



GAZELLE



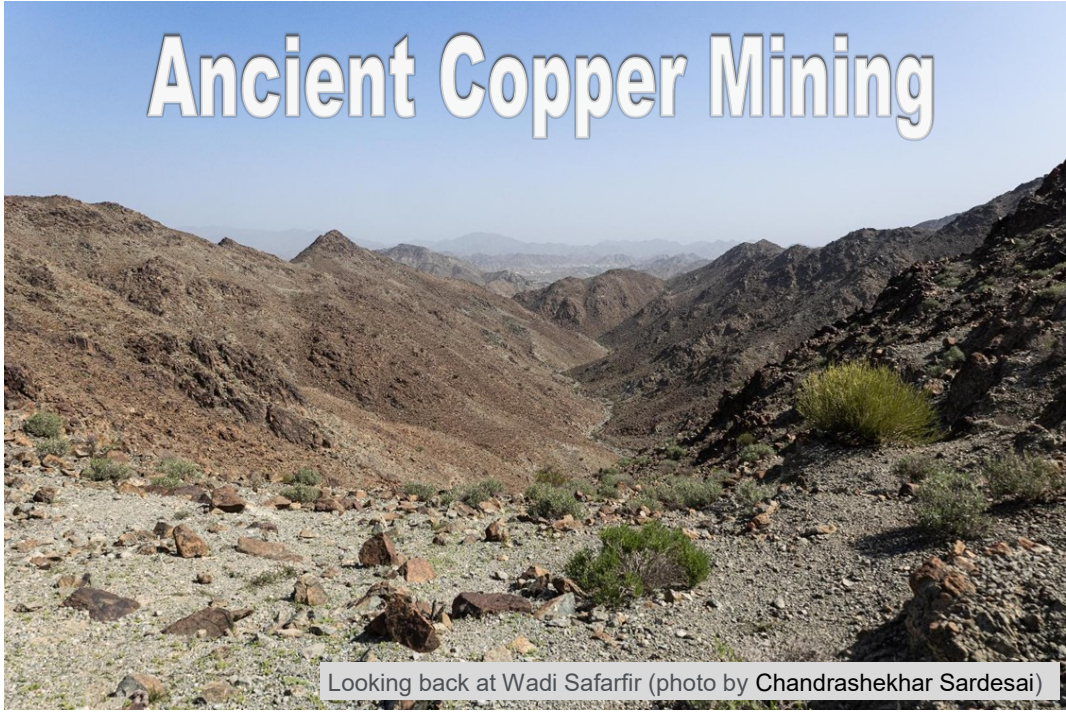
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Contributors—

Thanks to the following for their contributions this month:

Mary Lanaghan, Charles Laubach, Chandrashekhar Sardesai, Barbara Van Meir, Anelisa Lambert, Iain Dodson, Nirjhar Chakraborty, Ulrike Andorff, Kerstin N. Binoth, Gary Feulner and Tanusree Chakraborty

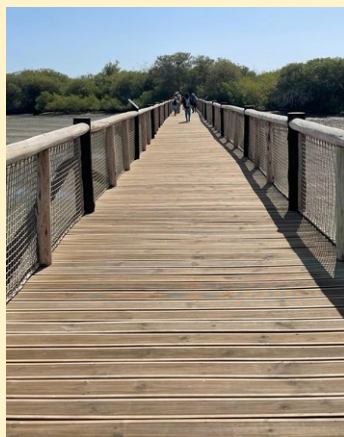


Ancient Copper Mining

Looking back at Wadi Safarfir (photo by Chandrashekhar Sardesai)

Recently-opened visitor centre in Khor Kalba

See page 6



Introduction

Natural History Group members convened in southern Ras Al Khaimah Emirate in late January to explore an ancient copper mining area and ramble through nearby wadis and hills. The hike was led by Barbara Van Meir and featured a presentation by guest Agnieszka Dolatowska, Senior Archaeologist at Jazirat Al-Hamra Restoration Project.

Copper Mining Village

Near the start of the hike, an ancient mine shaft was located with scouting assistance from Charles Laubach, and, shortly after, we entered upon a large field full of oddly shaped coarse rocks, some of which were tinged green. Agnieszka explained that these rocks were copper slag, the molten by-product of the intensely hot smelting process used to extract copper from ore. Additionally, we could see remnants of low stone walls, perhaps of terraced fields.



Copper slag (Photos by Anelisa Lambert)

Bronze is of course a combination of copper and tin and, as such, copper mining is important in the archaeology of the Arabian Peninsula. Oman has long been recognized as a major

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Announcements and Recorders

Virtual Monthly Speaker

6th March, 2022 at 8pm (via Zoom)

Presenter: Dr. Knut Bretzke, University of Tübingen (Germany)

Lecture Title: “The Paleolithic record of the Central Region in Sharjah”

Dr. Knut Bretzke is an archaeologist with expertise in the Stone Age of Southwest Asia. He earned his PhD from the University of Tübingen in Germany with a dissertation about the Paleolithic in Western Syria. After he gained first experience in Sharjah as team member of Prof. Hans-Peter Uerpmann between 2005 and 2010, Dr. Knut Bretzke became the head of the German Archaeological Mission to Sharjah in 2012. Since then, he conducted several fieldwork projects in collaboration with the Sharjah Archaeology Authority and international and interdisciplinary teams. The main goals of Dr. Bretzke’s research in southern Arabia are the filling of gaps in the Paleolithic record and a better understanding of the evolution of the human-environment relationship in arid regions.

In this presentation I will summarize my ongoing research on the Stone Age of Southeast Arabia. I will focus here on the field work conducted within the joint project between the Sharjah Archaeology Authority and the University of Tübingen in the Central Region of Sharjah. This presentation will provide an overview of the sites and assemblages that we are working on for the past decade and will briefly discuss paleoenvironmental factors that are thought to have influenced human occupation of Southeast Arabia in early prehistoric periods.

A Celebration of the Natural History of the Emirates

In early December 2021, on the occasion of the UAE’s 50th anniversary, New York University – Abu Dhabi and the UAE’s several Natural History Groups sponsored a two-evening online program titled *A Celebration of the Natural History of the Emirates*. Using a combination of 10-minute ‘flash talks’ and discussion panels, the event provides an overview of the unique environmental setting of the UAE, and surveys the major ecosystems and organisms that occur across our land and seascapes.

For those who could not attend, the full program (two evening sessions of short talks) is now available online on the YouTube channel of the NYUAD Institute as follows:

Day 1— https://www.youtube.com/watch?v=2p2YxFnJ-Po&list=PLIicEmxDQIMorRGHK4R_hX9ej1K-No6be

Day 2— https://www.youtube.com/watch?v=O1MQKIfSHLM&list=PLIicEmxDQIMorRGHK4R_hX9ej1K-No6be



DNHG Recorders

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

Vacancy

An opportunity has arisen to become part of the committee!

A new Gazelle Editor is required from the end of May, 2022. This is a voluntary role.

Please contact the Chairman, Gary Feulner if you are interested in joining the team.

Spotlight!

DNHG Field Trip to various wadis where Copper mining took place.



Flowering *Convolvulus vergatus*
 Arabic name: hub al-risha, adlam
 Bindweed or Morning Glory Family
 Common in Hajar Mountains
 Flowering Jan-Apr or sometimes throughout
 the year (Jongbloed, 2003) (Photo by Charles
 Laubach)



Feral donkey (photo by
 Chandrashekhar Sardesai)



Pitted beetle *Adesmia cancellate*
 (Photo by Chandrashekhar
 Sardesai)

DNHG Desert ramble, photo by Ulrike Andorff



© Kerstin N. Binoth

(top, left to right) Green haven in the mangroves, Arabian Collared Kingfisher, inside one of the three hides,

(bottom photo) panoramic view of the khor and bridge.

Photographs by Kerstin Binoth.



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© Kerstin N. Binoth

Field Trips

(Continued from page 1)



source of copper from the third millennium BC onwards and into the Islamic era, and there are also historic copper mining sites in what are now the United Arab Emirates.

The Wadi Safarfir site has not been excavated by archeologists, although the area was surveyed in the late 1970s and early 1980s and findings included pottery dating to early and late Islamic periods, as well graves and walls. Some of the remains identified during those surveys, including roasting pits, furnaces, rectangular and circular foundations of buildings, as well as a graveyard, are now likely to have been incorporated into the farms and buildings that have since been built in the wadi.

Agnieszka further explained details of the copper mining and production process, giving examples of the clues that are used to investigate the extent of copper *mining* or *production* at the site. The site was considered in the context of other locations in Oman and UAE, such as Tell Abraç in Umm Al Quwain, thought to have been an Iron Age meeting point for traders from Mesopotamia, Iran and the Indus Valley.

Finally, Agnieszka touched upon the significance of metal production in the context of the Bronze Age which followed the Neolithic revolution -- the shift in societies from nomadic to settled -- offering the insight that metal production could best be interpreted as a *result* of the shift toward settlement life, rather than a cause of the shift.

Wadi ponds were scouted for algae and tadpoles of the Arabian toad (*Bufo arabicus*) (photo by Iain Dodson)

Wadis

As we left the slag field behind, we ventured up Wadi Safarfir, toward a high pass affording 360-degree vistas which we shared with a feral donkey. The final ascent to the highest point was made by Iain, and we then descended as a group and returned via Wadi Ghargur, encountering shallow pools harbouring algae and, presumably, tadpoles of the Arabian toad (*Bufo arabicus*).

Written by Mary Lanaghan, with contributions by Iain Dodson, Chandrashekhar Sardesai, Anelisa Lambert, Charles Laubach, Barbara Van Meir.

Reference: Jongbloed, M. (2003). *Wildflowers of the United Arab Emirates*. Environmental Research and Wildlife Development Agency.



Walking out via Wadi Ghargur (photo by Iain Dobson)



Charles scouted the mine shaft (photo by Iain Dodson)



Feral donkey at a pass (photo by Mary Lanaghan)

Wildlife observed on the Copper Hike

Identifications of various flora and fauna were kindly made by Charles Laubach in consultation with Chandrashekhar and Gary Feulner, as follows:

Birds:

Hume's wheatear, Purple sunbird, Red-wattled lapwing, and Grey francolin

Plants:

Acacia tortilis
Sidr (*Ziziphus spina-christi*) – bearing fruit
Moringa peregrina
Ghaf (*Prosopis cineraria*)
Euphorbia larica
Tephrosia apollinea
Algae in the wadi ponds
Convolvulus virgatus (Morning glory family)
Lowland fig – *Ficus salicifolia*

Reptiles: Wadi racer (*Coluber rhodorachis*)

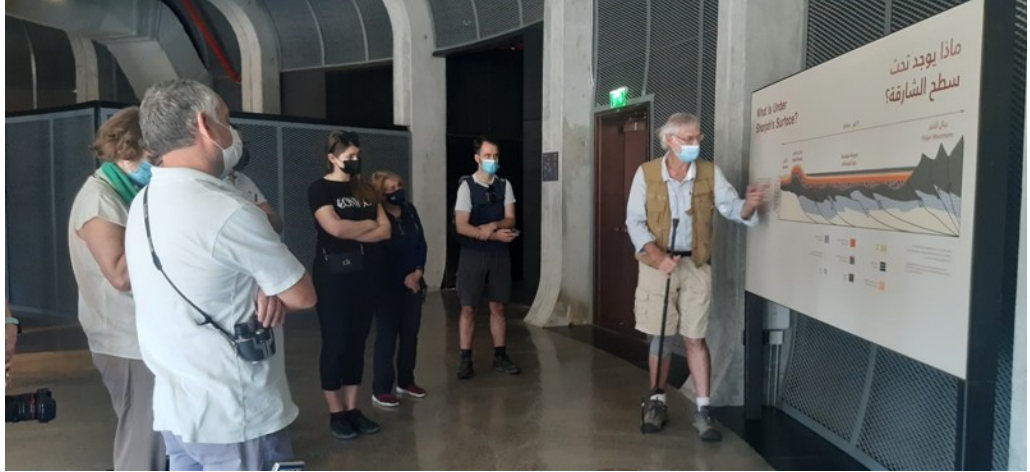
Mammals: donkeys and goats

Invertebrates: dragonflies, butterflies, wasps, pitted beetle (*Adesmia cancellate*)

Field Trips

Buhais Geology Park

Editor Margaret Swan reported in December 2021 on a private visit to Sharjah's Buhais Geology Park, located on the flanks of Jebel Buhais, in the Sharjah hinterland between Mleiha and Madam, where the desert sands meet the gravel plains. A DNHG field trip in late January 2022 was the group's second formal visit, and the exhibits, signage and graphics were again augmented by selected explanations and commentary by Gary Feulner, who participated in the development of much of the content.



The principal focus of the museum is to explain to visitors – in specimens, words, pictures and cross-sections – the evolution of the singular geology of Sharjah and its neighbors and, in particular:

- (1) the deep-earth igneous rocks of the Hajar Mountains in the east (the ophiolite, a slice of former oceanic crust and mantle);
- (2) the red, boulder-filled conglomerates and the pale yellow, often richly fossiliferous limestones, now conspicuously folded along the outlying mountain ridges of Jebel Buhais, Jebel Faya and Jebel Mleiha.
- (3) the extensive dune sands to the west (covering Sharjah's oil reservoirs); and
- (4) the Arabian Gulf itself, a recent geographical feature which was dry land as recently as 16,000 years ago, after the end of the last glacial period (or Ice Age).



Display of some of the abundant fossils at Jebel Buhais.

A distinctive feature of Buhais Geology Park is an outdoor trail which leads visitors safely through the lower slopes of the jebel and introduces the different geological units and various fossils as well as many of the processes that have operated to shape the landscape that we see today. Indoors there are two sections intended for children to exercise their observational and reasoning skills and to "think like a geologist".

While on the outdoor trail the DNHG group was rewarded with several non-geological gifts for naturalists generally: a Little Owl resting in a grotto on the main cliff face, a few Brown Necked Ravens, calling and playing in the currents rising above the cliff, and a lone individual of the White Desert



A Brown-Necked Raven plays in the breeze at Jebel Buhais.



A Little Owl *Anthe noctua* in a grotto on the Jebel Buhais cliff face.

Black Tip *Euchloe transcaspica*, an unusual sighting of that butterfly, which is rare in the UAE even in its normal mountain homeland.

Construction of Buhais Geology Park was supervised by Sharjah's EPAA (Environment and Protected Areas Authority) and by DNHG member Peter Jackson, Architectural Advisor to the Ruler of Sharjah, H.H. Sheikh Sultan bin Mohammed Al Qasimi. Apart from its educational content, the design of the museum, by Hopkins Architects, has won a number of architectural awards.

Contribution by Gary Feulner

Field Trips

Trip to Al Qurm Nature Reserve, Kalba

The morning started with beach cleaning under the guidance of Chris Wilson, operations manager of the Al Hefaiyah Mountain Conservation Centre. The beach is protected and is out of bounds for visitors. It was declared as a protected area by Emiri Decree No. (27) in 2012. It is about 7 km long and 300-400m wide. We were given sacks and gloves, and we got going. The beach mostly had plastic caps, innumerable in numbers, and bits and pieces of nylon ropes. Chris mentioned that these were dumped on the other side of the sea at Fujairah which got transported during the high tide. The two big items that were cleared off the beach were a huge fishing net (it took two persons to clear it off from the ground), and a dead cormorant, a migratory bird. All of us worked diligently for about two hours and a lot was cleaned off.

Then the action moved to the Rehabilitation center for the turtles. We saw two turtles that were rescued from the beach and are being rehabilitated in the pool. There were also three smaller quarantine tanks, where the turtles are kept initially before moving to the pool.



Recovering Green Turtle

Chris mentioned that most of the turtles that were found dead on the beach died because of gulping plastic objects. Necropsy revealed a large number of plastic objects in their stomachs. He also mentioned a piece of unfortunate yet queer information that, just after New Year, a lot of turtles were found dead with balloons in their stomachs. So great is the correlation between human activities and the survival of other living beings.

The next stop was the aviary which is a breeding center for birds. Among others, we saw herons, cormorants and seagulls. Also injured birds are treated here and later on released. The interesting thing was a pair of kingfishers called the Arabian Collared Kingfisher. This is a special variety of kingfishers found only in the Kalba region of UAE and in Oman. The biological name is a testament to that (*Todiramphus chloris kalbaensis*).

This particular variety was almost on the verge of extinction and only 35 breeding pairs were found in the wild in 2012. Now the figure has gone up to 131, thanks to the untiring conservation effort of the government and all concerned.

Next on our schedule was a walk in the mangroves. A long bridge over the creek took us to the inside of the mangroves, and the bridge turned into a fantastic boardwalk, about a meter above the forest bed which, during the high tides, gives the feel of walking over the water inside the mangrove. It gives us visitors a chance to feel the essence of the mangrove forest in its entirety. The total area is around 5 sq km and about 300 years old. We saw the Khor teeming with fish, hermit crabs, and also saw a big mud crab just lazing in the pit. We also visited the bird hides, which have excellent facilities for photographing the birds during the cooler time of the day when they are present in abundance. Our guide advised us to visit during the high tides when more fauna can be experienced. There were interesting trivia displayed all along the route.



Large mud crab in its burrow

I am sure all of us promised to one's own self to come back again to experience the magic of the mangroves during the high tide again.

The center also houses buildings which housed huge aquariums which displayed all the locally available population of fish, along with other archaeological findings related to the Kalba area flora and fauna.

We dispersed by mid-afternoon.

Contribution by Nirjhar Chakraborty with photographs by Tanusree Chakraborty



(Above) Beach Cleaning in full swing

(Below) Members with rubbish collection



Female Arabian Collared Kingfisher (*Todiramphus chloris kalbaensis*).

Field Trips

Al Hala Village

It was a journey back to the 18th century to the ruins of Al Hala village at Northern RAK. The journey was led by the archaeologist couple Tibor and Yvette along with the able help of Agnieszka, who enlightened us again after her wonderful commentary at the Copper Hike the week before. It was a short walk through a wadi for about 15 minutes that led us to a vast expanse of a valley from where we could see the ruins dotted on the meadow. The houses were small, mostly one-room structures with some having a kitchen outside the building. The kitchen looked small with a fireplace at the center. Few houses were located at a higher elevation which were bigger in size probably indicating some kind of class division among the settlement.



We found in one of the external walls of some houses some ancient sketches which looked like a person sitting on a donkey. We also saw signs of an ancient reservoir which used to collect water from a possible stream flowing from the mountain. They were apparent pieces of evidence that stones were rolled in position to divert the water properly through the channel. There was also a mosque in the settlement which could be identified from the Mehrab. Tibor mentioned that they have studied and found it to be astonishingly accurately aligned with Mecca. Particularly one house was located at a comparatively higher elevation, which was probably used for keeping a vigil.



It was a day well-spent among the ruins. The day ended with Gary giving a vote of thanks to Tibor, Yvette, and Agnieszka for unfolding this hidden gem to us and also offered them the honorary membership of DNHG.

The write-up will not be complete if I do not mention Lucy, the black Lab of Tibor and Yvette, who



accompanied us throughout the trip and was a constant source of joy. Hope to join again next year.

Contribution by Nirjhar Chakraborty

Photos from the January DNHG field trip to Wadi Ziqt

Thanks to Ulrike Andorff for leading this trip into the wadi, the purpose of which was to make observations of petroglyphs but there was also an abundance of flora and fauna. The group photo was taken by Ulrike and the others were taken by Kerstin Binoth.



Dubai Natural History Group (DNHG) Programme 2021/2022

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

6 March

Dr Knnut Bretzke will present an illustrated talk on
"The Paleolithic record of the Central Region in Sharjah"

DNHG Field Trips

Mid-March:

Inter-Emirates weekend with photo competition. Further details will be circulated to members via email.

Please note that field trips will only take place in accordance with current Dubai Government regulations. These have been relaxed this month but participants still need proof of vaccination or proof of PCR test not older than 72 hours upon registration/arrival.

If any member would like to suggest or lead a field trip, please contact Sonja, DNHG Field Trip Co-ordinator at the email address below.

A new Gazelle Editor

is required from the end of May.

Contact Chairman, Gary Feulner at the email below.

This is a voluntary position.

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	johanrphus@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.