

STUDY TOUR REPORT

2019 – 2020



A

TOUR TO

THE SOUTHERNMOST POINT OF INDIA

&

CITY OF GODS

DEPARTMENT OF ZOOLOGY
DESHBANDHU COLLEGE
UNIVERSITY OF DELHI
KALKAJI, NEW DELHI – 110019



PREFACE

The present report is a compilation of the events, places visited and activities of a 10 days educational trip to Kanyakumari and Trivandrum organized by the Department of Zoology Deshbandhu College, University of Delhi from 28th December 2019 to 6th January 2020 with the aim to aid the students acquire basic knowledge of marine ecosystem and equip them with the experience about various culture so as to imbibe and enhance one's reach and impact in the society. In addition, the Department also takes the opportunity for collecting various animal species of the region as specimens which would be documented, preserved and maintained in the Zoology museum of the College for use in the curricular activities of B.Sc. Zoology courses.

The Department of Zoology, Deshbandhu College is recognized as one of the best department in Delhi University as it emphasizes not only on the curricular syllabus but also the holistic development to the undergraduates of the department. The academic calendar of the college has a number of activities that contribute towards self learning and self assertion through exposure to the various geographical regions of the country. So, the Department organizes an educational excursion annually for the B.Sc. (Hons) Zoology and B.Sc. (Prog) Life Sciences as a part of Out of the Box Learning program. For the academic year 2019-2020, 47 members Students from B.Sc. Zoology (Hons) 3rd year (12), 2nd year (8), 1st year (10) and B.Sc. (Prog.) Life science 1st year (11) participated for the tour. The students were accompanied by the faculty members (3) and non-teaching faculty (3) of the Department.

Faculty members:

Dr. Moses Rinchui Ngasainao (*Tour-in-charge*), Dr. Manisha Sengar (*Escort*), Dr. Gajender Singh (*Escort*)

Mr. Jagbir Singh (*Tour Manger*), Mr. Anand Singh Dhaiya (*Asst. Tour Manager*), Mr. Virender Koli (*Assistant*)

Students:

B.Sc. Zoology Hons 3rd year:

Sayed-Attiq-Ul-Hassan, Ankan Halder, Raja Jena, Prithwik Bhowmik, Akhil Kapoor, Rahul Kumar Panda, Rajender Kumar, Stanzin Deachen, Padma Yangskit, Neha Kumari, Jewellery Mittra, Vishal Bhati.

B.Sc. Zoology Hons 2nd year:

Sudeshna Choudhary, Salma Parveen, Jyoti Nagarkoti, Himadri Sharma, Basudha Banerjee, Mohit Rana, Harsh Bhati, Abhishek Lakhan Pal.

B.Sc. Zoology Hons 1st year: Ritika Malhotra, Cheshta, Aman, Vishwas, Rachit Gupta, Himanshu Yadav, Yojit, Saurabh Kumar Singh, Amit, Anant.

B.Sc. Life Science 1st year: Mahima Singh, Ashwarya, Gargi Garg, Sargam Peshin, Vikram Sherawat, Ruddhi Kumar Jena, Mihir Bhaskar, Rahul, Anshul Joloniya, Sahadat Ali, Dheeraj Sharma.

MEMBERS OF THE ZOOLOGICAL STUDY TOUR 2019 – 2020
DEPARTMENT OF ZOOLOGY
DESHBANDHU COLLEGE



Members Sitting in Rows: 1st-Virender Koli, Dr. Manisha Sengar, Anand Dahiya. 2nd- Salma Praveen, Master Saksham, Sanjesh Singh, Mahima Singh, Ashwarya, Amit, Ankan Halder, Basuda Benerjee, Ritika Malhotra. 3rd- Abhinav Upadhyaya, Shashank Chauhan, Deepanshu, Praveen Kumar, Jagbir Singh, Naveen Jangra, Vishal Bhati, Arun Kumar, Yojit. 4th- Vikram Sherawat, Sargam Peshin, Sudeshna G. Choudhary, Jewellery Mittra, Padma Yangskit, Neha Kumari, Stanzin Deachen, Anant. 5th-Himadri Sharma, Gargi Garg, Dheeraj Sharma, Anshul Joloniya, Prithwik Bhowmik, Raja Jena, Sayed-Attig-Ul-Hassan, Rahul Panda, Saurabh Kumar Singh. 6th- Harsh Bhati, Jyoti Nagarkoti, Abhishek Lakhanpal, Ruddhi Kumar Jena, Rahul Siyan, Sahadat Ali, Mihir Bhaskar, Akhil Kapoor, Vishwas, Rachit Gupta. 7th- Saquib, Aman, Himanshu Yadav, Chestha Ghai.



Acknowledgement

*On behalf of all the Tour members, I extend sincere thanks to our Principal **Dr. Rajiv Aggarwal**, our Teacher-In-Charge **Dr. Varsha Baweja** for making it possible to conduct the educational trip 2019-2020. Our heartfelt gratitude to **Dr. Manisha Sengar** & **Dr. Gajender Singh** for continuous care, support and valuable assistance throughout the trip. Our sincere thanks to **Mr. Jagbir Singh**, **Mr. Anand Dahiya** and **Mr. Virender Koli** for their selfless and relentless service without their assistance the tour would not have been a success.*

Dr. Moses Rinchui Ngasainao
(Tour-In-Charge)



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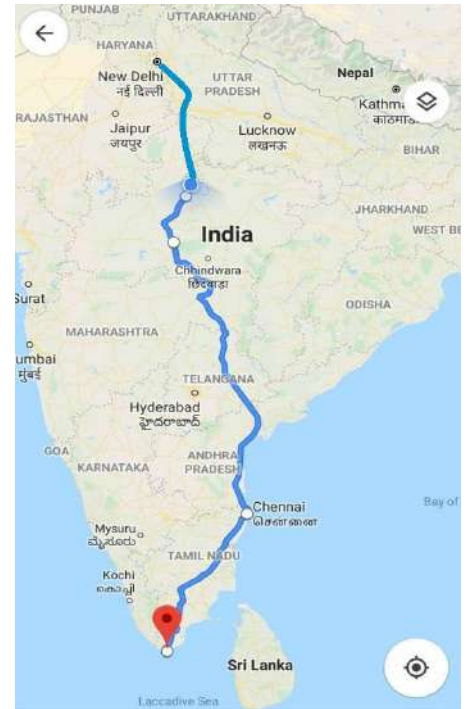


I. A TRAIN JOURNEY TO REMEMBER

On 28th of December, filled with Christmas vibes, our group of 47 boarded Thirukkural Express, Train No. 12642 from Hazrat Nizamuddin, New Delhi for an eventful journey to Kanyakumari, Kerala and adjoining areas.

All the members, completely snuggled up in sweaters, thermals and mufflers boarded the train at 0740 hours ready for a 50 hours journey to cover 2,815 km.

The cold wind seemed to bid us farewell as it swept the train with spine-tingling shivers and warm under-breaths. As the train passed Nagpur, a smiling sun finally dawned upon us and the blankets turned into useless heaps.



Gateway of Kanyakumari
Beautifully engraved design and art

As the trains passed the windmill farms of Nagercoil, the tall trees of sandal and the lush green vegetation confirmed the end of the long yet enjoyable journey on the 30th of December as we entered Kanyakumari.



Dr. Gajender with a Ukulele – Leisure time, talent time



Mr. Jagbir Singh aka Babaji, waiting for the train to move again after 48 hrs of journey



Mr. Anand singing away lost in a Ukulele melody



2. VIVEKANANDA ASHRAM – A Soulful Rest place

As we exit the Pink Train Station (Kanyakumari), we were surrounded by swarms of auto-rickshaws which eventually led us to our abode for the next few days. The Vivekananda Ashram, a soulful and serene rest-place for the travellers is run by Vivekananda Kendra. Within an hour of setting our foot in the Ashram, the tourist spirit in us rose and was further catalysed by the beautiful surroundings.



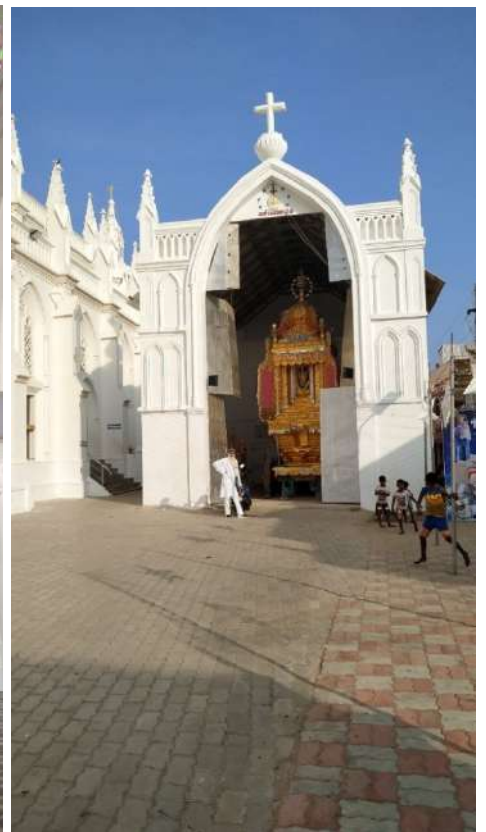
Some of the beautiful shrines and Temple of high significance within the Vivekanand Ashram.



3. OUR LADY OF RANSOM CHURCH

The change in the temperature was very much evident. The surrounding greenery packed with the cloudless sky fascinated and really soothed the Delhiites among us. The weather was warm 26 °C and we started with The Church of Our Lady of Ransom. A Catholic church built with the Gothic Revival Style, this was where St. Francis Xavier prayed and was named after the Patron of the congregation in Spain which redeemed the Christians from the Muslim invasion in the year 1218. Standing at 153 feet, the church passed within us a breeze of energy and excitement for the trip. The picturesque church had just been imprinted in our memory when we had a short walk to the Sunset Point. The sea seemed to have sensed our presence and welcomed us with its roaring waves.

The seven doors of the church are said to represent the seven fruits of the Holy Spirit. The intricately carved depiction of angels playing musical instruments leave the visitors awestruck. Carvings of the twelve disciples of Jesus Christ can be found. The lower portion depicts a lamb lying on the holy Bible.



Picturesque of the Church of Our Lady of Ransom interior and courtyard dressed in white signifying purity



4. VIVEKANAND ROCK MEMORIAL

It was the first morning in Kanyakumari and probably the first in the last few months since we breathed in a place so pure. Away from our residing place, Kanyakumari seemed like a dream. Cool breeze and the smell of the greenery around sent a tingling sensation down the spine. And after a round of breakfast, we rose to enjoy what we couldn't do the day earlier.

Dressed as colourful as flowers wearing Life Saving Jackets, we were taken to the magnificent Vivekananda Rock Memorial on a ferry. Surrounded by the Laccadive Sea, the memorial was built in 1970 in the honour of Swami Vivekananda who is said to have attained enlightenment on the very rock. The shrine consisted of two main structures namely, the Vivekananda Mandapam and the Shripada Mandapam. The lower mandapa of this temple is believed to contain Goddess Kumari's footprint.





5. VATTAKOTTAI FORT

The fast winds helped us tackle the sticky, sweating temperature of 31°C as we proceeded for the fort of Kanyakumari, The Vattakottai Fort. Surrounded by the light blue sea on one side, coconut plantations and the hills of eastern Ghats on the other, was an architectural masterpiece of granite. Built in the 18th century as a coastal defence fortification, it is a protected site under the Indian Archaeological Department.



This rectangular shaped fort is spread across an area of around 3.5 acres of land. The fort is surrounded by majestic walls of 25-26ft. height.

After we were done enjoying the black sand beach surrounding the fort, we moved ahead towards the beach just outside the fort. The beach is popularly known as the MUTTOM Beach. The beach turned out to be the best spot we had visited so far. It was an empty beach with just 47 souls bathing, collecting sea shells, marine rocks (Corals) and snails.





6. THE LAST SUNSET 2019

As the waves crashed on the rocky sea- shore and touched our feet, a mysterious calmness swept upon all of us. The sea irrespective of everyone nearby seemed aloof and full of energy. Time seemed to fly and the first day of our trip ended as we relished the sight of the red sun kissing the sea over the horizon. The moon rose and the sky sparkled with stars as glitters over it as we returned back to the Ashram after having a round of chilli and banana crisps.



The last Sun Set of the year 2019, as She slowly goes west we could do none but enjoy the beauty of her, bidding us fare-de well 2019



Sun Set Point, Rock Garden where thousands of tourist and denizens enjoys Natures Beauty as the Sun Sets by.

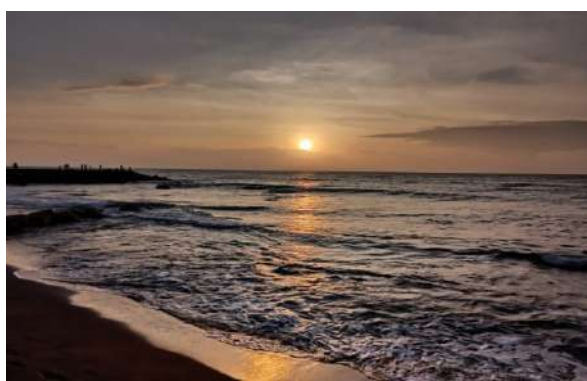
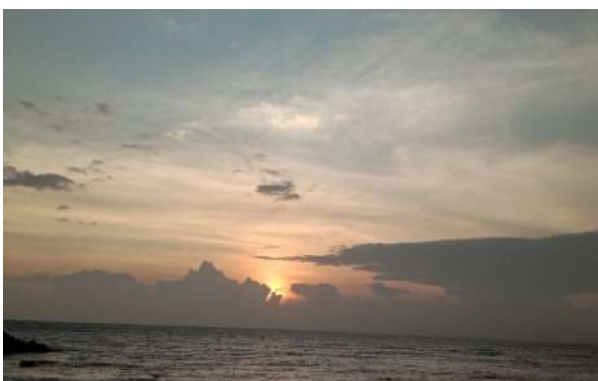
Far Left Photo:- Tour-incharges , Dr. Manisha, Dr. Moses, Babaji – planning for the next day schedule.



7. THE FIRST SUNRISE 2020

The sky was pitching dark as we woke up at 3:00 in the morning to witness the first sunrise of the year. The group moved towards the Sunrise Point inside the ashram and gathered near the sea shore. We were sleepy, but the sea was awake more than ever. The tides seemed to be in war. And far across, in the middle of the sea, we could see the Vivekananda Rock Memorial and the statue of Thiruvallavur glowing in the darknest.

The sunrise was exactly the opposite of the sunset we saw. It seemed the sea had played handball with the sun in a natural slo-mo. As the sun slowly and beautifully grew across the horizon, the sky broke into different shades of red and then, blue. The sea seemed calmer as the sun rose higher and higher in the sky.





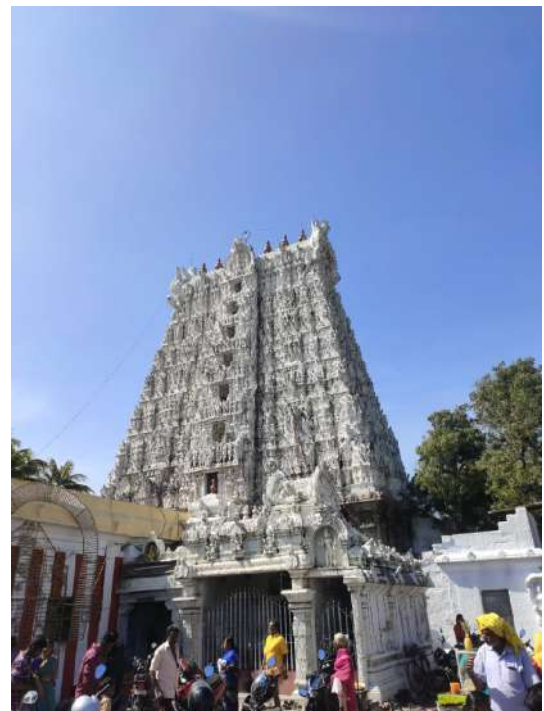
8. THANUMALAYAN TEMPLE

We packed our bags, checked on the rooms for one last time and proceeded towards the bus, for Trivandrum; the second spot of our trip. Enroute Trivandrum, as we crossed the tall coconut trees, we reached Thanumalyan temple.

Thanumalayan temple also known as Suchindram Temple is located at a distance of 11kms from Kanyakumari. It is dedicated to Lord Shiva, Lord Vishnu and Lord Brahma. The temple consisted of 30 shrines with captivating architecture. The ancient Suchindram Temple is said to have been built in the 17th century.

As we entered the temple, we realised the differences in the cultural practices between the north and south. We turned around to see the boys taking their shirts off and entering the temple which was actually the tradition.

A huge temple, completely carved from rocks seemed like a different world in its entity. Each pillar had a deity carved in it with acute precision. It took us around 30-35 minutes before we were out from the other side of the temple. The temple was unique in the sense that it holds three idols Brahma, Vishnu and Shiva in one. This temple is an architectural marvel. Men are supposed to enter the temple without any clothing on upper body. Almost all the sculptures are made up of gold.



We exit from the temple and resumed our journey towards Trivandrum. We passed small stretches of backwaters, large patches of coconut trees and beautifully constructed bungalows before we reached the third stop for the day, Thiruparappu Waterfall.



9. THIRUPARAPPU WATERFALLS

The temperature, by that time had risen to 31 C; apart from cultural, even the temperature differed in the Northern and Southern India. Located in Kanyakumari, the Thiruparappu Waterfalls has a total height of 50 ft and extends upto 300feet following for about 7 months a year. This famous falls is in the Kodayar (Kothai River). The Thirparappu fall was supposed to have been constructed for supplying water to the paddy fields. This river canal turned tourist hotspot is a must visit venue.



The cold water seemed to call us into a never-leave me bond. The water tasted sweet and a refreshing shower of the falls was a relaxation from the salts of the beach. One can also enjoy the small eateries nearby where you can munch the local food.



Our next destination The City of Gods was 55 km away from the water fall. Refreshed and rejuvenated the rest of the trip was spent dancing on the bus on Haryanvi, Punjabi and Bollywood songs.



10. POOVAR BACKWATERS – Paradise to an Eye

After having a taste of Idlis and Upma, all of us set for another fun-filled day in the Poovar Backwaters; Poovar is a small coastal village in Trivandrum and one of the most beautiful places in Kerala. Poovar boating offers two hours boating covering a span of 15kms through beautiful estuaries, Mangrove Forests, Golden Sand Beach, Mother Mary Statue, Coco Island and many more.

Trees completely bent over, touched each other's canopies, blocked the sunlight. As the boat moved past it, the mangroves on our either side grew clearer and clearer, and more beautiful. The lushy green trees with some having birds perched on them seemed heaven.



This mangrove forest is a home to many local birds like cormorants, eagles, herons and ducks. One could also find poisonous fruits hanging amidst the mangrove forest.

As the trees started getting clearer, it seemed as if someone had spilled gold across the

backwaters and soon we understood: it was The Golden Sand Beach. The sun rays played the role of King Midas, and turned every grain of sand it touched, into gold. It was one of the cleanest

beaches we had ever seen.

The sea was entirely blue and resembled the cloudless blue sky above it. As we placed

ourselves again on the boat, we went ahead and visited the

Elephant Rock, a medium sized rock present between the sea and a Statue of Mother Mary.





11. KOVALAM BEACH – A DENIZENS PARADISE

Kovalam is an area of Trivandrum located around 17kms south of the city centre. The beach has steep palm covered headlands and are lined with shops that offer all kinds of goods and services. The Kovalam Beach is bordered with coconut trees and they keep swaying gently.

One can find lots of Ayurvedic resorts here. This ancient practice in Kerala has been proved of having immense medical benefits and hence ayurvedic massages are popular among tourists.



Unlike other beaches, Kovalam beach is not that big but it is one of the most favourite beaches and the credit of favouritism is shared equally by the clean water, interesting beach activities and cuisines.



A Perfect Photo Says more than Thousand Words



12. SWAMY PADMANABHA TEMPLE – THE RICHCESS IN GODS

The Padmanabhaswamy temple is a Hindu temple located in Thiruvananthapuram, state capital of Kerala, India. Also known as the richest temple of the world, built in an intricate fusion of the Chera style and the Dravidian style of architecture. The name of the city of Thiruvananthapuram in Malayalam translates to "The City of Lord Ananta", referring to the deity of the Padmanabhaswamy temple. The temple houses Maha Vishnu - enshrined in the 'Anantha Shayana' posture, the eternal yogic sleep on the serpent Adi Shesha or Sheshnaag.

The most intriguing features of the temple are its hidden vaults which houses wealth in lakh crores. Many conventional historians and scholars are of the opinion that one of the names that the Temple had, "The Golden Temple", literally was in cognizance of the fact that the Temple was unimaginably wealthy.



We went to Temple on the 7th day of our trip. We were so fascinated to see such big carvings of the temple.



All (Men) were in lungis...even we did wear lungi and we can't wear shirt inside the temple. We talked to one of the passerby about this ritual...then he told us that God want to see us the way he created us...God don't want to see us in our so called artificial looks he want to see us natural...God loves the very own of us...God don't want to see us fake...



13. ZOOLOGICAL GARDEN TRIVANDRUM

The zoological garden of Trivanthapuram is one of the oldest zoo in India continuing to exist in its original location in the heart of the temple city (Thiruvananthapuram). Swati Thirumal Maharaja who ruled Travancore during 1830-1846 is said to be the visionary behind the establishment of the Thiruvananthapuram Museum and Zoo. This zoological garden is over 36 acres of land and located in the heart of the city it provides a respite for the people as much as it offers tourism and recreation for visitors reaching from outside Kerala and overseas.

A well maintained area with a dazzling array of animals and birds. Trivandrum zoo is home to about 82 species of animals that include lion-tailed macaque, Nilgiri Gai, Langur, Indian Rhinoceros, Asiatic lion, Royal Bengal tiger, Leopard, Hippopotamus, Cape Buffaloes and birds such as Rhea, Ostrich. The AQUARIUM was a good example of LIVING JEWELS.



We could see exotic and native species such as, Star fish, Red Cap Oranda, Gold Fish, Mono Angel, Alligator Gar, Tiger Loach, Tiger Shark, Red Line Torpedo, Arapaima, Shovel Nosed Catfish, Rock Lobsters, Big Parrot Fish Oscar and Angel Fish.





14. FOOD CULTURE -

Let's have a glance over sweet & small food journey, what we covered in Kanyakumari and Trivandrum. It all started with a two day journey in railway. Beginning with ghar ka khana I think nothing can beat it out, as simple as that. These days, there are restaurants that dish out every single cuisine at affordable prices but they don't stand a chance in front of maa ke haath ka khana. Isn't it? Mother has magic in her hands.



Butter Dosa Bread and a complete Tamil Dish in one plate



Kerala's Delicacies: Dosa and Fish Roast (Grouper fish 5 Kg)



Natural Drinks: Coconut Water and Sugarcane Juice



15. RETURN JOURNEY- An Experience Well Deserved

The train left the station of Thiruvananthapuram Central at its fixed hour 2230 hrs. As we all laid down our backs on the train berths, we recall all the moments we lived and the memories we created during this trip.

The first morning in the train was hot as expected. As we woke up, the scenery outside the window viewed opposite than what we had seen while coming up. This was a superfast train and we didn't expect it to stop anywhere. The train, fast on its wheels, crossed the towns and states without any ado. As we moved North-wards on the map, the temperature decreased and slowly, the blankets were out, shortly followed by thermals, mufflers and shawls - we were halfway home.

We knew we didn't much time before we are back to the pavilion. We sat, sang, danced, played a round or two of Dumb-Charade, clapped and enjoyed the really less time we could spend together. As the sun set down the second day, we were counting back with much scepticism. And at 0140 hours of 6th of January, we were back to what we call our home, 'Delhi'. And with this, our trip came to an end.

"They say travelling is not about the destination, it's about the journey."

In the words of students, "It might be true for some or many. My journey was a fusion of both breathtaking destination as well as beautiful journey" – Akhil Kapoor. Every journey have some specialty, some feel associated with it, whether we travel solo or with family, cousins or friends. Likewise, we also had some expectation from this journey. "Prior to leaving Delhi we hardly know each other except few of our juniors and classmates, but we came back from the trip with a bunch of memories. Chahe wooh bus me, hum sabka dance ho ya late night talks, which I hope no one is going to forget". For all this we would cherish our trip.



All Good Things Comes to an End....but the memories linger on and on
– Tour in charge (Dr. Moses)



16. Documentation of Specimens collected

INDIAN MACKEREL

Kingdom : Animalia

Phylum : Chordata

Class : Actinopterygii

Order : Scombriformes

Suborder : Scombroidei

Family : Scombridae

Genus : *Rastrelliger*

Common Name : Para

Date of Collection

: 3RD JANUARY 2020

Place of Collection: VIZHINJAM, KERALA



Comments:

The Indian Mackerel fish has a moderately deep body. They have thin dark longitudinal bands on the upper portion of their body. There is a black spot on the lower margin of the pectoral fin. Their caudal and dorsal fins are yellowish with black tips. They are generally 25cm in length. The mature fish are found in coastal regions, harbours and in deep lagoons. They are also found in areas with rich planktons.

Ecological Importance:

It is a commonly found fish in native places of Asia. It plays an important role in food chain as it is commercially important fish in India. It mainly feeds on planktons.

Economical Importance:

The Indian Mackerel has commercially high value due to its meat of strong flavor is quite consumed worldwide. It is marketed fresh, frozen, canned, dried-salted, and also made into fish sauce. As an oily fish, it is rich source of omega-3 fatty acids. It is rich in Vitamin B and fat soluble Vitamins such as A, D and E.

PUFFER FISH

Kingdom : Animalia

Phylum : Chordata

Class : Actinopterygii

Order : Tetradontiformes

Suborder : Tetradontoidei

Family : Tetradontidae

Genus :

Date of Collection : 2ND January 2020

Place Of Collection : Poovar Backwaters, Kerala

Collector's Name : Ankan Halder (Zoo Hons.) 3rd Year



Comments:

Tetradontidae are a family of primarily marine and estuarine fish of the order Tetradontiformes. It refers to four large teeth, fused into upper and lower plates which are used for crushing the hard



shells of crustaceans and mollusks, their natural prey. The majority of puffer fishes species are toxic and some are amongst the most poisonous vertebrates in the world.

Ecological Importance:

They are biologically and ecologically fascinating fishes best known for their unique morphology and arsenal of defenses including inflation and bio accumulation of deadly neurotoxins. These fishes are also commercially, culturally and ecologically important in many regions.

Economical Importance:

Meat of certain toxic species is considered a delicacy in Japan, Korea and China. Other puffer fish species with non toxic flesh, such as the Northern Puffer are considered a delicacy elsewhere.

SOLDIER CROAKER

Kingdom : Animalia
Phylum : Chordata
Class : Actinopterygii
Order : Perciformes
Family : Sciaenidae
Genus : *Nibea*
Species: *soldado*

Date of Collection: 2ND
JANUARY 2020

Place of Collection: POOVAR
BACKWATERS,KERALA



Comments:

Also known as Bholā, They are silvery with faint series of oblique stripes along scale rows. Pectoral and pelvic fins have a yellow tinge. They inhabit shallow coastal areas and estuaries and can grow upto a length of 40-60cm. They have a rounded snout. Teeth are differentiated into large and small in both the jaws. They have a carrot shaped swim bladder with 18-22 pairs of arborescent appendages along its sides. Juveniles occur in brackish estuaries and often ascend the lower reaches of large, turbid rivers. They feed on small fishes and invertebrates.

SQUID

Kingdom : Animalia
Phylum : Mollusca
Class : Cephalopoda
Order : Teuthida
Family : Loliginidae
Genus : *Uroteuthis*
Species: *U. duvaucelli*

Date of Collection : 3RD JANUARY 2020

Place of Collection: VIZHINJAM BEACH,KOVALAM,KERALA

Collector's Name : VISHWASH ZOOLOGY HONS 1ST YR



Comments:

Squids are soft bodied animals with generally two muscular tentacles and eight powerful arms. The lower surface of these arms is covered with two rows of suckers. It is also known as Indian Ocean Squid present in Indian Ocean, South China Sea, Red Sea and Arabian Sea. During breeding, fertilized



embryos hatch into a planktonic stage migrating into the upper jaws of the water column. As they grow larger, they take up a benthic existence as adults, with males being slightly larger than females.

Ecological Importance:

Due to bioaccumulation, squid like most predators would build up heavy metals and toxins if exposed to pollution. They are very sensitive to any changes in water quality and will swim to cleaner areas. Therefore, an area that is largely populated with squids should indicate clean waters. Its abundance is also an important ecosystem balance. A lot of predators like sperm whales, sea birds and seals depend on squid for food.

SCOLIODON

Kingdom : Animalia

Phylum : Chordata

Class : Chondrichthyes

Order : Carchariniformes

Family : Carcharhinidae

Genus : *Scoliodon*

Species: *S. laticaudus*

Date of Collection : 3RD JANUARY 2020

Place of Collection: VIZHINJAM BEACH, KOVALAM, KERALA

Comments:

A small, stocky species, it has a broad head with highly flattened, trowel shaped snout. The eyes and nares are small. The back is bronze-gray in colour and the belly is white. The maximum known length is 74cm, but reports indicate individuals reaching 1.2m. They are viviparous with unusual columnar placenta.

Economical Importance: The meat is eaten or used as a bait for other fishes. The fins are valued for shark fin soups and the carcasses are processed into fishmeal. The meat can also be processed with glacial acetic acid to obtain a gel powder that can be used as a protein supplement in cereal foods, a biodegradable film for wrapping seafood or a binder in sausages and other foods. They add to aesthetic value. As a hobby some beautiful coloured fishes are cultured in aquaria for house decoration.



PRAWN

Kingdom : Animalia

Phylum : Arthropoda

Class : Malacostraca

Order : Decapoda

Family : Penaeiidae

Genus : *Lutjanus*

Species: indicus

Date of Collection : 3RD JANUARY 2020

Place of Collection: VIZHINJAM BEACH, KOVALAM, KERALA

Comments:

The Indian Prawn is one of the major commercial prawn species in the world. It is found in Indo-west Pacific from eastern and South-eastern Africa, through India, Malaysia and Indonesia to





southern china. Adult shrimp grow to a length of about 22cm and live on the sea beds to depths.

Ecological Importance: Prawn is a marine decapods having a life span of 18month. They play an important role in the food chain. They are an important food source for larger animal ranging form fishes tot whales. In Kerala, the total brackish waters including the lower reaches are utilized for prawn farming.

Economical Importance: Indian Prawn is used for human consumption. It is s subject of aquaculture industry. For this, wild sed or young prawns are reared in hatchteries and kept in pond as they grow.

FLYING FISH

Kingdom : Animalia

Phylum : Chordata

Class : Osteichthyes

Order : Actinopterygii

Suborder : Beloniformes

Family : Exocoetidae

Genus : *Exocoetus*

Date of Collection: 3rd January 2020

Place Of Collection: Vizhinjam Beach, Kovalam, Kerala

Comments:

It is a marine bony fish, body covered with cycloid scales.

The mouth is wide and jaws bear teeth. It is endemic to tropical and subtropical parts of Atlantic Ocean. It occurs

on water surface, near the coast as well as in ocean. It

does not fly, it glides in the air with a speed of 16km/hr. it glides to protect itself from predators.

Ecological Significance:

They feed on planktonic invertebrates, mostly copepods. It is consumed by other predatory fishes, squid, dolphins and sea birds. Female produces a number of bundles of egg over a period of around 6day producing an average of 10,000 eggs. All fishes die soon after breeding. It is not the subject of fishery and no particular threats to the organism are known.

Ecological Importance: Pacific sardines are important for a large number of pelagic species, including sea birds, marine mammals, sharks, bony fishes and even pelagic invertebrates. Historically, this was an important species for human consumption and supported large cannery operations around the Pacific.



MOONFISH

Kingdom : Animalia

Phylum : Chordata

Class : Osteichthyes

Order : Actinopterygii

Suborder : Carangiformes

Family : Menidae

Genus : *Mene*

Date of Collection : 2nd January 2020

Place Of Collection: Vizhinjam Beach, Kovalam, Kerala



**Comments:**

The body of a moonfish is highly laterally compressed. The ventral profile is step with sharp ventral edge. The body is silvery below and blue-green on the back with three- four rows of dark gray spots on the upper side. The first two rays of the pelvic fin are greatly elongated, forming a prominent backward pointing process on the underside of the fish. It is a native of the Indian Ocean.

Economical Importance: It is a commercially important fish species being easy to dry without having to be salted.

POMFRET

Kingdom : Animalia

Phylum : Chordata

Class : Osteichthyes

Order : Actinopterygii

Suborder : Perciformes

Family : Bromidae

Genus : *Pampus*

Species : *P. argenteus*

Date of Collection : 2nd January 2020

Place Of Collection : Poovar Backwaters, Kerala

Collector's Name : Basudha Banerjee Zoology
2nd Yr

**Comments:**

Pomfret originated from the Portuguese word 'pampo'. A marine fish with one single bone. It is found in the Atlantic, Indian and Pacific Oceans. Pomfrets have flat bodies and deeply forked tails. There are three main types: silver, grey and black pomfrets. The family Bromidae currently includes 20 species across 7 genera.

Ecological Importance:

They play a vital role in the oceanic food webs because it mainly feeds on small sized squids, shrimps and fishes. It itself serves as an important prey for larger fishes such as sword fish and the blue shark. Although it is used as an abundant fish species, researchers are still limited on biomass, early life history and morphological classification.

Economical Importance:

Pomfret fishes are high in fat content, provides calcium, vitamin A and D. increased Vitamin B12 makes it important for the nervous system. It is also contains good amount of iodine, critical for the thyroid gland.



DIVERSITY OF KANYAKUMARI GASTROPODS AND CORALS IN MUTTOM BEACH



S. No.	Species of the seashell	Percentage Composition
1.	<i>Conus marmoreus</i>	0.44%
2.	<i>Turbo</i>	48.7%
3.	<i>Cerithium</i>	0.22%
4.	<i>Tegula pfeifferi</i>	0.44%
5.	<i>Pomacea</i>	0.22%
6.	<i>Cochlicella barbara</i>	0.22%
7.	<i>Cypraea</i>	0.22%
8.	<i>Gibbula magus</i>	20.97%
9.	<i>Trochus</i>	1.98%
10.	<i>Monodonta</i>	0.66%
11.	<i>Tegula eisseni</i>	0.22%
12.	<i>Buccinum undatum</i>	0.22%
13.	<i>Lithopoma</i>	4.63%
14.	<i>Marginella</i>	0.22%
15.	<i>Conus textile</i>	0.22%
16.	<i>Conus gloriamaris</i>	0.22%
17.	<i>Mitrella</i>	0.22%
18.	<i>Cellana nigrolineata</i>	0.22%
19.	<i>Nerita atramentora</i>	0.22%
20.	<i>Conus geographus</i>	0.22%
21.	<i>Cryptopleura costata</i>	1.32%
22.	<i>Driessena bugensis</i>	6.40%
23.	<i>Paphia undulate</i>	0.44%
24.	<i>Cerastoderma edula</i>	0.66%
25.	<i>Modiolus modiolus</i>	10.1%

S. No.	Coral Types	Composition
1.	Hag Stone	9.1%
2.	Key Largo Rock	21.6%
3.	<i>Lithophyllum</i>	15.8%
4.	<i>Piddocks</i>	8.3%
5.	<i>Citrium pica</i>	2.5%
6.	Favosite	20.8%
7.	Holy Coral Rock	2.5%
8.	Chalcedony	12.5%
9.	Moly Brown	2.5%
10.	Kimberlite	1.6%
11.	<i>Cliona</i>	1.6%
12.	Fulgurite Sand Glass	0.8%