this species, even single birds, from any country, date or time of year. They would be particularly keen to receive any reports of colour-ringed birds. Please send sightings to Dr Paul Donald, RSPB, The Lodge, Sandy, Bedfordshire, SG19 2DL, UK. Email: paul.donald@rspb.org.uk, tel: +44 (0)1767 680551, fax: +44 (0)1767 692365. **STOP PRESS:** Over 2000 counted in Syria in March - Remco Hofland.

MIGRATION DATA REQUESTED - TURKEY

The Istanbul Birdwatching Society is seeking migration data from Turkey to compare with our recent spring and fall (autumn) counts at the Bosphorus in Istanbul. Data from personal field notes and other reports would be very helpful in piecing together a comprehensive picture of the movements and behaviour of raptor and stork populations at this bottleneck. We are also seeking any data from raptor counts elsewhere in Turkey as from Borcka-Artvin and the Belen Pass. Data and reports in any language would be gratefully received and greatly appreciated, although material in English, Turkish, or French is easier to handle. Please contact Luke Smith on birdbrain7@gmail.com.

RALPH HINSHELWOOD DALY

The Sultanate of Oman lost its foremost environmentalist on 24th September 2006, when Ralph Hinshelwood Daly OBE WO died at home in Oman. For more than 30 years, Ralph Daly had helped the Sultanate's Government care for its natural environment during its development into a modern vibrant state.

He will always be renowned for arranging the very successful return of the Arabian Oryx to the wild in Oman in 1980, where it had become extinct in 1972: but he was interested in birds and all aspects of wildlife.

In 1976 he suggested a book of 100 Omani bird illustrations, but HM Sultan Qaboos bin Said wished that all be shown: The Birds of Oman (1980) and its Arabic edition were the result. As the Sultanate developed and people became more mobile, he encouraged more observers, including Omanis, to join the Oman Bird Group and to contribute their sightings to the central database (commenced by Effie Warr). Ralph formed the Oman Bird Records Committee in 1986 and became Chairman. He gave support to many studies and worked with other countries and with IUCN, WWF, FFPS, OSME, ABBA and BirdLife International. Studies included the Houbara, the Sooty Falcon, birds of coasts and islands, and of mountains and interior desert; subjects ranged from ringing and migration to breeding and mid-winter waterbird counts.

After war service in Europe he had joined the political service first in Sudan, then in Aden and the Protectorates when in 1965 he was appointed OBE. In 1969 he joined the Oman oil company PDO, to watch over the interests of the Omani tribesmen during the spread of oil-related activity. His fluent Arabic and his love of the people and their unspoiled desert interior confirmed in him a fear of the damage that development could bring.

In 1974 he became the first Adviser for the Conservation of the Environment to the Oman Government, a post for which he was supremely well suited. With a new Sultan from 1970, the country had begun to develop rapidly, and Ralph was able to suggest ways to inform the public and to study and conserve the environment and its wildlife.

Under his guidance flora and fauna surveys were conducted, books published and Government conservation measures encouraged. Reserves were set up for the Arabian Oryx, the Arabian Tahr and marine turtles; a centre for breeding endangered Omani mammals was established, and the Natural History Museum opened to the public.

A gifted Arabist, raconteur, public speaker and statesman, he had a love of the space and silence of the desert. He was kind, farsighted and intensely loyal, and with his wife Elizabeth a generous host with a wide circle of friends. His helpful influence will surely endure.

Michael Gallagher

Around the Region

compiled by
Dawn Balmer and Keith Betton

Records in *Around the Region* are published for interest only; their inclusion does not imply acceptance by the records committee of the relevant country. All reports relate to 2006 unless otherwise stated.

Reports and photographs for *Sandgrouse* 29 (2) should be sent by 15 Jul to: Around the Region, OSME, c/o The Lodge, Sandy, Bedfordshire SG19 2DL, U.K.; or atr@osme.org

Dawn Balmer, c/o BTO, The Nunnery, Thetford, Norfolk, IP24 2PU.
Keith Betton, 8 Dukes Close, Folly Hill, Farnham, Surrey GU9 0DR, U.K.

Bee-eaters *Merops apiaster* *by D. Powell*

EXPLANATORY NOTE

In Around the Region, as for *Sandgrouse* as a whole, bird names and taxonomy now generally follow the OSME Region List (ORL), based on **Dickinson, EC. 2003.** (Ed). *The Howard and Moore complete checklist of the birds of the world. 3rd edn.* Christopher Helm. London. and the IOC recommended list of English names **Gill, F, and M Wright. 2006.** *Birds of the World: Recommended English Names.* Princeton University Press. Princeton New Jersey. USA/Christopher Helm. London.

ARMENIA

An excellent trip report to Armenia and Georgia can be viewed on the internet at http://koti.mbnet.fi/caligata/

BAHRAIN

The first **Eurasian Bittern** *Botaurus stellaris* in Bahrain since 1997 was observed at Badaan Farm on 25 Oct and was still present at the end of Nov. There was a report of over 40 **Macqueen's Bustards** *Chalmydotis macqueenii* (Note **Houbara Bustard** *C. undulata* now considered not to occur east of Egypt) in the south of the country in early Dec which represents an influx of this species. A **Sooty Gull** *Larus hemprichii* (4th record) was seen circling the small harbour at the 'Ad Dur' Hawar ferry terminal on 30 Oct. The previous records were two in Manama in Aug 1969 and one at Sitra Mar 1988). Several **Bimaculated Lark** *Melanocoryphya bimaculata* were at Maharraq (Busaitain) and Badaan Farm on 29 Oct, the first records since 1997, although it is likely to be under-recorded. The first **Hypocolius** *Hypocolius ampelinus* of the autumn were seen at the Saar Roost (11 birds seen) on 26 Oct. This roost seems likely to survive the winter before it finally disappears under concrete. It is worth noting that the daytime feeding areas for the species are not in any way threatened, so should this roost be totally destroyed we expect the birds simply will relocate – a secondary (occasional) roost area already exists at what is the BDF wadi. A **Savi's Warbler** *Locustella luscinoides* was ringed at Baadan Farm on 25 Sep, the first record since Nov 1992. The sixth **Moustached Warbler** *Acrocephalus melanopogon* for Bahrain was observed at Badaan Farm on 3 Nov. On 1 Dec, again at Badaan Farm, a **Brambling** *Fringilla montifringilla* (12th record) and a **Common Linnet** *Carduelis cannabina* (4th record) were seen.

CYPRUS

A **Red-crested Pochard** *Netta rufina* was at Aspro Dam Pools from 8-23 Dec and three **Red-breasted Mergansers** *Mergus serrator* were at Potamos Liopetri on 5 Dec. A **Black-throated Diver** *Gavia arctica* was seen and photographed off Lady's Mile on 21 Nov and is the first record of any species of diver for Cyprus. At least 50 **Scopoli's Shearwaters** *Calonectris d. diomedea* were seen on a pelagic trip three miles off Pomos on 22 Oct. On 3 Sep *c*600 **European Honey Buzzards** *Pernis apivorus* were recorded over Akrotiri Salt Lake. A **Short-toed Snake Eagle** *Circaetus gallicus* was at Akrotiri Salt Lake on 13 Sep and one was at

Tsada golf club on 25 Oct. An **Eastern Imperial Eagle** *Aquila heliaca* was at Akrotiri Salt Lake on 4 Sep and a **Corncrake** *Crex crex* was there on 9 Sep. At Phasouri Reedbeds there were two **Little Crake** *Porzana parva* from 9-28 Sep and a **Baillon's Crake** *P. pusilla* was there on 23 Sep.During August 425 **Demoiselle Cranes** *Anthropoides virgo* passed through, mainly at Akrotiri Salt Lake on 23-31, 47 appearing on 4 Sep and 40 on 9 Sep. A **Pectoral Sandpiper** *Calidris melanotos*, the third for Cyprus, was at Akhna Dam on 28-30 Sep. Also at Akhna Dam, a **Broad-billed Sandpiper** *Limicola falcinellus* was there 30 Aug - 4 Sep, with another on 18 Sep. **Red-necked Phalaropes** *Phalaropus lobatus* were at Phasouri reedbeds on 13-20 Sep and at Larnaca Sewage Works on 31 Sep. The **Franklin's Gull** *Larus pipixcan* remained at Larnaca Sewage Works until 5 Aug and nearby a **Great Black-headed Gull** *L. ichthyaetus* was at Spiros Beach on 29-30 Sep (12th record). A **White-throated Kingfisher** *Halcyon smyrnensis* was at seen intermittently from 3 Sep - 29 Oct at Phasouri reedbeds (13th record). An **Isabelline Shrike** *Lanius isabellinus* (ssp undetermined) was at Akrotiri GP on 6-7 Sep. **Lesser Short-toed Larks** *Calandrella rufescens* were at Cape Andreas on 23 Sep, Tsada Hills, Paphos on 1 Oct and Mandria on 8 Oct. A **Savi's Warbler** *Locustella luscinioides* was seen at Phasouri Reed-beds on 21 Sep. Two **Rose-coloured Starlings** *Sturnus roseus* were at Akrotiri on 15-16 Sep; one at the Monastery of the Cats and the other at Phasouri Reed-beds. A **White-throated Robin** *Irania gutturalis* was at Germasogeia Dam on 2nd Sep and a **Rufous-tailed Scrub Robin** *Cercotrichas galactotes* was at Archangelos on 21 Sep. A **Rufous-tailed Wheatear** *Oenanthe xanthoprymna* (formerly **Red-tailed Wheatear** *O.x. xanthoprymna*) was at Konia on 1-2 Nov and was the third recorded under the parent taxon. At Phassouri reedbeds a **Dead Sea Sparrow** *Passer moabiticus* was reported on 12 Nov.

EGYPT

On 19 Jul, 38 **Yellow-billed Storks** *Mycteria ibis* were at Abu Simbel and an immature **Goliath Heron** *Ardea goliath* was in the mangroves at Wadi Lahami on 14-15 Jul. A **Pink-backed Pelican** *Pelecanus rufescens* was at Abu Simbel 19 Jul and two were on Lake Nasser between Abu Simbel and Kasri Ibrim in early Dec. At Hamata two **Crab-plovers** *Dromas ardeola* were seen on 25 Jul with *c*150 there in early Sep. At least 40 **Bridled Terns** *Onychoprion anaethetus* were on islands off Hurghada on 15 Jul. A **Long-tailed Skua** *Stercorarius longicaudus* was at Lake Nasser on 20 Jul. **Hume's Owl** *Strix butleri* was heard on 24 Dec 30 km west of Hurghada in the Red Sea Mountains The first **Black Drongo** *Dicrurus macrocercus* for the Western Palearctic (if accepted as a wild bird) was reported at Aswan on 27 Oct. An immature **Black Scrub Robin** *Cercotrichas podobe* was at the Shams Allam Hotel, Marsa Allam, Wadi Gamal, southern Red Sea on 13-14 Nov – if accepted, the second record for Egypt and the first outside Abu Simbel; it was seen again 23-24 Nov and 1 Jan 2007. At the same location there was a **Hypocolius** *Hypocolius ampelinus* on 30-31 Dec and 1 Jan 2007. A **Pied Stonechat** *Saxicola caprata*, if accepted, the first record for Egypt, was seen and photographed at El Gouna, Red Sea on 2nd-3rd Oct.

GEORGIA

In the Kazbegi area of Northern Georgia an **Icterine Warbler** *Hippolais icterina* was seen on 14 and 16 Jul and two young **Ménétries's Warbler** *Sylvia mystacea* on 14 Jul.

IRAQ

The Finno-Russian Lesser White-fronted Goose (*Anser erythropus*) project has satellite-tracked three birds to Iraq, where they are wintering. Another bird is in eastern Syria.

ISRAEL

A **Saker Falcon** *Falco cherrug* was seen at Tirat Tzvi, Bet She'an valley on 9 Sep. Two **Crested Honey Buzzards** *Pernis ptilorhyncus* were over the northern valleys in early Sep, with another over Modi'in, Judean foothills on 8 Sep. A **Bateleur** *Terathopius ecaudatus* was reported at Hula Lake on 8 Nov; the eighth record. A **Purple Swamphen** *Porphyrio porphyrio* was at Ma'agan Michael from mid-August to early October and an **African Swamphen** *P. madagascariensis* was at Ein Hahoresh fish ponds, Heffer valley in Sep. Also at Ma'agan Michael, a first-winter **Audouin's Gull** *Larus audouinii* was there on 14-15 Nov. The ninth **Great Black-backed Gull** *L. marinus* for Israel, an adult, was on the north Mediterranean coast at Acre from 30 Sep to 10 Nov. An adult **Herring Gull** *L. argentatus* was at Ma'agan Michael on 14-15 Nov, the second record for Israel. It was apparently from the yellow-legged Baltic population (*'omissus'* is now synonymised with *argentatus*), the previous Herring Gull record being a pink-legged *argentatus* in 1987. At Eilat's north beach, 14 **Lesser Crested Tern** *Sterna bengalensis* appeared on 1 Aug, a good count for this species, 35 **Bridled Tern** *Onychoprion anaethetus* occurring the same date. Five **Oriental Skylarks** *Alauda gulgula* were at Yotvata on 24 Oct, with one at Neot Smadar 25 Oct and one Sde Boker 6 Nov. Four **Basra Reed Warblers** *Acrocephalus griseldis* were trapped and ringed in the Hula Valley during 4th-7th (2 males, a female and a recently fledged young) – first indication of breeding away from southern Iraq Marshes. Fifteen **Pine Bunting** *Emberiza leucocephalos* were at Amasa, Judean hills on 23 Dec.

JORDAN

Four **Ferruginous Duck** *Aythya nyroca* were at Aqaba Sewage Works on 20 Apr. A **Black Stork** *Ciconia nigra*, a scarce spring migrant, was at the small pools caused by leaks in the WAJ pipeline north-west of Azraq on 29 Apr. On 28-29 Apr there were nine **Glossy Ibis** *Plegadis falcinellus* at Qa al Azraq. A female **Red-footed Falcon** *Falco vespertinus* flew over the reserve at Azraq on 29 Apr. A male **Osprey** *Pandion haliaetus* was at the new pools at Azraq on 3 Apr, and another flew over the reserve on 6 Apr. An adult male **Montagu's Harrier** *Circus pygargus* flew west over the Azraq reserve on 4 Apr and there was

an adult male on the west side of Qa al Azraq on 9 Apr and a first-summer there 24 and 27 Apr. Three **Steppe Eagles** *Aquila nipalensis* hunting in the desert area north of Aqaba on 8 Dec was unseasonal. A pale-phase **Booted Eagle** *A. pennata* passed over Azraq reserve on 3 Apr, two dark-phase individuals flew over on 5 Apr, and a dark phase bird was seen on 12 Apr; the species is a scarce passage migrant. **Corncrake** *Crex crex*, a rare spring migrant, was seen on Azraq reserve on 25Apr, with two there the following day. Another was at Qa al Azraq on 24, 27 and 28 Apr. Two **Spotted Crakes** *Porzana porzana* were seen at the hide pool at Azraq on 22 Apr, with one there on 23 and 24 Apr. A **Grey Plover** *Pluvialis squatarola* was at Qa al Azraq on 28 Apr and on the same date 81 **Greater Sand Plover** *Charadrius leschenaultii*, including a pair with three chicks, were at Qa al Azraq near the salt project area. At Wadi al Shaumari, there was a pair with one small chick on 8 Apr. **Eurasian Curlew** *Numenius arquata*, a scarce visitor in Jordan was at the salt project area at Qa al Azraq on 15, 24 and 28 Apr. Also at Qa al Azraq there were 520 **Little Stint** *Calidris minuta* on 24 Apr. There was a **Temminck's Stint** *C. temminckii* at Azraq Reserve on 23 Apr and at Qa al Azraq there were three on 9, three on 15, two on 24 and one on 29 Apr. A **Red (Grey) Phalarope** *Phalaropus fulicarius* (see ATR **Plate 1**, p93), the first for Jordan was at Qa al Azraq on 29-30 Apr. At Aqaba Sewage Works there was a first-summer **Great Black-headed Gull** *Larus ichthyaetus* and six **Caspian Gull** *L. cachinnans* Six were at Aqaba Sewage Works on 20 Apr. **Little Tern** *Sternula albifrons*, an uncommon visitor in Jordan, was recorded at Qa al Azraq where there were five on 24 and four on 27 Apr. **Whiskered Terns** *Chlidonias hybrida*, were seen at Azraq Reserve on 25-29 Apr. On 28 Apr, 500 **European Turtle Dove** *Streptopelia turtur* roosted at Azraq. The **European Nightjar** *Caprimulgus europaeus* is a scarce, but probably under-recorded visitor to Jordan; birds were seen regularly at Azraq Reserve between 13-27 Apr, peaking at three on the last date. There were also three at the Azraq Rest House on 27 Apr. **Egyptian Nightjars** *C. aegyptius* were recorded at Azraq drinking at the hide pool at dusk between 3 and 27 Apr. There were several records of **Blue-cheeked Bee-eater** *Merops persicus* from Azraq Reserve between 8 and 14 Apr, with six there on 28 Apr. At Shaumari, there were two on 27th April. A male **Daurian Isabelline Shrike** *Lanius i. isabellinus* was at Azraq on 17 Apr. A **Eurasian Golden Oriole** *Oriolus oriolus* flew over Azraq on 28 Apr. **Eurasian Crag Martins** *Ptyonoprogne rupestris* were seen at Azraq on 17 and 25 Apr. On 16 Apr there was a **Thick-billed Lark** *Ramphocoris clotbey* at Wadi al Qashah, one at Wadi al Emkharouq and a pair at Wadi al Husida. On Azraq Reserve there were two **Upcher's Warblers** *Hippolais languida* in *Nitraria* scrub on 25 Apr, and one there on 28 Apr and there was a **Wood Warbler** *Phylloscopus sibilatrix* on 22 Apr. **Eastern Bonelli's Warblers** *Ph. orientalis* were seen regularly at Azraq Reserve between 4-28 April and there was one at Shaumari on 8 Apr. Also at Azraq, a **Garden Warbler** *Sylvia borin* was seen on 27 Apr, there were several sightings of **Eastern Orphean Warbler** *S. crassirostris* between 3-27 Apr and a male **Rüppell's Warbler** *S. rueppelli* was there on 17 Apr. A male **Eurasian Blackbird** *Turdus merula* was at North Azraq on 6 Apr. **Thrush Nightingale** *Luscinia luscinia* is an uncommon migrant in Jordan, so two at Azraq on 27 Apr, one near Qasr al Kharana on 13 Apr and one at Wadi Rum on 19 Apr were notable. **Cyprus Wheatears** *Oenanthe cypriaca* were at Azraq on 5 Apr and at Shaumari on 11-12 Apr. **Rufous-tailed Rock Thrush** *Monticola saxatilis* is a scarce passage migrant, so a male and female by the WAJ pipeline north-west of Azraq on 12 Apr and four in Wadi Rum on 19 Apr were notable. There was an adult male **Collared Flycatcher** *Ficedula albicollis* at Shaumari on 8 Apr. **Citrine Wagtails** *Motacilla citreola* were recorded at Azraq Reserve on 22 Apr (male), 24 Apr (female), 27 (first-summer male) and 28 Apr (male). At Qa al Azraq, there was a female on 6 Apr. A **Grey Wagtail** *M. cinerea* was at the new pools, Azraq Reserve on 11 Apr and a male **Black-headed Bunting** *Emberiza melanocephala* was seen in the south-western part of the reserve on 5 Apr.

KUWAIT

A male **Common Pochard** *Aythya ferina* was at Jahra Pool on 2 Dec and a female **Ferruginous Duck** *Aythya nyroca* at Sabah Al Salem Pool on 14 Dec is the third confirmed record for Kuwait. A fledged juvenile **Little Grebe** *Tachybaptus ruficollis* at Jahra pools on 23 Jul may have been reared there. A **Black Stork** *Ciconia nigra* seen flying over Sulaibikhat Reserve on 29 Sep is the fifth Kuwait record. Up to eight **Socotra Cormorant** *Leucocarbo nigrogularis* were present on a platform off Zour point from 15 Jun – 8 Sep. A female **Merlin** *Falco columbarius* was at Doha Spit on 8 Dec. The third Kuwait record of **Black-winged Kite** *Milvus migrans* was of a bird seen flying over the Abdally road (road 80) at about km 40 on 14 Nov. Three **Eurasian Griffon Vultures** *Gyps fulvus* were in the Sabah Al Ahmed Natural Reserve (SAANR) on 9 Nov. There were three records of **Macqueen's Bustard** *Chamydotis macqueenii*: one flying over Power Plant Reeds near Zour point on 20 Nov, one in the SAANR on 23 Nov and one at Liyah on 24 Nov. Unsubstantiated reports of many birds being shot or pursued by falconers this autumn are worrying and there has been evidence of illegal entrance into restricted areas in pursuit of this species both by 4x4 vehicles and helicopter. A **Northern Lapwing** *Vanellus vanellus* flew over Jahra East outfall on 17 Nov. Three **Red-wattled Lapwings** *V. indicus* were present at Abdally Farms on 17 Nov and two were at the Kuwait Oil Company Rawdatain oilfield on 13 Dec. A **Pacific Golden Plover** *Pluvialis fulva* was in Sulaibikhat bay on 6 Oct. **Jack Snipe** *Lymnocryptes minimus* were recorded at Sabah Al Salem on 18 Nov and at Jahra East Outfall on 8 Dec. An adult winter **Great Black-headed Gull** *Larus ichthyaetus* was at Doha spit on 8 Dec. A **Pin-tailed Sandgrouse** *Pterocles alchata* came to drink at a storm drain by the Fahaheel highway 30, 5km south of Fahaheel at dusk on 14 Dec. A **Common Woodpigeon** *Columba palumbus* was seen flying at

Daiya on 31 Nov. Ten **Eurasian Scops Owl** *Otus scops* roosting at Tulha in the SAANR on 24 Oct is the highest daily count for Kuwait. There was a **Short-eared Owl** *Asio flammeus* at Jahra East Outfall on 10 Nov and one was found shot dead at Al Abraq Al-Khabari on 17 Nov. The second **Long-tailed Shrike** *Lanius schach* for Kuwait was at Sulaibikhat reserve on 17 Nov and was still present mid Dec. The first record was of a bird at Jahra Pool reserve on 7 Oct 2004. **Hypocolius** *Hypocolius ampelinus* were present Oct-Dec at Jahra Farms, Daiya and Green Island with a maximum of eight at Green Island on 16 Dec. Two **Eurasian Crag Martin** *Ptyonoprogne rupestris* were at Jahra East Outfall on 21 Oct, with one at Pipe Line Beach on 27 Oct. A **Woodlark** *Lullula arborea* was seen in Fahaheel park on 5 Oct. Upto 40 **Temminck's Lark** *Eremophila bilopha* were seen on several August dates at Liyah. Over 120 birds were seen in several flocks averaging 20 birds the Salmi/Wadi Al-Batin area on 10 Nov. A **Mountain Chiffchaff** *Phylloscopus [lorenzii] sindianus* was at Liyah on 3 Nov and another at Al Abraq Al-Khabari on 17 Nov. Three **Common Babbler** *Turdoides caudatus* seen at Tulha drinking pool in the SAANR on 3 Aug comprise the 4th record for Kuwait. Interestingly, one individual had yellow irises, a feature noted in field guides for **Arabian Babbler** *T. squamiceps* only. At SAANR there were two juvenile **Rosy Starling** *Sturnus roseus* on 17 Aug, a **Rufous-tailed Wheatear** *Oenanthe xanthoprymna* on 24 Oct, three wintering **Red-tailed Wheatear** *Oenanthe chrysopygia* during Nov and Dec and a single **Finsch's Wheatear** *O. finschii* in Nov-Dec, another being in the Wadi Batin area in Nov-Dec. A **Forest Wagtail** *Dendronanthus indicus*, the first for Kuwait and the Western Palearctic (defined by BWP as north of 27.5°N in the Arabian Peninsula) was at Al Abraq Al-Khabari on 10 Nov (see ATR **Plate 2**, p93). **Red-breasted Flycatcher** *Ficedula parva* was seen at three sites during the autumn: two at Tulha in the SAANR on 19 Oct, two at Sulaibikhat reserve from 2-9 Nov and two at Al Abraq Al-Khabari from 10-17 Nov. A female **Common Chaffinch** *Fringilla coelebs* was at Al abraq Al-Khabari on 17 Nov and a female **Brambling** *F. montifringilla* was at Sulaibikhat reserve on 9 Nov, with another female at Al Abraq Al-Khabari on 10 Nov. Three **Common Reed Bunting** *Emberiza schoeniclus* were present at Sabah Al Salem pool on 18 Nov and a single at Jahra East Outfall on 23 Nov and a juvenile **Black-headed Bunting** *E. melanocephala* was at Tulha in the SAANR on 26 Aug.

LEBANON

A very late record was of a **Velvet Scoter** *Melanitta fusca* offshore at Sarafand on 12 Nov 2005. Another late record was of two **Buff-bellied Pipits** *Anthus rubescens* at Cheikh Zennad on 10 Mar (the second record for Lebanon). A **Northern Gannet** *Morus bassanus* was off Ras Beirut on 16 Dec, with two **Great Black-headed Gulls** *Larus ichthyaetus* there the next day. An **Eurasian Curlew** *Numenius arquata* was at Naqura on 10 Oct, and **Little Owl** *Athene noctua*, **Barn Owl** *Tyto alba* and **Long-eared Owl** *Asio otus* were at Beshmezzin, Koura district on 2 Sep. The population of **Common Myna** *Acridotheres tristis* in Beirut has been increasing rapidly, with at least 50 regularly observed at three different locations in the city. Two **Eurasian Spoonbills** *Platalea leucorodia* were at Cheikh Zennad on 27 Sep. Autumn raptor migration highlights included up to ten **Crested Honey Buzzards** *Pernis ptilorhyncus*, three **Red Kites** *Milvus milvus* and three **Lanner Falcons** *Falco biarmicus* past Bhamdoun between 27 Aug and 1 Oct. In the Bekaa valley, a **Great Snipe** *Gallinago media* and an impressive 37 **Little Gulls** *Larus minutus* were reported at Lake Qaraoun on 6 Oct. Also in the Bekaa, two **White-throated Kingfishers** *Halcyon smyrnensis* were wintering at Aammiq for the third successive year and a **Dunnock** *Prunella modularis* was seen there on 20 Dec. A report of **Clamorous Reed Warblers** *Acrocephalus stentoreus* breeding at Kfar Zabad in the eastern Bekaa valley would be, if proven, a significant range increase for this sedentary species and a first record for Lebanon. Similarly, an adult and two juvenile **Southern Grey Shrike** *Lanius meridionalis* reported from Cheikh Zennad in June would be the first breeding record for Lebanon since at least the 1960s. A large-scale influx of **Pale Rockfinches** *Carpospiza brachydactyla* occurred and hundreds of pairs are estimated to have bred on both the eastern and western slopes of the Bekaa. (There were similar reports from Israel and Syria recently). Nearby at Aana, the male **Desert Finch** was still present on 11 Jul. The **White-throated Robin** *Irania gutturalis* at Jebel Barouk referred to in the last report constitutes the 3rd breeding record, following the discovery of the second breeding site for Lebanon at Tannourine in 2005 (and again in 2006).

OMAN

A **Sooty Shearwater** *Puffinus griseus* on 22 Oct at Ras Janjari is the 7th record. Most records of **Swinhoe's Storm-petrel** *Oceanodroma monorhis* have been in the south but increased sea-watching and pelagic boat trip activity have resulted in more northern records – one about 15 km off Muscat on 8 Sep, three off Masirah Island on 26 Oct (and four on the 27 Oct). One was also seen off Ras Janjari on 22 Oct. Three **Cory's Shearwaters** *Calonectris diomedea* were seen off Mirbat on 29 Jun (9th record). A late **Persian Shearwater** *Puffinus persicus* was seen off the ferry to Masirah Island on 1 Dec. There was a single **Abdim's Stork** *Ciconia abdimii* at Raysut on 23 Oct. Oman's third record of **Lesser White-fronted Goose** *Anser erythropus* was at Khor Sawli on 13 Dec while a single **Greylag Goose** *A. anser* was at Hilf, Masirah Island, on 28-29 Nov staying until at least 5 Jan 07. Some 24 **Common Shelduck** *Tadorna tadorna* (Oman's second highest total) were at Quriyat on 14 Dec. A male **Falcated Duck** *Anas falacata* at Khor Taqah on 13 Nov would be the 1st Oman record if accepted. A total of 400 **Egyptian Vultures** *Neophron percnopterus* on 24 Nov at Al Amerat near Muscat is a record number for Oman. **Lesser Spotted Eagles** *Aquila pomarina* were seen on 17 Nov between Mirbat and Ras Janjari and on 24 and 28 Nov at Quriyat – if accepted these will be the 10th and 11th records. There have been a

number of sightings of **Amur Falcon** *Falco amurensis* this autumn: first-year birds were seen on 5 Oct on Masirah Island, 14 Nov near Taqah, 15 Nov near Tiwi, 1 Dec at Ras Al Khabbah and 7 Dec at Al Beed Farm. An adult female was at East Khor on 18 Nov. A further bird was at Zeek on 14 Dec. A **Saker Falcon** *F. cherrug* was at Thumrait on 14 Dec. There was a **White-breasted Waterhen** *Amaurensis phoenicurus* at Ayn Sahanawt on 8 Dec. A **Black-winged Pratincole** *Glareola nordmanni* near Sadah (Dhofar) on 27 Sep would be the 10th record if accepted. A **Little Pratincole** *G. lactea* was at East Khawr on 10 Nov. A **Long-billed Dowitcher** *Limnodromus scolopaceus* was seen at Filim on 12 Dec. A **South Polar Skua** *Catharacta maccormicki* was off Ras al Hadd on 30 Jun and one was at Duqm on 9 Dec (5th and 6th records). A **Lesser Noddy** *Anous tenuirostris* was also off Ras al Hadd on 30 Jun and one was at Hadbin on 30 Sep. A first-winter **Oriental Turtle Dove** *Streptopelia orientalis meena* was at Sahanawt Farm, Salalah on 3 Oct. There was a small influx of **Pied [Jacobin] Cuckoos** *Oxylophus [Clamator] jacobinus*, starting on 15 May in Harweel. Other birds were seen at Dawkah on 25 Oct, Al Beed on 16 Nov, and a different bird there on 30 Nov. A pale morph adult was at Mughsayl on 9 Dec. Two **Grey-bellied Cuckoos** *Cacomantis passerinus* were found on Masirah Island (Hilf). A dark morph juvenile was present from 18 Oct-15 Nov while a first-winter bird was there from 28 Oct-4 Nov. These will be the 1st and 2nd records if accepted. **Asian Koels** *Eudynamys scolopaceus* regularly winter on Masirah but are more unusual elsewhere. The following records are therefore interesting: singles at Montasar on 29 Nov, 1 and 15 Dec, Qitbit on 29 Nov, Dawqah on 29 Nov and Muqshin on 1 Dec. Two **Short-eared Owls** *Asio flammeus* were at Montasar on 21 Oct while a single was seen at Hilf on 29 Nov. An **Egyptian Nightjar** *Caprimulgus aegyptius* was seen coming in off the sea at Ras al Hadd on 15 Sep. A **Little Swift** *Apus affinis* was on Masirah on 25 Nov. Single late **Blue-cheeked Bee-eaters** *Merops persicus* were seen at Taqah on 14 Dec and Qitbit on 15 Dec. A **Brown-throated Martin** *Riparia paludicola* was at Montasar on 15 Dec. Two juvenile **Streak-throated Swallows** *Petrochelidon fluvicola* were seen at Sidrah near Duqm on 7 Jul while an adult was at Qitbit on 14 Dec (4th and 5th records if accepted). A total of five **Forest Wagtails** *Dendronanthus indicus* was seen, a maximum of four on Masirah from 23 Oct-20 Nov and a further bird at Mabr Farm on 1 Dec. These are the 4th and 5th records. **'Masked Wagtail'** *Motacilla alba personata* occurs regularly in small numbers in the north, particularly at Sohar, but a record on 28 Sep at Wadi Shilyun in the south is unusual. **Hypocolius** *Hypocolius ampelinus* arrived in mid-November with a male and female at Montasar on 15 Nov. A single bird was seen there on 16 Nov and a juvenile on 29 Nov and 1 Dec. One was at South Qitbit on 29 Nov, while 18 were seen at Thumrait on the same day. Three were at Montasar on 15 Dec. Two **Thrush Nightingales** *Luscinia luscinia* were at Mabr Farm on 20 Sep and a single was at Shisr on 21 Sep (10th and 11th records). **White-throated Robin** *Irania gutturalis* is rare in autumn so one at Ras al Jinz on 14 Sep is of note. A **White-crowned Wheatear** *Oenanthe leucopyga* was seen in Quriyat from 3-24 Nov. An influx of thrushes in late November resulted in a female **Ring Ouzel** *Turdus torquatus* at Saye Plateau, Mussandam on 23 Nov and another at Wadi A'Shuweimiyah on 28-29 Nov. A male was at Mabr Farm on 1 Dec. Occurrences of **Black-throated Thrush** *T. atrogularis* were also widespread, being seen in Mussandam, Muscat and the central desert. Six were at Saye Plateau on 23 Nov, two at Mabr Farm on 28 Nov and 1 Dec, one at Shisr on 30 Nov and one at Qurm Park on 7 Dec. The 10th and 11th records of **Grasshopper Warbler** *Locustella naevia* have been seen this autumn with one at Hilf on 25 Sep and one at Qurm Park on 4 Oct. A **Paddyfield Warbler** *Acrocephalus agricola* was seen at Qurm Park after heavy rain on 15 Dec (9th record) while if accepted, Oman's 1st record of **Basra Reed Warbler** *A. griseldis* was at Qitbit on 2 Nov. **Green Warbler** *Phylloscopus trochiloides nitidus* was seen near Al Khahil on seven dates between 26 Sep-12 Nov at Hilf, Masirah and on 19 Nov at Qitbit. A **Yellow-browed Warbler** *P. inornatus* was at Hilf on 20 Nov while **Hume's Warbler** *P. humei* was seen at Montasar on 5 Nov, at Hilf from 27 Nov-1 Dec and at Qitbit on 15 Dec. If accepted, Oman's 2nd record of **Blue-and-white Flycatcher** *Muscicapa cyanomelana* was at Sahnawt Farm, Salalah from 14-18 Nov. The 1st record of **Taiga Flycatcher** *Ficedula albicilla* was at Hilf from 25-26 Nov. A further 1st record, of **Asian Brown Flycatcher** *M. dauurica*, was at Hilf from 25 –28 Oct. Seventy **Isabelline Shrikes** *Lanius isabellinus* (no information as to ssp) were in a small wadi near Ras al Jinz on 15 Sep. A single **Long-tailed Shrike** *L. schach* was at Quriyat on 14 Dec (9th record). The 4th record of **Black Drongo** *Dicrurus macrocercus* was recorded at Yaloon on 25/26 Nov. There have been only a few records of **Yellow-throated Sparrow** *Petronia xanthocollis* this autumn and in much smaller numbers than usual. A single **Brambling** *Fringilla montifringilla* was at Hilf, Masirah Island from 25-27 December. There was a **Rustic Bunting** *Emberiza rustica* at Qurm Park on 22 Oct (5th record) while there were three records of **Little Bunting** *E. pusilla*, with singles at Al Beed Farm on 16 Nov, Qitbit on 19 Nov and at least two on Saye Plateau, Mussandam on 24 Nov. These would be the 6th-8th records if accepted.

SAUDI ARABIA

Records were received from Dhahran, focusing mainly on the sewage effluent lake, west spray fields and the jabals at Dhahran Hills. A **Little Bittern** *Ixobrychus minutus* on 22 Dec was a notable winter record. There were six **Black-crowned Night Herons** *Nycticorax nycticorax* on 1 Sep. **Cattle Egrets** *Bubulcus ibis* now regularly roost in the Phragmites reeds at the lake and after just two on 28 Sep numbers peaked at 118 on 22 Dec. The species was previously considered an irregular but annual visitor. Birds have been wintering regularly for the last few years and began

using the lakeside roost in 2004. A single **Great Egret** *Ardea alba* was recorded on 14 Oct. A juvenile **Purple Heron** *A. purpurea* on 21 Dec was unusual. Single juvenile **Eastern Imperial Eagles** *Aquila heliaca* were seen on 29 Sep, 6 and 13 Oct, 6 and 10 Nov and 1 Dec. A juvenile **Little Crake** *Porzana parva* was at a pond from 25-28 Aug. A **Pharaoh Eagle Owl** *Bubo ascalaphus* was in the Dhahran Hills on 20 and 27 Jul, and three were recorded on 3 Aug. An **Egyptian Nightjar** *Caprimulgus aegyptius* was seen in car headlamps near the lake on 30 Sep. A **Mourning Wheatear** *Oenanthe lugens* was present on 15 ands 22 Dec. The species is rare in Dhahran, where there are occasional spring migrants. This record perhaps suggests occasional wintering in the area. A **Black Redstart** *Phoenicurus ochruros* of the *semirufus* race was seen on 21 Dec. A **Masked Shrike** *Lanius nubicus* was at the Haradh Gas Plant on 29 Aug. An **Asian Desert Warbler** *Sylvia nana* was at Thuqbah, Al-Khobar on 14 Dec and another was at Dhahran Hills on 22 Dec.

Records also came from Sabkhat al-Fasl, Jubail. Two **Great Egrets** *Ardea alba* were present on 6 Oct followed by at least ten on 13 Oct. A juvenile and adult **Greater Spotted Eagle** *Aquila clanga* were recorded 13 Oct, and six sub-adults and two juveniles were present on 10 Nov, followed by four on 6 Nov, and six on 1 Dec. **Purple Swamphens** *Porphyrio porphyrio* included seven on 4 Aug, ten on 18 Aug, and two on 29 Sep. At least 150 Avocet on 1 Dec was a notable record. Single **Short-eared Owls** *Asio flammeus* were present on 4 Aug and 16 Oct. In the early morning of 4 Aug there were six **Egyptian Nightjars** *Caprimulgus aegyptius* and seven more on 18 Aug. These were all in a loose group and were assumed migrants. Another was seen on 26 Dec. The species is considered to be a scarce passage migrant and winter visitor. A **White-throated Kingfisher** *Halcyon smyrnensis* was seen on 16 Nov and two **Pied Kingfishers** *Ceryle rudis* were together on 13 Oct. A **Richard's Pipit** *Anthus richardi* was present on 13 Oct. A **Mourning Wheatear** *Oenanthe lugens* was present on 13 Oct. Two **Citrine Wagtail** *Motacilla citreola* were seen on 6 Oct. Six **Bramblings** *Fringilla montifringilla* arrived after the first cold spell of winter on 10 Nov.

SOCOTRA (YEMEN)

A late record from November 2005 was of the 1st sighting of **Sacred Ibis** *Threskiornis aethiopicus*. Visits in January added **Northern Lapwing** *Vanellus vanellus*, **Great Black-headed Gull** *Larus ichthyaetus* and **Slender-billed Gull** *L. genei* to the island's list. More visits in February and March added a further three to the list bringing it to over 190. These were **Long-toed Stint** *Calidris subminuta*, **Baillon's Crake** *Porzana pusilla* and **Siberian Stonechat** *Saxicola maurus*. Other vagrants seen were four **Mallard** *Anas platyrhynchos*, **Western Marsh Harrier** *Circus aeruginosus*, female **Amur Falcon** *Falco amurensis*, two **Intermediate Egrets** *Egretta intermedia*, **Sacred Ibis** (still present), two **Slender-billed Gulls** two **Great Black-headed Gulls**, four **Jack Snipe** *Lymnocryptes minimus* and a **Collared Pratincole** *Glareola pratincola*. One of the most interesting records was an adult **Yellow Bittern** *Ixobrychus sinensis* at Sirhan, which raised the question as to whether the species might nest here. A previous visit had revealed a juvenile at an adjacent lagoon with dense palm groves. During the breeding bird surveys found a new area for the **Socotra Cisticola** *Cisticola haesitatus* in a species of dwarf acacia. About 200 individuals were estimated to be present in the 5km^2 that was surveyed. This survey also found the nest of **Socotra Warbler** *Cis. incanus* with three eggs, only the second discovered. **Cattle Egrets** *Bubulcus ibis* had increased to over 30, **Black-winged Stilts** *Himantopus himantopus* were pairing up and there were up-seven **Common Moorhens** *Gallinulua chloropus* at one wetland. All of these three could be potential new breeding birds for Socotra.

SYRIA

Late autumn counts in the Euphrates valley revealed good numbers of duck including 344 **Ferruginous Duck** *Aythya nyroca* at Ba'ath Lake on 9 Nov. A flock of 39 **Common Cranes** *Grus grus* was in the basalt desert east of Jebel Sis, potential wintering habitat, on 14 Nov. A **European Nutcracker** *Nucifraga caryocatactes* at Kassab on the Turkish border on 7 Oct is probably the first Syrian record. Two **European Robins** *Erithacus rubecula* were singing in suitable beech woods in the Foroulloq Forest on two dates in May; these appear to be the first breeding season records and would be a substantial range extension if proven breeding. The Finno-Russian Lesser White-fronted Goose (*Anser erythropus*) project has satellite-tracked one bird to eastern Syria, probably close to Dura Europos in the Euphrates wetlands. Three other birds are in Iraq.

TADZHIKISTAN (TAJIKISTAN)

Noteworthy among raptors were a **Crested Honey Buzzard** *Pernis ptilorhynchus* at the beginning of October and a **Pallid Harrier** *Circus macrourus* at the end of September, both being in the Zeravshan valley. A total of 25 **Cinereous Vultures** *Aegypius monachus* was in Gharm valley in early November. Three **Baillon's Crakes** *Porzana pusilla* were near Nurobod at the beginning of November. A **Solitary Snipe** *Gallinago solitaria* was flushed from a mountain river in Varzob district in early October.

TURKEY

Names given in brackets are the provinces in which sightings were made. In the north-east corner of the Mediterranean a **Northern Gannet** *Morus bassanus* was at Milleyha Shores (Hatay) on 21 Aug (only the second-ever autumn record). A **Red Kite** *Milvus milvus* was at Malkara (Tekirdağ) on 13 Oct. A **Little Bustard** *Tetrax tetrax* was in the Göksu Delta (Mersin) on 7 Nov. In the far east, just a few kilometres from the border with Armenia a **Purple Swamphen** *Porphyrio porphyrio* was only the third record for East Anatolia, at Tuzluca (Iğdır) on 8 Sep. Single **Corncrakes** *Crex crex* were at the Gediz Delta (Izmir) on 26 Sep, Büyükçekmece Lake (Istanbul) on 30 Sep and Goztepe (Istanbul) on 6 Oct (the second-latest

ever). A **Eurasian Dotterel** *Charadrius morinellus* was at Kulu Gölü (Konya) on 14 Oct and three **Bar-tailed Godwits** *Limosa lapponica* were at the Göksu Delta (Mersin) on 30 Sep. A **Lesser Yellowlegs** *Tringa flavipes* was trapped and photographed in the Kızılırmak Delta on 28 Nov. This is the 1st record for Turkey and only the third for the Middle East following sightings in Israel in 1977 and Oman in 2003. Interesting seabirds included a **Great Black-backed Gull** *Larus marinus* again at Haydarpaşa (Istanbul) on 27 Sep and a **Kittiwake** *Rissa tridactyla* at Riva (Istanbul) on 1 Nov. A **Short-eared Owl** *Asio flammeus* was at Izmit Bay (Kocaeli) on 15 Oct. Three **Horned Larks** *Eremophila alpestris* at Kilyos beach (Istanbul) on 5 Nov were probably first for this province. A **Siberian Accentor** *Prunella montanella* photographed at Rumeli Feneri (Istanbul) on 2 Nov is the first record for Turkey (p107 this issue) and only the second in the Middle East following a record in Lebanon in 1958. A **Desert Wheatear** *Oenanthe deserti* appeared at Kuyucuk Gölü (Kars) on 25 Sep and another was in the Sakarya Delta (Adapazarı) on 14 Nov. A **River Warbler** *Locustella fluviatilis* at Samandağ (Hatay) on 14 Oct was the latest ever for almost a month. An **Isabelline Shrike** *Lanius isabellinus* was sighted at Birecik Dam (Şanlıurfa) on 30 Sep. There was a report of a **Snow Bunting** *Plectrophenax nivalis* at Malatya on 19 Sep. Another was at Vize (Kirklareli) on 21 Nov followed by a single at Iğneada (Kirklareli) on 27 Nov and three at Kızılırmak on 28 Nov. Coincident with the **Siberian Accentor**, a **Lapland Longspur** *Calcarius lapponicus* photographed at Rumeli Feneri (Istanbul) on 2 Nov is the 1st record for Turkey (p107 this issue) and the Middle East although it winters in large numbers in Ukraine, on the opposite side of the Black Sea.

UNITED ARAB EMIRATES

A **Ruddy Shelduck** *Tadorna ferruginea* was in Safa Park on 21 Oct, with a flock of five reported at Al Wasit and another in Abu Dhabi city in late Nov. Five **Red-breasted Mergansers** *Mergus serrator* at Khor al-Beidah on 11 Nov were only the 5th record. Two **Wilson's Storm Petrels** *Oceanites oceanicus* were seen during a pelagic trip off Khor Fakkan on 21 Jul, one or two also being noted off the mainland coast at Al Ghurfa Breakwater (Banana Island), Fujairah, on dates either side of this date. A **Lesser Flamingo** *Phoeniconaias minor* was at Al Wathba Lake on 22 Jun, for one day only, and one, occasionally two, were present at Ras al Khor, Dubai, mid-Jul-Dec, except Sep, the 3rd and 4th records. A **Red-footed Falcon** *Falco vespertinus*, 1st UAE record, was at Fujairah National Dairy Farm (FNDF) 29 Sep-14 Oct by when it had been joined by a second bird. Both remained to 16 Oct, with one, the later arriving, to 20 Oct. An **Amur Falcon** *F. amurensis* was also at this site from 29 Sep, with two on 20 Oct, one remaining to 3 Nov at least (7th and 8th records). Another, different individual was photographed on the Masafi to Dibba road on 16 Nov and, finally, one was in Abu Dhabi city on 6 Dec. Single **Sooty Falcons** *F. concolor* were reported from Dubai Pivots on 2 Sep and Al Maqam Equestrian Centre and Golf Club on 22 Sep. Seven **European Honey Buzzards** *Pernis apivorus* were encountered offshore but seen heading landward during a pelagic trip off Khor Fakkan on 7 Oct. **Crested Honey Buzzards** *P. ptilorhynchus* returned to Abu Dhabi island from 28 Oct when one was probably newly arrived at Khalidiya. There were no further records until 17 Nov after which two or more different birds were noted regularly into early Dec. A record 42 **Western Marsh Harriers** *Circus aeruginosus* were at Khor Dubai on 2 Dec, with 40 more at Al Wathba Lake on 9 Dec along with a male **Northern Goshawk** *Accipiter gentilis*. What would be a 1st Abu Dhabi record of **Shikra** *Accipiter badius* was reported from the Abu Dhabi International Airport on 17 Oct. Single **Lesser Spotted Eagles** *Aquila pomarina* were at Khor Dubai from 17-28 Nov, with two on 25 Nov, and at Shahama also on 17 Nov. Just a single **Steppe Eagle** *Aq. nipalensis* was reported, at Hamraniyah on 4 Oct. An **Eastern Imperial Eagle** *Aq. heliaca* was at Khor Dubai 24-28 Nov and Al Wathba Lake from 30 Nov-9 Dec at least. A **Baillon's Crake** *Porzana pusilla* was at Al Wathba Lake on 26 Sep, while an adult **Red-knobbed Coot** *Fulica cristata* was still present at Al Warsan Lakes (Wimpey Pits) from 21 Oct-9 Dec at least, with an apparent hybrid (x **Eurasian Coot** *F. atra*) also noted. An interesting record of **Crab-plover** *Dromas ardeola* concerned 80 seen heading south some way off Khor Fakkan during a pelagic trip on 7 Oct; a flock of 500 was at Khor al Beidah on 29 Oct. A single juvenile **Sociable Lapwing** *Vanellus gregarius* was at Dubai pivots from 25 Nov with three birds present from 1 Dec onwards. Single **Eurasian Golden Plovers** *Pluvialis apricaria* were at Dubai pivots from 7 Nov into early Dec and at FNDF from 25 Nov also into early Dec. Single **Caspian Plovers** *Charadrius asiaticus* were noted at four sites from 13 Sep-15 Oct with two birds at one of these, Arabian Ranches, on 22 Sep. A **Eurasian Dotterel** *Ch. morinellus* was reported from FNDF on 11 Oct, with a single **Great Snipe** *Gallinago media* at the same locality from 22-23 Sep and 16 Nov. A flock of 34 **Great Knot** *Calidris tenuirostris* at Khor Al Beidah on 29 Oct had declined to 12 on 18 Nov. **Long-toed Stints** *C. subminuta* were reported at Al Wathba Lake on 26 Sep and 25 Nov, while a **Pectoral Sandpiper** *C. melanotos* (3rd record), was present at FNDF from 26 Sep-7 Oct. The peak count of **Broad-billed Sandpipers** *Limicola falcinellus* at Khor Dubai was 115 on 1 Jul. **Cream-coloured Coursers** *Cursorius cursor* totalled at 98 at Ghantoot on 16 Sep. A **Black-winged Pratincole** *Glareola nordmanni* was at FNDF from 26 Sep-25 Oct, with two from 10-15 Nov. **Brown Noddies** *Anous stolidus* were reported off the East Coast from July to early October, with a peak of eight off Ras Dibba on 15 Sep. An **Oriental Turtle Dove** *Streptopelia orientalis* found at a well on the Huwaylat road (Hatta to Kalba) on 9 Jul and again on 13 Jul was a highly surprising mid-summer record. Another was at Green Mubazzarah (Jebel Hafit) from 30 Oct-3 Nov. Just one **Asian Koel** *Eudynamys scolopaceus* was seen, in Abu Dhabi on 3-4 Oct, the 2nd island record. A **Long-eared Owl** *Asio otus* was at Khalidiya on 23 Nov, just the 13th UAE record. Several reports of **Brown Shrike** *Lanius cristatus* were received in Oct and early Nov, all but

one being at FNDF, although after scrutiny of photographs considerable contention remains (there is just one previously accepted record, a male in spring). The first **Hypocolius** *Hypocolius ampelinus* had returned to Ghantoot by 17 Nov when six were noted, increasing to 17 by 9 Dec. None was reported from any other site. Single **Brown-throated Martins** *Riparia paludicola* were at FNDF on three dates in Oct, with an early **Wire-tailed Swallow** *Hirundo smithii* at Qurrayah Pools on 15 Sep (earliest autumn record, first in Sep) followed by another at the FNDF on 15 Nov. Four **Eurasian Crag Martins** *Ptyonoprogne rupestris* were found first at Jebel Hafit on 14 Nov, and then either here or the nearby Al Ain Compost Plant into Dec, with up to eight present on 7 Dec (first Nov and Dec records). **Bimaculated Larks** *Melanocorypha bimaculata* were reported at five sites, the earliest returnees being seven on 28 Oct at Al Wathba Camel Racetrack, where over 20 were present in early Dec. A **Moustached Warbler** *Acrocephalus melanopogon* was at Green Mubazzarah from 29 Nov into early Dec. Up to two **Blyth's Reed Warblers** *A. dumetorum* were reported in Mushrif Palace Gardens from 10 Oct-3 Nov, with another at FNDF on 14 Oct. **Yellow-browed Warblers** *Phylloscopus inornatus* were present in Abu Dhabi from 14 Oct, with up to five reported on 23 Oct, and the latest, a single bird, on 8 Nov. **Green Warbler** *P. trochiloides nitidus* also put in an appearance in Abu Dhabi city with singles in two sites from 6-23 Oct, probably involving three different individuals. Always welcome, five **Dark-throated Thrushes** *Turdus atrogularis* were in the Dibba area on 25 Nov, one remaining in Dibba Park to 1 Dec at least, and another individual appearing at Green Mubazzarah on 7 Dec. A **Redwing** *T. iliacus* at the FNDF on 15 Nov was the 7th record and the first since 1994, also nipping over the border fence to get on to the Oman list, at last. Mundane elsewhere, perhaps, **European Robins** *Erithacus rubecula* were in Mushrif Palace Gardens on 2 Sep until 30 Nov and at Dibba Cement Works 25 Nov, while a **White-throated Robin** *Irania gutturalis* at Green Mubazzarah on 20 Oct was an exceedingly rare autumn record. Single **Eurasian Stonechats** *Saxicola torquatus* were reported at Dubai pivots and at Nouakchott Street marsh from late Nov. Finally, a **Pied Stonechat** *S. caprata* was at, where else, FNDF on 15 Sep (13th record), as was an **Olive-backed Pipit** *Anthus hodgsoni* on 24 Oct.

UZBEKISTAN

A single **Caspian Plover** *Charadrius asiaticus* was at Ghaliblar (Jizzakh) on 6 May. **Himalayan Griffons** *Gyps himalayensis* included six at Chimgan (Toshkent) on 8 May and a single the next day, five at Masarsay (Toshkent) on 8 May, two at Tahtakaraca Pass (Samarqand) on 25 Apr and a single at Zaamin National Park Sanatorium (Jizzakh) on 3 May. Perhaps the species is less rare here than previously thought. A **Lesser Sand Plover** *C. mongolus* was at Aydar Kul (Jizzakh) on 5 May. There are very few known records of **Crested Honey Buzzard** *Pernis ptilorhynchus* and migration has not been reported here before. Ten moved over Masarsay on 8 May, and the same day two passed through at Chimgan followed by 20 on 9 May (all Tashkent). A **Pale Martin** *Riparia diluta* was at Amu-Buchara-Chanel (Bukhoro) on 26 Apr. A **Hume's Short-toed Lark** *Calandrella acutirostris* was at Todakul (Bukhoro) on 27 Apr. This observation is from the lowlands away from the normal range and must have been a migrating bird. Seven **Pander's Ground-Jays** *Podoces panderi*, one Qizil Ravat on 28 Apr, and six at Tsvetushiy (Bukhoro) appeared on the same day. The following day there was a single at Tsvetushiy and three at Burovoy (all Bukhoro). An **Upcher's Warbler** *Hippolais languida* was at Uzunquduq Aydar Kul (Jizzakh) on 3 May. A total of 15 **Bohemian Waxwings** *Bombycilla garrulus* were at Beldersay (Toshkent) on 8 May. Two **Asian Paradise Flycatchers** *Terpsiphone paradisi* were at Ammankutan (Samarqand) on 25 Apr and five were in Nuratau National Park (Jizzakh) on 4 May. Three **Blyth's Rosefinches** *Carpodacus grandis* were at about 2200m in Zaamin National Park (Jizzakh) on 2 May. The distribution of this species is not well known.

YEMEN

Three **Great Cormorants** *Phalacrocorax carbo* were in large khor near Faydami, Al Mahra on 26 Dec. A **Great Egret** *Ardea alba* was at a khor near Shuhayr on 24 Dec. A second bird was observed at a large khor east of Ash Shihr on the same day. Five **Malachite Kingfishers** *Alcedo cristata* were in Wadi Masilah on 19 Dec, increasing to six the next day. Singles were in Wadi Hajr on 29 and 30 Dec. Six **Pale Rockfinches** *Carpospiza brachydactyla* were at a water hole on a jebel above Wadi Du'an on 29 Dec.

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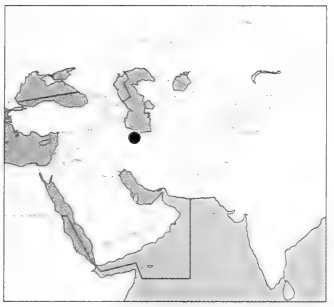
Waterbirds in microhabitats of Selke and Espand, in the Anzali Wetlands, Iran

ABOLGHASEM KHALEGHIZADEH



The Anzali Mordab (wetland) is a Ramsar Site and an Important Bird Area (IBA) that parallels the Caspian Sea shore just south of Anzali city. Two areas of the Anzali wetland, Selke (77.3ha) and Espand (45ha) were selected for this study because of the extent of open water they contained. Each area was divided into 11 sectors for the study, which took place from October 1999 to April 2000. A combined total of 55 waterbird species were identified in the two areas. At Selke, sector 10 recorded the highest species and bird numbers and at Espand, sectors 9 and 10. Sector 4 at Selke recorded a waterbird density of 250/ha and sector 7 at Espand 111/ha. Common Teal *Anas crecca* was the most abundant species in both areas. The influence of factors such as study area size, water depth and transparency, emergent plant coverage, distance from each area's Game Guard Station, pH, salinity and total solid sediments were assessed. Statistical analyses of waterbird numbers, species numbers and waterbird density were also carried out. Water depth correlated with bird population only at Espand. The percentage of emergent plant coverage correlated with bird density in both areas. Sector size was significant for the number of waterbird species at Espand. Sector size was significant for waterbird species density at both Selke and Espand. Salinity was significant for the number of waterbirds in both study areas, but pH was significant only at Espand. Although at least six species in the Anzali wetlands met the present RAMSAR criterion of holding at least 1% of the regional population, there will be a need to re-examine the RAMSAR site in the near future against the revised criteria at present being compiled. Both Selke and Espand have hosted assemblages of over 20 000 waterbirds in some years.

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INTRODUCTION

Iran possesses a large diversity of waterbird species. Count totals exceeded 2 million in 1997 (Gilissen *et al* 2002), which indicates the country's unquestioned importance for bird species conservation. In 1994 the Anzali wetland complex (**Fig 1**), in the south Caspian lowlands of Gilan province in northwestern Iran, held over 67 500 waterbirds (Taylor 1995). The Anzali wetland, some 15 000ha, is one of 105 IBAs (Evans 1994) and 22 Ramsar sites (a total area of 1 481 147ha) in Iran (Ramsar Convention 2000). Anzali (IBA IR016) was designated a Ramsar Site on 23 June 1975. Within Anzali, Selke Wildlife Refuge (360ha), Siahkesheem Protected Area (4500ha) and Sorkhankol Non-hunting Area (448ha) are three additionally protected areas, under the protection of Iran's Department of the Environment (Laws and Parliamentary Affairs Office, DOE 1997). For Contracting Party Governments to the Ramsar Convention, Ramsar designation of any site carries an obligation on the part of the government concerned to maintain the ecological character of the site. The Anzali Mordab is an outstanding example of a natural freshwater lagoon system characteristic of the south Caspian lowlands, and supports an extremely diverse wetland fauna and flora. It regularly holds well in excess of 20 000 waterfowl; it supports over 1% of the regional breeding population of Whiskered Tern *Chlidonias hybrida*, and in winter supports over 1% of the regional populations of Black-necked Grebe *Podiceps nigricollis*, Great Cormorant *Phalacrocorax carbo*, Eurasian Coot *Fulica atra*, Black-tailed Godwit *Limosa limosa*, Black-headed Gull *Larus ridibundus* and 12 species of Anatidae (Scott 1995). At least 157 species of birds have been recorded in the Selke Wildlife Refuge, and at least 144

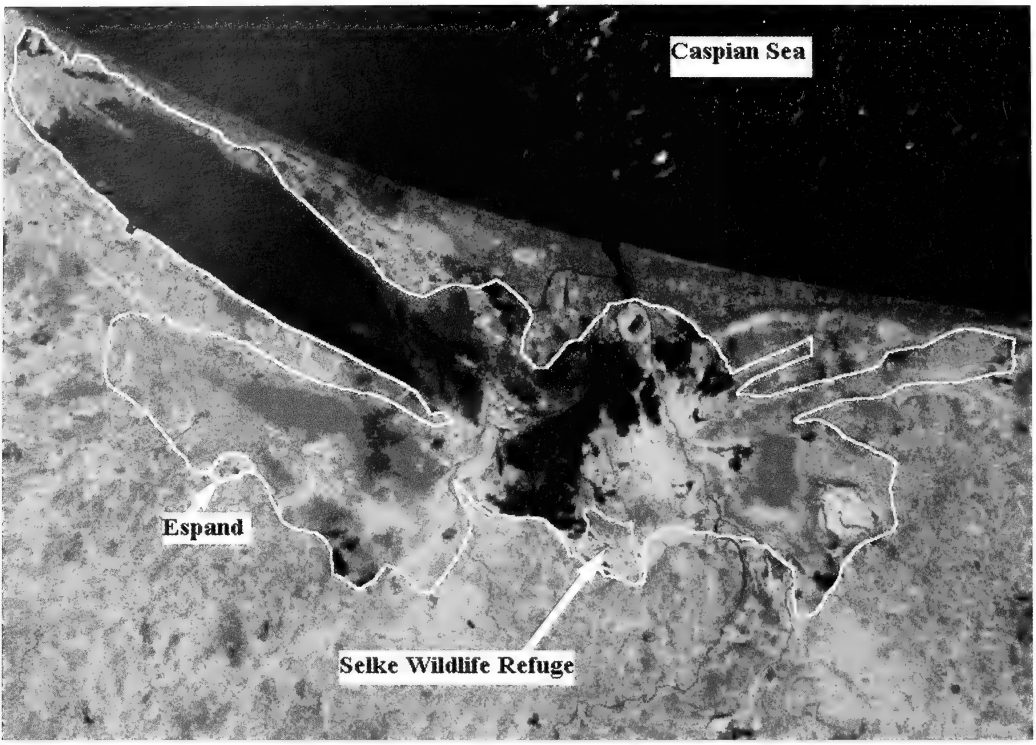

Figure 1. Satellite image of the Anzali Wetland Complex, showing superimposed limits and the relationship of the Selke and Espand wetlands to it. © *Tarbiat-Modarres University*

species in the Siahkesheem Protected Area (Scott 1995). Furthermore, three rare raptor species have been recorded at these two locations in recent years (Khaleghizadeh 2004). Selke and Siahkesheem held 70-90% of the total waterbirds in the Anzali Wetland during 1970-1988 (Yekom Consultancy & Engineering Co. 1989).

A fundamental principle of biodiversity is the maintenance of ecological processes necessary for the conservation both of species and of populations forming ecosystems - the evaluation of species and ecosystems comprises the first step in assessing a country's natural resources (WCMC 1996). Accordingly, this study of waterbirds in microhabitats at the Selke and Espand wetlands, carried out over a six-month period spanning the winter of 1999-2000, evaluates how essential factors for waterbirds, such as water depth, water temperature and vegetation that provides security and food (Behrouzi-Rad *in litt*), operate at these wetlands, which both lie within the Ramsar site (**Fig 2**). For species conservation, wetlands need to provide a dynamically stable ecological condition. To allow biodiversity to be sustained, feedback-dependent wetland management policies must aim to maintain that stability (Owen & Black 1990). In Anzali, specific environmental factors had been identified as affecting waterbird populations, either adversely or beneficially, namely, water depth, aquatic plants, climatic aspects in general, reduction in water-level and pollution (YEKOM 1989). Subsequent adverse factors identified include various methods of illegal hunting (Monavari 1992), aerial netting and boat movements (Riazi 1992), the latter being emphasised by Scott (1995), who recorded very high levels of waterbird disturbance from fishing activities, boat traffic and hunting. More recently, Khaleghizadeh (2000) noted that the Selke reserve provided a refuge to birds disturbed by hunting activities elsewhere.

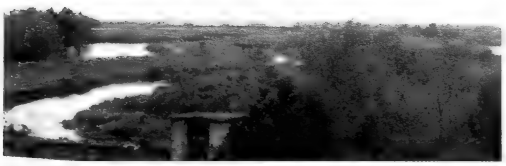

Plate 1. Where the Selke Wetland adjoins the Anzali Wetland Complex. *© Abolghasem Khaleghizadeh*

Plate 3. Selke at low waterlevel. *© Abolghasem Khaleghizadeh*

Plate 2. Espand: an awkward observation point in sector 5, near the Game Guard station, offering the only good views of sector 8. *© Abolghasem Khaleghizadeh*

Plate 4. Espand : water lily *Nelumbium caspium*, dominant aquatic plant, sector 5. *© Abolghasem Khaleghizadeh*

Plate 5. The present Selke embankment. *© Abolghasem Khaleghizadeh*

Plate 6. Swans and geese staging Espand at sector 10. *© Iranian DOE Office at Gilan*

Plate 7. Eurasian Coot *Fulica atra* at Espand. *© Iranian DOE Office at Gilan*

MATERIAL AND METHODS

Study Sites

South of the main Anzali lagoon, Selke Wildlife Refuge (37°23'N, 49°27'E, 77.3ha) and the Espand wetland (37°24'N, 49°19'E, 45ha) comprise shallow freshwater lagoons and marshes with adjacent flood meadows (**Figs 1 & 2**) (Evans 1994). The principal directions of water flow from the wetlands towards the main drainage channel are indicated in **Fig 2** by arrows. The study covered the open waters of the two wetlands. Selke (also called Selkeh), surrounded by an embankment, is closely linked to the open waters of the Anzali lagoon (**Plate 1**), the Selke study area being confined to within the embankment. In the Siahkesheem, open water areas surrounded by reedbeds are called *Klass* - they include Espand (also known as Esfan or Esfand), Kolesar, Nargestan and Laksar. Espand Klass, in the south of the Siahkesheem, is separated from the main lagoon by the extensive Siahkesheem reedbeds; it is also largely separated from other open waters. The Sowmaea-Sara DOE Office ensures that both study sites are fully protected from hunting, but waterbird hunting is permitted in adjacent areas on certain days of the week. The two sites were selected because of their easy access and close proximity to one another, Selke and Espand being 11km apart and some 19 and 30km respectively north of the city of Rasht (Ahmadi 1992, Khaleghizadeh 2000).

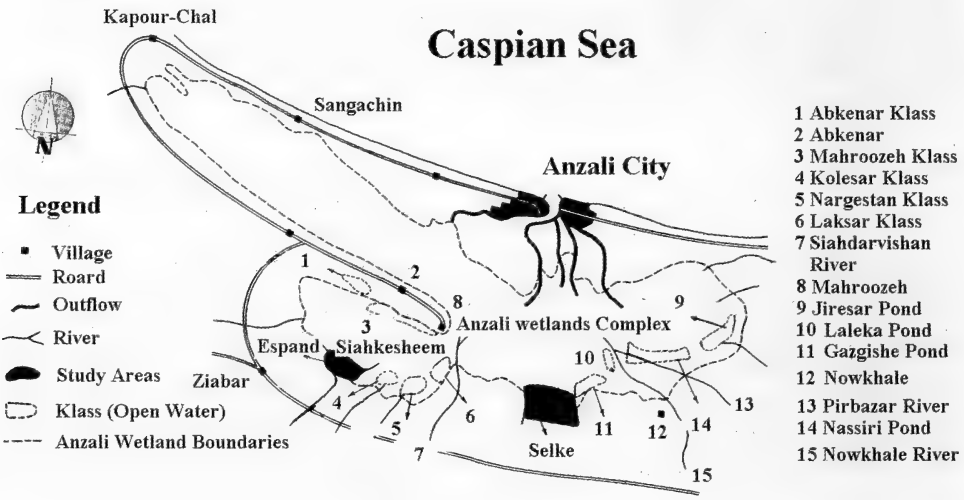

Figure 2. Location of the Selke and Espand wetlands within the Anzali Wetland Complex.

Waterbird counts

I made waterbird observations (see **Fig 3** for observation sites) approximately every two weeks from early October 1999 to early April 2000 both in the morning (0700-1100) and the afternoon (1500-1700), using Heinzel *et al* (1974) and Scott *et al* (1975) as identification references. At Espand sector 8, I obtained the best viewpoint by climbing the DOE radio aerial near the Game Guard Station (GGS) (**Plate 2**). The optics were Berkut 15x50 binoculars. I did counts on 14 occasions on days when hunting was forbidden in adjacent areas (Sundays to Tuesdays). Iranian Environmental Law allows hunting of waterbirds only on Wednesdays, Thursdays and Fridays (Laws and Parliamentary Affairs Office, DOE 1997). I avoided counting on Saturdays because of possible knock-on effects of Friday's hunting. Waterbird totals at Selke and Espand are given in **Tables 1** and **2**.

Table 1. Count maxima of bird species per sector at Selke between October 1999 and April 2000.

Species ▼ Sectors ►	1	2	3	4	5	6	7	8	9	10	11	Total	Freq %
Anser anser	90	10	9	1	118	740	0	480	320	510	673	2951	7.59
Cygnus olor	0	0	9	5	44	33	0	43	16	14	12	176	0.45
Cygnus cygnus	0	0	11	0	14	34	0	16	28	254	144	501	1.29
Tadorna tadorna	0	0	0	0	0	0	0	5	1	5	11	22	0.06
Anas strepera	0	0	0	35	250	400	0	860	265	58	150	2018	5.19
Anas penelope	0	0	0	0	25	60	0	4	280	25	60	454	1.17
Anas platyrhynchos	0	0	0	0	0	0	0	0	4	9	6	19	0.05
Anas clypeata	0	0	7	3	51	46	0	850	479	205	490	2131	5.48
Anas acuta	0	0	0	0	0	6	0	0	28	85	29	148	0.38
Anas querquedula	4	7	0	10	7	20	90	624	361	3428	100	4651	11.97
Anas crecca	350	54	750	2550	1100	750	0	1435	1400	1261	2961	12611	32.45
Netta rufina	0	0	1	0	0	0	0	0	0	0	0	1	0.00
Aythya ferina	62	0	76	0	242	13	4	60	20	0	5	482	1.24
Aythya nyroca	1	0	0	0	4	0	5	17	0	4	0	31	0.08
Aythya fuligula	0	0	8	0	19	2	0	13	4	0	4	50	0.13
Aythya marila	0	0	2	0	2	0	0	0	0	0	0	4	0.01
Anatidae (spp)	0	0	0	0	31	54	0	369	765	76	548	1843	4.74
Tachybaptus ruficollis	2	0	0	1	3	3	2	1	8	27	0	47	0.12
Podiceps nigricollis	0	0	0	0	1	0	0	0	0	0	0	1	0.00
Grebe spp	0	0	0	0	0	0	5	14	5	7	0	31	0.08
Phoenicopterus roseus	0	0	0	0	0	0	0	1	4	0	0	5	0.01
Plegadis falcinellus	0	0	0	0	0	0	0	0	0	2	0	2	0.01
Botaurus stellaris	0	0	0	0	0	0	1	0	0	1	0	2	0.01
Ixobrychus minutus	0	0	0	1	0	0	1	0	0	0	0	2	0.01
Nycticorax nycticorax	0	0	0	4	0	0	2	0	0	1	0	7	0.02
Ardeola ralloides	1	0	5	4	0	7	5	0	7	1	1	31	0.08
Bubulcus ibis	0	0	0	9	0	0	9	0	0	1	0	19	0.05
Ardea cinerea	1	1	1	2	2	2	1	0	3	10	12	35	0.09
Ardea purpurea	0	0	0	0	0	0	1	0	0	0	0	1	0.00
Ardea alba	1	1	0	1	0	1	1	0	3	15	10	33	0.08
Egretta garzetta	3	1	0	1	0	3	4	0	2	39	18	71	0.18
Pelecanus onocrotalus	0	0	0	0	5	3	0	0	14	0	2	24	0.06
Pelecanus crispus	0	2	0	0	0	1	0	0	2	0	2	7	0.02
Phalacrocorax pygmeus	21	13	6	6	5	12	14	0	18	20	27	142	0.37
Phalacrocorax carbo	4	12	2	11	5	4	0	0	21	69	39	167	0.43
Rallus aquaticus	0	2	0	1	0	0	3	0	0	1	1	8	0.02
Porzana porzana	0	0	0	0	0	0	2	0	0	0	1	3	0.01
Porphyrio porphyrio	12	1	0	16	0	0	12	0	1	6	11	59	0.15
Gallinula chloropus	0	0	0	7	0	0	3	0	15	14	0	39	0.10
Fulica atra	1330	252	1142	62	1150	638	505	590	1650	327	24	7670	19.73
Rallid spp	0	0	0	0	0	1	4	0	0	4	0	9	0.02
Himantopus himantopus	0	0	0	0	0	0	2	0	0	19	0	21	0.05
Recurvirostra avosetta	0	0	0	60	0	0	0	2	12	130	108	312	0.80
Vanellus vanellus	117	0	0	206	0	0	0	0	0	75	0	398	1.02
Charadrius hiaticula	0	0	0	30	0	0	0	0	0	38	0	68	0.17
Gallinago gallinago	4	0	0	12	0	0	0	0	13	0	8	37	0.10
Tringa totanus	35	0	0	43	0	0	2	0	0	200	10	290	0.75
Tringa stagnatilis	*	0	7	95	0	0	0	0	0	290	0	392	1.01
Tringa spp	6	0	0	28	0	7	0	45	0	29	180	295	0.76
Calidris alpina	0	0	0	0	0	0	0	0	0	1	0	1	0.00
Philomachus pugnax	0	0	0	22	0	0	0	0	0	0	0	22	0.06
Larus cachinnans	0	0	0	0	0	0	0	0	0	4	7	11	0.03
Larus ichthyaetus	0	0	0	0	2	0	0	0	4	21	49	76	0.20
Larus ridibundus	*	0	0	0	1	0	0	18	1	126	14	160	0.41
Larus minutus	*	0	0	0	0	0	0	0	0	0	82	82	0.21
Larid spp	1	1	0	0	1	0	0	2	0	38	57	100	0.26
Hydroprogne caspia	3	0	0	0	0	0	0	0	0	0	0	3	0.01
Chlidonias leucopterus	0	0	0	3	0	0	0	0	0	0	0	3	0.01
Chlidonias hybrida	1	0	0	1	0	0	0	0	1	0	0	3	0.01
Sternid spp	72	0	0	0	0	0	0	7	0	5	0	84	0.21

Environmental factors

In summer 1999, I obtained measurements of the size of the area, water depth (see benthographs, **Fig 4**), emergent plant coverage (%) and the distance from each area's GGS (**Fig 3**) to the respective sectors. For each sector, I could estimate the extent of the microhabitats, which comprised sets of depths, plant coverage, benthic slope in relation to the distance from the relevant GGS and in the context of the surrounding areas. Taking these estimates into account, each area divided conveniently into 11 sectors (**Fig 3**). On 16 October 1999 and 5 March 2000, I sampled water depth and transparency in each sector of both wetlands. I also recorded physiochemical factors such as pH, salinity and 'Total Solid Sediments' (TSS). These data and the relevant waterbird counts are at **Tables 3** and **4**. Four groups of aquatic plants (edge, emergent, floating [leafy and semi-submergent] and submerged) were identified for Selke and Espand (**Table 5**) using the Hassan-Abbasi (1998) Guide to Water Plants. Statistical analyses of waterbird species recorded, waterbird populations, and bird density used Pearson's correlation test in the SPSS package. The Margalef Richness ($R_{mg} = S\text{-}1/l_n$ (N)) and the Shannon-Wiener diversity indices ($H' = -\ ^{S}\Sigma_{i\text{-}1}\ (P_i)\log_2 P_i = -^{S}\Sigma_{i\text{-}1}\ P_i\ l_n\ P_i$) were calculated, where S is the number of bird species, P_i is the proportion i of bird species and l_n is the Napierian logarithm. These values enable us to assess the Anzali plant and bird species populations objectively. (For the Shannon-Wiener Diversity Even-ness Index, $J' = H'/H'_{max}$, where H_{max} = the maximum value of H', for J' values ranging between one and zero).

RESULTS

Waterbird species and population

Of the 55 species of waterbirds recorded during the survey, 53 were found at Selke and 38 at Espand; 36 were common to both sites. The highest sector count of waterbird species in each area was of 39 and 20 in sectors 10 at Selke and 9 at Espand respectively (**Figs 5 & 6**). Highest waterbird density was 250/ha in sector 4 at Selke

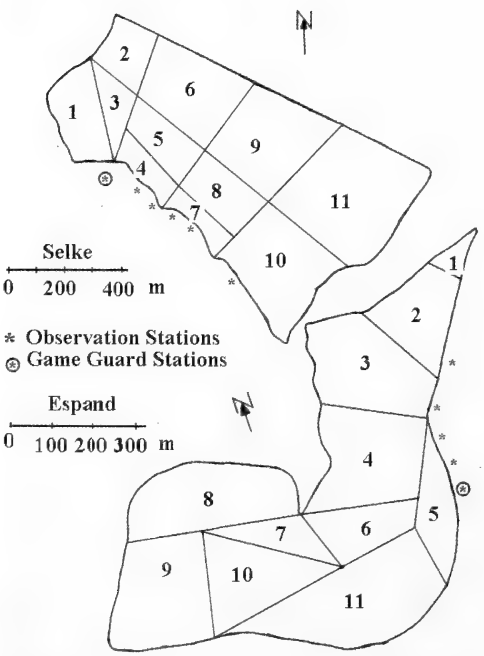

Figure 3. Selke and Espand sectors, Game Guard Stations and observation points.

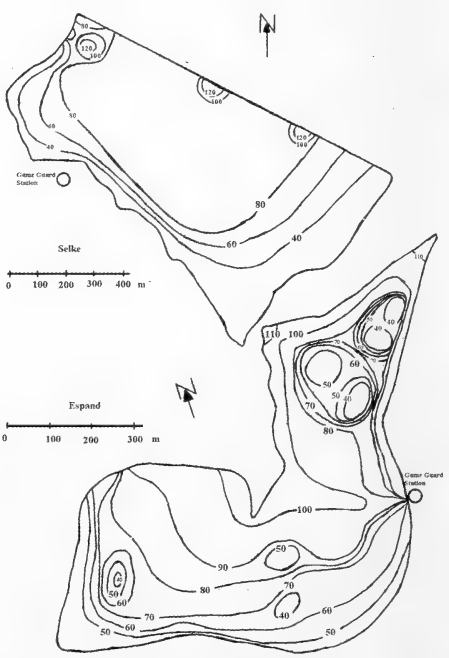

Figure 4. Selke and Espand benthographs (water depths), summer 1999.

Table 2. Count maxima of bird species by sector at Espand between October 1999 and April 2000.

Species ▼ Sectors ►	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**Total**	**Freq %**
Anser anser	0	0	4	47	0	5	14	0	0	0	0	70	0.30
Cygnus olor	0	0	5	5	0	26	56	7	63	85	56	303	1.28
Cygnus cygnus	0	0	0	0	0	0	0	45	35	0	0	80	0.34
Tadorna tadorna	0	0	0	0	0	0	0	0	7	0	0	7	0.03
Tadorna ferruginea	0	0	0	0	0	2	0	2	5	0	6	15	0.06
Anas strepera	0	11	7	19	0	37	85	3	15	70	65	312	1.32
Anas penelope	0	0	0	0	0	0	3	0	3	0	0	6	0.03
Anas platyrhynchos	0	10	22	40	0	3	3	9	34	0	0	121	0.51
Anas clypeata	0	8	6	0	0	0	0	0	0	0	0	14	0.06
Anas acuta	0	0	2	0	0	0	0	0	0	0	0	2	0.01
Anas querquedula	0	0	274	0	0	0	0	25	23	0	30	352	1.49
Anas crecca	65	950	1630	880	185	1540	1150	2700	1570	3250	1320	15240	64.60
Aythya ferina	0	0	0	3	0	0	0	0	3	0	0	6	0.03
Anas fuligula	0	0	0	1	0	0	0	0	0	0	0	1	0.00
Anatidae spp	0	0	12	92	0	0	0	0	0	2	565	671	2.84
Tachybaptus ruficollis	0	2	4	3	3	1	0	0	0	0	1	14	0.06
Phoenicopterus roseus	0	0	0	0	0	0	0	0	0	0	8	8	0.03
Platalea leucorodia	0	0	0	0	0	0	0	0	3	0	0	3	0.01
Bubulcus ibis	0	0	0	0	0	0	0	0	0	0	1	1	0.00
Ardea cinerea	0	1	6	1	1	0	2	1	26	0	7	45	0.19
Ardea alba	1	1	11	1	1	0	29	1	19	1	1	66	0.28
Egretta garzetta	0	0	1	1	5	0	2	2	4	0	4	19	0.08
Phalacrocorax carbo	1	105	20	740	2	2	33	210	59	225	79	1476	6.26
Phalacrocorax pygmeus	0	4	15	19	2	0	9	140	11	205	2	407	1.73
Rallus aquaticus	0	0	0	1	2	0	0	0	0	0	0	3	0.01
Porzana porzana	0	0	0	1	0	0	0	0	0	0	0	1	0.00
Porphyrio porphyrio	0	0	0	1	11	0	0	0	2	0	0	14	0.06
Gallinula chloropus	0	0	0	0	1	0	0	0	0	0	0	1	0.00
Fulica atra	17	43	146	375	14	685	638	83	645	400	605	3651	15.48
Rallid spp	0	0	0	2	1	0	0	0	0	0	0	3	0.01
Vanellus vanellus	0	240	406	0	0	0	0	0	0	0	0	646	2.74
Gallinago gallinago	0	0	0	0	1	0	0	0	0	0	0	1	0.00
Larus cachinnans	0	1	0	1	0	0	0	0	3	1	0	6	0.03
Larus ichthyaetus	0	0	1	4	0	0	1	1	2	1	0	10	0.04
Larus ridibundus	0	0	0	0	0	0	0	0	6	0	0	6	0.03
Larid spp	0	0	0	3	0	0	0	0	0	0	7	10	0.04

Table 3. Sector characteristics of Selke and bird count results, October 1999 - April 2000.

Species ▼ Sectors ►	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
Area size (m^2)	40000	47472	29369	12700	97026	86020	20579	134566	66778	165884	73400
Distance from Game Guard Station (m)	300	530	300	200	300	500	430	500	700	850	1000
Depth: range & (average) (cm)	30-60 (45)	60-90 (75)	50-80 (65)	10-40 (25)	40-60 (65)	60-80 (75)	10-40 (25)	40-60 (65)	60-80 (75)	20-60 (40)	10-100 (40)
Transparency (cm)	30	40	40	30	50	50	30	45	40	43	50
pH	7.79	7.46	7.67	7.60	7.87	7.92	7.42	7.80	7.61	7.57	7.54
Salinity (mg/lit)	0.68	0.70	0.60	0.78	0.58	0.58	0.73	0.56	0.51	0.49	0.51
TSS (mg/lit)	385.5	309.5	286.0	204.0	221.0	211.5	178.0	133.0	178.5	182.5	209.0
% area emergent plants	5	3	0	40	0	2	25	0	2	20	10
Total species	19	13	14	28	21	21	22	18	32	39	32
Total bird numbers	2121	357	2036	3178	3082	2840	678	5456	5755	7417	5845
Density waterbirds/ha	53.02	7.52	69.29	250.0	31.76	33.01	32.94	40.54	86.18	44.71	79.63

and 111/ha in sector 7 at Espand (**Figs 7 & 8**). Lowest was 7.5/ha in sector 2 at Selke. The highest sector counts, of 7417 and 4240, were made in the respective sectors 10 at both Selke and Espand (**Figs 9 & 10**). The calculated Margalef richness and Shannon-Wiener diversity indices confirmed the importance of sectors 10 and 9 (as did other indices) at Selke and Espand respectively (**Figs 11 & 12**). Common Teal *Anas crecca* was the most abundant species, comprising 32.5% of the bird numbers at Selke (the most numerous species in sectors 4, 6, 8 and 11) and 64.6% at Espand (the most numerous species in every sector). Next in relative abundance was Eurasian Coot, 19.7% at Selke (the most numerous species in sectors 1, 2, 3, 5, 7 and 9) and 15.5% at Espand (**Tables 1** and **2**). The exception was Garganey *Anas querquedula*, which was the most numerous species in sector 10 at Selke. Casual visitors or vagrants encountered were Eurasian Spoonbill *Platalea leucorodia*, Greater Flamingo *Phoenicopterus roseus*, Red-crested Pochard *Netta rufina* and Black-winged Tern *Chlidonias leucopterus*.

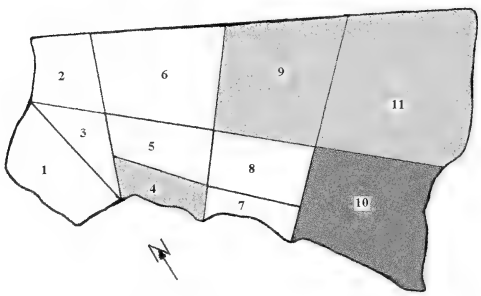

Figure 5. Selke: sectors with most species (Dark Grey, 25+).

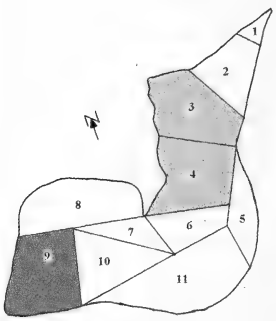

Figure 6. Espand: sectors with most bird species (15+).

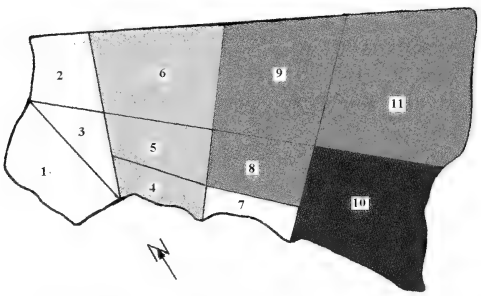

Figure 7. Selke: sectors with highest bird density (60+/ha).

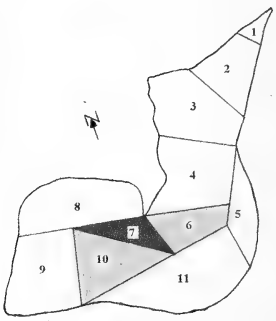

Figure 8. Espand: sectors with highest bird density.

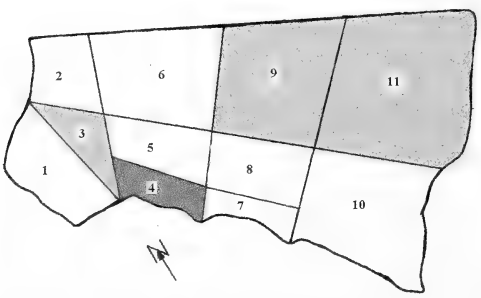

Figure 9. Selke: sectors with highest bird numbers (Dark Grey, 2500+).

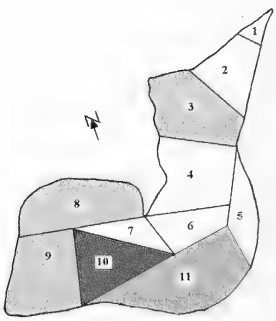

Figure 10. Espand: sectors with highest bird numbers (2500+).

Table 4. Sector characteristics at Espand and bird count results, October 1999 - April 2000.

Species ▼ Sectors ►	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
Area size (m^2)	5890	36135	51000	54136	13187	21957	18213	64050	65817	44402	74620
Distance from Game Guard Station (m)	550	400	400	250	75	250	450	600	750	550	400
Depth: range & (average) in cm	100-110 (105)	60-80 (75)	60-80 (75)	60-100 (80)	100	100	100	80-100 (90)	50-80 (65)	80	60-80 (70)
Transparency (cm)	42	35	40	48	50	50	50	45	40	43	50
pH	7.43	7.77	7.85	7.76	7.54	7.59	7.64	7.64	7.83	8.04	7.70
Salinity (mg/lit)	0.28	0.35	0.35	0.40	0.35	0.35	0.40	0.40	0.45	0.45	0.40
TSS (mg/lit)	401.0	540.5	812.5	324.0	479.0	106.5	106.5	210.0	190.0	54.0	107.0
% area emergent plants	10	25	35	7	35	0	0	15	15	0	25
Total species	4	12	17	19	12	9	13	14	20	9	13
Total bird numbers	84	1376	2572	2240	229	2301	2025	3229	2538	4240	2757
Density waterbirds/ha	14.26	38.08	50.43	41.38	17.36	104.79	111.18	50.41	38.51	95.49	36.84

Table 5. Identity and locations of aquatic plants at the two wetlands.

Species	**Selke**	**Espand**
Edge plants		
Alnus glutinosa Wild.	-	2,3,4
Carex sp.	10	-
Cyperus spp.	10	2,3,9
Juncus spp.	10	-
Paspalum sp.	shores	2,3,9
Polygonum hydropiper L.	1,4,7,10	2,3
Rubus sp.	-	coasts of 2,3,5,11
Salix sp.	shores	shores
Sambucus ebulus L.	shores	shores
Scirpus spp.	10	-
Emergent plants		
Nelumbium capsicum Wild.	2,11	5,9
Phragmites australis (*Ph. communis* L.)	1,2,4,6,7,9,10,11	1,2,3,4,5,8,10,11
Sparganium erectum L.	1,2,4,6,7,9,10,11	2,3,9,11, shores of 4,9
Typha latifolia L.	1,4,10,11	3,9,11
Floating-leaf plants		
Azollae sp.	All	All
Hydrocharis morsus-ranae L.	2,6,9,11	-
Hydrocotyle vulgaris L.	1,4,7,10,11	5,11
Lemna spp.	All	All
Nymphaea alba L.	2,6,9,11	-
Trapa natans L.	All	All
Submerged plants		
Ceratophylum submersum L.	All	All
Ceratophylum demersum L.	3,5,6,8,9	4,6,7,10
Najas marina L.	7,10	-
Potamogeton pectinatus L.	4,7,10	2,3,4,5,6,9,10
Ruppia maritima L.	5,6,8,9	4,6,7,10
Spirogyra sp.	11	9,10,11

NB Numbers represent wetland sectors.

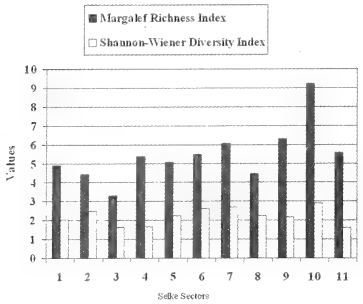

Figure 11. Diversity Indices in sectors at Selke.

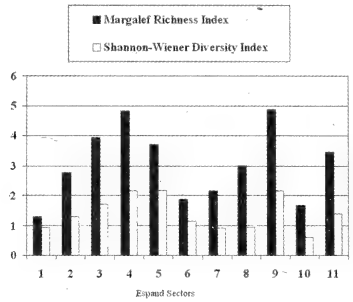

Figure 12. Diversity Indices in sectors at Espand.

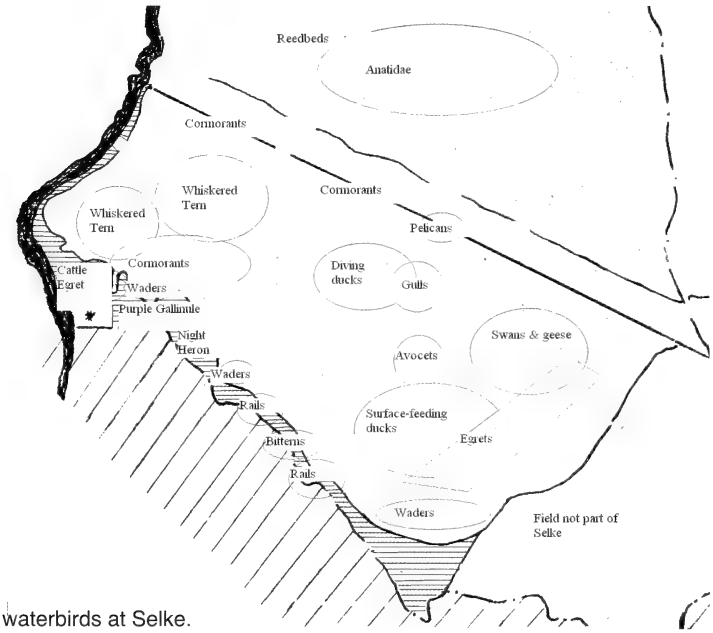

Figure 13. Preferred localities by waterbirds at Selke.

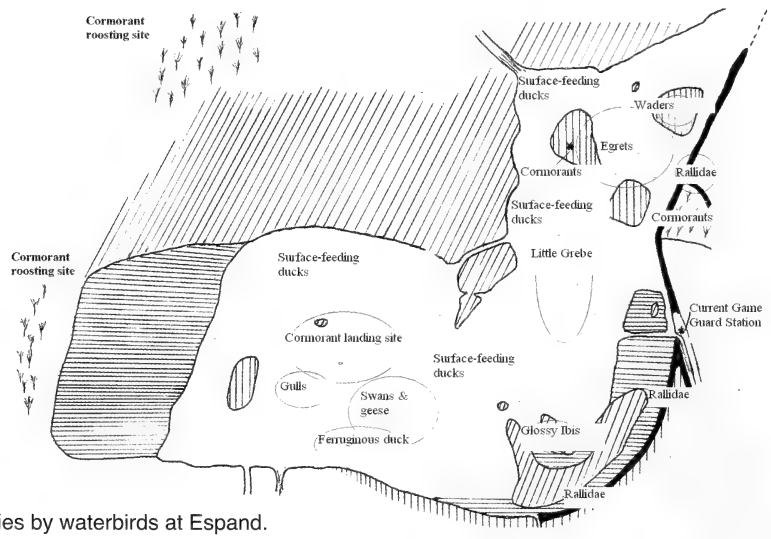

Figure 14. Preferred localities by waterbirds at Espand.

Water depth

Sectors 4 and 7 at Selke were the shallowest of all, roughly 25cm deep (**Table 3, Fig 4**). Overall, the Espand sectors were deeper (**Table 4, Fig 4**). Although as expected, Cattle Egret *Bubulcus ibis* preferred wetland edges where it associated with cattle, Charadriidae (*Tringa* spp and Ruff *Philomachus pugnax*) kept to the Selke (sectors 1, 4, 10 & 11, **Fig 13**) and Espand (sectors 2 & 3, **Fig 14**) shores, whereas Ardeidae, Threskiornithidae and Pied Avocet *Recurvirostra avosetta* prospected the plant-free shallows, and at both wetlands, Anatidae, particularly swans and Greylag Goose *Anser anser* frequented medium depth while foraging or resting and *Pelecanus* spp remained in the deeper waters. I found that water depth correlated with bird populations only at Espand ($P<0.05$).

Aquatic plants

The vegetation survey found 26 species of aquatic plants, namely 10 water's edge, 4 emergent, 6 floating and 6 submergent (**Table 5, Figs 15 & 16**). Eurasian Bittern *Botaurus stellaris*, Little Bittern *Ixobrychus minutus*, Common Snipe *Gallinago gallinago* and Purple Heron *Ardea purpurea* used water's edge and emergent plants as resting places and some residents such as Rallidae (excluding Eurasian Coot) were dependent on them. Whiskered Tern *Chlidonias hybrida* nested on floating plants, especially water lily *Nelumbium (caspium) nuciferum* (**Plate 4**) and water chestnut *Trapa natans*. The remaining waterbirds were distributed across the open waters. Hornwort *Ceratophyllum* spp were the typical submergent species of medium and deep waters. I conducted a nocturnal waterbird survey on a moonlight night. It showed that the assemblages were partly in the water's edge and emergent vegetation, but the rest had moved out into the open water at sundown. The percentage of emergent plant coverage correlated with bird density at both Selke and Espand ($P<0.05$) but not with waterbird populations or the total number of species ($P>0.05$).

Other environmental factors

The relationship between sector area and the total number of waterbird species and sector area and bird density showed that sector area was significant for the total number of species at Espand, and for bird density at both Selke ($P<0.01$) and Espand ($P<0.05$). Using Pearson's correlation to test the factors affecting sector waterbird density, such as water depth and transparency, pH, salinity and TSS (**Tables 3 & 4**), salinity was significant for bird assemblages at both wetlands ($P<0.01$), but pH was significant only at Espand ($P<0.01$). The other factors were not significant, nor were they for bird density or the total number of species ($P>0.05$). Similarly, the distance of a sector from either GGS was, by Pearson's correlation, not significant for waterbird density (**Tables 3 & 4**) ($P>0.05$).

DISCUSSION

Waterbird species and populations

I found that some individuals of grazing species such as swans and Greylag Goose were winter residents and some migrant, whereas other species migrated or were vagrant. It is essential to avoid disturbing these assemblages if they are to continue to use these wetlands in such numbers. Regular use of such habitats by migrant and passage waterbird species, and even by certain irregular visitors, raises the value of the indices of a habitat, as is the case for Selke in this study. Selke is of critical importance as a staging area for Garganey in autumn and spring (Khaleghizadeh & Behrouzi-Rad 2004). The Morista Similarity Index is used to demonstrate how similar or different the waterbird communities are between any two wetlands; it varies between 0 (dissimilar) and 1 (near-identical); applying the Morista to the two sites

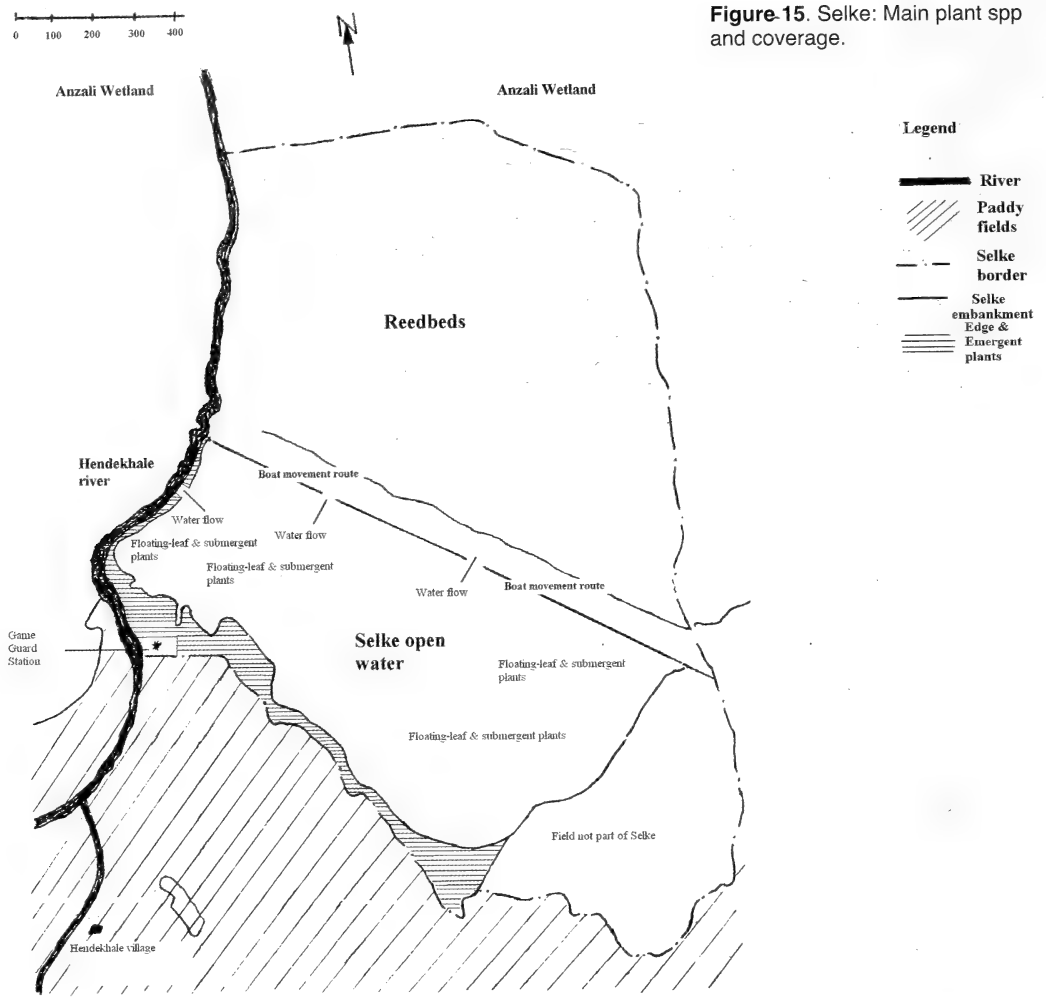

Figure 15. Selke: Main plant spp and coverage.

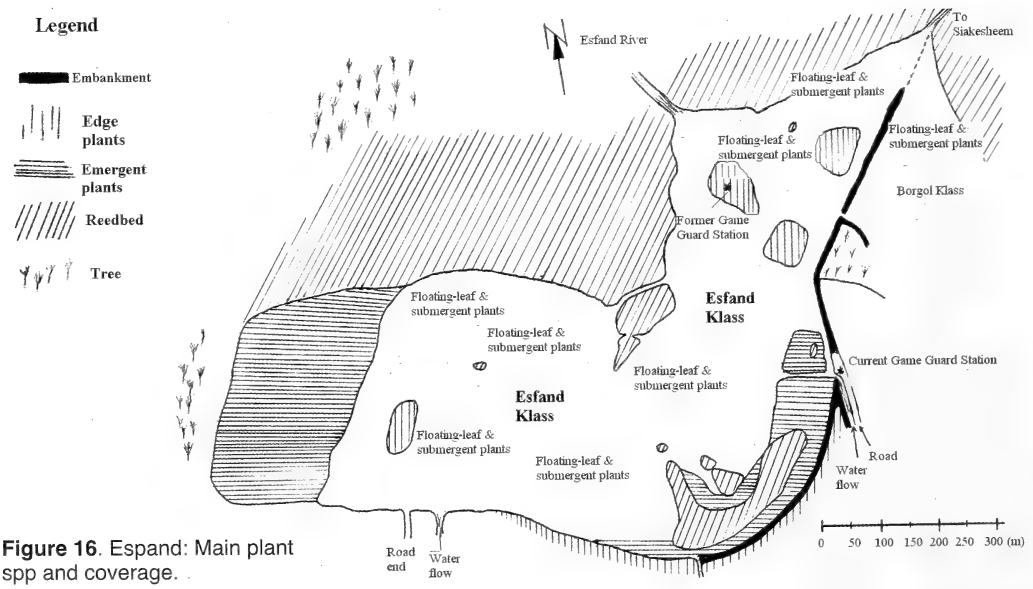

Figure 16. Espand: Main plant spp and coverage.

gave a value of 0.81 (Khaleghizadeh 2000), showing great commonality between the waterbird communities, yet the abundance of the commonest species, Common Teal at Espand (64%) was twice that at Selke (32%) (**Tables 1 & 2**).

Numbers of waterbirds and % of regional populations in the Anzali-Mordab

The Anzali wetland regularly holds well in excess of 20 000 waterfowl (Scott 1995), and as is characteristic of large wetlands, sometimes large concentrations can be found in relatively small areas. For example, counts of over 20 000 waterbirds were made at Selke in 1976-78, 1982, 1984-85, 1987-88 and 1992 (Mansoori unpub). At other times, concentrations appear elsewhere, but a common circumstance is that often the birds are scattered in many smaller assemblages. The fact that almost always the birds fly out at dusk to feed elsewhere in the Anzali complex and in adjacent rice fields confirms not only the importance of the Anzali wetlands as a whole, but also the subtle and sometimes intermittent part that elements of the wetlands, such as Selke and Espand play. This point is well illustrated by some of my occasional records during this study: for example over 100 Whooper Swan *Cygnus cygnus* at Espand (sectors 10 & 11) from West Asia); more than 750 Gadwall *Anas strepera* at Selke sector 8) (from the Black and Mediterranean Sea region), at least 250 Northern Lapwing *Vanellus vanellus* at Espand (sector 3) (migrating from West Asia to East Africa) and 10-plus Ferruginous Duck *Aythya nyroca* Selke (sector 8) (from southwest Asia (Delany & Scott 2002)). Other records of over 1500 Great Cormorant *Phalacrocorax carbo* roosting at Espand and over 250 breeding pairs of Whiskered Tern at Selke (Khaleghizadeh & Behrouzi-Rad 2004) are significant (Delany & Scott 2002). **Figs 17 & 18** show the frequency of waterbird groups per sector in Selke and Espand.

Water depth

At Selke and Espand, the spatial distribution of some groups of waterbirds relates to specific water depth, as does the density of assemblages, in general agreement with Cowell & Dodd (1995). As Suter (1994) found, the shallows were predominantly occupied by dabbling ducks, which means that habitat modification is more likely to reduce dabbling duck numbers than other waterbird species groups. The ab-bandan (a shallow impoundment to retain water for irrigation purposes until the dry summer months) at Selke is surrounded by a low embankment (**Plate 5**) and was originally created as a water storage pond and duck-hunting area (Scott 1995). Before the embankment, the southern Selke wetland was especially suitable for swans until about 1994.

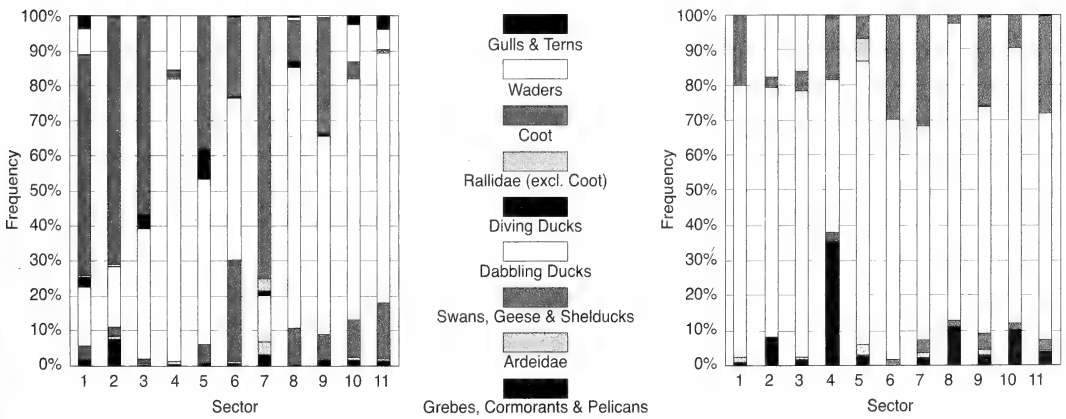

Figure 17 (left). Frequency of waterbird groups at each sector of Selke. **Figure 18 (right)**. Frequency of waterbird groups at each sector of Espand. Note; black–white column tints are set to the same order shown in the key.

The 14 White Pelicans *Pelecanus onocrotalus* in sector 9 at Selke were concentrated at the outflow of water into the main Anzali wetland area (**Fig 13**). At Espand, cormorant counts at tree-roost landing sites (**Fig 14**) produced 740 Great Cormorant in sector 4, and 200 plus in each of sectors 8 and10; respectively, these latter sectors also held 140 and 250 Pygmy Cormorant *Phalacrocorax pygmeus* (**Table 2**) Grey Heron *Ardea cinerea* and Great Egret *A. alba* were abundant in sectors 10 and 11 at Selke and in sectors 5, 7 and 9 at Espand; Little Egret *Egretta garzetta* also was common at these locations. Sectors 4 and 7 at Selke were favoured by other Ardeidae, such as Cattle Egret, Black-crowned Night Heron *Nycticorax nycticorax* and Little Bittern, although Squacco Heron *Ardeola ralloides* preferred vegetation in deeper waters. Swan count maxima were: 85 Mute Swan *Cygnus olor* in sector 10 at Espand and 254 Whooper Swan in sector 10 at Selke. Greylag Goose was most abundant in sector 6 at Selke. Amongst count maxima for Anatidae were; 242 Common Pochard *Aythya ferina* and 19 Tufted Duck *Ay. fuligula* (both in Sector 5 at Selke), 860 Gadwall, 850 Northern Shoveler *Anas clypeata* and 17 Ferruginous Duck (all in sector 8 at Selke), 280 Eurasian Wigeon *A. penelope* (Selke, sector 9), 3428 Garganey (Selke, sector 10) and 3250 Common Teal (Espand, sector 10). Although suitable microhabitats for waders occur at Selke in sectors 1, 4 and 10 and at Espand in sectors 1 and 4, only one wader species was numerous, Northern Lapwing in Espand's sectors 2 and 3. Laridae preferred sectors 1, 10 and 11 at Selke.

The permanent wetland area is surrounded by a broad belt of flood meadows and ab-bandans. These largely seasonal wetlands cover about 1000ha and flood to a maximum depth of about 50cm; they border on arable land to the west, south and east. These surrounding areas are used mainly for the production of rice and vegetable crops. In the late 1960s, a two-km long drainage canal, 20m wide, was constructed from the northeast corner of the Mordab to the Caspian Sea to facilitate the reclamation of 5000ha of reed marsh for agriculture (Scott 1995). The ab-bandans probably are of most important feeding sites for ducks from sunset to sunrise, as indicated by movements observed during a nocturnal survey. During the study period I observed, particularly at Selke, many ducks arriving in the mornings from the ab-bandans. Inflow is usually at its greatest in autumn, when the level of the Mordab may rise by a metre or more. The entire marsh and lagoon complex drains into the deep-water harbour of Bandar Anzali through several short channels at the northeast end of the main lagoon. The 1.8 metre rise in the level of the Caspian Sea since 1978 has resulted in a one metre rise in the water level in the main Mordab and has increased salt water intrusion during the summer months, when the level of the Caspian is at its highest and inflow of freshwater is at its lowest (Scott 1995). Monavari (1991) covered the recent history of the fall in the Caspian Sea level: from 1890-1932 it was 68cm, from 1933-40 32cm, from 1941-49 23cm, from 1950-69 41cm and from 1970-79.5cm. He recorded an increase during 1980-82 of 36cm, an increase which continued into the early 1990s, so much so that buildings very close to the Caspian's southern coast were destroyed towards the end of this period (pers obs).

Aquatic plants

Selke, separated from the Anzali main waterbody only by a narrow reedbed strip, appears to provide better habitat for Garganey and other passage migrants than the dense reedbed habitats of Siahkesheem. As stated by Khaleghizadeh & Behrouzi-Rad (2004), the arrival of the first wintering migrants such as Eurasian Coot was contemporaneous with the floating plants beginning to decline. However, in January, Coot numbers diminished as hornwort foliage declined, probably because this plant is the preferred food (Cramp & Simmons 1983).

Little Grebe *Tachybaptus ruficollis* usually appeared singly or in very small groups, although 27 were counted in sector 10 at Selke. Common Moorhen *Gallinula chloropus* was most numerous in sectors 9 and 10 at Selke and Purple Swamphen *Porphyrio porphyrio* in sector 4 at Selke (although it also preferred sectors 1, 7 and 11 at Selke and sector 5 at Espand). Eurasian Coot numbers exceeded 1000 at Selke in sectors 1, 3, 5 and 9 Selke, but never at Espand. Numbers of Rallidae (excluding Eurasian Coot) related to the percentage of emergent plants best in sectors 4, 7 and 10 at Selke, but in only sector 5 at Espand. Rallidae gradually reduce in November and December as the water's edge vegetation, their principal source of food and concealment, diminishes (Khaleghizadeh & Behrouzi-Rad unpub 2003).

Like Colwell & Dodd (1995), I found that waterfowl (and sometimes waders) used open waterbodies that held only small amounts of aquatic plants. Wetland-edge plant reduction affected overall vegetational succession, which in turn affected waterbird numbers, according with van Rees-Siewert & Dinsmore (1996). Perhaps fortuitously, the excavation of a ditch adjacent to *Phragmites* spp reedbeds near a surrounding embankment created, after a few years, suitable habitat for such as Eurasian Bittern and Water Rail *Rallus aquaticus*. The consequences of unplanned land-use changes are seldom so beneficial. Conservation management planning should take into account not only such matters, but also the effects of uncontrolled vegetational succession on waterbirds. For example, in recent years, there has been a massive spread of *Azolla* sp (water fern), introduced into the Caspian wetlands by rice-farmers in the 1970s. This aquatic weed now covers much of the water surface within the reedbeds and in most of the quieter backwaters. The ecological consequences of this invasive genus have yet to be fully documented. Nevertheless, it is likely that the greatly reduced abundance of water lily and water chestnut (both valuable waterfowl food plants) is due in part to the dominance of *Azolla* (Scott 1995). *Azolla* spp spread rapidly, having the ability to survive on moist soil in and around rivers, ditches, and ponds, forming dense surface mats, which degrade water quality by reducing oxygen levels, thus dominating indigenous water vegetation. In particular, *A. filiculoides* (water fern, of North American origin) (Ghahreman & Attar 2003) and *A. pinnata* (mosquito fern, of Asian origin) are rampant in many parts of the world, probably creating a 'green' disaster likely to affect waterbird populations and assemblages. However, the open-water areas of the Mordab support extensive beds of water lily and a very rich growth of other floating and submerged vegetation (Scott 1995), although the proportion of open water in the Anzali reduced from 29% in 1956 to 23% in 1966 (Monavari 1991).

Because midwinter counts of waterbirds among water's edge or emergent vegetation (especially reedbeds) usually produce unrepresentative low totals, future census work will probably be done from boats. Patches of woodland containing alder *Alnus glutinosus* and willow *Salix* sp occurring on higher ground and along river levees (Scott 1995) are probably important for roosting and breeding Ardeidae and Cormorants.

CONCLUSIONS (INCLUDING OTHER ENVIRONMENTAL FACTORS)

The relatively low diversity of species at Espand in comparison with Selke may partly be related to Espand's smaller area (van der Have *et al* 2002). Elmberg *et al* (1994) used regression analysis of the relationship between lake area and species number, obtaining a significant value ($P<0.05$). Van Rees-Siewert & Dinsmore (1996) also found that lake area affected waterbird species richness. However, Moshkani (1995) pointed out that in the international wetlands of Iran, wetland areas did not display linear regression as size diminished either with species or waterbird numbers. Perry

& Deller (1996) have demonstrated clearly that human activity-levels reduce habitat use by waterbirds, and it is this factor in conjunction with the smaller size of Espand (van der Have *et al* 2002) that probably causes it to have fewer waterbirds than Selke. Although waterbird density was not significantly related to the measured values of water transparency, pH, salinity, TSS or to the distance of assemblages from Game Guard stations, it would be prudent to sample these factors regularly, for changes to them would be vital in monitoring environmental changes to the microhabitats in the Espand and Selke sectors.

Disturbance factors, as noted from our personal observations during the study, varied in effect. The aircraft movements at Rash Airport seemingly were ignored by Selke waterbirds, but boat movements at both Selke and Espand had a noticeable effect. For example, Selke's sector 2 has a gap in its western embankment, where boat traffic using it regularly caused enough disturbance to reduce species variety and waterbird numbers during counts. It is important that this gap be closed in the near future. We had no direct observations of raptors preying on waterbirds, although eight raptor or owl taxa patrolled or were seen regularly: Black Kite *Milvus migrans*, White-tailed Eagle *Haliaeetus albicilla*, Western Marsh Harrier *Circus aeruginosus*, Hen Harrier *C. cyaneus*, *Accipiter* sp and Greater Spotted Eagle *Aquila clanga* occurred at both locations, but Pallas's Fish Eagle *H. leucoryphus* and Short-eared Owl *Asio flammeus* only at Espand. Western Marsh Harrier, the commonest raptor, perhaps from its behaviour, did predate waterbirds, but overall, the main effect of raptor presence was to cause frequent alarm in all the sectors and in the large areas of open water and adjacent areas, causing waterbird assemblages to take flight. The present location of the Game Guard stations clearly has a low disturbance effect on waterbirds. However, future management of these wetlands may require different patterns of Game Guard activity, which may increase the potential disturbance effect (For waterbird flight distance upon disturbance, see Mori *et al* 2001).

The results from Selke and Espand demonstrate the importance of obtaining baseline data, such as breeding, wintering and passage migrant populations of every waterbird species (Kirby 1995), for local (site conservation management) and national (ecosystem management policies) purposes. Only then can the carrying capacity of habitats be determined (Wisie 1996) and habitat improvements defined, thus optimising the protection of waterbird populations and assemblages.

The dominant vegetation throughout much of the central and eastern Mordab comprises vast beds of *Phragmites australis* that in places grows 6m high. Siahkesheem marsh is almost entirely overgrown with dense reedbeds. Up to the late 1960s, the extent of the *Phragmites* reedbeds was limited largely to the shores, but then a rapid expansion saw the entire eastern and central parts of the main Mordab covered in reeds by the early 1980s. This spread was attributed to falling water levels in the Mordab in step with the then continuous fall in the level of the Caspian Sea. Accelerated eutrophication arose as a result of increased inflow of domestic sewage, fertilizers and other organic material, the situation becoming so serious by the late 1970s that the Department of the Environment was investigating possible methods of control. It remains to be seen whether the recent rapid rise in water level in the Mordab and the concomitant increasing salt water intrusion during the summer months will eventually check and reverse *Phragmites'* spread. A further potential problem is that parts of the *Phragmites* marsh and the open wetlands bordering the southern Mordab are heavily grazed by domestic livestock (Scott 1995), particularly at Selke even during this study.

Priority factors

Although studies elsewhere strongly suggested that water depth and aquatic plant coverage would be the most important factors affecting waterbird numbers seasonally, it is always important to validate assumptions. This study confirmed the importance of these two factors, but only in the context of otherwise stable ecosystems that at present are not subject to long-term conservation management. Consequently, these two factors are the most important for a short-term conservation management plan for Selke and Espand, particularly in any future zoning of these wetland ecosystems. In the medium- and long-term, monitoring of all the factors considered in this study will be essential in these (and other) natural or semi-natural wetland ecosystems to allow appropriate modifications to be made under a coherent long-term conservation management plan so that waterbird population or assemblage compositions to be maintained (as per **Plates 6 & 7**) or increased. Habitat security is the other important factor to quantify in the conservation policy for the Anzali wetlands. Without it, suitable habitats for waterbirds will be degraded by uncontrolled waste water, often containing pesticides, entering the wetland complex. The dynamic chemical balance throughout the seasons of wetland water needs constant monitoring. Conservation policy design and implementation need to take into account socio-cultural aspects at local and regional level (see Mohammad Rezaie 2003) to place wetland and waterfowl conservation within the local economy and involving local people. Only properly integrated management policies can result in long-term conservation benefits for the wetland ecosystems and the waterbird populations. All these key factors will require many studies if such a programme is to produce a coherent monitoring system for the Anzali wetlands and its birds.

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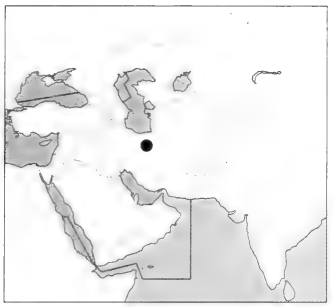
The Birds of the Latian Dam and Lashgarak Area, Tehran, Islamic Republic of Iran – June 1972 to February 1976

DEREK A SCOTT



The Latian Dam and the adjacent Lashgarak area are situated in the Jajerud Valley in the Alborz Mountains about 20km northeast of Tehran. Between June 1972 and February 1976, the author and several other bird-watchers resident in Tehran visited the area on 191 occasions throughout the year and kept detailed records of all birds observed within a study area of about 150ha. This contained a wide range of habitats including open water, mudflats, various riverine habitats, irrigated cultivation, orchards, poplar groves, rough fields and rocky hillsides. This paper, which is based on an original draft prepared by the author in March 1976, summarises observations of all 266 bird species recorded at the site, with emphasis on the timing of migration and periods of peak passage. The site was remarkable for the large number and diversity of migrants that were often concentrated into a very small area, particularly in spring when migrating birds were held up by bad weather over the high Alborz to the north. The thorough coverage achieved at Latian Dam and Lashgarak was particularly valuable in providing information on the timing of migration of a number of secretive species, such as Spotted Crake *Porzana porzana*, Great Snipe *Gallinago media* and Savi's Warbler *Locustella luscinioides*, that were seldom encountered during general avifaunal surveys elsewhere in Iran. A proposal for the establishment of a bird sanctuary was submitted to the Iran Department of Environment in 1973, and the site was identified as an Important Bird Area in 1994, but no special measures have been taken to protect it.

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INTRODUCTION

The Alborz Mountains present a formidable barrier to birds migrating between the south Caspian region and the central plateau of Iran, particularly during periods of inclement weather, when the high peaks may be shrouded in dense cloud for several days at a time. Under such conditions in spring, large numbers of migrating birds often congregate at suitable feeding areas along the south slope of the Alborz. In autumn, the effect is not so dramatic, since birds held up by bad weather have the entire south Caspian lowlands at their disposal. However, the relatively luxuriant valleys, gardens and orchards of the southern foothills of the Alborz still constitute an important feeding area for migrants which, having crossed the Alborz, must prepare for the long desert crossing to the south.

Many ornithologists and amateur bird-watchers have commented on the abundance of grounded migrants in the gardens of Tehran in spring and autumn. Areas of cultivation, poplar groves and orchards in the foothills may at times be teeming with migrant birds. Perhaps the very best of all such localities is an area of orchards, poplar groves, abandoned fields and marshes adjacent to the Latian Dam at Lashgarak in the Jajerud Valley, about 20 km northeast of Tehran. This area was 'discovered' in the late 1960s by George Nelson, an amateur birdwatcher formerly resident in Tehran. He was greatly impressed by the wide variety of migrants which were to be found passing through this area, and quickly recognized its potential as a site for bird ringing and migration studies. The unique value of the area is readily attributable to the concentration of different habitats in one small area, namely open waters of the Latian Dam,

a fast-flowing river, shingle banks, mud-flats, freshwater marshes, rough meadows, irrigated fields, low scrub, orchards, poplar groves, rocky hillsides and crags.

Nelson made irregular visits to Lashgarak throughout 1970, 1971 and 1972. In the summer of 1972, he showed the area to Nick P Paul, another bird-watcher resident in Tehran. Over the next two years, Paul made frequent visits to the area, and kept detailed records of his observations. Meanwhile, Nelson had suggested to personnel of the Iran Department of Environment in Tehran that the area might be suitable for the establishment of a small bird sanctuary. The author, in his capacity as Advisor in Ornithology to the Department of Environment, visited the area in January 1973 and again in late March 1973. He was so impressed by the variety of migrants present that he too visited the area as frequently as possible and kept detailed records. From late March 1973 until the end of 1974, Paul and the author visited Lashgarak on 123 dates, as far as possible covering the same ground each time to obtain standardized counts. Unfortunately, Paul left Iran in October 1974, and owing to pressure of other work, the author was unable to visit the area as often as before. However, Lashgarak was by this time becoming popular amongst the birdwatching community in Tehran. During late 1974 and throughout 1975, a number of birdwatchers visited the area and made their observations available to the author. Ken G Rogers and Francis B Argyle were particularly active, making independent visits to the area on 24 occasions between January 1975 and February 1976. By the end of 1975, it had become clear that a general summary of the bird data accumulated at Lashgarak was long overdue. The present report (originally drafted in March 1976) is intended to provide this. It summarizes all observations made at Lashgarak on a total of 191 visits between June 1972 and February 1976. A total of 266 species was recorded during this period. Details of year-round coverage are given in **Table 1**.

STUDY AREA

The Lashgarak area (35°47′N, 51°40′E) is located in the valley of the Jajerud in the Alborz foothills, at an elevation of *c*1350m asl. The main study area was an area of about 150ha along the northwestern edge of the Latian Dam where the Jajerud flows into the dam (**Fig 1**). Repeated visits showed this to be the best area in the vicinity of the dam, and one which could be covered comfortably in a three- to four-hour period; *ie* a winter's afternoon or summer's evening. Inside the Latian Dam enclosure, the orchard and areas of cultivation had effectively been abandoned. The vegetation had become rank and presented a very rich feeding habitat for insectivorous and seed-eating birds. The marsh vegetation along the various small offshoots of the main river

Table 1. Coverage at Lashgarak and Latian Dam, Tehran, June 1972 – February 1976.

	Numbers of visit days					
Month ▼ Year ▶	**1972**	**1973**	**1974**	**1975**	**1976**	**Total**
January	-	1	1	1	3	6
February	-	2	3	3	4	12
March	-	5	8	9	-	22
Apr	-	11	13	9	-	33
May	-	10	8	6	-	24
Jun	1	3	3	1	-	8
July	0	5	3	2	-	10
August	1	10	7	2	-	20
September	1	4	7	2	-	14
October	3	4	7	4	-	18
November	2	5	6	4	-	17
December	2	1	2	2	-	7
Visits/year	**10**	**61**	**68**	**45**	**7**	**191**

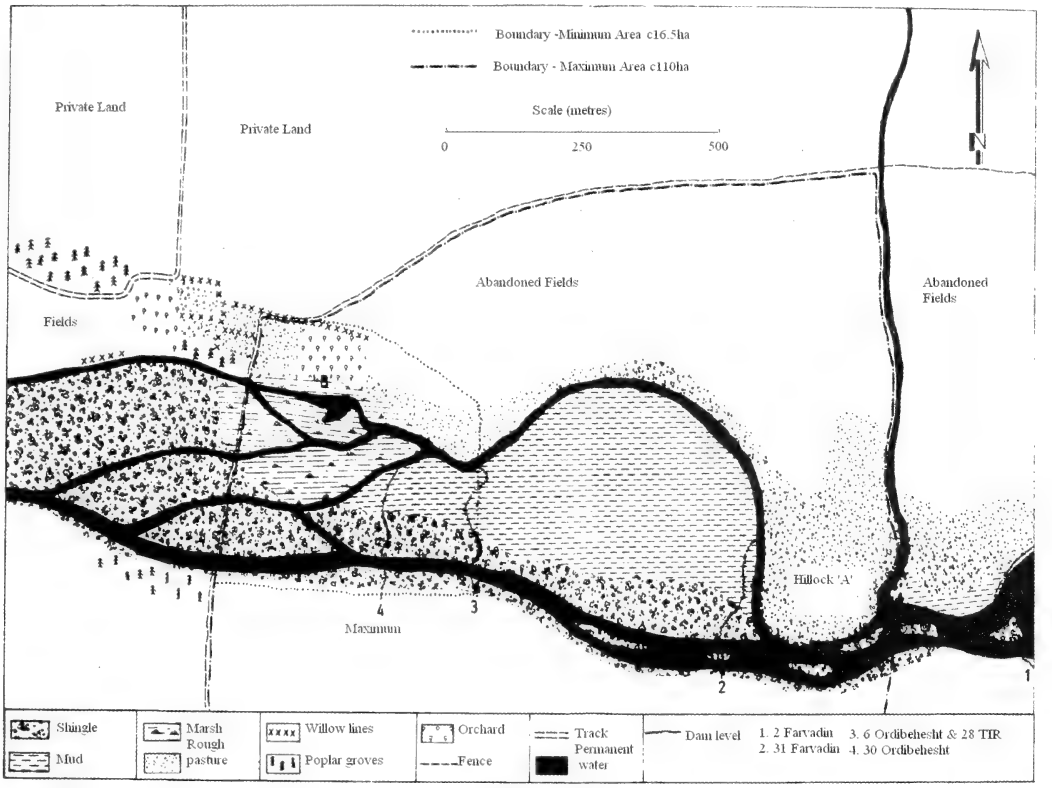

Figure 1. The study area at Latian Dam and Lashgarak in the Alborz foothills northeast of Tehran, Islamic Republic of Iran, showing possible boundaries (minimum and maximum) for a proposed bird sanctuary. The water level in the dam is shown for (1) 22 March (2 Farvardin), (2) 20 April (31 Farvardin), (3) 26 April (6 Ordebehesht) and 19 July (28 Tir), and (4) 20 May (30 Ordebehesht) 1973. (Reproduced from Scott 1976).

provided excellent habitat for waders, rails, crakes, pipits, wagtails and marsh-loving warblers. The dam and surrounding mud-flats and shingle banks were ideal for wildfowl, waders, gulls and terns, while the surrounding stony hillsides were frequented by the more typical Alborz species. Outside the dam enclosure, cultivated areas were still being tended, and indeed new orchards were being planted. Several poplar groves were maintained between the orchards and the river, and were clear-felled on a rotation basis. Thus at any one time, there were always several stands of poplars of various ages. While the mature stands of poplars were generally poor for birds, the young plantations, which required constant irrigation throughout the summer, provided excellent cover and feeding habitat for a variety of small birds.

For the daily counts of migrants at Lashgarak to be comparable, the same area should be visited each day and covered with the same thoroughness. Unfortunately, this was not always possible. The major difficulty in obtaining uniform coverage of the area was caused by the enormous fluctuations in water level in the reservoir. During late spring, when the water level reached its highest, the lake extended almost to the western boundary of the dam enclosure, while in mid-winter, when levels were at their lowest, a visitor wishing to count ducks on the lake would have to walk a kilometre or more east from the Najjar Kala Rud, at the east edge of the main study area. In spring, when the rivers were in flood, it was seldom possible to cross the Najjar Kala Rud, while in winter, a shortage of daylight sometimes prevented adequate coverage of the reservoir.

Table 2. Birds ringed at Lashgarak, Tehran, 1968-1975.

Species	1968	1969	1971	1972	1975	Total
Common Kestrel *Falco tinnunculus*					6	6
Spotted Crake *Porzana parva*			1	1	1	3
Little Ringed Plover *Charadrius dubius*		1				1
Great Snipe *Gallinago media*					1	1
Common Snipe *Gallinago gallinago*			3			3
Wood Sandpiper *Tringa glareola*			1			1
Eurasian Hoopoe *Upupa epops*		1				1
Syrian Woodpecker *Dendrocopos syriacus*					2	2
Red-backed Shrike *Lanius collurio*					4	4
Eurasian Golden Oriole *Oriolus oriolus*					1	1
Great Tit *Parus major*	4			2	9	15
Barn Swallow *Hirundo rustica*			1		1	2
Cetti's Warbler *Cettia cetti*		1			6	7
Savi's Warbler *Locustella luscinioides*					1	1
Great Reed Warbler *Acrocephalus arundinaceous*					4	4
Sedge Warbler *Acrocephalus schoenobaenus*					1	1
Eurasian Reed Warbler *Acrocephalus scirpaceus*					2	2
Eastern Olivaceous Warbler *Iduna [Hippolais] pallida*					12	12
Common Chiffchaff *Phylloscopus collybita*	8			3	44	55
Green Warbler *Phylloscopus trochiloides nitidus*					2	2
Blackcap *Sylvia atricapilla*		1		1		2
Garden Warbler *Sylvia borin*					5	5
Common Whitethroat *Sylvia communis*					6	6
Common Starling *Sturnus vulgaris*					1	1
Ring Ouzel *Turdus torquatus*				1		1
Song Thrush *Turdus philomelos*				3	7	10
European Robin *Erithacus rubecula*	1					1
Bluethroat *Luscinia svecica*	1					1
Thrush Nightingale *Luscinia luscinia*					1	1
Common Nightingale *Luscinia megarhynchos*		1			1	2
Common Redstart *Phoenicurus phoenicurus*		1			1	2
Spotted Flycatcher *Muscicapa striata*		1				1
House Sparrow *Passer domesticus*					4	4
Eurasian Tree Sparrow *Passer montanus*					13	13
Tree Pipit *Anthus trivialis*				2		2
Water Pipit *Anthus spinoletta*					7	7
Common Chaffinch *Fringilla coelebs*					2	2
Brambling *Fringilla montifringilla*				4	1	5
European Goldfinch *Carduelis carduelis*		2			18	20
Common Reed Bunting *Emberiza schoeniclus*					1	1
Total	**14**	**9**	**6**	**17**	**165**	**211**

Another problem arose as a result of increasing disturbance and destruction of habitat within the dam enclosure. During 1975 in particular, greater and greater attention was given to the gardens and popular groves outside the dam enclosure, as areas inside the enclosure became less attractive to birds. Natural seasonal changes in the vegetation also created problems, particularly with respect to skulking warblers and other small passerines which, although relatively conspicuous in spring, were easily overlooked in the dense vegetation of late summer and autumn. Such irregularities in coverage should be borne in mind when considering the data summarized in the Systematic List.

BIRD RINGING

Although the Lashgarak area constituted a superb site for the ringing of small migrants, little ringing had been conducted there prior to March 1976. George Nelson and RG Newell ringed 46 birds with British Museum rings between 1968 and 1972, and Francis Argyle ringed 165 birds with British Museum and Iran Department of Environment rings in 1975.[1] A list of the birds ringed at Lashgarak up to the end of 1975 is given in **Table 2**.

[1] As only the larger sizes of ring were available through the Iran Department of Environment ringing scheme at that time, the smaller passerines were ringed with British Museum rings.

THE PROPOSED BIRD SANCTUARY

In July 1973, the author submitted to the Director of the Department of Environment a proposal for the establishment of a bird sanctuary at Lashgarak (Scott 1973). The site proposed for the sanctuary encompassed some 110ha of land north of the Jajerud and entirely within the Latian Dam enclosure. The proposal was favourably accepted by the Department, and negotiations for reserve establishment were initiated with the various responsible authorities. Unfortunately, these negotiations proceeded slowly, and no reserve had been created by the time the author left Iran in early 1976.

At the time that the proposal was submitted, a small-scale sand and gravel operation had been initiated in the river bed within the proposed sanctuary boundaries. In the following two and a half years, these operations were expanded enormously. By the end of 1975, a large proportion of the river bed and associated marshes had been torn up, heavy machinery had been erected on site, and the comings and goings of heavy trucks were causing almost continuous disturbance to large sections of the area. The variety and abundance of bird life had inevitably diminished, and numbers of the larger and warier species (*eg* herons, egrets, ducks and waders) had dropped off markedly in 1975.

Despite the disturbance, the area was still of great interest to the ornithologist and bird-watcher. Although the site was subsequently identified as an Important Bird Area (Evans 1994), no special measures have as yet been taken to protect the area.

SYSTEMATIC LIST

The figures in brackets after the species' names indicate the number of dates on which the species was recorded, and the maximum number of individuals present on any one date, respectively.

Chukar Partridge *Alectoris chukar* (31/42)
A common resident on nearby hillsides, with parties occasionally descending to feed in the area during winter.

Seesee Partridge *Ammoperdix griseogularis* (1/6)
A pair with four well-grown young at the eastern edge of the area on 14 Oct 74. This species presumably breeds further down the valley.

Common Quail *Coturnix coturnix* (3/1)
Singles on 30 Aug 73, 13 Sep 73 and 10 Oct 74.

Unidentified grey geese *Anser* sp. (1/35)
A flock of 35 geese, thought to be Greylag Geese *Anser anser*, flew north over the dam on 17 Mar 75.

Common Shelduck *Tadorna tadorna* (11/8)
The only records were in the autumn and winter of 74/75: one on 3 and 5 Sep 74, eight on 17 Oct 74, two on 18 and 24 Oct 74, and then one on six dates to 13 Feb 75.

Ruddy Shelduck *Tadorna ferruginea* (15/2)
An uncommon passage migrant in spring (28 Feb to 17 May) and autumn (9 Sep to 24 Oct), with no more than two recorded in a day.

Gadwall *Anas strepera* (15/24)
A fairly common passage migrant in spring (23 Mar to 27 May), with a maximum of 24 on 22 Apr 74. Two on 7 and 10 Nov 74, four on 20 Nov 75, and seven on 6 Feb 76.

Eurasian Wigeon *Anas penelope* (28/40)
A fairly common passage migrant in spring (15 Mar to 4 May), and an uncommon passage migrant in autumn (28 Oct to 23 Nov). Maximum of 40 on 2 May 74.

Mallard *Anas platyrhynchos* (114/680)
A common winter visitor and passage migrant, with counts of up to 680 during autumn passage (Oct-Dec), up to 120 during the mid-winter period, and up to 200 during spring passage (late Feb to mid-Apr). Occasional in small numbers to 4 Jun and from 19 Aug.

Northern Shoveler *Anas clypeata* (26/30)
A fairly common passage migrant in spring (13 Mar to 24 May), and an uncommon passage migrant in autumn (8 Aug to 10 Nov). Maximum of 30 on 22 Apr 74 and 2 May 74. Also singles on 11 Jun 74 and 18 Dec 75.

Northern Pintail *Anas acuta* (25/65)
A fairly common passage migrant in spring (8 Mar to 9 May), with a maximum of 65 on 22 Apr 74, but uncommon in autumn (5 Sep to 10 Nov), with no more than four in a day.

Garganey *Anas querquedula* (63/51)
A common passage migrant in spring (13 Mar to 17 May) and autumn (17 Jul to 1 Nov), with peak periods of passage from late Mar to the end of Apr, and from early Aug to mid-Sep. Maximum in spring - 51 on 22 Apr 74; maximum in autumn - 29 on 16 Aug 73.

Eurasian (Common) Teal *Anas crecca* (82/80)
A common passage migrant in spring and autumn (late Feb to mid-May and early Aug to mid-Nov),

and occasional in small numbers in winter. Maximum of 80 on 22 Apr 74. Singles on 24 Jul 73 and 11 Jun 74, and two on 20 Jun 74.

Marbled Duck *Marmaronetta angustirostris* (2/3)
Two on 30 Mar 73 and three on 31 Oct 75.

Common Pochard *Aythya ferina* (12/39)
An uncommon passage migrant in spring, recorded on nine dates between 14 Feb and 16 Apr, with a maximum of 39 on 4 Apr 74. One on 1 Jan 75 and three on 14 Aug 75.

Tufted Duck *Aythya fuligula* (22/38)
A fairly common passage migrant in spring (22 Feb to 12 May), with a maximum of 38 on 28 Feb 74. Also one on 17 Oct 74, 12 on 1 Jan 75 and one on 14 Aug 75.

Smew *Mergellus albellus* (3/8)
Only recorded during the winter of 75/76: one drake and two ducks on 12 Jan 76; three drakes and three ducks on 6 Feb 76; and three drakes and five ducks on 13 Feb 76.

Red-breasted Merganser *Mergus serrator* (1/1)
One on 3 Nov 74. This is a very scarce migrant inland in Iran, although it winters commonly in the south Caspian region and in small numbers in the Persian Gulf.

Goosander *Mergus merganser* (8/22)
Probably a regular winter visitor in small numbers: 22 on 14 Feb 74 and 10 on 22 and 28 Feb 74; one on 24 Dec 74 and two on 1 Jan 75; five on 12 Jan 76, six on 6 Feb 76, and 10 on 13 Feb 76.

Great Crested Grebe *Podiceps cristatus* (15/8)
A regular passage migrant in spring and autumn in small numbers, and occasional in winter (13 Sep to 16 May), with a maximum of eight on 2 Apr 74 and 20 Apr 75.

Black-necked Grebe *Podiceps nigricollis* (9/5)
An uncommon passage migrant in spring (8 Mar to 26 Apr) and autumn (14 Sep to 24 Dec), with a maximum of five on 9 Nov 72 and 30 Mar 73.

Black Stork *Ciconia nigra* (1/1)
One flew over the area on 5 Aug 74.

Glossy Ibis *Plegadis falcinellus* (5/1)
A very scarce passage migrant in spring and autumn: singles on 21 Apr 73, 13 Sep 73, 22 Apr 74, 27 Aug 74 and 19 Sep 74.

Eurasian (Great) Bittern *Botaurus stellaris* (6/1)
A single bird on six dates between 15 Mar and 5 Apr 74.

Little Bittern *Ixobrychus minutus* (34/7)
A fairly common passage migrant in spring (16 Apr to 20 Jun), with a maximum of seven on 17 May 73. An uncommon passage migrant in autumn, when one or two individuals were recorded on six dates between 5 Aug and 12 Oct. An unusually early spring migrant appeared on 29 Mar 74.

Black-crowned Night Heron *Nycticorax nycticorax* (44/10)
A fairly common passage migrant in spring (21 Mar to 22 May), with a maximum of 10 on 26 Apr 73. A scarce passage migrant in autumn, when one or two individuals were recorded on 11 dates between 15 Sep and 18 Oct.

Squacco Heron *Ardeola ralloides* (46/30)
A common passage migrant in spring (29 Mar to 6 Jun), with a maximum of 30 on 24 May 73. Very scarce in autumn; the only records were single birds on four dates between 27 Aug and 26 Oct.

Cattle Egret *Bubulcus ibis* (13/5)
An uncommon passage migrant in spring (19 Apr to 24 May), with a maximum of five on 20 Apr 73.

Grey Heron *Ardea cinerea* (162/53)
A common winter visitor and passage migrant, with over ten birds present almost daily from late Jul to the end of Apr. Main passage between mid-Feb and the end of Apr, and between early Sep and the end of Nov. Maximum of 53 on 3 Nov 74. Occasional in small numbers throughout the summer.

Purple Heron *Ardea purpurea* (53/28)
A common passage migrant in spring (22 Mar to 10 Jun), with maximum counts of 27 on 20 Apr 73 and 28 on 11 Apr 74. Singles on ten dates in autumn between 17 Jul and 19 Sep.

Great Egret *Ardea alba* (formerly *Egretta alba*) (60/12)
A regular winter visitor in very small numbers (from 1 Nov), and a fairly common passage migrant in spring (latest on 22 May), with the main spring passage from the end of Mar to mid-Apr. Maximum of 12 on 5 Apr 74.

Little Egret *Egretta garzetta* (54/27)
A common passage migrant in spring (22 Mar to 17 May), and regular in small numbers in autumn (27 Aug to 17 Nov). Maximum in spring – 27 on 4 Apr 74; maximum in autumn – six on 5 Oct 72.

Great Cormorant *Phalacrocorax carbo* (70/30)
A common passage migrant in spring, with the main passage between the end of Feb and mid-Apr, and the last birds departing in early May (latest 9th). Maximum of 30 on 9 Apr 73. Occasional in small numbers in autumn (from 14 Oct) and winter. The only records in summer were one on 3 Aug 73, one on 22 May 75 and three on 17 Jul 75.

Lesser Kestrel *Falco naumanni* (3/150)
Four on 3 Aug 72; several flocks totalling 150 moving south down the valley on 3 Oct 74; and one on 26 Mar 75.

Common Kestrel *Falco tinnunculus* (117/6)
One or two pairs resident in the area, and no signs of any through passage.

Red-footed Falcon *Falco vespertinus* (1/1)
An immature male on 24 May 73. This is a very scarce passage migrant in Iran. The only other record during the 70s was a single bird (also an immature male) near Gorgan in the southeast Caspian region on 1 Aug 75 (pers obs)

Merlin *Falco columbarius* (7/2)
One from 31 Mar to 12 Apr 74; singles on 3 Nov 74 and 13 Nov 75; and two on 6 Feb 76.

Eurasian Hobby *Falco subbuteo* (49/6)
A fairly common passage migrant in spring and autumn, and an occasional visitor during the summer months (11 Apr to 17 Oct). Main passage in Apr and Sep; maximum of six on 10 May 74.

Saker Falcon *Falco cherrug* (5/1)
Singles on 19 Oct 72, 12 Apr 74, 3 Nov 74, 1 Jan 75 and 9 Oct 75.

Peregrine Falcon *Falco peregrinus* (5/1)
Singles on 27 Dec 73, 2 Apr 74, 28 Nov 74, 28 Aug 75 and 15 Nov 75.

Barbary Falcon *Falco pelegrinoides* (1/1)
One on 22 Apr 74.

Osprey *Pandion haliaetus* (12/1)
A regular passage migrant in spring and autumn; singles on six dates between 12 Apr and 9 May, and on six dates between 15 Aug and 17 Oct.

European Honey Buzzard *Pernis apivorus* (3/1)
Singles on 5 Aug 73, 6 Sep 73 and 16 Apr 75.

Black Kite *Milvus migrans* (57/60)
A fairly common passage migrant in spring and autumn, and an occasional visitor during the summer months (23 Mar to 11 Sep). Unusually high numbers were present between 18 Jul and 22 Aug 74, with over 20 on five dates and a maximum of 60 on 5 Aug.

Lammergeier *Gypaetus barbatus* (1/1)
One on 14 Feb 74.

Egyptian Vulture *Neophron percnopterus* (2/2)
Two on 12 Apr 74 and one on 29 May 75.

Eurasian Griffon Vulture *Gyps fulvus* (8/6)
An occasional visitor from the high Alborz, recorded in Apr, May, Oct and Nov.

Cinereous (Eurasian Black) Vulture *Aegypius monachus* (3/2)
Two on 26 Apr 73, two on 17 Oct 74, and one on 10 Nov 74.

Short-toed Snake Eagle *Circaetus gallicus* (8/2)
One on 18 Apr 74, two on 9 May 74, one on five dates from 8 Aug to 5 Sep 74, and one on 28 Aug 75.

Hen Harrier *Circus cyaneus* (4/1)
Singles on 4 Oct 73, 13 and 15 Nov 75, and 26 Nov 75.

Pallid Harrier *Circus macrourus* (4/1)
Singles on 19 Apr 73, 26 Sep 74, 10 Nov 74 and 13 Nov 75.

Levant Sparrowhawk *Accipiter brevipes* (1/1)
One on 17 Oct 74.

Northern Goshawk *Accipiter gentilis* (15/2)
An uncommon winter visitor: singles on 12 dates between 3 Nov and 5 Apr, and two on 11 Apr 74 and 13 Nov 75. An early migrant appeared on 26 Aug 73.

Eurasian Sparrowhawk *Accipiter nisus* (42/2)
A regular winter visitor and passage migrant in very small numbers (12 Sep to 6 May).

Common Buzzard *Buteo buteo* (3/1)
Singles of the form *vulpinus* (Steppe Buzzard) on 12 Sep 74, 17 Oct 74 and 16 Oct 75.

Long-legged Buzzard *Buteo rufinus* (20/3)
An occasional visitor in small numbers, recorded in almost every month, but most frequent in spring.

Greater Spotted Eagle *Aquila clanga* (3/1)
One on 31 Mar and 2 Apr 74, and one on 26 Mar 75.

Steppe Eagle *Aquila nipalensis* (1/1)
One on 1 May 75.

Eastern Imperial Eagle *Aquila heliaca* (3/1)
Singles on 30 Mar 73, 13 Mar 75 and 26 Mar 75.

Golden Eagle *Aquila chrysaetos* (52/4)
A regular visitor from the nearby high Alborz, recorded in almost every month of the year, but most frequent in winter.

Bonelli's Eagle *Aquila fasciata* (formerly *Hieraaetus fasciatus*) (1/1)
One on 10 May 74.

Water Rail *Rallus aquaticus* (23/3)
A regular winter visitor in very small numbers between 12 Oct and 22 Mar. A late spring migrant appeared on 22 May 75.

Corncrake *Crex crex* (16/1)
A regular passage migrant in very small numbers in spring (5 Apr to 16 May), but scarce in autumn, with only three records of single birds on 9 Aug 73, 13 Sep 73 and 4 Oct 73.

Little Crake *Porzana parva* (2/1)
Singles on 28 Oct 73 and 11 Sep 75.

Baillon's Crake *Porzana pusilla* (10/1)
Singles on 21 Apr 73 and 4 May 73; one immature on seven occasions between 19 Jul and 16 Aug 73; and one on 8 Aug 74.

Spotted Crake *Porzana porzana* (56/10)
A common passage migrant in spring (22 Feb to 27 May), and a fairly common passage migrant in autumn (24 Jul to 29 Nov). Maximum in spring – 10 on 21 Apr 73; maximum in autumn – three on several dates.

Common Moorhen *Gallinula chloropus* (9/3)
Up to three on six dates between 26 Oct 72 and 30 Mar 73, and singles on 19 Aug, 1 Nov and 27 Dec 73, but none thereafter.

Eurasian Coot *Fulica atra* (16/14)
An uncommon winter visitor and passage migrant: one or two on 14 dates between 14 Aug and 17 Apr, but a party of 14 on 23 Nov 73. One on 6 Jun 74 was unusual.

Eurasian Oystercatcher *Haematopus ostralegus* (1/2)
Two on 31 Mar 74.

Black-winged Stilt *Himantopus himantopus* (35/6)
A regular passage migrant in small numbers in spring (11 Mar to 6 May) and autumn (17 Jul to 23 Aug).

Pied Avocet *Recurvirostra avosetta* (6/16)
A scarce passage migrant in spring and autumn: one on 14 Sep 72; a flock of 16 on 13 Apr 73; six on 13 Sep 73; two on 19 Mar 74; three on 22 May 75; and one on 24 Jul 75.

Northern Lapwing *Vanellus vanellus* (12/17)
An uncommon winter visitor and passage migrant, most frequent in Nov and late Feb/early Mar (5 Oct to 15 Mar). Maximum of 17 on 8 Mar 74.

White-tailed Lapwing *Vanellus leucurus* (3/4)
Four on 11 Oct 73, one on 12 Oct 73, and one on 26 Mar 75.

Common Ringed Plover *Charadrius hiaticula* (14/3)
Two on 24 May 73, one on 12 May 74, and one on 24 Apr 75. An uncommon passage migrant in autumn; up to three recorded on 11 dates between 5 Aug and 12 Oct.

Little Ringed Plover *Charadrius dubius* (112/50)
A very common passage migrant in spring and autumn and a common summer visitor (15 Mar to 5 Oct). Main spring passage from end of Mar to mid-Apr; main autumn passage in Aug. Several pairs bred in the area. The highest count of 50 was recorded on 14 Aug 73.

Kentish Plover *Charadrius alexandrinus* (10/4)
A scarce passage migrant in spring and autumn. Four on 19 Apr 73; one from 14 to 17 Aug 75; singles on 26 Apr and 14 May 74; three on 5 Aug 74; and one from 26 Sep to 3 Oct 74.

Greater Sand Plover *Charadrius leschenaultii* (2/1)
One on 11 and 14 Apr 74.

Eurasian Woodcock *Scolopax rusticola* (14/2)
An occasional winter visitor: one or two individuals recorded on 14 dates between 24 Oct and 30 Mar.

Jack Snipe *Lymnocryptes minimus* (48/6)
A fairly common passage migrant in spring and autumn, and an occasional winter visitor (12 Oct to 22 Apr). Main passage from early Mar to mid-Apr, and from mid-Oct to the end of Nov. Maximum of six on 30 Mar 73.

Great Snipe *Gallinago media* (54/10)
A fairly common passage migrant in spring (29 Mar to 20 May), and a regular passage migrant in small numbers in autumn (14 Aug to 25 Oct). Maximum in spring – 10 on 3 and 4 May 73; maximum in autumn – seven on 20 Sep 73.

Common Snipe *Gallinago gallinago* (147/30)
A common passage migrant in spring and autumn, and a common winter visitor (5 Aug to 27 May). Main passage from end of Feb to late Mar, and from late Aug to mid-Nov. Maximum of 30 on 7 Mar 74.

Black-tailed Godwit *Limosa limosa* (2/1)
One on 23 and 26 Mar 75.

Whimbrel *Numenius phaeopus* (1/1)
One on 22 Apr 74.

Common Redshank *Tringa totanus* (15/3)
Singles on 19 Apr 73 and 14 Apr 74 were the only spring records. An uncommon passage migrant in autumn (24 Jul to 21 Nov), with no more than three in a day. One on 2 Jan 76 was unusual.

Marsh Sandpiper *Tringa stagnatilis* (19/5)
A fairly common passage migrant in spring (30 Mar to 4 May) and autumn (24 Jul to 13 Sep). Maximum of five on 10 Apr 75.

Common Greenshank *Tringa nebularia* (106/6)
A fairly common passage migrant in spring and autumn, and a regular winter visitor in very small numbers (17 Jul to 4 May). Main passage in Mar and Apr, and from early Aug to the end of Oct.

Green Sandpiper *Tringa ochropus* (168/90)
A very common passage migrant in spring and autumn, and a fairly common winter visitor (8 Jul to 14 May). Main passage from mid-Mar to late Apr, and from the end of Jul to late Sep. Maximum of 90 on 17 Aug 73. Up to 10 were present throughout the winter months.

Wood Sandpiper *Tringa glareola* (90/25)
A common passage migrant in spring (30 Mar to 24 May) and autumn (19 Jul to 14 Oct). Main passage from mid-Apr to mid-May, and from early Aug to the end of Sep. Maximum of 25 on 14 Aug 73.

Terek Sandpiper *Xenus cinerea* (7/10)
A scarce passage migrant in spring and autumn: five on 19 Apr 73; one on 2 Aug 73; two on 6 and 9 Sep 73; one on 2 May 74; 10 on 16 May 74; and one on 22 Aug 74.

Common Sandpiper *Actitis hypoleucos* (117/90)
A common passage migrant in spring (22 Mar to 27 May), and a very common passage migrant in autumn (8 Jul to 9 Nov). Main passage from mid-Apr to late May, and from late Jul to mid-Sep. Maximum of 90 on 17 Aug 73. Two birds were present throughout the winter of 73/74.

Ruddy Turnstone *Arenaria interpres* (1/1)
One on 19 May 75.

Sanderling *Calidris alba* (4/2)
All four records were in 74: two on 6 May, two on 12 May, one on 16 May, and one on 10 Oct.

Little Stint *Calidris minuta* (63/60)
A fairly common passage migrant in spring (13 Apr to 6 Jun), and a common passage migrant in autumn (18 Jul to 3 Nov). Main passage in May and from the end of Jul to the end of Sep. Maximum in spring – 24 on 10 May 74; maximum in autumn – 60 on 28 Aug 75.

Temminck's Stint *Calidris temminckii* (19/10)
A fairly common passage migrant in autumn (2 Aug to 7 Oct), but not recorded in spring. Main passage from mid-Aug to mid-Sep. Maximum of 10 on 19 Aug 73.

Curlew Sandpiper *Calidris ferruginea* (11/19)
One on 14 May 73. Regular in small numbers on autumn passage (29 Jul to 19 Sep), with a maximum of 19 recorded on 26 Aug 73.

Dunlin *Calidris alpina* (25/7)
A regular passage migrant in spring (30 Mar to 4 Jun) and autumn (5 Sep to 19 Oct) in small numbers. Two on 18 Dec 75 and one on 2 Jan 76 were unusual.

Broad-billed Sandpiper *Limicola falcinellus* (4/1)
Singles on 12 May 73, 9 May and 10 May 74, and 8 Aug 75.

Ruff *Philomachus pugnax* (23/13)
A fairly common passage migrant in spring (22 Feb to 16 May), but only an occasional visitor in autumn (30 Jul to 14 Sep). Maximum of 13 on 11 Apr 74.

Red-necked Phalarope *Phalaropus lobatus* (15/7)
A fairly common passage migrant in spring (11 Apr to 16 May), with a maximum of 17 on 11 Apr 74. Singles on six dates between 30 Aug and 13 Sep.

Collared Pratincole *Glareola pratincola* (5/2)
A scarce passage migrant in spring: one on 10 Jun 73; one on 11 Apr 74; two on 28 Mar 75; one on 13 Apr 75; and one on 22 May 75.

Common Gull *Larus canus* (9/2)
An uncommon passage migrant in spring, with one or two individuals recorded on eight dates between 8 Mar and 13 Apr. A late individual appeared on 10 May 74.

Caspian Gull *Larus cachinnans* (65/165)
A very common passage migrant in spring (28 Feb to 16 May), with a maximum of 165 on 11 Apr 74. Only one record of a bird on passage in autumn: a single on 23 Aug 73. An injured bird remained throughout the summer and autumn of 75 until at least 26 Dec. No serious attempt was made to identify individuals to subspecies, and all birds were simply referred to as Herring Gulls *Larus argentatus* which, at that time, included *cachinnans, michahellis, heuglini, armenicus* and the Central Asian forms. However, most were thought to be *cachinnans* from the Caspian region.

Lesser Black-backed Gull *Larus fuscus* (5/3)
A scarce passage migrant in spring: two on 8 Mar 73; singles on 4 and 14 May 73; three on 14 Apr 74; and one on 3 Apr 75.

Great Black-headed Gull *Larus ichthyaetus* (25/23)
A fairly common passage migrant in spring (27 Feb to 24 Apr), with a maximum of 23 on 11 Apr 74, but no records in autumn.

Common Black-headed Gull *Larus ridibundus* (73/240)
A very common passage migrant in spring (16 Feb to 27 May), with a maximum of 240 on 4 Apr 74. Very scarce in autumn, when there were one or two individuals on six dates between 26 Aug and 29 Nov.

Slender-billed Gull *Larus genei* (32/34)
A common passage migrant in spring (26 Mar to 24 May), with a maximum of 34 on 14 Apr 74, but no records in autumn.

Gull-billed Tern *Gelochelidon nilotica* (reversion from *Sterna nilotica*) (5/2)
A scarce passage migrant in spring: one on 13 Apr 73; two on 11 Apr 74; singles on 20 Apr and 6 May 75; and two on 29 May 75.

Caspian Tern *Hydroprogne caspia* (reversion from *Sterna caspia*) (2/3)
One on 5 Apr 74 and three on 17 Apr 74.

Sandwich Tern *Sterna sandvicensis* (11/23)
A fairly common passage migrant in spring (30 Mar to 16 May), with a maximum of 23 on 2 Apr 74, but not recorded in autumn.

Common Tern *Sterna hirundo* (32/56)
A common passage migrant in spring (5 Apr to 11 Jun), with a maximum of 80 on 11 Apr 74. The only record in autumn was one on 9 Sep 73.

Little Tern *Sternula albifrons* (formerly *Sterna albifrons*) (20/120)
A common passage migrant in spring (11 Apr to 10 Jun), with an exceptionally large flock of 120 on 10 May 74. Up to three were recorded on four dates between 8 Jul and 24 Jul.

Whiskered Tern *Chlidonias hybrida* (17/12)
An occasional visitor during the summer months (9 May to 14 Sep), although there was no evidence of breeding locally. The highest count of 12 was recorded on 18 Jul 74.

White-winged Tern *Chlidonias leucopterus* (23/27)
A fairly common passage migrant in spring (21 Apr to 10 Jun), with a maximum of 27 on 12 May 73, and an uncommon passage migrant in autumn (8 Jul to 3 Oct), when no more than four were recorded in a day.

Black Tern *Chlidonias niger* (2/1)
One immature on 26 and 29 Sep 74. This is a rather scarce passage migrant in northern and western Iran, here at the eastern extremity of its range.

Rock Dove *Columba livia* (almost daily/80)
A common resident.

Stock Dove *Columba oenas* (5/30)
One on 29 Sep 74; 30 on 17 Oct 74; one on 10 Apr 75; 12 on 9 Oct 75; and two on 23 Oct 75.

Common Woodpigeon *Columba palumbus* (8/21)
An occasional visitor in summer and autumn: one on 27 May 73; two on 21 Jun 73; one on 17 Aug 73; one on 1 Aug 74; one on 29 Sep 74; 21 on 3 Oct 74; eight on 17 Oct 74; and two on 22 May 75.

European Turtle Dove *Streptopelia turtur* (81/55)
A common passage migrant in spring and autumn, and an occasional visitor throughout the summer (16 Apr to 29 Sep). Main passage from late Apr to mid-May, and from early Aug to mid-Sep. Maximum in spring – 40 on 6 May 74; maximum in autumn – 55 on 5 Sep 74.

Eurasian Collared Dove *Streptopelia decaocto* (1/1)
One on 4 May 73. Like the Laughing Dove, this is a common resident in the Tehran area, but apparently seldom straggles into the mountains.

Laughing Dove *Streptopelia senegalensis* (5/1)
Singles on 21 Jun 73, 2 Apr 74, 11 Apr 74, 15 Aug 74 and 20 Nov 75. This is a common resident in Tehran.

Common Cuckoo *Cuculus canorus* (28/7)
A fairly common passage migrant in spring (4 Apr to 17 May) and autumn (3 Sep to 18 Oct), with a maximum of seven on 6 May 74.

Eurasian Scops Owl *Otus scops* (31/4)
A summer visitor to the area and probably also a passage migrant in small numbers, recorded on 31 dates between 23 Mar and 28 Aug.

Eurasian Eagle Owl *Bubo bubo* (1/1)
A bird found dead on 13 Feb 76 was the only record.

Little Owl *Athene noctua* (59/5)
One or two pairs resident in the area.

European Nightjar *Caprimulgus europaeus* (4/1)
A very scarce passage migrant: the only records were singles on 24 May 73, 17 Oct 74, 24 Oct 74 and 28 Aug 75.

Alpine Swift *Tachymarptis melba* (51/50)
A common visitor from the nearby high Alborz during the summer months (20 Mar to 3 Oct). The maximum of 50 was recorded on 30 Aug 73.

Common Swift *Apus apus* (43/100)
A common passage migrant in spring and autumn, and an occasional visitor throughout the summer (20 Mar to 19 Sep). Main passage in late Mar and early Apr and in Aug. The maximum of 100 was recorded on 30 Aug 73.

European Roller *Coracias garrulus* (80/20)
A common passage migrant and summer visitor, with several pairs breeding in the area (11 Apr to 9 Sep). Main passage in late Apr/early May and from late Jul to mid-Aug. The maximum of 40 was recorded on 14 Apr 74.

Common Kingfisher *Alcedo atthis* (40/4)
A regular passage migrant in very small numbers in spring (22 Mar to 26 Apr) and autumn (15 Aug to 14 Oct). One bird was resident in the area from 12 Jan to 6 Feb 76.

Blue-cheeked Bee-eater *Merops persicus* (22/175)
A fairly common passage migrant in spring (16 Apr to 22 May), occasionally in large flocks, e.g. 175 on 14 May 74. An uncommon passage migrant in autumn, with up to 30 recorded on six dates between 29 Sep and 19 Oct.

European Bee-eater *Merops apiaster* (86/200)
A common passage migrant and summer visitor, breeding commonly in the vicinity (17 Apr to 12 Oct). Main passage in late Apr/early May and from the end of Jul to the end of Sep. Maximum in spring – 150 on 20 Apr 74; maximum in autumn – 200 on 3 Aug 72.

Eurasian Hoopoe *Upupa epops* (118/20)
A common passage migrant and summer visitor, with several pairs breeding in the area (8 Mar to 20 Sep). Main passage from late Mar to late Apr, and from the end of Jul to late Aug. Maximum in spring – 16 on 2 Apr 73; maximum in autumn – 20 on 2 Aug 73.

Eurasian Wryneck *Jynx torquilla* (13/2)
A regular passage migrant in small numbers in spring and autumn: one or two individuals on seven dates between 26 Mar and 22 Apr, and singles on six dates between 23 Aug and 11 Sep.

Syrian Woodpecker *Dendrocopos syriacus* (daily/8)
Several pairs resident in the area.

Red-backed Shrike *Lanius collurio* (64/28)
A common passage migrant in spring (20 Apr to 24 May) and autumn (5 Aug to 25 Oct). Main passage from late Apr to mid-May, and from late Aug to late Sep. Maximum in spring – 28 on 16 May 74; maximum in autumn – 20 on 20 Sep 73.

Isabelline Shrike *Lanius isabellinus* (22/2)
Singles on five dates in spring (31 Mar to 19 May). An uncommon passage migrant in autumn (8 Aug to 1 Nov), with most records in Oct. No attempt was made to identify individuals to subspecies.

Lesser Grey Shrike *Lanius minor* (18/7)
An uncommon passage migrant in spring, with up to seven on nine dates from 20 Apr to 6 Jun, and an uncommon passage migrant in autumn, with up to three on nine dates from 5 Aug to 19 Sep. Maximum of seven on 16 May 74.

Southern Grey Shrike *Lanius meridionalis* (5/1)
Singles on 5 Aug 73, 19 Aug 73, 3 Sep 74, 15 Nov 75 and 18 Dec 75. No attempt was made to identify individuals to subspecies. In the 70s, the forms occurring commonly in Iran (*aucheri* and *pallidirostris*) were generally considered to be subspecies of the Great Grey Shrike *Lanius excubitor*.

Woodchat Shrike *Lanius senator* (24/4)
One or two on six dates in spring (11 Apr to 14 May). A regular passage migrant in autumn in small numbers (23 Jul to 12 Sep), with a maximum of four on 23 Aug 73.

Masked Shrike *Lanius nubicus* (5/2)
One from 20 to 26 Apr 74; two on 10 May 74; and one on 16 May 74. Although a common breeding summer visitor to the Zagros Mountains in western Iran, this is a scarce passage migrant in northern Iran.

Eurasian Golden Oriole *Oriolus oriolus* (50/10)
A fairly common summer visitor (18 Apr to 20 Sep), with several pairs breeding in the poplar groves. Some evidence of through passage in the second half of May, when as many as ten were recorded in a day.

Eurasian Magpie *Pica pica* (daily/50)
A common resident.

Red-billed Chough *Pyrrhocorax pyrrhocorax* (53/125)
A regular visitor, usually in small flocks, from the nearby Alborz (6 Sep to 26 Apr), most frequently observed in spring, when large flocks were present on several occasions, notably 100 on 2 Apr 73, 100 on 15 Mar 74, 125 on 2 Apr 74, and 100 on 13 Mar 75. Only one observation in summer: a single bird on 6 Jun 74.

Alpine (Yellow-billed) Chough *Pyrrhocorax graculus* (2/80)
A flock of 75 high over the area on 29 Mar 74, and a flock of 80 likewise on 28 Mar 75.

Eurasian (Western) Jackdaw *Corvus monedula* (8/10)
An occasional visitor, presumably from the nearby breeding colony by the Shemiran-Lashgarak road, observed in Jan, Mar, Apr, May, Aug and Sep. Usually in company with large flocks of Rooks.

Rook *Corvus frugilegus* (daily/600)
A very common visitor from the nearby large breeding colony at Lashgarak camp, with feeding flocks present in the area on a daily basis. The highest count of 600 was recorded on 19 Jul 73.

Hooded Crow *Corvus cornix* (formerly *C. corone cornix*) (daily/200)
A very common resident.

Northern (Common) Raven *Corvus corax* (12/6)
An occasional visitor from the high Alborz, recorded in Feb, Mar, Apr, May, Sep and Nov.

Coal Tit *Periparus ater* (formerly *Parus ater*) (1/1)
One on 19 Oct 72.

Great Tit *Parus major* (daily/25)
A common resident, with several pairs breeding in the area, and also a winter visitor, the highest counts recorded being between the end of Oct and the end of Mar.

Blue Tit *Cyanistes caeruleus* (formerly *Parus caeruleus*) (2 – 1)
Singles on 14 Feb 74 and 27 Feb 76.

Sand Martin *Riparia riparia* (37/100)
A common passage migrant in spring (23 Mar to 16 May) and autumn (22 Aug to 12 Oct). Counts of 100 were recorded on 6 May 73, 12 May 73 and 2 May 74.

Barn Swallow *Hirundo rustica* (112/200)
A very common passage migrant in spring and autumn, and an occasional visitor throughout the summer (8 Mar to 13 Nov). Main passage from late Mar to mid-May, and from early Sep to mid-Oct. Maximum in spring – 200 on 20 Apr 73; maximum in autumn – 200 on 12 Oct 73.

Eurasian Crag Martin *Ptyonoprogne rupestris* (formerly *Hirundo rupestris*) (15/3)
A regular passage migrant in very small numbers in spring (30 Mar to 26 Apr) and autumn (28 Aug to 31 Oct).

Common House Martin *Delichon urbicum* (35/40)
A common passage migrant in spring (7 Mar to 14 May), and a fairly common passage migrant in autumn (19 Jul to 1 Nov). Maximum in spring – 40 on 12 Apr 74; maximum in autumn – 30 on 1 Aug 74.

Calandra Lark *Melanocorypha calandra* (1/1)
One on 24 Oct 74.

Greater Short-toed Lark *Calandrella brachydactyla* (6/3)
A scarce passage migrant, recorded in both spring and autumn: one on 17 Aug 73; two on 9 Sep 73; one on 18 Apr 74; three on 10 Apr 75; two on 20 Apr 75; and one on 23 Oct 75.

Lesser Short-toed Lark *Calandrella rufescens* (4/73)
Flocks totalling 73 moving up the valley on 24 Oct 74, and singles on 21 and 26 Nov 74 and 27 Feb 75.

Crested Lark *Galerida cristata* (115/17)
Several pairs resident in the area.

Woodlark *Lullula arborea* (6/10)
A scarce passage migrant in late autumn and early spring: one on 25 Oct 73; five on 15 Mar 74; three on 11 Mar 75; seven on 6 Nov 75; two on 20 Nov 75; and 10 on 6 Feb 76.

Eurasian Skylark *Alauda arvensis* (28/39)
A fairly common passage migrant in spring (13 Feb

to 12 Apr) and autumn (14 Oct to 26 Nov), with a maximum of 39 on 10 Nov 74.

Horned Lark (Shorelark) *Eremophila alpestris* (13/100)

An occasional visitor in winter, usually during periods of hard weather (10 Nov to 28 Feb). The maximum of 100 was recorded on 22 Feb 74 during a period of very heavy snowfall.

Cetti's Warbler *Cettia cetti* (84/12)

A fairly common summer visitor (20 Mar to 8 Nov), with several pairs breeding in the area. There were some indications of through passage in the second half of Apr and first half of May, but the highest count (12) was recorded on 24 Jul 75.

Common Grasshopper Warbler *Locustella naevia* (12/2)

An uncommon passage migrant in spring, with one or two individuals on nine dates between 17 Apr and 6 May. The only records in autumn were singles on three dates between 24 Jul and 19 Aug.

Savi's Warbler *Locustella luscinioides* (15/17)

A fairly common passage migrant in spring (31 Mar to 12 May); usually only one or two at a time, but 17 on 14 Apr 74. Singles on five dates in autumn (23 Jul to 31 Oct).

Great Reed Warbler *Acrocephalus arundinaceus* (42/11)

A common passage migrant in spring (17 Apr to 4 Jun) and autumn (5 Aug to 17 Oct). Main passage in May, and late Aug/early Sep. Maximum in spring – 11 on 24 May 73; maximum in autumn – five on 22 Aug and 27 Aug 74. One on 20 Jun 74 was unusual.

Moustached Warbler *Acrocephalus melanopogon* (46/10)

A fairly common passage migrant in spring (15 Mar to 10 May) and autumn (3 Oct to 29 Nov). Maximum in spring – 10 on 5 Apr 73; maximum in autumn seven on 3 Nov 74.

Sedge Warbler *Acrocephalus schoenobaenus* (17/36)

A fairly common passage migrant in spring (4 May to 27 May), with a maximum of 36 on 24 May 73. Only two records in autumn: one on 19 Aug 73 and two on 9 Sep 73.

Eurasian Reed Warbler *Acrocephalus scirpaceus* (24/16)

A fairly common passage migrant in spring (30 Mar to 23 May) and autumn (17 Aug to 23 Oct). Usually only one to four individuals at a time, but 11 on 14 Apr 74, and 16 on 16 Apr 75.

Blyth's Reed Warbler *Acrocephalus dumetorum* (1/1)

One on 9 May 74.

Booted Warbler *Iduna caligata* (formerly *Hippolais caligata*) (8/3)

An uncommon passage migrant in spring (17 May to 4 Jun); not recorded in autumn, but perhaps overlooked because of identification problems. No attempt was made to separate nominate *caligata* from *rama* (now often treated as a separate species, Sykes's Warbler). *I. [c.] rama* breeds commonly in southern and eastern Iran, but *I. [c.] caligata* is more likely to be the form occurring on migration in northern Iran.

Eastern Olivaceous Warbler *Iduna pallida* (formerly *Hippolais pallida*) (58/22)

A common summer visitor (26 Apr to 20 Sep), with 15-20 pairs breeding in the area. There were some indications of through passage in May, when as many as 22 were recorded in a day (on 16 May 74).

Upcher's Warbler *Hippolais languida* (10/5)

A regular visitor in small numbers in late summer (18 Jul to 9 Aug), with a maximum of five on 2 Aug 73. It is possible that these were birds which had nested in semi-deserts habitats along the southern edge of the Alborz and had moved into the foothills as their breeding habitats became desiccated in the extreme heat of late summer.

Icterine Warbler *Hippolais icterina* (5/2)

A scarce passage migrant in the second half of Apr, with two on 19 Apr 73, two on 22 Apr 74, one on 26 Apr 74, and one on 16 Apr 75. The only autumn record was one on 15 Aug 74.

Willow Warbler *Phylloscopus trochilus* (41/20)

A common passage migrant in spring (5 Apr to 24 May), with the main passage from late Apr to mid-May, and a maximum of 20 on 6 May 74. Uncommon in autumn: one to three on seven dates between 14 Aug and 31 Oct.

Common Chiffchaff *Phylloscopus collybita* (118/60)

A very common passage migrant in spring (7 Mar to 24 May) and autumn (5 Sep to 29 Nov), with the main passage from mid-Mar to mid-Apr, and from early Oct to mid-Nov. Maximum in spring – 60 on 4 Apr 74; maximum in autumn – 50 on 28 Oct 73 and 16 Oct 75. One or two individuals over-wintered in the area in 73/74 and 75/76.

Wood Warbler *Phylloscopus sibilatrix* (4/2)

Two on 9 Sep 73, one from 6 May to 9 May 74, and one on 9 Sep 74. There were only four other records of this species in Iran in the 70s, all in autumn (pers obs), suggesting that this is a very scarce passage migrant this far east.

Yellow-browed Warbler *Phylloscopus inornatus* (3/1)

Singles on 8 Nov 73, 23 Nov 73 and 7 Oct 74. There appear to be very few records of this species in Iran, although the closely related Hume's Warbler *P. humei* is a fairly common winter visitor to the southeast of the country.

Green (Bright Green) Warbler *Phylloscopus trochiloides nitidus* (19/18)

Only one spring record: a single bird on 14 Apr 74. Fairly common on passage in autumn (15 Aug to 17 Nov); usually only one to four individuals at a time, but 18 on 26 Sep and 14 on 29 Sep 74.

Greenish Warbler *Phylloscopus trochiloides viridanus* (1/1)

One on 28 Oct 73. There were only three other records of this form in Iran in the 70s, and one of these was a bird seen at Lashgarak by MD Hutchinson and GN Langfield (pers comm) on 10 Oct 76.

Blackcap *Sylvia atricapilla* (53/100)

A very common passage migrant in spring (30 Mar to 16 May), with the main passage in the first three weeks of Apr. Generally no more than 50 in a day, but 100 were present on 14 Apr 74. A regular passage migrant in small numbers in autumn (9 Sep to 21 Nov), with a maximum of three on several dates. A male on 13 Feb 75 had presumably wintered locally.

Garden Warbler *Sylvia borin* (27/10)
A fairly common passage migrant in spring (3 May to 29 May) and autumn (22 Aug to 24 Oct). Maximum in spring – 10 on 22 May 75; maximum in autumn – eight on 3 Sep 74.

Barred Warbler *Sylvia nisoria* (6/2)
A scarce passage migrant in spring and autumn: two on 17 Aug 73, two on 9 Sep 73, one on 12 Oct 73, one on 9 May 74, two on 16 May 74, and one on 27 Aug 74.

Lesser Whitethroat *Sylvia curruca* (12/4)
An uncommon passage migrant in spring (4 Apr to 16 may), with most records in the third week of Apr. Only two records in autumn: singles on 9 Sep 73 and 26 Sep 74.

Desert Lesser Whitethroat *Sylvia minula* (formerly *S. curruca minula*) (4/1)
Singles on 5 Sep 74 and on three dates from 7 to 17 Oct 74.

Eastern Orphean Warbler *Sylvia crassirostris* (4/1)
Singles on 9 Aug 73, 6 Sep 73, 6 May 74 and 9 Oct 75. In the 70s, this form was considered to be a subspecies of the Orphean Warbler *S. hortensis*.

Asian Desert Warbler *Sylvia nana* (1/1)
One on 17 Oct 74.

Common Whitethroat *Sylvia communis* (66/16)
A common passage migrant in spring (2 Apr to 29 May) and autumn (23 Jul to 17 Oct), with the main passage in the first three weeks of May, and from mid-Aug to mid-Sep. Maximum in spring – 16 on 12 May 73; maximum in autumn – 16 on 27 Aug 74.

Ménétries's Warbler *Sylvia mystacea* (8/7)
An uncommon passage migrant in spring (15 Mar to 20 Apr): one or two recorded on six dates, but seven on 4 Apr 74 and five on 5 Apr 74.

Goldcrest *Regulus regulus* (10/6)
An uncommon winter visitor (1 Nov to 22 Mar), and only recorded in the winters of 74/75 and 75/76. Maximum of six on 10 Nov 74.

Winter Wren *Troglodytes troglodytes* (50/10)
A regular winter visitor in small numbers (23 Oct to 10 Apr). Maximum of 10 on 3 Jan 74.

Western Rock Nuthatch *Sitta neumayer* (1/1)
One by the river of 1 Jan 75, during a period of very severe weather.

Eastern Rock Nuthatch *Sitta tephronota* (31/3)
One or two pairs resident on the hillsides by the dam.

Wallcreeper *Tichodroma muraria* (14/1)
An occasional winter visitor from the high Alborz: one on 7 Dec 72; two on 14 Feb 74, then one on four dates to 15 Mar 74; one on seven dates between 27 Dec 74 and 13 Mar 75; and one on 27 Feb 76.

Rose-coloured Starling *Sturnus roseus* (16/38)
A fairly common passage migrant in spring (25 Apr to 10 Jun), with the main passage in the first three weeks of May, and a maximum of 38 on 16 May 74. The only record in autumn was two juveniles on 5 Aug 73.

Common Starling *Sturnus vulgaris* (110/3000+)
A common breeding summer visitor (early Mar to early Jul), and a very common passage migrant in Nov. Several thousand birds were observed moving down the valley in large flocks on 29 Nov 73. An occasional visitor at other times of the year, recorded in every month except Jan.

Ring Ouzel *Turdus torquatus* (10/4)
A scarce passage migrant in spring and an occasional winter visitor: one on 8 Mar 73, up to four on six dates from 14 Feb to 15 Mar 74, two on 15 Nov 75, one on 12 Jan 76, and one on 27 Feb 76.

Eurasian (Common) Blackbird *Turdus merula* (23/5)
A regular winter visitor in small numbers (24 Oct to 8 Mar).

Dark-throated Thrush *Turdus ruficollis* (formerly *T.r. atrogularis*) (29/31)
A fairly common winter visitor (23 Oct to 2 Apr) in three years, but none was recorded during the winter of 74/75. Maximum of 31 on 28 Feb 74. All were of the black-throated form *atrogularis*.

Fieldfare *Turdus pilaris* (34/75)
A common winter visitor (20 Nov to 28 Mar), with a maximum of 75 on 1 Jan 75.

Redwing *Turdus iliacus* (26/15)
A fairly common winter visitor (6 Nov to 2 Apr), with some indications of through passage in Mar and Nov. Maximum of 15 on 20 Nov 75.

Song Thrush *Turdus philomelos* (59/25)
A common passage migrant in spring (16 Feb to 20 Apr) and autumn (24 Oct to 29 Nov), with the main passage from early Mar to early Apr, and in Nov. Maximum in spring – 12 on 23 Mar 75 and 28 Mar 75; maximum in autumn – 25 on 21 Nov 74. Two birds were present until at least 2 Jan in the winter of 75/76.

Mistle Thrush *Turdus viscivorus* (4/2)
A scarce visitor in winter and early spring: one on 30 Mar 73, two on 15 Mar 74, one on 12 Jan 75, and one on 13 Feb 76.

European Robin *Erithacus rubecula* (30/3)
A regular winter visitor in small numbers (17 Oct to 23 Mar).

Bluethroat *Luscinia svecica* (34/7)
A fairly common passage migrant in spring (21 Mar to 24 Apr) and autumn (14 Oct to 7 Nov), with a maximum of seven on 24 Oct 74.

Thrush Nightingale *Luscinia luscinia* (15/10)
A fairly common passage migrant in spring (14 Apr to 14 May), with a maximum of 10 on 22 Apr 74, but only two records in autumn: singles on 15 Aug 74 and 28 Aug 75.

Common Nightingale *Luscinia megarhynchos* (61/12)
A common summer visitor (13 Apr to 26 Sep), with several pairs breeding in the area. Some indications of through passage in late Apr and May, with a maximum of 12 on 22 May 75.

Rufous-tailed Scrub-Robin *Cercotrichas galactotes* (1/1)
One on 9 Aug 73. The scarcity of this species at Lashgarak is remarkable, as this is a very common summer visitor throughout much of Iran, including the southeast Caspian region.

Eversmann's Redstart *Phoenicurus erythronotus* (5/2)
Five records in late winter/early spring: two on 28 Feb 74, one on 15 Mar 74, singles on 6 and 13 Feb 76, and two on 27 Feb 76.

Black Redstart *Phoenicurus ochruros* (30/8)
A fairly common passage migrant in spring (22 Feb to 14 Apr) and autumn (14 Sep to 18 Dec),

with a maximum of eight on 1 and 3 Nov 74. One to three on several dates during the winters of 74/75 and 75/76.

Common Redstart *Phoenicurus phoenicurus* (91/30)
A common passage migrant in spring (23 Mar to 16 May), with the main passage in Apr and a maximum of 30 on 14 Apr 74. A fairly common passage migrant in autumn (9 Sep to 10 Nov), with a maximum of nine on 8 Nov 73. Also singles on 8 Aug 74 and 17 Jul 75, and two on 24 Jul 75.

Whinchat *Saxicola rubetra* (18/4)
A fairly common passage migrant in spring (5 Apr to 24 May), with a maximum of four on 26 Apr 73. An uncommon passage migrant in autumn, with one to three recorded on six dates between 30 Aug and 5 Oct.

Eurasian (Common)/Siberian Stonechat *Saxicola torquatus/maurus* (50/12)
A fairly common passage migrant in spring (7 Mar to 24 Apr) and autumn (17 Aug to late Nov), occasionally lingering on into winter (the latest was a single bird on 3 Jan 74). The maximum of 12 was recorded on 20 Mar 75. No attempt was made to identify individuals to subspecies, but presumably most, if not all, were of one of the forms now assigned to Siberian Stonechat *S. maurus* (*variegatus, armenicus* and/or *maurus*).

Red-tailed Wheatear *Oenanthe chrysopygia* (treated by some as *O. xanthoprymna chrysopygia*) (12/3)
An uncommon passage migrant in spring (30 Mar to 24 Apr); only one record in autumn: a single on 17 Oct 74.

Isabelline Wheatear *Oenanthe isabellina* (45/12)
A scarce passage migrant in spring: three on 8 Mar and 15 Mar 74, one on 12 Apr 74, one on 22 May 75, and one on 27 Feb 76. Fairly common in late summer and autumn (23 Jul to 3 Nov), with the main passage from mid-Aug to the end of Sep. Maximum of 12 on 14 Aug 75.

Northern Wheatear *Oenanthe oenanthe* (56/20)
A common passage migrant in spring (7 Mar to 1 May) and autumn (11 Sep to 20 Nov), with the main passage in late Mar and the first two weeks of Apr, and from late Sep to the end of Oct. Maximum in spring – 20 on 2 Apr 73; maximum in autumn – 10 on 25 Oct 73 and 17-18 Oct 74. Also singles on 14 May, 16 May, 18 Jul and 22 Aug 74.

Pied Wheatear *Oenanthe pleschanka* (13/5)
A fairly common passage migrant in spring (3 Apr to 20 Apr), with a maximum of five on 10 Apr 75. Singles on 4 Oct 73, 20 Jun 74 and 6 Nov 75, but doubtless overlooked in late summer and autumn, when very similar to the much commoner Black-eared Wheatear *O. hispanica*. The situation is further confused by the extensive hybridization between these two species over a wide range in the Alborz mountains, with hybrid individuals making up the bulk of the population in the foothills northeast of Tehran (Haffer 1977).

Black-eared Wheatear *Oenanthe hispanica* (69/16)
A common passage migrant in spring and autumn, and an occasional visitor in summer (28 Mar to 1 Nov). The main passage is in the first three weeks of Apr, and from mid-Aug to mid-Oct. Maximum in spring – 16 on 11 Apr 74; maximum in autumn – 11 on 20 Sep 73 and 14 Oct 74.

Desert Wheatear *Oenanthe deserti* (2/1)
Singles on 15 Mar 74 and 17 Oct 74.

Finsch's Wheatear *Oenanthe finschii* (4/2)
A scarce passage migrant in early spring: one on 19 Apr 73, two on 15 Mar 74, one on 27 Feb 75, and one on 3 Apr 74.

Rufous-tailed Rock Thrush *Monticola saxatilis* (4/1)
Singles on 20 Apr 73, 12 Oct 73, and 12 and 18 Apr 74.

Blue Rock Thrush *Monticola solitarius* (3/5)
Three spring records: three on 30 Mar 73, five on 2 Apr 73, and one on 5 Apr 74.

Spotted Flycatcher *Muscicapa striata* (82/50)
A common passage migrant in spring and autumn, and an occasional visitor in summer (4 Apr to 25 Oct). Main passage in the first three weeks of May, and from mid-Aug to early Oct. Maximum in spring – 50 on 3 May 73; maximum in autumn – 20 on 26 Sep 74.

Eurasian Pied Flycatcher *Ficedula hypoleuca* (9/7)
An uncommon passage migrant in spring (26 Mar to 21 Apr), with a maximum of seven on 4 Apr 74. However, only males in breeding plumage were identified with certainty, and no attempt was made to separate this species for the very similar Semi-collared Flycatcher in non-breeding plumage in autumn. Thus it is possible that the European Pied Flycatcher also occurs on passage in autumn, and is commoner in spring than the records suggest.

Semi-collared Flycatcher *Ficedula semitorqu*ata (52/20)
A fairly common passage migrant in spring (29 Mar to 26 Apr), with a maximum of 20 on 14 Apr 74. Probably breeding locally, as some birds reappeared in early Jun (earliest 29 May) and undertook their moult in the area. Pronounced passage of this species, possibly with some *F. hypoleuca*, in late Jul and Aug, with a maximum of 20 on 30 Jul 73, but the only later records were two on 1 Sep and singles on 3 and 9 Sep 74. In the 70s, the Semi-collared Flycatcher was generally considered to be a subspecies of the Collared Flycatcher *F. albicollis*.

Red-breasted Flycatcher *Ficedula parva* (25/46)
Only two spring records: singles on 21 Apr 73 and 2 May 74. Common in autumn (8 Aug to 28 Oct), with the main passage from the end of Sep to late Oct, and a maximum of 46 on 17 Oct 74.

White-throated Dipper *Cinclus cinclus* (18/6)
A regular winter visitor in small numbers (13 Nov to 22 Mar), presumably from breeding areas higher up the valley. The highest count of six was recorded on 18 Dec 72. A single juvenile was present on 1 Aug 74.

House Sparrow *Passer domesticus* (almost daily/100s)
A very common resident, absent only during periods of heavy snowfall in Jan and Feb.

Spanish Sparrow *Passer hispaniolensis* (3/2)
Two on 8 Nov 73, one on 7 Mar 75, and two on 6 Nov 75.

Eurasian Tree Sparrow *Passer montanus* (almost daily/150)

A common resident, absent only during periods of heavy snowfall in Jan and Feb. The maximum of 150 was recorded on 3 Nov 73.

Pale Rockfinch *Carpospiza brachydactyla* (1/1)
One on 29 May 75.

Rock Sparrow *Petronia petronia* (25/100)
An occasional visitor in small flocks during the winter months (14 Oct to 9 Apr), with maximum counts of 100 on 14 Feb 74 and 30 on 28 Feb 74. Also up to 40 on four dates between 23 Aug and 9 Sep 73.

White-winged Snowfinch *Montifringilla nivalis* (2/15)
One on 14 Feb 74 and 15 on 6 Feb 76, during periods of heavy snowfall in the high Alborz.

Red Avadavat *Amandava amandava* (2/1)
One, presumably an escaped cage-bird, on 14 Oct and 3 Nov 74.

Alpine Accentor *Prunella collaris* (4/9)
An occasional winter visitor from the high Alborz during periods of heavy snowfall: a party of nine on 24 Dec 74; one on 27 Dec 74; two on 2 Jan 76; and nine on 6 Feb 76.

Radde's Accentor *Prunella ocularis* (2/4)
Only two records: one on 8 Mar 74 and four on 13 Nov 75. The scarcity of this species is remarkable, as it is a common summer visitor to the nearby high Alborz, and winters around springs in the desert southeast of Tehran (pers obs).

Dunnock *Prunella modularis* (16/6)
A regular winter visitor in very small numbers (28 Oct to 28 Feb). Maximum of six on 13 Nov 75.

Western Yellow Wagtail *Motacilla flava* (65/60)
A common passage migrant in spring (22 Mar to 12 May), and a very common passage migrant in autumn (19 Jul to 23 Oct). Main passage in first three weeks of Apr and from mid-Aug to late Sep. Maximum in spring – 27 on 21 Apr 73; maximum in autumn – 60 on 19 Sep 74. Seldom identifiable to subspecies in autumn, but in spring, males of the following subspecies were identified: Black-headed Wagtail *M. f. feldegg*, up to nine on 20 dates; Sykes's Wagtail *M. f. beema*, up to 10 on 11 dates; Yellow-headed Wagtail *M. f. lutea*, up to 10 on 10 dates; and Grey-headed Wagtail *M. f. thunbergi*, three on 11 Apr 74.

Citrine Wagtail *Motacilla citreola* (30/9)
A fairly common passage migrant in spring (22 Mar to 4 May), and a regular passage migrant in small numbers in autumn (19 Aug to 14 Oct). Maximum of nine on 13 Apr 75.

Grey Wagtail *Motacilla cinerea* (66/5)
A regular winter visitor in small numbers (15 Aug to 21 Apr). One on 24 Jul 75 was unusual.

White Wagtail *Motacilla alba* (daily/100)
A very common passage migrant in spring and autumn, a common winter visitor, and a resident breeding in small numbers. Main passage in Mar and from late Jul to late Oct. Maximum of 100 on 30 Jul 73. Resident birds belong to the dark-backed race *persica*, while many of the spring and autumn migrants belong to the light-backed race *dukhunensis* from the Caspian region.

Tawny Pipit *Anthus campestris* (9/5)
An uncommon passage migrant in spring (4 Apr to 22 May), with a maximum of five on 8 Apr 74.

Meadow Pipit *Anthus pratensis* (63/30)
A common passage migrant in spring and autumn, and a fairly common winter visitor (12 Oct to 21 Apr). Main passage in first half of Apr and from late Oct to mid-Nov. Maximum in spring – 23 on 12 Apr 74; maximum in autumn – 30 on 25 Oct and 8 Nov 73.

Tree Pipit *Anthus trivialis* (40/37)
A common passage migrant in spring (22 Mar to 2 May), and a fairly common passage migrant in autumn (28 Aug to 15 Nov). Main passage in first half of Apr and Sep. Maximum in spring – 37 on 5 Apr 74; maximum in autumn – six on 9 Sep 74.

Red-throated Pipit *Anthus cervinus* (19/6)
A fairly common passage migrant in spring (5 Apr to 4 May), and an uncommon passage migrant in autumn (17 Aug to 20 Nov). Maximum of six on 18 Apr 74.

Water Pipit *Anthus spinoletta* (81/50)
A very common passage migrant in spring and autumn, and a common winter visitor (18 Oct to 24 Apr). Main passage from mid-Mar to mid-Apr, and in Nov. Maximum of 50 on 22 Mar 73. Up to 25 birds present throughout the winter.

Common Chaffinch *Fringilla coelebs* (63/120)
A common winter visitor (5 Oct to 5 Apr), with a maximum of 120 on 13 Nov 75, and a late individual on 12 Apr 74.

Brambling *Fringilla montifringilla* (41/200)
A common winter visitor (1 Nov to 28 Mar), with numbers fluctuating greatly from year to year. Common during the winters on 72/73 (when a maximum of 200 was recorded on 23 Feb) and 75/76; fairly common during the winter of 74/75, and uncommon during the winter of 73/74.

Red-fronted Serin *Serinus pusillus* (5/10)
An occasional visitor in late winter and early spring: ten on 16 Feb 73, two on 15 Mar 74, three on 12 Jan 76, five on 13 Feb 76, and six on 27 Feb 76.

European Greenfinch *Carduelis chloris* (39/80)
A fairly common winter visitor (28 Oct to 15 Mar), with a maximum of 80 on 23 Nov 73.

Eurasian Siskin *Carduelis spinus* (18/100)
An irregular winter visitors, sometimes in large numbers: parties of three on 23 Feb 73 and 30 Mar 73; none during the winter of 73/74; fairly common during the winters of 74/75 and 75/76 (24 Oct to 22 Mar), with peak numbers in the second half of Nov (maximum of 100 on 21 Nov 74).

European Goldfinch *Carduelis carduelis* (123/250)
A common winter visitor (Nov to Mar), and a regular visitor in small numbers throughout the summer, presumably breeding nearby. Maximum of 250 on 27 Feb 75. The breeding birds and great majority of wintering birds belonged to the black-headed form *loudoni* (*carduelis* group), but small numbers of the grey-headed form *paropanisi* (*caniceps* group) were observed in winter.

Twite *Carduelis flavirostris* (8/250)
An occasional winter visitor during periods of hard weather: two on 14 Feb, 100 on 22 Feb, 30 on 28 Feb, five on 8 Mar and two on 15 Mar 74; 25 on 27 Feb 75; 39 on 13 Feb and 250 on 27 Feb 76.

Common Linnet *Carduelis cannabina* (81/100)
A common winter visitor (24 Oct to 29 May), with

most birds departing by the end of Apr, but several pairs, presumably local breeders, lingering on until the end of May. Maximum of 100 on 22 Feb 74.

Crimson-winged Finch *Rhodopechys sanguineus* (16/100)
A regular visitor in small flocks in late spring (17 Apr to 6 Jun), with a maximum of 100 on 23 May 74. Also two on 14 Feb 74, two on 2 Apr 74, and nine on 15 Nov 75.

Common Rosefinch *Carpodacus erythrinus* (40/46)
A common passage migrant in spring (20 Apr to 27 May), and a fairly common passage migrant in autumn (15 Aug to 25 Oct). Maximum in spring – 46 on 9 May 74; maximum in autumn – 15 on 12 Sep 74.

Hawfinch *Coccothraustes coccothraustes* (10/7)
A scarce passage migrant in spring: one to three from 30 Mar to 6 Apr 73, and up to seven from 22 Feb to 21 Mar 74.

Corn Bunting *Emberiza calandra* (formerly *Miliaria calandra*) (68/200)
A common visitor outside the breeding season (23 Jul to 18 Apr), commonest between the end of Aug and the end of Mar, with the maximum of 200 recorded on 18 Dec 72. Two on 14 May 73 and two on 29 May 75 were the only records in late spring/early summer, but the species was thought to be breeding further down the valley.

Yellowhammer *Emberiza citrinella* (48/100)
A very common winter visitor (24 Oct to 28 Mar), with counts of 100 on 16 Feb 73, 21 Nov 74 and 26 Nov 74.

Pine Bunting *Emberiza leucocephalos* (38/30)
A common winter visitor (28 Oct to 30 Mar), with a maximum of 30 on 8 Mar 73 and 21 Nov 74. A small number of individuals showed some characteristics of Yellowhammer, and were presumably hybrids originating from the contact zone between these two closely related species.

Rock Bunting *Emberiza cia* (20/20)
A fairly common winter visitor (14 Oct to 23 Mar), particularly during periods of hard weather. Maximum of 20 on 23 Feb 73.

Grey-necked Bunting *Emberiza buchanani* (2/14)
A party of 14 on 5 Sep 74, and four on 12 Sep 74.

Ortolan Bunting *Emberiza hortulana* (8/5)
A scarce passage migrant in spring and autumn: up to five on four dates between 18 Apr and 26 Apr 74, and one to three on four dates between 27 Aug and 19 Sep 74.

Rustic Bunting *Emberiza rustica* (1/1)
A male on 13 Mar 75. This is a very scarce passage migrant in Iran; there were only three other records in the 70s, all of single birds in eastern Khorasan Province in late Oct 75 (pers obs).

Black-headed Bunting *Emberiza melanocephala* (43/46)
A common passage migrant in spring (maximum 46 on 9 May 74), and a fairly common passage migrant in autumn (maximum 15 on 5 Aug 73 and 23 Aug 73); also an occasional visitor during the summer months. Extreme dates were 21 Apr and 14 Sep, with the main passage in May and Aug.

Common Reed Bunting *Emberiza schoeniclus* (36/40)
A common passage migrant in spring and autumn, and a winter visitor in small numbers (28 Oct to 3 Apr). Main passage in Mar and Nov. Maximum in spring – 15 on 8 Mar 74 and 15 Mar 74; maximum in autumn – 40 on 13 Nov 75.

DISCUSSION

One of the great advantages of studying bird migration in the Latian Dam and Lashgarak area was the relatively small number of resident species and breeding summer visitors that occurred in and around the area. Consequently, for only a small number of species did the presence of local birds mask the arrival and departure of passage migrants. Of the 266 species recorded area between June 1972 and February 1976, only 22 were believed to breed within the limits of the study area. All except Little Ringed Plover were characteristic birds of the semi-arid steppe, irrigated cultivation and rocky hillsides of the Alborz foothills, and included Common Kestrel, Rock Dove, Eurasian Scops Owl, Little Owl, European Bee-eater, European Roller, Eurasian Hoopoe, Syrian Woodpecker, Eurasian Golden Oriole, Eurasian Magpie, Hooded Crow, Great Tit, Crested Lark, Cetti's Warbler, Eastern Olivaceous Warbler, Eastern Rock Nuthatch, Common Starling, Common Nightingale, House Sparrow, Eurasian Tree Sparrow and White Wagtail. A further 18 species bred in the vicinity of the site and were occasional visitors to the study area, *eg* Chukar Partridge, Long-legged Buzzard, Common Woodpigeon, Common Swift, Eurasian Jackdaw, Rook, Black-eared Wheatear, European Goldfinch and Common Linnet, while another seven species were occasional visitors from the high Alborz, *eg* Eurasian Griffon Vulture, Golden Eagle, Alpine Swift, Red-billed Chough and Northern Raven.

Although snow cover was not unusual in winter, heavy snowfalls were rare and the river and reservoir never froze over, allowing small numbers of wetland and riverine species such as Grey Heron, Great Egret, Mallard, Water Rail, Common Snipe, Common Greenshank, Green Sandpiper, White-throated Dipper, Grey Wagtail, Meadow Pipit and Water Pipit to overwinter. The gardens and orchards supported good numbers of wintering passerines including Winter Wren, Eurasian Blackbird, Dark-throated Thrush, Fieldfare, Redwing, European Robin, Dunnock, Common Chaffinch, Brambling, European Greenfinch, Eurasian Siskin, European Goldfinch, Common Linnet, Corn Bunting, Yellowhammer, Pine Bunting, Rock Bunting and Common Reed Bunting. Many of these regular wintering species also occurred on passage in spring and autumn, and reached their highest numbers in these seasons. A further eight species were recorded only during periods of exceptionally severe weather and were presumably birds that had been pushed down from their normal wintering areas higher up in the mountains. These included Alpine Chough, Horned Lark, Wallcreeper, Rock Sparrow, White-winged Snowfinch, Alpine Accentor and Twite.

Approximately 170 species occurred almost exclusively as passage migrants, some only in spring or autumn but over 50 were recorded on 25 or more occasions, some of these occurring in substantial numbers, *eg* Purple Heron (max 28), Squacco Heron (30), Garganey (51), Common Sandpiper (90), Caspian Gull (165), Common Black-headed Gull (240), Red-backed Shrike (28), Sand Martin (100), Common Chiffchaff (60), Blackcap (100), Common Redstart (30), Spotted Flycatcher (50), Red-breasted Flycatcher (46), Western Yellow Wagtail (60), Tree Pipit (37) and Common Rosefinch (46). However, 53 species were recorded on fewer than five occasions. These included several species that were rare throughout Iran, notably Red-footed Falcon, Yellow-browed Warbler, Greenish Warbler and Rustic Bunting, but it was a little disappointing that not a single new species for Iran was recorded during the study period. This is perhaps not surprising, given the location of the site only a short distance from Tehran and thus in a region that had already been well worked by ornithologists, *eg* Heinrich (1928), Stresemann (1928), Meiklejohn (1948), Norton (1958), Passburg (1959) and Érard & Etchecopar (1970).

Most of the regular passage migrants were commoner in spring than in autumn. This was to be expected if the frequent periods of bad weather over the high Alborz in spring pose a barrier to birds migrating north, while the almost invariably fine weather over the central plateau in autumn present no obstacle to birds migrating south. The 50 or so species that were much commoner in spring than in autumn included many waterbirds, notably Great Cormorant, most herons and egrets, six species of ducks, several waders, and most gulls and terns, as well as a wide diversity of passerines including seven species of warblers, Rose-coloured Starling, Common Redstart, Whinchat, Citrine Wagtail, Tawny Pipit, Tree Pipit, Red-throated Pipit, Common Rosefinch and Black-headed Bunting. Only about 15 species were commoner in autumn than in spring, and about half of these were waders such as Green Sandpiper, Common Sandpiper, Little Stint, Temminck's Stint and Curlew Sandpiper which found suitable feeding habitat on the mudflats around the dam as the water level receded in late summer. However, why Isabelline Shrike, Woodchat Shrike, Green Warbler, Isabelline Wheatear, Red-breasted Flycatcher and Western Yellow Wagtail were much commoner in autumn than in spring was not clear.

Another interesting feature of bird migration through the Lashgarak area was the surprising scarcity of several common summer visitors to middle and higher elevations of the Alborz Mountains. There were fewer than five records of Eastern Orphean Warbler, Rufous-tailed Rock Thrush, Blue Rock Thrush, Radde's Accentor and Grey-necked Bunting, and no records of Plain Leaf Warbler *Phylloscopus neglectus* and White-throated Robin *Irania gutturalis* – all species that breed commonly in the Alborz to the north and east of Tehran. It would appear that on arrival at the Alborz in spring, these species can proceed directly to their breeding habitats in the mountains, irrespective of the weather, and do not need to linger in the foothills until conditions improve.

Although 28 species of raptor (Falconidae, Pandionidae and Accipitridae) were recorded at Lashgarak, only eight species were at all regular (>10 records). Five of these were widespread breeding birds in the Alborz mountains and foothills (Common Kestrel, Eurasian Hobby, Black Kite, Long-legged Buzzard and Golden Eagle); two were regular winter visitors to the Alborz (Eurasian Sparrowhawk and Northern Goshawk); and one (Osprey) was an occasional visitor to the dam in spring and autumn. There were no signs of any regular migration of raptors through the Jajerud Valley, but this was not surprising, as this valley descends in a southeasterly direction towards the central plateau. The main migration route of large raptors through north-central Iran is along the southern edge of the Alborz foothills and occurs in a northeasterly direction in spring, and southwesterly direction in autumn (pers obs). Over 80 species of waterbirds were recorded at Latian Dam and Lashgarak, but the numbers of most species were unremarkable in a regional or flyway context, and no species was recorded in internationally significant numbers (*ie* exceeding 1% of their flyway population). However, the records of small flocks of Smew and Goosander in winter were interesting, as there are few records of these species in Iran south of the Alborz, and the numbers of Little Ringed Plover (max 50), Green Sandpiper (max 90) and Common Sandpiper (max 90) were impressive for species that are seldom found in large concentrations. Five globally threatened species were recorded during the study, Marbled Duck, Lesser Kestrel, Greater Spotted Eagle, Eastern Imperial Eagle and Corncrake, all assigned to the category 'vulnerable' by Stattersfield & Capper (2000). Marbled Duck, Greater Spotted Eagle and Eastern Imperial Eagle were recorded on only one to three occasions, and the Lesser Kestrel was surprisingly scarce considering that there was a breeding colony of 10-15 pairs by the Tehran to Lashgarak road only a few kilometres away (pers obs). The Corncrake was a regular passage migrant through the area, chiefly in spring, but no more than one bird was seen in a day. Thus the site had little value for globally threatened species. However, the site was found to be of considerable importance for a 'near threatened' species, the Great Snipe.

The pronounced spring and autumn passage of Great Snipe through the Lashgarak area was one of the most interesting discoveries of this study. The species was recorded on a total of 40 occasions in spring (with a maximum of 10 individuals in a day) and 14 occasions in autumn (with a maximum of seven), suggesting that the species was a fairly common passage migrant through northern Iran. However, the author and colleagues at the Department of Environment recorded Great Snipe on only six occasions elsewhere in Iran between 1970 and 1976: in the southwest Caspian region (1 record), Alborz Mountains (2 records) and central Fars Province (3 records), suggesting that this secretive species was being widely overlooked. The Great Snipe was just one of several secretive species regularly recorded on passage at Lashgarak but seldom encountered elsewhere in Iran during the 1970s. Others

included Spotted Crake (56 records at Lashgarak but only 33 records elsewhere in Iran), Corncrake (16 at Lashgarak, 11 elsewhere), Jack Snipe (48 at Lashgarak, 47 elsewhere), Savi's Warbler (15 at Lashgarak, 12 elsewhere) and Grasshopper Warbler (12 at Lashgarak, nine elsewhere). It seems likely that all these species were regular passage migrants throughout much of Iran and were simply being overlooked during the general avifaunal surveys of the Department of Environment elsewhere in the country. The relatively high frequency of observations of these secretive species at Latian Dam and Lashgarak was at least partly attributable to the limited extent of the suitable habitat, all of which could be covered by a single observer in the space of a few hours, and clearly demonstrated the value of working a small, isolated patch very thoroughly.

It is regrettable that no action was taken to protect the Latian Dam and Lashgarak area in the 1970s, as this was an excellent site for the study of bird migration in close proximity to Tehran. However, the degradation of habitat at Lashgarak in the mid-70s is unlikely to have had any significant impact on the populations of birds passing through the region, as there were many comparable areas in the southern foothills of the Alborz, and more were being created as new dams were constructed and the area of irrigated cultivation and orchards was increased. These developments have continued, and now, thirty years on, there is probably a much greater extent of irrigated cultivation, gardens, orchards and poplar groves suitable as resting and refuelling areas for passage migrants than ever before.

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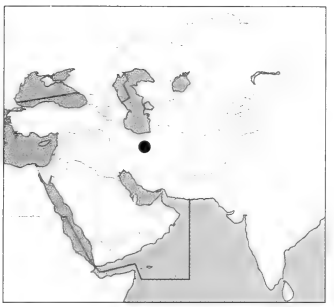
Avifaunal surveys of the Latian Dam and Lashgarak Area, an important IBA for migrants in Iran

ABOLGHASEM KHALEGHIZADEH[1] AND MOHAMMAD E SEHHATISABET



Over a 14-month period (August 2004 – September 2005), a monthly avifaunal survey was conducted of the Latian dam and the adjacent Lashgarak area, the survey area being divided into five sections. This research project was funded by OSME. During the study, 115 bird species were recorded. The highest monthly species total was 42, in May and August 2005. The highest total of species in any section was 47 (sections 2 and 4). Twenty-two species were observed only once. 64% of the total species were on passage or vagrants. Eight species were recorded for the first time at Lashgarak, bringing the total number of species recorded at this site to 274. It has been proposed that a small bird sanctuary be created. We have suggested that it should be larger than the previous 110ha proposed, covering an area of about 1000 ha.

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INTRODUCTION

The Lashgarak and Latian Dam area (*c*110 ha) has been identified as an Important Bird Area (IBA) in Tehran Province, Iran, as it meets three of the criteria (1, 3 & 6) for IBA designation. The well-watered valleys in the southern foothills of the Alborz Mountains, with their numerous small fields, gardens, orchards and poplar groves, constitute an important resting and feeding area for migrant birds in spring and autumn. These areas are particularly important during the spring migration, when periods of bad weather in the high Alborz may halt migration. The Lashgarak area, in the valley of the Jajerud, is a good example of such a site, with the added attraction of a small reservoir and some wetland habitat (Evans 1994).

Many ornithologists and amateur birdwatchers have commented on the abundance of grounded migrants in gardens in Tehran in spring and autumn (see Scott 2007 this issue), resulting in recommendations to the Department of Environment (DOE) for the creation of a small bird sanctuary at Lashgarak (Scott 1973, 2007 this issue). DA Scott, NP Paul and several other bird-watchers visited the area on many occasions between June 1972 and February 1976, confirming the great importance of this area for migrant birds (Scott 1976, 2007 this issue). The area was also visited by K Sariri, FA Harrington, GVT Matthews, J Wiles, B Nehring, A Eftekhar, Dr and Mrs R Valdez, and by other personnel of the Department of Environment. All have agreed that the area has great potential as a Nature Sanctuary. In terms of the variety of species to be encountered, there can be no doubt that this area is the best bird-watching locality within 100km of Tehran (Scott 1973). The area was also a regular bird-ringing site of the Department of Environment's Ornithology Unit in the 1970s (Evans 1994, Scott 1976, 2007, this issue). A total of 455 birds of 63 species was ringed at the site between 1968 and1978, including Great Snipe *Gallinago media* and Savi's Warbler *Locustella luscinioides*.

The present study, fulfilling in part Evans' (1994) recommendation for further work to monitor and document environmental changes at this (and 33 other) IBAs in Iran, had three objectives. The first was to undertake regular counts of waterbirds and compile a list of landbirds at the site over a period of one year. The second objective was to

pull together all previous unpublished information on the birds of Latian Dam. The third objective was to introduce the site to biologists, researchers, students and conservationists living in the Tehran area and to draw attention to the need to conserve this habitat for the future. Below we discuss changes in the numbers of species, bird numbers and habitats since the 1970s.

STUDY AREA

The study area lies *c*20km north-east of Tehran at *c*1350m asl in a steep-sided valley in the foothills of the Alborz Mountains. The Latian Dam was constructed on the Jajerud in the late 1960s. Four main rivers are linked to the Latian dam, the Jajerud from the northwest, forming mudflats and an estuary, one coming from Lashgarak city, another from east of Naran and one river from east of the dam enclosure. The unique value of the Lashgarak and Latian Dam area lies in the diversity of habitats existing in close proximity to one another, namely the dam's open waters, mudflats, shingle banks, freshwater marsh, rough meadows, irrigated fields, low scrub, orchards, poplar groves, rocky hillsides and crags. However, much of the marshland that existed in the 1970s has now disappeared (Derek A Scott pers comm). Outside the Latian Dam enclosure, some of the orchard areas of the 1970s are still tended, although their extent differs greatly. The river bed here is relatively sterile, with extensive bare shingle banks and little vegetation. The cities of Lashgarak (or Lavasan) and Sabou-Bozorg and several other villages lie to the north of the dam. The area is within a one-hour drive of Tehran. The area under consideration as a reserve is shown at **Fig 1** and **Plates 1-6**; this covers a much greater area than the 110ha proposed for sanctuary status by Scott (1973, 2007 this issue, see map) and identified as an IBA (IR 031) by Evans (1994).

The vegetation on the slopes to the east and south of the dam is dominated by Graminae. In the west, there is a small forest of tamarisk (*Tamarix* sp) shrubs. Two forest parks, namely Latian and Tello, have been established to the north and south of the dam, respectively (**Fig 1**). Land to the north of the reservoir has been planted with cypress spp, including *Cupressus arizonica* and with Acacia *Acacia* sp shrubs and pine *Pinus* sp trees. Other trees, shrubs and bushes occurring naturally or planted around the dam include poplar spp such as black *Populus nigra* and Caspian *Po. caspica*, 'tree-of-Heaven' *Ailanthus* sp, redbud *Cercis* sp, mulberry *Morus* sp, eastern plane, *Platanus orientalis*, white willow *Salix alba*, hackberry *Celtis* sp, hawthorn *Crataegus* spp, Spanish dogwood *Cornus iberica*, ash *Fraxinus* sp, briar *Rosa* sp, bramble *Rubus* spp. Like other lakes in the Alborz Mountains, the Latian Dam is oligotrophic, and the only submerged plant that has been identified is curled pondweed *Potamogeton crispus* in the western part. Fish species are reported to include carp *Cyprinus* sp and trout *Salmo* sp. The Shilot Organization has recently released fingerlings in the dam. Golden jackal *Canis aureus* is the study area's principal carnivore. Small mammals include Persian jird *Meriones persicus*, house mouse *Mus musculus*, mouse-like hamster *Calomyscus* sp, shrew *Crocidura* sp, field mouse *Apodemus* sp. (M Javidkar pers comm)

METHODS

All counts and observations were usually carried out on mid-month Fridays from 09:00 to 18:00, during the study period (**Table 1**). The observers used binoculars and walked around the reservoir mostly within 500m of the Latian Dam shore, dividing the area into five sections (**Fig 1**). We derived a broad comparison between our results and those of Scott from the 1970s. Waterbird numbers have been extracted from the results of the Mid-winter Waterbird Censuses from the DOE.

Table 1. Lashgarak and Latian Dam observation dates, disturbance factors and scale of disturbance to birds in 2004-2005.

Month	Date	Observers	Viewing conditions	People	Human and natural disturbance
Aug 04	13	AK*	Sunny	-	None
Sep	13,16	AK	Sunny	300	Swimming.
Oct	14,15	AK	Cloudy, some rain, sunny	30	None
Nov	11	AK & MS	Sunny	10	Much shooting
Dec	17	AK & MS	Some snow, sunny	10	Much shooting.
Jan 05	21	AK	Sunny, snow-cover 10-20cm – low water level in Dam	8	3 bulldozers and many trucks. Many hunters but no shooting
Feb**	18	AK & MS	Sunny & cloudy, snow-cover 10-20cm – very low water level in Dam	-	Shooting
Mar***	11	AK & MS	Rain all day – very low water level in Dam	-	Shooting
Apr	8	AK & MS	Sunny – very low water level in Dam	250	Shooting (once). c100 cattle. Plants dug up.
May	13	AK & MS	Sunny, cloudy, showers – very low water level in Dam	300	Golden jackal *Canis aureus* den found. 115 cattle
Jun	17	AK	Sunny, hot – very high water level in Dam	300	One grader, shooting (once), fishing, swimming
Jul	14	AK	Sunny, hot – very high water level in Dam	30 on Thursday	Canal-digging machine, c100 cattle, fishing, wall-building
Aug	12	AK & MS	Rainy morning, sunny – very high water level in Dam	500	Fishing, swimming, wall-building
Sep	23	AK & MS	Sunny	300	Fishing, swimming, much shooting

* AK= A. Khaleghizadeh and MS=M.E. Sehhatisabet.
** = From February onwards, Bee-eater *Merops apiaster* nest site in northern part added to study site
*** = From March onwards, public park at western part added to study site

RESULTS AND DISCUSSION

Avifauna

Results of the study are presented in **Tables 1-3**. 114 species were positively identified and three forms were identified to genus level. The highest monthly total of species recorded, 42, was in May and in August. Eight new species have been added to the previous list (266 species in Scott 1976), making a total of 274 species recorded at this site. The eight species are as follow as: Horned (Slavonian) Grebe *Podiceps auritus*, Spotted Redshank *Tringa erythropus*, Little Gull *Larus minutus*, Rose-ringed Parakeet *Psittacula krameri*, Tawny Owl *Strix aluco*, White-eared Bulbul *Pycnonotus leucotis*, Desert Finch *Rhodospiza obsoletus* and Common Myna *Acridotheres tristis*. Although Eurasian Griffon Vulture *Gyps fulvus* was not recorded in the present study, it was recorded on 7 December 2002 very close to this area (A Khaleghizadeh, pers obs), and also by local people in the study area. With the exception of our accidental observation of Tawny Owl, we recorded no other owls, or any nightjars during the study period, which lacked a nocturnal component. However, Eurasian Eagle Owl *Bubo bubo*, Little Owl *Athene noctua* and European Nightjar *Caprimulgus europaeus* were reported by local people. In January 2003, three Woodlarks *Lullula arborea* and 18 Crimson-winged Finches *Rhodopechys sanguineus* were also observed around the area (Sehhati & Vetr 2003).

Overall, a very wide variety of waterbirds has been recorded, mostly in rather small numbers (Evans 1994). However, results from the midwinter waterbird censuses exist only for the periods 1974-77 and 1999-2004, reflecting a total of 23 waterbird species. One globally threatened species, Lesser Kestrel *Falco naumanni*, occurs regularly in the area, 14 being recorded during this study (**Table 2**). A minimum of 15 bred in 1977 and 150 were recorded on passage in 1974 (Evans 1994).

Scott (1973) noted at least one breeding pair of the following species: Little Ringed Plover, *Charadrius dubius*, Common Kestrel *Falco tinnunculus*, Eurasian Scops Owl *Otus scops*, Little Owl, European Roller *Coracias garrulus*, European Bee-eater *Merops apiaster*, Eurasian Hoopoe *Upupa epops*, Syrian Woodpecker *Dendrocopos syriacus*, Rock Dove *Columba livia*, Eurasian Golden Oriole *Oriolus oriolus*, Eurasian Magpie *Pica pica*, Hooded Crow *Corvus cornix*, Crested Lark *Galerida cristata*, White Wagtail *Motacilla alba*, Cetti's Warbler *Cettia cetti*, Eastern Olivaceous Warbler *Iduna pallida*, Common Nightingale *Luscinia megarhynchos*, Great Tit *Parus major*, Eastern Rock Nuthatch *Sitta tephronota*, Common Starling *Sturnus vulgaris*, House Sparrow *Passer domesticus* and Eurasian Tree Sparrow *P. montanus*. Probable breeding species included Mallard *Anas platyrhynchos* and Corn Bunting *Emberiza (Miliaria) calandra* (Scott 1973). We have not made a special study of the breeding birds, but some species such as Lesser Kestrel, European Bee-eater (**Plate 7**), Syrian Woodpecker, Crested Lark, White Wagtail, Common Nightingale (two fledglings were observed in our study in orchards in the western end of the study area in July), Great Tit, Black-headed Bunting *Emberiza melanocephala*, Red-fronted Serin *Serinus pusillus* and Eurasian Golden Oriole and common resident species such as House Sparrow and corvids probably are breeding in this area. A stand of plane trees was a roosting and breeding site for Rook *Corvus frugilegus* (as mentioned by Scott 1976). Common Woodpigeon *Columba palumbus* has also been found breeding (Mr N Jamalian, Natural Resources Keeper, pers comm). Furthermore, two juvenile Golden Eagle *Aquila chrysaetos* observed in January 2005 were recently-fledged (A Khaleghizadeh pers obs).

Habitat suitability for migrant birds

In terms of the total number of bird species recorded, this IBA is one of the top three in Iran, coming after the Miankaleh Peninsula and Gorgan Bay (288 species) and ahead of Dasht-e Arjan and Lake Parishan (263 species) (Evans 1994). Of 115 species observed in

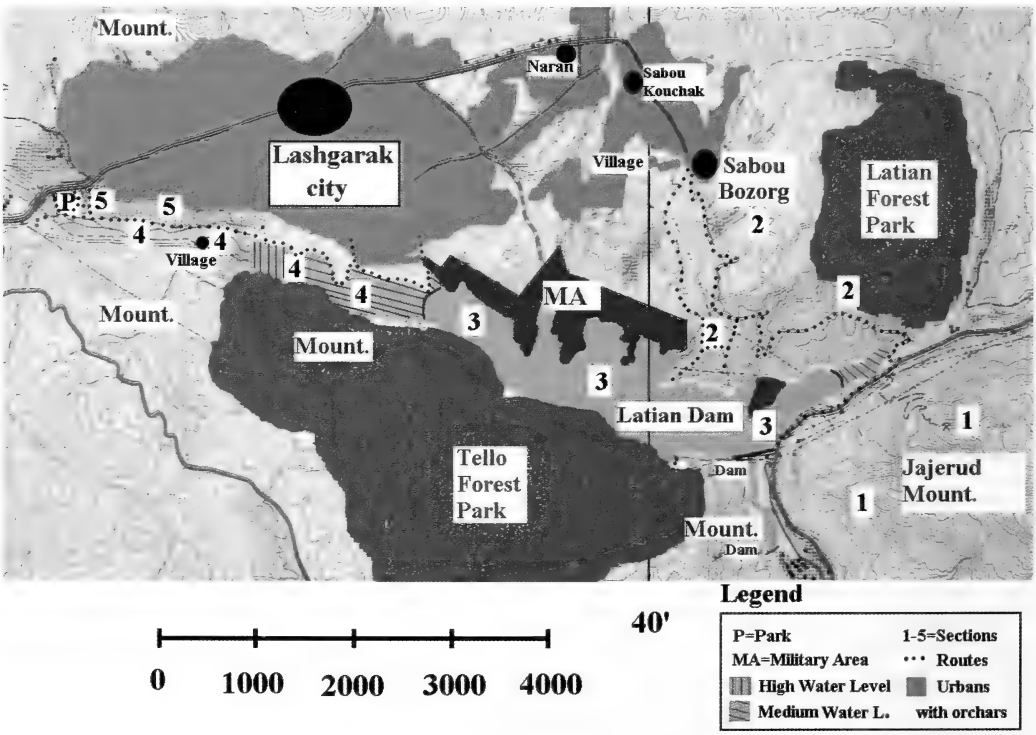

Fig 1. Map showing the Lashgarak and Latian Dam area under consideration as a reserve, its relationship to areas already protected, and the sections of the bird survey area. *© Abolghasem Khaleghizadeh*

Plate 1. View of the eastern corner of the dam on the Jajerud river. © *Abolghasem Khaleghizadeh*

Plate 2. View of afforestation in the eastern corner of the dam. © *Abolghasem Khaleghizadeh*

Plate 3. View of snow cover on the southern slope of the eastern corner of the dam. © *Abolghasem Khaleghizadeh*

Plate 4. View of the northern part of the dam. © *Abolghasem Khaleghizadeh*

Plate 5. View of the western to central parts of the dam, and two peaks in the eastern and southern parts. © *Abolghasem Khaleghizadeh*

Plate 6. Western part of the Latian Dam, and marshes. © *Abolghasem Khaleghizadeh*

Table 2. Bird species and numbers observed at the Latian Dam and Lashgarak area in the present study (14 counts August 2004 – September 2005) and in the 1970s (191 counts Scott 1976). **NB**: August 2004, the preliminary visit to this area, covered only the eastern part of the study site.
Key: W= Winter visitors, S= Summer visitors, P= Passage migrants, V= Occasional visitors, N= new species recorded, Bold numbers = month in which first observed, * = common resident not counted. In the Trend column, bird numbers are compared between the 1970s and this study, the symbol '=' indicates equal numbers, < indicates reduction, the scale being <<, <<< and <<<< representing reductions of more than half (50%), more than 80% and more than 90% in numbers respectively; likewise, '>' indicates an increase, and >>, >>> and >>>> represent scales of increase of 100%, 500% and 1000%.

Species	1970s counts		August 2004 – September 2005															
	Status	Max	A	S	O	N	D	J	F	M	A	M	J	J	A	S	Status	Trend
Chukar Partridge *Alectoris chukar*	R	42	**14+**	*	24+	*	*	*	*		*				*		R	<
Mallard *Anas platyrhynchos*	W/P	680				**43**	63	21	26						35		W/P	<<<<
Northern Pintail *Anas acuta*	P	65		**2**													P	<<<<
Garganey *Anas querquedula*	P	51			**6**										5		P	<<<
Eurasian Teal *Anas crecca*	P	80				**25**	1	1									W	<<
Great Crested Grebe *Podiceps cristatus*	P	8			**2**	5		4	8								W	=
Horned (Slavonian) Grebe *Podiceps auritus*	N	N					**4**										P	N
Black-necked Grebe *Podiceps nigricollis*	P	5					**1**										P	<<<
Little Bittern *Ixobrychus minutus*	P	7										**8**					P	>
Cattle Egret *Bubulcus ibis*	P	5									**1**	1					P	<<<
Grey Heron *Ardea cinerea*	W/P	53		**1**	1	6	73	3	6			1				1	W/P	>
Great Egret *Ardea alba*	W/P	12				**1**	8										P	<
Little Egret *Egretta garzetta*	P	27				**1**											P	<<<<
Great Cormorant *Phalacrocorax carbo*	P	30				**8**	22	5	1								W	<
Lesser Kestrel *Falco naumanni*	V	150									**14**	3	6				P	<<<<
Common Kestrel *Falco tinnunculus*	R	6			**2**	1	1		1			1		3	1		R	<<
Merlin *Falco columbarius*	V	2	**2**	2													V	=
Eurasian Hobby *Falco subbuteo*	P	6			**1**							1	3		2	1	P	<<
Peregrine Falcon *Falco peregrinus*	V	1		**1**								1					V	=
Eurasian Sparrowhawk *Accipiter nisus*	W/P	2			**1**		1	1	1	1						1	W	<<
Common Buzzard *Buteo buteo*	V	1				**1**											V	=
Long-legged Buzzard *Buteo rufinus*	V	3		**1**					2		1		1	1			V	<
Golden Eagle *Aquila chrysaetos*	R	4			**2**	1	1	3									W	<
Eurasian Coot *Fulica atra*	W/P	14					**1**										P	<<<<
Little Ringed Plover *Charadrius dubius*	P/S	50		**4**							3	2					P	<<<<
Charadrius sp	P	-				**10**					1						P	-
Jack Snipe *Lymnocryptes minimus*	W/P	6					**1**										P	<<<
Spotted Redshank *Tringa erythropus*	N	N	**5**														P	N
Common Redshank *Tringa totanus*	P	3					**2**										P	<
Green Sandpiper *Tringa ochropus*	W/P	90		**4**	4	2	5	3		4	1			1	4	1	W/P	<<<<
Common Sandpiper *Actitis hypoleucos*	P	90		**1**								3		3	4	1	P	<<<<
Little Stint *Calidris minuta*	P	60		**10**													P	<<<

Table 2. *continued*

Calidris sp	-				**30**												P	-
Common Gull *Larus canus*	P	2		**5**				17									P	>>>
Caspian Gull *Larus cachinnans*	P	165							**40**								P	<<
Great Black-headed Gull *Larus ichthyaetus*	P	23							**52**								P	>>
Common Black-headed Gull *Larus ridibundus*	P	240				**3**	33										P	<<<
Little Gull *Larus minutus*	N	N								**1**					1		P	N
Rock Dove *Columba livia*	R	80		**6**	*	*		*	5		*	*	*	*	*	15	R	-
Stock Dove *Columba oenas*	V	30		**4**										2			V	<<<
Common Woodpigeon *Columba palumbus*	V	21		**1**								3			1		V	<<<
Laughing Dove *Streptopelia senegalensis*	V	1									**1**	2			4	2	V	>>
Rose-ringed Parakeet *Psittacula krameri*	N	N			**10**	1		1	3		1			1	3	1	R	N
Tawny Owl *Strix aluco*	N	N								**1**							P	N
Alpine Swift *Tachymarptis melba*	P/S	50											**2**				P	<<<<
Common Swift *Apus apus*	P/S	100													**45**		P	<<
European Roller *Coracias garrulus*	P/S	20										**1**	1	1	2		P/S	<<<<
Common Kingfisher *Alcedo atthis*	P	4			**1**	2	2										W/P	<<
European Bee-eater *Merops apiaster*	P/S	200	**10**	17							1	30	14	10	25		P/S	<<<
Eurasian Hoopoe *Upupa epops*	P/S	20									**3**	2			2		P	<<<
Syrian Woodpecker *Dendrocopos syriacus*	R	8	**4**	8	8	5	4	4	4	5	1	2	4	6	5	5	R	=
Red-backed Shrike *Lanius collurio*	P	28	**1**									6				1	P	<<
Eurasian Golden Oriole *Oriolus oriolus*	P/S	10											**1**	1	7		P/S	<
Eurasian Magpie *Pica pica*	R	50	**10**	7	15	23	10	17	12	10	10	8	8	8	8	7	R	<<
Red-billed Chough *Pyrrhocorax pyrrhocorax*	V	125		**4**	2	21	1		2		4	2			1	2	V	<<<
Western Jackdaw *Corvus monedula*	V	10									**5**	4	1				V	<<
Rook *Corvus frugilegus*	R	600		3	40	100	16	7	10	60	20	20	30	70+	20	20	R	<<<
Carrion Crow *Corvus corone*	R	200	**2**	15	20	18	10	12	23	10	10	30	40	40	10	8	R	<<<
Great Tit *Parus major*	R	25			**1**		5	6	14	6	10	4	6	4	6	4	R	<
Sand Martin *Riparia riparia*	P	100		**3**													P	<<<<
Barn Swallow *Hirundo rustica*	P/S	200		**1**						7	12	12	13	12			P/S	<<<<
Eurasian Crag Martin *Ptyonoprogne rupestris*	P/S	3		**1**													P	<<
Common House Martin *Delichon urbicum*	P/S	40												**12**			P	<<
Crested Lark *Galerida cristata*	R	17		**2**	1	3			1		3		1	6	3		R	<<
Eurasian Skylark *Alauda arvensis*	P	39								**2**							P	<<<<
Horned Lark *Eremophila alpestris*	V	100						**8**	9								V	<<<<
White-eared Bulbul *Pycnonotus leucotis*	N	N		**2**				4				1		2	2		R	N
Sedge Warbler *Acrocephalus schoenobaenus*	P	36										**6**					P	<<<
Eastern Olivaceous Warbler *Iduna pallida*	P/S	22										**6**	8	6	3		P/S	<
Willow Warbler *Phylloscopus trochilus*	P	20										**1**					P	<<<<
Common Chiffchaff *Phylloscopus collybita*	P	60			**10**	1				20	10	4				4	P	<<
Blackcap *Sylvia atricapilla*	P	100			**1**						3						P	<<<<
Garden Warbler *Sylvia borin*	P	10													**1**		P	<<<<

Table 2. *continued on p.62*

Plate 7. Nests of European Bee-eater *Merops apiaster* near Sabou-Bozorg area. *© Abolghasem Khaleghizadeh*

Plate 8. View of abandoned fields in the northern part of the dam. *© Abolghasem Khaleghizadeh*

Plate 9. View of house-building on slopes in Lashgarak area at the western corner of the dam. *© Abolghasem Khaleghizadeh*

Plate 10. Garbage left out on the Latian dam edges. *© Abolghasem Khaleghizadeh*

this study (**Table 2**), 74 were passage migrants or vagrants (64%), 13 were resident (11%) and the rest winter or summer visitors (25%) (**Fig 4**), a similar breakdown to that given by Evans (1994). The site clearly is very important for migrant birds. The monthly totals show a smaller-scale increase in outward migrant species in the period August to December 2004 than for the return migration from March to May 2005 (**Table 2**) which period would be best for birdwatching in this area. Nevertheless, the habitat complexes of the Latian Dam and Lashgarak area in the southern foothills of the Alborz still constitute an important resting and feeding area for migrant birds during the spring and autumn migration seasons (Scott 1973).

As regards the numbers of each bird species, 22 (*c*20%) were recorded only once (**Table 2**), whereas Scott (1976) recorded 51 as singletons, 38 where only 2 or 3 were seen, but also 50 species whose numbers exceeded 50. Comparing bird numbers for the 1970s with those recorded in the present study, seven species were noted as unchanged in number and

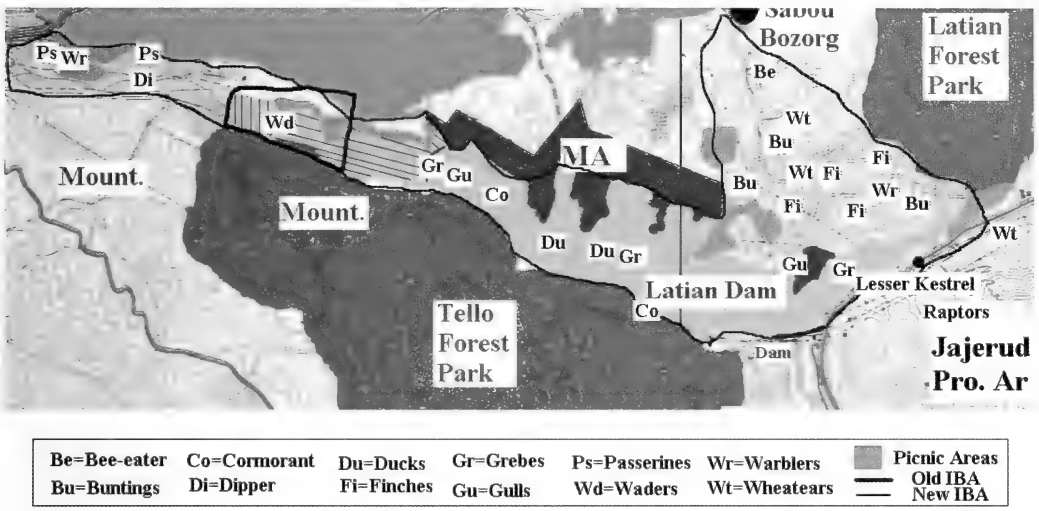

Fig 2. Map showing main areas preferred by bird species groups in the proposed Protected Area. © *Abolghasem Khaleghizadeh*

eight recorded in this study exceeded in number those in Scott (1976). **Table 3** indicates which sections of the area were used by each species (**Fig 5**). Sections 2 and 4 (**Fig 1**) attracted most species in any single month (47 each). Horned Lark *Eremophila alpestris* was seen only when the ground was covered with the snow, *ie* January and February 2005 (**Tables 1 & 2**); Scott (1976) also noted that they usually occurred during periods of hard weather (10 November to 28 February).

Although rather few species breed or winter in the area, by March 1976, no less than 266 species had been recorded at the site, including several scarce passage migrants which had seldom been recorded elsewhere in Iran (Scott 1976). In the 1990s the site was considered especially important for Great Snipe, which occurred regularly in spring (Evans 1994), and in autumn for Green Warbler *Phylloscopus trochiloides nitidus*, a common autumn passage migrant (Evans 1994), but we recorded none of these species. Inside the Latian Dam enclosure, the orchards and cultivated areas have more or less been abandoned (**Plate 8**). Around the area, crop fields once held wheat, barley, and alfalfa, but these fields have now disappeared. However, the orchard area has been increased, the main crops being such as cherry, walnut, apple and pear. The vegetation, having become rank, now presents a rich feeding habitat for insectivorous and seed-eating birds. The marsh vegetation bordering the various small offshoots of the main

Table 2. *continued from page 59*

Lesser Whitethroat *Sylvia curruca*	P	4													**1**		P	<<
Common Whitethroat *Sylvia communis*	P	16										**12**			8		P	<
Winter Wren *Troglodytes troglodytes*	W	10			**2**				1	1							P	<<<
Sitta sp	R	3	**1**				1	1									P	<<
Wallcreeper *Tichodroma muraria*	W	1				**1**											V	=
Common Myna *Acridotheres tristis*	N	N							**2**		1			1	10	1	R	N
Common Starling *Sturnus vulgaris*	R	3000+				**11**					3	13	12	50	20		P/S	<<<<
Eurasian Blackbird *Turdus merula*	W	5			**2**		4		3	2					3		W/P	<
Fieldfare *Turdus pilaris*	W	75							**2**								P	<<<<
Redwing *Turdus iliacus*	W/P	15					**3**	2									W/P	<<<
Song Thrush *Turdus philomelos*	W/P	25					**1**			12	6						W/P	<<
Mistle Thrush *Turdus viscivorus*	W	2							**8**								P	>>
European Robin *Erithacus rubecula*	W	3					**1**		1								P	<<
Common Nightingale *Luscinia megarhynchos*	S	12										**10**	10	4	2		S	<
Western Black Redstart *Phoenicurus ochruros*	P	8									**2**	1					P	<<
Common Redstart *Phoenicurus phoenicurus*	P	30			**1**						3	1					P	<<<<
Isabelline Wheatear *Oenanthe isabellina*	P	12			**1**						1				1		P	<<<<
Black-eared Wheatear *Oenanthe hispanica*	P	16	**1**								4	6		4	2		S	<<
Finsch's Wheatear *Oenanthe finschii*	P	2									**6**	2					P	>>
Spotted Flycatcher *Muscicapa striata*	P/S	50	**2**	4								8			4	5	P/S	<<<
Eurasian Pied Flycatcher *Ficedula hypoleuca*	P	7									**1**						P	<<<
Red-breasted Flycatcher *Ficedula parva*	P	46			**1**												P	<<<<
White-throated Dipper *Cinclus cinclus*	W	6					**3**	2	1								W	<<
House Sparrow *Passer domesticus*	R	100s	**33+**	25+	30+	*	20+	8+	18+	20+	25+	30+	25+	30+	50+	20+	R	-
Dunnock *Prunella modularis*	W	6					**1**			1							P	<<<
Grey Wagtail *Motacilla cinerea*	W	5														**2**	P	<<
White Wagtail *Motacilla alba*	P/R	100		**3**	15	1	8	10	9	10	7	6	4	5	10	8	R	<<<
Water Pipit *Anthus spinoletta*	W/P	50					**1**	3									W/P	<<<<
Common Chaffinch *Fringilla coelebs*	W	120				**52**	20	13	25	4							W	<<
Brambling *Fringilla montifringilla*	W	200					**1**	1	9	35							W	<<<
Red-fronted Serin *Serinus pusillus*	W	10	**4**				1				2	10	10	6	6		P/S	=
Greenfinch *Carduelis chloris*	W	80					**6**										P	<<<<
Eurasian Siskin *Carduelis spinus*	W	100								**1**							P	<<<<
European Goldfinch *Carduelis carduelis*	R	250													**3**		P	<<<<
Twite *Carduelis flavirostris*	W	250		**5**		6	8										P	<<<<
Common Linnet *Carduelis cannabina*	R	100				**3**			8	11	12						P	<<<
Crimson-winged Finch *Rhodopechys sanguineus*	V	100										**2**					V	<<<<
Desert Finch *Rhodospiza obsoletus*	N	N													**4**		V	N
Hawfinch *Coccothraustes coccothraustes*	V	7					**4**	2	4	6							W	<
Yellowhammer *Emberiza citrinella*	W	100							**7**								P	<<<<
Pine Bunting *Emberiza leucocephalos*	W	30				**2**											P	<<<<

Table 2. *continued*

Rock Bunting *Emberiza cia*	W	20				24+	30+			5						W/P	>
Black-headed Bunting *Emberiza melanocephala*	P/S	46	12									8	8	6	2	P/S	<<
Common Reed Bunting *Emberiza schoeniclus*	P	40								2						P	<<<<
Monthly bird species totals	**15**	**29**	**29**	**33**	**40**	**28**	**33**	**25**	**37**	**42**	**23**	**28**	**42**	**21**			
Cumulative number of bird species	**15**	**35**	**51**	**65**	**79**	**80**	**86**	**90**	**98**	**106**	**108**	**109**	**114**	**115**			

NB Quality of Trend Data. The visit schedule during the study, approximately once per month, probably meant that many short-distance migrants were missed, because migration peaks occurred between visits, and often the main migration occurs over a fairly short period. If the weather was unsuitable for migrants during the monthly visits, the observers would not have been able to document the migration as accurately as would have been possible if visits had been more frequent during these periods, or if there had been spells of daily observations. Accordingly, the trends depicted above are subject to modification by future studies that aim to focus on migration and passage.

river is particularly good habitat for waders and marsh-loving species such as Sedge Warbler *Acrocephalus schoenobaenus* and Reed Bunting *Emberiza schoeniclus*. The dam and surrounding mud flats and shingle banks are ideal for wildfowl, waders and gulls, while the surrounding stony hillsides are frequented by the more typical Alborz species (Scott 1973). Habitats preferred by other species include mountain slopes (Chukar Partridge *Alectoris chukar* and Rock Bunting *Emberiza cia*), a bridge near the dam (Lesser Kestrel), the western shores of the dam for waders, and forest plantations for buntings and finches (**Fig 2**).

However, the assessment of habitat suitability for migrant species requires more continuous collection of data than a once-per-month visit schedule can provide. It would have been all too easy to miss the peaks of migration, especially for short-distance migrants in spring. On weekly visits or during counts over continuous periods, species such as Black Kite *Milvus migrans*, Common Snipe *Gallinago gallinago*, tern species, European Turtle Dove *Streptopelia turtur*, Common Cuckoo *Cuculus canorus*, Cetti's Warbler, Green Warbler, Bluethroat *Luscinia svecica*, Whinchat *Saxicola rubetra*, Eurasian Stonechat *S. torquatus*, Semi-collared Flycatcher *Ficedula semitorquata*, Tree Sparrow, Yellow and Citrine Wagtails (*Motacilla flava* and *citreola* respectively), Meadow, Tree and Red-throated Pipits (*Anthus pratensis*, *trivialis* and *cervinus* respectively), Common Rosefinch *Carpodacus erythrinus* and Corn Bunting almost certainly would have been detected, some in considerable numbers. This consideration should shape future studies in the Latian Dam area. Note, however, that a separate one-year survey in the north and south of the study area (Bakhtiari in press) identified 80 species, including See-see Partridge *Ammoperdix griseogularis*, Gadwall *Anas strepera*, Eurasian Wigeon *A. penelope*, Northern Shoveler *A. clypeata*, Little Grebe *Tachybaptus ruficollis*, Eurasian Bittern *Botaurus stellaris*, Black-crowned Night Heron *Nycticorax nycticorax*, Barbary Falcon *Falco pelegrinoides*, Northern Goshawk *Accipiter gentilis*, Water Rail *Rallus aquaticus*, Eurasian Woodcock *Scolopax rusticola*, European Turtle Dove, Eurasian Eagle Owl, Little Owl, Lesser Grey Shrike *Lanius minor*, Great Grey Shrike *L. excubitor*, Northern Raven *Corvus corax*, Blue Tit *Cyanistes caeruleus*, Zitting Cisticola *Cisticola juncidis*, Scrub Warbler *Scotocerca inquieta*, Cetti's Warbler, Eurasian Reed Warbler *Acrocephalus scirpaceus*, Upcher's Warbler *Hippolais languida*, Eastern Orphean Warbler *Sylvia* [*hortensis*] *crassirostris*, Ménétries's Warbler *S. mystacea*, Western Rock Nuthatch *Sitta neumayer*, Eastern Rock Nuthatch *Si. tephronota* and Radde's Accentor *Prunella ocularis*.

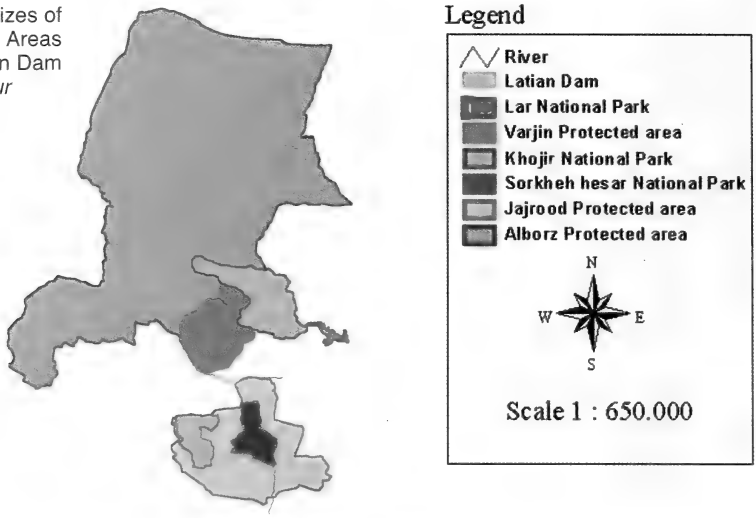

Fig 3. Map of the relative sizes of the neighbouring Protected Areas to the Lashgarak and Latian Dam area. *© Arash Bahman-pour*

Disturbance factors

The entire area is subject to intensive use by the general public at weekends and public holidays. The picnickers concentrate along the shores of the Latian Dam (**Fig 2**), where as many as 200 or 300 people may gather on Fridays, but picnickers on a typical July Thursday comprised small groups (**Table 1**). There is however a great deal of trespassing into the enclosed area. Dozens regularly picnic inside the abandoned orchards, bands of small boys and youths roam about in the marsh or swim in the dam, and fishermen assemble at the edge of the dam (Scott 1973).

As regards exploitation inside the enclosure, a limited amount of grazing, chiefly by cattle (**Table 1**, and A. Khaleghizadeh, pers obs), still persists, while in spring, local people collect herbs for food. The orchards are still tended to a limited extent,

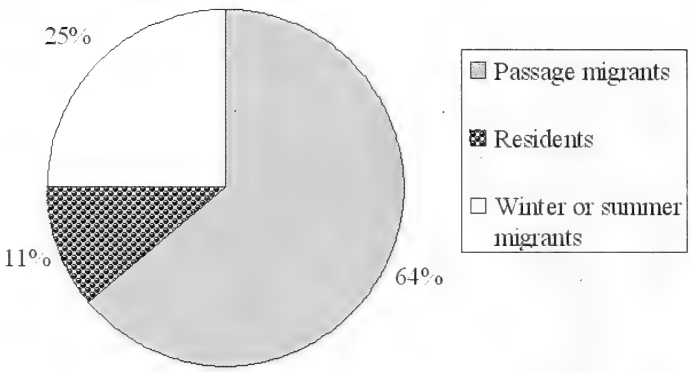

Fig 4. Species status at the Latian Dam and in the Lashgarak area 2004 and 2005.

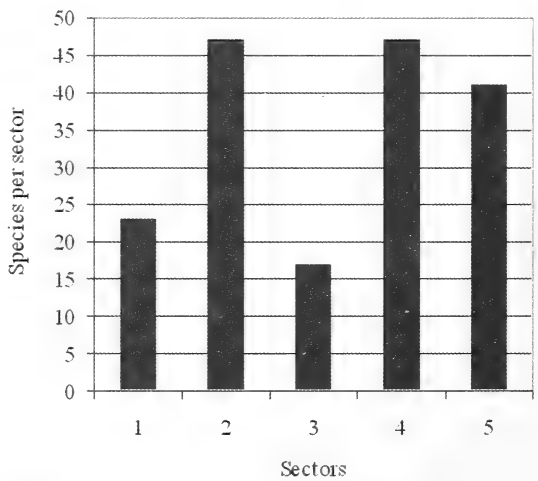

Fig 5. The number of species in each sector around the Latian Dam (see **Fig 1** for key, p.56).

and the bulk of the fruit is removed. The only large scale exploitation, the source of the greatest disturbance, is sand and gravel removal from the western end (Evans 1994). As in the 1970s (Scott 1976), heavy truck traffic causes almost continuous disturbance to the western sections of the area. Bulldozers and trucks are present throughout the year, and remove the gravel from the river bed. They also maintain the gravel banks paralleling the river route, probably to minimise the risk of flooding to the village situated the southern bank inside the western boundary of the enclosure. During summer of 2005, workmen were constructing a long embankment along both sides of the river, and other workers were constructing a new park, just next to the bridge at the western corner. As mentioned by Scott (1973), much of the natural marsh has been destroyed, and it would seem that the whole area may be completely devastated in the near future. Development of house building (**Plate 9**) toward the shore of the reservoir since 1975 (in particular since 1993, according to local people) has seriously reduced the numbers and diversity of birds. There is also some shooting and fishing in the area (**Table 1**). The variety and abundance of bird life inevitably has diminished, and numbers of the larger and warier species, *eg* herons, egrets, ducks and waders, had already dropped off markedly in 1975 (Scott 1976). The level of present-day disturbance is probably a major factor of the paucity of ducks, herons and waders during all our counts in this study. The same is probably true of the paucity or absence of warblers, especially *Locustella* and *Phylloscopus* species. In early spring 2006, there was a significant landslip of over a hectare near the wall of the Latian Dam.

Conservation

Scott (1973) recommended to the Department of Environment that a Bird Sanctuary be established inside the Latian Dam enclosure. If the gravel removal could have been terminated and a sanctuary established at that time, it would have been relatively easy to restore the site to its former lushness. All that would have been necessary would have been a general tidying-up operation, the creation of a few shallow impoundments, and perhaps some re-seeding of natural marsh vegetation (Scott 1976), but as far as is known, no special measures have, as yet, been taken to protect the area. Recommendations concerning the establishment of a general recreation area should be provided for the DOE's Habitats Office in the near future. It is recommended that a small Bird Sanctuary be established in the Lashgarak and Latian Dam area (**Fig 2**) – there is still time to create such a reserve.

The present picnicking localities are shown in **Fig 2**. Sometimes there are picnickers along the Jajerud bank, in fields below dam (A Khaleghizadeh pers obs). That this area is also a very attractive and popular picnic area should not be overlooked (Scott 1973), but in addition it offers the public a convenient and attractive place to study nature, and would provide an ideal outdoor educational laboratory (Evans 1994). Initially, however, it is most important that people are encouraged to clean up the picnic areas and their shorelines along the enclosed area at the dam (**Plate 10**). One way would be by radio and television broadcasts on the subject from the Islamic Republic of Iran Broadcasting (IRIB). Very close to the east end of the dam, the mountain slopes form the western part of the Jajerud Protected Area, especially the Jajerud itself, being under protection of the DOE. The study area not only borders the Varjin (28 000ha) and Jajerud (51 650ha) Protected Areas (PA) to the east and west, respectively, but also the Lar (31 000ha) and Sorkheh-Hesar (9380ha) National Parks (Laws and Parliamentary Affairs Office, DOE 1997). The Latian Dam and Lashgarak area sits between four areas protected by the DOE. The Central Alborz Protected Area (399 000ha) is also not too distant (**Fig 3**). The very existence of these protected areas so close to the Latian Dam may be another reason for the wide variety of birds in this

Table 3. Latian Dam sectors (map at **Fig 1, p.56**) used by each species and maximum counts of each species.

Species ▼ Sectors ►	1	2	3	4	5
Chukar Partridge *Alectoris chukar*	24+	1			
Mallard *Anas platyrhynchos*			63		
Northern Pintail *Anas acuta*				2	
Garganey *Anas querquedula*			6	5	
Eurasian Teal *Anas crecca*			25		
Great Crested Grebe *Podiceps cristatus*			8		
Horned (Slavonian) Grebe *Podiceps auritus*			4		
Black-necked Grebe *Podiceps nigricollis*			1		
Little Bittern *Ixobrychus minutus*				8	
Cattle Egret *Bubulcus ibis*				1	
Grey Heron *Ardea cinerea*	2		73	6	
Great Egret *Ardea alba*			8	1	
Little Egret *Egretta garzetta*	1			1	
Great Cormorant *Phalacrocorax carbo*			22		
Lesser Kestrel *Falco naumanni*	14				
Common Kestrel *Falco tinnunculus*	2	1		1	1
Merlin *Falco columbarius*		2			
Eurasian Hobby *Falco subbuteo*	1			1	3
Peregrine Falcon *Falco peregrinus*		1		1	
Eurasian Sparrowhawk *Accipiter nisus*		1		1	
Common Buzzard *Buteo buteo*		1			
Long-legged Buzzard *Buteo rufinus*		2	1	1	
Golden Eagle *Aquila chrysaetos*	2	3			
Eurasian Coot *Fulica atra*			1		
Little Ringed Plover *Charadrius dubius*				4	
Jack Snipe *Lymnocryptes minimus*				1	
Spotted Redshank *Tringa erythropus*			5		
Common Redshank *Tringa totanus*				2	
Green Sandpiper *Tringa ochropus*				5	
Common Sandpiper *Actitis hypoleucos*				4	
Little Stint *Calidris minuta*				10	
Common Gull *Larus canus*			17		
Caspian Gull *Larus cachinnans*			40		
Great Black-headed Gull *Larus ichthyaetus*			52		
Common Black-headed Gull *Larus ridibundus*			33		
Little Gull *Larus minutus*				1	
Rock Dove *Columba livia*		5			10+
Stock Dove *Columba oenas*		4			2
Common Woodpigeon *Columba palumbus*	1				3
Laughing Dove *Streptopelia senegalensis*				2	4
Rose-ringed Parakeet *Psittacula krameri*					10
Tawny Owl *Strix aluco*					1
Alpine Swift *Tachymarptis melba*				2	
Common Swift *Apus apus*	45				
European Roller *Coracias garrulus*		2			
Common Kingfisher *Alcedo atthis*			2	1	
European Bee-eater *Merops apiaster*	10	30		10	15
Eurasian Hoopoe *Upupa epops*		1		2	
Syrian Woodpecker *Dendrocopos syriacus*	1	6			8
Red-backed Shrike *Lanius collurio*	1			6	1
Eurasian Golden Oriole *Oriolus oriolus*					7
Eurasian Magpie *Pica pica*	7	10		8	12
Red-billed Chough *Pyrrhocorax pyrrhocorax*	21				2
Western Jackdaw *Corvus monedula*	5				
Rook *Corvus frugilegus*				30	100
Carrion Crow *Corvus corone*	10	10		30	20
Great Tit *Parus major*		10		4	10

Species ▼ Sectors ►	1	2	3	4	5
Sand Martin *Riparia riparia*				3	
Barn Swallow *Hirundo rustica*		6		10	
Eurasian Crag Martin *Ptyonoprogne rupestris*	1				
Common House Martin *Delichon urbicum*		12			
Crested Lark *Galerida cristata*		3		6	
Eurasian Skylark *Alauda arvensis*				2	
Horned Lark *Eremophila alpestris*				9	
White-eared Bulbul *Pycnonotus leucotis*				4	2
Sedge Warbler *Acrocephalus schoenobaenus*				3	3
Eastern Olivaceous Warbler *Iduna pallida*		2			8
Willow Warbler *Phylloscopus trochilus*		1			
Common Chiffchaff *Phylloscopus collybita*		2			18
Blackcap *Sylvia atricapilla*					3
Garden Warbler *Sylvia borin*					1
Lesser Whitethroat *Sylvia curruca*		1			
Common Whitethroat *Sylvia communis*		2			10
Winter Wren *Troglodytes troglodytes*				2	
Nuthatch sp *Sitta* sp	1				
Wallcreeper *Tichodroma muraria*	1				
Common Myna *Acridotheres tristis*					10
Common Starling *Sturnus vulgaris*				40	10
Eurasian Blackbird *Turdus merula*					4
Fieldfare *Turdus pilaris*		2			
Redwing *Turdus iliacus*					3
Song Thrush *Turdus philomelos*					12
Mistle Thrush *Turdus viscivorus*		8			
European Robin *Erithacus rubecula*					1
Common Nightingale *Luscinia megarhynchos*		2		2	10
Western Black Redstart *Phoenicurus ochruros*		2			
Common Redstart *Phoenicurus phoenicurus*					3
Isabelline Wheatear *Oenanthe isabellina*		1			
Black-eared Wheatear *Oenanthe hispanica*		6			
Finsch's Wheatear *Oenanthe finschii*	2	5		1	
Spotted Flycatcher *Muscicapa striata*	1	3			5
Eurasian Pied Flycatcher *Ficedula hypoleuca*		1			
Red-breasted Flycatcher *Ficedula parva*					1
White-throated Dipper *Cinclus cinclus*				3	
House Sparrow *Passer domesticus*	16	4			50+
Dunnock *Prunella modularis*					1
Grey Wagtail *Motacilla cinerea*				2	
White Wagtail *Motacilla alba*		5		12	10
Water Pipit *Anthus spinoletta*				3	
Common Chaffinch *Fringilla coelebs*		35			30
Brambling *Fringilla montifringilla*		35			
Red-fronted Serin *Serinus pusillus*		10			
Greenfinch *Carduelis chloris*					6
Eurasian Siskin *Carduelis spinus*					1
European Goldfinch *Carduelis carduelis*				3	
Twite *Carduelis flavirostris*		8			
Common Linnet *Carduelis cannabina*		12			
Crimson-winged Finch *Rhodopechys sanguineus*		2			
Desert Finch *Rhodospiza obsoletus*		4			
Hawfinch *Coccothraustes coccothraustes*					6
Yellowhammer *Emberiza citrinella*		7			
Pine Bunting *Emberiza leucocephalos*		2			
Rock Bunting *Emberiza cia*	10	30			
Black-headed Bunting *Emberiza melanocephala*		12		1	
Common Reed Bunting *Emberiza schoeniclus*				2	
Species per sector	**23**	**47**	**17**	**47**	**41**

Table 4. Waterbird Censuses at the Latian Dam during mid-winter counts (27 species overall).

Species	1973	1974	1975	1976	1999	2001	2002	2003	2004
Greylag Goose *Anser anser*					50				
Goose sp *Anser* spp.					232				
Common Shelduck *Tadorna tadorna*			1						
Mallard *Anas platyrhynchos*		50	44	85	144	50	10		36
Eurasian Teal *Anas crecca*		6		1	84	20	18		5
Common Pochard *Aythya ferina*		1	1						
Tufted Duck *Aythya fuligula*			12						
Smew *Mergellus albellus*				3					
Goosander *Mergus merganser*		22	2	5					
Duck sp				20				3	
Great Crested Grebe *Podiceps cristatus*			1	4					
Grey Heron *Ardea cinerea*		46	28	36	12	12	2	102	2
Great Egret *Ardea alba*	2	1			31	23		2	4
Little Egret *Egretta garzetta*					25	13			
Great Cormorant *Phalacrocorax carbo*				2				16	5
Water Rail *Rallus aquaticus*		3							2
Eurasian Coot *Fulica atra*						50			
Northern Lapwing *Vanellus vanellus*	1	1				7			
Little Ringed Plover *Charadrius dubius*						2			
Eurasian Woodcock *Scolopax rusticola*			1	1					2
Jack Snipe *Lymnocryptes minimus*	6	3							
Common Snipe *Gallinago gallinago*	10	25	12	3					
Common Greenshank *Tringa nebularia*			1	2					
Common Redshank *Tringa totanus*								2	
Green Sandpiper *Tringa ochropus*	2	8	12	5					
Common Sandpiper *Actitis hypoleucos*		2							
Caspian Gull *Larus cachinnans*						6			
Great Black-headed Gull *Larus ichthyaetus*						4			
Larus sp								8	
Total 27 waterbird spp ▲ Nos birds/year ▶	**21**	**168**	**115**	**167**	**578**	**198**	**30**	**133**	**56**

area of Iran, although the DOE should take steps to survey these very poorly-known protected area to monitor the bird activity throughout the year.

At present, the most essential action in creating a small bird sanctuary would be to have it defined as such according to the National Environmental Laws, in the Protected Area category (see Laws and Parliamentary Affairs Office, DOE 1997). In the longer term, it would be better to include the Latian Dam and Lashgarak area as a PA providing a continuous connection between the Varjin PA and the Jajerud PA, and to construct a DOE Game Guard station at the western corner of the dam near the Jajerud. However, the management of the areas surrounding the dam, does not lie solely with the DOE, but involves the Power Ministry (responsible for the dam itself), the Ministry of Jihad-e-Agriculture (the Latian forest parks), the Lavasan or Lashgarak Municipal authorities (the fields to the northwest) and the Defence Ministry (an area along the north bank). Because the DOE has responsibilities for territory to the west and to the east, the most practical proposal would be for the Varjin PA to be extended to cover the western half of the Latian dam area, and the Jaejerud PA to be extended to cover the eastern half.

CONCLUSIONS

Despite the extent of the present disturbance, the area remains of great interest to the ornithologist and birdwatcher and should receive the level of protection commensurate with Protected Area status. The richness of the avifauna has been maintained, as shown by the results of surveys in the 1970s and 2000s. However, the difference between the sizes of the respective study areas indicates not only was the size of the recommended protected area originally proposed too small (Scott 2007, this issue), so was the size, at 110ha, of the present IBA 031. The proposed new protected area should be *c*1000ha and should include the present IBA, the Latian Dam surface, the surrounding northern dam enclosed shores (which comprise part of the Latian forest park), the Jajerud up to the bridge and the western slopes to the Jajerud. Exclusions from this recommendation are the military area and urban environments. (**Fig 2**).

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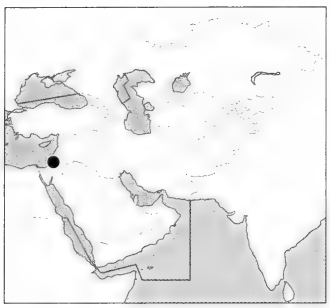
Preference of the White-headed Duck *Oxyura leucocephala* for wastewater reservoirs in the Judean Plain, Israel

EZRA HADAD[1] AND CHAIM MOYAL[2]



The White-headed Duck *Oxyura leucocephala*, which bred in Israel until the 1960s, began to winter there from the 1980s onwards. Numbers soon became significant, reaching 2605 in 2007 (25% of the world population). The origin of the wintering birds is not certain, but may encompass in part the populations that once wintered in Turkish locations, although the present winter population in Turkey may be comprised of an increasing proportion of birds displaced from former Russian and Kazakh breeding grounds by agriculture, the displacement possibly leading to new migration routes. Since the 1980s, overshoots from the Turkish wintering population would have found Israel increasingly congenial because the national reservoir construction policy created waterbodies that housed expanding plant and invertebrate communities. The annual series of winter counts suggest that White-headed Duck males and females display differential migration, a phenomenon not previously documented. Immatures are difficult to distinguish from females, and so improved discrimination would better document the extent of this behaviour, which if confirmed, would have implications for the species' conservation strategy. However, if females and males were found to be in equal proportions in winter in Israel, the unlikely corollary is that the sheer numbers of immatures present suggest high productivity levels never before recorded.

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INTRODUCTION

The White-headed Duck *Oxyura leucocephala*, one of the rarest ducks in the world today and listed in the IUCN Red List of Threatened Species as endangered, winters in Israel in growing numbers in the Judean Plain at treated waste water reservoirs and in the Jezreel Valley at the Tishlovet and Kishon reservoirs. These reservoirs have been surveyed regularly since the 1980s. The results of these counts are described in this paper. The head markings, relatively large beak and upright stiff tail make the species, an active diving-duck, easy to identify. Its distribution of disparate populations extends over much of the Palearctic from Spain to Mongolia, western China and south to India. Its eastern Asian distribution is much more discontinuous. The White-headed Duck no longer breeds in Italy, France, Hungary, Albania, the former Yugoslavia, Greece, Israel and Egypt, having become extinct from the early 20th century onwards (Green & Anstey 1992), and it appears extinct in Ukraine (Burfield & van Bommel 2004). From the 1930s onwards, its world population decreased from 100 000 to an estimate of only 10 000 (Green & Hunter 1996, Stattersfield & Capper 2000). The counts in Israel from 1990 to 2002 suggest that the species exhibits differential migration, at least in this part of its wintering range, behaviour not previously recorded. Much remains to be discovered about the migration strategy of the species (Li & Mundkur 2003).

HABITAT REQUIREMENTS AND PREFERENCES

General

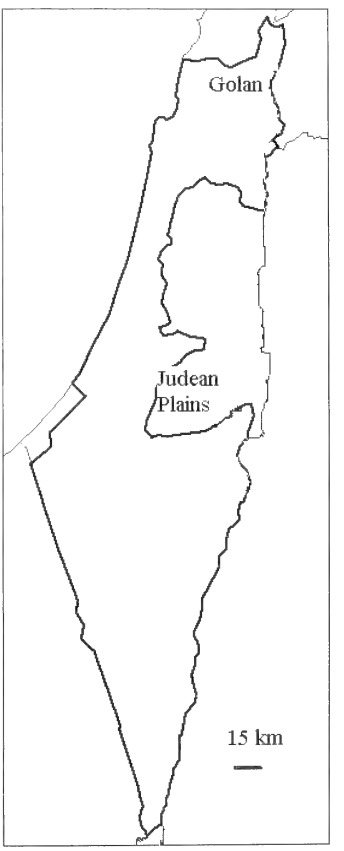
The preferred habitat of the White-headed Duck is shallow waterways of between 0.5 and 3m depth, as found in arid areas. The nests are situated in dense vegetation at the waters edge, in reed and papyrus beds. Many of the nesting habitats are temporary or

seasonal, which apparently causes significant population movement and fluctuations in numbers, some of them natural (Cramp & Simmons 1977). The White-headed Duck is dependent on water more than most other duck species, being more awkward out of water and agile in it, a function of the legs being so near the tail. Studies in central Asia have shown that the White-headed Duck is found in deeper and larger water bodies in the winter, and feeds in fresh water reservoirs with less dense and extensive vegetation (Anstey 1989). However, most of the White-headed Ducks that winter in Israel do so in wastewater or treated-water reservoirs, and less often in salt or fresh waterbodies. The reasons for this require further study.

A diving duck, the species feeds mostly nocturnally, but we have observed daytime feeding in Israel. The winter flocks are large and feed together separately from other duck species in the same water body. Studies in Pakistan and in the vicinity show that the diet of young and adult ducks consists mainly of Chironimid (midge) larvae (Sanchez *et al* 2000). Green *et al* (1993) state that the presence of such larvae drives the species' choice of habitats. The White-headed Duck also feeds on rotting floating vegetation and a variety of seeds, such as papyrus *Cyperus papyrus*, melilot *Melilotus sulcatus*, water lilies *Nymphaea alba*, slender naiad *Najas major*, as well as aquatic insects, such as Corixidae (water boatmen) found in the Judean Plain reservoirs, molluscs and other invertebrates and plants.

Habitat use and species' history in Israel

In summary, Henry Baker Tristram (1884) indicated that 'the White-headed Duck may be seen throughout the year in the Sea of Galilee and the Hula, apparently nests in the Hula, but definitely not in the Sea of Galilee'. Meinertzhagen (1930) stated it "apparently nests in the Hula and may be sighted all the year". Israel Aharoni (1923), the first Jewish zoologist in the then Palestine Mandate, described its status thus: "the White-headed Duck is resident in our land and is found in lakes in the Galilee". Shimon Bodenheimer (1953) wrote: "the White-headed Duck has completely disappeared". Up to 1960, there were no sightings of or data recorded on the species in Israel, except as Haim Merom noted (1960), that two specimens were in Israeli scientific collections, one dated 26 December 1953 in the University of Tel Aviv and the other, in the Haifa Biological Institute, collected on 9 November 1955 from the Kfar Masaryk pools. During the 1960s and early 1970s there were isolated sightings in northern Israel, the largest number being 26 in 1978 (Shirihai 1996, Paz 1986). The number of White-headed Duck sightings rose steadily during the 1980s, from 11 to 80 being seen from 1980 to 1984. The rate of increase paralleled the building of reservoirs in the Jezreel valley, where, during the 1984/85 winter, 180 were counted and another 22 were seen in the Ma'agan Michael pools (Shirihai 1996, Paz 1986). The continued rise in numbers produced 395 in the 1988/89 winter in the Jezreel valley (Shirihai 1996) and a few dozen individuals in the Hula and other northern waterbodies, some 500 in total. A literature survey showed that formerly, the White-headed



Map 1. General locations of wintering concentrations in Israel of White-headed Duck *Oxyura leucocephala*.

Duck was a common breeder in Israel, the then population apparently being stable, as were other southern populations at the time, such as those in Spain and Morocco. However, there is no reference in the literature to numbers increasing in winter, which suggests that the extent of winter visitors to Israel might not have been significant. Because the species' migration routes are still not known, partly because there had been so little ringing in the past, a comprehensive ringing programme for the White-headed Duck in the region would be a useful method of contributing vital data about its migration routes and phenology.

The White-headed Duck remains a fairly scarce winter visitor, although it has occurred in large numbers in two areas: one, comprising Tishlovet and Kfar Baruk reservoirs, is in northern Israel, split by the Kishon river, northwest of Afula and was established in 1981 – they have some exposed muddy pools, excellent for shorebirds – and the other is in central Israel in the Judean Plain and consists of waste treatment reservoirs built from the early 1980s onwards. Recently, a new and relatively large concentration was found near Ramle ('Matash Ayalon') in the Nesher cement factory reservoir, constructed in 1984 but not surveyed until the 2003/4 winter. In the 2004/5 winter, 1481 individuals were counted in Israel, the then highest-ever total, 980 at the Kishon reservoirs and 501 at the Judean Plains reservoirs, but in the 2006/7 winter, the total rose to 2605 (25% of the maximum world population – see Burfield & van Bommel 2004), the respective sub-totals being 1457 and 1148.

As has been found in all climates, swamp and lake drainage in Israel has had an adverse effect on a wide range of plants and animals. Amongst the most important drained swamps were the Hula Swamp, the Kbe'ra Swamps, the coastal swamps and lastly the swamps of the Jordan Valley and the Central Valleys. The driving factors for swamp drainage were the increased demand for river water for agriculture and for drinking water, thus accelerating the complete elimination of swamps in Israel. These changes had considerable knock-on effects on wet habitats in the area. Many populations of animals and plants, including some endemic to Israel, either declined sharply or became extinct. It is likely that this change was the proximate cause of the extinction of White-headed Duck as a breeding species in Israel, although the lack of timely studies means that there is no direct evidence, but the disappearance of all suitable breeding habitat is a common cause of extinction worldwide. It is also possible that at that time, breeding had already ceased because of other factors. For example, in the mid-1930s, small fish farms were being built, and these added to the demand for water. However, the construction in the 1970s of large water reservoirs, mainly in the Golan Heights, by the National Water Authority, began to provide potential replacement habitats, a trend followed in the 1980s by the establishment of large pools for effluent that would be treated for use in agriculture. As these reservoirs matured, areas of habitat suitable for a wide range of waterbirds developed, as shown by the systematic counts at these locations since then.

POPULATION THREATS

General

The main threats to the White-headed Duck population in regions of Russia and Kazakhstan derive from land use change (drainage of wetlands for agriculture and other development) and increased use of water resources (for irrigation, industry and human consumption) – increased disturbance at favourite haunts also forms a threat. However, the circumstances are exacerbated by increasing aridity over much of the species' range (Anstey 1989), probably due to climate change, a process of continuous habitat reduction. Increased irrigation also increases the frequency of waterbodies

drying up completely. The species' occurrence has been dropping steadily in various areas (Anstey & Moser 1990). In recent years, considerable effort in Spain and in Turkey has been expended to establish artificial reservoirs as one way of helping declining White-headed Duck populations. The western population in Iberia is estimated at around 1000 birds (Burfield & van Bommel 2004), but this total is a remarkable increase from the estimated 22 individuals surviving in the wild in the 1970s, and the trend in Spain seems to be continuing. This success came after a determined and costly effort by the Spanish Government and conservationists. The reasons for the original decline include the drying up of lakes, such as in Andalusia, where about 60% have dried up completely (Amat & Sanchez 1982). The breeding population in Turkey may be as high as 250 pairs (much lower than in the past), but the wintering population is estimated to be between 3000 and 12 000 individuals (Burfield & van Bommel 2004), which suggests a sizeable outward migration from, perhaps, Russia. Overshoots from this movement could explain the increase in the species' numbers in Israel in winter.

Another threat to the White-headed Duck population comes from the escapes of the North American Ruddy Duck *O. jamaicensis* from collections, mostly in the UK, where it was first introduced in the 1930s, although escapes from Slimbridge began to thrive during the 1950s. By the 1990s, a proportion had redeveloped a migratory impulse and birds began to appear in winter in continental Europe, with little ecological impact until males reaching Spain began to interbreed with White-headed Duck females. Ruddy Duck is far more aggressive than its congener in its mating behaviour and so hybrids began to appear in numbers. The hybrids retained the dominant behaviour of Ruddy Duck and out-competed the resident White-headed Duck males for breeding territories and for females. Although second- and third-generation crosses possessed reduced fertility, the males could still out-compete White-headed Duck males, whose productivity in affected areas reduced sharply. Spanish (and to a surprising extent, French) authorities have operated effective culling programmes of Ruddy Duck and hybrids, but the risk remains because of limited culling in UK, where Ruddy Duck remains a popular species. Ruddy Duck and hybrids have been recorded in North Africa, Ukraine, Turkey and Israel.

Another invasive species that contributes to the decrease in White-headed Duck numbers is carp *Cyprinus carpio*, which when overstocked, competes successfully for submergent vegetation. The eradication of the carp population from lakes in the Cordobá region in Spain brought about a consequent increase of breeding White-headed Duck pairs (Martí 1993). Hunting is another contributory factor implicated in the decline of White-headed Duck, because unlike its congener, which is wary and shy in human presence, it is easy to locate and shoot. Many countries in which it breeds or winters do not enforce any protection laws, if these exist, and in any case many who go shooting make little distinction between species. In waters that are heavily shot over, contamination through ingestion of lead shot has added to the mortality rate. Lastly, human consumption of the species' eggs in its former breeding range in France, Italy, the former Yugoslavia and Egypt may well have been the main reason for its local extinction (Green & Anstey 1992)

The White-headed Duck tends to avoid flying to escape danger, preferring to escape by diving and swimming to concealment (Roberts 1991) but like most ducks its flight is direct and fast. The species is additionally vulnerable because it is one of the few ducks that has a double moult strategy – one moult occurs at the onset of winter and the other immediately after the breeding season.

Specific to Israel

The present combination of a series of drought years and over-extraction from the Judean plains reservoirs is a threat to the wintering White-headed Ducks and to many other waterbirds. Water usage has increased since 1990, not least because quotas for agriculture have not been set relative to the reserves available. Hunting pressure during winter is exacerbated by unrestricted access to some reservoirs, and although hunting White-headed Duck is prohibited in Israel, the species often is shot while it is flying in mixed duck flocks – in the 2002 winter, EH (own notes) found lead shot in two White-headed Ducks killed at the Hulda/Mishmar-David reservoir. However, some reservoirs in the Soreq Valley are in the process of becoming protected areas, which should help increase the variety and number of birds using them.

Pesticide pollution of water (*eg* from Permethrin), we believe, is affecting adversely the diet of White-headed Ducks. Certainly, anti-mosquito pesticides appear to have damaged ecological systems in the reservoirs. In 2005, the Ministry of the Environment permitted pesticide use in the Soreq reservoirs, after which a mass mortality occurred of fish, insects and other aquatic fauna (Amram Tsabari & Ezra Hadad pers obs). Without a full scientific analysis, causation cannot be proven, but in our opinion, it is highly likely that this type of pesticide is having severe adverse effects on the sensitive ecological balance in such aquatic habitats. The use of other agricultural pesticides and artificial fertilizers in fields around the reservoirs and in their basins probably has led to concentrations in the waterbodies, the sediments, the plants and the food-chains, either as, or in the manner of nitrate run-off, a well-known cause of ecological damage world-wide. The introduction of a variety of fish species, like mosquito fish *Gambusia affinis* to clean vegetation and to reduce mosquito larvae and other aquatic insects may also have unknown, but possibly adverse effects on the availability of the duck's food sources. Various studies in Pakistan and Afghanistan (Chaudhry 1992) showed that the introduction of such as carp sp affected the ecological balance, as evidenced by a reduction in local fish species, vegetation and other organisms.

Ruddy Duck is not a problem in Israel, the one confirmed record in 1983 at the Yesodot reservoir possibly being a local escape. A winter 2004 report of 2 individuals on the Eastern Ram-On reservoir remains unconfirmed. No *Oxyura* hybrids have been recorded in Israel to date.

THE SURVEY AREA AND WHITE-HEADED DUCK DISPERSION

The survey area lies at 70-150m asl and has a mean annual rainfall of 450mm. It comprises a plateau scattered with low hills and many fields of cotton, wheat, sunflower, corn, chickpea and watermelon interspersed with vineyards and orchards. The Soreq, the largest river locally, possesses the area's typical rich riverine vegetation community, consisting primarily of cane *Phragmites australis*, tamarisk *Tamarix nilotica* and blackberry *Rubus sanctus*. The area's main reservoirs are near the settlements of Hulda, Revadim, Kfar-Menahem and Ramle. Excluding the Ramle-Na'an section, the survey area includes 23 treated waste-water reservoirs, the majority of which were built in the early 1980s to cope also with flood water (Since 1986, 150 such reservoirs have been built nationally). Raw sewage is first purified and left in oxidization pools before release to the main reservoirs, whose winter accumulation is used mainly agriculturally during summer. The two sewage treatment works opened along the Soreq River in 1999 and 2000 west of Jerusalem and at Beit-Shemesh respectively have improved the quality of the river water dramatically, a likely associative cause for the increase in wintering White-headed Duck numbers since. From 1995 to 2007, the Hulda/Mishmar-David and the Tzuba-Shoresh reservoirs held on average some 47%

of the total numbers in Israel. However, the White-headed Duck does disperse on occasion to one distant (Nesher-Ramle) and five nearby reservoirs, probably because of hunting pressure at Hulda/Mishmar-David and possible because of over-extraction at Hulda, following an increase in farming land locally (mainly during 2006).

Summary of winter counts in the reservoirs of the Judean plain

Until the 1980-81 winter, White-headed Duck was not recorded in the Judean Plain reservoirs, which then were few in number. During the reservoir building programme in the early 1980s, the species began to frequent the area in winter, numbers growing as more reservoirs were filled. Numbers remained quite low up to the 1988-89 winter, typically between 1 and 7 individuals being recorded per observation. In the 1989-1990 numbers reached 38, mainly at the Hulda/Mishmar David reservoir, but in the next two years peaked at 101 and 450 respectively at Hulda/Mishmar David. Between the 1993-1994 and 1999-2000 winters, there was a drastic decrease, the minimum being six and the maximum 60 (**Table 1**). Numbers increased in the winter of 2000-2001 to 140, which was the start of a steady increase to 501 in the winter of 2004-2005 and to 1148 in the winter of 2006-2007. Numbers gradually increased in parallel in other parts of the country. **Table 2** shows the typical temporal pattern of White-headed Ducks in winter in Israel, from late October to early April, the peak being in January. Certain reservoirs in the Judean Plains complex, particularly Hulda/Mishmar David and Zuba/Shoresh (**Table 3**), held some 66% of the White-headed Ducks (and similar proportions of other duck species present in large numbers), probably for two main reasons – they are large and their biotopes are better suited for Anatidae. Of the six reservoirs in that complex with the highest counts, five are within 1km of each other.

Of the White-headed Ducks counted up to 2005 in the Judean Plain region, 89% were juveniles or females (the distinction between juveniles and females being too difficult for certainty at range) and 11% adult males (**Table 4**), and although the overall percentage ratios had changed slightly by 2007 to 79:17, the imbalance remained. We cannot asses the actual proportion of adult females to males, but it is likely that females outnumbered males by some margin. Amongst duck species, it is not uncommon for adult males and females to adopt different migration strategies. The assumption is that it enables males to work out their dominance hierarchy to a degree before departing on the return migration, the most dominant being able to have first choice of breeding territory by arriving earliest, weather conditions on the breeding grounds permitting. We cannot assume as yet that the males wintering in Israel come from the same populations as the wintering females, but even if they do, we do not know where the 'other' males winter. However, if we assume that the actual proportion of wintering adult males and females is 1:1, then up to 2005 78% of the wintering population in Israel consisted of juvenile birds, approximately 7 per breeding pair, if all pairs successfully raised broods; the brood failure rate, like many duck species, is likely to be high and so 7 juveniles per pair is very unlikely, given the general decline of the species across so much of its extensive breeding distribution. Therefore, although we assume that the White-headed Duck population wintering in Israel exhibits differential migration to an as yet unknown degree (**Table 4**), we acknowledge that this phenomenon has not previously been documented for this species (Baz Hughes, Simon Delany pers comm to the editor, see also Li & Mundkur 2003). Assuming equal proportions of males and females for the 2007 figures still requires more than four young per pair surviving to reach the wintering grounds. An additional obscuring factor is that juveniles may also adopt different migration patterns from adult birds. Should differential migration be proved an established and not a transient behaviour, then the International Single Species Action Plan of the Conservation of Migratory Species (CMS) and the Agreement on the Conservation of African-Eurasian Migratory Waterbirds (AEWA) (Hughes *et al* 2006) may have to be revised.

Our thesis is that the wintering population of White-headed Ducks in Israel cannot truly represent the breeding populations to which the individuals belong. Furthermore, the origin of the wintering population in Israel may yet be shown to include a proportion of birds from the Central Asian breeding grounds, described by Li & Mundkur (2003).

Comparison of numbers in the two main wintering concentrations in Israel

Table 1 consists of the numbers of White-headed Ducks observed at the Kishon complex reservoirs and the reservoirs of the Judean plains between the years 1990-2007 (excluding the Nesher- Ramle reservoir which was surveyed only from winter 2003-2004). **Table 1** shows that the average number of ducks per count (16 counts) at the Judean plains reservoirs was 160 individuals, compared to 553 individuals (10 counts in 16 years) at the Kishon complex of reservoirs. In 1992 the Judean plains reservoirs area held nearly half of White-headed Duck seen in Israel that year (48.6%).

Table 1. Count maxima of White-headed Ducks per reservoir complex from 1990-2007. (NC = No Count)

Year (winter's end) ▶																		
Location ▼	**90**	**91**	**92**	**93**	**94**	**95**	**96**	**97**	**98**	**99**	**00**	**01**	**02**	**03**	**04**	**05**	**06**	**07**
Judean Plains	38	101	450	220	22	60	30	6	35	25	58	140	190	227	452	501	659	1148
Kishon Complex	NC	410	475	NC	430	NC	580	NC	NC	NC	440	568	854	409	385	980	832	1457
Totals ▶	**38**	**511**	**925**	**220**	**452**	**60**	**610**	**6**	**35**	**25**	**498**	**708**	**1044**	**636**	**837**	**1481**	**1491**	**2605**

Table 2. Typical pattern of build-up and dispersal of White-headed Ducks in winter in Israel (1990-2005).

Month	**Average/year**	**Month**	**Average/year**	**Month**	**Average/year**
October	12	January	239	March	39
November	89	February	135	April	2
December	105				

Table 3. Numbers of White-headed Ducks per reservoir from 1990-2007 in the Judean plains

Year (winter's end) ▶																		
Reservoir ▼	**90**	**91**	**92**	**93**	**94**	**95**	**96**	**97**	**98**	**99**	**00**	**01**	**02**	**03**	**04**	**05**	**06**	**07**
Hulda /Mishmar David	36	69	250	146	22	60	0	6	85	5	30	120	80	186	180	245	45	200
Revadim-east	0	32	0	0	0	0	3	0	0	0	0	0	50	13	60	5	30	53
Zuba /Shoresh	0	0	168	74	0	0	27	0	30	20	16	20	35	8	29	8	130	300
Hafetz-Haim	0	0	0	0	0	0	0	0	0	0	0	0	0	20	20	5	102	62
Yesodot	0	0	11	0	0	0	0	0	0	0	0	0	0	0	5	20	33	67
Nachshon	0	0	21	0	0	0	0	0	0	0	12	0	0	0	0	0	0	280
Kfar-Menachem	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0
Anot	0	0	0	0	0	0	0	0	0	0	0	0	25	0	0	0	0	0
Mishan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	58	70	52	39
Zohar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	0	0
Nesher-Ramle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100	136	257	147
Year Totals	**2**	**101**	**450**	**220**	**22**	**60**	**30**	**6**	**35**	**25**	**58**	**140**	**190**	**227**	**452**	**501**	**659**	**1148**

Table 4. Relative numbers of females and juveniles to males in the Judean Plains Reservoirs from 1990-2007

Year	**♀+ juv**	**♂**	**Year**	**♀+ juv**	**♂**	**Year**	**♀+ juv**	**♂**
1990	**37**	**1**	1996	**5**	**25**	2002	**158**	**32**
1991	**90**	**11**	1997	**6**	**0**	2003	**202**	**25**
1992	**424**	**26**	1998	**23**	**12**	2004	**428**	**32**
1993	**200**	**20**	1999	**15**	**10**	2005	**435**	**66**
1994	**22**	**0**	2000	**47**	**11**	2006	**571**	**88**
1995	**45**	**15**	2001	**132**	**8**	2007	**1035**	**113**

In 2007, the 1148 White-headed Ducks counted at the Judean plains reservoirs (by then the Nesher Ramle Reservoir had been added) comprised nearly 44% of all White-headed Ducks seen in Israel, but that same year was a record for the Kishon complex and immediate surrounds, which held 1457 ducks (almost all of the remaining 66%). From 2000-2007 there was a gradual rise in numbers of wintering White-headed Duck in the Judean plains area, but at the Kishon complex, numbers fluctuated, two major surges being were noted in the winters of 2002 and 2005. In the three counts done in the 1994-2000 period, the Kishon reservoirs often held substantially more ducks than the Judean plains complex. There is no satisfactory explanation as to why so few White-headed Ducks wintered in the Judean plains during that period.

CONCLUSIONS

The White-headed Duck begins to arrive in its breeding range by the end of March and leaves the northernernmost limits from the middle of October onwards. At present, there are no data on the origins of the White-headed Duck wintering in Israel. Tagging or ringing birds in the breeding grounds might help provide this information, but equally, similar actions with the wintering birds in Israel could be of great assistance to observers on the breeding grounds. The wintering concentrations observed throughout the years were limited to sewage treatment reservoirs, namely the Kishon complex of reservoirs and the water treatment reservoirs of the Judean plains, the biotopes thus created being attractive to the species, providing us with clues as to the White-headed Ducks' distinct preferences in choosing wintering sites. Relatively high numbers of White-headed Duck were first noted in the winter of 1984-85, just about the same time that most of Israel's water treatment reservoirs were being constructed.

A large surge in numbers of wintering White-headed Duck in Israel occurred in the early 1990s. In those years there was a dramatic decline in the number of White-headed Duck wintering at Burdur Golu lake in Turkey, from a sizeable 11 000 individuals in 1991, to only 1300 birds in 1996 (Green *et al* 1993, Stattersfield & Capper 2000). It is therefore possible that part of the Turkish wintering population continued south during those years and chose to winter in Israel, and also other countries in the region, like Syria, where in 2005, 700 White-headed Duck were observed. Although there may have been some recovery in wintering numbers in Turkey (Burfield & van Bommel 2004), the apparent extension of the outward migration route to Israel seems to have become established. Initial reports from December 2006 were of a total of 2150 birds, but this rose to 2605. It is likely that the main reason that White-headed Ducks are site-faithful to water treatment reservoirs is that these provide an abundance of suitable and accessible food, such as the insect and arthropod communities and adequate decaying plant material (*Melilot* sp). These reservoirs have no fish as competitors for the ducks' food, which remains in good supply until they depart. In neighboring fishponds, such as those adjacent to the Revadim and Kefar-menachem reservoirs, no White-headed Ducks were observed.

The large numbers of White-headed Ducks now wintering in Israel (and in Syria) make these populations of great importance for the conservation of the species' world population. So far, this importance has not been translated into action, because the authorities in charge of the reservoirs, not being aware of the circumstances, do not manage the reservoirs in ways that necessarily support this natural treasure. Although it would help, as a first stage, if the reservoirs were declared hunting-free zones, we still need to research many aspects to construct a sound understanding of the processes at work. It is entirely possible that relatively little effort could improve the quality of its wintering sites for the White-headed Duck in Israel. In particular, we

need to establish practical ways of improving conditions in the reservoirs so that the species' winter diet can be confirmed and better supported, and to better understand the migration patterns of the duck's age-classes, through such as ringing and satellite monitoring. Lastly, we need to improve the discrimination of adult females from immatures (Taej Mundkur pers comm to the editor) so that we can better document the phenomenon of differential migration, which could be a key factor in refining our understanding of the species' migration strategy. Success can come only through collaboration with all the agencies involved.

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We thank Asaf Mayrose, Dan Alon and Barak Granit for their comments, additions and support. We are indebted to Peter Geffen, Avner Cohen and Jonathan Meyrav for their skill as translators from Hebrew into English. We are grateful also for the interest shown and advice given by Baz Hughes, Simon Delany and Taej Mundkur during the editing of this paper.

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Cyprus – the autumn 2005 raptor migration at the southeast peninsula (terminating at Cape Greco)

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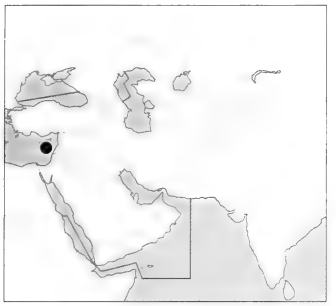


An eight-week survey in 2005 of the autumn migration of raptors from the 'southeast peninsula' in Cyprus in numbers that warrant the catergorisation of the peninsula (excluding the military area) as an IBA. The sea crossing distances are of the same order as in the central Mediterranean.

INTRODUCTION

Raptor migration in the Mediterranean area has long been observed and investigated (*eg* Bernis 1980, Shirihai *et al* 2000). Most studies deal with the passage funnelled at concentration points on the mainland (Bernis 1980, Shirihai *et al* 2000). Flight behaviour when crossing the sea has been studied along the western flyway in Spain (Finlayson 1992, Meyer *et al* 2000), along the central flyway at the Straits of Messina in southern Italy (Agostini & Logozzo 1997, Corso 2001a) and between Sicily and Tunisia over the Sicilian Channel, where the sea-crossing is the one of the longest on any regular raptor migration flyway in the Mediterranean (Agostini *et al* 1994). However, it is often assumed that most of the raptors using the eastern flyway, particularly the soaring species, detour the Mediterranean Sea in the Middle East and do not fly long distances over the open sea.

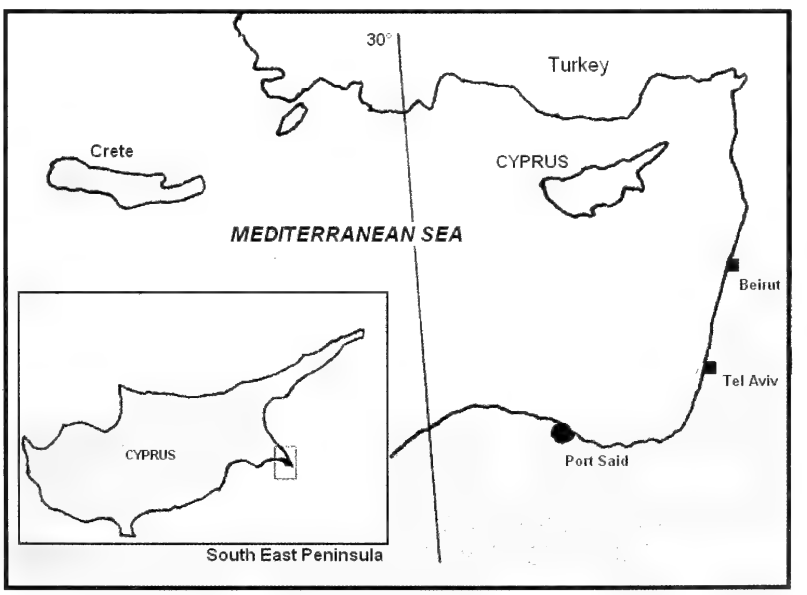


Figure 1a. Location of Cape Greco and its hinterland (box), in this paper called 'the SE peninsula'. *© Tobias Roth*

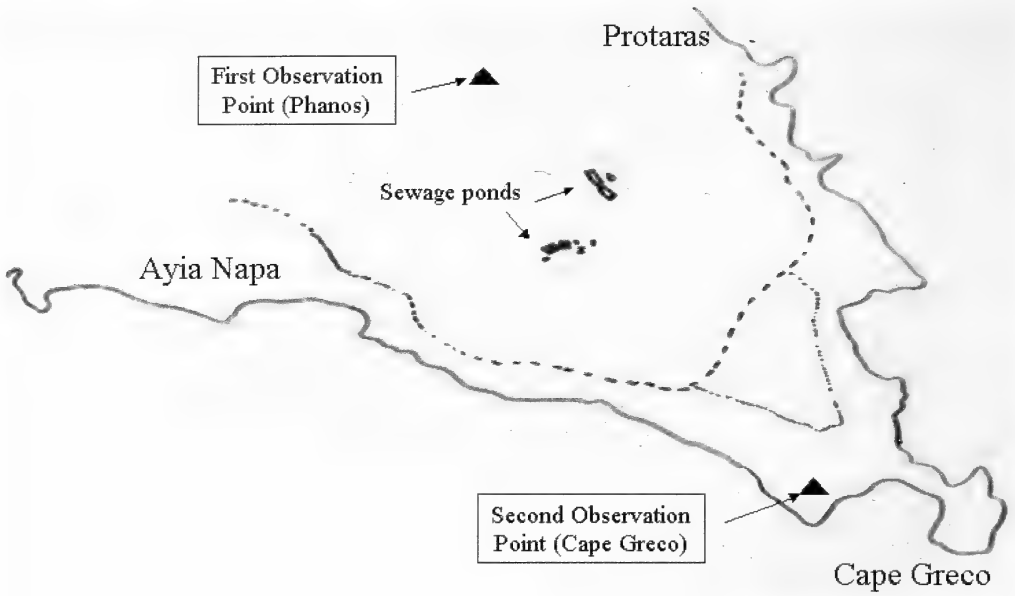


Figure 1b. Sketch plan of the SE peninsula. *© Edith Loosli (with permission)*

Cyprus is the only large island in the easternmost Mediterranean. It is a stepping stone for birds crossing the sea from Turkey to Africa (Flint & Stewart 1992). Soaring birds such as large raptors normally tend to avoid long sea crossings (Kerlinger 1985, 1989) and rarely arrive in Cyprus (Flint & Stewart 1992). However, although huge numbers of Accipitridae do not migrate over Cyprus, many medium-sized and smaller birds of prey pass through the island in autumn. They cross the island on a broad front, mainly concentrating at and departing from the capes, which serve as springboards to 'jump' out over the open sea (Flint & Stewart 1992). Observation of raptor migration on Cyprus has so far been incomplete. Recently, autumn raptor surveys have been co-ordinated by BirdLife Cyprus (Wilson 2005). Most of the available data is from the peninsula of Akrotiri and from its Cape Gata (Frost 1994, 1998, Wilson 2005). Only scant and occasional data are available from other capes and sites (Axelsen 2000, Gordon 2002, 2003, 2004, Richardson 2005). It has been postulated that important numbers of birds of prey migrate along the east of the island (Flint & Stewart 1992), but the extent of this passage has never been clarified and until now systematic observations were lacking.

The aim of this study was to conclude a survey of the migratory flow in the eastern part of the island. Raptor migration was investigated on the islands' southeast peninsula (which terminates at Cape Greco). For the purposes of this paper, we have adopted the terms southeast, or SE peninsula, because no counts were carried out at Cape Greco proper (see **Figs 1a & 1b**). We counted birds daily from the beginning of September until the end of October 2005. The phenologies and numbers of raptors are presented.

STUDY AREA AND METHODS

Cyprus is situated *c*80km south of the Turkish coast and *c*170km west of Syria (**Fig 1a**). The southeasternmost peninsula tipped by Cape Greco (also spelt Gkréko) contained our study area (**Fig 1b**), which lying east of Ayia Napa (Agia Nápa) and south of Protaras is quite sizeable, consisting of extensive inland cliffs interspersed with vegetated rocky limestone substrates. Although some maps call it the Karpaz peninsula (in error?), this name does not seem to be used locally.

Every day from 3 September to 26 October 2005 inclusive, we counted migrating birds from an observation point with good views in all directions. During the first part of the study period, we observed from sunrise till sunset except for a four-hour break from 11.00 in the hottest part of the day; from 25 September onwards, we counted raptors continuously for the whole day. Initially until 18 September our observation point was located on Phanos (35°00'N 34°01'E) (also spelt Fanos on most maps), the highest inland hill (with a television transmitter mast) on the peninsula at *c*170m asl. We had to change our observation point because we discovered that it was too difficult to identify from Phanos many of the falcons arriving over Ammochostos Bay from a northeasterly direction. Thereafter, we performed our diurnal bird census from the southernmost cliff (34°57'N 34°04'E) on the edge of the peninsula (100m asl) which is a closed area just west of Cape Greco. One observer (up to three during days of intense high migration) continuously scanned the sky through binoculars, using a telescope to aid identification. Those birds seen at great distance were identified to genus level if species identification was uncertain or impossible *eg Circus* sp. For each observation we recorded time, number of birds and if possible, age and sex (from plumage and structure: Forsman

Table 1: Prevailing wind conditions at the study sites for each day during the study period.

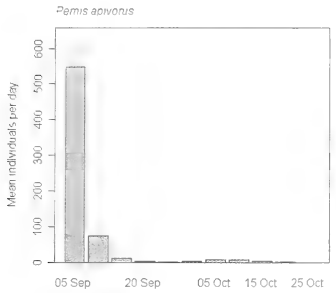
Date	Weather
03 Sep	gentle breeze from SW, stronger in the evening
04	gentle NNE breeze, increasing to variable in afternoon (thunderstorm)
05	gentle breeze from N
06	gentle breeze from N
07	no wind in the morning, gentle breeze from NW afternoon
08	gentle breeze from WSW
09	windy, persistent from N
10	gentle breeze from W
11	gentle breeze from SW
12	hardly any wind
13	gentle breeze from SSE
14	in the morning gentle breeze from E, increasing afternoon from SW
15	in the morning gentle breeze from SSW, in the afternoon stronger
16	gentle breeze from SE
17	windy, mostly from SW
18	gentle breeze in average from WSW
19	almost no wind
20	almost no wind
21	gentle breeze mainly from SSW
22	windy mostly from SSW
23	gentle breeze in morning, stronger in afternoon, mostly from SSE
24	gentle breeze in morning, stronger in afternoon mostly from WSW
25	gentle breeze from SSE
26	gentle breeze from SSE
27	hardly any wind in morning, in afternoon gentle breeze from E
28	hardly any wind in morning, in afternoon gentle breeze from WSW
29	gentle breeze from E
30	hardly any wind in morning, in afternoon gentle breeze from WSW
01 Oct	hardly any wind in morning, in afternoon gentle breeze from WSW
02	gentle breeze from SE
03	windy, persistent form WSW
04	windy, persistent from WNW
05	gentle NNW breeze in morning, gentle breeze from NE in afternoon
06	gentle breeze from NE
07	early morning NNW wind , then changing to S, in afternoon from WSW
08	changing wind from northerly directions (but sometimes even from S)
09	very gentle breeze from S
10	very gentle breeze from SW
11	gentle breeze from SW
12	morning: windy from N; afternoon: gentle breeze from E
13	gentle breeze from E
14	gentle breeze from W
15	windy, mainly from W
16	strong wind from W
17	strong wind from W
18	strong wind, variable in direction, mainly due E
19	strong wind variable in direction from W to E
20	windy from N
21	windy from N
22	windy from E
23	windy from E
24	windy from E
25	gentle breeze from NNE
26	windy, changing wind directions, mostly northerly

1999). If a species was too numerous to record every single individual, the total number and the duration of passage were noted. Resident birds observed daily were identified according to behaviour and plumage details or other characteristics (*eg* missing feathers) and were excluded from the count totals. Birds flying generally northwards in from the sea towards the SE peninsula and Cape Greco were not counted in order to minimise pseudoreplication in the data. We paid great attention to flock compositions and to individual characteristics, such as missing feathers, particular markings and colours in order to help prevent double-counting.

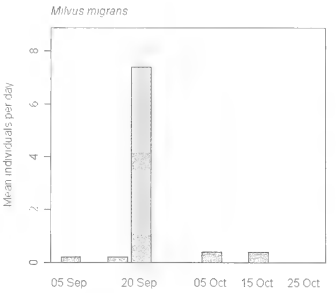
Because wind direction and strength is a very important factor affecting the interpretation of raptor migration dynamics, we have included the daily record of the prevailing wind conditions at the raptor observation points (**Table 1**). In **Figs 2a-2i**, the means of each five-day period (pentad) total of each species counted were calculated. To make valid comparison of the numbers in each age class, we applied a c2–test. Only juveniles and adults were considered in the calculations. Because individuals aged as being in their 2nd calendar year (2-cy autumn) or second year birds (3-cy autumn) have some limited experience of migration, we cannot place them in the juvenile and adult categories and hence we excluded them from the analyses. In **Figs 3a-3i** (the distribution of observation in 2-hour blocks during the course of the day), we included the data only from 25 Sep onwards (the period of continuous observation from sunrise to sunset).

Table 2: List of the 25 raptor species and numbers (N) counted. The bold numbers are the daily maximum of the species considered resident, the other numbers representing the totals of the daily counts.

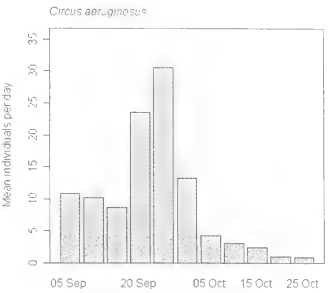
English name	Scientific name	N
Lesser Kestrel	*Falco naumanni*	32
Common Kestrel	*Falco tinnunculus*	**20**
Red-footed Falcon	*Falco vespertinus*	660
Eleonora's Falcon	*Falco eleonorae*	**5**
Merlin	*Falco columbarius*	3
Eurasian Hobby	*Falco subbuteo*	152
Saker Falcon	*Falco cherrug*	13
Peregrine Falcon	*Falco p. peregrinus/calidus*	24
Falcons	*Falco sp*	53
Osprey	*Pandion haliaetus*	23
European Honey Buzzard	*Pernis apivorus*	3302
Black Kite	*Milvus migrans*	44
Egyptian Vulture	*Neophron percnopterus*	1
Short-toed Snake Eagle	*Circaetus gallicus*	2
Western Marsh Harrier	*Circus aeruginosus*	554
Hen Harrier	*Circus cyaneus*	4
Pallid Harrier	*Circus macrourus*	15
Montagu's Harrier	*Circus pygargus*	96
Levant Sparrowhawk	*Accipiter brevipes*	9
Eurasian Sparrowhawk	*Accipiter nisus*	93
Northern Goshawk	*Accipiter gentilis*	**2**
Common/Steppe Buzzard	*Buteo b. buteo/vulpinus*	36
Long-legged Buzzard	*Buteo rufinus*	2
Lesser Spotted Eagle	*Aquila pomarina*	3
Booted Eagle	*Aquila pennata*	**3**
Bonelli's Eagle	*Aquila fasciata*	2
Total	**25 Species**	**5153**



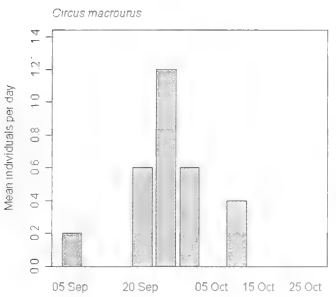
2a. Eurasian Honey Buzzard *Pernis apivorus*.



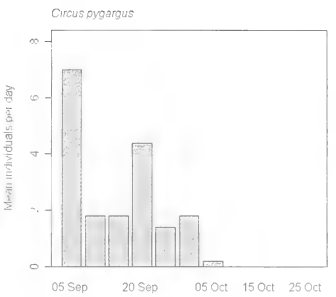
2b. Black Kite *Milvus migrans*.



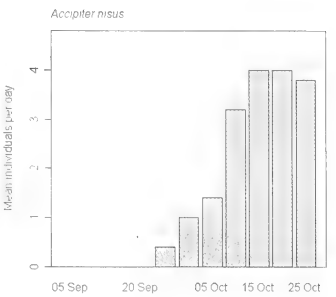
2c. Western Marsh Harrier *Circus aeruginosus*.



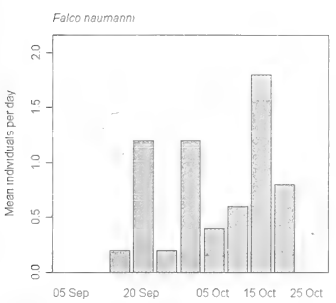
2d. Pallid Harrier *Circus macrourus*.



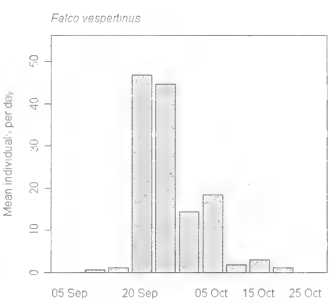
2e. Montagu's Harrier *Circus pygargus*.



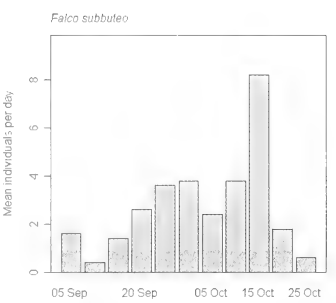
2f. Eurasian Sparrowhawk *Accipiter nisus*.



2g. Lesser Kestrel *Falco naumanni*.



2h. Red-footed Falcon *Falco vespertinus*.

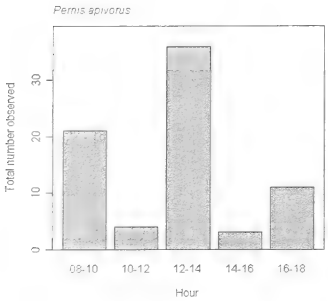


2i. Eurasian Hobby *Falco subbuteo*.

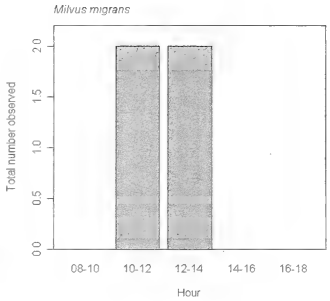
Figure 2. Raptor species passage rates at the SE peninsula 31 August to 26 October 2005 in five-day periods (pentads).

RESULTS

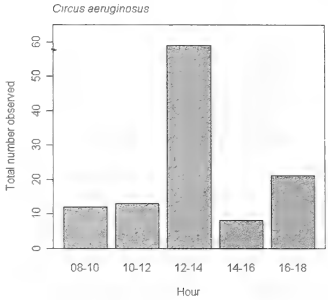
We recorded a total of 25 raptor species and 5135 individual raptors during the study period, as summarised in **Table 2**. For species that displayed no migratory behaviour, the maximum day count obtained was used as the total number of individuals present. For simplicity, we included species such as Common Kestrel *Falco tinnunculus* and Northern Goshawk *Accipiter gentilis* in this group, despite some undoubtedly being migrants. Although it is very difficult to categorise them, we note that the total number of such individuals was low. For migratory species, the daily counts were totalled over the whole season. Raptors crossing or departing from Cyprus' Karpas Peninsula (which lay 50-90km north-northeast of us – it is also called Karpasia or 'the Panhandle') on a broad front would arrive at the SE peninsula eastern coast on a



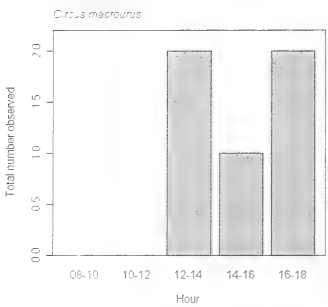
3a. Eurasian Honey Buzzard *Pernis apivorus*.



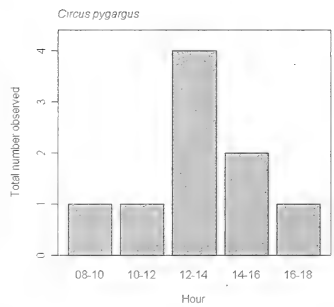
3b. Black Kite *Milvus migrans*.



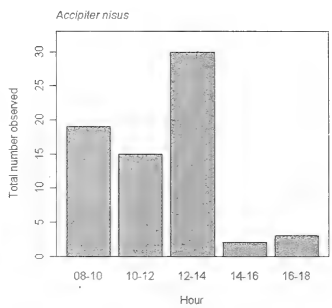
3c. Western Marsh Harrier *Circus aeruginosus*.



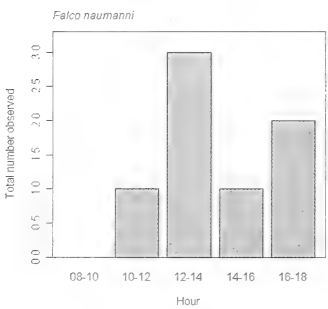
3d. Pallid Harrier *Circus macrourus*.



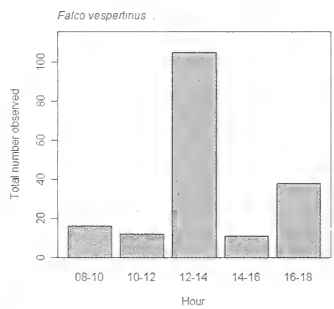
3e. Montagu's Harrier *Circus pygargus*.



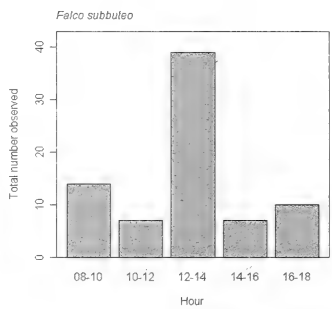
3f. Eurasian Sparrowhawk *Accipiter nisus*.



3g. Lesser Kestrel *Falco naumanni*.



3h. Red-footed Falcon *Falco vespertinus*.



3i. Eurasian Hobby *Falco subbuteo*.

Figure 3. Overall daily raptor passage phenology by species at the SE peninsula 25 September to 26 October 2005, 0800-1800 in two-hour blocks.

southerly heading, following the coastline. This was the case mainly for medium-sized raptors like European Honey Buzzards *Pernis apivorus* whose mean migration direction was almost due S (189.6°, 95 individuals) and Western Marsh Harriers *Circus aeruginosus*; again, almost due S (184.2°, 51 ind). However, many falcons and some European Honey Buzzards and harriers reached the SE peninsula from the sea, mainly from the northeast. Only a small fraction of the birds left Cape Greco heading west along the south coast. The majority flew towards the open sea (large falcons: SSW (203.1°); 13 ind). Individuals of many species, especially European Honey Buzzard, Western Marsh Harrier, Osprey *Pandion haliaetus* and Red-footed Falcon *Falco vespertinus* appeared to use trees or power-line poles to roost at night within the SE peninsula and Cape Greco.

Plate 1. Eurasian Honey Buzzard *Pernis apivorus*. Adult female, 7 Sep 2005, Paralimni, Cyprus. © *Tobias Roth.*

Plate 2. Red-footed Falcon *Falco vespertinus*. Juvenile, 28 Sep 2005, Cape Greco, Cyprus. © *Tobias Roth.*

Plate 3. Red-footed Falcon *Falco vespertinus*. Male, transitional plumage (2-cy autumn), 29 Sep 2005, Cape Greco, Cyprus. © *Tobias Roth.*

Plate 4. Eurasian Sparrowhawk *Accipiter nisus*. 03 Oct 2005, Cape Greco, Cyprus. © *Tobias Roth.*

Plate 5. Eurasian Honey Buzzard *Pernis apivorus* and Common Kestrel *Falco tinnunculus*. 10 Oct 2005, Cape Greco, Cyprus. © *Tobias Roth.*

European Honey Buzzard was the earliest species of all raptors passing at the SE peninsula (**Fig 2a**). Most individuals passed within a few days during early September, the daily maximum being 2250 individuals on 4 September, one of the highest totals ever recorded on Cyprus (Flint & Stewart 1992, Gordon 2002, 2004, Richardson 2005). 2005 was the best ever year for European Honey Buzzard passage in recent times, nearly 10 000 birds being counted passing over various parts of the island during September (Richardson 2006). Another very common migrant at the SE peninsula was Western Marsh Harrier (**Fig 2b**). Its migration peaked at the end of September, though passing individuals were recorded regularly throughout the study period. The commonest falcons were Red-footed Falcon (Total 660 ind; see, **Fig 2h**) followed by Eurasian Hobby *F. subbuteo* (152 ind; **Fig 2i**).

Only a proportion of individuals could be aged, in most cases because the distance was too great. Among the individuals we were able to age, juveniles of Western Marsh Harrier, Montagu's Harrier *C. pygargus* and Eurasian Hobby were significantly commoner than adults (Western Marsh Harrier **juv:ad** = **131:54**; χ^2 = 32.0, df=1, P<0.001. Montagu's Harrier: **21:2**; χ^2 = 15.7, df=1, P<0.001. Eurasian Hobby: **40:8**, χ^2 =21.3, df=1, P<0.001). There were significantly more adults than juveniles of Red-footed Falcons (**105:218**, χ^2 =39.5, df=1, P<0.001). As explained above, these analyses omitted 2-cy and 3-cy individuals. At the peak of the European Honey Buzzard migration, we were unable to age or sex each passing bird because there were often distant flocks. We could therefore not quantify the proportion of sexes or age classes accurately. The sample sizes of the remaining species were too small to provide meaningful proportions of age and sex classes. Because Pallid Harrier *C. macrourus* is of conservation concern, we have presented the ages of the individuals observed: out of 15 birds, 8 were juveniles, 5 adult males and one was a 3-cy male. The distribution of migratory raptors over the daylight period from 25 September onwards is given in **Figs 3a-3**i. The peak of passage of all the nine analysed species was between midday and 14:00.

DISCUSSION

Large raptors migrate predominantly by soaring-gliding, using thermal updrafts over land, and avoid long crossing distances over water (Kerlinger 1985, 1989). Some species with relatively long or pointed wings, such as harriers, ospreys and falcons, use flapping flight (*eg* Kerlinger 1989), often will undertake long overwater flights and might therefore be expected to be relatively more common on Cyprus than other raptors. We found this to be the case on Cyprus. If we compare our results with the mean numbers of raptors migrating in autumn across Kfar Qasim in Israel (Shirihai *et al* 2000), we find that the relative proportion of some species using Cyprus is comparatively small, even in a year which by Cyprus standards the migration was exceptionally good. For example, take European Honey Buzzard: the mean at Kfar: 322 000; this study: 3302 (some might have passed before we began our study). Much more occasional in Cyprus are Black Kite *Milvus migrans* (8973:44); Common/Steppe Buzzard *Buteo buteo/vulpinus* (1166:36) and Lesser Spotted Eagle *Aquila pomarina* (83 584:3). On the other hand, the relative numbers of Western Marsh Harrier (993:554), Montagu's Harrier (71:96), Osprey (64:23) and Red-footed Falcon (3019:660) were of similar magnitude. These results agree with a study by Meyer *et al* (2000) on autumn migration along the western flyway in Malaga in southeastern Spain: Black Kite exclusively, and Honey Buzzards predominately, followed the coast to the west towards Gibraltar, while the majority of harriers, falcons and Ospreys crossed the sea directly.

Comparison of the numbers of Eurasian Sparrowhawks *Accipiter nisus* and Levant Sparrowhawks *A. brevipes*, two similar species, reveals that the former species is commoner on Cyprus during migration (this study, Flint & Stewart 1992) but at Kfar (Shirihai *et al* 2000) the numbers of Levant Sparrowhawk far exceed the numbers of Eurasian Sparrowhawk (39 157:814). Although similar in structure, the two species' migration strategies seem to vary greatly: the vast majority of Levant Sparrowhawk is seen migrating in large flocks in soaring-gliding flight during the day (Shirihai & Christie 1992), but some individuals also migrate by night (Stark & Liechti 1993); these two strategies have not been recorded for the Eurasian Sparrowhawk. The entire population of Levant Sparrowhawk may migrate through Israel, because the numbers of migrants counted in Israel exceeds the best estimates of the breeding population (Hagemeijer & Blair 1997). For some reason, the Levant Sparrowhawk seems to migrate along a very narrow migration route which lies to the east of Cyprus. The passage of the globally threatened Pallid Harrier (NT = Near threatened, BirdLife International 2005), Saker *F. cherrug* (E = endangered) and Lesser Kestrel *F. naumanni* (V = vulnerable) is worth mentioning. It may be assumed that these species probably migrate on a broad front because the mean numbers at Kfar are comparable to those from this study (Pallid Harrier, Kfar 40, this study 15; Saker, 1 and 13; Lesser Kestrel, 18 and 32 respectively). However, they often migrate at very high altitude, and so many may have passed unnoticed.

Also of interest is the observation of several Peregrines *F. peregrinus* of the northern race *calidus*. This race is a scarce winter visitor to Cyprus with few records each winter (Gordon 2002, 2003, 2004, Richardson 2006). Having long wings and tail and being a very long-distance migrant (Corso 2001b, 2005, Forsman 1999), this bird is highly capable of long sea-crossings and does not therefore avoid islands. The number of birds we observed at the SE peninsula (24 reported of all races, of which 5-7 were *calidus*) are comparable to the numbers recorded at the Straits of Messina (average of 7.5 in 1997-2000, 2001b, Corso 2005). However, this is not indicative of the real passage magnitude over both islands as the species migrates on a wide front, as do several other migratory raptors using flapping flight (*eg* Lesser Kestrel, Saker, Red-footed Falcon and harriers). Concerning the Common Buzzard, we report *buteo* and *vulpinus* races together, as many of the birds seen were of the grey-brown morphs (though a few fox-red morphs were recorded as well), some of them probably having originated from the intermediate/clinal population of the Eastern Baltic area. For many we did not therefore risk attribution to a certain race (Harrop & Collinson 2003). However, most Common Buzzards migrating south over Turkey are usually attributed to *vulpinus* (Shirihai *et al* 2000). When compared with those obtained at the much better-known Akrotiri Peninsula site, our counts revealed higher numbers of almost all raptor species (*cf* **Table1**); Zalles & Bildstein (2000) mention the following autumn counts over 21 days from 19 September to 9 October 1992: in some cases we include in brackets the maximum numbers cited in the literature: *Pernis apivorus* 249 (860 in 1969), *Pandion haliaetus* 6, *Milvus migrans* 15 (50 in 1966), *Circus macrourus* 5, *C. pygargus* 9, *C. aeruginosus* 112, *Accipiter nisus* 39 (45 in 1967), *A. brevipes* 8, *Buteo buteo* 105 (300 in 1968), *Aquila pennata* (as *Hieraaetus pennatus*) 12, *A. pomarina* 1, *Falco naumanni/tinnunculus* 31, *F. vespertinus* 432, *F. subbuteo* 12 (106 in 1967), *F. cherrug* 3 and *F. peregrinus* 1. Our observations indicate that the SE peninsula is a very important site for raptor migration on Cyprus, particularly if the pattern of observations is maintained year to year, even in years of low raptor passage numbers.

In terms of distance to the closest mainland, the minimum flight distance from Turkey to Cyprus is *c*80km and from Cyprus to Egypt is *c*350km., circumstances not

too different to those applying to the central Mediterranean islands such as the Maltese Archipelago between Sicily and Tunisia – Sicily to Malta *c*90km and Malta to Tunisia *c*300km. Agostini *et al* (2004b) studied raptor migration in autumn on Pantelleria. They obtained similar figures to ours for European Honey Buzzard (Pantelleria: 2726 ind), Western Marsh Harrier (611) and Osprey (8). One noteworthy aspect is that the Black Kite was much more abundant on Pantelleria (where it was the commonest raptor after European Honey Buzzard and Western Marsh Harrier), as compared with the low total number of this study. The earlier start of Agostini's study may offer only a partial explanation for the difference, since the Black Kite had not been recorded in high numbers in autumn in Cyprus in the last several years (Gordon 2002, 2004, Richardson 2005). This species avoids long sea crossings both along the western flyway (Evans & Lathbury 1973, Meyer *et al* 2000) and the eastern flyway (this study, Shirihai *et al* 2000), but does undertake a long sea-crossing along the central flyway (Beaman & Galea 1974, Panuccio *et al* 2005). Some raptors follow different migration routes when young and adult (*eg* Agostini 2004, Agostini *et al* 2004a, Schmid 2000). On their first migration, juvenile raptors of many species cannot benefit from the adults' experience, since adults often migrate earlier (*eg* Gustin & Pizzari 1998). Hence juveniles, very often migrating alone or together with individuals of the same age-class, depend on their endogenous migratory impulse for direction, change of direction and timing (duration in any direction and change of course) (Berthold 1999), while adults may adjust their outward migration with experience (adaptive navigation). Thus, arriving at a coast (an ecological barrier, Berthold 1999), juveniles will follow a course that their internal clock demands. Early migrant juveniles would tend to maintain their heading out across the sea, while adults may navigate and make a detour along the coast in favour of a safe migration. In conditions of good visibility, adults to save energy might take the option on outward migration to cut the corner by flying from Turkey to Cyprus and then from southeast Cyprus towards Israel, because in both cases the destinations can be seen. In conditions of poor visibility (whether low clouds or industrial pollution), raptor migration to Cyprus from Turkey is almost non-existent (Mike Blair pers comm). The high proportion of juvenile Western Marsh Harriers and Eurasian Hobbies migrating across Cyprus may support this hypothesis, though the differences are less marked as these two species are capable of sustained flapping flight. Red-footed Falcons often migrate in mixed groups, so juveniles can benefit from the experience of the adults; these juveniles, as expected, are not overrepresented on islands. In case of the Eurasian Honey Buzzard in this study, it was also the case that juveniles appeared to exceed adults in number, but unfortunately because too many of the huge flocks were too distant for us to separate age-classes, our age-class counts applied only to a small proportion of the total numbers recorded. Other Cyprus records, however, show that Eurasian Honey Buzzard individuals in autumn are mostly juveniles or immatures (Colin Richardson, pers obs).

Other factors may be invoked to explain the variation in migration route between age classes. Differences in moult between age classes might have some effect, as might different wing-shapes, weights and tail lengths. Individual capability and experience in finding and using thermals and in avoiding obstacles may well play a part. It is known that some adult Montagu's Harriers continue to moult during autumn migration (Arroyo & King 1996) as do adult Pallid Harriers, although the percentage may be tiny (Corso & Cardelli 2004, Forsman 1999, T Roth pers obs). Agostini & Logozzo (1997) supposed that the gaps in moulting wings may imply higher energy costs during sustained flapping flights, making adults inclined to avoid long sea crossings. Indeed, juvenile Montagu's Harrier were much more

Photospot Plate 1. Sociable Lapwing *Vanellus gregarius*. Syria, early 2007. *© Mahmud Sheish Abdallah.* *(Text p.97)*

Photospot Plate 2. Sociable Lapwing *Vanellus gregarius*. Syria, early 2007. *© David Hoekstra.* *(Text p.97)*

Photospot Plate 3. Sociable Lapwing *Vanellus gregarius*. Syria, early 2007. *© Guido Keijl.* *(Text p.97)*

common than adults on Cyprus. Similarly, Corso & Cardelli (2004) suggested that many adult Pallid Harriers seem to tend to avoid long sea crossings in autumn, preferring to migrate over Middle Eastern countries. Our observations, though limited to a restricted number of birds, appear to confirm this phenomenon. Panuccio *et al* (2005) found that the circadian migratory flow across the Straits of Messina varied profoundly among species. In our study, we found that the circadian distribution of observation was similar for all species, peaks occurring around midday. The birds may in general start somewhere on the mainland (Turkey) in the morning, cross Cyprus at midday and head directly towards Africa. This would best explain the pattern of a midday peak. A peak in the early morning could be expected only if the birds were starting from somewhere in Cyprus. But as this does not coincide with observations and the timetable, our reasoning implies that a major part of raptors observed at the SE peninsula cross the sea from the mainland to Africa in one day without a stopover. However, as already mentioned, we did observe raptors, including some in groups, roosting on the SE peninsula and taking off at dawn (pers obs).

CONCLUSION

Sea crossings by raptors do also occur along the eastern flyway in the Mediterranean. Cyprus, and in particular the southeast peninsula, must be regarded as an important flyway for some species, such as Western Marsh and Montagu's Harrier, Osprey and Red-footed Falcon. Taking into account the total number of raptor species and individuals recorded on the SE peninsula, in our opinion the area should be included among Important Bird Areas (IBA) for the autumn migration of raptors. To prove the value of this area, we strongly recommend that raptor counts be carried out over a series of autumns. This would be the only way to confirm whether the 2005 season was typical or an exception for raptor migration at the SE peninsula. All possible efforts should be made by the local government and associations to protect the area and bird flyway from hunting, construction and other disturbance. In view of the findings of this paper and other published research, we urge the Cyprus Forestry Department and private land owners to recognise that SE peninsula is important for migrating raptors in autumn and to support the case for making it an IBA: this precious habitat will require careful management to protect migrant and resident bird species and other wildlife.

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Brown Fish Owl *Ketupa zeylonensis*, Antalya Mountains, Turkey. © *Osman Yöntem* (text on p94)

Brown Fish Owl *Ketupa zeylonensis* pair at roost, Antalya Mountains, Turkey. © *Osman Yöntem* (text on p94)

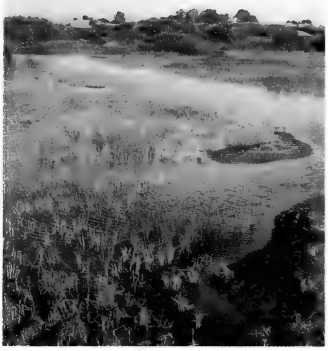
Days in Iraq with the Basra Reed Warbler *Acrocephalus griseldis* **Plate 1.** © *Omar Fadhel* (text on p95)

Days in Iraq with the Basra Reed Warbler *Acrocephalus griseldis* **Plate 2.** © *Omar Fadhel* (text on p95)

Days in Iraq with the Basra Reed Warbler *Acrocephalus griseldis* **Plate 3.** © *Omar Fadhel* (text on p95)

ATR **Plate 1.** Red (Grey) Phalarope *Phalaropus fulicarius*, Jordan. *© Pete Ellis* (see p11)

ATR **Plate 2**. Forest Wagtail, *Dendronanthus indicus*, al-Abraq, Kuwait. *© Pekka Fågel* (see p12)



Mheimideh **Plate 1.** Typical setting. © *David Murdoch* (text on p98)

Mheimideh **Plate 2.** Deep-water pool. © *David Murdoch* (text on p98)

Mheimideh **Plate 3.** Mining depressions. © *David Murdoch* (text on p98)

First for Turkey **Plate 1**. Siberian Accentor *Prunella montanella,* 2 Nov 06 Rumeli Feneri Turkey. *© Soner Bekir* (text on p107)

First for Turkey **Plate 2**. Lapland Longspur *Calcarius lapponicus* , 2 Nov 06 Rumeli Feneri Turkey.*© Soner Bekir* (text on p107)

Notes on the European Bee-eater *Merops apiaster* in northern Iran

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The European Bee-eater *Merops apiaster* is as a summer visitor to Iran (Mansoori 2001), like most insectivorous species, but records are lacking for arrival and departure dates and for its residency period in Iran. In this note, I summarise observations of European Bee-eater in Mazandaran and Tehran from the year 2000 onwards.

Early (arrival) records are: a small group at Noor Natural Resources Faculty, Mazandaran on 4 Apr 2000; one (several?) at Karadj city on 9 Apr 2003; one at the Anzali wetland on 12 Apr 2001; one on 1 May 2001 *c*65km east of Ghazvin city and another on 2 May 2002 in Sanandadj. Late (departure) records are: 11 & 12 Nov 2000 in Rostamkola and Behshahr, Mazandaran; 13 Nov 2000 in Sowmaeh-Sara, Gilan; nine on 6 Oct 2000 in Rostamkola; 'several' on 9 Oct 2000 at Dar-Abad Museum, north of Tehran, four flying on farms at Shahrak Eslah-e-Bazr, Karadj on 19 Oct 2004; in the Lake Orumieh area, Jalving and Vos (2003) noted it as fairly common and widespread, recording 70 birds (the largest late record) on 16 Sep and 30 on 24 Sep 2000.

I postulate that the residency period of European Bee-eater is roughly 7.5 months in northern Iran. In Rostamkola in Mazandaran, most assemblages usually appear in August over ripening rice fields. Between the April records and the August assemblages, small groups often appear in many locations. Such example records include 25km east of Bojnord, Khorasan on 30 May 2001, in Karadj from late May to late Jun, in Evin, north of Tehran, on 8 Aug 2000 and also in early Jul 2000. A roost of *c*100 non-breeding or late-breeding birds was recorded at the Agriculture Research Station of Pars-Abad, Moghan in Ardebil, on short poplar *Populus* sp trees, between 15-17 Jun 2001. The species seems often to appear just after rain, as happened in Mazandaran during 2000-2004. For example, the above Noor record followed a rainy day. After the 9 Apr Karadj record above, there was more or less continuous rain until 25 Apr, when the species promptly reappeared.

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An observation of Brown Fish Owl *Ketupa zeylonensis* in Turkey

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Translation by Sureyya Isfendiyaroğlu and additional support from Özge Balkız

In October 2004 I participated in an expedition to collect basic information on the wildlife of the Antalya Mountains (Kiliç & Eken 2004). As part of our study, we interviewed local people to obtain both general and detailed information about their area. A shepherd reported that a large owl was breeding on a cliff in a nearby canyon. That day, we set out to find and identify this mysterious species. After an exhausting walk in a steep and rocky river valley, we reached the

area where we could see two large owls roosting in scrubby trees only 10m from the expanses of the rock faces forming the cliff. I photographed the birds (**Plates 1 & 2** on p92) at a range of 15m, using my Canon EOS 300 and its 300mm lens. During many subsequent excursions through that valley, we saw the owls many times close to that same location. I recognised the birds as being Brown Fish Owls *Ketupa zeylonensis*, and confirmed my identification from my pictures. Up to now, the species' status has been that of a possible rare resident (Kirwan *et al* 1998). Burfield & van Bommel (2004) record a severe population decline in Turkey between 1990 and 2000, the BirdLife status given therein being Critically Endangered. The general area is dominated by forests of red pine *Pinus sylvestris*, whereas the rocky parts of the canyon floor are covered mainly by maquis comprised of such as holm oak *Quercus ilex*, olive trees *Olea oleaster*, mock privet *Phillyrea latifolia*, jasmine box *Phillyrea media*, Mediterranean strawberry tree *Arbutus andrachne*, terebinth *Pistacia terebinthus*, oleander *Nerium oleander* and myrtle *Myrthus communis*. The river, which is rich in fauna, is known to contain eel *Anguila anguila*, carp *Cyprinus* sp, frogs *Rana* sp, freshwater crustacea and dragonflies *Odenata* sp. Some remnant arable land lies adjacent to the river banks, where traditional extensive agriculture is still implemented.

I have produced recommendations for the protection and conservation the conservation of these Brown Fish Owls:

- Further research activities, involving Doğa Derneği, should be undertaken in order to identify the Brown Fish Owls' breeding and feeding territories.
- The cooperation of relevant government bodies and the local administrations should be secured in order to implement strict conservation measures in the area.
- Organic agriculture methods should be promoted in order to maintain the health of the river ecosystem.
- The local community should become involved with the species conservation by means of awareness programmes.
- Leaflets on the importance of the species and the site should be produced.
- Illegal fishing should be diminished to help maintain the fish populations in the river.
- Forestry management plans should be revised to take into account the species' biology.

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Days in Iraq with the Basra Reed Warbler *Acrocephalus griseldis*

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The Mesopotamian marshlands of southern Iraq are famous for their wildlife. This vast area of fresh-water lakes and the salt water of the Arabian Gulf make for important habitats for breeding, wintering and migrant birds. During the last three winters and two summers, biologists from Nature Iraq have been making surveys of these marshes under the Canada-Iraq Marshlands Initiative. BirdLife International was responsible for our training and, in addition to helping with the surveys, has encouraged me to study one of the marshland specialities. During my expeditions to the marshes near Al-Basra I first encountered the delightful Basra Reed Warbler *Acrocephalus griseldis*, a small bird that had undertaken a long journey from its winter haunts in East Africa to the marshes of my homeland (Porter *et al* 1996). Such was the charm of this bird that I decided to spend hot summer days watching it and its family.

Photospot Plate 4. Sociable Lapwing *Vanellus gregarius*. Syria, early 2007. *© David Hoekstra. (text on p97)*

Photospot Plate 5. Sociable Lapwing *Vanellus gregarius*. Syria, early 2007. *© David Hoekstra. (text on p97)*

Photospot Plate 6. Sociable Lapwing *Vanellus gregarius*. Syria, early 2007. *© Guido Keijl. (text on p97)*

The Basra Reed Warbler is near-endemic to Mesopotamia. Many frequent the reedbeds, thickets and shallow stream edges in the wetlands near Al-Basra. The tragedy of the drainage since the late 1980s was that it adversely affected the wildlife of the marshes to a huge extent – the numbers of this warbler became very low as its habitat dried out and the result was that it became Iraq's most globally threatened bird species, assessed as Endangered (BirdLife 2007), whereas previously it was considered only Near-Threatened (Stattersfield & Capper 2000). The Basra Reed Warbler is clearly independent from the Great Reed Warbler *A. arundinaceus*, which has a relatively massive body. *A. griseldis* can be distinguished by its smaller size, olive-brown plumage, distinct white supercilium, grey legs and elegant, thin, brown bill. The throat and underparts appear paler than the Great Reed Warbler. When close, you can see the narrow white edgings to its primary tips (see Basra Reed Warbler **Plates 1-3**, p92).

The behaviour of this little bird is also strange – it can be seen jumping and sneaking through the reedbeds, adopting different poses as it looks for the aquatic insects and larvae that are its favourite food. Sometimes it approaches the water's edge to catch small invertebrates or to scavenge the remains of dead fish, which are other sources of protein. The Basra Reed Warbler returns from Africa in spring to spend the summer in the Iraqi marshlands where it breeds. It builds its nest where the reeds are at a high density. After incubation and raising its young, its outward migration takes it back to Africa, to replay its life cycle the next year. Next summer I will return to the marshes of Al-Basra to spend many more hot days studying my new friends.

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LATE NEWS PHOTOSPOT
Sociable Lapwing *Vanellus gregarius* in Syria

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It is quite remarkable that large post-breeding populations of Sociable Lapwing *Vanellus gregarius* have been discovered in Syria and Turkey, and for a number of reasons. Firstly, the total counted, well over 2000 in Turkey Remco Hofland pers comm) and 1000 in Turkey (7 March 2007 – Birdlife 2007), represents about 25% of the known upper limit of the world population, but the origin of the Syrian birds is by no means certain. Although there is little recent knowledge about the wintering bird populations in the area where the Sociable Lapwings were found, is this area part of the regular wintering distribution of the species? Remco Hofland and his team are to be congratulated on the success of their hard work. OSME provided part of the support funding of this expedition.

The previous pattern of reports of sightings of Sociable Lapwing is one of individuals or small flocks, with occasional reports of larger gatherings, the overall incidence of sightings showing a decreasing trend. As indicated in Murdoch & Serra (2006), the birds in Syria and Turkey in the 2006/7 winter may either have stopped off for longer than usual in these locations on their way to their usual wintering grounds possibly on the African Red Sea coastal zone (Stattersfield & Capper 2000) or may only have migrated no further south this year. However, is there possibly a shift in migration patterns of a number of species? The discovery of Sociable Lapwings in Syria correlates with the increase in White-headed Duck *Oxyura leucocephala* in Israel (Hadad & Moyal, p70 this issue). If a large-scale change in

migratory behaviour is in progress, even if only for a handful of species, it will require a fundamental change in the associated conservation policies. Not only would the various international Single Species Action Plans have to be modified, the entire concept might have to be recast to allow such plans to be dynamic in response to rapid changes, rather than fixed agreements, such as the Agreement on the Conservation of African-Eurasian Migratory Waterbirds (AEWA) for the White-headed Duck (Hughes *et al* 2006).

Plates 1-6 are of the Sociable Lapwing flocks in Syria.

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Bird sites of the OSME Region: 3 – Mheimideh – jewel on the Euphrates

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The headwaters of the river Euphrates flow out of the Turkish hills, twisting across the parched lands of northern Syria before they enter the Iraqi plains. Until recently, the Euphrates flooded every winter, constantly changing its course, leaving behind oxbow lakes teeming with birds – duck, herons, terns, waders. Giant dams have now tamed the once-mighty river and many oxbows have been drained, but one site still gives a feel of the abundant wildlife they once held – Mheimideh. Less than 2km^2 in area, Mheimideh is hemmed in on all sides by houses (Mheimideh **Plates 1-3**, p93), yet it contains a wide range of habitats and an astonishing quality and quantity of wetland birds, the most important being three globally threatened species of duck (Birdlife International 2006), all of which breed on site. It has outstanding potential for educating and enthusing Syrians in nature conservation, for wildlife research and for ecotourism, but it is at very high risk of drainage or in-filling. My pressing purpose is to alert the conservation community to its potential and vulnerability; the longer-term aim is that Mheimideh should be the flagship nature reserve in the Euphrates valley.

Description

Mheimideh lies on the northeast bank of the Euphrates at an altitude of 205m, 15km north-west of the Syrian city of Deir ez-Zor, and can be reached easily (**Appendix 1**). The remaining waterbody is effectively sickle-shaped, with the deepest water (Mheimideh **Plate 2**, p93) on the outer edge of the sickle, gradually shelving towards the centre. The village of Sfeira Tahtani occupies the centre of the oxbow with Mheimideh village to the north and a major road on its western limit (**Fig 1**). The ground in the centre is very broken up by past mining operations, leaving many small water-filled depressions (Mheimideh **Plate 3**, p93), making access to the deeper water difficult; this area is grazed to bare earth. The land shelves irregularly into the deeper water, with islands and patches of reed of various sizes and other emergent vegetation, particularly towards the western end – this corner is good for herons, duck, crakes and reedbed passerines. A minor road runs along the northern side but a tall belt of *Arundo* sp reeds acts as an effective screen from the deepest water of the oxbow, the 'Northern Pool', the best area for

diving ducks. On the western edge, the wet sedges that border the main road are good for duck, waders and breeding wagtails. The causeway crossing the eastern end of the oxbow gives good views to the north of a lagoon excellent for duck and herons. The pools to its south are also productive but, further round the sickle, the water becomes shallow and choked with human debris. The result is a compact site with a rich mosaic of habitats in the middle of an extended village; it could almost have been designed by a wildlife consultant.

The birds

The most conspicuous birds are ducks. This in itself is remarkable as the wetland is effectively inside a village and duck are heavily hunted elsewhere along the Euphrates – yet a winter visit can record several thousand duck of 12 species (Murdoch *et al* 2004), with Eurasian Teal *Anas crecca* and Common Pochard *Aythya ferina* the commonest. In spring, it is easy to see three globally threatened species, White-headed Duck *Oxyura leucocephala*, Ferruginous Duck *Ay. nyroca* and Marbled Teal *Marmaronetta angustirostris*. Small numbers of White-headed Duck may well be resident, 21 being present in January 2004 and breeding proven in June 2003 (Murdoch 2003); the best areas to see them are just south of the causeway and the 'Northern Pool'. Ferruginous Duck is resident and common, with 10-40 pairs breeding, but Marbled Teal is probably a summer visitor, with perhaps 10 pairs. Mallard *A. platyrhynchos* bred in April 2006; there is apparently only one previous breeding record from Syria. Observations of a female Pochard in June 2003 and males of Shoveler *A. clypeata*, Garganey *A. querquedula* and even Pintail *A. acuta* in mid-May 2006 are intriguing, but few birders have visited in early summer, when sightings of ducklings would confirm breeding. Little Grebes *Tachybaptus ruficollis* are abundant and at least five pairs of Great Crested Grebes *Podiceps cristatus* in May 2006 constituted the second Syrian breeding record. Mheimideh is extraordinarily good for breeding birds, considering the level of disturbance; a spring visit is full of Black-winged Stilts *Himantopus himantopus* (probably over 20 pairs), Spur-winged Lapwing *Vanellus spinosus* (10 - 20 pairs) and White-tailed Lapwing *V. leucurus* (*c*5 pairs). Another attraction is the noisy colony of Whiskered Terns *Chlidonias hybrida*, easily watched from the causeway; there were probably 50 pairs in May 2006. A few Blue-cheeked Bee-eaters *Merops persicus* grace the centre of the oxbow and the reeds are alive with Savi's Warbler *Locustella luscinioides* (abundant), Moustached Warbler *Acrocephalus melanopogon* and Reed Warbler *Ac. scirpaceus*, though Great Reed Warblers *Ac. arundinaceus* seem to be scarce. Iraq Babblers *Turdoides altirostris* are common but more easily seen in late winter than the breeding season. Black-headed Wagtails *Motacilla flava feldegg* breed in the sedges with one pair of Citrine Wagtails *Motacilla citreola* in May 2006 – the first breeding record for Syria. Collared Pratincoles *Glareola pratincola* are usually present but they do not appear to breed on site.

Plate 4. Mheimideh children with bird book. *© David Murdoch*

Nine species of herons have been recorded and it is usual to see 4-6 species without difficulty, though none has been proven to breed. The commonest species is Little Egret *Egretta garzetta* with usually a few Great Egret *Ardea alba* and Grey Heron *Ar. cinerea*. Little Bittern *Ixobrychus minutus*, Purple Heron *Ar. purpurea* and Squacco Heron *Ardeola ralloides* are mainly summer visitors, Great Bittern *Botaurus stellaris* winters and Black-crowned Night Heron *Nycticorax nycticorax* and Cattle Egret *Bubulcus ibis* are irregular. It is easy to miss the herons because many pools are difficult to reach; in January 2004, we did not find a roost of 45 Grey Herons (a good count for Syria) until we had checked the 'Northern Pool'. Singleton Pygmy Cormorant *Phalacrocorax pygmeus* and Glossy Ibis *Plegadis falcinellus* have been seen on several occasions. Purple Swamphen *Porphyrio porphyrio* is common and conspicuous. Wintering Water Rails *Rallus aquaticus* often call in the reeds; an individual seen on 18 May 2006 is suggestive of breeding, not yet proven anywhere in Syria. Little Crake *Porzana parva* occurs on spring passage and regular visits will probably turn up other crake species. The muddy edges and tepid pools attract a wide range of migrants, Little Stint *Calidris minuta* and Ruff *Philomachus pugnax* the commonest, with over 20 species already recorded, notably Black-winged Pratincole *G. nordmanni* and Bar-tailed Godwit *Limosa lapponica*. There are often small numbers of White-winged *Chl. leucopterus*, Gull-billed *Gelochelidon nilotica*, Little *Sternula albifrons* and Common *Sterna hirundo* Terns, some of which may breed in the area. Slender-billed Gulls *Larus genei* are scarce and larger gulls seem to avoid the site. A variety of raptors hunt in winter and on passage; the commonest is Marsh Harrier *Circus aeruginosus* but Hen Harrier *C. cyaneus* and Merlin *Falco columbarius* are also regular. None has yet been proven to breed. Up to 50 Pied Kingfishers *Ceryle rudis* winter with a few summering. Citrine Wagtails seem to like Mheimideh – they are regular on spring migration, with 20 on 8 April 2006, and probably winter in small numbers (Murdoch *et al* 2004). Bluethroats *Luscinia svecica* and Water Pipits *Anthus spinoletta* overwinter with hundreds of wagtails, pipits (including Red-throated *An. cervinus*) and hirundines on passage.

In a Syrian context

The three Red Data Book species at Mheimideh also breed at Sabkhat al-Jabbul, the most important wetland in Syria (Murdoch *et al* 2004; Serra *et al* 2006), but they appear to be scarce or absent elsewhere in Syria. In general, duck and herons seem to be very scarce in the breeding season along the Euphrates valley (pers obs) though a formal survey is much needed. The same wader species breed at Jabbul and thinly at other sites along the Euphrates. Iraq Babbler and reedbed warblers are found all along the valley but they are easy to see at Mheimideh. In summary, Mheimideh probably has a wider range of breeding waterfowl than anywhere elsewhere in Syria except Jabbul.

Threats and opportunities

Mheimideh's survival so far is almost miraculous and it must not be taken for granted; there is intense pressure on good land in the Euphrates valley. Underwater springs are apparently the reason that it has not been successfully drained – there have been attempts – but it would be so easy for further in-filling to obliterate the site by degrees, giving villagers more space to build houses. There is undoubtedly encroachment round the edges; a small marsh that held breeding White-tailed Lapwing in 2003 has now been filled in. Hunting is less of a threat as it is theoretically illegal in Syria and it poses a hazard to houses round the lake - though there are a few cartridges on the ground. In February 2004, a member of the Syrian Wetland Expedition was offered a live Teal, presumably snared. Cattle and sheep graze the site very heavily and may trample nests. Village dogs roam the edge of the water, even close to Spur-winged Plover nests, and must predate young birds. Mheimideh is so accessible and the wildlife so conspicuous, at all times of year, that it has exceptional potential as a nature reserve. The village children are always fascinated by birders' activities (**Plate 4** p99) and really enjoy looking at birds through telescopes; visitors sense that the villagers know they have somewhere special. This is crucial – any attempt by foreign conservationists to impose any form of reserve will fail if the local people are not interested and if the community does not gain. I appeal to all visitors to help the local children enjoy their birds by letting them look through your optics. More than that - bring wildlife literature to hand out, it is warmly received.

The way forward

I would like to see a Syrian conservationist appointed with a remit to promote education in nature conservation, to record the birdlife accurately and to facilitate ecotourism (both from within Syria and from abroad). The principal short-term aims would be to engage the local community with wildlife literature, to teach nature conservation in local schools and (if possible) to found a local wildlife club for Mheimideh and Deir ez-Zor, the city nearby. Ornithological literature is at last available in Arabic, namely the excellent Porter identification guide (Porter *et al* 1996) and attractive handouts from RSCN, the Jordanian wildlife society, but much more is needed; the key will be to enthuse and train local ornithologists. In the medium term, a display (in Arabic) interpreting the site would encourage ecotourism from within Syria. Mheimideh needs individual recognition as an Important Bird Area (Evans 1994). Systematic counts of breeding and wintering duck are important, though less so than education; wildfowl counts will not save the site from obliteration. In the longer term, my vision is of a reserve that is a flagship for nature conservation in Syria, a significant source of income for the community and a cause for local pride. The alternative is almost inevitable: Mheimideh will be filled in and built over. The local community does not have the skills to safeguard its wildlife, nor does any conservation body in Syria. Mheimideh has exceptional potential but it is the immediate responsibility of the international conservation community to save it. No excuses, please.

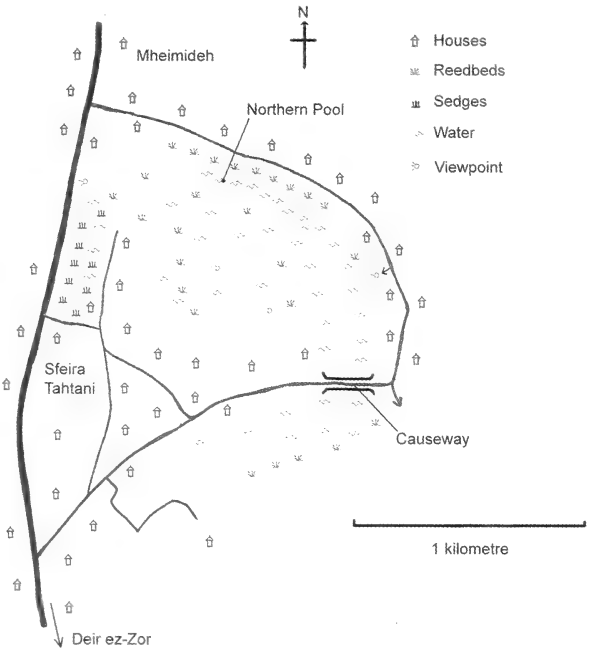

Figure 1. Sketch map of Mheimideh. *© David Murdoch*

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APPENDIX 1

Access and recording

Access is easy; Mheimideh is on the main road along the north bank of the Euphrates, only 20 minutes from Deir ez-Zor, the largest city on the Syrian Euphrates. The best place to park is on the western end of the causeway. From here, walk north or (if the light is wrong) cross the

causeway, slip between the houses and view west. However, to reach the 'Northern Pool' demands waterproof footwear. It is worth stopping on the main road to view over the sedges and to explore the nearby pools. First light is the best time to visit as many birds disappear shortly afterwards into the reeds. The first recorded visit by a birder was only in June 1994 (Hofland 1994). More birders have been visiting in the last five years, but visits so far have been random, almost always in the first half of the year, and usually targeting species such as Iraq Babbler. There have been no regular counts and very few observations during autumn passage. I confess that the estimates of breeding birds presented here are crude guesses made during a single morning. Red Data Book species surely deserve more accurate counts! So when you visit, please count everything you can and send the records to OSME at ed@osme.org.

Observation of Bohemian Waxwing *Bombycilla garrulus* in Armenia

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In its Holarctic distribution, the Bohemian Waxwing *Bombycilla garrulus* is a typical breeder of the tall taiga in the subarctic and boreal zones. It is a partial migrant and often makes eruptive movements. Within the Western Palearctic, its regular winter distribution ranges from the southern belt of the breeding area to northwestern, central and eastern Europe, but during invasion years it may reach the Mediterranean and Black Sea areas (Cramp 1988).

In the OSME area, the Waxwing is a vagrant to Cyprus and Israel, a rare visitor to Turkey and Iran (Porter *et al* 1996), a rare winter visitor to Georgia (Zhordanija 1962), irregular in cold winters to Azerbaijan (Patrikeev, 2004) and has reached Afghanistan (Dolgushin *et al* 1970). The species is more regularly a visitor to Kazakhstan – summer observations (eg Gavrilov & Gavrilov 2005) have raised the possibility that there may be an isolated breeding population in the northwestern Altai Mountains (Dolgushin *et al* 1970), possibly stretching east of Kazakhstan to the Western and Eastern Sayan Mountains and eastern Tuva (Ivanov 1976). In Armenia, one record, although published (Adamian & Klem 1997), was not supported by a description (Vasil Ananian pers comm).

Winter 2004/5 saw an unusually strong irruption of Waxwings within the Western Palearctic, birds appearing in massive numbers in the usual wintering range and reaching localities beyond it (Azzolini 2005, DDA 2005, Fintha and Pásti 2005, Goujon 2005, Wirdheim & Bruun 2004). This event also brought a large number of birds to Tbilisi, Georgia (Vasil Ananian pers comm).

On 11 December 2004, in clear, still weather conditions (*c*-3.5°C), I was birdwatching in the Tsahkadzor area, Armenia, near the tree-line east of the ski centre. At this altitude, *c*2000m asl, there was some 50cm of snow cover. I was wandering in an area of old oak and birch trees, when I heard the softly jingling call of Waxwings, recognised from earlier experience of the species in Hungary. As I turned there, I saw ten birds that had just taken off and were flying north. I saw them from the side and rear through my binoculars, as they flew away. The entire observation lasted about 20-30 seconds, but because of the proximity of the birds (*c*50m at the closest) this brief view was ample for certain identification. No other bird was present to allow size comparison. Although there was no opportunity to observe minute plumage details, I did note several essential ID features. The flock was relatively compact flock, and the flight was direct (not bounding) and like that of Common Starling *Sturnus vulgaris*; the birds' wing-shape was also starling-like, triangular (broad base and pointed tips), as was the size. Their plumage was generally light brown, and they displayed a black throat and a black mask on the face, some pattern on the wing (it could be discerned precisely) and a yellow terminal tail-band. This record is the first fully substantiated published record for Armenia (Vasil Ananian pers comm).

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The first record of Eleonora's Falcon *Falco eleonorae* (Gené, 1839) in Armenia

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As part of a Birdquest tour on 2 June 2005 we were birding *c*15km south-east of Yerevan in Azat river gorge near the Garni village (40°07'N, 44°44'E), Kotayk Province. The river gorge is a deep canyon with high basalt cliffs and boulder screes overgrown with walnut *Juglans regia*, feral fruit trees on one side and steep slopes with open juniper *Juniperus* sp woodland on the other. Scrub and bushes are present on both sides of the gorge, while its floor contains remains of gallery forest amid the gardens dominated by poplars *Populus* sp, willows *Salix* sp, fruit trees and walnut compose the main tree cover here. While walking along the river at about 16.00, BC noticed a gliding falcon approaching down the rocky slope. He first thought that it might be a Eurasian Hobby *Falco subbuteo*, but on realising it was a probable Eleonora's Falcon *F. eleonorae*, he then drew the group's attention to it, and later photographed it (**Plate 1**) at distance. Against the dark background of the slope we could see the bird's underparts clearly. The bird glided relatively low over our group, circled and ascended to soar with Common Buzzard *Buteo buteo menetriesi*, Eurasian Sparrowhawk *Accipiter nisus* and Common Kestrel *F. tinnunculus*. All the raptors rose higher with the thermal and eventually disappeared in the sky. During the observation we discussed the bird at length; our later examination of the photographs added no doubts to our conclusion that it had been a dark morph of Eleonora's Falcon, a species not previously recorded in Armenia. The observations over 3 to 4 minutes were made during bright sunshine with excellent visibility. Cloud cover was about two eighths. We used 8x and10x binoculars and 20x-60x fieldscopes at ranges of *c*50 to *c*300-400m.

Description

A medium size falcon with slim body, comparatively small head, distinctly long and slender wings and tail (the tail was closed at all times). Through direct comparison at *c*100m range, size was estimated as being *c*50% larger than the Common Kestrel present. Upperparts were noted at longer range as being uniform dark brown. Its underparts were seen better against the gorge wall; blackish-brown underwing coverts clearly contrasted with unbarred grey remiges . The dark brown head and underbody took on a chocolate-brown hue in direct sunlight, particularly in the ventral area.. However, wherever it was in indirect light, we could not see any difference in ventral colour from the rest of the underbody. At closer range, we noted barring on the rectrices. Flight action comprised powerful and elegant wingbeats that were noticeably relaxed compared with the 'hesitant' action of nearby Common Kestrel. The circumstances of the observation gave us reasonably good views of the bird, enabling us to eliminate readily all other confusion species among West Palearctic and Middle Eastern falcons, particularly Hobby, adult male Red-footed Falcon *F. vespertinus* and adult Sooty Falcon *F. concolor*. Seen gliding low over our heads, the bird lacked the red vent of the adult male Red-footed, which in similar circumstances and lighting conditions would clearly be much smaller in size, would display quicker and lighter flight action. The Red-foot exhibits different proportions (relatively blunter wings) and coloration (dark slate instead of blackish-brown underparts, dark slate grey upperparts, darker head and tail and pale silvery outer wings instead of uniform dark brown). Sooty Falcon would show rather uniform grey underparts without contrastingly dark underwing coverts against paler remiges and outer upperwings, its distal part of the tail is clearly darker than the rest of upperparts.

Plate 1. Eleonora's Falcon *Falco eleonorae*, 2 June 2005, Azat River gorge, Armenia. (Image adjusted for contrast). *© Bosse Carlsson.*

Notes on vagrancy

Breeding of Eleonora's Falcon is confined to the west Palearctic, mainly in the Mediterranean, extending to the Canary Islands and the Atlantic coast of Morocco. It winters in Madagascar and other nearby islands of the Indian Ocean, as well as in coastal SE Africa. Main arrivals at breeding sites occur through May to early June in the Mediterranean, although many immatures and adults wander before settling to breed in late summer as far away from the breeding range as the Baltic, and often occur well inland (Cramp & Simmons 1998, Forsman 1999). North of the breeding grounds, vagrants have been recorded in Albania (1 record), Bulgaria (relatively frequently), Denmark (6 records), France (over 275 records), Hungary (2 records), Poland (4 records), Slovenia (2 records), Sweden (12 records), Finland (3 records) and Britain (4 records) (Lee Evans *in litt* 2005). Areas of vagrancy in Turkey include Black Sea coast, Central Plateau, the south-east and east, the easternmost sightings being from Birecik (May 1984; May 1986; May 1987; June 1987), Cizre (June 1985), River Tigris at Diyarbakir (April 1987), east of lake Van (June 1987) and Ercek Golu (June 1987) (Martins 1989, Kirwan & Martins 1994). So far, there apparently are no published records from Iran (Mansoori 2000, Scott *et al* 1975, A. Khaleghizadeh *in litt* 2005) or from former Soviet Union territory (Dementiev & Gladkov 1951, Stepanyan 2003, VP Belik *in litt* 2005, EA Koblik *per* VP Belik *in litt* 2005). However, there have been undocumented verbal reports of at least three observations from the Black Sea coast of Georgia during 1977-1995 by A Abuladze and two from the Crimean region of Ukraine prior to 1988 by S Prokopenko (A Abuladze *in litt* 2005). In May and June 2005 vagrants in Europe were reported from France (5 May and 9 June), Hungary (12 May), Sweden (12 May) and Finland (7 and 22 June) (Gantlett 2005, van den Berg & Haas 2005).

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Raptor migration at Kazbegi, Georgia

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As a result of our raptor migration studies in Djibouti in the mid-1980s, we have always been interested in 'filling the gaps' in the knowledge of routes used by migrating raptors between their breeding grounds in northern and eastern Europe and Asia and the main entry points into Africa at either end of the Red Sea. In *OSME Bulletin* **22** (Welch & Welch 1989), we presented a short note suggesting a selection of sites which merited investigation, one of which was the central Caucasus of Georgia. In September 2003, we were able to fulfil a long-standing ambition to visit the area as a result of attending an international conference held in Kazbegi on the conservation of the Caucasian Black Grouse *Lyrurus mlokosiewiczi*. Kazbegi (42°50ãN 44°42ãE) is situated *c*160km north of Tbilisi at an altitude of 1740m asl. It lies in the valley of the River Terek which forms a natural crossing through the central Caucasus: the landscape is dominated by the impressive Mount Kazbek (5047m) to the west. We were present in Kazbegi from the afternoon of 19 Sep to the morning of 23 Sep but were able to make prolonged observations only on 20 Sep. Prior to our arrival, we had been touring other parts of Georgia and the weather had been distinctly mixed, especially in the mountains. On 19 Sep, when the weather, overcast with occasional light showers, was significantly better than for the preceding few days, we approached Kazbegi from Kobi and began to note small flocks of raptors moving south along the ridge bordering the road and so stopped to investigate. Between 1630 and 1730, we counted 155 raptors of 11 species, the commonest being Black Kite *Milvus migrans* (58) and Steppe Buzzard *Buteo buteo vulpinus* (59) (**Table 1**). On our way to Kazbegi we continued to observe the migration until dusk at 1900, recording a further 513 raptors of 8 species. Black Kite and Steppe Buzzard were again the most numerous but 68 Montagu's/Pallid Harriers *Circus pygargus/macrourus* were also of note.

The following morning the weather continued to improve, migrating raptors being noted from just after first light, with passage occurring throughout the day. The movement took place along both sides of the valley between Kazbegi and Kobi, which made it very difficult for just two observers to count. Therefore, instead of trying to count the whole movement or for the entire day, we carried out a sample one-hour count of the western side of the valley between 1145 and 1245, which, when considered together with the results of our casual observations, enabled us to gain an impression of the overall number of birds passing. The sample hour

Table 1. Raptor observations at Kazbegi, Georgia, September 2003

Scientific name / English name	19 Sep 1630-1730 Kobi-Kazbegi	19 Sep 1750-1900 Casual obs	20 Sep 0845-1500 Casual obs	20 Sep, 1145-1245 count W side of valley	Species totals	20 Sep Others' counts[1]
Falco tinnunculus / Kestrel	3	-	-	-	3	>5
F. tinnunculus/naumanni / Kestrel sp	-	-	-	1	1	-
Falco vespertinus / Red-footed Falcon	-	29	-	-	29	c6
Falco subbuteo / Eurasian Hobby	1	-	-	-	1	>2
Pernis apivorus / European Honey Buzzard	-	-	-	-	-	>100
Milvus migrans / Black Kite	56	59	11	1397	1523	>3000
Gypaetus barbatus[2] / Lammergeier	1	-	2	-	3	2
Gyps fulvus[2] / Eurasian Griffon Vulture	8	1	6	-	15	10-20
Aegypius monachus[2] / Cinereous Vulture	-	-	2	-	2	1
Circus aeruginosus / Western Marsh Harrier	1	1	2	-	4	>15
Circus macrourus / Pallid Harrier	-	-	-	-	-	2
Circus pygargus / Montagu's Harrier	-	-	-	-	0	1
Circus sp / Harrier sp	12	69	11	28	120	-
Accipiter brevipes? / Levant Sparrowhawk	-	-	-	3	3	c3
Accipiter nisus / Eurasian Sparrowhawk	13	15	9	82	119	>100
Buteo buteo vulpinus / Steppe Buzzard	58	364	389	1970	2781	>3000
B.b. vulpinus/M. migrans / Raptor sp	-	-	298	-	298	-
Aquila pomarina / Lesser Spotted Eagle	1	1	-	2	4	>10
Aquila nipalensis / Steppe Eagle	1	-	69	1	71	>10
Aquila heliaca / Eastern Imperial Eagle	-	-	1	-	1	-
Aquila chrysaetos[2] / Golden Eagle	-	-	2	-	2	2-3
Aquila pennata / Booted Eagle	-	1	1	7	8	3
Raptors per day totals	**155**	**539**	**801**	**3491**	**4988**	**>6250**

[1] The figures in the last column were obtained from independent counts by Swiss and German birdwatchers
[2] These species were not considered migrants.

produced a minimum of 3491 raptors of 10 species. Now, the general intensity of the movement was consistent for most of the day, and allowing for birds that we undoubtedly missed, we estimate that between 30 000 and 50 000 raptors passed through on that day. Several other observers, mostly Swiss and German who were also attending the conference, also noted this same movement and we include their counts in **Table 1**.

Raptor passage continued throughout our stay at Kazbegi, but as the weather conditions steadily improved, the numbers reduced day by day. It is likely that the preceding spell of bad weather had held up birds on the Russian side of the Caucasus, allowing them to come through in a 'rush' on the 20th. A similar movement, but of much greater magnitude, had been recorded by Beaman & Porter (1977) under similar weather conditions during their pioneering count at Borcka in northeast Turkey in 1976. The large numbers of Steppe Buzzards were to be expected but the numbers of Black Kites and harriers are noteworthy. In addition to the raptors, there was a steady passage of hirundines and bee-eaters and, given the amount of cover in the river valley, it is likely that a high variety and number of passerines also use the route.

Even though the movement on 20 Sep may have been exceptional, it is clear that Kazbegi is an important site for birds crossing the Caucasus and deserves regular attention and more comprehensive counting. We discussed our observations with staff from the Georgian Center for the Conservation of Wildlife who have recently started a raptor monitoring programme along the Black Sea Coast near Batumi (Balmer & Kirwan 2003). Our conclusion is that it is likely that the birds passing through Kazbegi do not form part of the movement recorded at other sites, which further highlights the importance of Georgia for raptor monitoring and conservation.

We would like to thank Thomas Gottschalk for providing the records from the other conference attendees.

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First record of Carrion Crow *Corvus corone* (*C.c. corone* or *C.c. orientalis*) for Lebanon

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On the afternoon of 24 October 2005, Chris Naylor, my wife and I were guiding a group of Swiss visitors around the springs area of Aammiq marsh, Bekaa. The non-birding guests were somewhat bemused at my excitement at the sight of a group of corvids in a dead tree when more spectacular and colourful birds were on hand. A flock of 57 Jackdaws *Corvus monedula* had arrived, the first of the winter, and with them in the tree were two Hooded Crows *C. cornix* and one Carrion Crow *C. corone*. As the Jackdaws and the Carrion Crow were the first I had seen in Lebanon since my arrival in January 2005, I drew Chris' attention to the flock but being preoccupied with our guiding duties we did not have time to discuss our sightings until later that day at the *A Rocha* Lebanon office in Aana. Only when Chris said he had never seen Carrion Crow in his 10 years in the country and when we had consulted Porter *et al* (1996), did we realize that a bird so familiar bird to British birders apparently was a rarity for the entire Middle East region! Fortunately it remained in the area until 27 October, allowing us to make more detailed observations. Identification was straightforward enough; the individual was of approximately the same proportions as the accompanying Hooded Crows, differing only in having all-black plumage. The possibility of it being a first year Rook *C.* was eliminated because it had a powerful bill and lacked 'trousers'. Porter *et al* (1996) give Carrion Crow's status as 'vagrant Turkey'. Cramp & Perrins (1994) suggest these records are probably of the central Asian *orientalis* subspecies. *C.c. corone* is essentially sedentary and breeds no nearer than Western Europe, whereas *C.c. orientalis* is a winter visitor to northeast Iran, making it likely that the Aammiq bird was of the latter race.

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The first Siberian Accentor *Prunella ocularis* & Lapland Longspur *Calcarius lapponicus* in Turkey

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On 2 November 2006, during fieldwork in Belgrad Forest, Istanbul, I observed a few flocks of soaring raptors. Then, hoping to find a possible unexpected migratory species, I settled

down at a site on the northwest of the Bosphorus, at Rumeli Feneri (41°14'09.40"N, 29°06'32.80"E), a town on the shore approximately 30km from the centre of Istanbul. The local area comprises a narrow stretch of cultivated areas between the coastline and the sizeable forests and is rather good for habitat. Many of the outward migrants that pass south along the Black Sea take advantage of these small patches of open grassland, cultivated areas, and orchards to feed and rest before continuing their migration. At the site itself, there is a castle and a group of farm buildings. After spending 2 hours watching for seabirds and using my car as a hide, I began to take some pictures of passerines perched on the surrounding bushes. I didn't even need to move my camera when a Siberian Accentor *Prunella montanella* perched on the bush, only 15m away in front of me. To me, the species was unmistakable, being a typical *Prunella*, but with a much more yellowish body plumage and of a lighter hue than any adjacent birds. The size of the broad yellow supercilium and its clearly unmarked yellow–rusty throat differentiated it from Black-Throated Accentor *P. atrogularis*. After a few seconds, it flew toward to the ground about 50m away. When I tried to find the bird again, I happened to flush a flock of Eurasian Skylarks *Alauda arvensis* from the grassland. Upon tracking them with my binoculars, I immediately could see a strange bunting in the flock as they landed. At first glance, I assumed it must be a Snow Bunting *Plectrophenax nivalis* in its first-winter plumage, the species I was hoping to see. On further approaching the flock to obtain a better view, I was surprised to find another species new to Turkey, a Lapland Longspur *Calcarius lapponicus*. It was clearly identifiable from its reddish-brown wing panel framed by narrow white wing-bars and pale median crown stripe.

The weather was cloudy and quite warm, about 15°C. Later on, strong winds predominated, bringing much rain to the shores. Although many birders from Istanbul Birdwatching Society (IKGT) and Ankara hastened to find the birds by searching the same location over and over, the birds were never seen again. Elsewhere, Siberian Accentor is considered a rare vagrant for Europe, there being only a few records. If it were the case that the southernmost, isolated breeding population in the subalpine belt of the Sayan and Kuznetsky Alatau ranges (Rogacheva 1992) winters in Korea, then a 180° misorientation course from the breeding grounds passes close to Turkey (see map in del Hoyo *et al* 2005) Lapland Longspur does winter just north of the Black Sea, but there were not any previous proven records for Turkey. One was briefly seen and heard on the Black Sea Coast on 18 September 1987 (AA Dijkstra *in litt* 1997) but the report lacked sufficient details (Kılıç & Eken 2004). The above two records submitted to the unofficial Turkish Rarities Committee (TRC) are supported by photographs (First for Turkey **Plates 1 & 2**, p93) and comprehensive descriptions. The data and pictures have been and posted to their e-mail group. The TRC members have accepted them as the first records of these species for Turkey.

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Plumbeous Water Redstart *Rhyacornis fuliginosus* – a new breeding species for Central Asia

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On 31December 2004 I observed a male Plumbeous Water Redstart *Rhyacornis fuliginosus* on the River Varzob in Dushanbe, the capital of Tadzhikistan (Tajikistan). The rufous tail and the sharp high-pitched whistling call identified the bird as a Redstart. The bird was relatively small, had a stocky, almost uniform dark bluish-grey body. Except for the blackish

face, it lacked black, brown or red areas on the body as well as white wing panels or forehead. This excludes all local species or subspecies of Redstarts *Phoenicurus spp* and is typical of male Plumbeous Water Redstart. The bird was observed for about 20 minutes in an open stand of pine trees *Pinus sp* on the edge of the concrete-lined river bed. Dusk made observation less rewarding and I left the area. On two visits on 2 and 8 January the bird could not be relocated. Prior to the observation, there had been heavy snowfalls which may have forced the bird into town. Once the snow started to melt, it probably left. On 16 May 2005 a female Plumbeous Water Redstart was seen on the river Ojuk in the centre of the district town Varzob. The medium grey body with paler, scaly underparts, two white wingbars, a white tail base and an inverted black triangle on the distal half of the tail clearly identified this bird. It was feeding along a fast mountain river, a tributary of the Varzob river. Several times it disappeared behind the dense vegetation hanging over the steep riverbank. Even though I did not see it carrying food, I suspected it was breeding under this vegetation. Unfortunately, the site was inaccessible because the river currents were very strong and the banks very steep. I saw no male during 30 minutes of observation. On 29 May, I returned with Stephan Lauper, a Swiss, to that location and we rediscovered the female 100m downstream, feeding four freshly-fledged juveniles, which we could photograph (**Plates 1&2**), but again no male was seen. The juveniles did not yet have fully-grown tails and probably also wings, because they flew very poorly. We judged it safe to conclude that they were raised in close vicinity to Varzob town. On 29 January 2006 I saw a male Plumbeous Water Redstart on the river Romit at Yawroz, about 50km east of Dushanbe. Again the dark bluish-grey body, the rufous-brown tail and the blackish face area identified the bird. During the 5 minute period that urgent commitments allowed me, I saw it feeding beside a White-capped Water Redstart *Chaimarrornis leucocephalus* amongst stones in the river.

Discussion

The Plumbeous Water Redstart occurs from East Afghanistan through the Karakoram and Himalayas to NW Thailand, Taiwan, and NE China (Collar 2005). In Central Asia, there have been two previous records by Zarudnyi, both of single males, the first on 7 June 1908 along the Kara-Kul river near Isfara on the northern slope of the Turkestan ridge in the Kyrgyz-Tajik border region, and the second from summer 1910 in Bukhara (Abdusalyamov 1973, Dementeev & Gladkov 1954 [who give the date of the first record as 25 June], Ivanov 1969). The corresponding skins have been lost and so some of these authors expressed some doubt about the records. Abdusalyamov (1973) reports fruitless searches for the species and writes: "If one assumes that Plumbeous Water Redstart was encountered in the mountains of Tajikistan, it doubtlessly was so as a vagrant". In Afghanistan, the species is apparently found only to the

Plate 1. Recently-fledged Plumbeous Water Redstart *Rhyacornis fuliginosus*, Varzob, Tadzhikistan (side view). *© Raffaël Ayé*

Plate 2. Recently-fledged Plumbeous Water Redstart *Rhyacornis fuliginosus*, Varzob, Tadzhikistan (back view). *© Raffaël Ayé*

south of the Hindukush (Paludan 1959). Van der Ven (2002) lists the species as a potential breeding bird for southern Kyrgyzstan, but this may be based on Zarudnyi's single record for the area. Given the paucity of ornithologists who have worked in such a large area, it is not unlikely that the earlier observations were of birds belonging to a so far undiscovered breeding population in Tadzhikistan rather than of vagrants. Local and visiting birdwatchers should be on the alert for this species – if they are fortunate, they could add further records.

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LETTER TO THE EDITOR

Conservation Issues in the United Arab Emirates – a response to Colin Richardson

In our opinion, Colin Richardson painted far too gloomy a picture of conservation in the UAE in his letter to *Sandgrouse* **25 (2)**: 183. Although, we, like him, regret the loss of land, for birds and other wildlife, over the last few decades, we would note that in a country where the population has risen from around 250,000 in 1971 to over 4 million today some impact on the environment is inevitable.

He is incorrect to state that there are no environmental NGOs and that these "are discouraged by the authorities." Indeed, he was formerly the Bird Recorder of one of them, the Dubai Natural History Group, and the three natural history groups, in Abu Dhabi, Dubai and Al Ain, all share the patronage of a leading Government Minister. Moreover, the Emirates Bird Records Committee, of which he is a former Chairman and Secretary, may have unofficial status, but its members, along with other resident birders, are working closely with the Environment Agency – Abu Dhabi, EAD, at its, EAD's, own request.

Colin provides a list of birds which he says he found difficulty in locating, or could not find at all, in a 1500km trip around the country in December 2005 and January 2006. Most are still seen frequently, in a variety of places, as is apparent from the records on the UAE birding website www.tommypedersen.com or from the weekly UAE Twitchers' Guide circulated on OSME's Middle East BirdNet.

We would agree that many formerly good birding sites have disappeared – and we regret their loss. Many of them, however, such as the fodder fields at the camel race-tracks at Al Wathba and Al Ain, or the temporary pools at 'Wimpey Pits' and Al Wasit (Ramtha) produced by the release of treated sewage, were artificial, not natural.

His statements on the destruction of the IBAs identified in Evans (1994) are, again, incorrect. Some have, indeed been damaged, but others remain in good shape, while other important areas identified subsequent to the publication of those listed in Evans 1994 are being effectively protected. We would refer those interested to our paper in November 2006 in *British Birds* **99 (11)** for an overview of the current status.

For Colin to say that "there seems little hope for the remaining indigenous wildlife, including the natural landscape itself" is really far from the truth. Although the threats are growing as a result of development, so too is recognition that those threats exist, along with the action to counter them. We would, therefore, disagree with his opening salvo that "it seems that all bird conservation organisations should give the UAE a wide berth." All is not lost and, personally, we would much rather that they joined with the UAE's resident birders and existing national and international NGOs, such as WWF-UAE, in seeking to promote more effectively the growing work on conservation that is taking place.

Simon Aspinall & Peter Hellyer

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REVIEWS & Recent Literature

Socotra: A Natural History of the Islands and their People Catherine Cheung and Lyndon DeVantier. 2006. Odyssey Books. £39.50 / $59.95

For anyone interested in the fauna and flora of Socotra, which have been subject to a welcome increase in attention during recent years, this book can be deemed required reading. It is a lavish production, containing over 400 colour photographs scattered throughout its pages, as well as many black-and-white images from days of yore. Indeed, comparing the accounts and experiences of the early explorers of the archipelago's natural history (which are made vivid in many parts of this work) with those of modern-day workers, one is still surprised with how, relatively speaking, little has changed, though serious development plans are, almost needless to say, afoot.

Readers of this review will, naturally enough, be most interested in the attention devoted to birds (26 pages of the total 393), but there is much else to interest the serious birder, not least the first chapter 'Geology and Environment' which provides a user-friendly, but far from lightweight introduction to the processes that have shaped the islands, and will be essential reading for those who seek to understand patterns of endemicity in the region. I will also single out important sections on the archipelago's flora, conservation and development, human history, marine mammals, and, for the would-be visitor, 'Visiting the Islands' will also be well thumbed. Arabic summaries are available for each chapter and invited experts have contributed extensively, for instance Richard Porter on birds and Miranda Morris on flora.

The degree of attention paid to Socotra's natural history and its conservation in recent years is, in no small part, due to the work of Richard Porter, Omar Al-Saghier and their colleagues' work on birds. The avian chapter is well illustrated with many recent photos of the endemics (including subspecies) and others, depictions from the ground-breaking Ogilvie-Grant and Forbes expedition of 1899, as well as artwork from the recent Yemen schoolchildren's book. The text discusses the breeding birds and significant others by trophic guilds, followed by sections on passage migrants and vagrants, and seabirds. Some tips for birdwatchers close the chapter. Throughout the entire book a discreet superscript numbering system is used to reference key facts. With the exception of some publications that have discussed the endemic *Buteo*, what has been lacking from studies of Socotran birds is a comprehensive reappraisal of their taxonomy, using a modern approach to the concept of species (as called for by Martins in the pages of *Sandgrouse* more than ten years ago). Fortunately, specimen material of Socotran birds is not widely scattered and such work has now commenced in earnest. Preliminary results are occasionally surprising, more often not unexpected, but overall will initiate a much-needed debate as to the overall number of endemic taxa that we need to recognise and the ranking we accord them.

In sum, Catherine Cheung and Lyndon DeVantier's book is to be warmly welcomed. It should provide impetus for a wave of new visitors to the island, for I am sure that there is still much to be discovered.

Guy M Kirwan

GUIDELINES FOR AUTHORS (2007)

The Editor will consider for publication in *Sandgrouse* or in *Webgrouse* (on the OSME Website) original papers that contribute to the body of information about birds of the Middle East and related zoogeographical regions; subject categories include, but are not limited to, species distribution, breeding biology, behaviour, identification, taxonomy, phylogeny and conservation. The Middle East for this purpose (the OSME region) includes Turkey, Cyprus and Egypt in the west, the Caucasus republics and Kazakhstan in the north, Kyrgyzstan, Tadjikistan, Turkmenistan and Afghanistan in the east, Oman and Yemen (including the Socotra archipelago) in the south, and all states within the above boundaries. The region follows a line that follows the approximate centreline of the Red Sea to include all islands belonging to Yemen and Saudi Arabia to the latitude of the Egypt-Sudan border on the western coast; north of this latitude, the Red Sea falls entirely in the OSME region. The Arabian Sea eastern limit is 61°24âE and the southern limit is 10°N.The Editor may recommend that authors of papers concerning birds on or near the western and eastern limits of the OSME region should submit them to the African and Oriental Bird Clubs respectively. Papers dealing with countries outside the OSME Region will normally be declined unless their emphasis is on species of direct interest to OSME, or concern the migration of species through the Region. It is the Editor's decision to accept or decline a submission for *Sandgrouse* or to suggest it for *Webgrouse*, but discussion is welcomed on these aspects.

Submissions should not have been published elsewhere substantially in the same form, nor should they be offered concurrently for publication elsewhere. Papers should be in English, but the Editor will endeavour to assist authors who are unable to obtain English translations of their work. The general principle is that submissions sent to the Editor should be in English in electronic format (English (UK) and Microsoft Word, not Mac)'. Submissions on other formats will be assessed individually. Submissions in hard copy should be double-spaced and on only one side of A4 paper sheets so that they can be scanned.

- In e-mail submission, **please do not embed diagrams, pictures and other graphics** (such as line-drawing maps and Excel tables) **in a Word document** – send them as separate files in popular formats (*eg* .jpeg or TIFF files) in separate messages to: ed@osme.org. **Please avoid transmitting images larger than 1.3MB if at all possible, otherwise mail them on CD**.
- On CDs, **please do not embed diagrams, pictures and other graphics** (such as line-drawing maps and Excel tables) **in a Word document**, but include them as separate items in the CD in the formats given above.
- Hard-copy figures should be drawn, without lettering, preferably in black ink on good-quality paper on white or translucent paper. Any legend of captions and figure lettering should be given in full at the end of the text of the paper submitted. Transparencies, negatives or good-quality prints are most acceptable – all can be scanned. Authors should state whether hard copy material is to be returned to them.

OSME has reviewed bird species, current nomenclature and taxonomy in the OSME Region List (ORL), which is based on Dickinson (2003) and generally follows the IOC English names (Gill & Wright 2006). The ORL is on the OSME website or is available on request from ed@osme.org. Authors are asked to use the ORL for order and sequence of bird species and for scientific and English names. Where possible, authors should consult a post-2005 issue of *Sandgrouse* and follow the layout conventions therein, summarised below:

Layout: Place author addresses (including current e-mail) after the paper's summary, if there is one, or after author names.

Headings: Use side headings (in **bold** full capitals), but without underlining. Centre headings, in smaller **bold** font than the side headings, are retained for '**ACKNOWLEDGEMENTS**' and '**REFERENCES**' at the end of papers.

Tables and Figures - uses of bold type: Where a Table or a Figure is identified by a title, the words 'Table' and 'Figure' should be in **bold**, thus: **Table** and **Figure**. Similarly, when referring to a Table number or a Figure number in the text, these should appear in **bold** thus: **Table 1. Figure 1.** This enables a reader to find references to Tables and Figures very quickly in the text. However, see '**Abbreviations**' below for the use of '**Fig**'. Note that column headings in a **Table** should be in **bold**.

Abbreviations and the form they take: The general principle of modern abbreviations is that they do not have full stops (periods) following them, the argument being that abbreviations are now recognised as such, and by definition a shortening of a word to form an abbreviation should not be accompanied by adding a full stop to lengthen it! Hence we have 'in prep', not 'in prep.' for 'in preparation'. Examples are; asl (not a.s.l.) = above sea level, (pers obs) = personal observation(s), not (pers. obs.) or (*pers obs*) or (*pers. obs.*) and *eg* (not e.g. nor eg) = *exempli gratia*, for example. **General rules: Firstly,** words and abbreviations from Latin and occasionally other languages are in ***italic***. Examples are; *et al* (not et al. or et al) = and others, *ie* (not i.e. or ie) = that is, *c* is the preferred abbreviation for 'circa' = approximately (not c. or *c.*), and it should be used without a space between it and the quantity, thus: '*c*10 nests', *cf* and not 'cf.' or '*cf.*' for 'compare', unpub and not unpubl (Preferably, 'unpub' should be followed by 'data', 'ms', 'notes' or similar) and 1km (not 1 km or 1 Km or 1 km.) = one kilometre. Lastly, **Fig** (not Fig. or **Fig.**) = Figure; the use of this abbreviation is preferred in articles, but if 'Figure' is used, please be consistent. **Secondly,** the number of the **Figure** is also in **Bold**, thus: **Fig 1** or **Fig 6**. **Thirdly**, for abbreviations of quantity, the abbreviation remains singular even when the quantities are plural, *eg* **1km, 2km or 500km.**

References and Citations In the reference list, the first author's surname is followed by the relevant initials. Subsequent authors should have their initials placed before the surname. **The general rule is** that we treat authors of papers first as human beings, and so apart from the lead or sole author whose surname must appear first to keep reference lists searchable in alphabetic order, we place the initials first. Note that:

All references cited in the text must appear in the Reference List. All references appearing in the Reference List must be cited in the text. Published and generally available references should be classed as **Primary References,** whereas internal reports and Web references should be called **Secondary References**. The general form of listing references should follow the example below of the two references cited in these Guidelines.

A citation in the text with 3 or more authors should cite only the first author, thus '(Smith *et al* 2000), omitting periods (full stops) and without a separating comma (see also *et al* in '**Abbreviations**' above. Multiple citations in the text within a single set of brackets normally should be separated by a comma (,), thus: (Jones & Smith 1999, Heath *et al* 2000, Ramadan-Jaradi 2004). However, multiple citations of a single author or the same team of authors may require separation by a semi-colon, thus: (Brown 1998, 1999, 2001; Jones & Smith 1999, Ramadan-Jaradi 2004). Citing an author by name within the text is unchanged, thus: 'as recorded by Jones (1997)'. Do not use full stops (periods) to separate an author's initials in the Reference List, hence 'JFP SMITH' and not 'J.F.P. SMITH' (Note the use of 'SMALL CAPITALS'). A citation with two authors should follow '(Smith & Jones 2000)' in the text, using the ampersand (&), but should be written as 'SMITH, JFP AND AB JONES. 2000.' in the Reference List.

General The first mention of a species in any paper must include the species name, thus: 'House Sparrow *Passer domesticus*', without brackets. However, English is such a flexible language that sometimes context may still require the use of brackets. Please do not repeat the scientific name in the text unless comparisons between one or more species are being drawn. Summaries of full-length papers should be less than 300 words, should not cite references and should cover only the subjects contained in the main text. We adopt the convention that authors will receive one or more edited electronic versions of their original texts to check for typographical errors and to confirm that the changes have not altered the meaning of the content before the journal is sent for typesetting. No changes of substance can be made to typeset proofs. In research journals, the convention remains of using the third person and the passive voice, purportedly to allow a neutral presentation. *Sandgrouse* encourages use of the first person and active voice, while noting that the more technical papers may benefit from the former, non-partisan style. Short Notes do not require summaries.

REFERENCES

DICKINSON, EC. 2003. (Ed). *The Howard and Moore complete checklist of the birds of the world. 3rd edn.* Christopher Helm. London. UK.

GILL, F, AND M WRIGHT. 2006. *Birds of the World: Recommended English Names.* Princeton University Press. Princeton New Jersey. USA/Christopher Helm. London. UK.


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