

Subject: TRAVELLERS TALES

Over my lifetime I have developed an interest in Evolution, but though I feel quite well informed about the evolution of Homo Sapiens, Knowledgeable Man, Modern Humans, new discoveries are made every year, which change the picture. However, I learned that 3.5 billion years ago the atmosphere and other conditions on earth were not conducive for the development of life, certainly not humans; as, for one thing the amount of oxygen in the atmosphere was minimal... but that's a few billion years ago.

Cyanobacteria, blue green algae, came into being about 3.5 billion years ago. They managed to thrive by taking water & carbon di oxide and using sunlight to convert the molecules into their food, expelling oxygen as a by-product. The cyanobacteria would produce a mucus which captured grains of dust and sand, slowly forming a solid rock by adhering to the cyanobacteria, which we call a **stromatolite!** Gradually over a few billion years those stromatolites formed all over the world and built up the oxygen level content to be 21% of the total atmosphere, a high enough level to support the wide variety of life we have today.

Stromatolites require a warm saline, shallow pool of water. That salinity restricted the number of creatures who would come and take a nibble, so only in the occasional isolated saline pools the stromatolites did not get eaten away. Apparently, Shark Bay in Western Australia is now one of the few places in the world, (and the only easily accessible place) where that is still the case, where the seagrass filters water entering the bay, restricting the amount of water entering Hamelin Pool. Then the water evaporates leaving the pool even more saline. Shark Bay was discovered only in 1954 and the living stromatolites were not confirmed until ten years later, when I was already 30 years old. How I found out about Shark Bay I remember not, but I soon decided that my story of evolution had to start there!

And it would require much TRAVELLING to collect the STORIES of evolution!!

By the 1960's my youngest brother Winston, had become an American, gathered himself a degree in Earth Sciences at Tufts University, and become a teacher in Lexington, Massachusetts. I had been living in the States and gathered myself a wife and two kids and returned to Britain permanently, to devote!!!*** (such a word makes my chosen work sound more professional and important) my life to Bag-in-Box and Bouncy Castles, though I still retained my interest in evolution.

My brother's career included visits to many geological sites, and later in his career he developed a passion for Australian geology, making a trip over there each year, from his home in the U.S.A., taking off into the bush by himself. (Lately it has certainly appeared high on his list of escape routes now Trump is in power).

I had frankly developed an aversion to the thought of visiting OZ because every travel advertisement I ever saw showed nothing but Ayers Rock. Though I travelled a lot, I avoided OZ. I was therefore surprised when I got invited by Winston to join his next trip to OZ. I was even more surprised to find he had already enlisted his old friend Chuck. Chuck was by now a medical professor in the University of Iowa, so

even less informed about geology than me, I hoped, though he would be a saviour if I got sick on the trip.

Over many long distance telephones calls, I told them that I was delighted to be invited but my only interest in OZ was to visit **Shark Bay?** to see the stromatolites, (an area unfamiliar to my brother). If they agreed to visit Shark Bay I would be happy to join them. Their answer was yes! **The trip was on.**

We flew into Perth. South of Perth is one of the greenest parts of Australia, but to the north, the way we were going, it was desert and scrub. I got stuck with the driving up from **Perth the 425 kilometres to Hamelin Station, 'cos** the Ozzies drive on the same side of the road as we Brits do.

The road up from Perth is deserted apart from the desert flora and the occasional Road train; vehicles 100 ft long. Frightened the daylights out of me when I first passed one. From Perth to Shark Bay there are few places one would call a town. Moving further north than Shark Bay, there are even fewer places that one would call a town following the coastal route, all the way until you reach Darwin. Because it is so sparsely populated, the Ozzies might class smaller places as towns. Just like the Yanks call all towns cities, no matter how small.

My brother had booked a campsite/hostel run by a bunch of Eco warriors. A place that had to be friendly; all residents used the same kitchen to prepare food and all residents used the same refrigerator for their milk and bacon etc. The accommodation was perfectly comfortable but it had one big drawback. Having so much desert on which to build their huts/cabins, all the facilities seemed spaced on their own acre or so of land. The loos were a couple of hundred yards from the bedrooms, or so it seemedin the middle of the night. I do not think they expected to be visited by old fellows my age who need to make a visit or two during the night.

We three NEW ECO WARRIORS, found that Hamelin Station was within walking distance of the edge of Hamelin Pool, where these stromatolites have made their home, though it had to be much cooler than it was for us to try the walk and one had to be energetic to make the walk. We drove to the site and donned our netted hats to avoid the plague of millions of flies.

If you visit, don't expect some exceptional sight when you approach the Stromatolites. That is not the point. The point is that the grandfathers of this bunch of stromatolites that existed in this pool 3.5 billion years ago had fed oxygen into the atmosphere to eventually support humanity; that is "us".

It is best I quote Bill Bryson from his book, "Down Under", on the subject. "Shapeless black blobs without character or lustre". "It is not the sight of the stromatolites that make them exciting, it' the *idea* of them. In this respect they are peerless". "You are looking at living rocks - quietly functioning replicas of the very first organic structures ever to appear on earth, You are experiencing the world as it was 3.5 billion years ago - more than three quarters of the way back to the moment of terrestrial creation. Now if that is not an exciting thought, I don't know what is."

As Richard Fortey has put it "This is truly time travelling".

One note. The cyanobacteria conspiring to produce the stromatolites, are the same "creatures" that have been accused just last week, of poisoning a large group of Elephants in Botswana.

During the few days we were there we did visit a few places along the peninsular forming the westerly wall of the Bay. Chuck was dying for a swim, so immediately we reached Shell Beach, a thirty mile drive from Hamelin he was soon in the water. Fortunately, the water was very clear. In a place called Shark Bay you have to see the warning sign of a shark, a long way away.

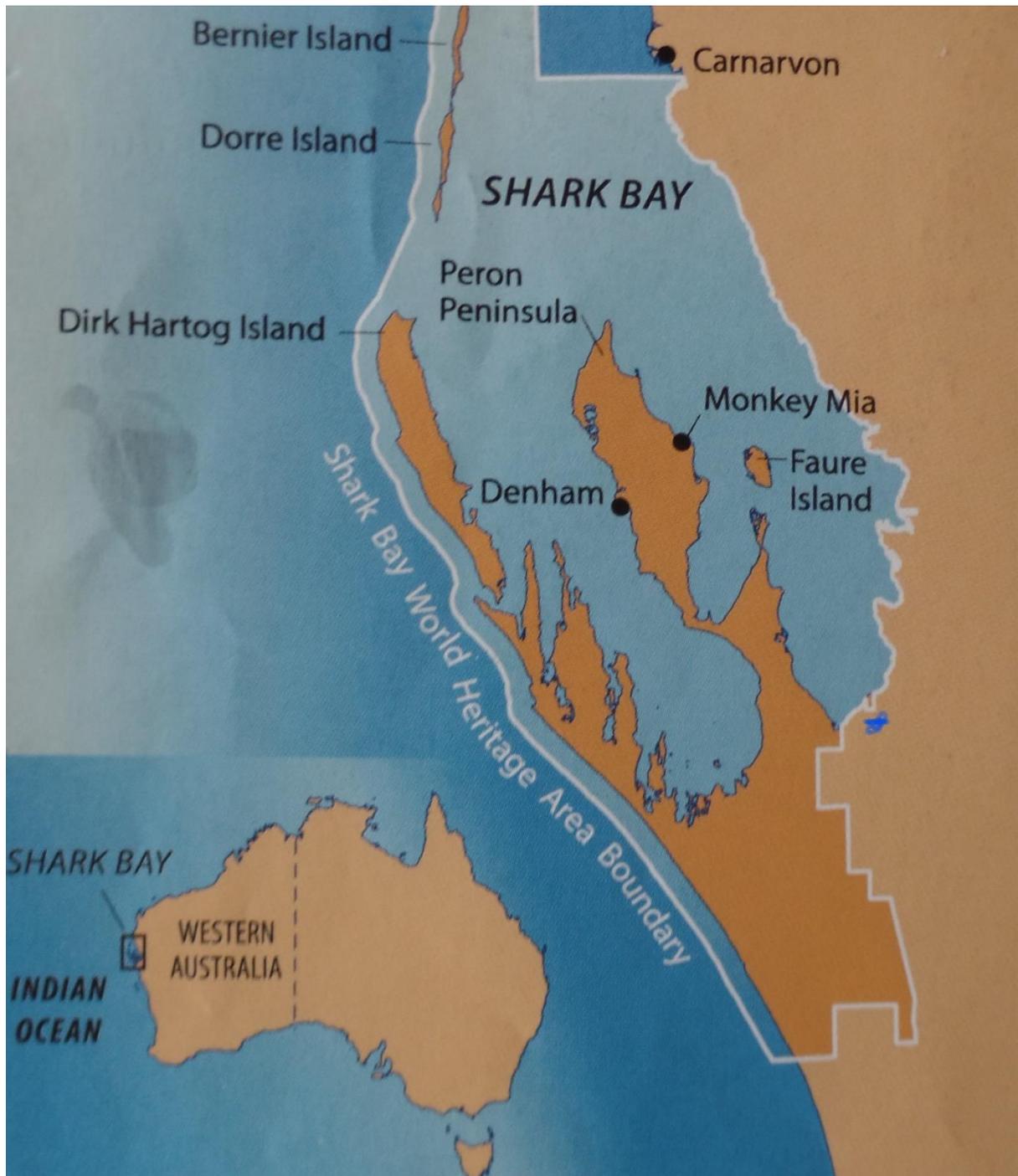
Further along the Peninsular were settlements called Denham and Monkey Mia, probably only built in the last couple of decades. Can't imagine how Monkey Mia got its name. In Denham we stopped for fish and chips in a cafe with perhaps twelve tables with four chairs each. A group of locals had collared the table in the corner and we had a choice of the rest. No conversation, The locals did not seem interested in the visitors.

Close by was a place called Shark observation platform. We spent an hour and saw no sharks; but later a bit further along we did visit a local Eco Aquarium where they had a wide variety of fish and a dozen types of sharks, all common in the area, one of which a warden was teasing with a hunk of tuna. Very exciting as we were only a couple of meters away. I doubt whether with visitors and staff there were a dozen people there. Perhaps our visit in May was not a time for the population of Perth to visit northerly parts. It was very quiet; not that it worried us.

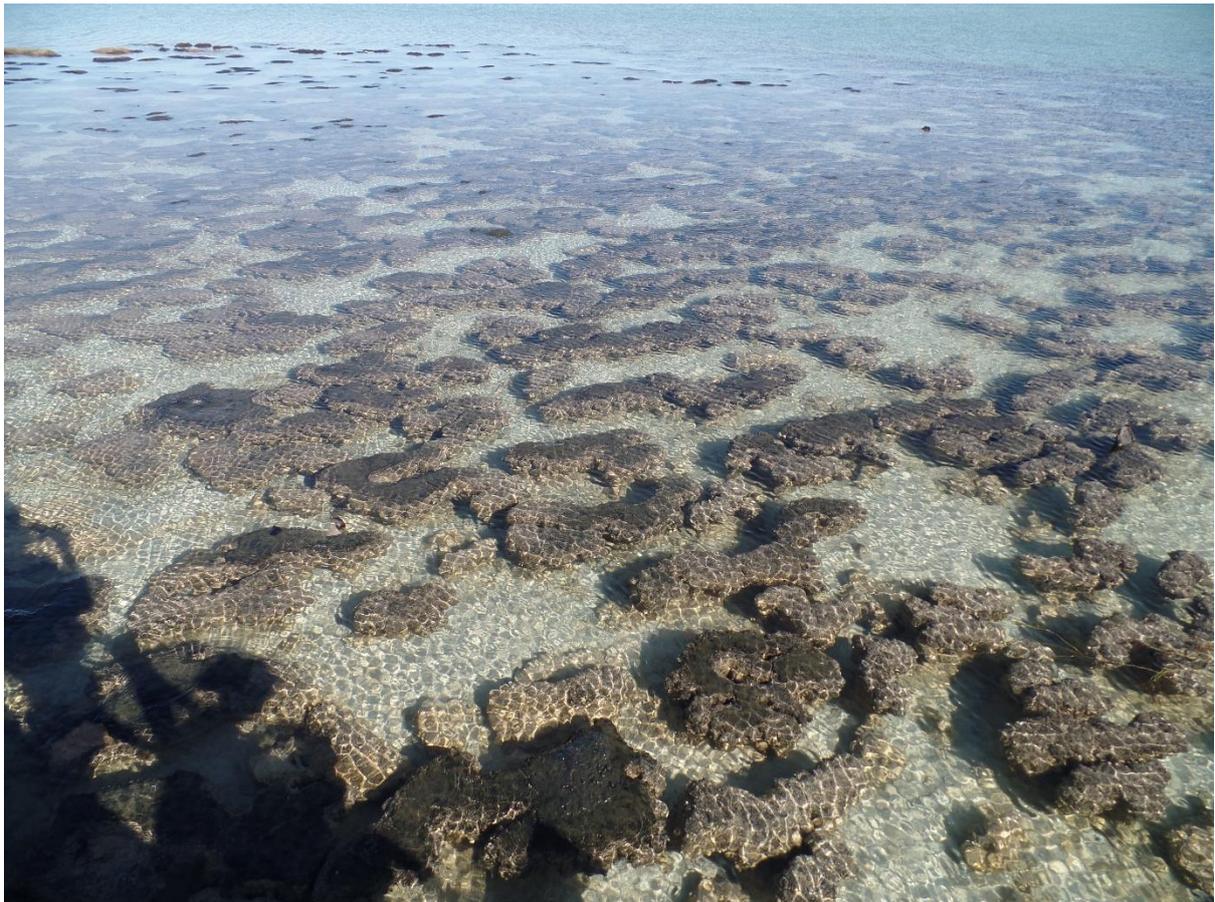
In the Next Chapter I will be flying to Adelaide and driving up into the Flinders Range....when I find the time to write it!!.

Keith
(Photos below)









Wildlife refuges

The seabirds and abundance of Shark Bay provide unique opportunities for observation. Please observe appropriate precautions for the seabirds.

See www.sharkbay.org.au for more information.

Stay safe

Shark Bay can be hot and hazardous. Always plenty of water and protect yourself from the sun.

What else you should:

- We ask the water for larger unpopulated areas.
- Please keep well clear of cliff edges - they may be unstable and slippery.
- Be prepared for sudden wind gusts.
- Supervise our children at all times.
- When walking on the water near coastal forest or wood stands.

Beyond the World Heritage Drive (4WD)

With a high clearance four-wheel drive you can venture along self-made tracks and enjoy sights beyond the coastline.

Four-wheel driving in Shark Bay

To reach Shark Bay's single track, self-made four-wheel drive tracks you will need to:

- Have a high clearance 4WD vehicle with low range capability.
- Reduce tyre pressure to 20psi or lower.
- Take care on steep banks and dangerous ruts.
- Drive only on existing vehicle tracks.
- Only use sand and silt to fill ruts.

NOTE: Unlicensed off-road vehicles, such as motor bikes and mopeds, are not permitted.

The World Heritage Drive (2WD)

Follow the World Heritage Drive to experience Shark Bay in a two-wheel drive vehicle.

- 1 **Hamelin Pool environmental and historic interpretation station.**
The microbial mats and ecosystems of Hamelin Pool represent a large portion of the Earth's history. Nearby is the historic telegraph station and a shell bank quarry. Trail our way along the walk starting at the Hamelin Pool carpark, or from the old telegraph station.
- 2 **Shark Bay.**
This peaceful location with shady trees and access to the water was once a pastoral station.
- 3 **Shell Beach, Wedge-tailed Shearwater.**
Tens of thousands of tiny cockle shells piled up to 10 metres deep make up Shell Beach. Discover their connection with seagulls along the short walk to the beach.
- 4 **Return to Shell Beach and Eagle Point.**
Enjoy the striking beauty of desert landscapes against the sea at Eagle Point, Whitehouse and Finkler's Camp. Contact the Discovery Centre on 08 9948 1590 for camping information.
- 5 **Shark Bay.**
Watch sharks, rays, marine and fish cruise the clear shallow water below the horizon.
- 6 **Clean Park.**
See some of Shark Bay's marine wildlife up close during a guided tour of the aquarium.
- 7 **Dunham.**
Dunham, the main view of Shark Bay, began as a traditional view and grew around a 'pavilion' along the shallow water alongside the main street to suit the residents.
- 8 **World Heritage Discovery Centre.**
Find out more about what to see and do in Shark Bay and book tours at the Discovery Centre. Drive into Shark Bay's World Heritage values and history in the display (display entry fee apply).
- 9 **Little Lagoon, Thalassemia.**
Little Lagoon is connected to the sea by a small, close creek - a great place to kayak and snorkel.
- 10 **Project FISH.**
See how a sheep station operated, find out about Project FISH and look in a fish lab.
- 11 **Shoal Bay, Brylbois.**
Experiencing Shoal Bay up close is just one of the things to do at Shark Bay. See the Shark Bay Map brochure for more information.

Marine reserves

Shark Bay's 7 marine reserves protect ancient ecological values, primary areas, seagrass and breeding grounds. See the Shark Bay Marine Reserves brochure for more information.

Entry fees and camping

Entry fees apply to most parks and reserves and get involved in many activities. Park passes can be purchased at the Department of Parks and Wildlife office or Discovery Centre in Dublin, but are not valid at the Murray MHA Reserve.

Camping fees apply throughout Shark Bay and are generally small and apply. However, permits are required in all reserves in the Discovery Centre on 08 9948 1590.

Reserves are required for Shark Bay, Shark Bay National Park and Shark Bay National Park (approximately - contact State Park Ranger Station on 08 9948 1590).