NATURE WATCH

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Volume 17 No 2 Apr–Jun 2009

Featuring:

A Journey to the Edge of the Cold

Singapore's Giant Clams

Tioman Today

On the Trail of the Greater Mousedeer

Susan Myers and Borneo's Birds

NATURE SOCIETY
(SINGAPORE)

MICA (P) 225/07/2009

Message from Editor

A Polar Bear on the cover of a Singapore nature magazine? There are two reasons why I put an arctic mammal on the cover of Vol. 17/2. Firstly, the Polar Bear has come so symbolize the enormous environmental issues that mankind faces. The problems have been there for decades, but it is only in the last few years that they have progressed to the top of the public agenda. A few years back, after viewing a photographic exhibition on Orchard Road by the French photographer Arthus-Bertrand, Singapore Minister Mentor Lee Kuan Yew was quoted in the papers as saying, that the fact of Polar Bear facing possible global extinction had made an impression on him. The decline of the ironic great white bear got the attention of decision-makers. Secondly, it is just nice to see a picture of a Polar Bear that is NOT taken near a garbage dump outside Churchill, Canada. This bear shows that these days, if you have the time and the money, you can travel from Singapore to anywhere you want in the world, and take stunning close-up photographs of the most scarce and elusive of animals. Iain Ewing and his son Tejas prove this with their story from Svalbard, Norway.

Closer to home, Celine Low writes from our own back-yard wilderness on Pulau Ubin about an exhilarating re-discovery of another iconic mammal: the Greater Mousedeer. Marcus Chua is second author and provides the cool scientific details.

Undersigned visited the stunning Malaysian island of Tioman. I had two strong boys with me on the trip, and together we explored the coastal strip of new resorts. However, after our walkabout it was Adam who told me: "of all the places we visited, I liked Bridget's the best." And I agreed, maybe because Ms. Hedderman has a higher sense of purpose to her activities than just making money.

Photo: Adam Strange

Editor exploring the warmer waters off Pulau Tioman

There are plenty of Giant Clams around Tioman. In fact, one of the pictures in this issue is from there. But the young scientist Neo Mei Lin shows that they still exist in Singapore waters as well. What politicians sometimes tell us, "you can just travel to other countries if you want to see real nature", doesn't really hold water, for the obvious reason that if all countries adopted that attitude there would be nothing left! Mei Lin shows that these clams are here, and they should be given a chance to stay.

To make this a bit of a ladies' issue, we lastly feature another talented and energetic young woman. Susan Myers has taken it upon herself to author an authoritative and comprehensive new field guide to the birds of Borneo, an important center for biodiversity and eco-tourism in this region.

Morten Strange
Editor-in-chief
August 2009

Share with us

Your stories, articles, surveys, observations and brilliant photographs and send them to the address on page 1. If you are not sure, please send an e-mail to contact@nss.org.sg with a proposal and we will get back to you. Articles can be e-mailed across as a simple Word document (no funny fonts or colours or inserts, please) or saved on a CD and mailed with the illustrations as separate high res. files. Digital pictures must be in 300 dpi, absolutely sharp and as large as possible, jpeg compression is OK. Do NOT crop, brighten or sharpen, we will do all that as necessary. Thank you very much.

This issue of *Nature Watch* is generously sponsored by

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On the Trail of the Greater Mousedeer

Text by **Celine Low** and **Marcus Chua**

Celine Low gets all excited recounting how she produced the first photograph of a Greater Mousedeer in Singapore. Together with Marcus Chua she analyses the implications of the find.

In November 2008 I volunteered to help in the Ubin Mammal Survey conducted by then NUS undergraduate, Marcus Chua, in conjunction with the National Parks Board (NParks). Never did it occur to me, that I would be part of a group privileged enough to rediscover the Greater Mousedeer, *Tragulus napu*, in Singapore. It is probably the only thing I have ever done in my life that can be considered a scientific contribution worthy of mention! What a long way I have to go to emulate my heroine, Jane Goodall!

I originally volunteered to help with a survey of the elusive Leopard Cat to be conducted on Pulau Tekong (Tekong Island). However, as the Ministry of Defense who are in charge of the island did not approve the permit for the survey at that time, Marcus eventually decided to do his study in Pulau Ubin (Ubin Island) instead. Maybe the stars decided it was the only way they could help me do something noteworthy in my life, as I heard that women are not allowed to camp overnight at Pulau Tekong. What would Jane Goodall have done, had she faced such an obstacle at Gombe??!!

The survey was already two months underway when Vilma D'Rozario, Andrew Tay, Chan Kwok Wai and I started helping out in the field. We cycled to get around the island between transects. On our very first night, 22 November 2008, Vilma, Andrew and I spotted a mousedeer at the first transect! Talk about luck, I had never seen a mousedeer before that!

We were incredulous as mousedeer were thought to be extinct on Pulau Ubin. During the NParks Ubin vertebrate surveys conducted from 1999-2001, in which Andrew, Vilma and I had also helped, mousedeer had never been sighted. Previous surveys by the Vertebrate Study Group (VSG) in 1993 had also not detected any mousedeer. Nor were there any records of mousedeer on Ubin in *The Pangolin*, a VSG publication.

I think we were too shocked to remember that I had a camera hanging around my neck and, by the time we sufficiently came to our senses, the mousedeer had already vanished into the undergrowth. Do not despair of us, though. We must have been on a roll for we again sighted mousedeer on our way to another transect! This time there were three of them! It was at this point that I came to realize that, when my camera and I are under stress, we just cannot communicate with each other. However, I finally managed to get this photo (*Facing page, above*).

Comparing photos of the Greater and Lesser Mousedeer, I was convinced that we had sighted the Greater Mousedeer on Ubin, although the rest of the VSG members, who were more discerning and careful, were hesitant to confirm the ID due to the poor quality of the photo. I was then determined to get a better photo as eating my words did not seem very palatable.

After helping out with a few more surveys, the opportunity arose for me to vindicate myself. I managed to get an almost clear shot of a mousedeer. Well, at least the important areas of neck, chest and head - crucial for identification - were un-blocked, although the image is not quite National Geographic quality. The date

Photo: Celine Low

Sighted – the Greater Mousedeer on Ubin.

was 17 December 2008. That was the day when we could conclusively pronounce that the Greater Mousedeer was alive and kicking in Singapore!

As you can imagine, I could hardly contain my excitement, and Marcus was similarly euphoric that his surveys had turned up such a significant and historic find in Singapore. I indulged myself by thinking that this must have been how Jane Goodall felt when she discovered that chimpanzees made use of tools.

Historic Records

The last records of the Greater Mousedeer in Singapore were from specimens in the Raffles Museum of Biodiversity Research collected from Changi, Kranji and Ubin in 1908, 1923 and 1921 respectively. The 1921 specimen from Pulau Ubin is therefore evidence that the Greater Mousedeer existed on the island. However, with

The Greater Mousedeer on Ubin, captured on film on 17 December 2008.

more than 50 years passing since the last record, the species might have been considered locally extinct. Baker & Lim (2008) list Greater Mousedeer as an indeterminate species.

In 1999, eight Greater Mousedeer were released in the MacRitchie area of the Central Catchment Nature Reserve as part of a reintroduction programme by Wildlife Reserves Singapore and NParks. They were fitted with a microchip in the ear but not with tracking devices. The area where they were released is very dense and they were not seen again, except for two, just a month after their release. There have been no official reintroduction exercises since then.

The closely related but noticeably smaller Lesser Mousedeer *T. kanchil* is still extant in Singapore, where it is restricted in distribution to the Central Nature Reserves (Baker & Lim, 2008). It seems to survive there in small numbers (R. Subaraj, pers. com.). Confirmed sightings have been infrequent, although several were made recently from the Lower Pierce boardwalk.

Additional Sightings

Since the landmark photo taken on 17 December 2008 which established the presence of the Greater Mousedeer on Pulau Ubin, other photographs have been taken. They include an excellent one by Chan Kwok Wai taken on 21 February 2009 which showed the distinctive chest and neck markings clearly.

At the end of Marcus' surveys in March 2009, 100 sightings of the Greater Mousedeer had been recorded on Ubin and several more images of the species had been captured via remote camera traps.

The media soon got wind of this wonderful find and would you believe it - the news broke right on Marcus' birthday! It must have been doubly-rewarding for him to see his work featured in both the *The Straits Times* as well as *Lianhe Wanbao* on 26 March 2009!

Where do they come from?

Some of the residents and ex-residents of Ubin were interviewed and none of them had seen mousedeer prior to our study, except Lim Chor Guan, a 65 year old resident who has lived in Ubin all his life. Lim last sighted mousedeer

towards the end of 2008. Lim said that he had seen mousedeer in recent years, but never before the turn of the century.

It could be postulated that the mousedeer's secretive behaviour, small population size and survey design may have prevented them from being detected during earlier faunal surveys on Ubin. In addition, incandescent torches were almost exclusively used in the past surveys whereas LED torches and headlamps were used in conjunction with incandescent torches during the recent study. So an improvement in lighting technology could also have contributed to the mousedeer sightings.

The changes that have taken place in Ubin could also have been a factor in the rediscovery of the Greater Mousedeer. In the last decade, the granite quarries have closed, and villagers have relocated to the mainland. Over time, abandoned farms and plantations have turned into secondary vegetation, thereby increasing habitat area and food resources available for the mousedeer. The drop in human population from its peak during the granite quarrying days of 3,000 people to its present population of less than 100 households, resulting in less nocturnal disturbances, could have facilitated the proliferation of the population of Greater Mousedeer. Marcus sighted an adult mousedeer with a juvenile on 6 January 2009, which proves that the mousedeer are breeding.

The absence of large predators like the tiger and leopard on Ubin has reduced predation pressure on the

At the end of Marcus' surveys in March 2009, 100 sightings of the Greater Mousedeer had been recorded on Ubin and several more images of the species had been captured via remote camera traps.

mousedeer, enabling them to recover more quickly.

Another possibility for the rediscovery of the Greater Mousedeer is that they could be immigrants that swam over from Johor, Malaysia. The recent developments in Johor north of Ubin, especially the clearing of forests for plantations and the Tanjong Puteri Golf Resort, could have forced the mousedeer out of their habitats. There have been a few observations of the Greater Mousedeer swimming, so it is highly possible that animals could have made the aquatic journey over the narrow strait.

Although it is possible that the Greater Mousedeer could have been survivors of the animal trade, that were released on Ubin, we do not think this is a likely theory. Released or escaped individuals tend to be few and more localized, whereas this population has a wide distribution in forest fragments across Ubin, and is fairly numerous in the western forest fragment. Unless a large number of released mousedeer were able to breed and spread quickly, they are unlikely to have been successful in establishing a population. A case in point is the apparent failure of the Greater Mousedeer reintroduction mentioned above. NParks, which has been managing Ubin since 1995, has not carried out any reintroduction exercises in Ubin.

Threats

While this rediscovery is a very encouraging sign, we must keep in mind the threats the mousedeer faces. As Ubin is a popular haunt for students, campers, bikers, hobby fishermen, chalet-getaway'ers and for those seeking outdoor adventure, even of the spooky kind. As such, it experiences constant human disturbance, like night activities and walks. This may upset the mousedeer's activity cycle and compel them to retreat further into the forest, effectively reducing their usable habitat and range. Poaching is also a very real threat as mousedeer meat is supposed to be a delicacy. Some people (I shall not mention names) equate mousedeer with ginger and stir-fry. Funny, yet sad. The illegal animal traps that have been found on the island attests to the secret epicurean desire and appetite for wild game meat.

For Singapore to have a viable population of the Greater Mousedeer after an absence of more than 80 years, whether from an enduring population or from immigrants, is nothing short of a miracle. Therefore we must treasure what we have, and protect them to the best of our ability. For they have surely esteemed us by making this, our home, their home.

Greater Mousedeer

Scientific Name: *Tragulus napu*

Shoulder Height: 30-35 cm

Body Length: 50-60 cm

Weight: 3.5-4.5 kg.

Fur: Greyish or orange-buff brown, mottled with blackish tips.

Other features: Throat pattern is somewhat variable, but this species always has five (never only three) diagnostic white lines of varying patterns across front. Two run along throat, one usually forms a white triangular patch in centre of chest.

Ecology and habitat: Occurs in tall and secondary forests, sometimes entering gardens. Mainly nocturnal, but sometimes also active during day. Diet includes fallen fruits, leaf shoots and other vegetation.

Distribution in Singapore: Ubin only.

Range: Sunda only. i.e. S. Myanmar, S. Thailand and Peninsular Malaysia. Also Sumatra, Borneo and adjacent islands.

Global status: Near-threatened. Populations have declined throughout range, owing to loss of forest habitat and excessive hunting.

Lesser Mousedeer

Scientific Name: *Tragulus kanchil*

Shoulder Height: 20-23 cm

Body Length: 40-48 cm

Weight: 1.4-2.5 kg.

Fur: More uniform chestnut brown mixed with fine black.

Other features: Usually three (rarely five) white lines from throat down onto chest. Males only of both species have tiny tusks but no antlers.

Ecology and habitat: Much like Greater

Distribution in Singapore: Central Nature Reserves on main island only.

Range: More widespread. From SW China across Indochina and Thailand to Sunda.

Global status: Not currently at risk. Populations declining.

Celine Low *is secretary of the NSS Vertebrate Study Group. She is also co-founder of Cicada Tree Eco-Place, a non-profit, environmental education NGO that promotes our natural and cultural heritage and eco-living. Her paid job is in pharmaceutical sales. Marcus Chua's mammal research was for his honours thesis. He has since graduated from the National University of Singapore with a degree in Life Sciences and is now working in the Raffles Museum of Biodiversity Research.*

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COMPETITION

What species is this?

E-mail your best guess with an explanation to contact@nss.org.sg. The answer will be revealed in *Nature Watch* Volume 17/3. The reader who summits the correct answer with the best description will receive a copy of *Wild Animals of Singapore*.

Photo: Morten Strange

Even from the sea the Melina Beach Resort is hardly visible.

Tioman Today

Text and photos by **Morten Strange**

Morten Strange made a recent visit to the stunning Pulau Tioman off the east coast of Malaysia and checked out some of the new developments in eco-tourism.

Not many people today will know of the movie *South Pacific*. It's an old classic Hollywood movie from 1958. They don't make them like that anymore, and some might say 'thank goodness for that'. However, the movie made the locale of Pulau Tioman famous as its exotic and gorgeous location. A few years later Time Magazine voted Tioman one of the most beautiful islands in the world. I don't think many people who have been to Tioman would disagree with that characterization.

I visited the island for the first time in 1981 and have been back too many times to count since then. Always by water. A couple of times in my own boat, when I had one of those, sometimes by direct ferry from the Tanah Merah Ferry Terminal, when that excellent and pleasant service existed. Most usually by bus across the Causeway and then by boat out of Mersing or from Tanjung Gemok Jetty a little further north. The crossing of the about 35 km stretch of ocean takes anywhere from 3.5 hours by slow bumboat to 1.5 hours by the fastest catamaran service.

Then finally, in July 2009, we flew out to Tioman. Why didn't I do that before? No more jams at the Causeway, no more dreadful road trips through Johor at the mercy of a suicidal bus driv-

From top: Black-naped Terns Sterna sumatrana just off the beach; Adam snorkeling the South China Sea.

er. My son, Adam, and his friend Eske from Denmark were with me, and I just loved that trip. We seemed to be on the only flight out of Seletar Airport that day. With just a handful of other passengers, your own personal immigration service, and a small intimate departure lounge, you felt like a movie star leaving Singapore on his private jet. The plane operated by Berjaya Air is a 48-seater Dash 7 prop-job; after just 40 minutes you land on Tioman, walk past the immigration shack and you are there!

Plans to construct a new and larger airport at this spot were officially abandoned in March this year, thanks in part to timely intervention and appeals from our sister organization, Malaysian Nature Society. Well done, MNS!

The entry point on Tioman is Kampung Tekek. MNS lost another battle here against mindless over-building; a new far too big concrete marina was recently put in. But that aside, check out the amazing flock of Island Flying Foxes (*Pteropus hypomelanus*) roosting in the casuarina trees along the jetty opposite the airstrip when you arrive, there are hundreds of them! Otherwise Tekek is just an ordinary chaotically developed village that you want to get out of as fast as you can. There is a taxi boat service to the various coastal resorts. These are some selected rates; prices are per person one way in Malaysian Ringgit (S$1 is about RM2.4):

Paya Beach Resort RM35
Kampung Genting RM40
Japamala RM70
Nipah RM100
Minang Cove RM120
Kampung Mukut RM120
Asah Waterfall RM150

When we got our room it had a huge bolder sticking out of the floor. Most of the chalets and rooms were built this way, with rocks and tree trunks going through them. This way the buildings existed around instead of across the environment, embracing it rather than replacing it.

At Melina, rooms and guest houses are built into the environment.

But the boys and I didn't need a taxi, by sea or land or otherwise. Adam is 1.93 meters tall, and he is the little one, Eske is 1.95, neither of them has a superfluous gram of fat on him. We decided to walk to our destination, Melina Beach Resort near Kampung Genting. It turned out to be a two-hour slog in the afternoon heat, carrying our luggage all the way. You pass the oldest hotel on the island on the way. It used to be the only place you could stay; now the whole island is dotted with resorts. Back then the place was part of the Merlin group, but it is now owned by Berjaya, it is 4-star rated and is called Berjaya Tioman Beach, Golf & Spa Resort, no less. Shortly after that, the blacktop road comes to an end, and you walk for another few kilometers across a decent trail to Paya Resort.

Paya Resort is not too bad; there is a small island just north of the beach with nice corals for snorkeling. There is also a mangrove habitat nearby, and from the back of the village you can follow a forest trail that will take you up along a stream into the hills of the interior, eventually leading to the 1,038 meter Gunung Kajang. A guide is recommended for this hike.

But this time I wanted to try a new place to stay. Our friend Bridget Hedderman has bought into a different type of resort with a markedly eco-friendly theme, and we wanted to check it out. The boys and I were looking for some sort of sign along the trail to lead us down to the Melina Resort, but there wasn't any.

Bridget Hedderman is director of Ecofieldtrips and proprietor of Melina Beach Resort. Her place is constructed so that it can hardly be seen, not even from the sea.

Corals of Tioman

Marine biologist, Chua Sek Chuan had a look at this image from Bridget's house reef just off Melina Beach Resort. He had this to say:
The corals on top are Plate Staghorn Coral *Acropora hyacinthus*, elsewhere they are Branching Staghorn Coral *Acropora grandis*; to the left, just above the left corner are some Encrusting Coral (probably *Astreopora sp.*) and at the right bottom corner maybe encrusting form of *Porites sp*. The fish is a parrotfish (*Scaridae sp.*); from this angle it could be one of three species.

Only when we ended up at the Genting Village did we realize that we had overshot the place and had to walk back, still carrying our entire luggage. Needless to say, Adam was not too impressed with his father's navigation skills!

In my defense I must say that Melina is well hidden away. "We have done this on purpose," Bridget later explained to me, after we walked along the beach and finally found the resort via the back entrance. "We have constructed the place so that it can hardly be seen, not even from the sea." True enough, even from the ocean it was hard to see that anyone lived in this isolated cove. When we got our room it had a huge bolder sticking out of the floor. Most of the chalets and rooms were built this way, with rocks and tree trunks going through them. This way the buildings existed around instead of across the environment, embracing it rather than replacing it.

Bridget is British, she now runs the place in partnership with a German national, Peter Witzigmann, the founder; who was not present during our visit. Bridget is the director of Ecofieldtrips Pte. Ltd. (see http://www.ecofieldtrips.com.sg/ for details). At Melina you will meet both school groups from the region and overseas, participating in the company's educational activities, as well as private guests and families.

Adam, Eske and I mainly did what you come to Tioman for anyway: We went swimming! I am not a diver. The equipment and organization involved puts me off. But I love the coral reef, and just snorkeling out to Melina's 'house reef' was good enough for me. Bridget went with me one day and showed me around, she knows the reef and all its inhabitants inside out. Her main concern that morning was to extricate any plastic garbage or rope caught up in the corals. When the boys and I wanted to go further afield we would rent sea kayaks and paddle along the coast to look for rich patches of corals and fish. I will spare the readers any further description of the marine environment. *Nature Watch* is lucky to have a network of contributors far better qualified than me to deal with this!

In the resort Bridget was constantly busy. "So, is this what I studied

marine biology for?" she would joke, as she helped the chambermaids clean out the rooms. At night she would transform into lounge hostess and have beer with the guests. With staff to do most of the logistics and the accounts, Bridget saw her role mainly as a guarantor for the ecological integrity of the operation. She would think out schemes for developing a sustainable and clean freshwater supply, garbage disposal and recycling of materials and waste.

Bridget was proud of the resort's turtle hatching program. The management buys up marine turtle eggs from villagers (at about RM4 per egg) and re-bury them in secure and fenced-off enclosures at the resort to improve morality rates. The eggs are mainly those of Green Turtles, but also a few of the rarer Hawksbill Turtles. During the 2008 nesting season, 30 nests were protected this way, with a total of 2,800 eggs, out of which 2,100 hatched successfully. After hatching, the young are released into the ocean at sunset.

I love the mornings at Tioman, sitting in a deck chair on the beach while the dawn breaks. Far out to sea large flocks of Bridled and Black-naped Terns would follow shoals of fish and dive in. As they emerged, Great Frigatebirds would swoop in and force them to release their catch. Frigatebirds are able to fish, but they prefer the easy way out by robbing other sea birds of their catch. Occasionally a White-bellied Sea-Eagle would swoop down and pick a large fish out of the water, then fly back towards shore to find a quiet perch to have its breakfast. All this took place so far out to sea it was barely visible to the naked eye; you really needed a good pair of binoculars to be able to appreciate it. Adam was not that impressed; being interested in mathematics he derived at a formula where the value of a nature experience was inversely proportional to the distance to the event squared.

Adam and Eske were more impressed with the Colugo we found one evening. Or rather, the two Colugos that Subaraj found for us. The Colugos on Tioman are of a special subspecies called *Cynocephalus variegatus taylori* (see *Colugo: The Flying Lemur of South-east Asia* by Norman Lim for details). They are somewhat smaller and darker than the ones on the mainland and in Singapore, and I had never seen one of those. Luckily R Subaraj (see www.subaraj.com) was there with a group of Scottish students, and he arranged a night walk for us one evening. Off the trail through the forest, behind Melina, we had great views of a pair of Colugos on a bare coconut palm trunk, and Adam held the flashlight right on one of them as it glided obligingly right across our group, you couldn't have wished for a better display.

Our best (or worst?) adventure was the walk to Asah Waterfall. They said it couldn't be done, and in hindsight I tend to agree! Adam wanted to see the biggest waterfall on Tioman, on the south coast near the village of Mukut. I had never been there, but I sailed around Tioman once when I had my own boat, and I know that the coastline along the south and the east, facing the South China Sea, is rugged and desolate. Bridget didn't know if there was a trail, I presumed there would be one. Otherwise, how can the villagers get around the island? Well, it turned out that there wasn't any!

We walked through Genting village without a problem, past an abandoned ghostly resort, to Japamala Boutique Resort, whatever that means. I guess a boutique resort is a place where the staff is forced to dress up in funny costumes and is not too friendly. We were told that the trail ended here, that this was private property, and that we could go no further south. Trust it to Adam to find a way, he lead us under some rocks and across a fallen log into something that might resemble a trail. That trail ended as well, but we basically navigated by following some electric cables strung out along the coastline trashing through the undergrowth and across the rocky patches. The coast alternated between patches of sandy beaches and rough outcrops where we had to climb across the hills. We passed one more resort on the way, Nipah Beach, a budget place, which is cut off from the rest of the island and doesn't even have a boat pier. After that followed another few kilometers of really slow trekking. The hike wasn't really that much fun, more like hard work. But at that point it was too late in the day to turn around.

Once we got to Minang Cove Resort there was a decent trail onto Mukut village, and on a paved track from there it was another hour's walk to the waterfall. The cool dip in the pool below the fall was (almost ...) worth the struggle getting there! The walk had taken much longer than I anticipated. It was almost dark by then, and by the time we got back to Mukut I couldn't find anyone who was willing to sail us back to Melina. We had to walk in pitch darkness on to Minang Cove Resort where the assistant manager Vicky took good care of us. Although the regular rooms were all full, she fed us and prepared the Beach Front Villa for us, so that we could spend the night in style. Thank you Vicky!

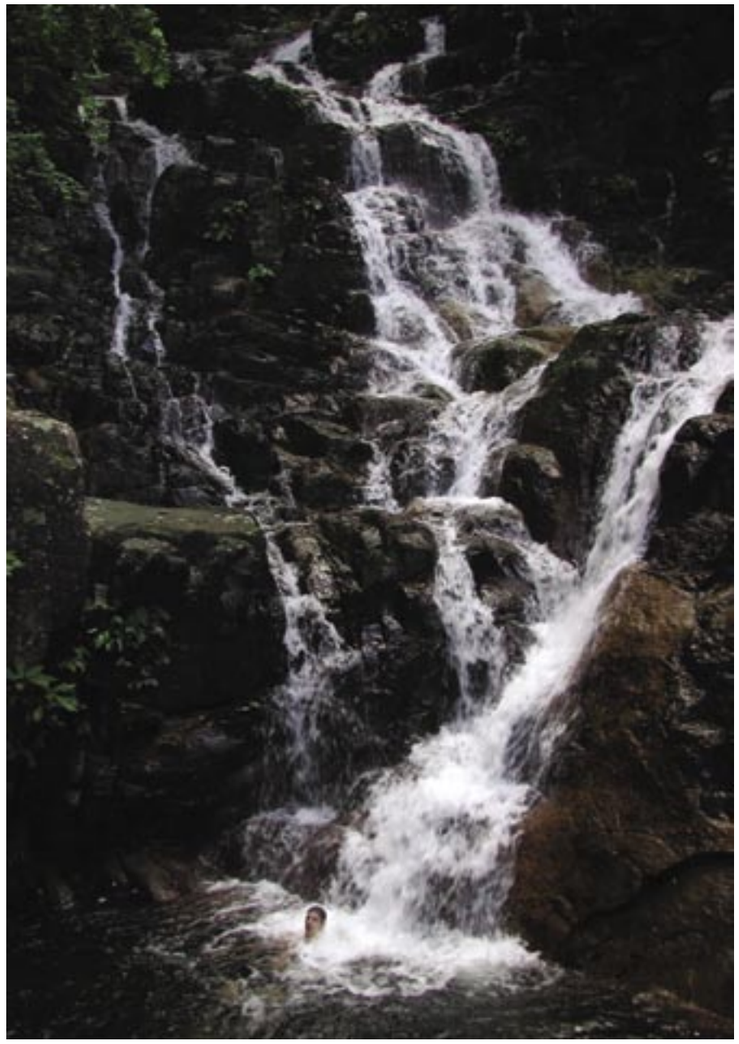
A few weeks after we were there, in August 2009, a group of four Singaporeans were at the Asah Waterfall late in the day just like us. They decided to spend the night on the rocks; but a flash flood during the night caused the water level to rise, and the two ladies in the group got washed away and drowned.

We on our part had a refreshing night's rest at Minang Cove, and the next morning Vicky arranged for a boat to take us back to the Kampung Genting pier. While our walk the day before had taken 6 hours, the ride back in a speedboat powered by a 225 hp outboard motor took exactly 12 minutes.

Turtles of Tioman

While most of the marine trutles breeding in this area are Green Turtles *Chelonia mydas* there are occasional landings of hawksbill turtle *Eretmochelys imbricata*. The hawksbill is a widespread species through tropical seas, but it is much rarer than the green and while the Green is listed by the IUCN as Endangered by global extinction the Hawksbill is listed as Critically Endangered. Both are protected from internation trade by the CITIES treaty. At Melina, here five newly hatched Hawksbill Turtles are being released into the ocean at dusk. An event that was both a conservation effort, as well as a public relations show for the guests. One of the Ecofieldtrips staff, Karen Chen, collects the baby turtles from the hatching pen (1), show them off to the visitors (2) and finally let them make their way to the the sea (3).

At Melina you can learn about the astonishing coral reef environment, in the class room.



The dip in the pool below the Asah Waterfall was (almost) worth it.

TRAVEL NOTES

Melina Beach Resort is open all year, even during the monsoon season December-January, boats might not operate during that period. Room rates vary from RM220 for a dormitory type room (with aircon and two bathrooms) that sleeps 10 up to RM650 for the penthouse suite. This includes breakfast; a great buffet dinner is put out every night at RM38 per plate, ala carte is also available. Check http://www.tioman-melinabeach.com/index.html for current rates and other details. We paid S$271 per person for a return air ticket to get there, check with Berjaya Air for current rates, https://www.berjaya-air.com/. If you go over land, expect to pay about S$50 for a return bus ticket to Mersing, from there boats leave regularly for Tioman, fare is about RM30-45 for one way, depending on type of vessel. Get off at Kampung Genting and walk north-west a km or so to Melina.

Singapore's Giant Clams

Text and photos by **Neo Mei Lin**

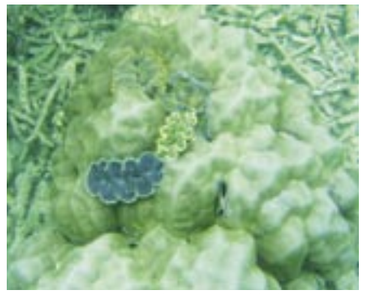
Giant clams are gigantic all right, but poorly understood. Neo Mei Lin has studied these gentle creatures of Singapore's coral reefs, and gives her account here of their beauty, ecology and of factors threatening their survival.

Giant clams live in the warm shallow waters of coral reefs in the South Pacific and Indian Ocean. They are one of the few living reef invertebrates that harbour photosynthetic symbionts (i.e., algae cells) in their tissues. Giant clams are also admired for their large size and beautiful mantle coloration. The largest recorded living species was the *Tridacna gigas* which can grow up to 1.37 m in length and weigh up to 200 kg in a life span that remains unknown (Rosewater, 1965).

Due to their large size, giant clams have been historically misunderstood to be a 'killer clam'. They were once claimed to cause deaths of divers, who accidentally might get caught between the two shell valves and drown. This is definitely not true! No written records of true accidents have been found, and these beautiful animals are known to be tame and harmless.

I have been handling clams for almost 18 months, and these giant clams, small or big, are all equally gentle. They will close their valves faster than your fingers can reach into their mantle tissues! In 2008 a new living species, *Tridacna costata*, was discovered in the Red Sea (Richter et al., 2008), making up a total of 10 species in the Tridacnidae family (*Tridacna* and *Hippopus*).

Facing page, from top: Fluted giant clam *Tridacna squamosa*; 8-months old juvenile *Tridacna squamosa*.



***Tridacna crocea* in their natural habitat (from Paya Beach, Tioman).**

Of these 10 species, four have been recorded in Singapore waters: *T. crocea*, *T. maxima*, *T. squamosa* and *Hippopus hippopus*. Records in Harrison & Tham (1973), Chou (1984) and Chua (1993) indicate that these species were once quite abundant around the Southern Islands, but now only small numbers of *T. crocea* and *T. squamosa* can be found on Singapore's remaining reefs. They probably do not constitute a viable population.

Hippopus hippopus is believed to be locally extinct since the last sighting record was in 1963 (Lee, 1966). As only two individuals of *T. maxima* have been found in the last few years, this species can be considered functionally extinct (i.e., a reduced population which is no longer viable) (Guest *et al.*, 2008).

The remnant populations of giant clams are widely distributed among the Southern Islands of Singapore, mainly on the shallow reefs of Cyrene, Kusu Island, Pulau Hantu, Pulau Jong, Pulau Semakau, Raffles Lighthouse and Sisters' Islands. Unfortunately, the current status of giant clams on completely reclaimed coastlines (eg Pulau Seringat, Tanjong Teritip and Terumbu Bayan) or military restricted-entry areas (eg Pulau Pawai and Pulau Salu) is unknown (Lee, 1966; Chou, 1984). Generally, all recent reef surveys have found only mature adults (>20 cm in shell length), and in low numbers—as few as one large individual per reef. No juvenile individuals have been recorded, indicating a lack of natural recruitment.

Habitat loss through intensive coastal development

A possible reason for the reduced abundance is the deterioration or loss of coral environments. Land scarcity in Singapore is the major driving force for intensive coastal development and land reclamation, resulting in an estimated loss of up to 65% of coral reefs around Singapore (Chua *et al.*, 2003). Most of the affected areas were either buried or destroyed; leaving the remaining reefs exposed to long-term impacts of high sedimentation and thus poor light penetration (Low & Chou, 1994). Giant clams rely heavily on their algal symbiotic partners—*Symbiodinium* species of unicellular algae —for their daily input of organic nutrients. Consequently, high levels of sediment in the waters stop light reaching these algal cells (also known as zooxanthellae), leading to a reduction in photosynthesis. Growth of giant clams is therefore likely to be adversely affected by this reduced light penetration, with those in deeper waters at greater risk.

A clam growth experiment performed by Guest *et al.* (2008) found

that adequate light penetration was necessary to ensure maximum growth rates. Apart from reduced growth, success in local recruitment could be affected by sediment. Giant clams are broadcast spawners that result in millions of gametes, but poor environmental conditions may not be able to sustain early larval life to metamorphosis. Furthermore, thick layers of sediment on the reef can stop clam larvae from finding shelters, effectively reducing the number of juveniles reaching maturity.

Natural stocks threatened by overfishing

Giant clams have traditionally served as a food staple for many people living in the Indo-Pacific region. However, recent widespread overfishing has led to significant declines of natural populations. In Singapore, fishermen previously harvested giant clams, locally known as *kima*, for food and curios. The attachment of a native name suggests that giant clams held a special significance to the local people.

Although we hardly hear this term in Singapore anymore, *kima* is still widely mentioned in Indonesia and Malaysia. Local fishermen mention about the abundance of giant clams on the reefs in the early 1960s, but also attest to past exploitation by islanders. This exploitation contributed towards the present state of natural stocks. While there is no firm evidence of giant clam harvesting in present times, there are no strict regulations to deter fishermen from continuing to extract them from local waters.

Giant clam research

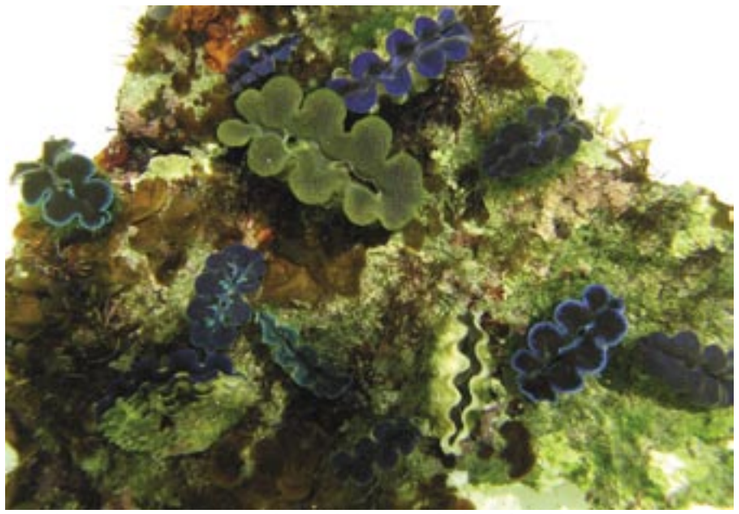
Although coastal development and unmanaged exploitation have impacted these iconic reef organisms in Singapore, there are reasons to remain optimistic. A decade of ongoing giant clam research has yielded invaluable information that will help plan and develop restocking projects. Extensive research on *Tridacnidae* in Singapore began in 1999, where the first giant clam mariculture initiative was put forth by the Tropical Marine Science Institute (TMSI) of National University of Singapore. Its aim was to re-seed the reefs and facilitate restoration of new giant clam populations. To date, three batches of juvenile *T. squamosa* have been produced successfully and the current stock of approximately 175 individuals has survived their first 18 months.

Recent studies by TMSI and the Marine Biology Laboratory, National University of Singapore, on the ecology of *T. squamosa* juveniles have demonstrated locomotion and aggregation behaviour—potentially an important attribute for increasing reproductive success or providing protection against predation.

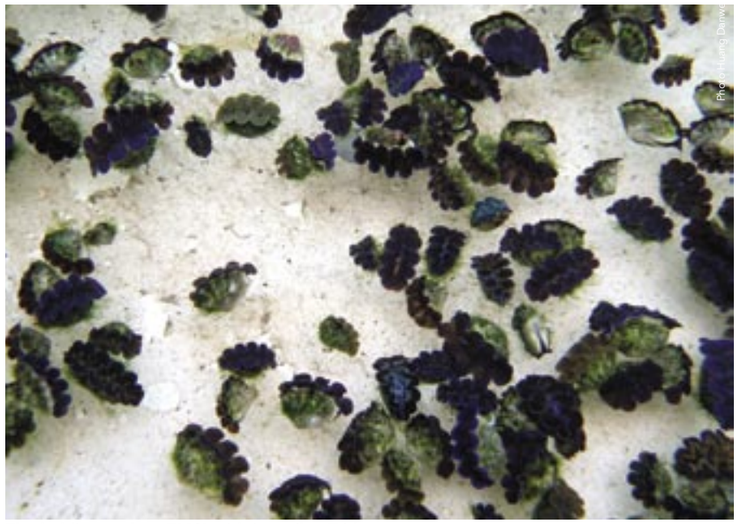
The present research focus is on giant clam early life history and prey-predator interactions, which will provide baseline information essential for the advancement of mariculture techniques. Future conservation work will include local recruitment studies as well as modeling the larval dispersal of local giant clam stocks to determine connectivity of local reefs and those of neighbouring countries.

Extensive research on *Tridacnidae* in Singapore began in 1999, where the first giant clam mariculture initiative was put forth by the Tropical Marine Science Institute (TMSI) of National University of Singapore.

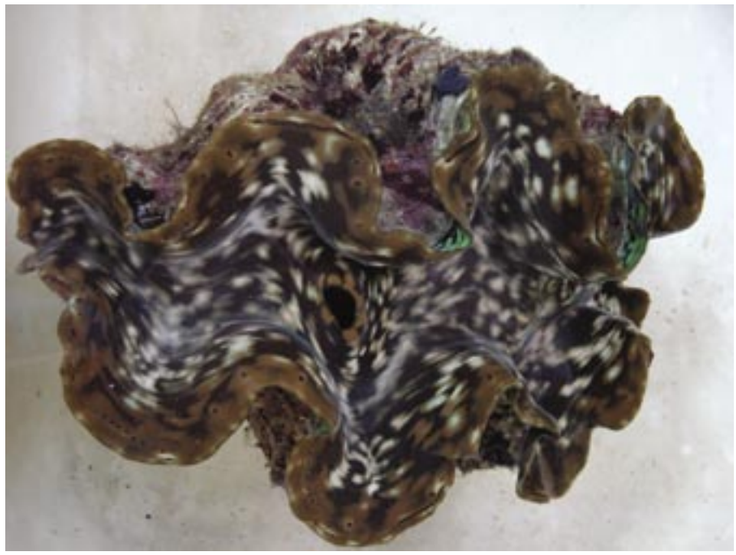
Juvenile *Tridacna squamosa* attached onto a coral rubble substrate.



Juvenile *Tridacna squamosa*, revealing a whole range of colours from blue, green and brown.



The holding tank at TMSI with juveniles *Tridacna squamosa*.



An adult *Tridacna squamosa*, 37 cm in shell length, in a holding tank.

What is the future of giant clams in Singapore?

These charismatic organisms not only beautify the reefs with their colourful mantles, but also play important roles, such as contributing to overall productivity and providing homes to other fauna. With a fully-fledged conservation project that includes giant clam restocking, we will not only benefit by restoring populations, but perhaps also be able to provide cultured clams for the aquarium trade.

Not only is good progress being made on giant clam aquaculture and research, but local conservation groups (e.g. WildSingapore and NSS) are making concerted efforts to increase public awareness on marine conservation. Animals featured in the newly published *Singapore Red Data Book* require special attention. In this book, *T. squamosa* is listed as 'endangered', while the status of the remaining three is not listed and is probably unknown.

Various forms of media events, exhibitions and public seminars such as the celebration of the 'International Year of the Reefs 2008' have successfully captured the attention and support of the public. Every individual plays an important role. We can all make an effort and a contribution to protect the marine environment. If we raise the awareness of the plight of giant clams in Singapore's waters, these gentle giants might yet have a chance to thrive again.

Neo Mei Lin *has recently graduated from National University of Singapore with a Bachelor's of Science with Honours. She will be pursuing her Masters in NUS for the next two years, working on giant clams (Tridacna squamosa). Her work will focus on determining the genetic backgrounds of the current giant clams in the local reefs, and hopefully produce more batches of juvenile giant clams for restocking reefs programmes.*

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A Journey to the Edge of the Cold

Iain Ewing and his son Tejas travel to Svalbard and meet up with Walrus, Reindeer and the iconic Polar Bear.

Text by **Iain Ewing**
Photos by **Tejas Ewing**

Above: Svalbard glacier.

Facing page, clockwise from top left: An Arctic Fox *Alopex lagopus* takes a nap on the tundra; The Vavilov cruise ship was our home for 11 days; Lichens give colour to the arctic landscape; The sign applies to all of Svalbard.

Svalbard! Just the name alone conjures up images of pack ice, glaciers, icebergs – and polar bears. My son, Tejas, and I saw all of these, and more, on our recent trip to Svalbard, an archipelago in the Arctic Ocean, located about halfway between the northern coast of Norway and the North Pole. The Spitsbergen Treaty of 1920 recognized Norwegian sovereignty over Svalbard, and it is reputed to have the largest population of polar bears in the world.

Our journey started on August 3, when we flew from London to Oslo, and then on to Longyearbyen, which, with about 2,000 people, is the largest settlement in Svalbard, and also the home of the world-famous seed vault. Nicknamed the 'Doomsday Vault', it is the ultimate safety net for the world's most important resource: the seeds of our crop plants. The seeds are stored in a vault dug into the side of a mountain, where they are maintained at the optimum temperature and humidity – far from the strife of the rest of the world.

After checking into our hotel, we went for a walk. Since the sun is in the sky 24 hours a day at this time of year, it didn't really matter what time it was. We walked down towards the harbour, and past a Reindeer, which was grazing unconcerned in the middle of the town. The endemic Svalbard Reindeer is a smaller subspecies of the Caribou, and was common in suitable habitat everywhere we went. When we

reached the harbour, we were rewarded with our first lifer of the trip, an Ivory Gull flying past. In addition to being all white, we could just make out the distinctive grey bill with the yellow tip. Within minutes we also saw Barnacle Goose, Common Eider, Purple Sandpiper, Northern Fulmar, Arctic Skua and Snow Bunting. The Snow Bunting was the only passerine we saw during our 12-day trip.

As we came to the outskirts of Longyearbyen, a sign warned us of the danger of polar bears. Polar bears have attacked and killed unwary tourists who were hiking in the mountains close to Longyearbyen, and everyone is warned not to walk outside the town without a rifle.

Our cruise started the next day with champagne on the deck, in perfect sunny weather with a temperature of 10 degrees, and as the Akademik Sergey Vavilov cruised out into the Arctic Ocean, we had good views of Black-legged Kittiwake, Dovekie, and both Common and Brunnich's Guillemot. Our home for the next 11 days was this former Russian scientific vessel from Kaliningrad, now leased by the Canadian polar cruise company, Quark. It had recently been renovated, and everything was truly shipshape, including our very comfortable cabin, and lots of deck space for enjoying the great views as we sailed through Arctic waters.

Since it never got dark, we had to decide when we wanted to go to sleep, and, as we didn't want to miss any of the activities the next day, we turned in at 10 pm. The next morning, after breakfast, zodiacs were ready to take us ashore at Ny Alesund, which is the most northerly year-round human settlement on earth, 30-35 people live her permanently. A former coal mining camp, the mine was closed in 1963 after a string of disasters which caused the collapse of the Norwegian government at the time, and Ny Alesund is now a research station with scientists from many nations, including China.

As we were walking around Ny Alesund, we were lucky to get better views of an Ivory Gull eating some of the reindeer meat that was hanging beside the dog kennels, where the meat was being dried in the summer sun to be used as winter food for the dogs. Other birds at Ny Alesund included the Black Guillemot and the Red-throated Diver, looking magnificent in breeding plumage. We also saw a couple of young Arctic foxes coming out from under a building and exploring the world. Their parents had a den there, and probably appreciated the safety afforded by the close proximity of humans.

After our visit to Ny Alesund, we put on our parkas and went on a zodiac cruise to view the 14th of July glacier. We were rewarded with another lifer

Our home for the next 11 days was this former Russian scientific vessel from Kaliningrad... It had recently been renovated, and everything was truly shipshape, including our very comfortable cabin, and lots of deck space for enjoying the great views as we sailed through Arctic waters.

The Walruses at Svalbard belong to the Atlantic subspecies *Odobenus rosmarus rosmarus*.

- Atlantic Puffins - looking magnificent with their amazing bills in full breeding size and colour. During the night, the Vavilov continued further north, and the next morning, when we went out on deck, it was distinctly colder. The ship had entered Raudfjord, or, in English, Redfjord, so named because of the red colour of the rocks in the cliffs of the fjord.

Svalbard is a geologist's paradise. Because there is very little vegetation, the morphology of the rocks is clearly exposed everywhere. If you know what you're looking at, you can see earth's history laid out in front of you. Another zodiac cruise gave us close-up view of glaciers and icebergs, and we also had our only view of a male King Eider swimming in the icy water together with a flock of Pink-footed Geese.

The next morning, after cruising all night yet further north, as the ship entered Woodfjord, Tejas got his first view of a Great Skua flying past the boat. And, finally, we heard the announcement we had all been waiting for: a Polar Bear had been sighted. Quickly, we got into our parkas, climbed into the zodiacs, and we were off. With the excellent boat-handling skills of the Quark expedition staff, we were able to get multiple views over a three-hour period of at least two Polar Bears. As we watched one of the bears walk nonchalantly into the frigid water, and swim from island to island, I was reminded of the Latin name of the Polar Bear: *Ursus maritimus*. Clearly, this is a bear which is completely at home in the ocean. It is the top predator in the arctic marine ecosystem, and, in the summer, the bears are very hungry, because, without enough pack ice, it is impossible to hunt seals. They will eat anything, and have even been seen eating dried-up seaweed. One day, we witnessed a Polar Bear high up on a cliff eating grass!

Later that day, as we passed Moffen Island, we saw Walrus hauled up on the beach, and we were fortunate to get great views of some of them swimming near the ship. As we

From top: The Svalbard Reindeer *Rangifer tarandus platyrhynchus*; Brünnich's Guillemots *Uria lomvia* below Alkefjellet; Flower.

Svalbard glacier.

watched from the top deck, the ship sailed past 80 degrees latitude. We were now less than 1000 kilometers from the North Pole. With the temperature at a chilly 3 degrees, I could see why the Vikings called these waters 'the edge of the cold'.

So far, we had been lucky with the weather. Although sometimes clouds hung low in the sky, we always had good visibility. Only once did we find ourselves sailing through fog, and none of our activities were curtailed by rain. On several days, we had bright blue skies and dazzling sunshine. And, everyday, some of the freshest air you can ever hope to breathe. One of the highlights of the trip was a zodiac cruise out to see the cliffs at Alkefjellet, where more than 100,000 pairs of Brunnich's Guillemots breed. This was the first time for Tejas and I to see one of the famous northern breeding colonies of seabirds, and it really was amazing. We cruised past the cliffs, and could clearly see the parent birds facing into the cliff, trying to protect their chicks from the Glaucous Gulls which flew back and forth, waiting for the opportunity of a meal. There was a sudden movement, and we saw that a Glaucous Gull had a full-grown Guillemot chick in its mouth, and we were astonished at how wide the gull's mouth gaped open, and in an instant the gull had swallowed the chick.

The itinerary included a cruise through the Seven Islands, the most northerly land in the Svalbard archipelago. We were able to land on Phippsoya, and get a great view of walruses sleeping and scratching on the sandy beach. Phippsoya derives from Phipps Oya; in other words, the Norwegian Oya for island, and Phipps for Constantine Phipps, the Captain of HMS Carcass. In 1773, the HMS Carcass sailed past these islands, unsuccessfully searching for a passage to India. The officers on the ship named the Seven Islands after themselves, and they named the smallest and most insignificant island after the smallest and most insignificant officer on board: Nelsonoya was named after the 14-year old midshipman, Horatio Nelson, who went on to become Admiral of the Fleet, and win some of the most significant naval battles in British history. Nelson is now honoured with a far more impressive memorial in London's Trafalgar Square.

The pack ice in the Hinlopen Strait was too thick to get through, so we had to return to Longyearbyen back down the west coast of Spitsbergen. But Tejas and I had no complaints, as that gave us the opportunity to go ashore at Ny London, an abandoned mine, where the highlight was another lifer for us, a family of Long-tailed Skuas. On the morning of day 11, we disembarked at the dock in Longyearbyen, from where we connected up to our flight back to London.

In addition to the mammals mentioned, we had seen Ringed and Bearded Seals as well as Fin and Minke Whales. Our bird list totaled 21 species, including 13 lifers. And I had gained three kilos eating three delicious meals a day!

TRAVEL NOTES

Tejas booked our trip with Quark Expeditions, a Canadian company that specializes in polar cruises. We took the 11-day Spitsbergen Explorer, on board the Akademik Sergey Vavilov. In Longyearbyen, we stayed at the very comfortable Spitsbergen Hotel. The trip, including all meals on board the ship, a very warm parka, a commemorative photo DVD and airfare from London via Oslo to Longyearbyen and return to London cost us about S$17,000. It certainly wasn't cheap, but we feel it was great value for money, with superb food, zodiac cruises and landings, and very friendly staff who are experts on Arctic wildlife, plants and geology. After our first experience on an Adventure cruise, we will definitely do another, and are happy to recommend Quark.

Iain Ewing *is a long-time member of NSS and a member of the NSS Advisory Council. He is CEO & Principal Trainer of Ewing Communications Pte Ltd. He travels 220 days a year around the world on business and to observe birds and nature.*

BOOK REVIEW

A Field Guide to the Birds of Borneo

By **Dr. Geoffrey Davison**

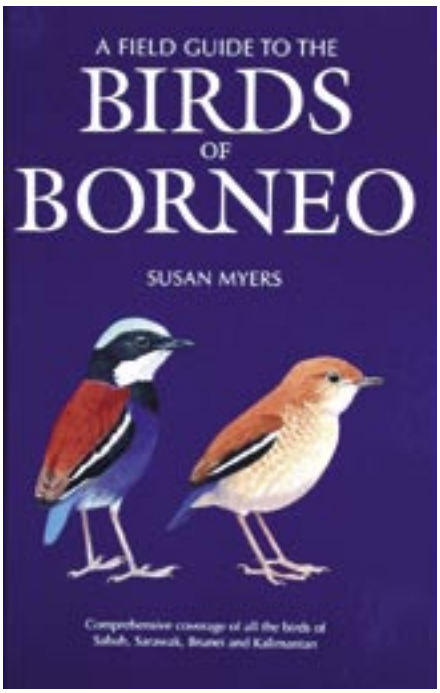
Susan Myers, a tour guide and enthusiastic birder who has visited many parts of Borneo many times on her travels, has produced a fairly handy-sized field guide of 271 pages. To place my later comments in context, I want to emphasise that this book is rather good, and I am already using my copy.

Here are some rough statistics. The book covers 631 species, of which only the Northern Hawk-cuckoo *Hierococcyx hyperythrus* is not illustrated. About 460 of the illustrations have been excised and reproduced from Craig Robson's (2008) *Field Guide to the Birds of South-East Asia*. Another 55 or so have been replaced because the subspecies in Borneo differ from those shown in Robson (2008) and about 17 because of improvements in posture or format (e.g., where only part of a bird was shown in Robson 2008). About 96 species illustrations are completely new, mainly Borneo endemic species, species that are migrants or vagrants to Borneo not recorded in mainland Asia, recent taxonomic splits, and so on. A few of the illustrations lifted from Robson have been reversed – sometimes it seems to match the direction faced by other illustrations on the same page, but sometimes for no obvious reason. Very occasionally (e.g., Blue-eared Kingfisher, Helmeted Hornbill), additional ages or sexes have been added to the Robson originals.

Taken from Robson (2008), some of the pictures have been slightly enlarged, which is good for clarity, but others (e.g. shearwaters) have been reduced. The new pictures have been painted by the same pool of artists, and fit in fairly well with the older ones. One blunder: the picture given for Bornean Barbet *Megalaima eximia* is a repeat of that for Blue-eared Barbet *M. australis* immediately above; evidently the intended new illustration went missing. And a few niggles: the painting of female Rufous-collared Kingfisher shows plain dark green wings but the text says they should be spotted with buff; the throat skin of the female Helmeted Hornbill merely looks dull grey and does not convey its lurid turquoise quality.

This book bucks the trend of many recent field guides, by showing two or three species per page, with pictures, map and full text together – not with many species together on one plate, and facing text notes. For me it works well, though others may prefer to have many pictures on one plate to aid comparison. The text is fairly detailed, about 200 words per species, including description, habitat, behaviour, voice, range and status, and breeding. An interesting point is the inclusion of duration and frequency (kHz) of calls, as the author has analysed recordings of many species, and this gives a sense of authority to the text. This is new and unusual, though the ordinary reader would have trouble verifying the data: are there any misprints, for example – I have no idea.

The maps (one per species) are the usual implicit mixture of known localities and probable distribution based on what is known of habitat preferences, but without acknowledging that forest has disappeared in many parts of Borneo. Colours are strong, giving excellent map clarity. Susan Myers has done a pretty good job of noting outlying records: for example, look at the maps of Dark-sided and Ferruginous Flycatchers, and Southern Jungle Crow. But there are a few problems. The text for the Island Collared Dove says there is a record from Kutai in East Kalimantan. I couldn't find out the source of this record: it's not listed in Clive Mann's (2008) *Checklist of the Birds of Borneo*. Susan Myers has included a spot in East Kalimantan for the map of this species, but the spot is



Myers, S. 2009. *A Field Guide to the Birds of Borneo*. Talisman (Singapore) and New Holland (London). ISBN 978-9-81083-441-8.

Susan doing her thing, leading a group of American birders through Borneo.

The Blue-headed Pitta *Pitta baudii* is one of Susan's favorites at Danum Valley.

not in Kutai! Readers will not be able to sort out the error here, unless they are able to do a more thorough trawl of the literature than I can. Susan Myers has also included a spot on the map for Racket-tailed Treepie in Brunei, from a record by Vowles that has been specifically rejected by Smythies (1999) and Mann (2008), but this record is not included in her text. An old record of Little Grebe from South Kalimantan is not mentioned or mapped. The text for Clamorous Reed-warbler mentions only Kalimantan, but the map includes a spot for Brunei as well. On the whole, though, the maps are pretty good and a lot of work has gone into them.

How is the book for identification? On the whole it's good, with helpful text and illustrations, though jizz is not great in some of the pictures. The blue iris of Racket-tailed Treepie is not shown. White-vented Whistler is too pale. Under tail-coverts of Black Oriole should be browner, less bright red. My main beef is with the swifts and swiftlets. There is evidently something about Waterfall Swifts that I fail to grasp, as all Borneo records are sightings, and many are coastal (contradicting Myers' text which describes the habitat as primary lower and upper montane forest). Myers maps them all in blue, indicating Waterfall Swifts are migrants or vagrants. All records from Java are indeed from the mountains, where they are apparently resident. What is going on with Waterfall Swifts (or swift-watchers) in Borneo? The Bornean Swiftlet *Collocalia dodgei* has recently been confirmed as distinct from Glossy (White-bellied) Swiftlet *C. esculenta*. In this, Myers is bang up to date, but I am afraid the inclusion of different-looking illustrations, and failure to emphasise that Bornean is known only from five specimens over more than a century, will encourage a lot of false claims. The colony at Kinabalu Park headquarters is Glossy, not Bornean.

In general then, although this book is quite good, birdwatchers who are keen to add records or other information will need to turn back to the original literature to check the facts carefully before relying on the specific details given here. With these provisos, I shall be using my copy extensively.

So, who is this Susan Myers?

WITH her newly launched book, *A Field Guide to the Birds of Borneo*, reviewed here by Geoffrey Davison, a young woman has come out of nowhere to establish herself as an expert on the nature of Borneo, one of the hotspots for biological diversity and ecotourism in Asia. As such, she will suddenly be rubbing shoulders with old-timer heavyweights like Bertram Smythies, John MacKinnon, Dr. Clive Mann and Dr. Davison.

In fact, Mann just had a new book out in late 2008, *The Birds of Borneo*, BOU Checklist 23. This one came out just too late for Susan to use it as reference, and she was unable to establish contact with Mann to review the manuscript before publication. However, as it turned out, the two books correspond well, with Mann listing 630 species and Myers one more; the Pied Avocet *Recurvirostra avosetta* recorded in 2009.

It has been said about bird field guide books that they are like SBS buses, first you wait and wait for one and then finally two appear at once. Well, in the case of Borneo, three will appear almost at once, in October 2009 we expect the launch of another one, *Phillipps' Field Guide to the Birds of Borneo*, by the sibling pair of Quentin and Karen Phillipps. This one claims to list no less than 664 species, so a comparison will be interesting.

Susan Myers got into the birding business out of sheer love for nature. She displays an immense passion for bird watching and for traveling in Asia, her favorite continent. A native Australian, she grew up as a child rambling around the Melbourne area looking for birds and reptiles and creepy-crawlies. She got bitten by the Asian nature bug during a brief visit to, of all places, Singapore. After her biology studies, she ended up living in Japan for four years, and she speaks the language there fluently. She also speaks a decent Bahasa Indonesia and has traveled to all Asian countries except North Korea, Bangladesh and Pakistan. Working now as a professional nature guide, mainly for Victor Emanuel Nature Tours, many of her groups come out of the United States.

Nature Watch caught up with Susan on the phone in Melbourne between tours, and to the inevitable question: "Which place is the best in the world to watch birds," the somewhat unsurprising answer was: "Borneo!" Susan added, "Probably Danum Valley in Sabah. That place is incredible, not just the birds, also the mammals and the insects. In fact, the whole ecosystem never ceases to amaze me. Every time I go there I experience something new."

And which bird is then her favorite? Susan replies without hesitation: "The Blue-headed Pitta." Which also happens to be on the cover of her new book. Other favorites include endemics like Whitehead's Broadbill, Bornean Ground-cuckoo, "and yes, let us not forget the Bornean Bristehead, this one is in an endemic family of its own."

So how many of the Borneo endemics has she seen? The number has been expanded to 50 species from MacKinnon's old 1993 list of 37. Again, Susan has to count backwards, how many has she NOT seen: "Hmmm, there is the Black Oriole. But then, no one I know has actually seen that one. A few of the pheasants ..." She comes to a total of six, which means she has seen 44 of the island endemics herself!

Susan has written a large number of scientific and popular reports and contributed to some books, like *Top 100 Birding Sites of the World*, on New Holland, her publisher. Her chapter was about ... wait for it ... Danum Valley! But this one is the first book with her name on the cover. Does she have any other books in the pipeline?

"Well, I am trying to talk New Holland into doing a field guide to the birds of Indonesia, excluding Borneo and Papua." Borneo has just been done, and although Susan has been birding in what was previously known as Irian Jaya, the eastern-most province in Indonesia, she does not consider herself an expert on New Guinea avifauna. We here at *Nature Watch* cannot wait for that one to come out.

RESOURCES

A testimony to her energy and efficiency, in addition to writing bird field guides and traveling for eight months of the year, Susan operates not one, but two online blogs:

http://birdtourleader.blogspot.com/ has her current thoughts, sightings and snapshots. While http://users.wired.net.au/susan/ is a compilation of her amazing collection of trip reports. You can't help but wonder where she finds enough days in a year to do all this. There is a useful introduction to her background at the Victor Emanuel Nature Tours website: http://www.ventcruise.com/people/susan-myers.