

Telangana Tribal Welfare Residential Degree College For Women, Rajanna Siricilla

Department Of Zoology Project Report-2020

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A PROJECT REPORT  
ON

“ INVESTIGATION INTO PEARL FORMATION ”

SUBMITTED BY

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UNDER THE GUIDANCE

OF

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DEPT OF ZOOLOGY



TELANGANA TRIBAL WELFARE RESIDENTIAL DEGREE COLLEGE [W], RAJANNA SIRICILLA

[AFFILIATED TO SATAVAHANA UNIVERSITY]

## DECLARATION

B.MUNNY, G. KAVITHA,. S. PRASANYA, M. MANASA we hereby declare that the project report titled "INVESTIGATION INTO PEARL FORMATION" was carried out from 01/06/2020 to 11/06/2020, under the guidance of P. VEENA at TTWRDC (W), Thangallapally.

I affirm that:

The work presented in this report is original and has not been submitted elsewhere for any other purpose.

The project report represents my own work and reflects my understanding of the subject matter.

Date:12/06/2020

Place: TTWRDC (w) Thangallapally

Name of the student

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## CERTIFICATE

This is to certify that the project report title "INVESTIGATION INTO PEARL FORMATION" Is completed by B.MUNNY, G. KAVITHA., S. PRASANYA, M. MANASA under the guidance of P. VEENA GDL in Zoology. This has to not been submitted to any other institute or university for the award of any degree.



Signature of faculty



Principal

Principal  
TTWRDC(W)SIRCILLA  
Dist: Rajanna Sircilla

Title: Investigation into Pearl Formation by Degree Students

**Date:**- 12/06/2020

STUDENT NAMES:

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Abstract:

This report presents findings from an investigation conducted by degree students on the formation of pearls. The study aimed to understand the biological, chemical, and environmental factors contributing to pearl formation. Through literature review, field observations, and laboratory experiments, the students explored various aspects of pearl formation, including the role of mollusks, environmental conditions, and human intervention. The findings provide valuable insights into the natural and artificial processes involved in pearl production.

Introduction:

Pearls have fascinated humans for centuries due to their lustrous beauty and rarity. Understanding how pearls form is essential for both scientific knowledge and commercial pearl cultivation. This investigation delves into the intricate mechanisms behind pearl formation, shedding light on the biological, chemical, and environmental factors influencing this phenomenon.

Methodology:

The investigation employed a multi-faceted approach, incorporating literature review.

1. Literature Review:

The students conducted an extensive review of scientific literature on pearl formation, spanning fields such as marine biology, chemistry, and materials science. This phase aimed to establish a theoretical foundation and identify key factors influencing pearl formation.



Students Work Done on process of formation of Pearls

#### Results and Discussion:

The investigation yielded several significant findings:

##### 1. Biological Factors:

Mollusks, particularly oysters and mussels, play a crucial role in pearl formation. The deposition of nacre around an irritant, such as a grain of sand or parasite, leads to the gradual formation of a pearl. The species of mollusk, its age, and health significantly influence the quality and size of the pearl produced.

##### 2. Environmental Factors:

Environmental conditions, including water quality, temperature, and salinity, affect pearl formation. Optimal conditions vary depending on the species of mollusk and geographic location. Pollution and habitat degradation pose threats to natural pearl formation.

### 3. Chemical Composition:

The composition of nacre, the iridescent material comprising pearls, was analyzed. Calcium carbonate and conchiolin, secreted by mollusks, contribute to the unique properties of pearls. Understanding the chemical composition aids in distinguishing natural pearls from synthetic ones.

#### REASON FOR CHOOSING THIS PROJECT :

- In the society there are number of unemployed women's because they are uneducated
- This pearl culture provides employment to this unemployed women's with in their own house
- By this pearl culture the women's can stand on their own legs without depending upon others
- Not only for women's it is also useful for poor people
- Many people are don't know what is pearl culture and importance of this

To know the importance and advantages of pearl culture to the society we are choosed this project

#### REQUIREMENTS:

- Oyster
- Nucleus
- knife
- Scissors
- Spatula
- Nets and Threads
- Wooden raft
- Forceps

#### PROCEDURE:

- Take the oyster then we can do the surgical implantation
- For the surgical implantation we can insert the nucleus into the oyster
- The oyster is opened with the spatula then we can enter the nucleus into the oyster now these are considered as the pearl form
- These pearls form can take in baskets or nets and finally returned into water tank
- For the growth of pearls we use phytoplankton like algae and cow dung cow urine as food to the oyster
- For every 15 days we have to change the water from the water tank
- After 15 - 18 months we get the pearls

#### USES / BENEFITS OF PEARL CULTURE:

- Pearls are one of the nine gems they have great value in the market these are used in jewellery and decorative items
- This pearl culture provides employability to unemployed people
- Low investment more profit
- We can also culture at our home easily

#### Conclusion:

The investigation conducted by degree students provides valuable insights into the complex process of pearl formation. By integrating theoretical knowledge with practical observations and experiments, the study enhances our understanding of the biological, chemical, and environmental factors influencing pearl production. These findings have implications for both scientific research and the pearl industry, informing sustainable practices and conservation efforts. Further research avenues include studying the genetic basis of pearl formation and developing innovative techniques for pearl cultivation.