

GAZELLE

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مجموعة دبي للتاريخ والطبيعي

DUBAI NATURAL HISTORY GROUP

PO Box 9234, Dubai, United Arab Emirates

Members' News

News from Near and Far

News of a past DNHG newsletter editor: **Neil Curtis**, now living in British Columbia and working for the Canadian government's Ministry of Agriculture and Lands, is on temporary assignment in Beijing this summer with the Chinese Ministry of Economic Development. Neil also mentions a month-long vacation in India including an off-road ascent of the Western Ghats. In addition, he comments that his photography exploits have blossomed into an art show.

Carol Goodwright and **Sylais Sanghvi** are reluctantly leaving Dubai in the next few months. They said that they have especially enjoyed and appreciated the DNHG lectures and field trips and have many special memories of adventures in the UAE, in particular because of the friends met here. Sylais will be returning to the UK ahead of Carol because she will be working in Cairo for six months. (Visitors welcome, she says.)

Binish Roobas was puzzled when he couldn't identify a butterfly from the primary references in the DNHG library (*Butterflies of Oman* and *Butterflies of Saudi Arabia and its Neighbours*, both by Torben Lar-

sen). It turns out that Binish had 're-discovered' the Western Pygmy Blue, one of the world's smallest butterflies and a native of semi-arid areas of the SW United States and northern Central America. The butterfly seems to have been introduced to the UAE c.1990 and has since become established. Its natural habitat is saline waste ground but in the UAE it can reliably be found on larger landscaped patches of the low, pale green succulent *Sesuvium spp.*



Western Pygmy Blue butterfly
photo by Binish Roobas

Members' Night

December

Contact Angela Manthorpe at manthorpe2005@yahoo.co.uk if you would like to give a presentation on Members' Night. It should be 20 minutes maximum, and we can provide all the necessary equipment and help. (See p.6, Feb. 08 *Gazelle*.)

DNHG Membership

DNHG Membership remains a bargain at Dhs.100 for couples and Dh. 50 for singles. You can join or renew at our meetings or by sending us your details and a cheque made out to: Lloyds TSB Bank account no. 60600669933501. (Please note we cannot cash cheques made out to the DNHG. Please also note our account number has changed.) Membership taken now will be good for the period through to August 2009.

DNHG membership entitles you to participate in field trips and helps pay for our lecture hall, publication and distribution of our monthly newsletter, the *Gazelle*, additions to our library, incidental expenses of speakers and occasional special

This month's Contributors

The Editor would like to thank the following for their reports and contributions:

Tom Horton
Francis Porter
Moh'd Arfan Asif
Valerie Chalmers
Gary Feulner
David Palmer

Under the patronage of H.E. Sheikh Nahayan bin Mubarak Al Nahayan



Fossils Found on Ibri Anticline Trip

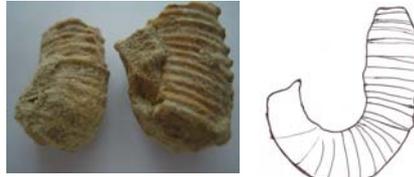
Part 1 - The Ammonites

Ammonite and echinoid (echinoderm) fossils found on the Ibri Anticline trip in November 2007 have been identified by experts at the Natural History Museum in London and it has now been established that two different stratigraphic horizons are represented at the Anticline. These are the Campanian of the Late Cretaceous (c. 84.0 to 74.5 million years old) and the Eocene (possibly Early Eocene - c.57.8 to 52.0 million years old) of the Tertiary, the Eocene overlying the Cretaceous.

Dr Noel Morris has identified four different taxa of ammonites of Late Campanian age, three uncoiled with varying degrees of uncoiling and one straight form. One or two normally coiled ammonites were found but need to be identified from the actual specimens. Dr Morris, on examining the photo of one such specimen, commented that it is certainly different from any he has seen in the UAE.

A feature of Cretaceous ammonite fauna is the presence of many heteromorphic forms. These ammonites exhibit unusual peculiarities of form compared to the normally coiled ammonites with which one is familiar (reference to my article on the Ibri Anticline Ammonites and Nautiloids in the Gazelle Vol 22 No.2 February 2007) and they show varying degrees of uncoiling or of coiling in a helicoid spiral. The uncoiled types very often had their early whorls in contact and the last whorl free, sometimes extended into an oval shape. Often the last whorl(s)/spiral(s) had loosened and opened out, ceasing to give mutual support. Consequently the ammonites had broken apart and their fossil remains are usually fragmentary. These heteromorphs were usually ornamented with ribs which were quite prominent. They also had complex suture patterns. Differences in ornamentation make it possible to distinguish species and genera, some of which have proved

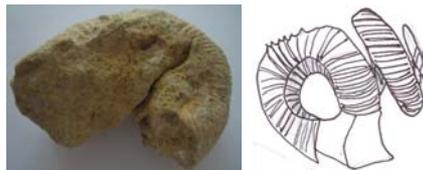
useful as zone fossils. The three uncoiled ammonites identified are *Lewyites* sp., *Nostoceras* sp. and *Didymoceras* sp. *Baculites* sp. A photograph of the specimen found, together with a drawing of what it possibly looked like, is also shown below.



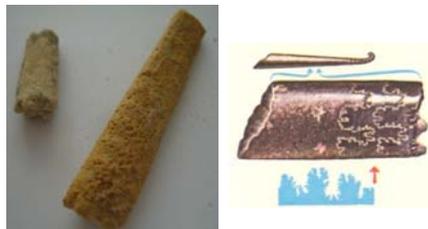
Lewyites sp.



Nostoceras sp.



Didymoceras sp.



Baculites sp. This is the straight form found which had the complex ammonitic suture

References:

Fossils in Colour by J.F. Kirkaldy
Fossils by H.H. Swinerton
 WMNH Ammonites from website www.wmnh.com/wmina00.htm

Many specimens of the nautiloid *Cimomia* sp. were again found on the 2007 Ibri Anticline Trip. Other fossils found included the distinctive large campanellids, as well as naticids, cerithids and flattened gastropods, bivalves of various sorts and sizes (including assorted scallops, pectens, cockles and a complete specimen of *Ostraea* sp. and boring bilvaves) and crab claws. Thanks to Valerie Chalmers

for her research, text and photographs. She denies the drawings. Valerie will continue in September's Gazelle with her report on the Echinoids, both regular and irregular, that were found on the Ibri Anticline trip.



Our Next Speaker

Bjorn Jordan is a naturalist, member of the DNHG, and Section Head for Rodents and Small Mammals at the Breeding Centre for Endangered Arabian Wildlife in Sharjah.

Bjorn, always enthusiastic about zoos and animals, started his career at just 17 when he joined the 'Small Mammal Specialist Group' in Germany. At the same time he started keeping his own first 'exotic' animals, wild caviars from South America, which were given to him by different zoos. The collection grew quickly and resulted in his own small zoo, rented to keep and breed different kinds of rodents.

Surprisingly for a person with such an interest, he decided to work for an insurance broker after he finished school and civil service! After six years there, the vacancy at the Breeding Centre came up and he decided to apply for the position. Since January 2007, he has been in charge of about 800 rodents and more than 200 small mammals from the Arabian Peninsula. The Breeding Centre houses, along with the endangered Arabian leopard and Arabian tahr, the biggest collection of rodents from the Arabian Peninsula in the world. Bjorn is responsible for ensuring that their daily care is carried out well, keeping records, and as well, publishing articles about different aspects of his work.



Email your field reports and news to pvana@emirates.net.ae, (Arial 10 justified) and send your photographs as separate jpg files, or deliver them to Anne for scanning.

Messy - but Ecologically Fairly Neat

For some time now I have heard the closed-minded Dubai mantra, "Why bother trying to recycle: it just goes to a landfill." Or even worse, "It gets shipped to China!" Recently six members of the Dubai Natural History Group (DNHG) and I witnessed the production of recycled paper and quality packaging at the Oasis Paper Recycling Plant at Al Quoz. Here is an extract from what could be the future edition of 'Recycling Paper in Dubai for Dummies':

1. Dump 300kg of non-gloss, non-laminated waste office paper (any colour) into a mixer.
2. Sprinkle in 100kg of cotton scraps to give it some strength.
3. Machine pulp with plenty of water for five hours.
4. Roll into sheets.
5. Leave to dry for six hours.
6. Re-sell at 30% its normal price.



The pulping process

Far from the glitz and glamour of Dubai, a little paper mill in Al Quoz does exactly that. Yet despite churning out more than 5 tons of recycled paper each week, the factory, owned by All Star Printers, is only a getting a trickle of the vast amount of paper used in Dubai. Despite that, management is itching to start double shifts to keep up with the demand and enjoy a 12% increased water efficiency.



Waste water

While the process is chemical free it is water intensive at 1500 gallons (21 bath tubs) batch. Not ideal for a desert industry, but as every ton saves 17 trees, 4.2 MWh of electricity and three cubic meters of landfill, it's a great start.



Part of the process

Ankur (fstyle@eim.ae), who is the factory manager, envisages compact modern paper recycling facilities as being a part of every new residential development. Fed by the residents' paper waste and driven by demand for recycled paper, a system bordering on sustainability could be formed.



The product

With big developers searching for 'green dumps' and large chains wanting to sell the new 'green range', this little paper mill could form part of the solution. *Thanks for report & photographs to Francis Porter*

Thru' the Lens ...

Natural history photography is challenging in the United Arab Emirates. The limited variety of species, extreme weather conditions and the desert narrow the spectrum of photographic opportunities in birdwatching.

The lakes in Al Warsan, now part of International city and Dragon Mart, were in earlier days called Wimpey pits and the DNHG's best kept secret. Today, a barricade is being built around the big lake and will prevent birdwatchers from entering the area. "Larry Woods dumpsite" near Sharjah University, and the khor at Jadaf were good bird watching sites in the past.

Now coming to the present possibilities for twitchers, Ras Al Khor Bird sanctuary, with its hides clearly marked on the Oud Metha Road and Aweer Industrial side, is ideal for photographing a limited number of species. One can register on-spot and enter these hides free of charge.

Khor Al Baidah is another ornithologist delight, which can still be accessed after Umm Al Quwain roundabout but before Dreamland Aqua Park. Camels often wade through the shallow waters along with a great number of birds depending on the tide.



Peregrine falcon

The fish farm near the sewage treatment plant on the Aweer Road after Dragon Mart, some farms at Lahbab on the road to Hatta, the fields of Hamraniya near Ras Al Khaimah, the beach near the Jebel Ali Hotel, Al Ghar lake and Al Wathba camel racetrack near Abu Dhabi, the areas surrounding the Al Ain zoo, the wind-



ing road up Jebel Hafeet, the cool Hatta lakes, the area around the polo club grounds and Jazira Resort at Ghantoot and Khor Kalba near Fujairah are some of the recommended places for bird watching.



Flamingos

For the short trips, the parks are ideal. Safa Park, Creekside Park, Mushrif Park and Mamzar Park provide 20+ species. Finally, one can watch birds in the golf courses, camel race tracks, lagoons, wadis, Jebels and the areas near sewage treatment plants and dairy farms. *Text and Photographs by Mohammed Arfan Asif*

Egypt's Very Ancient Treasures

Wadi Al Hitan, Egypt, leaves little to the imagination. Standing on the floor of the shallow valley among weathered sandstone pinnacles, it is easy to visualize it as a lagoon of the Tethys Sea, dotted with small islands, surrounded by mangroves and home to dozens of ancient whales, dugongs and other marine life -- 30 million years ago.

It is also easy to spot the some of the over 400 fossil whales skeletons identified on the floor of the wadi. Some have been fully or partially excavated, but many more are in situ, jumbled piles of matrix

mudstone and sandstone enclosing fairly obvious whale vertebrae, ribs, jaws and appendages. On the edge of the Sahara Desert, wind is the primary erosive force and as it exposes a whale skeleton on the floor of the ancient lagoon, it leaves a pink mound of sand which is not difficult to find.



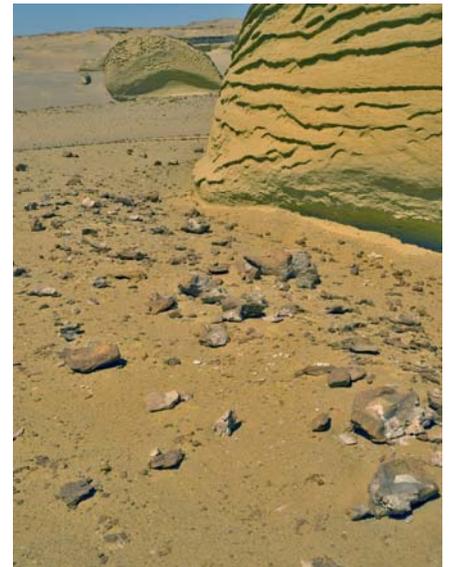
Fossil whale vertebra and rib section, in situ, Wadi Al Hitan

These fossils have become vitally important in the past two decades as researchers assembled the fossil record of whales, supporting one of Darwin's assertions in "The Origin of Species," that whales descended from four-limbed land animals. Genera including *Ambulocetus*, *Basilosaurus* and *Dorudon* clearly show the progression of hind limbs from weight-supporting structures to vestigial appendages as the lineage adapted to full-time marine life.



Dorudon atox skeleton

The site also demonstrates the evolutionary migration of nostrils from the nose to the top of the cranium.



Typical unexcavated whale skeleton exposed by wind erosion

I have been teaching my high school biology students about this site for many years, hoping to get there someday, and that finally happened in March of this year.

The United Nations has designated Wadi Al Hitan a World Heritage Site, and the Egyptian government has included it in the Wadi Al Rayan Protected Area. Aid from the Italian government has improved gravel roads to the site and provided some basic day-use facilities. Driving time from Cairo is 3-4 hours one way. The route passes through the Al Fayoum agricultural area of central Egypt and along the shores of Qarun Lake, a flood basin of the Nile River that is being rapidly eutrophied by agricultural runoff. Many Cairo-based tour companies can arrange cars and drivers to Wadi Al Hitan, including the required tourism police escort for non-residents. Inquiries with several companies found a wide range of quotes, between \$75 and \$150 US per car. *Thanks to Tom Horton for text and photographs.*



Even today, Wadi Al Hitan looks like the Tethys Sea lagoon it was 30 million years ago.



Dubai Natural History Group Recorders

Reptiles - Dr Reza Khan
res 344 8283
off 344 0462
fax (off) 349 9437

Archaeology - David Palmer
050-7387703
office direct line: 04-2072636
dpalmer@ud.ac.ae

Birds - David Bradford
davebradford9@hotmail.com

Astronomy - Lamjed El-Kefi
res: 06-5247 958
off: 06-5583 003
email: lankefi@emirates.net.ae

Marine Life - Lamjed El-Kefi

Geology - Gary Feulner
res 306 5570
fax 330 3550

Insects - Gary Feulner

Fossils - Valerie Chalmers
res 349 4816,
fax 340 0990
email: valeriechalmers@hotmail.com

Plants - Valerie Chalmers

Mammals & Seashells - Recorders needed!

The recorders are not necessarily scientific experts in their designated fields. In fact, most are not. However, they are interested and knowledgeable amateurs - please contact them if you have any interesting reports or queries.

The intention is that information will be channelled through to the *Gazelle* editor, so new information can be shared with all our readers.



Archeology Symposium Part 2 of David Palmer's Report

A major Iron Age town in Sharjah

Archaeologists under the leadership of the indefatigable Peter Magee continue to uncover more and more of the large Iron Age town at Muweileh, near the Sharjah airport and closely adjacent to the University of Sharjah. Magee talked to the DNHG a couple of years ago about his work there.

Very substantial stone and mud-brick architectural remains, including a columned building, have recently been found, close to the double fortification wall which was discovered several years ago. The settlement has turned out to be larger and more complex than originally supposed, including retaining walls that were probably used to extend the area of settlement. From the materials of the flooring of one of the buildings it seems that a creek reached inland to this point at the time when the town was occupied.

Magee is now convinced that the central part of Muweileh was built around 900 BC, and that there was significant expansion and reworking about a hundred years later, followed by rapid destruction between 800 and 750 BC. The settlement thus lasted about 150 years. Among the 200,000 animal bones found so far at the site is evidence of the earliest appearance of domesticated camels in the near east. The source of fresh water is still unknown. As Magee pointed out, after Muweileh nothing as elaborate was built again in the entire UAE until the fairly recent past.

Shell middens near Tell Abraç

Magee kicked off the second day of the symposium by reporting on his excavations of the mounds at Al Hamriyah, only 11 kms from Muweileh as the crow flies. This site is just off to the right as you head up the coast road from Ajman towards Ras Al Khaimah, near the cricket fields and the intersection that leads to the modern

coastal village of Al Hamriyah. The mounds are middens, containing shells and ceramics, scattered over a large area, mainly between the lines of dunes. Hearths or ovens have also been found, probably used for opening oyster shells.

The site was discovered by the French in the 1980s, but its size was not realized until the recent surveying and excavating by Magee's team. There are 252 hectares (nearly a square mile) of obvious prehistoric remains, a large site by the standards of the Middle East. Radio carbon dating of shells indicates that the site was seasonally occupied at various times between 6000 and 2400 years ago. Magee believes that it probably extends all the way to Tell Abraç, only 500 metres away, but that end of it has been covered by recent dunes. His team recently did a clean-up and re-excavation at Tell Abraç itself, using strata there to compare and date findings from the Hamriyah site.

Burial cairns in Kalba

Another report shedding light on hidden treasures in familiar places concerned the burial cairns near Kalba examined by Carl Phillips of CNRS in Paris. They lie inland from the town of Kalba, towards the mountains, just beyond the modern palm gardens. Phillips has excavated about 80 of them. Some are from the 3rd millennium BC, but others are "late pre-Islamic," dating from about 300 BC to 600 AD and indicating that the cairn burial tradition might have continued up to the Islamic period. Some of the imported pottery and beads, especially from India, are similar to those found at Mleiha in Sharjah and Ad-Dur in UAQ.

Rescue archaeology in Fujairah

The imminent construction of a golf course and associated housing in Wadi Madhab, an area of Fujairah where the existence of archaeological sites had previously been identified, led to the first instance of rescue archaeology in the UAE. It was undertaken in March 2008 (at the request and expense of the property development company) by a team



under the leadership of the British archaeologist Robert Carter.

In three weeks' investigation they found plenty of evidence of human occupation, dating back to the Iron Age. Wadi Madhab was probably the site of the first settlement in the region, settled before the area where the modern town of Fujeirah stands. In addition to various buildings, Carter's team found an Iron Age hill fort and cairn tombs, some of them in the distinctive figure eight shape. There were also many remains from the "Middle Islamic" period (13th to 15th centuries AD). Clusters of hut foundations indicate temporary use by mobile groups into the late Islamic period.

Hidden villages in RAK

In a series of beautifully presented slides, Christian Velde reported on his recent surveys of deserted villages in the foothills of the coastal mountains of Ras Al Khaimah. Christian is the resident archaeologist in RAK and has been our guide on several DNHG field trips. He pointed out the location of some of these villages in one such field trip he led in the Shimal area a couple of years ago.

Recently Christian, and his archaeologist wife Imke Moellering, surveyed five villages dating from the 16th to 19th centuries AD, named Qudairah, Kasaf, Baramah, Hallah and Muwailah. They run from north of Shimal up to the area near Rams. Each of the villages consisted of at least 60 houses with an elaborate complex of retaining walls for agricultural terraces, representing a huge investment of work. Baramah, near Rams, contained at least 120 houses in upper and lower sectors.

The villages had mosques, so were not temporary settlements. They were built fairly high above the coastal plain, in reasonably defensible positions. Water had to be carried up to the villages from the plains below. Hallah actually had fortifications in the form of defensive walls to block access via wadis, while Baramah and Muwailah had *surs*, or small walled citadels for refuge from lightly armed raiders in

search of animals and slaves. Muwailah was the only one used into the 20th century and is accordingly better preserved. There are earth-covered roofs, and many of the stone walls are covered by mud plaster, protected from rain damage by projecting stone slabs on the roofs.

Restoration and preservation

Also at the symposium there was a report by Eisa Abbas, of the Sharjah Directorate of Archaeology, on the preservation of the 1st century AD fort at Mleiha in Sharjah emirate, which was excavated for several seasons by a French team. The fort is now highly visible beside the road between Dhaid and Mleiha (the route of which was moved after the discovery) owing to the construction of a large permanent roof covering the entire site. Eisa described how they searched for the best source of local material for making new mud bricks to restore the lower parts of the fort (they found the best stuff near Fossil Rock). Peter Sheehan of the recently-formed Abu Dhabi Authority for Culture and Heritage (ADACH) described the process of restoring and preserving various historic buildings in Al Ain, including Jahili Fort.

Stepping back from the description of actual archaeological sites, Mark Beech of ADACH (a frequent guest speaker at the DNHG) talked about the new "Preliminary Cultural Review" process in Abu Dhabi. Under this process, surveys of possible archaeological sites are carried out in areas planned for development, usually as part of the environmental impact assessment required by the UAE Federal Environment Law. A total of 53 surveys have been carried out in Abu Dhabi emirate in the past year and a half, and several new archaeological sites discovered. Such is the pace and extent of planned development that Mark's unit is severely overstretched.

Lastly, Peter Hellyer, the coordinator of the symposium and long-time champion of archaeology in the UAE, presented a robust defense of private sector involvement

in archaeological activities. He recounted a number of successful investigations undertaken by himself and colleagues over past decades that have been financed by commercial organizations such as ADNOC. The companies concerned have often undertaken the subsequent protection and conservation of sites, as well as their excavation. Hellyer also described unfortunate instances in which developers show no interest in commissioning archaeological investigations which might lead to delay or modification of their development plans. *Thanks to David Palmer for attending the symposium and providing us with this information.*

Bumper Crop of Sand Partridge

In late May 2008, in the low mountains east of Shawkah, where there is always a small amount of permanent water, there is currently more than I have seen since the wet years of the mid-1990s. This seems to have had a salutary effect on the local population of Sand Partridge (*Ammoperdix heyi*), because in the course of a 6-1/2 hour walk (8am to 2:30pm) I encountered no less than 6 coveys of Sand Partridge, each a mother and (in all but one case) 8 or more young chicks.



Female sand partridge

In most instances the birds had been feeding in the gravel wadi bed ahead of me, and mother and chicks ran (not flew, but ran) in a line out of the wadi, across the fringing terraces and up the rocky slopes beyond, the little chicks



	name	tel home	tel office	fax
Chairman	Gary Feulner messages: 306 5300	306 5570	330 3600	330 3550
Vice Chairman	Valerie Chalmers email: valeriechalmers@gmail.com	349 4816	no calls pls	340 0990
Treasurer	Lena Linton email: linton@mailme.ae	050-474 3595		
Membership Secretary	Anindita Radhakrishna email: anin@emirates.net.ae	282 3952	050-656 9165	
Speaker Co-ordinator	Angela Manthorpe email: manthorpe2005@yahoo.co.uk	288 6232	050-645 1743	
Fieldtrip Co-ordinator	Pradeep Radhakrishna email: wgarnet@emirates.net.ae	282 3952	050-450 8496	
Fieldtrip Co-ordinator	Jenny Hill email: jennyhill76@hotmail.com		050 8861508	
Fieldtrip Co-ordinator	Sandhya Prakash email: springconsult@gmail.com	050-5512481		348 2868
Special Projects	Beryl Comar email: comar@emirates.net.ae	344 2243		344 2243
Newsletter Editor	Anne Millen email: pvana@emirates.net.ae	394 7076	no calls please	394 7075
Publisher	Peter van Amsterdam email: pvana@emirates.net.ae	394 7076	335 5495	394 7075
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Postmaster	Sandi Ellis email: peterjon@emirates.net.ae	050-644 2682		
Chief Engineer	Jesse Ellis email: peterjon@emirates.net.ae	050-8993413		

hopping up steps and occasionally flapping their little wings to assist. One or two seemed to glide as much as a couple of meters. Since adult Sand Partridge almost invariably fly when disturbed, not run, it seemed clear that the mothers "knew" that their offspring could not yet fly sufficiently well to make their escape by air.



Male sand partridge

The sudden sight of so many birds, running along in line, is arresting.

Viewed more closely, the sight of the awkward little chicks scurrying determinedly over broken ground brought a smile, but the humor was tempered by the knowledge that I was costing these little birds in terms of energy and water loss from exertion in the heat. Moreover, I had already seen a number of fox droppings in the area, so I knew where at least some of these little ones would end up.

The very first sighting of the day was the most striking because two groups had temporarily(?) merged, so that I was able to count a line of no less than 20 birds, led by 2 mother Sand Partridge (considerably smaller and more drab than the males). They traveled an estimated 150 metres and climbed some 50 metres before disappearing out of sight over a ridge.

The last sighting of the day was also distinctive. At about 2pm, with

the temperature at 40°C or more, I flushed a small covey (a mother and perhaps 5 or 6 chicks) from a shaded rock alcove beside the wadi. These birds, however, all flew from the alcove (about a 1-1/2 metres above the wadi bed) and glided slightly uphill and across the wadi (narrow at this point) to disappear among rocks and vegetation on the moderate slope opposite.

Thus at least these last Sand Partridge chicks were sufficiently fledged to accomplish this, suggesting that breeding is not highly synchronous locally and some chicks in the area may be significantly older than others. The *Interim Atlas of Breeding Birds of Arabia* (Jennings, 1995) says that, for Arabia as a whole, Sand Partridge chicks are generally reported from March to May, but have been observed in all months except February and October. *Report by Gary Feulner*

Dubai Natural History Group Programme

Lectures at Emirates Academy of Hospitality Management, 7.30 for 8.00pm

Sep 14 The Rodents and Small Mammals of the Arabian Peninsular
 – Bjorn Jordan

Field Trips (Members only, please. Details inside.)

Trips, details and changes may be announced by e-mail circular.