



GAZELLE



مجموعتنا دبي للتاريخ والطبيعي

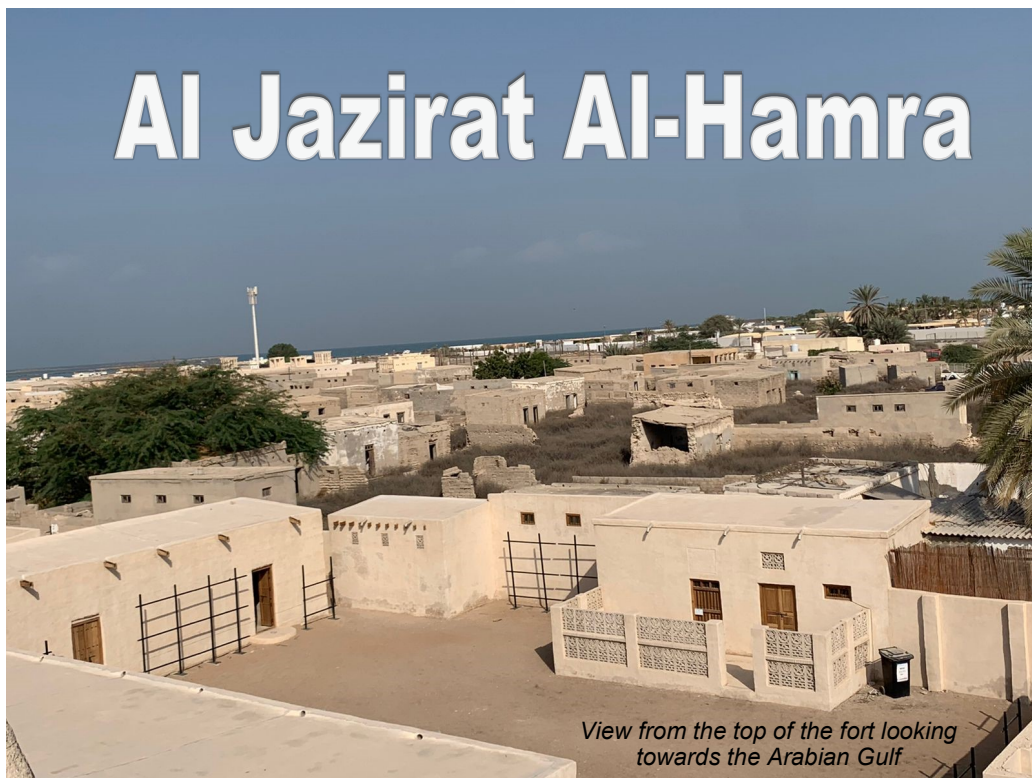
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Contributors—

Thanks to the following for their contributions this month:

Ahmed Shubbar, Charles Laubach, Denis Anderson, Kerstin Binoth, Angela Manthorpe, Margaret Swan, Gwynneth Robertson and Eva Huening.



Al Jazirat Al-Hamra

View from the top of the fort looking towards the Arabian Gulf

Abandoned Mountain Dwellings



See page 5

Al Jazirat Al-Hamra was an island just south of the main town of Ras Al Khaimah. For most of recorded history, the island was a stronghold of the Al Zaab tribe who lived there. In around the 1960s the Al Zaab entered into a disagreement with the local ruler of Ras Al Khaimah and, as a result, the tribe accepted Sheikh Zayed's invitation in relocating to Abu Dhabi, leaving their homes and possessions behind. The Al Zaab's loss is the modern historian, archaeologist and sociologist's gain: the sudden abandonment of the island has inadvertently left us a rare and unique example of a near complete Emirati town from the period c.1940-1960: a snapshot of town life before oil and modernity changed the Emirates forever.

The entrance to the community is dominated by the island's main fort – a classical Arabian fort with a tall tower ubiquitous throughout southern Arabia and beyond. Built on the landward side of the island closest to the mainland, the fort and its tower's advantageous position gave the inhabitants uninterrupted views of the entire island and beyond. The guards could see into the Gulf for any enemy ships passing over the horizon and, on the other side, lookout for and spot any potential threats emerging for the desert and the mountains of the mainland.

The inland threats must have been many. The archaeological evidence suggests that Al Jazirat Al-Hamra was a relatively wealthy place and this must have attracted Bedouin bandits from the desert. Though the homes on the island were built in the era before massive oil wealth and, though construction was limited to the availability of

(Continued on page 4)

Announcements and Recordors

Virtual Monthly Speakers

6th and 7th December, 2021 from 6:00pm to 8:30pm (via Zoom)

A Celebration of the Natural History of the Emirates

In place of our normal December lecture, and in honor of the UAE's Golden Jubilee Anniversary, the DNHG will join in hosting a two-evening program of short presentations about various aspects of UAE natural history. The program is organized primarily by New York University—Abu Dhabi and the full program is set out in the link below. It will take the format of a virtual webinar.

Advance registration is required in order to receive the webinar link. You may register by using the link below:

https://nyuadi.secure.force.com/Events/NYUEventRegistration?event=7cVPv2NEQq4KA3No08jycw_3D_3D

The Chairman, Committee and Members of the Dubai Natural History Group would like to express their congratulations to His Highness Sheikh Khalifa bin Zayed Al Nahyan, President of the UAE, His Highness Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai, His Highness Sheikh Mohammed bin Zayed Al Nahyan, Crown Prince of Abu Dhabi and Deputy Supreme Commander of the UAE Armed Forces and their Highnesses Supreme Council Members and Rulers of the Emirates on the auspicious occasion of the 50th Anniversary of the United Arab Emirates.

As we celebrate this Golden Jubilee year, we look to our leaders for their continued wisdom and visionary success over the next 50 years.



50th Anniversary for UAE

As the sun went down on National Day, Jubilee celebrations were set against the jagged mountainous backdrop of the Hatta dam.



Covering the cultural identity of the UAE, a 40 minute performance was livestreamed involving drones, fireworks and dramatic props. A revolving stage alternated between film footage and live performers with extended projected images on water fountains for added effect.

From 4th until 12th December, a ticketed live theatrical performance will be available at: <https://uaenationalday.ae/#home>

From the Editor:

A great start to the season with a wide range of lectures and trips. New ideas for trips are always welcome. Contact Sonja, the DNHG Field Trip Coordinator (contact details are on page 8).

An overnight camp will take place mid-December but many members have plans already, due to the holiday and festive period so it is a quiet month regarding trips.

Looking ahead, January promises a geological trip to Wadi Naqab and a visit to see petroglyphs and old villages in Wadi Ziqf. Also, plans are developing for an archaeological and copper smelting field trip in Wadi Al Qawr. Enjoy your read!

DNHG Recordors

Reptiles - Dr. Reza Khan
050 6563601

Astronomy - Lamjed El-Kefi
res: 06-5310467 off: 06-5583 003
lankefi@emirates.net.ae

Marine Life - Lamjed El-Kefi (contact as above)

Geology - Gary Feulner
res: 04 306 5570
grfeulner@gmail.com

Insects - Binish Roobas
050 243 8737
johanruphus@hotmail.com

Fossils - Valerie Chalmers
res: 04 4572167
mobile: 050 8305018 email:
valeriechalmers@gmail.com

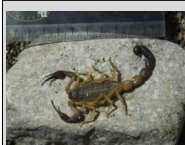
Plants - Valerie Chalmers
(contact as above)

Archaeology - Anelisa Lambert
056 6904508
anelisalambert@gmail.com

Seashells - Andrew Childs
050 4590112
andrew.childs@eim.ae

Bird Recorder— Panos Azmanis
050 7083555
azmanis.vet@gmail.com

Mammals—Jacky Judas
04 354 9776
050 6181026
jjudas@enwwf.ae



Hottentota jayakari

Erratum

Thanks to Gary Feulner who pointed out that the scorpion mentioned in last month's article was in fact *Hottentota jayakari* and not *Androctonus crassicauda* as reported. This highlights the challenge of making identifications on the basis of photos, and once I know more about how to tell the difference, I'll report back.

Angela Manthorpe

The website version of the October issue has been corrected accordingly.

Spotlight!

Jazirat Al-Hamra Restoration Project Progress, by Ahmed Shubbar



(from left to right) The use of coral and beach rock, The introduction of cement, The fort, Intricate original reliefs made of gypsum in one of the houses in JAH



Afro-Asian sand snake/Sand snake (*Psammophis schokari*) (Inset) Close-up of the snake's head

Tracks in the Sand

On the way to the Jazeerat al-Hamra meeting point this month, we stopped at some dunes in Umm al Quwain, where Gwynneth spotted a dead snake with tracks around it, indicating a struggle.

We thought the lines nearby leading up to tufts of grass were made by the same snake and contacted Jackie Strick, who in turn consulted with Johannes Els. Johannes identified the dead snake as an Afro-Asian sand snake (left photo) but said that the tracks (photo on the right) were of the Arabian horned viper. Johannes added, "Based on the tracks surrounding the dead snake it is possible that a bird attempted to predate on it."

A dead beetle was also noted close to the body of the snake with strange tracks surrounding it, perhaps another aerial attack? The snake was damaged near the tail end and appeared to be partially eaten. It was a fresh kill so perhaps the bird in question was waiting for us to leave, in order to finish its meal.

Contribution by Margaret Swan, Gwynneth Robertson and Eva Huening (with thanks to Jackie Strick and Johannes Els)



Tracks of the Arabian horned viper/Arabian sand viper (*Cerastes gasperettii*)

Tell Abraq Archaeological Site

Located on the border between Sharjah and Umm Al Quwain, it was originally on the coastline of the Arabian Gulf but changing sea levels have placed the remains of the city inland. It is a highly significant first and second millennium site with a remarkable stratigraphic sequence that is unparalleled thus far in the UAE. Excavation has revealed occupation from c 2500 BC to c 300 AD – offering insights into Bronze Age, Iron Age and Hellenistic/late Pre-Islamic societies.

Archaeologists from the Italian Archaeological Mission in Umm al-Quwain, Michele Degli Esposti and Enrica Tagliamonte invited a group from DHNG to visit current excavation works.

A full report will be circulated in the next edition.



Field Trips

(Continued from page 1)

local materials, these impressive structures were probably the most technologically advanced locally built structures in the Emirates at this time.

Since building materials were locally sourced, one sees numerous examples of homes and other structures built of coral and beach rock obtained from the nearby Arabian Gulf. The corals and rocks were kept together by a water-hardened gypsum mixture to keep the structure intact. These houses were a massive upgrade to the previously existing housing structures of the area, such as the “areesh” (palm frond) houses or tent. Again, the use of coral and stone indicates to the wealth and sophistication of the people of the island since such houses must have required much labour and material.

The houses at Al Jazirat Al-Hamra are also one of the first locally-built places in the Emirates to make use of new building technology imported from outside, namely cement. The use of cement blocks for construction was a major upgrade and a more efficient building material than traditional coral and beach rock. The remains on the islands clearly show the abandonment of corals and other stonework and the introduction of cement at this period, with many houses in the intermediate period built with a mixture of both cement and coral.

Affluence is also observed in the use of new building techniques. Homes were built in such a way as to reduce heat. We see homes with both a winter and a summer “majlis,” the latter designed in such a way as to avoid the heat. The remains of a home we visited also had a unique air-conditioning system with small slits behind the walls trapping the cool air from outside and chilling the interior.

Greater wealth brought ever more luxury, new building techniques and the accoutrements of modern living from the outside world. We saw intricate sculpted reliefs in many of the houses of the island, most of which are restored modern reproductions. However, a few original examples made of gypsum survive in some of the remaining houses, mostly designed with intricate Islamic motifs and a high degree of skill. We then observed the massive homes of the island’s two wealthiest residents. In the first example we saw a home with a “barjeel” (or windtower), a new style of architecture originating from Iran that allows for even greater cooling and ventilation for a home’s interior. In the second example, we saw a house with an upper story: a truly revolutionary concept for a private house at the time. An even more revolutionary concept was seen when we visited the remains of a compound of four houses. Installed on the corner of the compound was a basic toilet, a first for Al Jazirat Al-Hamra and a real sign of opulence and luxury!

The remains of the town are not restricted to houses. The remains of a souq, watchtowers and no less than three mosques remain. Due to the lack of enough building materials many of the new mosques were built in the same exact spot as the older mosques using the same building materials from the older structures. This indicates that Al Jazirat Al-Hamra was the setting of a much older settlement. How old is unclear. British records of the area go back to the early 19th century and earlier Venetian records go back earlier to the 16th century. Most of the archaeological finds date to the 20th century, but analyses of some of the coral stones used for building on the island are tentatively estimated to date from the 17th century. The research and the archaeological excavation on the island continue as do plans to turn the remains of the town into a large open air museum for mass tourism.

Opulence—a two-storey house with a view!



Contribution by Ahmed Shubbar

The wind tower or Barjeel: an import and a sign of increased wealth and sophistication



Looking upwards from inside the wind tower



Editor’s Note: Readers may wish to learn more of the Al Zaab tribe in ‘From Trucial States to United Arab Emirates.’ by Frauke Heard-Bey. More photos taken by Ahmed are on page 3

Field Trips

DNHG Outing to Wadi Yabanah

At my desk a few Sunday afternoons ago, I felt the building begin to sway. It was the unmistakable feeling of an earthquake. I was reminded to put pen to paper to describe the DNHG outing of the previous Friday, (12th November) ably led by Sonja, to the Wadi Yabanah landslide in Ras Al Khaimah, where a long-ago earthquake, perhaps stronger and certainly much closer, caused a sudden and catastrophic landslide to completely block one of the watersheds draining into Wadi Bih.

After a brief ascent from the car park to the top of the trail over the landslide, David Kingston pointed out where the rocks had come loose from the side of the wadi and tumbled down. After the landslide, a large silt plain formed upstream.

I first encountered the landslide in Wadi Yabanah many years ago on a hike with DNHG Chairman Gary Feulner. We had climbed Jebel Yabanah, accessing it from one of the tributaries of Wadi Maqalaili in Oman, and descended scree to the silt plain behind the rockfall. You can't do this today, because the border in Oman is no longer open, and climbing in the reverse direction -- up the scree to Jebel Yabanah -- would be quite a slog.

Gary prepared a detailed report on the Wadi Yabanah landslide in Tribulus 14.2 Autumn/Winter 2004, where he also discussed two other landslide dams in the Musandam area.

Led by Sonja, our group aimed to look at some of the evidence of human settlement in the area. The path over the landslide had been laid out and maintained with some care. We saw more evidence of careful planning, clearing and maintaining of trails further up the wadi. It would appear that the Government of Ras Al Khaimah is creating an official network of planned and managed trails, similar to what exists in parts of Oman. It certainly facilitates route finding and hiking generally.

Sonja quizzed us on the vegetation in the wadi. The most prominent trees were Acacia and Ziziphus. Some of the Ziziphus trees contained birds' nests, which appeared to be abandoned. Denis Anderson explained that the honeybees that occur locally produce honey when the trees are in bloom that varies depending on which variety of tree is visited by the hive. Denis added that the local honeybees did not actually originate in the UAE but instead spread here from neighbouring countries. Denis provides more detail below.



Umbrella Thorn Acacia (*Acacia tortilis*)



We crossed the silt plain to the eastern edge of the wadi, where there are crumbling walls and structures where there had once been fields and dwellings. Most of the vegetation on the bottom of the wadi was *Tephrosia apollinea*, now past its flowering season. Approximately halfway across the silt valley is a tomb and a water cistern with a barrage wall protecting them from excessive water flow in the wet season.

At the ruins on the eastern end of the wadi, Sonja explained how the inhabitants used to build structures using local rocks usually without benefit of plaster or mud. Fields were formed when silt was allowed to backfill areas that were walled off. Some silt was washed down by the rains but other times silt was carried by hand to create agricultural terraced fields. The local crops were wheat, and at higher elevations barley. We stopped for lunch at this first settlement, examining pottery sherds, which Sonja explained had been made locally from locally available clay and had not been fired at very high temperatures, as you could tell by the change of color through the center of the sherds.

None of us were sure of the exact date of the settlements. However, Sonja believes that they were from the 1400s to 1800s.

From our lunch spot, we could see Capparis vines growing from the surrounding cliffs, as well as the local lowland fig. At a distance, we could see several Moringa trees. Kerstin Binoth located and photographed a spiky gourd (*Cucumis prophetarum*).

After lunch, we headed up a side wadi along another managed trail. We encountered a number of graves and quite a few more dwellings, many of them walled into the sides of the cliff. Then at the end of the trail, the wadi came to an abrupt end at the bottom of a dry waterfall. Although the waterfall lacked flowing water, there was water seeping through the limestone in the wadi, attracting a fairly large number of local hornets harvesting algae and perhaps minerals and water from the seepage.



Hanging Caper (*Capparis cartilaginea*)



Blue-tailed Oman lizard (*Omanosaura cyanura*)



Wadi fig tree (*Ficus cordata salicifolia*)

Field Trips

Thanks to Sonja and Sandi for organizing and leading the event, and thanks to David and Denis for their commentary on the rocks and the bees, respectively. Many thanks as well to Kerstin Binoth, who, in addition to her photographs of the hornets, bees and plant life, also managed to take excellent photographs of a blue-tailed Oman lizard (*Omanosaura cyanura*) and a male red-veined dropwing dragonfly (*Trithemis arteriosa*)

I would now like to hand over to Denis Anderson for some additional commentary concerning the local Apifauna.

Denis Anderson adds:

Most of the photographs that we took were of Oriental hornets (*Vespa orientalis*) that were drinking water seeping very slowly from tiny cracks in rocks.

1. Some information about the water itself.

According to David Kingston, that water was first trapped in cracks and crevices in these rocks after rain. Air-borne carbon dioxide dissolves into the water turning it slightly acidic. The acid water slowly dissolved cracks in the rock making them larger and also creating soluble calcium carbonate. The acid/calcium carbonate water then slowly seeped downwards under gravity through very small cracks, eventually coming to the surface, where it lost its carbon dioxide upon exposure to air. In the outside air the water evaporates leaving behind small crystals of solid calcium carbonate. These exposed sites have also become colonized with algal growth, which can also play a role in the deposition of calcium carbonate.

2. Some information about the oriental hornets we saw.

Oriental hornets, *Vespa orientalis*, are common in mountainous and urban areas of the Emirates, as they also are in other semi-arid regions of the Middle East, parts the Mediterranean, northeast Africa, and central and western Asia. They are a major pest of hived honeybees. Like honeybees, oriental hornets live in large social colonies. Their nest consists of several horizontal combs made from paper, that workers prepare by mixing chewed-up wood and bark with saliva. Nests are invariably located in sheltered cavities, often underground.

Each hornet colony is headed by a single founder fertile female queen, hundreds of her infertile worker daughters and smaller numbers of her fertile male drones. Physically, drones and workers are difficult to tell apart, but the antenna of drones contains 13 segments, whereas the worker's antenna contains 12 segments.

Unlike honeybee colonies, oriental hornet colonies are seasonal, not perennial. Each spring, a new colony is established by a single queen that hibernated over winter after being reared and mated the previous autumn, just prior to the breakdown and death of the parent colony. The newly founded colony grows through spring and summer, peaking in size during late summer and autumn.

The hornets we saw drinking water from the rock seeps were mostly likely from colonies that were in the process of breaking down. In this phase, they produce many queens, which will emerge, mate and hibernate in cracks and crevices in rocks over winter. It appeared as though these hornets were not simply drinking the water. They were also most likely collecting minerals, an important part of their diets and needed for brood rearing.

Besides the hornets, a small number of rapidly moving black native bees, together with workers of *Apis florea* (the dwarf honeybee) and a very small number of a potter wasp were also visiting these seep holes.

3. Some information on the dwarf honeybees we saw.

Dwarf honeybees are the honeybees that most people see and encounter in the UAE. They are wild and very common and their swarms often visit or nest in peoples' backyards, public parks or on parts of buildings.

Even though dwarf honeybees are sometimes referred to as 'native to the UAE', they are not native or indigenous to the UAE or even to the Arabian Peninsula. Instead, all dwarf honeybees now present in Arabia are essentially descendants of tropical red dwarf honeybees that are native to Asia and are naturally distributed from Southern Iran in the west to Indonesia in the east. They were first reported in the Arabian Peninsula during the 1920's at Muscat, Oman, and were first reported in the UAE in 1983.

Since their original detection in Oman, dwarf honeybees have spread north and west to other parts of Arabia, northern Mena and the north-east regions of Africa. Dwarf bees from different parts of Arabia are genetically related to those of Pakistan and India, suggesting that the colony



Field Trips and Clips

or colonies that first arrived in Oman may have been stowaways on a vessel that originated from that region.

During their north-westerly expansion, dwarf bees have proven to be highly successful colonizers of hot arid environments. They are now common inhabitants of Oman, UAE, Saudi Arabia, Yemen, Iraq, Jordan, Israel, Egypt, Sudan, Eritrea, Djibouti and Ethiopia. Although they have not yet been found on Socotra Island (Yemen), they are assumed to be present in nearby Somalia and are considered an invasive species in North Africa.

Like other types of honeybees, dwarf bees are highly social. They live in colonies that comprise up to seven thousand worker bees, a small number of drones, and a single queen. The workers have black thoraxes covered with light-greyish coloured hairs while their abdomens have an orange-brown anterior and distinctive black and white coloured bands towards the tip.

The nest of dwarf bees consists of a single exposed comb that typically hangs from a tree branch or the roof of a mountain cave, rocky shelter or man-made structure. Worker bees protect the nest from ant-attack by coating the structure from which it hangs with sticky plant gum (propolis). Unlike honeybees, dwarf bees are poor at identifying a new nest site. Hence, reproductive swarms will often settle for a short time at a potential nest site, before moving on to another site. In Oman and mountainous regions of the UAE, swarms periodically migrate between mountains and other regions according to seasonal variations in forage availability.

Dwarf honeybees play an important role in the environment as pollinators of native plants, such as ghaf (*Prosopis cineraria*), samar (*Acacia tortilis*) and sidr (*Ziziphus spina-christi*).

The attached photograph of the dwarf honeybees was taken by Kerstin Binoth.

4. Some information on the species of potter wasp that I saw.

This very interesting species of potter wasp could not be identified. It appears to be a member of the genus *Ancistrocerus*, although potter wasps are the most diverse subfamily of the vespid wasps, with almost 200 genera.

All potter wasps have a solitary lifestyle. Female potter wasps nest alone and are quite diverse in their nest building. They may construct their own nest, generally out of mud, or use pre-existing cracks or cavities. The female lays a single egg in each nest and provisions it with larvae of moths, butterflies, beetles or other hymenopterans, which she paralyzes by stinging. Hence, potter wasps are important bio-control agents.

It is thought that native Americans based their pottery on the form of potter wasp nests.

Joint contribution by Charles Laubach and Denis Anderson with photographs by Kerstin Binoth



Asian Dwarf Honey bee (*Apis florea*)



One bottle claims 100 lives

In the trailer for 'Our Planet' David Attenborough says "We have changed the world so profoundly that scientists have decided that earth has entered a new phase of its existence. Welcome to the Anthropocene – the age of humans. We now determine nature's survival".

It's not just at the macro level (overpopulation, habitat destruction, natural disasters brought on by climate change, overfishing etc) that humans impact biodiversity, but also at the micro level – the everyday carelessness that is contributing to species extinction. This fact was forced home to me on a recent, typical, wadi hike. I was sitting under a tree, eating lunch and contemplating, when, in the quiet, a persistent scratching noise caught my attention. It didn't take long to identify the source - a beetle, struggling to climb over the lip of a water bottle, lying on its side in the wadi. I tipped the bottle up thinking the beetle would drop out easily but, instead, a cascade of bodies and parts - wings, legs, thoracic bits - fell to the ground. I am not a taxonomic expert so my tentative assessment is that the majority were darkling beetles (*Tenebrionidae*) – possibly *Trachyderma philistine*, a handful of the pitted beetle *Adesmia sp.*, and the orange spotted wings of another species. I stopped counting bodies when I got to a hundred....only one got away.

Given there are countless beetles in the UAE, does the death of a hundred matter? Well to me, yes. Species are disappearing before we even notice them, and, for this reason, I'll always pick up a few bottles when I'm out hiking and leave the place just a tiny bit cleaner than when I arrived.

Contribution by Angela Manthorpe

(Editor's Note: The full episode of 'Our Planet' and other documentaries presented by David Attenborough is available to view on the internet via YouTube and Netflix)

Dubai Natural History Group (DNHG) Programme 2021/2022

Monthly lectures are presently transmitted via Zoom, starting at 8.00pm

6 and 7 December: Celebrating the 50th Anniversary of the UAE.

9 January: Dr Sanjay Gubbi will present an illustrated talk on "Tiger Conservation: The Art of the Possible."

6 February Dr Koustubh Sharma will present an illustrated talk on "Snow Leopards: the ambassadors of the Mountains of Central & South Asia"

DNHG Field Trips

17/18 December: Traditional desert picnic and overnight camp (details will be sent via email to members but note that there will be no food-sharing as in the past due to Covid restrictions)

Please note that field trips will only take place in accordance with current Dubai Government regulations. Participants will remain socially-distanced and capacities are limited. Proof of vaccination or proof of PCR test not older than 72 hours is required upon registration/arrival and masks should be worn at all times.

DNHG COMMITTEE 2020/2021

When possible, please contact committee members outside office hours

	Name	telephone	email
Chairman	Gary Feulner	04 306 5570	grfeulner@gmail.com
Vice Chairman	Valerie Chalmers	050 830 5018	valeriechalmers@gmail.com
Treasurer	Puneet Kumar	050 452 4820	puneetcps@gmail.com
Membership Secretary	Alessandra Pipan	054 7771183	lssndr.ppn@gmail.com
Speaker Co-ordinator	Michelle Sinclair	050 458 6079	sinclairmichelle611@gmail.com
Fieldtrip Co-ordinator	Sonja Lavrenčič	050 256 1496	lavson@gmail.com
Member-at-Large	Pradeep Radhakrishna	050 450 8496	wgarnet@eim.ae
Member-at-Large	Anindita Radhakrishna	050 656 9165	anin@eim.ae
Newsletter Editor	Margaret Swan	050 798 4108	gazelleeditor@gmail.com
Librarian/Book Sales	Angela Manthorpe	058 135 4143	manthorpe2005@yahoo.co.uk
Postmaster	Sandi Ellis	050 644 2682	sandiellis@gmail.com
Chief Engineer	Binish Roobas	050 243 8737	johanruphus@hotmail.com
Website Co-ordinator	Alexis Biller	055 103 9014	alexis.biller@gmail.com

Postal Address: DNHG, PO Box 9234, Dubai, UAE

DNHG Membership

DNHG membership remains one of Dubai's best bargains at Dh100 for families and Dh50 for singles. Membership for the current year is valid from September 2020 to September 2021. In consideration of the restrictions on our lectures and field trips due to COVID-19, **all members who were paid up (or considered paid up) for 2020—2021 will be automatically renewed for 2021-2022**, without a renewal fee.

New members can join by (i) sending to the Membership Secretary (see above) a completed one-page membership form, which can be downloaded from our website (www.dnhg.org) and (ii) making payment to our Emirates NBD account by cash deposit or transfer from your bank or ATM, using our IBAN number AE640260001012012013302. However, this process does not always identify the payer. So if you wish to pay by cash deposit, 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 helps 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.