

INDIA—THE LAND AND THE PEOPLE

# THE BRAHMAPUTRA

Arup Kumar Dutta





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ARUP KUMAR DUTTA



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*In Memory*  
*of*  
*Ramendra Prasad Neog*

*Mahabahu Brahmaputra, Mahamilanar Tirtha,  
Shatajug Dhari Ahise Prakashi  
Samannayar Artha. . .*

— **Bhupen Hazarika**

The mighty Brahmaputra, holy site of the great synthesis, has for untold centuries been propagating the message of unity and harmony. . .

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## Preface

A river is an apt metaphor for life. It is born, wends its way through the landscape of consciousness, and dies to mingle in the sea of eternity. Constant change is the rule of life and a river is constantly changing; the water it carries is never the same, the face it presents is always different. Unlike hills and mountains it is not inert and immobile; there is life and dynamism in its flow. Sometimes it is placid, sometimes enraged. And, like life itself, its death is a beginning in the most sublime sense, a recurrent and cyclic regeneration of generations, a looking forward to a future which leaves behind yet embraces the past.

No wonder rivers formed a vital component of the animist's awe and worship, being shaped by the human imagination into living, breathing presences. Even the theistic fancy was prompted by residual animism, and invested the maternal archetype to rivers. The associations made with the Brahmaputra are, naturally, paternal! For the people of Assam this river is *Baba Brahmaputra*! The figure conjured up is that of an old, bearded patriarch, sanctified by millennia's wisdom, guiding the destiny of the people of the valley and hills since primordial times. In a more colloquial, intimate and loving way they call it *Borluit* or *Burhaluit*. It is the nourishing presence which overshadows all else in the valley and surrounding hills, animates the dwellers and lends vibrancy to their day to day existence, sustains their culture and shapes their imagination. The Brahmaputra, for the people of this region is, in fact, the very soul of Assam.

Yet the river does not belong to Assam alone. Emerging from the holy Himalayas and flowing as the *Tsangpo* across the heights of the Tibetan Plateau, it belongs to mystic Tibet. Rushing down in furious haste through deep chasms and narrow gorges as the *Siang/Dihang*, it belongs to Arunachal Pradesh. The floods and alluvia it brings as the Jamuna have induced the people of Bangladesh to make this river their very own. Above all, the Brahmaputra belongs to entire India, though the nation so far has seemingly ignored this fact. Jawaharlal Nehru, in his *The Discovery of India*, points out that the Brahmaputra was "rather cut off from the main currents of (Indian) history." Perhaps this lies at the root of the indifference displayed by the rest of India towards this river. It was not considered a sacred river in ancient India and the various myths investing it with holy stature grew up separately in Kamarupa, as Assam was known in the past. Much has been written about the Indus and Gangetic Valley Civilisations; hardly anything about the age old civilisations which had been erected on the banks of the Brahmaputra.

The indifference extends to scientific and technological aspects too. While in mainland India the hydro-power and irrigation potentiality of even minor rivers have been fruitfully exploited, very little has been done to tame and harness a mega river-system as the Brahmaputra. It was the very last of the major rivers in India to be bridged, the first bridge being opened for traffic as late as 1962. Our ability to manage a river and extract the best out of it depends upon a thorough knowledge of its fluvial-regime. Thus extensive research on the Brahmaputra and its tributaries is a *sine qua non* if it is to be tamed and harnessed. But serious and prolonged research by specialists like C.S. Bristow, J.M. Coleman, H. Bremmer, T. Hoffer and B. Messerli has been conducted only in Bangladesh. Not only have there been very few studies on the Brahmaputra in the Assam valley, the hazard management techniques adopted so far to tackle the grave problems of annual



flooding has been based upon an inadequate data-base. As Dr. D.C. Goswami, who has devoted a lifetime to the scientific study of this river, puts it : "A gigantic fluvial system with unique characteristics of flow, sediment transportation and channel configuration, the Brahmaputra river is close to a virgin when it comes to fluvial research."

Dr. S.D. Mishra, in his *Rivers of India* (1970), refers to the irony inherent in this contradiction when he states that "The Brahmaputra, the river normally neglected by most writers, is probably the most significant in the present day geopolitical context." Greater focus on the Brahmaputra can assist the nation in a two-fold way. The river and its tributaries constitute the most powerful fluvial system in India, endowed with unmatched latent energy which, if exploited, can be of invaluable service not merely to the North-East, but the nation as a whole. Possessing as it does over one third of the hydro-power potential of the nation, its exploitation can revolutionise the power scenario of the country. Yet, in the last five decades, less than 3 per cent of this stupendous potential has actually been tapped !

Moreover, the North-East is politically a hyper-sensitive zone. Colonial exploitation of its resources by the British had impoverished this once prosperous and self-sufficient region; floods of increasing intensity have ensured that the agricultural sector remains perpetually backward. Its neglect during the post-independence era has exacerbated the sense of alienation from the mainstream amongst the people, feeding secessionist aspirations and tendencies. The strategic importance of this area to India's security and integrity hardly needs to be reiterated. Hemmed in as it is on all sides by foreign countries, forces inimical to the well-being of the nation have found a fertile soil in the North-East upon which to plant their subversive seeds. It has now been universally acknowledged that economic development of the region is the sole panacea through which the feeling of alienation can be removed and the threat to national security be combated.

And the Brahmaputra is the Key to any endeavour towards this objective! The river-system had been a seminal element in the economic self-sufficiency of the region in the past, enabling as it did a vigorous internal trade as well as external trade with neighbouring countries such as Burma, China, Indo-China, Bhutan and Tibet. We must keep in mind that though the Brahmaputra Valley had come within the pale of Aryan Hinduism many centuries ago, it had retained its political independence till annexation by the British in the early 19th century. The river outlet provided by the Brahmaputra had then enabled the people of the region to embark on trade and cultural exchanges with the Indian mainland, which was another factor contributing to social and economic well-being. Also, the river's role as a corridor for cultural and trade exchanges between India and the above countries imparted to the North-East a centricity conducive to prosperity. Today, given the political will and interest to harness the potentials of this river-system and eradicate the annual scourge of floods, the Brahmaputra and its tributaries can work another economic miracle for the North-East and offset to a great extent the ominous outcomes of alienation.

However, issues like these are of peripheral concern in this book. Its principle aim is to familiarise readers in the rest of the country with this fascinating river by sketching its profile. Since the book is written with the lay reader in mind, this can by no means be a strictly geographic or scientific endeavour. On the contrary, only certain broad facets have been highlighted, while data and aspects of the fluvial and hydrologic regime, which might be purely of interest to scientists and researchers, assiduously avoided or simplified. Simultaneously, a brief account of explorations in the past to unravel its enigma, and the romance surrounding them, has been given.

An objective of equal importance is to acquaint outside readers with the society which grew up on the banks of the Brahmaputra, the heights of civilisation it attained and the

contributions made by it to the pan-Indian mosaic. Given the Sheer length and huge size of the river, such a statement needs to be qualified. The Brahmaputra flows through three countries, possessing unique societies of their own with distinct cultures. But the modest mandate of this book entails that it focuses primarily on the Indian section, specifically the Brahmaputra Valley and the hills surrounding it on three sides. In a sense this is as it should be; though the world today knows the entire river as the Brahmaputra, technically only in the Assam section it is called by that name.

Moreover, apart from the hill districts, Assam comprises of two valleys watered by two river-systems—the Barak (Surma) Valley, for obvious reasons, does not figure in this book. Its basic aim is to trace the ethnological evolution of the society (centred around the Brahmaputra) which came into being in Assam, its history and socio-cultural tradition. But, here again, the treatment has to be somewhat broad and rudimentary. The history of the Brahmaputra Valley reaches across millennia, with the powerful kingdom of *Pragjyotisha* ruled by Mongoloid monarchs such as Bhagadatta being contemporary to the various kingdoms which participated in the Mahabharata war. Given this vast range, it is not possible to go into great details. The multiplicity of ethnic entities in the region has endowed both colour and intricacy to its culture. The complexity has been compounded by the influences of two great cultures since ancient times, those of India and China. It is impossible to delineate such a complex cultural phenomenon within a few pages. However, considering that the knowledge of the rest of India about the society of this region is woefully meagre, it is to be hoped that even this broad treatment will help enhance the much needed national awareness.

Finally, the book also seeks to familiarise the reader with the intimate and intricate manner in which the river is bound up with the geography, society and economy of

the North-East, especially the Brahmaputra Valley. The river and its tributaries find echoes in the culture and ethos of the people, their folk-lore and literature, and in the very rhythm of their lives. A largely rural, agrarian society with an essentially hydrologic culture is absolutely dependent on river-systems like that of the Brahmaputra for its survival. An appreciation of this reality would, I believe, give the reader a proper perspective of the role of this river and its potentials.

A number of eminent personalities were consulted by me while writing this book. I am particularly indebted to Dr. Dulal Chandra Goswami for guiding me through involute technicalities and help draw a simpler profile of the river for lay-readers. I place on record my gratitude to Dr. Hiren Gohain, Mr. Nilmoni Phukan, Dr. Birendra Nath Dutta, Dr. Pradip Chandra Sarma and other leading intellectuals of Assam for their invaluable aid and guidance. Dr. Hem Barua, Mrs. Bineeta Dutta, Mr. Prafulla Bora, Mrs. Runima Barua, Mrs. Srutimala Duara, Mr. Jyotidev Goswami and others helped in collecting material for the book. I am deeply grateful to them.

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Guwahati, Assam

ARUP KUMAR DUTTA

## THROUGH ANTIQUE MISTS

The Brahmaputra is truly an international river. Born in the glacial womb of the Kailash range of the Himalayas, south of Rake Kanggyen Tso (Gun Kyud) lake in south-west Tibet at an elevation of 5300 metres, it traverses the Tibetan Autonomous Region of China, passes through the Indian states of Arunachal Pradesh and Assam, before cutting across the length of Bangladesh to meet the other great Indian river, the Ganges, and finally plunge into the Bay of Bengal. 1625 km of its 2880 km length lies in China, 918 km in India and 337 km in Bangladesh. Flowing in an easterly direction from its source, at Pe (3500m) on the eastern fringe of Tibet it enters narrow, gorge-filled terrain and continues south across the east-west trending ranges of the Greater Himalayas (average elevation 6000m), Middle Himalayas (3000-5000m) and Sub Himalayas (1000-2000m) before reaching the plains (155m at Pasighat in Arunachal). Entering Assam it meets two other major rivers, the Lohit and the Dibang, and together takes on an incredibly wide, braided, westerly course through the Brahmaputra Valley, turns southward around the Garo Hills below Dhubri in Assam and makes its journey to the sea across Bangladesh.

Few rivers in the world are called by as many names, testifying to the diverse cultures which have sprung up on its banks during the course of its long journey. Closer to its source it is known as the *Mutsung Tsangpo*, then the *Moghung Tsangpo* and, finally, the *Tsangpo*. While Chinese maps have it as the *Yarlu Tsangpo-Brahmaputra*, explorers

in the past have mentioned other local Tibetan names. The Imperial Gazetteer, for instance, refers to the name *Narichu Sangpu*. In their *Narrative of a Journey* (London, 1840) Sir W. LLOYD and Capt. Alex Gerard writes : "The Brahmaputra is named *Tanjoo Khampa*, or *Erechoomboo*, and one of its streams takes its rise from south-east of Manasorovar." The names referred to here are obviously corruptions of the Tibetan equivalent of the Brahmaputra, which is *Tamyak Kombo*, meaning horse-bodied or mouth of a horse. In his book, *Three Years in Tibet*, Ekai Kawaguchi states : "We reached the Brahmaputra, known in this region as *Martsan-Gi-Chu* or *Kobeichu* according to the districts which it traversed." The famous Swedish explorer, Sven Hedin, in his book *Trans Himalaya* (1909) adds yet more names : "The river is here called *Sangchen*, or sometimes *Tsangpo-Chimbo*, that is, the Great River..... We have already mentioned the name *Yere-Tsangpo* and further westward we shall meet with other names."

Entering India, after skirting high mountain chains of the Himalayas, the Tsangpo takes on the name of *Siang* and further down, *Dihang*, as it rushes down the hilly terrain of Arunachal Pradesh. Previously the river here was also called *Shyama*, *Sema*, or *Senglai*, while near Along it was known as *S'Yem*. In Assam, after meeting the two other great flows, the *Dibang* and the *Lohit*, it meanders through the narrow valley as the Brahmaputra. The locals also know it as the *Lohit*, *Luit*, *Borluit*, *Burhaluit*, *Siriluit* etc. One of its channels in Bangladesh retains the old name of Brahmaputra, while the main channel is called the Jamuna. At Goalundo the Jamuna meets the Ganges, the combined flow being called the Padma which merges with the Meghna before debouching into the Bay of Bengal.

In the past the river in Assam was known as *Tilao* in the Tai and Bodo and *Taluk* in the Singpho-Mishimi languages. Sir Edward Gait, the historian, has this to say : "In some cases the old name is disappearing, while in others it has already gone, as in the case of the Brahmaputra, which in



the early days of Ahom rule was known as the Ti-Lao." (*A History of Assam*, 1905). The Ahoms themselves called the river *Nam-Dao-Phi*, which translates as "the river of the star-god." Ancient scriptural allusions point out to a host of other names in the past such as *Lauhitya*, *Hiranyo*, *Mandakini*, *Hridini*, *Khatai*, *Brahmi*, *Karkaya*, *Diyame* etc. The British too added to the medley, but their names, of course, had more to do with difficulty in pronouncing Sanskrit or local names. For instance, in his well known *Report on Assam*, 1853, A.J. Moffat Mill spelt the river as *Bhramapootra*, *Berhampooter*, *Bramapootra*, *Brahmooter*, *Brahampootra* and *Brahmapootra*, all within the space of a few hundred pages!

The oldest verifiable name for the Brahmaputra in Assam, Lao-Tu, and its Bodo derivation, Ti-Lao, is ascribed to the Austro-Asiatic people who are thought to be some of the earliest inhabitants of this region. But the first recorded name of the river, *Lauhitya*, presumed to be Sanskritisation of the Austric word, is to be found in ancient Aryan literature, *Brahmaputra* being coined at a much later date. In the remote past *Lauhitya* referred not merely to the river, but also to the *Janapada* or territory through which it flowed. Thus in the earliest allusion in *Sabha Parvan* of the *Mahabharata*, which narrates how *Bhima*, in the course of his expedition to the east, reached the *Lauhitya* region and compelled the *Mlechcha* kings and dwellers of the seashore to pay taxes, a distinct territory is referred to :

*Evam Bahuvidhan Desan Vijitya Pavanatmajah  
Vasu Tebhya Upadaya Lauhityamagamad Vali  
Sa Sarvvan Mlechchanrpatin Sagaranupavasinah  
Karamaharayamasa Ratnati Vividhanica*

(*Sabha*, 30, 26-27)

*Lauhitya*, in the sense of a specific area, is also found in the *Markendeyapurana*, canto 58. In that and the preced-

ing canto, Bharatavarsha is depicted as a east-facing tortoise resting upon Lord Vishnu, various regions being shown distributed over different parts of its body. Lauhitya as well as Pragjyotisha, as Assam was known in ancient times, lie side by side on the face of the tortoise. The Kurmavibhaga section (14.6) of the *Brahatsathhita* also refers to Lauhitya and Pragjyotisha as two different but contiguous lands. Lauhitya, probably lying west of Pragjyotisha, comprised what is now Bangladesh, though a portion of it might have been within Pragjyotisha during the reign of Bhagadatta, the Kirata king.

However, Lauhitya in the sense of a river is also first mentioned in the Mahabharata. In chapter 9 of the Sabha Parvan we have :

*Sarayurvaravatyatha Langalica Saridvara  
Karatoya Tathatreya Lauhityasca Mahanadah*

(*Sabha*, 9-22)

(The great rivers Karatoya, Atreyi and Lauhitya).

In chapter 9 of the Bhisma Parvan too it is referred to along with other rivers :

*Suktimatimanangam Ca Tathaiba Brisasahwayam  
Lauhityam Karatoyam Ca Tathaiba Brisakahwayam*

(Rivers Suktimati, Ananga, Brisasahwaya, Lauhitya, Karatoya and Brisakahwaya).

Sage Palakapya in his *Hastyayurveda* states that his birthplace was the hermitage of sage Samagayana, which is located "near the Lauhitya Sagara." This is quite likely, not only because the North-East is elephant country, but also because there is an Assamese version of elephant-lore called *Hastividya*.

The *Vayupurana* states that the river Lauhitya was a place for pilgrimage and holy for Shraddha. The *Brahmandapurana* (1.51.11) tells of the river Lauhitya which arose from the lake Lohita. In the tradition of Baudha-Vajrayana (Tantrik Buddhism) there are lyrical compositions in

enigmatic language called *Charyapada*—of the 34 who composed these philosophical songs, quite a few, it appears, belonged to this region, one being named *Lauhityapada* of *Lauhityadesh*.

There are many such ancient sources where mention of the river may be found. For instance, in Kalidasa's *Raghuvansa* (written around mid-fourth century), Raghu is said to have crossed the Lauhitya in order to conquer Pragjyotisha. When he reached Kamarupa, the last country to be subdued by him in his northern expedition, the king of Pragjyotisha began to tremble. Other similar sources are Kalhana's *Rajtarangini*, the *Mandasor stone-pillar inscription* of Yasodharman (525-35 AD), the *ApsHAD stone-inscription* of Adityasena (672 AD), the *Pascim Bhag CP Grant* of Sricandra (10th C. AD) and *Tezpur copper-plates* and *Parbatiya-plates* of Vanamala.

Though Lauhitya is from the Austric Lao-Tu or Tibeto Burman Ti-Lao which means 'clear water', the Sanskrit derivation (Lao-Tu/Ti-Lao/Lao-Ti/Luiti/Luit/Lohit/Lauhitya) translates as the 'river of blood' or 'red river', phrases having both mythological and literal connotations. While the Kalikapurana explains the name Lauhitya to be due to the river merging from the Lohita lake, it is also associated with the great Hindu saint Parasurama who is said to have washed his hands in its water after committing matricide, thereby eternally staining it with blood. Such an association is to be found in the *CP Grants* of Indrapala, which state that the river "has received the name Lauhitya due to its waters washing the mud in the form of thick blood (Lohu or Lohita) of the axe with which Parasurama chopped off the knotty parts of trees in the form of necks of kings" (Verse 3). Yet the name is appropriate in a physical sense too—during the rainy season the river takes on a literally ruddy tinge because it carries a heavy sediment load of red soil and detritus.

The gist of the Puranic myth of Lauhitya's creation is

first narrated in the Srsti-Khanda of the fifth book of the *Padmapurana*. According to it the river's gestation was in the womb of Amogha, the beautiful wife of the sage Santanu, after she had imbibed the semen of Brahma, Hindu Lord of Creation. Amogha delivered on aqueous form at a place called Yugandhara. In the midst of the water could be seen a celestial Deva, clad in blue, adorned with a garland of jewels and a crown. The gods in heaven saluted this apparition and the spot became the foremost place of pilgrimage. "Thus Lauhitya was the son of Brahma born in Amogha's womb and brought into being by Santanu."

However, the name Brahmaputra was first mentioned in a much later work, the *Kalikapurana*, which scholars believe was written around the 10th century AD by an anonymous poet of this region. Though even in earlier allusions Lauhitya was considered to be a 'masculine' river (a *Nad* rather than a *Nadi*), by calling it Brahmaputra, or son of Brahma, the *Kalikapurana* rendered explicit this presumed masculinity. The Brahmaputra is, in fact, according to Hindu sacred writings, one of the few 'masculine' rivers in the world. Such a presumption is not without reason, the foremost being the sheer size of the river, the power of its flow especially during the rains, the muscular currents which eternally ripple across its anguine body and the magnificence of the terrain through which it wends its majestic way. One must note that the Lauhitya was occasionally referred to in ancient treatises as a Sagar (sea), thereby testifying to the impact its mammoth size and grandeur made upon the poetic imagination. In the tradition of Sanskrit literature, the sea is always masculine, while rivers are feminine. Moreover, according to Hindu belief rivers which flow from east to west are Nads (except Narmada), while those which flow from west to east are Nadis.

The *Kalikapurana* devotes an entire section to the Brahmaputra and relates the Santanu-Amogha myth of its

creation in a more elaborate and unambiguous manner, in the Puranic style of narration. According to it, there was a famous king in ancient times known as Sagar who, on seeing this river, was curious to know how it originated. He summoned the sage Aubadhya, who used his fecund imagination to enlighten the king with the following story.

In Harivarsha lived a greatly fortunate, wise and ascetic sage named Santanu, whose wife was the greatly chaste Amogha, daughter of Hiranyagarbha. Santanu lived sometimes in Kailash, sometimes on the bank of a big Kund or tank called Lohita and sometimes on the top of mount Gandhamadana. Once, while at the last named place, the sage went far away from his Ashram to gather fruits and flowers. Meanwhile Pitamaha Brahma, the Creator, came on his swan to his cottage in quest of Santanu and saw his wife. Amogha was beautiful as a celestial nymph. Her beauty so enamoured the creator that he wished to have a child by her which would benefit the world. But the chaste Amogha not only did not recognise Brahma, but also resisted his advances, saying :

*Akaryyam Na Maya Karyyam Munipatna Bigarhitam  
Balat Pramathya Cahanettwaya Twanca Sapamyaham*

(I am the wife of a sage. I will not be a willing party to this crime and will curse you if you molest me).

Brahma, thereupon, returned to BrahmaloK after leaving his semen behind. Santanu, on seeing the fire-like semen lying on the ground, learned of Brahma's visit and his desire. He meditated and, utilising his divine powers, recognised the Creator's true intention. He requested his wife :

*Idamtejo Brahmanastwam Pibamoghe Mamajnaya  
Hitaya Sarbajagam Devakaryyarthasidhaye*

(Amogha, drink this semen of Brahma for the salutariness of the three worlds and fulfillment of desire of the gods).

Whereupon Amogha requested her husband to drink the semen himself and sprinkle it into her womb. She conceived and in course of time gave birth to a watery form which in appearance looked exactly like Brahma. Santanu placed this form, called Brahmakunda, in the middle of four mountains— Kailash, Gandhamadana, Jarudhi and Sambwarttaka. With the passage of time it grew into a lake, swelling up to forty miles and looking like a vast sea. Brahma himself blessed his child and gave it the name Lauhitya Ganga. Gods and goddesses came to bathe in it and drink its pure water.

Much later it fell to the lot of the sage Parasurama to cleave the bank of the Brahmakunda and cause the Brahmaputra to flow as a river :

*Amoghayang Santanustu Bharyayang Tanayangswakam  
Jalarupang Samutpadya Jamadagnyena Dhimata  
Abatarayadabyagrang Plabayan Kamarupakam  
Sa Tu Brahmasuto Dhirah Plabayan Kundasanchayaan  
Achadya Sarbatirthani Bhubiguptani Chakarot*

(Parasurama, the son of Jamadagni gave the form of water to the offspring of Amogha, the wife of Santanu and hurriedly brought it down to inundate the region of Kamarupa. The sober son of Brahma flooded all the sacred lakes and submerged all the holy places and made them concealed under the earth (Kalikapurana, 81, 32-34a).

Parasurama, as stated in the narrative, was the son of sage Jamadagni. Pampered by his mother, Satyavati, since childhood, Jamadagni had developed a fiery temper and thus been given his name. He married Renuka who bore him five sons, the youngest being Parasurama. Renuka was sent one day by her husband to fetch water from the Ganges for his worship. While on the bank of the river she was enraptured by the sight of a beautiful young king, Chitratha, indulging in watersport with his companions, and was afflicted with unbecoming passion. Jamadagni at once understood the reason why she was late in fetching



the water. Overcome by rage, he ordered his five sons to cut off their mother's head. While the four elder ones balked at committing matricide, Parasurama, ever obedient to parental commands, picked up an axe and severed Renuka's head. Thus was he burdened with matricide—that the axe remained stuck to his hand was a reminder of the heinous nature of the crime!

Even Jamadagni, who had acquired divine powers through meditation and could restore Renuka to life, could not redeem Parasurama from his terrible sin, nor remove the axe from his palm. He advised his son to undertake severe penance and visit each of the *Tirthas* or holy places of pilgrimage in Bharatavarsha. Parasurama did as advised, visiting and bathing in holy places, but was unable to get rid of the axe. However, on taking a dip in the Brahmakunda, the bloody axe which had been a symbol of his sin finally slid away from his hand and he was redeemed. Such a miracle convinced him of the sacred nature of the water of the Brahmakunda, and he grew determined to make it flow to the plains so that entire creation could benefit from it.

With his axe he cut a channel till the Brahmaputra first flowed into the Lohit tank.

*Tasyapi Sarasastire Samuthaya Mahabalah*

*Kutharena Disam Purbamanayad Brahmanah Sutam*

(Then the valiant Parasurama stood on the bank of Lohita and cut a way for the Brahmaputra to flow in the eastern direction).

The son of Jamadagni next cleaved the Hemsringa (or Swarnaparbat) mountain lengthwise and the great river passed through the sacred land of Kamarupa before flowing into the Southern Sea. Since it came from the Lohita tank or lake, it was also called Lauhitya.

It is interesting to note that a tale similar in spirit also exists in Buddhist mythology, where an ascetic named Manju Ghosai was supposed to have brought the

Brahmaputra down from the Brahmakunda to flow through Assam.

“All the rivers are sacred, all flow towards the sea. All are like mothers to the world, all purge away sins”— so said the Markendeyapurana (57.30). The utility of mythopoeia in investing sacredness to rivers is seen in the case of most Indian rivers considered “feminine” and holy by Hindu scriptures. However, the myth surrounding the Brahmaputra to invest it with sanctitude may have been created divorced from the Aryan mainstream. Not only is it a ‘masculine’ river, but also, strangely enough, it was not among seven rivers considered sacred in ancient India, these being the Ganges, Yamuna, Godavari, Saraswati, Narmada, Sindhu and Kaveri.

The Assamese cultural icon, Kalaguru Bishnu Prasad Rabha, had sought to establish that the name Brahmaputra was of derivation from a Bodo word *Bhullumbuthor* or the ‘river of bubbling water’ (*Bhullumbuthor/Barambutut/Baramputar/Brahmaputra*). But obvious inferences which can be derived from age-old, associated myths render such an attempt redundant.

The Santanu-Amogha-Parasurama legend which sought to render sacredness to the Brahmaputra was indubitably an offshoot of totemistic and animistic tribal beliefs prevailing in prehistoric Assam. Primitive tribes of the region not only worshipped the Brahmaputra, but also most other rivers. The custom of offering virgins to river-gods show how deeply rooted was this faith. Such a ritual existed in ancient China, the original home of most of the tribes now living in the North-East. “Every year a beautiful girl was chosen. Fed and adorned like a bride, she was laid on a bridal bed. This was launched on the water and borne to a whirlpool where it sank. Thus the chosen went to be married to the Count of the River.” (Birinchi Kumar Barua, *Asomor Lok-Sanskriti*, 1961). Virgin sacrifice to rivers in Assam is mentioned in the songs of Kamalakuonri. Such

animistic reverence for rivers translated into Aryan myths. The Kalikapurana and the Smritishastras attribute sacredness to the Brahmaputra as well as the Swarnashree (Subansiri), Vallava (Baroliya), Bhattarik (Jia Bharali), Bridohaganga (Baragang), Dikkarvasini (Dikrong) etc.

The Brahmaputra is considered sacred not merely in India, but Tibet and Bhutan too. That the literal meaning of its Tibetan name, Tsangpo, is the Purifier, testifies to the sanctity attributed to it. Sven Hedin records that : "The Tsangpo is the river of Tibet par excellence. According to Waddell this name is sometimes so written that it is a strict translation of the name Brahmaputra, which means the son of Brahma." Swami Pravananda, in his book *Exploration in Tibet*, an account of a trip made there in 1928, provides an interesting piece of information. "After the Angsi and the Rongakchhu join the Chema-Yungdung (source streams of the Tsangpo), a little further down, the Chema broadens into two lakes called *Guru-Kyok* and *Rapgyal-Chhungo*. The Bhotiya merchants who go from Manasarovar beyond the *Kubi Chhu* (also called *Kupi Chhu*) for purchase of wool, regard this broadened portion of the river (double-lake) as the source of the Brahmaputra and call it Brahma-Kund; as such, they consider it sacred and bathe in it."

Apart from the Padmapurana and the Kalikapurana, we have allusions to the sacredness of the Brahmaputra in invocations contained in other treatises. For instance, the Yoginitantra states that there were two holy places called Brahmakunda and Lauhityahrada, bathing in which brings redemption from sins. The Mantra in Yoginitantra is significant because both Lauhitya and Brahmaputra are almost simultaneously invoked :

*Namaste Brahamaputraya Namah Santanusunave  
Trijanmanasca Yat Papam Hara Me Lohitatmaja*

(6.16 Patala, Yoginitantra)

(O Brahmaputra, I salute thee! O Son of Santanu, I salute thee! O Lauhitya form, remove all my sins

from the previous three births!).

The *Kamakhyatantra* also has an invocation :  
*Yatra Sidheswari Yonau Tatopi Dwiguna Smrita*  
*Tatascaturguna Prokta Lauhitye Nadapayasi*

(11th Patala, *Kamakhyatantra*)

(Where there is the genital organ of Sidheswari there is two times fruition of worship. Lauhitya gives four times fruition of worship than the genital organs of Sidheswari can do if the worship is performed in its waters).

As Birinchi Kumar Barua points out in his *A Cultural History of Assam (Early Period)* : "It appears that the river Lauhitya had already attained religious sanctity. The Kalikapurana devotes an entire section on the Lauhitya. Manuals or *Brahmaputra Mahatmya* also began to be written during this time. It is said that mere bath in the Lauhitya leads to emancipation (*Lauhitya Toye Yah Snati Sakaivalyam Vapnuyat*) and purification of all sins (*Lauhit-yam Nama Tattirtham Snanannasyati Patakam*)."

But the Brahmaputra, due to the presence of strong under currents, is not a safe river for bathing, in the way in which the Ganges, for instance, is. Particularly during the rains, when it swells up into terrifying size, it can be extremely dangerous. Thus, perhaps, gradually other myths, scriptural as well as folk, evolved to limit ritualistic bathing in its water. Both the Kalikapurana and *Kamakhyatantra* contain such precautionary myths. The sage Vasistha, it is said, was meditating on Shiva on Sandhyachala hills. Shiva's hosts, exasperated at Vasishta's prolonged presence, wished to expel him from Kamarupa and one of them, Ugratara, became so bold as to lay her hands on the sage. Vasishta pronounced a curse not merely on Ugratara, but also on the Lord of Destruction himself because he had been so eager to see him leave. Brahma, having to put the curse into effect, caused the descent of the Brahmaputra by the strokes of Parasurma's axe, which washed

off all sacred places so that it became impossible to recognise individual Tirthas. Any one, desiring to earn merit in an individual place of pilgrimage, had to bathe in the Brahmaputra with the thought of that Tirtha in mind.

However, the river also washed off Vasishta's Ashram as well as the wherewithals of his Puja, enraging the sage who pronounced a curse upon it, saying that henceforth it would be a carrier of human effluents and thus impure. When the Brahmaputra Deva pleaded for pardon, sage Vasishta relented and said that out of the entire year the river would attain sanctity on a single day, when those who bathe in it would acquire redemption. A folk-legend aims at a similar restriction. According to it, after Parasurama had caused the Brahmaputra to flow, the currents of the river plucked the axe out of his hands and carried it away to the sea. The sage grew angry at this indiscretion and pronounced a curse similar to Vasishta's, but relented after the river had asked pardon and pronounced it to be sacred on a single day of the year.

That auspicious day is Suklastami (8th day of the full moon) in the month of Caitra (March-April), the related festival being called Ashokastami. The *Tithitatta* gives details of the rituals to be performed during ablution and the outcome so obtained. A Mantra must be recited while bathing in the Brahmaputra on this day :

*Prithibiyam Yani Tirthani Sarita Sagaraadaya  
Sarbe Lauhityamayanti Masi Sitastamimam  
Brahmaputra Mahabhag Santanu Kulanandana  
Amoghagarbha Sambuta Papam Lauhitya Me Hara*

(All the Tirthas of the world are present in the Brahmaputra on this day of Ashokastami. That is why during bathing one must invoke the Son of Santanu and one born in Amogha's womb and pray : "O Lauhitya, emancipate me from my sins.").

Bathing in the river is, in fact, prescribed throughout the month of Caitra :

*Caitre Masi Sitastamyam Yo Naro Niyatendriyah  
Caitrantu Safalam Masam Such Prayatamanasah  
Snati Lauhityatoye Tu Sa Yati Brahmanah Padam  
Lauhitya Yah Snati Sa Kaibalyamabapunya .*

(Those who with a pure heart and subjugation of the senses bathe in the Lauhitya throughout the month of Caitra achieve *Punya* or redemption from sins).

The belief persists even today and millions of people come to the Brahmaputra in Caitra for a ritual dip. The Ashokastami festival is celebrated at many places along the entire length of the river and Melas are held. One observes that mid-March and early April are a comparatively dry period when the level of the Brahmaputra is at its lowest and an extended river-bank facilitates safe bathing. Also, it is interesting to note that ritualised bathing in a river is not mandatory before Darshan at temples in Assam, as is mostly the case in the rest of India. Each temple in Assam, including the celebrated Kamakhya, has a tank of its own where those who desire can take a holy dip. Even when perched on a hill where building a tank may not be feasible these are built on the foothills. For example, the tank called Silpukhuri in the heart of Guwahati was originally meant for pilgrims visiting the Nabagraha temple, while the pair called Jorpukhuri were for the Ugratara temple.

A subtle difference does exist between the attitude of orthodox Hindus to the Brahmaputra and its tributaries and that of tribal animistic worshippers. The Hindus invest the rivers with sanctity in an oblique manner, treating them as instruments through which redemption can be obtained. On the other hand, in animistic rituals, the river itself is directly worshipped. The Nagas, for instance, consider all rivers to be sacred but invest greater purity to the *Diyong* or *Tongpu*, and make pledges in its name or with its water in the palms. They believe that if the pledge is broken, the perpetrator would die if he ever crossed that



river, or touched its water or ate fish caught in it. There are mentions of worship of the Brahmaputra river-god in the chronicles of the Ahoms. The Ahom king, Pratap Singha, was said to have sacrificed four pairs of buffaloes, ducks, pigeons, goats etc. to the Brahmaputra during his conflict with the Mughal invaders. Despite broad Hinduisation of the region the animistic streak has survived among the people and even today many tribes worship the river. Orthodox Hindus too offer prayers and oblation to the Brahmaputra god for subsidence of water during high floods. There are incantations in the Asamiya language to be recited during worship, one of which is :

*Ganga Adi Kari Jatek Tirthak Pranam,  
Srilohit Pranam Karo Eke Thai*

(We bow our heads before Ganga and other holy sites. From the same place we also bow before the Lohit).

The banks of the Siang-Dihang-Brahmaputra have a multiplicity of ethnic entities living along them, most since prehistoric times. Moreover, this mammoth river has had a seminal influence on the lives of the people it sustains. It is, therefore, curious that while we have Aryan myths like the Brahmaputra Upakhyān narrated above, there are none regarding its creation in the folk-mythology of the disparate tribes inhabiting the Siang-Dihang and Brahmaputra regions. There appears to be two reasons for this. First, given the fact that the Brahmaputra valley has since time immemorial been notoriously flood-prone, the early settlers probably chose to colonise the foothills somewhat away from the river, or the banks of its tributaries. Thus we have folk-myths regarding the fabulous origin of the tributaries rather than the main river itself, as illustrated by the Kanyak-Bhairavi myth with regards to the Bharali tributary. The Mishings, who are a tribe most intimately connected to the Brahmaputra, consider the Subansiri tributary (which they call the Abanari) to be their source river and their folk-beliefs relate to it. Similarly the Dimasa

tribe call themselves sons of the Big River (Di-river, Ma-big, Sa-son), but in their case the Big River is the Dhansiri tributary and not the Brahmaputra.

Second, the tribes, having settled, appear to have remained relatively sedentary unless displaced by more powerful migratory waves, the reason being the difficulty of journey and communication in a jungle-filled, inimical terrain. Thus, while their eyes remained focussed on the immediate surroundings, the huge size and might of the Brahmaputra did not quite touch their imagination. Such limitation of experience leading to circumscribed imagination can be attributed to the fact that the by no means inordinately large tank at Sibasagar was called the Sea of Shiva.

However, since the culture of the people is essentially hydrologic, there is a surfeit of allusions to rivers in the folk-lore of this region, though not always by name. The legend of the Siang being the progenitor of all rivers in the *Abang* ballads of the Adi tribe of Arunachal, which relates myths regarding their origin, is an instance of this. Some tribes in the Tirap district of Arunachal believe that a huge serpent was the guardian of a lake on top of the Rongoka (Patkai) hills. A cock convinced this serpent to release the water of the lake, which today flows down as the Tirap and Diyang rivers. Rivers constantly recur in the folk-tales too. In Arunachal there are many such tales, including that of two youths who wished to marry a beautiful maiden, whose mother was loath to give her away to them. She, therefore, set them a seemingly impossible task—to string a thread spanning the width of the Siang with precious stones! The youths succeeded and carried the girl away, no doubt aided by the fact that while, in the plains, the river is many kilometres wide, in the hills of Arunachal it is sometimes only 30-40 metres broad in stretches!

The Hill-Mishimis have a folk-tale about how their women and those of the plainsmen learned to weave. In

the beginning man did not wear clothes because they did not know how to weave. But a girl, named Homboroomai, pleased the god Matai through worship and he taught her how to weave. She sat beside the river, tracing the pattern of its currents on to the cloth she wove. She looked at nature and wove patterns from flowers, bamboo leaves, ferns. One day a porcupine saw the cloth and, wanting to steal it, came out of his hole, displacing a rock which fell on the girl and killed her. Her loom was shattered into pieces. The river carried the pieces to the valley and that is how plainsmen learned to weave. The flowers in her cloth became butterflies. In the folklore of the Singpho tribe it was a river which gave iron to man. The first blacksmith named Intupoa, tired of cutting wood with stone, asked a tree where he could find something sharper. "If I tell you, you'll cut me down," replied the tree. Next he asked the grass but received a similar answer. When he asked a wild animal, it replied, "If I tell you, you'll make arrows and kill me." Finally he asked the spirit of the river, who presented him with iron.

Another imaginative tribal folk-tale relates how a rainbow is formed. A giant serpent lives in a river. When it becomes hungry it seeks human prey. If it cannot find a prey it climbs up to the sky to entreat the gods for something to eat. The path it takes is the rainbow. In fact, many tribal beliefs visualise the river-god as a serpent. Even today when a pond is dug, a stake called Naag, considered to be the embodiment of the water-god, is driven at the centre. Verrier Elwin, in his *Myths of The North East Frontier of India*, relates a Sherdukpen folk-tale in which a river-snake marries a village belle. At night it would assume human shape, but at daybreak revert to its serpentine form and go back to the river. No doubt the sinuous shape of a river is one basis for such a primitive association.

In two of the most endearing folk-tales of the Brahmaputra valley, *Tejimala* and *Silanir Jiyekar Sadhu* (The

story of the kite's daughter), a river plays a significant part. In the first the father of Tejimala is a Saudagar (river-merchant) who is away for long from his home on trading trips down the river Luit or the Brahmaputra, which enables the step mother to torment his daughter and attempt to kill her. In the second tale a man, fed up with giving birth to only daughters when he wished for a son, threatens to kill his next issue if she turns out to be a girl. That indeed is the case, but the mother floats the newborn baby in a basket down the river, from where she is picked up by a kite and reared up by it.

Among the folk-myths related to the Brahmaputra by name, the Lakhinder-Beula legend of Lower Assam is one of the most popular. It is also an example of how a scriptural myth is transmuted by popular imagination into a folk-lore. The former tells the story of Chandradhar, a reincarnation of the snake-hating Shaivite sage Padmasankha, who was the king of Champaknagar, now probably Chaygaon in Darrang district. Chandradhar is transformed into Chand Saudagar, a prosperous river-merchant of the same place, in the folk legend. Because he refused to perform Monosha-Puja, or snake-worship, the snake-goddess Padmavati not only killed the Saudagar's six sons by having them bitten by snakes, but also reduced him to abject penury by destroying his fleet of trading boats. The merchant did not submit and married off his youngest son, Lakhinder, to the daughter of a fellow merchant (in the scriptural myth a Shaivite king called Mukteswar of Nalbari in Darrang district), even though warned that his son would be bitten and killed by a snake on the night of consummation.

Despite his father taking every precaution, Lakhinder was bitten by a snake and killed that night as prophesied. But the bride, the Sati Beula, rather than live the life of a widow as her sister-in-laws had done, set off on a plantain stem raft down the Brahmaputra with the dead body of her husband. At Dhubri, before the river took its south-

ward course, she witnessed a strange spectacle. A *Dhubuni* (washerwoman) on the bank was being troubled at work by her young child. She killed it and kept the corpse beside her till she had finished her washing and it was time to go home. Then she resuscitated the toddler and prepared to depart with him. This alerted Beula that the washerwoman knew the incantation which could give life back to the dead. How Beula befriended Netai Dhubuni, who in reality was Padmavati's elder sister, and went to the court of the Devas and danced in order to gratify them into giving her a boon, forms the rest of the tale. Beula finally triumphed, having succeeded in restoring her husband's life and of his brothers', as well as the wealth of her father-in-law, and is today enshrined in common memory as a Sati.

That Chand Saudagar, at Beula's persuasion, agreed to perform Monosha-Puja clearly reveals the tale to be a probable allegory portraying past conflicts between non-Aryan cults like snake-worship, and Shaivism. Today a number of landmarks, such as Devi Mukteswari temple at Mangaldoi, Pancharatna ghat, the Beula *Shal* and *Bhel* at Hajo, Netai Dhubuni ghat and Chanddinga hill at Goalpara stand witness to the historical authenticity of the Beula-Lakhinder legend. An offshoot of this folk-myth is the curious custom prevalent in Assam, where an individual who dies of snake-bite is not cremated, but the corpse floated down the Brahmaputra upon a plantain-raft, in the hope that some *Bez* or medicine-man somewhere would be able to restore it to life!

In a number of cases episodes of history are transformed by the people into folk-legends. The story of Arimatta, a king who is assumed to have ruled a part of Assam in the 14th century, is an illustration. Folk-lore has it that one Ramachandra or Mriganko, great-grandson of king Dharpala of the Pala dynasty, ascended his nominal throne at North Guwahati around 1382. He had a beautiful wife, Chandraprobha, whom he loved deeply. Repeat-

ed ravage by a flooding Brahmaputra upon his kingdom having gradually reduced his subjects to penury, his priestly advisers opined that the annual scourge was due to the anger of the Brahmaputra god who must be propitiated through the sacrifice of Chandraprobha. Moved by his sense of duty towards his subjects, the king reluctantly agreed and set his beloved wife adrift on a raft upon the Brahmaputra. Tradition has it that the Brahmaputra god ravished her while on the raft and she conceived. A Brahmin mendicant discovered the raft with the unfortunate woman upon it and took her to his hutment.

There Chandraprobha gave birth to a boy who grew up with the Brahmin's family. Meanwhile Ramachandra, disgusted that the floods did not cease, and overwhelmed by grief, migrated with his followers and established another kingdom, changing his name in the bargain. Meanwhile the priestly advisers, learning that Arimatta was the queen's child and assuming him to be the son of Ramachandra, installed him as the king in the latter's old kingdom. Soon Arimatta's expansionist ambitions brought him into conflict with Ramachandra, whom he slew on the battle field without knowing that he was his foster father. Learning too late who his adversary had been, Arimatta undertook great penance. But, unable to rid himself of the crime of patricide, he finally committed suicide in the Borolia (Buroi) river.

The romantic tale relating to the eighth Ahom king, Sudangpha (1397-1407), is another similar illustration. Tyaokhamti, father of Sudangpha, ascended the Ahom throne in 1380. One of his first acts was to lead an army against the neighbouring tribe, the Chutiyas, to punish them for the murder of his elder brother, Sutupha. His Borkuonri, or elder queen, was left in charge of his kingdom during his absence. She was on bad terms with the Sorukuonri, or younger queen, and took advantage of her position to cause a false accusation to be proffered against her rival. She pronounced the younger queen

guilty and ordered that she be beheaded.

The principle minister of the royal court, seeing that the Sorukuonri was carrying the king's child who would be heir to his throne, saved her from being killed and secretly floated her on a raft down the Dihing river. The raft drifted on to the Brahmaputra, where the currents took it to a village on the North Bank. A Brahmin family discovered the raft and gave the queen shelter. She died, after giving birth to a boy, who was brought up by the Brahmin.

In the meanwhile the king Tyaokhamti and his consort, having become too despotic, were assassinated by the ministers and nobles of his court. For a period of eight years there was no king and the nobles ruled the country. This was not acceptable to the people. The ministers sent out emissaries all over the kingdom for news of the Sorukuonri and her child. Around 1397 a cattle trader, on a trading trip along the Brahmaputra, visited the village and saw a youth named Sudang. The boy was of such noble aspect that the trader made enquiries and learnt that he was the son of Tyaokhamti. The ministers were informed and, after verifying the story, brought the youth to the capital and placed him on the Ahom throne. Sudangpha became king in 1397, shifting his capital from Charaideo to Charguya near the Dihing river. Since he was brought up by a Brahmin, he is also known as the Bamuni-Kuonr or the Brahmin-Prince.

## UNRAVELLING AN ENIGMA

The account of the origin of the Brahmaputra, as narrated in the Padmapurana and Kalikapurana might, at a cursory glance, be dismissed as a fantasticated figment of fertile imagination, and the British colonialists were inclined to take it with a pinch of salt. For instance, Francis Buchanan Hamilton, in his *An Account of Assam* (compiled between 1807 and 1814), dismisses it as a "monstrous fable." Yet the myth does contain the rudiments of geological truths and was but a poetic expression of the origin and course of the Brahmaputra. The white and glittering semen of Brahma which fathered the river could be nothing else but the melting ice of the glacier where the river's head-streams originate. The double-lake formed at the meeting point of these streams was the mythical Brahmakunda.

The blows of the axe of Parasurama could well have been a metaphor for some ancient geological upheaval which caused the river to flow. The lake *Lohita* was, perhaps, the point at the lower reaches of the Lohit river near Tezu in the Lohit district of Arunachal Pradesh, today erroneously called the Brahmakunda. Such a supposition is reinforced by the fact that Parasurama had cleaved the Hemsringa or Swarnaparat (Golden Mountain) to make the river flow from lake Lohita through Kamarupa. The Lohit flows through the land of the Khamti and Mishimi tribes. The literal translation of Khamti (Kham-gold, ti-land) is Golden Land. We also know of the devastation wrought time to time by major earthquakes in this region, as the ones recorded in 1897 and 1950, that caused



massive landslips resulting in rivers changing their courses. The Adi mythology preserves the legend of a great deluge in the beginning of time. Thus there is a possibility that the Tsangpo in the distant past was contiguous to the Lohit and not the Dihang as at present. Perhaps some remote geological occurrence such as an earthquake had forced it to link up with its erstwhile tributary, the Dihang or, as some experts conjecture today, the upper reaches of the Dihang had 'captured' the Tsangpo.

Sages and Rishis of ancient times were more familiar with the Himalayas than we might assume, especially with river routes which facilitated commutation from one place to another. This knowledge metamorphosed in the course of centuries to myths in popular perception. What is relevant here is not any hypothesis about the Tsangpo's possible previous course, but that the myth clearly establishes it as the river Brahmaputra. Strangely enough this appeared to have been forgotten in Assam by the 18th century, giving rise to erroneous beliefs. One of these was the natural supposition that, of the three flows which confluenced in the plains to form the Brahmaputra at the eastern extremity of Assam, the Lohit was the primary body of the river and the Dihang and Dibang its tributaries. Not only did it emerge from what was presumed to be the Brahmakunda, but the direction of its flow most closely approximated the direction of the Brahmaputra itself in its passage through the valley. It is pertinent to note that the so called Brahmakunda or Parasuramkunda near Tezu, previous to the 1950 earthquake, had been almost ringed in by a rocky wall, so that it appeared to be a small lake. Though the earthquake of 1950 destroyed the walled-in formation, even today lakhs of devotees make pilgrimage to the spot during Makar-Sankranti in mid-January, when a big Mela is held every year.

Dr. John Peter Wade, who was a member of Captain Welsh's expedition to Assam in 1792-94, records for us the false views regarding the Brahmaputra or Luit prevailing

in the region during that period in his *Account of Assam* (1800).

"The sources of the Berhampooter are to the east-north-east of Assam, in a range of mountains beyond Nara. These streams are supposed to issue from the same spring or lake called the Brahmakoondah. The names of these rivers are 1. Sirilooicheh, 2. Boodalooicheh, 3. Looicheh Gabroo-Looicheh.

"The Sirilooicheh is said to flow in a northerly direction, and to terminate in the north sea. The Boodalooicheh takes a southerly course, and flows through the Burma country. The Looicheh or the Berhampooter, in a westerly direction, runs through Assam and Camroop. Its identity with the Sampo, or great river of Thibet, which passes the capital of the *Lama Gooroo*, at Lassa, is rendered doubtful by every account obtained from the natives in Assam."

Francis Buchanan Hamilton in his *Account* also quotes a native: "He further added, that the province of Sadiya extended to the north of the Brahmaputra and the Brahmakunda that is, to where the great river is precipitated from the northern mountains." The same view is taken up and elaborated by Montgomery Martin in his book, *The History, Antiquities, Topography and Statistics of Eastern India* (surveyed under the orders of the Supreme Government, 1838): "The learned natives of Assam insist that the source of the Berhampooter, in Sangskirt Brahmapootra, or son of Brahma, lies in a range of mountains beyond Nara to the east-north-east of Assam.

"The fabulous and divine origin of this river is detailed in the Pooranas, probably mixed with much valuable observation on the spot. A fountain called the Brahmakoondah is represented as the source of three great rivers, viz. 1. Sirilooicheh, 2. Boodalooicheh, 3. Looicheh, Gabroolooicheh, Daikalooicheh or Brahmapootra.

"The Sirilooicheh flows towards the north. The Boodalooicheh takes a southerly direction, through the Burma country. The Berhampooter rising between the two

forms intersects Assam and Camaroota. By the kingdom of Camaroota in the Pooranas is understood a considerable extent of country both sides of the Berhampooter, nearly to its junction with the sea. It is certain that such a great empire did exist at a very remote period, under the appellation of Camprist, Camaroota or Rungamuttee."

From the above observations it is clear that by the early 19th century, confusion regarding the geographical position of the Brahmakunda was already rife. The Puranic accounts had correctly placed it close to Mount Kailash, but the accounts of natives, while agreeing that it was the source of the Brahmaputra, sited it east-north-east of Assam, in a range of mountains beyond Nara, meaning the boundary of Assam and Burma. Yet, despite the emphatic assertions to the contrary by Wade and Martin, the belief that the river of Tibet was in some way linked to the one in Assam valley persisted, as apparent from Francis Buchanan Hamilton's Account : "It is also to be remarked, that the people of Assam bring the Bara or Great Lohit river from the same Brahmakunda that give rise to the Brahmaputra, that is to say, according to their ideas, from a great pool or lake, into which the Brahmaputra of Nepal, or Sanpo of Tibet, is precipitated coming south from the northern mountains. It is also to be observed, that, as the western branch of Erawati, or river of Ava is by the Assamese called Barah Lohit or Lusit, so the Brahmaputra, proceeding from the same place, in their common language is called Lusit or Lohit. In Sanskrit it is called Lohitya, as well as Brahmaputra. The former name seems to be an alteration of Lohit, in order to give it a meaning in the sacred language."

The belief in Assam at the start of the 19th century appears to be this—there was a Brahmakunda in the mountains east-north-east of the valley, from whence three rivers, including the Lohit or the Brahmaputra and the Irrawaddy of Burma originated. Also, it was quite probable that the Tsangpo debouched into this lake or tank. Such

a belief, in a curious way, did not contradict the Puranic postulate that Parasurama directed the river into the lake Lohita, nor the presumption that perhaps in the primeval past the Tsangpo had flowed into the Lohit. However, as far as recent geography was concerned, it was very far from the truth. This was but natural, considering that the surmises were based on hearsay and not the outcome of familiarity or scientific survey.

Yet the celebrated adventurer and cartographer, Major Rennell, had in the 1760s already propagated his theory that the Tsangpo and Brahmaputra were one and the same river, and even drawn a map of their probable course. His actual knowledge of the Brahmaputra extended only to 91° longitude, i.e. a few kilometres above Goalpara, but his cartographic instincts were infallible and his map very closely approximates the truth as we know it today. "On tracing the river in 1765," he wrote in his *Memoires of A Map of Hindoostan*, "I was no less surprised at finding it (the Brahmaputra) rather larger than the Ganges at its course previous to its entering Bengal. This I found to be from the east; although all former accounts represented it as from the North; and this unexpected discovery soon led to inquiries, which furnished me with an account of its general course to within 100 miles of the place where Du Halde left the Sanpoo. I could no longer doubt that the Burrampooter and Sanpoo were one and the same river, and to this was aided by positive assurances of the Assamers "that their river came from the north-west, through the Bootan mountains."

Much before Renell's work was published adventure-geographers of many nationalities, attracted towards Tibet and exploring the mountain ranges there, had expressed almost similar opinion. Captain William Gill of the Royal Engineers, himself an explorer of note, informs us about some of them in his *The River of Golden Sand* (Edited by Col. Henry Yule, 1883) : "Many years, however, before Renell's work was published, in fact, twelve years before

Rennell was born, P. Orazio Della Penna, writing in Tibet (1730), had stated that the river (Tsangpo) was then believed to join the Ganges, explaining (from such maps which were available to him those days) "towards Rangamatty and Chittagong." A conjecture to the same effect occurs in the *Memoir on The Map of Tibet*, by Pere Regis, at the end of Du Halde. Giorgi, in his *Alphabetum Tibetanum* (Rome, 1762), says the like. The same view is distinctly set forth in the *Geography of Tibet* which is translated in the 14th volume of the great French collection of *Memoires Concernant Les Chinois*, a document compiled by order of the Emperor K'ang-hi, and issued, with others of like character, in 1696. This represents the Yaru Tsanpu as rising to the west of Tsang (West-Central Tibet), passing to the north-east of Jigar-Kungkar (south of Lhasa), flowing south-east some 400 miles, and then issuing at the South of Wei (or U, East-Central Tibet) into the region of the Lokh'aptra, 'tattooed people' (i.e. Mishmis et hoc genus *Omne*); then turning south-west it enters India, and discharges into the Southern Sea (pp 177-78)."

Such accounts, with which some of the British explorers were no doubt familiar, clearly contradicted local beliefs. This, then, was the riddle! Where did the Brahmaputra actually originate? Was it the same river which flowed south of the Forbidden City of Lhasa? Or did it come, as local beliefs would have it, from the mountains beyond Nara, east-north-east of Assam? The Brahmaputra, in the early 19th century, therefore, became to the British an enigma crying out to be unravelled. But almost insurmountable obstacles confronted those who yearned to solve the riddle. Two directions were open to them. The first was to reach the Tsangpo close to its source and trace it eastward. But, though British imperialism had asserted itself over much of India and the northern routes to Tibet were open to them, that Forbidden Land in the 19th century was inimical territory to white-skinned foreigners who could go there at their own peril, and had to adopt

various ruses to make their way in.

The alternative was to travel upstream along the Dihang, Dibang and the Lohit and see if any of them were contiguous to the Tsangpo. Such a course was equally fraught with danger. For one thing, till the second decade of that century North-East India was a virtual terra incognita to Europeans, very few of them having set foot there, one of these being "Mr. Thomas Wood, of the Bengal Engineers," who provided "The first, and by far the most valuable, survey of the Brahmaputra," in the last decade of the 18th century, when the British were eyeing Assam prior to annexing it. Thus, till the annexation of Assam in 1826 by the British, no attempt could be made by them from the eastern direction to confirm the various speculations regarding the course of the Tsangpo and its possible connection to the Brahmaputra. Even after Assam was annexed, the difficulties remained, for the Dihang, Dibang and Lohit regions were peopled by tribesmen who remained perpetually hostile to the white invaders.

Despite the perils involved, the Tsangpo-Brahmaputra riddle gradually grew into an obsession with the adventurous Britons and, once British administration consolidated itself in Assam, they displayed a passionate alacrity in solving it. Captain Gill informs us that "Mr. David Scott, the first British Commissioner of Assam after the first Burmese war (about 1826), met with Lhasa merchants in the province, who told him that the Brahmaputra was their own river, that it passed Lhasa, penetrated the frontier mountains, and there received an additional amount from the Brahmkund. Wilcox heard the same from a Mishmi Chief." David Scott took an active interest in the Brahmaputra conundrum and encouraged exploratory expeditions. That he took personal interest can be inferred from a mention in *Himalayan Journal* by Sir Joseph Hooker, where it is stated that in one of the earliest attempts at exploration of the Brahmaputra, an agent was sent to Tibet by David Scott, Commissioner of

Assam, but was murdered on the way.

British imagination was also fired up by thrilling accounts of travellers to Tibet : "An old Lama told Abbe Desgodius that in his youth he had visited nearly the whole of Tibet, and had followed the great river from its source, in or near the lakes of Too-Ma-Pang, in the western part of the province of Nogare, the most western of Tibet, and the Lama said that some days to the east of Lassa the river turns towards the south, making a long bend, and traverse the Tibetan district of Hia-Yul, a rich and well-peopled district just to the north of Lhopa. The river enters the country of wild Lhopa tribe, and winds its way among steep and rugged bare rocks, without roads, and which can be passed only by means of wretched ladders made of lianas. After a certain course among the Lhopa, the river falls over a high rock into a valley which is not known. The height of the fall is so great that the Lama said it made him giddy to look down. At this place, he said, the river is almost as considerable as the Kin-Sha-Kiang at Bathang." (Quoted in *Encyclopaedia Asiatica* by Edward Balfour, 1858).

The Tsangpo flowed at great heights across the Tibetan plateau. If it did indeed descend to the Brahmaputra valley which was not much higher than sea level, there was a possibility that somewhere in the course of its descent lay the highest waterfall in the world. This was inducement enough! Added to it was the more utilitarian objective of opening a trade-route to Western China. One such route already existed to Yunan through Burma touching the river Irrawaddy, but a direct route across the Eastern-Himalayas promised to be more time-saving and less tortuous. Even though this finally proved to be a chimera, the Britishers did not give up their attempts to 'discover' alternative trade-routes, as reflected in the following extract from *Notes of A Trip up the Dihing Basin* by S. E. Peal:

"But while the benefits to be conferred and gained by travelling among the hill races on our N. E. frontier are clear to all who know the country and people, there are

other matters of interest that can be investigated at the same time. Commercial, ethnological and geographical problems—these await solution even if the discovery of a feasible route to Western China be admitted as demonstrably impossible. Exploration for the purpose of a trade-route are more needful east than west of Irrawadi, and the unsettled state of Upper Burma, compelled me to look to the upper Dihing basin as the site of this trip, the only European who had visited it being Wilcox in 1827."

In fact, the British dream of opening out a trade route to Tibet and Western China from Assam persisted till the 20th century, and gave rise occasionally to quixotic visions of the type to be found in the book *Tibet the Mysterious* by Thomas Holdis published as late as 1906. In it the author, apparently an aficionado of *laissez faire*, visualised not merely a trade—route to Tibet and China, but also a Tibetan section to the Assam Railways laid along the Tsangpo, connecting the valley to Lhasa! He also spelled out his personal plans of building a luxury hotel beside the waterfalls of Tsangpo for tourists, in the line of such hotels beside the Victoria waterfalls of Africa!

The prospect of attaining instant immortality by finding the highest waterfall in the world led adventurous Britons to take the eastern approach from Assam even before the region had been annexed. In 1825 Lt. Burlton made an unsuccessful excursion into the Mishimi hills on "a mission to explore the upper course of the Brahmaputra." Later Captain (Lt.) R. Wilcox, an administrator cum surveyor, who had heard from a Mishimi chief that the Dihang came from Tibet, made an attempt to proceed up that river. He moved through hostile territory and was able to reach as far as Mijong before being attacked by tribesmen, and only through a timely retreat was able to save himself and his group. In 1836 a botanist by the name of Dr. Griffith visited the Digaru area but could not progress very far due to the unfriendly attitude of the tribals. In fact, during the 1820s and 30s, all kinds of administrators,



surveyors and explorers visited the Dihang-Dibang-Lohit basins, so much so that the tribes living in these areas became suspicious and offered resistance, often with tragic consequences, as the murder of two priests, Father Krick and Father Bouri in the village of Same illustrates :

“These two gentlemen were, in the autumn of 1854, endeavouring to make their way to Tibet from Upper Assam, by the route up the Lohit, attempted 14 years later by Mr. T. T. Cooper, when they were attacked and murdered by a Mishimi chief called Kaiisa. On the receipt of this intelligence, and after a detailed account of the circumstances had been obtained from the servants of the priests, a party was despatched by the British authorities of Assam into the Mishimi country to capture the criminal chief. This was very dextrously and successfully affected by Lieut. Eden, who was in command. In the beginning of March, Kaiisa and some of his party were taken, and were tried and convicted (Kaiisa was hanged) by Major Dalton.” (*The River of Golden Sand*).

The hill tribes of Assam proved to be the greatest stumbling blocks to British endeavours to probe the Brahmaputra Tsangpo link from the east. It took many decades and more tragic incidents before the imperialists succeeded in wielding control over these fiercely independent people. A number of military and punitive expeditions had to be made. British administrators such as Neufville, Bedford, Wilcox, Harman, Woodthorpe and others have left fascinating records of such excursions.

Nor were the British more successful in the Northern approach, the irascibility of the Tibetans toward Europeans being the primary cause. Indeed, the Tsangpo-Brahmaputra riddle was proving to be a difficult nut to crack, and decades after British administration had consolidated itself in the North-East, the mystery had not been solved. Absence of definitive information ensured that hypothesisers had a field day and theories of the most bizarre kind were propounded! Knowledgeable individuals such as

Captain William Gill could chortle at them :

"I recently read of 'an able argument' (I certainly did not read the argument itself) to prove the identity of the Tibetan Tsangpu and the Irawadi. Life seems too short for the study of able demonstrations that the moon is made of green cheese, but, if these are still to be proffered, there can be no harm in stating the facts again." (*The River of Golden Sand*).

Such 'able arguments' either disclaimed the Brahmaputra's linkage with the Tsangpo, variously calling the latter an appendage of the Irrawaddy, Salween, Mekong and even the Yangtze Kiang in China, or considered the Subansiri, Dibang, Lohit and other tributaries rather than the Dihang to be its continuation! Given the fact that, in a curious geological phenomenon, the eastern part of the Tibetan Autonomous Region of China possessed, within about five degrees difference of longitude, the sources of a great many rivers flowing north to south, this was, on second thought, not all that strange! The Tsangpo, seemingly flowing straight as an arrow west to east at about 30° N latitude, could well have been the source of any of them! Captain Gill's description of this phenomenon is quaintly humorous :

"Everyone who has looked at a map of Asia with his eyes open must have been struck by the remarkable aspect of the country between Assam and China, as represented, where a number of great rivers rush southward in parallel courses, within a very narrow span of longitude, their delineation on the map recalling the fascis of thunderbolts in the clutch of Jove, or (let us say, less poetically) the aggregation of parallel railway lines at Clapham Junction."

He also gives us a taste of such hypotheses :

"Some good geographers have started the hypothesis that the Subansiri, rather than the Dihang, is the outflow of the Tsanpu; but recent information shows this to be next to impossible..... Very eminent geographers, however,

have not been content to accept the view of the identity of the Tsanpu and the Brahmaputra, and several have contended that the Irawadi of Burma was the true continuation of the great Tibetan river. D'Anville, I believe, was the first to start this idea (*Eclaircissements Geographiques Sur La Carte De L'Inde*, Paris, 1753). It was repeated by our countryman Alexander Dairymple, the compiler of the 'Oriental Reperatory', and much else, the founder of the Hydrographic Department of the Admiralty, and a very able geographer, in a map on a small scale which he put together for the illustration of Symes's 'Mission To Ava' (1800). The idea was maintained at a later date with great force and insistence by that remarkable and erratic genius, Julius Klaproth, who in a demonstration played fast and loose on a great scale with latitudes and longitudes, and produced Chinese documents from the days of T'ang dynasty to those of K'ang-hi in corroboration..... But everything is not necessarily true that is written in Chinese, any more than everything that is written in Persian—or even in Pushtu! Chinese writers have found leisure to speculate on geographical questions as well as the Europeans. And some of them, finding, on the one hand, the Tsanpu flowing through Tibet, and disappearing they knew not whither, and finding, on the other, the Irawadi coming down into Burma from the north, issuing they knew not whence, adopted a practice well known to geographers (to Ptolmey, be it said, *Pace Tantiwiri*, not least) long before Dickens humorously attributed it to one of the characters in 'Pickwick' — they combined the information and concluded that the Tsanpu and the Irawadi were one." (*The River of Golden Sand*).

Thus we have individuals like Montgomery Martin proffering their own 'hypothesis'. He begins by stating : "The number of rivers (in Assam) of which existence has been ascertained amounts to 58, including the Berhampooter and its two great branches, the Dehing and Looicheh. Thirty four of these flow from the Northern and

twenty-four from the Southern Mountains. The source of the Berhampooter is uncertain...". Martin then goes on to show how wrong people like Rennel were : "Major Rennel mentions that the natives of Assam positively assured him their river came from the north-west, through the Bootan mountains. It is not probable, that on the confines of Bengal, he should meet any natives who had the slightest acquaintance with the source of the Berhampooter; for even at the Capital of the country, with every advantage of communication with the most intelligent natives of the higher ranks, no certain information could be obtained on this subject, except one in particular, which contradicts Major Rennell's authorities, that the Berhampooter lies to the east-north-east, and that it flows west-wards, through the whole of its course to its entrance into Bengal. It is not considered by the Assamese as a continuation of the Sampoo, or of the river which intersects the Lama Gooroo's country; although it is highly probable that the latter is one of the great auxillary streams which flow from the Bootan, or northern ranges of mountains into the Berhampooter.

"Captain Turner saw the Erechoomboo, which he styles Berhampooter on his sole authority, running eastward and southward in latitude  $29^{\circ} 10'$  and east longitude  $89^{\circ} 10'$  in his progress through Bootan. A latitude and longitude which differ greatly from the statement of Major Rennell, derived from the authority of Du Halde and D'Anville, being at a greater distance to the southward than the place assigned in their maps; and the probability is considerably increased, that it is merely one of the numerous auxillary streams of the great river of Assam. In reality Du Halde himself confirms this conjecture, by the south east course which he gives to that river in the neighbourhood of Lassa.

"If nearly in the longitude of  $89^{\circ}$ , its course is south-easterly, it is evident, as it has only about  $2\frac{1}{2}$  degrees of latitude to run, it must penetrate the mountains in that direction, and join the Berhampooter, before the latter

reaches the longitude of the Capital of Assam in  $94^{\circ} 29'$ . But the Berhampooter is still a great river, very far to the eastward of the Capital. It is probable also, that the course of the Sampoo would still be more southerly as it approached the mountainous confines, from the resistance it would experience, and its natural tendency to declivities leading to the valley of Assam."

And finally, having got all that off his chest, Martin grandly puts forward his own conclusion: "From a consideration of these circumstances, we shall be compelled to consider the information, or the conjectures of Du Halde, D'Anville, and Rennell as utterly founded on error; the source of the Berhampooter to lay where the natives have placed it, to the east-north-east beyond and mountains of Nara; and the Sampoo of Bootan to pour its scattered waters into the valley of Assam and to join the Berhampooter at a great distance from the place where the latter enters Assam, possibly about half-way between that spot and the Khondar Chokey; where it visits Bengal. If I were permitted to form a conjecture, under such a deficiency of precise information, I would venture to suppose the Dikrungh the receptacle of the waters of the Sampoo.

"These, however, are not the only errors in D'Anville and Renell's maps, affecting the geography of Assam and the contiguous nations; for the Western limits of Ava, placed by them about 94 degrees of longitude, would encroach considerably on the kingdom of Assam; while the borders of China, or of Yunan, under  $97^{\circ} 30'$  would lay nearly in the same longitude as the entrance of the Berhampooter into the valley of Assam; and consequently the latter would be navigable from the Gulph of Bengal into the kingdom of China. I proceed to describe the course of the Berhampooter, which it appears rises beyond the mountains of Nara and flowing through the mountainous tract of Suddia, continues its course through Assam, to the confines of Bengal. Beyond the Capital Rungpoor—Gurgown, about 120 miles to the eastward, at Doimoanimukh,

it divides itself into two large and deep streams, called the Looicheh and Dehing". (*The History, Antiquities, Topography & Statistics of Eastern India*).

Till the middle of the 19th century the Lohit continued to be entrenched in popular perception as the true source of the Brahmaputra. William Robinson, in his *A Descriptive Account of Assam* (1841), presents the prevalent view :

"The Brahmaputra is fed principally by three great streams, uniting in latitude of 27° 45' and longitude 95° 30'. The last of these streams is the southernmost, and that which Hindoos have adopted as the chief branch, having sanctified it by an admission into their mythology. It retains the name of the great river, from its falling straight into the axis of the main trunk. This stream is described as taking its rise from a circular basin, or well, towards the eastern extremity of the valley called the Brahmakund, and situated in the side of the mountains beneath the snowy ranges, while behind and above it are stupendous ranges of an impracticable transit. It enters the valley rather by a series of cascades, than by a deep defile....."

"The other great source of the Brahmaputra are the Dihong and Dibong rivers. The source of the Dibong has been hitherto unknown, but it seems probable it must approach, if it do not pass within, the mountains on the frontier of China..... The former, the Dihong, requires more special notice from its being the supposed continuation of the Tsanpu, or the great river of Tartary, which, rising in latitude 30° north, longitude 82° east, runs eastward, and passing Lassa penetrates the frontier mountains that divide Thibet from Assam and enters the valley by a narrow defile in the Abor mountains.

"The above suspicion has been objected to, on the grounds that Tsanpu in Thibet, from the length of its course, is necessarily a very large river, and that the Dihong, scarcely more than a hundred yards wide, is in consequence by far too small to be the channel of such a stream....."

Four decades after Assam's annexation, no progress had been made towards the solving of the Tsangpo-Brahmaputra conundrum. Attempts by the British to impose their authority over the hill tribes of Assam had proved more difficult and protracted than they envisaged and expeditions from that end were invariably unsuccessful. Tibet too continued to be hostile towards white aliens. Clearly, a change of strategy was called for! Masters of espionage that they were, the British responded to the challenge. Under the control and guidance of high-ranking officers such as Colonel Montgomerie and General Walker, a scheme was devised to train up Indians in the rudiments of geological survey at the Survey of India's institute at Dehradun, and send them to Tibet on espionage missions. Apart from possessing mongoloid features, these Indians could either speak Tibetan, or were taught to do so. It was curious training, to say the least, having more to do with the tricks of the trade of spies, and less with geology! The men were taught to undertake basic survey work using improvised instruments and techniques, and record them as concisely as possible to aid memory. For example, they were trained to take strides of equal length and use beads of their rosary to keep count. They also practiced reciting their findings as though reciting prayers, thereby giving the appearance of devout Buddhists while actually memorising them. No Tibetan would dare disturb a Buddhist monk walking along with measured steps while muttering the prayer *Om Mani Padme Hum* (Hail the jewel in the lotus)! In the finest tradition of espionage not only were they given disguises and invested with completely new identities to enable them to blend into the Tibetan environment, but also equipped with modified instruments which could be easily camouflaged and concealed. The prayer-wheel each carried had a prismatic compass hidden inside it, as also rolls of paper to keep notes. Instead of the 108 beads required by Tibetan tradition, their rosaries had only 100, to protect them from confusion while counting paces.

They too carried thermometres to measure the boiling point of water, and compute altitudes by that means.

Thus trained and equipped, this band of Indians were sent one by one into Tibet on spying expeditions, their mandate being not merely to survey the area and unlock the secret of the Tsangpo-Brahmaputra course, but also to bring back geographical and political information which might be of use to the British imperialists in their expansionist designs. They were brave men who lent an added element of adventure and high romance to the saga of the Brahmaputra exploration. Though no scholars, they were jocularly called Pundits and referred to in the Survey of India annals by code names, such was the secrecy surrounding their training and mission. Nain Singh was S.N., Kishen Singh A.K., Mani Singh G.M., and so on. The Pundits were chosen very carefully for their intelligence and resourcefulness. Though Tibet was out of bounds for white-skinned foreigners and the few routes to it well guarded by armed Tibetans, Indian pilgrims, Bhutanese traders, Buddhist monks and other with bona fide motives were allowed entry. However, even in their case any suspicious or objectionable activity invited instant death or imprisonment, which made their mission as dangerous as if they had been Europeans.

Nain Singh and Mani Singh were the first two Pundits to be chosen. Not only could they speak fluent Tibetan, they had also made previous visits to Tibet—including one with some German explorers when one of the foreigners had been killed after his identity was discovered—and were thus conversant with the routes. Under the supervision of Col. T. G. Montgomerie, they were personally trained by Major Edmund Smyth, British Education Officer of Kumaon, who later figured as Crab Jones in *Tom Brown's Schooldays* by Thomas Hughes. First to be sent by Col. Montgomerie was Pundit Nain Singh, who in 1865 entered Tibet from Shamsung and reached the Tsangpo after crossing the 5000m Nolan pass. Following its course



westward he was able to reach close to the source of the great river, after which he returned to India, bearing with him invaluable records of a stupendous 2,400 km trek. Nain Singh made more forays into the Tibetan plateau, his last and greatest journey taking place in 1873, when he took an eastward course along the Tsangpo and returned to India through Assam.

Nain Singh and Mani Singh were followed by the most well known of the Pundits, Kishen Singh, who in 1872 took a circuitous route through Shigatse round the Tengri Nor and approached Lhasa from the north. His second journey in 1878 was even more invaluable, taking him as far as Mongolia. Having reached Lhasa from Darjeeling, he went to Yarkand crossing the Karakoram and Kunlun ranges. On the way to Mongolia via the Taklamakan desert and Kinsu, he and his companions underwent great peril and hardship, including being robbed by bandits and almost killed. His mentors back in India had given up all hopes of seeing him again; it is said that when he finally returned after 3 arduous years, he had to convince his own wife of his identity before she would let him enter his house.

Another intrepid adventurer was Hari Ram who, disguised as a pilgrim, crossed the river Kosi of Nepal and surveyed the area around Mount Everest, perhaps the first outsider to have got so close to the highest mountain peak in the world. Pundit Sarat Chandra Das, immortalised as Babu Huree Chunder Mukherjee, the Bengali Tibetologist, by Rudyard Kipling in his book *Kim*, also visited areas around Mount Everest and Tibet during 1879-84, and returned with valuable details. Pundit Rinzin Namgyal explored the course of the Yalung glacier. Interestingly enough, some of the Pundits, who were Muslims, were sent as spies further west to survey areas of Afghanistan. Pundit Ata Mohammed, disguised as a Mullah, explored the ancient Silk-Route to China and the Hindukush and Pamir regions. How perilous the circumstances in which

the various Pundits made their trips can be gauged from the fact that Pundit Mirza Shiya, sent to explore Northern Afghanistan, was murdered at Bokhara. Amongst the many explorers sent by the British were Pundits Abdus Shubhan, Lala of Sirmur, Nem Singh, Ugyan Gyatso etc.

Besides being resourceful and brave, these men were also extremely loyal and carried out faithfully the mandate entrusted to them, making more than one trips to Tibet and beyond. Nain Singh not only carried out a survey of Lhasa and adjoining areas, but also charted a crude map of the Tsangpo from its source in Chema-Yungdung glacier upto the south of the Tibetan capital. Kishen Singh crossed the Yangtze, Mekong and Salween and established the course of the Irrawaddy, conclusively proving that none of them could be continuation of the Tsangpo. Till the advent of the Pundits the geography of the Tibetan highlands had been mapped based primarily on hearsay and traveller's tales, or old, pictorial Chinese maps. These were, understandably, inaccurate, with even places well-known to the outside world being wrongly located. The Pundits were instrumental in bringing numerous, previously unknown geo-physical facets to light. Their reports, together with those of Europeans such as Thomas Webber, who in 1866 had succeeded in reaching some of the source streams of the Tsangpo, enabled their mentors to slowly but surely sketch out an accurate map of the area and fit in the first pieces of a jigsaw puzzle. The source of the Tsangpo between the source, Shigatse, Tsela-Dzong and Gyala was firmly established and the Tibetan plateau and its topography was charted out. Moreover, a process of elimination resulted in the discounting of most rivers of the region as continuation of the Tsangpo, and more and more the Dihang appeared to be the most likely candidate for that honour.

The accounts of the Pundits about their journeys make exciting reading. Some of them failed to return, being killed or thrown into prisons in alien lands, or dying of

hunger and hardships. Yet from their courage and sacrifice emerged authentic maps of Central Asia, China, Mongolia and Tibet. The most thrilling of these undercover excursions was that of the Darjeeling-born Kinthup, known as K. P. in survey reports. Personally selected by General Walker and tutored to the nature of his mission by H. J. Harman of the Survey of India, this Sikkimese explorer spent four years from 1879 to 1882 in Tibet. His mandate was to travel in disguise as far east along the Tsangpo as possible, and cut and float specially marked logs down the river. On receipt of the news that the logs had been despatched, survey officials would keep watch on the lower reaches of the Dihang for them. That would be conclusive evidence that the Dihang was a continuation of the Tsangpo.

Those four years in Tibet, to which he travelled disguised as a servant of a Tibetan lama, was the stuff of high adventure. In the company of the lama Kinthup first reached Lhasa and then followed the course of the Tsangpo up to Gyala-Dzong, the furthest point previously reached by his compatriots. But, unmindful of the gradual narrowing of the river, he pushed on ahead and reached the Rainbow Falls (later named so by Kingdon Ward and Earl Cawdor), the first outsider believed to have done so. From there the intrepid explorer carried on to Onlow, nearly one hundred miles lower than any previous traveller and "within one march of Miri Padam, which is about 35 miles from the nearest plains in India." But here he suffered a misfortune. His companion, fearful of continuing the increasingly treacherous journey, secretly sold him to a Tibetan Dzongpu or official, and made off. After a long stint as a slave to the official, Kinthup managed to escape and take shelter at a monastery at Pemakochung. Even while working as a servant to a lama, with exemplary devotion to duty, he surreptitiously carried out his assigned task :

"I, Kingthup, have prepared 500 logs (as instructed)

according to the orders of Captain Harman and am prepared to throw 50 logs per day into the Tsangpo, river from Bipung in Pemako, from the 5th to the 15th of the tenth Tibetan month of the year called Chhuluk."

Having readied the logs, Kinthup, who had been able to earn his master's goodwill and trust, took his permission to go to Lhasa on the pretext of pilgrimage. There he sent to his superiors a secret message of his readiness to despatch the logs, through a traveller who, however, failed to deliver it. At considerable risk to himself of having to remain a slave for life, Kinthup returned to Pemako and managed to float the logs down. But since those who were supposed to have kept watch had not been alerted, the logs floated down the Dihang undetected. In all fairness to H. J. Harman, he had kept day and night watch for two long years. But then he fell ill and left India, after which the vigil was abandoned. Sometime later Kinthup earned his freedom from the lama and tried to re-enter India through Assam, but was prevented from doing so by the hill tribes. He had to take a circuitous route before returning to Dehradun. Since he had not kept records the white Sahibs were none too willing to believe his tale, or give credit for and reward his incredible courage and loyalty. Had it not been for the unfortunate mishap with the message, K.P. might have gone down in history as the first to have incontrovertibly established the link of the Tsangpo with the Brahmaputra. Despite this, Kinthup remains the most romantic figure among the host of brave men who had set out to explore and unravel the enigma.

The following extract of Captain William Gill is an example of how latter explorers sought to draw inferences from the information brought back by the Pundits and people like Kinthup, as well as testimony to the enormous contribution made by them :

"The Pundit Nain Singh, on the journey to Lhasa which first made him famous (1865), was told by the Nepalese, Newars and Kashmiris at that city, that the great

river of Tibet was the Brahmaputra; whilst all the natives who were questioned also declared that, after flowing east for a considerable distance, it flowed down into India. The Pundit's information on his last great journey, when he crossed the river somewhat further to the eastward, before striking south into Assam, did not add much, but it was all in corroboration of the same view (see the *Journal of Royal Geographical Society*, xvii). And this has been still further confirmed by the report of exploration from the Chief of the Indian surveys for 1878-79.

"The explorer (n-m-g) took up the examination of the Tsanpu at Chetang, where it was crossed by Nain Singh on his way from Lhasa to Assam (in about long.  $91^{\circ} 43'$ , lat.  $29^{\circ} 15'$ ), and followed it a long way to eastward. He found that the river, before turning south, flows much further east than had been supposed, and even north-east. It reaches its most northerly point in about longitude  $94^{\circ}$ , and latitude  $30^{\circ}$ , some 12 miles to the north-east of Chamkar. The river then turns due south-east, but the explorer was not able to follow it beyond a place, 15 miles from the great bend, called Gya-La Singdong. There, however, he saw that it flowed on for a great distance, passing through a considerable opening in the mountain ranges, to the west of a high peak called Fung La. Chamkar appears in D'Anville's map as Tchamka, and in one of Klaproth's as Temple Djanga, in a similar position with regards to the river. And Gya-La Singdong seems to be the Temp. Sengdam of the latter map, standing just at the head of the 'Defile Sing-Ghian Khial', by which Klaproth carried off the waters of the Tsanpu into the Irawadi. If the position of the Gya-La Singdong as determined by the explorer is correct, its direct distance from the highest point hitherto fixed on the Dihong river, from the Assam side, is only about 100 miles.

"Evidence more recent and more positive has been adduced, in the end of 1882, by the return of another of General Walker's explorers after an absence of four years

in Tibet and Mongolia. Omitting the greater part of his travels, which are not relevant to the present question, we may state briefly that after visiting Ta-Chien-Lu and Bat'ang, he got as far as Sama in an attempt to reach Assam by the direct route. Here he was stopped and had to take the circuitous route by Atleno and Gyamdo, whence he turned to Chetang on the Tsanpu, and thence by Giangze Long and Phari to Darjiling. Now, as General Walker justly observes, if the Tsanpu river passes into the Irawadi, the traveller must have crossed it between Bat'ang and Sama, between Sama and Gyamdo, and again at Chetang. But he is positive that he crossed the Tsanpu only once, viz. at Chetang; and that on the way from Sama to Gyamdo there is a great range to the west separating the basin of the affluents of the Tsanpu from that of the streams flowing to the east. One of these latter may possibly fall into the Irawadi, but the Tsanpu assuredly cannot do so." (*The River of Golden Sand*).

The authorities in Assam, meanwhile, had not been idle. One possible method of conclusively establishing that the Dihang rather than the Lohit or other tributaries was a continuation of the Tsangpo was to measure their discharge. The *Journal of Asiatic Society of Bengal* reported one such attempt of the administration :

"II—On the Operation for obtaining the Discharges of large rivers in Upper Assam, during season 1877-78, by Lieut. H.J. Harman, R.E., in charge of Assam Valley, Survey of India.....

"(One of the Survey operations during the field season of 1877-78 was to explore as much as possible the region between the Subansiri and the Dihang rivers, with a view to ascertaining which of these two affluents of the Brahmaputra river had the best claim to be considered the recipient of the Sanpo River of Thibet. As there was reason to fear that political difficulties might intervene to prevent the survey officers from proceeding a sufficient distance into the interior to settle this disputed point,

Lieut. Harman was directed to measure the discharge of the several rivers at various points, and to ascertain the volume of water in each river in order that additional evidence might be forthcoming on an interesting geographical problem)".

The rivers measured were the Subansiri (25-28 February, 1878); Brahmaputra at 3 miles from Dibrugarh church (March 11-18); united streams of Dihang and Dibang at 1 mile above the junction with Brahmaputra and one mile below the mouth of the Dibang; Brahmaputra 9 miles above Sadiya (April 2-6). The measurements revealed that the Dihang, despite its comparatively lesser size while descending to the plains, contributed the greatest volume of water to the Brahmaputra, which was a scientific confirmation of what had by then become a near certainty.

Simultaneously, despite what were euphemistically termed 'political difficulties', the British continued to make quite a few expeditions up the Lohit, Dibang and Dihang. In one of these a gentleman named Cooper had to return unsuccessful in his attempt "to open a direct trade route to Western China and Tibet" due to opposition from Mishimis. Another Britisher, Williamson, was killed by the Abor (Adi) tribe on the bank of the Siang and a military expedition was sent there to mete out punishment. Finally, it was left to Needham, who in 1855-56 had travelled up the Lohit and proved that neither that river nor any in Burma could be the Tsangpo, to make another expedition in 1886 up the Dihang and conclusively establish that it and no other could be the southward continuation of the Tibetan river.

Towards the end of 1880s what had been a surmise was turning into a fact and Christopher Gill could state with confidence : "The next of these great rivers is the Dihong, which enters Assam in long. 95° 17', and joins the Lohit, or proper Brahmaputra, near Sadiya. Though the identity of this river with the great river in Central Tibet, the Yaru Tsanpu, has never yet been continuously traced

as a fact of experience, every new piece of evidence brings up nearer to assurance of the identity, and one might be justified in saying that no reasonable person now doubts it. Instead of being a new and heterodox theory invented by a European geographer as its latest opponents have imagined, it is the old belief of the natives on both sides of the mountains. It was indeed the belief of the illustrious Rennell, who first recognised the magnitude of the Brahmaputra, long before we had any knowledge of the Dihong, or of the manner and volume of its emergence from the Mishimi hills." (*The River of Golden Sand*).

However, strange as it might seem, even till the end of the 19th century no one had succeeded in surveying the entire course of the Tsangpo-Brahmaputra and the segment of the puzzle, from Pemako and Onlet which had been reached by Kinthup, to the point where Needham saw it entering India, was yet missing. The problem here was the great difference in height between where the Tsangpo disappeared into the high mountains of eastern Tibet at around 3657 metre above sea level and entered India at around 300 metre. How did the river descend such heights in a distance of barely 200 km as the crow flies? Was its course much longer? And, more exciting, did the unseen section contain the highest waterfall in the world?

The following extract from the *Imperial Gazetteer of India*, Vol. IX (1908) reveals that the Tsangpo-Brahmaputra had not yielded its mystique right to the beginning of the twentieth century, though a great deal was known about it by then :

".....River of Tibet and North-Eastern India, which for its size and utility to man ranks among the most important in the world. Its total estimated length is about 1800 mile, and its drainage area about 361,200 square mile, while during the rains the flood discharge at Goalpara is said to be more than half a million cubic feet per second. An element of romance hangs over the river, as a



certain portion of its course has never been actually explored, though there is little doubt that the Tsan-po, or great river of Tibet, pours its waters through the Dihang into the river which is known as the Brahmaputra in the Assam Valley. The source of the Tsan-po is in  $31^{\circ} 30'$  N. and  $82^{\circ}$  E., near the upper waters of the Indus and Sutlej, and a little to the east of Manasarowar. It has been traced almost continuously for a distance of 850 mile eastward to Gyala-Singdong, which is barely 150 mile from the Assam frontier, but no explorer has yet succeeded in following the river right down to its junction with the Brahmaputra. It was one time thought that the Tsan-po might be identical with the great river of Burma, the Irrawady, but explorations which terminated in 1882 proved that the course of the Tsan-po could not be east of a place called Sama in the Zayul Valley. It was then suggested that the river that flowed past Sama was not identical with the stream that runs westward from the Brahmakund to Sadiya, but was a tributary of the Tsan-Po, which flowed to the west of Sama into the plains of Burma. This theory was completely disproved by the explorations of Mr. Needham, who in 1855-56 marched from Sadiya up the so called Brahmaputra to Rima, a village east of Sama, and proved that the river at Rima and the river that flowed past Sadiya were the same. The Tsangpo having no outlet towards Burma in any direction, there is little room for doubt with regards to its identity with the Brahmaputra. Granted this premise, it seems probable that the channel by which it makes its way through the Himalayas is the Dihang, which is by far the largest river that falls into the Brahmaputra from the mouth, and at the point of junction considerably exceeds in volume the river flowing from the east, which, as it follows the same direction as the united stream in its passage down the valley, has been wrongly styled the Brahmaputra by the Assamese. In 1886-87 the Tsan-Po was visited by a native explorer who stated that he followed its course for nearly 100 miles south of Gya-La-

Singdong to a place called Onlet, which is only 8 mile from Miripadam and 43 mile from the Assam frontier. At first sight, it may seem strange that a geographical problem of such interest as the identity of the Tsan-Po and the Dihang should still remain unsettled, and that such a small strip of territory should be allowed to remain unexplored. The hills through which the Dihang makes its way present, however, great difficulties to the explorer, and are inhabited by fierce and hostile tribes of whom little is known. Activity in that region is politically undesirable; even if no opposition was offered to the expedition, it is possible that an advance and subsequent retirement would be construed into a sign of weakness, which might embolden the hill tribes to make incursions on the frontier of Assam."

But the British were not known as the 'bulldog breed' for nothing! They continued their endeavour in the early decades of the 20th century. The Tibetans had grown less hostile towards Westerners which facilitated easier entry from North India. An expedition was undertaken in 1904, whose member, Ryder, surveyed the area around the source streams of the Tsangpo. Sven Hedin in 1905 visited Tibet and journeyed some way down the river. In 1913 Lt. Col. F. M. Bailey and Capt. H. Morshead, in the course of an expedition from Mipi above Sadiya, went into areas where no other traveller had been before and mapped hitherto untrodden territory, their most significant discovery being the peak of Gyala Peri, on the north bank of the Tsangpo, across the Namcha Barwa mountains. They discovered numerous cascades and deep chasms but no water-fall exceeding 10 metres in height in the course of their trek across treacherous terrain, and finally re-entered Assam at Rangiya. Interestingly, their expedition, though permitted by the authorities, was not considered to be an officially sanctioned one as the hills of Assam even then were considered out of bounds for British nationals. Thus it was a private expedition financed by private resources. However, their daring feat did not go unrecognised—

Bailey received the Royal Geographical Society's gold medal and a flower, Blue Poppy, as well as a species of butterfly was named after him.

After the Bailey-Morshead expedition only about 80 kms of the course between Pemokochung and Lagung, where the river took the great southward bend between the Namcha Barwa and Gyala Peri, remained unmapped. This stretch was finally mapped in 1924 by two intrepid explorers, the soldier-botanists Kingdon Ward and Earl Cawdor. Basing themselves on the data provided by previous travellers, they went to Tibet from Kalimpong, reached the Tsangpo and travelled downstream to Chetang. From there they stuck to the route charted by Bailey and Morshead but discovered that, having reached Trap, they had no means of going further southward. Forced to take a northward route, they reached Oza Dzong and then Lunglag. Here they crossed the Tsangpo and reached Pemako but had to return to Gyala without finding the southward turn of the Tsangpo. However, they made a second attempt in November, moving along the south bank of the Tsangpo and by December reached the place called Pe at the point where the river began its southward curve. The tributary Po met the Tsangpo at that place and, much to their astonishment, the river had become so narrow that a cane-bridge had been constructed by local tribes to cross it. There they saw the 13 metre waterfall, the tallest of the many cascades, and named it the Rainbow Falls.

Having crossed the cane-bridge, they undertook a two day's climb and reached a higher spot, where they were startled by the sudden sight of the Tsangpo flowing 4,000 feet below them. Though they had seen quite a few waterfalls, they had not sighted a gigantic one which could explain the dramatic descent of the river. Following its course, they discovered the wide arc which the river made while taking on a southerly direction, as also the fact that it came down through narrow gorges in the

mountains, some hardly 3-4 metres wide, in a series of low rapids and cascades, descending at the stupendous rate of 400 feet per mile, while skirting the twin peaks of Gyala Peri and Namcha Barwa.

Thus, almost a century after the first British excursion was made, the final piece of the jigsaw puzzle was fitted in by Kingdon Ward and Earl Cawdor. The British ambition of finding the tallest waterfall proved to be a chimera; their hopes of establishing an alternate trade-route to Western China remained unrealised—as also Thomas Holdis's dream of laying a railway route and building a luxury hotel! But that they succeeded in overcoming every hurdle to unravel the enigma was signal testimony to their persistence, stamina, sense of adventure and enterprise. The courage of Indians such as the Pundits or K.P., their steadfast loyalty to the concept and devotion to duty, contributed no less towards the solving of the riddle. In an age of satellite mapping and high technology, it might appear strange that so much toil and sweat had been expended and so many lives lost, yet there can be little doubt that the saga of the Tsangpo-Brahmaputra would remain one of the most exciting adventures in the annals of human exploration.

## PROFILE OF A RIVER

With the acceptance of the theory of plate-tectonics a number of surmises have spawned regarding the process of mountain building and formation of river-systems and valleys. One such theory, simply stated, holds that in the Cretaceous period of the Mesozoic era a sea called Tethis existed between the Tibetan and Indian land masses. Due to continuous thrust of the Indo-Australian Plate beneath that of the Eurasian, enormous quantities of eroded detritus accumulated in the Tethis sea, which was later uplifted by a geological upheaval into the Himalayan mountain range. A corollary to this hypothesis is that in the prehistoric past the Tsangpo had actually flowed from east to west. The evidence cited for this surmise is that, though today the river initially flows west to east, its tributaries such as the Kyichu, Yarlungchu and Tarlungchu, contradicting natural laws, flow east to west.

It is also thought that the independent Tsangpo may have flowed down any of three rivers—the Shatadru (Sutlej), Karnali or Kaligandak. According to Burrard (*Geography and Geology of the Himalaya Mountains and Tibet*, 1932), erstwhile Director of the Geological Survey of India, the most likely outlet for the Tsangpo had been the Kaligandak. One piece of evidence offered is that the gorge through which the Kaligandak flows is so deep as to have been carved out only by a far bigger flow than what it is today. The gradual upliftment of the Himalayas changed the direction of the Tsangpo, and its final 'capture' by the headward erosion of the Siang-Dihang

brought it to its contemporary course.

Such a theory implies that the Brahmaputra, Ganges and Indus are antecedent rivers, meaning they are older than the mountains and valleys they traverse. In fact, it is believed that till the late Tertiary period the Indus, Ganges and Brahmaputra were one and the same river traversing a depression caused by the nascent folding of the Himalayas, flowing east to west from its headwaters in present day Assam to Punjab, and then southward to meet the Miocene sea of Sind. Dr. G.E. Pilgrim, who first propounded this hypothesis, called it the Siwalik river because he believed that the considerable amount of silt it carried was responsible for the formation of the Siwaliks. Later E. H. Pascoe, in his *A Manual of Geology of India and Burma*, christened it the Indo-Brahm. Consequent geological upheavals divided this river into three sections. The upliftment of a landmass in Punjab caused the Indus to flow separately from the Ganges, the former to the west, the latter east. A kindred geomorphic change bifurcated the Ganges from the Brahmaputra. One evidence pointed out by proponents of this controversial theory is the presence of the same species of dolphin, *Platanista Gangetica*, in all three rivers, a species different from marine dolphins or that found in the Irrawaddy river.

The point of origin of the Tsangpo-Brahmaputra had been known since ancient times, as apparent from the Brahma Amogha myth, where Santanu was supposed to have placed the Brahmakunda in the middle of four mountains, one of which was the Kailash. While it was familiar to nomadic Tibetan herdsmen, Chinese explorers too, centuries ago, had visited and mapped the area. For instance, in 1762 Chi Cho Nen, a Chinese geographer, had correctly fixed the source of the Tamchok Khambab (Tamyak Kombo) or the Tsangpo (Brahmaputra) as the Tamchok Khabab (Tamyak Kobo) mountain on the eastern flank of the Lanchen Khabab range located south-east on

the Kangrinpochhe (Kailash) range of mountains.

As in the case of the course of the Tsangpo, such information too seems to have been forgotten and there were many attempts in the 19th and early 20th century by Europeans to explore the river's source. Swami Pravananda, who visited the area in the third decade of this century, presents his view in his *Exploration in Tibet* : "The Chinese Civil Officer, J. Klaproth (1840) writes that the Brahmaputra takes its source in the Tamchok Khambab snow mountain from out of a little lake called Djimagoungroung, situated east of the Langchen Khambab or the source of the Sutlej. Djimagoungroung is the corrupt form of Chema-Yungdung. So, the Chinese geographer Klaproth correctly places the source of the Brahmaputra in the Chema-Yungdung. I too came across several moraine lakes in the bed of the Chema-Yungdung, as well as in that of the Angsi, when I visited the actual source of the Brahmaputra. There are two small lakelets in the Chema-Yungdung-Pu glaciers themselves, a little up the tongue where there are huge debris; and two big lakes Guru-Kyok and Rapgyalchhungo in the Chema-Yungdung itself, down Rongakchhu."

In 1865 Nain Singh had reached Marium-La and said in his report that the sources of the river were certainly in the huge chains seen in the south and fed by glaciers. Thomas Webber, Rawling, Ryder, Sven Hedin etc. were other European explorers who surveyed and wrote about the region. One of them, Sven Hedin, was indirectly responsible for the earlier erroneous belief that the Tsangpo (as also the Ganges) had its origin in the Manasha-Shrovara (Mansarovar) lake, called by the locals as Tso Mapham or Tso Mavang, which is situated in south-western Tibet.

The source of the Tsangpo, in fact, is the great glacier called Chema-Yungdung which covers the southern flank of the northernmost range of Himalayas named Kailash, at an elevation of about 5150 metre, between latitude 30°

31'N and longitude 82° 10'E, just south of Rake Kanggyen Tso lake. Since it initially flows in an easterly direction, it belongs to the same family and shares the characteristics of rivers such as the Hwang-Ho, Yangtze Kiang, Mekong, Irrawaddy and Salween, which, however, have their origins at much further north-east in the Tibetan plateau. The Mariumla pass separates the Chema-Yungdung glacier from the Mansarovar lake, in which two other Indian rivers, the Sindhu (Indus) and Shatadru (Sutlej) have their source, the former lying approximately 80-90 km south-east of the latter. The fact that two great Indian rivers, the Indus and the Brahmaputra, have their origin almost at the same spot but flow extreme west and east of the subcontinent is, indeed, a unique geological phenomenon.

Many headstreams roll down the frozen glacial slope to give birth to the Tsangpo, four of the important ones being the Kubi, Chema-Yungdung, Angsi and Mariumchhu. Though Hedin considered the Kubi to be the main headstream, Swami Pravananda assumes differently : "Of the four headwaters of the Brahmaputra, the Kubi, the Chema-Yungdung, the Angsi and the Mariumchhu, the Kubi is the biggest (3½ times the Chema), and as such its source in the Kubi glaciers should be regarded as the source of the Brahmaputra if the generation of water is taken into account. But if length is the deciding factor, the Chema-Yungdung, which is 6 or 7 miles longer than the Kubi, should be the main stream of the Brahmaputra....."

From its source it assumes a generally eastern direction in its 1625 km route across the narrow plains of the cold Tibetan plateau, wending a comparatively lethargic way between the main Himalayan ranges to the south and the Niench'ing-T'Ang-ku-la Shan (Nyenchen Tangla) to the north. Unlike Indus, Sutlej and Karnali, the Tsangpo in Tibet does not cut a deep channel and affords a placid flow. The terrain around the glacial source is unpopulated and barren, consisting primarily of rocky, icy landscape occasionally broken by verdant pastures peopled by



nomadic tribes of shepherds. The region is considered sacred by Hindus as well as Buddhists and names such as Kailash, which is supposed to be the abode of Lord Shiva, and lake Mansarovar, are integral to Hindu religion. The mythical Brahmlok of the Puranas was supposed to be here and the area has therefore become a pilgrimage centre for devout Hindus.

The Tsangpo meets its first major tributary, the Raga Tsangpo (Jo-k'a Tsangpu), on its left at Lhatse Dzong, from where not only does it have an arrow-like easterly course, but also presents a wide, navigable channel almost for 640 km. this is another remarkable phenomenon, lying as it does 3500 metre above sea-level, thereby presenting the highest navigable waters of the world. Box-like boats ply this route and Sven Hedin, who took a ride, gives us a description : "These Tsangpo boats are both simple and practical. A skeleton, or rather, framewok, of thin boughs and laths is tied fast together, and is covered with four yak hides sewed together, which are attached to a rim of wood forming the gunwale—and the boat is ready. It is very dumpy, of a long rectangular shape, but somewhat smaller in front than behind. It is not heavy, being only an ordinary load for a man. All the boats now descending the river with pilgrims going to the New Year Festival, and the boats which convey country produce or fuel to Shigatse and Tashi-Lumpo, will be carried back by the owners along the river bank. A large proportion of the inhabitants of Hlindug-Ling, the part of Tanak where we had encamped gain their living by such transport. These boats are very buoyant; there were four men in mine, and it could have borne a much heavier load.

"The rower sits on a thin board and rows continuously, but faces forwards, for he must be able to see the waterway downstream. The blades of the oars are divided like a fork, and a piece of leather is sewed between the prongs like the web of a duck's foot. Our boatman is a self-confident fellow, and receives my advice with a smile of

superiority when I venture to air my experience in river navigation. The current does most of the work, but the oars are in constant use to keep the boat under control." (*Trans Himalaya*).

At Jhi-K' a-Tse (Shigatse), the second most important Tibetan city after the capital Lhasa and the traditional home of the Panchen Lama, the Nien-Chu'-Ho (Ngang-chu) joins the Tsangpo on its right. Around 200 kms further east, at Ch'u Shui, as it flows south of the Forbidden City, it is met on its left by the La-Sa Ho (Kyichu), the river which flows past Lhasa. From here the river becomes remarkably broad, occasionally reaching almost 3 km in width, and there is a marked increase in river-traffic. Since till then it is fed primarily by glacial rivers, the water is extraordinarily clear, thereby earning it the name of Tsangpo, or the Purifier. Many a traveller such as Sven Hedin and the Pundits have recorded the fascinating prospect on either banks of the Tsangpo as it flows through narrow valleys, the lifestyle of an industrious and pious people ekeing out a livelihood often in the bleakest of environments. The richer, more populous regions such as the Kongbo in the south-east present a rosier scene, being marked by relatively higher agricultural production.

Travelling about 680 km from the point where the Kyichu joins it, the Tsangpo takes two more tributaries, the Yarlungchu and Tarlungchu before turning slightly southward and reaching Tse-La (Tsela Dzong) where the Ni-Yangho (Gyamadachu) meets it. Tsela Dzong lies just a short distance from the Indian border at the northern edge of Arunachal. From here the river grows gradually narrower till, at P'i (Pe) about 50 km away, it tapers down to merely 600 metre and less at certain points. After passing Pe the river suddenly turns north-eastward and, at an altitude of about 3,000 metre, becomes seemingly lost in a labyrinth of steep mountains and deep gorges. Actually, progressing in a series of cascades and rapids, it cuts a course through a succession of great, narrow gorges be-

tween the mountainous complex of Gyala Peri (7150 m) and Na-Mu-Cho-Pa-Erh-Wa Chan (Namcha Barwa, 7756 m). Then, performing a dramatic U-turn, it forces its way southward through the eastern extremity of the Himalayas to enter India at the Siang district of Arunachal Pradesh.

This was the stretch which had so troubled inquisitive adventurers seeking to solve the Tsangpo-Brahmaputra poser, as also the one which had inspired the greatest hopes of immortality! But, as Kingdon Ward and Earl Cawdor discovered, rather than descend from an altitude of 3,000 m at Pe by huge waterfalls, the Tsangpo drops in height through a succession of rapids and diminutive cascades which, though magical in their beauty, could not quite fulfill expectations of explorers. Yet the virgin landscape here, rugged and wild, with steep mountains and deep, impassable gorges, is one of the most awesome in the world.

Flowing 10 km away from Pe, the Tsangpo comes to the western reaches of the Namcha Barwa, where numerous snow-fed rivulets join it. Another 10 km later the river touches the Gyala Peri on its left. It flows through these two mountains for 15 km till it reaches Pemakochung, made familiar by Kinthup's adventure. Another 34 km later, at Gompe near the Showa monastery, it takes on the waters of the Po Tsangpo on its left.

The river with clear water which had flowed gently through the Tibetan plateau becomes unrecognisable here. The volume of water after taking on that of the Po Tsangpo becomes three times what it had been in the Kongbo valley, while the width becomes extremely narrow, as testified to by the cane-bridge which Ward and Cawdor had crossed at the confluence of Po Tsangpo and Tsangpo. It now loses its placid nature and plunges down through chasms and rocky tunnels with tremendous force. From Gompe the Tsangpo breaks off its northward course and once again turns eastward and flows for 30 km to reach Lagung on

the south of the Chu La pass. Another 35 km downstream it takes on the tributary Kabu Chindru Chu on the left while progressing in a southward curve. 55 km later it enters Indian territory at latitude  $29^{\circ} 35'N$  and longitude  $95^{\circ} 20'E$  at Monko near Sinyung La on the McMohan line, lying 5 km beyond Korbo close to Gelling in the Siang district of Arunachal.

If the Namcha Barwa-Gyala Peri stretch was awesome, the landscape as the river traverses the land of the Adis, the dominant tribe of the Siang district of Arunachal, is no less breathtaking. Beginning with a spectacular loop around the 1,400 m high Keping La, the Siang, as it is called by the Adis (Dihang lower down in the plains), continues its fast paced descent by a series of miniature waterfalls and rapids, which makes navigation not merely hazardous but almost impossible. On its nearly 200 km passage through Arunachal it receives the water of nine major tributaries, including Yang-Chang-Chu, Siyom, Yamne and Chiku. The furious currents create massive whirlpools as they rush down narrow gorges and rocky tunnels. During the monsoons, when the accumulated discharge grows even more heavy due to high precipitation, the Siang swells up to frightening proportions. Rocks are plucked off their perches and trees uprooted, and these hurtle down with terrifying speed, the noise combining with the din of powerful, spray-strewing currents to create a continuous roar which travels far distance.

However, on reaching the foothills of Arunachal at about 300 m above sea level, the water lose some of their pace though not their power. The river, which had been as narrow in places as 30 metres in the upper reaches, widens perceptibly and becomes navigable from Pasighat in the plains of East-Siang district. The broad, lower swath is marked by the presence of *Chaporis* or *Chars* (huge islands of silt and sand) as the Dihang breaks up into channels before meeting two other river-systems in the Assam

valley. Despite the presence of treacherous rapids till it reaches the plains, the Indian Army as well as adventure-sports lovers have conducted rafting expeditions down the Siang-Dihang stretch.

The British had named the people dwelling on the banks of the Siang-Dihang as Abors, which meant 'savages' or 'uncivilised people'. This is quite understandable, considering that the tribes of the Siang district proved to be for long thorns in the flesh of the colonialists! But, in reality, these people had attained a state of tribal culture far superior in many ways to that of the British themselves. These independent-spirited and proud people prefer to call themselves Adis, which translates as 'men of the hills'. Divided into a number of sub-tribes, such as the Padams, Minyongs, Pasis, Pangis, Shimongs, Boris, Ashings, Tangams, Gallongs, Ramos, Bokars, Pailibos and so on, the Adis are one of the most hardy, industrious and progressive tribes among the ethnic diversity of Arunachal.

Endowed with a sense of history preserved even today in their oral tradition, the Siang is an intimate entity of their folk-mythology. The Adis are also blessed with an innate aesthetic sense, as reflected in their weaving, pottery and cane-work. Their skillfulness is best reflected in the construction of bridges over the Siang and its tributaries and rivulets. "The Adis possess great native ingenuity in constructing different types of bridges to span mountain torrents and rivers. Dr. (Verrier) Elwin described these bridges as "marvels of untutored engineering skill". Another early explorer, W. Robinson, paid great compliments to the inventive skill of the Adis in building bridges : "The skill as well as the labour shown in the construction of these bridges is really surprising, and is such as would not do discredit to more civilised nations."

"The Adis make cantilever bridges of bamboo, suspension bridges with rigid bamboo footways, trestle bridges, and combination of both types. Their ingenuity and skill, however, come out prominently in the construction of

cane suspension bridges. When constructed, such a bridge would look like a tube of cane work secured to strong frames of logs of wood, growing trees, bamboo clumps or rocks on either side of a river. Foot rests of about ten to twelve inches width, attached to the bottom of elliptical coils of cane, run from end to end. We are told that the length of a bridge can at times be as great as 786 feet across." (J.N. Chowdhury, *Arunachal Panorama*, 1992).

The Adis themselves believe that their male ancestors learned of cane-weaving from spiders, while the females learned from them the art of weaving cloth. The 367 metre pulling cane suspension bridge beside Kamsing, around 70 km upstream from the foothills, is considered to be the longest river foot-bridge in the world.

Below Pasighat the Dihang separates into three channels before entering Assam at the Jonai subdivision of Lakhimpur district. At Kobo, west of Sadiya and 52 km south of Pasighat, two other rivers join it — the Dibang and Lohit. From this spectacular confluence till it leaves Assam at Dhubri in the western extremity of the state, the river is called the Brahmaputra, the name by which it is known today to the rest of the world.

Given the length of the Tsangpo-Siang-Dihang course, the Dibang and the Lohit are, technically, tributaries. Yet they are major river-systems on their own. The Dibang rises at a 5333 metre tall peak at 29° 55' and 95° 25' situated at the northern edge of Arunachal Pradesh. It is called Adzon at its source, taking on the name Dibang downstream. As with all mountain rivers, it winds a narrow and tortuous course through hilly terrain, growing broader and more braided only when it arrives at the plains. The Dibang and its tributaries have etched out deep gorges in the mountains and flow through landscapes as fascinating as the Siang. Its drainage area extending up to 12120 sq. km, water yield being about 2600-9700 m per second and sediment yield 3765 km per year, the Dibang

would have been deemed a major river in any other part of the world.

The Lohit, which too is the local name for the Brahmaputra (Luit), is even bigger. No wonder that it had been in earlier times considered to be the main stem of the latter. Its source lies of a 6,614 metre high peak called Yoko lying at  $29^{\circ} 30'$ ,  $97^{\circ} 15'$  in China, where the river is called Zayal Chu. It enters India about 155 km downstream at Rima on the north-eastern boundary of Arunachal. Another 120 km later it enters the famous Brahmakunda or Parasuramkunda near Tezu, at about 300 m above sea level. From here the river grows broader, and what had occasionally been narrow passages hardly 100 m broad, now widens to almost 2 km. Further downstream it grows even more broad, extending around Char areas to 6 km width. On its way to the confluence with the Dihang-Dibang, it takes on countless streams, rivulets and tributaries, those such as the Kundil and Noadihing being extremely big rivers themselves. Being snow-fed, the Lohit and its tributaries are perpetually filled with water and do not dry up in the winter season. The length of the Lohit in India is 190 km and its drainage area 22,077 sq. km. Its annual sediment yield is about 14,700 hectare metre.

Fed by three major river systems as well as numerous tributaries the Brahmaputra, as it flows in a slightly south-westerly direction for approximately 650 km through the verdant valley to which it has given its name, swells up into inordinate size. The valley is narrow, hardly 80-90 km wide, while north of the Karbi-Anglong hills it tapers down to a mere 55 km. On the other hand the river itself is one of the widest in the world. However, the river does not flow as a single, continuous, flat span of water, but as a web of channels of variable nature, interspersed with Chaporis or Char areas. From its source to Pe, a distance of around 1,600 km, the river had descended 2,710 metre, but in the next 250 kilometre or so it descends a stupendous 2300 m, the gradient in this stretch being 157-310 m.

per km. The latent force generated by the Dihang-Dibang-Lohit combine while descending from such great heights has to be dissipated in the plains, which explains the oscillating, braided nature of Brahmaputra's channels. It is almost as if, having rushed breathlessly down steep inclines, the river has literally let down its hair on reaching flat terrain, to take on an unpredictable, shifting course.

The river has a mean gradient of only about 1.5 m per km over a distance of around 650 km between Kobo (near Murkong Selek) where the confluence is, and Dhubri where it leaves Assam and enters Bangladesh, the difference in height of the two places being a mere 100 metre. Between Kobo and Dibrugarh the bed slope is 0.62 m per km, between Dibrugarh and Neamati near Jorhat 0.17 m per km, Neamati and Guwahati 0.13 m per km, and between Guwahati and Dhubri 0.094 m per km. Flowing over such flat terrain, the river loses the velocity attained in the mountains, and consequently its capacity to carry silt. Thus much of the sediment garnered by the Dihang-Dibang-Lohit combine is deposited on the river bed. With this process being continuous and silt being deposited on the bed of a particular channel, it gradually becomes too shallow to hold all the water, a part of which spills over the side to find a new channel outlet. When the new channel becomes clogged, it in turn develops branches and the process, repeated over the years, ensures that the Brahmaputra does not flow in a single channel, but a mesh of separating and re-uniting channels with huge silt-banks sandwiched between them.

These braided channels occupy an average width of 8 km, or one tenth of the valley's, which distends to 10-16 km during the monsoons. The mean width of the braided bed varies from 5.04 km between Dibrugarh and Neamati, 5.06 km between Neamati and Tezpur, 6.10 km between Tezpur and Guwahati, 3.78 km between Guwahati and Jogighopa and 7.10 km between Jogighopa and Dhubri. However, the bed at certain places may be as wide as



15-16 km. During high floods when many Chaporis between the channels as well as large areas around the banks are topped with water, the river does present an appearance of a vast, boundless aqueous sheet, conjuring up the image of a Sagar or sea described by ancient scribes, befitting its stature as a 'masculine' river.

But the aggregate width of the channels with perennial water is from about 1.5 to 3 km. Also, there are certain spots where clayey soil or rocky eminences which resist erosion prevent the river from channel expansion, thereby controlling its course. The most noteworthy of these constrictions are those near Dibrugarh (2.15 km wide), Dikhoulmukh (1.65 km), Silghat (2.5 km), Guwahati (1.5 km), Pandu (1.10 km) and Jogighopa (2.05 km). While the constrictions in Lower Assam are due to banks of Archaean rocks, in Upper Assam it is erosion-resistant soil. Such constrictions impede the normal flow, leading to decreased velocity and increased silt deposit upstream to them, giving rise to broad expanses of braided beds. Interestingly, on occasions, the river has to pass on the excess water to *Sutis* or meanders which leave it in a wide arc and rejoin it a long way ahead. The Buri Suti near Dibrugarh, Kherkutia Suti near Jorhat and Kolong Suti near Silghat are examples. Thus only at a very few places, notably at Silghat, Guwahati and Jogighopa, where it is controlled by rocky banks, does the Brahmaputra flow in a single channel.

Perhaps, in the primordial past, the depth of the Brahmaputra was much greater. But centuries of silt deposit has made it far shallower today. It is also on record that seismic activity in this region has resulted in the lifting of the river bed. During the great earthquake of 1950, for instance, the river bed between Kobo and Dibrugarh was estimated to have risen by 3 metres due to heavy deposition of detritus. Data on the depth of the river is conflicting, which is not surprising, given its variable nature. In shallow channels near Dibrugarh during the dry season

the depth is 3.6 to 5 metre, which increases significantly during rains. The depth recorded at Pandu during the construction of the Saraighat bridge over the Brahmaputra was 7 metre in dry season and 16 metre in rains. Present recordings at Guwahati measure 18.2 m and 27.4 m respectively.

The shifting, oscillating trait invests the river with protean malleability and its course is never quite the same in two different years. Due to the rise in the depth of the river bed the Brahmaputra has displayed a tendency to grow wider every year. The alluvial islands or Chaporis disappear during the season of rains and flood, new channels are formed, old are abandoned and the river presents a new face with each passing year. The formation of the river-island of Majuli was an outcome of this malleability. Satellite pictures reveal hugely divergent course of the Brahmaputra in the past, some places which are now on the South Bank having been on the North and vice versa. Innumerable allusions in historical treatises also testify to the transformation wrought by the chameleon streak in the river's nature and its propensity towards altering the geological and geographical character of the valley.

The important town of Dibrugarh in Upper Assam was 8 km away from the river in the 19th century as stated in the *Administrative Report on Assam* published in 1892-93. The town, in fact, was on the bank of the Dibru river, which gave it its name. Yet today, the Brahmaputra has gobbled up half the town and its being saved from further ravage by stone dykes and embankments. The old township of Sadiya was completely swept away by flash-floods which occurred due to landslips blocking the Dibang after the 1950 earthquake and consequent dam-burst. There is geological evidence to prove that the Brahmaputra followed a course many kilometre north of its present bed in the remote past. For instance, between Tezpur and Bishwanath in the North bank, the river flowed more to the

north than it does today, as evident from the fact that there is no alluvium deposits or levees in this area, and remnants or river beds in the shape of *Beels* and other wetland bodies can be had.

The Himalayas, extending between latitudes 26° 20' and 35° 40' North, and between longitudes 74° 50' and 95° 40' from the Indus trench below Nanga Parbat (8125m) in the west to Yarlung Tsangpo-Brahmaputra gorge below Namcha Barwa (7765 m) in the east, for a distance of about 2500 km, represent a dynamic mountain-building and sediment-yielding phenomenon, augmented by rivers to transport the detritus to the plains on its south. For millions of years the gradual upliftment of the Himalayas and Tibetan plateau resulted in the deposition of enormous masses of eroded sediment in the foredeep to the south, which have become the great plains of the Indus, Ganges and Brahmaputra. Geologists cite adequate evidence of massive erosion and regional denudation and equally dynamic sediment transfer and deposition to make such a supposition plausible. Soil erosion and mass wasting, which continue till today, aided by natural processes as well as man induced ones, render river-systems, which themselves are both eroding as well as transporting agents, the principle force in maintaining local relief energy in an orogenically active mountain range. The river-systems are, therefore, responsible for the formation of the plains.

As stated earlier, many of the great Himalayan rivers including the Brahmaputra and some of its tributaries are older than the mountains through which they flow. During the prolonged process of the upliftment of the Himalayas and the Patkai-Naga-Lushai hills, the rivers, though to a large extent maintaining their courses, gained greater momentum and eroding prowess and the deposition of sediment was accelerated. Thus the elevation of mountains and formation of alluvial basins was simultaneous till a mountain-chain with a completely developed valley-

system emerged. Geologists surmise that the main phase of the earth movement began in late Miocene or early Pliocene (12-15 million years ago) and erosion in the rising areas and deposition in Assam valley began in late Pliocene (1-2 million year ago). The Brahmaputra valley in Assam, therefore, is in a literal sense the gift of the river. It is a tectono-sedimentary basin underlain by recent river deposits called 'new alluvium' approximately 200-300 metres thick. Its foredeep consists of a mass of complex, metamorphosed and crystalline rocks of Archaean origin overlaid with sediments from two geosynclines, the Himalayas in the north and Patkai-Naga-Lushai hills in the south. There are a few scattered stretches of Pleistocene deposits called 'old alluvium' along the foothills. The hill areas consist of laterites and red loam.

The valley is boxed in from three sides by hills, at the north by the Eastern Himalayas, the east by the Patkai mountain ranges bordering Burma and Manipur, the south by the Naga-Karbi Anglong-Khasi, Jaintia and Garo hills which separate it from the Barak valley of Assam. The alluvial valley, which opens out in the west, is around 720 km in length with an average width of around 80 km, and fairly flat; only between Tezpur and Dhubri there are outcrops of gneissic rocks above the alluvium, and at Kamrup and Goalpara districts there are ranges of very low hills.

Occupying as it does one tenth of the valley, which in places widens to one-fifth during the rainy season, the Brahmaputra is unmistakably its most dominant feature, as recorded by outsiders since time immemorial. William Robinson points this out in his Account (1841): "The grand feature, however, of the physical geography of Assam, which belongs to the whole valley, and from which it derives its most appropriate name, is the Brahmaputra. This noble river may be classed among the largest in the world, being inferior to but a few in the length of its course, and holding a still higher rank among the great streams,

when we calculate its importance by the volume of water it disembogues into the sea, which on a fair computation taken at Gowalpara, amounted to about 1,41,188 cubic feet per second. During the rains, when the river attains a height of from thirty to forty feet above its common level, the body of water it discharged may fairly be computed at four times the above quantity."

Throughout the greater part of its course through the valley the river, which takes on an astonishing number of tributaries, is bounded on either side by stretches of marshland covered with thick grass, interspersed with paddy fields. The swampy nature of these low-lying riverine areas is caused by tributaries running parallel for some distance and then breaking up into many channels before confluencing with the main river, or by meanders or Suts diverting off it. Also, abandoned river beds, called Beels, getting inundated every year and retaining the water, contribute to the marshy, wetland character. Bao paddy, a variety suitable to flood-prone areas, also known as deep-water rice, is grown here. Further inland, the level of the alluvial plain rises and a belt of permanent cultivation in which a wide variety of rice and other crops are grown, comes to view.

The unbroken green of the landscape as seen from the Brahmaputra is soothing, and the rustic environment, unsullied by ugly scars of industrialisation, imparts to the ambience an extraordinary quiescence. Copses of plantain, bamboo, coconut, betel nut and other palms half-conceal clustered hamlets, with thatched roofs and bamboo-walled cottages. The hills rise in gentle slopes from the fringes of the valley, taking on a steeper gradient as one proceeds north or south. The foothills as well as the lower slopes had once been densely forested, but the tea-industry begun by the enterprising British had cleared away almost all the verdure in order to set up giant tea-plantations. Some of this area is also used to grow crops with irrigation from the hill-streams.

Navigable right from the confluence at Kobo to Dhubri, a traveller journeying along the Brahmaputra would be apt to be misled by the quiescence and the sparsely populated, marshy prospect the river banks present. The landscape, the reed-infested shoals, the swampy grasslands evoke a sentience of journeying through pristine wilderness untouched by human hand. On a clear day can be viewed the low mountains in the south, while behind the frontal ranges at the north rises the higher, snow-capped peaks of the Himalayas. The river itself, though powerful, flows on with deceptive languor, hardly making a murmur. The occasional appearance of a *Sihu*, or freshwater dolphin, sadly getting rarer with the passing years, gambolling along beside the steamer or the long-boat, is one of the most thrilling sights afforded to the lover of Nature.

The alluvial islands dotting the river impart a picturesque in the dry season not visible during the rains. These huge islands of sand and silt, barren and glistening like giant crystals in the sunlight, enhance the feeling of solitude. They have a characteristic elongated shape with tapering ends, and run parallel to the flow. The rich, alluvial deposits ensure a temporary growth of reeds and grasses and, in winter, some of these Chars or Chaporis, adorned with vast stretches of Kahua blossoms, are a sight for sore eyes. As late as the beginning of the 20th century the Char areas were virgin spots undefiled by human presence, and breeding grounds for a wide variety of avian and amphibian species including crocodiles (Gharial or Gavial) and tortoises and turtles.

Lakhminath Bezbarua, a path-breaking litterateur of Assam who, curiously, was born in a boat upon the Brahmaputra, gives us an inkling of this in his autobiography: "Travel upon a boat upstream across the Brahmaputra was great fun in childhood..... Whenever the boat was moored on a sandbank I would be the first to jump down the prance like a peacock upon the sands..... One afternoon the boat was taken to a sandbank so that lunch could

be cooked. We saw numerous river-terns flying overhead. Someone informed me that the river-terns built their nests in these islands and laid their eggs in them. Another day we found two huge eggs of crocodiles..... One evening we saw two or three turtles crawling across the sand. The boatmen told us that these turtles come in this season to lay their eggs in the islands. Our servant grabbed one turtle and turned it over on its back. Later, after it was killed and cut up, there were about forty eggs in its belly ..... Another day the boatmen caught a strange turtle which had a blunt spike or horn on its back. They said that the turtle was unpalatable....."

Alas, such primeval environments belong to the past! Today the Chars are used during winter for grazing of buffaloes and raising rabi crops. The bigger ones have assumed a somewhat permanent nature and been colonised, mainly by illegal encroachers. Though the river banks might yet present a look of desolate wilderness, behind the facade lies two thin strips of flatland where the bulk of the rapidly enlarging population of Assam is concentrated. Forests have been woefully depleted, wetlands are shrinking day by day. With no more land left for cultivation, the resources of this fertile valley are being stretched to the utmost.

But the essentially hydrologic character of the society has not changed, and rivers even today are the lifeline of the people. The plethora of ghats or mooring spots for boats and ferries bear witness to this. In the Brahmaputra valley rivers have traditionally been roadways. In the past, throughout his journey, a voyager would have encountered an unimaginable variety of boats, from dugouts, long-boats and *Maarnaos* carrying goods, to small mechanised crafts and large steamers. Today, with roads and railways having been made and the steamer-route to Calcutta closed, the number of crafts would be far less in number and variety.

The river banks would simultaneously acquaint the

traveller with the astonishingly diverse ethnic composition of the region and occasionally provide him with glimpses of its variegated culture—*Huchari* groups during the Bihu festival dancing on the sands, the hutments on stilts as he passes by a Mishing village, some quaint river-ritual of a fishing-tribe, herds of cattle quenching their thirst before being taken home by young cowherds, the sight of wild fauna through the reeds and grasses growing on shoals. Also, most of the important urban centres are situated on the banks of the Brahmaputra, or a stone's throw away, and invariably connected to it by one tributary or the other, Downstream from Kobo the voyager would first touch Dibrugarh on his left, the important centre of tea-cultivation and trade in Upper Assam. Moving west, he would pass by Sibsagar on his left, the seat of Ahom power which ruled Assam for six hundred years. The township, as well as other historical sites such as Gurgoan and Cheraideo, though lying inland, is linked to the Brahmaputra by the Dikhow-Namdang tributaries. Majuli, the largest river-island in the world, has the town of Lakhimpur as well as the Pabha wildlife sanctuary to its north and another important tea-centre, Jorhat, to its south. West of Majuli, on the south bank, lies the Kaziranga National Park, famed all over the world as the home of the One-horned Indian Rhinoceros. Further downstream are more wildlife sanctuaries, Orang and Manas on the north bank and Pabitora on the south. Slightly downstream from Kaziranga, at Silghat, the Kolong meander breaks away in a wide arc to meet the main river much further ahead. Perhaps in the none too distant past the Kolong meander was wider and more prominent than it is now, for it misled British surveyors into presuming that the land mass between it and the main river was a river-island, as is apparent from the description given in Francis Buchanan Hamilton's Account : "About 104 miles above Gohati, according to Mr. Wood's survey, the Brahmaputra divides into two branches; of which the northern is by far the



greatest, and preserves the name, while the southern is named Kolong. These two branches separate at Ariketarmukh, and rejoin at Kajolimukh 90 miles below, leaving between them an island, which by my informants is reckoned five days journey in length, and about one in width. About one half of this island may belong to the Western half of the kingdom, or to jurisdictions that are surrounded by it."

Before touching the beautiful town of Tezpur to the north, the traveller would pass beneath the Koliabhomora bridge, named after a warrior of historic significance. Guwahati, the sole metropolis of this region and the gateway to the North-East, lies on the left of the river. The city houses Dispur, the capital of Assam. The very first bridge to span the Brahmaputra, the Saraighat bridge, was built here, its construction facilitated by the fact that the river flows in a single channel and is comparatively narrower. At Guwahati too are situated the Kamakhya temples, well known since Puranic times, perched atop the Nilachal hills, as also the equally well known rock-island of Umananda with its ancient Shiva temple.

Below Guwahati are many places of historical or cultural interest, including Sualkuchi, the largest village in India famed for its silk-industry, and Barpeta, one of the principal centres of Vaishnava culture. The latest of the three bridges built so far over the Brahmaputra, named the Naranarayan Setu after a renowned Koch king, is at Jogighopa near the Goalpara township. The river's 650 km long journey through the valley ends at the town of Dhubri, after which it enters Bangladesh and takes on yet another name if not another identity.

"In the number of its rivers, Assam may be said to exceed every other country of equal extent," so wrote William Robinson in his 1841 *Account of Assam*. Earlier in 1838 Montgomery Martin had gone even further : "As far as my information or my recollection extends, this country

### Salient Features of the Brahmaputra Basin

<b>1 Total Catchment Area</b>	<b>580000 km<sup>2</sup></b>
(i) Catchment area within China	293000 km <sup>2</sup>
(ii) Catchment area within India	195000 km <sup>2</sup>
(iii) Catchment area within Bhutan	45000 km <sup>2</sup>
(iv) Catchment area within Bangladesh	47000 km <sup>2</sup>
<b>2 Length from Source to Confluence with Ganges</b>	<b>2880 km</b>
(i) Length within Tibet (China)	1625 km
(ii) Length within India	918 km
(iii) Length within Bangladesh upto confluence with Ganges	337 km
<b>3 Gradient</b>	
(i) Reach within Tibet	0.00260
(ii) Reach between Indo-China border and Kobo in India	0.00190
(iii) Reach between Kobo and Dhubri	0.00014
(iv) Reach within Bangladesh	
First 60 km from India border	0.00009
Next 106 km reach	0.00008
Next 92 km reach	0.00004
Next 79 km reach	0.00003
<b>4 Discharge Characteristics</b>	
(i) Maximum discharge at Pandu (Assam) on 23.8.62	72794 m <sup>3</sup> s <sup>-1</sup>
(ii) Minimum discharge at Pandu on 20.2.68	1757 m <sup>3</sup> s <sup>-1</sup>
(iii) Mean annual flood discharge at Pandu	51156 m <sup>3</sup> s <sup>-1</sup>
(iv) Mean annual dry season discharge at Pandu	4420 m <sup>3</sup> s <sup>-1</sup>
(v) Mean monsoon flow (June-October)	
Shigatse (Tibet)	507 million m <sup>3</sup>
Pasighat (India)	3979 million m <sup>3</sup>
(vi) Discharge per unit area of Basin	
T'sela D's Zong (China)	0.01 m <sup>3</sup> s <sup>-1</sup> km <sup>2</sup>
Pasighat (Arunachal)	0.023 m <sup>3</sup> s <sup>-1</sup> km <sup>2</sup>
Pandu (Assam)	0.03 m <sup>3</sup> s <sup>-1</sup> km <sup>2</sup>
Bahadurabad (Bangladesh)	0.032 m <sup>3</sup> s <sup>-1</sup> km <sup>2</sup>
<b>5 Sediment Load</b>	
(i) Average annual suspended load during flood at Pandu	400 million metric ton

(ii) Daily mean sediment load during floods at Pandu	2.12 million metric ton
(iii) Sediment yield	
T'sela D's Zong (China)	100 metric ton km <sup>2</sup>
Pasighat (Arunachal)	340 metric ton km <sup>2</sup>
Pandur (Assam)	804 metric ton km <sup>2</sup>
Bahadurbad (Bangladesh)	1128 metric ton km <sup>2</sup>

**6 Mean Basin Rainfall**

(Excluding Bhutan and Tibet) 230 cm

**7 Basin Land Use (in India)**

Total forest cover 114992.08 km<sup>2</sup>  
 Total agricultural land 50473.84 km<sup>2</sup>

**8 Basin Population in India**

30.4 million  
 (143 person/km<sup>2</sup>)

(Source : *Fluvial Regime and Flood Hydrology of the Brahmaputra River, Assam*, Dr. Dulal C. Goswami, Memoir Geological Society of India, No. 41, 1998, pp. 53-75)

**Ranking of Brahmaputra Among Large Rivers of the World in Terms of Discharge and Sediment Yield**

<i>River</i>	<i>Average Discharge at Mouth 10 m s</i>
Amazon	99.15
Congo	39.66
Yangtze	21.80
Brahmaputra	19.83
Hwang Ho	19.83
Yenisei	17.39
Mississippi	17.30
Orinoco	17.00
Lena	15.49
Parana	14.90
Irrawaddy	13.56
Ob	12.49
Ganges	11.67

<i>River</i>	<i>Sediment Yield (tons km yr)</i>
Yellow	1403
Brahmaputra (at Bahadurabad, Bangladesh)	1128
Brahmaputra (at Pandu, Assam)	804
Irrawaddy	616
Yangtze	246
Mekong	214
Orinoco	212
Colorado	212
Missouri	159
Amazon	46
Indus	103
Mississippi	64
Nile	37

(Source : *Fluvial Regime and Flood Hydrology of the Brahmaputra River, Assam*, Dr. Dulal C. Goswami, Memoir Geological Society of India, No. 41, 1998, pp. 53-75).

### Select List of Tributaries

<i>North Bank</i>	<i>Entry into Assam from</i>
Burisuti	Arunachal
Subansiri	"
Ranganadi	"
Buroi	"
Borgong	"
Jia-Bharali	"
Gabharu	"
Belsiri	"
Pachnoi	"
Dhansiri (north)	Bhutan
Noanadi	"
Nanoi	"
Barnadi	"
Puthimari	"
Mutanga	"
Darranga	"
Baralia	"
Nona	"

Pagladiya	"
Mora Pagladiya	"
Buradiya	"
Tihu	"
Kaldiya	"
Pahumara	"
Beki	"
Bhalukdoba	"
Manas	"
Buriaie	"
Champamati	"
Sankosh	"
<i>South Bank</i>	
Dibang	Arunachal
Lohit	"
Burhidihing	"
Desang	"
Dikhow	Nagaland
Jhanji	"
Bhogdoi	"
Dhansiri (south)	"
Kopili	Assam
Digaru	Meghalaya
Kulsi	"
Deosila	"
Dudhnoi	"
Krishnai	"
Jinari	"
Jinjiram	"

exceeds every other in the Universe of similar extent, in the number of its rivers, which in general are of a sufficient depth at all seasons to allow commercial communication on the shallow boats of Assam."

Assam, indeed, is a land of rivers! Not to speak of those of the Barak Valley, the Brahmaputra Valley itself is criss-crossed with an incredible number of rivers, big and small, as well as streams and rivulets. The Brahmaputra is fed on its course through the valley by no less than 57 tributaries on its north bank and 33 on its south. The principal north

bank tributaries are Jaidhol, Subansiri, Ranganadi, Dikron, Buroi, Jia-Bharali, Pagladia, Manas, Buri Aie, Champamati and Sankosh. The major south bank tributaries are Noadihing, Dibru, Buri-Dhing, Disang, Dikhou, Bhogdoi, Janjhi, Dhansiṛī, Kapili, Kulshi, Dudhnoi, Krishnai, Jinari and Jinjiram. A select list of these tributaries is given separately.

Some of these are huge rivers by themselves and carry more water than, say, many of the famous European rivers such as the Thames, Siene or Danube. The tributaries have their own tributaries, some inordinately large, which in turn are fed by numerous rivulets and streams. Added to all these are the wide and divergent braids of the Brahmaputra and the meanders which issue from it. Thus we have an intricate maze of water-bodies spread not merely across the valley, but also the hills enclosing it.

A few examples will illustrate this. the Subansiri is the largest tributary of the Brahmaputra. Called the Swarnanadi or 'River of Gold' in ancient times, it was renowned for the gold particles yielded by the sediment it carried. From its source in the Tibetan Himalayas till its confluence with the Brahmaputra it is 520 km long and its basin encompasses an area of 37000 sq. km of which 10000 sq. km lies in Assam. It originates in the south of the Po Rom peak (5059m), which is hardly 30 km from the Tsangpo and mere 5 km from the latter's tributary, the Tarlung Chu. No wonder that the Subansiri, called Lokong Chu at its source, was once mistaken to be a continuation of the Tsangpo. Only in 1877 could Captain Woodthrope succeed in penetrating to its upper reaches and prove this to be false.

While rushing down the mountains and hills with steep gradient to the plains, the Subansiri takes on at least 25 tributaries. Some of these, such as the Chayal Chu, Kamala, Pabha, Dulung, Ghagar, Ranga etc., have dozens of tributaries of their own. The Ghagar, for instance, has a large tributary called Bogi which itself is fed by only

slightly smaller tributaries such as Kakoi, Dhal and Somdiri.

Another large tributary on the north bank of the Brahmaputra, the Jia Bharali, takes its rise in a glacier close to the Indo-Tibetan border at  $28^{\circ} 7'$ ,  $92^{\circ} 53'$  and flows for over 260 km before merging with the main river. On its course it picks up the water of the Beesam, Tenga, Dayang, Diju, Bormocha, Namari, Daigrung, Dikrai, Sonai, Khari-Dikrai, Bogijuli, Bar-Dikrai, Mora, Manchari etc. Each of these sub-tributaries are in turn fed by countless rivulets and streams. Similarly, other north bank tributaries like the Manah, Barnadi and Dhansiri (N) are major rivers with many sub-tributaries of their own.

The south bank tributaries of the Brahmaputra, though relatively smaller than those of the north, weave a similar intricate web. The Buridihing, for example, which rises at the Arunachal-Burma border, is around 360 km long and has a basin area of 5457 sq. km. It is fed by numerous tributaries, including major ones like the Namchik, Tirap, Namdang, Dirak, Namchang, Digboi, Tipling, Tingrai, Disam and Sessa. Of these the Tirap is no less than 154 km long and the Sessa around 109 km. Another Brahmaputra tributary, the Dhansiri (S), considered to be one of the most serpentine rivers in the world, is around 352 km long with a drainage area of 12584 sq. km. Among the many tributaries of this river the Diphu, Chungajan, Deopani, Nambor and Dayang are notable. These are fed by innumerable sub-tributaries. For example, the Dayang carries the water of the Rengma, Langtajan, Daigrung and Kalyani. The Kalyani itself is fed by sub-tributaries such as Nihang Langchu, Langkatang, Borpong, Tarapung, Janghanri, Deuri, Rangchali etc.

Another important south bank tributary, the Kopili, exhibits the same web-like character. Though a river of extra ordinary size, it does not fall directly into the Brahmaputra, but into one of its well known Sutis, the Kolong. Around 297 km long, with a drainage area of 15868 sq. km,

the Kopili has among its many tributaries the Maintang, Longku, Longkring, Amring and Diyung. The tributaries of the Diyung are Robi, Dalaima, Darei and Mahur. The tributaries of the Mahur, in turn, are the Moti, Mupa, Langlai and Lamting. The tributaries falling into the Lamting are Darong and Homo. Among the rivulets which feed Homo are Phaph, Lamu and Lamding. The streams which join the Lamding are Langlao and Barlangfar. Those which feed Barlangfar are the langlhaliyat, Chotlangphar and so on!

Contributing to the incredible mosaic of rivers which cover the valley and hills are the meanders of the Brahmaputra which, besides being large water courses in themselves, are also fed by a network of tributaries. The Kolong is a good illustration. It breaks away in a wide arc around 130 km in length from the Brahmaputra east of the Nowgong district and rejoins it a long distance away at Kajolimukh in the eastern part of Kamrup district. On its way the Kolong takes on a number of tributaries such as the Misa, Dijū, Pathori, Nonoi and, of course, the Kopili. Each of these have a number of sub-tributaries merging into them.

The Brahmaputra valley is, therefore, an excellent illustration of a ramp valley, having as it does two distinct sets of tributary rivers from the north and south, each with individual basin characteristics, flow pattern, zone of oscillation, nature of sediment load and flood hydrology. The north bank tributaries, some of them snow-fed, with larger catchment and falling in regions of heavier precipitation, are bigger than those of the south bank. Emerging from high mountain ranges, they are endowed with extraordinary gradient and thus have high velocity and vigorous down cutting and lateral action. Except for the higher land where most of them flow through deep sections, they possess the same braided characteristic as the Brahmaputra, as well as coarse, sandy beds and a capacity to cause flash-floods and heavy discharge. The Subansiri,



with a maximum discharge of 11377 cumecs, brings down boulder gravel, sand and debris during floods, while the Jia-Bharali, with a maximum discharge of around 5886 cumecs, brings down sand and heavy debris load. All the north bank rivers have north to south courses except close to the confluence with the Brahmaputra, where the mouths shift westward due to frictional drag. Because of their dynamism and larger volume of water, they tend to push the Brahmaputra southward.

The south bank tributaries, on the other hand, rising as they do in lower hill ranges, have less gradients, deep meanders and comparatively low silt discharge. They wend their sinuous courses through deep old alluvium and are solely rain-fed, so are less prone to flash-flooding and have less braided characteristic in the plains. The nature of the silt they carry also differ. The Buridihing, with a catchment area of around 8473 sq. km, carries fine silt and organic matter. The sediment load carried by the Dhansiri (S) varies from medium to fine sand and silt.

Because of the presence of the natural levee of the Brahmaputra, many of the tributaries, as they approach it, tend to maintain a parallel course with the mainstream before finding an opening through which they can merge. This has resulted in the formation of swamps along the lower parts of the tributaries. By aiding in the deposition of large volumes of alluvial material, the tributaries have contributed no less than the main river to the formation of the geological terrain of Assam in general and the Brahmaputra valley in particular. Most pertinent, they have thrown out an aqueous network which has acted as channels of communication between various parts of the region since time immemorial. Indeed, the tributaries weave an intricate skein of arteries and veins through which flow the lifeblood of the people of this region, and impart to it an almost metabolic homogeneity binding the dweller in remote hills and forests to those who subsist in the fertile plains.

Below Dhubri at the Western extreme of the valley the Brahmaputra turns south around the Garo hills which form the outwork of the watershed separating it from the Barak or Surma, the other river-system and valley of Assam, and enters the Rangpur district of Bangladesh at  $25^{\circ} 47' N$  and  $89^{\circ} 49' E$ . Around 30 km of the Indo-Bangladesh border falls along the Brahmaputra. From here it is called the Jamuna till its confluence with the Ganges 337 km later, whence the combined flow is called the Padma. After flowing past Chilmari, it is joined on its right bank by the major tributary of Tista. At this place a spectacular hydrologic phenomenon occurred in 1787, when there was exceptionally high floods in the Tista. Till then the main stream of the Brahmaputra flowed south-east across the centre of Mymensing district and, after discharging its silt into the Sylhet swamps and receiving the Surma (Barak), united directly with the Meghna at Bhairabbazar. This was the course shown in Rennell's survey of 1785. But in 1787 the high floods in Tista, which till then was a tributary of the Ganges, made it divert eastward into an abandoned course, causing it to join the Brahmaputra opposite Bahadurabad Ghat in Mymensingh district. At that time the course of the Jamuna river (now the main Brahmaputra Channel) was a small stream called Konai-Jenai. But, after being reinforced by the unprecedented Tista floods, the Brahmaputra cut a new channel along the Konai-Jenai, which was gradually converted into the mainstream now confluencing with the Ganges. Today the old channel, retaining the name of Brahmaputra, leaves the Jamuna south of Gaibanda and flows past Jamalpur and Mymensingh to join the Meghna river at Bhairabbazar.

The oscillation of the Jamuna in Bangladesh is similar to the Brahmaputra's in the Assam valley and its course is never the same for two successive years. Before its meeting with the Ganges, it receives the waters of the Boral, Atrai and Hurasagar on its right, and becomes the point of

departure of an outside channel, the Dhaleswari river, on its left. A distributary of the Dhaleswari, the Burhiganga, flows past Dacca and joins the Meghna river above Munshiganj. The main channel meets the Ganges north of Goalundo at  $23^{\circ} 51' N$  and  $89^{\circ} 46' E$ . As the Padma it flows on for another 90 km and, near Chandpur at  $23^{\circ} 13' N$  and  $90^{\circ} 33' E$  meets a major river, Meghna, which also carries the water of the Barak or Surma of Assam and the Kushiara. The combined flow, called Meghna from then on, meanders along for another 50 km before breaking up into channels and entering the Bay of Bengal through the Meghna estuary.

Unlike the Assam valley, the Bangladesh landscape is flat and monotonous, unrelieved by any variety of terrain. Yet the scenery, as the river meanders on towards the sea, has a rustic charm of its own. The greenery of the land almost matches that of the Brahmaputra valley, with rural hamlets hidden among copses of bamboo and plantain, groves of mango, areca and coconut-palm. During the rains the feel of green grows more vivid, when seedlings of rice, the staple diet of the inhabitants, impart a distinct hue to the unfurling countryside. Along its way the river passes by a number of urban centres such as Bahadurabad, Golabari, Jagannathganj, Sirajganj, Sohagpur and Goalundo, places familiar since the past to voyagers who took the Padma-Jamuna river route to go to Assam.

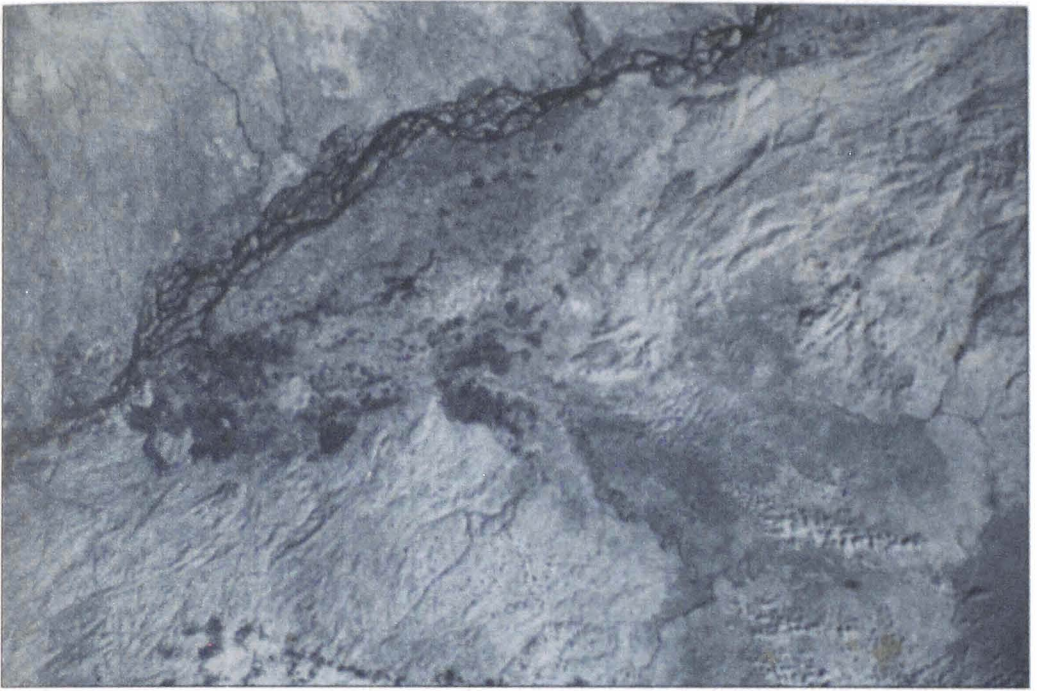
The Brahmaputra (Jamuna) is undoubtedly the most prominent river-system in Bangladesh. The Krug Committee, set up by the Government of erstwhile East Pakistan, estimated the total discharge of the major rivers of the country from June to October in 1956 at 860 million acre ft. of which contribution of the Brahmaputra was 50%, the Ganges 40% and the tributaries of the Meghna 10%. These figures were given exclusive of the drainage from local rainfalls. The Brahmaputra is also the larger carrier of sediment among the three. The combined flow of three major rivers deposit silt in the eastern corner of the great

Sundarban delta, and help in creating new land and thrusting the land-area forward. Satellite pictures reveal that such siltation has also caused islands to form in the Bay of Bengal.

As is the destiny of most great rivers, on reaching the sea the Brahmaputra's journey ends. That two of India's most revered rivers, the Mother Ganga and the Son of Brahma, traversing different terrain and sustaining different lands, meet as one before flowing into the sea is a fitting culmination to that marvellous journey.

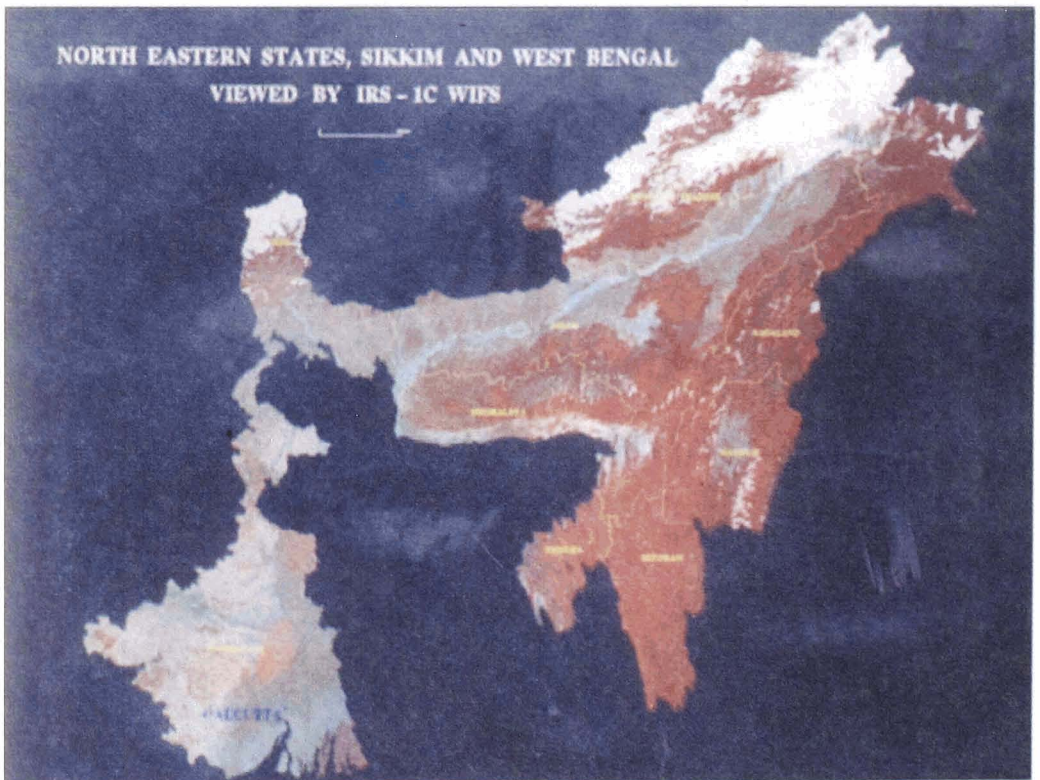
The Brahmaputra and its tributaries constitute a vast fluvial system with unique flow, sediment-transportation and channel-configuration characteristics. The Brahmaputra basin encompasses a wide area of 580000 sq. km of which 50.5% lie in China, 33.6% in India, 7.8% in Bhutan and 8.1% in Bangladesh, and range from cold, dry areas of Tibet placed at extreme elevation, mountainous regions at relatively lower elevation, low, temperately warm but extremely humid, land-locked valley of Assam, to the hot, humid plains of Bangladesh and deltaic flats at the edge of the Bay of Bengal. The basin falls under a powerful monsoon regime receiving an average annual rainfall of about 230 cm, unevenly distributed between regions of heavy rain and comparatively dry areas, with precipitation decreasing with increase of altitude. In certain regions, during monsoons, the precipitation is exorbitantly high, as in the Meghalaya plateau which receives around 1000 cm per year.

The natural vegetation of the basin is as diverse as the terrain, changing from alpine meadows and steppes of the Tibetan ranges to the tropical evergreen, mixed deciduous forests and tropical savanna of tall reeds and grasses of the plains. Within this century, due to increased colonisation and consequent man-induced changes such as deforestation as well as denudation of hillsides for shifting-cultivation, the natural vegetation of the region has suffered a



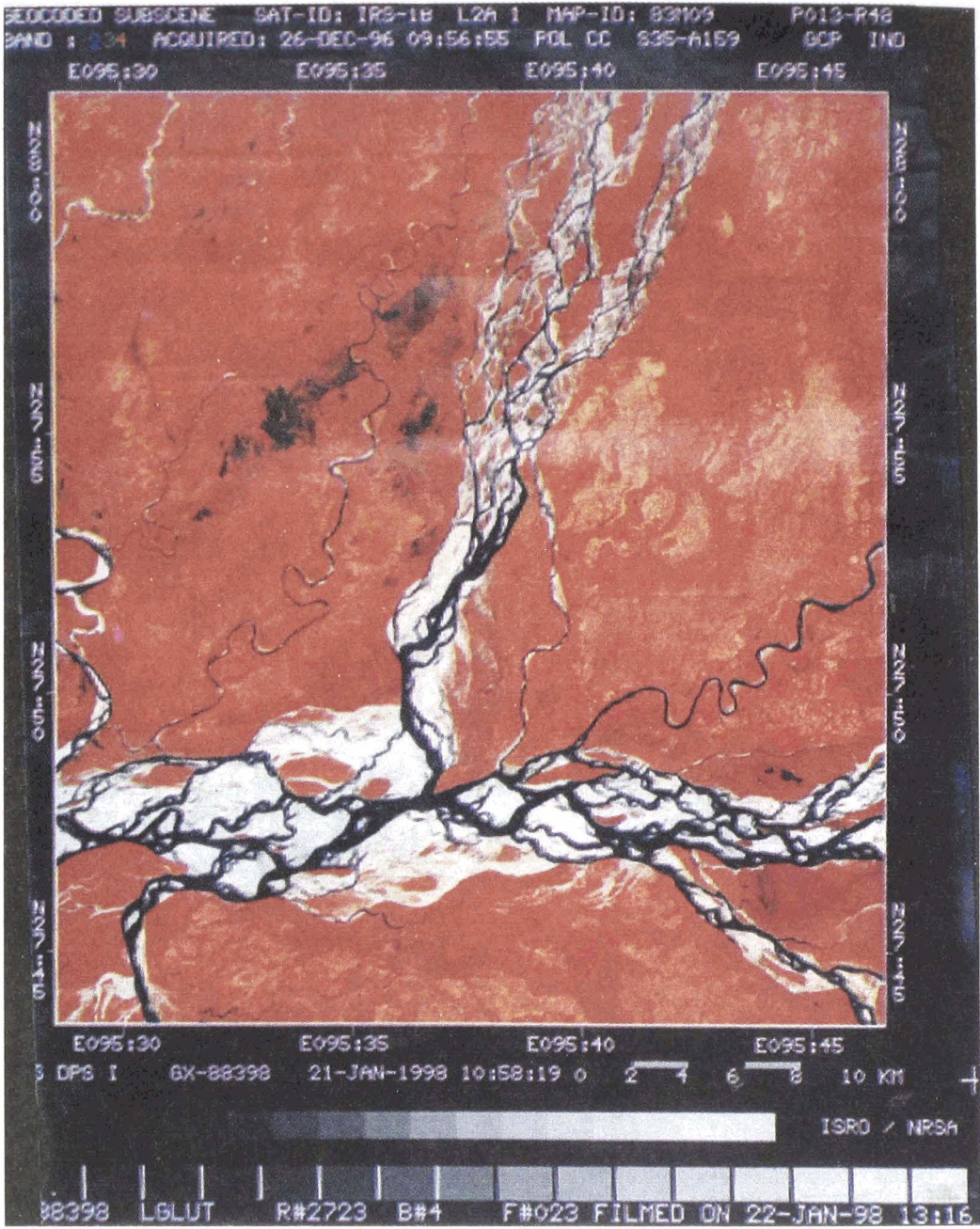
Satellite image (from 800km up) of stretch of Brahmaputra revealing its braided nature. Many North Bank tributaries are visible.

*Courtesy:* Pankaj P. Deka, Assam Remote Sensing Application Centre.



Satellite image of North East India obtained through Remote Sensing technique. *Courtesy:* Pankaj P. Deka, Assam Remote Sensing Application Centre.





Satellite image of the confluence of Lohit, Dibang and Dihang (Tsangpo-Siang). *Courtesy:* Pankaj P. Deka, Assam Remote Sensing Application Centre.





Widest section of the Brahmaputra at Gumi area.

*Courtesy:* Pankaj P. Deka, Assam Remote Sensing Application Centre.



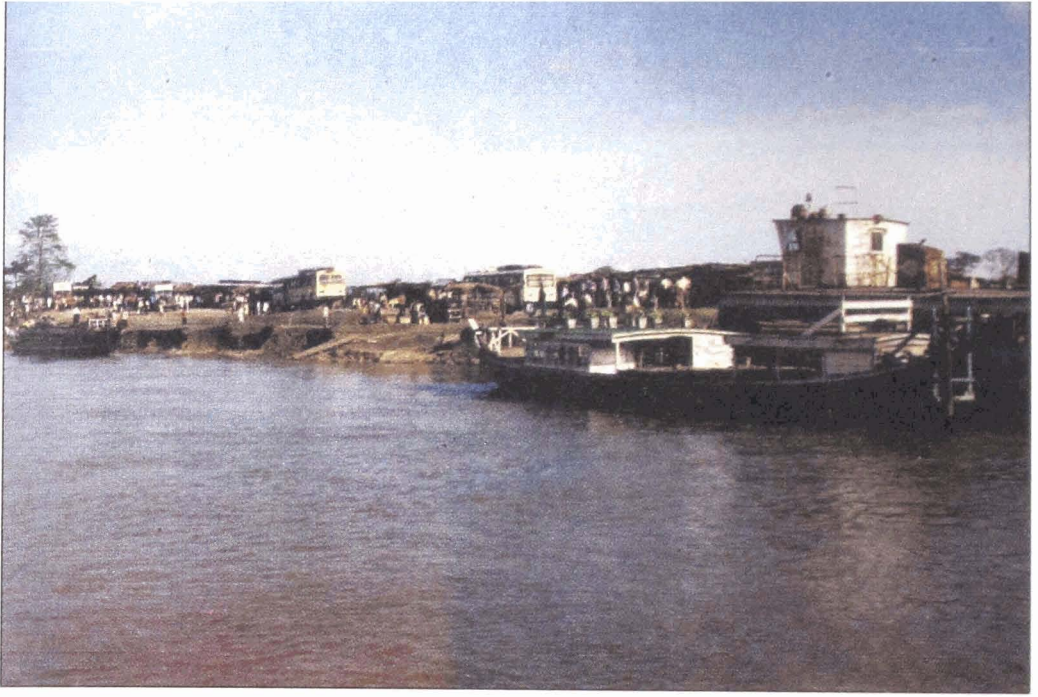
Brahmaputra above the Kaziranga National Park (dark brown shaded area). *Courtesy:* Pankaj P. Deka, Assam Remote Sensing Application Centre.





Close up of Adi cane-bridge. *Photo: Dip Bhuyan.*



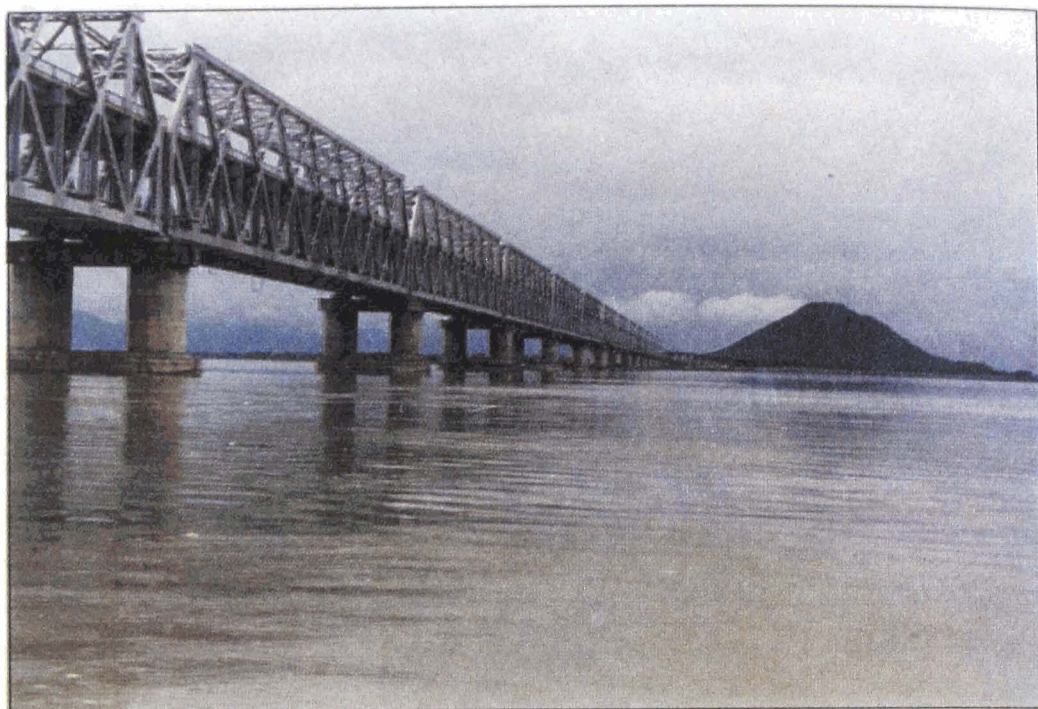


Neamatie ghat. *Photo: Dip Bhuyan.*



Fishing-folk's dwellings built upon the Brahmaputra's waters near Dhubri. *Photo: Dip Bhuyan.*



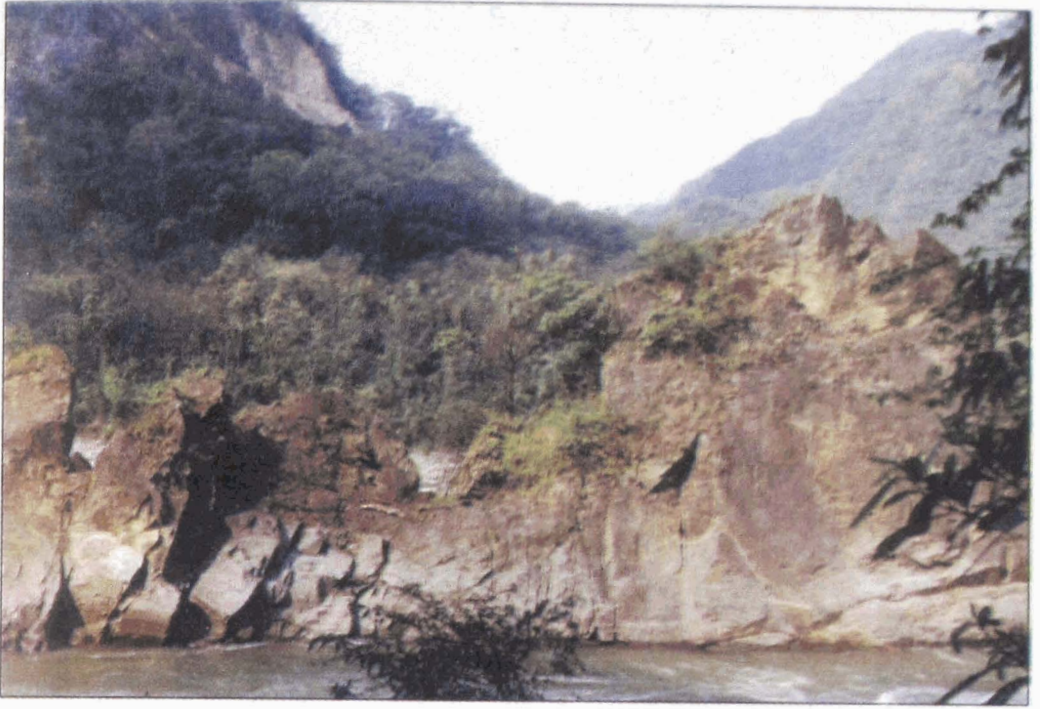


The Naranarayan Setu. *Photo: Dip Bhuyan.*



A cruise-boat on the Brahmaputra.

*Photo: S.H. Patgiri, Courtesy: Assam Tourism Department.*



The Parasuramkunda near Tezu. Legend has the rock-face as Parasurama's axe-blade. *Photo: Dip Bhuyan.*



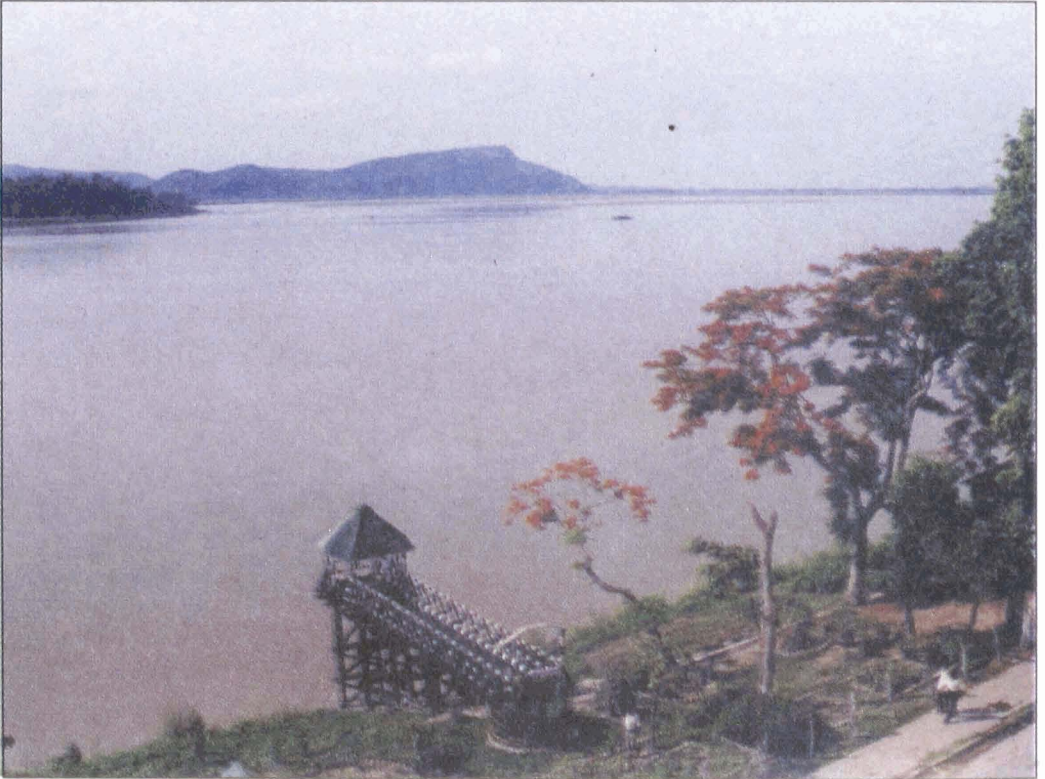
Erosion by the Brahmaputra. *Photo: Dip Bhuyan.*





Boats on the river Brahmaputra.

*Photo: N. Srinivasan, Courtesy: The North-East Daily.*

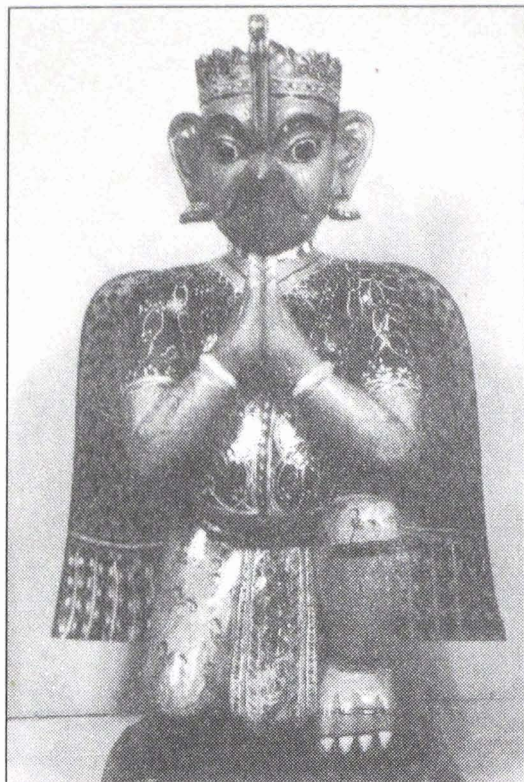


Brahmaputra near Guwahati. *Photo: Pankaj P. Deka.*

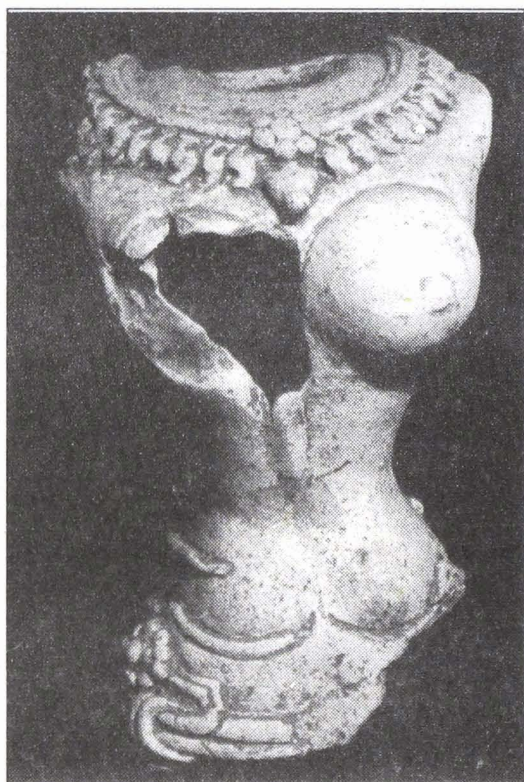


Twilight over the Brahmaputra. *Photo: Ritu Raj Konwar.*





Wooden sculpture (Sattria).  
*Courtesy: Assam State Museum.*



Kaolin female bust from  
Ambari excavations (undated).  
*Courtesy: Assam State Museum.*

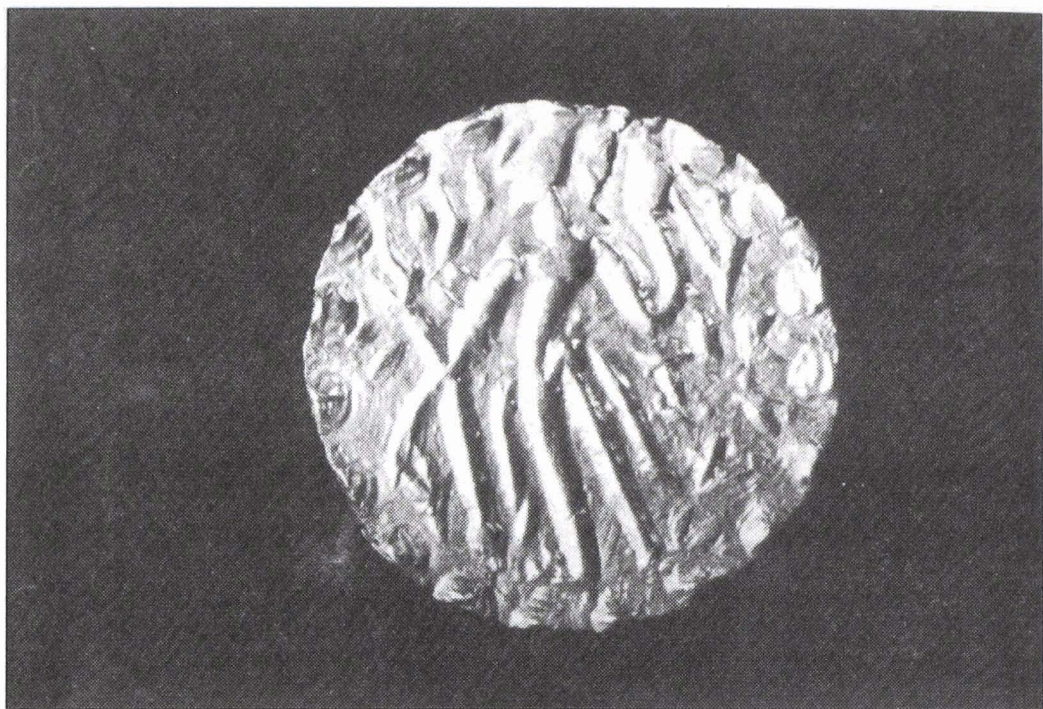


Stone sculpture of Ganga &  
Jamuna from Da Parbatia  
door-frame (6th century AD).  
*Courtesy: Assam State Museum.*

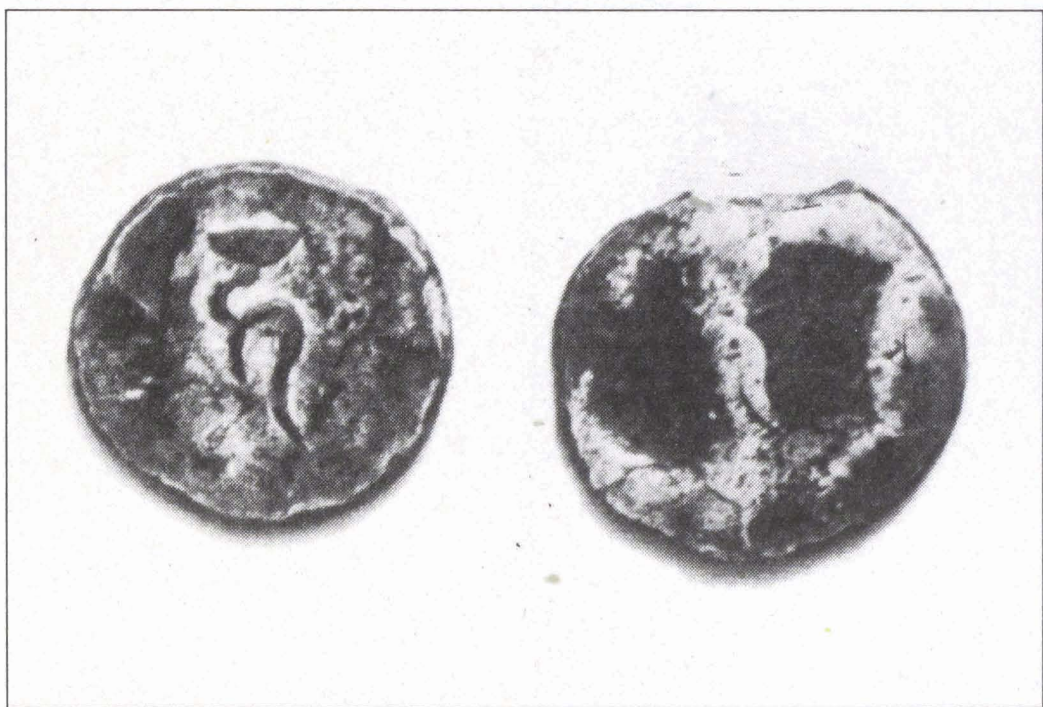


Stone sculptures of Ganga &  
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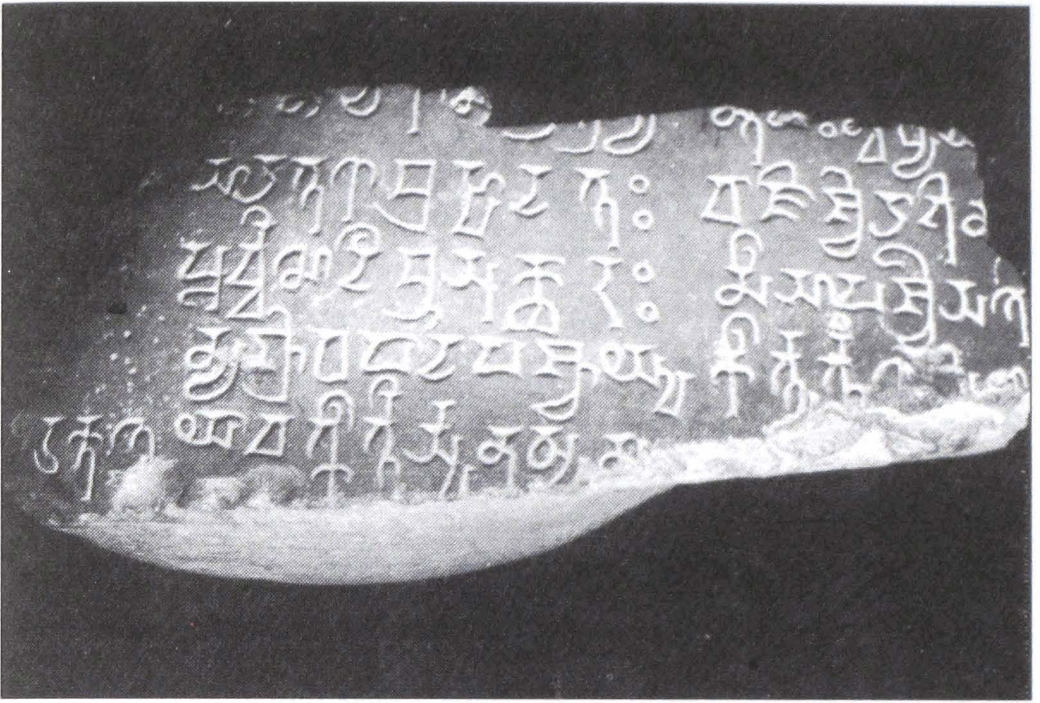


Paglatek Gold coin, late Gupta period. *Courtesy:* Assam State Museum.



Dhulapadung type copper coin. *Courtesy:* Assam State Museum.



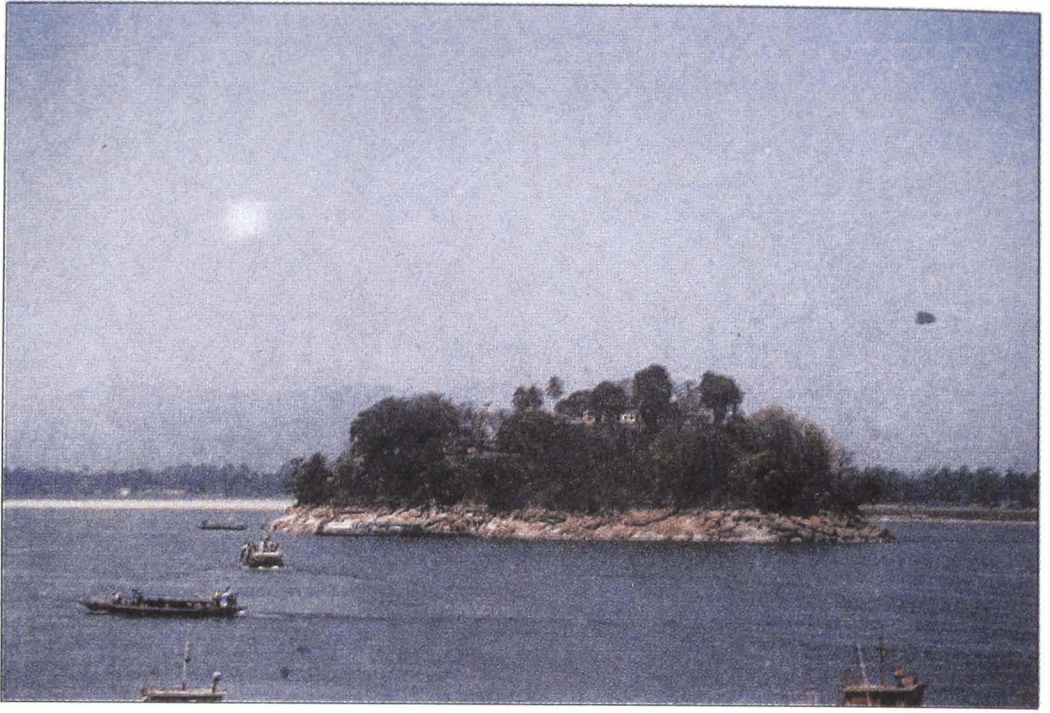


Nagajuri-Khanikargaon stone-inscription (5th century).  
*Courtesy: Assam State Museum.*



Paglatek Gold coin, late Gupta period. *Courtesy: Assam State Museum.*





The rock-island of Umananda. *Photo: Deepak Bezbaruah..*



Talatol-ghar at Sibasagar. *Photo: Anjan Deka, Courtesy: Assam Tourism.*



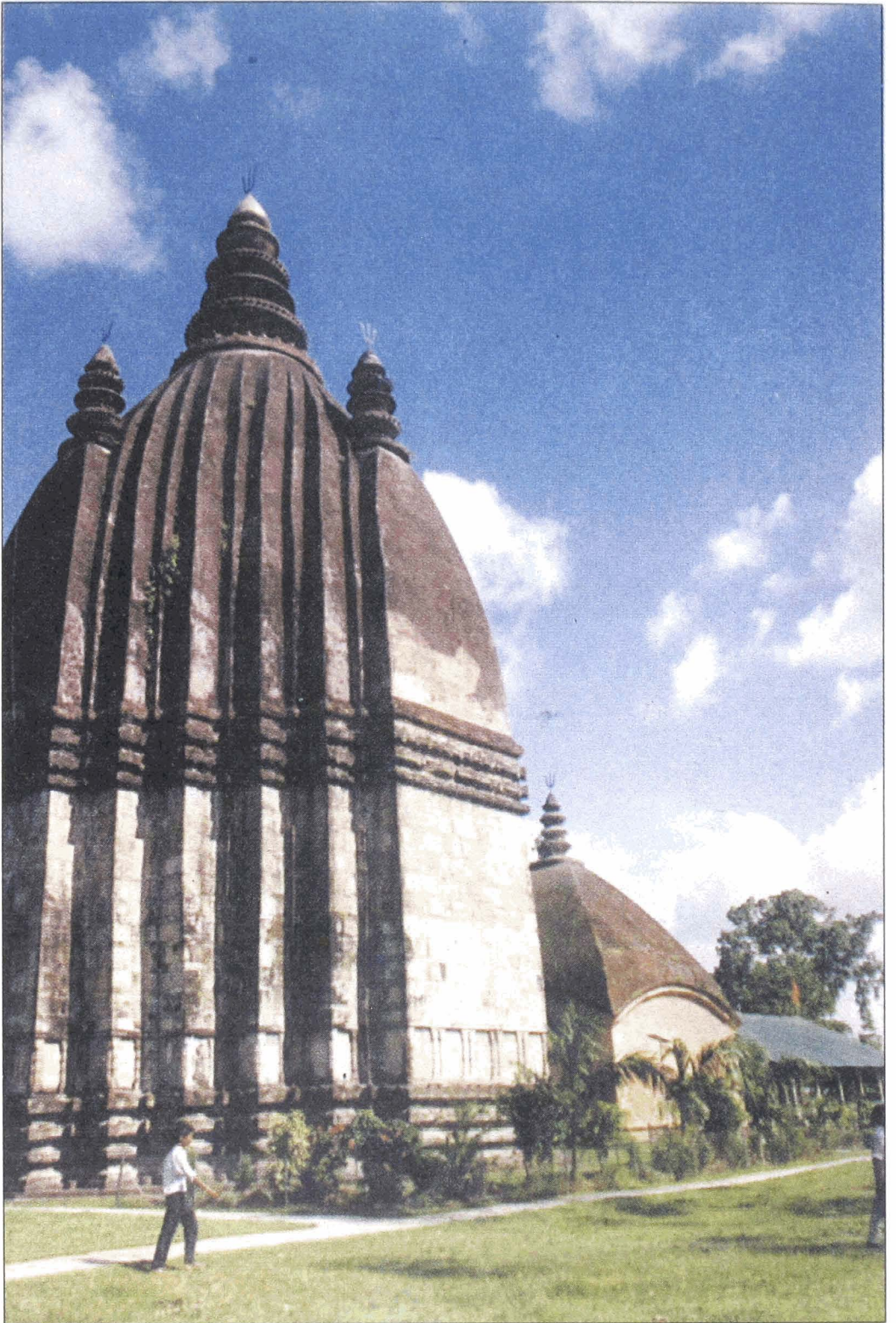


Ruins of Ahom palace. *Photo: Anjan Deka, Courtesy: Assam Tourism.*



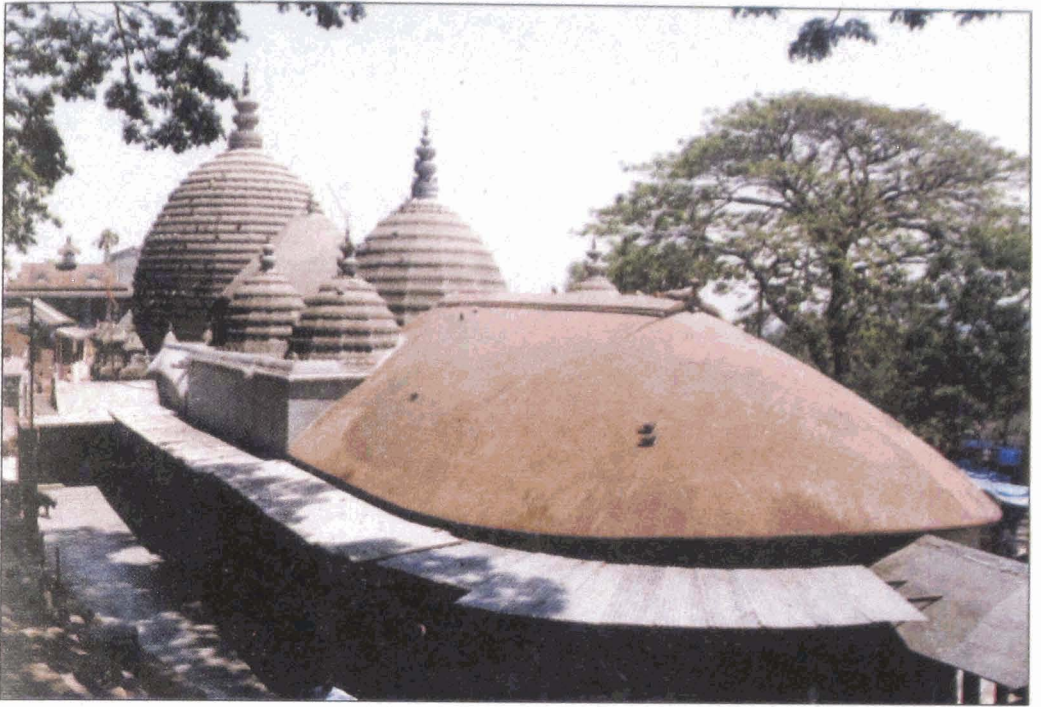
Rang-ghar, example of Ahom architecture.  
*Photo: Anjan Deka, Courtesy: Assam Tourism.*



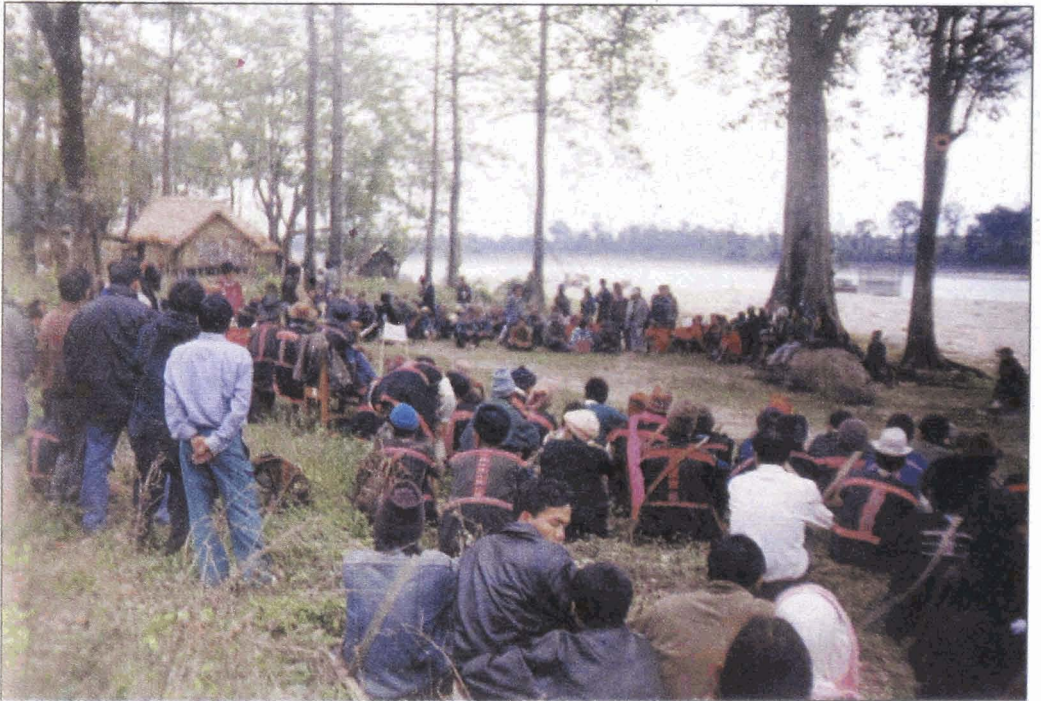


Example of Ahom temple architecture (Siva-dol).  
*Photo: Anjan Deka, Courtesy: Assam Tourism.*





The Kamakhya Temple. *Photo: Deepak Bezbaruah.*



An Adi Kebang or meeting of village council on the bank of the Siang.  
*Photo: Dip Bhuyan.*





Bihu dancers on the river-bank. *Photo: Dip Bhuyan.*



Sattriya dance at a Sattri in Majuli. *Photo: Dip Bhuyan.*





Mask-Bhaona being performed at a Sattrā in Majuli. *Photo: Dip Bhuyan.*



Mishing dancers on the bank of the Brahmaputra. *Photo: Bedo Bordoloi.*





Wetland eco-system, gift of the Brahmaputra.  
*Courtesy: UNICORNIS by Arup Kumar Dutta.*



Old method of towing boat upstream. *Photo: Dip Bhuyan.*



sea-change for the worse. Both in Arunachal and Assam the once dense tropical forests have been woefully depleted due to wanton felling of trees. Though experts differ on the extent of depredation caused by exploitation by man, his contribution towards ecological imbalances leading to climatic aberrations cannot be denied.

The flow regime of the Brahmaputra and its tributaries is dependent upon the seasonal rhythm of the monsoons and freeze-thaw cycle of glacial mountains. Since these two natural processes of rain and snow-melt coincide, the amount of water carried by the river-system during the summer months of monsoon is phenomenal. Dr. D.C. Goswami, one of the foremost authorities on the Brahmaputra, ranks this river as the fourth largest in the world in the volume of water discharged at the mouth, the annual average of which he estimates to be  $19830 \text{ m}^3 \text{ s}^{-1}$ , next only to the Amazon, Congo and Yangtze. The limited data available shows that the volume of flow in the Tibetan stretch is comparatively small. A study of maximum discharges at various sites for 1956-61 shows that while Pandu records a peak discharge varying from 50000 to 70000 cubic metre per second, the maximum recorded being 72,460 cubic metre per sec. in 1962, the maximum recorded flow at Tsela-Dzong was 14000 cubic metre per second only. The yield of the tributaries are also among the highest in the world, the rates for the Subansiri, Jia-Bharali and Manas, for example, being 0.076, 0.086 and  $0.023 \text{ m}^3 \text{ s}^{-1} \text{ km}^{-2}$  respectively. The high monsoon precipitation in the catchment areas and the steep gradient of the rivers are major factors responsible for the high rates of unit discharge.

The extraordinary volume of water carried by it and the great velocity of its flow are responsible for the high sediment yield from the basin which causes drainage congestion in the valley. This is compounded by the lithological erodibility of the highly folded and fractured terrains of recent origin of the Himalayas, which are

susceptible to easy degradation by climatic, weathering and hydrological factors. For example, soils in the lower Himalayan ranges developed on Tertiary sandstone are friable and shallow, consisting mostly of sand mixed with cobbles and boulders.

Moreover, the Brahmaputra basin represents a fragile geological base seismically very active. This seismic instability manifests itself in frequent earthquakes sometimes of very high magnitude, which make a severe impact on the fluvio-sedimentary regime of the river and its tributaries. Though accounts of the depredation wrought by such earthquakes in the remote past are hard to come by, in the recent past two tremors of great magnitude, in 1897 and 1950, both measuring 8.7 on the Richter scale, have been recorded and their impact on the fluvio-sedimentary regime of the river system documented. Extensive landslips on the Himalayan slopes and loosening of the soil, subsidence and fissuring of ground in the valley including river beds, increased sediment load of the rivers, changes in the course and configuration of the mainstream as well as tributaries, were some of the outcomes of these earthquakes.

To quote Dr. Goswami : ".....steep slopes, highly potent monsoon rainfall and snow-melt from Himalayan glaciers, easily erodible soils in the catchment and tectonic instability of the region together with the anthropogenic factors combine to provide the Brahmaputra its unique flow regime." All these factors ensure that, with the onset of summer as well as the rains, the rivers are fed by excess of water and attain stupendous energy which enables them not only to degrade their channels but also carry an astonishingly heavy amount of eroded material to be deposited in the plains. Dr. Goswami ranks the Brahmaputra second largest in the world, next to the Yellow River (Hwang Ho) in China, in terms of the amount of sediment transported per unit area viz. 1128 metric tons/km<sup>2</sup>. Measurements taken at Pandu near Guwahati between 1965-

1971 reveals that the river carries surface sediments averaging 15200 HM or 402 million metric tons per year. 95% of this amount is transported during the monsoon season. May through October, the Brahmaputra carries an average daily sediment load of 2.12 million metric tons at Pandu.

It must be kept in mind that in Tibet itself the river is clear. At Tsela-Dzong, for instance, the transported silt amounts to a mere 150 million metric tons per sq. km. The water and sediment yield, naturally, vary in different seasons in accordance with the flow regime of the river. To quote Dr. Goswami : "The annual flow and sediment discharge hydrographs of the Brahmaputra river show repetitive patterns of rise and fall of flow and sediment load in the river in accordance with the seasonal march of the monsoonal precipitation regime and the freeze-thaw cycle of Himalayan snow. The daily discharge hydrograph of the Brahmaputra shows high fluctuations in flow discharge and the different waves of flood during the high flow seasons. Even more striking are the enormous perturbations observed on the discharge hydrographs of some of the major tributaries like the Jia-Bharali or Subansiri, which are perhaps amongst the flashiest rivers of the world. The hydrograph of the Jia Bharali river with the drainage area of 11,300 km<sup>2</sup> exhibits variations in discharge by as much as 3000 m<sup>3</sup> s<sup>-1</sup> in the course of a single day. The Pagladiya, a notoriously unstable river originating in the outer Himalays of Bhutan, is yet another example of extraordinarily flashy character."

Power derived through descent from heights, excessive water yield and high sediment deposition cloggnig up the drainage-system of the valley have ensured that during few months of the year the Brahmaputra exhibits a wild, turbulent, uncontrollable nature and brings devastation to the people in the shape of floods. The river, considered a boon during the rest of the year, suddenly becomes a bane in popular perception, Yet it is this characteristic of its flow

regime which makes it one of the foremost mega-river systems in the world, and any attempt to harness it such a technological challenge. In length the Brahmaputra is only the twenty-fifth largest river, but in latent energy and dynamism it is equal to any river-system in the world.

## THE MELTING POT

An emerald vale. Enclosed on three sides by blue mountains. Veined with an arterial system of rivers flowing into a mammoth one, nourishing the entire valley. Fertile soil and temperate climate. The sure setting to the growth of a unique society!

Since time immemorial rivers have been the focal centre around which civilisations have evolved. The Mesopotamian (Sumerian and Babylonian) civilisations around the Tigris and Euphrates, the Egyptian civilisation on the banks of the river Nile, the age-old Chinese civilisation besides the Hwang Ho and Yangtze Kiang, the Indo-Gangetic civilisation upon the valley of the Indus and Ganges—all these are examples of fluvio-centric societies of ancient times. A river-system fulfilled certain basic requirements of a sedentary society—water for consumption as well as irrigation and a fertile soil so essential for the development of a stable, agro-based culture. The mighty Brahmaputra was no exception; not only did it and its tributaries prove to be a conduit for the influx of heterogeneous peoples, the river-system was also a vital agent in the colonisation of the region and the evolution of a composite society.

As R.C. Majumdar states in his *Indo-Aryan Colonies in the Far East* (1927), The Brahmaputra was “a highway of migration, leading to potentialities of a high civilisation.” On one side lay Western China, which anthropologists call the great repository of Mongoloid races, from where people fanned out in prehistoric eras to claim the Himalay-

an plateaus and slopes and South East Asia as their own. On the other lay the Indian sub-continent, with its own pattern of ethnic conflicts and assimilation, cultural synthesis and evolution. The Brahmaputra valley was the corridor and the river itself the road linking the two, allowing religious and cultural transference. The river also facilitated waves of migration into this region from all directions, taking in people and cultural traits. Broadly speaking the Caucasian elements entered from the west and Monogoloid from the east, north and to some extent from the south. In the process the hills and the plains of what today is called North-East India became a melting pot of different ethnic groups, which brewed up a cultural identity and ethos not to be encountered anywhere else in the nation.

A cursory glance might perceive an illusion of insularity in the geographical location of this region. But this illusion is sustained only when viewed in relation to the Indian sub-continent. When we take into account its location vis-a-vis China, Burma, S. E. Asia, Tibet, Bhutan and Bangladesh, the centricity of its geo-anthropological positioning becomes apparent. Also, the seemingly impassable mountain ranges hemming it in from three sides were, in fact, passably porous. The hills on the north, east and south had routes trod upon since prehistoric eras, linking Burma, Indo-China, China, Tibet and the Himalayan kingdoms. China, Burma and Indo-China could be reached via Cachar and Manipur in the south-east, and Patkai ranges in the east. Tibet was approachable through passes from the eastern extreme of Assam, while passes called Duars also existed to Bhutan and Nepal. From the south-west the valley could be reached by sea from the Bay of Bengal through Bangladesh (up the Brahmaputra) or Cachar, and even Burma (Myanmar). And, of course, the Ganges-Brahmaputra link could be utilised to enter Assam from the western flank, which has geologically always remained open.

The mind's eye can visualise the *modus operandi* adopted by successive waves of nomadic migrants who used these passages to enter the hills and plains of Assam and the vital role played towards this by the riverine routes. In the primeval past this fertile region of heavy rainfall was covered by dense forests having impassable undergrowth of ferns and creepers, and swampy stretches of grass and reeds. Though today the grasslands and forests have almost disappeared, remnants of these can yet be experienced in pockets of Arunachal and Kaziranga. The difficulties of traversing the land terrain could well have been compounded by the wildlife in the jungles and grasslands, as well as snakes and crocodiles. Under such conditions a river was the safest way to travel by and river banks the most congenial places to clear, colonise and settle, fulfilling as they did the prime requirements of water, food and relative safety. Occasionally new arrivals drove out old settlers from advantageous spots in the plains, forcing them to take to the hills. Since most of the tributaries of the Brahmaputra are navigable for quite some distance, and also have clear passages through the dense verdure while coming down from heights, they could be followed by groups who settled in the hills.

Thus, in a sense, present political barriers do not operate when we talk of social and anthropological evolution. The North-East must be seen as a geo-ethnic unit sharing common historical and socio-cultural traits. One must note that while NEFA (past name of Arunachal), Meghalaya, Nagaland and Mizoram were carved out of Assam after independence, the people of Manipur and Tripura too have ethnic and cultural empathy with the other members of the 'Seven Sisters'. Tracing the ethnic history of the region is, therefore, impossible without referring to its entirety.

Moreover, it is not possible to accurately delineate the chronological sequence in which the successive waves of migrants entered and colonised the region. Findings of

anthropology as well as archaeology go towards the tracing of history; the absence of scientific evidence and research stand in the way of obtaining incontrovertible conclusions. Very little systematic and scientific anthropological research has been carried out here. Prior to independence such explorations were primarily in the hands of amateur anthropologists, a situation which has not changed enough in recent years to afford definitive data. Tracing the ethnic history of the region must, perforce, be of the nature of surmises dependent heavily on scattered anthropological and archaeological findings, myths and folk-lore, language, social customs etc.

Given the dense verdure of the hills and valleys which could not be opened up for habitation and agriculture with stone implements, it is inconceivable that any form of sedentary society existed in the Brahmaputra valley prior to the iron-age. It is surmised that nomadic neolithic tribes were dwellers of this region till well into the iron-age. A few evidences of the existence of inhabitants during the neolithic period have been found, including stone-weapons, machetes, axes, hammers, hoes and spades. Megaliths and monoliths of cairn, dolmen and menhir are other indicators of human habitation in the primeval past. There are innumerable caves in this area and these may have been dwelling places for prehistoric man. The caves of Meghalaya offer great scope for exploration in this regard, for there is evidence that silica from their walls had been used to make stone-implents. The antiquities discovered in Assam have been documented in Prof. H.C. Dasgupta's *Bibliography of Prehistoric Indian Antiquities* and interpretations based on these have been offered by a number of Britishers including J.V. Hooker (*Himalayan Journal*), C.B. Clarke, Godwin Austen, Dr. J.H. Hutton etc.

Mortimer Wheeler and E.C. Worman, who propounded the theory of origin of neolithic cultures of India, were impressed by the concentration of neolithic finds in Eastern India and concluded that the celt-making traditions



and neolithic culture entered India from Far-East Asia through the Brahmaputra valley corridor. Though evidence points to the presence of the paleolithic man in the region, there is little to conclusively prove that mesolithic culture prevailed. Also, we know nothing of the people in the copper bronze and iron-ages who might have dwelt here.

The fact that the Khasis and Jaintias even today erect megaliths, called *Maw-Bynna* (Maw-stone, Bynna-to let people know or commemorate) is of considerable interest in this regard. Dr. Hutton and Mr. Mills considered these as representations of phallic worship : "The upright menhirs and the sitting stones must be interpreted in the light of Khasi, Synteng and Naga monoliths and dolmens as providing phallic memorials through which the soul matter of the living, as of the dead, assists the fertilisation of nature, the upright stones representing the male and the flat ones the female principles." These ancient megaliths are not only to be found in the Khasi, North Cachar and Naga hills, but even in plains areas such as Dimapur and Kachmari and among others such as the Karbis. According to anthropologist Kanak Lal Barua, the existing evidence points to the presence in Assam of a strong neolithic culture in prehistoric times, which was overshadowed by later migrants with a more sedentary attitude to life who were equipped with improved techniques of implement-making and cultivation, and the knowledge and use of iron. However, culturally they were inferior to the Austro-Asiatics who formed the true human base upon which the society of this region evolved.

The Austro-Asiatics or the Austric speaking branch of the Australoids are considered to be in the true autochthon population of Assam, as perhaps of the rest of India, though the latter surmise has been questioned by some anthropologists. Authorities such as Suniti Kumar Chatterji, Bani Kanta Kakoti, Birinchi Kumar Barua and R.M. Nath have offered adequate morphological and linguistic

evidence to prove the former to be a plausible surmise. Austro-Asiatic ethnic strains are present in the people of this region, and analysis of physical anthropological data reveals the existence of Austro-Asiatic traits. The Austro-Asiatics in the remote past, according to some authorities, had their habitation on the banks of the Hwang Ho and Yangtze Kiang, from where they dispersed over 4000 years ago to South-China, South-East Asia, Upper Burma, Assam, Nicobar islands, Indo-China and Australia. In India they are believed to have dwelt on the banks of the Brahmaputra and the Ganges. Remnants of these people are found today in Chota Nagpur in Bihar, Khasi and Jaintia hills of Assam and parts of Arunachal. Though some authorities consider them to be Mongoloids who had adopted the Austric language, most authorities state that Austro-Asiatic elements, are visible in the physical make up of Khasis and Jaintias, as also to some extent in certain Bodo tribes of Assam and the Wanchoo tribe of Arunachal. The language spoken by the Khasis and the Syntengs is related to the Monkhmer group of languages used even today in places such as Cambodia. The Austro-Asiatics may have first dwelt in highland areas beside the Brahmaputra, but were forced by subsequent invasions to flee to hill areas. It is believed that the matriachal social-system which is followed by the Khasis was once prevalent in entire Assam and is cited by authorities as evidence to show how widespread was the Austro-Asiatic population in this region.

They are presumed to be the keystone to the agriculture oriented society in Assam, responsible for introducing the cultivation of paddy, cotton and mustard and of using the Jhum or shifting-cultivation technique. Perhaps they, along with later Mongolians, brought in the art of spinning and weaving on handlooms to Assam, something which was perfected in ancient China, as also sericulture. Each rural woman in Assam being an expert weaver testifies to the indelible contribution made by this group . They were

the first to rear poultry as well as tame and domesticate elephants on the banks of the Brahmaputra. One of the most interesting cultural traits exhibited by them is their predilection for *Tamul*, or fresh or unripe betel-nut, something markedly present only among Austro-Asiatics. While the habit of chewing unripe betel-nut is prevalent in South East Asian countries like Thailand and Vietnam, in India it is seen only in the North-East. The addiction of the Khasis to betel-nut is legion, while the importance of betel-nut in Assamese society in rituals, festivals and social usage cannot be overemphasised. Offering of betel-nut at worship, while issuing invitation for a marriage-ceremony, expressing love or friendship, showing hospitality towards guests or respect towards elders, is integral to Assamese culture. This trait has been picked up even by Mongoloid hill-tribes such as the Garos, Ao, Lotha and Konyak Nagas.

Whether the Dravidians, whose history appears to be as old as that of the Austro-Asiatics, and who were supposed to have inhabited the whole of pre-Aryan northern India after supplanting the Austric speaking populace, migrated to Assam, is shrouded in controversy. A few anthropologists believe that the Bania and Kaibarta communities here are the survivors of the Dravidian race. Some scholars speak of the Mongolo-Dravidian who is said to have evolved through interfusion with the Indo-Chinese people settled here, while others debate the presence at all of ethnic Dravidian strain among the tribal groups of Assam. However, there is no denying the fact that Assamese culture, directly or indirectly, has been influenced by the Dravidian, even though it might have come belatedly and mixed with the Aryan.

The Dravidians, as proved by the Harappa and Mohenjodaro excavations, were masters at urban-planning, and their influence may have been evident in ancient cities such as Pragjyotishpur in Kamarupa. They were certain to have played a crucial, if not direct role, in the religious transformation of the North-East. The word *Puja* is of

Dravidian origin (Pu-flower, Chei-do, meaning action with flowers). Scholars also opine that Shiva worship is Dravidian, a cult later omnipervasive in Assam. Numerous Dravidian words, later Sanskritised, have come into the Assamese language.

However, it is the Mongoloid races who had their origin in Western China and migrated in sporadic waves through eastern passages into Burma and Assam who give the socio cultural brew in this region its distinct flavour. "Different branches of the great Sino-Tibetan speaking people which had their *Nidus* near the head-waters of the Yangtze Kiang and the Hwang Ho rivers, to the West of China, pushed South and West, probably from 2000 B.C. onwards, and tribes of these infiltrated into India mostly along the western course of the Brahmaputra. The great Bodo tribe would appear to have been established over the valley of the Brahmaputra fairly early, and to have extended into North and East Bengal into North Bihar. The North Assam tribes of the Abors and Akas, Daflas and Miris, and Mishmis appear to have come later, and to have established themselves in the mountains to the North of the Brahmaputra plains already in occupation of the Bodos, and by some Austric and possibly also Dravidian tribes which preceded the Mongoloid Bodos in this tract—Bodo and Austric and Dravidian with Aryan speaking elements from Bengal and Bihar and with the Siamese-Chinese section of the Mongoloids in their Thai tribe of the Ahoms finally becoming transformed to the Aryan Assamese-speaking masses of the valley." (*The Place of Assam in the History and Civilisation of India*, Suniti Kumar Chatterji, 1970).

Some of these tribes ascended the Tsangpo and migrated to the west to people the lower Himalayas. Others moved south down the Irrawaddy, Salween, Mekong and other rivers to populate Burma and South East Asian countries. The south-west wave of the Mongoloid migration descended the Brahmaputra and asserted their dominance on the valleys and hills of Assam, their influence at

times perhaps percolating further east to Bengal and Bihar. A constant, but periodic inflow initiated a cycle of conflict and synthesis till the settlers spread out by means of the Brahmaputra and its tributaries to colonise the entire region in the form of small kingdoms or principalities. The Austro-Asiatic and possible Dravidian elements were overwhelmed and coerced into assimilation so that distinctions between them and later migrants became blurred. As Suniti Kumar Chatterji states : "Assam has thus to meet all tribal movements from the East, involving the advent into India of Tibeto-Chinese speaking Mongoloids; and it was in Assam primarily that this great element in the formation of the Indian people became largely Indianised—particularly in the Brahmaputra valley..... This can be looked upon as Assam's great contribution to the Synthesis of Cultures and Fusion of Races that took place in India—a synthesis which had started in prehistoric times when two distinct races found that they were to reside together in the same country—the Austric and the Mongoloid, the Dravidian and the Austric, and the Dravidian and the Mongoloid. This synthesis took a definite shape, and its character and line of movement was fixed for ever when..... the Indian man as the result of the fusion of the Aryan and Dravidian, Mongoloid and Austric came into being at the end of the Vedic period (i.e. by 1000 B.C.)."

This Monogolid influx continuing through millennia is responsible for the mind boggling ethnic diversity of the North-East—so many peoples and tribes, each with its own colourful and vibrant culture! In Nagaland we have no less than 17 Naga tribes such as the Ao, Angami, Lotha, Sema, Rengma, Konyak, Sangtam, Chang, Phom and so on. The Lushai hills (now Mizoram) are peopled by the Lushais and Kukis, the Garo hills of what is today part of Meghalaya by the Garos who belong to the Tibeto-Burman Bodo group. Even more variegated is the ethnic composition of the erstwhile North East Frontier Agency (NEFA), now rechristened as Arunachal. Here we have the

Monpas, Mijis, Sulungs, Nishis, Akas, Tagins, Gallongs, Apatanis, Sherdukpens, Khowas, Adis, Daflas, Padams, Minyongs, Bokars, Boris, Digarus, Mishmis, Mijus, Khamtis, Singphos, Tangsas, Noctes, Wanchoos—to name only a few! Add to all these the dozens of tribes inhabiting Manipur, Tripura, Meghalaya and the Brahmaputra and Barak valleys as well as hills of Assam, and the North-East does indeed loom as a “virgin soil for the Verrier Elwins.”

Today scholars call these Tibeto-Burman linguistic family of the Indo-China group as Indo-Mongoloids, which describes their racial and cultural status more appropriately since they have dwelt in India for centuries, from as early, if not earlier, than when the Aryans entered India from the north-west, sometimes before 1000 B.C. In ancient times they were referred to as Kiratas. The mention of Kiratas is to be found not only in ancient Sanskrit literature, but earlier in fact, from the time of the *Yajur Veda* and *Atharva Veda* onwards, where the mountainous areas of north-east India as well as the Himalayas were shown to be the home of Kiratas. It was Sylvan Levi who first drew attention to the specific association of the generic term *Kirata* to Indo-mongoloid culture in the *Mahabharata* in a whole section called *Kirataparva*, where mention is made of several principalities along the border of Himalayas ruled by Kirata kings. The *Kalikapurana* describes the Kiratas as of short-stature, golden coloured and addicted to meat and drink. The *Vishnupurana* and *Markendeyapurana* give us an idea about their geographical distribution while the *Rajmala* chronicles of Tripura kings and the *Yoginitantra* reveal that as late as the medieval period they continued to be known as Kiratas.

The *Periplus of Erythrean Sea*, a work of the 1st century A.D., mentions the hill people to the east of the Ganges, called Kirrhadai, who were described as a race of men with flat noses. There is historical evidence to show that this amalgam of Austric-Dravidian-Mongoloid, augmented by Aryan influence, did succeed in erecting powerful empires

in the past, one of them known as Pragjyotisha. This non-Aryan empire, whose boundaries reached the "south-west barbarians of China," attained fame enough to find reiterated mention in the *Puranas* and epics. Referred to as a *Mlechcha* or *Asura* country, or a non-Aryan empire, it had as its rulers individuals of Mongoloid stock. There is, therefore, little to doubt that, despite the percolating Aryan influence from the west, Assam till the medieval ages remained predominantly a Mongoloid land, though very much in touch with the mainstream Indian culture.

Before the arrival of the Mongoloid Ahoms from North Burma in 1228, the Bodo people of the Tibeto-Burman linguistic group appear to constitute the dominant Kirata element in the hills and valleys of this region. Thus it was the Bodos who had first imbibed Aryan influence from the west. The group consists of a number of tribes such as Kachari, Lalung, Dimasa, Rabha, Garo, Chutiya, Moran etc. They were expert cultivators, weavers and sericulturists. Rivers had been essential to their mode of dispersal from their original homes; also, they preferred to live primarily on their banks. In the Bodo language water is *Di*, which explains why so many rivers in Assam have *Di* as prefix or suffix — Dihang, Dibang, Dikhow, Disang, Mangaldoi etc. Many of the Assamese names and customs having to do with rivers comes from them, the most significant being the fish-eating habit. The Bodo migration having penetrated further west from Assam, we find fish-oriented diet prevalent in places like Bengal. The technique of building *Changs*, or houses on stilts, is derived from the Bodos. If the rural economy of Assam even today is centred around the bamboo plant, the reason is the bamboo-culture brought in by the Bodos.

The most important event in the socio-cultural history of the Brahmaputra valley which gave it its present-day shape was, of course, the coming of the Tai-speaking, Shan tribe from Upper Burma belonging to the Siamese-Chinese language family. Not only did they add yet another

segment to the ethnic mosaic, they also, by uniting the disparate tribes and providing political stability, hastened the process of homogenisation. No doubt the cycle of conflict and synthesis continued in their time too and the chronicle of their 600 year long rule testifies to their struggle to subjugate other ethnic groups, particularly the Bodos. But their admirable tolerance and ability to imbibe and adapt helped forge the multi-ethnic society into one, common bond and gave the people of this region a unified, Assamese identity.

With the arrival of the Ahoms too began the recorded period of the Brahmaputra Valley's history. It is interesting to note that their *Buranjis* or chronicles were written in oblong strips of tree-bark, yet have lasted for centuries. During the course of their rule they gave up their own language, as well as religion and rituals and embraced Hinduism like other ruling houses of the past, thereby furthering the process of Hinduisation which had been continuing for centuries.

The Caucasoid or what is loosely termed Aryan migrants used the Ganges-Brahmaputra route to enter Assam, though in trickles and not hordes as the Mongoloids. Anthropologists observe physical traits of all major Caucasoid types among the population of the Brahmaputra Valley, including the Mediterranean, Alpino-Armenoid, Irano-Scythian and Indo-Aryan. Being in the nature of a corridor this valley, despite its age-old Mongoloid base, was the transit point for the exchange of Indo-Aryan culture from the Indian mainland to South-East Asian nations. In the process the people of the valley were influenced by it. One of the most notable emperors of Pragjyotisha, Bhagadatta, for example, was not merely a great Kirata warrior, but also well-versed in vedic religion and rituals. Thus, from an early period, Aryan culture made inroads into that of the predominantly Mongoloid. As Sunii Kumar Chatterji states : "There is evidence that Assam formed a highway not only for trade but also for



the exchange of ideas between India and Burma and South-West China (Szechuan and Yunnan) from at least the closing centuries of the first millennium B.C. The Sanskrit name of China, *Cina*, is believed to have been derived from the Ts'in dynasty which came into power in China from 221 B.C., and the name would appear to have come to India through Assam. The Kirata or Mongoloid people were certainly very well known to the Vedic Aryans, and we find mention of them in the *Yajur* and *Atharva* Vedas. They appear to have started to come within the Hindu pale from the late Vedic period, and Bhagadatta with his Kirata and Cina or Chinese hosts participated in the Mahabharata battle as an ally of the Kauravas."

Finally, despite the inferiority of actual Aryan presence in the valley, it was their ideas and customs which changed the face of the what had formerly been a tribal society. The Aryanisation of the North-East, therefore, followed an all-India pattern—the expansionist Brahmanical Hindu world of Gangetic India merging into that of the non-Aryan, thereby forming a composite society with a tribal base and Hindu superstructure. From a purely anthropological viewpoint the "strain of Aryan blood", as the historian Sir Edward Gait puts it, is very thin, apparent only in some of the higher castes. The Brahmins and Kalitas are examples of classes which possess a distinctly Aryan appearance. The synthesis is more pronounced in aspects such as religion and language.

The process of Aryanisation was too protracted and abiding to be encapsulated in a few paragraphs. Also, because of the insulation afforded by the terrain, the hill-dwellers of this region were far more impervious to external influences and retained their individual ethnic identities as well as dialects till the twentieth century. Aryanisation was more pronounced in the valley of the Brahmaputra, as also that of the Barak. It was not merely a process of tribal culture being moulded and given new shape by the Sanskritised culture of the Gangetic plains—rather, it

was a two-way traffic, with the latter imbibing linguistic and cultural elements from the Austric-Mongoloid synthesis and being influenced itself. For instance, the matriachal system of the Austro-Asiatics is thought to be, along with certain Mongoloid customs, responsible for the Sakti cult of Hinduism, in which a Mother-goddess is worshipped, as in the temple of Kamakhya. The Saivite's worship of the Linga is also considered to be an offshoot of the Austric phallic cult and custom of erecting stone megaliths and monoliths. As Jean Przyluski says : "The phallic cults, of which we know the importance in the ancient-religions of Indo-China, are generally considered to have been derived from Indian Saivism. It is more probable that the Aryans have borrowed from the aborigines of India the cult of Linga as well as the name of idol."

The Aryans, at first, did not consider stones to possess sanctity and, instead, worshipped *Agni* or fire, but later took up the Austro-Asiatics' reverence for stone. Rituals involving stones are the contribution of the latter to the Pan-Indian culture. Their custom of burying stones is presumed to have given rise to the ritual of *Pinda* as a part of the after-death rites of Hindus. Similarly, the Aryan Monosha-Puja, which was once a widespread cult in the valley, was taken from the Austrics, mostly from the *Uthleen* snake worship of the Khasis. The Austrics used to smear sacrificial blood on the forehead of their idols, which is believed to be the origin of the Hindu custom of using *Sindur*. These and many other instances of religious and cultural exchange can be cited to show that the process was one of genuine synthesis and not merely one culture imposing itself on another.

Commenting on the Mongoloid contribution Suniti Kumar Chatterji states : "The Tantric form of later Hinduism, which, however, is not divorced from its bases in Yoga in Puranic faith and ritual, seems to have taken its final colouring from the character of the Mongoloid cults, which it replaced. Among the Mongoloid tribes women

had far greater freedom in marriage, divorce and other matters than we find in orthodox Hindu society. Certain aspects of Vamachara Tantricism have their bases evidently in this side of Indo Mongoloid life and ways. In fact, the worship of the Great Mother in some of Her various shrines of Assam and East Bengal, particularly in Kamakhya near Gauhati, is looked upon as being originally Kirata of Tibeto-Burman." (*The Cultural Heritage of India*, Vol. I).

The evolution of a composite Assamese society centred around the Brahmaputra river and its tributaries and spanning the entire North-East was, as briefly shown, the outcome of conflict and assimilation between a continuum of communities. Though the formative process itself duplicated what had happened in the rest of India, certain fortuitous factors contributed in imparting a noticeable divergence endowing it with uniqueness. The area's geographical proximity to China, Burma and South East Asia and remoteness from the sub-continent, the predominance of Kiratas in the development of language as well as a collective cultural psyche, the fact that throughout its history the predominantly Mongoloid rulers had retained their independence, all these worked towards creating a relatively insular environment where a civilisation, markedly different from yet having distinct affinity to the rest of India, could evolve. The advent of the British to an extent broke the past "handicap of isolation", while the anti-imperialist struggle of the Indian people strengthened political links with the sub-continent, enabling the region to take its place within the Pan-Indian mosaic.

"This small corner of India is a meeting place of so many races and customs that it was long been recognised by anthropologists as one of the most productive fields for research work. As a result, no area of such a limited size can boast of such an impressive array of monographs. One can find over a dozen of classical studies dealing with

various Naga tribes, with the Meitheis, the Khasis, the Garos and so on." — Thomson Muirhead.

If the North-East is an ethnological warehouse, Assam's contribution towards adding colour to the spectrum is no less marvellous, considering the plethora of tribes and groups which have melded to make the Assamese identity. Anthropologists broadly divide the population living in the Brahmaputra valley and surrounding hills into two constituents, the Mongoloid Assamese and Caucasian Assamese.

The largest among the Mongoloid segment are the Bodos, actually a linguistic group though sometimes referred to in an ethnological sense. They comprise a number of tribes such as the Bodo-Kacharis of the plains, Dimasas or Hill Kacharis, Rabhas, Lalungs, Garos, Chutiyas, Moran, Tippera, Hajongs etc., belonging to the Tibeto-Burman linguistic group. The Bodo-Kacharis are called by different names in different places. In Bengal they are known as Meches, in Upper Assam as Sonowal-Kacharis, Thengal-Kacharis and Jharus. In Cachar they are called Barmans. The Dimasa-Kacharis belonging to the Great Bodo race live in the North Cachar Hills, though their name implies that they once lived in the plains. Since 'the big river' or Di-Ma is the Dhansiri, it implies that in the past they must have settled on the banks of that river. The Dimasa-Kacharis have a rich artistic and cultural heritage, as the ruins of their palaces and temples at Dimapur, Maibong etc. testify. The Kacharis, who have given the name to the Cachar district in Barak valley, are ethnically allied to Chutiyas, Lalungs, Garos and other members of the Bodo race.

The Chutiyas, after migrating into Assam through north-eastern passes, established independent principalities in the upper regions of the Brahmaputra. Today they are classified into four groups— Hindu Chutiya, Ahom Chutiya, Borah and Deuri. The Morans are an ancient population living in Upper Assam, who lost their

independence after the coming of the Ahoms. Their socio-cultural life is greatly influenced by Vaishnavism which they embraced in the 16th century, though they yet retain some of their own socio-cultural elements. The Koch-Rajbanshis are an admixture of different Mongoloid groups who have been given the status of Assamese Hindu caste after their conversion to Hinduism, and inhabit districts of Lower Assam. The Meches, another member of the Bodo family, are confined mostly to Goalpara district while some Garos of the same family live in Karbi Anglong and North Cachar Hills. The Lalungs, who in ancient days came into Assam from Tibet following the course of the Tsangpo, are a riverine tribe. The Rabhas, another member of the Bodo group, originally from the Tibetan region, are today widely scattered over the valley. The Sonowal-Kacharis are the third largest plains tribal group. Belonging to the Bodo family, they are called so because they were washers and collectors of *Son* or gold under the Ahom rulers.

Among the non-Bodo tribes are the Mishings (Miris), second largest tribal group in the plains and the one most closely affined to the Brahmaputra. The Khamyangs of Upper Assam, like the Ahoms, are a Mongoloid people belonging to the Tai speaking group, though they entered Assam much later. In hill dwellers such as the Karbis (Mikirs) of Karbi Anglong and North Cachar Hills, the Hmars who were originally from Central Asia, Kukis who originally inhabited a tract around the KU lake in China, Rengma Nagas some of whom live in Karbi Anglong, Zema Nagas, Jaintias and others. All in all there are 23 distinct tribal communities living in present Assam.

Historically, the most dominant and influential of the Mongoloid Assamese were the Ahoms, who had once lived in the upper course of the Irrawaddy. Today the once mighty Ahoms mostly inhabit the Upper Assam districts. Almost all the Mongoloid Assamese tribes are riverine people having close affinity with the Brahmaputra and its tributaries. Even those who dwell in the hills are believed

to have once lived in the plains and, today, build their villages on the banks of the upper reaches of tributaries. The Karbis, for instance, had originally been plains tribals driven to the hills during the reign of Kachari kings. Contradicting this pattern are the Mishings, who display the closest rapport with the Brahmaputra. They were originally a hill tribe living in the Abor and Mishmi hills of what today is the Siang district of Arunachal Pradesh. Nostalgic references to their past background is to be found in their folksongs :

*Adi Lokke Kang Kandak*

*Baggum Sinloode*

*Okumso Kang Kandak*

*Brahmaputra Abude*

*Einolemsine Diuryadeng*

*Ngke Mennam Oimebui.*

("In the hills *Baggum* woods are beautiful and in the plains the Brahmaputra. But my beloved surpasses both in her beauty.").

As to be expected, the folk-lore of the tribes which in a sense contain their history, are full of allusions to the rivers sustaining their societies. The Lalungs, for example, prefer to introduce themselves as Tiwas to other people. In their language *Ti* means water and *Wa* means superior. Since they originally hailed from Tibet their coming from a land of superior water apparently alluded to the pure water of the Tsangpo, whose course they had followed to reach the banks of the Brahmaputra. The Karbis call them Lalungs, *La* meaning water and *Lung* meaning rescued in their language. This apparently refers to the adverse circumstances under which the Lalungs had to leave Tibet and were literally rescued by the water of the Brahmaputra, whose south bank offered them shelter.

Though the Bodo group in general call the Brahmaputra *Ti-Lao*, the Dimasa Kacharis call it *Di-Lao*, the prefix for rivers in their dialect being *Di*. They have a quaint



folklore to explain how they became racially different from their brethren, the Bodo-Kacharis. Their king, defeated by a stronger adversary, was retreating with his army when an impassable river came in the way. Unable to cross it, the king decided to make a do or die stand on its bank. But that night a god appeared in his dream and told him that he would be able to cross the river safely at a specific point where an egret would be standing. But none of his men must look back while in the water. The next day, as directed in the dream, the king and most of his men crossed over to the other side. However, one of the men looked back to see if his son was crossing or not. At that very moment the river suddenly flooded and strong currents swept away those who were in its water, leaving a part of the king's troops stranded on one bank. Those who were able to cross became Dimasa-Kacharis !

The Sonowal-Kacharis have a quaint custom in which, prior to cremation, a copper coin is placed on the dead body because the land beside the Luit (Brahmaputra) where they now live was not their original land and thus a symbolic purchase of the land for cremation had to be made. In the case of the Deuris, each of their villages is usually named after the river near which it is situated, and their houses always face that river. Mishing villages are always built on the bank of the Brahmaputra; since the terrain is flood-prone, they build their houses on stilts raised around two metres from the ground. Similar beliefs and customs centred around a river are to be found amongst all tribes of the region.

This Mongoloid Assamese base of the Brahmaputra Valley is augmented by the presence of the Caucasian Assamese, consisting mainly of Hindu castes and Muslims. The Hindu castes can be broadly divided into Brahmins and Sudirs (non-Brahmins). The Sudirs are sub-divided into several castes such as Kalita, Kayastha, Ganak, Kairbarta, Hira, Kumar, Jogi, Keot etc. The Brahmins, traditionally a priestly class, came to Assam with the intrusion

of Aryan Hinduism and are the oldest Caucasian element in the region. The first of them are believed to have been brought in the 13th century from Mithila or Bihar by the kings of the Chutiya dynasty, in power before the arrival of the Ahoms. The Kalitas form the most populous Hindu group and are distributed all over the Brahmaputra Valley. Related to the Kalitas are the Kayasthas, who claim descent from the *Baro Bhuyans*, feudal chieftains who once attained prominence in Assam's history. The Hiras and Kumars are artisan classes brought from outside and settled in the valley, while the Kaibartas are fishermen and boatmen who prefer to live close to rivers since their livelihood depends on them.

The socio-cultural fabric of the valley has been enriched by the presence of a Muslim community who form the other constituent of the Caucasian Assamese. Their population has been formed by four types of migration : 1. Muslim soldiers captured in war; 2. artisans brought by ruling houses; 3. Muslim proselytizers; 4. local converts. The three classes of Assamese Muslims, all belonging to the Sunni sect, are Syeds, Sheikhs and Marias. The first Muslims came to the region in 1260, when Md. Bin Bakhtiyar Khilji, a general of Kutubuddin, invaded Assam and was defeated. There had been quite a few Muslim invasions since then, adding to the Muslim population. The captured soldiers who chose to make Assam their home were given settlement by the ruling king and their descendents came to be known as Marias, who are primarily engaged in the brass-metal industry. In the mid 17th century a Muslim saint named Hazrat Shah Milan, popularly known in Assam as Ajan Fakir, came with his associates to propagate Islam. He married an Ahom girl and gave rise to the Syed group. The Sheikhs, who form the bulk of the Assamese Muslims, are mostly local converts.

The annexation of Assam by the British brought in its wake other groups of people to this region. Bengalis were brought in number by the imperialists to man the clerical

stratum of the administration. The British also resorted to large-scale importation of tribals from other parts of India to work in their tea-plantations, creating a well-defined tea-worker community. The term tea-worker is not ethnic, for these workers were recruited from different areas of the country such as Bengal, Bihar, Orissa and Madhya Pradesh and from a profligate variety of tribes such as Tanti, Munda, Kurmi, Kol, Kheria, Sawra, Sabar, Oran, Gond, Santal et al. Each tribe from each area brought with it the cultural traditions of the area, which in the course of time evolved into the tea-worker culture adding yet another segment to the cultural pattern of the region. Along with the British also came the Marwari community of traders who not only contributed to the economic life of the Brahmaputra Valley, but also to its socio-cultural vitality.

Apart from entry of people from other parts of India, the post-independence decades have witnessed large-scale and mostly illegal influx from erstwhile East Pakistan, now Bangladesh. These neo-migrants are yet to be embraced into the common fold. In fact, due to the increased demographic pressure caused by their arrival into the tiny valley, their presence has given rise to social tensions and there has been an outcry for their repatriation.

Occupying as it does one tenth of the valley and fed by so many tributaries, the Brahmaputra river-system is a dominating factor influencing the ecology and climate of the region. A soil rendered perennially fertile by it and its tributaries, aided by a prolonged season of heavy rainfall, has ensured that the valley and the surrounding hills have an amazing array of flora and fauna. The vegetation varies the further one moves away from the mighty river and the higher one goes. The marshy, lowland areas close to Brahmaputra and some of its tributaries in the plains have a typical wetland ecosystem of savanna or grassland. Savanna areas are also located at comparatively higher alluvial terraces of the coarser deposits of Brahmaputra's

tributaries. These grasslands consist of an admixture primarily of *Saccharum Elephantinus* (Barotakher), *Erianthus Ravange* (Ikora), *Imperata Cylindrica* (Ulnkher), *Pollinia Ciliata* (Hankher), *Phragmites Karka* (Khagori), *Arundo Donax* (Nal) etc.

On the foothills and hills are tropical and sub-tropical forests to a height of around 2,000 metres, consisting of trees big and small, and thick undergrowth of ferns, creepers and climbers. Among the trees most common are *Acacia Odoratissima* (Jotikorai), *Acacia Marginata* (Korui), *Alstonia Antidysenterica* (Dulkhuria), *Andrachna Trifoliata* (Uriam), *Bignonia Colais* (Parijat), *Butea Frondosa* (Polash), *Careya* (Kombo), *Cassia Fistula* (Sonaru), *Gmelina Arborea* (Gambhari), *Nauclea Cadamba* (Kadam) *Spondieas Amara* (Amra), *Terminalia Hilka* (Hilikha) etc. The dense jungles and grasslands possess a huge range of medicinal and herbal plants and flowers, including numerous varieties of orchids. One unique plant is the *Aquilaria Agallochum* (Agur), the heart of which, when it becomes dark brown, is impregnated with a richly scented oil. The grasslands and forests also have a wide range of bamboo, plantain, coconut etc. In the higher region of the Siang-basin are deciduous and mixed deciduous forests of walnut, oak, chestnut, pine, spruce and rhododendron, and conifers and alpine meadows at optimum heights.

In the pristine past Assam was a paradise for wildlife and no other region in the country could boast of such varied and colourful faunal and avian presences. All the three Asiatic species of rhinoceros — the Asiatic Two-horned or Sumatran Rhinoceros (*Didermocerus* or *Dicerorhinus Sumatrensis*), the Lesser One-horned or Javan Rhinoceros (*Rhinoceros Unicornis*) — were to be found here. Other bigger mammals included the Asiatic elephant, wild-buffalo, mithun (bison) etc. Royal Bengal tiger, leopard, black-panther, wild cat, civet, hyena, jackal etc. could be numbered among carnivores and various species of deer such as the barking deer, hog deer, swamp deer, sambar and

musk deer (in Arunachal) among herbivores. The takin, a curious ox-goat species, is found in the Siang district. Among the primates are the golden langur, capped langur and hoolock gibbon. The avian presence in Assam was particularly spectacular, with a colourful variety of cormorants, darters, egrets, herons, pelicans, wild ducks and geese, storks, teals, kites, eagles, moorhen, jacanas, doves, parakeets, kingfishers, drongos, quails and so on. Snakes were present in great numbers, from pythons and king cobras to banded-kraits and bamboo-snakes. Some of the most endangered species of fauna in the world, as contained in the Red Data Book of the International Union for Conservation of Nature and Natural Resources, such as the pygmy hog, golden langur, white-winged wood duck, the Great Indian one-horned Rhinoceros, freshwater dolphin and Gharial etc. still cling on to a precarious existence in the North-East.

Historical annals about this region, particularly those written by Muslim invaders and British colonialists, are full of references to the luxuriant vegetation, dense, impenetrable jungles and the incredible faunal wealth. The death knell for the grasslands, jungles and animals was sounded when the indigenous tea-plant was discovered in Assam. Not only were vast tracts of jungleland cut down to establish tea-plantations, but also The Big White Hunter joined hands with local *Shikarees* in decimating animals in large numbers. Old District Gazetteers of the 19th century record how British tea-planters and administrators, in rhino killing sprees, would camp around the Mora Difloo river and routinely shoot down "2 or 3 rhinoceroses before breakfast." During their so called Greener or snipe-shooting season, thousands of birds were slaughtered all over Assam. Today the forested area of the valley and hills have shrunk alarmingly and wild animals are guarded in island-like wild life sanctuaries to protect them from poachers. The Brahmaputra Valley has the highest concentration of such sanctuaries in India, some of the more well known

being the Kaziranga and Manas National Parks, Pabha, Sonai-Rupai, Laokhoa, Orang and Pabitora wild-life sanctuaries.

Situated in the flood-plains of the Brahmaputra, the Kaziranga National Park is a fine illustration of how the river and its tributaries nourish and sustain the ecosystem and the faunal presences within it. Apart from the Brahmaputra flowing across the northern boundary, the 430 sq. km park formed by deep alluvial deposits of the mighty river is watered by a number of smaller rivers like the Mora Difloo, Difloo, Borjuri, Diring, Kohora, Deopani etc. Floods are an annual phenomenon and submerge almost the entire sanctuary. During high floods the animals take shelter in natural or man-made high grounds, some of them migrating to the nearby Karbi Anglong hills. But such temporary drawback is offset by the enormous advantages that the annual flooding brings. The flood water recedes slowly and low lying areas take a long time to dry, maintaining the swampy nature of the ecosystem in which animals such as the rhino and wild-buffalo thrive. The flood water also arrests the growth of unwanted plant species such as the parasitic water hyacinth, and replenish the soil with fresh alluvial deposits, thereby ensuring luxuriant growth of green grasses. Kaziranga has four types of deer, wild-buffalo, rhino and elephants among the herbivores. As the taller species of grass grow in height, they successively go beyond the reach of each of the species, but continue to be consumed by the other higher up in the grazing order. The barking deer, being the smallest, feeds only when the grass is at a sprouting stage. As the tall grasses continue to grow, they go beyond the reach of the hog deer, swamp deer, sambar, buffalo and rhino till only the elephant can feed upon them. This is merely one of the examples of how the Brahmaputra and its tributaries combine with Nature to cause the many miracles witnessed in the ecology of the region.

## THE ADJUTANT OF CLIOS

The river Brahmaputra is indubitably the propulsive force behind the making of Assam's history. Not merely a silent witness, but an active adjutant of Clios! Since the valley is its gift and it is older than the hills, its history is the history of the region. It was the channel which enabled settlers to enter and colonise; on its banks evolved the Kirata civilisations, the empires of the Asura and Varman dynasties, the kingdoms of the Koch, Kachari, Chutiya and Ahom. It was the Brahmaputra which had welcomed Hieun—Ts'ang to the court of Bhaskarvarman; invading Mughal armies had followed its contours; upon its fertile soil heroes of a not too distant past as Chilarai, Lachit Barphukan and Maniram Dewan were born. It was the presence of the Brahmaputra which facilitated proselytising by Sankardeva and his followers to spread the Vaishnava movement across the entire valley. To the British imperialists the river loomed as an essential component in their commercial aspirations; had it not provided an easily navigable outlet to the rest of India the British might never have annexed Assam. As a counterpoise the Brahmaputra brought Gandhi and the freedom struggle which finally shook off the imperialist yoke, enabling the Assamese people to shape their destiny as citizens of a free nation.

Yes, an active agent in the making of history and a witness to the entire gamut of events from primordial past. Yet a mute witness, whose enigmatic silence conceals a myriad secrets! Unfortunately, not many of the more distant ones have been unlocked and much of Assam's



history prior to the 13th century remains obscure. The Brahmaputra itself, to a great extent, is responsible for this—if it is the maker of the region's history, it is also its destroyer. Sir Edward Gait, in his *A History of Assam*, 1905, puts this aspect in a nutshell : "Some of the legends which have been mentioned suggest that in the distant past the inhabitants of the country which we now call Assam attained considerable power and a fair degree of civilisation; and this view is confirmed by the narrative of the Chinese pilgrim Hiuen Ts'ang and by the copper-plate inscriptions..... This being so, the question will doubtless be asked why so few memorials of their time have come down to us. The reason is that nature has vied with man in destroying them. The Brahmaputra Valley is an alluvial country, and the impetuous, snow-fed rivers which debouch from the Himalayas find so little resistance in its friable soil that they are constantly carving out new channels and cutting away their banks; consequently no buildings erected in their neighbourhood can be expected to remain for more than a limited time, except at a few points like Gauhati, where rock pierces through the alluvium. Though occurring at distant intervals, violent earthquakes are, in Assam, quite as great a cause of destruction as fluvial action..... A less sudden, but almost equally potent, cause of damage is found in the luxuriant vegetation of the country..... of the damage done by man, it is necessary only to mention the way in which religious zeal led the early Musalman invaders to break down Hindu temples, and the widespread havoc wrought by the Burmese in a spirit of wanton mischief."

The paucity of surviving memorials of ancient civilisations can be gauged from the fact that the earliest historical relics unearthed in the valley, the Umachala rock inscription on the Nilachala hills, which hints at the existence of a cave-temple at the site, and Nagjari Khanikargaon fragmentary stone-inscription, go as far back as only the 5th century A.D., coinciding with the Gupta dynasty of

mainland India. Subsequent epigraphical findings include the Barganga inscription of the 6th century, Nidhanpur copper-plate charters of the 7th century and a host of material in the late medieval period. As for archaeological excavations, though sites have been uncovered at a number of places in the valley and taken up for investigation, none appear to pre-date the 6th-7th century mark. The same is the case with images and sculptures recovered from various scattered sites such as Da-parbatiya, Deopani, Deoparbat, Bamunipahar, Suryapahar etc., none going beyond 5th century A.D. Perhaps the sole exception, after greater research might turn out to be the Ambari excavations in the heart of Guwahati, which according to some archaeologists offer evidence of the lost city of Pragjyotishpur, capital of the ancient kingdom of Pragjyotisha, one of the oldest cities contemporary with Hastinapura and Indraprastha.

Documented history of the region is available only since the coming of the Ahoms in the 13th century. For periods earlier to that historians have to rely on myths, legends, folk-lore, literary allusions as well as the scanty archaeological findings. The name Assam itself appears to be of relatively recent origin, probably being the anglicised mutation of either Asom, meaning 'peerless' or 'country of uneven terrain', or that of Ahom, the ruling group identified with the land when the British arrived. In ancient times the region was known as Pragjyotisha in the Mahabharata and Kamarupa in the Puranas and Tantras. Pragjyotisha translates as 'land of eastern lights', named so primarily due to the fame of the region as being the orthodox seat of astrology and astronomy. The temple of Nabagraha or 'nine planets' in its capital Pragjyotishpur, with its tradition of study in these two sciences, is acknowledged as an ancient observatory for astronomy and astrology. However, Dr. B.K. Kakati surmises that Pragjyotisha is the sanskritised version of an Austro-Asiatic word Pau (hill) + Ger (hill) + Jo (high) + Tic (long), which means

land of great mountain heights.'

The name Kamarupa, by which Assam was known in the medieval times, is related to a legend. Sati, Shiva's spouse, died with shock and sorrow at the discourtesy shown by her father, Daksha, towards her husband. Shiva was overwhelmed with grief and wandered across the three worlds carrying her dead body. This threatened apocalypse to all creation, to prevent which Vishnu chopped away the corpse with his Chakra. When Shiva continued to grieve, Kamadeva, the Indian god of love, was sent to make him forget Sati and fall in love again. So enraged was Shiva at this that he razed Kamadeva to ashes. Finally Kamadeva regained his *Rupa* or form in this region, whereby it was called Kamarupa. Here again Dr. Kakati holds that the word is the Sanskrit derivation of a non-Aryan word, *Kamru* or *Kamrut*, by which this region was known in the prehistoric era.

As stated earlier, numerous tribes had entered and colonised the valley and hills beside the Brahmaputra and its tributaries. The tiny communities which they created set off the process of invasion, conflict and synthesis which had gone on through millennia to produce a Kirata society with the Austric-Mongoloid ethnic-cultural base and Aryan religio-cultural superstructure. Such a unique society periodically erected a number of powerful empires on the banks of the Brahmaputra, testifying to the 'potentiality of high civilisation, that S.K. Chatterji had mentioned with reference to the river. As Edward Gait put it : "Apart from external aggression there was a strong internal tendency towards disintegration. There was no strong national spirit or other cohesive element amongst the Mongolian tribes of Assam, and their natural condition was probably that of a number of small communities, each under its own chief or headman, and independent of its neighbours..... From time to time a local chief of unusual enterprise and ambition, or possibly some Kshatriya adventurer, would reduce these petty states and make himself the master of

the whole country. So long as the central administration was young and vigorous, the tribal headmen would be held in check, but as soon as it became weak and effeminate, as usually happened after a few generations, the latter would recover their lost independence and enjoy it until it was again subverted in the manner already described. "This, in fact, was the repetitive pattern throughout the history of the region, resulting in the springing up of mammoth empires from time to time, of which Pragjyotisha can be surmised to be the most ancient and illustrious.

By the repeated allusions to it in the Mahabharata and Puranas, it is certain that the fame of this non-Aryan kingdom had travelled far and wide. Apparently, it not only included the Brahmaputra Valley, but also parts of Bengal, and its western boundary extended up to the Karotaya river. It was called the *Mlechcha* or *Asura* or *Danava* country, a clear reference to the rulers being of Mongoloid stock. One of the most powerful of the Asura kings was Narakasura, who was believed to have constructed the capital city of Pragjyotishpur as well as the temple of Kamakhya. His pride was his downfall and he was said to have been slain by Krishna who attacked his city, cut through its defences, and killed the potentate and thousands of Danavas in his army. Legend has it that Krishna came along the Brahmaputra river and rested at a place on the north bank before attacking Pragjyotishpur. This spot, which has a temple, was therefore named Asvakranta, meaning a place where battle-horses were rested, and a number of small holes in the rocks near the river are pointed out as their hoofprints.

However, Asvakranta is associated with another legend as related in the *Bhagavat*, involving Krishna and Rukmini, the daughter of Bhisma, who was presumed to have ruled a kingdom with its capital at Kundina on the banks of the Kundil river at Sadiya, where the extant ruins of a fort is claimed as evidence of the historic veracity of his

reign. Rukmini, though betrothed to Sishupal, was enamoured of Krishna and yearned to marry him. She sent a Brahmin messenger to Dwaraka with news of her predicament, whereupon Krishna himself came to carry her off on the eve of her wedding, after defeating the armies of Bhisma and Sishupal. On his return his horses were supposed to have rested at Asvakra. Folk legends have Rukmini bathing in the Brahmaputra. So beautiful was she that while she bathed on the north bank, even people on the south bank were watching her. To shield her from the onlookers Krishna was said to have erected the Aar-Parvat (*Aar*-screen or cover), a hillock that still bears that name. The Chutiya race, which erected powerful kingdoms in Upper Assam from time to time, claims their descent from king Bhisma.

Krishna appears in yet another tale of the *Bhagavat*, as also in the *Vishnupurana*, relating to Usha, the beautiful daughter of king Ban, ruler of Sonitpur, now known as Tezpur, located on the north bank of the Brahmaputra. She and Krishna's grandson, Aniruddha, fell in love and got married against the wishes of king Ban, who captured and imprisoned her paramour. Krishna thereupon came on an armed mission up the Brahmaputra, defeated Ban who is assumed to be a contemporary of Narakasura, and rescued the couple.

That Krishna appears so frequently in Assamese mythology is a curious phenomenon. His expeditions were probably mythical rendition of invasions by some ancient Aryan chief and his conflicts with the various Kirata chieftains. Just like Mongoloid intrusion from the east, first Aryan and later Muslim invasions from the west over the Brahmaputra is another recurrent pattern in the history of Assam.

Incorporating as it did the region of Bengal east of the Karatoya river as well as the greater part of modern Assam, Pragjyotisha was the vastest and most impressive empire in the history of the region, unmatched later by any

other, including the Ahom's. Mongoloid rulers like Narakasura and his son, Bhagadatta, whom Krishna was said to have placed on the throne after killing his father, appear to have been real and exceptionally powerful potentates, despite the absence of concrete archaeological evidence. Traditionally, occurrence of the name of a kingdom in the Indian epics, Puranas and Tantras is accepted as evidence of the historic reality of its existence. Bhagadatta, who surpassed his father in reputation and power, is frequently mentioned in the Mahabharata as the powerful potentate from the east. The *Sabha Parvan* relates how Arjuna attacked the kingdom of Pragjyotisha and defeated Bhagadatta. Later, Bhagadatta was said to have fought on behalf of the Kauravas in the battle of Kurukshetra. The *Drona Parvan* devotes four sections on his heroic deeds in that battle, from the time he rescued Duryadhona from being killed by Bhima to when he himself was killed by Arjuna. Bhagadatta's army was recruited from "Kirata, Cina and soldiers who dwelt on sea-coasts". The *Sabha Parvan* states that these soldiers "shone like gold", probably alluding to their yellow complexion.

As is usual with great empires, Pragjyotisha disintegrated in the course of time, to become smaller territories ruled by lesser kings. The Puranas and Tantras make occasional reference to them and some are remembered in folk legends, but an authentic chronological sequence cannot be given. One of the more famous of these kings was the legendary Arimatta who, as stated previously, was supposed to be the son of the Brahmaputra!

A slightly more authentic history of the region is to be obtained from the 7th century onwards, when rock and copper plate inscriptions and other sources offer direct evidence. By then the land had come to be known as Kamarupa and was ruled by kings of the Varman dynasty, the most notable being Bhaskarvarman. During his reign, around the year 643 A.D., the Chinese pilgrim traveller, Hiuen Ts'ang visited the kingdom of "the king of eastern

India" and left behind a detailed account: "The country of Kamarupa is about 10,000 li (almost 1700 mile or 2700 km) in circuit. The capital town is about 30 li. The land lies low, but is rich and regularly cultivated. They cultivate the jack-fruit and the coconut. These trees, though numerous, are nevertheless much valued and esteemed. Water led from the river or from banked-up lakes flows round the towns. The climate is soft and temperate. The manners of the people are simple and honest. The men are of small stature and their complexion a dark yellow. Their language differs a little from that of mid-India. Their nature is very impetuous and wild; their memories are retentive and they are earnest in study.

"They adore and sacrifice to the Devas and have no faith in Buddha; hence from the time Buddha appeared in the world, even down to the present day, there never as yet has been built one Sangharama as a place for priests to assemble. Such disciples as there are, are of a pure faith, say their prayers secretly and that is all. There are abundant Deva temples, and different sectaries to the number of several myriads. The present king belongs to the old line of Narayan Deb. He is of the Brahmin caste. His name is Bhaskarvarman, his title, Kumar. From the time that this family seized the land and assumed the Government, there have elapsed a thousand generations. The king is fond of learning and the people are so likewise in imitation of him. Men of high talent from distant regions, seeking after office, visit his dominions. Though he has no faith in Buddha, yet he much respects Sramanas of learning....."

The short stature and yellow complexion of the inhabitants show that Kamarupa had retained its Mongoloid character. The king too was a Mongoloid, although called a Brahmin, for royal aboriginal converts to Hinduism were often tutored by Brahmin advisers to appropriate Kshatriya titles. It is not clear to what extent Hinduism had permeated into the common hearth, but clearly it was the religion of the court. The Dubi and Nidhanpur copper-



plates detail the king's lineage and place him as the eleventh in descent from Pushyavarman, the founder of the dynasy, implying that the Varman dynasty began in the middle of the 5th century A.D. The *Harsa-Carita* by Bana Bhatta refers to him as the contemporary of Harsha Vardhana, the powerful and enlightened ruler of India, and his friend and ally. This alliance enabled him to extend his empire, which covered the Brahmaputra and Surma valleys of Assam as well as a large part of Bengal. Thus another Hinduised Indo-Mongoloid empire, which engaged in trade with far flung countries like China and Persia, had been erected on the Banks of the Brahmaputra.

After the death of Bhaskarvarman, according to copper plate inscriptions of Ratna Pal, Tezpur rock-inscriptions and Nowgong copper-plate, "by an adverse turn of fate", the kingdom was taken possession of by Sala Samba, "a great chief of the Mlechchas", whose descendants ruled till the end of the 10th century. A new line of kings, called the Palas, reigned till the 12th century; though they took on Kshatriya names after coming to power, they were actually Hinduised Bodos. The Pala dynasty was followed by the Dev kings, of whom Prithu Dev was the most notable. It was during his reign that Muslim invaders led by Ibn Bukhtiyar (1205-6) first attacked Kamarupa but were repulsed. He also repulsed a second attack by Ghiyas-ud-din, Governor of Bengal, in 1227 A.D. The highlight of 14th century Assam was the kingdom of Kamatapur, consisting of the modern districts of Kamrup, Goalpara, Coochbehar and Jalpaiguri, one of whose kings, Durlabh Narayan, was a great patron of art and literature and had in his court eminent Vaishnava poets such as Hem Saraswati and Haribar Bipra.

By the time the Ahoms entered the Brahmaputra Valley through eastern passes in 1228 A.D., Kamarupa had broken up into small principalities, with the Koch or Bodo dynasty coming up in the western half of the valley, and tiny kingdoms ruled by tribes such as Kacharis and

Chutiyas, as also feudal chieftains called Bara Bhuyans, in the central, eastern and north-eastern sections. Prior to Ahom suzerainty over the entire valley, the Koch kingdom was the most prominent and attained a level of military might as well as cultural height approximating the Brahmaputra Valley civilisations of yore. The most illustrious of the Koch kings was Naranarayan (1553-1584) who, because of his enlightened rule and patronage of literature and arts, has attained a historical status similar to Bhagadatta and Bhaskarvarman. His brother, Sukladhvaja, more popularly known as Chilarai or the Kite-king, who commanded Naranarayan's army and was a valiant warrior, remains a cult figure in modern Assam. With Chilarai's aid Naranarayan extended his empire, subjugating a number of local chiefs and even defeating the Ahoms and occupying for a while their capital at Gargaon in eastern Assam, forcing the Ahom king to flee to the mountains for shelter. At one time his kingdom included the entire Brahmaputra Valley except for an eastern segment under Ahom control, large parts of Bengal including Rangpur and a part of Mymensingh.

However, the milestone in the history of Assam was the coming of the Ahoms in the 13th century. Preceding dynasties had lasted for relatively too short periods to act as an authentic coagulating force. The Ahom dynasty, lasting for almost six centuries, and the generally enlightened and stable rule they provided especially in the 17th and 18th centuries, saw the synthesis of the disparate ethnic entities inhabiting the Brahmaputra Valley, and the evolution of a distinct Assamese language, culture and nationalist identity which could usher them into the modern era. As S. K. Chatterji states : "The history of Assam during what may be called the "High" and "Late" medieval ages, from 1200 to 1800 A.D., was characterised on the one hand by the stabilisation of her people in its language and culture as an Aryan-speaking Hindu people under the leadership of the Ahoms, themselves originally

of Sino-Tibetan Thai speech, and on the other by the stiff and finally successful resistance which was offered by the Ahom rulers to Mohammadan aggression from Bengal. Some 450 years of efficient administration under the puissant Ahoms brought to the peoples of Assam some sort of centralised, peaceful and orderly rule, which enabled various tribes to fuse into a single Assamese speaking nation of medieval India under the cultural leadership of the Brahmans and later of the Vaishnavas, which supplemented the military and political lead and organisation supplied by the Ahoms. Bit by bit, the Ahoms conquered the whole of the Brahmaputra Valley, and brought under their tutelage not only their powerful Bodo predecessors and rivals in the land like the Chutiyas and the Dimasas (Kacharis), but also the hill peoples like the Nagas and the Mikirs; and during the days of their greatest glory (as between 1680-1720), they had also brought under their power their erstwhile rivals the Kacharis, the Khasis and Jaiantias (Syntengs)."

The Ahoms were a Shan or Tai tribe belonging to the ancient kingdom of Mungman or Pong situated in Upper Burma on the banks of the Irrawaddy river. Sukapha, a prince of the tribe, in 1228 entered the Brahmaputra Valley through passes in the Patkoi mountains with a band of "eight nobles and nine thousand men, women and children" and carved out a kingdom in Upper Assam, with its capital at Cheraideo near Sibasagar. The year which followed their entry into Assam were ones of conflict with various petty principalities, especially the Bodo tribes such as the Koches, the latter effectively checking their advance further west and confining their territory to Central and Eastern Assam for a greater part of their reign. The Ahoms were non-Hindus; by the time they had made their advent, Hinduism had percolated into the people they now ruled over. Yet their kings with great wisdom and far-sight gradually gave up their own language and religion to take up those of the subjects. Greater political and cultural

intercourse, intermarriages and other social exchanges between tribes, ultimately broke racial and cultural barriers and imbued a solidarity and nationalistic spirit to the people.

After a protracted campaign to expand and consolidate their kingdom, the Ahoms set up a unique administrative structure which proved to be the agglutinating force holding their empire together. They were the first in this region to have introduced gun-powder and firearms as weapons into warfare and to have minted coins. Their greatest political success was to ward off the repeated invasion of Mughal forces from the west, producing ageless heroes such as Atanu Buragohain and Lachit Barphukan, strengthening the nationalistic bond among the people of the valley in the face of a common enemy. Monarchs such as Rudra Singha displayed a flair for construction matching in enterprise, if not in actual output, Mughal monarchs such as Shah Jahan, as the ruins in their many capitals, especially Sivasagar, testify. By the time the sun of the Ahom empire set and Assam lost her freedom to the British, a well-knit entity called the Asomiya people had evolved to open up a new chapter in the region's history.

The Brahmaputra and its tributaries, directly or indirectly, were involved with each act of this fascinating past. Many battles for ascendancy were fought upon its waters, or on its banks. Cities and palaces, forts and defensive ramparts, war-vessels with cannons mounted on the sides, trading fleets laden with silk and ivory, princes and princesses out on royal barges on pleasure cruises, monks and saints and pilgrims in quest of the wisdom of the east—the river had seen them all. Generation after generation through millennia, now lost to memory, but not to imagination!

Till the 13th century the only mention of this river was in ancient Sanskrit treatises and epigraphical items, and that too in a perfunctory manner. Yet it must have been the

vital factor in erecting settlements, framing battle strategy, or selecting sites for cities and fortifications. The most famous of the ancient cities, Pragjyotishpur, was upon its banks, as were many of the *Garhs* or fortifications for defence of the realm. Ancient Aryan conquerors must have taken the same riverine route later used by Mughal invaders like Mir Jumla. The river was, in a manner of speaking, the safest and most convenient route in a region of dense vegetation and hostile population. While infantry and cavalry soldiers would march along the bank, war-elephants being used to clear their way and that of the horses, the officers, weaponry and stock of food and other necessities would be towed upstream on large-boats and war-vessels by boatmen pulling at ropes, while moving over the naturally made levees on each side. Prime requirements for an army on the move, water for drinking and ablution, as also wood for cooking and sites for camping were readily available. And, of course, the river was the quickest way of departure if things got too hot to handle!

Also, as was the custom, rivers were sacrosanct and convenient lines drawn by Nature to mark boundaries and delineate territories, violation of which invited retribution. In the periods when we have direct records, boundaries between kingdoms were invariably denoted by river courses. Thus, for example, in the 16th century, "the Bhuyans of Upper Assam ruled north of the Brahmaputra, from west of Subansiri to east of Barnadi," and a line of Chutiya kings "ruled the country east of Subansiri and Disang." While its historical role in the remote past can be mere conjecture in the absence of authentic archaeological evidence, from the 13th century onwards we have direct information about the importance of the Brahmaputra in the Ahom *Buranjis* or Chronicles, as well as innumerable allusions to it and its tributaries. The *Buranjis* offer detailed description of land and naval engagements during the expansionist phase of the Ahoms, as also in their continuous endeavour to keep Muslim

invaders at bay. Often the river was used in quaint ways, as the following episode in the Ahom campaign to subdue the Kacharis show : "The people of Kosaree fled to Khilpokhooree, pursued by Kanasing. From this place they took refuge in the Gobbroo hills. Kanasing formed intrenchments at Seetulnagharee. The former retreated to Dungadurea. Kanasing now ordered a float to be made of plantain trees; the float was surrounded by a curtain. Within a lighted lamp and a piece of bamboo containing a letter were placed. The float was committed to the stream of the Berhampooter, and intercepted by the Kosaree people, who found and persued the letter. It recommended a cessation of hostilities and proposed that a select number of persons from both parties would meet at Deorgown, a place of worship....." (*An Account of Assam*, 1800, John Peter Wade).

Roads being non-existent, rivers were the lanes and by-lanes in Assam, something which remained true even till the first half of the twentieth century. Thus descriptions of journeys always involved river travel. The Buranjis' narration of how Sukapha entered Assam and initially led an unsettled existence is an example of this. Suka-pha was said to have left his native place of Maulang and wandered about the hilly country of Patkai for thirteen years asserting his dominance over the Naga tribes. In 1828 he arrived at Khamjang, crossed the Khamnamjang river in rafts to reach the shore of the Nongnyang lake. Leaving one of his nobles to rule over the Nagas, he proceeded to Dangkaorang. "The Swargadeo (king of heaven) left Dangkaorang for Khamnangpu and thence to Namruk where he offered worship to the Dihing river. He bridged the Sessa river and travelled upstream on the Dihing upon rafts and arrived at Munglakkhenteusha. Leaving Khontang to rule he departed downstream on the Dihing river to reach Tipam. But the place was prone to inundation during rains so he left Kangnong to rule the place and travelled downstream on the Dihing to

Abhayapur. Since the place was thinly populated he remained there for 5 years, but then left downstream on the Tilao (Lohit) for Habung. But the place being prone to inundation during rains he left downstream on the Tilao for Dikhowmukh (mouth of the Dikhow river). He touched the water of the Dilli river and understood that it came from Tipam. He travelled upstream and arrived at Mungringmungching valley. He weighed the water of that place and found it heavier than that of the Dikhow river and named it Sangtak (two Tolas heavier). He lived there for two years and then, leaving Tokhunlak to govern the place, went down the Dikhow river till reaching Simaluguri. He killed cows and gave a feast there to his officers but learned that on the Namdang river at that place there were 3300 *Ghats* where people collected their water (meaning the area was thickly populated). Alarmed at this discovery he went to Timan and remained there for 6 years. But the area being flood-prone and the land marshy, he went to Timak and built a town at Mungtinamao. But that area too being flooded, he built a town at Cheraideo and sacrificed two horses, one at the north and the other at the south of the township, while offering prayers under a mulberry tree to the gods Kamle, Rangle and Rangmlao." (Ahom *Buranji*).

Being people from hill areas, the Ahoms, initially, were none too adept at naval warfare or building and wielding boats, as can be seen by the fact that Sukapha used plantain rafts to come to his final destination. This too to a great extent explains some of the defeats they sustained at the hands of the tribes who had been the inhabitants of the riverine region before their arrival. Rivers were the ubiquitous backdrop in their early struggles to attain supremacy. During the reign of Sutupha, the sixth Swargadeo, for instance, there were constant disputes with the Chutiyas. In 1376 the Chutiya king met Sutupha at Chapaguri and offered his hand of friendship and invited him to a regatta on the Safrai river. There he lured him on



to his own barge and treacherously murdered him. It was this act which made Tyaokhamti, already mentioned in connection with the Brahmin-Prince legend, begin a retributive series of campaigns against the Chutiyas, leaving his elder queen to take care of the affairs of the court. The role played by the Brahmaputra in the subsequent happenings has already been stated, the historical importance of the episode which finally, brought Sudangpha to the throne lying in the fact that it marked the very first time when a Brahmin was brought to the Ahom court and given a pride of place.

However, being quick learners and good at organisation, the Ahoms grew adept at Naval engagement in the course of time. Also, their subjects who had been in the valley for far longer were already expert boatmen. In 1513, for example, the Chutiya Raja Dhir Narayan invaded Ahom territory with a flotilla of boats, but the Ahoms achieved a notable naval victory at Siraati. Again, in 1531, the then Swargadeo Suhungmung proceeded up the Dhansiri river with a large army against the Kacharis, "and halted at the junction of the Doyang and Dhansiri rivers. A night attack was made on a place called Nika, which was taken and burnt. The Ahoms then advanced to Dengnut, where the army was divided into two divisions, one ascending the left and the other the right bank of the Dhansiri. Another battle was fought and the Kacharis were defeated again and pursued as far as their capital at Dimapur, on the left bank of that river." (*A History of Assam*, Sir Edward Gait).

While they grew proficient in naval warfare, the inadequacy of their naval strength, specially the lack of know-how in constructing war-vessels appears to have persisted for a long time, contributing to the fact that they could not attain success against the powerful Koches and expand their empire further west till the 17th century. Their greatest defeat at the hands of the Koches was in 1546, when a well armed fleet under Sukladhvaj or Chilarai ascended

the Brahmaputra as far as the Dikrai river on the north bank, and routed the Ahom forces there, as also at Kalia-bor on the south bank. The Koches not only occupied Ahom territory for a while but also built one of the first major roads in Assam, around 560 km long, all the way from their capital at Kochbehar to Narayanpur in Upper Assam. Again, in 1562, "A force was sent up the Brahmaputra in boats as far as the mouth of the Dikhu, where an engagement took place in which the Ahoms appear to have been worsted. In the following January the redoubtable Chilarai himself took to the field with a large force and, in a second engagement near Dikhu, inflicted an overwhelming defeat on the Ahoms. Their king and chief nobles fled to Charaikharang in Namrup, and the Koches entered their capital at Garghaon, in triumph." (Sir Edward Gait). However, the sagacious king Naranarayan, not wishing to be hemmed in between inimical forces both east and west, worked out a peace treaty with the Ahoms and conditionally restored to them part of their territory including the capital Gargaon. But the Ahoms had the capacity to learn from their losses and later, when the Koch commander Tipu led another invading force up the Brahmaputra, he was defeated and had to flee with loss of many men, boats and cannons.

Such instances of offensive or defensive actions upon the Brahmaputra and its tributaries abound throughout the annals of the Ahoms period. In the course of time they built up a naval force to match their adversaries and grew almost invincible in river warfare. Their greatest successes came against the periodic Muslim invaders. Since the 13th century Muslim rulers had their eyes on the valley and made no less than 17 attempts to bring it under their sway — first came the Turks, followed by the Pathan and Mughal rulers of Delhi. In the beginning, since their empire was at a fledgeling stage, the Ahoms did not have to confront the invasions directly, for they had others such as the Koches and petty chieftains to act as buffers. The very

first Muhammedan invasion, as told in the *Tabaqat-i-Nasiri*, was by Bukhtyar Khilji, who was defeated by the then king of Kamarupa. Ghiyas-ud-din, a Bengal Governor, was said to have ascended the Brahmaputra as far as Sadiya in 1227, but had to finally beat a retreat. These were followed by unsuccessful invasions of Tughril Khan in 1257 and Muhammad Shah in 1337. In the 1560s Kalapahar, a renegade Brahmin and iconoclast, the general of Sulaiman Kararani, invaded the Koch kingdom of Naranarayan and ascended the Brahmaputra to Tezpur, but made no attempt to take permanent possession of the territory. While returning the Muhammedans, instigated by Kalapahar, indulged in large-scale demolition of Hindu images and temples — this is why Kalapahar is embodied in local folk-lore as a terrible iconoclast.

However, after the weakening of the Koch and other kingdoms, it was the Ahoms who had to headlong confront the enemy. Their successes against a powerful adversary constitute the most glorious episodes in the history of their rule. During the 17th century, while the independence of Upper Assam was undisturbed, Lower Assam, once a part of the Koch empire, witnessed a see-saw tussle between the Mughals and the Ahoms. A number of engagements took place between the two perpetual antagonists, often with the least provocation. For example, around 1615, the Ahoms arrested Ratan Shah, a Muslim trader, on the Brahmaputra at Kaliabor on suspicion of being a spy, burned his two trading-boats, killed his *Mudois* (boatmen) and seized his ware. This was provocation enough for Sheikh Quasim, Governor of Bengal, to send a punitive expedition which was routed in battle by the Ahom forces.

The majority of the engagements were on water, which explained the huge fleet of boats, both large and small, employed by the two antagonists. During the 9th invasion by the Mughals in 1627, for instance, their force consisted of 10,000 infantry and artillery soliders and a fleet of 400

big boats. The force of Syed Zainul-Abidin, sent by Nawab Islam Khan, consisted of 1,000 infantry, 1,000 cavalry and 210 sloops and boats. It advanced upto Pandu beside the Brahmaputra near Guwahati and fought and defeated the Ahoms, suffering only "loss of four ships and a few cannons." But, strengthened by reinforcements, the Ahoms fought and drove the intruders back. It is recorded in their Buranjis that a Boga-Bangal, or European, was captured by them and sent to the king. This is the first record of a European entering Ahom territory. The Buranjis also record that the Ahom commander offered worship to the Brahmaputra-god, praying that its branch flowing past Hajo dry up to impede the Muhammedan retreat, a prayer which the river apparently fulfilled! The Ahom chronicles also mention some unusual tactics adopted by them in battle, such as their breaching of river embankments at night, causing artificial flooding which washed enemy encampments away!

Accounts of the long-drawn conflict with the Muhammedans are filled with exciting episodes and glorious battles. The greatest naval battle fought by the Ahoms, the one which saw the final termination of hostilities in their favour, was the famous battle of Saraighat, fought on the waters of the Brahmaputra during the Muhammedan campaign of late 1660s and early 1670s. At that point of time the Ahoms, having ousted the Mughals from the entire Brahmaputra Valley, ruled over a kingdom extending up to the Manas river in the west, which was then recognised as the eastern boundary of the Mughal empire. According to the 1639 treaty between the Mughal commander Allah Yar Khan and the Ahom king, western Assam had passed into the hands of the Mughals. But the Ahom king Jaydhwaj Singha (1648-1663), taking advantage of Shah Jahan's illness and the subsequent anarchy in the Mughal court, had succeeded in driving them out beyond the Manas. They had set up a system of administration headed by an officer of the rank of Barphukan to

govern Lower Assam, who based himself either at Guwahati, or at Kaliabor as the situation warranted. By then the Ahoms had grown aware of how vital the Brahmaputra was for the security of their realm; this made them centre their defensive strategy around the mammoth river. The first opposition to any invading army was to be at the mouth of the Manas river, for the purpose of which forts were constructed at Jogighopa and Pancharatna. The Muslim chronicle *Fathiyah-i-Ibriyah* describes the fort at Jogighopa : "It is a large and high fort on the Brahmaputra. Near it the enemy has dug many holes for the horses to fall into, and pointed pieces of bamboo (*Panjis*) had been stuck in the holes. Beyond the holes, for about half a shot's distance, on even ground, they had made a ditch, and behind the ditch, near the fort, another one three yards deep. The latter was also full of pointed bamboo. This is how the Ahoms fortify all their positions. They make their forts of mud. The Brahmaputra is south of the fort, and on the east is the Manas."

The next defensive position was at the heavily equipped headquarters at Guwahati, and then 33 km upstream at Kajolimukh. If the invaders crossed these defensive outposts, final resistance would be offered at the forts of Samdhara and Simalugarh, and if these were breached, the capital would lie exposed and at the mercy of alien forces. Thus the primary defensive positions lay on the banks of the Brahmaputra and the stretch of the river near Guwahati, with its hills forming a natural ring of fortification, was of paramount importance to the Ahom strategy.

The Ahoms did not have a standing army of professional soldiers, but the agriculturists and artisans, called *Paiks*, were called upon to do soldier duty in times of crisis. Thus, in a sense, the entire population of Assam was a standing militia, which was of great advantage to the rulers. Also, by then the people had become experts in naval warfare, and skilled in manufacturing boats of all

types and sizes, including huge war-vessels capable of carrying cannons, powder and ball. Muslim historians have paid tribute to the skills of Assamese boatmen, whose familiarity with the river contributed greatly to success against the invaders. The noted historian S.K. Bhuyan, in his *Lachit Barphukan and His Times*, narrates an incident illustrating this skill with boats : "In August and September 1669 there ensued a series of naval engagements. The Moguls with their war-boats, each equipped with sixteen cannons, dashed towards the river stockades of the Ahoms. The Barphukan himself took the field at the head of his naval contingent and fell upon the enemy. The casualties on the side of the Moguls were very heavy..... During the course of the same engagement an Ahom captain named Koa Mriddha was captured by the Moguls along with his boat. The triumphant Mogul soldiers proposed to have a brief diversion and asked Koa Mriddha to amuse them by dancing. Koa Mriddha agreed to this proposal, and after having flung a hint to his oarsmen with his eyes, he asked his captors to clap their hands musically to the rhythm of his dance. The captive danced on merrily, and the Moguls offered the necessary music, supplemented by the timely beating of the oars. The dance and music having attained the climax, Koa Mriddha's boatmen deftly steered the vessel towards the Assamese side of the bank, and got out of the reach of the enemy. The captors shouted : "The *Koa* (crow) is flown."

The Ahom naval force was under the command of a number of officers, the chief of whom was called Pani Phukan. Below him were other officers and Naobaichas, or sailors, who were divided into various *Khels* or groups according to the kind of work they performed. One peculiar feature of the Assamese manner of fighting on the Brahmaputra was the construction of 'water-stockades' of a type similar to the ones they built on land. This was a skill known to none else in India, but other cultures, such as the Belorussains on the banks of the

Tiber, used a similar device. The technique was to drive trunks of wood into the river-bed from one sand bar to another, thus weaving a kind of wooden bridge right across the flow. These not only impeded the upstream movement of enemy boats, but could be used as vantage points from which to fight against approaching vessels. Some of these were so stoutly constructed that they could withstand the fury of the Brahmaputra during the monsoons, though, of course, they had gate-like passages which could be opened to allow their own boats to go through. The Ahom chronicles state that Swargadeo Udayaditya Singha even wrote a treatise on the art of constructing 'river-stockades.'

In his *Lachit Barphukan And His Times* S. K. Bhuyan provides an interesting glimpse of the Assamese naval strength in the Saraighat battle : "Ram Singha is said to have brought with him only forty war-vessels, whereas Mir Jumla had at his disposal, at the very beginning of his march, 323 war-vessels of all kinds mostly manned by Portuguese, English and Dutch sailors. Ram Singha might have strengthened his fleet in Assam, and there were two famous dockyards in the neighbourhood of Hazo, one at Ramdia and the other at Sualkuchi. On one occasion, during his campaign in Assam, Ram Singha captured a number of Assamese vessels, and despatched a fleet of 500 boats against the enemy. This fleet carried big guns, and their prows have been described as "sixteen mouthed." In one chronicle Ram Singha is said to have engaged 72 war-vessels in the naval battle of Saraighat. In another, it has been said that there was such a heavy congestion of boats on the waters of the Brahmaputra on that occasion that it was difficult for a vessel to make any headway owing to the lack of moving space. The Assamese, during that engagement, constructed a bridge of boats across the Brahmaputra connecting the two banks of the river at Gauhati. The number of Assamese boats at Gauhati of this period cannot be precisely known, though we may



surmise that there were any number of vessels as were necessary. There were numerous *Nao-Sals* or dock-yards in Assam, and the boat-building industry was very highly developed. There were two *Khels* or guilds the members of which were engaged solely in boat-building and boat-plying, the *Naosalia Khel* and the *Naobaicha Khel*. The creation of a powerful and numerous Assamese navy was made possible by the vast forest resources of the kingdom which supplied excellent timber for boats."

Shihabuddin Talish, who accompanied Mir Jumla to Assam and wrote a detailed account of that expedition, had this to say : "They build war-boats like the *Kosahs* of Bengal, and call them *Bacharis*. There is no other difference between the two than this that the prow and stern of the *Kosah* have two projecting horns, while those of the *Bachari* consist of only one levelled plank; and as, aiming solely at strength, they build these boats with the heart-wood of timber, they are slower than *Kosahs*. So numerous are the boats, large and small, in this country, that on one occasion the news writers of Gauhati reported in the month of Ramzan that upto the date of his writing 32000 *Bachari* and *Kosah* boats had reached that place or passed it..... They build most of their boats of Chambal wood; and such vessels, however, heavily they may be loaded, on being swamped do not sink into the water."

Having disposed off all his rivals and consolidated his position, the emperor Aurangzeb decided to teach the upstart Assamese who had driven out his forces from western Assam a lesson, and despatched his general Mir Jumla to wrest back the lost territory. Mir Jumla's campaign beginning in 1662 was a major success. We have detailed accounts of it in the Muslim chronicle *Fatiyah-i-Ibriyah*. Mir Jumla divided his army, consisting of 12,000 cavalry, 30,000 infantry soldiers, into two wings, one marching down the south bank, the other building a bridge of boats across the Manas and advancing along the north bank of the Brahmaputra. The naval fleet

“comprised a number of *Ghrabs*, or large vessels carrying about fourteen guns and about fifty or sixty men, each of which was in tow of four *Kosahs*, or lighter boats propelled with oars. Most of the *Ghrabs* were in charge of European officers, amongst whom Portuguese predominate. The total number of vessels of all kinds was between three and four hundred.”

This vast force easily broke through each of the Assamese defences in turn and marched in triumph into Gargaon, the capital, on March 17, 1662. Internal discord among the Ahom nobility, rivalry between the various officers both civil and military as well as cholera epidemics among the Assamese forces are cited as some of the reasons for the feeble resistance offered to this invasion. The Muhammedan booty captured during the campaign included “675 cannons, including one which threw balls weighing more than 100 kgs, 9,000 matchlock and other guns, and more than a thousand ships, many of which could accomodate sixty to eighty sailors.” However, Mir Jumla soon discovered that while conquering the land had been relatively easy, retaining it was more difficult. The Ahom king had fled to neighbouring hills from where he indulged in unremitting guerilla warfare with telling effect. Also, Mir Jumla’s officers and soldiers displayed a growing desire to return home and be reunited with their wives and children. These and other causes led the Moghul general to come to an agreement with the Ahom king whereby Upper Assam was restored to him while Lower Assam came once more under Mughal sway.

Chakradhwaj Singha, who succeeded Jayadhwaja Singha after the latter’s death in November 1663, forthwith began preparations to avenge Assamese humiliation, under the guidance of a wise and far-sighted Prime Minister, Atan Buragohain. The *Paiks* were freshly trained in warfare, arsenals and smithies worked day and night, while a number of war-vessels with mounted cannons as well as thousands of smaller boats were constructed to replace the

loss in naval strength. Most important, the mantle of leading the campaign to restore Assamese glory was placed on the shoulders of "Assam's man of destiny", Lachit Barphukan. In August 1667 the Assamese army sailed from the capital down the Brahmaputra to Kaliabor, from where it launched an all out land and water attack on the forces of Syed Firoz Khan, the imperial Governor at Gauhati. In the course of the fighting the Assamese recaptured a fort at Itakhuli, a strategic hill on the south bank of the Brahmaputra which offered a panoramic view of the river and adjacent areas many kilometres downstream from Guwahati. The Mughals made repeated attacks with an armada of war-boats on Itakhuli, but could not regain it. Within two months of the campaign Lachit Barphukan's forces emerged victorious and pushed out the imperial presence west of the Manas river. Having become the masters once more of Lower Assam the Assamese dug in and prepared their defences for the backlash they were certain their actions would evoke.

Sure enough, it came in the shape of a mighty army sent by Aurangzeb, who learned of the Assamese act of intransigence in December, 1667. Commanded by Ram Singha, it comprised of "21 Rajput chiefs, 4,000 troopers in his own pay, 1,500 gentlemen-troopers or *Ahadis*, and 500 artillery men, and with reinforcement from Bengal his total army swelled upto 30,000 infantry, 18,000 Turkish cavalry and 15,000 Kocharchers" (S.K. Bhuyan). In addition the Mughal forces possessed 1,000 war-hounds which were later effectively used to snatch off Assamese soldiers under the smoke of gunfire. Ram Singha also brought with him the Sikh Guru Teg Bahadur and five Muslims *Pirs* to ward off the evil effects of witch craft and black-magic of Kamarupa ! It was the Sikh Guru who built the first Gurudwara in Assam at Dhubri on the bank of the Brahmaputra. Known as Gurudwara Damdame, it is a holy shrine for Sikh pilgrims.

This huge army reached the frontier garrison of

Rangamati in February, 1669. On receiving news of its imminent arrival Lachit Barphukan and his officers spurred on the defensive preparations at Guwahati. His own maternal uncle was entrusted with the construction of a rampart near Amingaon at the north bank. One night the Barphukan made a surprise check and found the rampart far from completed with the workers sleeping. He at once took out his sword and beheaded his uncle, uttering the immortal words, "My uncle is not more precious to me than my motherland." This galvanised the workers into action and the rampart was constructed well in time.

The 1669 campaign by Ram Singha was a protracted affair, with the Assamese adopting defensive tactics and waiting for the rains. Lachit Barphukan, who is comparable to Shivaji as a brilliant strategist, employed a host of devices including psychological warfare to unnerve his opponents. For example, cognizant of the enemy's fear of Assam as a land of sorcery, he dressed up some of his men in weird costumes and made them dance at night around fires within visible distance from opponent camps. Also, aware of the futility of confronting such a mammoth army at the frontier outposts he ordered his men to retreat by boats, but always keeping in view of the vanguard of the opposing forces. At night innumerable earthen lamps were lit atop stems of plantain in the Assamese camps to give the impression of a vast army in retreat. The ruse worked for, as he neared without any real resistance the next point of defence of Guwahati, Ram Singha was deceived into imagining that he too would have an easy march to Gargaon like his predecessor, Mir Jumla.

But he was in for a surprise at the heavily fortified area adjacent to Guwahati, and a number of attempts to breach its defences, including a land attack from the north, proved futile. Ram Singha was coerced into laying siege, which suited Lachit's game-plan well, for rains set in making communication between the various Mughal camps difficult. Sporadic engagements resulted in minor

victories for both parties, but Ram Singha was unable to make definite progress. The period of siege also helped Lachit to take stock of the situation and consolidate defences in the light of intelligence supplied by spies, so that even in September, after the monsoons had ceased venting fury, Ram Singha was unable to make tangible progress despite a series of land victories wrought by the superiority of his forces. Guwahati remained in Assamese hands and, more important the vital river route lay under their command. The inability of Ram Singha to make headway prompted a sarcastic message from Aurangzeb sent through Rashid Khan : "I have sent Ram Singha to fight with the Assamese, not to make friends with them." Ram Singha's reply proved prophetic : "I have not refrained from fighting, but it has proved useless. As there are no fields, fighting by spears, shields and guns is an impossible affair. The Assamese have erected an impenetrable wall of defence on both banks. The only possibility is a naval fight."

This was the famous battle of Saraighat in March 1671 in which the Assamese finally dealt a mortal blow to Mughal aspirations, resulting in no more Muhammedan invasions thereafter. Spurred on by the message from his emperor and emboldened by the news that the intrepid Ahom commander Lachit was gravely ill, Ram Singha launched a do or die assault on the defenses across the Brahmaputra, close to Saraighat a little upstream of Guwahati. The Assamese soldiers, demoralised by the absence of their commander and the ferocity of the Mughal attack, soon gave way and commenced fleeing. Even the boats of the ailing Barphukan were readied for departure. When Lachit heard of this he ordered that he be taken to the scene of battle, sick-bed and all, being too ill to move. His servants carried him in his bed to a boat, which was then rowed into the thick of the raging conflict. This was such a dramatic act of morale boosting that the Assamese soldiers lost all thought of retreat and fell vigorously upon

the Mughal forces once again, driving them back.

“The Assamese war-ships rushed into the thick of the Mogul fleet. A terrible contest then ensued between the two armies. The whole Brahmaputra at the triangle between Kamakhya, Itakhuli and Aswakranta became littered with boats, and men struggling to escape drowning. The Ahoms erected on improviso bridge across the Brahmaputra by placing one boat after another over the whole breadth of the river. The Moguls could not stand the dash and fury of the Assamese onset. The Assamese were fighting for their life and liberty, and the Moguls for the mere luxury of a triumph and territorial expansion. There were heavy casualties on the side of the invaders. The few that survived were chased down to Pandu, some three miles from the scene of contest. The Barphukan intended to chase them further still, but he was dissuaded by Achyutananda Doloi. The combat came to an end, and it was a decisive victory for the Assamese. Ram Singha, at the end of the contest, praised the valour and skill of his redoubtable adversaries — “Every Assamese soldier is expert in rowing boats, in shooting arrows, in digging trenches, and in wielding guns and cannons. I have not seen such specimens of versatility in any other part of India.” (*Lachit Barphukan And His Times*, S.K. Bhuyan).

The battle of Saraighat was a fitting climax to the many centuries of conflict with invading Muhammedan forces. After suffering this humiliating defeat Ram Singha retreated with his army and the Ahoms regained their dominance over the entire Brahmaputra Valley till the advent of the British in the early 19th century. One key component of the Ahom success against foreign adversaries was the Brahmaputra and the fact that invading forces had to advance against its currents : “An attack on Assam from Bengal was always disadvantageous to the invading army, in comparison with the ease and facility with which the Assamese could conduct their war operations..... The invaders had always to ply their boats

upstream against the strong currents of the Brahmaputra. The progress was necessarily slow, and if their fleet was poor the equipments for their war in Assam would of necessity be meagre and insufficient. A large number of men had to be employed for towing the boats up. The land forces had to cut their way through dense forests, tall reeds and boggy morasses. Reinforcements from Bengal similarly took a long time to reach their destination in Assam. The advantageous position of the occupants of the Upper rapids of the Brahmaputra was realised by the Government of the East India Company when they despatched an army to attack the Burmese at Gauhati, mainly out of fear that the latter could at any time sail down the river and enter Bengal eluding the vigilance of the Company's flotilla at Goalpara. The difficulties experienced by Mir Jumla's invasion have been very well summarised by Charles Stewart who drew his materials from contemporary Persian sources. "As Meer Joomla was resolved not to quit sight of his fleet," wrote Charles Stewart, "on which were embarked his stores and depot of provisions, he regained the banks of the Burhampooter; and having crossed that river near Rungamutty, at the expense of great labour and much delay, he formed a road which enabled him to proceed in short stages. During this march, as the imperial army was obliged to drag the boats against strong currents, and the troops were necessitated to cross rivers and clamber over precipices, it frequently happened that their day's journey did not exceed one or two miles during which time, although not opposed by the enemy in front, they were often annoyed on their flanks by small parties of Assamese firing on them from behind trees, or whatever the nature of the ground permitted them to approach unseen....." (S.K. Bhuyan). The experience of other invaders could not have been much different. Indeed, time and again throughout Assam's history the Brahmaputra proved to be a saviour in the strictly military sense too!



The final decades of Ahom rule constitute the darkest period of Assam's history. It was in the 1790s that a weak-kneed monarchy, unable to withstand repeated uprisings of the Moamarias, a much persecuted Vaishnavite sect, as also depredations caused in their kingdom by petty chieftains and freebooter mercenaries from Bengal, disowned its glorious heritage of freedom and first appealed to the British for help. And the new invaders, in the guise of an army of deliverance under Captain Welsh, with Lieutenant Macgregor as adjutant and Ensign Wood as surveyor, entered Assam on 'gun-boats' along the Brahmaputra. By then the Muhammedan possessions in Bengal had passed into British hands, their frontier outpost being Goalpara. On 16th November, 1792, Captain Welsh's troops sailed from Goalpara to Guwahati.

A solitary incident bears witness to the demoralisation in the Ahom royalty. "Three days later, as the heavy boats conveying the detachment were labouring up the stream, about three miles below the Nagarbera hill, a few canoes appeared in the distance. As they approached the fleet, they were found to contain Gaurinath (the Ahom king) and a few attendants, who had escaped with him from Gauhati at two o'clock on the previous morning. The immediate cause of his flight was not the advance of Krishna Narayan, but a raid by a mob of Doms, or fisherman..... The Raja and his advisers had by this time become so demoralised that even this contemptible foe sufficed to inspire them with frantic terror, and they fled hastily without making the slightest effort at resistance." (*A History of Assam*, Sir Edward Gait). Captain Welsh and his troops remained in Assam till June, 1794, restoring a semblance of order in a land in a state of ferment and uprisings, and strengthening the monarch's hands. But, on orders of the Governor General Sir John Shore, he had to leave, when Assam again slid into chaos.

The state of anarchy, deepened by palace intrigues and persecution of the common people, continued into the

second decade of the 19th century when, in 1816, Badan Barphukan, a disaffected Minister of the Ahom king, sought the help of the king of Burma. The events which followed form a bleak chapter. The Maans, as the Burmese were called by the people of Assam, taking advantage of a state machinery on the verge of collapse, made repeated incursions into the region killing, raping and pillaging. At least a third of the population, already made thinner by the preceding political turmoil, was decimated by the ravaging Burmese and for a while Assam remained in the possession of the king of Ava.

However, the easy passage through Assam had made the Burmese marauders over-ambitious, which brought them into conflict with the British, making the latter determined to oust them from Assam. "These events had preceded the formal declaration of war which was not proclaimed until the 5th March (1824). In anticipation of active operations a force of about 3000 men with several cannon and a gun-boat flotilla, had been collected at Goalpara, on the frontier of the old Ahom kingdom. To this force was now assigned the task of turning the Burmese out of the Brahmaputra Valley" (E. Gait). This force was despatched up the Brahmaputra in March, 1824. "The Governor General in Council was, in consequence of these circumstances, induced to order the advance of the force previously assembled at Gowalpara into the territory of Assam, to dislodge the enemy from the commanding position which they occupied at the head of the Berhampooter..... In obedience to these instructions, Brigadier M'Morin, commanding the force, commenced moving from Gowalpara up the Berhampooter on the 13th March, 1824. On the 28th the force arrived at Gowhatti..... "(William Robinson). Progress was at a snail's pace : "The only practicable means of transport was by boats towed laboriously against the strong current of the river, and the rate of progress was necessarily very slow..... The commissariat flotilla, with the escort of gun-boats, being unable to

ascend the shallow stream of the Dikhu, halted at its mouth and from this point all supplies had to be transported by road. On the morning of the 27th January (1825) the enemy attacked an advanced post which was holding a bridge over the Namdang river. Supports were moved up quickly and then, in order to encourage the Burmese to show themselves a retreat from the bridge was feigned. The Burmese fell into the trap and rushed forward, whereupon they were attacked and put to flight with heavy loss."

The campaign of the British against Burmese presence in Assam witnessed many such skirmishes where their greater discipline and superior fire-power saw them emerge repeatedly victorious. His forces having been routed, the king of Ava had finally to concede defeat and, on February 24, 1826, Assam was incorporated into the British empire by the Yandabu Treaty concluded between two contending parties, neither belonging to the land. The Ahom *Swargadeo*, Purandar Singha, was made a titular head, but in 1838, under the all too familiar pretext that he had not paid his dues, he was deposed and pensioned off, and Assam was placed under the direct administration of the British. The all-powerful Ahoms lost an empire they were never to regain again.

Though influenced by the religions and cultures prevalent in mainland India, Assam till then had retained her separate and independent political identity. By bringing the region under a common administration and uniform civil code the British initiated the process of political unification with the rest of the country. Under them the seeds of modernism, including scientific education and improvement in communication, were sown. However, in the sphere of economy, the imperialists persisted with the colonial pattern, robbing the region of its natural resources as well as extracting revenue without putting any of it back for the development of the people. Each developmental activity they undertook in the region was designed

merely to prepare it for economic exploitation—the infrastructure they created was to facilitate the germination of a colonial culture. If English education was introduced, it was to create clerks and factotums; if roads and river-embankments were constructed and communication over the Brahmaputra improved, it was merely to make their tea-industry more profitable.

The sense of peace and tranquillity experienced by the people, after half a century of strife and unimaginable suffering, was short-lived, for it could hardly compensate for the loss of freedom. The awareness that one master had simply replaced another, equally pernicious one, and that exploitation and neglect were to be the rules of the day, seeped into the people on the banks of the Luit. This transmuted in the course of time to a vigorous anti-imperialist struggle, culminating in the attainment for India's independence from alien rule. Assam's role in that titanic struggle is honourable and the roll of her martyrs who made the supreme sacrifice for the nation is long. The Son of Brahma can indeed be proud that the very people he had nourished so long had fought a war for national independence on his shores as stirring as anywhere else in India.

## THE PILGRIM'S PROGRESS

Though the wide, braided course of the Brahmaputra as it flows through the valley is thickly dotted with *Char*-islands and sand-bars, two islands of a more permanent nature stand in symbolic isolation, both, coincidentally, the outcome of the fluvial changeability of the river. The Peacock islands of Umananda, with a rocky base, is representative of the Brahmanical Hinduism which percolated into the region with the gradual Aryanisation of the Kirata society, supplanting or amalgamating with tribal religions and rituals. The alluvial island of Majuli, is the symbolic manifestation of the religious reformation and cultural renaissance which took place in the Brahmaputra valley from the latter part of the 15th century, led by the Vaishnava saint Mahapurush Sankardeva, who preached the *Ekasarana Namdharma* faith with its philosophy of equality and tolerance.

Compared to the gargantuan size of Majuli, Umananda is a tiny island set in the middle of the river opposite Guwahati. According to Hindu legend this rocky island was created by Shiva from the dust which used to mark his forehead. To its south-west, also within the river, is another rock island called the Urvashi *Khuti*, which has been traditionally used to measure the level of water. Legend has it that the *Khuti* was the celestial Apsara Urvashi who had been transformed into a rock. It was the site of an early medieval temple, no longer extant. In the *Kalikapurana* it is stated that the slopes of the nearby Nilachala hills extended upto Urvashi and Umananda, implying that the

islands were once contiguous to the south bank as rocky outcrops. Erosion and changes in the channel-configuration of the Brahmaputra had converted them into islands. Upon Umananda stands a Shiva temple, the last surviving example of the temples built by the Ahom king Gadhadhar Singha. However, though constructed in 1694, it had been erected upon ruins of a stone-temple of the early medieval period, following the same groundplan. In fact, Umananda with its temple was an important pilgrimage site since ancient times and was mentioned both in the *Kalikapurana* and *Yoginitantra*. Today, along with the Kamakhya temple close by, it stands as a picturesque testimony to the high place Pragjyotisha and Kamarupa held in the Hindu pilgrim's route since ancient days.

Assam in general and the Brahmaputra in particular formed a natural corridor through which expansionist Brahmanical Hinduism could reach out to Burma and South Asian regions. Traditions of Hindu ruling houses in Burma suggest the migration by river and land routes through Assam into Burma among the Mons, Pyus and the Burmese even before the middle of the 1st millennium B.C. The Hindu king Samuda, who ruled Burma in 105 A.D., must have proceeded thither through Assam, as also the Hindus who led the Tchampas or Shans in their conquest of the mouth of the Mekong in 280 A.D. Thus this region played a seminal role in carrying first Hinduism and later Buddhism into South East Asia. Similarly, it was the route through which ancient Indian ideas and literature travelled to countries of the South East, where, however, the events depicted in epics such as the Ramayana and Mahabharata were given local names and habitation.

However, while they acted as a conduit to Hindu expansionism, the river and the valley actually prevented the expansion of Islam. By repeatedly repulsing Muhammedan invaders and retaining the independence of the region as well as its broad, Hindu character, the Koch, Ahom and other tribal groups acted as a buffer to Islamic

influence from India permeating further east. It would be interesting to speculate what the religio-cultural scenario of South East Asia might have been had they not done so. As S. K. Chatterji puts it : "The most noteworthy military achievement of the Ahoms was their holding the Mohamadan expansion from North India through Bengal..... There were persistent efforts on the part of the Muslim rulers of Bengal (Turki, Pathan and Indian Muslim) to conquer Assam all through the centuries, and we have very detailed accounts of the campaigns of the Mogul generals in Assam. But these fights between Ahom ruling houses, between their Ahom and Bodo and Hindu Assamese troops, on the one hand, and the Bengalised Turki and Pathan and Mogul and North Indian Muslims as well as Rajput and other Hindu troops under the Moguls on the other, show Assam in a peculiarly favourable light. Assamese kings stopped the Muslim flood from penetrating into Burma and beyond in a wave of aggressive warfare and conquest. Colonisation, proselytisation and then conquest of Arab merchants and their religious teachers in Indonesia led to the final Islamisation of Indonesia. The Arabs and then later on Indian Muslim merchants from Western India found a direct line of access by sea to Malaya and Indonesia, but a land route for aggressive advance was denied to the Indian Muslims by the Ahoms of Assam. Otherwise, the history of Burma and Indo-China might have been different."

In Assam itself the intrusion of Brahmanical Hinduism led to its slow and gradual amalgamation with the consequent obliteration of religions and rituals observed by the primitive Austric and Mongoloid elements. Prior to this animistic beliefs involving water, stone, trees and natural forces, side by side with magical practices appear to have prevailed. Worship of trees, rocks, snakes (later Hinduised into the serpent goddess *Manasa* or *Monosa*), *Sitala* or *Ai*, the smallpox goddess etc. were some of the cults. Rivers were an integral aspect of primitive animistic religions and



were offered oblation. The Jaiantia tribe, for instance, not only worshipped the Kapili river as a deity, but were said to offer human sacrifices to it in the months of November and December. That the ones offered for sacrifice were fed and feted to their hearts' content before the ritualised beheading recalls the later *Bhogi* cult of Kamakhya. The Syntengs even today treat the Kapili as a goddess and some of them never cross that river, or do so only after sacrifice of a goat or chicken. Such animistic reverence accorded in the past to rivers is the basis for the folk belief present till today among the Assamese people that one must not urinate or defecate upon the Brahmaputra, or soil it in any way. Hindu customs of bathing in rivers to acquire redemption from sins are surely offshoots of the reverence primitive people bestowed upon life-sustaining bodies of water.

However, for centuries after its intrusion, Hinduism was confined to the royalty and aristocracy and the common Kirata masses remained untouched. "And yet, in the Brahmaputra valley, large sections of population are still outside the pale of Hinduism, or in the lower stages of conversion, where their adopted religion still sits lightly on them and they have not yet learnt to resist the temptation to indulge in pork, fowls and other articles regarded by the orthodox as impure. The reason seems to be that in early days the number of Hindu settlers and adventurers was small, and they confined their attention to the king and his chief nobles, from whom alone they had anything to gain. They would convert them, admit the nobles to Kshatriya rank and invent for the king a noble descent, using the same materials over and over again, and then enjoy as their reward lucrative posts at court and lands granted to them by their proselytes. They would not interfere with the tribal religious rites, as to do so would call forth the active animosity of the native priests; nor would they trouble about the beliefs of the common people, who would continue to their old religious notions." (*A History of*

*Assam*, Sir Edward Cait, 1905). It was through royal patronage that Hinduism through the centuries permeated to the masses and became the dominant religion of the valley. Hinduisation of the upper classes was particularly vigorous during the Gupta period of 4-5th century and by the 7th century A.D. a Hinduised Mongoloid empire was more or less achieved.

The ruling monarchs celebrated their new-found Kshatriya status through temple-building in imitation of the tradition seen in the Indian mainland. Hindu scriptures advise that temples should be built beside rivers or on the sea shore as these alone can provide a salubrious environment for worship. In the Brahmaputra Valley this obviously meant that the monarchs chose this river's banks to built their temples, with the unfortunate consequence that most of the pre-Ahom temples have either disappeared altogether or can be seen only as ruins. Yet all extant temples have been built on sites of ancient temples or on their plinths. Temple ruins at Tezpur and temples and shrines in and around Guwahati, particularly the famous temple of Kamakhya, had been mentioned in the epics and definitely have a very ancient history, though not their ancient forms. Prolific temple-building was witnessed during the Varman period of 4th to 7th century, under the Gupta influence. This continued during the dynasty founded by Salastambha (7-11th century) and Palas (11-12th century). While the Umachala rock-inscription was the earliest evidence of Gupta influence, the Da-parbatiya ruins beside the Brahmaputra are sole remains of Gupta period temples. Rock-cut caverns at Pancharatna and Jogighopa in Goalpara, on either banks of the Brahmaputra, and ruins of a temple at the former place probably date around 7-8th century. A rock-cut votive Stupa about 2m in height show the ruins to be probably of a Buddhist shrine.

The ruins at Surya Pahar near Goalpara possess rock-cut Hindu deities, caverns, Shiva *Lingams*, *Stupas* and probably belong to the 8-9th centuries. Surya Pahar also

has two rock-cut *Tirthankara* images inside a natural cave, which are the only examples of Jainism in the Brahmaputra Valley. Many of the old temples were later renovated. The Haygriva Madhava temple at Hajo, for example, was a medieval temple renovated by the Koch king Raghudeva in 1583. Guptesvara temple at Singri in the Darrang district is the only surviving example of a temple from the early medieval period in the state. Majgaon, Bamunipahar and Singri ruins near Tezpur, Deo Parvat near Numaligarh etc. offer evidence of the type of temple architecture preferred by medieval kings. During the Varman period the practice appears to have been to erect temples in the alluvial plains, which explained their short-lived character. Later some temple builders appear to have learned from experience that the chameleon nature of the Brahmaputra, coupled with heavy rains and earthquakes, was detrimental to architectural longevity and chose the greater safety of hilltops. Another feature which testify to pan-Indian influences was the practice of building many temples in a clustered group, as is to be seen in the Daboka region ruins at Akashiganga, Mikirati, Rajbari, Na-Nath etc. The Madan Kamadeva ruins 20 kms from Guwahati reveal existence of 18 temples in the area, of which ruins of 12 have been uncovered. Since ancient times the area around Guwahati appears to be the most favoured centre for temple-building. Here later builders sought to erect their structures on sites where temples had originally stood. Almost all the later medieval temples yet standing in Guwahati have been built on the ruins of temples of the 11-12th century, including Manikarnesvar, Asvakranta, Umananda, Sukresvara, Janardana, Chatrakara, Navagraha, Vasishta etc. Greater archaeological explorations might unearth evidence that the ruins themselves may be of temples built on the sites of still more ancient ones.

After they had been brought under the pale of Brahmanical Hinduism, the Ahoms too built numerous *Dols* or temples, or renovated or rebuilt existing ones. Pratap

Singha (1603-1641) erected temples at Negheriting, Gargaon and Biswanath. Records have it that the Negheriting temple was washed away by the Brahmaputra and had to be rebuilt. Pratap Singha is also credited with having introduced Durga Puja into Assam. One of the peculiar features of the Ahom period was that temples were erected on the banks of huge, man-made tanks called *Sagars* or seas. Rudra Singha, the most prolific temple-builder among the Ahom *Swargadeos*, built the Jaisagar group of temples, while Siva Singha built the Gaurisagar and Sivasagar groups. Other Hinduised Mongoloid tribes who attained power in the valley also built or renovated temples, the Koches being responsible for the rebuilding of Kamakhya, the earliest dated monument in Assam in its complete form. The Kachari kings are credited with building the sole monolithic structure in Assam, the temple of Maibong, as also the Khaspur group of temples. The Chutiyas built temples at Malinithan, now in Arunachal and Tamresvari Mandir near Sadiya.

Factors such as the presence of the huge river and porous, alluvial soil had to be kept in mind by the architects while selecting temple-sites. Perhaps this was the reason why, despite the growth of powerful civilisations, the kind of mammoth temples found in other parts of India are not to be had in the Brahmaputra Valley, the soil permitting relatively smaller structures. The lack of size was compensated by numbers. Throughout its length across the valley the banks of the Brahmaputra are lined with innumerable temples, easily accessible to pilgrims on boats, some with great sanctity attributed by Hindu scriptures, bearing witness to the fact that since ancient times Kamarupa contained important sites of pilgrimage for the devout Hindu.

At the outskirts of the city of Guwahati, the site of ancient Pragjyotishpur, lies the Nilachala hills at the edge of the Brahmaputra. Atop the hill stand the Kamakhya

temple, a noted pilgrimage site since at least the medieval period. Legend has it that when Vishnu cut the body of Sati, it fell to the earth in fifty one pieces, and wherever a piece fell became a holy *Pitha* or pilgrimage spot. The genital organs fell on Kamagiri or Nilachala hills, and the place was thenceforth held sacred to Kamakhya, or goddess of sexual desire. "The Kamakhya shrine in Kamarupa had become established as an important centre for Tantric worship (both Buddhist and Hinduistic), according to the *Hevajara Tantra* (8th century A.D.) and the *Kalikapurana* (earlier than 1000 A.D.). And the *Kalikapurana* and *Yogintantra* already extol Assam as a land where Sakta Tantricism was fully established. The temple of the Mother Goddess Kamakhya near Gauhati in Assam could only have come into prominence in Assam and Eastern India and then in the rest of India after its site came to be recognised as a most holy *Pitha* where the pudendum from the body of Sati cut into pieces by Vishnu's discus had fallen; and this led to the spot being called the *Yoni-Pitha*; and it became a great place of pilgrimage for Hindu India." — S. K. Chatterji.

The legendary king Narakasura is credited with first having built the temple. Vishnu had taught him to worship the goddess Kamakhya, but the monarch, drunk with power, asked her to marry him. The goddess feigned acceptance on the condition that he build a temple for her within a single night. He was on the verge of completing the temple when the goddess, terrified that he might accomplish the task, made the goddess Bhairavi assume the shape of a cock and crow and claimed it as proof that the night had ended. Since that mythical inception the temple has witnessed the vagaries of time, the present one having been rebuilt by the Koch king Naranarayan in 1563. However, scholars opine that the word Kamakhya is from the Austro-Asiatic word 'Khmuoch' or 'Komuoch', meaning "someone's dead body", or from the Bodo word, 'Kham-Maikha', meaning 'eater of raw flesh'. Thus it is

quite possible that Kamakhya had been a site of tribal fertility rites before these merged with Hinduism to bring forth the Sakti cult.

The earliest Hindu faith which took root in Assam was Saivism which later transmuted into Saktism but found votaries among the Kacharis, who called Shiva as *Bathau*. He is even today worshipped by certain tribes as *Budha*, the old god, or *Baliyababa*, the mad god. In Assam Hinduism absorbed non-Aryan religious beliefs and practices to gradually develop a unique, orgiastic cult known as Tantrik Saktism, which became the principle religion of the valley by the beginning of the second millennium of the Christian era. The Nilachala hills with the *Yoni-Pitha* of Kamakhya became its centre. Tenets enunciated in the *Tantras* (Tantri-knowledge) were the guiding principles behind this mode which worshipped the female or procreant aspect of Nature as manifested through personified desire. It must be noted that tribal beliefs associate agriculture with women who were supposed to have discovered it in prehistoric times. An extremely sensual and hedonistic cult, Tantrik Saktism enjoined partaking of the five *Mas* or *Pancha-Makars* — *Madya* (wine), *Mamsa* (meat), *Matsya* (fish), *Mudra* (cereal) and *Maithuna* (sex).

Sorcery and magical practices, which lie at the core of primitive animistic rituals, were incorporated into this esoteric cult. Its chief scriptures were the *Kalikapurana* and the *Yoginitantra*, both belonging to the extremist school of Saktism, enjoining adoration "with sexual rites and the sacrifice of animals or, when the law permits, of man." The offering of near and dear ones to the deity was considered the supreme test of devotion. This spawned the sub-cult of the Bhogis, voluntary victims who were free to indulge in the most licentious sensualism. Bhogi meant 'one who enjoys' —he was given unfettered freedom and treated in a regal way till the goddess 'beckoned', when he was beheaded to the chant of *Om Ain Hrin Srin*.

Side by side with Saktism and extant primitive cults,

*Vajrayana*, a debased form of Buddhism, was prevalent in Kamarupa. Though the actual influence of Buddhism in Assam was minimal, the Brahmaputra and its valley was the corridor through which this religion passed into Burma, if not China. K. L. Barua in his *Early History of Kamarupa* states : "It is difficult to believe that Pragjyotisha, which was so close to Uttar Kosala and Magadha, could remain away from Buddhistic influences. Evidently the influence of Buddhism was felt in Kamarupa long before Bhaskarvarman came to occupy the throne." Buddhist proselytisers used the eastern route to travel to Burma, China and Indo-China, while monks from Tibet descended the Brahmaputra and its tributaries to preach the religion among the tribes of the sub-Himalayas. Folk belief has it that the Haygriva Madhava temple at Hajo was originally a Buddhist shrine and its temple deity known as Mahamuni, which is another name for Buddha. Even today Buddhist devotees from Bhutan come to Hajo during winter to pay their oblation to the Mahamuni.

But Buddhism with its philosophy of renunciation could not, it appears, compete with the sensual and worldly cults prevailing in Kamarupa. *Vajrayana* as it was practiced was actually a debased form of Buddhism — a curious amalgam of genuinely Buddhist principles and the erotic and magical. The Vajrayanist too held the *Panch-Makaras* as essential to their ritualistic worship and centred their cult around Kamakhya. Such extreme practices soon witnessed the degeneration of Hinduism in the land and the Brahmaputra valley in the later middle ages earned a notoriety which was not unmerited. Kamarupa came to be known as the land of witchcraft, black-magic and heinous practices in the name of religion. The *Ain-i-Akbari* alludes to such revolting acts as the "divination by the examination of a child cut out of the body of a pregnant woman who has gone her full term of months." Human sacrifice, an essential component of primitive tribal rites, grew rife, having received canonical sanction

from the Kalikapurana, and thousands of innocents were sacrificed, particularly in the Bhairavi temple at Kamakhya and Tamresvari temple near Sadiya. Queer Buddhist sects, such as the *Ratikhowas* (those who indulged in nocturnal enjoyment) added to the decadent medley. Tantrik and Buddhist sorcerers held sway over the multitude. Crude faiths exalted necromancy as a form of worship and superstition into dogma, and darkness descended upon a land with a glorious spiritual and cultural tradition.

It was at this crucial moment that Mahapurush Sankardeva arrived with his *Ekasarana Namadharm* and brought about religious reform and socio-cultural renaissance to this emerald valley.

Majuli, the *Rātna-Dvip* or Pearl-island, with its monastic institutions and ethnic-cultural mosaic, is a jewel in the valley's crown. A repository of Vaishnava tenets and Assamese culture, it was not always an island but a part of the south bank of the Brahmaputra. As late as the reign of the Ahom monarch Jayadhwajja Singha (1648-63), the region, then known as Majali, was an expanse of land between the Brahmaputra or Luit, which flowed on its north, and its tributary the Dihing, which flowed for some distance parallel to it before debouching. Some inexplicable geological phenomenon around 1662-63, probably abnormal high-floods, caused the creation of another channel of the Brahmaputra which merged into a section of the Dihing's flow, giving Majuli its present island character. The various rivers and streams which had been in the landmass initially imparted to it the appearance of being many small islets, but siltation through the centuries had filled them up, apart from certain bigger ones such as the Tuni (believed to be a section of the Dikhow), which even today originate from the south channel and, after cutting across the island, flows into the north. Affinity of soil is offered as one of the many pieces of evidence that the island was once a part of the mainland.



It did not take long for the people to invest a legendary guise to the creation of the island. It was said that Arimatta, son of the Brahmaputra river-god, after unwittingly killing his foster father, tried to atone for his sin by consigning untold wealth to the waters of the river. But the Brahmaputra spurned his offerings and turned away, leaving behind the island. It was also held that while Krishna was returning with Rukmini, his entourage rested at Majuli, and his bride mistook it to be Dwaraka, whereupon Krishna prophesied that it would one day be a second Dwaraka. This prophecy, in a way, has been fulfilled, for today Majuli stands in insular splendour as a pilgrimage site for a majority of the Assamese, being the holy seat of Vaishnavism propagated by Sankardeva and his disciples.

Mahapurush Sankardeva was born on October 1449, at Bardowa beside the Brahmaputra in the present district of Nowgong, into the family of the Siromani or overlord of one of the feudal chieftains called the Bhuyans. It is curious how repeatedly the river on whose bank he played as a child enters into the tale of his life, as testified to by the reiterated allusions to it in his devotional treatises, hymns and lyrics. One of his childhood passions was to swim across and back when the Brahmaputra was in spate. Even today in Assam being able to swim across this river is considered to be the epitome of strength and daring. Sankardeva studied under a noted Brahman scholar named Mahendra Kandali and emerged well versed in Sanskrit lore, including the *Vedas* and *Upanishads*, epics, *Puranas*, *Tantras* and *Kavya* in general. From a young age his was a reflective intellect; he also displayed a prodigy's flair for composing poems almost as soon as he had learned the alphabets. Though his heart was not in managing the family's fief, being its scion forced him to take up domestic responsibilities after the death of his father, and it was only in 1481 that he could fulfill his desire to go on a pilgrimage to North India. He spent several years there, visiting

various temples and *Tirthas* and learning of the many dogmas which prevailed in India, listening to the many lyrics. He carried back with him an awareness of the relevance of the neo-Vaishnava movement growing in strength in other parts of India to the dark times prevailing in his own native land. Though forced once again to take up his wordly duties as a Siromani Bhuyan, he engaged himself in the formulation of the doctrines of his own brand of Vaishnavism called *Ekasarana Namdharma*, and began propagating his faith among his immediate circle. For this purpose he built a small shrine in a lonely place where he could meditate in solitude, or discourse to his tiny band of disciples and hold *Namakirtana* or prayers with issues with allies and adversaries. This became the model for the *Sattras*, or monasteries, which he and his disciples later set up across the Bramaputra Valley.

Conflict with the Kacharis forced the Bhuyans to cede their territory and shift to the shelter offered in Ahom territory. Around 1517, they moved upstream bag and baggage upon a flotilla of boats till finally settling down at Majuli on the south bank and building a colony at Dhuwahat or Belaguri. Here occurred one of the momentous incidents in Sankardeva's life---his meeting with his staunchest disciple and friend, Madhavdeva, without whom perhaps the *Ekasarana Namadharma* faith would not have attained its all pervasive nature. The various debates between the Sankar-Madhav duo while seated on the banks of the Brahmaputra, or in boats while making river-trips to preach Vaishnavism, have been recorded in various Assamese Vaishnava treatises. With the entry of Madhavdeva and other young and enterprising disciples, *Ekasharna Namdharma* began spreading like wild fire and raised the hackles of Brahmans who foresaw an end to their dominance. Though Sankardeva attempted to placate them by inviting them to theological debate, the Brahmans instigated the Ahom king Suhummung (1497-1539) to take action against the nascent reformist

movement. The saint was forced to flee downstream to the safety offered by the Koch kingdom of Naranarayan in the west. After some time of itinerant existence preaching his Dharma, Sankardeva settled for a while at Chunpora or the modern town of Barpeta, and then finally at Patbausi, where he passed the final two decades of his life. An undisturbed existence enabled him to compose almost all his major literary works, including the *Kirtana-Ghosa*, adaptation of the Bhagavatpurana, the doctrinal treatise *Bhakti-Ratnakara* and dramas such as *Rukmini-Haran*, *Parijat-Haran*, *Kaliya-Daman* and *Keli-Gopal*. He also set out in 1550 on a second pilgrimage to Puri, returning to his idyllic existence to preach, write, set up *Sattras* and draw acolytes to his fold. The *Ekasarana Namadharm* faith spread far and wide.

The enlightened Koch king Naranarayan retained an open mind towards the new religion, but his brother Sukladhvaja or Chilarai grew to be a fervent admirer of the saint. However, as before the Brahmans in the court of the Koch king, fearful of their growing popularity, poisoned the mind of the king against the Vaishnavites. Naranarayan ordered that Sankardeva be brought in chains to his court. Forewarned of the conspiracy Chilarai sent his boats to Patbausi to carry the saint to his own dwelling at Phulbari, agreeing to send him to Naranarayan only if the latter pledged that no harm would befall him. Accordingly, Sankardeva presented himself at the court and so enamoured the king with his logic and piety that he became his lifelong patron, despite the continued hostility of Saivite and Saktaites Brahmans. Sankardeva died in September, 1569, having seen in his lifetime his faith take root and flourish in the Brahmaputra Valley.

*Ekasarana Namadharm*, as implied by the term, has three articles of faith, *Ekasarana* (shelter beneath one God), *Satsanga* (assembly of *Bhaktas* for *Bhakti* or obeisance), and *Nama* (chanting as a means of prayer). Popularly called *Mahapurushiya Dharma*, it forbids the worship of idols and

elaborate rituals while advocating an austere lifestyle for the Bhaktas. Two of the nine modes of *Bhakti*, *Sravana* and *Kirtana*, were considered by the saint to be sufficient for the common man, because they could be performed by the high and low alike. In reducing rituals to the minimum and placing emphasis on prayer through community chanting in congregation halls called *Namghars* and private prayer rooms called *Kirtanaghars*, Sankardeva had proffered to the people a creed in absolute contrast to the gory and erotic cults of Hinduism then prevalent. Side by side with the spiritual, the new faith also emphasised strongly on social and personal aspects. In the Vaishnava fraternity every individual was considered equal and neither caste nor religion was to be taken into account while inducting anyone into the faith. "Among the disciples of Sankardeva and Madhavdeva were Chandsai and Jayahari, both Musalmans; Govinda, a Garo; Jayananda, a Bhutiya; Madhava of Jayanti of the Hira or potter's profession; Srirama, believed to have been a Kaivarta; and Damodara, a Baniya. A later Superior, Sriramadeva, administered ordination to some Nocte Nagas, Ahoms, Koches, Miris, Kacharis and Marans, and people of many other tribes were also freely converted to the Vaishnavism of the Sankardeva's Order. It is the catholic outlook of this religion that could thus unify different peoples into one spiritual fraternity, and also achieve a cultural synthesis." (*Sankardeva*, Maheswar Neog, 1967). The prayer services could be conducted by any caste within the circle of *Bhaktas* and *Mah-Prasad*, or offerings, distributed amongst the congregation by everyone. Through such an egalitarian ethos Sankardeva was able to bring about the concept of equality among all mankind and remove stigma associated with birth. People from all walks of life, from the aristocracy to the meanest stratum, came flocking to his religion.

After his death proselytisation was carried on by his chief disciple, Madhavdeva, who composed the *Namaghosa*, and others such as Damodardeva, Harideva,

Ramarama, Gopaldeva etc. They set up *Sattras* all over the valley, the greatest concentration being in the Majuli island. In many ways this Vaishnava creed founded by Sankardeva resembled Buddhism, not merely in the absence of esoteric rituals, and reliance on meditation and community prayers, but also in the *Sattra* institution which housed *Bhaktas* who maintained a celibate status and spent their days in austere living and constant prayers. Their lifestyle inspired the people, leading to the gradual abolition of many evil offshoots of the darker days, including sensual over-indulgence, ritualistic killing of man and animals and imbibing intoxicants like liquor and opium. A majority of people in Assam began to owe allegiance to two heads—the temporal one to the king and spiritual to the head of a *Sattra*. The old priestly order which had the ears of the monarchy did not take kindly to the loss of their hold over the people and the Vaishnavites were a much persecuted lot. It is indeed ironic that the uprising of one of the Vaishnavite groups, the Moamarias, marked the beginning of the end for the Ahom dynasty.

The heart of a *Sattra*, the community prayer hall, was duplicated in each village by the institution of *Namghar*, a revolutionary step in religious and social transformation. The *Namghar* grew to be the centre of every activity of the village, the club where elders congregated each evening, a place for philosophical discourse as well as discussions on the affairs of the village, a theatre where the young and old performed folk or classical dramas, as also the village court where misconduct by individuals were weighed by the entire community and punishment imposed. In the final analysis, it was the moral standard set by the *Sattras* and *Namghars* which rescued the society of the Brahmaputra Valley from the religious excesses and depravity of earlier days and enabled the cultural renaissance to accompany religious reform.

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elaborate rituals while advocating an austere lifestyle for the Bhaktas. Two of the nine modes of *Bhakti*, *Sravana* and *Kirtana*, were considered by the saint to be sufficient for the common man, because they could be performed by the high and low alike. In reducing rituals to the minimum and placing emphasis on prayer through community chanting in congregation halls called *Namghars* and private prayer rooms called *Kirtanaghars*, Sankardeva had proffered to the people a creed in absolute contrast to the gory and erotic cults of Hinduism then prevalent. Side by side with the spiritual, the new faith also emphasised strongly on social and personal aspects. In the Vaishnava fraternity every individual was considered equal and neither caste nor religion was to be taken into account while inducting anyone into the faith. "Among the disciples of Sankardeva and Madhavdeva were Chandsai and Jayahari, both Musalmans; Govinda, a Garo; Jayananda, a Bhutiya; Madhava of Jayanti of the Hira or potter's profession; Srirama, believed to have been a Kaivarta; and Damodara, a Baniya. A later Superior, Sriramadeva, administered ordination to some Nocte Nagas, Ahoms, Koches, Miris, Kacharis and Marans, and people of many other tribes were also freely converted to the Vaishnavism of the Sankardeva's Order. It is the catholic outlook of this religion that could thus unify different peoples into one spiritual fraternity, and also achieve a cultural synthesis." (*Sankardeva*, Maheswar Neog, 1967). The prayer services could be conducted by any caste within the circle of *Bhaktas* and *Mah-Prasad*, or offerings, distributed amongst the congregation by everyone. Through such an egalitarian ethos Sankardeva was able to bring about the concept of equality among all mankind and remove stigma associated with birth. People from all walks of life, from the aristocracy to the meanest stratum, came flocking to his religion.

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Sankardeva and his followers utilised the modes of song, dance and drama in order to explain and popularise

the concepts of *Eksarana Namadharmā*, well knowing that it was thus they could touch the minds and hearts of a simple people. Their rendition of Sanskrit Vaishnavite treatises into the vernacular, as also their original poetic, lyrical and dramatic compositions created a body of literature which not only brought about a dynamic literary movement, but also contributed to the development of Assamese prose. The *Ankiyanat* or dramas composed by them were immensely popular and gave rise to a strong theatrical movement at the grass-root level. Their musical compositions initiated the culture of classical music and they left behind a rich legacy of classical dancing in the *Satriya* dance form. The *Sattras* grew to be the hubs of cultural activity, where classical music, dance and drama were cultivated and the purity of their styles retained. The Vaishnavites also gave birth to a distinct Assamese school of painting where holy books were enlivened by meticulous and colourful paintings. This movement, therefore, apart from playing a seminal role in unifying the people and imbuing in them a catholic sensibility, also brought about a cultural revolution in the vale of the Brahmaputra.

Today the river-island of Majuli stands as a remarkable repository of this Vaishnava religious and cultural heritage. Its recorded area in 1991 was 1256 sq km. But due to erosion it has been reduced to about 880 sq km, of which around 460 sq kms is inhabitable. A number of *Sattras* preserve the quintessence of Vaishnavism, making it a centre of the region's spiritual activity. The head of each monastery is called a *Gossain* or *Satradhikar* and the resident monks *Bhakats*, who however, unlike Buddhist *Bhikkhus*, do not go outside to solicit alms, but themselves undertake cultivation. Naturally, with the introduction of sectarianism into Sankardeva's *Eksarana Namadharmā*, the tenets professed by the various *Sattras* today differ from each other. Yet they have retained the spirit of *Satriya* culture in its pristine form. Many of them possess relics of priceless historic value, and also keep alive certain art



forms such as mask making, creation of costumes for *Ankiya-Nat* or *Bhaona*, cane and bamboo works, manuscript illustration etc.

In every sense Majuli can be called Assam in miniature, having been influenced by every religious and cultural influence which had in the past swept over the Brahmaputra Valley, as also in being inhabited by almost all the plains tribal and non-tribal groups. The harmonious coexistence of so many ethnic and religious groups testify to the Assemese ethos of tolerance. With its quiescent ambience and verdant environment, the rustic pace of existence and the absence of the hustle and bustle of urban life, as also in its waterbodies filled with an astonishing variety of avifauna, Majuli stands as a unique spot on the map of India.

While bringing the British to Assam, the Son of Brahma also brought Christianity. David Scott, the first Commissioner for this region, wanted a Christian Mission at Guwahati almost as soon as Assam was annexed. In response James Ray of William Carey's Mission at Serampore in Bengal was despatched by country-boat up the Brahmaputra in 1829, but the death of his wife forced him to withdraw. Some years later Captain Francis Jenkins, then Commissioner, invited the American Baptist Mission to Assam, pledging to pay Rs. 1000/- as cost of a printing press and another Rs. 1000/- in aid of the Mission. The American Baptists already had a presence at Burma and Calcutta. In bringing them to Assam the plan apparently was to bridge the existing gap and set up a line of Missions on the western frontier of China which would embrace entire South Asia. In 1837 a missionary by the name of Kincaid did ascend the Irrawaddy in order to get in touch with his counterparts in Assam, but was prevented by tribesman from doing so.

The American Baptist Mission took up Jenkins's invitation and, in 1835, deputed the pioneering missionary, Nathan Brown, to lead a Mission to Assam. Brown, who

was serving at Moulmein in Burma, arrived from there at Calcutta on September, 1835 and began making arrangements to traverse the river-route to Assam. Three large boats, "5-6 feet wide and thirty feet in length, with canopies of spliced bamboo and palm leaves" were acquired, one for Brown's family, a second for his fellow missionary O. B. Cutter and his wife, and a third for storage and kitchen. Cutter, an expert printer, took along the very first printing-press in Assam, a freight of inestimable significance for the region's destiny, as also "a hundred reams of paper and other printing material." The two families left Calcutta on November 20, 1835, first up the Hoogly to the Ganges, then down the Ganges to Brahmaputra, a journey which they later described as an exciting one through wild jungles. Each boat was manned by a *Mahji* with 6 or 8 men under him, who walked along the bank of the river, pulling the crafts after them with long ropes. When no paths were available, the men would push the boats forward with poles, a boatman securing the lower end of his pole in the river bottom and propelling the boat forward by holding the pole and walking to the rear of the boat. In accordance with their plan of eventually linking up with Burma, their destination for setting up the first Mission was Sadiya at the extreme eastern end of the valley, which they reached after four months of journey across the Brahmaputra on March 23, 1836.

The Browns and Cutters set up their Mission at Sadiya, learned the Assamese and Khamti languages and began their proselytising activities. Soon they were joined by other missionaries such as Mr. and Mrs. Miles Bronson. However, another missionary, Jacob Thomas, was the victim of a fatal accident, testifying the perilous nature of river journeys on country-crafts. He and his family were being rowed on canoes up the Brahmaputra towards Sadiya, but when almost at their destination, at Saikhowa, two trees fell with "a crash across the middle boat in which Mr. Thomas sat, instantly sinking it, the larger one

falling on the missionary with a bolt of death." Despite such adversities, which included the death of his son and a murderous assault by suspicious Khamtis on the Sadiya Mission, Brown and his men continued their work, circumstances coercing them to shift the Mission first to Jaipur, and finally to Sivasagar in 1841.

The American Baptists and other Christian Missions which followed them did not find a fertile field for conversion in the Brahmaputra Valley, possibly because the people there had a strong and age-old religious tradition. However, conversion among the hill-people who had remained somewhat impervious to external influences so far and followed animistic religions proved to be more rewarding as far as propagation of Christianity was concerned. Today a bulk of India's Christian population lives in the hilly areas of the North-East. But the valley was indebted to the American Baptist missionaries in other spheres, especially in the field of education and development of the Assamese language and specification of its grammar. Not only did O. B. Cutter with his press print books in vernacular to be used in the number of schools set up by the missionaries, the enterprising Baptists also brought out the first magazine in Asamiya, a monthly journal named 'Arunodoi' or the Dawn. Moreover, the Baptists, apart from other ameliorating activities, performed one feat which has earned them the eternal gratitude of the people of the Brahmaputra Valley. The British had brought with them a number of clerks from Bengal to help in the administration. Due to their machinations, Bengali soon replaced Asamiya as the official language of Assam. It was primarily due to the strenuous and steadfast championing of the Baptist missionaries that this aberration was rectified and from 1871 Asamiya was re-enshrined as the official language.

## THE MERCHANT'S ROUTE

*Dhanikah, Shrutiyo, Rajah, Nadi, Vaidyastu Panchamah  
Pancha Yatra Na Vidyate Tatra Basam Nakaryeta*

(One should not choose to live in a place which does not have prosperous citizens, learned and wise individuals, a good king, a river and physicians).

In placing a river among the five essentials, the wise Chanakya was specifying the vital role played by them in bringing about prosperity to a region. A river does this not only through providing the immediate requirements of life, but also by acting as channels for communication between different parts of a kingdom as well as with other cultures and people. Rivers have forever been economic assets, especially in ancient times. This was more so in places where the nature of terrain and climate made opening out of roads difficult. True, the Koches and Ahoms built a number of roads in the Brahmaputra Valley, but without the aid of appropriate technology, maintaining them in a land of lush, quick-growing vegetation was a Herculean task. These were almost impassable throughout the prolonged spell of heavy rains and the wise traveller always chose the more convenient river routes. The absence of viable roads can be gauged from the fact that only after the British arrived were bullock-carts introduced into Assam. While Ahom *Buranjis* speak of Sukapha bringing horses when he entered the valley, the chronicles subsequently make no more mention of this animal, revealing their patent unsuitability in the conditions prevailing here dur-

ing those days. It is recorded that Ahom warriors were extremely wary of Moghul cavalymen. Horses and ponies came into the picture again only during the British rule. Earlier, elephants were the favoured beasts for travel by land; since tame pachyderms were owned primarily by the upper classes, boats were the sole 'vehicles' for the common man to transport himself from one place to another. Even today to a great extent rivers remain roads and highways in the rural areas, as seen in the availability of boats in every villages, with each household possessing at least a dugout in those close to rivers.

Prosperity of an area is dependent not merely on political and social activity, but also a vigorous and dynamic economy which fully satisfies the consuming urges of each section. The Brahmaputra and its tributaries were central to the economies of each civilisation that evolved in the past upon their banks. A periodically replenished soil was a gift of paramount importance to an agricultural society. Bamboo, thatch, cane and reeds for construction of dwellings and good timber for building boats, ploughs, utensils etc. were provided by the characteristic ecosystem around these rivers. Water-routes for exchange of ideas and culture, as well as for exporting the region's surplus and importing necessities not available locally, were added bonuses. Assam's rivers, therefore, acted as channels for commercial exchange in three ways—internal trade within the region, trade with the hill tribes and immediate neighbours like Bhutan, mainland India, Burma and Tibet, and trade with far countries, especially highly developed ones like China.

Till the advent of first the Burmese marauders in the 19th century who depopulated and depredated the country, and then the British who through colonial exploitation impoverished it beyond measure, the people of this valley were economically self-sufficient. Food scarcity or famines were unheard of. Only after large-scale importation of labour by the British for their tea-plantations as well as

organised settlement of peasants from erstwhile East Bengal had essential food items to be imported. Especially during Ahom rule the rural economy was organised in such a manner that each village subsisted as a self-sufficient and integrated economic unit, possessing within itself specialists to fulfil the needs of the micro-community such as black-smith, brazier, carpenter, potter and so on. Each household had a loom and womenfolk produced cloth not only for the household, but also a surplus that could be bartered. Fish, fowl, game, fruits, ferns and herbs from Nature, betel-nut and Paan from the backyard, lime from snail-shells or limestones — the humblest of farmer or artisan, indeed, did not lack for anything !

This long history of economic self-sufficiency, coupled with a non-acquisitive sensibility, explains the absence of a well-defined trading class in this region except for some parts of Lower Assam. Internal trade was none too widespread in the past, one of the few items subject to large-scale trading being cattle, which were taken on the Brahmaputra and other rivers on specially made barges by cattle-traders. Though the various ruling houses minted coins, these were primarily used for external trade and the barter system was in vogue. This remained so to a large extent till the twentieth century, despite the British having accustomed the people to a monetary system. Localised internal trade was carried on in weekly *Haats* or rural markets, where villagers from one neighbourhood would gather to exchange surplus products. Exotic items from abroad were the fashion only amongst the royalty, nobles and upper classes, and the common man to a great extent was left out of the ambit of foreign trade.

Yet a land-locked country without a direct outlet to the sea did require certain items of common use not available locally. The humble salt, for instance. Its scarcity in the region made it worth its weight in gold, and there is evidence that crafty traders from Bengal kept the supply perennially low to maintain the price commanded. Salt-

springs were there in the hills adjoining the valley; hill-tribes like the Nagas and Noctes extracted crude salt from their water and brought them in bamboo-tubes to be bartered with the plains people for cloth and other necessities. Ahom *Buranjis* mention attempt by Ahom rulers to bring the salt springs and mines under their jurisdiction. But these produced a small fraction of the country's requirement, forcing the common man to adopt a substitute made from banana-ash called *Kala-Khar*, leading to the none-too-complimentary phrase *Khar-Khowa Asamiya* (Khar-eating Assamese)! Assamese language is full of aphorisms testifying to the value of salt, such as *Jaar Lon Khaba, Taar Gun Gaaba* (If you lick someone's salt, you must only praise him). Salt, therefore, constituted a bulk of the region's imports, being transported upon boats from Bengal over the Brahmaputra during the dry months of winter, or brought on horses by Bhutanese or Tibetans. "The trade with Bengal was considerable, and the officials who farmed the customs revenue paid Rs. 90,000 a year to the Bar Phukan of which, however, only Rs. 26,000 reached the royal treasury. Before the disturbances the registered imports of salt from Bengal amounted to 1,20,000 maunds a year, or roughly one sixth of the quantity imported at the present day..... The money price was three times as great as it is now, while, measured in paddy, it was more than forty times as great. It was thus quite beyond the means of the common people." (Sir Edward Gait).

In general, import and export in the valley was carried on by traders from mainland India, particularly Bengal and Bihar, some of whom occasionally took their ware as far as the Yunnan province of China and brought back Chinese products to be taken to India. Later, European traders joined this lucrative route. However, among the upper classes of Assam in each phase of its history there were enterprising souls who became *Saudagars*, or river-merchants, and used the Brahmaputra to send their flotilla of huge trading-vessels to, as folk-lore has it, far off places

such as Lanka or erstwhile Ceylon. The westward Brahmaputra-Ganges route to the Indian heartland was a natural outlet, while the sea was accessible to the south through the Meghna. "The intercourse between Assam and Bengal is almost entirely maintained by water. There is free communication between the Brahmaputra and the Ganges, and boats of the largest size pass by different insulations out of the one into the other throughout the year" (William Robinson, 1841). This had been as true for traders since the prehistoric Bhagadatta era as for the British. "There are three overland routes — 1. Murshadabad-Mauldah-Dinagepore-Rengpore-Bauugwah and Goalpara (thence by the Brahmaputra). 2. Dacca-Dumary-Puculoe-Jumalpore-Singymary and Goalpara. 3. Sylhet-Chirra-Moplung-Nunklow-Ranneygodown-Cannymook and Gohatti" (John M. Cosh, 1837). However, merchants and adventurers preferred the river route for obvious reasons, despite the tediousness of the voyage which took many months.

At the north-west side of the valley Bhutanese traders did brisk business in markets set up by them near the Dwars or passes to Bhutan, of which *Shatdwar*, or Seven-passes was the most well known. During the Ahom days the Dwars were in control of the plainsmen, but the British handed them back to Bhutan in consideration of an annual payment of tribute consisting of "yak-tails, ponies, musk, gold-dust, blankets and knives" (*North-East Frontier of Bengal*, A. Mackenzie). "Thibet is open to travellers on foot from the extreme east of Assam — from Sadiya to Bhaloo, first town met within Thibet, takes 16 days" (William Robinson). The *Tavkat-i-Nasiri* mentions another route from Karpattan in Tibet from which horses were despatched to Bengal through Kamarupa. A Buddhist preacher named Minnath is recorded to have gone to Tibet over this route. In fact, trade with neighbours like Bhutan, Tibet, Burma and China, which had been a tradition of succeeding societies of the Brahmaputra Valley, grew very



brisk during the Ahom period, but was neglected by the British.

The most romantic of all these outlets from the valley, an extension of the Ganges-Brahmaputra link, was the ancient 'silk route' to China. "There is an open road from Upper Assam into Burma, and thence into China, by which a considerable trade in Chinese and Burmese manufactures was at one time carried on. The Burmese in their incursions into Assam generally entered it by this route. The line of trade, after leaving Sadiya (at the eastern extremity of the Brahmaputra), pass by Bisa, across the Patkoye range of mountains, and through the valley of Hukung to the town of Munkung, situated on a navigable branch of the Irāwatti, called Namyang. Merchants proceeding from Munkung to Ava, at once descend the Irāwatti to the capital, while those to China ascend the Irāwatti for many miles to a place called Katemow, where they disembark their goods, and thence convey them on mules over a range of mountainous country, inhabited by Shyans (subject to Ava), into the Chinese province of Yunan. The intercourse between China and Assam by this route is extremely tedious, and can be followed by a trading people who traffick as they go along..... Lieut. Wilcox discovered a shorter route, tracing the Noadihing, which enters the Lohit, the great eastern branch of the Brahmaputra, a few miles down Sadiya, by water to nine days' march to Munglung" (*A Descriptive Account of Assam*, William Robinson, 1841). The Stilwell Road from Assam to Burma built by the British in the early 20th century traces the path of the ancient 'silk-route'. Another route from Tonkin to Kamarupa was mentioned by the 9th century Chinese traveller Kya Tang, part of which formed a land-water route from Assam to ancient Magadha.

The Sadiya-Yunan 'silk-route' was known to the earliest societies of the valley, being a way facilitating prehistoric migration. One of the most exciting finds of the Ambari excavations is what has been claimed to be 1st century

A.D. Roman pottery, which if substantiated by additional evidence would show that ancient valley civilisations like Pragjyotisha not only had trade and other contact with the Romans since at least the 1st century A.D., but also that the Brahmaputra and its valley was the corridor through which Rome carried on trade with China.

That it was a much used route between ancient India and China there can be no doubt. R. M. Nath in his *The Background of Assamese Culture* forwards a most interesting hypothesis : "Who were these *Kiratas* ? The word silk is derived from the original Mongolian—*Sirkek*, Korean—*Sir*, Chinese—*Ssi*, Greek—*Ser*, Latin—*Sericum*. The word *Sari*, wearing cloth of Indian ladies, is derived from *Ser*. The dealers in silk was called the *Seres* or the *Scyrites*. The word *Scyritae*, *Cirrhadae* and *Kirata* appears to have had originally referred to dealers in silk. Silk was originally produced in china and it was catered by merchants of Turkestan through Tibetan intermediaries to India and Assam. That there was an ancient route from China along the course of the Lohit river to Assam has already been mentioned. The Zuh-This people came to Assam Valley by this route. The Chinese records of about 248 A.D. mentions a trade route from Yunan in South China through Shan states, Hukong Valley, the Brahmaputra river, and Kamarupa to Pataliputra (Patna) and Sravasti. Other routes were from Signanfu to Lanchowfu, then to Siningfu, thence to Kokonor and south-westward by Lhasa and the Chumbi Valley to Sikkim and the Ganges. There were other sub-routes through Nepal along the course of the Arun river through Kailas peak along the Brahmaputra. A route from Lhasa led into Assam along the Lower Brahmaputra, and another route from near Manasarovar was along the course of the Subansiri river..... in ancient times traders from different parts of Tibet, Central Asia and China flocked to Assam through various routes, and as they traded mostly in silk, they were generally called *Seres-Cirrahadoi-Syrites-Cirata-kirata*."

It is clear that since time immemorial the Brahmaputra Valley had trade and cultural contact with China, racial affinity being one of the bonding factors. Among the finds of the Ambari excavations were 9th century Chinese Celadon pottery ware. Bhagadatta was believed to have presented a number of vessels made of *Asamsara*, or jade, probably of Chinese origin. "Communication between China and India (Assam) through the wild mountainous regions between the two countreis was exceedingly difficult, being two months' march through pestilential jungles and high mountains, as Hiuen Ts'ang has noted. But it nevertheless did exist, and for centuries before the days of both Hiuen Ts'ang and Bhaskara-varman, as we know from the Chinese soldier-explorer in Central Asia in the 2nd century B.C., Chang K'ien, and from the Greek geographers and sailors from the 1st century A.D. (e.g. *The Periplus of the Erythraean Sea*, and the *Geography of Ptolmey*)..... T'sang China and Sassanian Persia were the only great states in Asia with which India had direct contact in those days, and the direct contact with China was effected by land route only through Assam..... Evidently the Mongoloid kinship of the people of Assam with that of China and of the intermediate lands served as a link..... *The Periplus of The Erythraean Sea*, a 1st century A.D. Greek work on the navigation of the Arabian Sea and on the trade by sea between India and Egypt and the Roman world, gives indication of business done by Kirata or Mongoloid tribesmen of various groups, linking up India with Tibet and China; and this volume of trade was being carried on between North-Eastern India and South-Western China for centuries, even though the Indians on the one hand and the Chinese on the other hand had no official or formal or widespread knowledge of this trade. In the time of the Periplus, as the Greek explorer or geographer knew about it from South India and Egypt, this trade was in commodities like malabathrum from the Himalayan regions and in raw silk yarn and silk cloth from

Thinai or China. But prior to that, as the report of the Chinese military man, political officer and explorer Chang K'ien of the 2nd century B.C. has made it clear, there was a trade route from Assam to South-West China, officially not known to or recognised by the Chinese Government, through which Chinese manufactured goods like silk cloth and bamboo flutes came to India, to be exported again through her North-Western trade routes into Central Asia. The art of rearing silk worm and manufacturing silk as well as weaving silk into cloth may very well have first come to Assam and India through this route, independently of the Central Asian route through which the Chinese Princess and her Syrian followers smuggled silk cocoons to the lands of the West" (*The Place of Assam in the History And Civilisation of India*, S. K. Chatterji, 1970).

Apart from silk, items like brick-tea, Chinese pottery, jade and other precious stones found their way into India and distant countries by a route of which the Brahmaputra was a vital component. When Chang K'yien saw silk and cane bamboo items in the market-place of Bactria, he knew it had come by this route. Simultaneously, the Brahmaputra Valley itself had a great deal to offer to venturesome merchants who came looking for exotic items for trade. Kautilya's *Arthashastra* makes mention of sword-handles made of rhinohorn, buffalo-horn, ivory and bamboo roots which came from Kamarupa. The powerful kingdoms erected by the *Kiratas* had reached a high level of culture and craftsmanship, making them attractive for the mercantile class. During the *Asura* dynasty, "The country flourished tremendously in all respects; wild elephants were caught and trained, gold grains were collected from the rivers, and an umbrella decorated with jewels of high refracting power that on reflection of light looked like drops of rain, was the covet of all kings in other parts of India. This was called the *Varuna-Chatra* or the umbrella of the sea-god Varuna; for the *Asuras* considered the sea-god as their protector. Iron ores were also smelted and

weapons made with the metal. It is said that the capital town of Naraka was fenced round with iron palisades. Medicine with indigenous drugs was used profusely according to certain codified methods, and a particular system of treatment of ailments by indigenous drugs, still practised by certain village quacks in Assam, was known as the *Asuri-system*." (B. M. Nath).

According to the *Harsha-Carita* the gifts of Bhaskarvarman to Harsha Vardhana included, among other things, a white silk umbrella, exquisite ornaments, silken towels, baskets of reeds, drinking vessels encrusted with pearl, shell and sapphire, pillows of deer-hide, black aloe bark as pounded collyrium, Gosira sandals, camphor, scent-bags of musk oxen, betel-nuts, cowries, gourds, orang-outangs, musk deer, yaks, parrots, partridges, ivory etc. The list is testimony to the artistic and economic products of Assam during that era, and included animal and plant-products for which the country was well known. During the Mlechcha dynasty, according to R.M. Nath : "The waters of the Brahmaputra near the capital city remained covered with well decorated, large boats of the royal navy; the wide roads of the capital town bustled with the congested traffic of elephants, horses and chariots of merchants, princes and chiefs; and shops of musk, sandal-wood, silk, gold, jewellery and cosmetics were congested with merchants, traders and purchasers."

Since olden times gold was to be had in the sands of the Brahmaputra, and rivers like the Subansiri. The ore, extracted by washing the sand, was said to be of the purest quality. The gold emporium at Suvarnakudya near Hajo was the meeting place of gold merchants from different parts of India. Sizeable amounts of gold was extracted during the Ahom rule and, as Shihabuddin has stated, ten-twelve thousand gold-collectors or *Sonowals* were employed by the king, each having to enrich the royal treasury by 1 *tola* gold each year. Francis Hamilton noted that one place of gold mining was "Pakerguri, and (gold) is

contained in the sand at the junction of the Donsiri or Donhiri with the Brahmaputra, about thirty-two miles in a straight line from Gohati. The officer who superintends this is an Assamese, and is subject only to the immediate orders of the court. He is allowed 1,000 men, who are called *Sondhari*, with officers of ten and twenty, and are all paid in land..... They begin to work the mine in *Aswin* (15th September to 14th October), and each man must deliver one and a half rupee weight of gold dust. If he is successful he may keep whatever more he finds, but he must make up whatever deficiencies ill luck or indolence have occasioned."

Trade with other regions was particularly brisk during the later Ahom period, though the administration took strict care not to allow traders to go out of the country or to enter it without royal permission. Shihabuddin had noted that "Their kings neither allow foreigners to enter their land, nor permit any of their own subjects to go out of it. Formerly once a year, by order of the Raja, a party used to go for trade to their frontier near Gauhati; they gave gold, musk, aloe wood, pepper, spikenard and silk cloth in exchange for salt, saltpetre, sulphur and certain other products of India." Later, when the entire valley came under the Ahoms, Goalpara became the meeting point for traders from Assam and outside. "Goalpara is the great emporium of the boat trade, and Gauhati is ordinarily the extreme point reached by boats of large burden. Nearly all the boats which resort to Goalpara and Gauhati come from Bengal or the United Provinces." (*Imperial Gazetteer*).

There are interesting side-lights in the Ahom *Buranjis* as to how traders were often used by the powers that be as messengers or ambassadors. The *Deodhai Asom Buranji*, for instance, relates the beheading of three river-merchants, Sonari, Jayahari and Narahari, who had carried on trade with Bengal with the express permission of the Nawab there. Their offence was to have brought along a

messenger from the Nawab to the Ahom king. "They are traders," the king is reported to have said. "They should indulge in nothing but trade. Why should they bring the Bongal's messenger?" After the execution, the heads of the three unfortunate merchants were floated downstream on the Brahmaputra, so that the Nawab could see their fate for himself !

Assamese craftsmen were renowned for their skills with such exotic items as ivory, silk and cane. Francis Hamilton noted that "The king has in his house some men who make very fine mats, fans and head-scratchers of ivory, all Chinese arts. These people are said to be able to straighten the tooth of an elephant by covering it with a thick coat of clay and cow-dung and then exposing it to fire." J. P. Wade tells us that among the gifts presented by Rudra Singha (1696-1714) to the emperor at Delhi was a set of ivory chessmen and a ivory *Bichoni* or hand-fan. Shihabuddin records that "Flowered silk, velvet, *tat-band* and other kinds of silk stuff are excellently woven here. They make very nice and neat trays, chests, thrones and chairs, all carved out of one piece of wood." Assam silk, especially the three varieties, *Eri*, *Muga* and *Pat*, not to be had anywhere else, was in great demand." In Upper Assam there is not much trade in silk, but in the Western districts the animistic tribes often obtain the cash required for their land revenue by selling *Eri* cloth to the Bhotias and other tribes inhabiting the lower ranges of the Himalayas, or to Marwari merchants for export to Calcutta." (*Imperial Gazetteer*, 1909). other items for export during Ahom days included handloom cloth, lac, herbal scents (particulary *Agar* made from the heart-wood of the *Agur* plant), betel-nut, rhinoceros horn, cotton, brassware etc.

The above account can help us surmise how important an outlet the Brahmaputra was to the economy of a country which was not merely land-locked, but also enclosed on three sides by mountains. Yet, till the Ahom period, one of the biggest item of production in the Brah-

maputra Valley, one which was to later play an enormous economic role in free India, was yet to come. This item was Tea. The Indian tea-industry which had its birth in Assam and was the outcome of British enterprise was to supplant the monopoly enjoyed by Chinese tea in the 19th century itself.

China was the first tea drinking nation of the world and cultivation of the plant, manufacture and methods of brewing were perfected there. European traders to China grew acquainted with the brew and began trading in it in the 17th century. While other European nations did not show great preference for this oriental beverage, the British surprisingly took to tea as fish to water. The East India Company, which enjoyed the tea monopoly in the Far East, engaged in a lucrative trade, using fast-paced clipper ships to carry this commodity to an ever thirsty home market. Till the beginning of the 19th century, China remained the sole tea-exporting country in the world, since the East India Company did not contemplate an end to their barter and trade system with her. As long as there was an assured market and guaranteed source of supply, the Board of Directors of the Company shot down any proposal involving the commercial hazards and labour of opening out alternative avenues of tea.

However, certain changes in the political scenario brought about an end to their procrastination on the issue. In the beginning the tea imported from China had been exchanged for silver, leading to a drain on British reserves. The wily Britishers persuaded the Chinese to take opium as an item of barter instead, which soon converted that nation into a den of opium addicts. This exacerbated friction with the Chinese authorities and later led to what are called the Opium Wars. The looming threat that the Chinese would stop exporting the item altogether made the Company, towards the onset of the 19th century, initiate a genuine effort at growing tea in the colonies.



As an added impetus came the news that tea grew wild in Assam. From time immemorial native tribes of that region, such as the Singphos and Khamtis, had been drinking a brew from its leaves. The first European to have seen an Assam tea bush was a Scot named Robert Bruce, one time employee of the East India Company and a soldier of fortune, who in the 1820s made several trips by country-boats up the Brahmaputra in search of trade. In 1823 Bruce was at Rangpur (Jorhat), the then Ahom capital in Upper Assam, where he learned of the existence of wild tea bushes from an Assamese nobleman named Maniram Dutta Barua, popularly known as Maniram Dewan. Maniram put Bruce in touch with a friendly Singpho chief, Beesa Gam, and the Scotsman entered into an agreement with the chief for supply of tea seeds and plants, to be collected when he next visited Assam.

Robert Bruce died in 1824. But he had passed on the information to his younger brother, Charles Alexander Bruce, who can be called 'the father of the Indian tea industry.' He volunteered his services to the British authorities when the Burmese Wars broke out in Assam, was appointed commander of a gunboat, the H. M. Diana, under Col. Richards, and sent to Upper Assam. Bruce arrived at Rangpur at the end of January 1825, contacted Maniram and collected the tea plants, which he sent to David Scott. Realising the importance of the discovery, Scott immediately despatched by boat some plants to Dr. N. Wallich, Superintendent of the Calcutta Botanical Garden, who, however, pronounced them to be not genuine tea species. The indigenous Assam plant had to wait for another decade before it was acknowledged to be tea!

Till that point of time the British were none too keen on annexing Assam. Civil strife and repeated incursions by the Burmese had ruined and depopulated the region and they could not hope to acquire sufficient revenue. This can be seen by the fact that despite Captain Welsh's reluctance to leave Assam, he had to do so on the orders of Sir John

Shore, the Governor General. But now the exigent need to find a region where an alternative source of the brew could be raised made Assam more attractive to the British, since there were vast and virgin jungles which could be opened out for tea-planting, as also a huge river, navigable throughout the year, over which the produce could be transported. The white invaders, therefore, donned on the mantle of saviours, assisted the local Ahom ruler in his fight against the Burmese, defeated the latter and, through crafty manoeuvring, annexed Assam on 26th February, 1826, by the Yandaboo Treaty.

The East India Company began taking firm steps towards the establishment of tea plantations in Assam after 1833, when its monopoly of the Chinese trade was formally terminated. On 1st February, 1834, Lord Bentinck, Governor General of India, set up the historic Tea Committee, with George Gordon as its Secretary. The Tea Committee sent out a circular asking for reports of areas where tea could be grown. Captain F. Jenkins, who was then based in Assam, replied to the circular recommending Assam as ideal for tea planting. His assistant, Lt. Charlton, collected samples of the indigenous tea bushes and sent them to Calcutta.

In an amazing volte face Dr. Wallich now pronounced Charlton's samples as genuine tea "not different from the plant of China!" In recognition of this 'discovery' both Jenkins and Charlton received gold-medals from the Agricultural and Horticultural Society, while the claims of individuals like Charles Alexander Bruce were unceremoniously ignored. Maniram Dewan, who had been instrumental in bringing the existence of the tea-plant to the notice of the British, was later implicated in the Sepoy Mutiny and hanged!

In 1835 the Tea Committee appointed a Scientific Commission comprising of Dr. Wallich, Dr. W. Griffith and Dr. J. McLelland, to select favourable sites for planting tea. The Commission set out across the Ganges-Brahmaputra

route in 1836, and reached Upper Assam after a long and tiresome voyage. There they were met by Bruce who took their boats to the eastern extreme of the Brahmaputra to Khampti country, where they saw for themselves tea plants "in extensive natural plantations." The Commission was convinced and recommended planting.

Unfortunately, moved by the British obsession with Chinese tea, the Company decided that the China plant and not the "degraded Assam plant", should be used. The Tea Committee's Secretary had in the meanwhile returned from a trip to China and brought back tea seeds, which had been used to raise nurseries at Calcutta. Saplings from these nurseries were despatched to Assam and Charles Alexander Bruce, who was appointed Superintendent of Tea Culture in Assam, used them to start a number of plantations including Jaipur and Chabuwa. The Chinese plant proved to be a commercial failure, cross pollinated with the native *Jat*, thereby producing a hybrid which tormented planters for many years to come.

It is interesting to note that the site for the first tea plantation in Assam, as recommended by the Scientific Commission, was a riverine, *Char* area at Kundalimukh near Sadiya. Came the monsoons and the 'First Tea Garden in India' was washed away by floods! Bruce salvaged some plants which he shifted to Jaipur, where a few survive to this day. Later, in 1837, some of these plants were used to begin the Chabuwa (*Cha-Boa* in Assamese means tea planting) plantation.

As the Superintendent of Tea Culture, Bruce was under considerable pressure to give results. The experiment at Sadiya having literally been a washout, and the replanted saplings at Jaipur and Chabuwa needing time to grow, he had perforce to fall back onto the indigenous plants. During the course of his experiments at tea growing he was convinced of the commercial viability of the indigenous Assam *Jat*, but his superiors at Calcutta did not concur with his viewpoint. An enterprising individual,

Bruce extensively toured on tiny dugouts regions where no European had ever set foot before, in an endeavour to collect seeds and saplings of the local *Jat*, discover naturally growing copses of tea bushes and rope in the services of Singpho and Khamti chiefs.

With the help of Khamti tribesmen Bruce was successful in sending a small sample of manufactured tea in 1836 itself. The very next year Bruce despatched another consignment of 46 tea chests to the Tea Committee, made entirely from leaves of the Assam *Jat*. However, the long trip over the Brahmaputra in country-boats had its effect upon the produce and a large portion rotted before it could reach Calcutta. After removing the portion that had been spoiled in transit, 350 pounds in 8 chests were sent to the London Auctions on May 8, 1838. This historic consignment created great excitement and patriotic fervour when it reached London. The tea tasters there described it as "tea, good, middling, strong, high burnt, rather smoky, Pekoe kind .....". This tea was auctioned on January 10, 1839, the first non-Chinese tea to be auctioned in the world. The British buyers too rose to the occasion, one Captain Pidding snapping up the entire lot at a highly exaggerated price.

In 1839 and 1841 Bruce despatched bigger and better produced tea consignments which, again, received public and professional approval. From then on there was to be no looking back. After decades of bureaucratic and scientific blundering, Indian tea, thanks to Charles Alexander Bruce, had finally arrived! With Bruce having demonstrated the feasibility of cultivating and manufacturing tea in Assam, and the virgin territory made 'safe', the authorities could now hand over the nascent industry to colonial exploiters. In 1838 some merchants of Calcutta, at the behest of John Company, formed the Bengal Tea Association, while in February, 1839, a joint stock company was formed in London. These two combined to form the first Indian tea company called Assam Company. Shares worth

500,000 pounds were floated, and such was the euphoria generated over Indian tea that these sold immediately. In 1840 the authorities handed over to the new company almost all its tea holdings. The company also leased large tracts of land on a 25 year no rent basis under the Assam Wasteland Rules of 1838.

Though it took over a decade to attain profitability, the Assam Company, as well as pioneer proprietary planters, laid the seeds of the Indian tea industry. Their success initiated in the 1860s what is aptly termed the TEA MANIA, when a horde of speculators swarmed up the Brahmaputra with the hope of starting tea gardens. The scum of European society, on every conceivable means of water-transport, made a beeline for Assam to grab land, and Europeans became the biggest landlords of the region. Fortunately for the industry it recovered from the adverse impact of the TEA MANIA days, and by the 1870s was once more on even keel. Since the 1870s, despite occasional ups and downs, the Industry charted a steady course of expansion and consolidation.

Hopeful Europeans were not the only ones to have come up the Brahmaputra in those days. The rapidly expanding industry needed labour and these had to be imported. The first ill fated attempt at importing labour was made in 1844, when a large number of Chinese labourers were sent to Assam on a flotilla of boats over the riverine route. "At Pubna they quarrelled with the natives, or the natives with them; some sixty were captured by the magistrate, and consigned to jail, and the rest refused to proceed without their brethren." (Assam Company Report). From the late 1850s systematic importation of labour from tribal areas of Bengal and Bihar commenced, these being transported to Assam like cattle first upon country-boats and then steamers. The result was great mortality due to unhygienic conditions with cholera epidemics taking the biggest toll. The following report by the Superintendent of the Jorehaut Tea Company in 1860 reflects but

a little of the travails of the labourers in transit : "On the last trip of the steamer some 80 coolies were brought up by the Assam Company, and as I came up from Gowhatty on the steamer, I had a good opportunity of observing the habits of the coolies, their accommodation and treatment, and I am of the opinion that much may be done by better arrangement to mitigate the misery and consequent mortality on the passage. The most obvious inconveniences were; first, insufficient cooking accommodation, causing undue delay in the preparations of their meals, and so each individual or family had their rations served out to them in a raw state, those who were the latest to cook, rather than wait, satisfied the cravings of nature with uncooked food. Second, no private conveniences for relieving calls of nature, nothing but the ship's side, in the most public manner, the candidate for relief requiring another person to hold on by the hands; if a woman, this was a source of positive terror to the female emigrant, several of whom are dumped overboard sick to be on their legs until the decks dried, which is a very slow process in wet weather. Although there were only two casualties until our arrival at Tezpur, I observed that many of the coolies were in a reduced condition than ought to have been the case from a 20 days' river trip. At Tezpur, damp raw weather set in and with it cholera made its first appearance, the young, sick and the weakly falling the first victims." In all fairness to the Britishers, migrant labourers were not the only victims of such river trips. For instance, John Elwin Bartlett, assistant at Numaligarh Tea Estate, fell from a river steamer at Dhansirimukh on October 2, 1885, and was drowned!

The success of the Assam experiment not only gave rise to tea planting in many other parts of India such as Darjeeling and the Dooars, Kumaon and Garhwal as well as in South India, it also acted as a catalyst to the setting up of the industry in Indonesia, Sri Lanka and Africa. At present more than 45 countries have taken to tea planting

and for many of them it is an important item of export. By providing a passage by which the inputs required by the industry to establish itself, including labour, could be brought and, equally important, the produce could be transported first to Calcutta and then to London, the Brahmaputra proved to be a key element to the cultivation of tea outside China and its spread to the rest of the globe. Indeed, the inveterate tea-drinker can thank the Son of Brahma for providing him his daily cuppa!

In annexing the new territory the real purpose of the British was to "turn Assam into an agricultural estate of tea-drinking Britons and to transform local traditional institutions in such manner as to suit the colonial pattern of economy." (Amalendu Guha, *Planter Raj to Swaraj*). By the 1840s the administrative structure needed for the purpose had been erected and Assam was readied for colonial exploitation. Oil was struck and India's first refinery set up at Digboi. Coal was discovered and mined much earlier, as also minerals like silimanite. Plywood factories were set up all over the valley to exploit the forest wealth of the region, particularly to make tea-chests. Obviously, a faster mode of river-transportation was needed to take this exploitation to its logical conclusion, for which the existing slow modes had to be replaced.

Since prehistoric times when the river was called Lauhitya, boats constructed manually by the natives and plied upon it. Though no records of the type of crafts used in earlier times exist, later copper-plates have a number of allusions to boats, showing how prolific the river-traffic was. However, the style of these plates was poetic, full of metaphors and similes, without offering much technical information. The Vanamala plate of the 9th century states: "The boats were of many hues. To enhance their beauty multicoloured penants and tails of deer were suspended upon them. Jhumkas were attached so that they tinkled when they moved. The sides of the boats were wrought

into ornamental shapes coloured with red. There was no danger of the boats sinking. The Lauhitya was full of such beautiful boats."

The Tezpur rock-inscription on the bank of the Brahmaputra has an interesting antecedent revealing how thick the river-traffic was. The royal edict on the rock was the outcome of a dispute between officers of the court responsible for collection of tax for the use of the waterway, the royal navy, fishermen, and boatmen who carried passengers and cargo over the Brahmaputra. Over-crowding of the river had led each to come in the other's way. The ensuing quarrel had to be settled by the king and the rock-inscription immortalises his directive as to who could use which section of the river. It also proclaims that anyone violating the directives would be fined a hundred cowrie shells.

The art of building *Naos* or boats reached its acme during the days of the Ahoms. There were basically two types of boats. The simpler of these was the dugout canoe, of which a number of types like *Bachorinao*, *Gutiyanao*, *Selenginao* were made. A suitable tree was cut down, scooped out and imparted appropriate shape so it could float and move in water. Occasionally, a rudder affixed to the flat rear-end afforded guidance. More complex designs were made by joining planks of wood, with the two ends so raised as to be very high over the water level. Lac and bees-wax were used to caulk the gaps between the planks, as also a special resin bought from Apatani hill-tribesmen, known to the plains people as *Ahom-Etha* (*Drymicarpus racemosa*). It is said that *Ahom-Etha* once applied never came unstuck and provided waterproof coating to the vessel. The poorer section who could not afford *Ahom-Etha* used a mixture of snail-lime, molasses and *Kenduguti* (*Diospyros embryperus*). Four types of boats were constructed—war-vessels, trading-vessels, passenger-vessels and racing-vessels, each with its peculiar features.

The welter of boat types and names show the skill of



the Assamese boat-makers. The *Choranaos* were used for pleasure cruises as well as racing. The *Hiloichoranaos*, with cannons mounted at the prows, were war-vessels first invented by the Chutiyas. *Magarchoranaos* had crocodile-shaped prows and were primarily used as pleasure-boats and racing-boats. *Gochnaos* were huge, stately vessels employed in naval battles. Other boats used in warfare were *Bharinao*, *Gerapnao*, *Sulupnao* (a large and swift war-vessel), *Garaminao* etc. Passenger-boats included *Kochanaos*, which were large, flat bottomed boats capable of traversing the shallowest of rivers and carrying a hundred people; the *Bojoranaos* which were luxurious boats with wooden roofs for the comfort of well-to-do passengers; *Panchoinaos* of a type similar to the above, and *Paarnaos*, without *Sois* or canopies, to ferry people from one bank to the opposite.

Large trading-vessels included *Maarnaos*, described by John M. Cosh as "two canoes fastened together with transverse beams," *Arhoikuriyanaos* which could carry 50 maunds of cargo, *Dukuriyanaos* for 40 maunds, *Petelanaos*, *Barnaos*, *Dingas*, *Holognaos* and *Saalnaos* etc. Long distance travellers preferred *Gayaonanaos*, which were relatively comfortable vessels with provision for sleeping and equipped with sails. Smaller boats such as *Bacharunaos* and *Lapatinaos* were used to carry provisions and ammunition in battle as also for trading. John M. Cosh was particularly impressed with the variety of boats and the Assamese skill in making them : "Where water affords so ready and universal a conveyance, carriages and beasts of burden are in less demand, and so little are their services turned to any account in Assam, that it is possible to travel and not see a cart or a laden bullock. Grains are carried on barges..... boats are numerous, every household having one. Many of the canoes are of enormous sizes, capable of carrying 200 maunds, although cut out of the solid trunk of a single tree."

*Domalinaos* and *Selenginaos*, small dugout canoes, were

primarily used for fishing. The *Sattras* built their own boats from wood dyed with a speical colouring matter called *Hengul-Haithal*. Boat-racing on the Brahmaputra or Dikhow was a very popular form of entertainment with the Ahom rulers. Scores of racing-boats would await with iron *Kekuras* or anchors down on the river, the race being started with a shot from a cannon, and the winners handsomely rewarded. Such boat-races, using *Khelnaos*, are held even today at places like Barpeta. Some of the boats employed in neighbouring regions like Bengal and Burma also somehow made their way on to the Brahmaputra, like the *Kushanao*, *Mayurpankhi* (with a peacock-shaped prow), *Sampan* etc. There were instances of sailing yachts being used, and British 'gun-boats' carried sails to assist in speed if the wind was right, but these were more efficacious while sailing downstream and less in the direction where it mettered most.

Boats being tardy means of transport, reports of British administrators are replete with complaints about the slowness of travel, especially upstream the Brahmaputra, and its monotonous nature. Captain R. Boileau Pemberton, in his *Report on the Eastern Frontier of British India* (1835), speaks of "the navigation of a river more tedious, uncertain and difficult, than perhaps any other in India." Such an august and important body as the Scientific Commission of the Tea Committee, for instance, during their 1835 historic trip to Upper Assam, took four and a half months to reach their destination! Boats were subject not merely to the vagaries of weather, but also the *Mahjis* or boatmen, who chose inopportune moments to fall ill, or decamp, leaving the hapless voyager on the lurch!

Captain R. Wilcox in his memoirs refers to the uncertainties associated with a river trip : "Immediately below Gohati, hills confine the Burhamputra for the breadth of one thousand two hundred yards, the narrowest in its course through Assam; there in the rainy season boats are necessitated to be moored till a westerly breeze springs up

of a force sufficient to carry them through the narrow strait; but there is often great difficulty even where the river flows in an open bed. When coming down the river in the latter end of October, 1825, I saw a flotilla of commissariat boats (at that time very much required with their supplies for the army) which had been twenty-five days between Goalpara and Nughurbera hill, a distance of thirty miles, and there was no remarkable wind to impede their progress."

Apart from being slow, journeys were also tedious: "The voyage up is tedious and dreary; for days and weeks naught else is visible but sand banks and water bounding the very horizon, with no trace of vegetation but an endless jungle of impenetratable reeds; without the shadow of an inhabitant or signs of animal life but water-fowls and alligators — occasionally relieved by groups of beautifully wooded hills, whose shape and colour constantly change by position. Higher up the scenery improves; and a series of hills innumerable, retiring far away in fine perspective, till their blue conical summits are relieved by the snowy peaks of the Himalayas towering their icy pinnacles midway upto the vortex of the sky, afford one of the grandest scenes in nature.

"A voyage up the Brahmaputra is attended with many obstacles not to be met with upon the Ganges. In the dry season there are no beaten paths to facilitate tracking; the boat men must either force their way through the high reeds on the crumbling perpendicular bank, or scramble along the bottom; or, what they prefer, keep upon the shoal side of the river, where the sand-bank affords good footing, though with great drawback of the boat getting often aground. During the rains the navigation is very much impeded, the banks are overflowed and little or no tracking around is left, so that pushing along by the slowest of all processes, the bamboo, is the only means of advancing. The prevailing wind from the east adds no little impediment to the journey. During the cold weather

the Brahmaputra is clear and transparent but in the rains thick and turbid, and at the full flood covered with rafts of pine trees swept away by its mountainous torrents; or by large masses of soil, with the reeds and long grass still adhering.

“The usual route from Assam is down the river Brahmaputra via the Jennai, which leaves the Brahmaputra at Jumalpore, passes by the large town of Syragegunge, whence it soon after meets with the Pubna river, a navigable branch of the Ganges. After proceeding up the Pubna river for two or three days the boats meet the great currents of the Ganges, up which they ascend for three or four days more, till they come to the mouth of the Matabanga or the Jellingi, down either of which they drop to Calcutta. These two rivers are almost dry during the cold season, and during that period the voyage to and fro is made by the Sunderbans. The voyage from Goalpara to Calcutta is performed in from 25-35 days and from Calcutta to Goalpara eight days more.” (*Topography of Assam*, John M. Cosh, 1837).

With the British consolidating their presence in Assam, and the tea-industry rapidly growing, it was but a matter of time that a slow-moving country-crafts were replaced by steam-boats or screamers, making ‘tedious and dreary’ voyages a thing of the past. The Governor General of India had introduced a steamer-service on the Ganges as early as 1834, some of which made occasional trips to Assam carrying troop reinforcement and supplies. In the 1840s government steamers specifically for the Brahmaputra were introduced. Though meant for the army and administration’s convenience, non-military personnel could use them subject to accomodation being available. But their trips to Assam were irregular and uncertain, and they went only upto Guwahati. Under the circumstances the first tea-company, the Assam Company, found it difficult to send their cargo of teas speedily to Calcutta and thence to the London auctions. The Company, therefore,

purchased in 1842 a steamer for its use, propelled by 2 fifty-horsepower engines, and a flat called the 'Naga' upon which tea-chests could be towed along, but had to sell it off in 1847 due to financial constraints. The Indian General Navigation Steam Company, the first private steamer concern, commenced operations on the Ganges in 1847, but it did not ply on the Brahmaputra at the start. Till then tea-planters had to depend on the administration's goodwill for despatch of their cargo on government steamers. A. J. Moffat Mills in his Report on Assam in 1853 seemed cognisant of the difficulties faced by planters, for he recommended that the "existing steam communication be extended to Debrooghurh in Upper Assam" and that "the steamers plying be accompanied by cargo flats for the conveyance of goods and passengers, and for produce downwards."

However, in 1860, the Indian General Steam Navigation Company arrived at an understanding with the authorities by which government steamers would be withdrawn and it would run a steamer and a flat once every six weeks from Calcutta to Dibrugarh. From 1863 the frequency was enhanced to once a month. It was only then that a regular civilian steamer service began plying on the Brahmaputra. Steamer services became more frequent when, in 1862, J. H. Williamson started a rival company, the River Steamer Company, and by 1869 it was well established on the Assam route.

Though the relatively quick steamers to a great extent hastened transportation of tea to Calcutta, the travails of the pioneering planters were not wholly mitigated. The teas were made during the seasons of heavy rains, which meant that the chests had to be transported to the steamer-*Ghats* on the Brahmaputra from the plantations across muddy terrain. Bullock-carts were patently unsuitable, so elephants had to be used. But an elephant could carry only 6 chests, which resulted in the Assam Company attempting transportation on four-wheeled 'elephant wagons'!

However, Assam being a land of rivers, almost all gardens had streams and rivers close by, and unless impeded by floods, planters preferred to ferry his produce on boats to the Brahmaputra.

Large-scale importation of labour was facilitated by the introduction of steamers, but the cost of their transportation remained a perennial bone of contention, and there was a furore in 1861 at passage rates being hiked from Rs. 12 to Rs. 17 per head. The cyclone that struck Calcutta in 1864 did much damage to inland water crafts, causing a 50% hike in passage rates! In 1863, with a view to accelerating their service, steamer companies made Kooshtea the terminus for their Assam cargoes, the rest of the journey to Calcutta being done by the railways. But poor handling of cargo by the railways made this unsatisfactory, and in 1864 it was reverted to Calcutta. Before the introduction of steamers, *Dak* or mail was sent by the overland route, being carried by *Dak*-runners. Despatch by steamers proved to be far speedier, the average time then taken for a letter from Calcutta to reach Upper Assam being six to eight weeks!

"River-steamers were of the sternwheel paddle type with a shallow draught enabling them to traverse riverine routes containing treacherous sand-banks. They carried passengers and goods to Assam and returned to Calcutta with cargoes of tea. Serious accidents were few, though getting stuck on sand-banks for hours was a regular phenomenon. Cargo was carried in flats towed by the steamer. "The anchor was weighed at sunrise," wrote E.G. Foley, "and let go at sunset, travelling only 12 hours a day. To run into a sand-bank was a common thing and usually the boat stuck there for hours. Some of these boats were floating shops, particularly on the Assam line. Everything one desired could be bought. Even English sheep were on sale—at a fancy price." The steamers were captained by Europeans who carried lucrative trading on their own. Moreover, as Foley stated, they stocked a host of consumer

goods such as wine, cigar, ammunition, tinned food and medicines on board, which the passengers, as well as Europeans who came down to the *Ghats* to meet her, could buy at higher prices. Our griffin, if he had the inclination and the money, could buy off the shelf such exotic wares as Kola Tonic ("Energy for brain and body. There's a Kick in Kola Tonic. A Kick with no consequences!"), Solan beer, Benbow's Dog Mixture ("Ideal tonic and conditioner for dogs"), Superior Reading Biscuits, Huntley and Palmers Famous Biscuits ("The choice of our ancestors"), Molino pale, medium-dry sherry, Johnie Walker whiskey ("Born 1820, still going strong"), Rosa rum and Sutton's seeds! The steamers became better and better as competition crept in, and the exclusive European section resembled a luxury hotel. Very often planters who had fallen ill took a steamer trip over the Brahmaputra to recuperate." (*Chagaram—The Tea Story*, Arup Kumar Dutta, 1992).

A steamer trip soon became a 'perk' offered by tea companies. "Life in the factory was hard for a European. While the coolies worked in eight hour shifts, he often had to put in eighteen hours out of the twenty four at the height of the season, so the company usually gave him ten days leave and a trip down the Brahmaputra in a river-steamer in about September. When I got my leave I boarded a comfortable flat-bottomed barge carrying about 250 tons. The first class accommodation was most spacious, and I had it all to myself — the whole top deck protected by awning, a comfortable cabin with a fan, a bar and a lounge." (*Tea Planting and Hunting in Assam Jungles*, A.R. Ramsden). Steamers too were the safest and most convenient means of travel in Assam, far superior to the treacherous land routes despite the construction during the British days of a trunk-road linking the valley to Calcutta, as well as a rail-route. For example, in the first three decades since the service was introduced there were only three minor mishaps, with no loss of life and little damage to cargo.

The river passage remained clear despite the partition of the nation and, even after independence, continued to be the safest and cheapest route to Calcutta, much used by the people of the valley. But the 1965 war with Pakistan saw the closure of this historic outlet! This was a setback of unimaginable magnitude for the Brahmaputra Valley, especially the tea-industry. Just prior to partition over 50% of tea and other cargoes had been transported over the river route. After partition a section of the existing railway system went to Pakistan and planters found it more convenient to send teas by river-steamers now run by the Central Inland Water Transport Corporation. After partition upto the Indo-Pak war almost 90% of Assam tea was being sent by the Brahmaputra. When this arterial route was cut off, not only had planters to send their tea by land, but a kind of bottleneck was created due to the narrow and tenuous land link with the rest of the country. Historians of the future will surely dwell on how far this has reimposed the barrier of isolation in this region and reinforced the sense of being cut off from the national mainstream.

Strangely enough, though almost all the major rivers in India had been bridged prior to independence, the Brahmaputra remained an exception till the early 1960s. During the Ahom rule an enterprising general, Kalia Bhomora Barphukan, is said to have contemplated a bridge over the river near Tezpur, and had even begun preparations towards it. But his untimely death nipped the project in the bud. Highly skilled in the art of building bridges though they were, British engineers did not dare take up the challenge offered by the mighty Brahmaputra. In a sense the river itself was to be blamed for this. Its unimaginably wide, braided course did not make for easy bridging; also, since the tea and allied industries preferred to use the safe and cheap route it provided, made speedier by the introduction of steamers, the colonialists did not wish to under-



take the hazardous, toilsome and expensive task of building a bridge across it.

In order to facilitate their exploitation of the resources of the region, the British did construct roads and railways. In 1868 a regular Public Works Department was established, which undertook the construction of two trunk roads, north and south of the Brahmaputra, as well as roads linking administrative headquarters and tea districts. By the 1st decade of the 20th century there were 9464 km of road fit for vehicular traffic. The process of laying railway tracks began from 1885, the principal railway in the region, the Assam-Bengal State Railway, being opened for traffic in 1905 and extended from time to time. Since 1911 the procedure was to ferry goods and passengers from the south bank between Pandu and Amingaon. The administration did moot the construction of a bridge from 1925 onwards and carried out surveys, but nothing emerged. The absence of a bridge was felt the most during the 2nd World War, and the British carried out preliminary work for building a bridge at Pandu, but this too did not materialise.

Only after India's independence did the Government take up the scheme to build a bridge at the Amingaon site in earnest, where the river is relatively narrow and flows in a single channel, and has stable banks. The actual job of building the bridge was entrusted to the Indian Railways, the reputation of whose engineers in this field was sterling. The work on this bridge, named Saraighat after the famous Ahom victory over the Mughals, began in 1958 and it was inaugurated by Prime Minister Jawaharlal Nehru in 1962. A double-decker bridge, it consists of ten spans with a 24 feet wide roadway on the upper deck and railway on the lower deck. It is approximately 1 km long and gives a vertical clearance of forty feet for river-navigation above the high-flood level.

The euphoria generated in Assam after the opening of the Saraighat bridge was unprecedented. Poets sang

paean to it, musicians waxed lyrical. The noted Assamese lyricist, Rudra Barua, composed the following :

*Ashare Chakiti Jole O Luitat, Ashare Chakiti Jole,  
Tahanee Kalote Kalia Bhomorai Putisil Luitat Khuti,  
Enete Morone Nilehi Phukanak Amangal Luitat Uti,  
Opar Khalapedi Motor Gari Jaba, Kashedi Manuhar Shari,  
Talar Khalapedi Dhanmah Kohriai Saliba Kata Relgari,  
Luitar Dalange Ahukal Atarai Sukhare Batara Ane.....*

(The bridge over the Luit enkindles the earthen lamp of hope. Kalia Bhomora in the past had begun to bridge it, but death carried him away. Cars and people will go over the upper deck, while on the lower deck will go innumerable trains carrying goods. The bridge over the Luit will remove all difficulties and bring good fortune.)

Indeed, the Saraighat bridge did succeed in removing one bottleneck in communication with the rest of the nation, its importance increasing after the river route was closed. Since then two more bridges, the Kalia Bhomora Bridge near Tezpur, and the Naranarayan *Setu* at Jogighopa have been constructed.

Vast social changes were effected in India with the coming of the British. The most significant of these was the destruction, in the first half of the 19th century, of the medieval Indian society and growth and rise of the middle-class. At the nucleus of this class lay *Zaminders*, traders, intellectuals and petty functionaries in the British administration. Naturally enough, the middle-class took root where the Europeans were initially concentrated. Also, since urbanisation in India was the offshoot of bourgeois formation, the growth of towns and cities accelerated where European presence was strong, the vast metros of Calcutta, Chennai and Mumbai being extreme examples. As trade, commerce and administration spread to the interiors, the process of bourgeois formation as well as urbanisation also spread. The Indian medieval order

was finally put to the sword in 1857 and the middle-class emerged in the forefront, heralding a new era for India. Society, which had stagnated in the 18th century, was reinvigorated. Being innately enterprising and hankering after progress, this class was responsible for bringing India into modernity.

Assam was the last bastion of the medieval order to fall to the British. The twin processes of bourgeois formation and urbanisation here was, therefore, belated. Nevertheless, after the Yandabu Treaty transferred power into British hands, following the all-India pattern, the germination of a middle-class took place here too. Yet there was an important deviation. Native traders, doing business with early British adventurers, were a significant component of nascent Indian middle-class. However, since medieval Assam did not have a well-defined trading class, this vital component was absent in the bourgeois stratum which evolved under British patronage. Assamese middle-class sprang from the landed gentry as well as service-holders of the Ahom royalty. British education enabled it to branch out into professions and services and consolidate bourgeois formation. In an idiosyncratic inversion of the all-India pattern, it was this class who, inspired by the commercial and acquisitive ethos displayed by the British, took up the role of businessmen, giving a new thrust to Assamese commercialism.

Thus Baba Brahmaputra, who had nourished his flock in the valley with paternal solicitude through millennia, had yet another role to play! The river has been the focal centre of the slow but gradual urbanisation of Assam, most of the important cities and towns in the valley growing up either on its banks, or a stone throw away. The wily British had quickly grasped the commercial and administrative centrality of the river; certain strategic points assumed greater significance due to their presence and developed in the course of time into urban entities peopled primarily by the middle-class. Guwahati, of course, had its importance

since prehistoric times, yet when the British first arrived it was not much more than an outsize village. By establishing an army and civilian headquarters, opening out missionary schools, providing for medical treatment, and imparting to the place utmost importance on the steamer-route, the British converted it into a township. Since the middle-class was dependent on British patronage and proximity for its progress, the first rural to urban migration commenced in places such as Guwahati.

Other major urban areas on or very close to its banks are Dibrugarh, Sivasagar, Jorhat, Tezpur, Goalpara, Dhubri etc. Smaller but commercially or otherwise important towns such as Saikhowaghat, Kamalabari, Silghat, Hajo, Sualkuchi, Palashbari etc. too are on its banks. While places like Dibrugarh and Jorhat developed as tea-centres, those like Sivasagar initially grew up into administrative and educational centres. It is interesting to note that after independence townships which were close to the river not only assumed greater political and commercial importance, but also developed more rapidly. Thus urban areas away from the river such as Lakhimpur and Golaghat have not witnessed the development or enjoyed the prominence of Guwahati or Dibrugarh. However, even today the Brahmaputra Valley remains largely rural, the percentage of town dwellers being tiny as compared to those who live in villages.

## BURHA LUIT

As seen briefly, *Burha Luit*, as 'old man' Brahmaputra is fondly called by the people of the valley, was instrumental to a large extent for the migration of different ethnic groups into the region. With the passage of time, through a recurrent process of conflict and assimilation, a composite society with a tribal base and Hindu superstructure evolved. As it congealed into a more or less homogenous shape, it absorbed disparate cultural elements from each of the societies it was in contact or conflict, and each religion or philosophy it encountered. Thereby derivations of Hinduism, like Buddhism, Jainism, Sikhism etc., also took root in the valley; the Muhammedan invasions brought in Islamic elements; the belated migrants such as the Ahoms brought their own faiths and cultures. Moreover, though broadly Hinduised, each component of the society retained many tribal customs and rituals and, not surprisingly, do so even today. These were contextually antagonistic to orthodox Hinduistic beliefs and practices, yet retained their pristine character. Rather than clashing with the latter, they instead expressed themselves through folk-cultural channels such as festivals, songs, dances and folklore. Assam's 'national festival', the *Rongali-Bihu*, for instance, has associations more with primitive fertility cults than Brahminical Hindu rituals, with the songs and dances possessing definite sexual overtones, celebrating as they do the pro-creative aspect of Nature as revealed in spring-time. Simultaneously, there was the synthesis between the Aryan and tribal which can be termed more a chemical

fusion than a physical mixture; the Austric merging into the Mongoloid, the Austric-Mongoloid taking in the Aryan and fusing into a unique amalgam.

All this makes for an extremely involute cultural scenario. Culture of any society is too complex a phenomenon for simplistic appraisal--in the case of the Brahmaputra Valley it is even more so, the role of the river as a 'highway' and the valley as a 'corridor' ensuring that exorbitantly disparate religio-cultural elements went into its evolution. Far greater social-anthropological research is required than what had been achieved so far to offer us a total perspective. The ethnic multiplicity has led to an unimaginably tangled though colourful skein at the base level of society. Once again the Bihu festival can be cited as an example. There are three Bihus in a year, *Rongali* or fun and gaiety, *Bhogali* or feasting, and *Kongali* or poverty. *Rongali Bihu*, also called *Bohag-Bihu* since it is celebrated in that month (April), is the festival of song, dance and merriment. *Bhogali* or *Magh-Bihu* (January) is held when the fields have been harvested, the granaries are full, and it is time to feast. *Kongali* or *Kati-Bihu* (October) is held when the granaries are empty, the newly planted saplings are taking root in the paddy fields, where earthen lamps must be lighted and prayers offered for a good harvest.

Yet, though common to the entire valley, the celebration of the Bihus assume ethnic divergence while retaining their essential similarity. Thus what is *Magh-Bihu* in Upper Assam is *Maghar-Domahi* in Lower Assam. While a majority of rural folk plant a bamboo stake in the paddy fields during *Kati-Bihu* and light an earthen lamp, the Kacharis light lamps at the foot of a Siju cactus, symbol of their chief god Bathau. For most in the valley *Rongali-Bihu* has two divisions, the *Garu-Bihu* or *cattle-Bihu*, and *Manuh-Bihu* or *people-Bihu*. But the related festival *Boisagu* of the Bodo-Kacharis have one day each for *Magou-Domahi* (cattle), *Mansoi* (man), *Saima* (dog), *Ama* (swine), *Daoni* (fowl) and so on. The Mishings have a seed-sowing festival called

*Ali-Ai-Ligang*, which has incorporated cattle-bathing and *Huchari* (a form of community dancing) of the *Rongali-Bihu* into it. One of the chief features of the *Bisu* festival of the Deuris is the *Deodhani* dance rather than the *Huchari*. Rabhas do not dance the *Huchari*, but their festival of *Baikhu* has songs and dances. These are but random examples and, together with the plethora of festivals observed by different ethnic entities, adumbrate the cultural complexity of this region. One has also to note that many traditional rites and festivals are gradually disappearing at the folk level, indicating that the process of homogenisation is continuing even today.

The cultural intricacy of this patch of the pan-Indian mosaic has been further compounded by the influence of cultures of neighbouring countries, apart from the Aryan-Hindu one of the subcontinent. Elements from Burma, Indo-China, Tibet etc. have impinged on the substratum, especially of China, a culture as great and ancient as mainland India. Not only did the primitive migrants carry with them cultural traits, later prolonged and continuous association of the dwellers of the valley with Burma, Tibet, Indo-China and China helped reinforce common cultural aspects. As stated earlier, political, economic and cultural links with them had been strong since prehistoric times. In the kingdom of Bhaskarvarman, for example, Hiuen Ts'ang in 638 A.D. had heard a particular song and recognised it to be a Tibeto-Burman (probably Bodo) version of a Chinese song celebrating the triumph in 619 A.D. of a Chinese prince, the son of the T'ang emperor Kao-Tsu, over some rebels. That a Chinese song could achieve great popularity among the common people in Kamarupa shows how close relationship between the two was. Another testimony to the cultural correspondence of the Chinese emperor to Bhaskarvarman's request for a Sanskrit translation of the thoughts of the Chinese philosopher and mystic Lao-Tzu. We do not know whether the translation did reach Bhaskarvarman, but the episode reflects the bond of fellowship

between two intellectual and cultured rulers of the regions.

"Chinese ideas were also coming into India. This trade route brought to India at least three Chinese words which we have in Sanskrit--viz. *Cina* (from the name of the powerful Ts'in dynasty which first united China in the 3rd century B.C.).....*Kicaka*, for a kind of light bamboo out of which flutes were made....and *Musara* meaning a kind of precious stone or coral.....*Sindura* (from Ts'in-Tung, as suggested by Dr. Prabodh Chandra Bagchi), seems to have come to India from China with its Chinese name through Assam...."-----Suniti Kumar Chatterji. The art of spinning and weaving, especially of silk, perfected in China and in which Assamese women are adept, has already been mentioned, as also such cultural traits as the ritualistic use of betel-nut prevalent in Burma and countries of Indo-China. This cultural affinity can occasionally be seen in micro-level. For example, the significance of the orchid in amorous dalliances between young men and women is common to China, Assam and Burma. The orchid flower symbolises the consummation of love in China, a rural youth presenting an orchid to his bride before marriage as a token of his love. Marcel Garnet, in his *Festival and Songs of Ancient China* (1932), speaks of the Spring Festival of Cheng: "the youths and girls gathered in large numbers at the junction of the *Chen* and *Wei* rivers. They came there in companies to gather the orchids, they challenged each other in antiphonal songs...When the couples were united the new lovers presented each other at parting with a flower as love-token and symbol of betrothal." In Assam too the orchid, specifically the inordinately long and perfumed variety called *Kapouful*, is considered to be a symbol of youthful, undying love.

Many features of the *Rongali-Bihu* festival resemble the spring-festivals of China and other South Asian countries. The Assamese *Bihu* songs are also antiphonal in character, being alternate challenges and rejoinders between boy and



girl dancers. This is also true of some tribal dances and songs---The Mishings hold contests of love songs. The structure of *Bihu*-songs, the rhymed couplet and quatrains, resemble the Malayan *Pantun* as as also Chinese folk-songs. Even today in China new year festivities have Bihu like divisions, the first day being of the cock, the second of dog, the third of swine etc.

All this go to make the cultural complexity of the region, which cannot be conveyed in the space of a few pages. One can only give some broad cultural paradigms common to the entire valley, such as the influence of the Brahmaputra. The salubrious environment created by its river-system has played a seminal part in unifying the disparate ethnic elements into a homogenised whole, investing it with an Assamese identity. It has also moulded the collective psyche of the society which evolved in the valley and bestowed upon it common traits and attitude towards existence. Ecologists have pointed out to the contribution made by the vast, braided river and its tributaries towards maintaining the temperate climate of the region, and the abundance of greenery not merely soothing to the eyes, but also responsible to some extent for mild temperature and heavy rainfall. The rivers, unfailingly depositing fresh alluvium each year, ensured a fertile soil which yielded its plenty with the least toil. It is said that in Assam one has merely to scratch the earth to make something grow. The streams, *Beels* and marshes teemed in fish and amphibian presence; the avifauna was diverse and colourful; the grasslands and forests concealed a fascinating array of animals, many of which could be killed for meat, and an enormous floral wealth. Despite the inconveniences which a long period of heavy rains entailed, as well as the pestilences and diseases such as malaria, kala-azar and cholera, it was all in all an idyllic setting in which the inhabitants of the valley did not have a drudge too hard for livelihood.

This goes a long way to explain the easy going nature

of the Asamiya people, their philosophy of *Lahe, Lahe*, ('Slowly, slowly'), generous disposition and, above all, their fabulous hospitality, to be encountered whether it be in the humble cottage of a remote tribal village, or the mansion of a well-to-do urban family. No doubt the blood of ancient Mongoloid warriors still flow in their veins--that they could successfully resist many invasions from the west bear testimony to their bravery and ferocity in battle. Yet their general disposition is placid and amicable, they are easily content, tolerant of others and display a grace and courtesy in social interaction matched by few other societies. On the other hand, the ease of life offered by the environment made them chary of hard labour and incapable of sustained toil. The lack of enterprising spirit is compounded by the absence of acquisitive mentality, as noted by Mahatma Gandhi in his visit to Assam, though he, naturally, took it to be a positive attribute. "And to me," he wrote, "it is a sign of very high culture to see the Assamese women and girls wearing little or no jewellery." Easily satisfied and of a commercially unambitious nature, to a large extent this society was unequipped to confront the competitive, consumerist and materialistic modern world, which has resulted in economic and industrial backwardness.

At the same time, it is easy going, tolerant and liberal temperament which is instrumental in some of the positive traits universally shared by the composite society of the Brahmaputra Valley. The sense of tolerance led to an authentic democratisation of the social set-up, where hardly any barriers exist between different strata. The negative attributes which plague societies in other parts of the subcontinent, such as a rigid caste system, untouchability, intra-religious intolerance etc. are virtually nonexistent. John M. Cosh pointed this out in the middle of the 19th century: "Neither the one sect nor the other are very rigidly observant of the high caste principles, and a greater latitude and toleration amongst them is observed than in

any other parts of India." True, the Austric-Mongoloid base and relatively late Aryanisation of the region, as well as the influence of Mahapurush Sankardeva's *Ekasarana Namadharmā*, were also responsible for the absence of such aberrations as a rigid caste system in Assam. Yet, at the same time, the liberality of ethos engendered by the idyllic environment and the ability to lend an ear to the viewpoint of others too is responsible for the religious amity and tolerance which is the highpoint of the valley's culture.

Assimilating as they did with the other Caucasian and Mongoloid elements, the Assamese Muslims took on an identity of their own which makes them culturally different from non-Assamese Muslims. The contribution of this community to the literature and fine arts of the region have been stupendous. The easy inter-mixing and inter-marriage not only between Hindus and Muslims, but also members of the other minority faiths, and the total absence of communal ill--feeling among religious communities, is one aspect of Assamese society worth emulating. Unfortunately, demographic pressures, specifically the large-scale influx of aliens from Bangladesh, today threatens to disrupt the communal harmony built up through the centuries.

Another unique offshoot of the catholicity of outlook is the esteem, bordering on reverence, given to women in the society which evolved in the Vale of the Brahmaputra. The sacrosanctity of the tenet of the equal, if not superior, status of women vis-a-vis the menfolk is even today central to the Assamese ethos, and the reason for the absence of such demeaning practices as dowry or female-infanticide. Much of the credit for this must also be given to the matriachal system prevalent among the Austriacs, and the respect that they give to their womenfolk. Bertrand Russell explains the principle of inheritance which operates among a matrilineal people: "In a matrilineal society a man inherits from his maternal uncle; the functions which we attribute to the father are divided in a matrilineal society

between the father and the maternal uncle, affection and care coming from the father, while power and property come from the maternal uncle."

In such a society the woman is the hub around which social, economic and religious life revolves. The Austric attitude was reinforced by that of the Tibeto-Burmans, who not only considered women to be equal partners in day to day life, but also in religious and cultural spheres. For instance, Tibeto-Burman speaking Mongoloids gave women pride of place in religious rituals. In many cases women priests conducted worship, as also kindred activities such as exorcism and community fortune-telling. Not only did they work side by side with the men, by being able to generate income through silk-worm rearing, weaving etc., women were able to attain economic independence, emancipating themselves further. Mahatma Gandhi was enthralled with this: "Every woman in Assam is a born weaver. And she weaves fairy tales in cloth. I fell in love with the women of Assam as soon as I learnt that they were accomplished weavers." The Ahoms too treated women with respect as equal partners, there being numerous instances of a queen being given charge of the kingdom when the king was away in the battlefield. Sacrifices made by heroic women such as Jaymati testify to the fact that women were worthy of the esteem accorded to them.

An indirect gift of the Brahmaputra to the people of Assam is the Asamiya (Assamese) language, the result of the synthesis taking place through centuries between the diverse ethnological and linguistic groups which the river drew in the valley and hills. A commonly accepted language making possible communication throughout the region had come into being even before the arrival of the Ahoms. As Suniti Kumar Chatterji states: "The late medieval period in the history of Assam under the Ahom kings was, as we have seen, a period of travail for Assam, when her various tribal peoples of Mongoloid origin--the original Bodo and others, and the Austric people allied to the

Khasis, together with that strong group of Shan newcomers and Ahoms--were finally welded together as a single Assamese-speaking nation--the Aryan Assamese language having already taken shape at the beginning of this period from the Magadhi Prakrit and Apabhramsa dialects brought by settlers from Bihar and North Bengal during the greater part of the first millennium A.D."

Hieun Ts'ang, who visited Kamarupa in the 7th century A.D., stated that the language of this region "differs a little from that of mid-India," which implies that a distinctive regional language had already developed by then. However, as the rock-inscription of King Bhutivarman (5th-6th century A.D.) shows, Sanskrit at that point of time was the language of the rulers and priestly class. The nascent Asamiya language was the one used at the common level. Primarily due to the overriding influence of the priestly and teaching classes, Aryan languages formed its core, the Magadhi Apabhramsa being the base. As Dr. Grierson, the linguist, states: "Magadhi was the principal dialect which corresponds to old eastern Prakrit. East of Magadha lay the Gauda or Pracya Apabhramsa, the headquarters of which was at Gaur in the present district of Malda. It spread to the south and south-east and here became the parent of modern Bengali. Besides spreading southwards, Gauda Apabhramsa also spread to the east keeping north of the Ganges and is there represented at the present day by northern Bengali and in the valley of Assam by Assamese. North Bengal and Assam did not get their language from Bengal proper but directly from the west. Magadhi Apabhramsa, in fact, may be considered as spreading out eastwards and southwards in three directions. To the north-east it developed into the northern Bengali and Assamese, to the south into Oriya and between the two into Bengali.

Thus Asamiya, as proved by linguists such as Dr. Grierson, Dr. Bani Kanta Kakati and Birinchi Kumar Barua, is not a patois of any other language, but possesses

an independent identity of its own, though it does have an affinity to them. Its distinctive nature is further enhanced by the intrusion of Monkhmer, Tibeto-Burman, Tai and other elements of the Indo-Chinese family of languages, which is not the case with most other recognised Indian languages. Dr. Bani Kanta Kakati, in his *Assamese: Its Formation and Development*, has classified the divergent sources of Assamese vocabulary as:- 1. Austro-Asiatic (a) Khasi (b) Kolarian (c) Malayan; 2. Tibeto-Burman--Bodo; 3. Tai--Ahom. This makes Assamese a composite language taking in words both from Indo-Aryan and Indo-Mongoloid sources, as well as pre-Aryan and pre-Mongoloid sources, rendering its vocabulary extremely rich and colourful. Non-Aryan influence are also discernible in points of grammar, syntax and pronunciation.

The absolute dependence of an agrarian society to the Brahmaputra and its tributaries, operative both in the micro and macro levels, needs hardly to be reiterated. The *Pani-Tola* ritual during an Assamese marriage is an example at the micro-level. Here the women of the household make periodic and ceremonial trips to the river-bank to fetch the water with which to bathe the bride and groom. Folk-songs, known as *Biya-Nam*, are sung in chorus by them on the way, accompanied by *Uruli*, a peculiar form of ululation. At the macro-level community-fishing in streams and shallow water-bodies is an illustration. For a society in which fish is a primary source of nourishment, catching them assumes almost ritualistic significance. Interestingly enough, the people of the valley do not go in for deep-water fishing in the middle of the Brahmaputra. Even the Kaivarta community of professional fishermen prefer to fish in the shallower areas close to the banks, or in *Beels* and rivulets. The powerful currents of the Brahmaputra, perpetually creating whirlpools and eddies, is perhaps a cause for such precautions. The fishing-class sing songs in praise of the river or *Beel* called *Machmariya Geet*, of a kind

similar to the songs sung by boatmen, which are called *Naoriya Geet*. There is a tradition, both among professional fishermen and villagers, of offering prayers and oblation to the water bodies before commencing community-fishing. A number of *Mantras* or incantations, chanted by the rural-folk, designed to ensure a bigger catch, exist in Assam. Also, in sheer variety of freshwater fish Assam has few equals, as too in the astonishing range of names for them and the ways in which they are cooked.

Given this importance, it is little wonder that many rural beliefs are centred around fish. Some tribes do not eat certain species of fish because they believe that their race originated from them. A peculiar custom exists among the Khasis where a fish, termed 'revenge-fish', is beaten to death. Their legend has it that two sects chased away the weaker, who took refuge upon the bank of a river. There they caught a huge fish and vented their frustration by clubbing it to death. Thus this peculiar species of fish is very popular with the Khasis. Childless couples among the Dimasa tribe of North Cachar Hills perform a rite called *Mulling*, where different fish called *Nadong*, *Namna* and *Nayeh* in their dialect are ritualistically sacrificed in the hope of getting a child. Among the Lotha Nagas husbands cannot sleep with their wives on the night prior to a fishing expedition. The rural folk in Assam wield an astonishing variety of fish-trapping implements made of bamboo and cane, and employ a number of techniques including net-fishing. Many beliefs are linked to these implements. The Kacharis beat their nets and implements seven times with a broom before using them, and again beat them three times after the first catch had been hauled in.

There are numerous folk tales involving fish and rivers among the tribal groups. One such among the Jaintias tells of a fisherman who caught a big fish. Back at home when he tried to cut the fish the machete broke. So he left the fish hanging in his cottage. From that day onwards he discovered that someone swept and scrubbed his cottage and

prepared his food in his absence. One day, instead of going to fish, he hid in the cottage and watched a beautiful maiden emerge from the fish and perform the chores. The fisherman at once burn the fish-shell so that the maiden could not resume her piscine form, whereupon she agreed to become his wife.

Tribal religious or superstitious beliefs have permeated into Hindu customs too. In the *Yoginitantra* it is stated that fish can be offered to the *Devas* and *Devis*, and that it is a favourite food of Vishnu! In the Hajo Devalaya the fish (Matsya) incarnation of Vishnu is worshipped. Fish is among the sacrificial offerings at Hindu temples, and ritualistic sacrifice of cat-fish is performed at some places during Durgapuja. The Kacharis offer sour fish curry to Bathau. In the ancestor-worship of the Khasis dried-fish is an item of offering. The Karbis also use dried fish at worship. During the after-death period in Hindu households fish is not eaten. The Garos, after cremating their dead, cook a meal of rice, egg and fish at the site of cremation, if possible on the flames of the cremation-pyre itself.

Fish is a symbol of procreation in folk-lore, perhaps because it lays so many eggs and reproduces so fast. Thus it is an essential item in folk-rites involving fertility. In Upper Assam, Ahom agriculturists perform the *Lakhmi-Addra* festival to ensure a good harvest. During the festival women go to fish in *Beels* or streams, the number they could catch on the occasion prognosticating the outcome of the following harvest season. Before clearing an area for *Jhum* cultivation, the Garos offer fish-tails to their deities. The Ao Nagas believe that in times of drought it would rain if a community fishing-expedition is held. The Bodos bite off the tail of the first fish they catch in the belief that the act would bring in more fish. Many of the tribes believe that seeing fish in a dream is a good omen. Among caste Hindu Assamese, if a woman who has conceived sees fish in her dream, it is the most auspicious sign.

In social intercourse fish enjoys a status akin to betel-



nut. On occasions for celebration a gift of fish is made. During marriage gift of a large fish to the bride's household by the groom's family is a must. The announcement of the birth of a child to close relatives is always accompanied by gifts of fish. The Khasis place three slices of dried fish on the floor during a marriage, pour wine three times over them and then invoke their ancestors to bear witness to the ceremony. When arranging marriages among the Mishings, mutual gifting of fish is essential. The groom of an Ao Naga cannot fix his marriage with the prospective bride unless a gift of fish is made. The culture of this region is replete with such beliefs and practices.

Yet another important component of an agrarian society is cattle, which in the olden days was considered the wealth of a household. Cattle being such precious possessions, they are given the kind of respect not accorded to other animals. This reveals itself particularly during Garu or cattle-Bihu. On this day domestic cattle are ceremonially taken to the river bank, their heads and horns rubbed with turmeric and black-gram paste, and bathed. It is great fun for the children, who sing:

*Lao Kha, Bengena Kha,  
Basare Basare Barhi Ja,  
Maak Soru, Bapek Soru,  
Toi Hobi Bar Garu*

(Eat gourd and aubergine and grow from year to year. Your mother and father may have been small, but you will be a big cow).

The cattle-shed is cleaned and old tether-ropes are replaced with the new ones. William Robinson had witnessed the ceremony over hundred and fifty years ago: "The cows are then worshipped with peculiar honours. They are first sprinkled with holy water, like the horses in the Circusian Games, or bathed in the sacred stream of the Brahmaputra; the devotees next prostrate themselves before them, their horns are painted with various colours,

and their necks are decked with garlands of flowers and strings of fruit. The consecrated animals are then driven in a body through the villages, by crowds of people who made discordant noise upon various musical instruments. During the remainder of the day the cows are permitted to stray wherever they please, and seek a pasture in every field without restraint." Nothing much has changed, and even today rituals such as *Garu-Bihu* stand as symbols to the merging of the agrarian and hydrologic in the culture of the valley.

This culture, embodied in folk-lore, social customs and beliefs, way of life, festivals like Bihu, dances, songs and music, dress, food habits, cottage industries such as sericulture and handloom, language and literature, is intimately related to the environment in general and the Brahmaputra river system in particular. Baba Brahmaputra or Burha Luit evokes in the people an entire gamut of emotions---awe, wonder, reverence, fear, love. Even today, in this age of superior technology, the awe and wonder remains, and people before boarding a vessel on the Brahmaputra offer betel-nut to the river-god and mutter a prayer: ``*Utuai Nininba, Brahmaputra Devata, Tamul Di Matota Nai.*" (O Brahmaputra Devata, do not sweep us away, or there will be no one to offer you betel-nut), signifying their feeling of helplessness when confronted with his mighty flow. Yet the paternal image conjured up inspired love too, as also reiterated by mention in folk-songs. Naturally enough, folk lyricists used the colloquial terms for the Brahmaputra, Luit, Burha Luit, Bor Luit or Siri Luit, for these possessed a softer musical cadence than the explicit connotations of power and masculinity conveyed by the former.

*Luitar Sipare Kahuwani Phulile*

*Miriyani Khelile Taat*

*Ene Phagunmahiya Tomar Jauban Phulile*

*Mone Mor Kheliche Taat*

(On the other side of the Luit the Kahuwa flowers have blossomed. Mishing girls are sporting there. In such a month of Phagun your youth has blossomed and my mind is sporting there).

Occasionally, especially in the more modern and humorous Bihu songs, the name Brahmaputra does find mention:

*Brahmaputre Ahile Ingrajar Jahaj Ai*  
*Prithibi Talebalai*  
*Chapai De Chapai De Ingrajar Jahaj Ai*  
*Batari Achene Nai?*

(The English steamer came up the Brahmaputra, causing the earth to shake. O Englishmen, moor your steamer. Have you brought any news?).

The river is also alluded to as Siri Luit. The following couplet not only uses the term, but also evokes the familiar image of a village belle washing clothes on its bank:

*Chirip Chirip Kori Kapor Dhui Achilo*  
*Siri Luitalai Chai*  
*Siri Luitate Suhuri Marile*  
*Dhane Nao Meli Jai*

(I was washing clothes while looking at the Siri Luit, when I heard a whistle across the river. It was my beloved moving over the waters on a boat).

Sometimes other rivers are mentioned with the Luit:

*Luitar Esuti Disair Esuti*  
*Mor Dhan Esutiye Jai*  
*Caku Tirbir Hridaye Nasahe*  
*Cari Bhangi Bhangi Sai*

(The Luit or Disai, my beloved is on one of them. He looks about from his boat, anxious for a sight of me).

Or:

*Dihingar Chatat Dhubuni Namile*

*Name Luitat Miri*

*Nekhao Bhate Pani Nalao Kapor Kani*

*Gharar Ai Nahale Tiri*

(The washer-woman is on the bank of the Dihing, the Mishing woman is on the Luit's. Till I can place a woman in my house, I will neither eat nor sleep).

Such allusions are innumerable. Rivers also constantly recur in tribal folk-songs, although not always as Luit. The Mishings, as stated earlier, consider the Subansiri, which they call Abanari, as their own river and their folk-songs allude to the former:

*Abanari Anehgashadah Dungela*

*Achi Bidnam Kaloudag*

*Senam Kheshadah Dungela*

*Achil Doying Kiloudag.*

(I like to see the waters flow in the Subansiri, just as I like to see my beloved's face).

The close association of the Luit and the valley's society is reflected in the literature of the region. There are many allusions in the writings of the past, especially in the *Guru-Charit Katha* and other Vaishnava treatises. Among modern writings, reference can be made to poems such as *Dhanbar Ratani* by Lakkhinath Bezbarua for its charming depiction of certain scenes on the Luit familiar to the dwellers upon its banks:

*Luitar Sihu Oi Tupai Bur Marili*

*Akou Chon Etibar Ola.*

(O dolphin of the Luit, you have dived out of sight. Please let me have another glimpse of you).

Or,

*Naire Parate Kare Erabari*

*Chapara Chapare Khohe?*

(Whose abandoned land is this? Its earth is falling in chunks into the river).

Bezbarua's autobiography is filled with passages describing the sights and sounds of the Brahmaputra: "One night, after partaking of our meal, we were asleep in the boats. Suddenly the boatmen woke up father and told him that a thunder-storm, accompanied by powerful wind, was imminent, for a black patch of cloud was visible across the western sky. Father at once had the two boats safely moored with their help and took whatever precautions required. Fifteen minutes later the entire sky was covered with black clouds and the sounds of the approaching storm could be heard. Then there was fierce lightening and a terrible storm. The storm pounded our boats into the water....the next day, while travelling upstream, we saw a boat like ours flung topsy turvy upon a sandbar. We later learned that all the occupants of that unfortunate boat had drowned in the river."

A plethora of phrases and maxims in the Assamese idiom testify to the deep and pervasive influence of the Brahmaputra on the people of the valley which it helped to create. For example, the phrase "Brahmaputrat Pelabo Khoja" or wish to fling something in that river implies the desire to destroy it completely. Or the summons, "Luitar Pani Akou Ranga Karo," (Let us redden the waters of the Luit again), is a call to fight for the country. Similarly, for dances in rural areas during harvest-related festivals, young-men and women invariably chose the *Chars*, *Chaporis* or sandy banks of the river. It is indeed a marvellous sight to see the young people sway to the lilting melody of *Mohor Singar Pepa* (buffalo-horn pipe), while drumbeats throb in the open air. It almost appears as if Burha Luit is dancing with them!

The phrase Luitar Paar (the bank of the Luit) is synonymous with Assam itself. The revolutionary Assamese poet Jyoti Prasad Agarwala uses it while rousing the nationalistic spirit of the youth:

*Luitar Paarare Ami Deka Lora*  
*Moribaoloi Bhai Nai*

*Mukuti Meghar Mahan Mejhi  
 Nejal Phiringati Sai  
 Puruhit Jodi Thitate Atori  
 Kashote Murcha Jai  
 Ami Deka Lorai Dingi Paati Paati  
 Tejere Bolishal Jaam Bulai.....*

(We are the youth of the banks of the Luit. We are not afraid to die for the cause of our land. If, on seeing the intensity of the blaze our priests faint, it is we who will offer our necks and flood the sacrificial altar with our blood).

Jyoti Prasad used the river as a powerful symbol to invoke the sacrifices made by individuals in the past such as the heroic Jaymati:

*Luitare Paani Jabi O Boi  
 Sandhiya Luitar Paani Sonowali  
 Sahare Nagare Jabi o Boi  
 Jayare Kiriti Deshe Bideshe  
 Sahare Nagare Jabi o Koi  
 Etupi Dutupi Teje Tinitupi  
 Deshar Hake Jayai Gole Bilai  
 Jautijugiya Kiriti Rakhila  
 Saneki Jagataloi.*

(O Luit, flow through cities and towns and nations telling of the blood which Jaymati shed for her motherland, and immortalise her story).

Throughout the ages the river has inspired poets to sing praises to it, or berate it for keeping silent when there was so much decadence all around. Its beauty and strength has been captured in paintings, films and photographs. Lyricists and musicians have composed innumerable songs on the river; the Assamese musical maestro, Dr. Bhupen Hazarika, has used the Burha Luit as a leitmotif in a number of his songs. It has been a backdrop to short stories and novels; Tilottama Mishra has written an evocative

piece on the Brahmaputra titled *Lauhitya Sindhu*. It is not possible to reproduce all such allusions. Suffice to say that the Brahmaputra since time immemorial has captured the imagination of the people of the valley and will continue to inspire in times to come.

## FROM BOON TO BANE

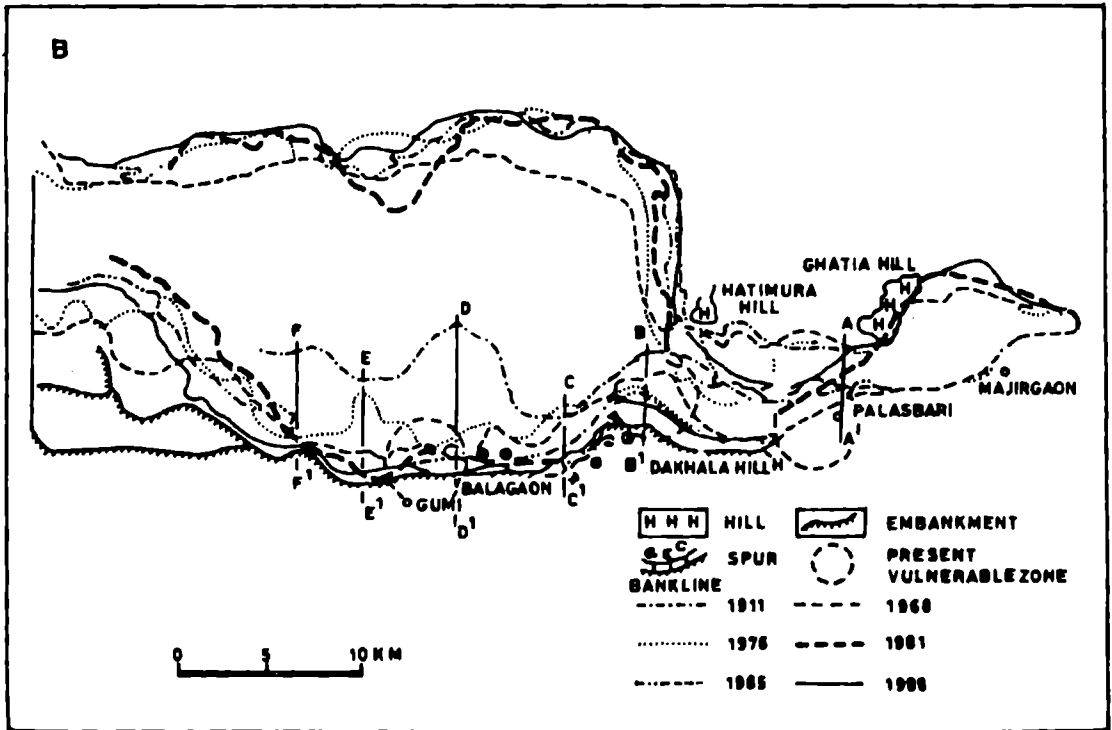
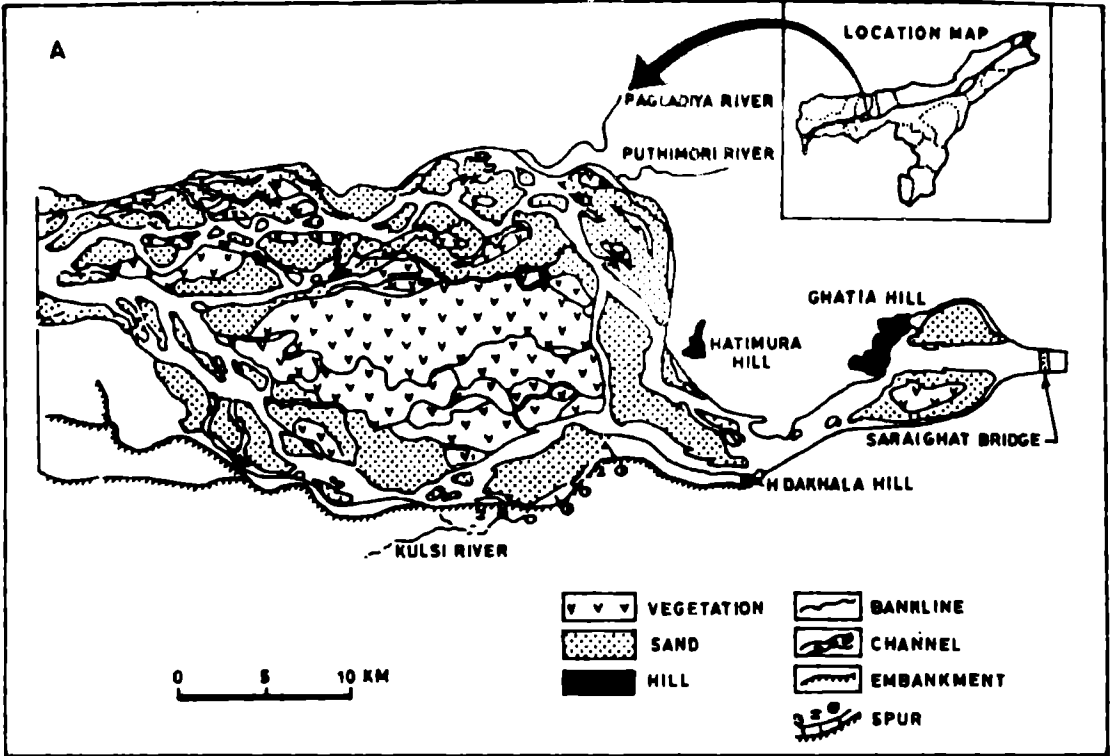
The Brahmaputra, flowing from one end of the valley to the other end linking up with other rivers in the west and land-routes in the east, had imparted to the region a political and cultural centrality which aided the evolution of a vibrant society in the past. Yet today, primarily because of political changes, all outlets from the valley involving this river and its tributaries have closed. Communist China has pulled down its bamboo-curtain; the border with Burma has not only been sealed but become the breeding ground for insurgent elements; Tibet has come under the sway of the Chinese; the *Dwars* with Bhutan lie almost disused. The final straw was the closure of the river-route to Calcutta in 1965. Currently a thin umbilicus links the North-East to the rest of the nation, a narrow strip of land having China on the north and Bangladesh to the south.

Thus there has been a shift in the geo-political positioning of the valley and the entire North-East. Formerly, because the civilisations which grew up on the banks of the Brahmaputra had more or less retained their independence, the region was the meeting ground for great and ancient cultures, and strategically placed for economic prosperity and cultural development. Strong ethnic and cultural bonds with its neighbours in the west, north and east, kept the valley, so to say, at the centre of things! But now, within independent India, the region has been reduced to an eastern outpost, at the periphery of mainstream affairs. The shift has been simultaneously one of

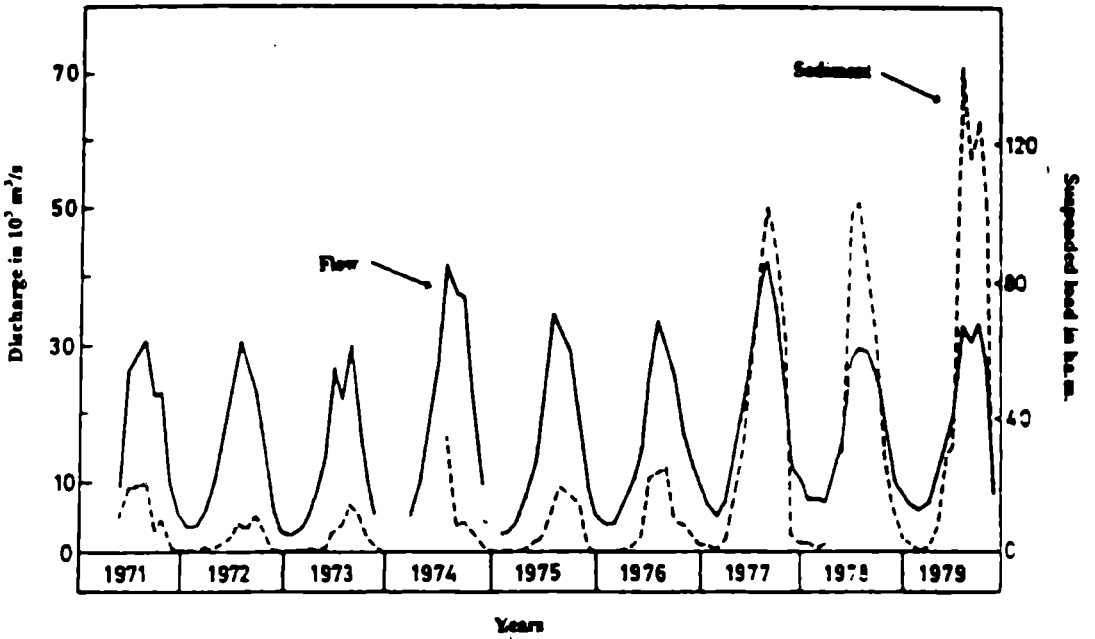


perspective, with psychological implications. The feeling of being cut off from the mainstream--the almost claustrophobic sentience of being hemmed in from all sides--lies at the root of many of the problems of the area, specifically insurgency. This alienation has been exacerbated by abnormal growth of population and lack of economic development, inevitably accompanied by unemployment and under-employment fuelling youthful discontent. The major industries, including tea and plywood, are in the hands of a few; local products have no other outlet except mainland India, where they cannot compete with better organised manufacturers; village self-sufficiency is a thing of the past, the region is now importing a major part of its everyday necessities. Further darkening the gloomy picture has been the incomprehension and neglect displayed by successive Governments at the helm of the nation's affairs.

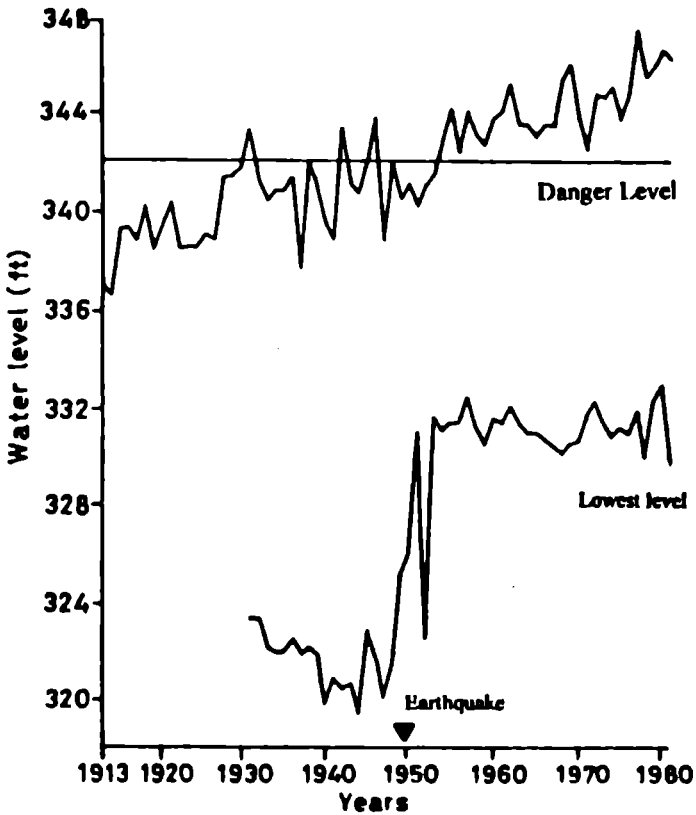
Today, the water of the Brahmaputra emits this all-pervasive reek of neglect. The mighty river, which had played such a fruitful role in the past, lies unutilised and useless. The steamers and flats rust at their moorings; the few boats which ply the river, and mechanised ferries, are only to transport people from one bank to another. The Bramaputra river-system has the highest hydro-potential in the country, being 41 per cent of her total hydro-power. The Central Water Power Commission made a preliminary estimate of the river-system's hydro-power potential in 1957 and estimated it to be around 12,500 MW, which has been revised upwards to 41,000 MW with availability of additional data. It is indeed sad that, five decades after independence, less than 3 per cent of this vast potential has been tapped. Although North-East India possesses 30 per cent of the water wealth of the country (i.e. 1853 km), there has been no attempt thus far to utilise it for the benefit of the region. In the irrigation sector, for instance, against a potential of 2,700,000 hectare, only 4,00,000 hectare have so far been covered, around 14 per cent of the



A. Channel configuration of the Brahmaputra River at Palasbari (IRS-1A, November 22, 1988). B. Bankline migration of the Brahmaputra River at Palasbari during the period 1911 through 1988. Source: Dulal Ch. Goswami.



Annual Flow and Sediment Discharge Hydrographs of Brahmaputra. Source: Dulal Ch. Goswami.



Highest and lowest flood levels of Brahmaputra at Dibrugarh before and after the 1950 earthquake. Source: Dulal Ch. Goswami.

potential against the all India average of 60 per cent.

The current perception among the common people of the Brahmaputra valley is that the river is more of a bane than a boon. This is due primarily to the absence of any tangible endeavour to harness its water resources. Perhaps enraged at the lack of importance given to it, Burha Luit vents its fury upon the hapless dwellers of the valley in the form of savage floods. The highest flood discharge recorded at Pandu was  $72,748 \text{ m}^3 \text{ s}^{-1}$  in 1962, which was around 25 times the minimum discharge that year! The average annual flood has a magnitude of  $48,160 \text{ m}^3 \text{ s}^{-1}$ . The monsoon months, May through October, account for 82 per cent of the mean annual flow at Pandu, while the low flow months, January and February, contribute only 2 per cent each to the annual monsoon-regime and freeze-thaw cycle of the higher Himalayas. The channel behaviour and configuration of the Brahmaputra and its tributaries undergo major changes during the flood season, the sediment transportation increasing as the flow increases. The loss of human lives as those of animals, both domestic and wild, and damage to property and environment is colossal.

Floods, of course, have been a natural hazard faced by the valley community since primeval times. For example, a great flood was recorded in 1570, which nearly reduced the region to famine conditions. There are innumerable references to floods in Ahom *Buranjis*. In 1863 J. Fergusson of the Geological Survey of India called Assam "a region under the dominion of water"! However, Dr. D.C. Goswami believes that the character of floods in the valley has changed for the worse after the devastating earthquake of 1950. Statistics bear him out, for the area and population affected by floods in the 1980s is much higher than the preceding decades. The geographical area of Assam is around 7.54 mha--the flood affected area till the 1980s averaged about 40 per cent. If the two hill districts of Karbi Anglong and North Cachar are excluded, 77 per cent of the remaining area, or over three-fourths, is flood-prone!

Simultaneously, the number of villages affected has increased from 3,600 to 8,770. Between 1954-96, there were high-floods in 54, 62, 66, 72, 73, 74, 77, 78, 83, 84 and 88. The high intensity of flood hazard in the state is demonstrated by the fact that in the worst ever floods which occurred in 1988, a total of 46.5 lakh hectare of land including 13.35 lakh hectare of cropped land was damaged, affecting 12.5 million people in 8770 villages!

Dr. Goswami offers a lucid and concise exposition of the causes of floods in the valley: "Floods in Assam are caused by a combination of several natural and anthropogenic factors. The unique geographic setting of the region, highly potent monsoon rainfall regime, easily erodible geological formations in the upper catchments, active seismicity, accelerated rates of basin erosion, rapid channel aggradation, massive deforestation, intense land use pressure, explosive population growth especially in the flood plain belt and ad hoc type temporary measures of flood control are some of the dominant factors that cause and/or intensify floods in Assam.

"The single most important cause for frequent occurrence of flood in this region is the extremely dynamic monsoon regime vis-a-vis the unique physiographic setting of the basin....The water yield of the basin is one of the highest in the world. High rates of yield together with the limited width of the valley and the greatly flattened gradient lead to tremendous drainage congestion and resultant flooding. The impact of earthquake on the regime of the river, especially on the morphology of the channel, has considerable influence on the flood potential of the Brahmaputra....Because of the heavy silting, the bed levels of the Brahmaputra and some of its tributaries have risen considerably reducing the conveyance capacity of the channels and causing them to spill over the banks during summer high flows and inundate the surrounding lowlands. The short term ad hoc type of flood protection measures so far adopted in the case of the Brahmaputra,

especially the extensive network of earthen embankments, has a deleterious impact on the regime of the river, more specifically its aggradational character, thus contributing to further intensification of the flood hazard potential in the valley. Human intervention and depredations in the watersheds also aggravate the problem to a certain extent. Because of denudation of forest cover the surface runoff has considerably increased and the time of concentration of flow significantly reduced. Encroachment of the large number of wetlands that serve as the natural reservoirs like the Beels, swamps and marshes in the flood plain zone has also reduced the retention capacity of the drainage system causing the flood levels to rise. The improperly planned road and railway embankments, settlement areas and land use practices also affect the drainage system. All these anthropogenic activities contribute to a worsening flood scenario of increased intensity, greater extension and higher damage potential" (*Fluvial Regime and Flood Hydrology of the Brahmaputra River, Assam*).

Apart from lithological erodibility of the Himalayas, high intensity cloudbursts, cascading flash-floods, landslides, improper land use practices like deforestation and Jhum cultivation, are responsible for high rate of soil erosion in the Brahmaputra basin. The area of forest in Arunachal and Assam have tragically shrunk, especially in the last few decades. Dramatic morphological and hydrological changes have also been brought about by the extreme seismic susceptibility of the area---over 2,500 earthquakes of varying magnitude occurred between 1970 and 1988 within a radius of 450 km from the Central Seismological Observatory at Shillong. The earthquakes of 1897 and 1950, considered to be among the most severe in world history, caused extensive landslips and rockfalls in the hills and subsidence and fissuring of the ground in the valley, and had an adverse impact on the topography and drainage system of the Brahmaputra and its tributaries. The August 15, 1950 earthquake, with its epicentre near Rima

in Arunachal, caused landslides that blocked the courses of the Subansiri, Dibang, Dihang and Lohit. The consequent dam-bursts released enormous amount of impounded water and detritus, causing havoc downstream. Such was the flood, sedimentation, silting and erosion unleashed that, by 1953, the town of Sadiya was wiped out, with Dibrugarh almost following suit.

Floods not only destroy lives and crops, but also infrastructural essentials like roads and bridges. The terrifying size and velocity attained by the rivers during the peak months of flood empower them to cause large scale erosion, threatening areas of human concentration including the river island of Majuli. The greatest casualty, of course, is the agricultural sector--if Assam today has lagged behind the rest of the nation in this field floods are to a great extent responsible. In the past, despite annual flooding, the inundation had, in fact, been a blessing in disguise, replenishing as it did the wetlands and laying fresh alluvium to enrich the soil. But today, primarily because of heavy population congestion in the valley and presence of constricting embankments, even a flood of moderate severity causes more havoc than it could otherwise be expected to. Heavy floods also carry higher loads of sediment of lithologic origin--the result is that often an unacceptable level of sand is deposited as silt when the floods recede, rendering fertile areas unfit for agricultural use. The erosion and sand deposition in the island of Majuli is a telling illustration of the destructive impact of such phenomena on the ecology of the region. The Sumoimari Channel which cuts across the island, barely 10 metres wide a few years ago, has become 50 metres wide, threatening to carve up the island into two! Also, continued and large scale erosion has considerably reduced the size of the island, forcing many of the inhabitants to shift to the banks for safety.

Hazard management and resource development are the twin Mantras when confronted with a mega-river like the Brahmaputra. Yet successive governments at the state

## Statement showing flood damages during 1953 to 1994, Assam

<i>Year</i>	<i>Area affected (nha)</i>	<i>Population affected (million)</i>	<i>Total damage (Rs. crores)</i>
1953	0.080	0.410	2.66
1954	3.150	1.680	15.97
1955	1.410	0.800	3.71
1956	0.600	0.560	3.26
1957	0.400	0.310	4.52
1958	1.250	0.470	2.70
1959	1.040	1.760	8.39
1960	0.470	1.320	7.76
1961	0.190	0.250	0.57
1962	1.620	4.050	20.23
1963	0.580	0.830	2.06
1964	0.760	0.770	2.76
1965	0.600	0.240	0.69
1966	1.780	4.650	22.53
1967	0.260	0.680	2.44
1968	0.410	0.920	8.36
1969	0.810	1.470	8.46
1970	0.720	1.710	10.43
1971	0.360	0.670	5.63
1972	1.100	3.200	24.15
1973	2.750	2.290	16.41
1974	1.120	2.850	20.14
1975	0.010	0.030	0.34
1976	0.570	1.460	11.98
1977	1.100	4.550	31.09
1978	0.310	0.920	4.08
1979	0.670	2.350	28.14
1980	1.160	3.360	39.80
1981	0.460	1.360	7.40
1982	0.610	1.420	21.89
1983	0.730	2.260	56.18
1984	1.520	5.680	50.83
1985	0.650	2.380	54.84
1986	0.430	2.350	204.60
1987	1.530	10.490	346.60
1988	3.820	8.410	663.84
1989	0.690	2.403	0.00
1990	0.488	1.692	74.56
1991	0.997	5.307	191.15
1992	0.213	0.974	26.56
1993	1.348	5.261	0.215
1994	0.053	0.177	0.020

Data Source: Flood Control Dept., Govt. of Assam, Revenue Department Government of Assam, Assam Remote Sensing Application Centre, Guwahati.



and the Centre have turned a blind eye to resource-development, while focussing primarily on hazard management. Short-lived measures, inspired by the ill-conceived National Policy for Flood Control, 1954, such as building embankments and dykes, appear to be the measures solely taken to combat floods. While there was only 200 km of embankment in the valley till 1954, by 1988 the length had risen to 4134 km, around 34 per cent of the country's total of 13,500 km. To attempt control of a river-system which come down from such heights with so great latent energy by means of embankments was sheer folly. Construction of embankments has aggravated the flood hazard rather than managed it. No wonder then that today the popular thinking among people is that they would have been better off without them. The network of embankments has so far been singularly ineffective in saving the inhabitants of the valley from floods. On the contrary, flash-floods caused by breaching of embankments, a regular occurrence due to inefficiency, corruption etc., cause greater devastation than had the embankments not obstructed the flow. Aggraded river beds, reduction of their conveyance capacity and intensification of the flood hazards are the consequences of embankments. Yet even today it is this hazard management aspect which continues to be pursued by departments such as Flood-Control. The cash-starved department is engaged solely on work involving boulder protection, solid stone spurs, timber pile spurs, river rivetment, marginal embankments and other short term devices at spots such as Dibrugarh, Kokilamukh, Moriaholai, Palasbari, Mukalmua, Goalpara, Dhubri and Guwahati. Such activities, far from solving the problem, create new ecological ones. For instance, boulder protection work necessitates removal of large rocks from hillsides, leading to environmental degradation.

Unthinking human interference, based on inadequate knowledge of Brahmaputra and its tributaries, has resulted in untold suffering for the people of the valley and

increased their vulnerability. Data-collection on the river, satellite mapping etc., can be said even today to be at a rudimentary stage, the result being that neither infrastructural development like construction of roads and railways, nor that of embankments which so drastically change river-configurations, have been based upon sufficient understanding of the fluvial regime of the rivers which constitute and hydrologic-system of the valley. Greater knowledge and systematic collection of data is a sine qua non for effective action against floods. Simultaneously, a change in the way the problem has been appraised so far is needed. The post-independence perspective has been of the river as a curse rather than a boon--the fact that it can work miracles for the North-East has been suppressed, and the technological thrust has been towards combating the curse part of it. Even a small river can work miracles for any area--what such a mega-river system can achieve for the economic development of the North-East can well be imagined!

In the past the people of the valley had learned to live with the floods, adapting their lives to the pattern the river chose to adopt each year. But then the population was sparse and land was available. Now not only are floods more intense, but the valley itself is choked with a population which had exceeded the 19 million mark. Most of the highland areas are occupied by tea-gardens; thus it is the rural poor occupying lowland areas who have to bear the brunt of flood fury. Not much was expected towards alleviating the distress of the people during British rule. But the people did hope that the powers that be in free India would harness the potential of Baba Brahmaputra and bring about prosperity to the region. Even five decades after independence this has remained a pipe dream. Whatever has been done towards resource development has merely been on paper. Since 1929 there have been at least 10 Flood Enquiry Commissions. As early as 1947 one of the Commissions had opposed further construction of

embankments and had recommended gradual removal of existing ones and construction of multi-purpose dams, but no attention has been paid to such recommendations.

After Independence a Flood-Control and Irrigation Department was set up by the State Government. Later, perhaps cognizant of the magnitude of the problem, it was decided that the Centre would finance flood-control work, for which purpose the Brahmaputra Flood-Control Commission was created. In 1981 the BFCC was dissolved and the Brahmaputra Board set up, its mandate being to prepare a master-plan for flood-control for the entire North-East. The Board submitted two reports in 1986 and 1988. Its master-plan, which recommends among other things the setting up of water-flow, meteorological and earthquake recording stations, modernisation of flood-forecasting equipment, anti-erosion schemes, Jhum-control, new drainage networks and multi-purpose dams, has so far been gathering dust.

In the meantime the entire 50 million hectare metres of runoff from the Brahmaputra (at Pandu) carrying almost 41 per cent the total hydro-power potential of the nation, has been allowed to go unutilised into the Bay of Bengal! How little work has been done to exploit water-resources can be garnered from the fact that till date the hydro-electric projects completed or on-going in five decades, namely the Umiam-Barapani hydro-electric project (114 MW), Kapili hydro-electric project (335 MW) and Karbi Langpi hydro-electric project (100 MW) together would produce a minute fraction of the actual power-potential. However, more ambitious projects, such as the Dihang dam project, Subansiri dam project, Kameng hydro-electric project, Dhansiri (Dayang) project, Jogighopa Barrage and Brahmaputra-Ganges Link Canal etc., do exist in the realm of future probabilities!

Thus far neither the political will nor the creation of an environment in which the potential of the river-system can be fully utilised has materialised. Various experts have

forwarded their views on how the rivers can be tamed and harnessed. In 1974-75 expensive dredgers were purchased to deepen the river-bed. But it was discovered that no sooner had a particular stretch been dug, it filled up with detritus in a matter of days! This is only one of the examples of the wasteful and wrong direction attempts to tackle the flood problem has taken. Most experts, including the Brahmaputra Board, strongly believe that building a series of dams on the main stem and major tributaries to store the water and silt during the season of maximum discharge is imperative if the valley is to be spared the agony of floods. Such dams, at the same time, will generate electricity to meet not merely the needs of the North-East, but of the nation as well. The Dihang, Dibang and Lohit together contribute to nearly 50 per cent of the average annual flow of the Brahmaputra, with the Subansiri chipping in with another 10 per cent. Experts opine that storage reservoirs on these rivers could control the main flow. They also argue for the control of at least 22 of the 90 tributaries feeding the Brahmaputra.

“Long term measures for management of floods through erection of multi-purpose reservoirs and adoption of sound watershed management practices especially in the upper catchments will definitely go a long way in reducing the intensity of the present hazard and ushering in a new era of progress and prosperity. An integrated approach utilising both surface and ground waters conjunctively will be a far more efficient way to manage the state's water resources. The non-structural (administrative) measures, specially land use regulations and zoning practices, should also receive serious attention as environmentally safe and technologically feasible supplementary measures that will help reduce the adverse impact of floods and ensure stabilisation in the productivity of agriculture. Use of appropriate disaster management techniques with respect to floods, improvement in the flood warning system, augmentation of the data-base through application of more

sophisticated techniques and instrumentation, provision of adequate outlets for flood waters and strengthening as well as proper maintenance of the existing structures for flood and erosion control seem to be some of the important areas that need immediate attention for alleviation of the flood hazard." (Dr. D.C. Goswami in *Agriculture in Assam*, 1989).

However, while a degree of unanimity appears to have been reached as to how this vast river--system can be harnessed for the benefit of the region, translating the various visions, including that of the Brahmaputra Board, into reality is fraught with obstacles, not the least being the international character of the river. Cooperation between three nations, China, India and Bangladesh, whose relations have not always been cordial, is needed if the Yarlu Tsangpo-Brahmaputra-Jamuna is to be tamed. Bangladesh has already voiced her objections to the proposal to regulate the flow in the Indian stretch; given India's territorial dispute with China, that country is certain to view with suspicion any such endeavour of the Indian Government. Clearly cooperation can be had only through the aegis of an international body such as the United Nations. Within India itself politically motivated disputes between states often stand in the way of progress. Arunachal has already lodged protest at the proposal to build dams on the Dihang and Subansiri with storage capacities of 35,500 and 10,600 mcum--such disputes would have to be settled. Moreover, ecological issues of long-time import are involved and these have to be studied—environmentalists have already voiced their concern at the proposal for a network of multi-purpose dams which would submerge huge tracts of forest and land. The area being highly seismic, the state of the art technology as well as experience of developed nations would be required for dam construction. Last but not least, any scheme to harness this river-system requires colossal expenditure, for which finance from world institutions would have to be obtained.

All in all, only a gigantic effort at an international level would be able to rein in the mighty Son of Brahma, if not tame him. It must be an integrated and not sectorial essay, with many factors, technical, administrative, social, management as well as development of water resources including wetlands coming into play. Flood management would be only one facet of the effort. Societal aspects must be taken into account; the agrarian nature of the economy has to be kept in mind and agricultural experts and environmentalists associated with any broad-based plan for harnessing the water resources. Man induced depredation will have to be stopped and a sincere effort at rejuvenating forest and wetland areas would have to be made. A tall order, indeed! Given the Central and State Governments' track-record in the past fifty years, it is little wonder that concerned individuals of this region are sceptical as to whether they would be able to muster the political will and resources. There is a phrase in Assamese, *Luitak Bhetibo Kone* (Who will dam the Luit?), implying a challenge which none dare take up. Indeed, it is unlikely that a genuine attempt would be made in the immediate future to harness the Brahmaputra and its tributaries and work the miracle this beleaguered valley so desperately needs.

This is why pragmatic planners in this region are being increasingly attracted towards a return to the concept of "living with the floods" which had operated in the days of yore, involving education and empowerment of the people to confront them. The basic objective of such a concept is to reduce the societal susceptibility to flood damage and remove anthropogenic causes which aggravate floods. Another essential element in this strategy is the improvement of flood forecast and warning systems as well as disaster preparedness. But side by side with technological intervention a change in traditional ways of life is sought, so that the people would be economically empowered to bear the annual trauma. The poorer section of society in the valley today is in a catch-22 situation--they can "live

with the floods" only if they are economically empowered, yet it is the floods which continue to keep them crippled! While the more affluent farmer in the rural areas of Assam has the resources to recoup from a savage spell of floods and last out till the next harvest, his poorer counterpart not only remains in a perpetual state of poverty, but gradually sinks into greater indigence and degradation. The need to rescue him from the vicious cycle in which he is trapped and strengthen the vulnerable section, rather than temporary hand-outs euphemistically called 'flood-relief', is the rationale behind this alternate strategy. Various plans and projects have to be devised and adaptations made so that dependence on the government is reduced and the people can face up to floods by themselves.

A single example will illustrate the pragmatism of such a strategy in the absence of any immediate steps for the integrated management of the Brahmaputra basin. Available data reveals that 75 per cent of loss due to floods is accounted for by crop damage, which in turn depend on the time of occurrence and the kinds of crops affected. The flood-prone areas are, ironically, of high crop yield, being rendered fertile by the fresh alluvium left behind by receding floods. Unfortunately, the main cropping season of Sali, the principle rice-crop of the region, coincide with the period of heavy rains and floods (June to November). Thus severe floods affect Sali-crops which occupy more than 75 per cent of the cropped area. As experts like Dr. Goswami suggest, the sole panacea is to change the cropping pattern from Kharif to Rabi crops as also undertake multiple cropping. This would entail reorienting the agriculture sector and laying greater emphasis on creating an irrigation infrastructure to compliment the switch to Rabi, as also making available cheap power. If by good fortune a season passes without high floods, the summer crop would be in the nature of an additional bonus to the farmer.

The increasing intensity of floods, greater degradation of river banks endangering many important townships, an

annual scourge which leaves behind a trail of devastation, has created a moribund scenario which does not augur well for the future of the Brahmaputra Valley. Enough time has been wasted, with the situation threatening to further aggravate if nothing tangible is done. Along with viable strategies to safeguard the people of the valley from floods, measures have also to be initiated at the political and economic levels to dissipate the feeling of alienation gripping the valley. This can to some extent be achieved by removing its current peripheral positioning and re-establishing its centricity through opening out the region for trade and other purposes with its neighbours. The willingness of the Bangladesh Government to reopen the river-route to Calcutta is a welcome step in this direction. Another positive development is the signal emanating from China about a possible initiative on its part to open out the ancient 'silk-route' passing through Burma and Assam. China is already building a highway linking Yunnan and Sichuan with Myanmar; the Burmese authorities too appear to be amenable to the construction of an arterial route to Assam, a section of which would be the historic Stilwell Road.

Dr. Bhupen Hazarika has immortalised the aspirations of the people of Assam in his lyric:

*Endharar Bheta Bhangi Pragjyotishat Boi*

*Jeuti Nijarare Dhaar.*

*Shata Shata Bontire Gyanar Dipalire*

*Jilikabo Luitare Paar.*

*Sachipate Bhasha Dibo, Siphunge Asha Dibo.*

*Rangghare Melibo Duar,*

*Samaje Shaboti Lobo Mahan Manabota,*

*Bigyane Aanibo Juaar.*

*Jilikabd Luitare Paar.*

(Piercing the barrier of darkness a stream of light will flow through Pragjyotisha. Earthen-lamps will illuminate the banks of the Luit with the light of wisdom. Leaves of the Sachi will imbue language, the Siphung will give hope,



the Rangghar will open its doors. Society will embrace humanism; science will bring forth a tidal wave of knowledge. The banks of the Luit will light up again).

Yes, the pall of darkness now shrouding the valley would perhaps lift one day and a thousand lamps will once again light up the banks of the mighty Brahmaputra. This is a dream to be cherished not only by the people of this beautiful valley and the blue hills surrounding it, but the rest of India as well.



## Select Bibliography

- Agarwal A. & Narain, S. -*State of India's Environment: Floods* (1991).
- Bailey, F.M. -*No Passport to Tibet* (1957).
- Bailey, F.M. -*China-Tibet-Assam* (1945).
- Barua, B.K. -*A Cultural History of Assam* (1969).
- Barua, H. -*The Red River and The Blue Hills* (1954).
- Barua, K.L. -*Early History of Kamarupa* (1933).
- Baruah, B.B. -*Flood & Erosion Control in Brahmaputra Valley* (1969).
- Bordoloi, D.N., Thakur, G.C.S and Saikia, M.C. -*Tribes of Assam* (1987).
- Borpujari H.K. -*The Comprehensive History of Assam*.
- Bremmer, H. -*Floods in Bangladesh: Geog. Background* (1990).
- Bristow, C.S. -*Brahmaputra River: Channel Migration* (1987).
- Bhuyan, S.K. -*Lachit Barphukan and His Times* (1947).
- Burard, -*Geography and Geology of the Himalayan Mountains and Tibet* (1932).
- Chatterji, S.K. -*The Place of Assam in the History and Civilisation of India* (1970).
- Chatterji, S.K. -*Kirata-Jana-Krti*.
- Chowdhury, J.N. -*Arunachal Panorama* (1992).
- Coleman, J.M. -*Brahmaputra River: Channel Process* (1987).
- Cosh, J.M. -*Topography of Assam* (1837).
- Das, B.M. -*The Brahmaputra Valley Population* (1977).
- Dutta, A.K. -*Cha-Garam, The Tea Story* (1992).
- Dutta, M. -*Sculptures of Assam* (1990).
- Gait, E. -*A History of Assam* (1905).
- Gill, W. -*The River of Golden Sand* (1883).
- Goswami, D.C. -*Alluvial Flow and Regime of the Brahmaputra, Assam, India* (1983).
- Goswami, D.C. -*Brahmaputra River, Physiography, Basin Denudation and Channel Aggradation* (1985).

- Goswami, D.C. -*Fluvial Regime and Flood Hydrology of the Brahmaputra River, Assam* (1998).
- Goswami, P. -*Festivals of Assam* (1995).
- Goswami, P.C. (Ed.) -*Agriculture in Assam* (1989).
- Guha, A. -*Planter Raj to Swaraj* (1977).
- Hamilton, F.B. -*An Account of Assam* (1814).
- Hedin, S. -*Trans Himalaya* (1909).
- Hoffer, T. & Messerli, B. -*Floods in Bangladesh: A Synthesis* (1997).
- Hooker, J. -*Himalayan Journals*.
- Hunter, W.W. -*A Statistical Account of Assam* (1879).
- Ives, J.D. & Messerli, B. -*The Himalayan Dilemma* (1989).
- Kingdon-Ward, F. -*A Plant Hunter in Tibet* (1934).
- Kingdon-Ward, F. -*Assam Adventure* (1941).
- Mill, A.J.M. -*Report on the Province of Assam* (1854).
- Misra, S.D. -*Rivers of India* (1970).
- Montgomery, M. -*The History, Antiquities, Topography and Statistics of Eastern India* (1838).
- Nath, R.M. -*The Background of Assamese Culture* (1948).
- Needham, J.F. -*A Trip into the Abor Hills* (1884).
- Neog, M. -*Sankaradeva* (1967).
- Pascoe, E.H. & Prasad, B. -*Early History of Indus, Brahmaputra and Ganges*.
- Pemberton, R.B. -*Report on The Eastern Province of British India* (1835).
- Pravananda, S. -*Exploration in Tibet* (1950).
- Robinson, W. -*A Descriptive Account of Assam* (1841).
- Sarma, P.C. -*Architecture of Assam* (1980).
- Stewart, W.S. -*Early Baptist Missionaries* (1926).
- Wade, J.P. -*An Account of Assam* (1800).
- Easays of M. Borthakur, Mukunda Madhav Sharma, B.M. Das and D. Kedia in *Brahmaputra Becknons* (1982).
- Papers by D.N.D. Goswami, A.N. Duttachoudhury, S.C. Sen in *Assam Science Society's Symposium souvenir* (1978).

### **Assamese Books**

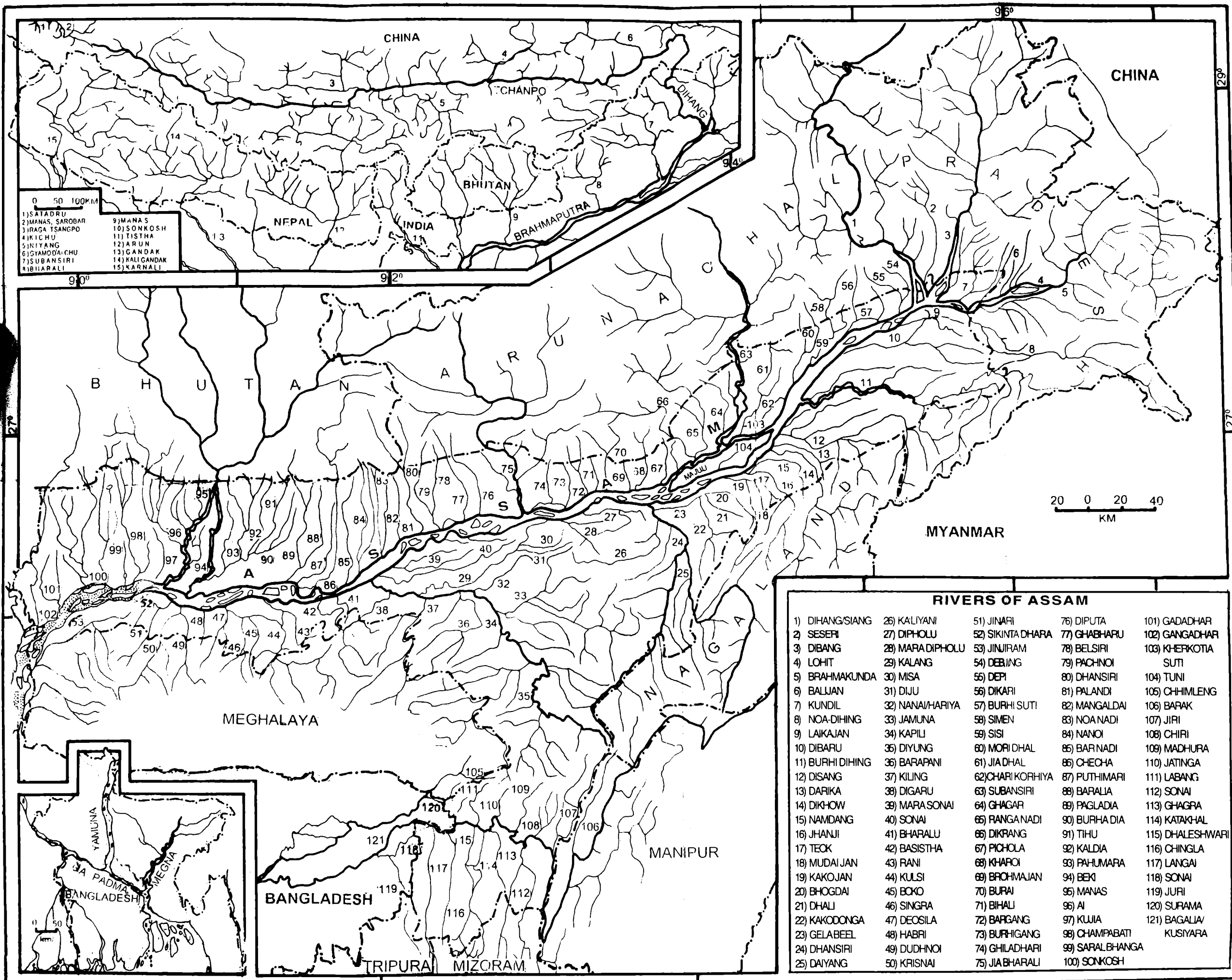
- Barua, B.K. -*Asamar Lok-Sanskriti* (1966).
- Barua, B.K. -*Asamiya Bhasha aru Sanskriti* (1985).
- Barua, L. -*Kamarupar Itikatha* (1985).
- Bhattacharyaa, B. -*He Bishal Brahmaputra* (1992).
- Chaliha, P. -*Purani Asamar Karikari Shilpa* (1998).
- Neog, H. & Gogoi, L. (Ed.) -*Asamiya Sanskriti* (1966).

Mishra, T. -*Lauhitya Sindhu* (1997).

Rajkumar, S. -*Itihase Suonra Soshata Bachar* (1980).

Sharma, J.N. -*Asamar Nad-Nadi* (1993).

*Buranjis of Ahom Period* etc.



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|--------------------|-----------------|
| 1) SATADRU         | 9) MANAS        |
| 2) JMANAS, SARODAR | 10) SONKOSH     |
| 3) IRAGA TSANGPO   | 11) TISTHA      |
| 4) KICHU           | 12) ARUN        |
| 5) NIYANG          | 13) GANDAK      |
| 6) GYAMODACHU      | 14) KALI GANDAK |
| 7) SUBANSIRI       | 15) KARNALI     |
| 8) BHARALI         |                 |

### RIVERS OF ASSAM

1) DIHANG/SIANG	26) KALIYANI	51) JINARI	76) DIPUTA	101) GADADHAR
2) SESERI	27) DIPHOLU	52) SIKINTA DHARA	77) GHABHARU	102) GANGADHAR
3) DIBANG	28) MARA DIPHOLU	53) JINJIRAM	78) BELSIRI	103) KH-ERKOTIA SUTI
4) LOHIT	29) KALANG	54) DEBILING	79) PACHNOI	104) TUNI
5) BRAHMAKUNDA	30) MISA	55) DEPI	80) DHANSIRI	105) CHHIMLENG
6) BALJAN	31) DIJU	56) DIKARI	81) PALANDI	106) BARAK
7) KUNDIL	32) NANAI/HARIYA	57) BURHI SUTI	82) MANGALDAI	107) JIRI
8) NOA-DIHING	33) JAMUNA	58) SIMEN	83) NOA NADI	108) CHIRI
9) LAIKAJAN	34) KAPILI	59) SISI	84) NANOI	109) MADHURA
10) DIBARU	35) DIYUNG	60) MORI DHAL	85) BAR NADI	110) JATINGA
11) BURHI DIHING	36) BARAPANI	61) JIADHAL	86) CHECHA	111) LABANG
12) DISANG	37) KILING	62) CHARIKORHIYA	87) PUTHIMARI	112) SONAI
13) DARIKA	38) DIGARU	63) SUBANSIRI	88) BARALIA	113) GHAGRA
14) DIKHOW	39) MARA SONAI	64) GHAGAR	89) PAGLADIA	114) KATAKHAL
15) NAMDANG	40) SONAI	65) RANGA NADI	90) BURHA DIA	115) DHALESHWARI
16) JHANJII	41) BHARALU	66) DIKRANG	91) TIHU	116) CHINGLA
17) TEOK	42) BASISTHA	67) PICHOLA	92) KALDIA	117) LANGAI
18) MUDAI JAN	43) RANI	68) KHAROI	93) PAHUMARA	118) SONAI
19) KAKOJAN	44) KULSI	69) BROHMAJAN	94) BEKI	119) JURI
20) BHOGDAI	45) BOKO	70) BURAI	95) MANAS	120) SURAMA
21) DHALI	46) SINGRA	71) BIHALI	96) AI	121) BAGALIA/ KUSIYARA
22) KAKODONGA	47) DEOSILA	72) BARGANG	97) KUJIA	
23) GELABEEL	48) HABRI	73) BURHIGANG	98) CHAMPABATI	
24) DHANSIRI	49) DUDHNOI	74) GHILADHARI	99) SARALBHANGA	
25) DAYANG	50) KRISNAI	75) JIABHARALI	100) SONKOSH	

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