



GAZELLE

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مجموعتنا دورية للتاريخ والطبيعي

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Contributors—

Thanks to the following for their contributions:

Warren Bavenstock, Tamsin Carlisle, Angela Manthorpe, Gary Feulner, Rahul Shah, Ocean Bekker, Harold Bekker, Ulrike Andorff and Alexis Biller.

Send your contributions for inclusion in the February issue to:

gazelleeditor@gmail.com

by 25th February, 2019

A Dedicated Mother

I was cutting back some grass in my yard recently and, as I gathered up the stalks, a spider ran for cover. The rather 'hairy' appearance of its back caught my eye and after a quick chase I cornered the escapee for a few photos.

The spider was identified by Binish Roobas as a common wolf spider (Family Lycosidae, Genus Hogna). Wolf spiders live on the ground, do not spin webs and will ambush or chase prey opportunistically from the mouths of their burrows. They have very good eyesight and you can see 3 rows of eyes in the photos – 4 small ones on the bottom row, 2 very large eyes in the middle and 2



smaller ones on top. Zooming in on the photos I'd taken I could see that the 'hairy' appearance was due to the fact that she was covered in tiny spiderlings. As a truly dedicated parent, the female will carry the newly-hatched offspring on her back for several weeks until they are large enough to fend for themselves; no other species of spider is known to do this.

Gary Feulner and Binish Roobas, in their 'Spiders of the UAE: An Introductory Catalogue' in *Tribulus* Vol 23, 2015, explain that, even before the eggs hatch, "female wolf spiders typically



construct a relatively large and roughly spherical egg case which they carry under the rear of the abdomen, attached to the spinnerets". Since publication of the initial catalogue in 2015, the authors have established a website – www.uaespiders.com – to maintain records of UAE spiders. You are invited to contribute.

Contribution by Angela Manthorpe



A 'find' encountered on the Copper Hike. Find out more on page 7 (photo by Alexis Biller)

Announcements and Recorders

Monthly Speaker - 8pm on Sunday 3rd February, 2019

Lecture Title - "Underwater Search and Recovery of an Ancient Stone Anchor"

to be followed by an underwater Diaporama Slideshow:

"The Arabian Seas—Corals and Fish"

Biography - Lamjed El-Kefi

An engineer by profession, Lamjed El-Kefi is also an amateur astronomer and photographer of the deep sky wonders.

Lamjed started diving in his home country of Tunisia in the late 1960s. From diving as a hobby, he soon progressed into underwater photography using his own home-made watertight housings for both still and motion picture cameras.

Following a move to the Arabian Peninsula to work in the UAE in the 1980s, he joined the BSAC local Diving Club and the DNHG.

Underwater photography became a prime activity along with his other naturalist interests. He has taken photographs all over the Middle Eastern and Far Eastern seas. Lamjed won first prize in the fish category in the prestigious CMAS Photography World Championship of the year 2000.

He has also used his skills to develop his keen interest in the defense of Marine Diversity and to pass on a message of awareness for Marine and Nature Conservation and has had many of his photographs published.



From the Editor:

As we approach the IEW with anticipation, please note the reminder above of the discounted hotel rate and refer to the email sent by Val Chalmers for details.

See page 4 for news on the *Conocarpus lancifolius*. The specimen in the photograph below was found growing on waste ground at Ain al-Faydah. It is typically planted as a roadside or border tree.



Some members enjoyed a trek in the mountains where copper-smelting once took place. Read more on page 5.

From spiders and butterflies to an educational trip to museums in Sharjah, this issue also offers information regarding local land snails you may find in your garden.

Enjoy your read!

2019 Inter-Emirates Weekend (IEW)

hosted by DNHG

takes place between

21—23 February, 2019

Members are reminded of the discounted hotel rates and to make their bookings by the end of January, 2019

DNHG Recorders

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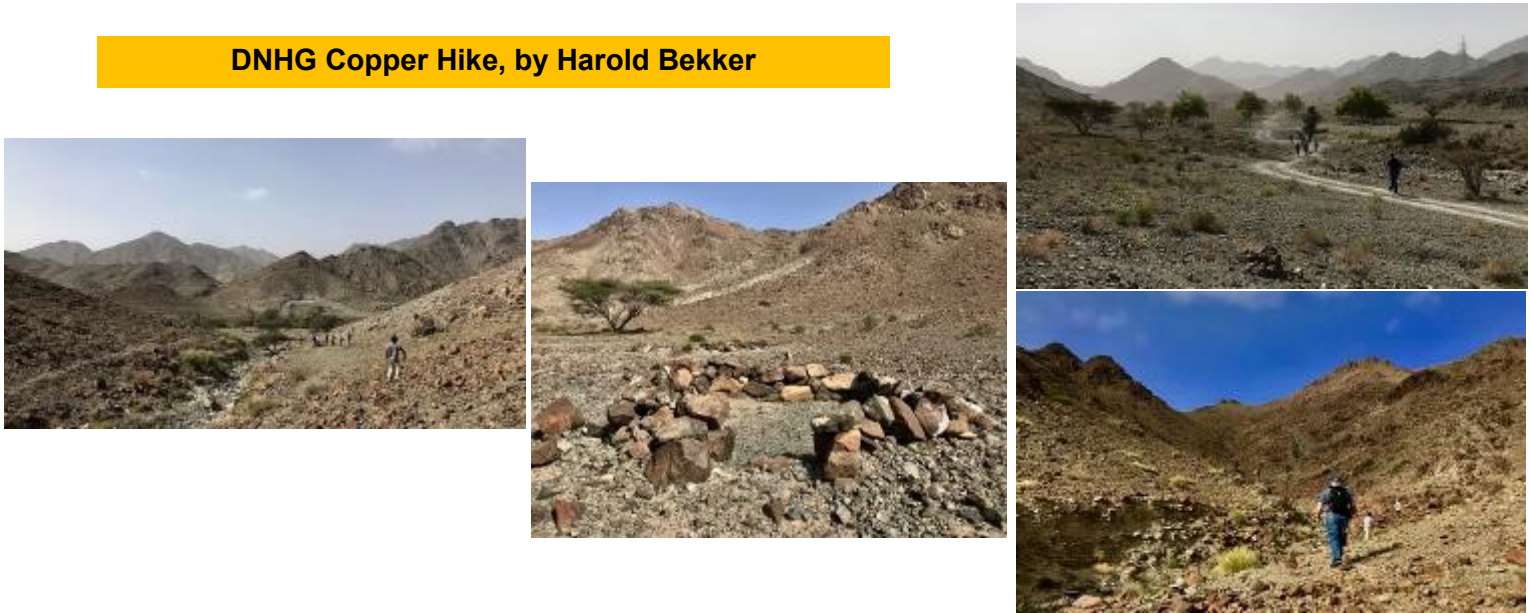
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Spotlight!

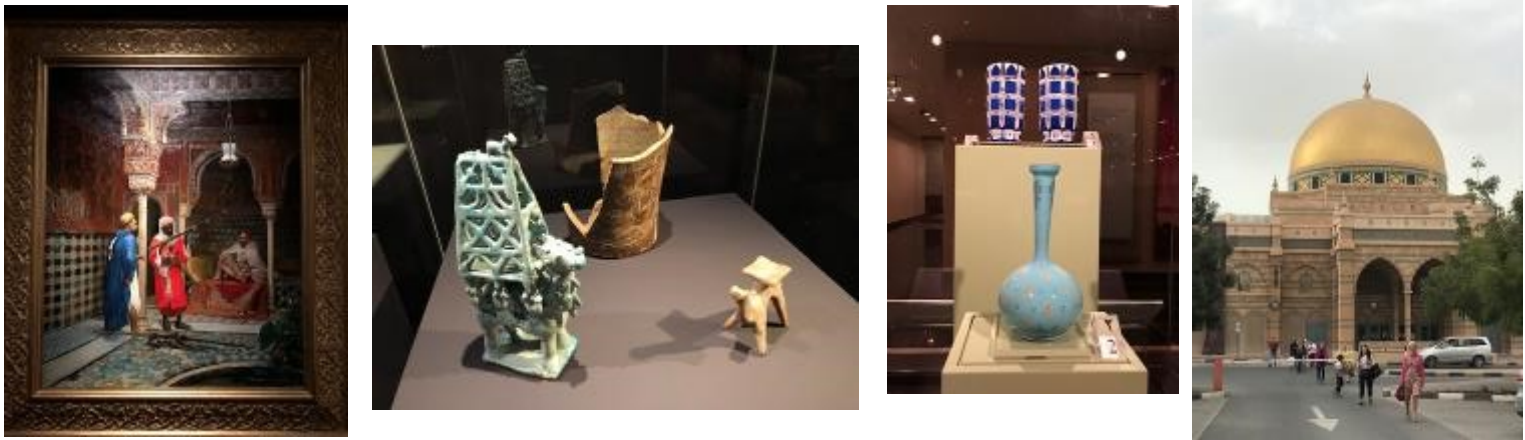
Turtle Release, photos courtesy of Warren Bavenstock



DNHG Copper Hike, by Harold Bekker



DNHG Trip to Sharjah Archaeological Museum, by Rahul Shah



Field Trips

Conocarpus banned in RAK

The Ras al-Khaimah Environmental Protection and Development Department has recently decreed a ban on the *Conocarpus lancifolius* tree, also known by its Arabic name, *damas*. *C. lancifolius* is native to the horn of Africa, Djibouti and Yemen, where it is found in coastal and riverine environments and is used for timber and firewood.

It has been introduced elsewhere as a pioneer species in soil stabilization and reforestation projects, and has proved effective in cleaning oil-contaminated soils and absorbing heavy metals.

In the UAE, it has become increasingly popular over the past 20 years as a landscaping species, due to its large size, rapid growth, heat tolerance, salt tolerance and relative drought tolerance. It is particularly common as a border species, planted around fields or along roadsides.

Leaves and cone-like seeds of *C. lancifolius*.



The RAK ban affects not only new plantings, but requires the removal of existing trees. This mandate is due to the tree's extensive root networks, which damage other plant species nearby as well as pipelines and concrete infrastructure. Its shed leaves appear to be allelopathic and discourage the growth of other species under or around it.

RAK is only the latest emirate to address the dangers of *C. lancifolia*. As early as 2012, Dubai Municipality began to warn residential property owners about the dangers of the aggressive root systems, which seek out the humidity associated with such structures as water pipes and swimming pools, and can disrupt concrete and tiles on a community-wide scale.

Contribution by Gary Feulner

UAE Land Snails – Including Yours!

The tyre-tube snail, seen here munching on fodder grass at Jimi Oasis in Al-Ain, is a venerable resident of UAE plantations. Its name, *Xeropicta mesopotamica*, reveals its association with the agriculture of the so-called Fertile Crescent of Iraq, one of the cradles of early civilization. Its history in the UAE is probably as old as that of agriculture, but it is not found outside cultivated (or formerly cultivated) areas.

Better known to most Dubai residents is a slightly smaller, flatter snail that looks like a tiny coil of rope. These can be found in well-watered lawns, especially on the margins where the dead shells weather out. This is *Polygyra cereolus*, the so-called Florida snail, native to the southeastern United States, which has proved to be a very successful invader of suburban Dubai.

The land snails of the UAE were studied comprehensively in the early 2000s by DNHG members Stephen Green and Gary Feulner, and their generalizations have withstood the test of time. (See the chapter on "Land Snails" in *The Emirates – A Natural History*.) There are only seven native land snails, of which three are restricted to high elevations in the mountains of the Musandam peninsula and two others are limited to cultivated environments.

Two species have proved able to cope with the dry climate of Arabia and its neighbors, and can be found in natural environments not only in the UAE, but throughout much of the Middle East, where they live in soil among rocks and especially among plant roots. In the Hajar Mountains, their elongated shells can often be found in low soil mounds where larger shrubs have died. One, the bullet-shaped *Zootecus insularis*, is typically 13-14 mm in length and is readily noticed, but the other, the teardrop-shaped *Pupoides coenopictus*, is normally less than 4 mm and is easily overlooked. Both can also be found occasionally in the Dubai suburbs. *P. coenopictus* is most common under stones in gardens.

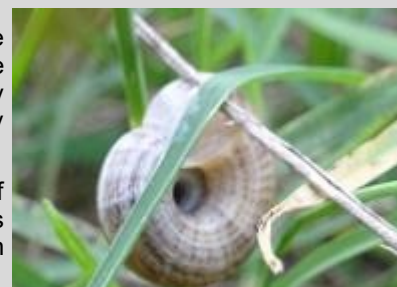


Native land snails in the Hajar Mountains: Adults and juveniles of *Zootecus insularis* occupy most of the photo, but shells of four adults and one juvenile *P. coenopictus* are seen at lower right.

Only a few other, "foreign" snails, most of them very localized, were recorded during those original studies. It was nevertheless expected that the extensive use of exotic landscaping plants in Dubai would add to the number of new snails reported over the intervening years. So far that has not proved to be the case, but we strongly suspect that others must be out there.

So, a reminder, especially for new members: Your unwanted garden snails and slugs are of interest for scientific study and an accounting of the terrestrial snails of the UAE. Photos or shells will be gratefully accepted by Chairman Gary Feulner, and contributors will be kept informed of progress and pedigrees. Dead shells are preferred; we'll follow up if you've got something unusual. It's easy. Just bag 'em and tag 'em! Please remember to record the location and the habitat, as well as your name, the date, and any remarks.

Contribution by Gary Feulner



***Xeropicta mesopotamica* munching on fodder grass in Al-Ain.**



***Polygyra cereolus*, native to the southeastern USA but invasive in Dubai lawns. (Photo by Ulrike Andorff)**

Field Trips and Clips



Copper Hike

Participating in the DNHG Copper Hike, organized by Barbara van Meir was a very engaging experience.

Barbara gave an eye-opening introduction to the history of mining going way back to the pre-Islamic and even to the earlier Bronze Age. She also tested our knowledge on a few facts and we learned that Oman has been linked to

the copper-producing land of Magan.

We then examined an old mine and smelting site and were amazed by the texture and shape of the slag. We gathered and discussed specimens, including turquoise-coloured rock.



The most intriguing fact was that the copper requires a temperature above 1,000 C to be smelted out of the rock. This led to a small group discussion about possible methods used and where the wood was coming from. We spent some time 'roaming' around exploring the remains of the mine and almost forgot about the hike.

After climbing a short way, we were rewarded with a breathtaking, panoramic view and with it, a refreshing breeze.

Continuing down the valley, we returned to the original starting point via a second wadi with some wonderful dried up-pools and water-carved rocks.

The hike was a great combination of some climbing, strolling through the wadis and discovering here and there, some beautiful patches of flowers announcing the spring. We enjoyed spotting insects—some perfectly camouflaged and we tried to take photographs of many butterflies. We also observed some stone dwellings.

We really enjoyed the friendly, supportive group atmosphere and common enthusiasm to spot and appreciate spectacular places covered with yellow or white flowers, such as an Asphodel Lily field.

Later, we reflected that it was worth the early start, being rewarded with heaps of photos, memories of panoramic views, the spaciousness of the wadis, the lilies and the copper-coloured rocks.

Contribution by Ocean and Harold Bekker (text by Ocean Bekker and photographs by Harold Bekker—more photos can be seen on the Spotlight page)

Part 2 of Tamsin Carlisle's report on Plain Tiger Butterflies (continued from last month)



Plain Tiger female laying an egg on Silk Vine

Plain Tigers are strong fliers. However, unlike the Monarch, which is renowned for its annual long-distance migrations, most are non-migratory—at least, according to studies of sub-Saharan African populations. On the other hand, studies of two forms of Plain Tiger in the Canary Islands and other populations found in Europe show that Plain Tigers from certain populations can and do migrate.

I encountered the species first in the United Arab Emirates where, between 2010 and 2017, I frequently observed its caterpillars consuming leaves of the Sodom's Apple or Giant Milkweed (*Calotropis procera*). That plant has an acrid white latex sap which irritates skin and is used in Africa as an arrow poison. It is common throughout the Emirates, especially in scrubby sand desert, where it is one of the few plants that camels will not eat. It also thrives on disturbed ground in urban and village settings in disturbed habitats, as do Plain Tiger butterflies.



Plain Tiger caterpillar on Sodom's Apple Milkweed.

(Continued on page 6)

Field Clips

(Continued from page 5)

Over the years, I have also spotted Plain Tigers in the northern and Dhofar regions of Oman, Egypt (in downtown Cairo), Sri Lanka, southern Nepal and northern Vietnam, as well as most recently in Turkey. In Sri Lanka, I found the butterflies on Giant Caltrop (*Calotropis gigantea*), a close relative of the Sodom's Apple Milkweed.

I first became aware of the presence of Plain Tiger butterflies on Turkey's Mediterranean coastal plain in May 2018. For the next few months, I spotted them quite frequently, but always in flight, never settling, and usually out of range of my camera lens. Sometimes they seemed to be investigating Oleander bushes (*Nerium oleander*; Family: Apocynaceae). That plant is in the same family as milkweeds but is not as closely related to any of the milkweeds as those all are to each other, according to recent genetic analysis. It was unclear whether the butterflies were interested in Oleander as a larval food plant, a nectar source, or a place to shelter from the relentless sun or meet potential mates. I was not able to get close enough to those butterflies to see what they were doing in the bushes, and I did not find any caterpillars on Oleander.

The first occasion on which I succeeded in photographing Plain Tigers in this area was in October (still late summer in the region), when I found them on the stands of Common Fleabane lining the channel bringing water to a Eucalyptus plantation. There, they were settling on the flowers in large numbers and filling up on nectar.

Common Fleabane is not at all closely related to milkweeds, being in the Asteraceae family, which also contains asters, daisies and thistles. However, the plants contain compounds with insecticidal properties. It is known from African studies that Plain Tiger butterfly males supplement the toxins they accumulate as caterpillars, and apparently retain after metamorphosis, with a variety of nasty chemicals from non-milkweed food

plants including certain thistles. Females not so much, perhaps because metabolizing toxins would reduce the metabolic energy available to them for making eggs.

Female Plain Tigers resemble the males closely, which is not always the case among butterflies. It has been suggested that this enables female Plain Tigers to benefit from the males' propensity to consume toxin-laced nectar: After catching a bad-tasting male, birds would avoid taking conspicuous orange butterflies of either sex.



Plain Tiger Courtship



Plain Tiger on Purple Loosestrife

While it seems likely that the mass of Plain Tigers I saw that day were attracted to the fleabane as a nectar source and may have been mostly males, I did see some apparent courtship displays with the male hovering above the presumed female, indicating that both sexes were present. Common Fleabane was not the only plant in flower along or near the water course. Others visited by Plain Tigers for nectaring included Purple Loosestrife (*Lythrum salicaria*) and White Horehound (*Marrubium vulgare*). Moreover, recently emerged females may have come to that location to seek mates.

There remains a mystery about the identity of the Plain Tigers' larval food plant(s) in southern Turkey. I have not found any milkweed present in places where I have seen the butterflies. Indeed, the only species from the Apocynaceae family I have so far found in the region are Oleander and Pinwheel Flower (*Tabernaemontana divaricata*), both cultivated and neither being a milkweed.

Possible explanations for my failure to find a larval food plant and caterpillars include the possibility of milkweed growing locally in places I have not visited; that this butterfly species, in which females lay eggs singly, thus spreading their next-generation bets, has found a viable non-milkweed food plant at this location; or perhaps the Plain Tigers observed in Turkey, as well as in South and Central Europe, are from migratory populations that do not breed in southern Turkey.

It has been stated in African studies that the Plain Tiger has no diapause (hibernation or aestivation period). That is plausible for sub-Saharan African populations but in snowy central Europe and even the Turkish Mediterranean coastal strip, with its occasional winter frosts, a resident population would need to hibernate. If not, then the adults must migrate, possibly through southern Turkey to the Arabian Peninsula and/or North Africa.

That October day was the last time I saw Plain Tigers in southern Turkey before the winter rains set in, which happened in December. Were they gathering to fill up on nectar in readiness for southward migration? That is a scenario for future investigation.

Contribution by Tamsin Carlisle



Plain Tiger on Common Fleabane, wings closed.

Field Trips



Sharjah Archaeological Museum

On 9 January a group of DNHG members visited the Sharjah Archaeological Museum and the Sharjah Museum of Islamic Civilisation. Both museums are hosting temporary exhibitions in addition to their permanent collections.

The Sharjah Archaeological Museum presents "Echo of the Caravans: Pre-Islamic Civilisation Sites in Saudi Arabia" in co-operation with The Saudi Commission for Tourism and National Heritage. The exhibition runs to the end of January and combines artefacts from three ancient commercial centres in Saudi Arabia: Najran in the south west, and Al-Ula and Tayma in the north west, together with artefacts discovered at Mleiha, Muweilah and Jebel al-Buhais in Sharjah. One of the key goals of the exhibition is to highlight the ancient Arab trade routes, which fostered not only the exchange of goods but also ideas and practices.

The first human settlements in what is now Saudi Arabia emerged in between the fifth and sixth millenia BC, and were concentrated on the coast of the Arabian Gulf. There is evidence of trade links between these settlements and Mesopotamia. Other settlements emerged across the Arabian peninsular in the third millenium BC as a result of expanding trade relations. In the last century BC, the Nabataeans extended their influence into the north west of the Arabian peninsular. However, from the first century AD, conflicts between the Romans and Persians led to the decline of trade in the region.

Najran was well-placed at the intersection of various trade routes. There is evidence of human activity dating back to the Late Stone Age, including the settlement of Al-Ukhhood and examples of rock art. Inscriptions in the Tammudi, Al-Musnad and Nabataean scripts, in addition to early Islamic Kufic scripts, have also been found at Najran.

Al-Ula was located on the trade route linking the southern part of the Arabian peninsular with Egypt, the Levant and Mesopotamia. There is evidence of continuous habitation from pre-historic times to the late Islamic era. Al-Hijr in Al-Ula was the Nabataeans second city after Petra, and has many rock carved tombs and places of worship. Note that for a time Al-Hijr also became an important stopover for pilgrims performing the Haj. Al Khuraibah is another important site in Al-Ula. It was the capital of the Dadan and Lihyan kingdoms. Rock-carved tombs are present here also.

Tayma was an ancient oasis settlement surrounded by a 10km long stone, brick and mud wall, which dates from the 6th century BC. Only the northern side of the town was unprotected. Within Tayma can be found the Al-Hamra palace (6th century BC), Qasr Al-Rudm and Ablaq Palace (both from 1st millennium BC). The well of Hadaj is one of the largest in the Arabian peninsular, and is believed to date from 6th Century BC.

The exhibition contains a small but wide-ranging selection of artefacts, including rock art, glazed and unglazed pottery, alabaster containers and stone tablets written in the Al-Musnad script.

The museum's permanent collection is also well worth a look, and takes the visitor from the stone Age to the beginning of the Islamic Era. Highlights include replicas of tombs found at Al-Buhais, including evidence of successful brain surgery carried out with pieces of flint!

The Sharjah Museum of Islamic Civilisation is hosting the temporary exhibition "Crossroads: Cultural Exchange between the Islamic Civilisation, Europe and Beyond" to celebrate its 10th anniversary (the museum building previously housed the Souq al Majarrah). The exhibition runs until 27 April and is a collaboration with the Museum of Islamic Art in Berlin, Germany, which has contributed most of the artefacts (although the Sharjah Archaeology Museum has also loaned some exhibits). The displays highlight how the world has been shaped by the constant flow of people, ideas, technology and art. One interesting feature of the exhibition is that it juxtaposes artefacts from different geographies to illustrate the connectedness of the world even in ancient times. There is a focus on the cities of Cairo, Aleppo and Istanbul, diverse and cosmopolitan major trading centres where ideas between east and west were actively exchanged.

The Museum has many other galleries housing over 5,000 artefacts. The Abu Bakr Gallery of Islamic Faith gives a good introduction to the Islamic faith, and displays sections of the Kiswah, which shrouds the Kaaba in Makkah (Saudi Arabia). The Ibn Al-Haytham Gallery of Science and Technology has recently been refurbished and expanded. It has replicas and models to illustrate some of the most important discoveries and inventions Islamic scholars have given to the world. Elsewhere within the museum can be found an extensive coin collection, pottery, wood carvings, manuscripts, textiles and weapons.

Appreciation goes to Hazelle Page and Val Chalmers for organizing this educational trip.

Contribution by Rahul Shah



Dubai Natural History Group Programme

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

February 3:	Lamjed El-Kefi presents "Underwater Search and Recovery of an Ancient Stone Anchor"
March 3:	Sandra Knutson presents "Student research to monitor environmental quality in the UAE"
April 7:	Marina Tsaliki presents "Vegetation mapping and plant species diversity in Ras Al Khaimah".

Scheduled Field Trips (Members only)

February 21-23: DNHG host the Inter-Emirates Weekend (IEW)

Field trips will also be circulated to members via e-mail

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When possible, please contact committee members outside office hours

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Field Reporters

Do you have a field report, unusual finding, interesting news article, book review, amazing photograph, or community news to share?

Send your contributions to:

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DNHG Membership

Membership remains one of Dubai's best bargains at Dh100 for families and Dh50 for singles. Membership is valid from September 2018 to September 2019. You can join or renew at meetings or by sending us a cheque made out to HSBC account number 030100242001. (Please note we cannot cash cheques made out to the DNHG).

Payment can also be made by cash deposit at a bank or ATM, using our IBAN number AE900200000030 100242001. However, this process does not identify you as the payer. If you wish to pay by cash, please also photograph or scan a copy of your payment confirmation and send via e-mail to the Membership Secretary, so we know whose money we have received.

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