



GAZELLE

مجموعة دبي للتاريخ والطبيعي

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Cowrie Killer

Local cowries

Cypraea grayana. This shell can reach up to 70mm long; it has a mushroom-coloured base, with darker patches between the teeth. The dorsum is patterned with a honeycomb of dark brown markings. On occasion a different pattern is seen, with dashed lines rather than the honeycomb; this is sometimes identified as *C. arabica*.

There are in fact a number of cowrie species that fall into the *C. arabica* complex, and this has long caused discussion among shell collectors. *C. arabica*, *C. eglantina*, *C. histrio*, *C. maculifera* and *C. grayana* all have similar colouration and, while a typical specimen of each may be straightforward to classify, there are many atypical examples which display traits from more than one species; classification then becomes much more difficult.

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Contributors—Thanks to the following for their reports and contributions:

Andrew Childs, Owen Dowley, Peter Dowley, Francis Porter, Valerie Chalmers, Gary Feulner, Binish Roobas, Christine Demaret, Tamsin Carlisle, Joanna Pugolis and Anelisa Lambert.

When scouring the UAE beaches for seashells, one of the most collectible and popular families to focus on is the cowrie. We are fortunate to have about a dozen varieties around our coastline, and their high gloss and vivid colouration make them attractive display pieces (but difficult to photograph because of the reflection!). The most

common cowrie above, is the *Cypraea turdus winckworthi* (bottom row, middle), which has dark brown spots over a pale blue or green dorsum, and a glossy white base.

The largest cowrie in the UAE, which is commonly found washed up on the beaches on both West and East coasts, is



C. grayana—*C. arabica*



Cypraea grayana—octopus damage

Announcements and Recorders

Monthly Speaker—8pm on Sunday 18th September, 2016

The DNHG are delighted to welcome the following speaker, who will present an illustrated talk on:

“Herpetofauna conservation & biodiversity in the United Arab Emirates“

Johannes Els is a South African herpetologist based at the Breeding Centre for Endangered Arabian Wildlife. He completed his studies in nature conservation through the University of South Africa and Zoo and Aquarium animal management through Sparsholt College, Hampshire, United Kingdom.

Johannes is a member of the IUCN/SSC sub-Saharan Africa and North Africa/West Asia Viper specialist groups and IUCN/SSC Freshwater fish specialist group. He has a special interest in reptile ecology and biogeography. He co-authored the first comprehensive IUCN Redlist for the reptiles of the Arabian Peninsula and several other publications which include the description of two new species of geckos from the Hajar Mountains of Oman and United Arab Emirates. Johannes' interest in reptiles has taken him from the world's smallest viper in South Africa to Indonesia's largest lizard and Britain's snow basking adders.

The content of Johannes' talk will include new contributions to the herpetology of the UAE and *in situ and ex situ conservation projects for multiple species*.

From the Editor:

Welcome to a new season of the Dubai Natural History Group. If you are reading this as a joining member, the committee extend a special warm welcome to you.

The first meeting takes place on 18th September, when we look forward to a lecture by herpetologist, Johannes Els (details above).

Annual subscriptions are also due on this date and forms will be provided for completion during the meeting. However, in order to save time, the form can be downloaded and printed from the following link:

http://www.dnhg.org/uploads/4/0/9/9/40998945/dnhg_membership_form.pdf

Field trips are currently being planned. Please let us know if you would like to lead or organize one of these by contacting Sonja (next column), or any member of the committee.

Sadly, we learned of the passing of archaeologist, Beatrice de Cardi, aged 102. This interesting lady pioneered exploration in the UAE, Oman and Qatar. The article on page 5 outlines some of her achievements.

Despite taking a break over the summer, this issue is packed full. Photographs on page 3 include the field trip to Kyrgyzstan, whereas articles include spiders once again, namely the Brown Widow. Enjoy your read!

Technology and natural history come together as scientists in Brazil print a 3D shell for this tortoise, which lost 85% of its shell in a fire.

Watch how this was achieved in the one minute video in [this link](#).



Wanted: Field Trip Coordinators

If you would like to join the 'Field Trip Coordination Team' or are interested in leading your own field trip then we would like to hear from you!

Field trip leaders do not need to be professional experts but just be generally interested and enthusiastic.

We have a variety of field trips to choose from or are happy to help if you would like to organize your own.

To find out more, please contact Sonja Lavrenčič on: lavson@gmail.com



[DNHG facebook page](#) has reached a milestone—over 1,000 followers!

DNHG Recorders

Reptiles - Dr. Reza Khan 050 6563601

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

Marine Life - Lamjed El-Kefi

Geology - Gary Feulner res: 306 5570

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Mammals - Lynsey Gedman mobile: 050 576 0383 email: lynseygedman@hotmail.com

Seashells - Andrew Childs mobile: 050 459 0112 email: andrew.childs@eim.ae

Birds - Tamsin Carlisle mobile: 050 1004702 email: tamsin.carlisle@platts.com

Spotlight

Kyrgyzstan birdlife, by Tamsin Carlisle



Northern Wheatear (*Oenanthe oenanthe*)

Fire-fronted Serin (*Serinus pusillus*)



Citrine Wagtail—male (*Motacilla citreola*)



Black Kite (*Milvus milvans*)

Natural sand sculptures in Al Wathba, by Christine Demaret



New Zealand (North Island) vistas, by Margaret Swan



Nepal Hill Country Trip

© Owen Dowley

In early April, the DNHG once again made a personalized visit to Nepal, ten members spending a couple of days in Kathmandu and a week in rural Ramechhap District, in the hill country to the east. Former DNHG member Narayan Karki, the founder of GN English Boarding School, was once again our guide in the hill country, and our host for

- a descent from Makadum by a recently completed road, including an overnight at a windswept 'hotel' above the 2000 meter village of Doramba.
- a lunch of fresh fish from the Tamakosi River.

We also had the opportunity (like it or not) to view firsthand some of the damage from last spring's earthquakes. This included the destruction of two major temples and a pillar at Patan Durbar Square, as well as destruction of the tower of the Bodhi stupa, the best known site of the famous Buddhist "eye" that has come to seem almost iconic of Nepal. In Sindupalchowk District, the worst hit by the earthquake, we descended to the upper Sunkosi River via endless switchbacks with earthmoving work still going on.

Landslides and reconstruction were still continuing on the upper Sunkosi River, and the nearby border with China was still closed at the time of our visit, so we abandoned our customary visit to the hot springs at Tatopani in favor of a visit to a remote hilltop monastery near Dhulikhel. Built to honor a prince believed to be a prior incarnation of Buddha, this proved to be an inspired choice to round out our visit. Some final shopping in Kathmandu

and a visit to Narayan's Kathmandu concluded the program. *Report by Gary Feulner, photos by Owen Dowley and Peter Dowley*



Shree Pashupatinath Temple, Kathmandu © Peter Dowley

three days at the school, in the Ramechhap village of Makadum.

At the school, we boarded in the newly-completed pre-fab construction, built to provide classroom space and teacher accommodation pending precautionary remedial work to the main school building. Meals were an eclectic blend of Nepali and western cuisine.

Activities during the week included:

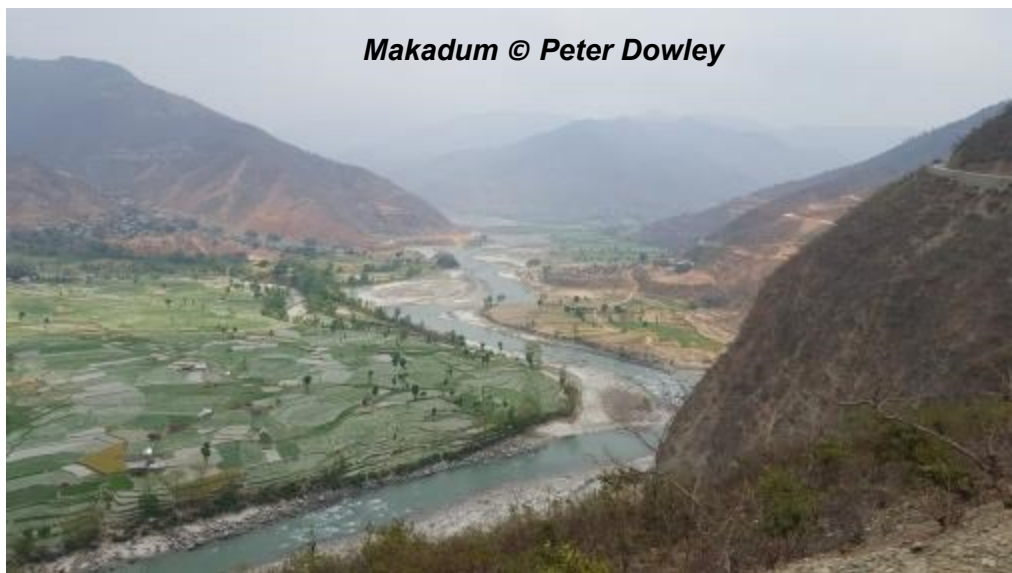
- ceremonies and a feast at Khandadevi temple, a revered hilltop temple above Makadum.
- singing, dancing and a humorous evening skit by the school's teachers, introducing aspects of Nepali culture.
- tea for ten at local homes in Kathmandu and Makadum, including one rural home we had to reach by a precipitous trail.
- Tibetan music and rice wine at the 'Mongolian' village of Galpa.
- a short hiking ascent of Agleswor Peak, the local high spot at just over 2400 meters.



© Peter Dowley



© Peter Dowley



Makadum © Peter Dowley

Clip and Announcement

Camels Carried Common Cold

A German research team studying coronaviruses, and in particular the transmission of the virus that causes MERS (Middle East Respiratory Syndrome), has concluded that camels are also the original source of one of the four coronaviruses that cause common colds in humans, HCoV-229E. Their findings demonstrated transmission of precursors of HCoV-229E from camels to humans. (Coronaviruses are one of two main categories of viruses responsible for

the so-called "common cold"; the other is rhinoviruses.)



The MERS virus is not easily transmitted to humans, but researchers continue to be concerned about the possibility that it could adapt and spread more widely. An understanding of the virus' predecessors and its evolution is important to development of a successful vaccine.

DNHG member Prof. Dr. Ulrich Wernery, Scientific Director of the Dubai Central Veterinary Laboratory (CVRL), was a member of the team that published the latest findings, released by the German Center for Infection Research.

Contribution by Gary Feulner (photo: camels east of Liwa by Binish Roobas)

In Memoriam: Beatrice de Cardi (1914-2016)

Beatrice de Cardi died in July at age 102, reckoned the world's oldest practising archaeologist. Her death in London followed a brief hospitalization resulting from a fall.

Beatrice was well-known as the doyenne of Arabian archaeology, based on her pioneering exploration in the UAE, Oman and Qatar. She continued to visit the UAE annually into her mid-90s, working at the National Museum of Ras al-Khaimah. One of her specialties throughout her archaeological was the comparative study of pottery.

In the UAE, many people are aware of her extensive survey work in the mid-1960s, which resulted in the discovery of Julfar and a wealth of 2nd Millennium tombs in and around the Ras al-Khaimah area. She also headed a British team which surveyed Qatar and pushed its archaeological heritage back to the 5th Millennium.

Many fewer people, including many of us who knew her in her later years, were aware of the diverse adventures of her earlier years, archaeological and otherwise, for which she has been characterized as "part Miss Marple and part Indiana Jones" – a description which underplays the serious intellectual content of her work.



Beatrice de Cardi in 2014 with the historian Michael Wood
CREDIT: ADAM STANFORD
AERIAL-CAM

Her reputation for unflappability earned her a WWII position as a diplomatic liaison officer based in Chungking, China, from where much of her time was spent, in her words, "searching for cargoes that had gone astray in a territory extending from Karachi to Assam and over 'the Hump' into western China".

That was succeeded by archaeological survey work in Baluchistan, even then a wild and lawless place. Her discoveries there established links between the Gulf States and the Indus Valley civilization and led her in the 1960s and 1970s to Eastern Arabia where she rode camels and dhows and camped with Bedouin.



Beatrice de Cardi - CREDIT: COUNCIL FOR BRITISH ARCHAEOLOGY

During those years as well, she became the founder of the Society for Arabian Studies, the forerunner of today's British Foundation for the Study of Arabia, and one of the founding members of the annual Seminar for Arabian Studies.

Those who knew her will miss her as a person. But her example goes much further. It has been, and will continue to be, an inspiration to younger generations of archaeologists.

A more complete obituary, full of colourful details and an account of Beatrice's many honours, can be found at:

<http://www.telegraph.co.uk/obituaries/2016/07/06/beatrice-de-cardi-archaeologist-obituary/>

*Contribution by
Gary Feulner*



Beatrice de Cardi at Shimal, Ras al-Khaimah, in 2005
CREDIT: CHRISTIAN VELDE

Field Clip

Brown Widow Confirmed in Dubai

The introductory catalog of UAE spiders published by Gary Feulner and Binish Roobas in the 2015 *Tribulus* (vol. 23) is already serving one of its purposes -- to encourage closer attention to this fascinating but often misunderstood group of creatures. Along with spiders that could be confidently identified, the catalog presents other UAE denizens that can only be identified (at present) to genus or family. In a few cases, accounts are given of spiders considered likely to be present on the basis of photographic evidence and



A Brown Widow female, *Latrodectus geometricus*, a brown spider with a red-orange hourglass shape on the underside of her abdomen. (Photo by Anelisa Lambert)

general range, but that have not been confirmed.

DNHG members and the broader community were not long in taking up the challenge, with the result that the Brown Widow, *Latrodectus geometricus*, has recently been confirmed from two locations in Dubai, courtesy of Joanna Pugolis and Anelisa Lambert. Spiders as a group are notoriously difficult to identify, and members of the genus *Latrodectus* are no exception, but confirmation was possible in the case of *L. geometricus* because the egg case is distinctive: the small white or off-white sphere is profusely studded with tiny spikes or pimples. Both ladies obligingly took photos of the spiders and egg cases in the service of science. Joanna found hers under furniture in an unused room in her house in the Lakes. Anelisa's found its way into her home with her

daughter's bicycle, brought in from the garden over the summer.

The Brown Widow is one of three *Latrodectus* species found in the UAE. The most famous is the Redback, often mistakenly called the Australian Redback. Although its markings certainly resemble the Australian *Latrodectus hasselti* (the female has a round, jet black abdomen with an a red accordion-shaped mark on the dorsal side) expert opinion says that the UAE Redback is a Middle Eastern species still under definitive study.

The other *Latrodectus* known to be present is *L. dahli*, Dahl's Widow, which as an adult is typically all black, with a white hourglass shape on the underside of the abdomen (not red-orange, as seen in *L. geometricus*). Unfortunately, not all spiders read the book, and adults of *L. geometricus* and *L. dahli* sometimes retain their juvenile coloration into maturity, displaying more colorful patterns of stripes on the abdomen and making identification more difficult.

All *Latrodectus* species should be treated with care. The Redback is



Posterior view of a Brown Widow female showing the fully mature color. In juveniles and some adults, the dorsal abdomen may be marked with diagonal white bands. (Photo by Joanna Pugolis)

generally considered to have a potentially serious bite, capable of causing a systemic reaction; the others are generally treated as being of lesser concern. [NB: The Brown Widow should not be confused with the Brown Recluse, *Loxosceles rufescens*, a very different spider (family Sicariidae) whose bite can cause potentially serious tissue necrosis in humans.] If any members have experience with spider bites from these species, we would be interested to hear more.

Contribution by Gary Feulner



The distinctive, spiky spherical egg cases of the Brown Widow. (Photo by Joanna Pugolis)



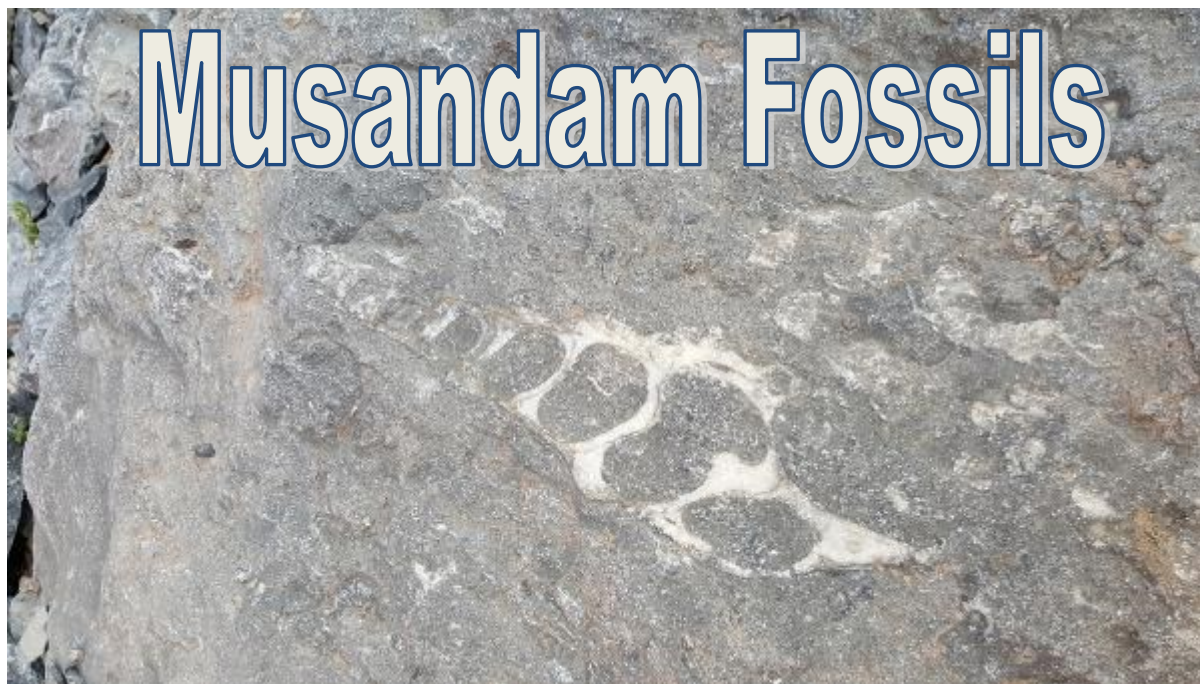
A UAE Redback female *Latrodectus cf. cinctus* (not an Australian import), guarding her smooth spherical egg cases in a Hajar Mountain wadi.

Field Clips

Two hours north of Dubai in Wadi Ghalilah, Ras al-Khaimah, lies an ancient route on a steep escarpment in the mountains of the Musandam peninsula, connecting the wadi with a high plateau and a satellite village of the high flats known as As-Saye. Popularized today as the "Stairway to Heaven" (and known to an earlier generation of UAE hikers and explorers as "Hidden Valley"), the route has become famous as a playground for experienced climbers. Not to be undertaken lightly, it has claimed at least two lives of at least two visitors in the current century.

Along the route, Francis Porter, Ranjith Powell and Linda Luu found the 15cm long fossil shown in the accompanying photo. The fossil belongs to the Class Gastropoda (Cambrian to Present) of the Phylum Mollusca. Gastropods are characterised by a single valve and no internal septa (walls). This particular gastropod is turreted or conical, the coiling likely to be right-handed and it looks as if it has the front edge of the aperture of the shell lengthened in the shape of a channel for the protection of the siphon.

The often neglected fossils of the Musandam peninsula are marine fossils from the (mostly) shallow waters of the former Tethys Sea. They range in age from Late Permian through Early Cretaceous -- a long time, spanning the massive end-Permian



extinction. They are reasonably abundant but have not been much studied in the UAE/Oman, probably because the Musandam was historically difficult to access, the fossils are mostly embedded (they don't weather out), and the groups represented can be more easily studied more easily from Tethys Sea outcrops elsewhere. Fossils found in the Musandam include an array of groups -- gastropods, a number of distinctive bivalves, nautiloids, coral, crinoids, and echinoderms. Some individual fossils can be quite large.

The British Geological Survey has mapped all of the strata which outcrop in upper Wadi Ghalilah as belonging to the Musandam 2 Formation, which is Middle Jurassic in age, so this is the likely age of the fossil in question.

Contribution by Valerie Chalmers and Gary Feulner, with thanks to Francis Porter.

(Continued from page 1)

It was during a session when I was trying to determine exactly which of these types I had found, that I came across something unusual that caught my eye. On several of the cowrie shells, I found a tiny pin-prick hole, less than a millimeter in diameter, in the rear of the columella area of the base. This is much smaller than the holes often found in bivalves that have been attacked by carnivorous predators such as *Neverita didyma*, beautiful examples of which can often be found washed up on the beaches at Rams in Ras al Khaimah. The hole was in the same place on each shell, which was what made me think it was not casual damage.

The cowrie shell is generally quite thick, and the narrow-toothed aperture makes it difficult for predators to reach the animal inside. Couple that with a smooth shiny surface which makes it difficult to get hold of the shell, it is not surprising to understand that the cowrie is well protected against attackers.

The culprit in this case is the humble octopus, which uses its radula 'tongue' to drill a hole in the cowrie shell using acid secretions. The drilled hole is usually in the same location, the posterior end of the columella, which is where the internal organs of the cowrie animal are located. Once the hole is drilled, the octopus injects toxic venom to kill the cowrie before extracting and eating it. On occasion multiple drill-holes can be found, but one hole is usually sufficient to do the job.

Once I found out that this is a common cause of death in *C. grayana*, I checked back to the *C. grayana* shells that I have collected over the last three years, and saw that one in six of these shells exhibited a drill-hole in this position and had ended up as octopus food, leaving the empty shell to be washed up on the beach for me to find. I have also found other medium-size cowries such as *C. onyx*, *C. vitellus* and *C. carneola* with the same pin-hole damage.

So if you find a cowrie washed up on a local beach, check the base of it to see if your cowrie too met an untimely end at the hand (or tentacle) of a predatory cephalopod.

Contribution by Andrew Childs

Dubai Natural History Group Programme

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

- September 18: Johannes Els - Herpetofauna conservation & biodiversity in the United Arab Emirates
- October 9: Andrew Childs and Vicky Dobson—Shell we? Oh yes, let's! Collecting seashells in UAE and Oman - from whim to passion over three years.
- November 6: Jacky Judas—studying a PHD on peccaries in French Guyana.

Scheduled Field Trips (Members only)

- December 16—23: Northern Vietnam

Further field trips, details or changes to trips will be announced/confirmed by email.

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Contributions

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

If so, email your contributions to:

gazelleeditor@gmail.com

(Arial 10 fully justified)

DNHG Membership

Membership remains one of Dubai's best bargains at Dh100 for families and Dh50 for singles. Membership is valid from September 2016 to September 2017. 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.