



NEWSLETTER: MARCH 2020

Coastal Walk: Mt Eliza to Mornington 14th December 2019

The final activity of our club for 2019 was a geological coastal walk from Mt Eliza's Moondah Beach to Schnapper Point in Mornington. At the very beginning of our walk along Moondah Beach, near the mouth of Gunyong Creek, we ran into Dr Jeff Yugovic, an ecologist well known to our club. The meeting was very fortunate, as we had an opportunity to listen to an on-site lecture, during our brief walk to Manyung Rocks.



A moment with Jeff Yugovic. All photos by Velimir Dragic

He told us about ten types of rocks, which can be observed in this place where tectonic activity occurs. Also, he talked about the earthquake that shook the Peninsula in 1932, and about native vegetation along the coastal line of the Mornington Peninsula.

Geologically speaking, Moondah Beach is a sandy terrace, which expands some 150 metres south from the mouth of Gunyong Creek, with growth covered dunes that reach down to the beach.

After taking a photo with Jeff and saying goodbye to him at Manyung Rocks, we continued southward towards Sunnyside Beach. A small, 50 metre long gully displays significant exposures of Balcombe clay overlain by Marina Cove Sand and Baxter Sandstones.

Erosion affected coastal cliffs of Gellibrand Marl and shore platform, reveal up to 40cm in size calcareous nodules, with beds facing multiple directions caused by the drag of Manyung Fault.

The site is rich with fossils from the later Miocene period (5-11 million years ago), primarily: gastropods, bivalves & fragile crustaceans. In addition, chunks of fossilised coal formed on the swampy ground some 18 million years ago, can be seen in the sand between basalt and sandstone outcrops.



Rocks ranging in age 380 million years old Granite to 4 million years old Sandstone (Mudstone, coarse and fine-grain Sandstone, Basalt, Gellibrand Marl, grey Granite and reddish Granodiorite, Balcombe clay, Quartz Baxter sandstone & Old volcanic sediments)



*Left: Miocene marine fossils embedded in sedimentary rock
Right: Coal formed in a swamp about 18 Million years ago*

The site is also rich with Mesozoic Era sediments, which are in relation to tectonic movements of Manyung Fault, which is, in turn, a component of the Selwyn Fault system—the main geological factor in the shaping of the Mornington Peninsula.

Continuing further, south of Manmangur Creek and Caraar Creek we observed steep granodiorite cliffs of Mt Eliza, which reach far into the sea, and made it difficult for us to reach Mills Beach and Mornington. These rocks are

exposed only towards the coast, whilst on land they are covered with Tertiary deposits and sediments.



Gravel of a bygone beach on the platform which is now two metres above the current sea level

The coast is covered with gravel. On the eroded cliff we could clearly see the line formed by gravel of a bygone beach (which had existed some 6000 years ago) on the platform which is now two metres above the current sea level. This complements the rich picture of this turbulent geological complex.

Continuing further, in the south-westerly direction from the Beleura Cliff, we reached Mills Beach, and to the west of the mouth of Tanti Creek we came upon Red Bluff. This is a ten metre high cliff of Baxter Sandstone, Tertiary sedimentary formation - it is a hard, coarse-grained, red and yellow sedimentary rock, which is ironised.

Apart from Silver and Pacific Gulls, Crested Terns, three types of Cormorants, and Pelicans, we did not observe anything out of the ordinary. Our informal bird-list stands at about 20.

At the end I should note that we saw five blue bottles and an eleven-armed sea-star, washed up on the beach. — **Velimir Dragic**

India Visit 2019

Recently Trudy and I went to India for the last week of September and two weeks into October with seven other tourists being family and friends.

We landed in Delhi where we spent several days before boarding a bus to tour out into the desert region of Rajasthan.

The weather was ideal, warm and sunny with daytime temperatures from 30 to 35 degrees which was a welcome change from the cold conditions of Melbourne. Delhi air was very close and pollution was thick.

The trip was a cultural experience; we didn't want to stay in

up market hotels, so the trip was well suited to us. We have stayed in two maybe three star accommodation and experienced India life at the grass roots.

The tour included several forts and several Havelis (former mansions) together with local shops, visits to artisans farms, camel and horse studs, wetlands and the Keoladeo Bird Sanctuary and of course the Taj Mahal.

I became known as the critter guy, while others were taking photos of buildings I was taking photos of birds, mammals, insects and anything else that moved.—**Graeme Rigg**

Following is the list of critters I photographed or sighted

BIRDS

Asian Koel	Cattle Egret	House Sparrow	Little Cormorant	Red-Wattled Lapwig
Asian Openbill	Common Moorhen	Indian Cormorant	Little Grebe	Rock Pigeon
Bank Myna	Common Myna	Indian peafowl	Little Green Bee-eater	Rose-ringed Parakeet
Black Drongo	Common Tailorbird	Indian peafowl hen	Little Swift	Rufous Treepie
Black Kite	Darter	Indian Pond Heron	Oriental Magpie Robin	Shikra
Black Redstart	Egyptian Vulture	Indian Roller	Painted Stork	Siberian Crane
Black-crowned Night Heron	Eurasian Collared Dove	Indian Silverbill	Pied Bushchat	Spotted Owlet
Black-headed Ibis	Eurasian Marsh Harrier	Intermediate Egret	Pied Starling	White-bellied Drongo
Black-winged Kite	Great Egret	Jungle Babbler	Purple Heron	White-breasted Waterhen
Black-winged Stilt	Great White Pelican	Jungle Crow	Purple Sunbird	White-browed wagtail
Blue-tail Bee Eater	Grey Francolin (partridge)	Large Cuckooshrike	Red Junglefowl	White-eared Bulbul
Brahminy Starling	Grey Heron	Large Grey Babbler	Red-collared Dove	White-throated Kingfisher
Bronze-winged Jacana	Grey-headed Swamphen	Laughing Dove	Red-headed Vulture	Wired-tailed Swallow
Brown-headed Barbet	House Crow	Lesser Whistling Duck	Red-vented Bulbul	

OTHER

Black Ant small	Grasshopper	Black-butt Gazelle	Pigs	Blue Bull Antelope
Black Ant large	Bats	Water Buffaloes	Sambar Deer	Monitor Lizard
Cricket	Black Beetle	Deer	Plain Tiger Butterfly	Camels
Striped Bug	Gazelle	Turtle	Spotted Deer	Brahmin Cattle



White Throated Kingfisher; Spotted Owlet; Indian Palm Squirrel; Painted Storks. All photos by Graeme Rigg

**Lepidoptera - Butterflies and moths
Cathy Powers 12th February 2020**

Cathy is a member of the Australian Plant Society, and lives near Bacchus Marsh, but travels widely to talk to clubs. She used to photograph orchids, but now Lepidoptera are her focus. Lepidoptera means ‘scaly wings’.

The differences between moths and butterflies are much discussed – one difference is numbers – there are 5 branches of butterflies, with more than 400 species. Moths have 140 branches, with 10,000 named so far, and twice as many to be named.

One point of difference is that butterflies are day flying ,

and moths night flying, but with many exceptions, such as the iridescent Satin Forester moth. Another is that moths have antennae that are thread like or feathery, while butterflies’ antennae are clubbed, but some day flying moths have clubbed antennae. The feathery antennae of male moths are to collect female pheromones.

The real difference, but only visible with a microscope, is that moths have a wing coupling mechanism, the frenular bristle from the base of the hindwing, held in place by a retinaculum. Butterfly wings are not linked.

The life cycle of Lepidoptera: eggs, then larvae - 5 or 6 instars, then cocoon, then the moth emerges - it is still compacted from cocoon life, and it has to pump fluid into its wings, which takes 30 – 40 minutes, and is a vulnerable time for it.

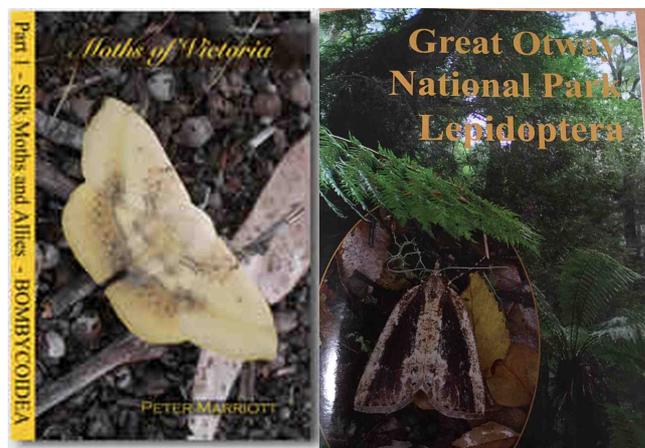


Clubbed butterfly antennae (Green Grass-dart, left) and feathery moth antennae (Satin Forester, right). Photos by Lee Denis

All moths have eyes, and many larger moths have ears, but not the smaller ones. Their main predators are bats, and they have 3 techniques to avoid predation – long tails on wings, closing their wings and dropping, and ultra sound clicks to confuse bats.

There is a large range of sizes in moths, and the females are often larger than the males. Butterflies only fly in the warmer months, but there are moths flying all year round, different species at different seasons. Most are attracted to light near ultra violet.

The Entomological Society of Victoria is publishing a series of Moth ID books *Moths of Victoria*, 9 so far, with at least another 20 to go. These are very detailed, but Museums Victoria, with the Entomological Society of Victoria has put out a booklet, *The Great Otway National Park Lepidoptera*, which is a handy field guide. There is also *Caterpillars, Moths and Their Plants*, put out by Butterfly Conservation South Australia. — **Judy Smart**



Eastern Treatment Plant Bird Count 23rd February

Four members joined the monthly bird count conducted by Mike Carter at the Eastern Treatment Plant in Bangholme. A total of 11 observers took part. The count took place from 9 am to about 5 pm, and involved driving in convoy around the facility, stopping to count birds in the myriad ponds and basins. For us the site became a bit of a blur—we soon lost track of where we were—was this the opposite end of a basin we'd already seen, or a different one? The old hands of course new exactly where we were. By the end of the day we were full of admiration for the dedicated team (Mike, Dawn, Alison and David) who do this every month—as well as separate counts on surrounding wetlands.

Mike produces and distributes a comprehensive report listing counts of all species sighted; a summary report appears in the Birdlife Mornington Peninsula newsletter.

The report summary states:

77 bird species were logged of which 45 were wetland dependant, (10 were shorebirds), 4 were raptors and 28 were non-wetland dependant. Water levels on the Plant were further boosted by good rainfall in late January & first half of February. With the exception of WEHB

(Western Effluent Holding Basin) which is drying and mostly has a muddy base, all basins are completely full. Waterfowl numbers continue to fluctuate wildly. Glossy Ibis have now vacated the Plant. A Baillon's Crake has joined Australian Spotted Crakes and a Buff-banded Rail on the Plant. Wood Sandpipers now number a remarkable 7. All are together on the top pond of the Golden Triangle. Our first Pectoral Sandpiper of the season was seen today and the first Common Sandpiper one week ago but not today.

Numbers ranged from one Baillon's Crake to 2100 Sharp-tailed Sandpiper to 4780 Eurasian Coot. The raptors were Black-shouldered Kite (5); Whistling Kite (4), Brown Goshawk (3) and Swamp Harrier (8).

Highlights for me included the Wood Sandpipers, which I had not seen before; Red-necked Avocets (60); Australasian Shoveler (135), close views of Great Crested Grebes and Blue-billed Duckx; and a Black-fronted Dotterel performing its "broken wing" act in front of our car. My personal tally was 67 species, so there were ten I missed. I believe that all but one of us missed the Baillon's Crake (well done Rog) and the Red-browed Finches (well done again Rog). Unfortunately I didn't spot a single one of the 180 Pink-eared Ducks either!



Wood Sandpiper. All photos by Lee Denis

The weather was fine and warm, mostly still—a gusty wind sprang up at one stage but didn't last long—so we had the best possible conditions.

The regular team can experience much worse weather, but carry on as best they can—when the freezing wind is

violently shaking their scopes it gets "difficult" they said.



Black-fronted Dotterel with a 'broken wing'

There were only a couple of locations—the Aeration Ponds—which were a bit smelly (*wind your windows up around there we were told*). A very enjoyable day. Thanks to Mike and his team.—Lee Denis



Counting Sharp-tailed Sandpipers at the Eastern Treatment Plant

Birdwatching Reports Langwarrin FFR & Devilbend

Our birdwatching excursions for December (Langwarrin Flora & Fauna Reserve) and February (scheduled for Woods Reserve, but instead shifted to Devilbend Reservoir) were both affected by forces beyond our control, so we didn't see many birds.

The weather (read torrential rain) meant that only the three

members who live closest to Langwarrin FFR decided to chance it. After deciding that since we were there we might as well, Pat and I decided to go for a walk anyway, to be joined by Leanne later. For a while we thought that a magpie and a raven might comprise our entire bird list, but eventually (that is after about an hour, and a burst of hail) our list had amazingly risen to 22, with a good range of

honeyeaters, several Common Bronzewing, Black-faced Cuckoo-shrike, White-browed Scrubwren etc.

Our plants in flower count also reached 22, including a meadow of Fairy's Aprons (*Utrichularia dichotoma*) and Swamp Isotome (*Isotoma fluviatilis*). The Peppermints (*Eucalyptus radiata*) were also in flower, which perhaps explains the number of heyeaters about despite the weather. The only orchids we saw were Onion Orchids (*Microtis* sp).

Our February visit to Wood's Reserve—which we haven't visited since October 2017—was aborted due to fox control operations, so we instead went to Devilbend. The weather was again less than ideal; although fine, there was a cold gusty wind. Our species count wasn't much better than at

Langwarrin. The most interesting of our 27 species was a pair of White-bellied Sea-eagles over the Devilbend Reservoir. Wedge-tailed Eagles were also seen there and also at Bittern Reservoir.

The waterbirds were limited to the most common, such as Coots, Swans, Chestnut Teal and Little Pied Cormorant. Musk Ducks, and both Australasian and Hoary-headed Grebes were seen at Bittern Reservoir. The most interesting sightings for me were the numerous Marbled Xenica butterflies.

So the most interest for me from these two birding outings were flowers and butterflies!—**Lee Denis**

Peninsula Field Naturalists Club Inc

Meetings are held on the second Wednesday of each month with a field trip the following Saturday. Further information and current Programme of Activities can be found at our website.

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