

Project Report

Environmental and Ecological Change: Gleanings from Copperplate Inscriptions of Early Bengal

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INTRODUCTION

Historically defined, the geographical orbit of Bengal (comprising present Indian state of West Bengal and the independent Republic of Bangladesh) witnessed the consolidation of human settlements of the historical phase from almost the middle of the first millennium BCE. It is from the third century BCE level that proper archaeological and epigraphic evidence from some parts of the region show the growth and expansion of large scale urban settlements.

The geographical and chronological distribution of copperplate inscriptions of early Bengal clearly suggest the four different geographical sectors from which they were issued. These are: a. northern Bengal, b. western-southwestern Bengal, c. eastern Bengal and d. southeastern Bengal. A classified account of the plates from these sub-regions is summarized below:

- Northern Bengal: Copperplates of the Guptas and one post-Gupta king (5th–7th century CE); Pāla and Sena rulers (8th–12th century CE)
- Western-Southwestern Bengal: Copperplate of Vijayasena (6th c. CE); Śaśāṅka-Jayanāga (7th c. CE); Sena rulers (mid 12th c. CE) and Sena subordinates (ca. 1196 CE)
- Eastern Bengal: Copperplates of local rulers

of the Vaṅga region (6th century CE); Candra and Varman kings (9th–10th century CE)

- Southeastern Bengal: Copperplate of Vainyagupta from Comilla (5th century CE); Deva, Rāta and Khaḍga kings from Comilla (7th–8th century CE) and Copperplates of Deva kings of Comilla-Noakhali (13th century CE)

The above classificatory scheme vindicates five geochronological ‘categories’ in the inscriptional corpus of Bengal: the Gupta plates of fifth–sixth centuries, the post-Gupta plates of sixth century hailing from eastern and southwestern Bengal, those of the local lineages of sixth–eight centuries, plates of the Pāla and their contemporaries of eighth–twelfth centuries and those of the Sena and their subordinates of twelfth–thirteenth centuries.

The primary methodology followed in this research involved i) The collection of epigraphic data from published sources. ii) The identification of names of large number of floral, faunal and topographic terms with scientific aid from published sources coupled with and followed by fieldwork in understanding the patterns of continuity and changes in the environmental and ecological configurations of the concerned micro-regional landscapes, supplemented with Satellite imageries from such archives as Google Maps and Google earth coordinates. iii) Photographic

* The project was carried out under the sponsorship of Indian National Commission for History of Science between the period July, 2014 and June, 2017.

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documentation of material assemblages of environmental details encountered in the field. iv) A comparative study of the physical environ of rural settlements on the basis of the inscriptional data primarily from copperplate inscriptions, supplemented by available database recorded in some of the stone inscriptions from the region. The project was executed under the following heads:

- I. Introduction
- II. Beyond Ecology: Boundary Clauses *vis-a-vis* Patterning of Rural Settlements
- III. Concluding Remarks
- IV. Appendix I Classified Geographical Details in Copperplate Inscriptions of Early Bengal
- V. Appendix II Floral and Faunal Species

DISCUSSION

The first Chapter of the report concentrates on the history of research on inscriptional sources of Bengal and their potential for the study of the history of environment in the Bengal delta. The nature of geographical-environmental data recovered from the copperplate charters of Bengal suggests, as shown below with select examples, that boundary markers in the copperplates of Bengal had a highly varying pattern of delineation on the basis of their geographical and chronological characteristics. Further, the precise nature of the 'locality' within which land transfers occurs is also a major determinant of the nature of boundary specifications. However, a domineering role of different categories of water bodies and certain categories of floral vegetation is apparent from the available database. However, a clearer picture is expected to be yielded after the crucially significant set of copperplates from eastern and southeastern Bengal is examined.

The classified details of boundary clauses of the select copperplates from different sub-regions of Bengal are presented below:

Southeastern Bengal

The earliest southeast Bengal inscription is that of Vinayagupta found from the village of Gunaighar in the former Comilla (present Barhmanberis) district of Bangladesh, dated to the early sixth century (ca 507) CE. The boundary clause of the inscription is remarkable in that it provides a large number of details of the natural and human environ of seven plots of different categories of land: The detailed boundary specification of the Gunaighar copperplate is summarized below as a case:

Boundary of Plot 1: to the east, the border of Guṇikāgrahāra village and the field (*kṣetra*) of carpenter (*vardhaki*) Viṣṇu; to the south, the field of *Miduvilāla* (?) and the field belonging to the royal monastery (*rājavihāra*); to the west, the Sūrī-Nāśī-Rampuraṇeka-Kṣetram; to the north, the tank (*puṣkariṇī*) in the enjoyment (*bhoga*) of Doṣī... and the boundaries of the fields of Piyāka and Ādityabandhu.

Boundary of Plot 2: to the east, border of Guṇikāgrahāra village; to the south, the field of Pakkavilāla; to the west, the field of royal monastery; to the north, the field of Vaidya.

Boundary of Plot 3: to the east, the field of ...; to the south, the boundary limit of the field of Makhadvācharika; to the west, the field of Jolārī; to the north, the field of Nāgī Joḍāka.

Boundary of Plot 4: to the east, the boundary limit of the field of Buddhāka; to the south, the field of Kālāka; to the west, the boundary limit of the field of Sūryya; to the north, the field of Mahīpāla.

Boundary of Plot 5: to the east, the *kaṇḍaviḍuggurika-kṣetra*; to the south, the field of Maṇibhadra; to the west, the boundary limit of the field of Yajñarāta; to the north, the boundary limit of the village Nāda-udaka.

Boundary of Plot 6 (*talabhūmi*, i.e. lowland belonging to the *vihāra*): to the east, the ditch (*jolā*) between the (two) landing places of boats

at Cuḍāmaṇi and Nagaraśrī (*cuḍāmaṇi-nagaraśrī-nauyogāyormadhye*); to the south, the channel open to boats connected to the tank of Gaṇeśvara-*vilāla*; to the west, the end of the field belonging to the temple of Pradyumneśvara; to the north, the channel leading to the landing place of boats at Praḍāmāra (*praḍāmāranauyogakhātah*).

Boundary of Plot 7 (*hijjaka-khilabhūmi* at the entrance of the *vihāra*): to the east, the boundary limit of the field belonging to the temple of Pradyumneśvara; to the south, the boundary of the field belonging to the *vihāra* of the Buddhist monk Ācārya Jitasena; to the west, the stream (*gaṅga*) Hacāta; to the north, the tank (*puṣkarinī*) of Daṇḍa.

The best example of a narrative of an extraneous landscape and its ecology is found also in one of the copperplates of tenth century belonging to the reign of the Candra king Śrīcandra, found from the village of Paschimbhag in southeast Bengal, in the present district of Maulavibazar (former Comilla). Apart from the regular boundary description of the granted plot, the inscription furnishes an unprecedented detail of the landscape of Assam (Kāmarūpa):

Śrīcandra's forces, in the course of their conquest of the Kāmrūpa country, entered the woodlands near the Lohitya which were covered by the clouds that were the flying sea-pigeons, had Banana groves that were tawny owing to the ripening of the leaves or fruits and in which monkeys were roaming, had many plains on which drowsy yaks were ruminating leisurely, and were dark owing to the black aloe trees (*Aloe aloe barberae*). Citraśilā river covered with beautiful Storax (*Styrax balsam*) plants and river Pucpabhadrā marked by valleys full of the rustling sound of the Palmyra (*Borassus flabellifer*) leaves.

The boundary clause of the inscription further specifies that the granted plot was:

bounded in the east by the embankment at Bṛhatkomma, in the south by the Maṇi-*nadī*, in the west by the canals called Jujju and Kāṣṭhaparṇī and the river called Vetragnaṅghī, and in the north by the Kosiyāra river (*nadī*).

Eastern Bengal

The most detailed data of a given human environ is supplied in the Satya Parishat or Madhyapada copperplate of the time of Viśvarūpasena, dated to the early thirteenth century, found from the Dhaka district of Bangladesh. The land granted through this copperplate consisted of eleven plots. Two plots in the Ramasiddhipāṭaka in Nāvya in *vaṅga*, included within the Paunḍrabardhana *bhukti*. The land having its four boundaries are: on the east *devahāradeva-bhoga*; on the south-west, *varāhakuṇḍa*; on the south *bāṅgālavaḍā*; and on the west and the north, the river. This plot given away on the *Uttarāyana-saṃkrānti* day of the 13th regnal year, 25 *udānas* yielding 60, in the village of Binayatilaka in the *nāvya* region with boundaries as follows: on the east, the sea; on the south, *pranullī* land, on the west, the embankment; and on the north, the village. 165 *udānas* yielding 140, which lay in Navasaṃgraha-caturaka included in Madhukṣīraka-āvṛitti; 25 *udānas*, yielding 50 in Deūlahastī in Lāuhaṅḍā-caturaka in Bikramapura; to the east and west of the river... Land including homestead plot; four plots in the same village of Deūlahastī; 12 ³/₄ *udānas* yielding 50, in Ghāgharakāṭṭī-pāṭaka in Urā-caturaka which lay in Candradvīpa; 24 *udānas* yielding 50 in Pātilādivīka which lay in Candradvīpa—given away by king on the Utthānadvādaśī day in the 14th regnal year.

Northern Bengal

The Jagjivanpur or Tulabhita copperplate of ninth century, found from the district of Malda and datable to the mid-ninth century, is again a specimen of epigraphic source providing precise environmental data of a given micro-region. The boundary specification of the plate suggests that granted plot of land was bounded by the following landmarks:

There the half stream of the river *Taṅgila* marks the boundary on the east and (partly) on the south

too, which is (further) demarcated by the half stream of *Kubja-ghaṭikā*, *Kāśiggada-bandhāka*, in the middle, stretching up to the eastern boundary of *Nārāyaṇa-vāsa*. The western boundary is marked by *Golayi nirjjhara*, the low land (*avakhāta*) of *Ajagara-vāsaka* (python habitat), termite mound, *aśvattha* tree (the holy fig tree, *Ficus religiosa*), the western bank (*paścima pāṭa*) of *Svalpanandādhāra*, the *vilva* tree (*Aegle marmelos*) west of *Bijjaga-bandh*, the *āmalakī* tree (*Emblic myrobalam*) six reeds away (*ṣaṅṅal-āntara*). Next, the northern boundary consists of the east-facing northern water-holes, and (the area) from *Nandasurāli* on the south up to the half stream of (the river) *Tāngila*.

Fieldwork in the region resulted in the discovery of a number of early medieval sites in and around the identifiable waterbodies. The natural environ also suggests that the landscape surrounding the identified localities show

discernable continuity in the pattern of natural vegetation.

A number of early medieval sites were also reported on the basis of case studies on a set of twelfth century copperplates from the site of Shibbati (or 'Rajibpur') dated in the reign of the Pāla king Madanapāla (Fig. 1).

Western-Southwestern Bengal

A small set of copperplates dating either to the sixth century or to the twelfth century are found from the larger western-southwestern tracts of present West Bengal. Of these, the results of fieldwork around Malla Sarul, one of the epigraphic find-spots, has already been published. The second major inscription, used here to illustrate the nature of database on local environment, is the Sitahati (or Naihati) copperplate of the time of Lakṣmaṇasena.

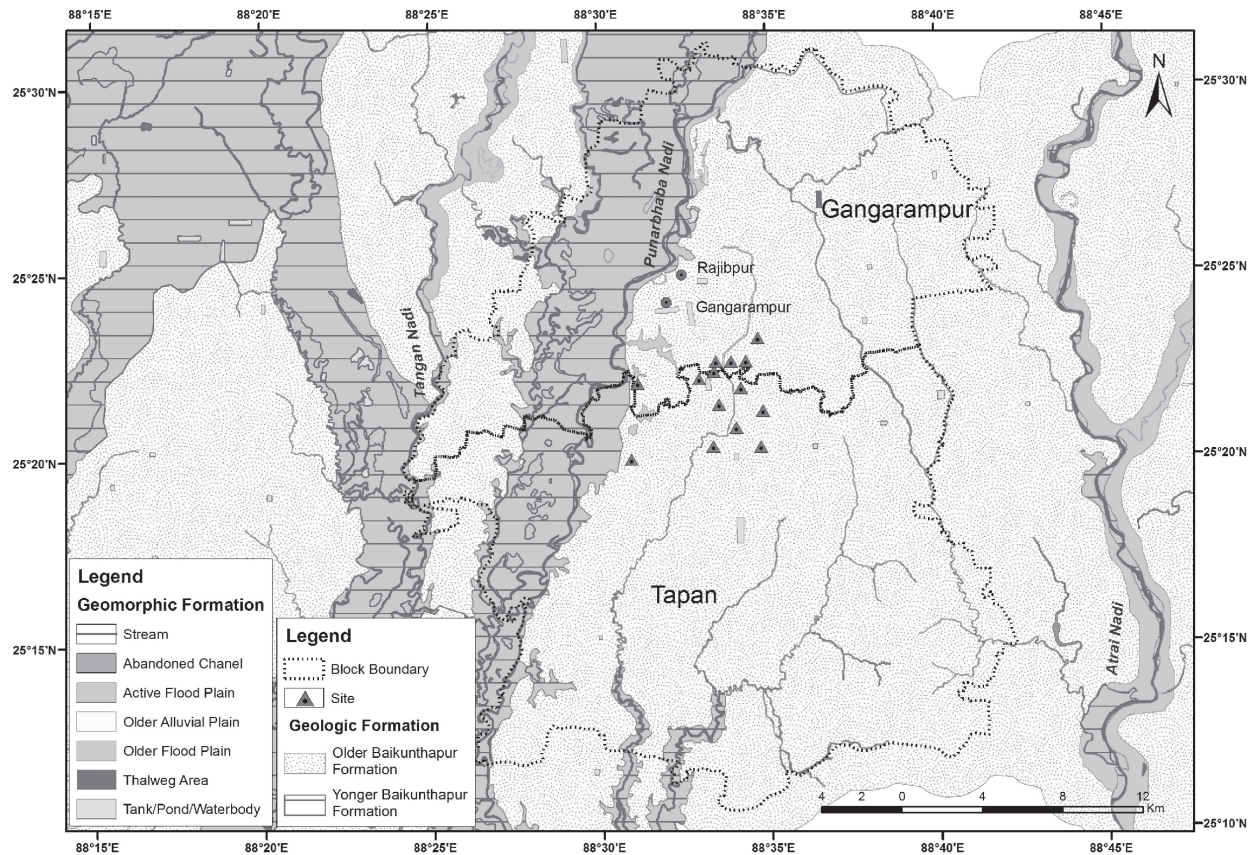


Fig. 1. Map showing distribution of archaeological sites around the village mentioned in the Rajibpur copperplate inscription.

Of these, the Naihati/Sitahati copperplate was taken up for a case study. The plate was found from the twin village of Naihati-Sitahati in the Ketugram PS of the Bardhaman district. The content of this inscription are like the other early medieval copperplates. The boundary clause of the plate reads:

...śrīvarddhanamānabhukty antaḥpātiny
uttrarāḍhāmaṇḍale svalpadakṣiṇavīthyām
khaṇḍayillāśāsanottarasthita siṅgaṭiānadyuttarataḥ
nāḍicāśāsanottarastha siṅgaṭiānadīpaścim
ottarataḥ amvayillāśāsanapaścimasthita
siṅgaṭiāpaścimataḥ kuḍumvamādakṣiṇasīm
ālidakṣiṇataḥ| kuḍumvamāpaścima paścimagaṭisīm
ālidakṣiṇataḥ| āūhāgaḍḍiādakṣiṇagopathadakṣiṇ-
ataḥ tathā āūhāgaḍḍiyottaragopathaniḥsṛta-
paścimagaṭi surakoṇāgaḍḍiaktiyottar āliparyyanta-
gatasīm ālidakṣiṇataḥ naḍḍināśāsanapūrvvasīm
ālipūrvvataḥ jalasoṭhīśāsanapūrvvasthagopath
ārdhapūrvvataḥ molāḍandīśāsanapūrvvasthitaḥ
siṅgaṭiāparyyanta gopathārdhapūrvvataḥ| evam
catuḥsīmāvicchinnah vāllahīṭhāgrāmah...

The complicated and at time puzzling boundary clause represented above shows that rural settlements were often recognized in terms of not only natural floral and faunal landmarks, but also in that of human settlements contiguous to it. It further demonstrated that a whole cluster of rural habitations as marked, on an apparently undifferentiated landscape, in terms of their proximity to a single waterbody, the Siṅgaṭiā river, the present counterpart of which could also be traced in the region.

The first appendix is devoted to preparing exhaustive classified database on the geographical details found in the copperplate inscriptions of Bengal. The second one, on the other hand, concentrates on a thorough listing of the distribution pattern floral and faunal landmarks that find mention in these charters.

CONCLUSION

The major elements that find frequent reference in the boundary clauses of the inscriptions are the

bewildering varieties of waterbodies like tank (*puskariṇī*), ditch (*jolā*), dried river (*gaṅginī*) and stream (*gaṅga*); different types of land (*kṣetra*) like lowland (*talabhūmi*), homestead land (*vāstubhūmi*) and fallow land (*khilakṣetra*); some highly interesting expressions in relation to maritime activities are found in some of the inscriptions. For example, one of the boundaries represented in the Gunaighar plate refers to a *nauyoga* or 'landing place of boats'. Besides, the boundary clauses are witness to the regular vegetation patterns of several sub-regional landscapes, by way of regular references to numerous economically and medicinally useful plant species.

A fresh fieldwork at two of the epigraphic sites of western Bengal resulted in the preparation of digitized maps of localities identifiable as modern counterparts of early medieval rural settlement. It may be reiterated that the inherent geo-chronological disparity in the nature of occurrence of copperplates in different sub-regions of Bengal is a major predicament in reconstructing a proper environmental history of the Delta in totality, the nature of evidence, if supplemented with available literary accounts from the region, may result in a fairly comprehensive picture of the layers of environmental changes that Bengal underwent in the early medieval period.

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