

# REPORT

on

## National Webinar on *“Interesting World of Aquatic Creatures”*

Organized

by

Department of Zoology and UGC-Seminar Committee

In association with IQAC, GGDC, Mangalkote

*Date: 28<sup>th</sup> May, 2022*

*Time: 6.00 PM onwards*

*Platform: Google Meet*

### *Objectives of the webinar:*

The webinar was organized to commemorate “**World Fish Migration Day**” with the following objectives in mind:

1. Make everyone aware of the current status of aquatic ecosystem and environment as a whole,
2. Discuss the impacts of anthropogenic activities on the environment,
3. Develop an understanding of how the fisheries industry affect the economic backbone of the country,
4. Understand the effects of environmental damage on the aquaculture and fishery industries and how they are correlated to those who depend on it for their livelihood,
5. Have a preliminary idea on the diversity snails found in India and their importance, and
6. Comprehend the importance of biodiversity conservation by counteracting the agents of environmental damage.

### *Proceedings of the Webinar:*

The webinar entitled “**Interesting World of Aquatic Creatures**” was organized on **28.05.2022** from **6.00 PM** to commemorate “**World Fish Migration Day**” globally observed on 21<sup>st</sup> May every year. Google meet platform was used for this purpose. It began with the welcome address by Dr. Suchismita Das, Convener, UGC-Seminar Committee where she set the tone of the programme by talking about the ‘World Fish Migration Day’ and its importance. Subsequently, Dr. Pradipta Kumar Basu, Officer-in-Charge, GGDCM delivered his inaugural speech in which he highlighted the importance of the programme in the current scenario of environmental pollution and biodiversity loss. This was followed by the address of Dr. Debraj Biswal, Head, Department of Zoology, GGDCM and Coordinator, IQAC who elaborated the present environmental crisis w.r.t. aquatic bodies across the world and how ‘fishes’ form an important part of Indian cuisine, especially in West Bengal. He went a step further and describe how the current state of availability of fishes is affecting the national economy and those associated with it for their livelihood. He also clarified how aquatic bodies and the creatures therein transcends the domain of science (including technology) and includes humanities and social sciences to draw the bigger picture. Then, he highlighted the presence of *Khudrun Dighi* adjacent to the institution that is managed by the Fisheries Department, Govt. of West Bengal. In this way, he tried to link the situatedness of the institution with pisciculture and the aquatic ecosystem. Eventually, he introduced the first esteemed speaker, Dr. Dipanwita Sarkar (Paria) and requested her to begin with her deliberation.

## Lecture 1:

Dr. Dipanwita Sarkar (Paria) took over the platform happily and discussed the topic “**Fish: The Migrants**”. Considering, the webinar was addressed to the teachers and students of all disciplines she took care in explaining the term “migration” and the reasons for this periodic behaviour exhibited by certain creatures. The primary reasons for fish migration i.e. food and reproduction were briefly discussed with examples. Then she went on to discuss how the seasonal alterations affected fish behaviour and food resources triggering their periodic shifting and the osmoregulatory events associated with it. She described different types of movements observed in fishes during the migratory activities. This was followed by descriptions of different types of migrations observed in fishes – Diadromous, Anadromous, Catadromous, Potamodromous, Oceanodromous, Latitudinal, Vertical and Shoreward migrations. She demonstrated the importance of migration in the completion of the life cycle of eel (*Anguilla* sp.) by sharing a video with the audience. Finally, she detailed the significance of fish migration in the aquatic ecosystem as a whole.

As an example of how fish migration is directly related to the livelihood and financial backbone of the nation she showed some videos on Hilsa fishes and their current status. She showed graphical reports of how the availability of Hilsa fishes in the Hooghly River has been declining over the last few years causing a steep rise in its market price. Heavy pollution has caused changes in migratory routes of Hilsa. Besides, extensive harvesting of young fishes and females with eggs are also responsible for poor sustainability in the Hilsa population. Later, she highlighted on the research efforts to cultivate Hilsa fishes in ponds currently being considered to boost its production. She summed up her lecture by enumerating the causes of pollution and aquatic ecosystem and prevention of harvesting young fishes.

## Discussion:

Following the 1<sup>st</sup> lecture, the house was opened for discussion where the students and other faculty members expressed their satisfaction with the lecture. An interesting question on genetically modified *Hilsa* fishes and the associated ethical and ecological issues was also discussed in this session.

The second session began with Dr. Animesh Mondal, Assistant Professor, Dept. of Zoology, GGDCM introducing the second distinguished speaker, Dr. Maitreya Sil and briefly describing the topic to be addressed by him.

## Lecture 2:

In the second half of the webinar Dr. Maitreya Sil delivered his talk on *Freshwater Snails of India*. Dr. Sil started his talk with biogeography which is a sub-field of ecology and evolutionary biology that investigates the patterns and processes of distribution of species and groups of species. The distribution of a group can be determined by contemporary processes, as evident from floral turnover along the slope of a mountain. But these processes have a historical angle as well. For example, many flightless birds are restricted to oceanic islands. One reason behind such distribution is historical absence of predators. Historical biogeography is a branch of biogeography which aims to understand these historical aspects. Historical biogeography emerged as a field of science in the 18<sup>th</sup> century. Scientists such as Comte De Buffon, Charles Darwin, Joseph Hooker, Charles Lyell, Alfred Wallace helped the discipline grow. In the twentieth century the discovery of continental drift has explained a lot about disjunction distribution of flora and fauna. In recent times biogeography is heavily dependent on molecular phylogenetics and divergence dating. The he discussed how different plants and animals colonized the Indian subcontinent. There are three main routes different groups have taken to colonize India. Some groups were already present in India, when it was a part of Gondwanaland supercontinent during Mesozoic. When Gondwanaland was fragmented during late Mesozoic, these groups rafted on the Indian ferry towards Asia. Dr. Sil eloquently discussed about three freshwater snail families — Ampullariidae, Viviparidae and Bulinidae. There he found out that most of the dispersal into India took place after India collided with Asia.

## Discussion:

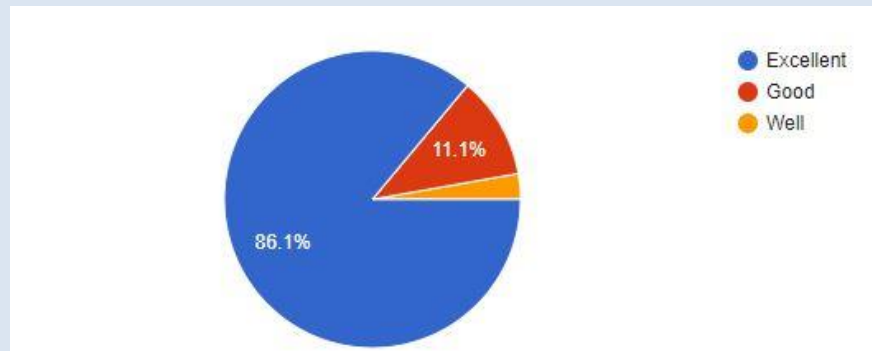
The house was opened to discussion at the end of the second lecture. From the conversations it was clear that the attendees had immensely benefitted from the talk. In addition, they all came to know about modern taxonomy based on molecular biology. The interesting phenomenon of continental drift was also received by the attendees, especially those from humanities, enthusiastically.

## *Participants and Feedback:*

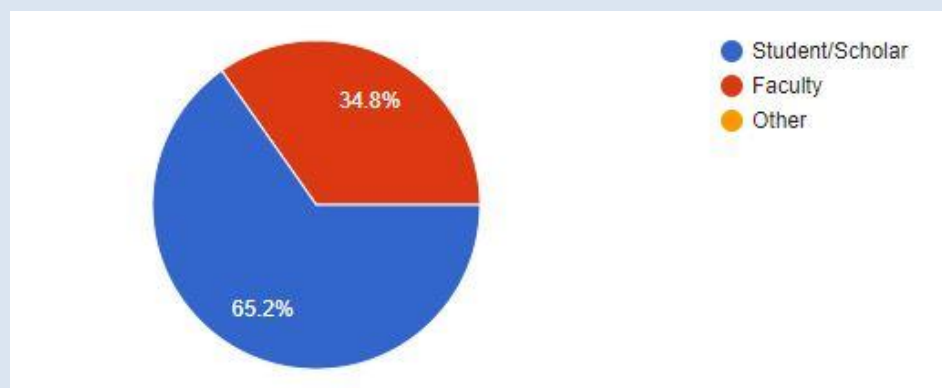
After the completion of both the sessions feedback was collected through a pre-generated Google Form (<https://forms.gle/ckNAM651jq3cQtSm6>) which also sent certificates to the responding participants. A total number of 52 individuals (excluding 02 speakers) participated in the webinar. There were 20 female and 32 male participants. Feedbacks were collected from them and analysed. The overall responses have been shown as under:

The programme was successful as evidenced from Fig. 1 which shows that 86.1% of the participant population has responded it to be “excellent”.

The programme was attended by both teachers and students as observed in Fig. 2. The proportion of students was, however, higher than that of teachers which also indicates that the programme could reach the target population (i.e., students) maximally.



**Fig. 1: Overall analysis about the quality of the programme.**



**Fig. 2: Analysis of teacher-student proportion participating in the programme.**

### *Vote of Thanks:*

The programme ended with the vote of thanks from Prof. Pinaki Roy, Secretary, Teachers' Council and Head Department of Sociology.

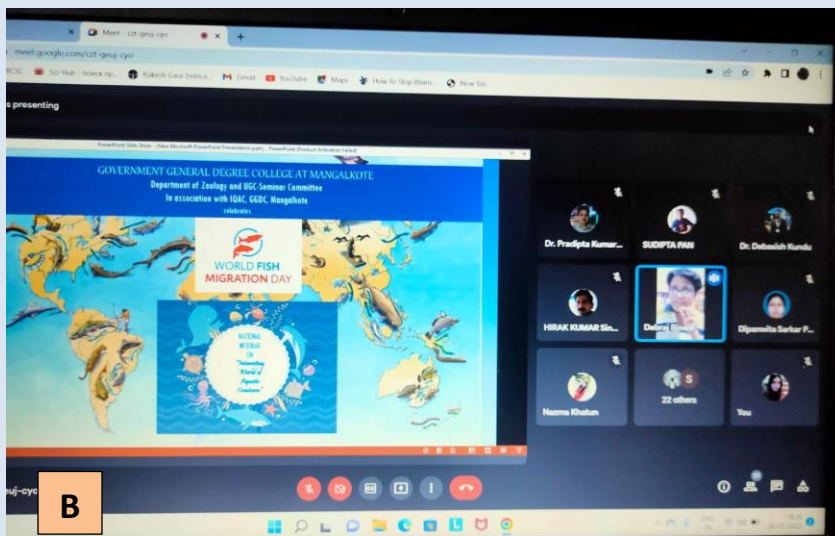
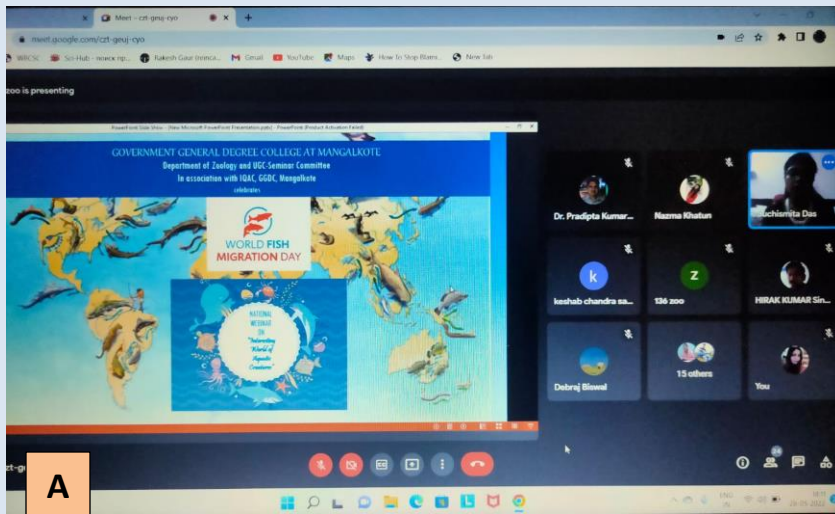
### *Outcomes of the webinar:*

The discussions at the end of each sessions and the feedback clearly showed that the objectives were achieved. Further, the students came to know about genetically modified organisms (with

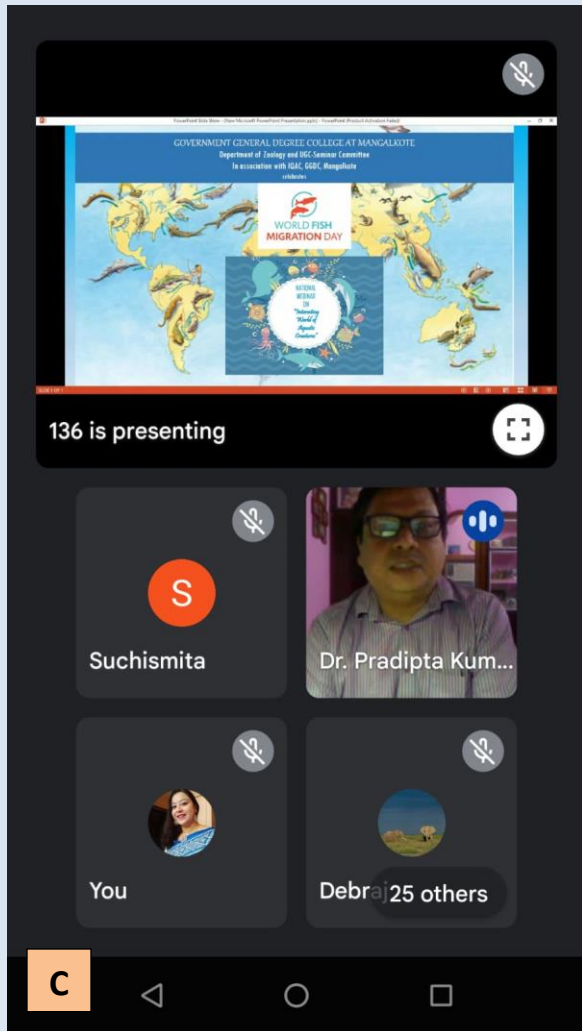
*Hilsa* as an example), their negative effects on species diversity and the associated ethical issues. They also came to know about continental drift and molecular taxonomy.

The webinar could also correlate with the situatedness of the institution i.e., just adjacent to a large water body (*Khudrun Dighi*) which is leased by the State Govt. to local fishing communities for fish farming.

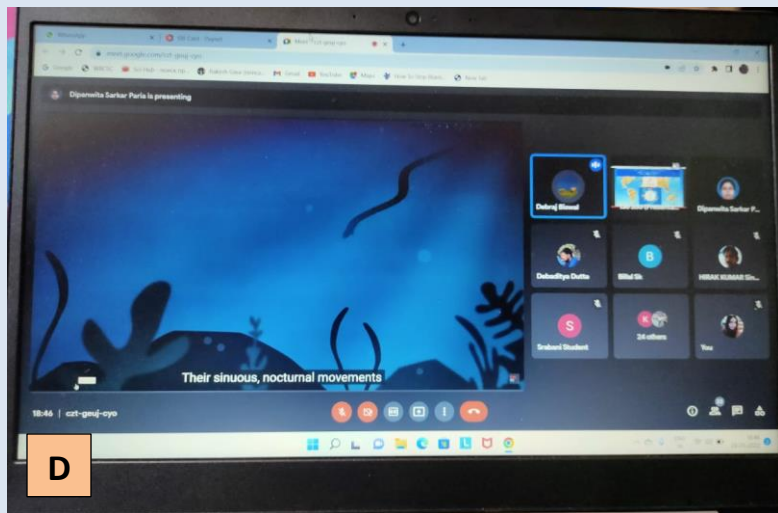
### GLIMPSES FROM THE WEBINAR



**Figs. A & B:**  
**Inauguration of the webinar**

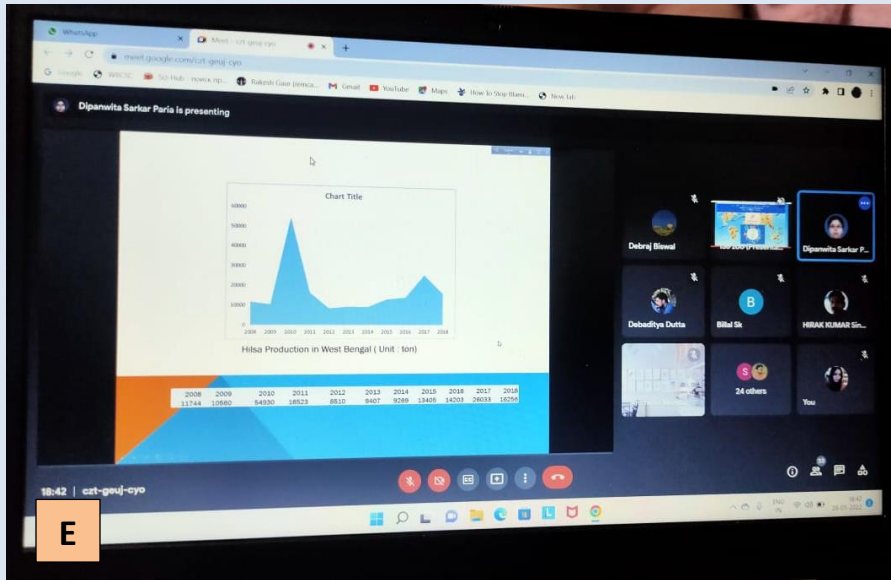


**Fig C: Address by the HOI on the occasion of the webinar**

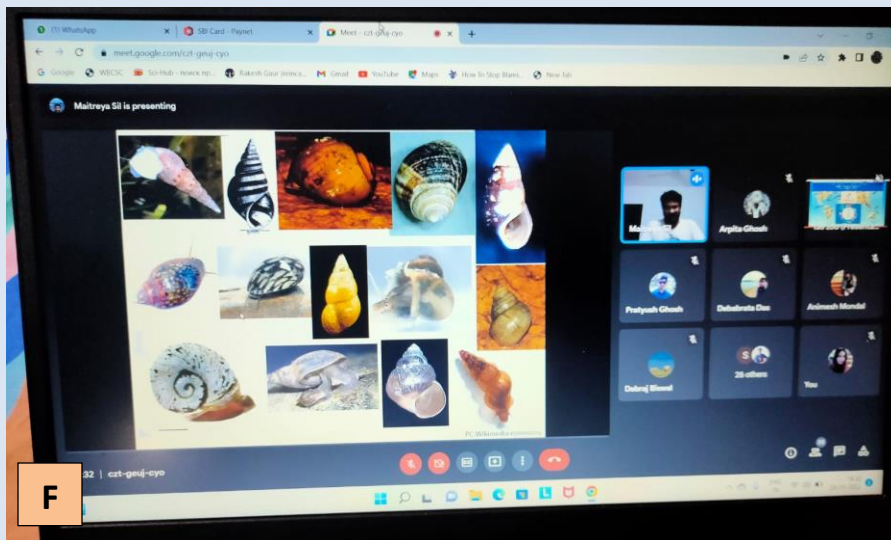


**Fig. D: Presentation of Lecture 1**





**Fig. E: Presentation of Lecture 1 (Contd.)**

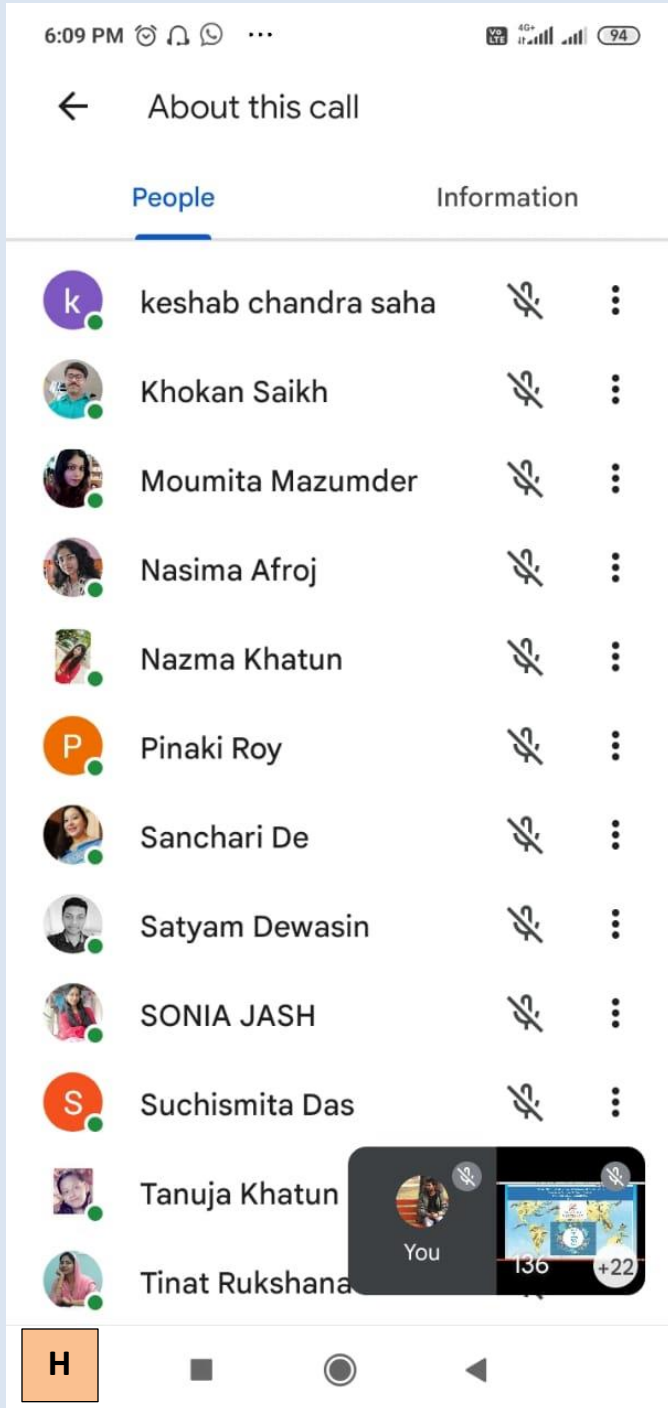


**Fig. F: Presentation of Lecture 2**



**Fig. G: Discussion session**





**Fig. H: Screenshot of attendants**

\* NATIONAL WEBINAR AT GGDCM: INTERESTING WORLD OF AQUATIC CREATURES""

\* Meeting code: czt-geuj-cyo

\* Created on 2022-05-28 06:06:51

\* by <https://chrome.google.com/webstore/detail/google-meet-attendance-li/appcnhiecidclcdjeahgklg>

Full Name	First Seen	Time in Call
136 zoo	28-05-2022 06:06	01:52:49
Abhipsa Ghosh	28-05-2022 07:19	00:35:49
Abida Sultana	28-05-2022 06:19	01:06:08
Animesh Mondal	28-05-2022 06:06	01:50:48
Aritra Dutta	28-05-2022 06:06	01:36:43
Aritra Rudra	28-05-2022 06:41	00:05:26
Arpita Ghosh	28-05-2022 06:12	00:50:15
Bikash Laha	28-05-2022 06:06	00:07:07
Billal Sk	28-05-2022 06:06	01:31:10
Biswajit Sarkar	28-05-2022 06:47	00:00:43
Debabrata Das	28-05-2022 06:55	01:02:58
Debaditya Dutta	28-05-2022 06:31	00:27:08
Debashis Biswas	28-05-2022 06:22	00:22:25
Debkañita Pal	28-05-2022 06:06	01:53:36
Debraj Biswal	28-05-2022 06:06	01:52:49
Deep Das	28-05-2022 06:59	01:00:15
Dinesh Maity	28-05-2022 06:10	00:22:18
Dipanwita Sarkar	28-05-2022 06:06	01:13:50
Dr. Debasish Kun	28-05-2022 06:12	00:44:17
Dr. Pradipta Kurr	28-05-2022 06:06	00:26:27
Echo Knight	28-05-2022 06:06	01:14:13
HIRAK KUMAR Si	28-05-2022 06:10	01:05:12
Kerim Sekh	28-05-2022 06:34	00:38:10
Khokan Saikh	28-05-2022 06:06	00:40:19
Maitreya Sil	28-05-2022 07:00	00:58:55
Mala Das	28-05-2022 07:14	00:29:44
Moumita Mazur	28-05-2022 06:06	01:52:03
Nasima Afroj	28-05-2022 06:06	00:06:18
Nazma Khatun	28-05-2022 06:06	00:21:24
Pinaki Roy	28-05-2022 06:06	01:52:44
Pratyush Ghosh	28-05-2022 06:16	01:18:33
Priyanka Saha	28-05-2022 06:23	01:31:33
Rejoyanul Kerim	28-05-2022 07:12	00:47:08
Rupam Goswami	28-05-2022 06:13	01:44:30
SAMPAD MOND,	28-05-2022 07:38	00:21:14
SONIA JASH	28-05-2022 06:06	01:52:49
SUDIPTA PAN	28-05-2022 06:15	00:51:59
Sanchari De	28-05-2022 06:06	01:52:33
Satyam Dewasin	28-05-2022 06:06	01:52:35
Shyama charan ç	28-05-2022 06:10	01:43:57
Soumya Mallick	28-05-2022 06:16	01:04:22
Srabani Student	28-05-2022 06:36	01:23:30

Subhechha Chak	28-05-2022 06:44	01:15:38
Suchismita Das	28-05-2022 06:06	00:42:00
Suchismita Dey	28-05-2022 06:12	01:40:40
Susmita Hazra	28-05-2022 07:23	00:36:40
Tanuja Khatun	28-05-2022 06:08	00:20:40
Tinat Rukshana	28-05-2022 06:06	01:52:49
anamika mukher	28-05-2022 06:28	00:07:02
jeet choudhury	28-05-2022 07:17	00:42:28
keshab chandra s	28-05-2022 06:06	01:26:11
madhumita chak	28-05-2022 06:19	01:33:06

;hghihfok



Government of West Bengal

**GOVERNMENT GENERAL DEGREE COLLEGE, MANGALKOTE**

**Department of Zoology**

Panchanantala, Khudrun Dighi, Mangalkote, Burdwan-713132, Dist.- Burdwan

*Email:* ggdc Mangalkote@gmail.com; *Website:* <http://mangalkotegovtcollege.org>

**NO.: Zoo/09/2022**

**DATE: 14.05.2022**

**NOTICE**

All concerned are hereby notified that a 'National Webinar' has been scheduled to be organized jointly by the Department of Zoology and the UGC-Seminar Committee on **28.05.2022** to observe 'World Fish Migration Day' celebrated every year on May, 21<sup>st</sup>. The programme aims to boost the all-round development of the students of this institution as emphasized in the notice (no. IQAC/12/2022) published by the Internal Quality Assurance Cell on 06.05.2022.

**Countersigned**

**Officer-in-Charge  
GGDC at Mangalkote  
Purba Bardhaman**

**Convener  
UGC-Seminar Committee  
GGDC at Mangalkote  
Purba Bardhaman**

**Head  
Department of Zoology  
GGDC at Mangalkote  
Purba Bardhaman**

GOVERNMENT GENERAL DEGREE COLLEGE AT MANGALKOTE

Department of Zoology and UGC-Seminar Committee

In association with IQAC, GGDC, Mangalkote

celebrates



ON SATURDAY, MAY 28<sup>TH</sup>, 2022  
AT: 06.00 P.M.



REGISTER BY 27.05.2022 AT:

<https://forms.gle/YDRVyfCizjx2LWAJ8>

NO REGISTRATION FEE REQUIRED



# Invited speakers:

## **DR. DIPANWITA SARKAR (PARIA)**

Assistant Professor of Zoology (W.B.E.S.),  
Chandernagore College,  
Chandernagore Hooghly,  
West Bengal,  
India.

### *Lecture Topic I:* **FISH: THE MIGRATORS**

The discussion will be focussed on the interesting phenomenon of fish migration in general. The current status of migration in Hilsa fish will also be highlighted.

**TIME: 6.20 PM TO 7.05 PM**

## **DR. MAITREYA SIL**

Post-doctoral Fellow,  
National Institute of Science Education and  
Research (NISER),  
Bhubaneswar,  
Odisha,  
India.

### *Lecture Topic II:* **FRESHWATER SNAILS OF INDIA**

The Indian subcontinent is interesting because of its geographic and climatic variation and geological history. It hosts a vast array of freshwater snails but they largely remain unknown. The lecture will introduce us to this fascinating world of freshwater snails.

**TIME: 7.20 PM TO 8.05 PM**

## **ORGANIZING COMMITTEE:**

**PATRON:** DR. PRADIPTA KUMAR BASU, OFFICER-IN-CHARGE, GGDC, MANGALKOTE

**ADVISOR:** DR. DEBRAJ BISWAL, COORDINATOR, IQAC, GGDC, MANGALKOTE

## **ORGANIZERS:**

DR. DEBRAJ BISWAL, HEAD, DEPT. OF ZOOLOGY

DR. ANIMESH MONDAL, ASSISTANT PROFESSOR, DEPT. OF ZOOLOGY

DR. SUCHISMITA DAS, CONVENER, UGC-SEMINAR COMMITTEE

## **TECHNICAL ASSISTANCE:**

DR. AKASH KEDIA, HEAD, DEPT. OF BOTANY & MEMBER, UGC-SEMINAR COMMITTEE

## **HOST ASSOCIATES:**

ALL FACULTY MEMBERS OF IQAC COMMITTEE, DEPT. OF ZOOLOGY & UGC-SEMINAR COMMITTEE, GGDC, MANGALKOTE

## **PROGRAMME SCHEDULE (28.05.2022):**

**6.00 – 6.05 PM:** WELCOME ADDRESS BY DR. SUCHISMITA DAS, CONVENER, , UGC-SEMINAR COMMITTEE

**6.05 – 6.10 PM:** INAUGURAL ADDRESS BY DR. PRADIPTA KUMAR BASU, OIC, GGDCM

**6.10 – 6.15 PM:** ADDRESS BY COORDINATOR, IQAC

**6.15 – 6.20 PM:** INTRODUCING THE LECTURE TOPIC I BY DR. DEBRAJ BISWAL, HEAD, DEPT. OF ZOOLOGY

**6.20 – 7.05 PM:** *LECTURE I*

**7.05 – 7.15 PM:** DISCUSSION

**7.15 – 7.20 PM:** INTRODUCING THE LECTURE TOPIC II BY DR. ANIMESH MONDAL, ASSISTANT PROFESSOR, DEPT. OF ZOOLOGY

**7.20 – 8.05 PM:** *LECTURE II*

**8.05 – 8.15 PM:** DISCUSSION

**8.15 – 8.30 PM:** VOTE OF THANKS BY PROF. PINAKI ROY, SECRETARY, TEACHERS' COUNCIL & HEAD, DEPT. OF SOCIOLOGY

**SATURDAY, MAY 28<sup>TH</sup>, 2022**

**Google Meet gateway opens at 5.30 P.M.**

**PLEASE JOIN -**

**<https://meet.google.com/czt-geuj-cyo>**

PARTICIPATION CERTIFICATES WILL BE PROVIDED TO CANDIDATES SUBMITTING THE FEEDBACK FORM AT THE END OF THE WEBINAR



Government of West Bengal

Office of the Principal

**GOVERNMENT GENERAL DEGREE COLLEGE AT MANGALKOTE**

PANCHANANTALA, KHUDRUN DIGHI, MANGALKOTE

P.O. - MAJHIGRAM; BLOCK - MANGALKOTE; SUB DIVISION - KATWA  
DISTRICT - PURBA BARDHAMAN; WEST BENGAL; PIN CODE - 713132; INDIA

Email: ggdc Mangalkote@gmail.com; Website: <http://mangalkotegovtcollege.org>

Memo No.: 259/MGC

Dated: 21/05/2022

To  
Dr. Dipanwita Sarkar (Paria),  
Assistant Professor (W.B.E.S.),  
Department of Zoology,  
Chandernagore College,  
Chandernagore, Hooghly,  
Pin: 712136, West Bengal, India.

**Sub.:** Invitation to deliver an Online Lecture in the National Webinar on “Interesting World of Aquatic Creatures” on 28<sup>th</sup> May, 2022, jointly organized by Department of Zoology and UGC-Seminar Committee, in association with IQAC, GGDC, Mangalkote, to celebrate World Fish Migration Day observed every year on 21<sup>st</sup> May.

Madam,

It is our honour to invite you as a speaker to deliver an Online Lecture **in the National Webinar on “Interesting World of Aquatic Creatures” on 28<sup>th</sup> May, 2022 (Saturday), at 6 p.m. on Google Meet Platform, to celebrate World Fish Migration Day observed every year on 21<sup>st</sup> May.** The programme has been jointly organized by Department of Zoology and UGC-Seminar Committee, in association with IQAC, Government General Degree College, Mangalkote, Panchanantala, Khudrun Dighi, Purba Bardhaman-713132, West Bengal. We sincerely hope that listening to your deliberation will be an enriching experience for all the participating students, research scholars and faculty members.

We shall be highly obliged if you kindly accept our invitation.

Thanking you,

With regards,



**Officer-In-Charge  
GGDC, Mangalkote**

*Dr. Pradipta Kumar Basu*  
OFFICER IN CHARGE, W.B.E.S.  
Government General Degree College, Mangalkote  
Dt. Purba Bardhaman, West Bengal- 713132



Government of West Bengal

Office of the Principal

**GOVERNMENT GENERAL DEGREE COLLEGE AT MANGALKOTE**

PANCHANANTALA, KHUDRUN DIGHI, MANGALKOTE

P.O. - MAJHIGRAM; BLOCK - MANGALKOTE; SUB DIVISION - KATWA  
DISTRICT - PURBA BARDHAMAN; WEST BENGAL; PIN CODE - 713132; INDIA

Email: ggdc Mangalkote@gmail.com; Website: <http://mangalkotegovtcollege.org>

**Memo No.: 260/MGC**

**Dated: 21/05/2022**

To,  
Dr. Maitreya Sil,  
Post-doctoral Fellow,  
National Institute of Science Education and Research (NISER),  
Bhubaneswar, Odisha, India.

**Sub.:** Invitation to deliver an Online Lecture in the National Webinar on “Interesting World of Aquatic Creatures” on 28<sup>th</sup> May, 2022, jointly organized by Department of Zoology and UGC-Seminar Committee, in association with IQAC, GGDC, Mangalkote, to celebrate World Fish Migration Day observed every year on 21<sup>st</sup> May.

Sir,

It is our honour to invite you as a speaker to deliver an Online Lecture **in the National Webinar on “Interesting World of Aquatic Creatures” on 28<sup>th</sup> May, 2022 (Saturday), at 7 p.m. on Google Meet Platform, to celebrate World Fish Migration Day observed every year on 21<sup>st</sup> May.** The programme has been jointly organized by Department of Zoology and UGC-Seminar Committee, in association with IQAC, Government General Degree College, Mangalkote, Panchanantala, Khudrun Dighi, Purba Bardhaman-713132, West Bengal. We sincerely hope that listening to your deliberation will be an enriching experience for all the participating students, research scholars and faculty members.

We shall be highly obliged if you kindly accept our invitation.

Thanking you,

With regards,



**Officer-In-Charge  
GGDC, Mangalkote**

*Dr. Pradipta Kumar Basu*  
OFFICER IN CHARGE, W.B.E.S.  
Government General Degree College, Mangalkote  
Dt. Purba Bardhaman, West Bengal- 713132



Government of West Bengal  
Office of the Principal  
**GOVERNMENT GENERAL DEGREE COLLEGE AT MANGALKOTE**  
PANCHANANTALA, KHUDRUN DIGHI, MANGALKOTE  
P.O. - MAJHIGRAM; BLOCK - MANGALKOTE; SUB DIVISION - KATWA  
DISTRICT - PURBA BARDHAMAN; WEST BENGAL; PIN CODE - 713132; INDIA  
Email: ggdcmanagalkote@gmail.com; Website: <http://mangalkotegovtcollege.org>

DATE: 28<sup>TH</sup> MAY, 2022

## Certificate of Appreciation

The undersigned expresses his gratitude to **Dr. Dipanwita Sarkar (Paria)**, Assistant Professor of Zoology (W.B.E.S.), Chandernagore College, Chandernagore, Hooghly, Pin: 712136, West Bengal, India, for her valuable contribution as an Invited Speaker in the National Webinar titled "Interesting World of Aquatic Creatures", held on 28<sup>th</sup> May, 2022 jointly organized by Department of Zoology and UGC-Seminar Committee, GGDC, Mangalkote, in association with IQAC, GGDC, Mangalkote, on the occasion of celebration of World Fish Migration Day, observed globally on 21<sup>st</sup> May every year.



**OFFICER IN CHARGE**  
**Government General Degree College, Mangalkote**

*Dr. Pradipta Kumar Basu*  
OFFICER IN CHARGE, W.B.E.S.  
Government General Degree College, Mangalkote  
Dt. Purba Bardhaman, West Bengal- 713132



Government of West Bengal

Office of the Principal

**GOVERNMENT GENERAL DEGREE COLLEGE AT MANGALKOTE**

PANCHANANTALA, KHUDRUN DIGHI, MANGALKOTE

P.O. - MAJHIGRAM; BLOCK - MANGALKOTE; SUB DIVISION - KATWA  
DISTRICT - PURBA BARDHAMAN; WEST BENGAL; PIN CODE - 713132; INDIA

Email: ggdc Mangalkote@gmail.com; Website: <http://mangalkotegovtcollege.org>

DATE: 28<sup>TH</sup> MAY, 2022

## Certificate of Appreciation

The undersigned expresses his gratitude to **Dr. Maitreya Sil**, Post-doctoral Fellow at National Institute of Science Education and Research (NISER), Bhubaneswar, Odisha, India, for his valuable contribution as an Invited Speaker in the National Webinar titled “Interesting World of Aquatic Creatures”, held on 28<sup>th</sup> May, 2022 jointly organized by Department of Zoology and UGC-Seminar Committee, GGDC, Mangalkote, in association with IQAC, GGDC, Mangalkote, on the occasion of celebration of World Fish Migration Day, observed globally on 21<sup>st</sup> May every year.



**OFFICER IN CHARGE**

**Government General Degree College, Mangalkote**

*Dr. Pradipta Kumar Basu*

OFFICER IN CHARGE, W.B.E.S.  
Government General Degree College, Mangalkote  
Dt. Purba Bardhaman, West Bengal- 713132