

# A field trip to remember

*The Ram Hattikudur Advanced Training in Conservation 2022–23 fellows visited the island of Rameswaram and some other important locations to get some on-ground experience of the marine field under the watchful eyes of our mentors and with the assistance of H. Byju, an independent conservationist and Raveendran Natarajan, an electric engineer-turned-naturalist. There was a palpable feeling of excitement as we, clothed in lightweight fabric outfits, started our journey from Coimbatore to Rameswaram with a transition from dusty feet to sandy feet.*

## Home to the winged visitors

*Our first stop was the Vettangudi Bird Sanctuary known for its winged visitors where*

*the feathered flocks roost and nest on the trees. It is an ideal nesting place for larger-sized birds. When we reached the bird sanctuary the weather was pleasant and it was an awesome sight to watch the birds rise up and touch down the waters. We were fortunate to witness Asian Open Bill Stork, White Ibis, Oriental Darter, Intermediate Egret, Pond Heron, and Little Grebe.*

*The fellows were then divided into two teams to determine the abundance of birds at a particular site in the bird sanctuary. We were introduced to the point count method to survey the birds. A point count consists of standing in a specific location and counting birds. One counts the number of individual birds (of each*



species) within a circle of a certain radius. We used the radius of the binocular for the point count method. The method was used to calculate the abundance of Black-headed Ibis, Oriental Darter, Asian Open Bill Storks, Little Cormorants, and Intermediate Egret.

To conclude, although we could observe eutrophication in the stagnant water body it was rejuvenating to just watch amid the natural greenery how the birds went about their busy business of feeding while we prepared to leave for our next destination an eco-tourism site.

**Boating around eco-tourism site**

Ready to explore the landscape we excitedly got down in Karangadu, a community-based eco-tourism site covering the mangrove forests of Ramanathapuram district. The Tamil Nadu Forest Department has formed an organization called the 'Environmental Development Committee in collaboration with the villagers of Karangadu. Through this organization 'Community Eco-Tourism' is organized and they provide facilities such as boating, kayaking, paddle boating, and snorkelling to see the creatures under the water. When we reached the place there were very few visitors and after some persuasion, we were allowed to go boating. On the pleasant boat trip, species such as Crested Tern, Brahminy Kite, Avicennia, Flying Fish, Hermit Crab, Sea Squirt, and some waders that wandered were a feast for the eyes.

Once the site visit was complete we drove to our accommodation at Uchipuli near Mandapam camp. Upon arrival, we started pitching our tents. The accommodation was owned by nature enthusiast and philatelist of Madurai, Raveendran Natarajan who has been working in the landscape of the Gulf of Mannar mostly on shore birds.



### **A companion of the winged birds**

Raveendran runs the Iragukal Amritha Nature Trust which is based in Madurai and is currently working as a nature educator for the Uzhavan Foundation. Once we completed pitching our tents and had our dinner we all got together for his presentation. A few takeaways from our interaction with him are:

- Most women are not encouraged to join the field of conservation. However, it is very important to teach them as they carry their knowledge for around three generations.
- Zoology should not be made a textbook subject and more fieldwork should be included in the course.
- Along with students, it is equally important is to reach out to the teachers, who in turn can spread the message to a large number of youngsters.
- In 1978, there were more than 170 birds in Madurai. Recently, they have recorded around 272 birds based on regular monitoring and constant efforts.
- Different techniques like Shadow puppetry can be used to teach students the identification of birds.
- He along with Byju was instrumental in establishing a plastic checkpoint before the proposed bird sanctuary in Dhanuskodi to combat plastic pollution.

The presentation ended with Byju explaining through a map, our present location and where we will be traveling to in the next four days after which we mentally wind down ourselves from the day and prepared for a restful night's sleep.

### **A cyclone hit town**

The first location for the next day that is day two was Dhanuskodi. It was a picturesque

place to be, there's an eeriness to the fact that what once used to be a town so significant, is nothing more than a ruin now. It is no more than history now, thanks to a cyclone that took place in the year 1964. It destroyed everything, and what remains now is a sandy shoreline with ruins dating back to those days. The only residents of this island are now fishermen folk that are spread across the place. It is also a paradise for birders for its population of migratory birds that fly from different countries. Therefore, it has been proposed as a bird sanctuary. The birds along with other species seen on our way to that place were Slender-Billed Gull, Brown-headed Gull, Crested Tern, Little Cormorant, Little & Intermediate Egrets, and lizards.

On the way to the ghost town, we stopped at a fishing site where we for the first time saw bycatch- the incidental capture of non-target species during fishing. A staggering amount of marine life- including jellyfishes and crabs were hauled up with the catch and then discarded.

Although that sight was disheartening nonetheless, it was also interesting to watch and understand the dynamics of people working and how the pricing for a pomfret caught in the catch skyrocketed in such a short period of time. We with a heavy heart left for our final destination Arichal Munai- the endpoint of the Indian mainland. The road leading to the endpoint was artificially constructed by levelling up the sand bar which are moving spaces just like the sand dunes found in a desert. Once we reached we all stood there and gazed at the ocean on all sides while the wind tried to toss us away. We also got to see the Pamban Railway Bridge that connects the town of Mandapam to Rameswaram; Palk Strait, the inlet of the Bay of



*Bengal between southeastern India and northern Sri Lanka, and the Kodhandaramar Temple from afar.*

*We bid adieu to the cyclone-hit coastal charm Dhanuskodi and in the evening we proceeded to our next adventure which was a visit to meet the eight-legged creature - the tarantulas.*

### **Visit to the humble abode of the Tarantula burrows**

*The world of tarantulas was exposed to us during our visit to the Mysore Zoo when we spotted the Regal Parachute Spider, a *Poecilotheria regalis* tarantula. Also, more insights and in-depth knowledge about different species of tarantulas were learnt by us during our sessions on IUCN Red List Assessments. One such species was *Poecilotheria hanumavilasumica*, a Critically Endangered tarantula species, endemic to Rameswaram Island, which was extensively studied by The Wildlife Information and Liaison Development (WILD) Society and Zoo Outreach Organisation (ZOO). They have been instrumental in understanding the distribution, habitat association, ecology, behavior, abundance, and threats of *Poecilotheria hanumavilasumica* on Rameswaram Island, Tamil Nadu. *Poecilotheria hanumavilasumica* also commonly known as Rameshwaram Parachute Spider is now restricted to a few tamarind, casuarina, and mixed dry deciduous trees and palm plantations on the island of Rameshwaram and on the mainland close to the island.*

*We got the opportunity to visit one of the study sites in which Drs. Manju Siliwal, Sanjay Molur, B.A. Daniel, and Mr. B. Ravichandran conducted their study. The site was the Hanumavilasum Temple Grove; a sacred grove undisturbed and*



well-protected by the Rameshwaram Temple trust, a type locality for *P. hanumavilasumica* species. The grove consists mostly of tamarind trees that are more than 50 years old. There are certain instructions that we needed to follow while visiting a tarantula site.

Mentioned below are the instructions we followed before visiting the grove:

- We should not stomp our legs and walk as tarantulas are very sensitive to vibrations.
- To prevent us from getting lost in the wilderness and the darkness the fellows were divided into a group of two.
- We were told to be silent and behave as the villagers are superstitious about the tarantulas and by our behaviour we should not aggravate the antagonism against the tarantulas.

We started our trail and all ten fellows were lucky to sight for their first time *Poecilotheria hanumavilasumica* a light and dark brown striped tarantula with yellow colouration on the underside of the front legs. Few findings during our trail in the Hanumavilasum Temple Grove were:

- Approximately, 35 individuals were spotted by the team during the whole trail, some spotted inside or on the tamarind trees while others were sighted in the fallen trees.
- Mostly females and juveniles were spotted during the trail. The females were 7-8 inches in length. No male was observed during our visit in that area.
- No males were encountered mainly because they were wanderers and do not have permanent burrows or maybe the females might have devoured the males after mating. Females on the other hand were sighted more during our trail near the burrows as they

mostly remain in the burrows throughout their life.

- The increase in juvenile spotting was due to the completion of the breeding seasons along with the hatching of the eggs which mostly takes place around the months of July to October.

Besides, Rameshwaram Parachute Spider we spotted a black widow spider, geckos, wolf snake, bullfrogs and many more. The black widow was easily identified by its characteristic shiny black body and strikingly red hourglass-shaped marking on the abdomen. Also, a very funny sighting which we suspect was of palm civet. As we started moving back to the entrance we spotted the last beauty of the day a giant tarantula. The abdomen was huge and the yellow coloration was such a sight to behold. We then finally moved out of the spider heaven, which also marked the end of our adventures for the second day in Rameswaram.

### **Visit to the place with 'No' Birds**

Day three started early as we were to travel even south to Rameshwaram towards Tuticorin, about 80 km to a place called Valinokkam, a salt pan site in Ramanathapuram district. Earlier the place was used to break ships however, now they have transformed into salt pans. Before looking through the binoculars we saw some 3-4 Brahminy Kite and thought there were only those few birds in the landscape but once the binoculars were on we saw hundreds of waders perfectly camouflaging with their surroundings, almost not visible from the naked eye. We spotted the greater and lesser Sand Plover, Kentish Plover, Redshank, and Greenshank during our visit. As we headed towards a nearby wetland in Valinokkam, known as Brahmankullam which holds the water for salt pan for salt production. The land was full of gastropod shells that too very tiny ones, which was odd to be in a wetland, later we got know that water from the sea gets pumped there to



extract salt, and with it comes all these shells. We stopped at an area where Raveendran stealthily moved to capture the shore birds. We all sat on the ground and tried to imitate him while Byju crawled closer to him. Raveendran then narrated his Maya flamingo story- the story of the flamingo, whose picture he wanted to capture but ended up getting stuck in the quicksand.

The salt pan walk with us was also joined by Somu Prasad a forest guard in charge of that area. He narrated stories about the challenges of being in that job, the illegal trade of wildlife species like sea cucumbers, and the consequences of taking the right action.

Our main motive to visit the salt pan was to spot a flamingo. Nevertheless not being able to see that bird was compensated by the spotting of a majestic Peregrine Falcon and several waders, the Barn Swallow and the Palm Swift beautifully flying above our heads. With smiling faces, we moved towards our next location a turtle hatchery.

### **Visit to our flippered friends hatchery**

Somu Prasad was more than happy to take us to a forest department turtle hatchery. It gave us an opportunity to understand and observe the nesting and hatching process of the turtle and how things work on- the ground. Murugavel and M. Selvam, anti-poaching watchers (APWs), who have released around 50,000 hatchlings till now briefly spoke to us about their duties and the hatchery process.

- The turtle comes to the shore and digs around a foot-deep hole and lays 80 to 150 eggs and closes the hole. Turtles are also responsible for

making some false mounts to confuse any potential predators.

- The anti-poaching watchers identify the nest sites based on turtle tracks. They cover a 7 km stretch along the coastline early in the morning to check if any turtle has laid any eggs and there were a total of 23 APWs in that region.
- The eggs of the turtle are jelly-like when they are fresh so in that state they have to make the transfer from the nesting site to the hatchery.
- They take measurements of the nest- the depth, width, length temperate and try to replicate it as precisely as possible. They collect the sand in the nest to fill it up in the hatchery and cover the nest with some sheets.
- Dogs and humans are the main threat to turtle eggs and hatchlings nowadays, humans because of hunting and disorientation of light to the hatchling
- The highest number of turtle nesting happens in March and hatchlings are usually released in the early mornings between 4 to 6 A.M. but they also told us that they are observing a change in the laying season in turtles - it getting a bit early.



*They discussed the change in perceptions of the fishermen’s community about turtles and their eggs over time. It was fascinating to understand that they now encourage their relatives and villagers, who have also become informers, to protect the turtle eggs. It was then time to have fun at the beach but little did we know what awaited us.*

**SO-CALLED ‘DISCARDS’**

*We got to a place near the landing centre where the sight was disheartening – heaps and heaps of what local fishermen called ‘discards’ was present just in front of us. In those discards were different species of gastropods, bivalves, crabs, corals, sea horses, and sea dollars. There were rotting corpses of puffer fishes, sea cucumbers, and sea urchins. Priyanka Iyer informed us the discards collected were from a bottom net. This serious issue needs to be addressed but it has different complications. To ease our minds we all went to the beach.*

**Fun at the beach**

*As we started walking towards the beach near the landing site, we saw boats and gillnets in the sea. The sea out there had a very different structure as the shelf was not too deep maybe around few meters and even an elevation (sand bank) could be found in the middle. The floor was very different as it had seagrass. The whole experience was refreshing and was the ideal gateway for the end of our day three.*

**Community interaction**

*On day four we went to the village of Chinnapallam situated close to the Gulf of Mannar Marine National Park where we met Mrs. Lakshmi Murthy, the local counsellor and Seacology prize winner. She shared stories and discussed with us the change in the sea-scape*





over three generations. For instance, earlier the fishing boats used were row boats however, now they have shifted to motor boats. A few insights from our interaction with her are.

1. There has been a shift from exploitive fishing to sustainable forms and how she was instrumental in setting up the process. To safeguard the resource and sustain their livelihood the local communities gave break from fishing a few days a month – 6 days they go for fishing 9 they take a break, and that cycle is repeated.
2. During her childhood days, the community was able to visit the Kurusadai island and used to live there for about fifteen days and then come back to the main Rameshwaram island, back then the islands were in control of the fishery department, but since the control change to Forest department they are not allowed to go to the islands and also because of the marine protected area that came in 1986.
3. In 2020–2022 the death of fish due to algal blooms reduced the seaweed quality.
4. The species of seaweeds they harvest in their local names and their utilization are as follows: Kanji – used in food; Marikolunthu – used in food; Kalathankora – for dye; Karakam – for dye and Verr pasi – for food but the exact cause is not known to the community.
5. The dried seaweed is processed in the factories to be used for different industries. Around 200 kg of seaweed has to be processed to get 7–8 kg of agar. The communities does the initial processing in their village and then send it for further processing industries in Madurai which is then exported internationally.
6. The community doesn't go in the places of the corals because they have a basic



*understanding of their importance and the effects they have on their fishing nets, also sea weed collectors have been attacked by marine fauna near those areas. She was also active in agreeing to recognise the Gulf of Mannar seaweed collectors as a unique group of women fishers and the utilization the prize money in establishing schools for the children in that community.*

*Lakshmi and her community's story is a perfect example to show that no one is too small to bring an impactful change in their community. After the interaction, it was time for us to walk towards the sea and explore the marine inhabitants present in that area.*

### **Sea walk - exploring the marine world**

*The group went into the sea at low tide; for a long walk where the sea floor was covered with sea grass. It felt like we were going on a stroll alongside stunning aquatic creatures. The walk was slow and careful as the sea bottom was muddy and knee-deep at times. Nonetheless, the rich marine biodiversity that was spotted includes two different species of sea cucumbers, sea hare, sea lotus, crabs, hermit crabs, gastropods, big bivalves, seaweeds, algae, egg cases, starfish, mantis shrimps made our day. The species seen were lifers for many of us and the practical knowledge of different species like the tube feet of starfish and sea cucumber helped us deepen our knowledge about the marine world and its inhabitants. We also got to understand from Dr. Sanjay Molur the importance of sea cucumber role in the nutrient cycling of the sea bed. Overall, walking on our own feet under the sea and touching and capturing the aquatic life was indeed a charming and exciting activity.*

### **Visit to a marine interpretation centre**

*In the evening the group visited the interpretation centre beside the Vivekananda memorial located in Kunthukul village in Pamban, Rameswaram. The interpretation centre showcased various marine species found in the Gulf of Mannar along with appropriate information and catchy illustrations. However, the information when double-checked was copied from Wikipedia. But the good part about the centre was, on the entrance a structural representation of Olive Ridley Turtles, the smallest and most abundant of sea turtles along with their threats was engaging to catch every tourist's attention. The group then moved out to a not-so-crowded beach nearby and saw the bivalves with their muscular foot in action, along with shore grasses. The captivating depictions in the illustration centre along with the beach experience made this place worth going to.*

### **All good things come to an end**

*On the last day, we started our journey back to Coimbatore and on our way, we stopped at Therthangal Bird Sanctuary. We used a watch tower with two stories to spot Pelican, Storks, Glossy Ibises, Lapwings, Purple Heron, Barn Swallows, and others in the vegetation. As the temperature got hotter we scrambled back into our cars and got on our way. In transit, we also got to taste one of the signature desserts of Madurai—Jigarthanda! As all good things come to an end the field trip might have ended but the memories, knowledge, and lessons learnt will always remain etched in our hearts.*

### **Conclusion**

*The focus for the RHATC batch 2022-23 has been marine ecosystem, wildlife, and its different aspects. Although, we were privileged to see a lot of diversity which we had not seen*



before but, we also saw because of people using the landscape there has been an increase in the number of invasive and we were also exposed to the sad reality of bycatch. Therefore, it is a vastly changing landscape and will continue to do so if we do not start taking action. Also, the field trip enabled us to gain invaluable experience working in the marine system whilst exploring different marine species. We were also treated to some bonus wildlife encounters. To recapitulate, the field trip was indeed a trip to remember and in the long run, the experience of the trip will help to inspire us, the budding conservationists to continue working in this field.

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