

RESEARCH ASSISTANCE DETAILS

(Dr. Nivedita Chakraborty)

- Name of the PhD scholar:** Mrs. Lovely Burman
- Affiliation:** Assistant Professor of Geology, Sahid Matagini Hazra Government General Degree College for Women
- Title of the proposed PhD dissertation:** Changes in depositional setting across (Upper Permian) Raniganj Formation and (Lower Triassic) Panchet Formation in Raniganj Basin, Eastern India.
- Synopsis of the proposed work:** The Gondwana rocks of Raniganj and Panchet Formation are well preserved in the Raniganj Basin (Damodar valley), an elongated fault-controlled basin. Both the Formations are composed of siliciclastic rocks inferred to be deposited under fluvial condition. So far only lithological and biological aspects of the two Formations have been studied along with some geochemical investigation. However, specialist sedimentological analysis is still lacking. The goal of the present endeavor is to work out the detail modes of deposition of the terrestrial deposits within the Basin. Recognition of architectural elements, delineating and ranking of the bounding surfaces and palaeohydrological study, so far neglected, assumes special significance across the single continental Permo-Triassic transition in Indian sub-continent will be worked out. Intention of this project is to separate out the differences in mode of deposition across the boundary with change of palaeoclimate and sea level too. Syn-sedimentary deformation structures preserved within the Panchet Formation will be examined with special emphasis on their morphological variations, mechanisms and genesis. This sedimentological reappraisal may provide important clues to reconstruct the regional palaeogeographic and palaeoclimatic scenario of Gondwanaland at that time.
- Status of PhD:**
- Mrs. Burman has enrolled for PhD in Department of Geology, Presidency University. She appeared before Departmental PhD Committee for PhD interview on March 14, 2024.
 - She initiated her research in 2022. She has done geological field trips in different remote areas of Bankura and Purulia districts under the supervision of Dr. Nivedita Chakraborty and Dr. Anudeb Mondal.
 - She has presented a paper (oral presentation) entitled "Paleoenvironment, paleocurrent and paleohydraulics of the lower Triassic Panchet Formation: A case study from Banspetali in Raniganj Basin, Eastern India at Annamalai University, Chidambaram in the International conference on 'Voyage of sedimentology from the mountains to the oceans: An innovative trajectory' & 39th convention of Indian Association of Sedimentologists held in December 6-8, 2023.
- Supervisors:** Dr. Anudeb Mondal (PU); Dr. Nivedita Chakraborty (KJRGDC).

(N.B.: As Bankura University does not offer Master's degree in Geology, Mrs. Burman had to enroll for PhD in Presidency University).



Presidency University

PhD Admission 2023-2024(February cycle)

Application Form

Application ID: PU/PhD/2024Feb/162

PERSONAL DETAILS

Candidate's Name LOVELY BURMAN

Father's Name Ratan Burman

Mother's Name Shikha Burman

Date of Birth (dd/mm/yyyy) 12/06/1990

Nationality Indian

Gender Female

Person with Disability (PwD) No

Minority No

Annual Family Income (in Lac) 9.5 Lacs

Rs

Blood Group B +(positive)



Lovely Burman

COMMUNICATION DETAILS

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Pin 713210

State West Bengal

ACADEMIC DETAILS

Level	Name of Examination	Name of Board/ University	Subject(s) of Study	Year of Passing	% of Marks/ CGPA obtained	Division/Class
10th	Madhyamik Parit	West Bengal Bo	Bengali, English	2006	79.75	First
12th	Higher Seconda	West Bengal Co	Bengali, English	2008	69	First
Graduation	B.Sc. Three-yea	The University o	Geology Honour	2011	65.5	First



Presidency University
86/1, College Street, Kolkata - 700 073

PROVISIONAL SELECTION LIST
for Admission to Ph.D. Programme for Session 2023-2024
(Feb, 2024 cycle)

Ref.No.: PU/FC/284 /PhD/notice/2024

Date: 18.04.2024

The list of provisionally **selected candidates** and **waitlisted candidates** for admission to PhD programme for the session 2023-2024 (February, 2024 cycle) are given below. For taking admission, the selected candidates are required to pay **Rs 2000/- + applicable Bank charges online through SBI collect portal (<https://www.onlinesbi.sbi/sbicollect/icollecthome.htm?corpID=469266>)** which will be available from **18th April, 2024 to 28th April, 2024.**

Important Dates:

Availability of Payment Portal: 18th April, 2024 to 28th April, 2024

Publication of second selection list (if any vacancy exists): 29th April (after 5 pm).

Dates for reporting (only for admitted candidates): **30th April, 2024 or 2nd May, 2024 at 11 am**

Steps for Payment:

1. The fees are to be paid online through SBI Collect portal:
<https://www.onlinesbi.sbi/sbicollect/icollecthome.htm?corpID=469266>.
2. Select "PhD Admission" under payment category.
3. Put Application ID(Only number) as given below to load your data for payment.

Document Verification

All admitted candidates are required to report at the office of the undersigned (3rd floor, G+IV new building, college street campus) for completing the Ph.D. enrolment process on **30th April, 2024 or 2nd May, 2024 at 11am**. Date of commencement of classes will be intimated by the concerned department/school/Institute.

Candidates are required to carry one passport size recent photograph along with the following documents in **original with one set of photocopies** at the time of reporting

Application ID : PU/PhD/2024Feb/	Department/School/Institute name	Selected under category
470	Economics	GENERAL
261	Economics	OBC B
194	Geography	GENERAL
281	Geography	GENERAL
525	Geography	OBC A
130	Geology	GENERAL
237	Geology	GENERAL
259	Geology	GENERAL
293	Geology	GENERAL
399	Geology	GENERAL
274	Geology	OBC B
140	Geology	SC
162	Geology	SC
199	Institute of Health Sciences	General
236	Institute of Health Sciences	General
289	Institute of Health Sciences	General
391	Institute of Health Sciences	General
407	Institute of Health Sciences	General
210	Institute of Health Sciences	OBCA
427	Institute of Health Sciences	OBCA
295	Institute of Health Sciences	SC
593	Institute of Health Sciences	SC
12	Life Sciences	GENERAL
71	Life Sciences	GENERAL
126	Life Sciences	GENERAL
153	Life Sciences	GENERAL
154	Life Sciences	GENERAL
222	Life Sciences	GENERAL
283	Life Sciences	GENERAL
310	Life Sciences	GENERAL
337	Life Sciences	GENERAL
365	Life Sciences	GENERAL
422	Life Sciences	GENERAL
375	Life Sciences	SC
426	Life Sciences	SC

39th Convention of Indian
Association of Sedimentologists
&
International Conference on
**Voyage of Sedimentology from the Mountains
to the Oceans : An Innovative Trajectory**

IAS@AU-2023

6 - 8th, December, 2023

Abstracts



Organized by

Department of Earth Sciences

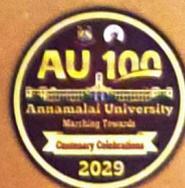
Annamalai University

Annamalai Nagar - 608 002.

Tamil Nadu, India



IAS@AU - 2023



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Palaeoenvironment, palaeocurrent and palaeohydraulics of the Lower Triassic Panchet Formation: a case study from Banspetali in Raniganj Basin, Eastern India

Lovely Burman¹, Nivedita Chakraborty², Anudeb Mandal³

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³Department of Geology, Presidency University, Kolkata - 700073, W.B.

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The Raniganj Basin in Damodar Valley, India accommodates ~2000m thick continuous succession of Gondwana Supergroup (Late Carboniferous to Triassic). The present study deals with the Lower Triassic Panchet Formation overlying the Upper Permian Raniganj Formation, and encompassing the P-T boundary in terrestrial realm. Field work has been carried out along the stream sections in and around Banspetali area, within the fault controlled intracratonic rift basin. Although the geochemical and palaeontological evidences are relatively well documented, the sedimentology of this area lacks needed attention. Current investigation intends to form a preliminary idea on palaeoenvironment, palaeocurrent and palaeohydraulics of Banspetal section. Sedimentary facies analyses have been performed identifying four channel belts constituting eleven facies within the Panchet Formation in order to acquire knowledge regarding palaeogeography, transportation mechanism and depositional environment of the clastic Gondwana sediments. Field investigation points towards an overall low-sinuosity braided channel pattern. Thick multi-storied amalgamated channel units with high average bed-thickness and lesser proportion of overbank fines, dominance of mid-channel bars, overall fresh appearance of pebbly to medium grained sand sized sediments, absence of carbonaceous content in mica rich shales and absence of coal broadly characterise the studied Formation. Petrography suggests mineralogically arkosic to sub-arkosic composition, texturally immature to sub-mature character with poor to moderate sorting. Present study also confirms remarkable presence of syn-sedimentary deformation structures associated with the third channel belt within the succession. Deformation structures are characterized by a range of morphology and style: slump folds, convolution, distorted layers in chaotic fashion, load and flame structures, overturned cross-bedding and slide planes. The deformed layers are bounded by undeformed beds of similar facies. Palaeocurrent analysis shows deviation in flow direction from NE to NW below and above the deformed level respectively. Palaeohydrological analysis indicates an increase in different fluvial parameters: mean channel width, mean channel depth, mean discharge, principal stream length and the rest in post SSD package. Moreover an amplified depositional slope and a convergence in flow direction are indicated beyond the disturbed zone. Probably a change in drainage area for post SSD channel systems is reflected. The results of this study are expected to serve as a basis for further sedimentological investigation in the study area.