

Challenges in Managing Prehistoric Cultural Heritage: A Case Study of Jagannathpur of Jharkhand State, India

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Purbi Singhbhum district of the state Jharkhand in Eastern India yielded clusters of prehistoric sites. Captain Beeching (1868) first discovered some Palaeolithic implements from the adjoining area, which was later communicated and further revisited by Ball (1970; 1975). Later on, the search was carried out by many eminent scholars. Among them, Ghosh (1970) did an extensive survey of the different areas of Purbi Singhbhum district to reconstruct the geo-stratigraphy of the prehistoric culture of the area. He discovered a total of forty prehistoric sites and classified them into five clusters according to their administrative location. The site Jagannathpur is one of them in the Galudih cluster. The site is located in the Galudih sub-division of Purbi Singhbhum district by the side of the stream Kundra Nallah, which is a tributary of the river Subarnarekha. The site yielded primary deposition of Palaeolithic cultural remains. An intensive study was done earlier by the author on the account of the typo-technological context of the Palaeolithic stone tools observed from the site (2021). As the site is near the stream, every shower of rain shifts the objects from their primary location. Local people made a dam on the stream, which results in natural erosion, and anthropogenic activities are the causes of the destruction of the site. The present study is an approach to identifying the causes of destruction of the site area and to proposing suggestive remedies to preserve this rich prehistoric site. The focus of the present paper is on the site Jagannathpur in specific and eastern India in general.

Keywords: prehistoric cultural heritage, heritage management, site preservation, palaeolithic archaeology, archaeological conservation, community participation, Jagannathpur

Introduction

In Purbi Singhbhum district of Eastern India, the search for Palaeolithic cultural remains was started by Captain Beeching (1868) with the discovery of stone artifacts from the adjoining area, which was later communicated and further revisited by Ball (1870; 1875). Later on, many eminent scholars like Anderson (1917), Mitra (1926), Murray (1941), Sinha (1951), Sen and Ghosh (1960), Sen, Ray, and Ghosh (1962), Ghosh (1970), Jayaswal (1981), Kumar (2008), Basak (2010), Bain (2015), Dutta & Mondal (2018; 2021; 2024; 2025), Dutta (2025), and Mahato and Mondal (2020) were done extensive work in different parts of Singhbhum.

Purbi Singhbhum district lies on the Chotanagpur plateau region in Eastern India and bears ancient Gondwana landforms and plenty of natural resources, which attracted the early hominins to inhabit the area from the early Pleistocene times. In 1962, Ghosh explored the different parts of the Singhbhum area for a long period. He discovered more than 40 prehistoric sites that exhibit a huge cultural heritage, which were mostly associated

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with early Palaeolithic culture. Notably, after carefully analysing the prehistoric cultural objects, he classified the sites into five major clusters, mentioning the Chandil and Sini group from Northern Singhbhum, Ghatshila group from Eastern or Purbi Singhbhum, Chaibasa group in Central Singhbhum, and Jamda or Gua group in Southern Singhbhum.

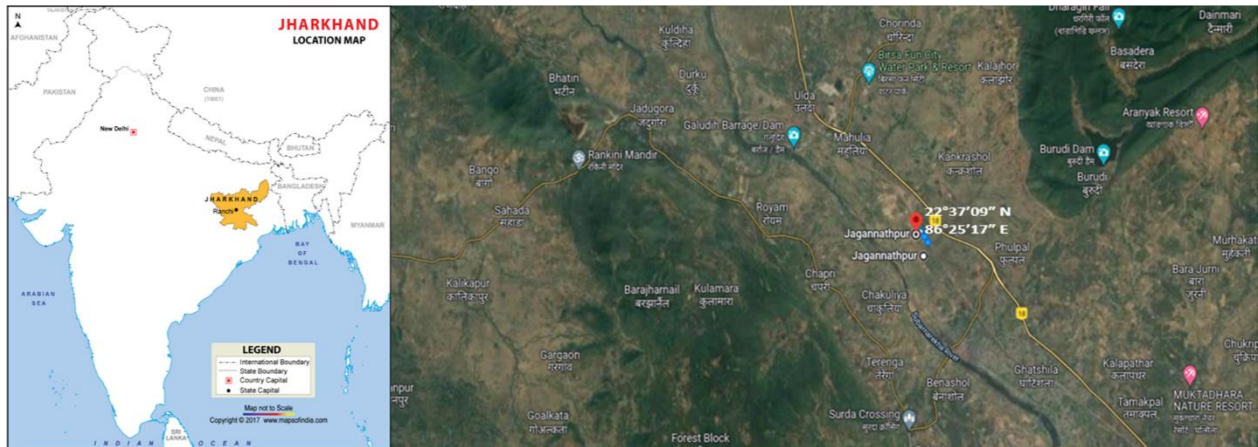


Figure 1. Location map and satellite image of site Jagannathpur (source: www.google.com).

After Ghosh, several field surveys were conducted in different seasons as part of the curriculum of Anthropology at West Bengal State University and Calcutta University from 2009 to 2021. These surveys enriched the prehistoric findings of different sites of the Galudih and Ghatshila areas of the Purbi Singhbhum district of Jharkhand. The present study is the continuation of the earlier findings from the site Jagannathpur, which belonged to the Ghatshila group as per Ghosh (1970). The site is located along the stream Kundra Nallah, which is locally known as Kondor Nallah, a tributary of the river Subarnarekha.

Notably, in recent research, an approach was taken to reconstruct the past environment of the site by Mahato and Mondal (2020). In 2021 and 2024, the present author emphasized the typo-technological analysis of the artifacts found from the site, mentioning the importance of the site in the context of cultural heritage and concluding that the site poses a continuous primary deposition of cultural belongings, which indicates that it was a factory site where possibly the early hominins made their stone artifacts for their survival.

Objectives

The objective of the present study is to understand the probable causes of the destruction of the site as well as to propose suggestive remedies to preserve the site.

Research Methodology

The site was purposively selected to identify the destruction process. The methodology for this study is primarily based on the observational ground. The site and the adjoining area have been intensively examined through geological and geographical understandings. Also, the local people were randomly interviewed to understand their views and opinions regarding the site, though they are ignoring it.

Site Jagannathpur

The site Jagannathpur (22°37'10" N, 86°26'0" E) is located along the bank of Kundra Nallah, which is a tributary of the river Subarnarekha in Galudih subdivision under Purbi Singhbhum district of the state Jharkhand.

The site is extended through a more than 300 meters. The stream Kundra is flowing from the North to the East direction. The actual stratigraphy is situated nearer to a dried channel, which is about 200 meters away from the present stream bed towards the North-East direction. It is observable that the earlier dried channel was once connected to the stream, but now it is filled with wild grasses and bushes. The channel is followed by a gravel bed, which indicates the earlier water activities. On the upper terraces, a tank was dug up by the local people to store rainwater.

The soil is lateritic and red in colour due to the excessive presence of iron and becomes sticky in wet conditions. Hematite nodules, quartz, quartzite blocks, pieces of cherts, few artifacts were scattered on the surface. Stratigraphy is exposed due to heavy rain-wash during the monsoon.

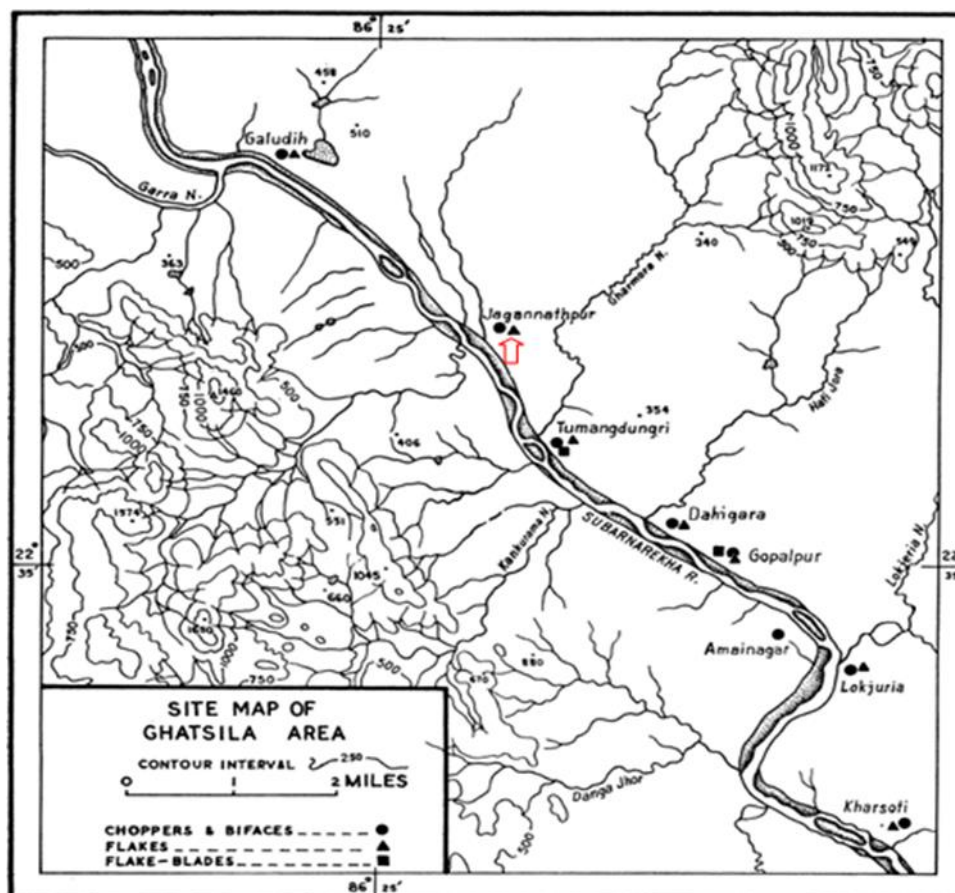


Figure 2. Site map of the Ghatsila area locating the Site Jagannathpur (Modified after Ghosh, 1970).

The site is surrounded by bushes and date trees. The soil is dry in nature. The composition and the texture of the soil are not appropriate for cultivation. In the south direction, Jagannathpur village is situated, and the rest of the three sides are bounded by the stream Kundra.

Vegetation

Mainly Sal tree (*Shorea robusta*) is predominant. Tamarind tree (*Tamarindus indica*), Kendu (*Diospyros melanoxylon*), Wood apple (*Aegle marmelos*), Mango (*Mangifera indica*), and Krishnachuda (*Delonix regia*) are also prominent. But Date palms (*Phoenix Dactylifera*) and Prickly Poppy (*Argemone Mexicana*) are also seen.

The area is predominantly inhabited by tribal groups like Santhals, Mundas, and Hos. There is a silty layer at the top of the area. The lower margin of the flooded area contains yellowish alluvial deposition on which local people practice small-scale agriculture.

Stratigraphy

Primarily, a thick gravel bed was observed on the Archean bedrock. The gravel bed suggests a longer wet phase in which the stream carried gravel due to erosional activity. This layer is topped by a thick silty clay deposition indicating a long dry phase. This layer yielded few flake tools, mainly scrapers, and two choppers made of quartzite at the lower part. From the upper part of the layer, a few flakes and flake blades are noticed.



Figure 3. Stratigraphy of site Jagannathpur.

Cultural Assemblages

Cultural assemblages contain both core tools, flake tools, and blade tools along with the cores and raw materials. Typo-technological analysis of the collected artifacts indicates the whole Palaeolithic sequence.

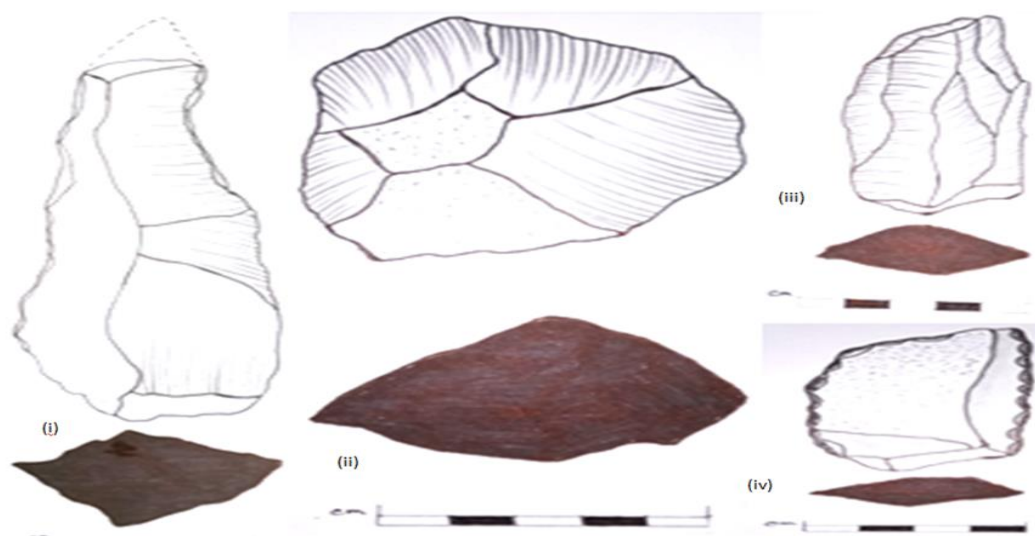


Figure 4. Schematic diagram of core tools: (i) Hand-axe, (ii) Chopper, (iii) Single-sided scraper, (iv) Double-sided scraper.

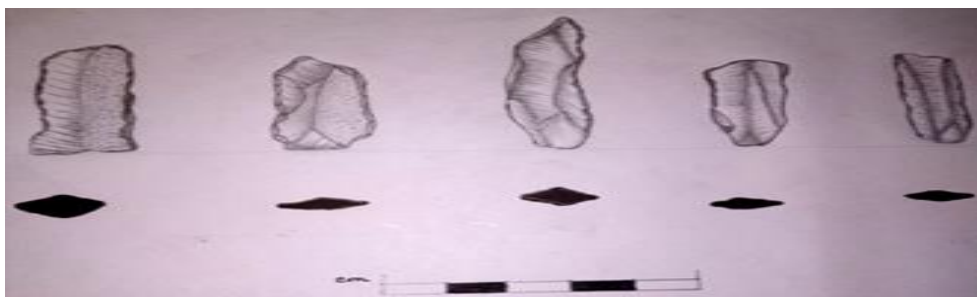


Figure 5. Schematic diagram of flake tools and blade tools.

Problems Identified

The primary and important problems in the conservational aspect of any prehistoric site are the long-term destruction process. In such cases, the destruction is caused by both natural and human agents. Natural agents of destruction are water activities and soil erosion. The continuous and seasonal rain washes over the upper terraces, which may erode the soil from its actual strata, leading to a slow landslide. Thus, the stratigraphical layers are exposed, and the cultural objects are dislocated through the water-worn activity. Flooding and waterlogging are also responsible for the same. Whereas the local people sometimes occupied the site and the adjoining area as their habitational ground. They generally use the land for agricultural purposes and sometimes make huge tanks store rainwater for harvesting. Also, they use the land to graze their cattle, which sets the soil loose and damages the cultural objects. Besides, the excreta from cattle and humans may change the chemical composition of the soil. Alongside this, developmental activities such as making roads and buildings for the local inhabitants may also destroy the site.

Present Status of the Site

For the present context, the site Jagannathpur is going through several survival challenges. The implementiferous layers have been continuously eroded by rainwater for years. Also, heavy rainfall causes long-lasting waterlogging, which causes the sliding of the whole stratigraphy and exposes the cultural objects. Thus, the artifacts are getting dislocated from their actual deposition, which results in the closing of the site horizon. Sometimes, the artifacts also get rolled during the water activity and get partially or fully damaged through the working edges. Continuous dislocation of the artifacts and deposition in the secondary layer lost its original context. The local people of village Jagannathpur are used to digging the site for agricultural purposes. They also dug a pond in nearby areas. Different destruction processes due to the construction of houses, dams, and reservoirs are identified as human agents of destruction on the site.



Figure 6. Waterlogging in a man-made reservoir at the site.

Suggested Remedies for the Preservation of the Site

On the protection and preservation grounds, the local people play an important role. It is very hard to conserve an open site without the support and help of local people. In the present study, some remedies have been suggested to protect this culturally rich prehistoric site. It is our duty to inform the local people about the importance of this cultural heritage. They should be trained to use the site area without damaging its actual context. Awareness programs with the local people are recommended for the protection of the site. A site museum can be set up to preserve the collected artifacts from the site. It may be exhibited to visitors. Further, local governance and state governance may play a lead role in conserving the site. They should include the site in their heritage list so that periodic treatment can be provided. Also, illegal mining and quarrying should be prohibited by enacting strict laws.

Conclusions

The site Jagannathpur is one of the richest prehistoric sites among the others in Purbi Singhbhum, Jharkhand as well as in Eastern India. The site poses a continuous cultural sequence from the Palaeolithic times to the contemporary. The depositional variation of the artifacts in the different layers from the site indicates the area was once used as the primary habitational purpose by the past people for a long time. But for now, the site is facing damage by both nature and humans which leads to a huge cultural loss. It is our responsibility to protect and conserve our past remains. The local people should need to be involved in the protection of their cultural heritage. Also, the local and state administration should take initiative for the conservation of the site. Academicians and administrators can arrange awareness programs regarding the preservation of the site. Public opinion also can be taken about the protection of the site. Also, the in-situ study of the artifacts may reduce the possibility of the destruction of the site. Archaeological Survey of India and Anthropological Survey of India can initiate their action to protect the site. Further studies and scholarly approaches might reveal the event of the cultural evolution of past people. Although the earlier damages cannot be recovered, more attentive future steps may conserve the cultural heritage of the area.

In summary, the following are the suggested remedies for the protection of the site:

- Awareness of the local people about the importance of the site.
- Protect the site or the particular focused area from further decay.
- Construction of a site museum for the preservation of artifacts yielded.
- It is a conjunctive effort of academicians, institutes, administrative bodies, and local people to protect this cultural heritage of our prehistoric past.

References

- Anderson, C. W. (1917). A note on prehistoric stone implements found in the Singhbhum District. *Journal of Bihar and Orissa Research Society*, (III), 349-362.
- Ball, V. (1870). Stone implements discovered in Singhbhum. *Proceedings of the Asiatic Society of Bengal*.
- Ball, V. (1875). On the stone implements from Chotanagpur. *Proceedings of the Asiatic Society of Bengal*.
- Bain, W. K. (2015). A preliminary study on microlithic evidences at Galudih of East Singhbhum in Jharkhand. *Journal of the Anthropological Survey of India*, 64(1), 69-80.
- Basak, B. (2010). Upper palaeolithic culture in the south-eastern marginal tracts of Chotanagpur: A few observations. *Pratna Samiksha*, 1, 1-8.
- Beeching, C. (1868). Notes on some stone implements found in the district of Singhbhum. *Proceedings of the Asiatic Society of Bengal*.

- Dutta, T., & Mondal, D. K. (2018). A typo-technological study of scrapers found from the site Lakridungri, in Purbi Singhbhum District of Jharkhand. *Journal of the Dept. of Anthropology*, 18, 3-13. University of Calcutta.
- Dutta, T., & Mondal, D. K. (2021). An account of palaeolithic cultural remains found from the site Jagannathpur in Purbi Singhbhum District of Jharkhand, Eastern India. *Proceedings of the 3rd National Scientific Conference of Vietnam Natural Museum System*, 5, 625-631. Hanoi, Vietnam.
- Dutta, T., & Mondal, D. K. (2024). Prehistoric cultural heritage of the site Jagannathpur in Purbi Singhbhum District of Jharkhand, in Eastern India. *South Asian History, Culture and Archaeology*, 4(1), 135-145.
- Dutta, T., & Mondal, D. K. (2025). An account of archaeological remains found from the site Chandrarekha in Purbi Singhbhum District of Jharkhand, Eastern India. *Heritage: Journal of Multidisciplinary Studies in Archaeology*, 10, 627-633.
- Dutta, T. (2025). Cultural transition at Chandrarekha tracing the shift from pre-urbanization to semi-urbanization in Purbi Singhbhum, Jharkhand. In D. Basu (Ed.), *Various dimensions of urbanization in the Indian subcontinent: From the Harappan era to the colonial period* (pp. 55-64). Kolkata: Society for Heritage Archaeology & Management.
- Ghosh, A. K. (1970). The palaeolithic culture of Singhbhum. *Transactions of the American Philosophical Society*, 60(1), 3-68.
- Jayaswal, V. (1981). Stone age man around Ranchi. *Journal of the Oriental Institute*, 31, 45-63.
- Knudson, R. (1999). Cultural resource management in context. *Archives and Museum Informatics*, 13, 359-381.
- Kumar, A. (2008). The upper palaeolithic "Damin Industries" of the Bansloi River Basin, Jharkhand. *Man and Environment*, 33(2), 15-31.
- Mahato, D., & Mondal, D. K. (2020). A study of environmental archeology of the site Jagannathpur in Galudih area in Purbi Singhbhum District of Jharkhand. *Journal of Kolkata Society for Asian Studies*, 6(1).
- Mitra, P. (1926). *Prehistoric India*. Calcutta: University of Calcutta.
- Murray, E. F. O. (1941). The ancient workers of western Dhalbhum. *Journal of the Royal Asiatic Society of Bengal Letters*, 6, 79-104.
- Sen, D., & Ghosh, A. K. (1960). On the occurrence of palaeolithic in Singhbhum. *Man in India*, 40(3), 178-191.
- Sen, D., Ray, G. S., & Ghosh, A. K. (1962). Paleolithic from Manbhum and Singhbhum. *Man in India*, 42(1), 10-18.
- Sinha, S. C. (1951). Discovery of some prehistoric tools in South Manbhum. *Science and Culture*, 17, 164.