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Compiled and distributed by Michael C Jennings (ABBA Co-ordinator) *for contributors to the Atlas of the Breeding Birds of Arabia*

The Atlas has a Publisher

One issue that has, until now, held up the preparation of the final atlas is the lack of a publisher. I am pleased to report that the project now has one. The NCWCD which sponsors the ABBA project has long been associated with Pro Entomology of Basle in the production of journal the *Fauna of Saudi Arabia,* renamed *Fauna of Arabia* from Volume 17. As *Fauna of Arabia* aims to publish baseline data on all branches of zoology from the Arabian peninsula it is natural that it should also publish the breeding bird atlas. The outline plan is that one complete volume of *Fauna of Arabia* will be set aside for the bird atlas. Although the atlas volume will be one in a series it will be self sufficient as a reference and there are plans for it to be marketed separately as the atlas. There may also be a slightly different version to facilitate marketing of the atlas as a separate book, rather than one of a series. Some changes to the usual format of *the Fauna* will be made to accommodate the special requirements of the atlas. The individual species accounts will range from one to four pages of text and will include, in addition to the Arabian distribution map, a world distribution map and a line drawing. Other maps/text figures will be included where needed, eg to show range change in recent years.

Now that the project has a publisher, writing up the species accounts can go forward more quickly as formats and constraints for species accounts, map size and proportion, artwork and illustrations etc are now clear. Publication is assured sometime next century!

In *Phoenix* 15 the challenge was made to current observers to get out and visit some of the squares which were at the time totally unrecorded and previous observers were asked to check their records in case they had unreported data. The unreported squares were mostly in border areas between countries or in the Empty Quarter. Despite the offer of valuable prizes only a few more squares have been atlassed. These were XB19, the last unatlassed square in central Oman (visited during ABBA Survey 24), UB22, the last unatlassed square in UAE (two eagle owls in a *Ghaf* tree - C Drew), KB28 in central Saudi Arabia and JA37 on the Saudi Arabian- Iraq border, were visited on detours during ABBA Survey 25 in April 1999. Stan Howe came up with an old winter desert wheatear record from NA37 in northern Kuwait but unfortunately it did not count as a breeding bird record, so that square remains unatlassed. Anyone managing to get records from the remaining 47 squares (outside of the Empty Quarter) gets a free five-year subscription to *Phoenix*.

Fig 1. Eagle owl *Bubo bubo* was the first bird recorded in UB22 (by C Drew of ERWDA), the last unatlassed square of the UAE.

Another gap in the database is the lack of good information on food taken by birds in Arabia. This is an area of knowledge that is very poorly recorded. Unfortunately observers rarely note what a species is feeding on, yet very often food items and prey species can be a good indication of how the species is utilising a particular habitat. What, for example, do golden eagle feed on in the arid wastes of Arabia. Certainly in the northern plains the Dhub lizard (*Uromastix*) is the surprising top of the menu but other species taken include agamid lizards, brown-necked ravens, rodents, hares (a species probably declining through over hunting), hedgehogs and even foxes. They

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also eat at carcases of wild and domesticated animals. In considering food requirements the final atlas does not want to have to rely on standard works of other areas (which are often repeated text) so observers as asked to pay special attention to food during the year 2000 and report their observation to ABBA.

During 1999 the NCWCD very kindly donated 40 copies of the *Interim Atlas* to each of the local natural history societies in Arabia. If observers in Arabia want an *Interim Atlas* but cannot got a copy from their local group they may still write to Prof Abuzinada, NCWCD, PO Box 61681, Riyadh 11575, for a copy. The price of £8 or 50 SR is still the best value in Arabian bird books currently available.

Finally, some contributors have asked what will happen to the ABBA database once the final atlas is out. Present plans are that the database will continue to be added to and developed and information will continue to be available to anyone who needs it. I also have plans to make CD-ROM copies of the database provided there is a demand.

Best wishes to all contributors and readers, I look forward to seeing the first records of the new millennium.

Michael Jennings

Golden Eagle - a New Breeding Species for the UAE

In the Arabian Peninsula, the golden eagle *Aquila chrysaetos* is known to breed in both Saudi Arabia and Oman and possibly in the highlands and eastern desert of Yemen. There were no confirmed records of breeding in the UAE until fieldwork in the southern desert of Abu Dhabi by the Abu Dhabi Islands Archaeological Survey (ADIAS) during winter 1998/99, when an active eyrie was found.

During the ADIAS survey in parts of inland south-east Abu Dhabi in early January 1999, a single eyrie was discovered. Judging by its size, construction and the presence of old eggshell, it was several years old and certainly had been used previously. The nest was placed in a *Calligonum comosum* tree almost two metres off the ground on an otherwise un-vegetated dune crest, overlooking a sabkha/gypsum plain. At the time of discovery, the nest was in the process of repair, with both adults in attendance. One bird was observed carrying a stick to repair the eyrie and so disturbance by the presence of the observers was purposely minimised.

A return visit was made in July 1999 and it was clear that the eyrie had been used during the preceding season, although whether the breeding attempt earlier in the year had been successful was not determined. The only prey remains identified were hares *Lepus capensis*. Pellets were collected for further study.

The presence of breeding golden eagles in adjacent areas of Oman was proven by the late 1970s. Also several unfledged chicks were delivered to the Al Ain Zoo between 1978 and 1987 (Richardson, C. & Aspinall, S J; 1998, *Birdwatching Guide to the UAE*, Hobby Publications), suggesting that the species may indeed have been nesting in the Emirates at that time. The possibility exists that the nesting pair discovered in January 1999 may have been the source of the eaglets delivered to Al Ain Zoo. If this is not the case (and definitive proof is unlikely to be obtained), then at least one and possibly further nests may exist. Given the nature of the terrain in which the eyrie was discovered, where access by 4WD vehicle is for the most part impracticable, this would not be altogether improbable.

The exact location of this one known UAE site must remain undisclosed for security reasons. It is in south-eastern Abu Dhabi, outside the immediate area of current development activities. The position of a second possible breeding site, to the north of the Liwa Oasis, located previously by the same authors, must also remain undisclosed.

Given the discovery of this first eyrie and the possibility that others may exist, every opportunity should be taken to detect previously undiscovered eyries. Aerial surveys of likely areas should be considered. Remoteness and inaccessibility are the key variables to help narrow down the overall search area, which will be primarily in the south and south-east of the Emirate. Aerial survey is likely to be more successful than a survey conducted by 4WD and would permit a rapid search over a large area, something which is not practicable by vehicle or on foot. The knowledge of the local bedouin inhabitants is also likely to be valuable.

The golden eagle occurs across northern and mountainous areas of Europe and Asia from Scotland to NE Siberia, Korea and Japan, as well as in Canada, the western United States and North Africa. The sub-species present in the Middle East requires confirmation, especially as the Arabian population is effectively isolated. The nominate form reaches west Asia, with *homeyeri* present in Iberia and North Africa. Most western and southern populations are resident, but some dispersal of young or wandering in winter is apparent.

Other than the likely resident breeding birds, records from the UAE may well concern visiting birds, more probably of Arabian stock (see below) than from northern populations. Of the less than 10 previous confirmed and published recent records of this eagle in the Emirates, (the first in 1990), three are from the western desert regions of Abu Dhabi, including two immatures, and two from the Al Ain area (Richardson and Aspinall op. cit.).

Northern central Saudi Arabia and central Oman are the most important areas within the Arabian Peninsula for this species. Tree nesting is typical in eastern Arabia, whereas rock outcrop sites are tenanted in northern areas of the peninsula (Jennings, 1995; *An Interim Atlas of the Breeding Birds of Arabia*). Nesting in an isolated *Calligonum comosum* was recorded in late 1930 by Bertram Thomas (1932; *Arabia Felix*, Jonathan Cape - see plate p. 236), during his travels in the Empty Quarter in a location similar to that identified in Abu Dhabi. That nest was also leafless at the time the nest was found. Thomas did not see the birds and believed the nest might have been of tawny eagle *Aquila rapax*. (However it is now recognised that the nest could not have belonged to a tawny eagle and the eggs, which are in the Natural History Museum, Tring, are also too large for Bonelli's eagle *Hieraaetus fasciatus*, thought by some as another possibility).

The total population in eastern Arabia is small. Around ten active nests sites are currently known in Oman's central desert regions, all of which are eyries in trees, although breeding has been confirmed in that area in no fewer than 14 ABBA squares, with possible breeding in three others. The population picture is somewhat

confused since not all nests are used each year. The closest Oman nest to the Emirates, as far as is known, is approximately 300 km. from the Liwa Oasis, although there are possibly others in intervening difficult to access areas (Jens Eriksen, *pers. comm.*, September 1999).

There is clearly no room for complacency with regard to the conservation of tree-nesting golden eagles of the desert regions of southern and eastern Arabia, which suffer from persecution by chick theft and disturbance. The long term survival of these birds and their

continued successful breeding must be in grave doubt in view of the opening up of desert areas to modern development and tourism.

Simon Aspinall & Peter Hellyer, Abu Dhabi Islands Archaeological Survey, P O Box 45553, Abu Dhabi, UAE <Email: hellyer@emirates.net.ae>. (All correspondence to the first author)

Recent Reports

The following are a selection of some interesting, unexpected or unusual records of Arabian breeding birds received during the last year. Some relate to earlier years. Not all these records have been verified and some may not yet be accepted by local recorders.

Greater sandplover *Charadrius leschenaultii*
One observed injury feigning early June 1998, Fanateer island Arabian Gulf, PB31, near Jubail, Brian Meadows.

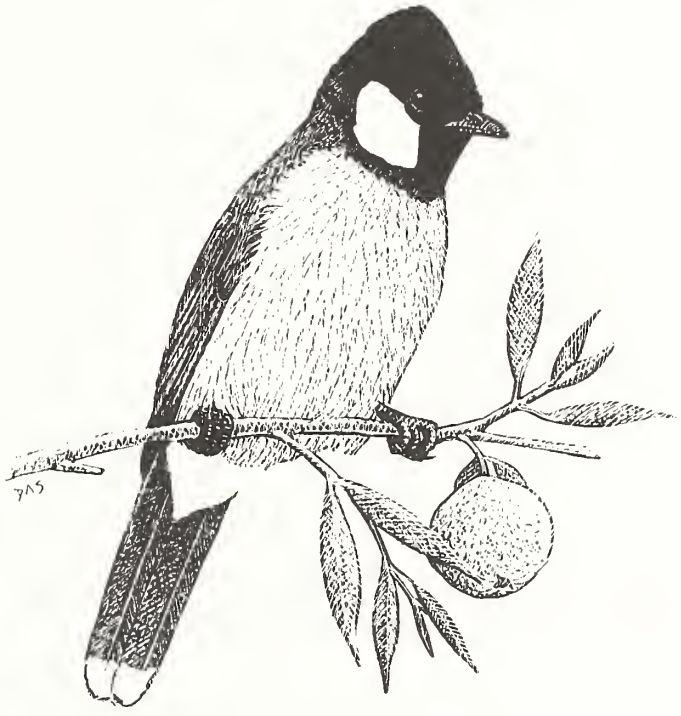

Fig 2. White-cheeked bulbul *Pycnonotus leucogenys* Nest building south of Buraydah (JB28) in March 1999, Abdullah Suhaibani. This bird is fast extending its range in central Arabia northwards and southwards from Riyadh.

Bruce's green pigeon *Treron waalia*
Six in a fig tree in Wadi Sara (JA07) Yemen, 4 Jan 1998, MCJ, (ABBA Survey 23). This is the only January record for the species on the ABBA database. Surely they are not that rare in mid winter?

Little rock thrush *Monticola rufocinerea*
One at only 200m altitude inland from Al Lith (GA17) late November 1991, Brian Meadows. Good evidence that birds move to lower altitudes in winter.

Graceful warbler *Prinia gracilis*
Recorded breeding south of Buraydah (JB28), central Arabia 1999, Abdullah al Suhaibani. The species is gradually spreading in the Buraydah area helped by the availability of many suitable areas provided by irrigated agriculture in recent years.

Savi's warbler *Locustella luscinioides*
Seen PB31/PA31 Eastern Province 1998/9, including reeling song at dusk, Brian Meadows.

Golden oriole *Oriolus oriolus*
Up to two pairs bred each year 1989, 90 and 92 and probably also bred 1987, 88 and 93 at Yanbu (EA24) Red Sea coast, Brian Meadows.

House sparrow *Passer domesticus*
Entering nest sites at Shar camp, TB22, 7 Jan 99. This is the southernmost recording in the UAE, Simon Aspinall. The species was not known in the Liwa area until a few years ago (*Phoenix* 5:6-7 and 14:22-24),

Desert finch *Rhodospiza obsoleta*
One hundred at a day time roost Hedjaz, FA26, July 1988, Brian Meadows.

Trumpeter Finch *Bucanetes githagineus*
1000+ at large open air grain stores near Yanbu al Bahr EA25, January and February 1989, Brian Meadows. Largest flock reported.

Das Island UAE

Like Masirah island off Oman and Fair Isle in the north Atlantic, Das island (SB27) in the middle of the Arabian Gulf is one of those specks in the sea that, for some reason, get more than their fair share of migrants birds. Some 280 species have been seen there altogether including several recorded nowhere else in the UAE. However it is also a very interesting island from two other ornithological viewpoints. Firstly, the island is a live experiment in the colonisation of man-made habitats by commensal, and semi-commensal species, mostly in the last 10 years. Secondly Das, as a mid Gulf landfall for migrants, is also a good indicator, in some cases the only indicator, that a number of Arabian resident landbirds actually migrate across the Arabian Gulf or disperse considerable distances after breeding.

Das island lies 175 km north west of Abu Dhabi city and is approximately 2 km long by 1 km wide. The island is given over to the oil industry, processing and storing oil and gases. Over 2500 oil industry people live on the island and its natural environment is now totally man-made. In 1988 Dave Heath provided a snapshot of birds on Das for *Phoenix* 5:5-6. At that time only feral pigeons *Columba livia* were nesting whilst white-cheeked tern *Sterna*

repressa bred on manmade structures around the island and ospreys *Pandion haliaetus* had once built a nest on one of the mooring berths. Feral pigeons are still common, the white-cheeked terns still breed wherever they can (385 pairs bred successfully in 1999) but there is still no confirmed breeding for the osprey. One year there was a second hand report of eggs taken from a nest.

Since Dave Heath's time landbird habitats on the island have become more established with more extensive gardens, more and older trees (especially exotic mesquite *Prosopis juliflora)*, but also date palms and there are now ornamental lakes. Half of the island remains industrial in aspect but the changing environment has enabled a surprising 13 additional species to breed, including several which were originally introduced to the island by man and a few that have got there without assistance. New breeding birds include four introduced species which now nest ferally, these being mallard *Anas platyrhynchos* (probably the domesticated form) nesting on the ornamental lakes since 1997, the domesticated form of guineafowl *Numida meleagris* nesting ferally since 1997, peacock *Pavo cristatus* nesting since 1997 and chukar *Alectoris chukar*, two pairs of which escaped from an aviary in 1998 and both of which raised small broods in spring 1999. These species are interesting from the point of view that they may be able to establish a self sustaining population in a man-made habitat like Das. Another feral breeding bird is the Indian silverbill *Euodice malabarica* which has nested since 1998. This bird species may well have got to the island independently but it is known that some caged birds escaped earlier in the 1990s. The other confirmed or likely breeding landbirds on the island are listed below, all of these almost certainly arrived on the island by flying from the mainland.

- Eurasian collared dove *Streptopelia decaocto*, common and breeding since 1997. (NB two of the first eruptive collared doves to be recorded in Arabia were seen on Das in 1962).
- Palm dove *S. senegalensis* , arrived 1990, breeding since 1991 and now common.
- Crested lark *Galerida cristatus*, odd birds have been recorded since 1987 but there was an influx in spring 1998 and an increase in numbers including young birds, leading to the assumption of local breeding.
- White-cheeked bulbul *Pycnonotus leucogenys*, arrived in spring 1993, bred that year and is now common.
- Indian house crow *Corvus splendens*, first recorded on the island in 1987 but first bred in 1998.
- Common mynah *Acridotheres tristis*, arrived in June 1993 (4 birds) and again in June 1998 (30 birds) and this year five young were seen in July.
- House sparrow *Passer domesticus*, first bred in 1995 and is now abundant.
- Yellow-throated sparrow *Petronia xanthocollis*, some wild birds were accidentally trapped in an aviary in 1998, they bred in the aviary but others probably bred outside that year.

The only additional non-landbird that has shown any indication of breeding on Das in recent years the red-billed tropicbird *Phaethon aethereus* which has been seen entering crevices in rocks (although those crevices showed no signs of nesting). The original *Phoenix* 5 account of Das omitted to mention that 20 pairs of swift tern *Sterna bergii* and 40 pairs of lesser crested tern *S. bengalensis* bred on the disused offshore tanker berth No 3 in June 1986 and bridled tern *S. anaethetus* bred on the bare metal surface of another disused offshore loading berth in June 1987.

In addition to the growing list of resident landbirds on the island there are a number of mainland birds recorded on the island that are often regarded as a rather sedentary. Their occurrence on Das, admittedly mostly as rarities, shows that there is some passage across the Arabian Gulf, and there must therefore also be a degree of movement within Arabia and between populations there. Birds in this category are cream coloured courser *Cursorius cursor*, Namaqua dove *Oena capensis*, rose-ringed parakeet *Psittacula krameri* (regular), barn owl *Tyto alba*, little owl *Athene noctua*, little green bee-eater *Merops orientalis*, black crowned finchlark *Eremopterix nigriceps* (regular), bar-tailed desert lark *Ammomanes cincturus* (regular), desert lark *A. deserti*, hoopoe lark *Alaemon alaudipes*, pale crag martin *Ptyonoprogne fuligula*, long-billed pipit *Anthus similis*, hooded wheatear *Oenanthe monacha*, white-crowned black wheatear *O. leucopyga*, graceful warbler *Prinia gracilis*, purple sunbird *Nectarinia asiatica*, streaked weaver *Ploceus manyar* trumpeter finch *Bucanetes githagineus* and house bunting *Emberiza striolata*. Das may be a speck in the ocean but it has a lot of interesting birds both resident and passing through. Birds occurring there which are now colonising the island and passage birds of species not generally thought of as migratory, allow us to understand a little more about the Arabian avifauna.

Compiled by the editor from the detailed observations of Mike Wood and Len Reaney.

Fig 3. The chukar partridge *Alectoris chukar* is found in the mountains of the Musandam and extreme north- west Saudi Arabia. It is now also one of the more unexpected feral breeding species on Das Island, UAE.

Silverbills in Jeddah

In June 1996 I set up a bird-feeder outside my living room window in Jeddah, Saudi Arabia (FA19) which very quickly attracted groups of birds that I came to know as silverbills. These birds were gregarious and always shared the tray with as many of their flock as

space allowed. At that time I was relatively unfamiliar with Arabian birds and it was a little while before I became aware that there were slight differences among the group, half the group had a narrow white band on the rump and upper tail and half had not. After obtaining a Middle East field guide I was able to identify that both Indian and African silverbills *Euodice malabarica* and *E. Cantans* were present, in approximately equal numbers. Until then the fact that some birds had white rumps had not seemed unusual considering that there were always individual birds among the group that had been dyed a variety of colours. I regularly saw these coloured birds being offered for sale around the city. Coloured birds were incidentally readily accepted by the resident silverbills and pairing and courtship between them and Indians was seen. I also noticed that the dyed "escapees" turned into Indian silverbills.

I observed these birds daily throughout 1997 and 1998 but by the end of this period all the birds frequenting my feeder had the white rump marking. Why the African silverbills had left the built up areas around my home was a mystery. However they could still be found on the edge of the city and further afield, and were the only silverbill at Wadi Al Urahah (FB20) on the Mecca bypass. Maybe the African species prefers the dry, open, sandy scrub of the less developed suburbs. Possible competition with the rapidly increasing Indian silverbill was a factor but this is not borne out by the fact that from my own observations the two species appeared to amicably cohabit. Another answer might be hybridization, with the increasingly outnumbered Africans being assimilated by the Indians but I have no observations to back up this suggestion. What is clear is that the introduced Indian silverbills are now thriving throughout the city and the Africans are limited to the outskirts.

Marcus Jenkins, P O Box 167(CC942), Jeddah 21231, Saudi Arabia <Email: marcusjenkins@compuserve.com>

New Books

Phoenix aims to provide details of all new publications which are relevant to the study of birds and wildlife in Arabia, or to the Arabian/Middle Eastern environment generally. Most titles mentioned are available in good book shops in Arabia, Europe and North America. Others are on restricted distribution or privately published and readers wishing to obtain copies should contact the author, publisher or distributor mentioned. Alternatively, all the titles reviewed in this and earlier issues of *Phoenix* may be ordered through Subbuteo Natural History Books Ltd, Pistyll Farm, Nercwys, Nr Mold, Flintshire, North Wales, CH7 4EW, UK. (Email: sales@subbooks.demon.co.uk). When ordering through a library or agent quote the ISBN or ISSN number if given. The prices shown here are published prices, which sometimes include post and packaging. Recommendations made about books are based on the standard of treatment of the subject, format and quality of preparation. A recommendation does not necessarily mean good value for money. Readers are asked to provide details of other new, relevant titles not mentioned in this survey.

Visitor's Guide to Bahrain Birds by Michael and Mike Hill (1998)

Bahrain is a small island with the densest human population of any state in Arabia. This puts great pressure on the environment and especially bird environments. One might think birds to be found there would be few but over 300 species have been recorded. It boasts roosts of over 1000 grey hypocolius in winter (largest numbers recorded together anywhere) and one of its islands holds the largest colony anywhere of the regionally endemic Socotra cormorant. This book is aimed at the interested amateur, be they on a visit to the island or a resident wanting to know more about the birds around them. It starts with guide of how to find the best birding sites in Bahrain (essential for any short term visitor without any local knowledge). This includes colour sketch maps showing location of sites. This is followed by an up to date checklist which provides English and scientific names and current status of all birds that have been recorded on the island. The main part of the book (80 pages) is devoted to a systematic overview of Bahrain birds, providing straightforward notes to groups of birds or individual species, dealing with identification pointers, habitat, food, habits and the best places to see them. This section is profusely illustrated with colour photographs by the authors. The photographic skills of Mike (Senior) are already well known through his illustration of a number of books and Michael (Junior) seems to have inherited the full SLR gene judging by his photos. About 170 photos are scattered through the book, some are old favourites from other publications but many are new, including dramatic shots of Socotra cormorants and terns and classic studies of parakeet, hoopoe, ducks and bee-eaters. It is worth buying for the pix alone. It is amazing how often these photographers were on hand to record the single or very rare occurrences of species on the island. Another very useful section of the book is the occurrence tables where a databar provides for each species a monthly comment on occurrence in four categories of commonality: isolated or individual records, scarce but regularly recorded, common, and very common. This book is recommended for any birding visitor to Bahrain. Even the expert will find the sites guide essential and the status and occurrence data very helpful.

Card cover, 119 pages (190 mm X 245 mm). Price BD 9.500 (approx £15.40), plus postage, available from Bookplus, PO Box 16, Manama, Bahrain (Tel: Bahrain 581107).

Waders and Other Waterbirds in the United Arab Emirates – Autumn 1994 and Spring 1995 by G O Keijl, P S Ruiters, T M van der Have, A bij de Vaate, E C L Marteijn and R Noordhuis (1998)

The Foundation Working Group for International Waterbird and Wetland Research (WIWO) has a good track record in sponsoring detailed, structured studies and producing authoritative and businesslike reports. This report (WIWO No 62) is no exception. During the period from Autumn (September and October)1994 and Spring 1995 (April and May) waders and other shorebirds, their habitats and food were surveyed along the UAE coasts with special attention being paid to the Khor Dubai area. The Arabian Gulf holds internationally important numbers of several waders species and at any one time during the migration periods up to 100,000 waders are using the coastal lagoons of the Emirates to feed and rest. The survey teams visited 13 specific sites in the inner Gulf, from Jebel Dhanna in western Abu Dhabi to Ras al Khaimah in the north, and two sites on the UAE east coast. Waders and shorebirds were counted at each location, separate counts were made of departing migrants (correlated to e.g. sunset and high tide) and all records were analysed by flock size , time periods and so on. Birds were also trapped and ringed for further study and the report includes a detailed chapter of biometric data including weight, measurement and moult. The team included members who carried out a detailed study of the invertebrate fauna at various UAE coastal

sites, to look at the availability of food items for waders, also made observations of feeding waders. There is a separate note on the breeding of Kentish plovers at Khor Dubai and a checklist of all birds observed giving a summary of their status. The text is supplemented by numerous tables, graphs and maps and line drawings. The study and report is prepared with the co-operation of NARC, Abu Dhabi and the Abu Dhabi Shorebird Project.

Card covers, 133 pages (240 mm X 170 mm). Price DF25 post free (but those not paying by Eurocheque, from a Dutch account or by cash, must contribute a further DF15 for bank charges). Available from WIWO, P O Box 925, NL-3700 AX Zeist, The Netherlands.

Wild Cats of the United Arab Emirates by Mohamed A Reza Khan (1998)

There are four species of cat found wild in Arabia today, the leopard, caracal, wildcat and the sand cat, and they all occur in the UAE. Two species have been lost, the lion which was widespread in the Arabian Peninsula during historical times and hung on in northern Arabia until the late 19 century whilst the cheetah only became extinct some 20 years ago. This booklet provides us with a background of cats worldwide, as well as an up-to-date resume of the status and occurrence of those found in the UAE. In Arabia all cats are at best rare, in fact you will be lucky to see any. The leopard which may be down to only 100 animals in the whole of Arabia is represented by perhaps only 10 in the mountains of the northern UAE. The caracal is more common but just as invisible to the non-specialist observer. Sadly the most people get to see of this species is its remains hanging in a tree, the victim of a shepherd protecting his flocks or maybe just a misguided hunter. Wild cats are more frequently recorded but beware of misidentification with the ubiquitous feral cat. Sand cats are very rarely reported in the UAE but it is possible they may be more widespread in desert areas than is presently known. For each species there are notes on identification, distribution, habitat, habits, food, breeding, animals in captivity and persecution/conservation issues. There is also a separate chapter on conservation problems, measures taken locally and internationally, and captive breeding attempts. A useful selected bibliography completes the work. Illustrated with nearly 50 colour photographs of UAE cats and their habitats. There is a separate Arabic version.

Card cover booklet, 60 pages (217 mm X 280 mm); price US$6.50 (excludes postage). Published by Dubai Municipality, Public Relations Section, PO Box 67, Dubai, UAE and distributed through Dubai Zoo, also PO Box 67.

Wild About Cats – Life with Arabia's Endangered Felines by Marycke Jongbloed (1998)

Marycke Jongbloed has had a dramatic change in her life direction. She came to Arabia as a family doctor but her passion for Arabian cats has led her to found the Arabian Leopard Trust, which is now a full time occupation. This book is in many ways her story, expanding on her passion for cats, especially those she has met with and looked after in the UAE. The story starts with her first Arabian cats, the local race of the wildcat known as Gordon's Wildcat and presents her personal experiences of her first encounters with and then caring for them . She graduated to leopards following newspaper reports of senseless killing of leopards in the northern UAE in 1993 and then consolidated her concern for their conservation and protection by founding the Arabian Leopard Trust. ALT was started virtually from scratch with little knowledge and expertise but a lot of enthusiasm. It soon became involved in studies to ascertain the current status of the leopard in the UAE and elsewhere in Arabia, rescuing captive leopards from Yemen and the captive breeding of the species including the loan of animals from Oman. The story continues with her experiences of caracal and sand cats and is complete with a roundup of Arabian cat conservation issues. This book contains a wealth of information and vital statistics of cats and their care. Illustrated by some 70 colour photos of cats, their habitat and prey.

Card cover, 84 pages (210 mm X 250 mm). Price 75 Dhrus . Published by Barker Trident Communications 31-32 Cock Lane, London EC1A 9BW with the support of Shell Markets Middle East Ltd. Available from the author at P O Box 24444 Sharjah, UAE. ISBN 0 963689 0 9

Biodiversity of Animals in Kuwait by Sharon K Jaman and Robin Meakins (1998)

This book is an introduction to the range of animals to be found in Kuwait. It is arranged in scientific order starting with arthropods and moving through to mammals. For each grouping, class, order, family etc information is given on the main characteristics etc and then specific examples which occur within Kuwait are detailed. It is selective in its treatment, for example under crustacea only the crabs are dealt with, for which notes are provided on diagnostic characteristics, numbers and diversity (worldwide), body features, and brief details of exoskeleton, development and growth, locomotion, respiration, feeding, senses, defence mechanisms and reproduction. The topics covered depend on their relevance to the grouping. There is a note on crabs within Kuwait and a more detailed treatment of two species with whole page colour paintings. The paintings are generally to a good standard and with the excellent line drawings make an attractive book. However the birds and mammals artwork look hurried and some are poor. Only the most common representatives in each group, be they crabs, spiders, butterflies fish or birds, are depicted in the species accounts making the book useful as an introduction to the fauna of Kuwait.

Card covers, 215 pages (205 mm X 266 mm). Price not known. Published by the Center for Research and Studies on Kuwait, P O Box 65131, Almansouria 35652, Kuwait. ISBN 99906 32 30 0.

Re-introduction Practitioners Directory 1998 by P S Soorae and P J Seddon (1998)

This is a conservation workers directory of the organisations around the world working on the reintroduction of animals and plants. It is not a directory of the progress, success or otherwise of re-introduction events. Animals are arranged by species in taxonomic order, 217 altogether, ranging from snails and insects to the African elephant. Not unexpectedly there are many more mammals (77) and birds (69) being actively worked for re-introducing than invertebrates (only 18). For each species details are provided on those organisations working on the species, names, addresses, telephone, fax and email addresses of contacts and the type of project, e.g. re-introduction, translocation, supplementation etc. For species such as the Arabian oryx there are seven organisations listed, but for many there is only one. Plants are

arranged by country, the organisations active in plant re-introduction being listed with the species they are working on shown. Not illustrated.

Card covers, 112 pages (170 mm X 240 mm). Price not available. Published jointly by the IUCN Species Survival Commission, Re-introduction Specialist Group, Nairobi, Kenya and the NCWCD Riyadh. Available from NCWCD, P O Box 61681, Riyadh 11575, Saudi Arabia. ISBN 996-614-08-5

Off-road in the Hejaz by Patrick Pierard and Patrick Legros (1997)

More and more parts of Arabia are coming within the coverage of adventure guides for travellers and this one breaks new ground in getting us far afield in Western Saudi Arabia. There have long been off road guides to the outback of Oman and the UAE and recently similar guides have appeared for the vicinity of Jeddah and Riyadh. This new one takes us to places from north of Tabuk to as far south as al Baha (HB16) in the highlands. The authors present a selection of sites that can be visited on a day trip, with a nights camp, or a several day expedition. Presenting clear maps and sketches on how to find sites, places to visit on the way and problems to watch out for. The guide includes a selection of trips suitable for both 2 and 4 wheel drive vehicles. There are some 15 major sites covered, but as they also cover other sites on the way and several things to see once you have arrived, there is enough in this book to keep the average family of explorers busy for months. For each site lots of information is given, including a start point and directions, and whether a 2WD or 4WD vehicle is needed, a description of the sites to be seen at the destination and on the way with a 'mileage' chart of landmarks along the way. Notes are given on the history of the site, wildlife and architecture as appropriate. This is an excellent little book which will enable many visitors to western Arabia to get the most out of their travels. Recommended.

Card covers (wire bound to open flat), 96 pages, A5 size. Price £14.95. Available from the publishers, Motivate Publishing Ltd, 96 Kensington High Street, London W8 4SG. ISBN 1 86063 0278.

Fig 4. Rose-ringed parakeet *Psittacula krameri* were seen at Asab camp, Liwa (UA23), in January 1999 by Simon Aspinall. There are other records for the Empty Quarter - what do they do there and where are coming from and going to?

Journals, Reports and other Publications

The following notes list some of the more interesting papers concerning birds and other wildlife which have appeared in the various Arabian natural history society newsletters and in other reports etc in recent months. Space does not permit the full citation of each article but further information can be obtained from the various societies and organisations shown. Note that in addition to the main papers listed most periodicals also include regular features such as recent reports, brief notes etc.

Fauna of Arabia Vol 17 (1998)

This is the first volume under the new title of this important regional work (previously known as *Fauna of Saudi Arabia*). The series has become the primary reference work on the biodiversity of the Arabian peninsula and is now the baseline reference underpinning national inventories of most animal groups. This most recent volume (502 pages) contains ten major articles, eight of which concern invertebrates and two for vertebrates. The five papers on insects describe 20 or so species new to science by cataloguing recent collections and museum material for the *psylloidea* (jumping plant-louse fauna), the *anobiidae, anthicidae, melolonthinae* and *pachydeminae* beetles and the *milichiidae* and *carnidae* flies. An important paper on crustacea details the 48 species of pardoned crabs found in the Arabian Gulf area and there is an equally important checklist of all the terrestrial and freshwater molluscs of the Arabian Peninsula. (One new species *Levantini symensi* honours the ornithologist Peter Symens). A second paper on molluscs describes six new species of marine gastropods from the Red sea and Gulf of Aden. The two papers on vertebrates provide a short note on the labrid fish *Pteragogus flagellifer* in the Red Sea and a review of the mammals of Yemen. The latter provides a checklist of the 71 species of lands mammals currently/recently found in the country. Of these, 23 are bats. Also within the total, four species are human introductions, two are endemic to Yemen and eight endemic to Arabia. The majority of Yemen mammal species have, not surprisingly, affinities with African species. This volume contains numerous colour and black and white photographs as well as many text figures.

Published by NCWCD, P O Box 61681, Riyadh, and Pro-Entomologica, c/o Natural History Museum, Basle, Switzerland.

Tribulus

Volumes 8 (Pt 2) and 9 (Pt1) appeared in winter 1998 and spring 1999 respectively. These issues include a wide selection of environmental and biological reports as well as a good wad of the archaeological. *Tribulus* maintains a high standard of science and these examples include three field guides which many will find very useful to take with them into the wadis; these are studies on the damselflies and dragonflies, freshwater snails and wadi fish of the UAE. All are well illustrated with photos. Of special interest to anyone venturing into the desert is a case study of snake bite (probably saw-scale viper *Echis carinatus*), suffered by an expatriate leaving a wadi pool. One most important lesson from the article is that even profession medical opinion can get it wrong. In this case a hospital doctor, under the wrong impression there were no dangerous snakes in the area, treated the patient for pain and swelling only. The patient's situation deteriorated and he was in severe pain and suffering a range of symptoms when he finally got anti-venom nine hours later at another hospital. It was sixteen days

before he could walk reasonably well. Other articles covered include lepidoptera, scorpions, finless porpoise, Arabian leopard, clam shrimps, marine fish and flies. Bird interest concerns notes on ostrich eggshell finds, UAE's first blackstart and monthly bird reports from April 1998 to March 1999. *Tribulus* is a good read.

Available from the Emirates Natural History Group (Abu Dhabi), P O Box 2380, Abu Dhabi, UAE.

Journal of the Saudi Arabian Natural History Society Vol 3 No 8

This issue dated December 1998 (43 pages) has 9 articles and a number of short notes over a broad range of natural history subjects. Contents subjects range from the crown of thorns starfish and brood care among marine creatures, terrestrial and marine dangers in the Jeddah area, a sighting of up to 5 crocodiles in a Jeddah creek (yes crocodiles, one was said to be 2.5 m long!), astronomical sightings, to historical aspects of Tayma and the Hejaz. Bird interest centres on notes of Jeddah birds and on the Maharzat as Sayd reserve in central Arabia.

The journal and information of the society are available from The Secretary SANHS c/o the Jeddah Prep and Grammar School, P O Box 6316, Jeddah 21412, Saudi Arabia. Fax ++966-2-6937380

Sandgrouse

Vol 20 (No 2) has 10 main papers, two of direct relevance to Arabia: the first record of speckled pigeon *Columba guinea* in Yemen /Arabia and bar-tailed desert lark and black-crowned finch lark breeding in Kuwait. There is also a long paper of on the limits of the western palearctic in Iran and the Arabian Peninsula. This edition's photo- spot focuses on Hume's owl. Volume 21 (No 1) might be termed the Israel and Jordan special issue as the main contents relate to those two countries. There are three main papers; the Jordan Bird Report 1995-7 takes up 26 pages; a checklist of the birds of Jordan and Israel, and a lengthy review (51 pages) of the 50 species new to Israel during the period 1979-98. This issue has 40 coloured photos in its 112 pages which must be some kind of record for this periodical. Supported by regular features such as 'Around the region' which has the usual surprises of rare birds in the Middle East. Sandgrouse Supplement No1 was published in August 1999 and is a Checklist of the Birds of Turkey. OSME has a particular connection with Turkey, having evolved from the Ornithological Society of Turkey in the late 1970s. This checklist follows a line of similar lists and Turkish Bird Reports prepared by OST/OSME. The 453 species reliably recorded in the country are presented in tabular form, providing English and scientific names, status codes and a published reference source for further details. Additional notes are given on 17 species and rejected species are dealt with thoroughly. Detailed bibliography.

Available from the Ornithological Society of the Middle East, c/o the Lodge, Sandy, Bedfordshire, England.

Zoology in the Middle East Vols 17 and 18 (1999)

There are 12 papers (119 pages) in Vol 17 but it unfortunately has nothing directly relevant to Arabian birds Indeed the only bird paper concerns the rather scarce distribution of great-spotted cuckoo in Bulgaria. Other papers deal with the status of marbled polecat in Jordan (there has now been one record in Saudi Arabia), reptiles (3), fish (1) and invertebrate and marine fauna (6). Vol 18 (120 pages) has 11 main papers (seven on vertebrates). A review of the status of the brown and Asiatic black bears in Iran is particularly interesting. The latter, thought to have become extinct in the late 1960s, still hangs on in the south-eastern mountains. The brown bear is encouragingly more numerous than thought. The only Arabian ornithological interest is a bit tenuous in the form of a paper on molecular sexing of houbara and other arid land birds, based on studies of captive birds in UAE. There are three papers on fish, Turkish marine fish and fish of Bafa Golu and the south Caspian basin in Iran.

ZME is available from Max Kasparek Verlag, Mönchhofstr. 16, 69120 Heidelberg, Germany. Price DM27. ISSN 0939-7140.

Falco

No 13 is in a new glossier format (B&W). Includes articles on falcon trapping on the Tihama, sakers in Mongolia, hybrid falcons and peregrines in Sri Lanka. Plus notes on taxonomy and conferences, reports, reviews etc, (22 pages).

Available from Middle East Falcon Research Group, P O Box 45553, Abu Dhabi, UAE.

Counting Houbara Bustards by F Launay and T Bailey (eds) (1999)

This occasional publication of the IUCN/SSC/BirdLife Working Group on houbara bustard is about, yes you have guessed, counting houbaras. It is a collection of five papers, including introductory and concluding chapters, on censusing in Kazakhstan, the Canary Islands, Uzbekistan and Saudi Arabia.

Available from ERWDA, P O Box 45553, Abu Dhabi, UAE. <Email: erwda@emirates.net.ae>

ABBA and *Phoenix* Notes and Notices

Contributions to *Phoenix*

Articles relevant to the aims of the ABBA project are welcomed, especially notes on new breeding birds, the avifauna of specific areas or studies concerning particular species. There is no charge for notices, requests for information and advertisements of reports, publications etc. Articles may be emailed, submitted on disk (please state software) typed or handwritten. Charges for commercial advertisements and loose inserts are available on request.

Records still needed

Readers who have records of Arabian birds, however old, and whether published or not, are urged to make contact with the Co-ordinator. Old records are especially valuable in assessing population changes and range expansions and contractions. For example were there house sparrows *Passer domesticus* in Abu Dhabi in 1960? No one seems to know for sure. Although the project concerns resident and breeding species, it is not only proved breeding information that is required, notes suggesting possible or probable breeding, particularly unusual breeding species are also very valuable. Information on exotics and escaped species, ringed

birds and habitats is also needed. There is still much scope for collecting breeding bird information even for the common species in well trodden areas. Would observers please continue to send in records and information for their local area and remember to copy ABBA report sheets to the local bird recorder (if there is one). Any outstanding report sheets for 1999 or earlier years should be sent in as soon as possible. All potential contributors will be sent full instructions on how to submit records, ABBA recording forms, breeding birds list etc.

How to obtain *Phoenix*

One issue of *Phoenix* is published each year. It is issued free to all current contributors to the ABBA project and is sent to recent correspondents. A bundle of each issue is also passed to all natural history and similar groups active in Arabia. It is available on subscription for a single payment of £20 for the next five issues, i.e. Nos 17 to 21 inclusive. Because of the excessive bank charges for handling foreign cheques those not having access to a UK bank account are asked to pay in sterling notes or the equivalent in foreign currency notes. *Phoenix* Nos 1-15 are available at £2 each (or the set for £18) including postage. Those leaving Arabia might be interested in placing a subscription order as the price represents a small sum for all the news of Arabian birds for five years. All subscribers will receive a reminder when their next subscription is due. Will subscribers and observers please remember to advise any change of address.

Fig 5. Up to five pairs of starlings *Sturnus vulgaris* have bred in Ras al Khaimah, UAE (VB28) since 1993 (see *Phoenix* 8:2), including four birds carrying food in May 1996. They have not been found breeding away from the original site.

ABBA Survey Reports and Summaries

To date 25 ABBA Surveys have been completed, they have reached almost every part of Arabia from the Gulf of Aqaba to Ras al Hadd in Oman, and the Kuwait border to Aden. For each survey a summary report is prepared which includes the itinerary, a map and details of unusual observations etc. This is followed later by a full report prepared for the NCWCD, providing all the information collected on bird distribution and numbers. In line with the ABBA policy of making all information collected by the project available to those who want to use it, the summaries and full reports are copied to relevant libraries, museums and societies. In addition, a small number are available for sale. Full reports of Surveys Nos 4 to 24, and summaries of all 25 are currently available. (See details on page 21).

The *Phoenix*

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ABBA Reports by Email

Please advise the ABBA Coordinator if you wish to receive advance copies of ABBA survey reports etc by Email.

Society News

New Bird Group in Jeddah

The Jeddah based Saudi Arabian Natural History Society has formed a birding group (February 1999) of interested members in the Jeddah area. The group holds monthly meetings, local birding trips, publishes a newsletter and encourages novice birders with help in obtaining field guides, equipment and solving identification problems. A system of reports from members to a recorder is in place. The SANHS also plans to set up a website which will include bird news.

Those birding in Jeddah who have not yet contacted the group and others in Arabia or elsewhere who may visit Jeddah are advised to contact Marcus Jenkins, C/O Saudi Arabian Airlines, P O Box 167, MB638, CC942, Jeddah 21231, Saudi Arabia. <Email: marcusjenkins@compuserve.com>. The address of the SANHS is C/O Jeddah Prep and Grammar School, P O Box 6316, Jeddah 21412, Saudi Arabia.

Requests for Information

Herring-type Gull Wings Wanted

Would anyone finding dead herring-type gulls on Arabian coasts (and inland birds) send the dried wings to me along with details of place and date found, cause of death (if known), measurements and colours of soft parts if available. *Dr W R P Bourne, 3 Contlaw Place., Milltimber, Aberdeen, AB13 0DS Scotland (Tel 01224 732348)*

Great Black-headed Gulls on Cyprus

An analysis of great black-headed gull *Larus ichthyaetus* occurrences in Cyprus is being carried out by Bob Frost and Peter Flint . They would be grateful for unpublished records of this species in Cyprus, giving the date and time, number of birds, location and, if possible, the weather conditions. All records will be acknowledged. Please send information to *Bob Frost, Yelkouan, 14 Chaucer Way, St Ives, Huntingdon, Cambs, PE17 4TY, UK. <Email: rfrost@waitrose.com>*

Arabia Ornithological Bibliography

You will see on page 10 that there is now an ABBA webpage. One of the chapters is a bibliography of Arabian birds which currently stands at some 1500 entries. It has always been a sub task of the ABBA project to identify all published and unpublished references to Arabian birds and a bibliography will be published in due course However in the meantime everyone is welcome to consult the draft for free. In order to get the 'full set' of published material several readers will already experienced considerable badgering from me in the past for offprints, photocopies etc of reports and papers. Well I hope you can agree that my persistence has created something of value for everyone. To escape further badgering and to ensure your publications get to a wide audience in future would all authors kindly please send me an offprint or photocopy of their work.

I am particularly keen to hear from authors who notice gaps in the bibliography for papers they have authored or are aware of. If a paper is not on the bibliography I probably do not have it and would appreciate a copy. *Michael Jennings*

Winter Records of Ring Ouzels

As part of a study to elucidate the migratory movements of ring ouzels *Turdus torquatus* we would be grateful to receive reports of sightings of this species between September and April from the Arabian region, or indeed any part of its winter range. Please provide as much information as possible on location, date, number of birds, type of activities, feeding , habitat and whether flocking with other species. Records from any year would be appreciated including older records. *Dr Colin Ryall, School of Environmental Management, Farnborough College, Boundary Road, Farnborough, Hampshire, GU14 6SB, UK. <Email: c.ryall@farn-ct.ac.uk>*

Fig 6. Several thousand sooty gulls *Larus hemprichii* have been counted along the UAE east coast in spring.

Colour-ringed Cormorants and Greater Black-headed Gulls from the Black Sea

Almost 1500 fledgling great cormorant *Phalacrocorax carbo* were colour-ringed during the 1999 breeding season at different colonies in the Sivash, a major wetland between the Black and Azov seas (46°00'N, 34° 30'E). Also 50 great black-headed gulls *Larus ichthyaetus* were colour-ringed. Mauve-pink rings were used on cormorants and yellow ones on great black-headed gulls, both ring types are engraved with black letters. All birds were also fitted with metal rings (Moscow or Bologna). It is most likely that the majority of these birds will migrate to the Middle East and the eastern coasts of the Mediterranean. All observations should be reported, stating species, when and where seen, with ring details, to *Nicola Baccetti (INFS, Via Ca Fornacetta 9, I-40064 Ozzano Emilia BO, Italy. <Email: inszuni@iperbole.bologna.it>.*

Websites

Find all you need to know on Arabia and its birds at the following sites:

http://www.uaeinteract.com UAE webpage providing local news and politics, general environmental stuff but also the home of Arabia's most famous and oldest bird site, the weekly UAE "Twitchers" report. Also catch up on all those back issues from 1996.

http://www.arabianwildlife.com Based around the magazine *Arabian Wildlife* providing publication information , back issues contents etc, also provides information on others periodicals such as *Tribulus* and posts *UAE Twitchers*.

http://www.geocities.com/Yosemite/5267 Bahrain's own bird reference covering birds sites round the island with notes on what to see and maps of how to find them, a checklist of birds, seasonal occurrence tables and most other things relating to birds on the island.

http://www.oman.org/nath00.htm Oman based but covers Arabia generally in the fields of botany, climate, conservation, ecology, geology, marine biology, meteorology and zoology. Provides a directory of contacts (individuals and organisations with web links) working on various environmental issues in Oman and Arabia and a reading list.

ABBA Website

In recent months I have put together an embryo website http://dspace.dial.pipex.com/arabian.birds/ for ABBA which aims to provide some basic data about the ABBA project and Arabian birds in general. The outline contents page is shown below, those pages that currently exist are shown with an asterisk, the rest are in preparation:

- List of Arabian breeding birds (with ABBA reporting codes) and short notes on status and distribution.*
- Instructions to contributors to the ABBA project, including a report form.
- Draft bibliography of Arabian birds. *

- Index to the contents of *Phoenix* newsletters, numbers 1-15.*
- Where to watch birds and ornithological sites of interest in Arabia.
- Ornithological and natural history societies in Arabia, publications, officers and national bird recorders.
- Other environment, conservation and wildlife related websites relating to Arabia.
- *Phoenix* subscriptions and back issues, ABBA reports and other items available for sale. *

The web page is very primitive at present. Preparing the pages has been rather time consuming due to my inexperience of this art form and lack of specialist software. If there is a *Phoenix* reader with a penchant for designing web pages, and who would enjoy sorting out the ABBA page I would be pleased to hear from them. I cannot afford to pay except by a gratis subscription to *Phoenix*. Similarly if anyone would be interested in drafting the bird sites chapter I would like to hear from them to discuss ideas and sources.

I would very much to like to get feedback from those who have seen the pages and can offer ideas on format/layout, changes or suggest other information that might be put on the ABBA page. The missing contents will gradually be added as time permits.

Michael C Jennings

Birds on Farms in Central Saudi Arabia: ABBA Survey 25 - April 1999

It is well known that in the last two decades the variety of bird species breeding in and around the towns and cities of central Arabia has greatly increased. Some new species have been directly introduced by man or have escaped from captivity but many others have expanded their range naturally as new areas of suitable habitat becomes available to them. In preparing the first 100 species accounts for the Atlas of the Breeding Birds of Arabia it has become apparent just how many species have significantly increased their range and numbers in recent years but precisely why this should be so was not clear. It is likely that one major environmental change, the establishment of large areas of irrigated agriculture in many parts of Arabia, is a contributory factor, possibly the major factor.

Large areas devoted to cereal crops, vegetables and fruit are hitherto unknown habitats in Arabia, yet such habitats now stretch in almost unbroken tracts through much of northern and central Saudi Arabia. (See note on page 19). The closeness of farms have formed habitat bridges which have enabled a number of mainly commensal species to expand their range easily, leapfrogging across Arabia. Previously many of these species were range restricted due to extensive wastes of arid, inhospitable habitat found between centres of human population. There are other species that might have been expected to take advantage of the new habitats have not expanded their range or numbers, so clearly other factors are also at play.

In view of the apparent importance of irrigated agriculture to bird distribution and a number of questions I had concerning bird habitats on farms, the numbers of birds present on them, and especially the effect the new habitats are having on the indigenous breeding species, I decided to make an ABBA survey specifically to look at farms in central Arabia. ABBA Survey 25 took place between 2 - 25 April, 1999. The survey team consisted of Mohammad al Baroody of the NCWCD and myself.

Prior to the farm visits, 2-4 April was spent in the Riyadh area particularly looking at the al Hair watercourse. (See note on page 19). Once the survey got under way various other sites were visited between farms, records being collected for the ABBA database at all locations. A total of seven nights were spent camping and 14 in accommodation provided by the farms visited and one or two nights in hotels. The survey visited six farms as detailed below (see also Fig 7). The farms were all primarily cereal farms, although several had large flocks of sheep and others fruit and vegetable enterprises. Unfortunately no dairy farms could be visited because of precautions in place at the time to prevent the possible spread of disease. Virtually all crops are irrigated by central pivot systems, although fruit trees were usually watered by individual drip feed methods. Central pivot arms varied between from between about 300 and 500 m radius, with an area of 28-78 ha (69-193 acres).

Todhia Farm (NB25, OA25) east of Al Kharg, 5 - 6 April. This farm has an irrigated area of 2200 ha. and was the smallest farm visited, the least diversified but probably the most intensively farmed with almost all of its 37 pivots under production with wheat. Harvest was underway during the visit. This farm is an agent for Al Marai farms which is a large dairy farm chain. It has no livestock. The indigenous habitat at the farm was scrub desert with small limestone gravel outcrops, some acacia and *Calotropis* in wadi beds.

NADEC (National Agricultural Development Company) Farm (LA17, LA16) Wadi Dawasir, 7 - 9 April. Situated south of Wadi Dawasir on the Najran road. With 350 pivots laid out, the total cultivatable area was approximately 16,000 ha., but only 5,000 ha were irrigated in 1999, mostly wheat (harvest was complete) but also alfalfa, potatoes and 12 pivots of Rhodes grass (a fodder crop only grown on this one farm). The farm had 31,000 Nejdi sheep. The habitat prior to farm being established was arid sparsely vegetated scrub desert with small scattered sand dunes.

Gassim Agricultural Development Company Farm, (JA31) Sheri, 10 - 12 April. Situated between Buraydah and Hail the total area of this farm is some 30,000 ha. with a pivot area of 6000 ha. Of the 91 pivots laid out only 60 were being irrigated in 1999, comprised of 30 wheat (harvest had not started) , 5 barley, 8 alfalfa, 10 maize (stubble) and 7 potatoes and other vegetables. In addition there were 37 ha of fruit, 30,000 naemi sheep and 50 bee hives. The original habitat of this farm was a sandy gravel plain with good scrub cover. Many areas of rough ground including shallow wadis and small stony hills remain, creating good habitats for indigenous birds.

NADEC Farm (IB31, IB32) Hail, 12 - 14 April. Situated north east of Hail. This farm has a total area of 23,000 ha. In 1999 the irrigated area (200 large pivots) was 12,000 ha. (10,000+ha. wheat, 780 ha. alfalfa, 312 ha. potatoes and 234 ha. onions) 4,200 ha. was fallow. 9000 Nejdi sheep were kept. The wheat harvest had not started. The original habitat of the farm was similar to that at Gassim farms above but uncultivated areas were not so extensive.

TADCO (Tabuk Agricultural Development Company) Farm (CA34) Tabuk, 15 - 18 April. This farm has a total area of 35,000 ha. and during 1999 some 230 pivots were irrigated, 106 with wheat, 85 with alfalfa and a few with onions and potatoes, there were also some fruit pivots. No barley was grown in 1999. The wheat harvest had not started. This farm had 2,500 ha. of Mediterranean fruits, mostly irrigated by drip feed techniques. 760 bee hives were counted but there were no livestock. The original habitat of this farm was very sparsely vegetated and arid desert with numerous sandstone outcrops. The outcrops and large areas of rocky sandstone desert were untouched.

NADEC Farm (EA36) Wadi Serhan, 18 - 21 April. The farm is situated in an area known as al Bisaita to the west of the Wadi Serhan which was renowned in the past as an arid monotonous gravel plain with virtually no vegetation. In 1999, 2,700 ha. were being irrigated by 52 pivots, 38 of barley (harvest had not started), 10 alfalfa and the rest potatoes. In addition there were 255 ha. of fruit orchards, 60,000 naemi sheep and 100 beehives .

Data was collected on birds present at each farm with view to making an assessment of the range of resident /breeding species and their populations present, also records were gathered on migrant and visiting species. Information was collected by three main methods:

- Transect censuses of birds present on and utilising individual pivots;
- Early morning transect censuses of pivots or other cultivated areas and waste ground in and near farms, mainly aimed at assessing the number and variety of breeding birds;
- Miscellaneous observations whilst moving around farms to examine habitats and crops.

Unfortunately Mohammad al Baroody had to leave the survey following Wadi Dawasir due to an eye infection in addition to which I was ill from 11 April to the end of the survey with a severe virus infection which greatly reduced the time I could devote to field work.

The transect method for pivots was to walk between the outer pivot leg and the first inner pivot leg over an arc of 90 degrees. All birds seen or heard between the two legs in the sector were counted. Counts were extrapolated to represent a theoretical population for the whole pivot and an average for a square hectare calculated. The method of extrapolation had to be somewhat subjective; generally large birds using the pivot, such as harriers and ravens, could be counted for the whole pivot but small species could only reasonably be counted within the sector. It was not possible to compare results directly between pivots as they vary a great deal in size. There was a fringe of weeds around many pivots and along a service road to the centre of many. In addition the centre often held a small pond created by water that had spilt from the pump.

Early morning timed (half hour) transect censuses were carried out on 12 occasions, at sites near farms, on waste areas on farms and over or beside irrigated areas. During the transect period all birds seen and heard were counted. The transect was a straight line and within one habitat type where possible.

General observations around farms were made during the initial period of the visit, when all corners and the whole perimeter of the farm were visited to identify crops and habitats available. Most farms had areas of indigenous habitat within their borders where the original avifauna could be found. Such areas were in many ways better for birds than comparable areas outside the farms because farms had a surrounding fence which meant that waste areas were completely ungrazed. This made for richer habitat, plants having had the opportunity to mature and produce seeds. Even when farms had large flocks of sheep there was little evidence of grazing as animals were generally grazed with attendant shepherds onto stubble and not allowed to roam freely. Other habitats available on farms were the administrative centres where there were usually trees and established gardens, grain silos, rubbish and effluent areas and water spill ponds. In censuses observations were made of both resident and breeding birds and migrant and visitors equally.

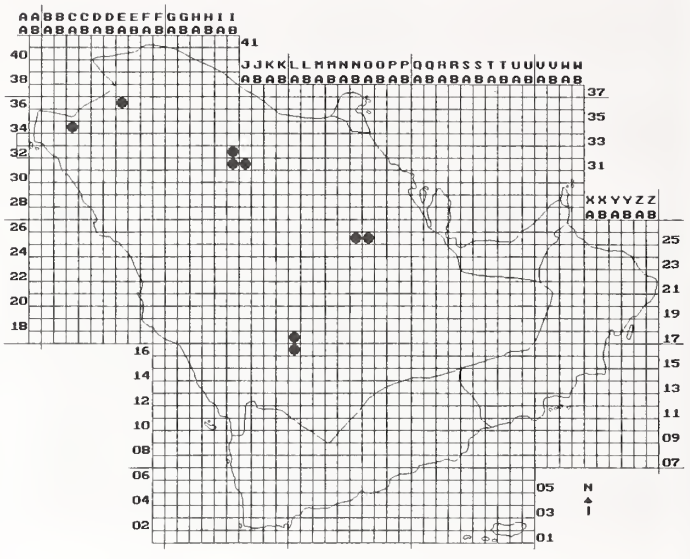

Fig 7. Location of farms visited during ABBA Survey 25; Wadi Serhan EA36, TADCO CA34, Hail IB31 & IB32, Gassim JA31, Todhia NB25 & OA25 and Wadi Dawasir LA17 & LA16.

Farm	Indigenous Breeding Species	Non-indigenous Breeding Species	Total Breeding Species
Todhia	8	6	14
Wadi Dawasir	7	8	15
Gassim	7	13	20
Hail	8	12	20
TADCO	11	15	26
Wadi Serhan	2	14	16

Fig 8. Number of breeding birds noted on each farm

The numbers of breeding species present on the six farms visited is shown at Fig. 8, splitting breeding birds into indigenous species (ie those that were in the area before the farm was established) and non-indigenous species that have apparently moved into the area to utilise new habitats now available on the farm. Only on one farm

(Todhia) were the number of indigenous species in the majority. At the other extreme in Wadi Serhan only two species of 16 potential breeding species were likely to have been at the location before the farm was created. Non- indigenous species included crested lark *Galerida cristata*, house sparrow *Passer domesticus* and kestrel *Falco tinnunculus* which were not generally found in desert areas as breeding birds prior to irrigation.

Notes on breeding and potential breeding species on farms are shown below.

Egyptian vulture *Neophron percnopterus.* Ten present on an alfalfa stubble pivot at Wadi Dawasir (probably attracted to water at the pivot), 8 Apr and two feeding at the TADCO rubbish area, 14 Apr, were the only records.

Kestrel *Falco tinnunculus.* One or two only at Wadi Dawasir, NADEC Hail, TADCO and NADEC Wadi Serhan.

Quail *Coturnix coturnix.* Present on every farm and in 17 of 27 pivots censused. Presence was mostly confirmed by the call or flushing. Highest numbers were found in alfalfa, including its stubble and cereal crops. They were not in three pivots of Rhodes grass (at Wadi Dawasir) or in wheat and maize stubble and potatoes. At TADCO most birds were in small groups (up to 20, 15 Apr), were much less vocal and thought to be mainly migrants.

Cream-coloured courser *Cursorius cursor.* One or two pairs at Gassim, TADCO and Wadi Serhan. An apparent pair and two almost fully grown juveniles were feeding on a pivot of newly sown (just sprouting) alfalfa, 11 Apr at Gassim.

Spur-winged plover *Hoplopterus spinosus.* Five pairs at pools adjacent to Todhia, 5 Apr and three pairs at pivot pump pools, TADCO, 15 Apr.

Pin-tailed sandgrouse *Pterocles alchata.* Six pairs at NADEC Hail, 13 Apr and a group of 12 at TADCO, 15 Apr.

Rock dove *Columba livia.* Recorded commonly at all farms, mainly frequenting the administrative areas and grain silos. A large group of 400 was noted in a grain disposal area at TADCO, 17 Apr. They were relatively scarce on the pivots but could sometimes be seen on cereal and alfalfa stubble and potatoes. Groups of feral birds were noted at Gassim, Hail, TADCO and Wadi Serhan but some of these were almost certainly loft pigeons from worker's camps.

European collared dove *Streptopelia decaocto.* Resident at each farm. Like the rock dove these birds were mainly found in the administrative areas of the farm. Also in vineyards and orchards of northern farms but rather scarce in scrub areas. Found in small numbers only on pivots (8 of 27), in most cases these were crops of ripening cereals or cereal stubble, once alfalfa stubble.

Palm dove *Streptopelia senegalensis.* Resident at each farm, in small numbers at Todhia and Wadi Dawasir and Gassim but common at the other three farms. Again mainly present in the administrative area and around grain stores. At TADCO 200 had collected at a waste grain area, 17 Apr. Common in orchards. Odd birds were at pivots adjacent to farm buildings.

Turtle dove *Streptopelia turtur.* Commonly cooing in TADCO orchards where there were several dozen pairs apparently preparing to breed, 16 Apr.

Namaqua dove *Oena capensis.* A few pairs a Todhia, Wadi Dawasir and TADCO, one or two Gassim and Hail, not recorded Wadi Serhan. Recorded on wheat and maize stubble pivots.

Little owl *Athene noctua.* Only recorded at Hail where surprisingly numerous with 12 birds (12 Apr) counted on heaps of rocks removed from the soil when pivots were cleared for tilling.

Little green bee-eater *Merops orientalis.* Single pairs at Todhia and Wadi Dawasir.

Black-crowned finch lark *Eremopterix nigriceps.* Three at Todhia, 5 Apr were the only record.

Dunn's lark *Eremalauda dunni.* Common at Gassim and Hail in scrub areas of the farms, not in irrigated areas.

Bar-tailed desert lark *Ammomanes cinctura.* A few at Todhia, Gassim, Hail and TADCO but not utilising pivots.

Desert lark *Ammomanes deserti.* A few were present in suitable habitat at Todhia, Gassim, Hail and TADCO. At Todhia they were feeding on wheat stubble, 5 Apr, the only instance when irrigated areas were utilised.

Hoopoe lark *Alaemon alaudipes.* Recorded in small numbers at each farm. Regularly feeds round the weedy edge of pivots rather than on the pivot itself, although once on recently cut alfalfa.

Short-toed lark *Calandrella brachydactyla.* Pairs nest building and also migrant groups at Hail, TADCO and Wadi Serhan. Present on four of nine pivots censused at TADCO and Wadi Serhan, frequenting alfalfa and potatoes but not uncut wheat and barley. Seen picking green wheat from growing heads that had fallen over and also jumping up to take individual grains on the edge of pivot.

Lesser short-toed lark *Calandrella rufescens.* Present on five of eight pivots censused at Gassim and Hail, frequenting alfalfa, maize stubble, potatoes, but not green wheat or barley. A few pairs Wadi Serhan. Probably included some migrants and visitors but the majority seemed to be about to breed with pairs, much song and courtship behaviour.

Crested lark *Galerida cristata.* The most common bird on all farms, recorded on every pivot census and every early morning census. The highest counts during an early morning census (approx 1.5 km) was 92, on a patch of scrub between pivots. The extrapolated population on Todhia farm was 16,000 pairs. The crop which was the least attractive to them was Rhodes grass whereas alfalfa was probably the most heavily populated, seen feeding on green wheat, either sitting on the ear or flying up from the ground to pull down the ear.

Pale crag martin *Ptyonoprogne fuligula.* A few hawking insects around the sheep pens at Wadi Dawasir and a few TADCO.

Rufous bush chat *Cercotrichas galactotes.* Migrants at Wadis Dawasir and Serhan but commonly singing in TADCO orchards.

Black bush chat *Cercotrichas podobe.* A few in scrub and around administrative areas at Wadi Dawasir and in the orchards at Gassim.

White-crowned black wheatear *Oenanthe lencopyga.* One or two at rock outcrops TADCO, 15-17 Apr.

Graceful warbler *Prinia gracilis.* One in vineyards at Gassim, 11 Apr and a few at TADCO, both range extensions.

Great grey shrike *Lanius excubitor.* A few in scrub areas at Todhia, Wadi Dawasir, Gassim, and Hail. Not associated with irrigated areas.

Brown-necked raven *Corvus ruficollis.* Small post breeding groups had formed at Todhia (15) 5 Apr, Wadi Dawasir (40) 8 Apr and TADCO (70) 15 Apr. Single birds at Wadi Serhan but not recorded Gassim or Hail. Only seen at three pivots, one of ripe wheat and two of alfalfa.

House sparrow *Passer domesticus.* Common all farms. Some farm managers identified this species as a pest of ripe cereal crops. This borne out to some extent by observations of 84 and 60 birds on ripe crops of wheat and barley respectively, although all other records on crops were negligible. Seen eating green wheat grains from growing cereal. Rather scarce in areas of scrub or rough ground but common in orchards and vineyards.

Spanish sparrow *Passer hispaniolensis.* One or two with house sparrow at Gassim but several thousand pairs breeding at Hail, 14 Apr and hundreds more at TADCO, 15 Apr, in concentrated colonies, mainly in tamarisk trees. There was a high degree of synchrony in nesting activity. About 50 at Wadi Serhan. Not observed in crops.

Indian silverbill *Euodice malabarica.* One pair in an orchard at Gassim, 11 Apr. A range extension.

Desert finch *Rhodospiza obsoleta.* Common at Gassim, Hail , TADCO and Wadi Serhan. Especially frequent in orchard areas but also on the weedy fringe of pivots and foraging in the scrub areas on the edges of farms.

Goldfinch *Carduelis carduelis.* Common in orchards at TADCO where the population was estimated at 500 pairs. One nest with a single egg (first Arabian nest) 17 Apr. Three birds at Wadi Serhan, 19 Apr is a range extension.

Trumpeter finch *Bucanetes githaginens.* Three at TADCO was the only record, 15 Apr.

Although not the major objective of the survey notes were collected of migrant and visiting species in addition to potentially breeding birds. Montagu's harriers *Circus pygargus* were moving through northern Arabia from 10 - 21 Apr. They were particularly numerous on farms over cereal and alfalfa pivots, the highest daily count was 31 (males) at Gassim farms on 11 April and 30 (males) at Hail on 13 April. No other species of pale male harriers were identified. In addition a number of brown 'females' were seen which were probably also mostly this species. There was a light movement of common buzzards *Buteo buteo* in northern areas from 12-20 April with up to 30 seen each day. A group of 40 black-winged pratincoles *Pratincola nordmanni* were at Gassim farms on 10-12 April. A lapwing *Vanellus vanellus* was on the perimeter of Todhia on 6 April. Red-throated pipits *Anthus cervinus* were common on all farms from Gassim northwards with a maximum count of 1024 and 1281 on pivots of alfalfa at TADCO, 15 - 17 April. Like the previous species, yellow wagtail *Motacilla flava* were particularly numerous from Gassim northwards, the maximum on a pivot was over 1000 on an old field of alfalfa at Gassim on 11 April. Lesser whitethroats *Sylvia curruca* were exceptionally numerous at TADCO on 15-17 April when there was a huge fall over the whole farm. On 16 April there were an estimated 1000 in a kilometre long tamarisk windbreak and probably an average of at least 10 per ha. in the 2500 ha. fruit orchards there, giving 25,000 for the farm that day.

A full list of all observations is available on request.

Fig 9. At NADEC farm Hail, 12 little owls *Athene noctua* were counted at dusk, they were using heaps of rocks cleared from fields as nest sites.

The large farms that can now be found in many parts of central Arabia have irrevocably altered large areas of former wilderness, some say even the climate has been changed. Many of those areas are now inaccessible to people who previously utilised the desert but it is undeniable that these farms have also been beneficial to many bird species. The main positive effects of the farms are:

a. Since the establishment of large irrigated farms in central Saudi Arabia, several commensal or near commensal species have greatly increased their range, in many cases probably because the network of farms has allowed them to colonise new areas without having to move across large arid wastes. Their numbers have greatly increased where farms have been established as farms often present optimum conditions for them to find food and to nest.

b. The majority of indigenous species still find their traditional habitat even in areas of intensive agriculture as the original desert and scrub still exists between irrigated pivots, and on the edge of farms and in marginal or rocky areas within the farm boundaries. The fact that farms have perimeter fences and thus exclude uncontrolled grazing means that arid lands habitats

within farms are now in better condition than similar areas outside the farm, which are often overgrazed.

c. Farms provide many opportunities for migrant species to rest and feed during seasonal movements and must therefore greatly increase their ability to survive the migration. The creation of large irrigated agricultural areas has meant that Arabia is no longer a wide expanse of inhospitable arid environments for migrants.

The most valuable irrigated crop in terms of its utility for birds was judged to be the fodder crop alfalfa. Because this crop is cut up to 10 times each year birds can always find crops in different conditions to suit their needs. Alfalfa stubble allows access to often damp ground for ground feeders and the growing crop has a high population of insects and caterpillars, as well as green foliage. Unfortunately the monthly cropping of alfalfa means that there must be a huge mortality of eggs and young for those species that attempt to nest in it. Quails would find it difficult to lay a clutch and incubate them in a cropping cycle. Equally crested larks could hardly build a nest, lay the clutch, incubate and rear the young in the same cycle. The least favoured crop by birds was Rhodes grass. This is rather coarse grass grown for hay (only at Wadi Dawasir), it seemed to be almost devoid of insects and caterpillars.

The benefits of irrigated farms in central Arabia may however be short-lived. All farms were irrigated from deep boreholes tapping fossil water aquifers. Most farms reported that they were having to bore deeper and deeper to find adequate supplies of water and it seems inevitable that some areas will run out of water in the next decade or two, perhaps sooner. Farms are currently subsidised by various government schemes which help with set up costs and drilling wells, land purchase, the movement of produce, fuel, and guaranteed produce prices. There are plans to reduce some subsidies. Because of the subsidies, the farms can presently withstand the increasing costs of obtaining enough water but if water runs out at any farm, that farm must immediately become non-viable. There are plans for more use of desalinated water for irrigation but this will be only available in the vicinity of the coast and not hundreds of kilometres away in the interior where farms are several hundred metres above sea level. Already in central Arabia one can see numerous small pivot farms that have been abandoned. The smaller ones would probably have been much less economically viable than the larger ones examined during ABBA Survey 25 and will not have had the financial and technical resources to overcome water and pest problems. Also it seems that a lot of entrepreneurs dabbled in farming in the 1980s without enough knowledge of the industry to succeed or the profit margins were inadequate.

Acknowledgements

The success of ABBA Survey 25 was due to help from many people especially farm managers and employees. On the farms a great deal of help and hospitality was extended to Mohammad al Baroody and myself, they freely provided information on the history and development of farms, crops, animals, and water sources. We were also made welcome at the Head Office of NADEC in Riyadh where the Director General Mohamed al Babtain and the Plant Production Manager Abdulaziz al Babtain gave every assistance in planning visits to the three NADEC farms included in the study. I wish to record special thanks to individuals at farms as follows; Jack King, Farm Manager at Todhia; Project Manager Hasan al Shehiri, Ahmed al Shaban, and Bassam Sakabani at NADEC Wadi Dawasir; Assistant Project Manager Haroon Rashid and Dr Talaat Nasr el Din, Gassim Agricultural Company, Sheri; Manager Salem al Shawi and Abdul Gaffer Majeed, NADEC Hail; General Manager Saad Alswatt and Assistant Project Engineer Farhan al Shihri at TADCO and Manager Abdulla al Sudais and Dr Nazir Nahlawi at NADEC Wadi Serhan. I would also like to acknowledge the help and encouragement given to me by the Riyadh Natural History Society, especially Ray Tyson, Peter Lenthal and John Ady and the Al Khobar Natural History Group notably Arnold Rivett. The NCWCD is the major sponsor of the ABBA project and I wish to record my thanks to the Commission, especially to the Secretary General Prof. Abdulaziz Abuzinada, for continued sponsorship and for encouragement to look at the developing agricultural regions of the Kingdom in the current survey.

Michael C. Jennings

Summer Observations of Seabirds in the Gulf of Oman

From the 21May until the 24 June 1999 I joined a team which Shell Deepwater Oman (SDO) had commissioned for a seismic survey in the Gulf of Oman. During the day light hours I made environment observations of seabirds and other wildlife encountered. Since bird density was generally low, each observation was individually recorded and numbers of birds were either counted or estimated. When possible, determinations were made with reference to Gallagher & Woodcock (*The Birds of Oman*, 1980).

A high proportion of the time was spent surveying in an area identified on the accompanying maps as Block I8 in which the Daymaniyat Islands lie. This Block is to the NW of the oil concession. The most common birds observed in Block 18 were;

Pale-footed shearwaters *Puffinus carneipes* 34
Persian shearwaters *Puffinus lherminieri (persicus)* 347
Indeterminate shearwaters - 85
Wilson's storm petrels *Oceanites oceanicus* 115
Bridled terns *Sterna anaethetus* 1140
Roseate terns *Sterna dougallii* 109
Indeterminate terns - 2855

All of these are summer residents in the Gulf of Oman. These three families accounted for 94% of all sightings and were distributed throughout the survey.

Pale-footed shearwaters, previously known as an occasional visitor to the area, were always encountered in small numbers, often as single individuals or as pairs. This was also the case with Persian shearwaters, except that this species also formed large groups (10-50) and often associated with groups of feeding terns. Wilson's storm petrels were often observed as individuals but were also found in flocks of 10-25 birds. A single red-billed tropicbird *Phaethon aethereus* and three masked boobies *Sula dactylatra* were also observed. The former is known to nest on the Daymaniyat Islands and Ra's Sawadi while the boobies were probably visitors from their nesting areas in Dhofar (Jensen & Salm, *Coastal Seabirds of the Sultanate of Oman. Scientific results of the IUCN Coastal Zone Management Project*. Ministry of Commerce and Industry, Government of Oman. 1992).

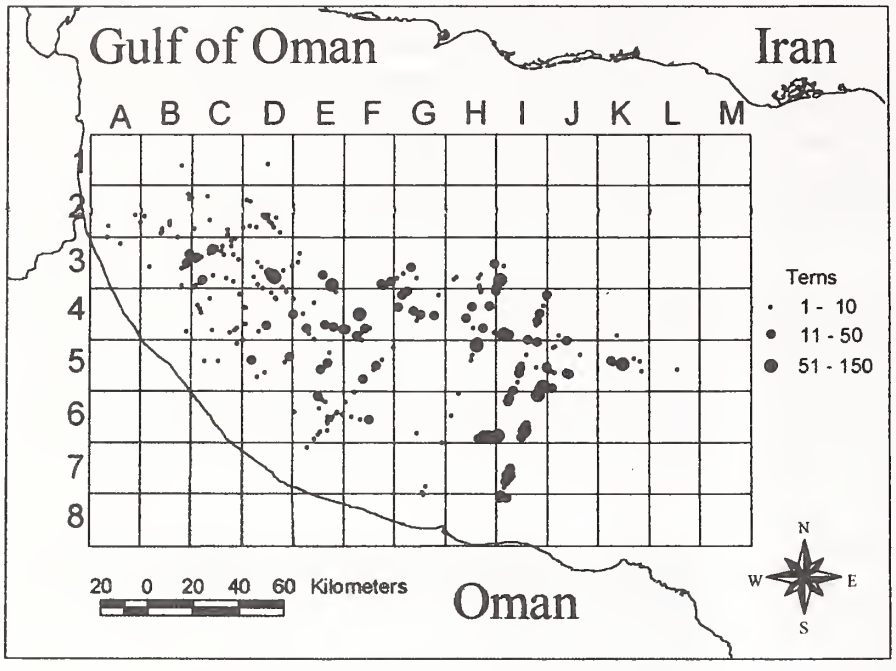

Fig 10. Records of all species of tern showing their distribution and numbers in the Gulf of Oman. The survey Blocks do not correspond to ABBA squares.

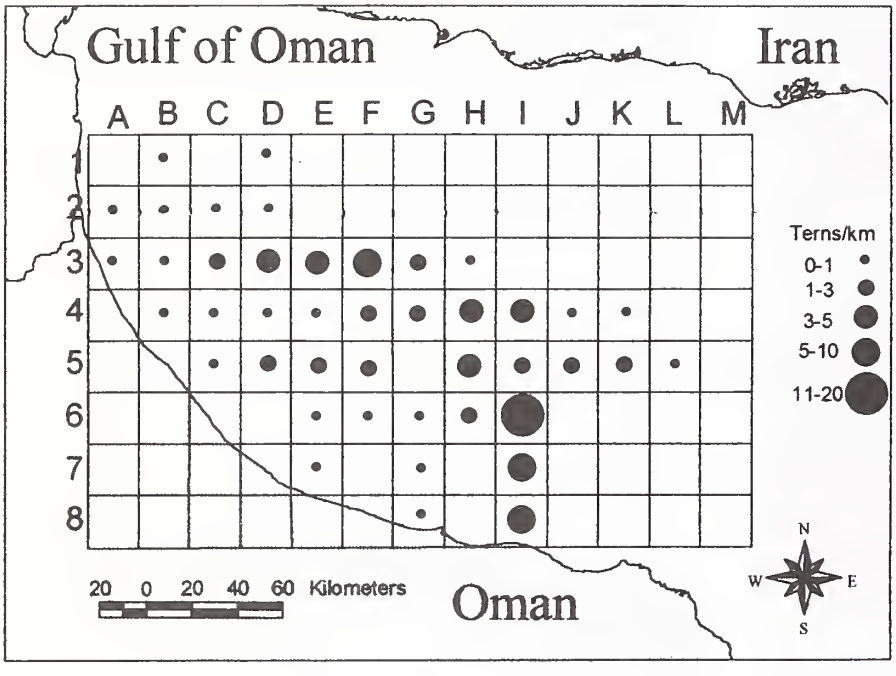

Fig 11. For each Block the total number of terns has been divided by the number of survey kilometres to give an 'encounter rate' which is an indicator of density.

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Photos needed for *Phoenix*

Photos of Arabian breeding birds, their nests, eggs and habitats etc are welcomed for inclusion in future issues of *Phoenix*. Photos may be printed with just a caption, for their aesthetic value, or can be submitted to illustrate notes and papers. Submitted photos may be in colour or black and white (glossy or matt), slides, prints or negatives, so long as they have good contrast.

Bridled terns breed in large numbers on the Daymaniyat Islands in summer, and this colony probably accounts for the majority of the individuals seen. This view is supported by the observation that the majority of birds were seen to be flying in the direction of the islands at dusk. Bridled terns were commonly associated with tuna and probably use the splashes of feeding tuna as a cue to forage. Groups of 10-50, sometimes mixed with other species of tern and shearwaters, account for the majority of terns, but smaller groups of 1-5 individuals were also encountered either resting or foraging. Singles and pairs were commonly perched on floating debris such as polystyrene blocks. The distribution and numbers of terns observed is shown at Fig 10, also the rate at which they were encountered, individuals per km of survey as an indication of the density of birds in each Block, shown at Fig 11. The roseate terns which also breed on the Daymaniyat Islands (their only breeding site in Oman) were recorded at a number of locations. Others seabirds observed included four great skuas *Stercorarius skua* an uncommon summer visitor, sooty gull *Larus hemprichii* which is a common breeding resident, white-cheeked tern *Sterna repressa*, breeding summer visitor, common noddy *Anous stolidus*, four seen, an uncommon breeding summer visitor. A small flock of four phalaropes *Phalaropus* sp. Were seen, these are uncommon at this time but much more common in winter.

Migrant landbirds seen at sea were kestrel *Falco tinnunculus* which breed on the mainland but the four seen were probably late migrants on passage; grey heron *Ardea cinerea*, a common passage migrant; pallid swift *Apus pallidus* a breeding visitor locally and late migrant spotted flycatchers *Muscicapa striata* which approached the vessel to rest and remained on board for several hours.

Oman is of prime importance for some nesting birds. Among seabirds, for example, the Persian Shearwater is not known to nest elsewhere (Gallagher & Woodcock, 1980). Of particular interest is the distance from the breeding site that terns forage in some cases in excess of 150km. This has significant conservation implications, particularly since more than a quarter of the world's exports of hydrocarbon pass through the Gulf of Oman each year.

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Wildflowers of Saudi Arabia by Sheila Collenette (1999)

The first three ABBA Surveys (1985-7) were joint fieldwork with Sheila Collenette in which I looked at bird distribution and Sheila studied and collected plants. This symbiotic relationship worked very well as we both wanted to visit the same out of the way locations. At a practicable level as a visitor to Saudi Arabia, I did not have a vehicle and Sheila had a vehicle but no driver. During these surveys and some later field work together I built up a tremendous admiration for Sheila's single-mindedness in finding and collecting endless new plants for Arabia and in many cases new for science. She tirelessly worked and photographed all day in the heat, from mangrove swamps to the high Asir and the spent hours in the evening writing up notes, changing plant press papers and so on. She has now spent some 26 years studying Arabian plants and must rank as the most prolific and persistent field botanists Arabia has seen. I have learnt a lot about plants from Sheila which has greatly enhanced my understanding of birds in desert habitats.

Sheila published her first Saudi Arabian flora as *An Illustrated Guide to the Flowers of Saudi Arabia*, itself a magnificent achievement, in 1985 but was disappointed about the publication arrangements and the poor colour reproduction of a number of the plates. This new book is an enlargement and update of the first with, I am pleased to say, magnificent colour photos from end to end. Any description of this new book *Wildflowers of Saudi Arabia* (ISBN 9960-614-09-3) must drip with superlatives. It has 832 pages (295x220mm, portrait), 2400 photos, and 260 other illustrations of 2250 species. Only 66 species were not photographed or found by Sheila (which are mostly historical records or vagrants to the Kingdom) and thus this book is unique in being able to illustrate almost the entire flora of a large country by photographs. This new plant book will allow most bird people to identify most plants being eaten or utilised by birds to at least the genus and for more knowledgeable botanists to identify the majority of species. This is made possible by a really superb quality of the colour separations which has clearly been a very exacting task by the publishers.

The book is arranged alphabetically by families, genus and species and is extremely easy to use (although it is easier if you know the names of families). There is an overview of the family, with short notes on the identification and distribution of each species. There are also notes on the status of each species such as whether they are endemic, endangered or, in a few cases, extinct in recent years. Every species is supported by a herbarium specimen and the reference numbers of specimens collected by Sheila herself are provided. Almost every species is illustrated by a colour photo, usually a close-up but often in its in natural habitat. The exception is that the grasses are shown as line drawings which is a better medium to identify them. The book is supported by maps showing the more important collection localities and a range of photos of habitats and plant communities.

There was a limited print run on this book and its size and expense of production mean that it is not cheap at £165 (discounts available or four or more copies) plus postage and packing (£10 for UK, £35 for Europe and $63 for USA) - discounts on postage for multiple orders). It is available from East Anglian Engraving Co Ltd , 81 Barn Road, Norwich, NR2 4UB, <Email: *eae@netcom.co.uk*> and Tel UK 01603 624881. The author has a small number of copies for sale and she has kindly offered them to *Phoenix* readers at a discount price of £150, and even postage (£8.50) can be avoided if they are prepared to collect them from her home in Hampshire. Anyone who would like a copy direct from the author should contact me for details. Residents in Saudi Arabia can obtain a copy from the NCWCD at a price of SR1000.

This is one book that most people interested in the Arabian environment will want to have for reference on their bookshelf. It is highly recommended.

Michael C Jennings

Fig 12. One of the more enigmatic birds of Socotra is the endemic buzzard, provisionally thought of as a race of the common buzzard *Buteo buteo* but it may be a separate species. Recent studies of the fauna of the Socotra islands may shed some light on its taxonomy.

Greater Flamingos Breed in Abu Dhabi

After five years of trying, greater flamingos *Phoenicopterus ruber* finally bred successfully at the Al Wathba Lake Reserve (UB25) in Abu Dhabi in the winter of 1998-1999. The first time that the species has been recorded breeding successfully on the mainland of Arabia.

Formerly known as Al Ghar Lake, the Al Wathba Lake is 40 km. east of the city of Abu Dhabi. The lake is formed primarily by the discharge of treated effluent onto salt flats (sabkhas), with occasional fresh water replenishment through rainfall. The lake was formally designated as a wildlife reserve in the summer of 1998 by UAE President Sheikh Zayed bin Sultan Al Nahyan. It is managed by Abu Dhabi's Environmental Research and Wildlife Development Agency and was inaugurated in November 1999 by Britain's Prince Charles, then on an official visit to the Emirates.

Greater flamingos were first observed at Al Wathba at the beginning of 1990, following heavy winter rains. A breeding

attempt took place in the summer of 1993 when 22 nest mounds were completed. Four eggs hatched in early July, but the colony was abandoned shortly afterwards as a result of human interference, made possible by falling water levels. Further breeding attempts took place in succeeding summers but were always frustrated by the decline in water levels, most recently in the summer of 1998. This last attempt leading to the formal designation of the lake as a nature reserve.

In excess of 100 flamingos have been resident at Al Wathba throughout the year since the early 1990s, except for one short period when the lake dried up completely, although numbers increase to several hundred during the winter months.

Despite the fact that there is no precedent for breeding taking place outside the summer (except for captive birds) flamingos at Al Wathba began nest building activity in November 1998. By early January 1999, over 40 nests were suspected of containing eggs. Flooding later that month caused the washing out of the majority of the nest mounds, but a dozen nests survived, with 10 chicks hatching. These fledged in April. Although nest mounds have been constructed at several places in Arabia previously, including near Dubai, Jubail and Jeddah, and chicks have been observed near Hodiedah in Yemen, the Abu Dhabi occurrence is the first successful breeding with fledged young in Arabia since 1922. (In that year the species was recorded as breeding on the island of Bubiyan, in Kuwait).

In late October 1999, in time to coincide with the formal inauguration of the reserve by Prince Charles, repairing of the nest mounds had commenced, with activity indicative of another nesting attempt still continuing as *Phoenix* 16 went to press.

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The African Reed Warbler in Mangroves at Yanbu al Sinaiyah

Yanbu al Sinaiyah (23° 56'N, 38° 14'E ; EA24) is a new industrial city to the south east of the Red Sea coastal town of Yanbu al Bahr (EA25), Saudi Arabia. The *Avicennia marina* mangrove belt there is the site where the first African reed warblers *Acrocephalus baeticatus* were recorded in Arabia. I discovered the birds shortly after taking up residence at Yanbu al Sinaiyah in 1984 after I noticed a number of small grey-toned warblers, that I thought were *Acrocephalus,* singing at several sites along the mangrove stand (see *Phoenix* 3:3-4). Two birds were collected and sent to the Natural History Museum, Tring, UK. Aware of similar birds on the Sudanese side of the Red Sea I suspected they were of the same species and this was confirmed subsequently by Ash et al., in 1989 (*Bull. Brit. Orn. Club* 109:36-43) who considered the Red Sea mangrove warblers as a new race of the Africa reed warbler.

I remained at Yanbu al Sinaiyah for 10 years 1984-1994 . As there is a dearth of data concerning this bird this short note has been prepared to provide some further information on its breeding, population and seasonality, obtained during my residence at Yanbu. The data was obtained on an ad hoc basis as, for various reasons, it was not feasible to carry out a detailed study of the species.

The status of birds occurring at Yanbu al Sinaiyah appears to be 'resident' as there are records for all months of the year, although there are relatively fewer sightings during the period August to early October. At this time maximum water temperatures are recorded and this is also the time when the mangroves are utilised extensively by palearctic migrants (see Meadows, 1992; *Proc. VII Pan-Afr. Orn. Cong.*. 155-161), including potential predators such as shrikes, and one or both these aspects may affect them. On the Sudanese coasts the birds are absent from September to November. However it is possible that the Yanbu al Sinaiyah population could contain both mobile and sedentary elements with at least part of the population being migratory. The Yanbu al Sinaiyah mangroves also support a population of at least ten pairs of clamorous reed warblers *A. stentoreus* and although they are also apparently resident I have observed that some individuals move out of the mangroves to the upper salt marsh and beyond into the adjacent acacia steppe in July and August. I do not have similar observations for the African reed warbler but they could easily have been overlooked.

The breeding season is indicated by singing birds mainly from December to June although some song, albeit usually low in intensity, was heard in all months over my period of residence at Yanbu. The loudest singing, often throughout the day, was most prevalent in May and June. The species is probably double brooded, the gonads of two birds collected in March indicated that they had recently bred and begging juveniles were seen in May and as late as July. The phenology of the mangroves at Yanbu al Sinaiyah has been studied in some detail, buds and flowers develop with the onset of warmer days (fruiting occurs during the winter) with flowering in late May for younger plants and the heaviest flowering for older trees in June. At this time of the year the invertebrate, particularly insect, population is presumably increased and breeding is probably geared to coincide with this relative abundance. At Yanbu al Sinaiyah the flowering period can extend over a long period with significant flowering still occurring in October in some years. This may be an important factor in whether birds remain or leave the mangroves during the autumn.

The mangrove belt at Yanbu al Sinaiyah covers a total area of approximately 800 ha. In an attempt to estimate the population size I trapped and colour ringed 12 individuals between April and December 1993 but unfortunately I was unable to continue the study into 1994 and I did not have any retraps by the time the study had to be terminated. My earlier estimates based on song plots had put the population at a minimum of about 45 pairs. However on 19 May 1993 I located no less than 23 singing birds in an area of approximately 120 ha. in the northernmost zone (designated as Conservation Area 1). Extrapolation of this count over the entire Yanbu al Sinaiyah mangrove belt would yield a population well in excess of 100 pairs. It is possible that the population increased slightly during my ten years of residence through changing conditions within the mangroves brought about by changing growth rates and heights. Also in Conservation Area 1 there has been significant colonisation of a previously mangrove free shoreline, which can be attributed to an increased silt load brought about by the building of the adjacent industrial city and a rapid growth of existing trees. For example, the photo on page 14 of Baldwin and Meadows 1998 (*Birds of the Madinat Yanbu al Sinaiyah and its hinterland*) of this mangrove belt, which was taken in 1983, shows a clearly defined seeding zone towards the shore. By 1994 mangroves in this zone were as tall as those on the seaward side.

Unlike clamorous reed warbler, which were often seen at the base of mangroves, African reed warblers were normally observed in the dense middle level of young mangrove trees, from where they

usually sang. They also avoided the canopies of older trees. This may explain their absence from the mangrove belt which occurs just north of Yanbu al Bahr where all the trees are old, and young mangroves are absent.

Finally no African reed warblers were seen on visits to the only other significant coastal stand of mangroves north of the Tropic of Cancer that occur between Umm Lajj and Al Wejh, immediately south of the Wadi Hamd (CB28) in 1985 and 1986. This isolated stand of mangrove contains *Rhizophora mucronata* in addition to *Avicennia marina*.

Brian Meadows, P O Box 10476, Jubail 31961, Saudi Arabia and 9 Old Hall Lane, Walton on the Naze, Essex, CO14 8LE UK.

Editor's Note: See *Phoenix* 15:13-14 for details of a recent taxonomic study of *Acrocephalus* and *Hippolais* warblers which suggests the Red Sea mangrove *Acrocephalus* warblers warrant specific status as *A. avicennia*.

Distribution of Irrigation Pivots in Arabia

The introduction of large scale irrigated agriculture in many parts of Arabia in recent years, especially central pivot irrigation, has permanently and significantly altered the avifauna of the peninsula. Pivot farms have allowed many species to colonise new corners of Arabia by presenting bridges of green habitat across regions which were previously arid and inhospitable terrain for them. The distribution of pivots as noted during recent ABBA Surveys can be seen at Fig 13. This is by no means all the squares which have pivots and does not include other irrigated habitat such as afforestation. See also the report on ABBA Survey 25 to farms in central Arabia (pages 11-15) for more information on what birds can now be found in regions of central pivot irrigation.

Michael C Jennings

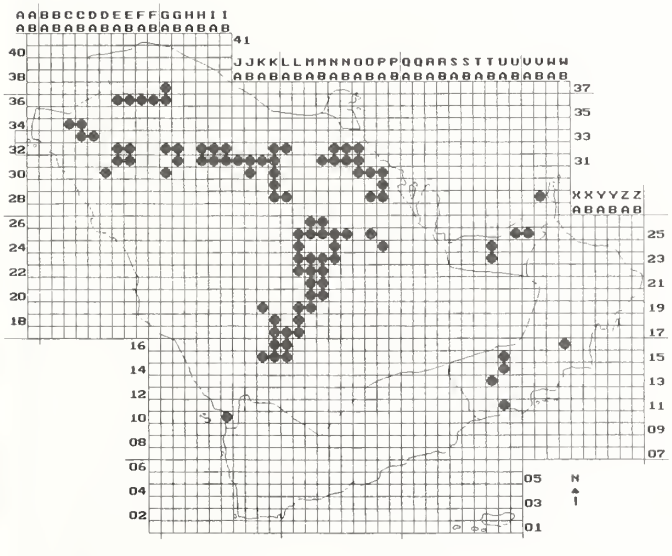

Fig 13. Squares in which central pivot irrigation schemes have been recorded during recent ABBA surveys.

Birds Along the Al Hair Watercourse April 1999

Much has been written about the birds of the Al Hair watercourse or the Riyadh River, MB26, (*Phoenix* 14:18-19). It is certainly an exceptional site for both migrants and visitors as well as for breeding birds. On 2 April 1999 (during ABBA Survey 25), I walked a 15 km stretch of the watercourse, from where the road first crosses it south of Riyadh to the Al Hair dam. This is an area of thick reedbeds and tangles of tamarisk, and small, often abandoned, farms and date groves. Estimates of breeding bird populations in the immediate vicinity of the watercourse in this sector of the river on that day are as follows.

Moorhen *Gallinula chloropus*, 375 pairs.
Coot *Fulica atra*, 10 pairs,
Eurasian collared dove *Streptopelia decaocto*, 500 pairs,
Namaqua dove *Oena capensis*, 12 birds seen,
Little green bee-eater *Merops orientalis*, 15 pairs,
White-cheeked bulbul *Pycnonotus leucogenys*, 375 pairs,
Black bush chat *Cercotrichas podobe*, 30 birds seen,
Reed warbler *Acrocephalus scirpaceus*, 166 pairs,
Olivaceous warbler *Hippolais pallida*, 90 pairs,
Great grey shrike *Lanius excubitor*, 3 birds seen.

Michael C Jennings

ABBA Survey 24 to Northern and Central Oman, December 1998 and January 1999.

I spent two and half weeks over the new year 1998/9 travelling with my family in central and northern Oman. Our itinerary from Muscat (see map) took us first to the Wadi Tayin (YA23) and then south through Wadi Dima (YB22) and on to Mintirib. From there we crossed the Wahiba sands and then visited Ar Ruways, Khaluf, took a boat trip to Mahawt Island (without a landing). Thence along the coast to Duqm before turning inland to cross the Jiddat al Harasis via Yalooni. We then travelled north by road from Haima crossing the desert again eastwards from Ghaba (XA19) to Safaj at 21°N. This was followed by a brief visit to Jebel Shams and Muscat before travelling along the north coast from Quriyat to the turtle nesting area at Ras al Junayz, returning to Muscat via Ibra. We travelled by hired 4WD and camped each night. Camp sites are marked on the map as crosses.

Timed transect censuses were carried out on foot most days at dawn to assess local bird populations and counts of desert birds were also made during measured vehicle transects of suitable areas. Mid winter is not the best time to look for breeding birds in palearctic Arabia and especially when travelling as a group. Nevertheless some interesting observations were obtained and a number of species were breeding or at least thinking about it. The first ABBA records for square XB19 were obtained. A selection of records is as follows.

Egyptian vulture *Neophron percnopterus*
Up to four Wadi Tayin, Wadi Dima, Ghaba (XA19), Quriyat, Wadi Suwayh (YB23), Ras al Junayz. Not recorded south of about 21°N. Larger groups counted were 250 at al Ghayyan rubbish dump, ten Jebel Shams, 22 Tiwi rubbish tip and 15 Bilad Bani Bu Ali (ZA21) rubbish tip. These counts suggest that the breeding population is supplemented by wintering birds.

Lappet-faced vulture *Torgos tracheliotos*
One over Wadi Dayqah (YB23) on 29 December, and pairs at Barzaman (YA21) on 5 January and Ghul (below Jebel Shams) on 6 January.

Long-legged buzzard *Buteo rufinus*
Four Wahiba Sands (all YB19) on 31 December.

Bonelli's eagle *Hieraaetus fasciatus*
One Wadi Dima on 30 December.

Arabian red-legged partridge *Alectoris melanocephala*
One calling just before sunset at approx. 400m altitude, southeast of Quriyat on 8 January. Rather scarce in the Eastern Hajar.

Swift tern *Sterna bergii*
A few between Ar Ruways (YB18) and the Khaluf area 31 December - 2 January. Also small numbers Tiwi to Ras al Junayz 9-11 January. Adults feeding full grown juveniles Ras al Hadd and Ras al Junayz 10-11 January. These birds breed in Arabia in midsummer. It seems difficult to believe that these young birds were hatched somewhere in Oman in the previous summer and were still being fed by adults in January. Perhaps they bred locally in late autumn or moved into the area from some other breeding locality.

Wood pigeon *Columba palumbus*
A flock of 140-180 Wadi Tayin 29 January. The flock, which was seen twice, appeared to be on an early morning foraging flight. This flock greatly exceeds the previous largest flock seen in Oman of about 40 and may have been the entire population of the Eastern Hajar.

Bruce's scops owl *Otus brucei*
One sitting on the Jebel Shams track near Ghul on 7 January. Also its monotonous call was heard for a few minutes at 2000hrs on 8 January in Wadi Suwayh.

Little green bee-eater *Merops orientalis*
Up to three Wadi Tayin 29 December, near Mintirib 30 December and 12 January, Safaj and Wadi Ithil (YA20) 5 January. An adult
(Continued page 21)

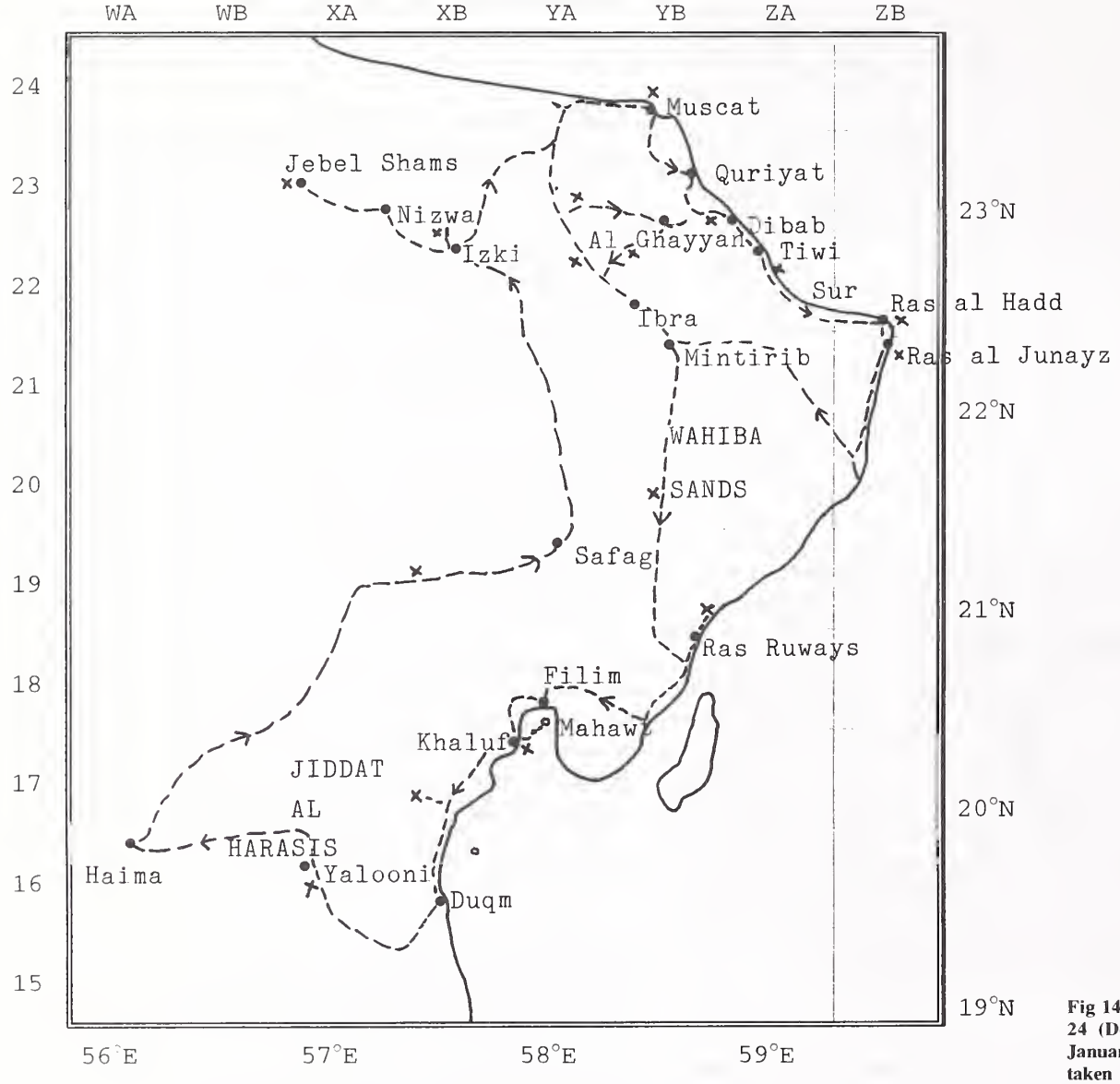

Fig 14. ABBA Survey No 24 (December 1998 and January 1999). Route taken and places visited. Camp sites shown by a cross.

taking food into a nest hole at Ras al Ruwais (ZB21) 11 January is an exceptionally early breeding record.

Bar-tailed desert lark *Ammomanes deserti*
Two (not positively identified) Jiddat al Harasis (XA16) 3 January and two (identity confirmed) WA16 the next day.

Long-billed pipit *Anthus similis*
One at only 300m altitude between Wadi Dayqah and Wadi Suwayh on 8 January.

Desert warbler *Sylvia nana*
Two Jiddat al Harasis 3 January, both accompanying desert wheatears *Oenanthe deserti*, two Wadi Jumaym (XB19) 4 January and one Wadi Qulam (YA19) following a desert lesser whitethroat *Sylvia minula* on 5 January.

Great grey shrike *Lanius excubitor*
Widespread in small numbers especially desert areas. Singing on many occasions. Seven counted on a 105km vehicle transect in the Wahiba Sands on 31 December.

Brown-necked raven *Corvus ruficollis*
Widespread, especially in desert areas. Concentrations noted at rubbish dumps were 20 al Ghayyan on 29 December and 200 at Bilad Bilad Bani Bu Ali on 21 January. A few birds seen on nests and nest-building from 4 January.

Michael C Jennings.

Fig 15. No reports of breeding Abdim's stork *Ciconia abdimii* have been received since 1995.

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New Breeding Birds in Oman

The last few years have seen some interesting additions to the number of breeding birds in Oman. Though we do not have confirmed breeding records for all species, the following birds must surely breed as they are all, bar one, thought to be resident. The following gives a brief description of the history of three new species.

Hume's tawny owl ***Strix butleri***
This species was only accepted onto the *Oman Bird List* in 1994 when M. R. Brown submitted a description of the owl from Jebel Samhan (UB11) in the Dhofar Mountains of southern Oman. He had heard the distinctive call (*hoooo hoohoo hoohoo*) and the bird had also responded to a tape recording of that species. It also became clear that a pair of owls heard previously in 1977 in Wadi Uyun (TB11) by M. D. Gallagher and T. D. Rogers was this species. During the last few years this owl has been seen and or heard in several wadis in the Dhofar Mountains and foreign bird tour groups can now easily get Hume's tawny owl on their trip lists from Wadi Mughsayl (TB10).

Yellow bittern ***Ixobrychus sinensis***
In 1984 and 1986 C M Greaves submitted *OBC Rare Bird Reports* of a small bittern he believed to be this species from khors near Salalah (UA11) in southern Oman. Since it would be a new species to Oman and Arabia the claim and photos (taken in 1986) were forwarded to James Hancock, author of *The Herons Handbook*, but he could not unfortunately confirm the identity. The claim was not accepted at the time, but was pulled out again in May 1997, when new evidence of these bitterns was obtained from Salalah. Again photos were taken and this time the birds could be safely identified as this species, one picture was of a male in full breeding plumage, showing pale blue-grey crown, red face and beige-coloured back. Several birds were present including heavily striped juveniles. Two small chicks were seen climbing through the reeds which might have confirmed breeding but an adult male little bittern *Ixobrychus minutus* flew in to feed the chicks, providing only the second confirmed breeding record for that species in Oman. Thus, it seemed the two *Ixobrychus* species were living side by side at one site. Yellow bitterns have been recorded in various khors in the Salalah area from mid April to early November but it is possible that they leave during the winter months. This species is widespread over the Indian subcontinent and from southeast Asia to Japan, it is also found on the Seychelles. In Oman the birds are quite active and easy to find early morning, but they go into hiding after 8 am. It is most likely they have been present in the limited area of the Salalah khors for many years but went unnoticed until 1984.

Yemen serin ***Serinus menachensis***
A Slovenian cave group visited Oman in October 1997 and explored the huge sink hole at Tawi Attair (UB11) in the Dhofar Mountains at the and of that month. Birdwatchers had been to the area many times, but to my knowledge none had birded the interior to the cave before. One of the cave visitors was a knowledgeable birdwatcher as well and discovered a small active breeding colony of Yemen serins. Over several days some 10 to 15 birds were seen. This represented a significant range expansion for this species previously known only from southwestern Arabia. Since their discovery at Tawi Attair the species has been seen there several times there and also at a nearby, smaller sink hole. Some birdwatchers have seen the birds from the rim of the holes using powerful telescopes.

Jens Eriksen College of Science, Sultan Qaboos University, P O Box 36, Al Khod 123, Oman. <*Email:*hjoman@omantel.net.om>

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Fig 16. Little swifts *Apus affinis* breed in south-west Arabia from the latitude of Jeddah to Aden and possibly into eastern Yemen. They are mainly a breeding summer visitor but a few can be found in all months. Rare migrant in all other areas with a peak of records in March.

First Breeding of White-tailed Plover in the UAE

At least one pair of white-tailed plovers *Chettusia leucura* nested in a marshy area near a rubbish dump in Ajman (VA27) in the United Arab Emirates in the spring/summer of 1996. This was the first breeding record of the species in the country.

White-tailed plover is an uncommon autumn passage migrant and localised winter visitor in the UAE (Richardson & Aspinall, 1998; *The Shell birdwatching guide to the United Arab Emirates*. Hobby. Liverpool & Dubai). Wintering birds may linger into spring, but most return north by April. There is no appreciable passage in spring. Its status is virtually the same throughout eastern Arabia where occurrence is largely dependent on available habitat. In the Emirates it favours sewage lakes, rubbish dumps and nutrient rich marshes (pers. obs.) although elsewhere it may also be found on saline pools and wet plains (Porter et al, 1996; *Field guide to the birds of the Middle East.* T. & A. D. Poyser, London). It is an opportunist breeding species in Arabia, the first breeding record was of a pair which bred in a marsh at al Khobar, in Saudi Arabia in spring 1992 (Ramsay, 1992; *Phoenix* 9:3-4), about 500 km. west of Ajman.

Four birds were first observed at the Ajman site, a very odorous area of pools and salt flats, used as a local dumping ground for discarded fish and builders waste, during a visit on 2 March 1996. On a subsequent visit on 15 March, I only found two birds, but with Chris Holt at midday on 7 April, we found four birds. All four were flying around calling anxiously, showing classic signs of nest site anxiety. It was unusually late for migrants, so breeding was strongly suspected. Subsequent visits were made to search for more breeding evidence on 15, 20 & 26 April and 3 May, during which period up to six birds were present, but still no nests could be located amongst the rubble and detritus.

I returned to the site on 29 May, but no birds were present - the pools had dried out considerably. However, at the reedy mudflats at Ramtha tip, a former waste water dump about 500 metres away, I discovered a family party of two adult White-tailed plovers and two recently fledged young. The conclusion is that at least one pair had successfully raised young, the first breeding record for the UAE.

In the spring of 1999, the species nested again in the UAE, at a series of gravel lakes near Dubai (VB27). The lakes are used as an overflow for surplus water from the Dubai sewage treatment plant. The site was drawn to my attention by David Bradford who reported at least two birds there in the preceding January, these may have overwintered. At least three pairs were active in display and anxious territorial campaigning from 15 February. On 30 May eight birds were present, most of them flying in wide circles anxiously calling. On the 3 July, a pair was found with three juveniles and on 31 August (after I returned from 6 weeks leave) I logged a noteworthy 12 birds at the site, although some were probably early autumn migrants.

Colin Richardson, P O Box 50394, Dubai, United Arab Emirates.
<Email: colinr@emirates.net.ae>

Great Crested Grebes attempt Breeding at Dhahran Saudi Arabia

Great crested grebes *Podiceps cristatus* overwinter on the Arabian Gulf around Al Khobar (QA29) in the Eastern Province, where up to 15 birds have been counted on the sea. In recent years several birds have also used the treated sewage effluent lake located inland of Dhahran, where peak numbers of up to 11 birds have been noted by Richard Wellington (RW). During the winter of 1998/99 a maximum of seven birds were recorded (12 December 1998) on the lake. By April only three remained but all were in breeding plumage, the first gaining this plumage by 11 February 1998.

On 23 April two birds were noted actively building a platform structure with fibrous green pondweed and head shaking displays were seen then and also on 26 April. However following strong winds on 28 April this first structure drifted to the lake edge . By 7 May a second structure was under construction in a more sheltered part of the lake when more head shaking was seen and on 13 May a sitting bird behaved aggressively to passing little grebes *Tachybaptus ruficollis*. The birds were still actively adding material to this structure until 19 May but later the second platform was abandoned and nearly submerged. This species is known to construct mating platforms where they perform a ritualised "platform courtship" early in the season before laying (*Birds of the Western Palearctic* Vol 1). The two platforms described so far were probably therefore not true nests.

By 25 May a third more substantial looking nest platform had been built, about14m from the lake side. High reed cover permitted good observation of the third platform and photography. Four copulations were noted at 15-25 minute intervals, between 1500 - 1635 hrs on 28 May. In the prelude to copulation the male approached the female cautiously, the inviting female had its head and kinked neck extended horizontally. The male then climbed

onto the female to mate with erected ruff and crest, whilst calling. After copulation the male would jump off the female over her head and them vigorously paddle the water for a short time.

Both RW and myself believed that the third structure was a true nest and I was very hopeful that this more robust nest and the active mating signalled that eggs would soon follow. Unfortunately my vacation from late May to early July meant I could not make any personal observations during this period. However RW noted active birds at the nest site during June but no sign of eggs were seen despite observation of the nest by telescope when sitting birds left the nest. Birds were sitting on the nest over a period of about three weeks. On my return from vacation I saw only one bird at the site on 5 July and the third nest structure had disappeared. There were signs of a fourth platform structure at another location.

The possible reasons for lack of breeding success are:

- Nest platforms may have been flooded due to wide fluctuations in water level brought about through management of the lagoon. (Previously many little grebe nests have been destroyed simultaneously in this way).
- The pair may have been too young, inexperienced and infertile.
- Disturbance from a footpath which runs almost around lake, where casual recreational use includes people walking their dogs. The lake is relatively small and surrounded by a chain link fence to prevent entry. Little fringing vegetation means that dogs and people are clearly visible from most parts of the lake.

I am very grateful to Richard Wellington for the additional notes provided in respect of great crested grebe and this nesting attempt.

Dr Graham Lobley, c/o Saudi ARAMCO , Pox 6291, Dhahran 31311, Saudi Arabia. <Email: lobleygr@aramco.com.sa>

Letters

Owls on Socotra

We were interested to read "News from Socotra" in *Phoenix* 15. Dr Wranik reported that local people talk of a second species of owl on the island. It might be of interest that during our survey in 1997 we had an interesting contact with an owl which was not *Otus senegalensis*. The identification was not confirmed so the record was not mentioned in our paper in *Alauda* (Vol 66, 235-246). This owl was encountered in the Hagghier mountains on 20 November for a short time at the beginning of the night. It did not appear to have ears and the voice (only recorded once) was like a dove. It seemed to be a small bird and it could have been *Otus brucei*. Alternatively the voice might evoke Hume's owl *Strix butleri*. Unfortunately this observation was on our last night in the field and the bird was not seen or heard again. For us the problem remains unsolved.

Michel Clouet, 16 Avenue des Charmettes, 31500 Toulouse, France.

Sand Partridge Broods

I was interested in your comment on the brood size of sand partridge *Ammoperdix heyi* in *Phoenix* 15. The answer may be that they resemble *Alectoris* partridges in which the female may lay two clutches in separate nests, one being incubated by her and the other by the male. The two will then combine the broods after hatching.

If this was occurring in *Ammoperdix* it would explain why broods of young sometimes appear twice as numerous as eggs, if the parents have raised two simultaneous clutches. If one clutch had come to grief or if only one had been laid one would have the smaller number of young. If one of the adults had been killed one might have the a smaller brood of chicks with a single adult which presumably might be either male or female. If two such individuals associated one might have an apparent larger brood which appeared to be tended by either two females or two males.

Colin Harrison, 19 Kennington Road, Kennington, Oxford, OX1 5NZ UK.

Credits

Artwork; starling, Hilary Welch; eagle owl, white-cheeked bulbul, chukar partridge, little owl, Socotra buzzard, Abdim's stork and little swift, Dave Showler; rose-ringed parrakeet and sooty gull, Jan Wilczur, moustached warbler, Ian Lewington ; Gulf of Oman maps, Simon Wilson and other maps, MCJ. Colin Richardson, Peter Hellyer and Carol Qirreh gave help with final preparation. Printed by Printroom and Lake Shore Graphics, 12 Northern Court, Vernon Road, Nottingham, NG6 0BJ, UK.

Address

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Email <arabian.birds@dial.pipex.com>.
Webpage <http://dspace.dial.pipex.com/arabian.birds/>.

Fig 17. Moustached warbler *Acrocephalus melanopogon* were seen on numerous occasions in PB31, PB30 and PA31 in the Eastern Province in 1998/9, birds were singing, engaged in courtship chases and trapped birds had brood patches; Brian Meadows.