



GAZELLE



مجموعة دبي للتاريخ والطبيعي

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Contributors —

Thanks to the following members for their contributions this month:

- Angela Manthorpe
- Gary Feulner
- Kerstin Binoth
- Margaret Swan
- Ulrike Andorff

Wadi al Dahir: sulphur pools & more ...
see page 3



© Kerstin Binoth



Overview of a common Swallowtail roosting in the main gorge of Wadi Wurayah. The pale yellow butterfly is perched on the face of a rock at the bottom left of the photo just above the waterline of the stream

Swallowtails Roosting

The Common Swallowtail butterfly *Papilio machaon* is an annual visitor to the UAE from late autumn to mid-spring. Two recent observations of the Common Swallowtail at roosting time, the latest in October, suggest that it may employ a "conscious" strategy to achieve safety from predation.

Investigation of the physical, floral and faunal changes wrought by the heavy rains three months earlier found me wading the main gorge of Wadi Wurayah, a few kilometers walk beyond the waterfall. Contrary to my expectations, there was no large pool at the mouth of the gorge; that area was totally filled by gravel. The gravel bed of the lower gorge was also dry. Surface water was flowing in the upper gorge, not more than about 15cm in most places but algal growth made exposed bedrock or large boulders slippery. Pebble-sized gravel provided the most secure footing.

(Continued on page 4)

Announcements and Recorders



Syrphidae: *Eristalinus tabanoides*

Monthly Lecture

Wednesday 7 December at 8pm

Speaker : Dr Brigitte Howarth

Topic : All about flies - Diptera, their life histories, and families found in the UAE

Currently director of Institutional Effectiveness at the American University in Dubai, Dr. Brigitte Howarth is responsible for overseeing the university's institutional effectiveness initiatives. She provides leadership in developing the institutional research, planning, assessment and accreditation protocols for the university and serves as the liaison with national and international accrediting bodies. By training Brigitte is an ecologist with extensive experience in desert ecology and an active research agenda in ecology, entomology, environmental history and conservation. Her first degree was in Applied Ecology and her Ph.D. in ecological entomology. Her hobbies echo her research interests with a passion for all forms of life and what they require to survive. Brigitte is Chair of the Al Ain Chapter of the Emirates Natural History Group, Al Ain. She joined the ENHG shortly after arriving in the UAE in 1998 where she has served in many different capacities over the years. In addition to her current tenure as chair, she is also the curator and custodian of the ENHG's entomological collection. Contributors to the collection date back to the origins of the ENHG, including many specimen collected by the founder of the ENHG, Bish Brown.

DNHG Recorders

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From the Editor:

Winter has arrived and Mother Nature is beaconing.

Please share with us through the email below your observations, stories, photos and captions of wildlife and nature in the UAE or abroad.

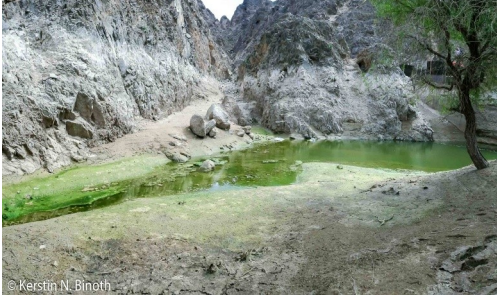
Email: gazelleeditor@gmail.com

Deadline: 22 December 2022

We look forward to hearing from you.

Spotlight! Wadi al Dahir through Kerstin Binoth's lens - a selection

Planning the route heading off and often stopping on the way to investigate



Some of the flora and fauna of Wadi al Dahir



The sulphur pools....



...and feral donkeys



(Continued from page 1)

In many places the walls of the narrow gorge slope over the wadi bed obscuring the sky, so "sunset" comes early there. On my return journey down the shaded gorge, not much past 3pm, I was surprised to encounter a Common Swallowtail perched with its wings spread on the vertical face of a rock, but so close to the waterline that one of the tails on its wings appeared to be actually touching the flowing water (see photos); the innermost edges of both hind wings were missing, symmetrically, probably lost to a bird attack.

Might the butterfly be dead or badly injured? That seemed unlikely given the limited damage and its otherwise alert posture and precarious position. If it had fallen in the water and rescued itself, there would have been many easier places to exit. But it remained motionless, even when I passed close by to continue my journey downstream, consistent with a butterfly that had already bedded down for the night.

As I walked, I continued to puzzle over what I had seen, and I began to consider that it might be a very good strategy to avoid predation or other dangers in the night, as long as the butterfly was confident of its hold on the rock. The only amphibious predators likely in flowing water, toads and the wadi racer snake, were rare if not absent in the fast-flowing water of the gorge and, if the water level were to rise, the butterfly would sense it with the "tails" of its wings.



A close-up of the Swallowtail roosting in the gorge. The "tail" of the left wing seems to be touching the water



A second Common Swallowtail starting to roost at the base of a wadi wall, over the damp gravel of a receding pool (the butterfly is at the centre of the photo)

An hour or so later, in the main wadi below the gorge, I observed a second Common Swallowtail apparently seeking to roost along the now shaded wadi. It chose a spot low over the upstream end of a long, narrow pool at the base of the wadi wall, not over the water itself but over damp, fine gravel, where the pool would probably have extended just a day or two before. Like the Swallowtail in the gorge, it perched with its wings fully open despite the coming dusk. I wondered whether it might have used the same site previously, when the water was higher, and whether it was employing a strategy similar to the butterfly in the gorge.



A close-up of the second Swallowtail.

In the end, the second Swallowtail proved sensitive to the attention of the observers as larger butterflies very often do, so it is not possible to confirm its final choice for the night, but I was struck by the similarity of the "instincts" of these two individuals. Observations like these raise many other questions, too. The answers to some may be well known (at least to experts); others, perhaps not.

For example, does the Common Swallowtail (or any other butterfly) normally roost with its wings open? Most butterflies do not; they fold their wings and shelter in plants or brush. Does display of the full upper side not make it more exposed to predation? Or is it relying on its warning coloration (which signals its foul taste, the result of larvae feeding on toxic foodplants)? Or was I misinterpreting what I saw, ignoring some other aspect? Learning to be continued!

Contribution and photos by Gary Feulner

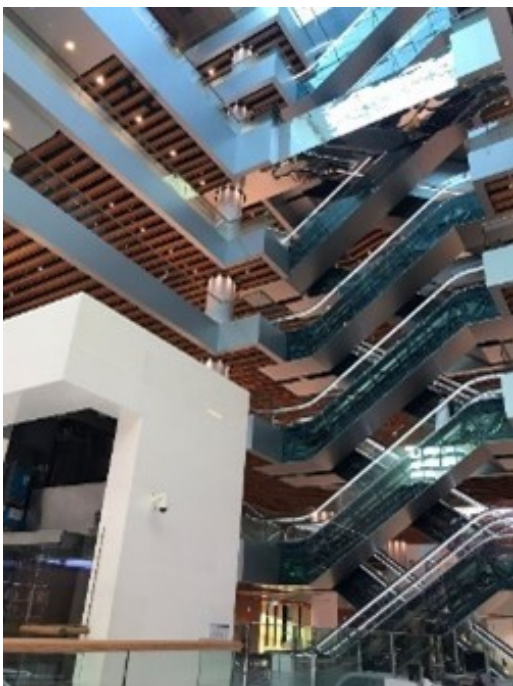
A visit to Mohammed bin Rashid Library

Books enrich our lives with knowledge, wonder and imagination. However, at the new library in Dubai, not just books are on offer. Claimed to be the largest cultural centre in the Middle East and North Africa (MENA) region, the building promised a spacious, state-of-the-art interior and I was not disappointed on a visit earlier this month.

On entering I found myself drawn towards a giant, elevated screen. Here, visitors could watch whilst computer-generated astronauts walked around their virtual selves. An opportune moment to celebrate the achievements of Hazza al Mansouri, the first Emirati astronaut to enter the International Space Station.



Mohammed bin Rashid Library



Looking upwards inside the library

As a librarian I always look for clear signage but, realising that in this digital age people prefer to use online sources of information and direction, I found interactive maps amply located throughout the building. In addition, manned information desks and security guards were on hand to respond to any queries. My destination was on the seventh floor, where an exhibition of the history of the written word was on display.

From ancient methods of book binding to historical maps of the world as people saw them in their day, everything about the exhibition was excellent. Early astronomical and astrological maps bore intricate night skies, where beautifully illustrated mythical figures gazed dreamingly down on the stars and constellations below.

I especially enjoyed viewing historical interpretations of fine Calligraphy throughout the ages and seeing the fabulous examples, each prominently displayed in its own glass frame. I was fleetingly concerned about the spotlights creating light damage to the exhibits. However, they did not appear to be affected.

The information Centre on the first floor offers desktop workstations, laptop study areas and cosy study booths. Books follow the Dewey cataloguing system and are shelved strategically, clearly displaying each genre of study. Carpeting ensures soft footfall, thus not distracting students from their centre of focus.

There are pleasant walkways outside where seating areas observe the busy Festival City across the Creek. Outside also boasts an amphitheatre, providing yet another area where talks, author visits and discussions can take place.

There is a separate children's library which I did not visit but, overall, the library is well designed and encourages study at all levels. Further reaching out to the community will follow, as more floors with conference rooms open their doors to the public.

Advance booking online is necessary as a QR codes on phones or devices will be scanned on entry. Visiting the exhibition requires another QR code from the website at the time of booking.

Getting there, the Creek Metro Station is an eight-minute walk away for those without a car and for those with their own transport, parking is available. Water taxis can be taken from Festival City to the station nearby. This will be useful for those visiting the Literature Festival in February next year. Follow the link below to take a virtual tour yourself:

Mohammed bin Rashed Library website: <https://mbrl.ae/>



Book-binding exhibits

Digger wasps – what's in your larder? *Contribution by Angela Manthorpe*

At the end of October Gary Feulner and I were hiking across a gravel plain in an East Coast wadi when we spotted the orange-coloured abdomen of a wasp labouring near the ground. As its behaviour was unusual, we trained our binoculars on the creature and found that it was half carrying and half dragging a grasshopper larger than itself across the rocky terrain.

This was a digger wasp, of the Sphecidae family, the largest group of solitary wasps in Arabia which typically have a long thin waist. They dig nests in the ground and, just like stocking a larder, they provision them with suitable prey which they've stung and paralysed. Once the larder is full, they lay an egg on the immobilised insect and leave nature to take its course.

What we had spotted was the wasp en-route to its nest with its prey in tow. When you are smaller than 4cm long and are carrying a heavy load and the ground is strewn with hazards, sandy slopes, huge cliff faces and crevasses, it can be challenging. At one point the load tumbled into a hole between boulders and for a few moments the wasp disappeared. It then emerged doggedly dragging the grasshopper by its antennae which the wasp had clamped between its jaws.

Every now and again the wasp would deposit its load and hover a few centimetres off the ground. I interpreted this as checking for directions because, after the final such hover, the wasp turned at a sharp angle of approximately 220-240 degrees from its original course and within moments arrived at a small hole in the mud and deposited the grasshopper outside. The wasp removed a small lump of clay that had been blocking the hole and disappeared inside. It then re-emerged, grasped the grasshopper and dragged it headfirst into the hole. I could hear the wasp buzzing inside and after a few moments it emerged again, turned with its back to the opening and started flicking clay towards the hole, backfilling with precision. Every now and again it would check the hole, then resume work and, after only a few moments, the job was complete. You could see from the final photo that there was no trace of the hole.

Meanwhile, down in the nest the larva has a ready meal when it hatches and it feeds on this until it pupates. The new wasp then digs its way out of the hole and the cycle starts again. We estimated that the wasp dragged its victim for approximately 25m from where we first noticed it. The wasp had surely flown from the nest hole to find its prey. How then did it find its way back over land for such a distance through rugged terrain? What clues did it rely on so successfully?

According to Walker and Pittaway's *Insects of Eastern Arabia*, "The Hymenoptera is one of the largest orders of insects and includes many highly developed species with specialised patterns of behaviour". Next month we shall look at two more examples of wasps provisioning their nests. Tune in to see what else may be in the larder....

PS from Gary Feulner: The wasp discussed and illustrated here must remain unidentified for the moment. It bears a close resemblance to *Parapsammophila turanica* (as shown in *Insects of Eastern Arabia* at p.116) but the latter is said to rely on smooth-skinned caterpillars as larval food. Reference to *Arthropod Fauna of the UAE*, Vols 4 and 5, reveals a broad array of very similar species that can only be distinguished by expert examination. The different species may also differ in their choice of insect prey, illustrating the point made by Walker and Pittaway cited above about specialised patterns of behaviour.



The load - *Photo by Angela Manthorpe*



At the nest - *Photo by Angela Manthorpe*



Backfilling - *Photo by Angela Manthorpe*



Job done - *Photo by Angela Manthorpe*

The wasp discussed in this article dragged its grasshopper prey across the rugged ground shown here from the camera (or further away) to its nest burrow where Angela (pink shirt) is standing - *Photo by Gary Feulner*

Gimme Shelter

Our local samr tree (*Acacia tortilis*) is known in much of Africa as the Umbrella Thorn tree. Although the UAE version is rarely very large or lush, it serves a similar function here as a shelter for creatures large and small from the open sun, and for protection from both terrestrial and avian predators.

Near midday in late October, exploring a minor wadi on the East Coast, we detoured past a single small *Acacia* on a rolling terrace area – the largest tree for hundreds of meters around – and found that it was a shaded gathering place for a half dozen or more *Trithemis arteriosa* dragonflies (Red-Veined Dropwing or Gulley Darter), mostly females but including at least one immature male.

The thin red male *T. arteriosa* is the most common dragonfly in Hajar Mountain wadis and can be found at virtually any rocky wadi pools, even small ephemeral ones. They jockey for territory if there is more than one male. Females are normally found on the surrounding hillsides or brush, and visit the pools only to feed or breed.

The minor wadi in question was dry and the nearest surface water was at least 1.5 km away by a wadi route. We speculated, however, that the dragonflies we saw might have grown up nearby, in a temporary bedrock pool in a steeper tributary wadi (identified by another detour), in the interval since the heavy rain on the East Coast at the end of July.

It is unusual to find female *T. arteriosa* in a group but, on the same day, nearer to substantial water, we found a luxuriant Wadi Fig *Ficus salicifolia* that was host to an even larger number, also including some immature males. Again, their local abundance may have been attributable to the heavy summer rainfall.

Apart from these observations themselves, our experience reinforces the adage of many local naturalists that "No detour is without interest."

Contribution by Gary Feulner and Angela Manthorpe



A lonely samr tree *Acacia tortilis* in the Hajar Mountains - Photo by Gary Feulner



A female *Trithemis arteriosa* (Red-Veined Dropwing), one of about a half dozen sheltering in the *Acacia* and showing why this genus is often called "Dropwing"
- Photo by Angela Manthorpe

More Online Guides

In response to occasional inquiries, three accounts of relatively unsung UAE faunal groups – wadi fish, freshwater snails and terrestrial molluscs (snails and slugs) – have been added to the Online Guides in the Resources section of the DNHG website:

- *Wadi Fish of the UAE*, by Gary Feulner;
- *Freshwater Snails of the UAE*, by Gary Feulner and Stephen Green; and
- *Terrestrial Molluscs of the UAE*, by Gary Feulner and Stephen Green.

These accounts discuss and illustrate the native and introduced species that can be found in the UAE, as well as their habitats and distribution.

Originally published in *Tribulus* some two decades ago, the three papers have stood the test of time (despite the authors' expectations that additional introduced land snails were likely to gain a foothold in UAE lawns and gardens). Abridged popular accounts of wadi fish and terrestrial molluscs were also published in "*The Emirates – A Natural History*" (Trident Press, 2005).

Contribution by Gary Feulner



The "Florida snail" *Polygyra cereolus*, an introduced pest of UAE lawns
Photo by Ulrike Andorff

Dubai Natural History Group (DNHG) Programme 2022/2023

DNHG Lectures

07 December	Topic: All about flies - Diptera, their life histories and families found in the UAE Speaker: Dr Brigitte Howarth
16 January 2023	Topic: An Unstable Equilibrium at Dubai Creek Speaker: Todd Reis

DNHG Field Trips

10 December	Archaeology Workshop in Ras Al Khaimah
11 - 18 December	Northern Laos

For more information and sign-up please contact:

* Sonja Lavson at lavson@gmail.com for Archeology Workshop in Ras Al Khaimah

* Binish Roobas at binishroobas@hotmail.com for Northern Laos

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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 2022 to September 2023. 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 were automatically renewed for 2021 - 2022, without a renewal fee. As we have started hybrid meetings from September 2022, renewal fees can be paid at meetings or by the methods mentioned below.

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.