

CHAPTER I

THE GEOGRAPHICAL DISTRIBUTION OF SILK GROWERS IN MALDA AND MURSHIDABAD AND AN ASSESSMENT OF THE ECOLOGICAL AND OTHER IMPORTANT FACTORS FOR THE GROWTH OF THIS INDUSTRY IN THE AREAS STATED ABOVE.

The history of any country is inseparably connected with its geography. Dr. Hem Chandra Roy Choudhry said, "a knowledge of space, no less than that of time, of geography no less than that of history is an indispensable pre-requisite for a proper understanding of history."¹ The statement of Dr. Roy Choudhury is truly applicable to the history of Bengal. The geographical position and ecological setting of Malda and Murshidabad helped the growth of silk industry there and mulberry plantation and cocoon-growing were greatly influenced by the climatic conditions of the regions.

I

The Ganges played a vital role in the ecology of Malda and Murshidabad and the soil of the river banks was very much helpful for the cultivation of mulberry. It formed the boundary of Malda along the western and south-western frontier, and of Murshidabad from the extreme north to the south-east. The soil of Malda was loamy and composed of hard red-clay. It was enriched every year by the alluvial deposits of the Ganges and its off-shoots and tributaries. William Hunter remarked about the soil of Malda that the river basin was "Sandy, but enriched each year by the deposits of mud that are left by the inundations of the Ganges."² The geographical environment of Malda was very much helpful for the development of sericulture and "the town of Malda is situated close to the muhana, or conflux, of the rivers Kalindri and Mahananda. In ancient times the Ganges in full pride flowed through or close by the mighty city of Gour, and riparian changes led to Malda becoming the port for both Gour and Pandua."³ In 1676, Mr Edward wrote about Malda, "the Town is small, but conveniently seated on a branch of the Ganges and a small river from Morung which joyne (join) a little above the Town, which is of great resort, being the

staple of cloth etc., for that part of the country, and comes in from all parts within thirty or forty miles (miles)."⁴ Old Malda was not only the centre of great trade but also remarkable centre of Silk and Cotton manufactures from early times. Shortly after 1579 A.D., it was written in Tarikh-i-Sher Shahi of Abbas Khan Sarwani that " Sher Khan gave to Shaikh Khalil money, rich clothes and manufactures of Malda and Bengal in enormous quantity."⁵

Malda is in between Rajmohal hills in the west and Garo hills on the east and the entire area was covered by alluvium which helped cultivation of mulberry. The rise of the silk industry at Malda and Murshidabad was largely due to the "geographical importance it commanded" for the mulberry culture, silkworm rearing and for the pursuance of Silk trade. Milburn depicted Malda as the greatest centre of production of raw silk from the cocoons.⁶ The enormous silk production was mainly "due to the edaphic excellence of her Gangetic alluvium and consequent higher yield of mulberry."⁷

The soil of Murshidabad was equally suited to the culture of mulberry. It was "greyish or reddish, mixed with lime and oxide of iron; and beds of nodular limestone (kankar) are to be seen scattered here and there."⁸ Streysham Master wrote in 1676 that "all the country or great part thereof about Cossimbazar, is planted or set with mulberry trees, the leaves of which are gathered young to feed the worms with and make the silk fine, and therefore the trees are planted every year. The soil of Bengal is very fertile, being a kind of a loose fat earth, and in some places a fat sand."⁹ The extent of cultivation of mulberry in Murshidabad was estimated at 50,000 bighas, an estimate more probably under than above the mark.¹⁰ The position of Murshidabad on the bank of the Bhagirathi made the town an important centre of silk trade."Situated as it (Murshidabad) was on the bank of the river Bhagirathi, flowing from the Ganges to the sea, it had a commanding view of the boats laden with goods of Indian and foreign merchants plying between the south and north-western regions of the province. It was adjacent to Kasimbazar, the most important centre of the silk trade in

Bengal, where the European traders carried on extensive investments, and as such it brought the European Companies and the Government of the country closer to one another."¹¹

The geographical position of Murshidabad helped the city to reach its pinnacle of glory. Even after Plassey, Robert Clive remarked, "the city of Murshidabad is as extensive, populous and rich as the city of London."¹² During this time, the largest dimensions of the city were 5 miles long along the Bhagirathi and 2½ miles in breadth. The economic prosperity of Murshidabad was mainly depended on its silk industry and trade. But after the British occupation, the development of the city came to a stand still. The battle of Plassey resulted in the decline of Murshidabad. With political factor, the geographical factor was also responsible for the decline. The changes in the course of the Bhagirathi, the natural calamities and political change caused the downfall of Murshidabad.

II

The rivers of Malda and Murshidabad were helpful for navigation and the soil of the river banks was enriched with alluvial deposits. Francis Buchanan mentioned in his report that "both cultivators and breeders should chiefly occupy the immediate vicinity of navigable rivers, so that the leaves might be transported in canoes, at a moderate expense, to the villagers in which the worms happen to thrivethe banks of the Mahananda are peculiarly favourable, and were they cultivated with care, from the Kalindi to the Punarbabha, might probably supply all Bengal."¹³ The most characteristic features of the physical geography of Bengal were its rivers and the influence of the Ganges and its offshoots on the history of Bengal and particularly on the history of Malda and Murshidabad was no doubt great. The Ganges with its many tributaries and "a hundred mouths" used to carry boats of merchandise throughout the province and supply the needs of north-western and eastern India.¹⁴ According to Dr. R.K. Mukherjee, "the whole of Bengal is a fertile alluvial plain, but this can be divided into four natural regions¹⁵ according to the extent to which the soil is

enriched by silt deposited when the rivers are in flood."¹⁶

In the early days of the British rule, the Bhagirathi served as the main water way in Murshidabad. And on the bank of it the city became the chief centre of commerce. Mr. Hamilton remarked in 1820 that "Murshidabad was the gate of a heavy inland traffic and river was seen constantly covered with boats which were examined at the Custom house."¹⁷ According to Rennel's map the Bhagirathi flows past Jangipur, Murshidabad, Kassimbazar, Burhampur, Plassey, Cutwa, Ahgadeep, Nuddeah, Mirzapour, Bansbarya, Hoogly, Chandernagore, Serampour, Calcutta, Budge budge and Fulta.¹⁸ But the course of the Bhagirathi gradually changed due to silting. This silting of river started as early as 1666. We got the testimony from the French traveller Bernier when he came to visit Murshidabad.¹⁹ This was perhaps the earliest reference to silting up the Ganges.²⁰ The Bhagirathi, which was the channel of conveyance between Malda and Murshidabad and Calcutta, was not navigable in the dry season.²¹ The river system of Murshidabad and Malda was mainly constituted by the Ganges and the Mahananda. It made the communication easy and facilitated commerce. Alexander Dow rightly remarked that "the easy communication by water from place to place facilitated a mercantile intercourse among the inhabitants. Every village has its canal, every pergunnah its river, and the whole kingdom the Ganges which falling by various mouths into the Bay of Bengal lay open the ocean for the export of commodities and manufactures."²²

Murshidabad occupied the convenient position for river traffic, "lying between the two first offshoots of the Ganges, which leads southwards direct to Calcutta."²³ The eastern side of the district being surrounded by the Ganges, the Bhagirathi and the Jalangi made the transportation easy. The Ganges was navigable throughout the year for large boats of "100 maunds burden or say four tons."

In the rainy season, the rivers Bhagirathi and Jalangi could float boats of equal burden and in summer they became fordable at many points. The Singa, the Bansloi & the Dwaraka rivers of Mursidabad were navigable for boats of 50 maunds (or say two

tons) during the rainy season. Many important towns of Murshidabad were situated on the banks of rivers. Thus the geographical situation of Murshidabad was highly favourable for the expansion of trade and the river traffic helped in the dissemination of silk trade. The steamers would regularly ply between Murshidabad and Goalundo and Calcutta. The Ganges or Padma was navigable throughout the year. The other rivers like Bhagirathi and Jalangi were also navigable except in dry season. The river Bhagirathi was flowing from the north to the south in the district. It divided the district into two equal parts and formed a contrast to each other. The portion to the west of the river was Rada and that to the east was Barendra. The principal seats of trade of the district were Azimganj, Jangipur, Jiaganj, Khagra and Dhulian. The Jain merchants of Azimganj were very famous for their wealth. The other important markets were Bhagwangola, Beldanga, Saktipur, Jalangi, Kandi, Gokarna, Lalbagh, Sagardighi, Baluchar and Chhapghati. Periodical fairs were also held at Dhulian, Jangipur, Chaltia, Santipur and Kandi. Silk was the chief export of trade.

The river Mahananda divided Malda into two parts. In the dry season the navigation in the district was limited to the Mahananda, the Atreyi and the Karotoya which were navigable at all seasons for boats of "500 mans burthen". The rivers which were navigable all through the year for boats of 100 maunds were the Ganges, the Mahananda, the Kalindri and the Punarbhaba. The other four rivers, viz. the Tangan, the Pagla, the Sonakhali, and the Suarmasa were navigable only in the rainy season for boats of 50 maunds or 2 tons burden. The river system of Malda was mainly constituted by the Ganges and the Mahananda.²⁴ The river traffic system was good in the country. The Ganges connecting Malda and Murshidabad with the other parts of the country made the communication easy and facilitated the development of the Silk industry there.

Besides the water routes, there were land routes also. Easy communication of Malda and Murshidabad with the other parts of the country both by land and water was helpful for the development of silk industry and trade there. Malda and

Murshidabad were connected through the Ganges with the important towns like Calcutta, Dacca, Patna, Mirzapur and Benares. There was also trade connection with Nepal, Bhutan and Sylhet. Burdwan was not so important a town at that time. Still it was connected with important roads not only with Malda and Murshidabad but also with the other parts of the country. As for example, there were roads running from Burdwan to Chandernagore and thence to Calcutta, one to Ghyretty Cantonment by Dhaniakhali, one to Rajmahal, one to Radhanagar, one to Chanderkona.²⁵ Kasimbazar was the important Silk centre and it was also connected by many important roads with the different parts of the country. There was "one from Cossimbazar to Patna, one to Burdwan, one to Jalangi and thence to Dacca, one to Rampur-Boalia, one to Meenkhot and Dinajpur, one to Malda, one to Rampur."²⁶

III

Climate played a significant part on the ecological setting of Malda and Murshidabad. The essential factor for the growth of sericulture and silk industry there was climate. It helped the silk worms to live, grow and form cocoons. The silkworms formed cocoons "in a temperature between about 60° and 85°F the best temperature being 70°-75°F with about a similar percentage of humidity."²⁷ The quality of the filament of the cocoon depended on temperature. "The quality of the filament does not solely depend upon the food of the insect, but is also influenced by the degree of temperature in which it is reared."²⁸ The very high or low temperature and very high or low percentage of humidity in the atmosphere created an obstacle for the silkworms to thrive. Temperature had a direct effect on the worms and both in very high or low temperatures eggs would not hatch properly, the silk worms would not feed, grow or spin properly and the moths would not lay eggs properly.²⁹ Humidity had also an equal effect on the worms and 70 to 75 percent humidity in the air was always better for the growth of the healthy worms. Too dry and too humid atmosphere retarded the functions of the worms and variations in temperature were always fatal to the rearing of silk worms. Both the temperatures and humidity in the topography

of Malda and Murshidabad were admirably suited to the growth of silk industries. The humidity of the atmosphere was high throughout the year. It was lowest in March, after that it increased steadily and reached the highest point in August-September. In October, there was a slight fall and at the beginning of February it began to decrease further till the lowest grade of saturation was reached in March.³⁰

The climate of Malda and Murshidabad was generally hot and dry. An oppressive summer season, well-distributed rainfall and high humidities all through the year were the main characteristics. Sky became cloudy in the monsoon season while it began to clear up in October, and the sky would remain clear or lightly clouded in the rest of the year.³¹ The post monsoon season was fairly pleasant. The solar heat helped in the cultivation of mulberry. But the scorching ray of the sun in Bengal, particularly in the areas of Malda and Murshidabad, was not suitable for maintaining the natural quality of silk as it "burns the thread, weakens it, crisps it, tarnishes the colour of the silk, and renders it worse in the hand of the dyer."³² Therefore, the cocoon-growers killed the chrysalis in the cocoons not by sun heat but by hot woven.

Irrigation was not needed for the culture of mulberry at Malda and Murshidabad due to sufficient and well-distributed rainfall there. The average annual rainfall in Malda district was 60-64 inches and on an average there were 67 rainy days at Malda. August was the month with the heaviest rainfall and the variation in the rainfall from year to year was not large.³³ So, irrigation was not necessary, as almost the whole of the cultivated fields would go entirely under water during the rains.³⁴ In Murshidabad, the average annual rainfall was 50.91 inches and the number of rainy days were 60.34.³⁵

Water is a vital factor in the growth of silk industry. Clear water helped not only in winding off the cocoons, but also in maintaining the glossiness of silk. Climate made the water of Malda and Murshidabad clear and such clear water "facilitated

the winding off the cocoons, and gave a rich gloss and brilliancy to the colour of the silk."³⁶ It was inevitable to keep the reeling basin always full of water in order to maintain in the silk a fine colour.

The climatic condition of a region helps in the production of abundant foodgrains also. "It is rainfall rather than soil conditions, which for the most part govern agriculture, and condition population-density in the plain."³⁷ Sufficient rainfall favoured the cultivation of various crops in Bengal and this gave the people of Bengal some sorts of leisure which helped them in cultivating arts and crafts. Forbes J. Royle remarked that "this (climate) would have allowed leisure to some of the people to practise useful arts and to pursue a scientific course of observation, or a philosophical train of thought."³⁸ If it was true for the whole of Bengal, it was particularly true of the people of Malda and Murshidabad where artistic skill in silk industry grew from early times on account of easy availability of food grain. The French traveller Bernier and Tavernier were impressed by the "fertility of the alluvial soil of Bengal, its tropical flora and the ease with which crops were raised."³⁹ Some salient meteorological statistics is given in the Table 1:1 for the town of Berhampore (Murshidabad).

T A B L E 1:1

Months	Temperature					Humidity	Cloud	Rainfall	
	Mean	Mean maximum	Mean minimum	Mean Daily	Range Month	Mean	Mean	Inches	Days
January	65	77	53	24	25	87	1.5	0.47	1
February	70	82	57	25	34	80	2.2	0.92	2
March	80	93	66	27	38	71	2.7	1.05	2
April	88	100	75	25	29	76	3.8	1.75	3
May	87	97	77	20	23	82	5.6	4.88	8
June	86	92	79	13	17	88	8.1	9.87	12
July	84	89	79	10	12	92	8.7	10.31	16
August	84	89	79	10	10	92	8.9	10.98	16
September	84	89	79	10	11	90	7.2	9.79	12
October	81	88	74	14	20	85	3.6	4.71	5
November	73	82	64	18	25	85	1.9	0.40	1
December	66	77	55	23	26	85	1.4	0.10	...
Year	79	88	70	19	23	84	4.6	55.23	78

Source: O' Malley, Bengal District Gazette, Murshidabad, 1914, P. 18.

IV

In their report about the culture of mulberry in the soil of Bengal the Directors stated "so luxuriant a soil, with so happy a climate for vegetation as Bengal was described to be, might possibly made the leaves of the mulberry-tree too fibrous, or the fibres too tough; it was therefore suggested to adopt the practice as in Italy, by sawing off the taproot of the tree, which being thus deprived would draw less juices from the earth."⁴⁰ The fertility, wealth and beauty of the kingdom of Bengal attracted Francis Bernier, the French traveller, very much. He said, "in regard to valuable commodities of a nature to attract foreign merchants, I am acquainted with no country where so great a variety is found."⁴¹ The beauty of Bengal was very charming. In describing its beauty Bernier also remarked, "throughout a country extending nearly an hundred leagues⁴² in length, on both banks of the Ganges, from Rajmahal to the sea, is an endless number of channels, cut, in bygone ages, from the river with immense labour, for the conveyance of merchandise and of the water itself, which is reputed by the Indians to be superior to any in the world. These channels are lined on both sides with towns and villages, thickly peopled with Gentiles; and with extensive fields of rice, sugar, corn, three or four sorts of vegetables mustard, sesame⁴³ for oil, and small mulberry-trees, two or three feet in height, for the food of silk-worms."⁴⁴

Therefore, environment appeared to play an important part in the growth of mulberry trees, as its cultivation mainly depended on climatic conditions and soil types. Malda and Murshidabad had qualified in this regard. Besides, irrigation was not needed, for abundant rainfall on such a soil made cultivation easy and profitable.⁴⁵

The silk rearing community of Malda and Murshidabad got every advantage of the ecological setting of the areas, and mulberry plantation, cocoon-growing, silk winding and silk weaving became

feasible in the natural environment of the regions. Land was elevated and the productions of mulberry leaves were in abundance there. In consideration of this congenial industrial climate R.C.Dutt held the view that "the silk worm was principally confined to Bengal, it would not flourish in Northern India, and the soil of Bombay was not suited to the mulberry culture."⁴⁶

Consequently, silk became an established industry of Malda and Murshidabad. The ecological setting favoured the growth of moriculture, sericulture, silk-worm growing, silk throwing, silk weaving and silk trade and, thereby, paved the way for economic development of the regions. The communication and transport of Malda and Murshidabad being carried through the rivers with the other parts of the country also helped to stimulate silk business and to localise silk industry. Merchants from distant places assembled there, and conducted a wide range of trade in silk. "The silk industry has been the principal non-agricultural industry in Murshidabad for the last three centuries."⁴⁷

Geographical position, soil condition, easy communication, temperature, humidity and precipitation had combined with the inherent skill of the people of Malda and Murshidabad to build the reputation of silk industry and trade. Geography encouraged the silk growing community to settle there. The silk weavers also became a sedentary community and they attained proficiency in their calling on account of the fact that "proficiency was transmitted for centuries from father to son."⁴⁸ Further, they had their slender and delicate physical frame and fine sense and taste which helped them to become adept in the production of silk.



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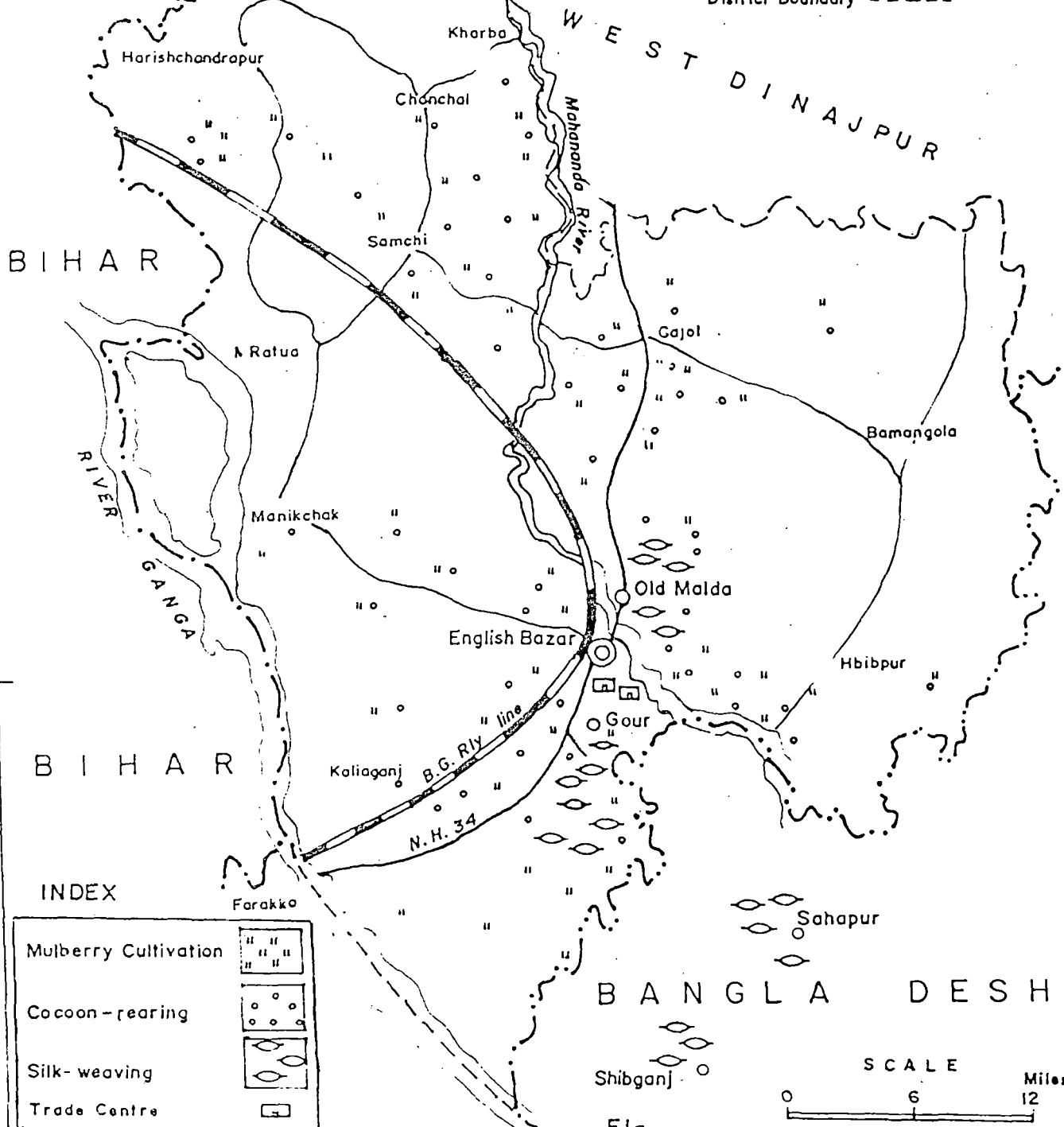
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88° E

MAP OF MALDA DISTRICT Showing Mulberry Cultivation, Cocoon-rearing and Silk-weaving

International Boundary — · — · — State Boundary — — — —
District Boundary - - - -



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Mulberry Cultivation	" " "
Cocoon-rearing	○ ○ ○
Silk-weaving	◇ ◇ ◇
Trade Centre	□

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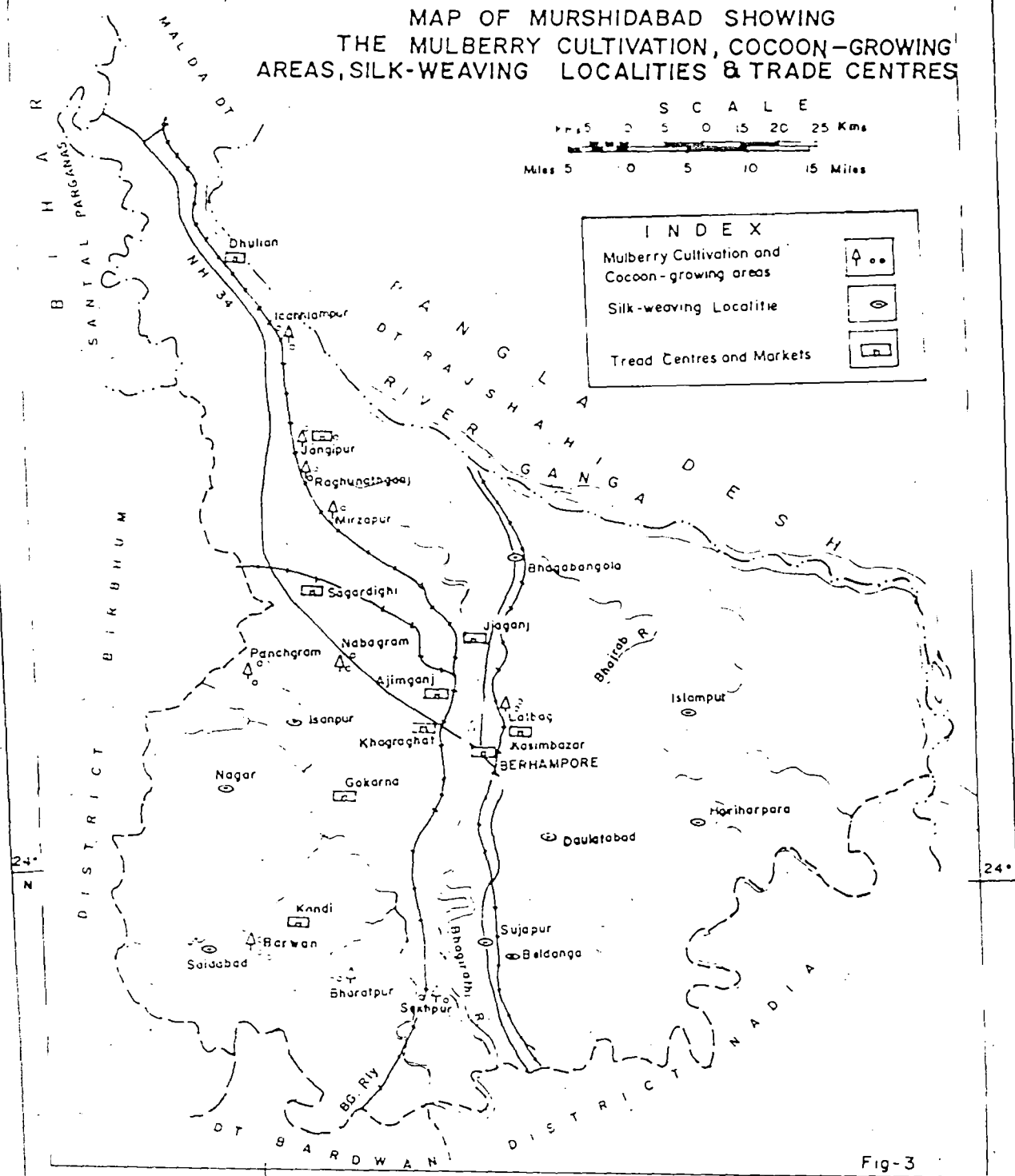
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88° E

MAP OF MURSHIDABAD SHOWING THE MULBERRY CULTIVATION, COCOON-GROWING AREAS, SILK-WEAVING LOCALITIES & TRADE CENTRES



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