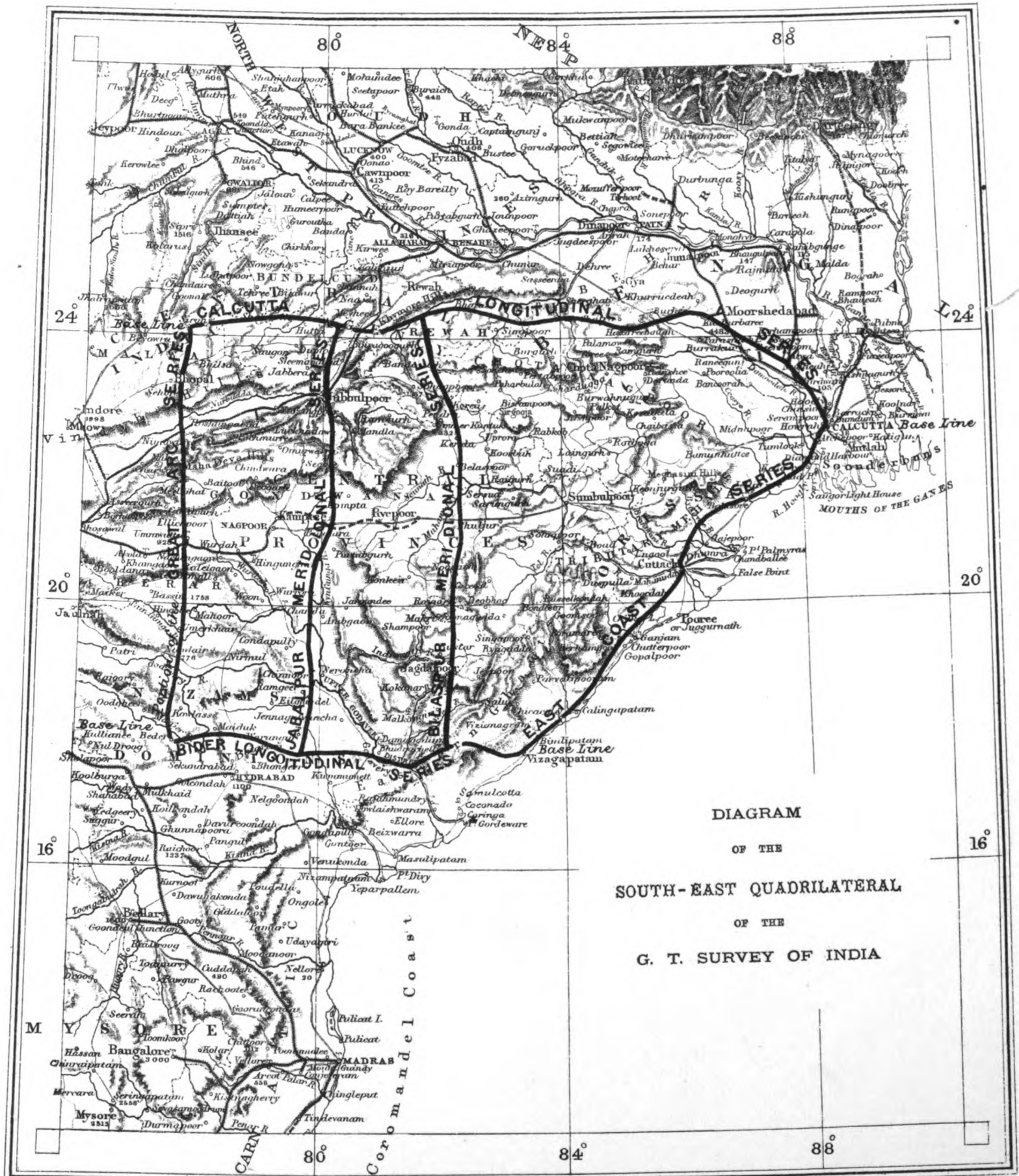


GREAT TRIGONOMETRICAL SURVEY OF INDIA



C. DYSON, PHOTO.

Photostereographed at the Office of the Trigonometrical Branch, Survey of India, Dehra Dun, August 1880.

G. G. OLLENBACH, ZINCO.

SYNOPSIS OF THE RESULTS OF THE OPERATIONS OF  
**THE GREAT TRIGONOMETRICAL SURVEY OF INDIA**  
VOLUME XII.

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DESCRIPTIONS AND CO-ORDINATES  
OF THE  
PRINCIPAL AND SECONDARY STATIONS AND OTHER FIXED POINTS OF  
**THE CALCUTTA LONGITUDINAL SERIES**  
*OR SERIES B*  
OF THE  
**SOUTH-EAST QUADRILATERAL.**

---

BY MAJOR-GENERAL J. T. WALKER, C.B., R.E., F.R.S., &c., &c.,  
SURVEYOR GENERAL OF INDIA AND SUPERINTENDENT OF THE SURVEY  
AND HIS ASSISTANTS.



Dehra Dun:

PRINTED AT THE OFFICE OF THE TRIGONOMETRICAL BRANCH, SURVEY OF INDIA.

M. J. O'CONNOR.

1880.



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PAGE 6— <i>B.</i>	line 11 from bottom	<i>after</i>	the old mint.	<i>add</i>	The station is about 279 feet above the ground level of the Jail.
9— <i>B.</i>	" 17 "	<i>for</i>	N. E.	<i>read</i>	W. S. W.
"	" 4 "	"	when the lower mark * * * height.	"	when it was found in good preservation and no alteration in its construction was made.
"	" 2 "	"	S.	"	S. S. W.
10— <i>B.</i>	" 17 from top	"	when the lower mark * * * height.	"	when it was found in good preservation and no alteration in its construction was made.
"	" 20 "	"	2 miles N.	"	1½ miles S. W.
"	" 5 from bottom	"	1 mile E.	"	2 miles S. E.
12— <i>B.</i>	" 12 "	"	2 miles N.	"	1 mile W. N. W.
"	" " "	"	3.5 miles N. E.	"	5 miles N. W.
14— <i>B.</i>	" 19 "	"	0.75 of a mile east.	"	1½ miles E. by N.
15— <i>B.</i>	" 14 "	<i>after</i>	1836	<i>add</i>	1837, 1845, 1846
19— <i>B.</i>	" 22 from top	<i>for</i>	40 feet	<i>read</i>	89 42 feet
79— <i>B.</i>	" 9 " column 5	"	Karásoli, LXIX	"	Karásoli, LXIX
84— <i>B.</i>	in col. 3	<i>before</i>	line 11 from bottom	<i>insert</i>	H 52
85— <i>B.</i>	Since this Volume was passed through the press, it has been discovered that Anoti Hill and Lakni h.s. are identical.				
89— <i>B.</i>	in col. 3	<i>after</i>	line 22 from top	<i>insert</i>	H 43
90— <i>B.</i>	" 2	"	" 16 "	"	H 119
98— <i>B.</i>	" "	<i>before</i>	" 8 from bottom	"	H 1236
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94— <i>B.</i>	" 3	"	line 12 from bottom	"	H 2168
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## ON CHART.

Chart No. 1	<i>for</i>	Lora h.t.	<i>read</i>	Lora h. tr.
-------------	------------	-----------	-------------	-------------

## ADDITIONAL ERRATA.



PAGE		°	'	"		°	'	"	
89— <i>B.</i>	latitude of Búdí Paturiá Bungalow	<i>for</i>	24	11	6·8	<i>read</i>	24	10	6·8
93— <i>B.</i>	" of Dangarh Building	"	24	6	31·3	"	24	5	31·3
95— <i>B.</i>	" of Dugáo Fort	"	24	9	39·6	"	24	8	39·6
"	" of Gamberiá Building	"	24	4	58·9	"	24	3	58·9
99— <i>B.</i>	" of Kanáo Fort	"	24	0	12·5	"	23	59	12·5
100— <i>B.</i>	" of Kimlásá Fort	"	24	13	20·4	"	24	12	20·4
101— <i>B.</i>	" of Koria Hill Mark	"	22	39	14·36	"	23	39	14·36
"	" of Kurai s.	"	24	3	23·91	"	24	2	23·91



## REFERENCES.

v

The Principal Stations of this Survey, when on hills or high mounds, consist of circular masonry pillars from 3 to 4 feet in diameter for the large theodolites to rest on: each pillar is surrounded by a platform from 14 to 20 feet square for the observatory tent and observer: as these stations are invariably placed on the highest accessible points, the pillars rarely require to be more than 2 to 3 feet high. But when the stations were in the plains, where high mounds were not available, towers had to be built; these were in the majority of instances in the form of hollow squares with ladders inside for mounting to the top, where a short, circular, isolated and perforated pillar of masonry of the usual dimensions, standing on wooden beams let into the walls, was built for the instrument to rest on. A few of the towers were constructed of the modern pattern, consisting of a central, perforated pillar of masonry, surrounded by a platform of sun-dried bricks for the observatory tent and observer. When the pillars were perforated, no mark-stones were permanently placed at their upper surfaces. The old semaphore stations at Ganjua, Mubarakpur, Dilakás and Nibria, on the line from Calcutta to Benares, were adopted as survey tower stations: these were of a circular hollow form, and were adapted to carry the short pillars above referred to for the theodolite.

The abbreviations employed in the text are as follows:—

h.s.	denotes	hill station	(secondary)
s.	„	station	„
t.s.	„	tower station	„

These abbreviations are placed only after stations where a theodolite has been set up and observations taken to surrounding points.

The name in italics in the alphabetical list commencing on page 84—*B.*, is that of the district in which the point is situated.

The latitudes and longitudes of all points shown on the charts at the end of this volume, and of those other points included (from want of space on chart No. 3) in list on page 115—*B.* will be found in the text. The latter exhibits numerical values of triangles only to points of a superior class, to which alone, if exhibited on the charts, lines are drawn: these lines are either continuous throughout, or dotted for half the length and continuous for the other half: the dots indicate that the bearing was not observed, and in such cases numerical values of azimuths are not given. For other points, difficult to identify or of comparatively less accuracy, numerical values of triangles or azimuths are not given.

The trigonometrical heights always refer to the upper mark-stone let into the pillar when the latter is solid; and to the upper surface of the pillar, on which the theodolite stood, when the pillar is perforated or the tower is hollow: the spirit levelled heights refer to the points on which the levelling staff stood as indicated in foot-notes in the Co-ordinate List commencing on page 84—*B.*

November 1880.

J. B. N. HENNESSEY,  
*In charge of Computing Office.*





## PREFACE.



The chain of triangles which extends from Sironj, in Central India, to Calcutta, and directly connects the base-lines at those two places, is known as the Calcutta Longitudinal Series. It separates two of the great Sections into which the Principal Triangulation of the Survey of India has been divided for convenience of reduction, and which are known as the South-East and the North-East Quadrilaterals. In the general reduction it was assigned to the first of these Sections, which embraces the area included between the Meridian of  $78^\circ$  on the west, the Coast line on the east and the Parallels of  $18^\circ$  and  $24^\circ$  on the south and north. With the exception of a comparatively short chain of triangles along the meridian of Sambalpur,  $84^\circ$ , the whole of the principal triangulation of this Quadrilateral was completed by the year 1873: the base-lines at its four corners, namely Sironj, Bider, Calcutta and Vizagapatam, on which the linear elements were dependent, had been completed several years previously. As it was probable that many years might elapse before the remaining chain of triangles could be undertaken, and as the base-lines, the four external and all the most important internal chains had been finished, the simultaneous and final reduction of this figure was commenced, without waiting for further triangulation, on the completion of that of the North-West Quadrilateral, the results of which have already been given in Volumes II to IV of the *Account of the Operations, &c.* The South Párasnáth and South Malúncha Meridional Series were purposely excluded from the reduction, on account of their having been executed with inferior instruments, in the early days of the Survey; they were afterwards made consistent with the simultaneously reduced portion of the triangulation; and this will also have to be done for the Sambalpur Meridional Series, after its completion, whenever that may be. The general principles of the simultaneous reduction, and the procedure followed in carrying it out, have been explained in Volume II of the *Account of the Operations, &c.*, and full details of the whole of the principal triangulation at present included in the Quadrilateral, will be found in a Volume, to be published hereafter, which will probably be Volume VI.

As however the entire contents of the volumes of the principal triangulation are not needed by geographers and surveyors, and moreover as these volumes give no details of the secondary triangulation—which is of considerable value for local requirements—it is obviously desirable that Synopses of the final results of the whole of the operations, including the secondary as well as the principal triangulations, should be published for general use, in such a form as to be most suitable for convenience of reference. This has already been done for the several Series forming the North-West Quadrilateral, as follows:—

- |  |   |                    |
|--|---|--------------------|
| I. Great Indus Series.   | } | already published. |
| II. Great Arc, Section $24^\circ$ to $30^\circ$ .              |   |                    |
| III. Karáchi Longitudinal Series.                              |   |                    |
| IV. Gurhágárh Meridional Series.                               |   |                    |
| V. Rahún Meridional Series.                                    |   |                    |
| VI. Jogí-Tíla and Sutlej Series.                               |   |                    |
| VII. North-West Himalaya Series, nearly ready for publication. |   |                    |

And for the following Series of the South-East Quadrilateral, viz.,

- |   |   |                    |
|---|---|--------------------|
| VIII. Great Arc, Section $18^\circ$ to $24^\circ$ . | } | already published. |
| IX. Jabalpur Meridional Series.                     |   |                    |
| X. Bider Longitudinal Series.                       |   |                    |
| XI. Biláspur Meridional Series.                     |   |                    |

The present is the 12th Synoptical Volume, and it gives the results of the whole of the triangulation, both the principal, which was executed with great theodolites having azimuthal circles of 24 to 36 inches in diameter read by 5 micrometer microscopes,—and the secondary, which was executed with 18-inch theodolites read by micrometer microscopes, and with smaller theodolites, having circles of 7 to 14 inches in diameter, read by verniers.

By the process of reduction which has been followed, the principal triangulation has been rendered perfectly consistent, both internally and externally; internally, so that if in any one of the several polygonal figures of which the chains may be composed, calculations are carried from one station to another in every possible direction, the same results will be inevitably deduced; and externally, so that the values of the co-ordinates of any station, when computed from the given co-ordinates of any other station, with the final linear and angular data, will be the same, whether the calculation is carried directly through the series, or circuitously through any of the other chains of triangles comprising the South-East Quadrilateral. All secondary triangulations which emanate from one side of the principal series and close on another side thereof, or on a contiguous series, have also been made consistent throughout.

As regards the general arrangement of this volume, it is necessary to point out that the several sections have been prepared and printed at different times, and that the work has extended over several years. The Introduction and the Names and Descriptions of the Principal Stations, were originally prepared for Volume VI of the *Account of the Operations, &c.*, and when a sufficient number of copies had been printed for that work, additional copies were struck off for the present synopsis. The Names and Descriptions of the Principal Stations, pages 1—*B.* to 19—*B.*, were printed first of all; this was done in the years 1873-74, after a general programme had been drawn up for the reduction of the South-East Quadrilateral: there was then a long pause in the printing, while the reduction of the principal triangulation was being completed. Finally the secondary triangulation had to be adjusted in accordance with the principal, and then the printing of this volume was resumed.

The data given in this volume are the following:—

*First* (page 1—*B.*), an alphabetical list of the names of the principal stations, showing the numbers assigned to them, which were employed in the reductions as being more convenient to use than names.

*Second* (page 3—*B.*), a numerical list giving the names corresponding to the numbers.

*Third* (page 5—*B.*), descriptions of the principal stations—of their structure and positions—as taken from the original records of the observations, and supplemented by an Addendum, page 21\*—*B.*, which gives the most recent information of their condition which has been received up to date.

*Fourth* (page 21—*B.*), the angles and sides of the principal triangles, numbered and arranged in order from west to east.

*Fifth* (page 30—*B.*), the angles and sides of certain secondary triangles. The numbering is here made consecutive to that of the principal triangles, in order to facilitate references which are made in other sections to the place where the length of a side is to be found.

*Sixth* (page 64—*B.*), the azimuths of surrounding stations and points, at principal, principal-auxiliary† and secondary stations, the latter arranged in alphabetical order.

*Seventh* (page 84—*B.*), the co-ordinates and descriptions of all stations and points arranged in alphabetical order.

The Heights of the stations have been divided into two groups for final adjustment. Those of the first group have been determined differentially between Kámkhera, of which the height is 1,780·1 feet, and Bhaorása 1,387·3 feet—which values rest on the line of Spirit Levels carried from the mean sea level at Karáchi to Sironj, and are given at pages 134 and 135 of the *Tables of Heights in Sind, the Punjab, &c.*, Calcutta 1863—and the height of Sonákúr, 124·6 feet, as determined by leveling with a 12-inch theodolite from the 63rd mile-stone from Calcutta on the Grand Trunk Road; this mile-stone is one of the points fixed in the line of Spirit Levels carried from Karáchi to Calcutta, and its height will be found on page 51 of the *Tables of Heights in the N. W. Provinces and Bengal*, Roorkee 1866.

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† NOTE.—By a principal-auxiliary station is meant a station auxiliary to a principal station at which observations were taken to fix unvisited points.

The heights of the stations falling into the second group have been determined differentially between the following obligatory values; *viz.*, Sonákúr, 124·6 feet, as already given; Chinsura, 86·4 feet, as determined by spirit leveling; North End Calcutta base-line, taken as 16·3 feet; and South End Calcutta base-line, as 13·0 feet. The height of Chinsura will be found given on page 52 of the second of the Tables of Heights already referred to. The heights of the two ends of the Calcutta base-line were deduced as follows:—

Height of base-line dot at S. End Calcutta base-line above sea level determined by Spirit Leveling from Kydd's Dock, ... ..	10·43 feet
Correction for difference in the values of height of datum in Kydd's Dock, — 8·82 used in the above determination and — 6·25 as brought down from Karáchi mean sea level, ... ..	+ 2·6 „
Height of base-line dot at S. End Calcutta base-line above Karáchi mean sea level, ... ..	13·0 „
Height of tower at S. End Calcutta base-line above base line dot, ... ..	73·6 „
Height of top of tower at S. End Calcutta base-line above Karáchi mean sea level, ... ..	86·6 „
Difference of height between upper surfaces of towers at S. and N. Ends of Calcutta base-line determined by reciprocal vertical angles, ... ..	4·2 „
Height of top of tower at N. End Calcutta base-line above Karáchi mean sea level, ... ..	90·8 „
Height of top of tower at N. End Calcutta base-line above base-line dot, ... ..	74·5 „
Height of base-line dot at N. End Calcutta base-line above Karáchi mean sea level, ... ..	16·3 „

All the heights of the Calcutta Longitudinal Series were determined differentially, by the method of reciprocal vertical angles, back and forward observations being taken at each of the principal stations, at the time of minimum refraction. The errors generated in the sections of the triangulation containing the two groups of stations as above indicated, were 1·5 feet in the western and 3·6 feet in the eastern group.

It has not been considered necessary to publish the whole of the details of the secondary triangulation. The sides and angles of 836 triangles, which were selected as most likely to be of general use, and the azimuths of all these sides, have been given; but for a number of other points the co-ordinates only have been given. With the aid of Nos. X, XI, and XII of the "*Auxiliary Tables to facilitate calculations of the Survey Department of India*", Dehra Doon 1868, local surveyors, working on a system of rectangular co-ordinates, can readily transform the spheroidal co-ordinates here given to suit their own requirements.

The Longitudes depend on an astronomically determined value of the longitude of the Madras Observatory, 80° 17' 21", which was deduced about the year 1815. There has long been reason to believe that this value was about 3' too great; but, pending the final determination of the longitude of the Madras Observatory, it has not been considered desirable to alter the value, which has therefore been maintained up to the present time. An electro-telegraphic determination of the longitude of Madras from Greenwich, commencing with the difference between Suez and Greenwich—determined, in 1874, under the superintendence of the Astronomer Royal—was completed in 1877 by the determination of the difference between Suez and Madras, by Captains Campbell and Heaviside, as a part of the operations of this Survey. The combined result places the Observatory at Madras in Long. 5<sup>h</sup> 20<sup>m</sup> 59<sup>s</sup>·42 = 80° 14' 51"·30. Thus the following precept may be accepted with considerable confidence,—

**All the values of longitude in this volume require a constant correction, probably of—2' 30".**

As regards the orthography of Indian names in the present volume. In the early portion, consisting of Alphabetical and Numerical lists and Descriptions of Principal Stations, printed in 1873-74, the orthography of Dr. Hunter's "Guide to the Orthography, &c." was adopted for such names as occur in the Guide, and all other names

were spelt in keeping therewith, as nearly as was desirable. Then there was a pause of about two years in the printing, during which several of the provincial lists of spellings, constructed under the orders of the Government of India, were received. In the remainder of the volume such of the spellings as are given in the lists (excepting those of the principal stations, which are generally spelt as at first) were adopted; for the names of places not in the lists and consequently not so well known, the rule was followed of accenting all vowels, wherever necessary. This has caused some diversities of spelling, as in the terminal *gaon* which is occasionally printed *gáon*. It is however believed that, notwithstanding such departures from a standard spelling, all the names will be readily recognisable. As a general rule the pronunciations of the vowels are as follow:—*a* has a variable sound as in *woman*, *rural*, *paltry*; *á* as in *tartan*; *i* as in *bit*; *í* as in *ravine*; *u* as in *bull*; *ú* as in *rural*; *o* as in *note*; *e* as *a* in *say*; *au* as *ou* in *cloud*; *ai* as *i* in *ride*.

The Charts accompanying this volume show the whole of the principal stations and triangulation, the positions of all the secondary points, and those portions of the secondary triangulations of which full details of the angles, sides and azimuths are given. With the aid of the Charts it is hoped that little difficulty will be met with in finding out any of the data which may be required. The descriptions of the secondary stations are in some cases not as full and clear as is to be desired: this arises from the inadequacy of the information entered on the spot by the surveyors in their field books; every effort has been made to supplement this, whenever it was practicable to do so, in order to facilitate the future identification of the stations, and all the information which is at present forthcoming has been given.

The general arrangement of this volume and the preparation of the data which it contains have been the work, at different times, of Mr. Hennessey, M. A., F.R.S., Major Herschel, R.E., F.R.S., and Mr. Cole, M. A. Mr. Cole moreover supervised the Simultaneous Reduction of the South-East Quadrilateral of which this series forms a portion, and he also wrote the Introduction to this volume. Great pains have been taken to secure the utmost accuracy in preparing the data and passing them through the press.

CALCUTTA,        }  
 March 1879.     }

J. T. WALKER, MAJOR GENERAL, R.E.,  
*Surveyor General of India.*

**CALCUTTA LONGITUDINAL SERIES.**



## CALCUTTA LONGITUDINAL SERIES.

## INTRODUCTION.

Towards the end of the year 1824 Captain Everest, the then Superintendent of the Great Trigonometrical Survey, found his health so much impaired by the hardships and privations he had undergone in the discharge of his duties, that it began to be manifest that he would soon have to seek a change of climate. He had, about this time, brought the section of the Great Arc between latitudes  $18^{\circ}$  and  $24^{\circ}$  nearly to a termination, and only postponed quitting his post till this should be accomplished. By January 1825 he had completed the triangulation, and measured a Base-line at Sironj, and had also taken a series of celestial observations for latitude at Kaliánpur; and by March he was able to quit the field.

His health having now somewhat improved, he decided again to delay his departure and to proceed with his party to Goonah, there to bring up the calculations connected with his operations. Here he suffered a relapse and became so weak that he lost all further hesitation about applying for leave of absence; and he only put off proceeding to Calcutta to obtain a medical certificate until he should regain sufficient strength to enable him to bear the journey.

It now became a question how the survey establishment was to be employed during his absence. The only officers besides himself were four Sub-assistants, the senior of whom was a man of no education, beyond what he had picked up during a long period of service under Colonel Lambton and Captain Everest. He understood the ordinary procedure in executing a triangulation and was a fair observer, but he knew nothing of the science of his profession. It was desirable therefore, both for this cause and from the fact that only an inferior instrument was available, that the party should be entrusted with the execution of some series of minor importance. Captain Everest suggested triangulations emanating in a northerly direction from the Bombay Longitudinal Series, a sufficient portion of which series had been executed by himself, prior to Colonel Lambton's death, to furnish bases for such operations. But he stated that had it not been that he considered the management of an extensive eastern and western series required more skill than that of a meridional series—an opinion which has been since amply confirmed by experience—he would have recommended a chain to be carried eastward from near the Sironj Base, along the parallel of  $24^{\circ}$ , which he



thought, would pass over comparatively fertile and populous territory; lastly he pointed out that there remained the completion of the Bombay Longitudinal Series, which had been carried as far as the meridian of  $75^{\circ} 58'$ , leaving only 200 miles of what appeared to be favourable country to traverse.

Unfortunately the undertaking which Captain Everest least advocated was the one preferred by the Indian Government, who decided that a longitudinal series should be executed, which originating from the triangulation in the neighbourhood of the Sironj Base-line, should be carried eastward to close on Calcutta. This series was afterwards the basis on which ten meridional series rested for many years, and during this interval it was a constant source of regret that so important a triangulation had not been executed with all the refinement of modern times.

The Surveyors were Mr. Joseph Olliver, who had joined the Survey at the time of its

*Cost of Survey Establishment by which the Calcutta Longitudinal Series was executed.*

Mr. J. Olliver, 1st Sub-Ast.	Rs. 400 0 0
„ W. Rossenrode, 2nd „	„ 300 0 0
„ M. Torrnick, 3rd „	„ 140 0 0
„ J. Peyton, 3rd „	„ 107 0 0
1 Sardár and 28 Instrument Carriers	219 8 0
12 Principal Flagmen	96 0 0
6 Harkáras	30 0 0
1 Jamadár, 1 Havildár, 3 Naiks and 30 Sepoys	332 0 8
Allowance for 4 private tents	88 0 0
1 Dresser	40 0 0
	1752 8 8

origin under Colonel Lambton, Mr. W. Rossenrode, whose length of service was nearly equally great, and two young assistants, Messrs. Murray Torrnick and J. Peyton. The instrument employed for the principal triangulation was an 18-inch Alt-Azimuth by Cary, furnished with two microscopes to each circle.\* Mr. Olliver's method of using the instrument was to change zero by arcs of  $20^{\circ}$  from  $0^{\circ}$  up to  $160^{\circ}$ , always keeping the same face. For a time he reduced the number of zeros by increasing the arc from  $20^{\circ}$  to  $30^{\circ}$ . The neglect to change face was not of so much

consequence in the horizontal observations; for these, owing to the signals being at approximately the same height, may be assumed to have been affected to nearly the same extent by errors of collimation and of the adjustment of the transit axis to the vertical axis, leaving the deduced angles free; but all azimuth observations to circumpolar stars were vitiated and had to be rejected. After the measurement of the Calcutta Base-line, in 1831, he was provided with an instrument—probably Troughton and Simms' 18-inch Theodolite No. 1†—having three microscopes wherewith to read the horizontal limb, and his zero settings were  $18^{\circ}$ ,  $19^{\circ}$ ,  $20^{\circ}$ ,  $21^{\circ}$ ,  $22^{\circ}$ ,  $23^{\circ}$ ,  $24^{\circ}$ ,  $25^{\circ}$ ,  $26^{\circ}$ ,  $27^{\circ}$ ,  $28^{\circ}$ ,  $29^{\circ}$ ,  $30^{\circ}$ . No direct evidence as to the signals employed is now on record; but there can be little doubt that those which were observed to by day were opaque, such as masts and flagstaves; by night luminous signals, such as those devised by Captain Everest when he was conducting the Bombay Longitudinal Series in 1822, were employed: they consisted of a small earthen cup, of about six inches diameter, filled with cotton seed steeped in oil and resin, which was set to burn under a large inverted earthen vessel about  $2\frac{1}{2}$  feet in diameter, with an aperture cut in the side.

\* See Appendix No. 2 of Volume II, page 68.

† This appears from a statement in a letter from the Surveyor General to Lieutenant Rivers dated 27th February 1850, and it is further corroborated by the discrepancies between the measures of angles on opposite faces which are very similar to those shown in Appendix No. 6 of Volume II to have been exhibited by this instrument.

The Series was originated at the close of 1825, on the side Bhaorása to Kámkhera, and was carried a distance of about 2 degrees eastward as far as the side Kusmár to Himilia during that field season, which terminated only with the commencement of the rains. The party then recessed at Saugor. One of the many instances of the childish fears inspired by the survey operations, among even the better informed natives of the country, in its earlier days, was manifested this season by the Rája of Rámnapur, who caused it to be proclaimed by beat of drum that his people should be cautious of falling into the hands of the surveyors, lest they should have their children taken to burn in the signal fires! Fears of a similar character are not unknown even in the present day. When the Railway bridge over the Jumna river at Allahabad was in course of building, a rumour was current that the engineers required young children for the foundations of the piers: and again so late as 1874, considerable inconvenience and annoyance were caused to the residents at the Hill Sanitarium of Mussooree by certain ill-disposed people circulating a report that an individual had arrived there with the express object of distilling an *elixir vitæ* from the brains of the unwary whom he waylaid at night. As a consequence it was exceedingly difficult to induce any native servant to stir out after dark. The facility with which such absurdities are credited is the more remarkable because that the natives have constant evidence of the anxiety the European Officials always evince to preserve life even, as instanced in the out-breaks of famine and pestilence, at the risk and frequent loss of their own lives.

The party entered the field again about the 5th October 1826. Mr. Olliver first occupied himself in adding largely to the secondary operations over the ground traversed the preceding season until he had retraced his steps as far as Teonda, when he completed the principal triangle Teonda-Ahmadpur-Kámkhera, thus forming a double connection with the Great Arc. By January a further advance eastward was made, and the side Chámki-Marwás was reached before the party was driven from the field by the rains. Mr. Rossenrode selected stations in advance, while Mr. Olliver conducted the final observations. Recess quarters at Mirzapur were reached on the 3rd July 1827.

Field operations began again on the 9th October 1827; but as the country where the series had terminated the preceding season was very unhealthy, Mr. Olliver occupied himself at first in executing a small triangulation round Benares, Mirzapur and Chunar. This was completed by the end of December and a connection formed with the main series, when the latter was proceeded with; and notwithstanding considerable sickness among the establishment it was advanced as far as Sewádhi. The party reached recess quarters at Gya in July 1828. They were detained longer in quarters than usual by order of the Surveyor General, to bring up arrears of calculations, which, owing to Mr. Olliver's having devoted his whole energies to the execution of field work, had accumulated to a considerable extent. It was not till about the middle of November that the party again took the field. This season the triangulation was advanced to about Long.  $86^{\circ} 49'$ , and recess quarters at Berhampore were entered in July 1829: field operations did not commence again till December. Up to this time the operations had lain in hilly country; but they had now been brought within a short distance of the plains. These, in the early days

of the Survey, always proved very troublesome to the surveyors, chiefly because it was then considered a *sine quâ non* that the sides of triangles should be of the greatest practicable length. This entailed the building of very lofty towers and the clearing of long rays at a considerable expenditure of time and money. Accordingly about the middle of March 1830 we find Colonel Everest, who had recently returned from England, reporting to Government that the triangulation having reached Gopálnagar, about 56 miles from Calcutta, was much impeded by the flatness of the country. In order to save expense he requested permission to make use of the line of Semaphore towers connecting Calcutta with Benares, and that Mr. Olliver might receive authority to construct such other towers as were necessary. Both requests were conceded, and the preparation of the Semaphore towers to receive the instrument, as well as the building of other towers, was at once taken in hand. Burdwan was chosen for recess quarters this season, and the party arrived there on the 30th June, the triangulation only having been advanced to the side Râdhâmâdhupur-Karâsoli.

A small reduction was this year made in the survey establishment. When Colonel Lambton commenced the Trigonometrical Survey he had to depend entirely on his own resources for the protection of his establishment and the public property under his charge, and he organised a small guard consisting of a Jamadâr, a Havildâr, 3 Naiks and 30 Sepoys, which in English would nearly correspond to a Sub-Lieutenant, a Sergeant, 3 Corporals and 30 Privates. This guard always attended the Survey wherever it was carried and rendered it quite independent of protection from the local authorities. The Government being impressed with the idea that the guard was unnecessarily large ordered its reduction to 1 Havildâr, 1 Naik and 12 Sepoys; after a time it was abolished altogether and guards were obtained from the local authorities.

In October Colonel Everest required Mr. Olliver's attendance at Calcutta to assist in completing the General Reports, Volumes 5 and 6, giving the results of Colonel Lambton's operations from 1814 to 1821. He returned to Burdwan in December and took the field again about the middle of January 1831. Trial was first made this season of the heliotropes and lamps brought out from England by Colonel Everest, but with what result does not appear. The triangulation closed this year at Madhpur, at the end of July.

The next cold season witnessed the measurement of the Calcutta Base-line. This was completed in January 1832, and Mr. Olliver's party were then engaged for sometime on triangulation in and about Calcutta. Towards the end of March triangulation was resumed at Mubârakpur and the Calcutta Longitudinal Series was completed by the end of July.

It thus appears that this series, which is 684 miles long, took 6 years to accomplish. It traversed, throughout the greater part of its extent, a wild desolate and unhealthy tract of hill country which presented formidable difficulties. These, notwithstanding frequent ravages of jungle fever, were successfully overcome by Mr. Olliver, to whom very great credit is due for his indefatigable exertions. But owing to the defective state of the instrumental equipment, the work was only of a secondary character, and most inadequately fulfilled the object for which it was intended, *viz.*, to serve as a basis for the several meridional series between

Sironj and Calcutta, the Himalaya mountains and the east coast of the Madras Presidency. There is therefore much reason to regret that the surveyors were not employed instead in executing one or more of the meridional series, which are simply based on and are not needed as the basis of other series, and which, even with the inferior instruments at their disposal, they might have completed with all the accuracy desirable for future Topographical requirements.

For upwards of 30 years this Series continued to be a blot on the triangulation of India, till in 1863-64 it became necessary to execute the Jabalpur Meridional Series. There was then no alternative but to revise so much of the Calcutta Longitudinal Series as would enable the new meridional series to be originated from a trustworthy base. The work was entrusted by Colonel Walker, Superintendent of the Survey, to Mr. G. Shelverton, to be executed with Troughton and Simms' 36-inch theodolite.

Mr. Shelverton took the field early in October and reached the neighbourhood of the Sironj Base on the 16th December. Arrangements were at once made for strengthening the old Series by the addition

Season 1863-64.

PERSONNEL.

G. H. W. Shelverton, Esq., Civil Assistant.  
A. Donnelly, Esq., Civil 2nd Assistant.  
Mr. M. C. Hickie, Senior Sub-Assistant.  
" F. Bell, 1st Class "  
" L. Pocock, 2nd Class "

of the two stations Lakoli and Bhaurgára, thus transforming that portion of it into a series of 4 simple polygons. The preliminary operations afforded occupation to the party until the end of January 1864, when the final obser-

vations were commenced and were concluded on the 10th May. Mr. Hickie was entrusted with the building of platforms, cutting of hill roads and clearing of forest on this portion of the work and Mr. Pocock assisted in the observatory. The other two assistants were employed on the preliminary work of the Jabalpur Series.

Whilst these operations were in progress Mr. Keelan, who had recently completed the Rahún Meridional Series, and had been directed to undertake the Sambalpur Meridional Series on the meridian of  $84^{\circ} 15'$ , after first revising the portion of the Calcutta Longitudinal Series between that meridian and the meridian of Jabalpur, had commenced the latter undertaking with Colonel Waugh's 24-inch theodolite No. 1.

His party broke ground at Gora Hill Station, on the 1st December 1863. The upper

Season 1863-64.

PERSONNEL.

H. Keelan, Esq., 1st Assistant.  
Mr. H. E. T. Keelan, 1st Class Sub-Assistant.  
" H. W. Psychers, 3rd "  
" J. F. Trotter, " "

mark-stone at this station had been removed, but the lower one, engraved on the rock *in situ*, had not been tampered with. As was to be expected from the nature of the country, the means of communication were found to be bad and very limited, the population scanty, provisions scarce and fever at the commencement and at the end of the cold

season very prevalent; twice the camp suffered severely from its attacks.

On the completion of the selection of two polygons round Mirchádhi and Sewádhi—the original series was here single and did not include the stations of Harai, Kochea and Khaira Pándu—the main party left Harai and marched for Aunri to begin the final observations. On arrival at Mirchádhi several of the men of the establishment as also the native doctor were suddenly taken ill with fever; and during the two following days, the 19th and 20th December,

all in camp were prostrated including Mr. Keelan himself. Work was thus brought to a standstill. As soon as it was possible to do so, the party left the neighbourhood of Mirchádhi and proceeded by short marches towards Aunri, the foot of which hill was reached on the morning of the 25th December. Here a hospital for the sick was established. Three deaths occurred; but early in January the establishment began to recover and on the 11th final observations were commenced at Aunri Hill Station, and they were proceeded with regularly till April, when the two polygons already mentioned were completed.

A party was detached under Mr. H. E. T. Keelan assisted by Mr. Trotter to lay out the triangulation for the Sambalpur Meridional Series. In this operation they were again attacked by jungle fever; and when the native doctor, who was sent to their assistance, arrived he found Messrs. Keelan and Trotter in a very deplorable state. All in camp, both public and private servants with only one or two exceptions, were prostrated, so that neither could the tents be pitched or food prepared. Messrs. Keelan and Trotter were in a helpless condition lying on some straw under the shade of a tree, and the fever had taken such hold on them that they did not recover from it for a long time, and the former was so much shaken by it that he had to be transferred to another party working in a healthier tract of country.

Mr. Keelan, who had recessed at Chunar, resumed operations at Aunri on the 19th

Season 1864-65.

PERSONNEL.

H. Keelan, Esq., 1st Assistant.  
Mr. L. H. Clarke, Civil 2nd Assistant.  
" H. W. Psychers, 3rd Class Sub-Assst.  
" J. F. Trotter, " "

December, and carried the revision of the Calcutta Longitudinal Series westwards to the side Amua-Lora, up to which Mr. Shelverton had revised the previous season: work closed on this side on the 11th April. As much of the old work consisted of single triangles, Mr. Keelan in-

troduced the stations of Banjári, Singpur, Barjana and Koría, in order to make the Series double throughout. He thus formed this section of the Series, which extends a distance of 168 miles, into two double polygons consisting of 20 triangles. All the old marks were found intact. No secondary work was undertaken, as the original Series embraced extensive operations of this nature.

It had been originally intended that the Sambalpur Meridional Series should follow the

Season 1865-66.

PERSONNEL.

H. Keelan, Esq., 1st Assistant.  
Mr. H. E. T. Keelan, Senior Sub-Assistant.  
" H. W. Psychers, 2nd Class "  
" J. F. Trotter, " "  
" E. J. Connor, 3rd Class "

meridian of  $84^{\circ} 15'$ ; but the physical difficulties which presented themselves during the season of 1863-64 in extending the Series southwards were found so great, that Colonel Walker, decided to carry a Series down the meridian of  $85^{\circ}$  instead. It thus became necessary for Mr.

Keelan to revise a further portion of the Calcutta Longitudinal Series before he could obtain a satisfactory base for his operations.

His party left Chunar on the 27th November to recommence work from the side Hurí-láong-Turer. In shifting ground to the eastward no material change in the character of the country presented itself. Its physical features were peculiar: the hills rarely rise to a point but assume the form of plateaus, with abrupt and nearly perpendicular scarps. These elevated masses of table-land, or *páts* as they are generally called, are from 3000 to 3500 feet in height, and vary in breadth from 4 to 7 miles: their surfaces are either flat or slightly undu-

lating, and are mostly covered with long grass or shrubs, and occasionally with dense forest jungle. It was a very troublesome matter to select stations for the completion of the triangulation without any break of continuity; the ground had to be repeatedly reconnoitered, positions which at first promised well turning out, on further examination, to be unsuited for the extension of the triangulation. The difficulties were eventually overcome by an aggregation of stations forming a polygon of three centres.

As soon as the services of the assistants could be spared, Mr. H. E. T. Keelan, with Messrs. Peychers and Connor to assist him, commenced the approximate series on the meridian of  $85^{\circ}$ . They succeeded in selecting 12 stations, forming two hexagons and one quadrilateral, and advancing the triangulation 112 miles. The tract of country (Singhbhoom) which was traversed was extremely wild, and the habitations were more scanty than in the district to the north. It was intersected by several rivers, the largest of which are the Koil and the Braming. The jungles abounded with wild elephants, buffaloes, rhinoceros and tigers. In addition to taking a share in the approximate series, Mr. Peychers was employed on minor triangulation to determine the positions of Lohardugga, Doranda and Ranchee.

The revision of the Calcútta Longitudinal Series having now proceeded so far, the

*Season 1866-67.*

PERSONNEL.

H. Keelan, Esq.,	Surveyor 3rd Grade.
Mr. H. E. T. Keelan,	1st Grade, Sub-Asst.
„ H. W. Peychers,	3rd „ „
„ J. F. Trotter,	„ „ „
„ E. J. Connor,	4th „ „

question arose whether it was not of more importance that this series should be completed, in view of the large quantity of triangulation which depended on it, rather than that a new meridional series should be first executed; and Colonel Walker decided in favour of the former. Accordingly Mr. Keelan was instructed to proceed with this revision, from the side Kasiátu-Patál up to which it had been carried during the preceding season.

The party reached Kasiátu on the 10th December and Mr. H. E. T. Keelan was then detached to select stations in order to make the series double. By the introduction of Mahúda and Jálve he was enabled, with the two first stations of the North Párasnáth Meridional Series, Bámani and Ghoránji, to construct a double polygon round Chendwár and Párasnáth. Beyond this figure was a pentagon round Bihárináth which appertained to the old work. All the angles of both these figures were observed by Mr. Keelan this season. In the meantime the advanced party proceeded with the examination of the towers employed by Mr. Olliver; for the Series here leaves the hills and enters the plains of Lower Bengal. All the towers were visited except those at the extremities of the Base-line and at Sáttén and Chinsurah Stations of the Calcútta Meridional Series. The old telegraph towers were found to be in as good preservation as when originally built, except that the whole of the woodwork had decayed away and needed to be renewed. The towers built by Mr. Olliver had not proved of such good workmanship. Hákestápur and Aknápur had fallen down entirely, and Bhálki was also in a very dilapidated state. There was no uniformity in the stations built by Mr. Olliver: at Madhpur a solid rectangular column of masonry 7 feet at base, 4 feet at top and 40 feet high marked the station. At Bhálki the station consisted of a platform having 4 pillars, one at each corner, about 35 feet high, on which was supported the stage for the observer and his instrument. Bhola again was a hollow rectangular tower.

Mr. Keelan reached Raneegunge with his assistants early in November 1867, but found the country so flooded by the heavy rains that had fallen during the cyclone that had passed over Calcutta and the surrounding country on the 1st of that month, that he was obliged to halt for nearly a fortnight, until the inundation had sufficiently subsided to permit of the field work being commenced.

Season 1867-68.

PERSONNEL.

H. Keelan, Esq.,	Surveyor	3rd	Grade.
Mr. H. E. T. Keelan,	Civil Asst.	4th	Grade.
" H. W. Peychers,	2nd	Grade,	Sub-Asst.
" J. F. Trotter,	"	"	"
" A. Moore,	4th	"	"

On the 20th the camp started for Rádhámádhupur Hill Station, situated in a part of the district which was elevated and free from inundation. On arrival the clearing of the rays left unfinished the preceding season was taken in hand. When this work was ended the party moved on to Nawágáon Tower Station. This station had been selected during the previous season with the intention of completing the double polygon round Bihárináth and Rádhámádhupur, into which the old hill station of Dubrájpur was to have entered; but when Nawágáon was visited, Malúncha was found to be visible from it, and Dubrájpur was accordingly dispensed with. The preliminary operations, such as the clearing of rays and the selection of stations, were now continued by all hands. In order to obtain mutual visibility at the time of minimum refraction between Bhálki and Madhpur, it was found necessary to raise the former to 40 feet in height and the latter to 50; preparations for the building having been made, the stations of Párhát and Sonákúr were selected by ray-tracing.

On completing the ray-traces as far as Hákestápur the main party returned to Madhpur on the 15th January, and on the following day the old column there was blown up; and at the base, level with the ground, a markstone was found, in the normal of which two others were carefully inserted.

In February the party retraced its steps to Malúncha, where final observations commenced. These were proceeded with until the 23rd May when continued wet weather drove the camp into Burdwan for shelter, the angles at Hákestápur and Mubárákpur of the Madhpur polygon being still unmeasured.

Mr. Keelan met with several difficulties during this season in the execution of his work. It has been already stated that during the early part of the season, the district of Burdwan was, throughout the greater portion, under water. The only dry spots were village sites, with barely enough ground near them to pitch a few tents; and as there were no facilities for travelling the party experienced much trouble in getting from one place to another. Later in the season the labour which was needed for building stations and clearing rays was not easily procured. The villagers were generally engaged in cutting their rice crop and for this reason refused to work. One native official to whom Mr. Keelan wrote in the vernacular a request that he would furnish Mr. Trotter with workmen, sent a reply in English that all the inhabitants about his táluk consisted entirely of the middle class, and depended solely on the produce of the soil for their food, and were not accustomed to work for money. Much passive opposition was also encountered; and on two occasions brick-making was stopped in consequence of the preposterous demands which were made for the materials. Fortunately Mr. Keelan was cordially assisted by the higher authorities, and thus, and by exercising much patience and forbearance, he was able to carry on his operations.

The advanced party under Mr. H. E. T. Keelan, when they entered the Hooghly district, experienced much difficulty from another cause, *viz.*, the sickness and mortality then prevailing there. Mr. Keelan writes of it as follows:—"During the winter months a very peculiar and fatal fever of a typhoid type, prevailed throughout the Hooghly district, carrying off numbers of the inhabitants, each village losing a large percentage of its population. In some few cases entire villages were depopulated, these being chiefly situated on the borders of broad and marshy ravines, locally named "*kháls*," which poisoned the atmosphere with malarious exhalations. Native doctors and compounders were sent by the district officers to alleviate the sufferings of the people; but they do not seem to have done much good, the ravages of the fever having continued unabated till the approach of the hot season, when it seemed to have gradually left the district, receding in a south-westerly direction. The inhabitants of the country round the stations of Aknápúr, Bhola and Sáttén seemed to have suffered more than those of any other place visited in the district, especially the villages near Aknápúr, which, being surrounded by *kháls* and marshes, were affected most, the banks of the ravines being converted into veritable golgothas from the remains of the unburied dead. The poorer classes having suffered most, the rites of burial and cremation were in most cases unperformed, thereby intensifying the unhealthiness of the season. The inhabitants of this and the adjacent districts are noted for their disregard of the most ordinary sanitary precautions; their villages being densely packed and buried in masses of trees, surrounded by numberless tanks choked with noxious weeds; these together with their banks which are covered with unburied and unburnt bodies being the chief cause of the fatal epidemic."

The camp left Burdwan on the 15th November 1868, and Mr. Keelan first proceeded to

Season 1868-69.

PERSONNEL.

H. Keelan, Esqr., Dy. Supdt.	3rd Grade.
Mr. H. E. T. Keelan, Surveyor	4th "
" H. W. Peychers, Asst. Surveyor	2nd "
" J. F. Trotter, "	" "
" A. Moore, "	4th "

examine the station marks of the Madhpur polygon at which work had closed the preceding season. He then observed an azimuth at Madhpur, after which final observation of the horizontal angles was commenced. Whilst observing at Mubárakpur, on the 10th January, a violent earthquake occurred regarding which Mr. Keelan writes as follows:—

"Shortly after commencing the horizontal angles this evening, and whilst intersecting the Madhpur heliotrope, a slight vibration was noticed in the telescope of the theodolite—as if a person were treading heavily on the top of the tower—gradually increasing in magnitude until it was recognised to be due to an earthquake. It became more and more violent, and the instrument and every thing on the top of the tower rocked to and fro for some time, creating no little alarm, when the shock suddenly ceased; I then looked at the level and the plumb-line; the former was running rapidly backwards and forwards in the tube, whilst the latter was oscillating violently below. The shock was felt at about 4h 45m p. m., and lasted fully one or two minutes; the direction of motion being apparently north and south, as indicated by the oscillation of the plumb-line."

It was intended that the revision of the Calcutta Longitudinal Series should terminate on the side Bhola-Dilakás, a side of the polygon round Nibria which had been executed under Captain Thorold Hill during season 1847-48 when he commenced the East Coast Series; but



when the towers of Bhola and Dilakás were examined no ground level mark could be found at either. At Bhola, where the tower was 75 feet high, the floor when cleared of rubbish did not exhibit any sign of a mark ever having been placed there, nor did an excavation of some 5 feet reveal one. At the top of the tower however, there was a circular aperture in the roof of about 3 inches diameter, the centre of which must have been used by the former observers. At Dilakás where the tower was 80 feet high there was an indentation in the floor below the aperture at the top; and it is possible that something inserted therein contained the station mark. Since the towers were so lofty a very slight deflection might have caused a considerable amount of displacement in the position of the centre of the aperture at the summit, consequently it did not appear safe to assume that these centres were still in the normals of the original marks, and it became necessary to remeasure the angles of the two triangles Dilakás-Bhola-Nibria, Nibria-Bhola-North End Base connecting with the side Nibria-North End Base, where the ground level marks were in good preservation. The side Bhola-Sátten was, moreover, connected with the side Bhola-North End Base by the two triangles Sátten-Bhola-Chinsurah, Chinsurah-Bhola-North End Base, which appertained to the Calcutta Meridional Series. Their angles had been measured by Mr. Peyton in season 1844-45 with Troughton and Simms' 18-inch No. 1, an inferior instrument. It would therefore have been very desirable to have remeasured them now with the instrument Mr. Keelan was employing; but for this purpose it would have first been necessary to cut down a number of valuable trees which had grown up on the lines since they were originally cleared, and to remove other obstacles to mutual visibility, such as houses and other buildings which might subsequently have been erected on them; and as the lines all lay in or near Calcutta, the opposition likely to be met with from the inhabitants, whose excessively litigious character is proverbial, might have delayed the completion of the revision a whole season or more. It was therefore decided to confine the operations to the remeasurement of only the two triangles first specified, *viz.*, Dilakás-Bhola-Nibria, Nibria-Bhola-North End Base, and as they would enter the work as single triangles, Mr. Keelan was directed to observe each angle on twice the usual number of zeros, to compensate for the loss of weight occasioned by departing from the polygonal form of triangulation. Another azimuth was observed at Aknápur, in course of the operations, and all the final angles were finished on the 25th March, the revision being then complete up to the side Nibria to North End Calcutta Base.

The values of the angles obtained at Bhola, Dilakás, Nibria and North End Base proved so accordant with those previously measured by the East Coast Series party that there was no further question as to the identity of Bhola and Dilakás. And it was therefore decided that the triangulation of the Calcutta Meridional Series as far as the side Sátten-Chinsurah, and that of the East Coast round Nibria, should be combined with Mr. Keelan's, thus forming a polygon with three centres. The manner in which this was done will be seen by reference to page 39 of Part I.

It happened that in the vicinity of the station of Sonákúr there were two bench-marks fixed by the Spirit Leveling Operations of this Survey, *viz.*, the 58th and 63rd milestones on the Grand Trunk Road. Accordingly Mr. Keelan was instructed to carry a line of levels from Sonákúr to one of the above mentioned milestones, employing for the purpose the 12-inch theodolite with which his party was furnished.

In revisionary operations of this nature it is very necessary to make a connection with the identical points at which former observations were made, at all sides of junction with preceding triangulation. In the present instance, the original points were identified in almost every case; but at a station near Hazáribágh, on the side of origin of the Chendwár Meridional Series, the markstone had been removed; consequently Mr. Keelan was directed, after completing the junction at Calcutta, to proceed to Chendwár and connect the new station with those of the Meridional Series. This measure protracted his operations into the middle of the unusually intense heat of the summer of 1869. Work terminated at the end of May and the camp marched for Chunar to recess there. The heat was then so excessive, that several cases of sunstroke occurred, which the men of the establishment called Loo-ka-mara.

The revision clearly established the unsatisfactory nature of the original triangulation indicating errors of nearly as much as a foot per mile on certain of the sides, and errors in the elements of Calcutta of no less than 4" in latitude and 1" in longitude. The value of the computed length of the Calcutta base-line, as deduced from the revised triangulation differed from the measured length by a little more than half an inch per mile, whereas the original difference was many times as great. The values of height at Calcutta determined from the measurement of the vertical angles in the course of the new operations differ by only 2 feet from those determined by spirit leveling operations, whereas formerly the difference was about 111 feet. Assuming the spirit levelling operations to be errorless, the total difference of 2 feet in height is made up of an accumulation of error of 1·5 feet between Kámkhera and Sonákúr, where the series lies almost entirely in the hills, and of 3·6 feet, with the opposite sign, between Sonákúr and Calcutta, where the triangulation lies in the plains.

The Calcutta Longitudinal Series, as finally completed, forms one of the bounding chains of the section of the triangulation of India denominated the South-East Quadrilateral. The longitudinal distance between its extreme east and west stations, *viz.*, the South End of the Calcutta Base-line and Kámkhera, is 684 miles, and the closing error of side at the Calcutta Base was 0·62 inches per mile in the Base-line. The discrepancies in latitude, longitude and azimuth at Baniban,—one of the present stations of origin of the East Coast Series—as computed from Kámkhera *viá* the Calcutta Longitudinal Series and *viá* the Great Arc, the Bider Longitudinal and the East Coast Series amounted to

in Latitude	...	0"·308 = 31 feet
„ Longitude	...	0·228 = 21 „
„ Azimuth	...	8·644

These discrepancies have now been dispersed by the Simultaneous Reduction of the South-East Quadrilateral giving corrections to the Calcutta Longitudinal Series

in Latitude	...	0"·030 = 3 feet
„ Longitude	...	0·120 = 11 „
„ Azimuth	...	0·724

and eliminating the error in length at the base-line.

June 1880.

W. H. COLE.



*The Secondary Triangulation of the Calcutta Longitudinal Series.*

The Secondary Triangulation of the Calcutta Longitudinal Series is mainly due to Mr. Olliver, who executed a large amount in connection with the original series during the years 1825 to 1832. It was no part of the programme of the operations of the revision of the series, to re-establish any of the secondary stations or points; because the main object in view was to afford reliable bases for the several meridional chains which emanate from the series, and the positions of all other points than principal stations would, when re-calculated after the revision, be sufficiently accurately determined for any purposes for which they might be required. Messrs. Shelverton and Keelan, therefore, confined themselves to the observation of the angles of principal triangles only, selecting those from the original series which best suited their purpose; and adding others here and there, where they were required to make the chain double throughout. A few additional secondary points were fixed in Damoh, and about Ranchee and Doranda, also the newly built General Post Office in Calcutta.

In and around Calcutta, however, several survey parties have at different times executed secondary triangulations and fixed points by intersection. First Mr. Olliver in 1832, after the completion of the measurement of the base-line; next Mr. Peyton in 1844-45, when originating the Calcutta Meridional Series; thirdly Captain Thorold Hill in 1847-48, when commencing the East Coast Series; and lastly Mr. Ryall, when fixing the Astronomical Latitude Station and establishing a new station at the Surveyor General's Office, the point marking the old station having been lost.

When the several results were collated for publication, it was found desirable to give all the secondary points, which had been determined in and around Calcutta, together in the Synoptical Volume for the Calcutta Longitudinal Series, to which they had mostly appertained in the first instance.

As in a large and important city, such as Calcutta, new buildings are constantly springing up and old ones sometimes disappearing, while the designation of others may change, it has been thought desirable to append a list of the places fixed in and around Calcutta, shewing the years when they were determined, so that any confusion likely to arise from the above mentioned causes may be obviated.

*Stations and Intersected Points in and around Calcutta.*

Station or Point.		Date when fixed.	Observer.	Remarks.
Ágarpára Church	N.W. Corner	1845	Mr. J. Peyton	
”	” Steeple	”	”	
”	” s.	”	”	
Ákra	Farm	”	”	
”	Khál	”	”	
”	s.	1846	”	
Balampur	Tree Flag	1845	”	
Bálánagar	Temple No. 1	”	”	
”	Temple No. 2	”	”	
Ballabhpur	Flag	”	”	
Bally	s.	”	”	
Balúkhál	Chimney	”	”	
”	Temple	”	”	
Bandanharia	Tree Flag	”	”	
Banpára	Tree Flag	”	”	
Baraset	Flag	”	”	
Barrackpore	Flagstaff	1832	Mr. J. Olliver	
”	Golá Ghát s.	1845	Mr. J. Peyton	
”	Park House	”	”	
”	” s.	”	”	
”	Semaphore	1832	Mr. J. Olliver	
”	s.	1845	Mr. J. Peyton	
Baubazar Khál	Flag	”	”	
Bhadrakáli	Flag	”	”	

*Stations and Intersected Points in and around Calcutta.—(Continued).*

Station or Point.	Date when fixed.	Observer.	Remarks.
Bhot Bágán                      Flag	1845	Mr. J. Peyton	
Buj-Buj                              s.	"	"	
"                                      Tree Flag	"	"	
Calcutta                      Armenian Church	1832	Mr. J. Olliver	
"                                      Bágbazar Temple	"	"	
"                                      Bishop's College	1845	Mr. J. Peyton	Now the Mechanical Engineering College.
"                                      Boithakkháná Church	1832	Mr. J. Olliver	
"                                      Building	1848	Captain C. T. Hill	
"                                      Chandpál Ghát	1832	Mr. J. Olliver	
"                                      Currie's Factory	"	"	
"                                      Dharamtala Church	1848	Captain C. T. Hill	Dharamtala Church.
"                                      Exchange Semaphore	"	"	
"                                      Fort William Chimney	"	"	
"                                      "                      Flagstaff	{ 1832	Mr. J. Olliver	
	{ 1848	Captain C. T. Hill	
"                                      "                      s.	{ 1832	Mr. J. Olliver	
	{ 1845	Mr. J. Peyton	
	{ 1869	Mr. H. Keelan	
"                                      Foundry Chimney	1848	Captain C. T. Hill	
"                                      Free Church of Scotland	"	"	
"                                      Free School Church	"	"	or St. Thomas' (Protestant).
"                                      General Post Office	1869	Mr. H. Keelan	
"                                      Government House	1848	Captain C. T. Hill	
"                                      Jail	"	"	

*Stations and Intersected Points in and around Calcutta.—(Continued).*

Station or Point.	Date when fixed.	Observer.	Remarks.
Calcutta Kidderpore Bridge	1845	Mr. J. Peyton	Hastings Bridge. Fell in and rebuilt in 1873-74.
„ „ Chimney	1848	Captain C. T. Hill	
„ „ Church	„	„	
„ Latitude Station	1865	Mr. E. Ryall	In compound of Mathematical Instrument Dept., now No. 9 Park Street.
„ Loretto Convent	1845	Mr. J. Peyton	
„ Maharajpur Cenotaph	1848	Captain C. T. Hill	Or Gwalior Monument.
„ Mint, Middle Chimney	1832	Mr. J. Olliver	* Is the chimney of the S. Boiler room.
„ „ N. Chimney	„	„	* Is the chimney of the N. Boiler room in Silver Mint.
„ „ S. Chimney	„	„	* Has long been removed.
„ No. 7 Park Street s.	1865	Mr. E. Ryall	No. 9 Park Street.
„ Observatory s.	1832	Mr. J. Olliver	Now 46 Park Street.
„ Ochterlony Monument	„	„	
„ Old Church	1848	Captain C. T. Hill	Generally known as Mission Church.
„ Prinsep's Ghát	1845	Mr. J. Peyton	
„ Race Stand s.	1848	Captain C. T. Hill	Old Stand, south side of Race Course.
„ R. C. Cathedral	„	„	
„ Sailors' Home	„	„	Now Police Office.
„ St. James' Church	„	„	} This was the old church, not in existence now, and not on the site of the present St. James' Church.
„ St. John's Cathedral	„	„	
„ St. Paul's Cathedral	„	„	
„ St. Saviour's Church	„	„	
„ St. Thomas' Church	„	„	Roman Catholic Church.

\* Communicated by Colonel J. F. Tennant, R. E., Mint Master, Calcutta, under date 19th April 1881.

INTRODUCTION.

XIX—B.

*Stations and Intersected Points in and around Calcutta—(Continued).*

Station or Point.	Date when fixed.	Observer.	Remarks.	
Calcutta	Scotch Kirk	1848	Captain C. T. Hill	
„	Strand Mills	1832	Mr. J. Olliver	
„	Sudder Dewani Court	1848	Captain C. T. Hill	Military Hospital.
„	Surveyor General's Office	1865	Mr. E. Ryall	46 Park Street.
„	Thompson's Ghát	1845	Mr. J. Peyton	<i>Disappeared.</i>
„	Town Hall s.	1848	Captain C. T. Hill	
Chátra	Flag	1845	Mr. J. Peyton	
Chingriháta	t.s.	1865	Mr. E. Ryall	
Chinsurah Church	Steeple	1845	Mr. J. Peyton	
„	Armenian Church Steeple	{ 1832	Mr. J. Olliver	
		{ 1845	Mr. J. Peyton	
„	s.	1845	„	
Chitpore	Bridge	„	„	
„	s.	„	„	
Cossipore	Colvin Ghát s.	„	„	
„	E. Mill	„	„	
„	Foundry	„	„	
„	Highest Chimney	1848	Captain C. T. Hill	
„	Loharkhána Ghát	1845	Mr. J. Peyton	
Dhakanser	s.	„	„	
„	Sugar Factory	1848	Captain C. T. Hill	
Dum-Dum	Church	1832	Mr. J. Olliver	
„	Monument	1848	Captain C. T. Hill	
„	Roman Catholic Chapel	1832	Mr. J. Olliver	



*Stations and Intersected Points in and around Calcutta—(Continued).*

Station or Point.	Date when fixed.	Observer.	Remarks.
Dum-Dum Tomb	1832	Mr. J. Olliver	
Fort Gloucester Chimney	1848	Captain C. T. Hill	
„ s.	1846	Mr. J. Peyton	
Gusuríá Chimney	1845	„	
„ (Puráná) Flag	„	„	
Howrah s.	„	„	
Ishará s.	„	„	
Khardaha s.	„	„	
„ Temple	„	„	
Kistonagar Tree Flag	„	„	
Konnagar Ghát	„	„	
„ Temple	„	„	
Kumárháti Temple	„	„	
Kutrang s.	„	„	
Laskarhát s.	1865	Mr. E. Ryall	
Máhesh s.	1845	Mr. J. Peyton	
Metiaburuj Ghát	„	„	
Nishchindeepore Tree Flag	„	„	
No. 1 s. (Hooghly River)	„	„	
No. 2 s.	„	„	
No. 3 s.	„	„	
No. 4 s.	„	„	
No. 5 s.	„	„	
No. 6 s.	„	„	

## INTRODUCTION.

XXI—B.

*Stations and Intersected Points in and around Calcutta—(Continued).*

Station or Point.	Date when fixed.	Observer.	Remarks.
No. 7 s. (Hooghly River)	1845	Mr. J. Peyton	
No. 8 s. ”	”	”	
No. 9 s. ”	”	”	
No. 10 s. ”	”	”	
No. 11 s. ”	”	”	
No. 12 s. ”	”	”	
No. 13 s. ”	”	”	
No. 14 s. ”	”	”	
No. 15 s. ”	”	”	
No. 16 s. ”	”	”	
No. 17 s. ”	”	”	
No. 18 s. ”	”	”	
No. 19 s. ”	”	”	
No. 20 s. ”	”	”	
No. 21 s. ”	”	”	
No. 22 s. ”	”	”	
No. 23 s. ”	”	”	
No. 24 s. ”	”	”	
No. 25 s. ”	”	”	
No. 26 s. ”	”	”	
No. 27 s. ”	”	”	
No. 28 s. ”	”	”	
No. 29 s. ”	”	”	
No. 30 s. ”	”	”	

*Stations and Intersected Points in and around Calcutta—(Continued).*

Station or Point.		Date when fixed.	Observer.	Remarks.
No. 81	s. (Hooghly River)	1845	Mr. J. Peyton	
No. 82	s. ”	”	”	
No. 33	s. ”	”	”	
Noáda	t.s.	1832	Mr. J. Olliver	
Páikpára	s.	1846	Mr. J. Peyton	
”	Village Tree	1845	”	
Pokpári	” Tree Flag	”	”	
Sámpur	s.	”	”	
Sealdah	s.	1865	Mr. E. Ryall	
Seebpore	Distillery	1848	Captain C. T. Hill	
”	Temple	”	”	
Senpukur Village	Tree Flag	1845	Mr. J. Peyton	
Serampore	Building	1832	Mr. J. Olliver	
”	Chimney	”	”	
”	Church	{ ”	Mr. J. Olliver	
”		{ 1845	Mr. J. Peyton	
”	Flagstaff	1845	”	
Shalkiá	s.	”	”	
Uttarpára	s.	”	”	

March 1881.

W. H. C.

CALCUTTA LONGITUDINAL SERIES.

1—B.

ALPHABETICAL LIST OF STATIONS.

Aknápur . . . . .	LXXVI.	Jálve . . . . .	LX.
Amúa . . . . .	XVII.	Kalúmar . . . . .	XII.
Aunri . . . . .	XXXIII.	Kámkhera . . . . .	(IV).
Bágru . . . . .	XLVI.	(of base-line figures).	
Baniban . . . . .	LXXXIV.	Karára . . . . .	XXIII.
Banjári . . . . .	XX.	Karásoli . . . . .	LXIX.
Bámáni . . . . .	LVI.	Kasiátu . . . . .	XLIV.
Bárágáon . . . . .	LV.	Khaira Pándu . . . . .	XL.
Barjana . . . . .	XXIV.	Kochea . . . . .	XXXIX.
Bhálki . . . . .	LXVIII.	Koria . . . . .	XXVII.
Bhaorása . . . . .	(V).	Lakanpúra . . . . .	XIX.
(of base-line figures).		Lakoli . . . . .	II.
Bhaurgára . . . . .	XI.	La Martiniere . . . . .	LXXXVI.
Bhola . . . . .	LXXX.	Lora . . . . .	XVI.
Bhursu . . . . .	XLIX.	Lul . . . . .	XXXII.
Bihárináth . . . . .	LXIII.	Madhpur . . . . .	LXX.
Birpokhar . . . . .	XLV.	Mahúda . . . . .	LIV.
Budhon . . . . .	III.	Máhwári . . . . .	XLVIII.
Bulbul . . . . .	XLIII.	Málhan . . . . .	XLVII.
Calcutta base-line, North End .	LXXXII.	Malúncha . . . . .	LXIV.
Do. South End .	LXXXV.	Mandra . . . . .	VIII.
Chainpur . . . . .	LVIII.	Marwás . . . . .	XXVI.
Chamki . . . . .	XXV.	Mirchádhi . . . . .	XXXIV.
Chapri . . . . .	XXIX.	Mubárákpur . . . . .	LXXV.
Chendwár . . . . .	LIII.	Múrergerh . . . . .	XXVIII.
Chinsura . . . . .	LXXXI.	Náharmau . . . . .	VI.
Dastánpur . . . . .	LXXVII.	Nawágáon . . . . .	LXVII.
Dilakás . . . . .	LXXIX.	Nibria . . . . .	LXXXIII.
Durgápur . . . . .	LXII.	Párasnáth . . . . .	LVII.
Ganjua . . . . .	LXXII.	Párhát . . . . .	LXXI.
Ghoránji . . . . .	LIX.	Patál . . . . .	LII.
Gobra . . . . .	XXXVII.	Pithauria . . . . .	LI.
Gora . . . . .	XXXV.	Pokra . . . . .	XXXI.
Gurwáni . . . . .	XXX.	Púnchi . . . . .	XVIII.
Hákistápur . . . . .	LXXIV.	Rádhámádhupur . . . . .	LXVI.
Harai . . . . .	XXXVI.	Rámpur . . . . .	XXII.
Hariharpur . . . . .	L.	Rangír . . . . .	X.
Himilia . . . . .	IX.	Salaia . . . . .	XIV.
Huríláong . . . . .	XLII.	Samalia . . . . .	LXXXVII.

## CALCUTTA LONGITUDINAL SERIES.

## ALPHABETICAL LIST OF STATIONS—(Continued).

Satíria	. . . .	XIII.	Teonda	. . . .	I.
Sátten	. . . .	LXXVIII.	Tikaria	. . . .	XV.
Saugor	. . . .	V.	Tilabani	. . . .	LXI.
Sewádhi	. . . .	XXXVIII.	Tins	. . . .	IV.
Singpur	. . . .	XXI.	Tinsmál	. . . .	VII.
Sonákúr	. . . .	LXXIII.	Turer	. . . .	XLI.
Súsinia	. . . .	LXV.			

## NUMERICAL LIST OF STATIONS.

(IV)	.	.	.	Kámkhera.	XXXVII	.	.	Gobra.
(V)	.	.	.	(of base-line figures). Bhaorása.	XXXVIII	.	.	Sewádhi.
I	.	.	.	(of base-line figures). Teonda.	XXXIX	.	.	Kochea.
II	.	.	.	Lakoli.	XL	.	.	Khaira Pándu.
III	.	.	.	Budhon.	XLI	.	.	Turer.
IV	.	.	.	Tins.	XLII	.	.	Huriláong.
V	.	.	.	Saugor.	XLIII	.	.	Bulbul.
VI	.	.	.	Náharmau.	XLIV	.	.	Kasátu.
VII	.	.	.	Tinsmál.	XLV	.	.	Birpokhar.
VIII	.	.	.	Mandra.	XLVI	.	.	Bágru.
IX	.	.	.	Himilia.	XLVII	.	.	Málhan.
X	.	.	.	Rangír.	XLVIII	.	.	Máhwári.
XI	.	.	.	Bhaurgára.	XLIX	.	.	Bhursu.
XII	.	.	.	Kalúmar.	L	.	.	Hariharpur.
XIII	.	.	.	Satíria.	LI	.	.	Pithauria.
XIV	.	.	.	Salaia.	LII	.	.	Patál.
XV	.	.	.	Tikaria.	LIII	.	.	Chendwár.
XVI	.	.	.	Lora.	LIV	.	.	Mahúda.
XVII	.	.	.	Amúa.	LV	.	.	Bárágáon.
XVIII	.	.	.	Púnci.	LVI	.	.	Bámani.
XIX	.	.	.	Lakanpúra.	LVII	.	.	Párasnáth.
XX	.	.	.	Banjári.	LVIII	.	.	Chainpur.
XXI	.	.	.	Singpur.	LIX	.	.	Ghoránji.
XXII	.	.	.	Rámpur.	LX	.	.	Jálve.
XXIII	.	.	.	Karára.	LXI	.	.	Tilabani.
XXIV	.	.	.	Barjana.	LXII	.	.	Durgápur.
XXV	.	.	.	Chamki.	LXIII	.	.	Bihárináth.
XXVI	.	.	.	Marwás.	LXIV	.	.	Malúncha.
XXVII	.	.	.	Koria.	LXV	.	.	Súsinia.
XXVIII	.	.	.	Múrergerh.	LXVI	.	.	Rádhámádhupur.
XXIX	.	.	.	Chapri.	LXVII	.	.	Nawágáon.
XXX	.	.	.	Gurwáni.	LXVIII	.	.	Bhálki.
XXXI	.	.	.	Pokra.	LXIX	.	.	Karásoli.
XXXII	.	.	.	Lul.	LXX	.	.	Madhpur.
XXXIII	.	.	.	Aunri.	LXXI	.	.	Párhát.
XXXIV	.	.	.	Mirchádhi.	LXXII	.	.	Ganjua.
XXXV	.	.	.	Gora.	LXXIII	.	.	Sonákúr.
XXXVI	.	.	.	Harai.	LXXIV	.	.	Hákistápur.
					LXXV	.	.	Mubárapur.

## CALCUTTA LONGITUDINAL SERIES.

## NUMERICAL LIST OF STATIONS—(Continued).

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LXXVI . . . .	Aknápur.	LXXXII .	Calcutta base-line, North End.
LXXVII . . . .	Dastánpur.	LXXXIII .	. . . . Nibria.
LXXVIII . . . .	Sátten.	LXXXIV .	. . . . Baniban.
LXXIX . . . .	Dilakás.	LXXXV .	Calcutta base-line, South End.
LXXX . . . .	Bhola.	LXXXVI .	. . . . La Martiniere.
LXXXI . . . .	Chinsura.	LXXXVII .	. . . . Samalia.

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## CALCUTTA LONGITUDINAL SERIES.

## DESCRIPTION OF STATIONS.



(IV). Kámkhera Hill Station, lat.  $24^{\circ} 0'$ , long.  $77^{\circ} 46'$ —observed at in 1824, 1826, 1837, 1848 and 1864—stands on the lands of the village of Imláni, in pargana Sironj of the territories of the Nawáb of Tonk. The circumjacent villages with their distances and bearings are—Imláni, 2 miles S. E.; Kámkhera  $1\frac{1}{2}$  miles W.; Ladhora about 2 miles N.; and Kua about 2 miles S.

The station was originally marked in 1824 by a low circular platform about 2 feet high, having a markstone imbedded in its upper surface, and another in the ground. No change appears to have been made when the station was visited in January 1826 for the purpose of originating the Calcutta Longitudinal Series. On re-visiting it in December 1836 the lower mark was referred to and the upper having been found to deviate 0.75 inches was re-centered over the lower at the same height as before. In January 1837, a pillar constructed of stone and mud was raised to a height of 6 feet above this upper mark, a markstone being placed at the upper surface and another intermediately, and the whole was enclosed within an isolated square platform of 25 feet side at base, having a slope of 4 inches per foot, and of the same height as the pillar. When the station was again visited in December 1848, on commencing the Karáchi Longitudinal Series, the upper markstone had disappeared; the pillar was accordingly dug down to the level of the upper mark of 1824, in doing which a markstone was met with at a height of 26.3 inches above it, but deflected 1.2 inches W. from its normal. A masonry pillar 4 feet in diameter and 8 feet in height was then built over the upper mark of 1824 and 2 markstones inserted therein in the normal of the original one, viz. one on its upper surface and the other 4 feet below; the pillar was then surrounded by an isolated platform of boulders 18 feet square at base and of the same height as the pillar, with a good external slope.

The station was subsequently visited in February 1864, on the revision of the Calcutta Longitudinal Series when the uppermost markstone was compared with the one next below it and being found accurately in its normal was replaced at the same height as before.

(V). Bhaorása Hill Station, lat.  $24^{\circ} 8'$ , long.  $78^{\circ} 3'$ —observed at in 1824, 1826, 1837 and 1864—is built on a low ridge of sandstone, situated in pargana Bhaorása of the Gwalior territories. The circumjacent villages with their distances and bearings are—Bherkheri, about 2 miles N.W.; Kiria, about 2 miles N.E.; Salitra, about 2 miles S.S.W.; and Sarkandi, about 2 miles W.

The station was originally marked in 1824 by a circular platform of loose stones (probably about 2 feet in height) having a markstone at top and another at bottom. No change appears to have been made when it was visited in February 1826 for the purpose of originating the Calcutta Longitudinal Series. On re-visiting the station in January 1837, the upper markstone was removed to examine the dot below, and the former was found to have deflected 0.75 inches: it was accordingly re-adjusted in the normal of the lower mark, and a square pile of 25 feet side at base was raised to a height of 9 feet, enclosing the central isolated pillar 4 feet in diameter which carried a markstone at its summit and another intermediately.

The station was subsequently visited in January and February 1864, on the revision of the Calcutta Longitudinal Series, when the markstones were examined for deflection, and the uppermost markstone was replaced in the normal of the lowermost one, another markstone having been built into the pillar at 3 feet 8 inches below the uppermost one.



I. Teonda Hill Station, lat.  $23^{\circ} 49'$ , long.  $78^{\circ} 14'$ —observed at in 1826 and 1864—is situated on an isolated range of hills, terminating to the S.E. at the village of Teonda, from which the station is approached; tahsil Basoda, súbadári Bhilsa, sarsúbadári Iságarh of the Gwalior territories. There is a remarkable cave on the northern face of the hill close to the station.

The pillar is solid and contains two marks, the upper 3.5 feet above the lower, which is engraved on the rock *in situ*. The station of 1864 was made to occupy as nearly as possible the site of the station of 1826 which was denoted by the remains of a circular platform. No markstone or isolated pillar was found. The village of Rasúlpur lies about half a mile N.W. at the foot of the hill.

II. Lakoli Hill Station, known also as Mirgnáth, lat.  $23^{\circ} 29'$ , long.  $78^{\circ} 8'$ —observed at in 1864—is on a conspicuous peak of the range that forms the watershed of the Betwa and Bína rivers; súbadári Bhilsa, sarsúbadári Iságarh of the Gwalior territories. Beside the platform is a rock with a small hole in its perpendicular face, from which water, esteemed to be holy, can be obtained in scant quantity.

The pillar is solid and contains two marks, the upper 2.75 feet above the lower, which is engraved on the rock *in situ*. The village of Lakoli lies about 1.5 miles W. by N. of the hill and the village of Bhairápur about the same distance E.

III. Budhon Hill Station, lat.  $24^{\circ} 5'$ , long.  $78^{\circ} 34'$ —observed at in 1826, 1833 and 1864—is situated immediately above the village of that name; thánah Berwála, tahsil and district Saugor, jágír Pitoria.

The pillar is solid and contains three marks, the two upper respectively 9 and 4 feet above the lowest. The station of 1826 was re-visited in 1833 for the purpose of originating the Budhon Meridional Series, but no alteration in its construction appears to have been made. When again visited in 1864 the markstones were found untampered with, the upper being accurately plumbed over the lower, which was adopted for the new station.

IV. Tins Hill Station (Tinspahár), lat.  $23^{\circ} 38'$ , long.  $78^{\circ} 30'$ —observed at in 1826 and 1864—is situated in the lands of the village of Soner; mahál Siwás, zila Mushrik of the Bhopál State. On the top of the hill are the remains of a fort, once of some strength, built by Hírde Sháh, the grandfather of Hamír Singh, who lost his jágírs for disloyalty in 1857.

The pillar is solid, 9 feet high and contains three marks. The markstones of the station of 1826 when it was visited in 1864 were found untampered with, the upper being accurately plumbed over the lower, which was adopted for the new station. The village of Soner lies about 2 miles S.W., Siwás, a large town, about 4.5 miles S.W. and Hanautia village about 2.5 miles N.W.

V. Saugor (Ságar) Hill Station, lat.  $23^{\circ} 50'$ , long.  $78^{\circ} 49'$ —observed at in 1826 and 1864—is situated on the Bhunria hill about half a mile due east of Saugor jail and immediately above the old mint.

The pillar is solid, 2 feet high and contains two marks. The markstones of the station of 1826 when it was visited in 1864 were found untampered with, the upper being accurately plumbed over the lower, which was adopted for the new station.

VI. Náharmau Hill Station, lat.  $23^{\circ} 30'$ , long.  $78^{\circ} 52'$ —observed at in 1826 and 1864—is situated within a ruined fort on a hill about half a mile S.E. of the village of that name; thánah Gaurjhamar, tahsil Raili, district Saugor. On the hill top, adjacent to the trigonometrical station, is a reservoir of water, known as Nilkanth Maháráj's tank, which is resorted to by pilgrims immediately after the setting in of the rains.

The pillar is solid, 2 feet high and contains two marks. The markstones of the old station when it was visited in 1864 had disappeared.

VII. Tinsmál Hill Station, lat.  $24^{\circ} 7'$ , long.  $79^{\circ} 2'$ —observed at in 1826, 1833, 1834 and 1864—is situated on the top of a very conspicuous hill about three quarters of a mile S. by E. of the village of Tinsúa from which it is approached; thánah and tahsíl Banda, district Saugor. There is an old stone temple close to the platform. A fair is held annually on the hill about the end of April.

The pillar is solid and has three marks, one engraved on the rock *in situ* and the others 3.5 and 8.5 feet above it respectively. The station of 1826 was re-visited in 1833 for the purpose of originating the Budhon Meridional Series, when its height was increased by 8.5 feet. It was again visited in 1834 to originate the Rangír Meridional Series, but no further alteration in its construction appears to have been made. On visiting it in 1864 the upper mark was found displaced and the position of the lower was adopted for the new station. The deserted village of Tinsi lies S. by E.

VIII. Mandra Hill Station, lat.  $23^{\circ} 39'$ , long.  $79^{\circ} 9'$ —observed at in 1826 and 1864—is on an isolated range about 3 miles N. E. of the town of Raili; thánah and tahsíl Raili, district Saugor.

The pillar is solid and 3 feet high. The markstones of the station of 1826, when it was visited in 1864 were found untampered with, the upper being accurately plumbed over the lower. The position of the lower mark was adopted for the station of 1864. The village of Barkhera is about 2 miles S. E. and the deserted village of Menai at the eastern foot of the hill.

IX. Himilia Hill Station, lat.  $23^{\circ} 45'$ , long.  $79^{\circ} 23'$ —observed at in 1826, 1827 and 1864—is on a low range of hills about 2.5 miles E. by S. of the villages called Lánji and Himilia; thánah, tahsíl and district Damoh.

The pillar is perforated, 25.35 feet high and surrounded by a tower built of stone and mud, and has been raised over the lower markstone of the station of 1826. The height of the pillar of 1826 was 9.08 feet. The village of Bhanpura lies about 1.5 miles N. by W.

X. Rangír Platform Station, lat.  $24^{\circ} 0'$ , long.  $79^{\circ} 28'$ —observed at in 1827, 1834 and 1864—is situated in a ploughed field about half a mile E. of the little village of Rangír; thánah Narsingarh, tahsíl and district Damoh.

The pillar is solid and contains two marks, the upper 5 feet above the lower. The station of 1827 was re-visited in 1834 for the purpose of originating the Rangír Meridional Series and was then raised 4 feet in height. On again visiting it in 1864 the station was found destroyed and although one markstone was discovered amongst the debris it was impossible to say if it was in position. Every endeavour was made that the new station should correspond as nearly as possible with the old.

XI. Bhaurgára Hill Station (Bhaurgára-ka-Horo), lat.  $23^{\circ} 31'$ , long.  $79^{\circ} 23'$ —observed at in 1864—is situated on a low range of hills about  $2\frac{1}{2}$  miles W. by N. of the village of Surádai; jágír Hatri, thánah, tahsíl and district Damoh.

The pillar is solid, 8 feet high and contains two marks, the upper 8.33 feet above the lower. The village of Laklaka is 3.5 miles E.

XII. Kalúmar Hill Station (Hatiápahár), lat.  $23^{\circ} 28'$ , long.  $79^{\circ} 47'$ —observed at in 1827, 1864 and 1865—is situated in the lands of the little village of Kalúmar, on the most elevated part of a high range of hills; thánah Katanghi, tahsíl and district Jabalpur. A Revenue Survey platform, marking the junction of the boundaries of the villages of Thála, Chauri, Kalúmar and Mengwa, adjoins the station.

The pillar is solid and contains two marks, the upper 3.17 feet above the lower. The station of 1827, when visited in 1864, had been destroyed; the remains of a platform were found but no markstones: the new station cannot therefore be considered as identical with the old. The village of Kalúmar lies about 2 miles N. by W., that of Jalheri from which the station is approached about 3 miles S. W. and the large village of Katanghi about 4 miles S. E.

XIII. Satria Hill Station, lat.  $23^{\circ} 54'$ , long.  $79^{\circ} 41'$ —observed at in 1827, 1864 and 1865—is situated in the lands of the village of Pathargarh on a hill named Bhenra, one of a low range  $4\frac{1}{2}$  miles E. by N. of the large village of Hindoria.

The pillar is solid and contains three marks, one at the top and the others 3.08 feet and 6.92 feet respectively below it. The markstones of the station of 1827, when it was visited in 1864 were found untampered with, the upper being accurately plumbed over the lower, which was adopted for the new station. The little village of Pathargarh, which contains a ruined fort and from which the station is approached, lies about 1.5 miles W. by S.; that of Satria about 4.5 miles N. and Jer about 2 miles E.

XIV. Salaia Hill Station, lat.  $23^{\circ} 50'$ , long.  $79^{\circ} 59'$ —observed at in 1827 and 1865—is situated about a mile and half to the N.W. of the village of Rája-ki-Salaia; pargana Raipura of the Panna State.

The pillar is solid and contains three marks, one at the top and the others 3.25 and 5.25 feet respectively below it. The position of the station of 1865 is identical with that of 1827. The village of Adrar is about 1.5 miles N. E.

XV. Tikaria Hill Station, lat.  $24^{\circ} 8'$ , long.  $79^{\circ} 56'$ —observed at in 1827 and 1864—is on the highest part of the plateau on which the little village of Tikaria is situated; thánah Mandwa, pargana Raipura of the Panna State.

The pillar is solid and contains three marks, one at the top and the others 1.67 and 6.58 feet respectively below it. The upper mark of the station of 1827 was in 1864 found accurately plumbed over the lower, which was adopted for the new station.

XVI. Lora Hill Station, lat.  $23^{\circ} 30'$ , long.  $80^{\circ} 12'$ —observed at in 1827, 1864 and 1865—is in the lands of the village of Hargarh, tahsil Sihora, district Jabalpur.

The pillar is solid and contains two marks, the upper 4 feet above the lower. The markstone of the station of 1827 was in 1864 found undisturbed and its position was adopted for the new station. The town of Sihora, on the Jabalpur and Mirzapur road, lies about 3 miles W., Hargarh village S. W., Mirhai N. and Darauli S. by E.

XVII. Amúa Hill Station (known as the Khaimur hill), lat.  $24^{\circ} 0'$ , long.  $80^{\circ} 32'$ —observed at in 1827, 1834, 1864 and 1865—is situated about 1.5 miles S. of Amúa village; thánah Safáganj, pargana and tahsil Myhír, district Nagod.

The pillar is solid and contains two marks, the upper 2.42 feet above the lower. The station of 1827 was re-visited in 1834 for the purpose of originating the Amúa Meridional Series, but no change in its construction seems to have been made. On again visiting it in 1864, the upper mark was found accurately plumbed over the lower, which was adopted for the new station.

XVIII. Púnchi Hill Station, lat.  $23^{\circ} 32'$ , long.  $80^{\circ} 41'$ —observed at in 1827 and 1865—is situated on the highest point of a round hill, locally known as Púnchi-ka-pahár; pargana Chendiah of the Rewah territories.

The pillar is solid and 3 feet high. The lower mark is on the rock *in situ*, having been placed there in 1827. The upper mark was found undisturbed and its height adopted for the new station. The large village of Kauria lies about 3 miles N.

XIX. Lakanpúra Hill Station, lat.  $24^{\circ} 3'$ , long.  $80^{\circ} 50'$ —observed at in 1827, 1843 and 1865—is situated on the highest point of a small range of hills running east and west about 0.5 mile N. of the village of Lakna or Lakanpúra; pargana Rághogarh, district Jabalpur.

The pillar is solid and contains two marks, the upper 3.83 feet above the lower which is engraved on the rock *in situ*. The station was re-visited in 1834 for the purpose of originating the Amúa Meridional

Series when it was raised 2 feet 4·5 inches. On again visiting it in 1865 the markstone was found undisturbed, a circular masonry pillar surrounded by a platform was then built over the lower mark to the same height as the station of 1834.

**XX.** Banjári Hill Station, lat.  $23^{\circ} 13'$ , long.  $80^{\circ} 33'$ —observed at in 1865—is on the continuation of the same range of hills on which Barjana and Singpur hill stations are situated; pargana Rámgarh, district Mandla of the Central Provinces.

The pillar is solid and contains two marks, the upper 3·00 feet above the lower which is engraved on the rock *in situ*. The village of Banjári lies at the base of the hill about 0·75 of a mile E. of the station, that of Dadargawan about 1·25 miles S. and Saidera village about 1·75 miles N. N. W.

**XXI.** Singpur Hill Station, lat.  $23^{\circ} 16'$ , long.  $80^{\circ} 56'$ —observed at in 1865—is on the continuation of the extensive mass of the Mekal hills; pargana Saipura of the Rewah territories.

The pillar is solid and contains two marks, the upper 3·00 feet above the lower which is on a stone embedded in the ground. The village of Singpur lies about 1 mile N., that of Kúdari about 1·5 miles N. W. and Ammani village about 2 miles S. E.

**XXII.** Rámpur Hill Station, lat.  $23^{\circ} 41'$ , long.  $81^{\circ} 7'$ —observed at in 1827 and 1865—is situated on a spur of a hill on which, about 2 miles to the east, is the fortress of Bándogarh; pargana Rámnagar of the Rewah territories.

The pillar is solid and contains two marks, the upper 2·92 feet above the lower which is engraved on the rock *in situ*, having been placed there in 1827. The upper mark of 1827 had disappeared in 1865 and a new pillar was then built to the same height as before. The village of Rámpur lies about 2 miles S.

**XXIII.** Karára Hill Station, lat.  $24^{\circ} 5'$ , long.  $81^{\circ} 18'$ —observed at in 1827, 1842 and 1865—is situated on the highest point of a small range of hills running northeast and southwest; pargana Rámnagar of the Rewah territories.

The pillar is solid and contains two marks, the upper 3·00 feet above the lower which is engraved on the rock *in situ*, having been placed there in 1827. The station was revisited in 1842 for the purpose of originating the Karára Meridional Series, when no alteration in its construction appears to have been made. On again visiting it in 1865, the upper mark was found displaced, and a new pillar was then built to the same height as before. The village of Karára lies about 3·5 miles N.E.

**XXIV.** Barjana Hill Station, lat.  $23^{\circ} 9'$ , long.  $81^{\circ} 18'$ —observed at in 1865—is on a hill so called rising considerably above the general level of the table-land known as Mekal Pát; pargana Sohágpur of the Rewah territories.

The pillar is solid and contains two marks, the upper 3·00 feet above the lower which is engraved on a stone imbedded in the ground. The village of Chítalwáni lies about 1 mile S.E., that of Jainthairi about 1·5 miles E. and that of Thúngúna about the same distance S. The approach to the station is from Majgowa village about 5 miles E.

**XXV.** Chamki Hill Station, lat.  $23^{\circ} 34'$ , long.  $81^{\circ} 41'$ —observed at in 1827, 1828, 1865 and 1869—is on a range of hills running east and west, about 4 miles S.W. of Chamki village; pargana Sohágpur of the Rewah territories.

The pillar is solid and contains two marks, the upper 3·21 feet above the lower which is engraved on the rock *in situ*, having been placed there in 1827. The upper markstone of 1827 was found undisturbed in 1865 but a new pillar was then built to the same height as before. The station was revisited in 1869 for the purpose of originating the Biláspur Meridional Series, when the lower mark was examined and the pillar rebuilt to its former height.

**XXVI.** Marwás Hill Station, lat.  $24^{\circ} 5'$ , long.  $81^{\circ} 49'$ —observed at in 1827, 1828, 1842 and 1865—is situated on a range of hills running east and west, about 2 miles S. of the village of Marwás; pargana Marwás of the Rewah territories.

The pillar is solid and contains two marks, the upper 3.58 feet above the lower which is engraved on the rock *in situ*, having been placed there in 1827. The station was revisited in 1842 for the purpose of originating the Karára Meridional Series, but no alteration appears to have been then made in its construction. On again visiting it in 1865 the upper markstone was found undisturbed and a new pillar was then built to the same height as before.

XXVII. Koría Hill Station, lat.  $24^{\circ} 24'$ , long.  $81^{\circ} 33'$ —observed at in 1865—is situated in the lands of the village of Koría on the extensive and elevated range of the Kaimúr hills which runs parallel to the river Son at a distance of from 4 to 5 miles to the north. The hill is locally known as Rewasin and is in the Rewah territories.

The pillar is solid and contains two marks, the upper 2.83 feet above the lower which is engraved on the rock *in situ*.

XXVIII. Múrergerh Hill Station, lat.  $23^{\circ} 36'$ , long.  $82^{\circ} 0'$ —observed at in 1828, 1865 and 1869—is situated on an elevated peak, difficult of access, called a *garh* from the fort—now in ruins—on its summit; pargana Bokhár, district Chota Nágpur.

The pillar is solid and contains two marks, the upper 3.67 feet above the lower which is engraved on the rock *in situ*, having been placed there in 1828. The upper markstone of 1828 was found undisturbed in 1865 but a new pillar was then built to the same height as before. The station was revisited in 1869 for the purpose of originating the Biláspur Meridional Series, when the lower mark was examined and the pillar rebuilt to its former height. The village of Bhaurkoh lies about 2 miles S.W. and that of Dohstál about 3 miles S.

XXIX. Chapri Hill Station, lat.  $24^{\circ} 19'$ , long.  $82^{\circ} 16'$ —observed at in 1828, 1846 and 1865—is on a small hill about 2 miles N. of the village of that name; pargana Bardi of the Rewah territories.

The pillar is solid and contains two marks, the upper 3.25 feet above the lower which is engraved on the rock *in situ*, having been placed there in 1828. The station was revisited in 1846 for the purpose of originating the Gurwáni Meridional Series, when no alteration appears to have been made. On again visiting it in 1865 the upper markstone of the former station was found undisturbed but a new pillar was then built to the same height as before.

XXX. Gurwáni Hill Station, lat.  $24^{\circ} 1'$ , long.  $82^{\circ} 20'$ —observed at in 1828 and 1865—is on an isolated hill about 1 mile N. of the village of that name; pargana Singrauli of the Rewah territories.

The pillar is solid and contains two marks, the upper 8.00 feet above the lower which is on a stone embedded in the earth flush with the ground level, having been placed there in 1828. The upper markstone of 1828 had disappeared in 1865, but the lower which was adopted was discovered beneath the debris of the old station. When the Gurwáni Meridional Series was commenced in 1846 an Azimuth was observed at this station. The village of Gora lies about 2.5 miles N.W.

XXXI. Pokra Hill Station, lat.  $24^{\circ} 19'$ , long.  $82^{\circ} 31'$ —observed at in 1828, 1846 and 1865—is on a conspicuous peak in the midst of a mass of hills densely covered with forest; pargana Bardi of the Rewah territories.

The pillar is solid and contains two marks, the upper 2.92 feet above the lower which is engraved on a square cut stone imbedded in the earth. The station was revisited in 1846 for the purpose of originating the Gurwáni Meridional Series but no alteration in construction appears to have been then made. On again visiting it in 1865 the markstone of the former station was found undisturbed but a new pillar was then built to the same height as before. The small village of Pokra lies about 1 mile E.

XXXII. Lul Hill Station, lat.  $23^{\circ} 45'$ , long.  $82^{\circ} 33'$ —observed at in 1828 and 1864—is on a flat-topped hill about 2 miles west of the deserted village of that name in a tract of country called Kondiah. The remarkable peak of Rasonki lies about 4 miles east.

The pillar is solid and contains two marks, the upper 3.00 feet above the lower which is engraved on the rock

*in situ*, having been placed there in 1828. The upper mark of the new station is 2·00 feet higher than that of the old station.

XXXIII. Aunri Hill Station, lat.  $24^{\circ} 12'$ , long.  $82^{\circ} 46'$ —observed at in 1828 and 1864—is situated on the southernmost and highest peak of a small range of hills about 3 miles S.W. of the village of that name; pargana Bardi of the Rewah territories.

The pillar is solid and contains two marks, the upper 4·50 feet above the lower which is engraved on the rock *in situ*, having been placed there in 1828. The upper markstone of the station of 1828 was found undisturbed in 1864 but a new pillar was then built to the same height as before.

XXXIV. Mirchádhi Hill Station, lat.  $23^{\circ} 48'$ , long.  $82^{\circ} 56'$ —observed at in 1828 and 1864—is on the highest peak of a small range of thickly wooded hills running east and west, about 1·5 miles S.W. of the village of that name, in the Sirgúja territory.

The pillar is solid and contains two marks, the upper 1·00 foot above the lower which is engraved on the rock *in situ*, having been placed there in 1828. The upper mark of 1828 was found undisturbed in 1864 but a new pillar was then built to the same height as before.

XXXV. Gora Hill Station, lat.  $24^{\circ} 5'$ , long.  $83^{\circ} 17'$ —observed at in 1828, 1844 and 1864—is on an isolated hill to the east of which is another and less elevated isolated hill; pargana Singrauli, district Mirzapur.

The pillar is solid and contains two marks, the upper 3·00 feet above the lower which is engraved on the rock *in situ*, having been placed there in 1828. The station was revisited in 1844 for the purpose of originating the Gora Meridional Series when no alteration in its construction appears to have been made. On again visiting it in 1864 the upper markstone had disappeared but the platform was uninjured and its height was adopted for the pillar then built. The village of Gora lies about 1·5 miles S. and that of Dudhi from which alone the station can be approached about 6 miles N.

XXXVI. Harai Hill Station, lat.  $23^{\circ} 29'$ , long.  $83^{\circ} 1'$ —observed at in 1864—is situated on the highest point of a range of hills running east and west and separated from the great mass of hills to the north by the river Mohan. The hill is locally known by the above name and is in the Sirgúja territory.

The pillar is solid and contains two marks, the upper 3·25 feet above the lower which is engraved on the rock *in situ*. The village of Majúrdikki lies in a small valley about 3·5 miles N. and that of Jáj about 2·5 miles S.W. by W.

XXXVII. Gobra Hill Station, lat.  $23^{\circ} 37'$ , long.  $83^{\circ} 31'$ —observed at in 1828 and 1864—is situated on a very conspicuous, isolated, round-topped hill, surmounted by high sugar-loaf-shaped blocks of rock, the highest of which was adopted for the station. The hill is in the heart of the wildest part of the Sirgúja territory.

The mark defining the station is engraved on the rock *in situ*, having been placed there in 1828, and a platform has been built round the rock to a level with the summit. The small Gond village of Gobra lies about 2 miles N.

XXXVIII. Sewádhi Hill Station, lat.  $23^{\circ} 58'$ , long.  $83^{\circ} 48'$ —observed at in 1828, 1844, 1849, and 1864—is situated on an isolated hill densely covered with bamboo jungle; pargana Palámau, district Chota Nágpur.

The pillar is solid and contains two marks, the upper 2·00 feet above the lower which is engraved on the rock *in situ*, having been placed there in 1828. The station was revisited in 1844 for the purpose of originating the Gora Meridional Series and again in 1849 to commence the Hurilóng Meridional Series when no alteration in its

construction seems to have been made. On again visiting it in 1864 the upper markstone had disappeared, but the platform remained and its height was adopted for the pillar then built. The village of Sewádhi lies about 1 mile N. and the large village of Ranka about 2 miles N.E.

XXXIX. Kochea Hill Station, lat.  $24^{\circ} 18'$ , long.  $83^{\circ} 41'$ —observed at in 1864—is situated on the highest point of the eastern extremity of a range of hills running east and west. The hill itself though sometimes called Pipri-ka-pahár is better known as Kochea, and is in the subdivision of Palámau, district Chota Nágpur.

The pillar is solid and contains two marks, the upper 1.92 feet above the lower which is engraved on the rock *in situ*. The village of Pipri lies about 1.25 miles S. S. W.; those of Bissanpur and Kochea about 1.5 miles S. S. E. and that of Patho about 1.5 miles N. The town of Untárinagar is about 7 or 8 miles W.

XL. Khaira Pándu Hill Station, lat.  $24^{\circ} 21'$ , long.  $83^{\circ} 59'$ —observed at in 1849 and 1864—is situated within the lands of the village of Kajaru, on the highest point of a remarkably high peak cropping out of a range of low hills; thánah and tehsíl Nabinagar, district Behár.

The pillar is solid and contains two marks, the upper 3.17 feet above the lower which is engraved on the rock *in situ*. This station was first established as a secondary point in 1829 and a mark placed on the rock *in situ*. When the Huriláong Meridional Series was commenced the station was incorporated as a Principal station of this series, the mark of 1829 having been found and adopted. On visiting it again in 1864 the former mark was still in existence and a pillar with another mark was then placed over it.

XLI. Turer Hill Station—also called Buda-pahár—lat.  $23^{\circ} 38'$ , long.  $84^{\circ} 4'$ —observed at in 1829, 1864 and 1866—is on a spur of the northern extremity of an elevated mass of hills locally known as Páts; pargana Sannia, district Chota Nágpur.

The pillar is solid and contains two marks, the upper 2.58 feet above the lower which is engraved on the rock *in situ*, having been placed there in 1829. In 1864 the position of the old station was defined by a heap of stones, on removing which the mark on the rock was found. The village of Turer lies about 2 miles N.

XLII. Huriláong Hill Station, lat.  $24^{\circ} 2'$ , long.  $84^{\circ} 24'$ —observed at in 1828, 1848-49, 1864 and 1866—is on the highest point of a small, detached, flat-topped hill; pargana Thappa Púnthag, district Chota Nágpur. Adjoining the platform is an observatory where latitude observations were taken during 1865-66 by Mr. Taylor.

The pillar is solid and contains two marks, the upper 3.00 feet above the lower which is engraved on the rock *in situ*, having been placed there in 1828. The station was revisited in 1848 for the purpose of originating the Huriláong Meridional Series, but no alteration in its construction appears to have been then made. In 1864 the upper markstone of the old station had not been disturbed but a new pillar was then built to the same height as before. The village of Huriláong lies about 2 miles N. and that of Turási about 3.5 miles N. E.

XLIII. Bulbul Hill Station, lat.  $23^{\circ} 38'$ , long.  $84^{\circ} 29'$ —observed at in 1829 and 1866—is on the northeastern extremity of the great mass of hills on which Bágru and Birpokhar stations are situated; pargana Kosmau, district Chota Nágpur.

The pillar is solid and contains two marks, the upper 3.00 feet above the lower which is engraved on the rock *in situ*, having been placed there in 1829. This lower mark was the only one formerly employed. The village of Bulbul lies about 1 mile S.

XLIV. Kasíátu Hill Station, lat.  $23^{\circ} 58'$ , long.  $84^{\circ} 57'$ —observed at in 1829, 1844, 1865-66 and 1869—is on the highest point of an isolated hill overlooking a partially level and densely wooded country; pargana Goría, district Chota Nágpur.

The pillar is solid and contains two marks, the upper 3.00 feet above the lower which is engraved on the

rock *in situ*, having been placed there in 1829. The station was visited in 1844 for the purpose of originating the Chendwár Meridional Series, but no alteration in its construction is mentioned. In 1864 the upper markstone of the old station had not been disturbed but a new pillar was then built to the same height as before. It was again visited in 1869 but no alteration was then made.

**XLV.** Birpokhar Hill Station, lat.  $23^{\circ} 25'$ , long.  $84^{\circ} 18'$ —observed at in 1866—is in the midst of an extensive and elevated mass of broad hills, or rather parallel ranges of table-land running east and west, called Páts, separated by broad valleys. The Pát on which the station is situated is named Gamhár. The station is locally known as Birpokhar from a pool of water formed by a spring about 200 yards to the east; pargana Barweh, district Chota Nágpur.

The pillar is solid and contains two marks, the upper 6·00 feet above the lower which is on a stone imbedded flush with the ground level. The village of Gamhár lies about 0·75 of a mile E. and that of Rángeh about 2·5 miles N.E. in the valley below.

**XLVI.** Bágru Hill Station, lat.  $23^{\circ} 29'$ , long.  $84^{\circ} 38'$ —observed at in 1866—is on the continuation of the same hills as Birpokhar H.S. which terminate abruptly here; pargana Khúkra, district Chota Nágpur.

The pillar is solid and contains two marks, the upper 7·00 feet above the lower which is on a stone imbedded flush with the ground level. The village of Bágru lies about 1·5 miles S.E. at the foot of the hill, the large village of Kasmárganh about 3 miles S.W. and that of Chúrgain 2 miles S.S.W.

**XLVII.** Málhan Hill Station, lat.  $23^{\circ} 39'$ , long.  $84^{\circ} 53'$ —observed at in 1866—is on the highest point of a group of low wooded hills; pargana Tori, district Chota Nágpur.

The pillar is solid and contains two marks, the upper 3·80 feet above the lower which is engraved on the rock *in situ*. This station was a secondary point of the triangulation of 1829. The village of Málhan is at the foot of the hill to the W., that of Manah Málhan about 2 miles N.W., Káli about 2 miles E., Hesalong about 3 miles S., and Marmar about 2·5 miles N.

**XLVIII.** Máhwári Hill Station, lat.  $23^{\circ} 26'$ , long.  $84^{\circ} 56'$ —observed at in 1866—is situated on a hill locally known as Máhwári-ka-pahár which is the highest of a group of hills; pargana Khúkra, district Chota Nágpur.

The pillar is solid and contains two marks, the upper 4·00 feet above the lower which is engraved on the rock *in situ*. The village of Máhwári lies about 1 mile W., the large village of Kairo about 3 miles W.N.W., Múrtho 1·5 miles E. and Kanjgi about 1 mile S.

**XLIX.** Bhursu Hill Station, lat.  $23^{\circ} 16'$ , long.  $84^{\circ} 47'$ —observed at in 1866—is on the highest point of an extensive group of low rocky hills, and is distinguished by a high tree on the south side of the station; pargana Dúisa, district Chota Nágpur.

The pillar is solid and contains two marks, the upper 4·00 feet above the lower which is engraved on the rock *in situ*. The village of Bhursu lies about 1 mile S.E., that of Amaratoli immediately below the hill to the east and the large villages of Lávágain and Chaigri 1·5 miles W.

**L.** Hariharpur Hill Station, lat.  $23^{\circ} 17'$ , long.  $85^{\circ} 4'$ —observed at in 1866—is on a small isolated hill about half a mile S. of the village from which it derives its name; pargana Khúkra, district Chota Nágpur.

The pillar is solid and contains two marks, the upper 3·00 feet above the lower which is engraved on the rock *in situ*. The village of Massu is about 1 mile E., Haranji at the base of the hill W.S.W. and Thabair about 1·5 miles S.

**LI.** Pithauria Hill Station, lat.  $23^{\circ} 32'$ , long.  $85^{\circ} 19'$ —observed at in 1866—is in the



lands of the village of Pithauria; on a remarkably elongated hill with a very high perpendicular and inaccessible rock in the centre of it, immediately below which the station is situated, pargana Sútiamba, district Chota Nágpur. The hill is locally known as Púsu-ka-pahár.

The pillar is solid and contains two marks, the upper 1·50 feet above the lower which is engraved on the rock *in situ*. The village of Pithauria lies about 1 mile S.E. and that of Rára about 1·25 miles N.E.

LII. Patál Hill Station, lat.  $23^{\circ} 40'$ , long.  $85^{\circ} 10'$ —observed at in 1829 and 1866-67—is on a low range of flat hills running east and west, about 2·5 miles south of the river Damúdah; pargana Kishanpura, district Chota Nágpur.

The pillar is solid and contains two marks, the upper 2·50 feet above the lower which is engraved on the rock *in situ*, having been placed there in 1829. The upper markstone of 1829 appeared undisturbed in 1866 but a new pillar was then built to the same height as before. The village of Patál lies about 1 mile N.

LIII. Chendwár Hill Station, lat.  $23^{\circ} 57'$ , long.  $85^{\circ} 29'$ —observed at in 1867 and 1869—is on the highest and northernmost peak of a thickly wooded and small isolated range of hills, running north and south; pargana Champa, district Hazáribágh.

The pillar is solid. Mr. Taylor employed this station for latitude observations during the season 1865-66 and built a pillar over a mark found at the ground level, which was afterwards ascertained to be at some distance from the mark of 1829 which had been destroyed; he also erected an observatory over the station. Subsequently, in 1867, Mr. Keelan when revising the triangulation built up the pillar to a height of 3·00 feet above the floor of the Observatory and placed a markstone at the top: it was again visited in 1869 but no alteration was then made. The village of Chendwár lies about 1 mile S. E., that of Marhetta at the base of the hill to the S. W. and the station of Hazáribágh about 5 miles N. W.

LIV. Mahúda Hill Station (locally so called) lat.  $24^{\circ} 12'$ , long.  $85^{\circ} 14'$ —observed at in 1867—is in the lands of the village of Gúrrí on the highest point of a range of hills running east and west; district Hazáribágh. The Station Sindraili of the Chendwár Meridional Series is on a spur of the hill about 0·75 of a mile east.

The pillar is solid and contains two marks, the upper 3·00 feet above the lower which is engraved on the rock *in situ*. The village of Gúrrí is immediately below the station to the S., the large village of Sháhpur lies about 2 miles in same direction.

LV. Bárágáon Hill Station, lat.  $23^{\circ} 33'$ , long.  $85^{\circ} 30'$ —observed at in 1829 and 1867—is situated on the highest peak of an elevated group of hills, and derives its name from the hills having twelve villages at their southern base; pargana Sútiamba, district Chota Nágpur.

The pillar is solid and contains two marks, the upper 2·00 feet above the lower which is engraved on the rock *in situ*, having been placed there in 1829. The upper markstone of 1829 appeared undisturbed in 1866 but a new pillar was then built to the same height as before.

LVI. Bámani Hill Station, lat.  $24^{\circ} 27'$ , long.  $85^{\circ} 49'$ —observed at in 1851 and 1867—is on a small conical, detached sandstone hill, which rises about 250 feet above the surrounding country; district Hazáribágh. The hill derives its name from the god Bráhma who, according to native tradition, once occupied its summit.

The pillar is solid and contains two marks, the upper 3·75 feet above the lower which is the same as that established in 1851 by the North Párasnáth Meridional Series, and was found engraved on the rock *in situ*. The lower mark was the only one employed in 1851. The large village of Domcháncho lies about 4 miles W., and that of Kharkár close under the hill on the same side.

LVII. Párasnáth Hill Station, lat.  $23^{\circ} 58'$ , long.  $86^{\circ} 11'$ —observed at in 1829,

1850-51 and 1867—is on an isolated mountain covered with small temples dedicated to the god Párasnáth. The hill belongs to the Rájah of Pálganjo; pargana Karakdia, district Hazáribágh.

The pillar is solid and contains two marks, the upper 1·00 foot above the lower which is engraved on the rock *in situ*, having been placed there in 1829. The station was visited in 1850-51 for the purpose of originating the North Párasnáth Meridional Series, and a hollow pillar 3 feet in diameter raised to a height of 18·2 inches above the mark of 1829 to support the instrument. In 1867 the upper mark of 1829 appeared undisturbed and its height was adopted for the new station.

LVIII. Chainpur Hill Station, lat.  $23^{\circ} 33'$ , long.  $85^{\circ} 54'$ —observed at in 1829, 1834, 1836 and 1867—is on the northern extremity of an extensive range of densely wooded flat hills, running north and south.

The pillar is solid and contains two marks, the upper 2·88 feet above the lower which is engraved on the rock *in situ* having been placed there in 1829. The station was revisited in 1834 and 1836 for the purpose of originating the South Párasnáth Series, but no record exists of any alteration in its construction at those times. On again visiting the station in 1867 the upper markstone of 1829 appeared undisturbed but it diverged 4 inches to the north. A new pillar was built to the same height as before. The village of Chainpur lies about 4 miles N. E., that of Pitarbár about 2·5 miles N. and Kharkata about 1 mile N.

LIX. Ghoránji Hill Station, lat.  $24^{\circ} 34'$ , long.  $86^{\circ} 11'$ —observed at in 1851 and 1867—is on a conspicuous peak of a range of hills forming the boundary between the districts Hazáribágh and Monghir.

The pillar is solid and contains two marks, the upper 3·00 feet above the lower which is the same as that established by the North Párasnáth Meridional Series in 1851, and was found engraved on the rock *in situ*. The upper markstone of the station of 1851 appeared undisturbed in 1867 but a new pillar was then built to the same height as before. The village of Ghoránji lies about 3 miles S.

LX. Jálve Hill Station, lat.  $24^{\circ} 23'$ , long.  $86^{\circ} 39'$ —observed at in 1867—is within the lands of the village of Domráon on a small conical hill rising about 300 feet above the surrounding country; Sonthál parganas, district Bhágalpur.

The pillar is solid and contains two marks, the upper 2·00 feet above the lower which is engraved on the rock *in situ*. The village of Domráon lies about 2·5 miles N. E. by E., that of Husainabad 1 mile S.W., and Búrheh and Jhúmrabad respectively 3·5 miles W. and 2·5 miles N.W.: Bajnáth, the famous place of pilgrimage, is about 9 or 10 miles N.

LXI. Tilabani Hill Station, lat.  $23^{\circ} 25'$ , long.  $86^{\circ} 36'$ —observed at in 1829, 1834, 1836 and 1867—is on the eastern and highest of two isolated peaks, about 1 mile N.W. of the village from which it derives its name; pargana Nadarka, district Chota Nágpur.

The pillar is solid and contains two marks, the upper 2·00 feet above the lower which is engraved on the rock *in situ*, having been placed there in 1829. The station was revisited in 1834 and 1836 for the purpose of originating the South Párasnáth Series, but no record exists of any alteration in its construction at those times. On again visiting the station in 1867 the upper markstone of 1829 appeared undisturbed and its height was adopted for the new station. The village of Kolabani lies about 1·5 miles S. E.

LXII. Durgápur Hill Station, lat.  $23^{\circ} 50'$ , long.  $86^{\circ} 49'$ —observed at in 1829, 1844 and 1867—is on a flat isolated hill about 1·5 miles west of the river Barákhar; pargana Pandra, district Chota Nágpur.

The pillar is solid and contains two marks, the upper 2·00 feet above the lower which is engraved on the rock *in situ*, having been placed there in 1829. This station was visited in 1844 for the purpose of originating the North Malúncha Meridional Series when only one mark was found engraved on a rock and about two feet above

the surface of the hill; this mark was the only one then employed. When again visited in 1867 a second mark is stated to have been found 2 feet above the one on the rock and a new pillar was built to that height. The villages of Durgápur and Raghunáthpur lie about 1 mile E. and the large village of Pandra about 4 miles S.W.

LXIII. Bihárináth Hill Station, lat.  $23^{\circ} 34'$ , long.  $86^{\circ} 59'$ —observed at in 1830 and 1867—is on a high, round-topped, isolated hill; pargana Mahisara, district Chota Nágpur.

The pillar is solid and contains two marks, the upper 2·00 feet above the lower which is engraved on the rock *in situ*, having been placed there in 1830. The upper markstone of 1830 had not been disturbed in 1867 but a new pillar was then built to the same height as before. The village of Bihárináth is at the base of the hill to the N.

LXIV. Malúncha Hill Station, lat.  $23^{\circ} 54'$ , long.  $87^{\circ} 8'$ —observed at in 1829, 1844 and 1867-68—is on a sharp peaked isolated hill; pargana Sonthál, district Bírghúm.

The pillar is solid. This station was revisited in 1844 for the purpose of originating the North Malúncha Meridional Series when the platform was opened out and it was found that the mark at its surface was on a huge rock rising about 4 feet above the surface of the hill. Mr. Taylor used this station for latitude observations during 1864-65, and built a small masonry pillar round the original mark with a triangular aperture in it; he also erected an observatory over the station. In April 1867 Mr. Keelan in revising the Calcutta Longitudinal Series filled up the triangular aperture, placing a markstone flush with the floor of the observatory which was 1 foot above the original mark; a pillar was then constructed to the height of 4·00 feet above the floor and a markstone inserted in its summit in the normal of those below. The village of Kabuljuria lies about 1 mile S., and Siris Kundi about 2 miles S.

LXV. Súsinia Hill Station, lat.  $23^{\circ} 24'$ , long.  $87^{\circ} 2'$ —observed at in 1830, 1846 and 1867—is on the highest point of a long isolated hill, about a mile in extent, at the base of which to the S.W. are extensive quarries of sandstone belonging to the Bardwán Stone Co.; pargana Chatra, district Chota Nágpur.

The pillar is solid and contains two marks, the upper 2·00 feet above the lower which is engraved on the rock *in situ*, having been placed there in 1830. The station was revisited in 1846 for the purpose of originating the South Malúncha Series but no record exists of any alteration in its construction at that time. The station was again visited in 1867, when the upper markstone of the station of 1830 was found undisturbed but the mark was not truly in the normal of that below. A new pillar was built to the same height as before. The village of Súsinia lies about 0·75 mile to the W.

LXVI. Rádhámádhupur Hill Station, lat.  $23^{\circ} 32'$ , long.  $87^{\circ} 21'$ —observed at in 1830-31 and 1867-68—is on a long flat ridge of wooded hills running north and south; pargana Sairgarh, district Báncura.

The pillar is solid and contains 4 marks placed vertically over a fifth, which is engraved on the rock *in situ*, at distances above it of 4·00, 8·00, 12·00 and 14·00 feet. The lowest mark is the same as that established in 1830. The upper mark of 1830 was not found in 1867 and the platform was in ruins, but its height, as nearly as could be estimated, was adopted for the new station. The village of Rádhámádhupur lies about 1 mile S.

LXVII. Nawágáon Tower Station, lat.  $23^{\circ} 38'$ , long.  $87^{\circ} 35'$ —observed at in 1868—is on a swell of ground half a mile south of the village from which it derives its name; pargana Senbhúm, district Bírghúm.

The tower encloses a central perforated pillar 32·25 feet high. An arched passage admits of access to a mark at the ground level, which is vertically over one imbedded in masonry three feet below. The village of Ilam Bazar lies about 0·5 mile S. W., that of Súk Bazar about 0·25 mile N. W. by W. and Debipur about 0·75 mile W.

LXVIII. Bhálki Tower Station, lat.  $23^{\circ} 28'$ , long.  $87^{\circ} 39'$ —observed at in 1831 and 1868—is at the southern extremity of a tract of forest, about 1 mile N. W. of the village from which it derives its name; pargana Goban, district Bardwán.

The pillar is perforated. The station of 1831 was defined by a mark in the centre of a masonry platform 15 feet square, at the corners of which pillars were erected to a height of 35 feet to carry a wooden platform. The markstone was found undisturbed and was taken up and another markstone imbedded about 1 foot below it, the original markstone being then replaced in its former position. A perforated pillar to carry the instrument was built over it to a height of 39·30 feet with an arched passage to admit of access to the mark, and the corner pillars were raised to the necessary height to carry a timber platform for the observer. The village of Soátha lies about 2 miles S. and that of Amrágarh about 2·5 miles S. W.

**LXIX.** Karásoli Hill Station, lat.  $23^{\circ} 14'$ , long.  $87^{\circ} 28'$ —observed at in 1830-31 and 1868—is on a ridge of low undulating country, covered with forest; pargana Bishnupur, district Bāncura.

The pillar is solid and contains 3 marks placed vertically over a fourth which is engraved on the rock *in situ*, at distances above it of 4, 8 and 12 feet. The lowest mark is the same as that established in 1830. The upper markstone of the former station was not found in 1868, but the height of the platform was adopted for that of the new station. The village of Karásoli lies about 1 mile W., the town of Sonamukhi about 5 miles N. and Ránigáon village about 0·75 of a mile E.

**LXX.** Madhpur Tower Station, lat.  $23^{\circ} 10'$ , long.  $87^{\circ} 47'$ —observed at in 1831 and 1868—is on the N. E. angle of a high bank of a tank adjoining the village from which it takes its name; pargana Khandghosh, district Bardwán.

A hollow rectangular tower 48·88 feet high surmounts the marks which are, one in the ground floor and one 1·5 feet below it. The station of 1831 was 40 feet high and a mark was found in the foundation, the position of which was adopted in 1868.

**LXXI.** Párhát Tower Station, lat.  $23^{\circ} 21'$ , long.  $87^{\circ} 53'$ —observed at in 1868—is on the bank of a tank about 500 yards S. of the village from which it takes its name; pargana Sáhibganj, district Bardwán.

A hollow rectangular tower 40·25 feet high surmounts the marks which are, one in the ground floor and the other 1·89 feet below it. The circumjacent villages are Jagdobaj 0·75 of a mile W., Gopálpur 0·75 of a mile S. W., Bágár 1·25 miles S., and Maháchanda 0·75 of a mile E.

**LXXII.** Ganjua Tower Station, lat.  $22^{\circ} 58'$ , long.  $87^{\circ} 36'$ —observed at in 1832 and 1868—is one of the old telegraph towers about 500 yards W. of the village from which it derives its name; pargana Bishnupur, district Bāncura.

The tower is circular, hollow and 69·17 feet high. Two marks were placed, one in the ground floor and the other 1·5 feet below it. The mark of 1832 was not found in 1868, but a round hole, one inch in diameter and one inch deep was found in the centre of the floor and was assumed to denote its position.

**LXXIII.** Sonákúr Tower Station, lat.  $23^{\circ} 13'$ , long.  $88^{\circ} 0'$ —observed at in 1868—is on slightly rising ground about 0·2 of a mile S. S. E. of the village from which it derives its name; pargana Sháhabad, district Bardwán.

A hollow rectangular tower 40·30 feet high surmounts the marks which are, one in the ground floor and the other 2·19 feet below it. The line of railway between Bardwán and Calcutta runs within half a mile of the station to the south.

**LXXIV.** Hákestápur Tower Station, lat.  $23^{\circ} 4'$ , long.  $87^{\circ} 59'$ —observed at in 1832 and 1868-69—is on the bank of a tank, locally known as Baliár Khán; pargana Haveli, district Bardwán.

A hollow rectangular tower 46·42 feet high surmounts the marks which are, one in the ground floor and the other 2 feet below it. The station of 1832 which had been built to a height of 58 feet was in ruins in 1868,

but on removing the debris the mark at the ground level was found undisturbed and its position was adopted for the new station. The azimuths and distances of the surrounding villages are as follows:—Hákiatápur  $62^{\circ} 29'$ , miles 1.09, Narainpur  $137^{\circ} 29'$ , miles 2.08, Sáhta  $205^{\circ} 40'$ , miles 1.07, Wochitpur  $263^{\circ} 24'$ , miles 1.13.

**LXXV. Mubárákpur Tower Station**, lat.  $22^{\circ} 50'$ , long.  $87^{\circ} 50'$ —observed at in 1832 and 1869—is one of the old telegraph towers about 200 yards from the left or east bank of the river Dalkisor; pargana Baira, district Hugli.

The tower is circular, hollow and 73.75 feet high. Two marks were placed, one in the ground floor and the other 1.58 feet below it. No markstone was found in 1869 denoting the station of 1832, but a large rusty nail in the centre of the floor was assumed to be the mark and its position adopted. The azimuths and distances of the circumjacent villages are as follows:—Mubárákpur  $14^{\circ} 57'$ , miles 0.81, Shámbáti  $160^{\circ} 23'$ , miles 1.41, Bágdáhar  $254^{\circ} 47'$ , miles 2.12.

**LXXVI. Aknápur Tower Station**, lat.  $22^{\circ} 54'$ , long.  $88^{\circ} 6'$ —observed at in 1832 and 1869—is on a small artificial mound, elevated a few feet above the level of the surrounding country; pargana Bálgaria, district Hugli.

A hollow rectangular tower 45.33 feet high surmounts the marks which are, one in the ground floor and another 1.5 feet below it. The station of 1832 was in ruins in 1869 and on removing the debris a hole 7 inches square and 2 feet deep was found in which the new markstones were inserted. The azimuths and distances of the circumjacent villages are as follows:—Aknápur (temple spire)  $19^{\circ} 49'$ , miles 0.12, Parámba  $154^{\circ} 16'$ , miles 1.07, Bhárámpur  $267^{\circ} 5'$ , miles 1.18.

**LXXVII. Dastánpur Tower Station**, lat.  $23^{\circ} 3'$ , long.  $88^{\circ} 8'$ —observed at in 1869—is at the S.W. angle of a high bank of a tank; pargana Chútipur, district Bardwán.

A hollow rectangular tower 34.83 feet high surmounts the marks which are, one in the ground floor and another 2.0 feet below it. The azimuths and distances of the circumjacent villages are, Dastánpur  $142^{\circ} 34'$ , miles 0.23, Sankarpur  $277^{\circ} 24'$ , miles 0.94 and Chopá  $31^{\circ} 51'$ , miles 2.30.

**LXXVIII. Sáttén Tower Station**, lat.  $22^{\circ} 59'$ , long.  $88^{\circ} 17'$ —observed at in 1845 and 1869—is to the east of, and adjoining the village from which it takes its name; pargana Chaumúlia, district Hugli.

A hollow rectangular tower 43.5 feet high surmounts the marks which are, one in the ground floor and another (that of 1845), one foot below it. The height of the former station was 33.00 feet. The azimuths and distances of the circumjacent villages are as follows:—Dúnúrpur  $68^{\circ} 12'$ , miles 0.75, Megsar  $190^{\circ} 26'$ , miles 1.56 and Bhusáli  $288^{\circ} 1'$ , miles 0.51.

**LXXIX. Dilakás Tower Station**, lat.  $22^{\circ} 43'$ , long.  $88^{\circ} 4'$ —observed at in 1832, 1848 and 1869—is one of the old telegraph towers, on the line from Calcutta to Benares, and is in the village from which it takes its name; pargana Bhúrsút, district Hugli.

The tower is circular, hollow and 80.83 feet high. In 1869 two marks were placed, one in the ground floor and the other 3.17 feet below it in the normal of a mark found at the top of the tower, none having been found at the bottom. The azimuths and distances of the circumjacent villages are as follows:—Bilispur  $94^{\circ} 5'$ , miles 0.67, Durgápur  $259^{\circ} 55'$ , miles 0.93 and Kúlakás  $345^{\circ} 0'$ , miles 1.04.

**LXXX. Bhola Tower Station**, lat.  $22^{\circ} 49'$ , long.  $88^{\circ} 14'$ —observed at in 1832, 1845, 1848 and 1869—is in an open flat plain and close to the district road leading from Serampur to Doarhatta; pargana Bandipur, district Hugli.

A hollow rectangular tower 75.08 feet high surmounts the marks which are, one at the level of the floor and another 3.25 feet below it. No markstone was found in 1869 denoting the former station and its position had to be estimated from a circular aperture in the roof of the tower. The azimuths and distances of the surrounding villages are as follows:—Bhola  $258^{\circ} 53'$ , miles 0.39, Modhihidjili  $163^{\circ} 38'$ , miles 0.32, Pachimpára  $40^{\circ} 10'$ , miles 0.66.

LXXXI. Chinsura Station, lat.  $22^{\circ} 53'$ , long.  $88^{\circ} 27'$ —observed at in 1845 and 1863—is on the roof of the Hugli, or Saiyid Mohsin's College, at the intersection of two of the walls.

A markstone was imbedded in the wall and a pillar 9 feet high with another mark at its surface was built over it, the height of the upper mark being 51 feet above the ground. The station was revisited in 1863 for the purpose of originating the East Calcutta Longitudinal Series, but not alteration in its construction was made.

LXXXII. Calcutta base-line, North End Tower Station, lat.  $22^{\circ} 43'$ , long.  $88^{\circ} 25'$ —observed at in 1832, 1845, 1848 and 1869—is situated east of Sukchár village at the junction of the road from Sukchár to Barasat with the Barrackpur road, and opposite to the 11th milestone from the Government House in Calcutta; pargana Calcutta, district Twenty-four Parganas.

The tower is 74.5 feet high. In other respects the station is similar to that at the S. End of the base.

LXXXIII. Nibria or Mahiari Tower Station, lat.  $22^{\circ} 36'$ , long.  $88^{\circ} 17'$ —observed at in 1832, 1845, 1848 and 1869—is an old telegraph tower on the line from Calcutta to Benares, situated in the village of Mahiari; pargana Arsa, district Hugli.

The tower is circular, hollow and 88.33 feet high. In 1869 a mark was found in the ground floor over which a rectangular pillar was built for protection. The azimuths and distances of the circumjacent villages are as follows:—Prústh  $208^{\circ} 58'$ , miles 0.49, Unsúnni  $261^{\circ} 38'$ , miles 0.92, Nethánkú  $159^{\circ} 34'$ , miles 1.17, Andúl palace  $31^{\circ} 38'$ , miles 0.88.

LXXXIV. Baniban Tower Station, lat.  $22^{\circ} 31'$ , long.  $88^{\circ} 7'$ —observed at in 1848—is on an artificial mound in the village of that name; pargana Balia, district Hugli. The station which is situated in a jhíl is only accessible during 3 months of the year.

The tower is 40 feet high and has markstones at top and bottom.

LXXXV. Calcutta base-line, South End Tower Station, lat.  $22^{\circ} 37'$ , long.  $88^{\circ} 25'$ —observed at in 1832, 1844-45 and 1848—is situated at the junction of the Barrackpur and Chitpur roads and directly opposite to a garden house owned by Rájah Bábu; pargana Calcutta, district Twenty-four Parganas.

The station is marked by a square hollow tower 73.6 feet in height and some 13 feet square at top; the isolated pillar for the theodolite being built on beams which are let into the wall about 4 feet below the upper surface of the tower. The usual circle and dot are engraved on a block of stone fixed in the ground floor of the building.

LXXXVI. La Martiniere Station, lat.  $22^{\circ} 32'$ , long.  $88^{\circ} 24'$ —observed at in 1848—is on the dome of the college of that name.

A deep dot was cut in the lead of the sky-light as near as possible to the centre of the crest to define the station.

LXXXVII. Samalia Tower Station, lat.  $22^{\circ} 26'$ , long.  $88^{\circ} 18'$ —observed at in 1848—is on an artificial mound in the village of that name in the Hanspokria Jhíl, about 1.5 miles west of the high road from Calcutta to Diamond Harbour; pargana Nauhazári, district Twenty-four Parganas. The station is inaccessible during the rains, except by boats.

A hollow rectangular tower 63.08 feet high defines the station. It has a markstone at the top and another at the bottom.

W. H. COLE.

January 1874.



## PRINCIPAL TRIANGULATION—ADDENDUM TO DESCRIPTION OF STATIONS.

NOTE.—Consequent on modern alterations of district and other boundaries, the sites occupied by the stations are now included in civil divisions of territory which differ frequently from the district, pargana or village, recorded in the preceding descriptions of stations: a suitably modified statement of the sub-divisions in question is accordingly given in the following table and is derived chiefly from the annual reports, up to 1878, made by the Civil Officials to whose care the stations have been committed.

The spelling of names is in accordance with that given in the lists of more important places published under the orders of Government whenever such names occur in the lists.

It has become customary in modern times to erect a *square* protecting pillar at each Principal Station over the circular pillar on which the large theodolite stood and which carries the true mark-stone. The square pillar bears a sufficiently accurate mark for Topographical and Revenue Survey purposes, so that it is generally unnecessary to refer to the true mark-stone which thus remains concealed and protected. The stations which are protected in the manner described are indicated thus †.

No.	Local name	District or Agency	Pargana, &c.	Village	Remarks
(IV)	Kámkhera	Sironj	Sironj	Imláni	} Visited by Lieut. C. Strahan, R.E., of the Topographical Survey, in 1870, and reported by him to be in good order.
(V)	Bhaunrása	Isagarh	P. Bhaunrása	Bhaunrása	
I	*	...	...	...	
II	Lakoli	Isagarh	P. Bhílsa	...	Visited by Captain R. V. Riddell, in 1871, who found the pillar completely destroyed, he built a new pillar on the ruins of the old.
III	Budhon	Saugor	Tah. Kurai, Tá. Pitihra, Thá. Barodia	Budhon	
IV	*	...	...	...	Visited by Captain R. V. Riddell, in 1871, who reported that the "upper and second mark-stones were found outside the platform. About $\frac{1}{3}$ of the platform was dug out to a depth of 5 feet from the upper surface. $\frac{2}{3}$ of the upper surface of the platform with its concave wall were found intact and from this remaining portion of the circle, the position of the present upper mark-stone was determined so that it is possible that it may be 1 or 2 inches out of position."
V	Saugor	Saugor	P. and Tah. Saugor, Thá. Gopálganj	Saugor	

NOTE.—Stations (IV) and (V) appertain to the Sironj base-line figure. P. stands for Pargana, Tah. for Tahsil, Tá. for Táluk and Thá. for Thána.

\* No report received from the officials in whose districts the stations lie.



No.	Local name	District or Agency	Pargana, &c.	Village	Remarks
VI	Náharmau	Saugor	P., Tah. and Thá. Rehli	Náharmau	
VII	Tinsmál	"	P., Tah. and Thá. Banda	Tinsu	
VIII	Mandri	"	P., Tah. and Thá. Rehli	Mandri	
IX	Imilia Lánji	Damoh	Tah. Damoh	Bhilampur and Chaurad	
X	Rangír	"	"	Rangír	
XI	Surádehi	"	"	Surádehi	
XII	Kalúmar	"	"	Kalúmar	
XIII	Sataria	"	"	Sataria	
XIV	Salaia	Jubbulpore	...	...	
XV	Raipura	[Agency Bundelkhand	P. Raipura	Tikaria	
XVI	Muraia	Jubbulpore	...	...	
XVII	Amua	[Agency Baghelkhand	Maihar State	Amua	
XVIII	Púnchi Bhúndi	"	P. Chandia, Rewah State	Púnchi	In 1874 the old pillar was reported by the district official in charge to have fallen down and to have been replaced by another constructed by his orders.
XIX	Lakhanpura	Jubbulpore	Tah. Murwára	Lakhanpura	
XX	Banjári	Mandla	Tah. Rámgarh, Tál. and Thá. Saipura	Sarwahi and Banskhára	
XXI	Singpur	Baghelkhand A.	P. Saipura, Rewah State	Singpur	Do.
XXII	Rámpur	"	P. Mádhogarh	Rámpur	
XXIII	Karára	"	"	Devardah	
XXIV†	Barjana	"	Sohágpur	Chitalwáni	Do.
XXV†	*	...	...	...	
XXVI	Marwás	Baghelkhand A.	Marwás, Rewah State	Marwás	

\* No report received from the official in whose district this station lies.

No.	Local name	District or Agency	Pargana, &c.	Village	Remarks
XXVII	Koria	Baghelkhand A.	P. Saipura, Rewah State	Koria	In 1874 the old pillar was reported by the district official in charge to have fallen down and to have been replaced by another constructed by his orders.
XXVIII†	*	...	...	...	
XXIX	Chapri	Baghelkhand A.	Tál. Singrauli, Rewah State	Chapri	
XXX	Gurwáni	„	„	Gurwáni	
XXXI	Pokar	„	Tál. Bardi	Pokar	
XXXII	*	...	...	...	
XXXIII	*	...	...	...	
XXXIV	*	...	...	...	
XXXV†	Gohanda	Mirzapur	Tah. and P. Singrauli, Thá. Chaupan	Gohanda	
XXXVI	Harái	„	Tah. and Tappa Chhianúe, Thá. Bindháchal	Harái	In 1872 a portion of the pillar was reported by the district official in charge to have fallen down.
XXXVII	*	...	...	...	
XXXVIII	Sewádhí	Lohardugga	P. Palamow, Thá. Rámkunda	Sowari	
XXXIX	Kuchia	„	P. Palamow, Thá. Garhwa	Kuchia	
XL	Khaira Pándu	„	P. Balunja, Thá. Husainabad	Khaira Pándu	
XLI†	Turer	„	P. Palamow, Thá. Rámkunda	Turer	
XLII†	Hurílong	„	P. Palamow, Thá. Daltonganj	Hurílong	
XLIII†	Bulbul	„	P. Kasmár, Thá. Lohardugga	Bulbul	
XLIV†	Kasiátu	Hazáribágh	Thá. Pagár	Kasiátu	
XLV†	Birpokhar	Lohardugga	P. and Thá. Barwe	Halta	

\* No report received from the officials in whose districts the stations lie.

No.	Local name	District or Agency	Pargana, &c.	Village	Remarks
XLVI†	Bágru	Lohardugga	P. Khúkra, Thá. Lohardugga	Bágru	
XLVII†	Málhan	"	P. Tori, Thá. Bálumáth	Málhan	
XLVIII†	Máhwári	"	P. Khúkra, Thá. Lohardugga	Máhwári	
XLIX	Bhursu	"	P. Dúisa, Thá. Páلكot	Bhursu	
L	Hariharpur	"	P. Khúkra, Thá. Koráme	Hariharpur	
LI†	Pithauria	"	P. Sútiambe, Thá. Ranchee	Pithauria	
LII†	Patál	Hazáribágh	Thá. Pagár	Patál	
LIII†	Chendwár	"	Hazáribágh	Marhetta	
LIV†	*	...	...	...	
LV†	*	...	...	...	
LVI†	Bámáni	Hazáribágh	P. Kodarma	...	
LVII†	Pareshnáth	"	Pachamba	Madhuban	
LVIII†	Chainpur	Lohardugga	P. Palamow, Thá. Daltonganj	Chainpur	
LIX†	Ghoranji	Hazáribágh	Kharagdiha	Ghoranji	
LX†	Dumraon	Sonthal Per- gunnahs	Dumraon	Dumraon	
LXI†	Tilabani	Manbhoom	P. Ludurka, Thá. Purulia	Tilabani	
LXII†	Durgapur	"	P. Pándra, Thá. Nirsha	Raghunáthpur	
LXIII†	Bihárináth	Bankoora	P. Mahishára, Thá. Ganga- jal-gháti	Bihárináth	
LXIV†	Malancha	Sonthal Per- gunnahs	P. Kundahitka- reya, Tál. Kendowa	Tiljuri	
LXV†	Shushunia	Bankoora	P. and Thá. Chhátna	Shushunia	

\* No report received from the officials in whose districts the stations lie.

PRINCIPAL TRIANGULATION—ADDENDUM TO DESCRIPTION OF STATIONS. 25\*—B.

No.	Local name	District or Agency	Pargana, &c.	Village	Remarks
LXVI†	Rádhámá-dhabpur	Burdwan	Thá. Raneegunge	Rádhámádhapur	
LXVII	Nayagrám	Beerbhoom	P. Singhbhoom, Tál. Maheshpur, Thá. Bolpur	Nayagrám	
LXVIII	Bhálki	Burdwan	Thá. Áusgrám	Bhálki	
LXIX†	Karásoli	Bankoora	P. and Thá. Bishnupur	Karásoli	
LXX	Kulia or Madhpur	Burdwan	Thá. Khandaghosh	Kulia or Madhpur	
LXXI	Párhát	„	Thá. Sáhebganj	Párhát	
LXXII	Ganjua	„	„ Kotalpur	Ganjua	
LXXIII	Sonákúr	„	„ Gángura	Sonákúr	
LXXIV	Hákistápur	„	„ Ráona	Hákistápur	
LXXV	Mubárapur	„	„ Jehanabad	Mubárapur	
LXXVI	Aknápur	Hooghly	P. Balgaria, Thá. Haripál	Aknápur	
LXXVII	Dastánpur	Burdwan	Thá. Salímabad	Keotara	
LXXVIII	Satthan Grija	Hooghly	P. Chaumaha, Thá. Dhanikháli	Satthan	
LXXIX	Dilakás	„	P. Bhursut, Thá. Kristonagar	Dilakás	
LXXX	Bhola	„	P. Bandipur, Thá. Haripál	Bhola	
LXXXI	Chinsurah	„	P. Arsha, Thá. Chinsurah Khásmehal	Chinsurah	
LXXXII	Sukchar	24-Pergunnahs	P. Calcutta, Thá. Barrackpore	Sukchar	
LXXXIII†	Mahiári	Howrah	P. Arsha, Thá. Dumjur	Mahiári	
LXXXIV	Bargachhia	„	P. Balia, Thá. Jagatballapur	Bargachhia	

## CALCUTTA LONGITUDINAL SERIES.

No.	Local name	District or Agency	Pargana, &c.	Village	Remarks
LXXXV	Barrackpore	24-Pergunnahs	P. Calcutta, Thá. Barrackpore	Barrackpore Park	
LXXXVI	...	...	...	...	
LXXXVII	Samali	24-Pergunnahs	P. Magura, Thá. Bistopur	Samali	

January 1879.

J. B. N. HENNESSEY,  
In charge of Computing Office.

## CALCUTTA LONGITUDINAL SERIES.

## PRINCIPAL TRIANGULATION,

## TRIANGLES.

No. of triangle	Station	Spherical excess	Corrected plane angle			Distance		
						Log. feet	Feet	Miles
1	Kámkhera, (IV)	1'15	50	25	31'88	5'1229801	132733'4	25'139
	Bhaorása, (V)	1'15	89	55	35'63	5'2360396	172202'6	32'614
	Teonda, I	1'15	39	38	52'49	5'0409071	109877'1	20'810
2	Bhaorása, (V)	1'50	57	0	40'13	5'1717602	148511'5	28'127
	Teonda, I	1'50	74	25	39'48	5'2318719	170557'9	32'303
	Budhon, III	1'49	48	33	40'39	5'1229801	132733'4	25'139
3	Teonda, I	1'22	77	56	45'25	5'2135248	163502'6	30'966
	Budhon, III	1'21	39	23	44'04	5'0257563	106110'0	20'097
	Tins, IV	1'22	62	39	30'71	5'1717602	148511'5	28'127
4	Kámkhera, (IV)	1'61	32	5	5'11	5'0799147	120202'8	22'766
	Teonda, I	1'62	98	21	59'27	5'3500319	223888'6	42'403
	Lakoli, II	1'62	49	32	55'62	5'2360396	172202'6	32'614
5	Teonda, I	'95	69	36	37'07	5'1129190	129693'7	24'563
	Lakoli, II	'94	50	4	33'51	5'0257563	106110'0	20'097
	Tins, IV	'94	60	18	49'42	5'0799147	120202'8	22'766

NOTES.—1. The values of the side are given in the same line with the opposite angle.  
 2. Kámkhera, (IV), and Bhaorása, (V) appertain to the Sironj base-line figure.

## CALCUTTA LONGITUDINAL SERIES.

No. of triangle	Station	Spherical excess	Corrected plane angle			Distance		
			Log. feet	Feet	Miles			
6	Budhon, III	1'24	50	17	38'81	5'1055090	127499'7	24'148
	Tins, IV	1'24	49	6	15'92	5'0978608	125274'0	23'726
	Saugor, V	1'25	80	36	5'27	5'2135248	163502'6	30'966
7	Budhon, III	1'25	52	25	56'00	5'1116742	129322'5	24'493
	Saugor, V	1'25	77	24	33'79	5'2020309	159232'2	30'158
	Tinsmál, VII	1'24	50	9	30'21	5'0978608	125274'0	23'726
8	Saugor, V	1'33	85	32	49'83	5'2471882	176680'3	33'462
	Tinsmál, VII	1'33	47	35	15'06	5'1167388	130839'5	24'780
	Mandra, VIII	1'33	46	51	55'11	5'1116742	129322'5	24'493
9	Tins, IV	1'10	53	52	51'78	5'0780725	119694'0	22'669
	Saugor, V	1'11	66	44	56'82	5'1339853	136139'9	25'784
	Náharmau, VI	1'11	59	22	11'40	5'1055090	127499'7	24'148
10	Saugor, V	'94	49	41	28'41	5'0242910	105752'6	20'029
	Náharmau, VI	'95	70	38	32'56	5'1167388	130839'5	24'780
	Mandra, VIII	'94	59	39	59'03	5'0780725	119694'0	22'669
11	Tinsmál, VII	1'21	29	2	58'65	4'9502634	89179'2	16'890
	Mandra, VIII	1'21	76	47	48'06	5'2523794	178804'9	33'865
	Himilia, IX	1'21	74	9	13'29	5'2471882	176680'3	33'462
12	Tinsmál, VII	1'16	32	55	38'34	4'9876984	97207'2	18'410
	Himilia, IX	1'16	58	1	22'09	5'1809676	151693'7	28'730
	Rangír, X	1'17	89	2	59'57	5'2523794	178804'9	33'865
13	Himilia, IX	'60	43	28	15'52	4'9053549	80418'3	15'231
	Rangír, X	'61	80	15	49'50	5'0614739	115205'7	21'819
	Satíria, XIII	'61	56	15	54'98	4'9876984	97207'2	18'410
14	Himilia, IX	1'41	67	49	52'41	5'2130543	163325'6	30'933
	Satíria, XIII	1'41	71	22	59'45	5'2230669	167134'8	31'654
	Kalúmar, XII	1'40	40	47	8'14	5'0614739	115205'7	21'819
15	Mandra, VIII	'51	55	24	15'89	4'9183988	82870'3	15'695
	Himilia, IX	'52	62	14	22'12	4'9497992	89083'9	16'872
	Bhaurgára, XI	'52	62	21	21'99	4'9502634	89179'2	16'890
16	Himilia, IX	'89	54	16	48'78	5'1350956	136488'4	25'850
	Bhaurgára, XI	'89	96	11	8'25	5'2230669	167134'8	31'654
	Kalúmar, XII	'88	29	32	2'97	4'9183988	82870'3	15'695
17	Kalúmar, XII	1'14	36	49	47'57	4'9975724	99442'6	18'834
	Satíria, XIII	1'14	63	15	42'46	5'1707122	148153'6	28'059
	Salaia, XIV	1'15	79	54	29'97	5'2130543	163325'6	30'933
18	Kalúmar, XII	1'44	59	29	3'37	5'1601464	144592'7	27'385
	Salaia, XIV	1'44	58	32	42'88	5'1558720	143176'6	27'117
	Lora, XVI	1'44	61	58	13'75	5'1707122	148153'6	28'059

PRINCIPAL TRIANGULATION—TRIANGLES.

No. of triangle	Station	Spherical excess	Corrected plane angle			Distance		
						Log. feet	Feet	Miles
19	Salaia, XIV	2'16	75	55	57'69	5'3273615	212501'3	40'246
	Lora, XVI	2'16	62	45	55'46	5'2895552	194784'8	36'891
	Amúa, XVII	2'15	41	18	6'85	5'1601464	144592'7	27'385
20	Satiria, XIII	'79	60	1	24'85	5'0359472	108629'3	20'574
	Salaia, XIV	'79	67	30	43'62	5'0639668	115868'9	21'945
	Tikaria, XV	'78	52	27	51'53	4'9975724	99442'6	18'834
21	Salaia, XIV	1'64	78	5	58'66	5'3064709	202521'4	38'356
	Tikaria, XV	1'63	70	14	30'46	5'2895552	194784'8	36'891
	Amúa, XVII	1'63	31	39	30'88	5'0359472	108629'3	20'574
22	Lora, XVI	2'16	54	9	1'64	5'2447862	175705'8	33'278
	Amúa, XVII	2'16	47	14	27'66	5'2018261	159157'2	30'143
	Púnchi, XVIII	2'17	78	36	30'70	5'3273615	212501'3	40'246
23	Amúa, XVII	1'41	83	13	14'93	5'2846539	192598'9	36'477
	Púnchi, XVIII	1'40	31	49	58'72	5'0098779	102300'6	19'375
	Lakanpúra, XIX	1'41	64	56	46'55	5'2447862	175705'8	33'278
24	Púnchi, XVIII	1'90	54	59	18'38	5'2128838	163261'5	30'921
	Lakanpúra, XIX	1'90	49	56	51'63	5'1835015	152581'4	28'898
	Rámpur, XXII	1'90	75	3	49'99	5'2846539	192598'9	36'477
25	Lakanpúra, XIX	1'76	59	29	48'97	5'2029570	159572'1	30'222
	Rámpur, XXII	1'75	58	40	35'27	5'1992329	158209'7	29'964
	Karára, XXIII	1'76	61	49	35'76	5'2128838	163261'5	30'921
26	Rámpur, XXII	2'40	77	25	40'43	5'3489290	223320'7	42'396
	Karára, XXIII	2'39	58	21	9'20	5'2895480	194781'6	36'890
	Chamki, XXV	2'39	44	13	10'37	5'2029570	159572'1	30'222
27	Lora, XVI	1'41	46	16	51'82	5'0923643	123698'5	23'428
	Púnchi, XVIII	1'41	65	17	50'60	5'1917027	155490'1	29'449
	Banjári, XX	1'41	68	25	17'58	5'2018261	159157'2	30'143
28	Púnchi, XVIII	1'08	59	31	33'55	5'0985812	125481'9	23'766
	Banjári, XX	1'09	62	18	17'19	5'1103003	128914'1	24'416
	Singpur, XXI	1'08	58	10	9'26	5'0923643	123698'5	23'428
29	Púnchi, XVIII	1'46	69	44	38'63	5'2098120	162110'8	30'703
	Singpur, XXI	1'46	62	0	26'24	5'1835015	152581'4	28'898
	Rámpur, XXII	1'45	48	14	55'13	5'1103003	128914'1	24'416
30	Singpur, XXI	1'68	84	55	6'97	5'2996941	199385'8	37'762
	Rámpur, XXII	1'67	40	59	58'37	5'1183433	131323'8	24'872
	Barjana, XXIV	1'67	54	4	54'66	5'2098120	162110'8	30'703
31	Rámpur, XXII	2'64	59	34	49'00	5'2919741	195872'8	37'097
	Barjana, XXIV	2'64	59	2	27'52	5'2895480	194781'6	36'890
	Chamki, XXV	2'65	61	22	43'48	5'2996941	199385'8	37'762



## CALCUTTA LONGITUDINAL SERIES.

No. of triangle	Station	Spherical excess	Corrected plane angle			Distance		
			Log. feet	Feet	Miles			
		"	°	'	"			
32	Karāra, XXIII	2'52	56	30	16'99	5'2840259	192320'6	36'424
	Chamki, XXV	2'51	47	56	54'12	5'2336163	171244'4	32'433
	Marwās, XXVI	2'52	75	32	48'89	5'3489290	223320'7	42'296
33	Chamki, XXV	1'57	71	31	51'44	5'2758585	188737'6	35'746
	Marwās, XXVI	1'57	33	20	27'96	5'0388877	109367'4	20'714
	Múrergharh, XXVIII	1'58	75	7	40'00	5'2840259	192320'6	36'424
34	Marwās, XXVI	2'31	63	34	44'59	5'2812024	191074'4	36'188
	Múrergharh, XXVIII	2'30	54	13	8'30	5'2382717	173089'9	32'782
	Gurwāni, XXX	2'31	62	12	7'11	5'2758585	188737'6	35'746
35	Múrergharh, XXVIII	1'76	37	48	48'69	5'0927197	123799'7	23'447
	Gurwāni, XXX	1'77	71	3	21'36	5'2810088	190989'2	36'172
	Lul, XXXII	1'77	71	7	49'95	5'2812024	191074'4	36'188
36	Gurwāni, XXX	1'54	78	21	12'70	5'2598878	181923'1	34'455
	Lul, XXXII	1'54	59	50	57'54	5'2057917	160617'1	30'420
	Aunri, XXXIII	1'53	41	47	49'76	5'0927197	123799'7	23'447
37	Karāra, XXIII	1'60	54	59	48'32	5'1697895	147839'2	28'000
	Marwās, XXVI	1'60	53	25	2'15	5'1611562	144929'3	27'449
	Koria, XXVII	1'61	71	35	9'53	5'2336163	171244'4	32'433
38	Marwās, XXVI	2'00	98	1	15'68	5'3844759	242368'3	45'903
	Koria, XXVII	1'90	44	49	16'87	5'2368722	172533'0	32'677
	Chapri, XXXIX	1'99	37	9	27'45	5'1697895	147839'2	28'000
39	Marwās, XXVI	1'38	36	5	29'35	5'0296558	107067'1	20'278
	Chapri, XXXIX	1'39	72	14	15'41	5'2382717	173089'9	32'782
	Gurwāni, XXX	1'39	71	40	15'24	5'2368722	172533'0	32'677
40	Chapri, XXXIX	'69	79	2	45'77	5'0868493	122137'6	23'132
	Gurwāni, XXX	'68	41	33	56'11	4'9166608	82539'3	15'632
	Pokra, XXXI	'68	59	23	18'12	5'0296558	107067'1	20'278
41	Gurwāni, XXX	'89	35	8	58'90	4'9681337	92925'2	17'599
	Pokra, XXXI	'89	95	40	34'66	5'2057917	160617'1	30'420
	Aunri, XXXIII	'89	49	10	26'44	5'0868493	122137'6	23'132
42	Lul, XXXII	1'58	57	5	42'93	5'1933248	156071'9	29'559
	Aunri, XXXIII	1'57	44	46	6'94	5'1169892	130914'9	24'795
	Mirchādhi, XXXIV	1'58	78	8	10'13	5'2598878	181923'1	34'455
43	Aunri, XXXIII	1'75	54	30	45'04	5'1831181	152446'7	28'872
	Mirchādhi, XXXIV	1'76	69	0	59'87	5'2425645	174809'3	33'108
	Gora, XXXV	1'75	56	28	15'09	5'1933248	156071'9	29'559
44	Mirchādhi, XXXIV	2'17	60	28	26'57	5'2732510	187607'9	35'532
	Gora, XXXV	2'18	74	31	48'88	5'3176397	207797'2	39'356
	Gobra, XXXVII	2'17	44	59	44'55	5'1831181	152446'7	28'872

PRINCIPAL TRIANGULATION—TRIANGLES.

No. of triangle	Station	Spherical excess	Corrected plane angle			Distance		
						Log. feet	Feet	Miles
45	Lul, XXXII	1'20	40	19	9'30	5'0688319	117174'2	22'192
	Mirchádhi, XXXIV	1'21	93	23	3'66	5'2571387	180775'1	34'238
	Harai, XXXVI	1'21	46	17	47'04	5'1169892	130914'9	24'795
46	Mirchádhi, XXXIV	1'65	58	59	11'40	5'2513423	178378'4	33'784
	Harai, XXXVI	1'65	86	45	4'67	5'3176397	207797'2	39'356
	Gobra, XXXVII	1'64	34	15	43'93	5'0688319	117174'2	22'192
47	Gora, XXXV	2'03	51	8	36'75	5'1975769	157607'5	29'850
	Gobra, XXXVII	2'04	60	53	32'90	5'2475620	176832'5	33'491
	Sewádhi, XXXVIII	2'04	67	57	50'35	5'2732510	187607'9	35'532
48	Gobra, XXXVII	1'78	53	6	15'12	5'1813899	151841'3	28'758
	Sewádhi, XXXVIII	1'79	70	47	12'89	5'2535577	179290'7	33'957
	Turer, XLI	1'78	56	6	31'99	5'1975769	157607'5	29'850
49	Sewádhi, XXXVIII	2'14	60	39	37'56	5'2693773	185941'9	35'216
	Turer, XLI	2'14	73	57	10'97	5'3117342	204990'7	38'824
	Huríláong, XLII	2'14	45	23	11'47	5'1813899	151841'3	28'758
50	Gora, XXXV	1'52	44	19	16'73	5'1043921	127172'2	24'086
	Sewádhi, XXXVIII	1'53	59	23	13'58	5'1949280	156649'1	29'668
	Kochea, XXXIX	1'53	76	17	29'69	5'2475620	176832'5	33'491
51	Sewádhi, XXXVIII	'99	42	4	28'24	5'0022011	100508'1	19'036
	Kochea, XXXIX	1'00	79	56	41'80	5'1693414	147686'7	27'971
	Khaira Pándu, XL	'99	57	58	49'96	5'1043921	127172'2	24'086
52	Sewádhi, XXXVIII	2'05	59	7	26'84	5'2576727	180997'5	34'280
	Khaira Pándu, XL	2'05	76	25	22'74	5'3117342	204990'7	38'824
	Huríláong, XLII	2'05	44	27	10'42	5'1693414	147686'7	27'971
53	Turer, XLI	1'63	52	18	34'39	5'1746556	149505'0	28'315
	Huríláong, XLII	1'62	47	53	37'66	5'1466477	140167'6	26'547
	Bulbul, XLIII	1'63	79	47	47'95	5'2693773	185941'9	35'216
54	Huríláong, XLII	2'06	73	47	36'06	5'3026059	200727'1	38'016
	Bulbul, XLIII	2'06	60	32	43'80	5'2601083	182015'5	34'473
	Kasiátu, XLIV	2'06	45	39	40'14	5'1746556	149505'0	28'315
55	Bulbul, XLIII	1'27	35	35	27'94	5'0773340	119490'7	22'631
	Kasiátu, XLIV	1'27	42	16	41'03	5'1402539	138119'2	26'159
	Málhan, XLVII	1'28	102	7	51'03	5'3026059	200727'1	38'016
56	Kasiátu, XLIV	'84	42	51	3'52	4'9657019	92406'4	17'501
	Málhan, XLVII	'85	75	34	31'58	5'1192222	131589'8	24'922
	Patál, LII	'84	61	34	24'90	5'0773340	119490'7	22'631
57	Turer, XLI	'85	43	26	26'81	4'9863894	96914'7	18'355
	Bulbul, XLIII	'85	52	34	51'56	5'0489877	111940'6	21'201
	Birpokhar, XLV	'85	83	58	41'63	5'1466477	140167'6	26'547

## CALCUTTA LONGITUDINAL SERIES.

No. of triangle	Station	Spherical excess	Corrected plane angle	Distance		
				Log. feet	Feet	Miles
58	Bulbul, XLIII	'57	84 52 21'89	5'0686344	117120'9	22'182
	Birpokhar, XLV	'57	39 37 24'26	4'8750184	74992'6	14'203
	Bágru, XLVI	'57	55 30 13'85	4'9863894	96914'7	18'355
59	Bulbul, XLIII	'59	46 36 39'89	5'0099757	102323'6	19'379
	Bágru, XLVI	'60	101 12 27'09	5'1402539	138119'2	26'159
	Málhan, XLVII	'59	32 10 53'02	4'8750184	74992'6	14'203
60	Bágru, XLVI	'59	46 2 34'32	4'9036893	80110'5	15'172
	Málhan, XLVII	'60	67 6 34'15	5'0108191	102522'5	19'417
	Máhwári, XLVIII	'60	66 50 51'53	5'0099757	102323'6	19'379
61	Málhan, XLVII	'58	83 0 6'32	5'0595083	114685'4	21'721
	Máhwári, XLVIII	'58	53 6 17'27	4'9657019	92406'4	17'501
	Patál, LII	'58	43 53 36'41	4'9036893	80110'5	15'172
62	Bágru, XLVI	'57	49 15 44'61	4'9134200	81925'7	15'516
	Máhwári, XLVIII	'57	59 15 35'83	4'9681627	92931'4	17'601
	Bhursu, XLIX	'57	71 28 39'56	5'0108191	102522'5	19'417
63	Máhwári, XLVIII	'46	78 33 40'55	4'9915640	98076'3	18'575
	Bhursu, XLIX	'46	46 28 49'68	4'8606988	72560'3	13'742
	Hariharpur, L	'46	54 57 29'77	4'9134200	81925'7	15'516
64	Máhwári, XLVIII	'71	68 36 22'34	5'1005742	126059'1	23'875
	Hariharpur, L	'71	78 59 9'21	5'1235058	132894'1	25'169
	Pithauria, LI	'71	32 24 28'45	4'8606988	72560'3	13'742
65	Máhwári, XLVIII	'66	33 37 8'90	4'8674037	73689'2	13'956
	Pithauria, LI	'67	59 30 28'23	5'0595083	114685'4	21'721
	Patál, LII	'67	86 52 22'87	5'1235058	132894'1	25'169
66	Kasíátu, XLIV	1'49	53 50 14'77	5'1633013	145646'9	27'585
	Patál, LII	1'49	79 19 27'67	5'2486588	177279'6	33'576
	Chendwár, LIII	1'48	46 50 17'56	5'1192222	131589'8	24'922
67	Patál, LII	1'26	66 40 47'09	5'1679196	147204'0	27'880
	Chendwár, LIII	1'25	48 0 31'00	5'0760641	119141'8	22'565
	Bárágaon, LV	1'26	65 18 41'91	5'1633013	145646'9	27'585
68	Chendwár, LIII	1'56	41 51 34'87	5'1293180	134684'6	25'508
	Bárágaon, LV	1'57	91 18 34'03	5'3048778	201779'9	38'216
	Chainpur, LVIII	1'56	46 49 51'10	5'1679196	147204'0	27'880
69	Chendwár, LIII	2'70	46 32 30'50	5'2421188	174629'9	33'074
	Chainpur, LVIII	2'71	76 27 7'34	5'3690001	233883'8	44'296
	Párasnáth, LVII	2'70	57 0 22'16	5'3048778	201779'9	38'216
70	Párasnáth, LVII	3'09	68 0 23'86	5'3792092	239446'9	45'350
	Chainpur, LVIII	3'09	69 26 36'53	5'3834503	241796'7	45'795
	Tilabani, LXI	3'09	42 32 59'61	5'2421188	174629'9	33'074

PRINCIPAL TRIANGULATION—TRIANGLES.

No. of triangle	Station	Spherical excess	Corrected plane angle			Distance		
			o	'	"	Log. feet	Feet	Miles
71	Párasnáth, LVII	2'80	42	7	35'70	5'2227379	167008'2	31'630
	Tilabani, LXI	2'80	61	40	10'35	5'3407576	219158'1	41'507
	Durgápur, LXII	2'81	76	12	13'95	5'3834503	241796'7	45'795
72	Kasiátu, XLIV	1'16	41	13	45'86	5'0684356	117067'3	22'172
	Chendwár, LIII	1'16	45	12	17'32	5'1005323	126046'9	23'873
	Mahúda, LIV	1'17	93	33	56'82	5'2486588	177279'7	33'576
73	Chendwár, LIII	1'86	74	4	15'65	5'3221513	209967'1	39'767
	Mahúda, LIV	1'86	73	30	27'33	5'3209097	209367'7	39'653
	Bámáni, LVI	1'86	32	25	17'02	5'0684356	117067'3	22'172
74	Chendwár, LIII	3'26	57	28	19'83	5'3307913	214186'1	40'566
	Bámáni, LVI	3'26	67	1	26'75	5'3690001	233883'8	44'296
	Párasnáth, LVII	3'25	55	30	13'42	5'3209097	209367'7	39'653
75	Bámáni, LVI	2'12	74	2	42'74	5'3384203	217981'9	41'284
	Párasnáth, LVII	2'11	35	5	30'94	5'1150653	130336'3	24'685
	Ghoránji, LIX	2'12	70	51	46'32	5'3307913	214186'1	40'566
76	Párasnáth, LVII	2'73	46	10	16'94	5'2352169	171876'7	32'552
	Ghoránji, LIX	2'74	67	37	57'90	5'3430630	220324'6	41'728
	Jálve, LX	2'73	66	11	45'16	5'3384203	217981'9	41'284
77	Párasnáth, LVII	3'16	56	5	17'14	5'3151838	206625'5	39'134
	Jálve, LX	3'16	61	40	13'75	5'3407576	219158'1	41'507
	Durgápur, LXII	3'16	62	14	29'11	5'3430630	220324'6	41'728
78	Durgápur, LXII	1'21	58	4	37'62	5'1556043	143088'4	27'100
	Tilabani, LXI	1'20	39	45	55'72	5'0327593	107834'9	20'423
	Bihárináth, LXIII	1'21	82	9	26'66	5'2227379	167008'2	31'630
79	Tilabani, LXI	'74	26	45	53'82	4'8247705	66799'1	12'651
	Bihárináth, LXIII	'74	78	31	0'37	5'1624569	145364'0	27'531
	Súsinia, LXV	'74	74	43	5'81	5'1556043	143088'4	27'100
80	Bihárináth, LXIII	'61	70	38	35'82	5'0763352	119216'2	22'579
	Súsinia, LXV	'62	77	26	33'72	5'0910906	123336'2	23'359
	Rádhámádhupur, LXVI	'61	31	54	50'46	4'8247705	66799'1	12'651
81	Súsinia, LXV	1'06	46	9	7'45	5'0534166	113088'0	21'418
	Rádhámádhupur, LXVI	1'06	84	21	38'49	5'1932653	156050'5	29'555
	Karásoli, LXIX	1'06	49	29	14'06	5'0763352	119216'2	22'579
82	Rádhámádhupur, LXVI	'79	57	57	49'50	5'0250915	105947'7	20'066
	Karásoli, LXIX	'79	57	14	2'32	5'0215809	105094'7	19'904
	Bhálki, LXVIII	'80	64	48	8'18	5'0534166	113088'0	21'418
83	Durgápur, LXII	'90	73	48	20'49	5'1172218	130985'1	24'808
	Bihárináth, LXIII	'90	53	57	11'36	5'0425047	110282'0	20'887
	Malúncha, LXIV	'90	52	14	28'15	5'0327593	107834'9	20'423

## CALCUTTA LONGITUDINAL SERIES.

No. of triangle	Station	Spherical excess	Corrected plane angle			Distance		
						Log. feet	Feet	Miles
84	Bihárináth, LXIII	1'23	74	43	41'10	5'1888201	154461'5	29'254
	Malúncha, LXIV	1'23	50	22	49'18	5'0910906	123336'2	23'359
	Rádhámádhupur, LXVI	1'23	54	53	29'72	5'1172218	130985'1	24'808
85	Malúncha, LXIV	1'06	29	0	7'94	4'9431726	87734'9	16'616
	Rádhámádhupur, LXVI	1'07	92	23	36'86	5'2571922	180797'4	34'242
	Nawágaon, LXVII	1'07	58	36	15'20	5'1888201	154461'5	29'254
86	Rádhámádhupur, LXVI	'45	38	28	29'76	4'8169993	65614'4	12'427
	Nawágaon, LXVII	'46	85	13	41'27	5'0215809	105094'7	19'904
	Bhálki, LXVIII	'45	56	17	48'97	4'9431726	87734'9	16'616
87	Bhálki, LXVIII	'85	59	52	5'17	5'0492574	112010'1	21'214
	Karásoli, LXIX	'85	65	14	26'39	5'0704272	117605'4	22'274
	Madhpur, LXX	'85	54	53	28'44	5'0250915	105947'7	20'066
88	Karásoli, LXIX	'72	50	9	52'65	4'9676705	92826'2	17'581
	Madhpur, LXX	'72	61	55	36'90	5'0280124	106662'7	20'201
	Ganjua, LXXII	'73	67	54	30'45	5'0492574	112010'1	21'214
89	Madhpur, LXX	'66	49	40	2'98	4'9631400	91862'9	17'398
	Ganjua, LXXII	'67	79	57	7'61	5'0743007	118659'0	22'473
	Mubárákpur, LXXV	'66	50	22	49'41	4'9676705	92826'2	17'581
90	Madhpur, LXX	'57	54	23	7'00	4'9851463	96637'6	18'303
	Mubárákpur, LXXV	'57	39	3	0'18	4'8744216	74889'6	14'184
	Hákistápur, LXXIV	'57	86	33	52'82	5'0743007	118659'0	22'473
91	Bhálki, LXVIII	'53	41	5	1'35	4'8881322	77291'6	14'639
	Madhpur, LXX	'53	48	12	23'51	4'9429384	87687'6	16'608
	Párhát, LXXI	'54	90	42	35'14	5'0704272	117605'4	22'274
92	Madhpur, LXX	'34	47	34	29'87	4'7941942	62257'9	11'791
	Párhát, LXXI	'35	66	1	6'80	4'8868360	77061'3	14'595
	Sonákúr, LXXIII	'35	66	24	23'33	4'8881322	77291'6	14'639
93	Madhpur, LXX	'31	43	20	47'32	4'7493781	56153'7	10'635
	Sonákúr, LXXIII	'31	66	16	1'81	4'8744216	74889'6	14'184
	Hákistápur, LXXIV	'32	70	23	10'87	4'8868360	77061'3	14'595
94	Hákistápur, LXXIV	'48	63	36	28'19	4'9572663	90628'8	17'165
	Mubárákpur, LXXV	'47	43	36	51'96	4'8437930	69790'0	13'218
	Aknápur, LXXVI	'48	72	46	39'85	4'9851463	96637'6	18'303
95	Mubárákpur, LXXV	'46	44	16	57'56	4'8380075	68866'4	13'043
	Aknápur, LXXVI	'46	68	57	39'20	4'9640663	92059'0	17'435
	Dilakás, LXXIX	'46	66	45	23'24	4'9572663	90628'8	17'165
96	Aknápur, LXXVI	'27	63	42	49'11	4'8241547	66704'4	12'633
	Dilakás, LXXIX	'27	48	31	10'43	4'7461473	55737'5	10'556
	Bhola, LXXX	'28	67	46	0'46	4'8380075	68866'4	13'043

PRINCIPAL TRIANGULATION—TRIANGLES.

No. of triangle	Station	Spherical excess	Corrected plane angle			Distance		
						Log. feet	Feet	Miles
97	Dilakás, LXXIX	·42	67	38	15·89	4·9348244	86064·6	16·300
	Bhola, LXXX	·42	66	34	27·17	4·9314199	85392·5	16·173
	Nibria, LXXXIII	·41	45	47	16·94	4·8241547	66704·4	12·633
98	Bhola, LXXX	·35	44	0	14·42	4·7870280	61239·0	11·598
	Nibria, LXXXIII	·35	58	29	7·82	4·8759237	75149·1	14·233
	North End,* LXXXII	·36	77	30	37·76	4·9348244	86064·6	16·300
99	North End,* LXXXII	·12	49	19	54·37	4·6705132	46828·8	8·869
	Nibria, LXXXIII	·12	33	22	14·96	4·5309666	33959·9	6·432
	South End,* LXXXV	·13	97	17	50·67	4·7870280	61239·0	11·598
100	Dilakás, LXXIX	·34	44	46	54·47	4·7876742	61330·2	11·616
	Nibria, LXXXIII	·34	56	28	13·97	4·8608083	72578·5	13·746
	Baniban, LXXXIV	·35	78	44	51·56	4·9314199	85392·5	16·173
101	Nibria, LXXXIII	·28	71	6	47·56	4·8488746	70611·4	13·373
	Baniban, LXXXIV	·27	53	37	18·38	4·7787702	60085·6	11·380
	Samalia, LXXXVII	·28	55	15	54·06	4·7876742	61330·2	11·616
102	Hákistápur, LXXIV	·22	49	32	52·14	4·7291283	53595·5	10·151
	Aknápur, LXXVI	·22	48	11	51·66	4·7201914	52503·9	9·944
	Dastápur, LXXVII	·22	82	15	16·20	4·8437930	69790·0	13·218
103	Aknápur, LXXVI	·23	52	14	16·17	4·7429801	55332·5	10·480
	Dastápur, LXXVII	·23	77	47	20·65	4·8351069	68408·0	12·956
	Sátten, LXXVIII	·23	49	58	23·18	4·7291283	53595·5	10·151
104	Aknápur, LXXVI	·24	54	6	42·11	4·7603096	57585·0	10·906
	Sátten, LXXVIII	·24	51	38	37·68	4·7461473	55737·5	10·556
	Bhola, LXXX	·25	74	14	40·21	4·8351069	68408·0	12·956
105	Sátten, LXXVIII	·29	74	33	16·35	4·8702092	74166·7	14·047
	Bhola, LXXX	·28	56	59	41·07	4·8097497	64528·2	12·221
	Chinsura, LXXXI	·28	48	27	2·58	4·7603096	57585·0	10·906
106	Bhola, LXXX	·34	50	24	54·75	4·8034553	63599·7	12·045
	Chinsura, LXXXI	·34	65	35	35·26	4·8759237	75149·1	14·233
	North End,* LXXXII	·34	63	59	29·99	4·8702092	74166·7	14·047
107	Nibria, LXXXIII	·09	36	2	34·65	4·4468598	27980·8	5·299
	South End,* LXXXV	·09	63	58	50·52	4·6307822	42734·9	8·094
	La Martiniere, LXXXVI	·10	79	58	34·83	4·6705132	46828·8	8·869
108	Nibria, LXXXIII	·17	58	43	42·34	4·7212973	52637·7	9·969
	La Martiniere, LXXXVI	·18	77	19	50·42	4·7787702	60085·6	11·380
	Samalia, LXXXVII	·17	43	56	27·24	4·6307822	42734·9	8·094

\* Of Calcutta base-line.

September 1876.

J. HERSCHEL.

**CALCUTTA LONGITUDINAL SERIES.**  
**SECONDARY TRIANGULATION. TRIANGLES.**

PRINCIPAL-AUXILIARY STATIONS, AND INTERSECTED POINTS.

Differences between the common sides of two triangles to stations and intersected points, are shown by the small figures in the column for "Distance in Feet" between the data of the two triangles, the earlier of which in order has supplied the greater value: where the difference is small it has usually been apportioned between the triangles, but where it is large no adjustment has been made, as one or other of the two values must be erroneous.

No. of triangle	Station	Corrected plane angle	Distance			Theodolite used	No. of triangle	Station	Corrected plane angle	Distance			Theodolite used														
			Log. feet	Feet	Miles					Log. feet	Feet	Miles															
109	Kámkhera, (IV) Bhaorása, (V) Udepur Hill Mark	0 45 18 27 73 8 42	4.954409 5.079819 5.040907	90034 120176 109877	17.052 22.761 20.810	Inch 18 "	114	Masjidpur Bhirpur Kurwai Fort	0 37 49 20 110 33 19	4.544222 4.728041 4.476207	35012 53461 29937	6.631 10.125 5.670	Inch 18 "														
														110	Budhon, III Tins, IV Patári	0 52 18 52 44 58 8	5.115427 5.066292 5.213325	130445 110491 163503	24.705 22.063 30.966	"	115	Masjidpur Bhirpur Bamorá Temple	0 68 8 36 78 23 22	4.702296 4.725714 4.476207	50384 53176 29937	9.543 10.071 5.670	"
112	Bhaorása, (V) Udepur Hill Mark Masjidpur	0 38 58 18 108 13 7	4.775351 4.710624 4.954409	59614 51360 90034	11.291 9.727 17.052	"	117	Bhaorása, (V) Udepur Hill Mark Bhari	0 163 0 3 10 53 0	5.144299 4.705892 4.954409	139412 50803 90034	26.404 9.622 17.052	"														
														118	Bhaorása, (V) Masjidpur Bhirpur	0 27 16 49 128 9 20	4.476207 4.433808 4.710624	29937 27152 51360	5.670 5.143 9.727	"	118	Udepur Hill Mark Patári Bhari	0 77 44 33 22 15 52	5.144299 4.732818	139412 54053	26.404 10.237	"

NOTE.—1. Names followed by Roman numerals are those of Principal Stations. Kámkhera, (IV), and Bhaorása, (V), appertain to the Sironj base-line figure.  
2. The values of the sides are given in the same lines with the opposite angles. \* Base deduced by two sides and included angle. † S. Stands for small theodolite.

PRINCIPAL-AUXILIARY STATIONS, AND INTERSECTED POINTS.

No. of triangle	Station	Corrected plane angle	Distance			No. of triangle used	Station	Corrected plane angle	Distance			Theodolite used	Inch
			Log. feet	Feet	Miles				Log. feet	Feet	Miles		
119	Teonda, I Gárgája, I Bilái	72 56 17 35 6 2 71 57 41	4.748894 4.528120 4.746553	56091 33738 55790	10.623 6.390 10.566	182	Patári Bagodá Barkherá Fort	103 59 22 18 40 41	4.477077 3.995643 4.415371	29997 9900 26024	5.681 1.875 4.929	18 " "	
120	Teonda, I Patári Bilái	58 44 11 47 51 44 73 24 5	4.580848 4.528120 4.639504	38891 33738 43602	7.366 6.390 8.258	133	Patári Bagodá Datorá Building	45 0 30 92 33 37	4.435804 4.585822 4.415371	27277 38532 26024	5.166 7.298 4.929	" "	
121	Gárgája, I Bilái Uwar	122 35 47 38 40 57	4.878574 4.459465 4.748894	75609 28805 56091	14.320 5.456 10.623	134	Patári Bagodá Dhanserá Fort	19 15 51 139 21 9	4.371961 4.667397 4.415371	23548 46494 26024	4.460 8.806 4.929	" "	
122	Teonda, I Gárgája, I Uwar	87 29 45 64 40 57	4.459465 4.789993 4.746553	28805 61658 55790	5.456 11.678 10.566	135	Patári Bagodá Malhargarh Temple	19 13 26 156 28 52	5.058477 5.141966 4.415371	114413 138665 26024	21.669 26.262 4.929	" "	
123	Gárgája, I Uwar Imlaudá Building	50 41 46 60 58 31	4.379928 4.433016 4.459465	23984 27103 28805	4.542 5.133 5.456	136	Teonda, I Tins, IV Torá	63 10 30 45 39 10 71 10 20	5.000193 4.904016 5.025756	100044 80171 106110	18.948 15.184 20.097	" "	
124	Gárgája, I Uwar Garaspur Fort	12 17 33 112 41 29	3.874196 4.511027 4.459465	7485 32436 28805	1.418 6.143 5.456	137	Budhon, III Tins, IV Torá	23 20 0 17 0 22 139 39 38	5.000193 4.868496 5.213525	100044 73875 103503	18.948 13.991 30.966	" "	
125	Gárgája, I Uwar Garaspur Hill Mark	14 11 1 124 38 31	4.030225 4.556258 4.459465	10721 35996 28805	2.030 6.817 5.456	138	Tins, IV Torá Richái	52 43 36 5.043413 57 54 29	4.973988 5.043413 5.000193	93970 110513 100044	17.797 20.930 18.948	" "	
126	Gárgája, I Uwar Murádpur Pagoda	146 53 48 21 7 18	4.879553 4.698964 4.459465	75780 49999 28805	14.352 9.470 5.456	139	Teonda, I Tins, IV Richái	104 39 58 7 4 26 68 15 36	5.043413 4.148231 5.025756	110513 14068 106110	20.930 2.664 20.097	" "	
127	Patári Bilái Basodá Hill Mark	23 58 13 21 26 19	4.346092 4.300178 4.589848	22187 19961 38891	4.202 3.780 7.366	140	Gárgája, I Richái Basodá Mausoleum	103 58 41 45 35 42	4.905193 4.772196 4.622775	80388 59183 41954	15.225 11.209 7.946	" "	
128	Teonda, I Tins, IV Pipalkheri	68 27 19 55 59 38 55 33 3	5.078042 5.028041 5.025756	119685 106670 106110	22.668 20.203 20.097	141	Teonda, I Gárgája, I Basodá Mausoleum	40 54 55 100 57 32	4.772196 4.948000 4.746553	59183 88716 55790	11.209 16.802 10.566	" "	
129	Tins, IV Saugor, V Pipalkheri	55 46 11 65 32 3	5.063760 5.078042 5.105509	115814 119685 127500	21.934 22.668 24.148	142	Teonda, I Bilái Kariápahar	13 38 58 99 57 45	3.907595 4.496746 4.528120	8083 31387 33738	1.531 5.944 6.390	" "	
130	Patári Bilái Bagodá	120 20 45 36 18 38	4.753414 4.415371 4.589848	56678 26024 38891	10.734 4.929 7.366	143	Teonda, I Richái Kariápahar	95 37 27 23 8 11	4.551830 4.496746 4.148231	35631 31387 14068	6.748 5.944 2.664	18 s	
131	Patári Pipalkheri Bagodá	80 18 53 18 8 16 81 32 51	4.915953 4.415371 4.917445	82405 26024 82688	15.607 4.929 15.661	144	Teonda, I Tins, IV Muhammadgarh, Basodá	62 13 4 34 21 39	4.975434 4.780214 5.025756	94500 60286 106110	17.898 11.418 20.097	18 "	

NOTE.—Gárgája, I, appertains to the Great Arc Meridional Series—Section 18° to 24°. \* Base deduced by two sides and included angle. † See note to page 30—B.



CALCUTTA LONGITUDINAL SERIES. SECONDARY TRIANGULATION—TRIANGLES.

No. of triangle	Station	Corrected plane angle	Distance			No. of triangle	Station	Corrected plane angle	Distance			Theodolite used
			Log. feet	Feet	Miles				Log. feet	Feet	Miles	
145	Tins, IV Richái Muhammadgarh Basodá	h.s.	4.705867 4.975434 5.043413	5080 94500 110513	9.621 17.898 20.930	158	Tins, IV Pipalkheri Babúká	53 24 33 .17 58 13	5.006060 4.590680 5.078042	101405 38906 119685	19.206 7.380 22.668	Inch 18 "
146	Tins, IV Richái Nawáb Basodá	h.s.	4.806387 4.938336 5.043413	64031 86703 110513	12.127 16.432 20.930	159	Teonda, I Pipalkheri Babúká	66 57 25 37 34 50	5.006060 4.827415 5.028041	101405 67207 106670	19.206 12.729 20.203	" "
147	Teonda, I Tins, IV Nawáb Basodá	h.s.	4.938336 4.857817 5.025756	86703 72080 106110	16.432 13.652 20.097	160	Tins, IV Babúká Serwás Turret	57 34 9 02 48 50	4.581202 4.603998 4.590680	38124 40179 38906	7.221 7.610 7.380	" "
148	Gárgája, I Richái Bagrod W. Temple	h.s.	4.495203 4.760052 4.622775	31275 57551 41954	5.923 10.900 7.946	161	Teonda, I Tins, IV Ratgarh Palace	25 39 52 34 1 54	4.726152 4.837481 5.025756	53229 68783 106110	10.081 13.027 20.097	" "
149	Teonda, I Gárgája, I Bagrod W. Temple	h.s.	4.760052 4.533583 4.746553	57551 34165 55790	10.900 6.471 10.566	162	Teonda, I Pipalkheri Ratgarh Palace	42 47 27 39 44 38	4.863815 4.837481 5.028041	73083 68783 106670	13.841 13.027 20.203	" "
150	Gárgája, I Richái Bagrod Dome	h.s.	4.494286 4.761308 4.622775	31209 57718 41954	5.911 10.931 7.946	163	Teonda, I Budhon, III Kurai	18 24 49 27 45 0	4.813146 4.981658 5.171700	65035 95864 148512	12.317 18.156 28.127	" "
151	Teonda, I Richái Bagrod E. Temple	h.s.	4.498188 4.535440 4.148231	31491 34312 14008	5.964 6.498 2.664	164	Teonda, I Pipalkheri Kurai	27 54 16 63 55 42	4.698507 4.981658 5.028041	49947 95864 106670	9.460 18.156 20.203	" "
152	Teonda, I Tins, IV Bagrod	h.s.	4.908032 4.546135 5.025756	80916 35107 106110	15.325 6.600 20.097	165	Bagodá Kurai Hiran Pagoda	90 21 55 40 25 22	4.740148 4.552015 4.619328	54973 35046 41622	10.412 6.751 7.883	" "
153	Tins, IV Torá Bagrod	h.s.	4.969122 4.908032 5.000193	93137 80916 100044	17.640 15.325 18.948	166	Bagodá Kurai Silegaon Building	58 43 47 47 21 21	4.568501 4.503300 4.619328	37025 31804 41622	7.012 6.035 7.883	" "
154	Teonda, I Richái Piprái Fort	h.s.	4.432311 4.306008 4.148231	27059 20231 14008	5.125 3.832 2.664	167	Bagodá Kurai Bandrautá Fort	42 11 35 21 58 1	4.492209 4.238033 4.619328	31061 17299 41622	5.883 3.276 7.883	" "
155	Teonda, I Torá Piprái Fort	h.s.	4.869140 4.306008 4.904016	73984 20231 80171	14.012 3.832 15.184	168	Bagodá Kurai Dalpatpur Fort	30 56 22 35 42 17	4.367531 4.422578 4.619328	23309 26459 41622	4.415 5.011 7.883	" "
156	Tins, IV Pipalkheri Mirzapur Hill Mark	h.s.	4.932297 4.778362 5.078042	85505 60029 119685	16.206 11.369 22.668	169	Pipalkheri Kurai Kanao Fort	15 43 46 13 45 36	4.439432 4.382623 4.698507	27506 24134 49947	5.210 4.571 9.460	" "
157	Teonda, I Tins, IV Mirzapur Hill Mark	h.s.	4.778362 4.697138 5.025756	60029 49790 106110	11.369 9.430 20.097	170	Pipalkheri Kurai Dangarh Building	15 10 13 121 6 51	4.276765 4.791524 4.698507	18913 61876 49947	3.582 11.719 9.460	" "

NOTE.—Gárgája, I, appertains to the Great Arc Meridional Series—Section 16° to 24°. \* Base deduced by two sides and included angle.

PRINCIPAL-AUXILIARY STATIONS, AND INTERSECTED POINTS.

No. of Triangle	Station	Corrected plane angle	Distance			No. of Triangle	Station	Corrected plane angle	Distance			Theodolite used
			Log. feet	Feet	Miles				Log. feet	Feet	Miles	
171	Pipalkheri Kurai Gamberia Building	h.s. s. s.	4.121900 4.688043 4.698507	13240 48758 49947	2.508 9.234 9.460	184	Budhon, III Chirari Pithoria Fort	h.s. h.s. h.s.	4.009247 4.357934 4.405416	10215 22800 25434	1.935 4.318 4.817	Inch 18 "
172	Pipalkheri Kurai Kimlasa Pagoda	h.s. s. s.	4.788018 4.961163 4.698507	61379 91446 49947	11.625 17.319 9.460	185	Pipalkheri Chirari Isarwar Pagoda	h.s. h.s. h.s.	4.421833 4.442721 4.621210	26414 27715 41803	5.003 5.249 7.917	"
173	Budhon, III Kurai Kimlasa Pagoda	h.s. s. s.	4.788018 4.828656 4.813146	61379 67399 65035	11.625 12.765 12.317	186	Pipalkheri Barodia Isarwar Pagoda	h.s. h.s. h.s.	4.413280 4.442721 4.408150	25809 27715 25595	4.905 5.249 4.847	"
174	Pipalkheri Kurai Kimlasa Fort	h.s. s. s.	4.786444 4.962066 4.698507	61157 91636 49947	11.583 17.355 9.460	187	Teonda, I Budhon, III Narauli	h.s. h.s. h.s.	4.843499 5.136427 5.171760	69743 136907 148512	13.209 25.929 28.127	"
175	Pipalkheri Kurai Budi Paturia Bungalow	h.s. s. s.	4.698616 4.884213 4.698507	49959 76597 49947	9.462 14.507 9.460	188	Teonda, I Tins, IV Narauli	h.s. h.s. h.s.	5.027341 5.136427 5.025756	106498 136907 106110	20.170 25.929 20.097	"
176	Pipalkheri Kurai Dugio Fort	h.s. s. s.	4.690554 4.810344 4.698507	49040 64617 49947	9.288 12.238 9.460	189	Tora Narauli Lohari Temple	h.s. h.s. h.s.	4.385769 4.866384 4.789527	24309 73516 61592	4.604 13.924 11.665	"
177	Budhon, III Kurai Garola Palace	h.s. s. s.	4.571625 4.533809 4.813146	37293 34183 65035	7.063 6.474 12.317	190	Teonda, I Budhon, III Dilchauri	h.s. h.s. h.s.	5.093470 5.097635 5.171760	124014 125209 148512	23.487 23.714 28.127	"
178	Pipalkheri Tora Barodia	h.s. h.s. h.s.	4.471375 4.408150 4.444587	29606 25595 27835	5.607 4.847 5.272	191	Budhon, III Saugor, V Dilchauri	h.s. h.s. h.s.	4.885519 5.093470 5.097861	76828 124014 125274	14.551 23.487 23.726	"
179	Tora Barodia Chandamau	h.s. h.s. h.s.	4.206060 4.478717 4.471375	16072 30110 29606	3.044 5.703 5.607	192	Saugor, V Naharmanu, VI Semri Panari	h.s. h.s. h.s.	4.952027 4.835278 5.078072	89542 68435 119094	16.959 12.901 22.669	"
180	Saugor, V Pipalkheri Chirari	h.s. h.s. h.s.	4.621210 4.999772 5.063760	41803 99948 115814	7.917 18.929 21.934	193	Tins, IV Naharmanu, VI Semri Panari	h.s. h.s. h.s.	4.952027 4.823139 5.133985	89542 66549 136140	16.959 12.004 25.784	"
181	Budhon, III Pipalkheri Chirari	h.s. h.s. h.s.	4.621210 4.405416 4.669682	41803 25434 46739	7.917 4.817 8.852	194	Tins, IV Dilchauri Dakrai	h.s. h.s. h.s.	4.367204 4.530606 4.726144	23292 33932 53228	4.411 6.426 10.081	"
182	Budhon, III Tora Kondia Fort	h.s. h.s. h.s.	5.007073 4.525646 4.868496	101642 33546 73875	19.250 6.353 13.991	195	Tins, IV Semri Panari Dakrai	h.s. h.s. h.s.	4.717754 4.530606 4.823139	52210 33932 66549	9.888 6.426 12.604	"
183	Budhon, III Chirari Barodia, N. Turret	h.s. h.s. h.s.	4.827885 4.707219 4.405416	67280 50959 25434	12.742 9.651 4.817	196	Dilchauri Dakrai Moaso Building	h.s. h.s. h.s.	4.524354 4.562791 4.367204	33447 36542 23292	6.335 6.921 4.411	"

\* Base deduced by two sides and included angle. † See note to page 30—B.

CALCUTTA LONGITUDINAL SERIES. SECONDARY TRIANGULATION—TRIANGLES.

No. of triangle	Station	Corrected plane angle	Distance			No. of triangle	Station	Corrected plane angle	Distance			Theodolite used	Inch
			Log. feet	Feet	Miles				Log. feet	Feet	Miles		
197	Dilchauri Dakrai Masuriai Building	59 2 36 48 21 1	4.320704 4.260981 4.367204	20931 18238 23292	3.964 3.454 4.411	210	Pipalkheri Bhapai Garhpura Pagoda	30 19 44 84 26 46	4.654791 4.949488 4.909599	45164 89020 81208	8.554 16.860 15.380	Inch 18	
198	Tins, IV Dilchauri Munderi Mosque	14 28 55 62 22 47	4.135733 4.685116 4.726144	13669 48430 53228	2.589 9.172 10.081	211	Budhon, III Tins, IV Richonda	56 8 5 37 31 57	5.133676 4.999183 5.213525	136043 99812 163503	25.766 18.904 30.966	"	
199	Dilchauri Dakrai Gamberia Hill Mark	85 32 5 40 58 26	4.460754 4.278789 4.367204	28890 19002 23292	5.472 3.599 4.411	212	Budhon, III Tins, IV Richonda	46 35 32 38 39 32	5.064749 4.999183 5.202031	116078 99812 159232	21.984 18.904 30.158	"	
200	Tins, IV Dilchauri Gamberia Hill Mark	16 19 14 111 45 22	4.278789 4.797974 4.726144	19002 62802 53228	3.599 11.804 10.081	213	Budhon, III Richonda Pindarua Fort	48 51 58 38 59 22	4.876383 4.798260 4.999183	75229 62843 99812	14.248 11.902 18.904	"	
201	Dilchauri Dakrai Sihora Temple No. 1.	125 57 7 23 48 54	4.573411 4.271339 4.367204	37446 18678 23292	7.092 3.538 4.411	214	Richonda Bhapai Saugor Magazine	46 42 17 29 43 2	4.548588 4.381794 4.674247	35366 24088 47233	6.698 4.502 8.946	"	
202	Dilchauri Dakrai Rampur Temple	149 17 31 9 51 39	4.524039 4.049549 4.367204	33423 11209 23292	6.330 2.123 4.411	215	Saugor, V Bhapai Masanjir	56 8 2 89 23 51	4.577840 4.411365 4.658559	37830 25785 45557	7.165 4.884 8.628	"	
203	Tins, IV Dakrai Torai Fort	29 17 11 30 16 30	4.284477 4.207573 4.530606	19252 19841 33932	3.646 3.758 6.426	216	Richonda Bhapai Masanjir	46 13 49 64 22 15	4.577840 4.690528 4.674247	37830 49037 47233	7.165 9.287 8.946	"	
204	Tins, IV Dakrai Jaisinghnagar Fort	71 3 27 62 41 37	4.647678 4.620548 4.530606	44430 41740 33932	8.415 7.905 6.426	217	Bhapai Masanjir Saugor Pagoda	41 23 55 78 0 4	4.458109 4.628121 4.577840	28715 42474 37830	5.438 8.044 7.165	"	
205	Tins, IV Naharnau, VI Jaisinghnagar Fort	14 10 43 6 5 59	4.983250 4.620548 5.133985	96217 41740 136140	18.225 7.905 25.784	218	Richonda Bhapai Saugor Pagoda	63 59 13 28 0 1	4.628121 4.346122 4.674247	42474 22188 47233	8.044 4.202 8.946	"	
206	Tins, IV Naharnau, VI Sejpuri Building	9 43 36 16 36 48	4.714652 4.943131 5.133985	51838 87726 136140	9.818 16.615 25.784	219	Bhapai Masanjir Saugor Cantonment	41 29 24 75 41 34	4.449847 4.614985 4.577840	28174 41208 37830	5.336 7.805 7.165	"	
207	Tins, IV Semri Panari Sejpuri Building	24 42 23 109 43 34	4.590538 4.943131 4.823139	38953 87726 66549	7.377 16.615 12.604	220	Richonda Bhapai Saugor Cantonment	60 42 52 27 54 32	4.614985 4.344681 4.674247	41208 22115 47233	7.805 4.188 8.946	"	
208	Tins, IV Saugor, V Bhapai	13 2 46 26 8 1	4.658559 4.948873 5.105509	45557 88894 127500	8.628 16.836 24.148	221	Richonda Bhapai Lakni	49 46 9 54 5 31	4.648564 4.752949 4.674247	44521 56617 47233	8.432 10.723 8.946	"	
209	Tins, IV Pipalkheri Bhapai	42 43 25 47 57 36 89 18 59	4.909599 4.948873 5.078042	81208 88804 119685	15.380 16.836 22.668	222	Saugor, V Bhapai Lakni	67 38 33 71 8 56	4.648564 4.501258 4.658559	44521 31714 45557	8.432 6.007 8.628	"	

\* Base deduced by two sides and included angle.

PRINCIPAL-AUXILIARY STATIONS, AND INTERSECTED POINTS.

No. of Triangle	Station	Corrected plane angle	Distance			Theodolite used	No. of triangle	Station	Corrected plane angle	Distance			Theodolite used
			Log. feet	Feet	Miles					Log. feet	Feet	Miles	
223	Semrí Panári Masanjir Bilibrá Temple	h.s. " "	4° 6478' 57 4° 5259' 53 4° 6370' 72	44448 33501 43418	8° 418 6° 345 8° 223	286	Saugor, V Richondá Karápur Temple	57° 19' 41 91° 3' 51	4° 6513' 02 4° 7203' 31 4° 4455' 22	44803 53215 27895	3 8° 485 10° 079 5° 283	Inch 18 "	
224	Semrí Panári Lakní Bilibrá Temple	h.s. " "	4° 5681' 29 4° 5250' 53 4° 6129' 41	36994 33501 41015	7° 006 6° 345 7° 768	237	Saugor, V Mandra, VIII Pathariá	41° 6' 31 72° 8' 37 66° 44' 52	4° 9714' 17 5° 1320' 88 5° 1167' 39	93631 135546 130839	17° 733 25° 672 24° 780	" " "	
225	Tins, IV Saugor, V Hirápur	h.s. " "	4° 8606' 03 5° 0540' 02 5° 1055' 99	72559 113245 127500	13° 742 21° 447 24° 148	288	Saugor, V Tinsmál, VII Pathariá	44° 26' 20 71° 4' 22 64° 29' 18	5° 0014' 18 5° 1320' 88 5° 1110' 74	100327 135546 129323	19° 001 25° 672 24° 493	" " "	
226	Saugor, V Mandra, VIII Hirápur	h.s. " "	5° 0275' 45 4° 8606' 03 5° 1167' 39	106548 72559 130839	20° 180 13° 742 24° 780	289	Saugor, V Tinsmál, VII Dholpahári	7° 25' 52 9° 30' 30 103° 3' 38	4° 7589' 56 4° 8652' 29 5° 1110' 74	57406 73321 129323	10° 872 13° 887 24° 493	" " "	
227	Náharman, VI Hirápur Nanní Deori Pagoda	h.s. " "	4° 6154' 44 4° 2800' 95 4° 6791' 92	41252 19059 47774	7° 813 3° 610 9° 048	240	Tinsmál, VII Pathariá Dholpahári	61° 33' 52 34° 40' 1 83° 46' 7	4° 9481' 55 4° 7589' 56 5° 0014' 18	88747 57406 100327	16° 808 10° 872 19° 001	" " "	
228	Saugor, V Náharman, VI Bohári	h.s. " "	5° 0845' 06 4° 7316' 94 5° 0780' 72	121480 53913 119094	23° 008 10° 211 22° 669	241	Richondá Dholpahári Painári Temple	19° 38' 8 71° 29' 30	4° 3446' 27 4° 7951' 76 4° 8181' 57	22112 62399 65790	4° 188 11° 818 12° 460	" " "	
229	Saugor, V Tinsmál, VII Bohári	h.s. " "	5° 0376' 59 4° 7316' 94 5° 1110' 74	109058 53913 129323	20° 655 10° 211 24° 493	242	Tinsmál, VII Dholpahári Benáiká Fort	59° 24' 48 50° 59' 6	4° 7220' 14 4° 6774' 91 4° 7589' 56	53725 47587 57406	9° 986 9° 013 10° 872	" " "	
230	Saugor, V Bohári Bokpurá	h.s. " "	3° 9151' 40 4° 6910' 34 4° 7316' 94	8225 49095 53913	1° 558 9° 298 10° 211	243	Tinsmál, VII Richondá Pátan Temple	45° 10' 45 18° 36' 43	4° 9627' 03 4° 6158' 69 5° 0647' 49	91771 41292 116078	17° 381 7° 821 21° 984	" " "	
231	Richondá Bohári Bokpurá	h.s. " "	3° 9151' 40 4° 8289' 58 4° 8419' 21	8225 67446 69490	1° 558 12° 774 13° 161	244	Tinsmál, VII Dholpahári Pátan Temple	66° 11' 14 42° 50' 35	4° 7447' 24 4° 6158' 69 4° 7589' 56	55555 41292 57406	10° 522 7° 821 10° 872	" " "	
232	Lakní Bokpurá Dungasráo Building	h.s. " "	4° 3387' 93 4° 8255' 98 4° 7888' 72	21817 66927 61500	4° 132 12° 675 11° 648	245	Richondá Dholpahári Sanodá Fort	30° 10' 35 58° 58' 51	4° 5194' 81 4° 7511' 82 4° 8181' 57	33074 56387 65790	6° 264 10° 679 12° 460	" " "	
233	Bohári Bokpurá Gumeriá Mosque	h.s. " "	4° 6036' 31 4° 6351' 28 3° 9151' 40	40145 43105 8225	7° 603 8° 175 1° 558	246	Saugor, V Richondá Sanodá Fort	86° 22' 43 64° 2' 12	4° 7511' 82 4° 7058' 45 4° 4455' 22	56387 59798 27895	10° 679 9° 621 5° 283	" " "	
234	Richondá Bohári Gumeriá Mosque	h.s. " "	4° 6351' 28 4° 4424' 52 4° 8419' 21	43165 27698 69490	8° 175 5° 246 13° 161	247	Saugor, V Hirápur Dháná Cupola	41° 44' 10 36° 9' 16	4° 6937' 45 4° 6412' 92 4° 8606' 93	49402 43782 72559	9° 356 8° 292 13° 742	" " "	
235	Richondá Bohári Karápur Temple	h.s. " "	4° 6945' 51 4° 6513' 02 4° 8419' 21	49494 44803 69490	9° 374 8° 485 13° 161	248	Hirápur Bokpurá Dháná Cupola	1° 53' 59 3° 20' 48	4° 4479' 90 4° 6937' 45 4° 8886' 33	28054 49402 77381	5° 313 9° 356 14° 655	" " "	

\* Base deduced by two sides and included angle.

No. of Triangle	Station	Corrected plane angle	Distance			Theodolite used	No. of Triangle	Station	Corrected plane angle	Distance			Theodolite used
			Log. feet	Feet	Miles					Log. feet	Feet	Miles	
249	Dholpahári Bokpurá Dhaná Dome	h.s. " "	4° 46' 08.71 4° 93' 77.92 4° 78' 93.99	28898 86655 61574	5.473 16.412 11.662	18 " "	Dholpahári Gongtoríá Paderíá Building	h.s. " "	6° 26' 50 123 23 3	3° 75' 01.68 4° 62' 15.21 4° 58' 51.58	5626 41833 38473	1.065 7.923 7.287	Inch " "
250	Dholpahári Bohári Dhaná Dome	h.s. " "	4° 56' 04.66 4° 93' 77.92 4° 74' 44.21	37108 86655 55516	7.028 16.412 10.514	" "	Dholpahári Bohári Paderíá Building	h.s. " "	16° 32' 27 37 41 29	4° 28' 59.75 4° 62' 15.21 4° 74' 44.21	19479 41833 55516	3.689 7.923 10.514	" "
251	Tinsmál, VII Pathariá Gongtoríá	h.s. " "	4° 82' 05.54 4° 93' 55.99 5° 00' 14.18	66154 86200 100327	12.529 16.326 19.001	" "	Saugor, V Tinsmál, VII Badráná Pagoda	h.s. " "	22° 26' 42 37 59 54	4° 75' 49.53 4° 90' 15.46 5° 11' 16.74	56761 91526 129323	10.750 17.335 24.493	" "
252	Saugor, V Tinsmál, VII Gongtoríá	h.s. " "	4° 93' 55.99 4° 84' 62.33 5° 11' 16.74	86200 70186 129323	16.326 13.293 24.493	" "	Tinsmál, VII Pathariá Badráná Pagoda	h.s. " "	33° 4' 28 30 24 59	4° 78' 66.38 4° 75' 49.53 5° 00' 14.18	61184 56761 100327	11.588 10.750 19.001	" "
253	Dholpahári Gongtoríá Saikherí Pediment	h.s. " "	4° 60' 77.43 4° 74' 53.49 4° 68' 05.93	40527 55635 47018	7.676 10.537 9.075	" "	Tinsmál, VII Badráná Pagoda Banda	h.s. " "	23° 51' 7 134 9 19	4° 50' 50.42 4° 47' 16.98 4° 75' 49.53	31992 29628 56761	6.059 5.611 10.750	" "
254	Richondá Dholpahári Saikherí Pediment	h.s. " "	4° 74' 53.49 4° 68' 05.93 4° 81' 81.57	55635 47018 65790	10.537 9.075 12.460	" "	Tinsmál, VII Dholpahári Banda	h.s. " "	4° 38' 17 17 0 26 59	4° 44' 68.14 4° 47' 16.98 4° 75' 89.56	27978 29628 57406	5.299 5.611 10.872	18 " "
255	Dholpahári Gongtoríá Ladorá Temple	h.s. " "	4° 51' 63.69 4° 68' 20.73 4° 58' 51.58	32837 48092 38473	6.219 9.108 7.287	" "	Dholpahári Gongtoríá Choká Temple	h.s. " "	101° 10' 48 36 4 23	4° 74' 51.20 4° 52' 34.20 4° 58' 51.58	55606 33375 38473	10.531 6.321 7.287	18 " "
256	Dholpahári Bohári Ladorá Temple	h.s. " "	4° 28' 49.79 4° 68' 20.73 4° 74' 44.21	19274 48092 55516	3.650 9.108 10.514	" "	Tinsmál, VII Dholpahári Choká Temple	h.s. " "	27° 56' 37 25 45 51	4° 52' 34.20 4° 49' 07.73 4° 75' 89.56	33375 30958 57406	6.321 5.863 10.872	" "
257	Dholpahári Gongtoríá Richáwar Cupola	h.s. " "	4° 57' 15.89 4° 77' 10.9 4° 58' 51.58	37200 59864 38473	7.062 11.338 7.287	" "	Tinsmál, VII Pathariá Behrá	h.s. " "	6° 10' 21 169 59 53	4° 79' 31.62 4° 58' 63.54 5° 00' 14.18	62110 38579 100327	11.763 7.307 19.001	" "
258	Dholpahári Bohári Richáwar Cupola	h.s. " "	4° 17' 10.30 4° 77' 10.9 4° 74' 44.21	14826 59864 55516	2.808 11.338 10.514	" "	Tinsmál, VII Gongtoríá Panchannagar Temple	h.s. " "	74° 18' 35 39 42 30	4° 95' 83.48 4° 78' 62.59 4° 93' 55.99	90855 60292 86200	17.207 11.419 16.326	18 " "
259	Richondá Dholpahári Goretá Fort	h.s. " "	4° 75' 59.56 4° 79' 18.3 4° 81' 81.57	57011 62688 65790	10.797 11.873 12.460	" "	Tinsmál, VII Pathariá Pauchannagar Temple	h.s. " "	33° 38' 37 33 40 29	4° 77' 99.5 4° 78' 02.59 5° 00' 14.18	60243 60292 100327	11.410 11.419 19.001	" "
260	Dholpahári Gongtoríá Goretá Fort	h.s. " "	4° 49' 69.31 4° 75' 59.56 4° 58' 51.58	31400 57011 38473	5.947 10.797 7.287	" "	Saugor, V Náharman, VI Sajpur	h.s. " "	88° 45' 9 60 51 20	4° 84' 09.37 5° 13' 67.59 5° 07' 80.72	69333 137012 119694	13.131 25.949 22.669	" "
261	Bohári Bokpurá Bharpaní Idghá	h.s. " "	4° 56' 09.73 4° 49' 98.27 3° 91' 51.40	37074 31610 8225	7.022 5.987 1.558	" "	Saugor, V Mandra, VIII Sajpur	h.s. " "	88° 4' 8 72 37 54	4° 65' 61.84 5° 13' 67.59 5° 11' 67.39	45309 137012 130839	8.581 25.949 24.780	" "

\* Base deduced by two sides and included angle. † See note to page 80—B.

PRINCIPAL-AUXILIARY STATIONS, AND INTERSECTED POINTS.

No. of Triangle	Station	Corrected plane angle	Distance			No. of Triangle	Station	Corrected plane angle	Distance			Theodolite used
			Log. feet	Feet	Miles				Log. feet	Feet	Miles	
275	Hirapur Sajpur Rangir Temple	15 52 52 22 58 48	4 58 5272 4 739610 4 945657	38483 54905 88238	7 288 10 399 16 712	288	Náharman, VI Himilia, IX Garhákota Ramná Spire	20 24 59 47 3 43	4 866780 5 188718 5 289701	73583 154425 194850	13 936 29 247 36 903	Inch 18 "
276	Mandra, VIII Sajpur Talampur Building	47 21 27 48 48 42	4 525345 4 535241 4 656184	33523 34296 43309	6 349 6 495 8 581	289	Mandra, VIII Himilia, IX Garhákota Ramná Spire	54 25 34 45 15 20	4 866780 4 807907 4 950263	73583 64255 89179	13 936 12 170 16 890	" " "
277	Hirapur Sajpur Pandrináth Pagoda	21 10 51 80 44 57	4 513024 4 949455 4 945657	32585 89013 88238	6 171 16 859 16 712	290	Mandra, VIII Garhákota Ramná Spire Baleho Fort	78 44 9 69 30 43	4 827838 4 557475 4 807907	67273 36097 64255	12 741 6 837 12 170	" s. s.
278	Mandra, VIII Sajpur Pandrináth Pagoda	37 20 36 20 9 44	4 513024 4 267543 4 656184	32585 18516 45309	6 171 3 507 8 581	291	Mandra, VIII Sajpur Baleho Fort	123 57 32 31 28 0	4 857296 4 557475 4 656184	71994 36097 45309	13 635 6 837 8 581	18 s. s.
279	Hirapur Sajpur Behli Fort	22 33 23 85 8 54	4 550600 4 965171 4 945657	35530 92294 88238	6 729 17 480 16 712	292	Himilia, IX Pathariá Garhákota Fort Flag	30 20 1 61 17 8	4 604131 4 843823 4 900637	40191 69795 79549	7 612 13 219 15 066	18 "
280	Mandra, VIII Sajpur Behli Fort	40 58 17 15 45 47	4 550600 4 167932 4 656184	35530 14721 45309	6 729 2 788 8 581	293	Mandra, VIII Himilia, IX Garhákota Fort Flag	51 28 10 36 47 44	4 843823 4 727801 4 950263	69795 53439 89179	13 219 10 121 16 890	" "
281	Náharman, VI Sajpur Deori Pagoda	45 7 8 67 30 3	4 726083 4 841317 4 840937	53221 69393 69333	10 080 13 143 13 131	294	Mandra, VIII Himilia, IX Pathariá Temple	47 6 0 71 19 15	4 870873 4 982539 4 950263	74280 96059 89179	14 068 18 193 16 890	" "
282	Náharman, VI Sajpur Bená Pagoda	43 2 31 92 19 13	4 828339 4 993859 4 840937	67350 98596 69333	12 756 18 673 13 131	295	Himilia, IX Sajpur Pathariá Temple	81 53 23 31 37 12	5 146941 4 870873 5 113673	140262 74280 129919	26 565 14 068 24 606	" "
283	Mandra, VIII Sajpur Chandpuri Pagoda	24 23 56 44 7 17	4 303487 4 530168 4 656184	20113 33898 45309	3 809 6 420 8 581	296	Mandra, VIII Pathariá Bardári Hill Flag	24 31 47 65 57 18	4 589654 4 932011 4 971417	38874 85509 93031	7 362 16 195 17 733	" "
284	Saugor, V Náharman, VI Tikhi Hill Pagoda	43 12 25 75 37 49	4 971031 5 121767 5 078072	93547 132363 119094	17 717 25 069 22 669	297	Mandra, VIII Himilia, IX Bardári Hill Flag	26 59 22 71 30 6	4 611940 4 932011 4 950263	40920 85509 89179	7 750 16 195 16 890	" "
285	Saugor, V Mandra, VIII Tikhi Hill Pagoda	6 29 4 92 35 35	4 175035 5 121767 5 116739	14964 132363 130839	2 834 25 069 24 780	298	Mandra, VIII Pathariá Sarkandí Temple	37 28 40 62 59 25	4 762934 4 928550 4 971417	57934 84830 93031	10 972 16 066 17 733	" "
286	Mandra, VIII Tikhi Hill Pagoda Chirári Fort	57 20 19 35 50 21	4 332746 4 406831 4 175035	21515 25517 14964	4 075 4 833 2 834	299	Himilia, IX Pathariá Jortalá Temple	54 32 10 34 19 10	4 811605 4 651854 4 900637	64804 44859 79549	12 274 8 496 15 066	" "
287	Mandra, VIII Sajpur Chirári Fort	61 51 46 34 4 2 84 4 12	4 603895 4 406831 4 656184	40169 25517 45309	7 608 4 833 8 581	300	Himilia, IX Pathariá Aslaná Temple	37 47 3 58 23 41	4 690497 4 833443 4 900637	49024 68146 79549	9 285 12 907 15 066	" "

\* Base deduced by two sides and included angle. † See note to page 80.—J.

No. of triangle	Station	Corrected plane angle	Distance			No. of triangle	Station	Corrected plane angle	Distance			Theodolite used
			Log. feet	Feet	Miles				Log. feet	Feet	Miles	
301	Himilia, IX Satiría, XIII Rangir	43 28 19 56 15 48 80 15 53	4° 9' 05.361 4° 9' 87.687 5° 06' 14.74	80420 97205 115206	15.231 18.410 21.819	314	Himilia, IX Samáná Chauráí Fort	100 34 40 14 4 35	4° 79' 44.72 4° 18' 79.97 4° 76' 04.04	62298 15414 57598	11.799 2.919 10.909	Inch 18 "
302	Tinsmál, VII Himilia, IX Rangir	32 55 35 58 1 20 89 3 5	4° 9' 87.687 5° 18' 09.65 5° 25' 23.79	97205 151093 178805	18.410 28.730 33.865	315	Himilia, IX Chauráí Fort Bálakot	33 12 30 60 47 40	3° 98' 54.86 4° 24' 58.94 4° 18' 79.97	9671 17615 15414	1.832 3.336 2.919	" "
303	Himilia, IX Patharíá Niborá Temple	38 21 54 87 21 49	4° 78' 40.52 4° 99' 07.32 4° 90' 06.37	60821 97889 79349	11.519 18.540 15.066	316	Himilia, IX Patharíá Narsinggarh Fort	58 45 32 67 59 33	4° 92' 88.37 4° 96' 40.18 4° 90' 06.37	84886 92049 79549	16.077 17.433 15.066	" "
304	Himilia, IX Rangir Niborá Temple	26 40 56 77 30 21	4° 65' 34.28 4° 99' 07.32 4° 98' 76.87	45022 97889 97205	8.527 18.540 18.410	317	Himilia, IX Samáná Narsinggarh Fort	42 8 35 99 47 13	4° 79' 70.96 4° 96' 40.18 4° 76' 04.04	62675 92049 57598	11.870 17.433 10.909	" "
305	Himilia, IX Rangir, X Damoh	28 27 52 21 14 59 130 17 9	4° 78' 34.38 4° 66' 45.00 4° 98' 76.98	60735 46185 97207	11.503 8.747 18.410	318	Satiría, XIII Samáná Paterá	59 1 16 86 2 51 34 55 53	4° 94' 33.28 5° 00' 91.32 4° 76' 80.14	87766 102125 58616	16.622 19.342 11.101	" "
306	Himilia, IX Patharíá Damoh Mosque	93 33 59 29 14 16	4° 97' 52.43 4° 66' 48.92	94459 46227	17.890 8.755	319	Satiría, XIII Patharíá Paterá	38 16 14 38 35 23 103 8 23	5° 00' 60.83 5° 00' 91.32 5° 20' 26.07	101410 102125 159443	19.207 19.342 30.198	" "
307	Himilia, IX Rangir Damoh Mosque	28 31 9 21 18 27	4° 78' 34.70 4° 66' 48.92 4° 98' 76.87	60739 46227 97205	11.504 8.755 18.410	320	Patharíá Paterá Batágágarh Staircase	12 50 12 78 6 48	4° 35' 28.33 4° 99' 67.28 5° 00' 66.83	22534 99250 101410	4.268 18.797 19.207	" "
308	Himilia, IX Satiría, XIII Kalúmar	67 49 50 71 22 59 40 47 11	5° 21' 30.45 5° 22' 30.00 5° 06' 14.74	163322 167132 115206	30.932 31.654 21.819	321	Patharíá Samáná Batágágarh Staircase	62 39 10 55 17 5	5° 03' 03.90 4° 99' 67.28 5° 02' 80.47	107248 99250 106671	20.312 18.797 20.203	" "
309	Satiría, XIII Salaia, XIV Kalúmar	63 15 46 79 54 24 36 49 50	5° 17' 07.99 5° 21' 30.45 4° 99' 75.72	148152 163322 99443	28.059 30.932 18.834	322	Rangir Samáná Nagar Temple	145 3 44 7 58 1	4° 88' 48.53 4° 26' 87.04 4° 78' 35.48	76710 18565 60750	14.528 3.516 11.506	" "
310	Himilia, IX Kalúmar Samáná	75 26 52 20 3 42 84 29 26	5° 21' 09.99 4° 76' 04.94 5° 22' 30.00	162521 57598 167132	30.780 10.909 31.654	323	Satiría, XIII Rangir Modia Temple	9 19 46 22.40 45	4° 39' 08.60 4° 76' 71.51 4° 90' 53.61	24596 58499 80420	4.658 11.079 15.231	" "
311	Satiría, XIII Kalúmar Samáná	78 52 2 20 43 29 80 24 29	5° 21' 09.99 4° 76' 80.14 5° 21' 30.45	162521 58016 163322	30.780 11.101 30.932	324	Rangir Samáná Hindoríá Hill Mark	34 7 2 82 52 23	4° 58' 25.06 4° 83' 02.61 4° 78' 35.48	38239 67649 60750	7.242 12.812 11.506	" "
312	Patharíá Samáná Hinotá Temple	18 52 17 25 15 38 5° 02' 80.47	4° 69' 50.43 4° 81' 54.01 5° 02' 80.47	49550 63373 106671	9.384 12.381 20.203	325	Himilia, IX Rangir Hindoríá Hill Mark	41 8 58 67.51 4	4° 83' 02.61 4° 97' 87.27 4° 98' 76.87	67649 95220 97205	12.812 18.034 18.410	" "
313	Himilia, IX Samáná Hinotá Temple	57 48 0 21 49 4	4° 69' 50.43 4° 33' 77.15 4° 76' 04.94	49550 21763 57598	9.384 4.122 10.909	326	Satiría, XIII Salaia, XIV Jamáná	71 32 54 13 5 3	4° 97' 65.60 4° 35' 43.23 4° 99' 75.72	94746 22611 99443	17.944 4.282 18.834	" "

\* Base deduced by two sides and included angle. † See note to page 30.—B.

PRINCIPAL-AUXILIARY STATIONS, AND INTERSECTED POINTS.

No. of triangle	Station	Corrected plane angle ° ' "	Distance			Theodolite used	No. of triangle	Station	Corrected plane angle ° ' "	Distance			Theodolite used
			Log. feet	Feet	Miles					Log. feet	Feet	Miles	
327	Satiria, XIII Rangir Jamaniá	97 32 33 15 2 46 67 24 41	4' 936251 4' 354323 4' 905361	86348 22611 80420	16' 354 4' 282 15' 231	Inch 18 "	340	Lora, XVI Gaura Indráná No. 1	62 11 0 95 48 56	4' 939984 4' 982072 4' 557910	85307 95956 30133	6 16' 157 18' 173 6' 843	Inch 18 "
328	Rangir Samaná Paterá Temple	70 33 57 67 42 27	4' 934872 4' 926613 4' 783548	86074 84453 60750	16' 302 15' 995 11' 506	"	341	Lora, XVI Indráná No. 1 Gosalpur	23 46 18 134 48 32	4' 735548 4' 693666 4' 982072	54519 49393 95956	10' 326 9' 355 18' 173	"
329	Rangir Jamaniá Kundalpur Temple	6 37 1 135 12 26	4' 206777 4' 993117 4' 936251	16098 98428 86348	3' 049 18' 642 16' 354	"	342	Lora, XVI Gaura Gosalpur	85 57 18 37 34 33	4' 771631 4' 693666 4' 557910	59106 49393 36133	11' 194 9' 355 6' 843	"
330	Satiria, XIII Samaná Hatta, S. Temple	100 37 39 47 42 14	5' 049336 4' 910892 4' 768014	109733 82583 58616	20' 783 15' 641 11' 101	"	343	Lora, XVI Amúá, XVII Gutehí	74 31 40 10 47 16	5' 312783 4' 601055 5' 327362	205487 39908 212501	38' 918 7' 558 40' 246	"
331	Satiria, XIII Jamaniá Hatta, N. Temple	43 42 58 123 39 25	4' 854201 4' 934986 4' 354323	71483 86097 22611	13' 538 16' 306 4' 282	"	344	Lora, XVI Gaura Gutehí	4 36 50 138 37 38	3' 686358 4' 601055 4' 557910	4857 39908 36133	0' 920 7' 558 6' 843	"
332	Satiria, XIII Samaná Hatta, N. Temple	102 36 20 47 20 49	5' 057824 4' 934986 4' 768014	114242 86097 58616	21' 637 16' 306 11' 101	"	345	Lora, XVI Gutehí Majoli Temple	44 45 13 106 48 24	4' 770844 4' 904276 4' 601055	58999 80219 39908	11' 174 15' 193 7' 558	"
333	Satiria, XIII Jamaniá Nayagaon	12 51 5 6 25 58	4' 652140 4' 823808 4' 354323	44889 66651 22611	8' 502 12' 623 4' 282	"	346	Lora, XVI Gosalpur Maretí Temple	53 24 30 62 34 2	4' 644579 4' 688109 4' 693666	44114 48765 49393	8' 355 9' 236 9' 355	18
334	Satiria, XIII Nayagaon Jatásankar Fort	61 10 10 85 28 45	5' 026154 5' 082271 4' 823808	106207 120857 66651	20' 115 22' 890 12' 623	"	347	Lora, XVI Indráná No. 1 Maretí Temple	29 38 12 24 14 4	4' 768991 4' 688109 4' 982072	58748 48765 95956	11' 126 9' 236 18' 173	"
335	Satiria, XIII Samaná Jatásankar Fort	98 0 13 57 46 25	5' 150676 5' 082271 4' 768014	141474 120857 58616	26' 794 22' 890 11' 101	"	348	Lora, XVI Gaura Sihora Temple No. 2	45 13 22 35 49 5	4' 414408 4' 330555 4' 557910	25966 21407 36133	4' 918 4' 054 6' 843	"
336	Kalúmar Samaná Mohári Temple	19 4 54 31 33 19	4' 837085 5' 041418 5' 210909	68720 110006 162521	13' 015 20' 835 30' 780	"	349	Lora, XVI Gosalpur Talaó Temple	82 38 1 23 27 29	4' 707425 4' 310992 4' 693666	59983 20464 49393	9' 656 3' 876 9' 355	"
337	Salsaia, XIV Kalúmar Gaura	53 15 10 47 8 1 79 36 49	5' 081670 5' 042954 5' 170709	120690 110396 148152	22' 858 20' 908 28' 059	"	350	Lora, XVI Indráná No. 1 Talaó Temple	58 51 43 11 35 39	4' 940279 4' 310992 4' 982072	87152 20464 95956	16' 506 3' 876 18' 173	"
338	Lora, XVI Kalúmar Gaura	45 35 36 12 21 0 122 3 24	5' 081670 4' 557910 5' 155885	120690 36133 143181	22' 858 6' 843 27' 118	"	351	Lora, XVI Gaura Máigúá Temple	153 55 7 12 2 28	4' 816116 4' 492354 4' 557910	65481 31071 36133	12' 402 5' 885 6' 843	"
339	Lora, XVI Kalúmar Indráná No. 1	16 35 24 28 8 33 135 16 3	4' 764076 4' 982072 5' 155885	58087 95956 143181	11' 001 18' 173 27' 118	"	352	Lora, XVI Gaura Panwáni Temple	153 55 3 12 48 7	4' 839834 4' 542246 4' 557910	69157 34853 36133	13' 098 6' 601 6' 843	"

\* Base deduced by two sides and included angle. † See note to page 80-B.



CALCUTTA LONGITUDINAL SERIES. SECONDARY TRIANGULATION—TRIANGLES.

No. of Triangle	Station	Corrected plane angle	Distance			No. of triangle	Station	Corrected plane angle	Distance			Theodolite used
			Log. feet	Feet	Miles				Log. feet	Feet	Miles	
353	Lora, XVI Gosalpur Kumbhí Building	112 31 25 26 6 57	4 839140 4 517237 4 693666	69046 32003 49393	13 077 6 232 9 355	366	Lora, XVI Gaura Tikeris Temple	65 28 36 93 47 12	4 967759 5 007867 4 557910	92845 101828 36133	17 584 19 286 6 843	Inch 18 "
354	Lora, XVI Gutehí. Boriban Temple	15 20 28 146 35 50	4 532169 4 850411 4 601055	34054 70862 39908	6 450 13 421 7 558	367	Lora, XVI Amúá, XVII Bahiri Fort	11 18 16 11 41 29	5 027863 5 042283 5 327362	106626 110226 212501	20 194 20 876 40 246	" " "
355	Lora, XVI Gaura Kauriya Temple, No. 1	45 23 10 92 39 52	4 585217 4 732355 4 557910	38478 53995 36133	7 288 10 226 6 843	368	Lora, XVI Bhainsakhand Khareni Temple	12 4 29 25 27 0	4 534398 4 847052 4 998554	34229 70316 99668	6 483 13 317 18 876	" s "
356	Lora, XVI Amúá, XVII Deopahár	45 56 16 14 5 50	5 246156 4 776298 5 327362	176261 59745 212501	33 383 11 315 40 246	369	Deopahár Gola Jajunágrá Hill Mark	76 29 37 20 35 48	4 742598 4 301059 4 751445	55284 20001 56421	10 470 3 788 10 686	12 " "
357	Lora, XVI Bhiláwá Deopahár	39 32 41 50 4 19 90 23 0	4 695508 4 776298 4 891577	49603 59745 77997	9 395 11 315 14 755	370	Deopahár Súkrádáni Jajunágrá Hill Mark	56 5 21 25 51 30	4 580455 4 301059 4 657122	38059 20001 45407	7 208 3 788 8 600	" " "
358	Lora, XVI Deopahár Súkrádáni	43 39 38 65 16 56	4 657122 4 793850 4 770298	45407 62299 59745	8 600 11 782 11 315	371	Bhiláwá Deopahár Bansibá Hill Mark	26 22 35 105 24 15	4 470586 4 807054 4 695568	29552 64129 49603	5 597 12 146 9 395	" " "
359	Amúá, XVII Deopahár Súkrádáni	13 9 19	4 657122 5 177138 5 246156	45407 150362 176261	8 600 28 478 33 383	372	Lora, XVI Bhiláwá Bansibá Hill Mark	44 45 16 76 26 54	4 807054 4 947176 4 891577	64129 88547 77997	12 146 16 770 14 755	86 12 "
360	Amúá, XVII Deopahár Gola	18 39 25	4 751445 5 217482 5 246156	56421 164999 176261	10 686 31 250 33 383	373	Amúá, XVII Súkrádáni Bhítri	20 37 13 71 39 22	4 724237 5 154832 5 177138	52995 142834 150362	10 037 27 052 28 478	36 12 "
361	Deopahár Súkrádáni Gola	110 48 19 48 47 25	4 323112 4 751445 4 657122	21043 56421 45407	3 985 10 686 8 600	374	Deopahár Súkrádáni Bhítri	46 16 51 56 37 52	4 724237 4 594339 4 657122	52995 39295 45407	10 037 7 442 8 600	" " "
362	Lora, XVI Súkrádáni Deori Hill Mark	45 20 47 82 1 3	4 745689 4 889305 4 793850	55679 77511 62209	10 545 14 680 11 782	375	Amúá, XVII Bhítri Koria Hill Mark	28 13 32 86 41 43	4 872086 5 196554 5 154832	74488 157237 142834	14 108 29 780 27 052	36 12 "
363	Súkrádáni Gola Deori Hill Mark	36 29 40 125 36 41	4 609937 4 745689 4 323112	40732 55679 21043	7 714 10 545 3 985	376	Lora, XVI Bhítri Koria Hill Mark	51 19 50 38 21 36	4 872086 4 772379 4 979560	74488 59208 95403	14 108 11 214 18 069	36 12 "
364	Súkrádáni Gola Sleemanabad Temple	36 33 3 5 22 18	4 273163 3 469605 4 323112	18757 2949 21043	3 552 0 558 3 985	377	Súkrádáni Gola Piprod Hill Mark	138 17 26 27 57 40	4 770213 4 618216 4 323112	58013 41516 21043	11 158 7 863 3 985	" " "
365	Lora, XVI Amúá, XVII Bhainsakhand	20 34 19 16 22 28	5 094219 4 998554 5 327362	124228 99668 212501	23 528 18 876 40 246	378	Súkrádáni Bhítri Piprod Hill Mark	64 37 24 46 49 3	4 711316 4 618216 4 724237	51442 41516 52995	9 743 7 863 10 037	" " "

\* Base deduced by two sides and included angle. † See note to page 30.—2. ‡ Base taken from triangle No. 106 of the Jabalpur Meridional Series, Secondary Triangulation.

PRINCIPAL-AUXILIARY STATIONS, AND INTERSECTED POINTS.

No. of Triangle	Station	Corrected plane angle	Distance			No. of Triangle	Station	Corrected plane angle	Distance			Theodolite used
			Log. feet	Feet	Miles				Log. feet	Feet	Miles	
379	Bhītrī Gola Bhatgaon Hill Mark	h.s. " "	4.944583 4.488546 4.862371*	88020 30800 72840	16.671 5.833 13.796	392	Amūa, XVII Jukehī Murwāra Building	65 0 7 95 4 11	4.786604 4.827619 4.361877	61179 67239 23008	11.587 12.735 4.358	Inch 18 "
380	Sókrádání Bhītrī Bhatgaon Hill Mark	h.s. " "	4.488546 4.826142 4.724237	30800 67010 52995	5.833 12.691 10.037	398	Amūa, XVII Sungará Murwāra Building	38 32 0 75 29 16	4.636168 4.827619 4.802360*	43268 67239 63440	8.195 12.735 12.015	" s
381	Bhīlāwá Deopahār Ambetá Hill Mark	h.s. " "	4.622223 4.837243 4.695598	41901 68745 49603	7.936 13.020 9.395	394	Amūa, XVII Jukehī Kauwāra Fort	67 52 56 68 27 16	4.489568 4.491306 4.361877	30872 30996 23008	5.847 5.870 4.358	18
382	Deopahār Bhītrī Ambetá Hill Mark	h.s. " "	4.239683 4.622223 4.594339	17365 41901 39295	3.289 7.936 7.442	395	Amūa, XVII Sungará Kauwāra Fort	41 24 50 27 1 37	4.654385 4.491306 4.802360*	45122 30996 63440	8.546 5.870 12.015	"
383	Lora, XVI Bhītrī Chirīabhār Hill Mark	h.s. " "	4.557465 5.064063 4.979560	36096 115895 95403	6.836 21.950 18.069	396	Amūa, XVII Jukehī Palwā Temple	26 45 32 45 31 47	4.036408 4.236430 4.361877	10874 17236 23008	2.060 3.264 4.358	"
384	Deopahār Bhītrī Chirīabhār Hill Mark	h.s. " "	4.557465 4.751320 4.594339	36096 56405 39295	6.836 10.683 7.442	397	Amūa, XVII Jukehī Deora Fort, N.E. Bastion	138 58 12 20 35 40	4.636065 4.361877 4.361877	43258 23179 23008	8.193 4.390 4.238	"
385	Lora, XVI Pūnchī, XVIII Sungará	h.s. " "	5.256314 5.220242 5.201826	180432 166051 159157	34.173 31.449 30.143	398	Amūa, XVII Pūnchī, XVIII Kodá	5 54 47 12 36 7 161 29 6	4.755888 5.081778 5.244786	57002 120720 175706	10.796 22.864 33.278	"
386	Pūnchī, XVIII Lakanpūra, XIX Sungará	h.s. " "	5.216863 5.256314 5.284654	164764 180432 192599	31.205 34.173 36.477	399	Amūa, XVII Lakanpūra, XIX Kodá	77 18 29 57 14 29 45 27 2	5.146261 5.081778 5.009878	140043 120720 102301	26.523 22.864 19.375	"
387	Lora, XVI Amūa, XVII Jukehī	h.s. " "	4.361877 5.307854 5.327362	23008 203167 212501	4.358 38.479 40.246	400	Lakanpūra, XIX Kodá Jiwār	38 10 15 109 29 4	4.962867 4.900236 5.146261	91805 79476 140043	17.387 15.052 26.523	"
388	Amūa, XVII Pūnchī, XVIII Jukehī	h.s. " "	5.267175 4.361877 5.244786	185001 23008 175706	35.038 4.358 33.278	401	Amūa, XVII Lakanpūra, XIX Jiwār	43 41 10 19 4 14 117 14 36	4.900236 4.575134 5.009878	79476 37595 102301	15.052 7.120 19.375	"
389	Amūa, XVII Sungará Kudrī	h.s. " "	4.720835 5.024003 4.802360*	52582 105682 63440	9.959 20.016 12.015	402	Amūa, XVII Jukehī Deora Fort, S.W. Bastion	138 29 11 20 50 0	4.635296 4.361877 4.361877	43181 23171 23008	8.178 4.388 4.358	"
390	Sungará Jukehī Kudrī	h.s. " "	4.917832 4.720835 4.643981	82762 52582 44954	9.959 9.959 8.343	403	Amūa, XVII Jiwār Deora Fort, S.W. Bastion	11 29 19 17 13 17	4.192783 4.361877 4.575134	15588 23171 37595	2.952 4.388 7.120	"
391	Sungará Jukehī Sainagar Fort	h.s. " "	4.589683 4.323006 4.643981*	38876 21038 44954	7.363 3.985 8.343	404	Amūa, XVII Jiwār Banjārī Fort	28 12 2 89 41 31	4.303223 4.628760 4.575134	20101 42536 37595	3.807 8.056 7.120	"

\* Base deduced by two sides and included angle. † See note to page 30—B.

CALCUTTA LONGITUDINAL SERIES. SECONDARY TRIANGULATION—TRIANGLES.

No. of Triangle	Station	Corrected plane angle			Distance			Theodolite used	No. of triangle	Station	Corrected plane angle			Distance			Theodolite used
		°	'	"	Log. feet	Feet	Miles				°	'	"	Log. feet	Feet	Miles	
405	Amúá, XVII Lakanpúra, XIX Banjári Fort	15	29	8	4° 79' 48.46	62351	11.809	Inch 18	418	Lakanpúra, XIX Karára, XXIII Naugúá	12	22	21	5° 06' 02.09	114871	21.756	Inch 18
406	Amúá, XVII Lakanpúra, XIX Singondí Temple	10	29	41	4° 62' 87.60	42536	8.056	"	419	Lakanpúra, XIX Karára, XXIII Jheriá Hill Mark	4	47	29	4° 65' 10.88	44780	8.481	"
407	Lakanpúra, XIX Jiwár Singondí Temple	30	27	54	4° 75' 14.94	56428	10.687	"	420	Lakanpúra, XIX Naugúá Jheriá Hill Mark	11	1	25	5° 28' 50.80	192788	36.513	"
408	Lakanpúra, XIX Jiwár Káritalái Fort	36	20	31	4° 81' 02.40	65954	12.491	"	421	Lakanpúra, XIX Naugúá Amarpur	18	58	45	4° 82' 71.79	67171	12.722	"
409	Lakanpúra, XIX Púnchi, XVIII Kodá Kauriya Temple No. 2	17	16	17	4° 48' 55.57	39588	5.793	"	422	Lakanpúra, XIX Naugúá Amarpur Fort	123	23	46	4° 99' 62.42	99138	18.776	"
410	Lakanpúra, XIX Púnchi, XVIII Kodá Chendíá Fort	33	12	34	4° 75' 14.94	56428	10.687	"	423	Bamangúá Naugúá Amarpur Fort	34	26	56	4° 82' 71.79	67171	12.722	"
411	Lakanpúra, XIX Púnchi, XVIII Kodá Chendíá Fort	34	27	58	4° 77' 45.76	59508	11.271	"	424	Lakanpúra, XIX Karára, XXIII Tindotá	59	23	56	4° 70' 95.81	51237	9.704	"
412	Lakanpúra, XIX Púnchi, XVIII Kodá Chendíá Pagoda	14	37	49	4° 42' 42.22	26560	5.030	"	425	Lakanpúra, XIX Naugúá Badanpur	71	48	49	4° 75' 24.58	56553	10.711	"
413	Lakanpúra, XIX Púnchi, XVIII Kodá Dándiá Hill Mark	20	42	17	4° 56' 05.18	36351	6.885	"	426	Lakanpúra, XIX Naugúá Badanpur	48	47	15	4° 65' 10.88	44780	8.481	"
414	Lakanpúra, XIX Púnchi, XVIII Kodá Dándiá Hill Mark	12	57	53	4° 36' 29.93	23067	4.369	"	427	Lakanpúra, XIX Naugúá Badanpur	56	39	15	4° 64' 93.19	44598	8.447	"
415	Lakanpúra, XIX Púnchi, XVIII Kodá Dándiá Hill Mark	32	45	41	4° 48' 02.29	39877	5.848	"	428	Lakanpúra, XIX Naugúá Dhobi Temple	66	20	5	4° 68' 92.92	48898	9.261	"
416	Lakanpúra, XIX Púnchi, XVIII Kodá Dándiá Hill Mark	59	47	11	4° 69' 29.10	49307	9.339	"	429	Lakanpúra, XIX Naugúá Jhobi Fort	50	54	34	4° 64' 93.19	44598	8.447	"
417	Lakanpúra, XIX Púnchi, XVIII Kodá Dándiá Hill Mark	32	45	41	4° 48' 02.29	39877	5.848	"	430	Bamangúá Naugúá Asorá	40	44	21	4° 57' 40.32	37500	7.102	"

† See note to page 80—B.

PRINCIPAL-AUXILIARY STATIONS, AND INTERSECTED POINTS.

No. of triangle	Station	Corrected plane angle	Distance			Theodolite used	No. of triangle	Station	Corrected plane angle	Distance			Theodolite used
			Log. feet	Feet	Miles					Log. feet	Feet	Miles	
431	Naugá Amarpur Asorá	h.s. s. h.s.	4°17'70.2 4°71'10.73 4°70'9.81	15063 51484 51237	2°8.53 9°7.51 9°7.04	†s "	444	Chamki, XXV Marwás, XXVI Ará Hill Mark	54°1'13 9°55'4	173246 36874 192321	32°8.12 6°9.84 36°4.24	18 "	
432	Laknapúra, XIX Rámpur, XXII Padarí	h.s.	5°03'87.19 5°04'04.04 5°21'28.84	109325 109750 163262	20°7.05 20°7.86 30°9.21	18 "	445	Karára, XXIII Marwás, XXVI Gidela Hill Mark	119°8'21 16°48'27	215109 71213 171244	40°7.40 13°4.87 32°4.33	" "	
438	Laknapúra, XIX Karára, XXIII Padarí	h.s.	4°80'13.70 5°04'04.04 5°19'23.33	63295 109750 158210	11°9.88 20°7.86 29°9.64	" "	446	Marwás, XXVI Koria, XXVII Gidela Hill Mark	36°36'37 100°57'18	130666 215109 147839	24°7.47 40°7.40 28°0.00	" "	
434	Naugá Padarí Tikúri Fort	h.s. "	4°74'35.6 4°60'8.71 4°87'21.72	55403 49576 74503	10°4.93 7°6.85 14°1.10	" "	447	Chamki, XXV Marwás, XXVI Umeriá Hill Mark	12°51'52 66°15'7	43604 179260 192321	8°2.58 33°9.51 36°4.24	" "	
435	Laknapúra, XIX Karára, XXIII Pátol	h.s.	4°99'20.83 5°03'53.98 5°19'23.33	98194 108492 158210	18°5.97 20°5.48 29°9.64	" "	448	Marwás, XXVI Koria, XXVII Umeriá Hill Mark	62°42'48 16°51'44	133593 43604 147839	25°3.02 8°2.58 28°0.00	" "	
436	Karára, XXIII Naugá Rámpur Dome	h.s.	4°94'34.41 4°74'09.81 5°06'02.09	87789 55978 114871	16°6.27 10°4.32 21°7.56	" "	449	Chapri, XXIX Gurwáni, XXX Pabá	99°42'34 39°41'52	162190 105102 107067	30°7.18 19°9.06 20°2.78	" "	
437	Karára, XXIII Pátol Rámpur Dome	h.s.	4°65'28.15 4°74'09.81 4°99'20.83	44959 55978 98194	8°5.15 10°4.32 18°5.97	" "	450	Gurwáni, XXX Pokra, XXXI Maui	77°9'27 41°18'1	135449 91690 122138	25°6.53 17°3.06 23°1.32	" "	
438	Karára, XXIII Marwás, XXVI Kanrodí	h.s.	5°36'8.31 5°27'9.55 5°23'6.16	233524 190482 171244	44°2.28 36°0.76 32°4.33	" "	451	Marwás, XXVI Gurwáni, XXX Maui	28°36'46 36°4'47	4°96'23.24 5°52'14.0 5°23'8.27	17°3.66 21°3.55 32°7.82	" "	
439	Rámpur, XXII Karára, XXIII Kanrodí	h.s.	5°27'9.55 5°03'45.93 5°20'29.57	190482 108291 159572	36°0.76 20°5.10 30°2.22	" "	452	Gurwáni, XXX Maui Chauri Hill Mark	48°40'19 70°27'18	4°89'66.46 4°99'52.65 4°90'23.24	78822 98916 91690	14°9.28 18°7.34 17°3.66	" 12
440	Rámpur, XXII Kanrodí Bulbul Hill Mark	h.s.	5°04'51.68 4°71'38.02 5°03'45.93	110960 51737 108291	21°0.15 9°7.99 20°5.10	" "	453	Chapri, XXIX Pokra, XXXI Báura Hill Mark	132°52'6 18°8'15	5°09'62.25 4°72'43.46 4°91'66.61	124803 53009 82539	23°6.37 10°0.39 15°6.32	18 "
441	Chamki, XXV Kanrodí Kundar	h.s. "	4°73'11.92 4°65'7.55 4°95'86.43	53851 45454 99917	10°1.99 8°6.09 17°2.19	" "	454	Chapri, XXIX Gurwáni, XXX Báura Hill Mark	53°49'20 29°27'6	4°93'96.31 4°72'43.46 5°02'96.56	87022 53009 107067	16°4.81 10°0.39 20°2.78	" "
442	Kanrodí Kundar Sohápur Motif Mahal	h.s. "	4°95'07.37 4°95'01.09 4°73'11.92	89276 89148 53851	16°9.08 16°8.84 10°1.99	" "	455	Chapra, XXIX Gurwáni, XXX Bagai Hill Mark	44°53'10 18°10'19	4°92'81.71 4°57'35.24 5°02'96.56	84756 37456 107067	16°0.52 7°0.94 20°2.78	" "
443	Karára, XXIII Marwás, XXVI Ará Hill Mark	h.s.	5°23'86.64 5°36'87.86 5°23'61.6	173246 233769 171244	32°8.12 44°2.74 32°4.33	" "	456	Gurwáni, XXX Pokra, XXXI Bagai Hill Mark	59°44'16 42°40'2	5°03'34.86 4°92'81.71 5°08'68.49	108015 84756 122138	20°4.57 16°0.52 23°1.32	" "

\* Base deduced by two sides and included angle. † See note to page 30.—B.

CALCUTTA LONGITUDINAL SERIES. SECONDARY TRIANGULATION—TRIANGLES.

No. of triangle	Station	Corrected plane angle	Distance			No. of triangle	Station	Corrected plane angle	Distance			Theodolite used
			Log. feet	Feet	Miles				Log. feet	Feet	Miles	
457	Chapri, XXIX Gurwani, XXX Seogarah	h.s.	4° 09' 51.67 5° 00' 53.2 5° 02' 06.6	49564 102219 107007	9.387 19.360 20.278	470	Gurwani, XXX Pokra, XXXI Karinpahar Peak No. 1	23 53 40 32 37 16	4° 77' 31.76 4° 89' 7.19 5° 08' 68.49	59317 78944 122138	11.234 14.952 23.132	Inch 18 "
458	Marwas, XXVI Chapri, XXIX Seogarah	h.s.	5° 00' 53.2 5° 09' 17.82 5° 23' 68.72	102219 123533 172533	19.360 23.396 32.677	471	Chapri, XXIX Pokra, XXXI Karinpahar Peak No. 1	42 5 13 26 46 3	4° 77' 31.76 4° 60' 50.5 4° 91' 66.61	59317 39857 82539	11.234 7.549 15.632	"
459	Mauli Seogarah Girā	h.s. s.	4° 51' 55.89 4° 43' 54.01 4° 76' 87.48	32778 27252 58715	6.208 5.161 11.120	472	Chapri, XXIX Sungarh Hill Mark Korā Koh	27 24 43	4° 22' 41.44 4° 59' 12.5 4° 48' 57.65	16755 36235 30603	3.173 6.863 5.796	"
460	Mauli Bagai Hill Mark Girā	h.s. s.	4° 55' 99.79 4° 43' 54.01 4° 44' 06.67	36306 27252 27385	6.876 5.161 5.224	473	Chapri, XXIX Karinpahar Peak No. 1 Korā Koh	19 32 54	4° 12' 71.66 4° 55' 91.25 4° 00' 50.5	13402 36235 39857	2.338 6.863 7.549	18
461	Gurwani, XXX Seogarah Basinpat Hill Mark	h.s.	5° 02' 08.54 5° 02' 64.38 4° 09' 51.67	104919 106277 49564	19.871 20.128 9.387	474	Pokra, XXXI Sungarh Hill Mark Jagobar	43 45 48	4° 67' 08.62 4° 74' 10.61 4° 82' 65.41	46866 55089 67072	8.876 10.433 12.703	18
462	Gurwani, XXX Mauli Basinpat Hill Mark	h.s.	5° 21' 11.23 5° 02' 64.38 4° 96' 23.24	162601 106277 91690	30.796 20.128 17.366	475	Gurwani, XXX Sungarh Hill Mark Jagobar	35 0 21	4° 67' 08.62 4° 82' 86.77 4° 91.2184	46866 67403 81693	8.876 12.766 15.472	18
463	Gurwani, XXX Seogarah Danauja Hill Mark	h.s.	4° 26' 83.15 4° 53' 07.80 4° 09' 51.67	18549 33945 49564	3.513 6.429 9.387	476	Gurwani, XXX Pokra, XXXI Karinpahar Peak No. 2	18 49 20 28 55 46	4° 72' 61.86 4° 90' 20.83 5° 08' 68.49	53234 79815 122138	10.082 15.116 23.132	18
464	Gurwani, XXX Mauli Danauja Hill Mark	h.s.	4° 78' 75.94 4° 53' 07.80 4° 96' 23.24	61319 33945 91690	11.613 6.429 17.366	477	Pokra, XXXI Jagobar Karinpahar Peak No. 2	33 44 49 69 53 43	4° 49' 81.94 4° 72' 61.86 4° 74' 10.61	31492 53234 55089	5.964 10.582 10.433	7
465	Seogarah Danauja Hill Mark Sirā	h.s. s.	3° 81' 89.66 4° 30' 47.4 4° 26' 83.15	6591 20173 18549	1.248 3.821 3.513	478	Gurwani, XXX Jagobar Ujain Hill Mark	5 16 24 77 5 39	3° 79' 58.91 4° 82' 14.30 4° 82' 86.77	6250 66287 67403	1.184 12.554 12.766	18
466	Gurwani, XXX Seogarah Sirā	h.s. s.	4° 30' 47.4 4° 47' 22.42 4° 09' 51.67	20173 29665 49564	3.821 5.618 9.387	479	Pokra, XXXI Jagobar Bagadi	36 58 47 133 52 39	4° 08' 43.43 4° 66' 24.91 4° 74' 10.61	12143 45972 55089	2.300 8.707 10.433	7
467	Gurwani, XXX Pokra, XXXI Sungarh Hill Mark	h.s.	4° 82' 65.41 4° 91' 21.84 5° 08' 68.49	67072 81693 122138	12.703 15.472 23.132	480	Jagobar Ujain Hill Mark Bagadi	57 10 22	4° 00' 91.3 4° 08' 43.43 3° 79' 58.91	10210 12143 6250	1.934 2.300 1.184	"
468	Chapri, XXIX Pokra, XXXI Sungarh Hill Mark	h.s.	4° 82' 65.41 4° 48' 57.65 4° 91' 66.61	67072 30603 82539	12.703 5.796 15.632	481	Gurwani, XXX Sungarh Hill Mark Deori	33 28 18	4° 73' 20.90 4° 58' 48.70 4° 91.2184	53962 38448 81693	10.220 7.282 15.472	18
469	Chapri, XXIX Sungarh Hill Mark Siwar	s.	4° 27' 79.18 4° 42' 42.84 4° 48' 57.65	18693 26563 30603	3.592 5.031 5.796	482	Sungarh Hill Mark Jagobar Deori	87 22 4 60 10 46	4° 46' 22.03 4° 73' 20.90 4° 67' 08.62	28987 53962 46866	5.490 10.220 8.876	"

\* Base deduced by two sides and included angle.

PRINCIPAL-AUXILIARY STATIONS, AND INTERSECTED POINTS.

No. of triangle	Station	Corrected plane angle	Distance			Theodolite used	Station	Corrected plane angle	Distance			Theodolite used
			Log. feet	Feet	Miles				Log. feet	Feet	Miles	
483	Gurwáni, XXX Seogarah Gorá Hill Mark	h.s. 62 33 28 13 15 48	4.656760 4.069248 4.095167	45369 11729 49564	8.593 2.221 9.387	Inch 18 12	Gurwáni, XXX Seogarah Girpahár Hill Mark	h.s. 81 40 24 58 37 52	4.883263 4.821238 4.695167	76783 66258 49564	14.542 12.549 9.387	Inch 18 12
484	Gurwáni, XXX Deori Gorá Hill Mark	h.s. 52 19 10 16 31 45	4.513574 4.069248 4.584870	32627 11729 38448	6.179 2.221 7.282	18 7	Gurwáni, XXX Chúri Girpahár Hill Mark	h.s. 77 55 25 73 10 33	4.830289 4.821238 4.522841	67653 66258 33330	12.813 12.549 6.313	18 7
485	Gurwáni, XXX Gorá Hill Mark Dúmadóla	s. 35 55 36 42 31 5	4.007868 4.230522 4.069248	10183 17003 11729	1.929 3.220 2.221	18 12	Gurwáni, XXX Seogarah Baindú Hill Mark	h.s. 116 13 0 38 54 39	5.024153 4.869333 4.695167	105719 74017 49564	20.023 14.018 9.387	18 12
486	Gurwáni, XXX Danaujá Hill Mark Dúmadóla	s. 12 37 12 155 17 49	4.249111 4.230522 4.530780	17746 17003 33945	3.361 3.220 6.429	18 12	Gurwáni, XXX Chúri Baindú Hill Mark	h.s. 43 22 49 111 55 43	4.738803 4.869333 4.522841	54803 74017 33330	10.379 14.018 6.313	18 7
487	Gurwáni, XXX Gorá Hill Mark Gorá	s. 15 7 3 140 5 26	3.678306 3.884550 4.069248	4768 7666 11729	0.903 1.452 2.221	18 12	Gurwáni, XXX Lul, XXXII Choládhár Hill Mark	23 44 25 98 17 56	4.769349 5.159913 5.092720	58796 144515 123800	11.136 27.370 23.447	18 " "
488	Gurwáni, XXX Gorá Hill Mark Jángari	s. 67 12 1 41 3 2	4.216532 4.229449 4.069248	16464 16961 11729	3.118 3.212 2.221	18 7	Múrengarh, XXVIII Gurwáni, XXX Choládhár Hill Mark	48 46 11 47 18 58	5.159913 5.150006 5.281202	144515 141256 191074	27.370 26.753 36.188	" "
489	Gurwáni, XXX Pokra, XXXI Gurwáni Hill Mark	62 15 43 4 21 27	5.071044 4.004755 5.086849	11772 10110 122138	22.395 1.915 23.132	18 " "	Chapri, XXIX Pokra, XXXI Kanáo Hill Mark	16 50 42 122 55 46	4.568637 5.030502 4.910661	37037 107276 82539	7.015 20.317 15.632	" "
490	Gurwáni, XXX Pokra, XXXI Barmá Hill Mark	35 48 21 30 38 11	4.801828 4.831861 5.086849	77952 67899 122138	14.764 12.860 23.132	" "	Gurwáni, XXX Pokra, XXXI Kanáo Hill Mark	17 25 35 63 32 27	4.568637 5.044214 5.086849	37037 110717 122138	7.015 20.969 23.132	" "
491	Gurwáni, XXX Deori Popári Hill Mark	h.s. 39 26 45 101 13 40	4.585973 4.774568 4.584870	38545 59507 38448	7.300 11.270 7.282	7	Pokra, XXXI Kanáo Hill Mark Morchiá	18 35 41 138 41 8	4.252884 4.335807 4.568637	17889 21667 37037	3.388 4.104 7.015	" "
492	Gurwáni, XXX Barmá Hill Mark Chúri	h.s. 52 7 18 98 51 52	4.734331 4.522841 4.831861	54241 33330 67899	10.273 6.313 12.860	18 7	Jagobar Kanáo Hill Mark Jagobar	60 0 5 114 18 35	4.657585 3.716239 4.679725	45455 5203 47833	8.609 0.985 9.059	" "
493	Gurwáni, XXX Deori Chúri	h.s. 85 31 33 42 49 44 51 38 43	4.689127 4.522841 4.584870	48880 33330 38448	9.257 6.313 7.282	18 7 "	Chapri, XXIX Gurwáni, XXX Ghorbí	63 39 28 67 21 28	5.104364 5.117146 5.029656	127164 139962 107067	24.084 24.803 20.278	18 " "
494	Deori Chúri Parwatá Hill Mark	h.s. 39 47 53 68 49 35	4.518724 4.682131 4.689127	33016 48008 48880	6.233 9.110 9.257	" "	Gurwáni, XXX Pokra, XXXI Ghorbí	25 47 31 82 8 11 72 4 18	4.747060 5.104364 5.086849	55855 127164 122138	10.579 24.084 23.132	" "
495	Gurwáni, XXX Deori Parwatá Hill Mark	h.s. 55 55 1 82 37 37	4.682131 4.760376 4.584870	48008 57594 38448	9.110 10.908 7.282	18 7	Pokra, XXXI Ghorbí Padári Fort	24 45 55 60 53 54	4.370418 4.689697 4.747060	23465 48944 55855	4.444 9.270 10.579	" "

\* Base deduced by two sides and included angle.

No. of Triangle	Station	Corrected plane angle ° ' "	Distance			Theodolite used	No. of Triangle	Station	Corrected plane angle ° ' "	Distance			Theodolite used
			Log. feet	Feet	Miles					Log. feet	Feet	Miles	
509	Aunri, XXXIII Mirchádhi, XXXIV Kauwái	60 36 3 57 42 53	5.188798 5.175732 5.193325	154454 149876 156072	29.353 28.386 29.559	18 "	Gora, XXXV Danwár Hill Mark Chúrti	55 9 21 81 25 35	4.859788 4.782753 4.940718	72408 60639 87241	13.714 11.485 16.523	Inch 18	
510	Gurwáni, XXX Aunri, XXXIII Kauwái	68 29 1 25 57 57	5.175732 4.848413 5.205792	149876 70536 160617	28.386 13.359 30.420	" "	Gobra, XXXVII Turer, XLI Hará Sidá Hill Flag	61 1 30 44 19 14	5.211248 5.113597 5.253558	162648 129896 179291	30.805 24.602 33.957	" "	
511	Mirchádhi, XXXIV Kauwái Saipur Fort	41 13 34 45 31 19	5.008405 5.042904 5.188798	101954 110383 154454	19.310 20.906 29.253	" "	Gora, XXXV Gobra, XXXVII Hará Sidá Hill Flag	43 28 21 52 58 22	5.113597 5.178198 5.273251	129896 150729 187608	24.602 28.547 35.532	" "	
512	Ghorbí Kauwái Saipur Fort	49 48 41 31 6 13	5.008405 4.838498 5.119872	101954 68944 131787	19.310 13.058 24.900	" "	Sewádhi, XXXVIII Turer, XLI Tattápáni Hill Mark	47 44 43 49 18 41	5.054019 5.064513 5.181390	113245 110615 151841	21.448 21.972 28.758	" "	
513	Gurwáni, XXX Lul, XXXII Kári Hill Flag	38 1 33 87 24 44	4.971292 5.181256 5.092720	93603 151794 123800	17.728 28.749 23.447	" "	Gobra, XXXVII Sewádhi, XXXVIII Tattápáni Hill Mark	41 45 56 23 2 32	5.064513 4.833015 5.197377	116015 68173 157608	21.972 12.912 29.850	" "	
514	Gurwáni, XXX Aunri, XXXIII Kári Hill Flag	40 19 41 65 26 18	5.033460 5.181256 5.205792	108009 151794 160617	20.456 28.749 30.420	" "	Sewádhi, XXXVIII Turer, XLI Banká Fort	79 49 50 4 58 0	5.176306 4.120381 5.181390	150074 13200 151841	28.423 2.500 28.758	" "	
515	Aunri, XXXIII Gora, XXXV Khogwár	71 18 20 34.58 47	5.236809 5.018720 5.242565	172508 104405 174809	32.672 19.774 33.108	" "	Khaira Pándu, XL Hurilóng, XLI Kotan Hill Stone	93 35 41 32 0 48	5.346717 5.071943 5.257073	222186 118017 180998	42.081 22.352 34.280	" "	
516	Mirchádhi, XXXIV Gora, XXXV Khogwár	97 16 26 21 29 30	5.236809 4.804233 5.183118	172508 63714 152447	32.672 12.007 28.872	" "	Sewádhi, XXXVIII Hurilóng, XLI Kotan Hill Stone	104 3 5 12 26 24	5.346717 4.693191 5.311734	222186 49339 204991	42.081 9.345 38.824	" "	
517	Aunri, XXXIII Khogwár Singpur Fort	40 58 51 27 0 0	4.868389 4.708666 5.018720	73857 51128 104405	13.988 9.683 19.774	" "	Khaira Pándu, XL Hurilóng, XLI Biktamb Hill Stone	108 21 13 18 12 45	5.330192 4.847774 5.257073	213891 70433 180998	40.510 13.340 34.280	" "	
518	Gora, XXXV Gobra, XXXVII Chainpur Hill Stone	47 17 30 15 27 36	5.190513 4.750138 5.273251	155065 56252 187608	29.368 10.654 35.532	" "	Sewádhi, XXXVIII Hurilóng, XLI Biktamb Hill Stone	82 5 17 26 14 27	5.330192 4.979911 5.311734	213891 95480 204991	40.510 18.083 38.824	" "	
519	Gora, XXXV Gobra, XXXVII Danwár Hill Mark	33 13 40 22 38 16	5.094122 4.940718 5.273251	124200 87241 187608	23.523 16.523 35.532	" "	Sewádhi, XXXVIII Biktamb Hill Stone Sanpura	15 50 47 121 15 9	4.484358 4.880979 4.979911	30497 76029 95480	5.776 14.399 18.083	" "	
520	Gobra, XXXVII Sewádhi, XXXVIII Danwár Hill Mark	38 15 19 52 0 5	4.989389 5.094122 5.197577	97586 124200 157608	18.482 23.523 29.850	" "	Sewádhi, XXXVIII Kotan Hill Stone Sanpura	37 48 35 39 13 43	4.679677 4.880979 4.693191	47827 76029 49339	9.058 14.399 9.345	" "	
521	Gora, XXXV Chainpur Hill Stone Chúrti	25 21 49 67 50 57	4.452247 4.782753 4.750138	26016 60639 56252	4.927 11.485 10.654	" "	Khaira Pándu, XL Biktamb Hill Stone Gúdá No. 1	44 43 17 85 37 32	4.690404 4.731074 4.847774	49705 53836 70433	9.414 10.196 13.340	" "	

\* Base deduced by two sides and included angle.

PRINCIPAL-AUXILIARY STATIONS, AND INTERSECTED POINTS.

No. of Triangle	Station	Corrected plane angle	Distance			Theodolite used	No. of Triangle	Station	Corrected plane angle	Distance			Theodolite used
			Log. feet	Feet	Miles					Log. feet	Feet	Miles	
535	Khaira Pându, XL Kotan Hill Stone Gûda No. 1	h.s. 29 57 45 129 23 45	4.882365 4.731074 5.071943	76272 53830 118017	14.445 10.190 22.332	Inch 18 "	548	Sewâdhi, XXXVIII Turer, XLI Tungari Hill Mark	23 27 38 97 38 58	4.848838 5.244944 5.181390	70605 175770 151841	13.372 33.290 28.758	Inch 18 "
536	Sewâdhi, XXXVIII Khaira Pându, XL Bisrâmpur Hill Tree	10 34 55 28 0 20	4.038330 5.046048 5.169341	43484 111185 147687	8.236 21.058 27.971	" " "	549	Sewâdhi, XXXVIII Hurilông, XLII Tungari Hill Mark	37 12 2 58 33 14	5.095401 5.244944 5.311734	124567 175770 204991	23.592 33.290 38.824	" " "
537	Khaira Pându, XL Biktamb Hill Stone Majâson Fort	21 55 35 135 1 26	4.570662 4.591235 4.847774	37210 39015 70433	7.047 7.389 13.340	" " †s	550	Sewâdhi, XXXVIII Turer, XLI Kumandi Hill Mark	29 34 11 112 30 9	5.086021 5.358357 5.181390	121905 228222 151841	23.088 43.224 28.758	" " "
538	Khaira Pându, XL Bisrâmpur Hill Tree Majâson Fort	81 51 43 52 38 36	4.733636 4.591235 4.638330	54155 39015 43484	10.257 7.389 8.236	18 s	551	Sewâdhi, XXXVIII Hurilông, XLII Kumandi Hill Mark	31 5 29 85 21 55	5.072769 5.358357 5.311734	118241 228222 204991	22.394 43.224 38.824	" " "
539	Sewâdhi, XXXVIII Hurilông, XLII Nowâd Hill Mark	24 25 27 7 0 20	5.210983 4.080757 5.311734	162549 47946 204991	30.786 9.081 38.824	18 "	552	Sewâdhi, XXXVIII Hurilông, XLII Sarjû Hill Mark	35 46 57 88 27 9	5.161307 5.394208 5.311734	144980 247861 204991	27.458 46.943 38.824	" " "
540	Gobra, XXXVII Sewâdhi, XXXVIII Bijka Hill Mark	32 29 50 71 19 2	4.940508 5.186815 5.197577	87198 153710 157608	16.615 29.119 29.850	" " "	553	Turer, XLI Hurilông, XLII Sarjû Hill Mark	51 3 0 43 3 55	5.161307 5.104812 5.269377	144980 127295 185942	27.458 24.109 35.216	" " "
541	Sewâdhi, XXXVIII Hurilông, XLII Bijka Hill Mark	60 7 53 25 4 50	5.351356 4.940508 5.311734	178384 87198 204991	33.785 16.515 38.824	" " "	554	Sewâdhi, XXXVIII Hurilông, XLII Palamow Hill Fort	16 25 27 42 58 26	4.828266 5.210441 5.311734	67339 162346 204991	12.754 30.747 38.824	" " "
542	Sewâdhi, XXXVIII Turer, XLI Hartâ Bâgi Hill Flag	21 33 5 24 8 10	4.891810 4.938379 5.181390	77950 86772 151841	14.763 16.434 28.758	" " "	555	Sewâdhi, XXXVIII Hurilông, XLII Yaktâ Hill Mark	11 0 9 59 52 10	4.617096 5.273357 5.311734	41409 187654 204991	7.843 35.541 38.824	" " "
543	Sewâdhi, XXXVIII Hurilông, XLII Hartâ Bâgi Hill Flag	39 6 35 21 41 1	5.170684 4.938379 5.311734	148144 86772 204991	28.058 16.434 38.824	" " "	556	Hurilông, XLII Kasjâtu, XLIV Bari Râmpur	37 41 2 59 12 4 83 6 54	5.049599 5.197229 5.260108	112075 157481 182015	21.226 29.826 34.473	" " "
544	Sewâdhi, XXXVIII Hurilông, XLII Itikâ	12 59 43 7 47 24 159 12 53	5.113602 4.893745 5.311734	129898 78297 204991	24.602 14.829 38.824	" " "	557	Hurilông, XLII Bulbul, XLIII Bari Râmpur	36 6 36 76 30 8 67 23 16	4.979758 5.197229 5.174656	95446 157481 149505	18.077 29.826 28.315	" " "
545	Sewâdhi, XXXVIII Bijka Hill Mark Itikâ	73 7 36 4. 58 34 5 2 53 169 58 33	4.994960 4.893745 5.311734	98846 78297 204991	18.721 14.829 16.515	" " "	558	Bulbul, XLIII Bari Râmpur Lâtehâr	39 7 41 26 24 28 114 27 51	4.820679 4.668734 4.979758	66173 46637 95446	12.533 8.833 18.077	" " "
546	Sewâdhi, XXXVIII Hurilông, XLII Shâhpur	4 58 34 5 2 53 169 58 33	5.009248 5.015466 5.311734	102152 103695 204991	19.347 19.626 38.824	" " "	559	Bulbul, XLIII Kumandi Hill Mark Lâtehâr	64 3 56 46 38 43	4.651649 4.668734 4.559351	44838 46637 36254	8.492 8.833 6.866	" " "
547	Hurilông, XLII Bijka Hill Mark Shâhpur	30 7 43 5 2 53 120 12 34	5.015400 5.009248 5.251356	103610 102152 178384	19.623 19.347 33.785	" " "	560	Bulbul, XLIII Bari Râmpur Ratanpur Hill Mark	71 24 24 64 18 3	5.112421 5.090467 4.979758	129545 123159 95446	24.535 23.326 18.077	" " "

\* Base deduced by two sides and included angle. † See note to page 30—B.



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No. of triangle	Station	Corrected plane angle	Distance			No. of triangle	Station	Corrected plane angle	Distance			Theodolite used
			Log. feet	Feet	Miles				Log. feet	Feet	Miles	
561	Hurliáong, XLII Bulbul, XLIII Ratanpur Hill Mark	22 10 44 5 5 44	5.090467 4.462046 5.174656	123159 28977 149505	23.326 5.488 28.315	574	Bulbul, XLIII Kasiátu, XLIV Hurdag Hill Mark	33 35 19 16 50 13	5.158568 4.877538 5.302606	144068 75429 200727	27.286 14.286 38.016	Inch 18 "
562	Hurliáong, XLII Ratanpur Hill Mark Delá	121 14 59 22 3 32	4.819290 4.663709 4.462046	65961 40101 28977	12.493 8.731 5.488	575	Máhwári, XLVIII Bhureu, XLIX Kahmár	88 25 42 50 24 17 41 0 1	5.096344 4.983284 4.913420	124837 96224 81926	23.643 18.224 15.516	12 " "
563	Hurliáong, XLII Delá Turási	45 59 34 99 59 37	4.527230 4.418064 4.663709	33669 26186 46101	6.377 4.959 8.731	576	Máhwári, XLVIII Kahmár Lohardugga	41 26 31 50 6 59 88 26 30	4.804212 4.868438 4.983284	63711 73865 96224	12.066 13.990 18.224	" " "
564	Sewádhí, XXXVIII Hurliáong, XLII Turási	51 46 56 121 59 55	4.418064 5.278544 5.311734	26186 189908 204991	4.959 35.968 38.824	577	Kasiátu, XLIV Patál, LI Naktí Hill Stone	26 11 35 90 27 14	4.812818 5.167975 5.119222	64986 147223 131590	12.308 27.883 24.922	18 " "
565	Hurliáong, XLII Bulbul, XLIII Kasmár Hill Mark	116 20 24 16 22 34	5.261413 4.759743 5.174656	182563 57510 149505	34.576 10.892 28.315	578	Kasiátu, XLIV Bari Rámpur Naktí Hill Stone	45 23 49 85 15 26	5.021937 5.167975 5.049509	105181 147223 112075	19.921 27.883 21.226	" " "
566	Bulbul, XLIII Kasiátu, XLIV Kasmár Hill Mark	44 10 12 61 15 12	5.161636 5.261413 5.302606	145090 182563 200727	27.479 34.576 38.016	579	Kasiátu, XLIV Patál, LI Káiro Hill Mark	34 22 46 105 20 25	5.060431 5.292880 5.119222	114929 196282 131590	21.767 37.175 24.922	" " "
567	Hurliáong, XLII Kasiátu, XLIV Nágarh Hill Mark	60 43 31 21 32 43	5.204731 4.829018 5.260108	160225 67456 182015	30.346 12.776 34.473	580	Kasiátu, XLIV Bari Rámpur Káiro Hill Mark	73 12 38 110 26 37	5.102705 5.292880 5.049509	126679 196282 112075	23.992 37.175 21.226	" " "
568	Hurliáong, XLII Kasiátu, XLIV Telanga Hill Mark	81 23 0 31 52 28	5.291987 5.019000 5.260108	195879 104616 182015	37.098 19.814 34.473	581	Bulbul, XLIII Bari Rámpur Rudni Hill Mark	61 7 19 83 49 26	5.162911 5.218052 4.979758	145516 165216 95446	27.560 31.291 18.077	" " "
569	Hurliáong, XLII Bulbul, XLIII Sri Samad Hill Mark	69 34 35 46 13 1	5.192039 5.078751 5.174656	155610 119881 149505	29.472 22.705 28.315	582	Patál, LI Báraogaon, LV Chendwár	66 40 36 65 18 39 48 0 45	5.167883 5.163272 5.076064	147192 145637 119142	27.877 27.583 22.565	" " "
570	Bulbul, XLIII Kasiátu, XLIV Sri Samad Hill Mark	14 19 45 37 37 43	4.799886 5.192039 5.302606	63079 155610 200727	11.947 29.472 38.016	583	Kasiátu, XLIV Patál, LI Chendwár	53 49 59 79 19 41 46 50 20	5.163272 5.248659 5.119222	145637 177280 131590	27.583 33.576 24.922	" " "
571	Hurliáong, XLII Bulbul, XLIII Chitáwag Hill Mark	46 55 8 69 30 35	5.086148 5.194210 5.174656	121941 156390 149505	23.095 29.619 28.315	584	Patál, LI Chendwár Udewá Hill Mark	29 22 13 43 5 49	4.874527 5.018501 5.163272	74908 104352 145637	14.187 19.764 27.583	" " "
572	Hurliáong, XLII Kasiátu, XLIV Chitáwag Hill Mark	26 52 30 58 58 39	4.916429 5.194210 5.260108	82495 156390 182015	15.624 29.619 34.473	585	Kasiátu, XLIV Patál, LI Udewá Hill Mark	51 6 12 49 57 28	5.018501 5.011351 5.119222	104352 102648 131590	19.764 19.441 24.922	" " "
573	Kasiátu, XLIV Patál, LI Hurdag Hill Mark	68 17 33 59 40 20	5.190536 5.158568 5.119222	155073 144068 131590	29.370 27.286 24.922	586	Kasiátu, XLIV Udewá Hill Mark Tendhá	47 0 24 96 58 59	4.878759 4.783911 5.011351	75641 60801 102648	14.326 11.515 19.441	" " "

PRINCIPAL-AUXILIARY STATIONS, AND INTERSECTED POINTS.

No. of triangle	Station	Corrected plane angle	Distance			Theodolite used	No. of triangle	Station	Corrected plane angle	Distance			Theodolite used
			Log. feet	Feet	Miles					Log. feet	Feet	Miles	
587	Kasiátu, XLIV	72 23 21	5'141107	138391	26'210	18	Kasiátu, XLIV	16 18 42	4'719770	52453	9'934	18	
	Hurdag Hill Mark	82 51 18	4'783911	60801	11'515		Chendwár	55 21 26	5'186524	153647	29'100		"
	Tendua		5'158568	144068	27'286		Dumraon Semaphore		5'248659	177280	33'576		"
588	Kasiátu, XLIV	49 29 18	4'897361	78952	14'953	"	Kasiátu, XLIV	8 58 38	4'428766	26839	5'083	"	
	Udewá Hill Mark	81 17 16	4'895041	78039	14'894		Sindúr	63 17 29	5'186524	153647	29'100		"
	Utráti		5'011351	102648	19'441		Dumraon Semaphore		5'214388	163828	31'028		"
589	Patál, LII	47 33 45	4'897361	78952	14'953	"	Chendwár	23 26 19	4'079529	12010	2'275	"	
	Udewá Hill Mark	102 43 21	4'724594	53028	10'043		Sindúr	98 31 5	4'475984	29860	5'655		"
	Utráti		5'018501	104352	19'764		Hazáribágh Mausoleum		4'408527	25617	4'852		"
590	Bárágaon, LV	64 14 2	5'133692	136048	25'767	"	Chendwár	23 39 13	4'090278	12482	2'364	"	
	Chendwár	38 46 23	4'975910	94604	17'917		Sindúr	100 55 7	4'484976	30548	5'786		"
	Ard Hill Mark		5'167883	147192	27'877		Hazáribágh Temple No. 1		4'408527	25617	4'852		"
591	Kasiátu, XLIV	48 4 55	5'133692	136048	25'767	"	Chendwár	25 31 49	4'146112	13999	2'651	"	
	Chendwár	56 4 42	5'181034	151717	28'734		Sindúr	102 24 39	4'50377	31723	6'008		"
	Ard Hill Mark		5'248659	177280	33'576		Hazáribágh Temple No. 2		4'408527	25617	4'852		"
592	Kasiátu, XLIV	58 33 4	5'196923	157370	29'805	"	Chendwár	24 53 26	4'053263	11305	2'141	"	
	Patál, LII	75 56 27	5'252712	178942	33'891		Sindúr	82 36 20	4'425472	26636	5'045		"
	Silwári Semaphore		5'119222	131590	24'922		Hazáribágh House		4'408527	25617	4'852		"
593	Kasiátu, XLIV	4 43 5	4'168976	14756	2'795	"	Chendwár	22 6 25	4'021674	10512	1'991	"	
	Chendwár	94 6 12	5'252712	178942	33'891		Sindúr	91 23 0	4'445971	27924	5'289		"
	Silwári Semaphore		5'248659	177280	33'576		Hazáribágh Cenotaph		4'408527	25617	4'852		"
594	Kasiátu, XLIV	7 20 4	4'408527	25617	4'852	"	Chendwár	29 28 14	4'477288	30012	5'684	"	
	Chendwár	54 43 44	5'214388	163828	31'028		Sindúr	125 41 56	4'694951	49539	9'382		"
	Sindúr		5'248659	177280	33'576		Ichak Palace No. 1		4'408527	25617	4'852		"
595	Chendwár	58 28 15	4'814730	65272	12'362	"	Chendwár	32 0 15	4'445957	27923	5'288	"	
	Udewá Hill Mark	101 59 8	4'408527	25617	4'852		Sindúr	118 54 13	4'663921	46123	8'735		"
	Sindúr		4'874527	74908	14'187		Ichak Temple		4'408527	25617	4'852		"
596	Kasiátu, XLIV	65 11 46	5'214331	163806	31'024	"	Chendwár, LIII	24 15 30	5'051226	112519	21'310	24	
	Chendwár	35 33 55	5'021012	104957	19'878		Bámáni, LVI	25 36 10	5'073155	118346	22'414		"
	Sindwar Semaphore		5'248659	177280	33'576		Jarimo		5'320910	209368	39'653		"
597	Kasiátu, XLIV	57 51 42	5'145700	139862	26'489	"	Chendwár, LIII		4'642472	43901	8'315	12	
	Sindúr	39 27 10	5'021012	104957	19'878		Jarimo	97 1 16	5'117806	131161	24'841		"
	Sindwar Semaphore		5'214388	163828	31'028		Partkolá	63 34 36	5'073155	118346	22'414		"
598	Kasiátu, XLIV	29 33 11	4'936685	86434	16'370	"	Bámáni, LVI	17 34 12	4'642472	43901	8'315	24	
	Sindúr	39 39 15	5'048561	111831	21'180		Jarimo		4'900131	79457	15'049		"
	Katkamsandí Semaphore		5'214388	163828	31'028		Partkolá	129 18 44	5'051226	112519	21'310		"
599	Kasiátu, XLIV	36 53 15	5'043554	110549	20'937	"	Jarimo		4'640900	43751	8'286	"	
	Chendwár	37 23 16	5'048561	111831	21'180		Partkolá	83 48 32	4'767468	58542	11'088		"
	Katkamsandí Semaphore		5'248659	177280	33'576		Mahábal	48 12 16	4'642472	43901	8'315		"

No. of triangle	Station	Corrected plane angle			Distance			No. of triangle	Station	Corrected plane angle			Distance			Theodolite used
		o	'	"	Log. feet	Feet	Miles			Log. feet	Feet	Miles	o	'	"	
613	Chendwár, LIII Jarimo Mahábal	49	2	4	4.767468	58542	11.088	626	Bámáni, LVI Partkolá Rock on Hill	109	20	29	5.121103	132161	25.030	Inch 12
		102	1	54	4.960809	91371	17.305			36	5	52	4.910570	82522	15.620	"
					5.073155	118346	22.414						4.900131	79457	15.049	"
614	Partkolá Mahábal Opotá Hill Mark	42	48	57	4.482410	30368	5.751	627	Bámáni, LVI Partkolá Marámoko Rock	119	22	3	5.074980	118845	22.508	24
		58	53	48	4.582722	38258	7.246			24	59	41	4.700579	57621	10.913	12
					4.640990	43751	8.286						4.900131	79457	15.049	"
615	Partkolá Mahábal Chandri	55	27	6	4.557902	36133	6.843	628	Bámáni, LVI Nero Hill Mark Chanchal	97	13	38	4.652044	44972	8.517	24
		72	33	31	4.577173	37772	7.154						4.327090	21237	4.022	12
					4.640990	43751	8.286						4.568910	37060	7.019	12
616	Chendwár, LIII Mahábal Chandri	20	52	53	4.557902	36133	6.843	629	Bámáni, LVI Partkolá Dabarseni Hill Mark	72	24	32	4.983506	96273	18.234	24
		94	47	4	5.004406	101020	19.133			55	42	36	4.921388	83443	15.804	12
					4.960809	91371	17.305						4.900131	79457	15.049	"
617	Partkolá Mahábal Barkata Dák Bungalow	30	14	19	4.358483	22829	4.324	630	Patáil, LIII Bárágaon, LV Changara Hill Mark	11	32	35	4.507720	32190	6.097	18
		44	35	26	4.502755	31824	6.027			36	14	31	4.978195	95103	18.012	"
					4.640990	43751	8.286						5.076064	119142	22.565	"
618	Partkolá Chandri Barkata Dák Bungalow	21	45	4	4.157512	14372	2.722	631	Bárágaon, LV Chainpur, LVIII Changara Hill Mark	120	22	48	5.186100	153497	29.071	"
		55	8	33	4.502755	31824	6.027			10	25	23	4.507720	32190	6.097	"
					4.577173	37772	7.154						5.129318	134685	25.508	"
619	Chendwár, LIII Mahábal Garisaram	14	10	19	4.670093	46784	8.861	632	Bárágaon, LV Chendwár Rámgar	39	27	51	5.073456	118428	22.430	"
		14	23	39	4.676710	47502	8.997			12	43	5	4.613001	41021	7.769	"
					4.960809	91371	17.305						5.167883	147192	27.877	"
620	Chendwár, LIII Garisaram Báli	89	3	40	4.742139	55225	10.459	633	Bárágaon, LV Chainpur, LVIII Rámgar	51	50	49	5.056914	114002	21.591	"
		31	37	9	4.461753	28957	5.484			16	26	11	4.613001	41021	7.769	"
					4.676710	47502	8.997						5.129318	134685	25.508	"
621	Chendwár, LIII Báli Jharpo House	78	28	50	4.733233	54105	10.247	634	Bárágaon, LV Chendwár Lavalauug Hill Mark	52	52	54	5.070937	117744	23.300	"
		69	53	24	4.714752	51850	9.820			41	41	18	4.992139	98206	18.600	"
					4.461753	28957	5.484						5.167883	147192	27.877	"
622	Chendwár Sindúr Tutki Semaphore	123	55	4	4.907730	80859	15.314	635	Bárágaon, LV Chainpur, LVIII Lavalauug Hill Mark	38	25	46	4.924440	84031	15.915	"
		40	50	24	4.804280	63721	12.068			46	35	7	4.992139	98206	18.600	"
					4.408527	25617	4.852						5.129318	134685	25.508	"
623	Bámáni, LVI Partkolá Jogi	23	13	59	4.697476	49828	9.437	636	Bárágaon, LV Chainpur, LVIII Lugu Hill Mark	46	8	22	4.998217	99590	18.862	"
		15	44	44	4.535915	34278	6.492			56	40	16	5.062227	115406	21.857	"
					4.900131	79457	15.049						5.129318	134685	25.508	"
624	Bámáni, LVI Jogi Nero Hill Mark	59	54	2	4.552632	35697	6.761	637	Párasnath, LVII Chainpur, LVIII Lugu Hill Mark	34	4	57	4.998217	99590	18.862	"
		63	55	20	4.508910	37060	7.019			66	36	47	5.212499	163117	30.893	"
					4.535915	34278	6.492						5.242119	174630	33.074	"
625	Bámáni, LVI Partkolá Banda Hill Mark	79	38	10	4.955856	99335	17.109	638	Bárágaon, LV Lugu Hill Mark Chhatarpur	38	4	27	4.869981	74128	14.039	"
		40	27	18	4.775145	59586	11.285			106	14	38	4.845801	70113	13.279	"
					4.900131	79457	15.049						5.062227	115406	21.857	"

PRINCIPAL-AUXILIARY STATIONS, AND INTERSECTED POINTS.

No. or triangle	Station	Corrected plane angle	Distance			Theodolite used	No. or triangle	Station	Corrected plane angle	Distance			Theodolite used
			Log. feet	Feet	Miles					Log. feet	Feet	Miles	
639	Bárágaon, LV Chendwár Chhatarpur	h.s. " "	5° 19' 14.92 4° 84' 58.01 5° 16' 78.83	155415 70113 147192	29.435 13.279 27.877	Inch 18	652	Chainpur, LVIII Tilabani, LXI Saráipahári Old Semaphore	27 30 31 15 40 31	5° 20' 8.67 4° 9' 55.97 5° 37' 9.209	161610 94536 239447	30.608 17.905 45.350	Inch 18 "
640	Bárágaon, LV Lugu Hill Mark Powá	h.s. " "	4° 90' 97.38 4° 79' 19.63 5° 06' 22.27	81234 61939 115466	15.385 11.731 21.857	"	653	Párasnáth, LVII Tilabani, LXI Saráipahári New Semaphore	35 18 23 26 29 35	5° 20' 02.16 5° 08' 77.49 5° 38' 34.50	158568 122391 241797	30.032 23.180 45.795	" " "
641	Bárágaon, LV Chendwár Powá	h.s. " "	5° 19' 06.25 4° 79' 19.63 5° 16' 78.83	157262 61939 147192	29.785 11.731 27.877	"	654	Párasnáth, LVII Chainpur, LVIII Saráipahári New Semaphore	32 42 4 42 42 26	4° 98' 89.58 5° 08' 77.49 5° 24' 21.19	97489 122391 174030	18.464 23.180 33.074	" " "
642	Bárágaon, LV Powá Ajegarh Tree	h.s. " "	4° 74' 85.94 4° 96' 45.28 4° 79' 19.63	56041 92157 61939	10.614 17.454 11.731	"	655	Tilabani, LXI Durgápur, LXII Lachmanpur	50 32 30 73 44 59	5° 19' 33.28 5° 28' 79.55 5° 22' 27.38	156073 194068 167008	29.559 36.755 31.630	" " "
643	Powá Ajegarh Tree Gola	h.s. " "	4° 65' 18.99 4° 44' 99.33 4° 74' 85.94	44864 28180 56041	8.497 5.337 10.614	"	656	Párasnáth, LVII Tilabani, LXI Lachmanpur	36 5 40 11 7 43	5° 28' 79.55 4° 80' 33.36 5° 38' 34.50	194068 63582 241797	36.755 12.042 45.795	" " "
644	Lugu Hill Mark Powá Gola	h.s. " "	4° 44' 99.33 4° 95' 28.32 4° 90' 97.38	28180 89708 81234	5.337 16.990 15.385	"	657	Durgápur, LXII Bihárináth, LXIII Donaktad	59 7 58 53 38 14	5° 00' 16.66 4° 97' 39.44 5° 03' 27.59	100384 94177 107835	19.012 17.837 20.423	" " "
645	Párasnáth, LVII Chainpur, LVIII Gomia Bungalow	h.s. " "	4° 93' 96.18 5° 07' 49.92 5° 24' 21.19	87020 118848 174630	16.481 22.509 33.074	"	658	Tilabani, LXI Bihárináth, LXIII Donaktad	41 7 48 28 31 14	5° 00' 16.66 4° 86' 25.41 5° 15' 56.04	100384 72869 143088	19.012 13.801 27.100	" " "
646	Párasnáth, LVII Chainpur, LVIII Govindpur Semaphore	h.s. " "	4° 96' 34.27 4° 99' 94.86 5° 24' 21.19	91924 99882 174630	17.410 18.917 33.074	"	659	Lachmanpur Donaktad Kutri Semaphore	93 59 46 36 6 15	5° 30' 97.64 5° 08' 11.24 5° 19' 44.36	204063 120538 156472	38.648 22.829 29.635	" " "
647	Bárágaon, LV Chainpur, LVIII Govindpur Semaphore	h.s. " "	4° 96' 34.27 5° 23' 80.42 5° 12' 93.18	91924 172999 134685	17.410 32.765 25.508	"	660	Párasnáth, LVII Lachmanpur Kutri Semaphore	88 45 25 59 24 56	5° 08' 11.24 5° 01' 61.69 4° 80' 33.36	120538 103793 63582	22.829 19.658 12.042	" " "
648	Bárágaon, LV Chainpur, LVIII Chalkari Semaphore	h.s. " "	4° 90' 20.05 5° 26' 55.32 5° 12' 93.18	79800 184303 134685	15.114 34.906 25.508	"	661	Párasnáth, LVII Lugu Hill Mark Chas Bungalow	71 51 15 66 27 42	5° 22' 80.74 5° 07' 30.66 5° 21' 24.99	169073 118322 163117	32.021 22.409 30.893	" " "
649	Párasnáth, LVII Chainpur, LVIII Chalkari Semaphore	h.s. " "	4° 90' 20.05 4° 98' 21.53 5° 24' 21.19	79800 95974 174630	15.114 18.177 33.074	"	662	Párasnáth, LVII Lachmanpur Chas Bungalow	66 19 49 81 33 35 32 6 36	5° 03' 96.31 5° 07' 30.66 4° 80' 33.36	109355 118322 63582	20.749 22.409 12.042	" " "
650	Párasnáth, LVII Chalkari Semaphore Angwáli Bungalow	h.s. " "	4° 13' 86.34 4° 98' 74.20 4° 98' 21.53	13760 97145 95974	2.606 18.399 18.177	"	663	Tilabani, LXI Lachmanpur Gurdia Hill Mark	59 47 51 53 24 55	5° 26' 12.58 5° 22' 93.20 5° 28' 79.55	182498 169559 194068	34.564 32.113 36.755	" " "
651	Párasnáth, LVII Lugu Hill Mark Angwáli Bungalow	h.s. " "	5° 01' 04.03 4° 98' 74.20 5° 21' 24.99	102424 97145 163117	19.399 18.399 39.893	"	664	Chainpur, LVIII Tilabani, LXI Gurdia Hill Mark	14 18 29 6 7 5	5° 22' 93.20 4° 86' 40.50 5° 37' 9.209	169559 73122 239447	32.113 13.849 45.350	" " "

\* Base deduced by two sides and included angle.

CALCUTTA LONGITUDINAL SERIES. SECONDARY TRIANGULATION—TRIANGLES.

No. of triangle	Station	Corrected plane angle	Distance			No. of triangle	Station	Corrected plane angle	Distance			Theodolite used
			Log. feet	Feet	Miles				Log. feet	Feet	Miles	
665	Párasnáth, LVII Lachmanpur Pálganjo Temple No. 1	h.s. h.s. h.s.	76 9 55 44 15 37 4 854890 4 711489 4 803336	71598 51462 63582	13 560 9 747 12 042	678	Pahárpur Pachet Hill Mark Nagarkhari	129 53 10 32 34 37	5 151392 4 745444 4 997546	141707 55647 99436	26 838 10 539 18 833	Inch 18
666	Párasnáth, LVII Lachmanpur Domra, E. Temple	h.s. h.s. h.s.	47 14 20 68 49 19 4 715710 4 819533 4 803336	51965 65908 63582	9 842 12 500 12 042	679	Lachmanpur Pachet Hill Mark Nagarkhari	26 6 48 144 42 46	5 151392 4 710366 5 209476	141707 51329 185984	26 838 9 721 35 224	"
667	Párasnáth, LVII Lachmanpur Khatras Temple	h.s. h.s. h.s.	25 21 49 99 43 21 4 522240 4 884147 4 803336	33284 76586 63582	6 304 14 595 12 042	680	Tilabani, LXI Donaktad Dubráchati	37 58 32 103 17 3	4 663425 4 670750 4 862541	46071 46854 72869	8 726 8 874 13 801	"
668	Tilabani, LXI Lachmanpur Babúdi Semaphore	h.s. h.s. h.s.	32 18 51 28 4 18 5 076746 5 021379 5 287955	119329 105046 194068	22 600 19 895 36 755	681	Tilabani, LXI Pachet Hill Mark Dubráchati	58 29 45 95 16 34	4 956128 4 670750 5 023537	90392 46854 105569	17 120 8 874 19 994	"
669	Chainpur, LVIII Tilabani, LXI Babúdi Semaphore	h.s. h.s. h.s.	15 7 18 21 21 55 5 021379 5 166429 5 379209	105046 146700 239447	19 895 27 784 45 350	682	Tilabani, LXI Dubráchati	9 26 44 30 20 20	4 079773 4 508026 4 670750	12016 36985 46854	2 276 7 005 8 874	"
670	Tilabani, LXI Lachmanpur Bowá Hill mark	h.s. h.s. h.s.	59 40 27 29 22 4 5 224111 4 978578 5 287955	167537 95187 194068	31 730 18 028 36 755	683	Tilabani, LXI Donaktad Dubráchati Bungalow	36 32 45 38 59 38	4 651379 4 675337 4 862541	44810 47352 72869	8 487 8 908 13 801	"
671	Tilabani, LXI Donaktad Bowá Hill Mark	h.s. h.s. h.s.	108 51 6 41 0 1 5 137689 4 978578 4 862541	137306 95187 72869	26 005 18 028 13 801	684	Durgápur, LXII Donaktad Upchuria	60 46 4 105 47 3	4 931475 4 357179 4 973944	85403 22760 94177	16 175 4 311 17 837	"
672	Tilabani, LXI Durgápur, LXII Deoli Semaphore	h.s. h.s. h.s.	57 20 24 19 37 51 5 159119 4 760351 5 222738	144318 57591 107008	27 333 10 907 31 630	685	Durgápur, LXII Pachet Hill Mark Upchuria	89 3 54 74 7 14	4 895813 4 357179 4 878973	78671 22760 75679	14 900 4 311 14 333	"
673	Chainpur, LVIII Tilabani, LXI Deoli Semaphore	h.s. h.s. h.s.	11 51 55 46 52 52 5 379209 4 760351 5 310590 5 379209	57591 204451 239447	10 907 38 722 45 350	686	Durgápur, LXII Upchuria Pondra Temple	28 51 49 58 35 3	4 041311 4 288766 4 357179	10998 19443 22760	2 083 3 682 4 311	"
674	Tilabani, LXI Lachmanpur Pahárpur	h.s. h.s. h.s.	33 26 25 56 52 7 5 029166 5 210904 5 287955	106946 162519 194068	20 255 30 780 36 755	687	Tilabani, LXI Biharínáth, LXIII Raghuánáthpur Temple	21 51 20 12 24 9	4 976012 4 737146 5 155604	94626 54594 143088	17 922 10 340 27 100	"
675	Tilabani, LXI Durgápur, LXII Pahárpur	h.s. h.s. h.s.	17 6 5 76 16 19 4 691932 5 210904 5 222738	49196 162519 167008	9 317 30 780 31 630	688	Biharínáth, LXIII Donaktad Raghuánáthpur Temple	16 7 5 70 9 43	4 446028 4 976012 5 001666	27927 94626 100384	5 289 17 922 19 012	"
676	Tilabani, LXI Biharínáth, LXIII Pachet Hill Mark	h.s. h.s. h.s.	20 36 35 40 0 24 4 761953 5 023537 5 155604	57803 105569 143088	10 948 19 994 27 100	689	Biharínáth, LXIII Súsunia, LXV Raghuánáthpur Semaphore	91 1 3 54 4 59	5 067201 4 975684 4 824771	116735 94555 66799	22 109 17 908 12 651	"
677	Tilabani, LXI Súsunia, LXV Pachet Hill Mark	h.s. h.s. h.s.	47 22 30 46 26 18 5 030180 5 023537 5 162457	107196 105569 145364	20 302 19 994 27 531	690	Biharínáth, LXIII Donaktad Raghuánáthpur Semaphore	16 1 12 69 59 33	4 443585 4 975684 5 001666	27771 94555 100384	5 260 17 908 19 012	"

\* Base deduced by two sides and included angle.

No. of triangle	Station	Corrected plane angle	Distance			No. of triangle	Station	Corrected plane angle	Distance			Theodolite used
			Log. feet	Feet	Miles				Log. feet	Feet	Miles	
691	Bihárináth, LXIII Súsínia, LXV Sutábái Semaphore	51 55 54 75 27 12	4.820763 4.910487 4.824771	66186 81374 66799	12.535 15.412 12.651	704	Bihárináth, LXIII Súsínia, LXV Agerá House	88 46 26 38 45 21	4.925377 4.722053 4.824771	84213 52729 66799	15.949 9.987 12.651	Inch 18 "
692	Tilabani, LXI Bihárináth, LXIII Sutábái Semaphore	27 22 46 26 35 7	4.910487 4.898663 5.155604	81374 79189 143088	15.412 14.998 27.100	705	Bihárináth, LXIII Súsínia, LXV Manjá Hill Mark	70 26 24 53 26 41	4.879794 4.810477 4.824771	75822 64636 66799	14.360 12.242 12.651	"
693	Tilabani, LXI Donaktad Arhara Semaphore	74 45 23 67 32 39	5.060576 5.041885 4.862541	114968 110125 72869	21.774 20.857 13.801	706	Súsínia, LXV Rádhamaadhupur, LXVI Manjá Hill Mark	23 59 53 31 41 25	4.768644 4.879794 5.076335	58701 75822 119216	11.118 14.360 22.579	"
694	Tilabani, LXI Súsínia, LXV Arhara Semaphore	6 51 40 20 3 36	4.593819 5.041885 5.162457	38355 110125 145364	7.264 20.857 27.531	707	Durgápur, LXII Bihárináth, LXIII Lakhanpur	55 35 49 53 34 44	5.043636 5.102348 5.032759	110570 126575 107835	20.941 23.973 20.423	"
695	Tilabani, LXI Donaktad Chhatna Semaphore	80 11 3 71 7 26	5.174805 5.157202 4.862541	149556 143616 72869	28.325 27.200 13.801	708	Durgápur, LXII Malúncha, LXIV Lakhanpur	18 12 32 104 7 36 57 39 52	4.610509 5.102348 5.042505	40786 126575 110282	7.725 23.973 20.887	"
696	Tilabani, LXI Súsínia, LXV Chhatna Semaphore	12 17 20 80 38 20	4.491079 5.157202 5.102457	30980 143616 145364	5.867 27.200 27.531	709	Durgápur, LXII Lakhanpur Bodma Hill Mark	59 1 26 14 22 50	5.054000 4.515909 5.102348	113240 32803 126575	21.447 6.213 23.973	"
697	Durgápur, LXII Malúncha, LXIV Pabrá Hill Mark	65 27 56 66 3 53	5.127155 5.129200 5.042505	134016 134648 110282	25.382 25.502 20.887	710	Durgápur, LXII Malúncha, LXIV Bodma Hill Mark	40 48 54 14 5 4	4.944999 4.515909 5.042505	88105 32803 110282	16.687 6.213 20.887	"
698	Bihárináth, LXIII Malúncha, LXIV Pabrá Hill Mark	88 28 40 13 49 24	5.127155 4.595577 5.117222	134016 32032 130985	25.382 6.067 24.808	711	Malúncha, LXIV Lakhanpur Churilí	38 39 53 81 59 12 59 20 55	4.471581 4.671005 4.610509	29620 46947 40786	5.610 8.891 7.725	"
699	Bihárináth, LXIII Pabrá Hill Mark Sauntá	121 30 11 25 3 18	4.809488 4.619960 4.595577	64480 41683 32032	12.214 7.895 6.067	712	Bihárináth, LXIII Malúncha, LXIV Churilí	7 10 32 13 13 14 159 36 14	4.671005 4.934275 5.117222	46947 85956 130985	8.891 16.279 24.808	"
700	Bihárináth, LXIII Pachet Hill Mark Sauntá	63 4 45 73 14 58	4.730969 4.619960 4.701953	53823 41683 57803	10.194 7.895 10.948	713	Malúncha, LXIV Lakhanpur Saraskundá Hill Mark	21 51 58 18 27 58	4.370513 4.300167 4.610509	23470 19960 40786	4.445 3.780 7.725	"
701	Durgápur, LXII Malúncha, LXIV Damoníchatí	32 52 25 52 4 14 95 3 21	4.778828 4.941147 5.042505	60094 87327 110282	11.381 16.539 20.887	714	Durgápur, LXII Malúncha, LXIV Saraskundá Hill Mark	10 24 58 82 15 38	4.300167 5.039005 5.042505	19960 109397 110282	3.780 20.719 20.887	"
702	Durgápur, LXII Bihárináth, LXIII Damoníchatí	40 55 56 53 48 31 85 15 33	4.850599 4.941147 5.032759	70892 87327 107835	13.427 16.539 20.423	715	Malúncha, LXIV Lakhanpur Desarman Temple	24 16 32 95 34 16	4.286284 4.670253 4.610509	19332 46801 40786	3.661 8.864 7.725	"
703	Durgápur, LXII Bihárináth, LXIII Agerá House	21 20 41 110 33 5	4.722053 5.132420 5.032759	52729 135650 107835	9.987 25.601 20.423	716	Malúncha, LXIV Lakhanpur Afzalpur Flag	8 56 34 86 32 37	3.804088 4.611713 4.610509	6369 40809 40786	1.206 7.746 7.725	"

No. of triangle	Station	Corrected plane angle	Distance			No. of triangle	Station	Corrected plane angle	Distance			Theodolite used
			Log. feet	Feet	Miles				Log. feet	Feet	Miles	
717	Malúncha, LXIV Lakhanpur Serampore Chimney	h.s. 19 29 23 69 42 9	4.133828 4.582714 4.610509	13609 38257 40786	2.577 7.246 7.725	730	Malúncha, LXIV Dubrájpur Bistápur Pagoda	h.s. 16 36 4 138 13 43	4.842105 5.209763 5.014890	69519 162093 103488	13.167 30.690 19.600	Inch 18 "
718	Durgápur, LXII Malúncha, LXIV Barpahári Hill Mark	28 43 49 110 9 33	4.906462 5.197144 5.042505	80624 157451 110282	15.370 29.820 20.887	731	Bihárináth, LXIII Rádhámádhupur, LXVI Kola	h.s. 46 27 36 91 38 9	4.915971 4.951542 5.091091	82408 89442 123336	15.608 16.940 23.359	"
719	Malúncha, LXIV Lakhanpur Barpahári Hill Mark	h.s. 6 1 57 167 51 39	4.604222 4.906462 4.610509	40200 80624 40786	7.614 15.270 7.725	732	Rádhámádhupur, LXVI Karásoli, LXIX Kola	h.s. 69 48 55 42 25 4 67 46 1	5.059442 4.915971 5.053417	114668 82408 113088	21.717 15.608 21.418	"
720	Malúncha, LXIV Lakhanpur Lakar-kundá Flag	h.s. 27 10 53 120 42 12	4.544639 4.819313 4.610509	35046 65965 40786	6.638 12.493 7.725	733	Súsunia, LXV Kola Bankoora Semaphore	h.s. 62 2 34 75 46 0	4.767836 4.808189 4.648839	58592 64297 44549	11.097 12.177 8.437	"
721	Bihárináth, LXIII Lakhanpur Ukhara Building	h.s. 36 19 52 66 25 34	4.827144 5.016646 5.043636	67165 103907 110570	12.721 19.679 20.941	734	Bihárináth, LXIII Kola Ukhara Palace	h.s. 63 22 8 65 16 44	5.010185 5.017146 4.951542	102373 104027 89442	19.389 19.702 16.940	"
722	Bihárináth, LXIII Malúncha, LXIV Ukhara Temple	h.s. 53 11 50 52 52 43	5.038016 5.036199 5.117222	109148 108692 130985	20.672 20.586 24.808	735	Súsunia, LXV Rádhámádhupur, LXVI Barjorá	h.s. 46 49 47 114 29 11	4.622885 4.980186 5.076335	41965 95540 119216	7.948 18.095 22.579	"
723	Bihárináth, LXIII Malúncha, LXIV Dubrájpur	h.s. 39 25 38 87 4 26	5.014890 5.211483 5.117222	103488 162736 130985	19.600 30.821 24.808	736	Súsunia, LXV Karásoli, LXIX Barjorá	h.s. 31 43 34 120 48 19	4.923264 4.980186 5.193265	83804 95540 150051	15.872 18.095 29.555	"
724	Bihárináth, LXIII Rádhámádhupur, LXVI Dubrájpur	h.s. 35 18 4 95 45 16	4.975510 5.211483 5.091091	94517 162736 123336	17.901 30.821 23.359	737	Súsunia, LXV Rádhámádhupur, LXVI Manjádí	h.s. 44 21 48 127 43 53	4.316636 5.022825 5.076335	20732 105396 119216	3.926 19.961 22.579	"
725	Durgápur, LXII Malúncha, LXIV Hatiádubá Hill Mark	h.s. 40 27 32 105 12 55	5.103483 5.275807 5.042505	126906 188715 110282	24.935 35.742 20.887	738	Rádhámádhupur, LXVI Barjorá Manjádí	h.s. 91 11 35 26 3 13	4.673868 4.316636 4.622885	47192 20732 41965	8.938 3.926 7.948	"
726	Malúncha, LXIV Dubrájpur Hatiádubá Hill Mark	h.s. 34 6 0 91 17 12	4.852276 5.103483 5.014890	71166 126906 103488	13.479 24.935 19.600	739	Rádhámádhupur, LXVI Barjorá Maliádí, E. Pediment	h.s. 35 11 48 58 6 9	4.384318 4.552510 4.622885	24228 35687 41965	4.589 6.759 7.948	"
727	Malúncha, LXIV Dubrájpur Dulabpur	h.s. 106 52 35 58 10 26	4.497220 5.066530 5.014890	31421 116555 103488	5.951 22.075 19.600	740	Rádhámádhupur, LXVI Manjádí Maliádí, E. Pediment	h.s. 55 59 47 88 30 5	4.471214 4.552510 4.316636	29595 35687 20732	5.605 6.759 3.926	"
728	Malúncha, LXIV Dubrájpur Soory Jail	h.s. 25 11 4 114 19 41	4.831390 5.162071 5.014890	67825 145235 103488	12.846 27.507 19.600	741	Karásoli, LXIX Barjorá Tentikálú Hill Mark	h.s. 23 4 17 107 46 10	4.637589 5.023209 4.923264	43410 105489 83804	8.222 19.979 15.872	"
729	Dubrájpur Dulabpur Soory Jail	h.s. 7 27 6 166 12 26	4.566970 4.831390 4.497220	36895 67825 31421	6.988 12.846 5.951	742	Rádhámádhupur, LXVI Karásoli, LXIX Tentikálú Hill Mark	h.s. 50 29 13 5 18 36	5.023209 4.102234 5.053417	105489 12654 113088	19.979 2.397 21.418	"

\* Base deduced by two sides and included angle.

PRINCIPAL-AUXILIARY STATIONS, AND INTERSECTED POINTS.

Triang. No.	Station	Corrected plane angle ° ' "	Distance			No. of triangle	Station	Corrected plane angle ° ' "	Distance			Theodolite used
			Log. feet	Feet	Miles				Log. feet	Feet	Miles	
743	Rádhámádhupur, LXVI Barjorá Asortá Dargah	17 29 3 108 43 2	4.193802 4.692443 4.622885	15624 49254 41965	2.959 9.328 7.948	756	Karásoli, LXIX Ganjua, LXXII Rhol Flag	43 58 47 47 25 33	4.869755 4.895258 5.028012	74089 78570 106663	14.032 14.881 20.201	Inch 18 "
744	Rádhámádhupur, LXVI Barjorá Pokarná Building	46 29 37 70 19 7	4.532798 4.646139 4.622885	34103 44273 41965	6.459 8.385 7.948	757	Karásoli, LXIX Dhansimilá Rhol Flag	18 39 34 154 54 46	4.772966 4.895258 4.310921	59288 78570 20745	11.229 14.881 3.929	" "
745	Rádhámádhupur, LXVI Barjorá Alampur Hill Mark	51 10 35 64 40 44	4.500274 4.624824 4.622885	36331 42153 41965	6.881 7.983 7.948	758	Bhola, LXXX Nibria, LXXXIII Paintal	42 22 29 109 7 31	4.638145 4.788127 4.934824	43466 61394 86065	8.232 11.628 16.300	" "
746	Rádhámádhupur, LXVI Karásoli, LXIX Kistásair Hill Mark	22 26 45 54 0 19	4.647521 4.973661 5.033417	44414 94115 113088	8.412 17.825 21.418	759	Dilakás, LXXIX Bhola, LXXX Paintal	64 6 44 77 48 48	4.788127 4.624117 4.824155	61394 42084 66704	11.628 7.970 12.633	" "
747	Súsiniá, LXV Rádhámádhupur, LXVI Kistásair Hill Mark	47 56 41 61 54 55	4.973661 5.048557 5.076335	94115 111830 119216	17.825 21.180 22.579	760	Bhola, LXXX Chinsurah, LXXXI Chinsurah Church	2 15 6 109 22 16	3.496169 4.876590 4.870209	3135 75264 74167	0.594 14.255 14.047	" "
748	Súsiniá, LXV Karásoli, LXIX Rámságár	24 46 53 64 3 10	4.815732 5.147210 5.193265	65423 140349 156051	12.391 26.581 29.555	761	Bhola, LXXX North End*, LXXXII Chinsurah Church	52 40 1 63 45 19	4.824274 4.876590 4.875924	66723 75264 75149	12.637 14.255 14.233	" "
749	Súsiniá, LXV Rámságár Sálgaháti Semaphore	6 16 28 17 35 11	4.578858 5.020487 5.147210	37919 104830 140349	7.182 19.854 26.581	762	Chinsurah, LXXXI Chinsurah Church Chinsurah	11 55 21 130 51 7	2.932522 3.399138 3.496169	856 2507 3135	0.162 0.475 0.594	" 12
750	Karásoli, LXIX Rámságár Bishanpur Building	20 42 46 84 29 27	4.379819 4.829194 4.815732	23978 67483 65423	4.541 12.781 12.391	763	Bhola, LXXX North End*, LXXXII Serampore Church	8 23 47 24 19 26	4.307512 4.757883 4.875924	20301 57264 75149	3.845 10.845 14.233	18 "
751	Karásoli, LXIX Rámságár Baniá Pokar Semaphore	41 43 18 70 28 38	4.672335 4.823464 4.815732	47026 66598 65423	8.906 12.613 12.391	764	Bhola, LXXX Nibria, LXXXIII Serampore Church	52 24 2 41 35 12	4.834764 4.757883 4.934824	68354 57264 86065	12.946 10.845 16.300	" "
752	Súsiniá, LXV Rádhámádhupur, LXVI Dhansimilá	43 46 47 93 34 28	5.085484 5.244603 5.076335	121754 175632 119216	23.060 33.264 22.579	765	Bhola, LXXX Nibria, LXXXIII Nosáda	35 51 53 70 17 39 73 50 28	4.720134 4.926121 4.934824	52497 84357 86065	9.943 15.977 16.300	" "
753	Rádhámádhupur, LXVI Karásoli, LXIX Dhansimilá	9 12 48 110 0 2	4.316921 5.085484 5.033417	20745 121754 113088	3.929 23.060 21.418	766	North End*, LXXXII Nibria, LXXXIII Nosáda	47 28 28 11 48 31 120 43 1	4.720134 4.163678 4.787028	52497 14577 61239	9.943 2.761 11.598	" "
754	Karásoli, LXIX Ganjua, LXXXII Kishnagur	54 30 50 100 41 37	4.946382 4.658180 5.028012	88386 45518 106663	16.740 8.621 20.201	767	North End*, LXXXII Nosáda Baraset Flag	96 32 22 63 19 8	4.623852 4.577791 4.163678	42058 37826 14577	7.966 7.164 2.761	" 12
755	Dubrájpur Dulabpur Kishnagur Flag	55 7 33 29 42 55	4.413013 4.194193 4.497220	25883 15638 31421	4.902 2.902 5.951	768	Bhola, LXXX Nosáda Barrackpore Flag Staff	19 22 36 36 2 11	4.531427 4.780179 4.926121	33996 60281 84357	6.439 11.417 15.977	18 "

\* Of Calcutta base-line.



No. of Triangle	Station	Corrected plane angle	Distance			No. of Triangle	Station	Corrected plane angle	Distance			Theodolite used
			Log. feet	Feet	Miles				Log. feet	Feet	Miles	
769	Bhola, LXXX North End†, LXXXII Barrackpore Flag Staff	11 14 14 36 14 41	4°208167 4°780179 4°875924	19869 60281 75149	3°763 11°417 14°233	18 " "	South End†, LXXXV Noáda Dum-Dum Church	73 23 3 43 33 46	4°319103 4°175940 4°287713	20850 14995 19396	3°949 2°840 3°673	18 " "
770	Bhola, LXXX Noáda Barrackpore Semaphore	19 25 49 35 51 50	4°533203 4°778998 4°926121	34135 60117 84557	6°465 11°386 15°977	" "	North End†, LXXXII South End†, LXXXV Dum-Dum Church	25 56 1 71 59 18	4°175940 4°513399 4°530967	14995 32607 33960	2°840 6°176 6°432	" "
771	Bhola, LXXX North End†, LXXXII Barrackpore Semaphore	11 17 27 36 0 30	4°301482 4°778998 4°875924	20021 60117 75149	3°792 11°386 14°233	" "	North End†, LXXXII Nibria, LXXXIII Cossipore Foundry	44 8 36 30 46 11	4°645155 4°511182 4°787028	44173 32448 61239	8°366 6°145 11°598	" "
772	North End†, LXXXII Noáda Ágarpara Church	18 55 5 20 19 29	3°873377 3°903299 4°103678	7471 8004 14577	1°415 1°516 2°761	12	North End†, LXXXII South End†, LXXXV Cossipore Foundry	5 11 18 60 43 12	3°526858 4°511182 4°530967	3364 32448 33960	0°637 6°145 6°432	" "
773	North End†, LXXXII South End†, LXXXV Ágarpara Church	20 46 31 6 7 13	4°425343 3°903299 4°530967	26628 8004 33960	5°043 1°516 6°432	18	North End†, LXXXII South End†, LXXXV Cossipore, E. Mill	5 26 24 72 22 2	3°517699 4°519976 4°530967	3294 33111 33960	0°624 6°271 6°432	" "
774	North End†, LXXXII South End†, LXXXV Balúkhál Chimney	32 24 56 36 29 36	4°290291 4°335400 4°530967	19512 21647 33960	3°695 4°100 6°432	" "	North End†, LXXXII Nibria, LXXXIII Cossipore, E. Mill	43 53 30 31 33 25	4°642107 4°519976 4°787028	43864 33111 61239	8°308 6°271 11°598	" "
775	North End†, LXXXII Nibria, LXXXIII Balúkhál Chimney	16 54 58 8 50 2	4°612943 4°335400 4°787028	41015 21647 61239	7°768 4°100 11°598	" "	South End†, LXXXV La Martiniere, LXXXVI Cossipore Highest Chimney	88 36 32 6 43 42	4°448619 3°517533 4°446860	28094 3293 27981	5°221 0°624 5°299	24
776	Nibria, LXXXIII South End†, LXXXV Dhakanser Sugar Factory	14 9 42 68 37 25	4°062526 4°643011 4°679513	11549 43955 46829	2°187 8°325 8°869	24	Nibria, LXXXIII Noáda Calcutta, Bágbazar Temple	29 51 43 52 27 36	4°421197 4°623279 4°720134	26375 42003 52497	4°995 7°955 9°943	18
777	North End†, LXXXII Nibria, LXXXIII Dhakanser Sugar Factory	36 14 24 19 12 33	4°643011 4°38519 4°787028	43955 24464 61239	8°325 4°633 11°598	" "	Nibria, LXXXIII South End†, LXXXV Calcutta, Bágbazar Temple	8 17 59 49 1 33	3°904750 4°623279 4°670513	8031 42003 46829	1°521 7°955 8°869	" "
778	North End†, LXXXII South End†, LXXXV Dum-Dum Roman Catholic Chapel	27 27 10 64 50 6	4°195030 4°488003 4°530967	15669 30761 33960	2°968 5°826 6°432	18	South End†, LXXXV Noáda Calcutta, Currie's Factory	127 34 6 23 16 11	4°499003 4°196597 4°287713	31550 15725 19396	5°975 2°978 3°673	" "
779	North End†, LXXXII Noáda Dum-Dum Tomb	28 20 37 132 26 9	4°322683 4°514287 4°163678	21022 32680 14577	3°982 6°189 2°761	" "	Nibria, LXXXIII South End†, LXXXV Calcutta Mint, N. Chimney	15 5 44 41 9 39	4°166325 4°568976 4°670513	14666 37066 46829	2°778 7°020 8°869	" "
780	North End†, LXXXII South End†, LXXXV Dum-Dum Monument	27 20 45 72 49 27	4°190997 4°518031 4°530967	15849 32963 33960	3°002 6°243 6°432	24	Nibria, LXXXIII Noáda Calcutta Mint, N. Chimney	36 39 28 44 11 35	4°501694 4°568976 4°720134	31746 37066 52497	6°013 7°020 9°943	" "
781	South End†, LXXXV La Martiniere, LXXXVI Dum-Dum Monument	125 53 52 19 0 21	4°595746 4°190997 4°440860	39423 15849 27981	7°466 3°002 5°299	" "	Nibria, LXXXIII South End†, LXXXV Calcutta Mint, Middle Chimney	15 19 52 41 20 50	4°170771 4°568467 4°670513	14817 37023 46829	2°806 7°012 8°869	" "

† Of Calcutta base-line. \* Base deduced by two sides and included angle.

PRINCIPAL-AUXILIARY STATIONS, AND INTERSECTED POINTS.

No. of Triangle	Station	Corrected plane angle	Distance			Theodolite used	No. of Triangle	Station	Corrected plane angle	Distance			Theodolite used
			Log. feet	Feet	Miles					Log. feet	Feet	Miles	
795	Nibria, LXXXIII South End*, LXXXV Calcutta, Mint, S. Chimney	15 23 26 41 28 19	4'171497 4'568694 4'670513	14842 37036 46829	2'811 7'014 8'869	Inch 18 "	808	Nibria, LXXXIII South End*, LXXXV Calcutta, Old Church	22 16 45 49 34 13	4'271456 4'574179 4'670513	18683 37513 46829	3'539 7'105 8'869	Inch 24 "
796	Nibria, LXXXIII Noáda Calcutta, Armenian Church	39 32 57 44 31 14	4'526426 4'568285 4'720134	33607 37007 52497	6'365 7'009 9'943	" "	809	Nibria, LXXXIII La Martiniere, LXXXVI Calcutta, Old Church	13 45 50 54 47 9	4'038389 4'574179 4'630782	10924 37513 42735	2'069 7'105 8'094	" "
797	North End*, LXXXII Nibria, LXXXIII Calcutta, Armenian Church	37 9 52 51 21 28	4'568285 4'679857 4'787028	37007 47847 61239	7'009 9'062 11'598	" "	810	La Martiniere, LXXXVI Calcutta, Town Hall Calcutta, Sailors' Home	15 56 39 97 19 37	3'486928 4'044507 4'011216	3069 11079 10262	0'581 2'098 1'943	" 12 "
798	Nibria, LXXXIII Noáda Calcutta, Strand Mills	39 51 44 43 15 0	4'530099 4'559886 4'720134	33892 36231 52497	6'419 6'862 9'943	" "	811	Nibria, LXXXIII Noáda Calcutta Observatory	54 44 44 49 58 46 75 56 30	4'641732 4'617463 4'720134	43826 41444 52497	8'300 7'849 9'943	18 "
799	Nibria, LXXXIII South End*, LXXXV Calcutta, Strand Mills	18 18 0 42 27 59	4'226599 4'559886 4'670513	16850 36231 46829	3'191 6'862 8'869	" "	812	Nibria, LXXXIII South End*, LXXXV Calcutta Observatory	32 31 0 61 55 39 85 33 21	4'402236 4'617463 4'670513	25249 41444 46829	4'782 7'849 8'869	" "
800	Nibria, LXXXIII South End*, LXXXV Calcutta, R. C. Cathedral	18 16 38 46 34 57	4'210132 4'574890 4'670513	16223 37574 46829	3'073 7'116 8'869	24 "	813	Nibria, LXXXIII Calcutta Observatory Calcutta, Chandpál Ghát	6 59 17 30 46 8	3'915646 4'539401 4'617463	8235 34626 41444	1'560 6'558 7'849	" "
801	Nibria, LXXXIII La Martiniere, LXXXVI Calcutta, R. C. Cathedral	17 45 57 58 46 0	4'127373 4'574890 4'630782	13408 37574 42735	2'539 7'116 8'094	" "	814	Nibria, LXXXIII Noáda Calcutta, Chandpál Ghát	47 5 27 41 14 48	4'585085 4'539401 4'720134	38467 34626 52497	7'285 6'558 9'943	" "
802	South End*, LXXXV La Martiniere, LXXXVI Calcutta, Town Hall	17 43 41 38 24 2	4'011216 4'320830 4'446860	10262 29933 27981	1'943 3'965 5'299	" "	815	La Martiniere, LXXXVI Calcutta, Town Hall Calcutta, Race Stand	67 53 38 45 37 54 66 28 28	4'015743 3'993123 4'011216	10369 8001 10262	1'964 1'515 1'943	24 12 "
803	La Martiniere, LXXXVI Calcutta, Town Hall Calcutta, Foundry Chimney	11 43 46 135 29 21	3'585787 4'123415 4'011216	3853 13287 10262	0'730 2'516 1'943	" 12	816	South End*, LXXXV La Martiniere, LXXXVI Calcutta, Exchange Semaphore	17 3 7 32 19 37	4'033821 4'294751 4'446860	10810 19713 27981	2'047 3'734 5'299	24 "
804	La Martiniere, LXXXVI Calcutta, Town Hall Calcutta, Building	18 27 4 24 6 21	3'727700 4'145364 4'011216	5342 13975 10262	1'012 2'647 1'943	24 12	817	La Martiniere, LXXXVI Calcutta, Race stand Calcutta, Exchange Semaphore	73 58 3 64 13 58	4'062075 4'033821 3'993123	11537 10810 8001	2'185 2'047 1'515	" 12 "
805	North End*, LXXXII Nibria, LXXXIII Calcutta, General Post Office	36 15 36 55 31 57	4'559159 4'703403 4'787028	36238 59513 61239	6'863 9'567 11'598	24 "	818	South End*, LXXXV Calcutta Observatory Calcutta, Boithakkhaná Church	6 44 28 16 55 5	3'868378 4'262670 4'402236	7385 18309 25249	1'399 3'468 4'782	18 "
806	Nibria, LXXXIII South End*, LXXXV Calcutta, Scotch Kirk	21 40 53 48 30 33	4'264554 4'571522 4'670513	18389 37284 46829	3'483 7'061 8'869	" "	819	South End*, LXXXV La Martiniere, LXXXVI Calcutta, St. John's Cathedral	18 1 38 35 36 44	4'031518 4'300645 4'446860	10755 20232 27981	2'036 3'832 5'299	24 "
807	Nibria, LXXXIII La Martiniere, LXXXVI Calcutta, Scotch Kirk	14 21 42 54 25 12	4'055794 4'571522 4'630782	11371 37284 42735	2'154 7'061 8'094	" "	820	Nibria, LXXXIII South End*, LXXXV Calcutta, St. John's Cathedral	23 56 7 45 57 13	4'300645 4'554429 4'670513	20232 35845 46829	3'832 6'789 8'869	" "

\* Of Calcutta base-line.

No. of Triangle	Station	Corrected plane angle ° ' "	Distance			Theodolite used
			Log. feet	Feet	Miles	
821	La Martiniere, LXXXVI Calcutta, Town Hall Calcutta, St. James' Church	39 20 57 62 0 21	3 821921 3 905760 4 011216	6636 9242 10262	1 257 1 750 1 943	Inch 24 12
822	South End*, LXXXV Calcutta, Town Hall Calcutta, St. James' Church	18 11 45 61 51 56	3 821921 4 272788 4 320830	6636 18741 20933	1 257 3 549 3 905	24 12
823	South End*, LXXXV La Martiniere, LXXXVI Calcutta, Government House	15 13 50 34 46 6	3 982079 4 318685 4 446860	9596 20830 27981	1 817 3 945 5 299	24 "
824	Nibria, LXXXIII South End*, LXXXV Calcutta, Government House	25 19 26 48 45 1	4 318685 4 503638 4 570513	20830 36613 46829	3 945 6 934 8 869	" "
825	Nibria, LXXXIII South End*, LXXXV Calcutta, Dharmatala Church	25 50 35 54 14 17	4 316448 4 586317 4 670513	20723 38576 46829	3 925 7 306 8 869	" "
826	Nibria, LXXXIII La Martiniere, LXXXVI Calcutta, Dharmatala Church	10 12 0 55 4 59	3 920694 4 586317 4 630782	8331 38576 42735	1 578 7 306 8 094	" "
827	La Martiniere, LXXXVI Calcutta, Town Hall Seebpore Temple	37 15 1 99 57 34	3 901113 4 172549 4 011216	9144 14878 10262	1 732 2 818 1 943	" 12
828	La Martiniere, LXXXVI Calcutta, Town Hall Seebpore Distillery	33 14 34 99 39 7	3 885275 4 140154 4 011216	7678 13809 10262	1 454 2 615 1 943	24 12
829	La Martiniere, LXXXVI Calcutta, Town Hall Calcutta, Fort William Chimney	21 44 39 62 8 5	3 582444 3 900176 4 011216	3823 9124 10262	0 724 1 728 1 943	24 12
830	La Martiniere, LXXXVI Calcutta, Town Hall Calcutta, Maharajpur Cenotaph	26 10 54 75 59 49	3 665756 4 008000 4 011216	4632 10186 10262	0 877 1 929 1 943	24 12
831	North End*, LXXXII Nibria, LXXXIII Calcutta, Fort William Flagstaff	32 49 46 65 2 56	4 525258 4 748595 4 787028	33516 50052 61239	6 348 10 616 11 598	18 "
832	Nibria, LXXXIII Samalia, LXXXVII Calcutta, Fort William Flagstaff	63 5 36 33 38 22	4 732016 4 525258 4 778770	53953 33516 60086	10 218 6 348 11 380	24 "
833	Nibria, LXXXIII La Martiniere, LXXXVI Calcutta, Free School Church	7 10 55 58 43 50	3 767329 4 602180 4 630782	5852 40011 42735	1 108 7 578 8 094	" "
834	Nibria, LXXXIII South End*, LXXXV Calcutta, Free School Church	28 51 40 58 36 9	4 354605 4 602180 4 670513	22626 40011 46829	4 285 7 578 8 869	Inch 24 "
835	Nibria, LXXXIII South End*, LXXXV Calcutta, Free Church of Scotland	28 21 2 61 1 15	4 347109 4 612446 4 670513	22239 40968 46829	4 212 7 759 8 869	" "
836	Nibria, LXXXIII Samalia, LXXXVII Calcutta, Free Church of Scotland	66 25 15 40 40 16	4 760524 4 612446 4 778770	57613 40968 60086	10 912 7 759 11 380	" "
837	Nibria, LXXXIII South End*, LXXXV Calcutta, St. Saviour's Church	29 16 7 62 21 13	4 359911 4 618037 4 670513	22904 41499 46829	4 338 7 860 8 869	" "
838	Nibria, LXXXIII La Martiniere, LXXXVI Calcutta, St. Saviour's Church	6 46 28 72 41 21	3 709906 4 618037 4 630782	5128 41499 42735	0 971 7 860 8 094	" "
839	Nibria, LXXXIII South End*, LXXXV Calcutta, St. Thomas' Church	33 12 25 58 59 3	4 409345 4 603824 4 670513	25665 40163 46829	4 861 7 607 8 869	" "
840	Nibria, LXXXIII Samalia, LXXXVII Calcutta, St. Thomas' Church	61 33 52 40 46 6	4 733073 4 603824 4 778770	54085 40163 60086	10 243 7 607 11 380	" "
841	La Martiniere, LXXXVI Calcutta, Town Hall Calcutta, Kidderpore Chimney	61 11 18 63 40 49	4 039763 4 049626 4 011216	10959 11211 10262	2 076 2 123 1 943	" 12
842	Nibria, LXXXIII South End*, LXXXV Calcutta, St. Paul's Cathedral	37 11 47 56 57 41	4 453089 4 595959 4 670513	28385 39360 46829	5 376 7 455 8 869	24 "
843	Nibria, LXXXIII Samalia, LXXXVII Calcutta, St. Paul's Cathedral	57 34 30 40 26 29	4 709426 4 595959 4 778770	51218 39360 60086	9 700 7 455 11 380	" "
844	Nibria, LXXXIII Samalia, LXXXVII Calcutta, Kidderpore Church	50 45 57 35 13 56	4 668890 4 549024 4 778770	46654 34748 60086	8 836 6 581 11 380	" "
845	Nibria, LXXXIII South End*, LXXXV Calcutta, Kidderpore Church	44 0 20 47 52 9	4 512561 4 549024 4 670513	32551 34748 46829	6 165 6 581 8 869	" "
846	La Martiniere, LXXXVI Calcutta, Town Hall Calcutta Jail	62 11 24 28 30 39	3 957946 3 690063 4 011216	9077 4898 10262	1 719 0 928 1 943	" 12

\* Of Calcutta base-line.

No. of triangle	Station	Corrected plane angle	Distance			No. of triangle	Station	Corrected plane angle	Distance			Theodolite used	
			Log. feet	Feet	Miles				Log. feet	Feet	Miles		
847	La Martiniere, LXXXVI Calcutta, Town Hall Calcutta, Sudder Dewani Court	78 38 30 33 23 45	4° 03' 57.5" 3° 78' 48.59" 4° 01' 12.16"	1085.4 609.3 1026.2	2.056 1.154 1.943	858	Semo Sarol Palandú Bungalow	h.s. " "	7 45 15 55 32 38	3° 90' 78.02" 4° 78' 39.38" 4° 8' 18.740"	995.0 608.05 658.78	1.884 11.516 12.477	Inch 12 "
<b>RANCHEE AND DORANDA SECONDARY SERIES.</b>													
848	Hariharpur, L Pithauria, LI Semo	47 7 47 32 12 29 100 39 44	4° 973' 18.0" 4° 834' 86.1" 5° 100' 57.4"	940.11 683.69 1260.59	17.805 12.949 23.875	859	Parasnáth, LVII Thakbali Domri	h.s. " "	28 59 53 109 7 46 41 52 21	4° 508' 18.3" 4° 797' 97.0" 4° 647' 07.4"	3222.4 6280.1 4436.8	6.103 11.894 8.493	12 "
849	Pithauria, LI Semo Sarol	36 6 45 86 38 5 57 15 10	4° 818' 74.0" 5° 047' 60.1" 4° 973' 18.0"	658.78 1115.84 940.11	12.477 21.133 17.805	860	Thakbali Domri Chino	h.s. " "	56 10 44 86 38 30 4 508' 18.3"	4° 646' 40.7" 4° 726' 17.4" 4° 508' 18.3"	443.00 532.32 3222.4	8.390 10.082 6.103	" "
850	Semo Sarol Ranchee	55 37 5 45 15 27 79 7 28	4° 743' 21.9" 4° 678' 04.0" 4° 818' 74.0"	553.63 476.47 658.78	10.485 9.024 12.477	861	Domri Chino Arwára	h.s. " "	66 30 20 79 37 45 4 862' 77.9"	4° 862' 77.9" 4° 893' 20.9" 4° 640' 40.7"	729.09 782.00 443.00	13.808 14.811 8.390	" "
851	Máhwári, XLVIII Pithauria, LI Jagannáthpur Temple	34 5 17 74 49 9 5 123' 50.6"	4° 896' 14.4" 5° 132' 16.8" 5° 123' 50.6"	787.31 1355.72 1328.94	14.911 25.676 25.109	862	Domri Chino Karidá Hill Mark	h.s. " "	64 45 22 34 57 54 44 39 51	4° 609' 09.6" 4° 410' 90.0" 4° 609' 09.6"	406.53 257.57 443.00	7.700 4.878 8.390	" "
852	Hariharpur, L Pithauria, LI Jagannáthpur Temple	38 0 50 42 24 40 5 100' 57.4"	4° 896' 14.4" 4° 935' 61.4" 5° 100' 57.4"	787.31 862.21 1260.59	14.911 16.330 23.875	863	Chino Arwára Karidá Hill Mark	h.s. " "	33 0 23 44 39 51 33 0 23	4° 719' 83.7" 4° 609' 09.6" 4° 862' 77.9"	524.61 406.53 729.09	9.936 7.700 13.808	" "
853	Pithauria, LI Semo Ranchee Hill Temple	19 58 7 26 59 6 59 38 59	4° 642' 77.8" 4° 766' 20.4" 4° 818' 74.0"	439.32 583.72 638.78	8.320 11.055 17.805	864	Thakbali Domri Bhalua	h.s. " "	96 22 18 37 8 6 46 29 36	4° 644' 97.8" 4° 428' 48.7" 4° 508' 18.3"	441.55 268.22 3222.4	8.363 5.080 6.103	" "
854	Semo Sarol Ranchee Hill Temple	40 57 20 42 9 23 32 43 48	4° 762' 21.0" 4° 642' 77.8" 4° 818' 74.0"	578.38 439.32 638.78	10.954 8.320 12.477	865	Domri Chino Bhalua	h.s. " "	49 30 24 65 2 32 65 27 4	4° 508' 64.2" 4° 644' 97.8" 4° 646' 40.7"	370.38 441.55 443.00	7.015 8.363 8.390	" "
855	Semo Sarol Doranda House	48 51 24 39 41 5 3 21 3	4° 668' 52.2" 4° 566' 09.9" 4° 818' 74.0"	457.99 308.95 638.78	8.674 6.988 12.477	866	Thakbali Bhalua Madhuban Temple	h.s. " "	17 55 28 88 35 9 114 17 46	3° 934' 98.8" 4° 446' 64.0" 4° 704' 30.2"	86.10 270.67 506.18	1.631 5.297 9.587	" "
856	Semo Sarol Doranda Church	75 45 23 4 678' 04.0"	4° 624' 08.5" 4° 818' 74.0"	420.81 476.47	7.970 9.024	867	Thakbali Domri Madhuban Temple	h.s. " "	30 14 12 43 33 59 89 51 17	4° 446' 64.0" 4° 508' 18.3" 4° 623' 62.0"	279.67 3222.4 420.36	5.080 6.103 7.961	" "
857	Semo Ranchee Ranchee Bungalow	4 678' 04.0"	4° 678' 04.0"	476.47	9.024	868	Domri Chino Paresnáth Temple Spire	h.s. " "	43 33 59 89 51 17	4° 623' 62.0" 4° 785' 27.6" 4° 640' 40.7"	609.92 443.00	11.552 8.390	" "

† Base deduced by Ray Trace computation.

No. of triangle	Station	Corrected plane angle	Distance			No. of triangle	Station	Corrected plane angle	Distance			Theodolite used
			Log. feet	Feet	Miles				Log. feet	Feet	Miles	
869	Thakbali Chino Paresnath Temple Spire	h.s. " "	4° 50' 18" 27 4° 52' 40" 31 4° 53' 23" 22	42036 43441 53232	7.961 8.228 10.082	880	Satten, LXXXVIII Talchinan Beta	0' 1" "	3.767529 4.305574 4.275090	5855 20210 18866	1.109 3.828 3.573	Inch 12 "
870	Parasnath, LVII Thakbali Bamaniá	h.s. " "	4° 77' 56" 24 4° 80' 45" 1	16858 44048 44368	3.193 8.342 8.403	881	Talchinan Beta Tetriá	58 1 26 90 46 52 31 11 42	3.981773 4.053199 3.767529	9589 11303 5855	1.816 2.141 1.109	" "
871	Thakbali Bhalua Bamaniá	h.s. " "	4° 90' 41" 52 4° 31' 57" 5 4° 57' 21" 3	31853 16858 26822	6.033 3.193 5.080	882	Beta Tetriá Biltpur	30 59 7 110 12 50 38 48 3	3.896426 4.157164 3.981773	7878 14360 9589	1.492 2.720 1.816	" "
872	Bhalua Bamaniá Chilinghi	h.s. " "	4° 4' 06" 7761 4° 4' 53" 5386 4° 4' 50" 3148	11689 34307 31853	2.214 6.498 6.033	883	Tetriá Biltpur Mostikri	71 58 58 66 19 21 41 41 41	4.051662 4.035309 3.896426	11263 10847 7878	2.133 2.054 1.492	" "
873	Parasnath, LVII Thakbali Chipu	h.s. " "	4° 138' 42" 28 4° 21' 47" 49	39877 78851 44308	7.552 14.934 8.403	884	Biltpur Mostikri Baburbari	37 40 28 66 17 38 76 1 54	3.850863 4.026414 4.051662	7094 10627 11263	1.343 2.013 2.133	" "
874	Thakbali Bamaniá Chipu	h.s. " "	4° 60' 46" 4 4° 94' 17" 58 4° 24' 55" 58	34897 39877 16858	6.609 7.552 3.193	885	Mostikri Baburbari Bhola, LXXX	78 20 20 79 17 35 22 21 56	4.261439 4.262865 3.850863	18257 18317 7094	3.458 3.469 1.343	" "
875	Bamaniá Chipu Badua	h.s. " "	4° 140' 26" 11 4° 27' 55" 34	15031 47460 34897	2.847 8.989 6.609	886	Satten, LXXXVIII Beta Sira	38 53 54 112 32 29	4.019592 4.138007 4.305574	10461 13741 20210	1.981 2.602 3.828	" "
876	Chipu Badua Kondauli	h.s. " "	4° 17' 8" 20 4° 154' 9" 43 4° 8' 41" 57	29286 43312 15031	5.547 8.203 2.847	887	Talchinan Beta Malpara	68 58 55 33 48 28	4.011224 3.992235 3.767529	10262 9823 5855	1.944 1.860 1.109	" "
877	Badua Kondauli Kurhurbaree Bungalow	h.s. " "	4° 113' 50" 53 4° 15' 9" 18	34468 9852 29286	6.528 1.866 5.547	888	Beta Tetriá Khorí	32 20 42 33 43 27 113 55 51	3.749177 3.767529 3.981773	5613 5824 9589	1.063 1.103 1.816	" "
878	Chipu Badua Kurhurbaree Bungalow	h.s. " "	4° 40' 17" 30 4° 40' 18" 50	9852 9857 15031	1.866 1.867 2.847	889	Tetriá Biltpur Khorí	76 29 23 39 43 42 63 46 55	3.931388 3.749177 3.896426	8539 5613 7878	1.617 1.063 1.492	" "
879	Thakbali Bamaniá Paiganjo Temple No. 2	h.s. " "	4° 18' 26" 54 4° 116' 13" 26	7501 21265 16858	1.421 4.028 3.193							

\* deduced by Ray Trace computation.

SECONDARY STATIONS, AND INTERSECTED POINTS.

No. of Triangle	Station	Corrected plane angle	Distance			No. of Triangle	Station	Corrected plane angle	Distance			Theodolite used
			Log. feet	Feet	Miles				Log. feet	Feet	Miles	
<b>HOOGLHY RIVER</b>												
<b>SECONDARY SERIES—(above Calcutta).</b>												
890	Nibria, LXXXIII South End*, LXXXV Calcutta, Ochterlony Monument	27 20 23 52 16 50	4 339743 4 575864 4 679513	21865 37659 46829	4 141 7 132 8 869	901	Bally Dhakanser Uttarpára	24 39 4 120 20 25	3 322578 3 838378 3 661031	3331 6893 4582	0 631 1 305 0 868	Inch 12 "
891	North End*, LXXXII Nibria, LXXXIII Calcutta, Ochterlony Monument	37 29 32 60 42 38	4 575864 4 732090 4 787028	37659 53902 61239	7 132 10 220 11 598	902	Dhakanser Uttarpára Bhadrakáli Flag	29 28 53 128 41 43	3 644421 3 844695 3 522578	4410 6994 3331	0 835 1 325 0 631	"
892	South End*, LXXXV Calcutta, Ochterlony Monument Shalkiá	33 42 55 118 39 23	4 140835 4 062759 4 339743	13830 11555 21865	2 619 2 188 4 141	903	Uttarpára Bhadrakáli Flag Agarpára	17 40 29 12 10 19	3 802776 4 017406 3 644421	6350 10409 4410	1 203 1 971 0 835	"
893	South End*, LXXXV Shalkiá Howrah	11 57 46 140 59 34 27 24 0	3 721601 4 203992 4 062759	5267 15995 11555	0 998 3 029 2 188	904	Uttarpára Agarpára Kuturang	11 26 6 76 31 29	3 314910 4 005558 4 017407	2065 10129 10409	0 391 1 918 1 971	"
894	South End*, LXXXV Calcutta, Ochterlony Monument Howrah	21 45 9 118 1 20	3 962801 4 203992 4 339743	9179 15995 21865	1 738 3 029 4 141	905	Bhadrakáli Flag Agarpára Kuturang	64 21 10 96 48 33	3 314910 3 760804 3 802776	2065 5765 6350	0 391 1 092 1 203	"
895	Shalkiá Howrah Chitpore	16 23 35	3 721601	5267	0 998	906	Agarpára Kuturang Khardaha	66 21 4 104 24 27 9 14 29	4 071086 4 095303 3 314910	11778 12454 2065	2 231 2 359 0 391	"
896	Shalkiá Chitpore Bhot Bágán Flag	30 29 9 51 5 51	3 578294 3 704107 3 868305	8787 5809 7384	0 717 1 100 1 399	907	Agarpára Khardaha Ishará	60 42 45	3 386523 4 129130 4 095303	2435 13463 12454	0 461 2 550 2 359	"
897	Chitpore Bhot Bágán Flag Cossipore, Colvin Ghát	59 55 20 38 57 13	3 717046 3 774625 3 578294	5213 5951 3787	0 987 1 127 0 717	908	Khardaha Ishará Málesh	93 6 37 25 18 17	3 699903 3 755015 3 386523	5011 5080 2435	0 949 1 077 0 461	"
898	Chitpore Cossipore, Colvin Ghát Barrackpore	135 55 52 25 31 58	3 642413 3 982431 3 774625	4389 9004 5951	0 831 1 819 1 127	909	Khardaha Málesh Barrackpore Park	159 22 29 9 42 29	3 805444 4 074942 3 755015	6389 11883 5689	1 210 2 251 1 077	"
899	Cossipore, Colvin Ghát Barrackpore Bally	14 54 27 149 25 22	3 621273 3 917363 3 642413	4181 8267 4389	0 792 1 566 0 831	910	Málesh Barrackpore Park Ballabhur Flag	16 5 16 26 40 46	3 416212 3 625805 3 805444	2607 4225 6389	0 494 0 800 1 210	"
900	Barrackpore Bally Dhakanser	138 10 22 19 54 44	3 661031 3 913106 3 621273	4582 8187 4181	0 868 1 551 0 792	911	Barrackpore Park Ballabhur Flag Barrackpore, Golá Ghát	92 55 38 20 25 2	3 873002 3 836477 3 416212	7465 6862 2607	1 414 1 300 0 494	"
						912	Barrackpore Park Barrackpore, Golá Ghát Serampore Church	28 27 20 56 25 49	3 516252 3 738966 3 836477	3283 5741 6862	0 622 1 087 1 300	"
						913	Shalkiá Chitpore Calcutta, Thompson's Ghát	71 43 50 17 37 8	3 845870 3 349322 3 808305	7012 2235 7384	1 328 0 423 1 399	"

\* Of Calcutta base-line.

Triangle No.	Station	Corrected plane angle	Distance			No. of Triangle	Station	Corrected plane angle	Distance			Theodolite used
			Log. feet	Feet	Miles				Log. feet	Feet	Miles	
914	Chitpore Cossipore, Colvin Ghát Chitpore Bridge	148 28 37 4 55 5	3 841875 3 056642 3 774625	6948 1139 5931	1 316 0 216 1 127	"					Inch 12 "	
915	Chitpore Cossipore, Colvin Ghát Gusurís (Puráná) Flag	25 6 25 47 7 5	3 423550 3 660828 3 774625	2652 4580 5931	0 502 0 867 1 127	"					"	
916	Barrackpore Bally Bálanagar Temple No. 1	85 12 57 32 44 21	3 673641 3 408206 3 621273	4717 2560 4181	0 893 0 485 0 792	927	North End*, LXXXII Nibria, LXXXIII Calcutta, Fort William	32 56 25 66 43 48	4 528654 4 756395 4 787028	33780 57068 61239	6 398 10 808 11 598	Inch 24 "
917	Barrackpore Bally Bálanagar Temple No. 2	31 53 53 92 11 1	3 426088 3 702802 3 621273	2667 5044 4181	0 505 0 955 0 792	928	South End*, LXXXV Nibria, LXXXIII Calcutta, Fort William	44 56 19 33 21 33 101 42 8	4 528654 4 419908 4 670513	33780 26297 46829	6 398 4 081 8 869	12 "
918	Uttarpára Ágarpára Khardaha Balúkhál Temple	151 50 50 7 37 11	4 146192 3 594947 4 017406	14002 3935 10409	2 652 0 745 1 971	929	Nibria, LXXXIII Calcutta, Fort William Akra	62 18 16 55 28 3 62 13 41	4 528959 4 497629 4 528654	33803 31451 33780	6 402 5 957 6 398	"
919	Ágarpára Khardaha Konnagar Ghát	36 24 47 10 0 44	4 008774 3 475474 4 095303	10204 2989 12454	1 933 0 566 2 359	980	Nibria, LXXXIII Akra Sámpur	25 29 13 107 54 12 46 36 35	4 270056 4 614723 4 497629	18623 41183 31451	3 527 7 800 5 957	"
920	Ágarpára Khardaha Konnagar Temple	17 8 42 19 57 53	3 784252 3 848055 4 095303	6085 7048 12454	1 152 1 335 2 359	981	Akra Sámpur Paikpára	93 35 56 69 8 24	3 771855 4 298641 4 270056	5914 19890 18623	1 120 3 707 3 537	"
921	Ishará Máhesb Khardaha Temple	66 6 14 29 7 18	3 662792 3 388942 3 699903	4600 2449 5011	0 871 0 464 0 949	982	Nibria, LXXXIII Sámpur Fort Gloucester	11 12 29 104 18 8 64 29 23	3 947906 4 645598 4 614723	8870 44218 41183	1 680 8 375 7 800	"
922	Máhesb Barrackpore Park Baubazar Khál Flag	30 29 44 45 1 38	3 524869 3 669149 3 865444	3349 4668 6389	0 634 0 883 1 210	988	Sámpur Paikpára Fort Gloucester	115 29 21 39 26 51 25 3 48	4 100406 3 947906 3 771855	12601 8870 5914	2 387 1 680 1 120	"
928	Ishará Máhesb Baubazar Khál Flag	12 26 36 154 11 2	3 669149 3 974727 3 699903	4668 9435 5011	0 883 1 787 0 949	984	Sámpur Fort Gloucester Buj-Buj	21 41 28 79 23 15 78 55 17	3 523811 3 948583 3 947906	3340 8883 8870	0 633 1 682 1 680	"
924	Máhesb Barrackpore Park Barrackpore Park, House	8 32 45 142 44 53	3 295936 3 905902 3 865444	1977 8052 6389	0 374 1 525 1 210	985	Calcutta, Fort William Akra Calcutta, Loretto Convent	125 30 5 7 53 25	4 578297 3 805215 4 528959	37870 6386 33803	7 172 1 209 6 402	"
925	Barrackpore Park Barrackpore, Golá Ghát Serampore Flagstaff	25 11 16 47 17 3	3 486112 3 732251 3 836477	3063 5288 6862	0 580 1 001 1 300	986	Nibria, LXXXIII South End*, LXXXV Calcutta, Surv. Genl's Office	32 31 3 61 55 26 85 33 31	4 402244 4 617447 4 670513	25249 41443 46829	4 782 7 849 8 869	14 "
926	Barrackpore Park Barrackpore, Golá Ghát Chátra Flag	11 39 59 130 2 18	3 350094 3 928296 3 836477	2230 8478 6862	0 424 1 606 1 300	987	Nibria, LXXXIII La Martiniere, LXXXVI Calcutta, Surv. Genl's Office	3 31 32 61 43 34 114 44 54	3 461453 4 617447 4 630782	2894 41443 42735	0 548 7 849 8 094	"

† The continuation of this series will be found in the Synopsis of Results of the E. Coast Series. • Of Calcutta base-line.

SECONDARY STATIONS, AND INTERSECTED POINTS.

No. of triangle	Station	Corrected plane angle	Distance			Theodolite used	No. of triangle	Station	Corrected plane angle	Distance			Theodolite used
			Log. feet	Feet	Miles					Log. feet	Feet	Miles	
988	La Martiniere, LXXXVI	14 13 25	2 854973	716	0 136	14	MUTLA	0 1 "	45 33 45	4 304967	20182	3 822	
	Calcutta, Surv. Genl's Office	82 37 0	3 460930	2890	0 547								
	Calcutta, No. 7 Park Street	83 9 35	3 461453	2894	0 548								
989	La Martiniere, LXXXVI	8 33 59	2 693599	494	0 094	"	SECONDARY SERIES—(incomplete).	"	52 34 47	4 351190	22449	4 252	
	Calcutta, No. 7 Park Street	52 7 7	3 417685	2616	0 496								
	Calcutta, Latitude	119 18 54	3 460939	2890	0 547								
940	Calcutta, Surv. Genl's Office	40 59 3	2 693599	494	0 094	943	South End*, LXXXV	"	81 51 28	4 446860	27981	5 299	
	Calcutta, No. 7 Park Street	31 2 28	2 589002	388	0 074								
	Calcutta, Latitude	107 58 29	2 854973	716	0 136								
941	South End*, LXXXV	9 42 1	3 932301	8557	1 621	944	La Martiniere, LXXXVI	"	59 39 11	4 277661	18952	3 589	
	Calcutta, Surv. Genl's Office	20 6 52	4 242143	17404	3 308								
	Sealdah	150 11 7	4 402244	23249	4 782								
942	La Martiniere, LXXXVI	30 31 46	3 932301	8557	1 621	"	Chingrihata	"	66 46 41	4 304967	20182	3 822	
	Calcutta, Surv. Genl's Office	139 34 43	4 038299	10922	2 069								
	Sealdah	9 53 31	3 461453	2894	0 548								

NOTE.—In fixing the Calcutta Latitude station all observations were taken to luminous signals. \* Of Calcutta base-line.

March 1877.

J. B. N. HENNESSEY,  
In charge of Computing Office.



**CALCUTTA LONGITUDINAL SERIES.**

**AZIMUTHS OF SURROUNDING STATIONS AND POINTS, AT PRINCIPAL,  
PRINCIPAL-AUXILIARY, AND SECONDARY STATIONS.**

The following table contains, in the first column, the name of each Principal, Principal-Auxiliary, or Secondary Station, at which azimuths of surrounding Points have been measured; immediately followed by those azimuths. The second column contains the number of the triangle which gives the distance between the Station and the Point.

Name of station with azimuths of surrounding points	No. of Triangle Distance	Name of station with azimuths of surrounding points	No. of Triangle	Name of station with azimuths of surrounding points	No. of Triangle
ĀGARPARA s. Balúkhāi Temple	23 3 21	ĀKRA s. Pāikpāra	931	AMUA, XVII Murwāra Building	392
Uttarpāra	s. 30 40 34	Sāmpur	930	Sakrádāni	359
Bhadrakāśi Flag	42 50 51	Nibrā, LXXIII	929	Lora, XVI	19
Kutrang	107 12 1	Calcutta, Fort William	929	Gola	360
Konnagar Ghāt	137 8 18	Calcutta, Loretto Convent	935	Koria Hill Mark	375
Konnagar Temple	156 24 23			Gutehī	343
Ishārā	163 43 56			Baliñri Fort	367
Khardaha	" 173 33 5			Bhainsākhand	365
				Sungārā	389
AKNAPUR, LXXVI		AMARPUR s. Lakanpūra, XIX	421	Sulsaia, XIV	19
Dilakās, LXXIX	5 57 0 87	Naugūā	421	Kudri	389
Mubārakpur, LXXV	74 54 40 53	Asorā	431	Jukehī	387
Hākistāpur, LXXIV	147 41 20 85			Tikaria, XV	21
Dastānpur, LXXVII	195 53 12 73	AMUA, XVII		Palwā Temple	396
Sātien, LXXVIII	248 7 29 14	Bhittri	373	Lakanpūra, XIX	23
Bhola, LXXX	302 14 11 49	Deopuhār	356	Banjari Fort	404
		Kauwāra Fort	394	Singoudī Temple	408

AZIMUTHS OF STATIONS AND INTERSECTED POINTS.

Name of station with azimuths of surrounding points	Triangle giving distance	Name of station with azimuths of surrounding points	Triangle giving distance	Name of station with azimuths of surrounding points	Triangle giving distance	
<b>AMBA, XVII</b> Jiwār Deora Fort, N.E. Bastion Deora Fort, S.W. Bastion Chendá Fort Kodá Punchi, XVIII	h.s. 303 45 30 314 45 49 315 14 50 329 19 34 h.s. 357 22 50 343 17 36 78	<b>BADVA h.s.</b> Bamaná Chipú Kurhurbaree Bungalow Kondauli  <b>BAGADI s.</b> Ujain Hill Mark Pokra, XXI Jagobar	h.s. 36 14 46 " 64 10 20 " 104 29 10 218 20 3  19 42 10 214 52 0 h.s. 348 44 39  17 35 2 h.s. 35 12 59 91 27 58 138 15 30 155 23 13 158 29 24 190 7 32 206 39 44 h.s. 248 51 19 h.s. 277 21 30 279 47 41 358 54 21  162 28 17 h.s. 220 20 32 290 6 29  77 54 43 40 133 24 57 81 234 37 25 50 280 40 0 40 329 55 45 58  186 34 33 247 22 13  h.s. 57 33 2 89 1 2 158 31 45  h.s. 130 26 46 189 45 57 200 20 10	875 875 877 876  480 479 479  132 130 133 134 135 165 166 167 165 131 168 130  152 153 152  58 58 59 60 62  315 315  291 290 290  620 620 621	<b>BADYA s.</b> Uttarpára Dhakanser Bilanaagar Temple No. 2 Bilanaagar Temple No. 1 Cossipore Colvin Ghát Barrackpore  <b>BAMANGVA h.s.</b> Asorá Amarpur Fort Lakanpúra, XIX Naugá Karara, XXIII Rampur, XXII  <b>BAMANI, LVI</b> Jarimo Partkolá Chendwár, LIII Jogí Muhúda, LIV Banda Hill Mark Nero Hill Mark Kock on Hill Maramoko Rock Chanchal Ghoránji, LIX Dabarseni Hill Mark Párasnath, LVII  <b>BAMANTA h.s.</b> Párasnath, LVII Bhalus Thakóali Chípú Badúá Paiganjo Temple No. 2 Chilinghí  <b>BANDA s.</b> Dholpahári Tinsnal, VII Badraná Pagoda  <b>BANTBAN, LXXXIV</b> Dilakás, LXXIX Nibria, LXXVIII Samalia, LXXXVII	901 900 917 916 899 899  430 423 416 417 415 415  609 611 73 623 73 625 624 626 627 628 75 629 74  870 871 870 874 875 879 872  267 266 266  100 100 101
<b>ANGWALI BUNGALOW s.</b> Lugu Hill Mark Chalkari Semaphore Párasnath, LVII	100 45 39 129 18 45 210 22 21	<b>BAGODA h.s.</b> Barkherá Fort Biláí Datorá Building Dhanserá Fort Malhargarh Temple Hiran Pagoda Silegaon Building Bandrautá Fort Kursi Pipalkherí Dalpatpur Fort Patari  <b>BAGROD h.s.</b> Teonda, I Torá Tins, IV  <b>BAGRU, XLVI</b> Birpokhar, XLV Bulbul, XLIII Málhan, XLVII Máhwári, XLVIII Bhursu, XLIX  <b>BALAKOT s.</b> Himilia, IX Chaurái Fort  <b>BALEHO FORT s.</b> Sajpur Mandra, VIII Garhákota Ramná Spire  <b>BALI h.s.</b> Chendwár, LIII Garisaram Jharpo House	480 479 479  132 130 133 134 135 165 166 167 165 131 168 130  152 153 152  58 58 59 60 62  315 315  291 290 290  620 620 621	<b>ARWARA h.s.</b> Domrí Karidá Hill Mark Chino  <b>ASORA h.s.</b> Amarpur Naugá Bamaugús  <b>AURRI, XX-XXIII</b> Kári Hill Flag Lul, XX XII Kauwái Gurwáni, XXX Pokra, XXXI Gora, XXXV Singhpur Fort Mirchádhi, XXXIV Khogwár  <b>BAHUKA h.s.</b> Serwás Turret Teonda, I Pipalkherí Tins, IV  <b>BABURBARI s.</b> Bhola, LXXX Mostikri Bilitpur  <b>BADANPUR s.</b> Lakanpúra, XIX Badanpur Temple Tindotá Naugá	861 863 861  431 430 430  514 36 509 36 41 43 517 42 515  160 159 158 158  885 884 884  425 427 426 425	

Name of station with azimuths of surrounding points	No. of triangle giving distance	Name of station with azimuths of surrounding points	No. of triangle giving distance	Name of station with azimuths of surrounding points	No. of triangle giving distance	Name of station with azimuths of surrounding points	No. of triangle giving distance
BANJARI, XX Lora, XVI Punchi, XVIII Singpur, XXI	27 27 28	BARODIA h.s. Chandamau Isarwar Pagoda	179 186	BHAKTI, LXVIII Karāsoli, LXIX Rádhámádhupur, LXVI Nawágon, LXVII Párhát, LXXI Madhpur, LXX	82 82 86 91 87	BHARJANA, XXIV Singpur, XXI Rámpur, XXII Chamki, XXV	30 30 31
BARAGAOON, LV Patál, LII Arid Hill Mark Changara Hill Mark Chendwár Chendwár, LIII Rámgar Lugu Hill Mark Lávalaung Hill Mark Govindpur Semaphore Chalkari Semaphore Chhatarpur Powá Chainpur, LVIII Ajegari Tree	67 590 630 582 67 632 636 634 647 648 638 640 68 642	BARRACKPORE, GOLA GHAT s. Serampore Church Chátra Flag Barrackpore Park Ballabhpur Flag Serampore Flagstaff	912 926 911 911 925	BHAORASA, (V) Masjidpur Bhirpur Kámkhera, (IV) Bhari Budhon, III Patári Bamora Temple Teonda, I Udepur Hill Mark	112 113 1 117 2 111 116 1 109	BARI RÁMPUR s. Bulbul, XLIII Látehar Ratanpur Hill Mark Hurliáong, XLII Kasiátu, XLIV Nakti Hill Stone Káiro Hill Mark Rudni Hill Mark	557 558 560 556 556 578 580 581
BARI RÁMPUR s. Bulbul, XLIII Látehar Ratanpur Hill Mark Hurliáong, XLII Kasiátu, XLIV Nakti Hill Stone Káiro Hill Mark Rudni Hill Mark	557 558 560 556 556 578 580 581	BARRACKPORE s. Bally Dhakanser Bálanagar Temple No. 2 Bálanagar Temple No. 1 Cossipore, Colvin Ghat Chitpore	899 900 916 898 898	BHAPAIL, h.s. Tins, IV Pipalkheri Garhpára Pagoda Richonda Saugor Cantonment Saugor Pagoda Saugor Magazine Saugor, V Masanjir Lakui	208 209 210 214 219 217 214 208 215 221	BARJANA, XXIV Singpur, XXI Rámpur, XXII Chamki, XXV	30 30 31
BARJANA, XXIV Singpur, XXI Rámpur, XXII Chamki, XXV	30 30 31	BEHRA s. Tinsmál, VII Pathariá	270 270	BHARI s. Bhaorisa, (V) Patári Udepur Hill Mark	117 118 117	BARJORA s. Súsunia, LXV Maliád, E. Pediment Manjádí Rádhámádhupur, LXVI Tentikálí Hill Mark Alampur Hill Mark Pokarna Building Asoria Dargah Karāsoli, LXIX	735 739 738 735 741 745 744 743 736
BARJORA s. Súsunia, LXV Maliád, E. Pediment Manjádí Rádhámádhupur, LXVI Tentikálí Hill Mark Alampur Hill Mark Pokarna Building Asoria Dargah Karāsoli, LXIX	735 739 738 735 741 745 744 743 736	BETA s. Tetriá Tálichinan Sáttan, LXXVIII Malpára Sira Khorí Bilitpur	881 880 880 887 886 888 882	BHAURAGA, XI Mandra, VIII Himilia, IX Kalumar, XII	15 15 16	BARODIA h.s. Torá Pípalkheri	178 178
BARODIA h.s. Torá Pípalkheri	178 178	BHAINSAKHAND h.s. Lora, XVI Amúa, XVII Khareni Temple	365 365 368	BHAURAGA, XI Mandra, VIII Himilia, IX Kalumar, XII	15 15 16		

AZIMUTHS OF STATIONS AND INTERSECTED POINTS.

Name of station with azimuths of surrounding points	No. of triangle ranging	Name of station with azimuths of surrounding points	No. of triangle ranging	Name of station with azimuths of surrounding points	No. of triangle ranging
<b>BHILAWA</b> h.s. Lora, XVI Deopahar Bansibá Hill Mark Amhetá Hill Mark	857 357 371 881	BHARINATH, LXIII Raghunáthpur Semaphore Donaktad Pachet Hill Mark Durgapur, LXII Saunta	689 657 676 78 699 702	BOHARI h.s. Ladóra Temple Karapur Temple Dholpohári Tinsmál, VII Paderiá Building Bharpaní Idgah	256 235 250 229 268 261
<b>BHIRPUR</b> h.s. Masjidpur Bhaorása, (V) Kurwai Fort Bamorá Temple	113 113 114 115	Damoni Chati Máloneha, LXIV Churli Lakhanpur Dubrejpur Ukhara Temple Ukhara Building Ukhara Palace Agerá House Radhámádhupur, LXVI Manjui Hill Mark Pabrá Hill Mark Kola Súsinia, LXV	702 712 707 723 722 721 734 703 80 705 698 781 79	BOKPURA h.s. Hirapur Dhuni Cupola Dhaná Dome Lakni Saugor, V Gumeriá Mosque Richondá Dungaráo Building Dholpohári Bohari Bharpaní Idgah	248 248 249 232 230 233 231 232 249 230 261
<b>BHITRI</b> h.s. Deopahar Lora, XVI Gola Súkrádáni Koria Hill Mark Piprod Hill Mark Amúa, XVII Bhatraon Hill Mark Chiriábhár Hill Mark Amhetá Hill Mark	374 376 379 373 375 378 373 379 383 382	Uwar Gárgája, I* Bagodá Busodá Hill Mark Patari Kariápahar Teonda, I	121 119 130 127 120 142 119	BUDHON, III Tins, IV Pipalkheri Torá Teonda, I Garolá Palace Patari Kurái Bhaorása, (V) Kimlásá Pagoda Rondá Fort Barodiá, N. Turret Pindarus Fort Tinsmál, VII Pithoriá Fort Richondá Saugor, V Chirarú Narauli Dilchauri	3 181 137 177 110 168 2 173 182 188 213 7 184 211 6 181 187 190
<b>BHOLA, LXXX</b> Paintal Dilakás, LXXIX Aknápur, LXXVI Sáten, LXXVIII Mostikri Báburbári Chinsurah Church Chinsura, LXXI Barrackpore Semaphore Barrackpore Flagstaff Serampore Church Cal. base-line, N. End, LXXXII Noáda Nibría, LXXXIII	758 96 96 104 885 885 760 105 770 768 763 98 765 97	BILAI h.s. Uwar Gárgája, I* Bagodá Busodá Hill Mark Patari Kariápahar Teonda, I	121 119 130 127 120 142 119	BULBUJ s. Fort Gloucester Sámpur	934 934
<b>BHUSA, XLIX</b> Bágru, XLVI Kahmár Máhwári, XLVIII Huriharpur, L	62 575 62 68	BIRPOKHAR, XLV Turer, XLI Bulbul, XLIII Bágru, XLVI	57 57 58	BULBUL, XLIII Birpokhar, XLV Turer, XLI Kumandi Hill Mark Hurlikong, XLII	57 58 659 53
<b>BHARNATH, LXIII</b> Sutábái Semaphore Tilabani, LXI Raghunáthpur Temple	691 78 687	BOHARI h.s. Náharman, VI Dhaná Dome Bokpurá Richwar Cupola Saugor, V Gumeriá Mosque Richondá	228 250 230 258 228 233 231	BULBUL, XLIII Birpokhar, XLV Turer, XLI Kumandi Hill Mark Hurlikong, XLII	57 58 659 53

\* Of the Great Arc Meridional Series—Section 18° to 24°.

CALCUTTA LONGITUDINAL SERIES.

Name of station with azimuths of surrounding points	No. of triangle giving distance	Name of station with azimuths of surrounding points	No. of triangle giving distance	Name of station with azimuths of surrounding points	No. of triangle giving distance
<b>BULBUL, XLIII</b>		<b>CALCUTTA BASE-LINE, S. END, LXXXV</b>		<b>CALCUTTA OBSERVATORY</b>	
Ratanpur Hill Mark	560	Calcutta, Ochterlony Monument	890	Calcutta, Chandpal Ghát	813
Kasmar Hill Mark	565	Calcutta, Old Church	808	Noáda	811
Látehár	558	Calcutta, Bagbazar Temple	790	Cal. base-line, S. End, LXXXV	812
Sri Samad Hill Mark	569	Calcutta, Government House	823	Calcutta, Boithakhaná Church	818
Kasítú, XLIV	54	Calcutta, Scotch Kirk	806		
Chitwág Hill Mark	571	Calcutta, Kidderpore Church	845		
Bari Rampur	557	Calcutta, Exchange Semaphore	816	<b>CALCUTTA, RACE STAND</b>	815
Hurdág Hill Mark	574	Calcutta, R. C. Cathedral	800	Calcutta, Town Hall	817
Málhan, XLVII	55	Calcutta, Town Hall	802	Calcutta, Exchange Semaphore	815
Rudni Hill Mark	581	Calcutta, St. John's Cathedral	819	La Martiniere, LXXXVI	
Bágru, XLVI	58	Calcutta, Fort William	928		
		Calcutta, Strand Mills	799		
		Calcutta Mint, S. Chimney	795		
		Calcutta Mint, Middle Chimney	794		
		Calcutta Mint, N. Chimney	792		
		Calcutta, Currie's Factory	791		
		Howrah	893		
		Shalkiá	892		
		Nibria, LXXXIII	99		
		Cossipore Highest Chimney	788		
		Cossipore, E. Mill	786		
		Cossipore Foundry	785		
		Balukhál Chimney	774		
		Dhakanser Sugar Factory	776		
		Ágarpara Church	773		
		Noáda	782		
		Cal. base-line, N. End, LXXXII	99		
		Dum-Dum Roman Catholic Chapel	778		
		Dum-Dum Church	782		
		Dum-Dum Monument	780		
		Chingriháta	943		
		<b>CALCUTTA, FORT WILLIAM</b>			
		Akra	929		
		Nibria, LXXXIII	927		
		Cal. base-line, N. End, LXXXII	927		
		Cal. base-line, S. End, LXXXV	928		
		Calcutta, Loretto Convent	935		
		<b>CALCUTTA, LATITUDE</b>			
		Calcutta, No. 7 Park Street	989		
		Calcutta, Surv. Genl's Office	940		
		La Martiniere, LXXXVI	989		
		<b>CALCUTTA, NO. 7 PARK STREET</b>			
		Calcutta, Surv. Genl's Office	938		
		Calcutta, Latitude	939		
		La Martiniere, LXXXVI	938		
		<b>CALCUTTA OBSERVATORY</b>			
		Nibria, LXXXIII	811		
		<b>CHAINPUR, LVIII</b>			
		Bátugaon, LV	68		
		Changara Hill Mark	631		
		Ráingár	633		
		Lávalaung Hill Mark	635		
		Chendwár, LIII	68		
		Langú Hill Mark	636		
		Gomin Bungalow	645		
		Govindpur Semaphore	646		
		Chalkari Semaphore	648		
		Párasnáth, LVII	69		
		Saráipahári Old Semaphore	652		
		Saráipahári New Semaphore	654		
		Babúfí Semaphore	669		
		Deoli Semaphore	673		
		Tilabani, LXI	70		
		Gurdia Hill Mark	664		

AZIMUTHS OF STATIONS AND INTERSECTED POINTS.

Name of station with azimuths of surrounding points	No. of Triangle Distance	Name of station with azimuths of surrounding points	No. of Triangle Distance	Name of station with azimuths of surrounding points	No. of Triangle Distance
<b>CHAMKI, XXV</b> Barjane, XXIV Kundar Kanrodí Rámpur, XXII Karara, XXIII Umeria Hill Mark Marwás, XXVI Ará Hill Mark Múregerh, XXVIII	81 441 441 26 26 447 32 444 33	CHENDWAR, LIII Mahábal Bámani, LVI Partkóla Garisaram Chandri Jharpo House Jarino Parasnáth, LVII Báil Chainpur, LVIII Báraogaon, LV	618 73 610 619 616 621 609 69 620 68 67	CHINO h.s. Arwára Karidá Hill Mark Pomri Thakbali Bhalua Pareshnáth Temple Spire	861 862 860 860 865 868
<b>CHANGHAL, h.s.</b> Bámani, LVI Nero Hill Mark	628 628	CHENDWAR h.s. Arid Hill Mark Patál, LII Udewá Hill Mark Kasiátu, XLIV Hazáribágh Temple No. 2 Hazáribágh House Hazáribágh Temple No. 1 Hazáribágh Mausoleum Hazáribágh Cenotaph Sindwar Semaphore Katkamsaudi Semaphore Sindúr Dumraon Semaphore Ichak Palace No. 1 Ichak Temple Silwári Semaphore Tutki Semaphore Láválaung Hill Mark Chhatarpur Powá Ramgar Báraogaon, LV	590 582 584 583 604 605 603 602 606 596 599 594 600 607 608 593 622 634 639 641 632 582	CHINSURAH s. Chinsurah Church Chinsura, LXXXI	762 762
<b>CHANDAMAU h.s.</b> Torá Barodiá	179 179	CHANDRI h.s. Chendwár, LIII Mahábal Bharkata Dák Bungalow Partkóla	616 615 618 615	CHITPU h.s. Bamaniá Parasnáth, LVII Thakbali Kurhurbaree Bungalow Kondauli Badúa	874 873 873 878 876 875
<b>CHAPRI, XXIX</b> Seogarh Bagai Hill Mark Baura Hill Mark Marwás, XXVI Pabái Koria, XXVII Pokra, XXXI Siwar Ghorbí Kanáo Hill Mark Korá Koh Karinpuhá Peak No. 1 Suugarh Hill Mark Gurwani, XXX	457 455 453 38 449 38 40 469 506 502 472 471 468 39	CHHATARPUR h.s. Báraogaon, LV Chendwár Lugu Hill Mark	638 639 638	CHITPORE s. Chitpore Bridge Calcutta, Thompson's Ghát Howrah Shalkiá Bhot Bágán Flag Gusuriá (Purána) Flag Barrackpore Cossipore, Colvin Ghát	914 913 895 895 896 916 898 897
<b>CHAS BUNGALOW s.</b> Lugu Hill Mark Parasnáth, LVII Lachmanpur	661 661 662	CHITINGHI h.s. Bhalua Bamaniá	872 872	CHITPORE s. Chitpore Bridge Calcutta, Thompson's Ghát Howrah Shalkiá Bhot Bágán Flag Gusuriá (Purána) Flag Barrackpore Cossipore, Colvin Ghát	914 913 895 895 896 916 898 897

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CHURI h.s. Baindi Hill Mark Girpahar Hill Mark Gurwani, XXX Deori Barmá Hill Mark Parwatá Hill Mark	499 497 492 493 492 494	DELA h.s. Turási Hurlkong, XLII Ratanpur Hill Mark  DEOPAHAR h.s. Lora, XVI Gola Súkrádání Amúa, XVII Jainágrá Hill Mark Bhítri Bansibá Hill Mark Amhetá Hill Mark Chiribháar Hill Mark Bhiláwá	563 562 562  356 360 358 356 369 374 371 381 384 357	DHOLPAHARI h.s. Tinsmál, VII Banda Choká Temple Pathariá Gongtoríá Paderiá Building Bohári  DILAKAS, LXXIX Mubarakpur, LXXV Aknápur, LXXVI Bhola, LXXX Paintal Nibriá, LXXXIII Baniban, LXXXIV  DILCHAURI h.s. Tins, IV Dakrái Teonda, I Munderi Mosque Masurái Building Mosó Building Gamberiá Hill Mark Budhon, III Sihora Temple No. 1 Rámpur Temple Saugor, V  DOMRI h.s. Chino Karidá Hill Mark Arwára Thakbali Madhuban Temple Bhalua Parasnáth, LVII Pareshnáth Temple Spire  DONAKTAD h.s. Tilabani, LXI Dubráchati Dubráchati Bungalow Bowá Hill Mark Kutri Semaphore Lachmanpur Upchuriá Durgápur, LXII Bihárináth, LXIII Chhátrna Semaphore Arhará Semaphore	239 267 268 240 253 262 250  95 95 96 759 100  194 194 190 198 197 196 199 190 201 202 191  860 862 861 859 867 864 859 868  658 680 683 671 659 659 684 657 657 695 693		
CHURIL s. Bihárináth, LXIII Malúncha, LXIV Lakhanpur  CHURU s. Chainpur Hill Stone Gora, XXXV Danwár Hill Mark  COSSIPORE, COLVIN GHAT s. Bhot Bágán Flag Gusuríá (Purána) Flag Barrackporé Bally Chitpore Chitpore Bridge	712 711 711  521 521 522  897 915 898 899 897 914	DHAKANSEER s. Barrackpore Bally Uttarpára Bhadrakáli Flag  DHANSIMILA h.s. Karásoli, LXIX Súsinia, LXV Rádhámádhupur, LXVI Rhol Flag  DHOLPAHARI h.s. Bokpura Goretá Fort Sanodá Fort Iticháwar Chupola Dhaná Dome Ladorá Temple Saikheri Pediment Saugor, V Richondá Painarí Temple Benáiká Fort Pátan Temple	900 900 901 902  753 752 752 757  249 259 245 257 249 255 253 239 241 241 242 244	DAMOH h.s. Himilia, IX Rangú, X  DAMONI CHATI s. Bihárináth, LXIII Durgápur, LXII Malúncha, LXIV  DASTANPUR, LXXXVII Aknápur, LXXXVI Hákitápur, LXXXIV Sátten, LXXXVIII	194 196 197 199 201 202 194 195 204 203  805 305  702 701 701  102 102 103	0 1 " 6 31 57 45 11 7 118 27 40 170 6 23 217 19 32 238 55 58  20 42 10 189 18 24 248 39 19  108 2 12 175 53 9 257 18 44  31 58 25 40 8 17 128 57 4 143 51 31 353 1 12 357 56 17  25 50 29 171 47 29 201 22 5 208 44 40 225 54 12 239 51 27 249 43 6 286 53 14 323 8 52 355 33 59  45 26 33 175 43 42  22 21 51 107 37 24 202 40 45  15 54 14 06 98 9 30 48 298 6 53 19	0 1 " 205 52 16 210 47 0 231 38 7 289 38 23 332 48 55 339 15 45 355 48 12  119 11 7 60 185 56 31 31 234 27 42 01 298 34 26 302 5 58 31 346 52 53 13  43 31 30 69 44 47 100 34 6 105 54 17 128 47 23 133 15 42 155 16 52 173 43 12 195 41 54 219 2 18 246 39 58  23 55 54 88 41 16 90 26 14 297 17 24 327 31 36 334 25 30 339 9 45 340 21 55  25 6 56 63 51 21 64 6 34 66 6 57 99 12 1 135 18 16 194 5 17 207 32 10 274 45 58 313 59 30 317 34 17

AZIMUTHS OF STATIONS AND INTERSECTED POINTS.

Name of station with azimuths of surrounding points	No. of triangle giving distance	Name of station with azimuths of surrounding points	No. of triangle giving distance	Name of station with azimuths of surrounding points	No. of triangle giving distance
DONAKTAD h.s. Raghunáthpur Semaphore Raghunáthpur Temple	344 45 31 344 55 41	FORT GLOUCESTER s. Nibría, LXXXIII Sampur Paikpara Buj-Buj	212 9 31 276 38 54 301 42 42 356 2 9	GHOBI h.s. Kauwái Gurwáni, XXX Padári Fort Chapri, XXIX Pokra, XXXI Saipur Fort	932 932 933 934
DUBRACHATI s. Pahrá, W. Temple Donaktad Pachet Hill Mark Tilabani, LXI	17 25 47 h.s. 243 48 24 251 48 53 347 5 27	GANJA, LXXII Karásoli, LXXIX Kishnaghur Rhol Flag Madhpur, LXX Mubárákpur, LXXV	153 48 48 79 178 36 22 201 14 22 221 43 19 97 301 40 28 25	GIRA s. Maulj Bagai Hill Mark Seogarih	88 754 756 88 89
DUBRAJPUR h.s. Rádhámádhupur, LXVI Hatáádúhá Hill Mark Bihárináth, LXIII Malúncha, LXIV Dulabpur Soory Jail Kishnaghur Flag Bistápur Pagoda	13 7 51 24 17 15 62 4 31 115 34 27 222 27 2 h.s. 229 54 8 277 34 35 337 20 44	GARGAJA, I* Imkudá Building Basodá Mansoleum Murádpur Pagoda Bháí Teonda, I Richái Bagrod Dome Bagrod, W Temple Garaspur Hill Mark Garaspur Fort	17 8 51 137 59 48 179 33 17 203 51 18 238 57 20 39 241 58 29 273 44 34 273 59 59 312 16 4 314 9 32 326 27 5	GOBRA, XXXVII Harai, XXXVI Mirchádi, XXXIV Chainpur Hill Stone Gora, XXXV Dauwar Hill Mark Hará Sidá Hill Flag Sewádhí, XXXVIII Bijká Hill Mark Tatápani Hill Mark Turer, XLI	123 140 126 119 119 140 150 148 125 124 121
DELAPPUR s. Kishnaghur Flag Dubrájpur Malúncha, LXIV Soory Jail	12 45 45 h.s. 42 28 40 100 39 6 236 16 14	GARIBARAM h.s. Báí Chendwar, LIII Mahábal	9 46 39 41 23 48 192 49 50	GOLA h.s. Deori Hill Mark Amúa, XVII Piprod Hill Mark Sleemanabad Temple Bhatgaon Hill Mark Súkrádáni Bhitri Jajnugrá Hill Mark Deopahár	620 619 619
DUMADOLA s. Danaújá Hill Mark Gorá Hill Mark Gurwáni, XXX	99 56 0 262 7 6 304 38 11	GAURA h.s. Gosalpur Indroná No. 1 Kalúmar Saláia, XIV Gutehí Tikeriá Temple Kauriya Temple No. 1 Lora, XVI Májrjá Temple Panwani Temple Sihora Temple No. 2	7 42 2 47 2 49 73 17 17 152 54 6 172 36 15 217 26 41 218 34 1 311 13 53 323 16 21 324 2 0 347 2 58	GONGTORIA h.s. Paderiá Building Goretá Fort Richáwar Cupola Saikheri Pediment Jadorá Temple Saugor, V Dholpahári Tinsmál, VII	342 340 337 344 366 355 338 351 352 348
DURGAPUR, LXII Tilabani, LXI Donaktad Deolí Semaphore Pondrá Temple Upechurá Lachmanpur Párasnáth, LVII Pahárpur Jálve, LX Boduna Hill Mark Malúncha, LXIV Saraskundá Hill Mark Lakhanpur Barpahári Hill Mark Damonicháti Hatáádúhá Hill Mark Agerá House Pahrá Hill Mark Bihárináth, LXIII Pachet Hill Mark	26 31 56 46 27 35 16 46 9 47 59 29 31 88 21 20 h.s. 100 16 55 102 44 13 21 102 48 15 164 58 45 48 213 50 2 254 38 56 24 265 3 54 h.s. 272 51 29 283 22 45 287 31 22 295 6 28 307 6 37 320 6 52 328 27 17 64 359 17 26	GHORANJ, LIX Párasnáth, LVII Bámani, LVI Jálve, LX	0 13 3 35 71 4 51 80 292 35 2 72		71 657 672 686 684 655 71 675 77 709 83 714 707 718 701 725 703 697 78 685

\* Of the Great Arc Meridional Series—Section 18° to 24°.



Name of station with azimuths of surrounding points	No. of triangle & distance	Name of station with azimuths of surrounding points	No. of triangle & distance	Name of station with azimuths of surrounding points	No. of triangle & distance
GONGORIA h.s. Choká Temple Panchampagar Temple Pathariá	188 54 34 224 42 8 251 h.s. 266 12 42	GURWANI, XXX Gorá Hill Mark Chapri, XXXIX Sungarh Hill Mark Karinpahar Peak No. 1 Karinpahar Peak No. 2 Ujain Hill Mark Pokra, XXXI Deori Jagobar Jamari Kanáo Hill Mark Ghorbi Aunri, XXXIII Barná Hill Mark Popari Hill Mark Parwá Hill Mark Gurwani Hill Mark Kári Hill Flag Chúri Kauwá Lul, XXXVII Baéndú Hill Mark Choládbar Hill Mark	268 271 251 518 43 515 43 50 47 524 519 44 521 487 487 341 346 342 349 341 353 585 584 534 496 461 34 452 34 457 466 463 485 449 450 454 487 455	HIMILIA, IX Bhaugára, XI Baláot Sajpur Náharman, VI Mandra, VIII Garhákota Fort Flag Garhákota Ramná Spire Pathariá Pathariá Temple Bardári Hill Flag Tinsmál, VII Asaná Temple Niborá Temple Hinotálá Temple Jortalá Temple Narsingharh Fort Rangir, X Rangir, X Damoh Damoh Mosque Samaná Hindoria Hill Mark Satiria, XLII Kalúmar Kalúmar, XII Chaurái Fort	15 315 295 288 11 292 288 292 294 297 11 300 303 313 299 316 301 12 305 306 310 325 18 308 14 314
GORA, XXXV Chainpur Hill Stone Mircháthi, XXXIV Khogwar Aunri, XXXIII Koehea, XXXIX Sewáthi, XXXVIII Hará Sidá Hill Flag Danwar Hill Mark Gobra, XXXVII Chúri	21 14 39 48 29 0 05 69 58 30 h.s. 104 57 16 89 238 29 11 95 282 48 30 21 290 28 48 300 43 29 333 57 9 00 s. 355 52 50	GURWANI, XXX Gorá Hill Mark Chapri, XXXIX Sungarh Hill Mark Karinpahar Peak No. 1 Karinpahar Peak No. 2 Ujain Hill Mark Pokra, XXXI Deori Jagobar Jamari Kanáo Hill Mark Ghorbi Aunri, XXXIII Barná Hill Mark Popari Hill Mark Parwá Hill Mark Gurwani Hill Mark Kári Hill Flag Chúri Kauwá Lul, XXXVII Baéndú Hill Mark Choládbar Hill Mark	488 39 467 470 478 478 40 481 475 488 503 506 36 490 491 495 489 513 492 510 35 498 500	HIMILIA, IX Bhaugára, XI Baláot Sajpur Náharman, VI Mandra, VIII Garhákota Fort Flag Garhákota Ramná Spire Pathariá Pathariá Temple Bardári Hill Flag Tinsmál, VII Asaná Temple Niborá Temple Hinotálá Temple Jortalá Temple Narsingharh Fort Rangir, X Rangir, X Damoh Damoh Mosque Samaná Hindoria Hill Mark Satiria, XLII Kalúmar Kalúmar, XII Chaurái Fort	15 315 295 288 11 292 288 292 294 297 11 300 303 313 299 316 301 12 305 306 310 325 18 308 14 314
GORA s. Gorá Hill Mark Gurwani, XXX	185 22 0 325 27 26	GURWANI, XXX Gorá Hill Mark Chapri, XXXIX Sungarh Hill Mark Karinpahar Peak No. 1 Karinpahar Peak No. 2 Ujain Hill Mark Pokra, XXXI Deori Jagobar Jamari Kanáo Hill Mark Ghorbi Aunri, XXXIII Barná Hill Mark Popari Hill Mark Parwá Hill Mark Gurwani Hill Mark Kári Hill Flag Chúri Kauwá Lul, XXXVII Baéndú Hill Mark Choládbar Hill Mark	487 487	HIMILIA, IX Bhaugára, XI Baláot Sajpur Náharman, VI Mandra, VIII Garhákota Fort Flag Garhákota Ramná Spire Pathariá Pathariá Temple Bardári Hill Flag Tinsmál, VII Asaná Temple Niborá Temple Hinotálá Temple Jortalá Temple Narsingharh Fort Rangir, X Rangir, X Damoh Damoh Mosque Samaná Hindoria Hill Mark Satiria, XLII Kalúmar Kalúmar, XII Chaurái Fort	305 306 310 325 18 308 14 314
GOSALPUR h.s. Indrá No. 1 Maretí Temple Gaura Taláo Temple Lora, XVI Kumbhí Building	h.s. 90 27 30 162 42 0 187 41 29 201 48 33 225 16 2 251 22 59	GURWANI, XXX Gorá Hill Mark Chapri, XXXIX Sungarh Hill Mark Karinpahar Peak No. 1 Karinpahar Peak No. 2 Ujain Hill Mark Pokra, XXXI Deori Jagobar Jamari Kanáo Hill Mark Ghorbi Aunri, XXXIII Barná Hill Mark Popari Hill Mark Parwá Hill Mark Gurwani Hill Mark Kári Hill Flag Chúri Kauwá Lul, XXXVII Baéndú Hill Mark Choládbar Hill Mark	845 854 843 843 344	HIMILIA, IX Bhaugára, XI Baláot Sajpur Náharman, VI Mandra, VIII Garhákota Fort Flag Garhákota Ramná Spire Pathariá Pathariá Temple Bardári Hill Flag Tinsmál, VII Asaná Temple Niborá Temple Hinotálá Temple Jortalá Temple Narsingharh Fort Rangir, X Rangir, X Damoh Damoh Mosque Samaná Hindoria Hill Mark Satiria, XLII Kalúmar Kalúmar, XII Chaurái Fort	227 225 225 247 248 226 279 277 275 275 227
GUDA No. 1 h.s. Kotan Hill Stone Biktamb Hill Stone Khaira Pandu, XL	62 21 20 106 7 33 191 45 5	GURWANI, XXX Gorá Hill Mark Chapri, XXXIX Sungarh Hill Mark Karinpahar Peak No. 1 Karinpahar Peak No. 2 Ujain Hill Mark Pokra, XXXI Deori Jagobar Jamari Kanáo Hill Mark Ghorbi Aunri, XXXIII Barná Hill Mark Popari Hill Mark Parwá Hill Mark Gurwani Hill Mark Kári Hill Flag Chúri Kauwá Lul, XXXVII Baéndú Hill Mark Choládbar Hill Mark	90 90 93 102 94	HIMILIA, IX Bhaugára, XI Baláot Sajpur Náharman, VI Mandra, VIII Garhákota Fort Flag Garhákota Ramná Spire Pathariá Pathariá Temple Bardári Hill Flag Tinsmál, VII Asaná Temple Niborá Temple Hinotálá Temple Jortalá Temple Narsingharh Fort Rangir, X Rangir, X Damoh Damoh Mosque Samaná Hindoria Hill Mark Satiria, XLII Kalúmar Kalúmar, XII Chaurái Fort	227 225 225 247 248 226 279 277 275 275 227
GURWANI, XXX Girpahar Hill Mark Basinpat Hill Mark Muregarh, XXVIII Chauri Hill Mark Marwás, XXVI Seogarh Sirá Danaujá Hill Mark Dumáddólá Pabá Mauli Bára Hill Mark Gorá Bagai Hill Mark	16 20 56 23 6 59 35 3 28 80 84 40 6 97 15 38 21 h.s. 98 1 20 s. 102 58 27 112 2 0 124 39 12 h.s. 129 14 3 133 20 25 139 28 49 s. 145 27 45 150 45 36	GURWANI, XXX Gorá Hill Mark Chapri, XXXIX Sungarh Hill Mark Karinpahar Peak No. 1 Karinpahar Peak No. 2 Ujain Hill Mark Pokra, XXXI Deori Jagobar Jamari Kanáo Hill Mark Ghorbi Aunri, XXXIII Barná Hill Mark Popari Hill Mark Parwá Hill Mark Gurwani Hill Mark Kári Hill Flag Chúri Kauwá Lul, XXXVII Baéndú Hill Mark Choládbar Hill Mark	45 45 46	HIMILIA, IX Bhaugára, XI Baláot Sajpur Náharman, VI Mandra, VIII Garhákota Fort Flag Garhákota Ramná Spire Pathariá Pathariá Temple Bardári Hill Flag Tinsmál, VII Asaná Temple Niborá Temple Hinotálá Temple Jortalá Temple Narsingharh Fort Rangir, X Rangir, X Damoh Damoh Mosque Samaná Hindoria Hill Mark Satiria, XLII Kalúmar Kalúmar, XII Chaurái Fort	893 895 898 894
HARIHARPUR, L Bhursu, XLIX Máhwári, XLVIII Pithauria, LI Jagannáthpur Temple Semo	88 3 29 35 143 0 59 58 222 0 9 50 260 1 0 h.s. 269 7 57	GURWANI, XXX Gorá Hill Mark Chapri, XXXIX Sungarh Hill Mark Karinpahar Peak No. 1 Karinpahar Peak No. 2 Ujain Hill Mark Pokra, XXXI Deori Jagobar Jamari Kanáo Hill Mark Ghorbi Aunri, XXXIII Barná Hill Mark Popari Hill Mark Parwá Hill Mark Gurwani Hill Mark Kári Hill Flag Chúri Kauwá Lul, XXXVII Baéndú Hill Mark Choládbar Hill Mark	63 63 64 852 848	HIMILIA, IX Bhaugára, XI Baláot Sajpur Náharman, VI Mandra, VIII Garhákota Fort Flag Garhákota Ramná Spire Pathariá Pathariá Temple Bardári Hill Flag Tinsmál, VII Asaná Temple Niborá Temple Hinotálá Temple Jortalá Temple Narsingharh Fort Rangir, X Rangir, X Damoh Damoh Mosque Samaná Hindoria Hill Mark Satiria, XLII Kalúmar Kalúmar, XII Chaurái Fort	555 549 49 554 541
HOWRAH s. Shalkiá Chitpore Cal. base-line, S. End, LXXXV Calcutta, Ochterlony Monument	202 17 34 225 35 55 229 20 14 347 21 34	GURWANI, XXX Gorá Hill Mark Chapri, XXXIX Sungarh Hill Mark Karinpahar Peak No. 1 Karinpahar Peak No. 2 Ujain Hill Mark Pokra, XXXI Deori Jagobar Jamari Kanáo Hill Mark Ghorbi Aunri, XXXIII Barná Hill Mark Popari Hill Mark Parwá Hill Mark Gurwani Hill Mark Kári Hill Flag Chúri Kauwá Lul, XXXVII Baéndú Hill Mark Choládbar Hill Mark	45 45 46	HIMILIA, IX Bhaugára, XI Baláot Sajpur Náharman, VI Mandra, VIII Garhákota Fort Flag Garhákota Ramná Spire Pathariá Pathariá Temple Bardári Hill Flag Tinsmál, VII Asaná Temple Niborá Temple Hinotálá Temple Jortalá Temple Narsingharh Fort Rangir, X Rangir, X Damoh Damoh Mosque Samaná Hindoria Hill Mark Satiria, XLII Kalúmar Kalúmar, XII Chaurái Fort	893 895 898 894
HURILONG, XLII Yaktá Hill Mark Tungári Hill Mark Turer, XLI Palamow Hill Fort Bijká Hill Mark	23 59 5 25 18 1 38 28 0 98 40 52 49 58 46 25	GURWANI, XXX Gorá Hill Mark Chapri, XXXIX Sungarh Hill Mark Karinpahar Peak No. 1 Karinpahar Peak No. 2 Ujain Hill Mark Pokra, XXXI Deori Jagobar Jamari Kanáo Hill Mark Ghorbi Aunri, XXXIII Barná Hill Mark Popari Hill Mark Parwá Hill Mark Gurwani Hill Mark Kári Hill Flag Chúri Kauwá Lul, XXXVII Baéndú Hill Mark Choládbar Hill Mark	63 63 64 852 848	HIMILIA, IX Bhaugára, XI Baláot Sajpur Náharman, VI Mandra, VIII Garhákota Fort Flag Garhákota Ramná Spire Pathariá Pathariá Temple Bardári Hill Flag Tinsmál, VII Asaná Temple Niborá Temple Hinotálá Temple Jortalá Temple Narsingharh Fort Rangir, X Rangir, X Damoh Damoh Mosque Samaná Hindoria Hill Mark Satiria, XLII Kalúmar Kalúmar, XII Chaurái Fort	555 549 49 554 541

Name of station with azimuths of surrounding points	No. of triangle giving distance	Name of station with azimuths of surrounding points	No. of triangle giving distance	Name of station with azimuths of surrounding points	No. of triangle giving distance
HURLAONG, XLII Hartá Bági Hill Flag	548	JAGOBAR h.s. Pokra, XXXI	474	JUKHEI h.s. Palwá Temple	396
Nowadí Hill Mark	589	Kansó Hill Mark	505	Amúá, XVII	387
Sewadhi, XXXVIII	49			Deora Fort, N.E. Bastion	397
Sháhpur	546	JAGOBAR s.	505	Deora Fort, S.W. Bastion	402
Delá	562	Jagobar	505	Púnci, XVIII	388
Itiká	544	Kansó Hill Mark		Kanwára Fort	394
Kotan Hill Stone	528				
Biktamb Hill Stone	530	JALVE, LX		KAHMAR h.s.	
Khaira Pándu, XL	52	Párusnáth, LVII		Lohardugga	576
Turási	563	(Ghoranjí, LIX		Máhwári, XLVIII	575
Telanga Hill Mark	568	Durgápur, LXII		Bhursu, XLIX	575
Nágarh Hill Mark	567				
Kasmár Hill Mark	565	JAMANTA h.s.		KALUMAR, XII	
Kasiátu, XLIV	54	Satiria, XIII		Bhaurgára, XI	16
Sri Samad Hill Mark	569	Raugir		Himilia, IX	14
Chitáwag Hill Mark	571	Hatta N. Temple		Satiria, XIII	14
Bari Rámpur	556	Naysgaon		Salaia, XIV	17
Ratanpur Hill Mark	561	Kundalpur Temple		Lora, XVI	18
Bulbul, XLIII	53	Salaia, XIV			
Sarjú Hill Mark	552			KALUMAR h.s.	
Kumandí Hill Mark	551	JAMGARI s.		Himilia, IX	308
		Gurwáni, XXX		Samaná	310
INDRAWA No. 1 h.s.		Gorá Hill Mark		Mohari Temple	336
Kalimar	339			Satiria, XIII	308
Mareti Temple	347	JARIMO h.s.		Salaia, XIV	309
Gaura	340	Chendwár, LIII		Gáura	337
Taláo Temple	350	Mahábál		Lora, XVI	338
Lora, XVI	339	Partkolá		Indraná No. 1	339
Gosalpur	341	Bámani, LVI			
				KAMKHERA, (IV)	
ISHARA s.		JIWAR h.s.		Bhaoráá, (V)	
Máshesh	908	Deora Fort, S.W. Bastion		Udepur Hill Mark	1
Baubazar Khál Flag	923	Amúá, XVII		Teonda, I	109
Khardaha Temple	921	Banjári Fort		Lakoli, II	4
Khardaha	907	Karitalái Fort			
Ágarpára	907	Lakanpúra, XIX		KANRODI h.s.	
		Singonadí Temple		Sohágpur Moti Mahal	442
		Kodá		Bulbul Hill Mark	440
ITWA h.s.				Rámpur, XXII	439
Bijká Hill Mark	545	JOGI h.s.		Karára, XXIII	438
Sewádhi, XXXVIII	544	Partkolá		Marwás, XXVI	438
Hurláong, XLII	544	Nero Hill Mark		Chamki, XXV	441
		Bámani, LVI		Kundar	441
JAGOBAR h.s.					
Gurwáni, XXX	475			KARARA, XXIII	
Deori	482	JUKHEI h.s.		Rámpur, XXII	25
Ujain Hill Mark	478	Murwára Building		Padári	433
Sungarh Hill Mark	474	Lora, XVI		Bamangúá	415
Karinpahár Peak No. 2	477	Sungará		Jheris Hill Mark	419
Bagadí	479	Saagar Fort		Lakanpúra, XIX	25
Jagobar	505	Kudri			

Name of station with azimuths of surrounding points	No. of triangle giving distance	Name of station with azimuths of surrounding points	No. of triangle giving distance	Name of station with azimuths of surrounding points	No. of triangle giving distance
KARARA, XXIII Naugús Tindotá Pátol Rámnagar Dome Gidela Hill Mark Koria, XXVII Marwás, XXVI Ará Hill Mark Chamki, XXV Kanrodi	418 424 435 436 445 37 32 443 26 438	o / " h.s. 90 47 14 " 109 11 8 " 128 30 41 138 27 6 150 10 16 214 18 46 81 269 18 36 73 316 56 17 325 48 56 24 h.s. 349 32 10	o / " h.s. 272 22 11 34 " 272 22 29 275 6 16 320 27 24 322 6 40 324 35 34 326 12 27 59 352 24 3	KOCHEA, XXXIX Gora, XXXV Khaira Pandu, XL Sewádhí, XXXVIII  KODA h.s. Amúá, XVII Jiwár Lakampúra, XIX Chendíá Pagoda Chendíá Fort Dándíá Hill Mark Kauriya Temple No. 2 Púnchi, XVIII  KOLA h.s. Bankoora Semaphore Súsiniá, LXV Bihárináth, LXIII Ukhara Palace Rádhámdhupur, LXVI Karasoli, LXIX	66 583 585 591 586 588 56 577  510 512 509 511 509  534 51 528 530 537 51 52 536  906 919 920 907 908 909 906  515 517 515 516  888 888 889  754 754
KARASOLI, LXIX Baniá Pokar Semaphore Bishanpur Building Rámságár Kistásair Hill Mark Súsiniá, LXV Kola Barjorá Rádhámdhupur, LXVI Tentikálá Hill Mark Bháiki, LXVIII Dhansimilá Kishnagbur Madhpur, LXX Rhol Flag Gaujua, LXXII	751 750 748 746 81 732 736 81 741 82 753 754 87 756 88	o / " h.s. 5 51 24 26 51 56 47 34 42 107 6 48 111 37 51 87 h.s. 118 42 3 s. 143 21 26 161 7 6 99 166 25 43 218 21 10 10 h.s. 271 7 9 s. 279 14 41 283 35 37 35 289 46 44 333 45 30 72	o / " h.s. 134 11 34 " 204 48 8 h.s. 219 44 36 235 54 21 281 25 40  h.s. 11 45 54 24 33 22 50 41 43 39 56 29 11 78 24 46 s. 82 32 13 46 308 7 57 72 356 33 3	KASIAIU, XLIV Chendwár, LIII Chendwár Udewá Hill Mark Arid Hill Mark Tendús Utráti Patál, LII Naktí Hill Stone  KAUWAI h.s. Gurwáni, XXX Ghorbi Aunri, XXXIII Saipur Fort Mirchádhi, XXXIV  KHAIRA PANDU, XL Gúdá No. 1 Sewádhí, XXXVIII Kotan Hill Stone Biktamb Hill Stone Májsaon Fort Koches, XXXIX Huriláong, XLII Bisrámpur Hill Tree  KHARADA s. Kutrnag Konnagar Ghát Konnagar Temple Ishará Máhes Barrackpore Park Ágarpara  KHOGWAR h.s. Aunri, XXXIII Singhpur Fort Gora, XXXV Mirchádhi, XXXIV  KHORI s. Tetriá Betá Bilitpur  KISHNAGHUR s. Karasoli, LXIX Gaujua, LXXII	906 919 920 907 908 909 906  515 517 515 516  888 888 889  754 754
KARIAPAHAR h.s. Bijái Teonda, I Ríchái  KASIATU, XLIV Káiro Hill Mark Máhan, XLVII Hurdag Hill Mark Bari Rámpur Chitáwag Hill Mark Bulbul, XLIII Sri Samad Hill Mark Huriláong, XLII Kasmár Hill Mark Nágarh Hill Mark Telanga Hill Mark Sindwar Semaphore Maháda, LIY Katkansandí Semaphore Dumraon Semaphore Sindúr Silwári Semaphore	142 142 143  579 55 573 556 572 54 570 54 566 567 568 596 72 598 600 594 592	o / " h.s. 65 32 32 325 34 47 348 42 58  o 35 14 9 3 31 95 34 30 1 37 47 52 38 1 17 51 20 14 25 88 57 57 96 59 56 45 112 35 26 118 32 39 128 52 24 207 10 43 231 8 24 31 235 29 14 256 3 47 265 2 25 267 39 24	o / " h.s. 16 46 0 55 12 20 112 26 25  34 24 49 77 63 46 57 278 0 19 76 322 49 38 63 339 41 23  h.s. 267 57 12 269 10 54 296 6 30  h.s. 38 50 59 110 9 9 242 31 59	KORA KOH s. Karipahár Peak No. 1 Sóngarh Hill Mark Chapri, XXIX  KORIA, XXVII Karára, XXIII Gidela Hill Mark Chapri, XXIX Marwás, XXVI Umeriá Hill Mark  KUDRI h.s. Jukehí Amúá, XVII Sungará  KUNDAR, h.s. Sohágpur Motí Mahal Kanrodí Chamki, XXV	473 472 472  87 446 38 87 448  390 389 389  442 441 441

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<b>KURAI s.</b>		<b>LAKANPURA, XIX</b>		<b>LA MARTINIÈRE, LXXXVI</b>	
Teonda, I	163	Badaipur Temple	197 55 4	Calcutta, Maharajpur Cenotaph	131 18 27
Dalpatpur Fort	168	'Vindota	210 25 33	Calcutta, Fort William Chimney	135 44 42
Bagoda	165	Pátol	228 5 41	Calcutta, Town Hall	157 29 21
Bandrautá Fort	167	Naugá	253 25 50	Calcutta, St. John's Cathedral	160 16 39
Hiran Pagoda	165	Kacará, XXIII	265 48 11.05	Calcutta, Government House	161 7 17
Silegaon Building	166	Jhobí Fort	268 11 38	Calcutta, No. 7 Park Street	163 24 57
Danzarh Building	170	Dhobi Temple	270 18 45	Calcutta, Exchange Semaphore	163 33 46
Kimiasá Pagoda	174	Padári	283 34 44	Calcutta, Foundry Chimney	169 13 7
Búdi Paturia Bungalow	172	Banangúa	295 7 18	Calcutta, Scotch Kirk	170 20 0
Dugáo Fort	175	Amarpur Fort	310 5 5	Calcutta, Old Church	170 41 57
Gamberiá Building	176	Anarpur	312 49 46	Calcutta, Dharmatala Church	170 59 47
Budhon, III	171	Rampur, XXII	325 18 1.77	Calcutta, Latitude	171 58 56
Garolá Palace	163	<b>LAKHANPUR h.s.</b>		Calcutta, Sailors' Home	173 26 0
Pipalkheri	177	Bihárináth, LXIII	39 25 55	Calcutta, Free School Church	174 38 38
Kanáo Fort	164	Desarman Temple	55 6 15	Calcutta, R. C. Cathedral	174 40 48
	169	Azalpur Flag	64 7 54	Calcutta, Building	175 56 25
		Churúli	68 41 19	Calcutta, Surv. Genl's Office	177 38 22
<b>KUTRANG s.</b>		Durgápur, LXII	93 0 39	Calcutta, St. Saviour's Church	188 36 9
Uttarpára	904	Bodma Hill Mark	107 23 29	Cossipore Highest Chimney	189 9 41
Bhadrakáli Flag	905	Saras-kundá Hill Mark	132 12 33	Cal. base-line, S. End, LXXXV	195 53 23.40
Khardaha	906	Malúncha, LXIV	150 40 31	Calcutta St. James' Church	196 50 18
Ágarpára	904	Serampore Chimney	220 22 40	Sealdah	208 10 8
		Lakar-kundá Flag	271 22 43	Dum-Dum Monument	214 53 44
		Barpahári Hill Mark	318 32 10	Chingriháta	248 28 10
		Ukhara Building	333 0 21	Laskarháat	308 7 21
		<b>LAKNI h.s.</b>		<b>LASKARHAT s.</b>	
Babúdi Semaphore	668	Bilíhrá Temple	5 9 43	La Martiniere, LXXXVI	128 8 18
Bowá Hill Mark	670	Semri Panári	55 42 19	Chingriháta	194 54 59
Khatras Temple	667	Bhápai	124 38 22		
Chas Bungalow	662	Richondá	178 43 53	<b>LATEHAR s.</b>	
Gurdiá Hill Mark	663	Saugor, V	195 47 18	Bulbul, XLIII	28 0 10
Domrá, E. Temple	666	Dungasráo Building	229 16 26	Kumandi Hill Mark	74 38 53
Kutri Semaphore	656	Bokpurá	248 13 55	Bari Bampur	273 32 19
Párasnáth, LVII	659	<b>LAKOLI, II</b>			
Pálganjo Temple No. 1	665	Kamkhera, (IV)	145 20 5.91	<b>LOHARDUGGA s.</b>	
Nagarkári	679	Teonda, I	194 53 3.15	Kahmár	180 9 1
Nagarkári	674	Tins, IV	244 57 37.59	Máhwári, XLVIII	268 35 31
Pahárpur	655	<b>LA MARTINIÈRE, LXXXVI</b>			
Durgápur, LXII	679	Namalia, LXXXVII	38 34 57.88	<b>LORA, XVI</b>	
Pachet Hill Mark	655	Calcutta, Sudder Dewani Court	78 50 51	Gosalpur	45 18 32
Donaktad	659	Calcutta, Race Stand	89 35 43	Indraná No. 1	69 4 50
Tilabani, LXI	655	Calcutta, Jail	95 17 57	Kalúmar, XII	85 40 6.68
		Calcutta, Kiddyerpore Chimney	96 18 3	Kalúmar	85 40 14
		Nibria, LXXXIII	115 54 48.47	Sihora Temple No. 2	86 2 28
		Seebpore Temple	120 14 20	Majoli Temple	91 7 26
		Seebpore Distillery	124 14 47	Mareti Temple	98 43 2
				Talao Temple	127 56 33
				Gaura	131 15 50
				Gutehi	135 52 39
<b>LAKANPURA, XIX</b>		<b>LAKANPURA, XIX</b>			
Punchi, XVIII	23	Punchi, XVIII	15 14 55.30		
Jheria Hill Mark	419	Jheria Hill Mark	16 49 36		
Kodá	399	Kodá	22 57 14		
Singondí Temple	406	Singondí Temple	43 51 12		
Jiwar	400	Jiwar	61 7 29		
Banjári Fort	405	Banjári Fort	69 42 2		
Sungará	386	Sungará	75 17 54		
Amús, XVII	23	Amús, XVII	80 11 43.06		
Káritálá Fort	408	Káritálá Fort	95 35 27		
Badanpur	425	Badanpur	194 32 43		

Name of station with azimuths of surrounding points	No. of triangle giving distance	Name of station with azimuths of surrounding points	No. of triangle giving distance	Name of station with azimuths of surrounding points	No. of triangle giving distance
LORA, XVI Salaia, XIV Boriban Temple Deori Hill Mark Kauriya Temple No. 1 Bhainsakhand Koria Hill Mark Tikeria Temple Sungarā Bahiri Fort Khareni Temple Jukehī Amua, XVII Sakradāni Bhitrī Bansibā Hill Mark Deopahār Chiribāhār Hill Mark Pūnchi, XVIII Kumbhī Building Bhilāwā Banjārī, XX Mājgūā Temple Panwāni Temple	18 354 362 355 365 376 366 385 367 368 387 19 358 376 372 356 383 22 353 357 27 351 352	MAHARAJA, LII Kasiātu, XLIV Bāmani, LVI Chendwār, LIII MAHWARI, XLVIII Bhursu, XLIX Lohardugga Bāgru, XLVI Kahmar Māhan, XLVII Patāl, LII Pithauria, LI Jagannāthpur Temple Hariharpur, L	72 73 72 62 576 60 575 60 61 64 851 63 908 910 924 909 922 921 908 537 537 538 59 55 55 56 60 887 887 697 711 83 701 83 710 728 727 723	MALUNCHA, LXIV Nawagaon, LXVII Lakarkundā Flag Serampore Chimney Bistāpur Pagoda Bāpahārī Hill Mark Hatādūbā Hill Mark Ukhara Temple Lakhaipur Kādhāmādhupur, LXVI Afzalpur Flag Sarakundā Hill Mark Desaruan Temple MANDELA, VIII Chandpurī Pagoda Tikhī Hill Pagoda Sajpur Nāharman, VI Pandrināth Pagoda Rehli Fort Talampur Building Hirāpur Saugor, V Tinsmal VII Garbakota Ramnā Spire Pathariā Garhakota Fort Flag Pathariā Temple Bardārī Hill Flag Sarkandi Temple Himilia, IX Baleho Fort Bhaugārā, XI Chirārī Fort MANJADI s. Maliādi, E. Pediment Sūsina, LXV Rādhāmādhupur, LXVI Barjorā MARWA, XXVI Arā Hill Mark Chamki, XXV Kanrodī Umeriā Hill Mark Karārā, XXIII Gidela Hill Mark Koria, XXVII Chapri, XXIX Maulī	85 720 717 730 718 725 722 708 84 716 713 715 283 285 274 10 278 280 276 226 8 8 289 237 293 294 296 298 11 290 15 286 740 737 787 738 448 32 488 447 82 445 37 38 451
LUL, XXXII Chokādhār Hill Mark Mūregarh, XXVIII Gurwāni, XXX Aunri, XXXIII Kārī Hill Flag Mirchādhi, XXXIV Harai, XXXVI MADHPUR, LXX Gaujua, LXXII Karasoli, LXIX Bhālki, LXVIII Pārhāt, LXXI Sonākūr, LXXXIII Hākistāpur, LXXIV Mubārākpur, LXXV MAHABAL h.s. Garisaram Chendwār, LIII Opatā Hill Mark Partkolā Bharkata Dāk Bungalow Jarimo Chandri	500 35 35 36 513 42 45 88 87 87 91 92 90 89 619 613 614 612 617 612 615	MAHARAJA, LII Biktamb Hill Stone Khaira Pāndu, XL Bisrāmpur Hill Tree MALHAN, XLVII Bāgru, XLVI Bulbul, XLIII Kasiātu, XLIV Patāl, LII Mahwārī, XLVIII MALPARA s. Betā Talehiman MALUNCHA, LXIV Pabrā Hill Mark Churifī Bihārīnāth, LXIII Damonūchati Durgāpur, LXII Bodima Hill Mark Soory Jail Dulābpur Dubrājpur	59 55 55 56 60 887 887 697 711 83 701 83 710 728 727 723	MALUNCHA, LXIV Nawagaon, LXVII Lakarkundā Flag Serampore Chimney Bistāpur Pagoda Bāpahārī Hill Mark Hatādūbā Hill Mark Ukhara Temple Lakhaipur Kādhāmādhupur, LXVI Afzalpur Flag Sarakundā Hill Mark Desaruan Temple MANDELA, VIII Chandpurī Pagoda Tikhī Hill Pagoda Sajpur Nāharman, VI Pandrināth Pagoda Rehli Fort Talampur Building Hirāpur Saugor, V Tinsmal VII Garbakota Ramnā Spire Pathariā Garhakota Fort Flag Pathariā Temple Bardārī Hill Flag Sarkandi Temple Himilia, IX Baleho Fort Bhaugārā, XI Chirārī Fort MANJADI s. Maliādi, E. Pediment Sūsina, LXV Rādhāmādhupur, LXVI Barjorā MARWA, XXVI Arā Hill Mark Chamki, XXV Kanrodī Umeriā Hill Mark Karārā, XXIII Gidela Hill Mark Koria, XXVII Chapri, XXIX Maulī	85 720 717 730 718 725 722 708 84 716 713 715 283 285 274 10 278 280 276 226 8 8 289 237 293 294 296 298 11 290 15 286 740 737 787 738 448 32 488 447 82 445 37 38 451

Name of station with azimuths of surrounding points	No. of triangle giving distance	Name of station with azimuths of surrounding points	No. of triangle giving distance	Name of station with azimuths of surrounding points	No. of triangle giving distance
MARWAS, XXVI Seograh Gurwáni, XXX Múregrah, XXVIII	458 34 33	MUBARAKPUR, LXXV Ganjua, LXXII Madhpur, LXX Hakistapur, LXXIV Aknápur, LXXVI Dilakás, LXXIX	89 89 90 94 95	NAUGVA h.s. Karáta, XXIII Padári Jhobí Fort Hamangúá Asorá Tikúri Fort	418 434 429 417 430 434
MASANJIR h.s. Bílihrá Temple Semrí Panári Bhápáil Richondá Saugor Cantonment Saugor Pagoda Saugor, V	223 223 215 216 219 217 215	MURGARH, XXVIII Chamki, XXV Marwás, XXVI Gurwáni, XXX Lul, LXXII Choladhar Hill Mark	33 33 34 35 501	NAYAGAON h.s. Satíria, XIII Jamaniá Jatásankar Fort	85 85 85 86
MASUPUR h.s. Bhirpur Bhaorás, (V) Kurwái Fort Bamorá Temple Udeppur Hill Mark	113 112 114 115 112	NAGARKIARI s. Lachmanpur Pahárpur Pachet Hill Mark	679 678 678	NAYAGAON h.s. Satíria, XIII Jamaniá Jatásankar Fort	333 333 334
MAULI h.s. Chauri Hill Mark Marwás, XXVI Bagai Hill Mark Pokra, XXXI Gurwáni, XXX Danaujái Hill Mark Girá Seograh Basinpat Hill Mark	452 451 460 450 450 464 459 459 462	NANAMAT, VI Nanni Deori Pagoda Tins, IV Jaisinghnagar Fort Sejpurí Building Semri Panári Hirapur, V Saugor, V Bohári Garhakota Ramná Spire Mandra, VIII Himíia, IX Tikhi Hill Pagoda Sajpur Bena Pagoda Deori Pagoda	227 9 205 206 192 227 9 228 288 288 284 273 282 281	NAYAGAON h.s. Satíria, XIII Jamaniá Jatásankar Fort	930 932 100 97 758 764 98 775 765 776 784 787 99 789 792 794 795 796 800 798 806 805 808 820 824 813 825 890 835 833 887 881
MIRCHADHI, XXXIV Lul, LXXII Kauwái Khogwár Sajpur Fort Aunri, XXXIII Gora, XXXV Gobra, LXXVII Harai, LXXVI	42 509 516 511 42 43 44 45	NARADULI h.s. Tins, IV Teonda, I Torá Budhon, III Lohári Temple	188 187 189 187 189	NAYAGAON h.s. Satíria, XIII Jamaniá Jatásankar Fort	795 796 800 798 806 805 808 820 824 813 825 890 835 833 887 881
MORCHIA h.s. Pokra, XXXI Kanáo Hill Mark	504 504	NAUGVA h.s. Amarpur Amarpur Fort Jhobi Temple Dheri Hill Mark Lakanpúra, XIX Bedanpur Rámnuagar Dome	421 422 428 420 417 425 436	NAYAGAON h.s. Satíria, XIII Jamaniá Jatásankar Fort	85 85 86
MOSTIKRI s. Bhola, LXXX Tetría Bilitpur Babur-bári	885 883 883 884	NAUGVA h.s. Amarpur Amarpur Fort Jhobi Temple Dheri Hill Mark Lakanpúra, XIX Bedanpur Rámnuagar Dome	885 883 883 884	NAYAGAON h.s. Satíria, XIII Jamaniá Jatásankar Fort	85 85 86

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<b>NIBRIA, LXXXIII</b> Calcutta Observatory s. 292 20 36 Calcutta, Surv. Genl's Office " 292 20 39 Calcutta, St. Thomas' Church 293 2 2 Calcutta, Fort William " 293 11 9 La Martiniere, LXXXVI 295 52 11.04 Calcutta, St. Paul's Cathedral 297 1 24 Calcutta, Kidderpore Church 303 49 57 Samalia, LXXXVII 354 35 53.55 Akra s. 355 29 25	811 986 839 927 107 842 844 101 929	<b>PAINTAL s.</b> Dilekás, LXXIX Bhola, LXXX Nibria, LXXXIII  <b>PARASNATH, LVII</b> Kutri Semaphore Angwáli Bungalow Chainpur, LVIII Chalkari Semaphore Govindpur Semaphore Gomia Bungalow Lugu Hill Mark Chendwár, LIII Bámáni, LVI • Domri h.s. Ghoránji, LIX Thakbali Chipú Bamaná Paiganjo Temple No. 1 Jálve, LX Durgapur, LXII Lachmanpur Khatras Temple Tilabani, LXI Domrá, E. Temple Chas Bungalow Saraipahári New Semaphore	759 758 758  660 650 69 649 646 645 637 69 74 859 873 870 665 76 71 656 667 70 666 661 653	PATAL, LII Káiro Hill Mark Nakti Hill Stone Málhan, XLVII Hurdag Hill Mark Kasiátu, XLIV Utráti s. Udevá Hill Mark Silwári Semaphore Chendwár, LIII Chendwár h.s. Changara Hill Mark Báragoon, LV Pithauria, LI  PATARI h.s. Teonda, I Biláí Barkherá Fort Udepur Hill Mark Basodá Hill Mark Datorá Building Bhaorása, (V) Bhari s. Dhanserá Fort Malhargarh Temple Bagodá Rudhon, III Pipalkheri Tins, IV  PATERA h.s. Pathariá Batiágarh Staircase Satiria, XIII Samána  PATHARIA h.s. Garhákota Fort Flag Mandra, VIII Saugor, V Gongtoriá Dholpahári Badraus Pagoda Behrá s. Tinsmál, VII Panchanagar Temple Batiágarh Staircase Niborá Temple Paterá h.s. Narsinggarh Fort	579 577 56 573 56 589 584 592 66 582 630 67 65  120 120 132 118 127 133 111 118 134 135 130 110 131 110  319 320 318 318  292 237 237 251 240 265 270 238 272 820 303 319 816
<b>NOADA t.s.</b> Calcutta, Bégbazar Temple s. 5 51 20 Calcutta Observatory s. 8 20 10 Calcutta, Armenian Church 13 47 42 Calcutta, Mint, N. Chimney 14 7 21 Calcutta, Strand Mills 15 3 56 Calcutta, Chandpál Ghát 17 4 8 Calcutta, Currie's Factory 19 2 57 Nibria, LXXXIII 58 18 56 Bhola, LXXX 132 9 24 Agarpára Church 158 42 28 Barrackpore Semaphore 168 1 14 Barrackpore Flag Staff 168 11 35 Cal. base-line, N. End, LXXXII 179 1 57 Baraset Flag 242 21 5 Dum-Dum Tomb 311 28 6 Dum-Dum Church 312 13 0 Cal. base-line; S. End, LXXXV 355 46 46	789 811 786 793 798 814 791 765 765 772 770 768 766 767 779 782 782	<b>PARHAT, LXXI</b> Madhpur, LXX Bhálki, LXXVIII Sonákúr, LXXIII  <b>PARTKOLA h.s.</b> Chandri Bharkata Dák Bungalow Chendwár, LII Mahábal Opará Hill Mark Banda Hill Mark Rock on hill Marámoko Rock Jogi Bámáni, LVI Dabarseni Hill Mark Jarámo  PATAL, LII Máhwarí, XLVIII	91 91 92  615 617 610 612 614 625 626 627 623 611 629 610  61	26 51 38.15 117 34 13.83 320 50 31.00  5 3 24 26 48 28 36 48 51 57 2 47 99 51 44 163 28 13 167 49 39 178 55 50 188 10 47 203 55 31 259 38 7 333 14 15  40 49 42.92	
<b>PAPAI h.s.</b> Chapri, XXIX Gurwáni, XXX  <b>PAPARI h.s.</b> Rámpur, XXII Tikúri Fort Lakanpúra, XIX Naugúá Karara, XXIII  <b>PAPARPUR h.s.</b> Tilabani, LXI Lachmanpur Nagarkiarí Durgápur, LXII Pachet Hill Mark  <b>PAKPARA s.</b> Fort Gloucester Sámpur Akra	449 449  482 484 432 484 483  674 674 678 675 678  933 931 931	268 29 10 309 4 44  7 21 5 88 55 29 103 42 33 121 16 46 233 58 16  9 22 22 h.s. 99 3 50 s. 100 21 51 282 44 46 330 28 41  s. 121 43 26 " 161 10 17 " 230 18 41			

Name of station with azimuths of surrounding points	No. of triangle giving distance	Name of station with azimuths of surrounding points	No. of triangle giving distance	Name of station with azimuths of surrounding points	No. of triangle giving distance
<b>PATNARIA</b> h.s. Aslaná Temple Satiría, XIII Jortalá Temple Samáná Damoh Mosque Hinotá Temple Bardári Hill Flag Sarkandí Temple Himilía, IX	300 319 299 312 306 312 296 298 292	POKRA, XXXI Jagobar Gurwáni Hill Mark Gurwáni, XXX Bagadí Karinpahár Peak No. 2 Karinpahár Peak No. 1 Sungarh Hill Mark Bára Hill Mark Maufí Bagai Hill Mark Chapri, XXI Aumí, XXXIII Ghorbí Morchíá Kanáo Hill Mark Padári Fort Barmá Hill Mark	474 489 40 479 476 470 467 453 456 40 41 507 504 502 508 490	POWA h.s. Báragoa, LV Chendwár Lugu Hill Mark Gola Ajegarh Tree PUNCHI, XVIII Banjári, XX Lora, XVI Sungará Jukebí Amía, XVII Kodá Lakanpúra, XIX Kauriya Temple No. 2 Chendíá Pagoda Rámpur, XXI Dándiá Hill Mark Singpur, XXI	724 85 82 742 745 752 744 81 632 632 638 440 29 414 24 24 415 432 25 26 489 30 749 748 748 751 750 850 857 850 12 12 13 305 301 304 302 322
<b>PATOL</b> h.s. Jakanpúra, XIX Rámágar Dome Karára, XXXIII	435 437 435	POWA h.s. Báragoa, LV Chendwár Lugu Hill Mark Gola Ajegarh Tree	640 641 640 643 642	POWA h.s. Báragoa, LV Chendwár Lugu Hill Mark Gola Ajegarh Tree	640 641 640 643 642
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<b>PITHAURIA, LI</b> Semo Harbarpur, L Máhwári, XLVIII Patál, LII Sarol Ranchee Hill Temple Jaganáthpur Temple	848 64 64 65 849 853 851	RADHAMADHUPUR, LXVI Asoríá Dargah Kistásar Hill Mark Barjorá Kola Malíadí, F. Pediment Súsiniá, LXV Manjíá Hill Mark Bihárináth, LXIII Manjíadí Malúncha, LXIV	743 746 735 731 739 80 706 80 737 84	RADHAMADHUPUR, LXVI Asoríá Dargah Kistásar Hill Mark Barjorá Kola Malíadí, F. Pediment Súsiniá, LXV Manjíá Hill Mark Bihárináth, LXIII Manjíadí Malúncha, LXIV	743 746 735 731 739 80 706 80 737 84
<b>RADHAMADHUPUR, LXVI</b> Dubrápur Nawágaon, LXVII Bháiki, LXVIII Tentikáló Hill Mark Alámpur Hill Mark Dhansimíá Pokarná Building Karsaoli, LXIX RANGAR s. Báragoa, LV Chendwár Chainpur, LVIII RAMPUR, XXII Bulbul Hill Mark Singpur, XXI Dándiá Hill Mark Púnchi, XVIII Lakanpúra, XIX Bamungúá Padári Karára, XXIII Chamki, XXV Kanrodí Barjana, XXIV RAMSAGAR s. Salghati Semaphore Súsiniá, LXV Karásoli, LXIX Baniá Pokar Semaphore Bishanpur Building RANCHEE s. Semo Ranchee Bungalow Sarol RANGIR, X Himilía, IX Tinsmál, VII Satiría, XIII Damoh RANGIR h.s. Himilía, IX Niborá Temple Tinsmál, VII Nagar Temple	300 319 299 312 306 312 296 298 292 435 437 435 128 162 158 156 178 128 131 169 164 170 171 174 172 175 176 181 180 185 210 129 209 178 848 64 64 65 849 853 851	RADHAMADHUPUR, LXVI Asoríá Dargah Kistásar Hill Mark Barjorá Kola Malíadí, F. Pediment Súsiniá, LXV Manjíá Hill Mark Bihárináth, LXIII Manjíadí Malúncha, LXIV	743 746 735 731 739 80 706 80 737 84	RADHAMADHUPUR, LXVI Asoríá Dargah Kistásar Hill Mark Barjorá Kola Malíadí, F. Pediment Súsiniá, LXV Manjíá Hill Mark Bihárináth, LXIII Manjíadí Malúncha, LXIV	743 746 735 731 739 80 706 80 737 84



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<b>SAMPUR</b> h.s. Deori Pagoda Náharman, VI Hirápur Rangir Temple	281 273 275 275	11 54 55 79 24 58 111 59 31 134 58 19	h.s. h.s. h.s. h.s.	SATTEN, LXXVIII Bhola, LXXX Talahanan Aknápur, LXXVI Dastánpur, LXXVII Chinsura, LXXXI Sirá Betá  SAVGOR, V Lakni	104 880 108 103 105 886 880  222

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Palandú Bungalow	855	Bijka Hill Mark	540	Hakistapur, LXXIV	93
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<b>SEMRI PANARI h.s.</b>		<b>SHAHPUR s.</b>			
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Saugor, V	192	Hurtikong, XLII	546	Gola	861

Name of station with azimuths of surrounding points	No. of triangle giving distance	Name of station with azimuths of surrounding points	No. of triangle giving distance	Name of station with azimuths of surrounding points	No. of triangle giving distance			
<b>SUKRADANI</b> h.s. Deori Hill Mark Sleemanabad Temple Amúá, XVII Piprod Hill Mark Bhátgaon Hill Mark Bhitri Jainágrá Hill Mark Deopahár	114 44 25 114 47 48 209 30 13 216 32 11 254 33 7 281 9 35 301 34 56 327 26 26	<b>TEONDA, I</b> Muhammadgarh Basodá Lakoli, II Uwar Richái Gárgája, I* Basodá Mausoleum Kámkhera, (IV) Bilái Kariápahár Bhaorása, (V) Patári Kurái Budhon, III Pipalkherí Torá Naranú Raigarh Palace Dilchaurí Mirzapur Hill Mark Babúká Tins, IV Pipráí Fort Bagrod Bagrod E. Temple Bagrod W. Temple Nawáb Basodá	362 364 359 377 380 373 370 358  385 389 391 390 389 386 395 393 385  696 694 691 79 689 677 79 704 705 737 80 735 733 752 81 747 748 749 733  880 887 880 881  587 586 586	7 31 43 14 55 16 53 31 11 31 49 58 37 59 0 49 07 99 55 44 113 17 17 43 131 57 6 145 36 4 152 56 11 07 190 41 17 208 57 3 227 21 52 04 236 51 20 242 8 9 255 16 23 279 38 47 280 25 6 288 52 49 303 48 45 305 18 38 51 307 17 27 342 7 31 343 22 59 343 43 4 359 30 28	144 4 122 139 119 141 1 119 142 1 120 163 2 128 136 187 161 190 157 159 3 154 152 151 149 147	<b>TILABANI, LXI</b> Gurdiá Hill Mark Bowá Hill Mark Chainpur, LVIII Saráipahári Old Semaphore Saráipahári New Semaphore Babádi Semaphore Parasnáth, LVII Deoli Semaphore Lachmanpur Pahrá, W. Temple Dubráchati Dubráchati Bungalow Pahárpur Donaktad Durgapur, LXII Raghunáthpur Temple, Pachet Hill Mark Bihárináth, LXIII Násunia, LXV Sutábái Semaphore Arhará Semaphore Chhátua Semaphore	96 6 15 96 13 38 102 13 19 62 117 53 51 118 16 47 123 35 15 144 46 22 32 149 6 12 155 54 5 157 39 28 167 6 12 168 31 59 189 20 30 205 4 44 206 26 35 48 224 21 12 225 35 57 246 12 32 41 272 58 26 96 273 35 18 279 50 7 285 15 47	663 670 70 652 658 668 70 672 655 682 680 683 674 658 71 687 676 78 79 692 693 695
<b>SUNGARA</b> h.s. Lora, XVI Kudri Sainagar Fort Jukehi Amúá, XVII Lakanpúra, XIX Kanwára Fort Murwára Building Punchi, XVIII	17 15 15 116 9 54 171 47 36 233 43 56 247 11 34 255 6 16 274 13 11 322 40 50 322 45 19	<b>TETRIA</b> s. Mostikri Tulehman Beta Khorí Bilitpur  <b>THAKBATI</b> h.s. Madhuban Temple Parasnáth, LVII Paresnath Temple Spire Bhalua Chino Domri Chipú Pálgaujo Temple No. 2 Bamaná	863 881 881 888 882  866 859 869 864 860 859 873 879 870	22 45 14 169 21 44 200 33 26 234 16 53 310 46 16  3 1 44 8 11 44 10 50 19 20 57 12 61 8 46 117 19 30 229 29 16 271 48 26 290 15 20	863 881 881 888 882  866 859 869 864 860 859 873 879 870	<b>TINDOTA</b> h.s. Lakanpúra, XIX Badaupur Karara, XXIII  <b>TINS, IV</b> Lakoli, II Serwás Turret Nawáb Basodá Muhammadgarh Basodá Bagrod Itichái Teonda, I Babúká Mirzapur Hill Mark Patári Katgarh Palace Torá Pipalkherí Budhon, III Naranú Dakrái Gamberiá Hill Mark Munderi Mosque Dilchaurí Bháipail Ríchondá Torá Fort	30 27 55 52 17 22 289 1 56  65 6 2 86 70 25 49 82 59 22 91 3 14 110 11 57 118 20 27 125 24 53 22 127 59 58 138 58 59 143 6 17 159 26 47 171 4 3 181 24 31 188 4 25 15 205 35 15 205 49 25 207 9 31 208 59 50 223 28 45 224 7 56 225 36 22 235 6 36	424 426 424  5 160 146 144 152 188 3 158 156 110 161 186 128 188 194 200 198 194 208 211 203
<b>SUSINIA, LXV</b> Chhátua Semaphore Arhará Semaphore Sutábái Semaphore Tilabani, LXI Raghunáthpur Semaphore Pachet Hill Mark Bihárináth, LXIII Agerá House Manjía Hill Mark Manjádí Rádhamedhupur, LXVI Barjorá Kola Dhansmilá Karasoli, LXIX Kistásair Hill Mark Ramságar Sáigháti Semaphore Bankoora Semaphore	12 30 26 73 5 10 92 24 41 93 8 46 06 113 46 54 139 35 4 167 51 52 62 206 37 14 221 18 34 237 24 8 245 18 26 95 263 59 29 272 59 29 289 5 14 291 27 35 46 293 15 8 316 14 28 322 30 56 335 2 3	<b>TIKARIA, XV</b> Satiria, XIII Amúá, XVII Salaia, XIV	45 57 45 62 283 15 21 22 353 29 53 30	20 21 20	<b>TENDUA</b> s. Hurdeg Hill Mark Kasiátu, XLIV Udewá Hill Mark	59 18 5 142 9 23 239 8 22	587 586 586	

\* Of the Great Arc Meridional Series—Section 18° to 24°.

AZIMUTHS OF STATIONS AND INTERSECTED POINTS.

Name of station with azimuths of surrounding points	No. of triangle giving distance	Name of station with azimuths of surrounding points	No. of triangle giving distance	Name of station with azimuths of surrounding points	No. of triangle giving distance
<b>TINS, IV</b> Saugor, V Semri Panári Hirapur Jaisinghnagar Fort Sejpur Building Náarmanu, IV	6 198 225 204 206 9	h.s. 337 10 42 31 h.s. 256 37 36 " 271 37 7 h.s. 276 52 52 281 19 59 291 3 35 19	h.s. 60 24 49 62 13 14 198 55 0 211 23 16 h.s. 221 34 11 " 243 10 16 " 254 27 14 " 272 33 59 " 274 22 55 " 351 2 54	188 186 182 187 178 179 189 189 178 186	UFCOURIA s. Donaktad Durgapur, LXII Pondrá Temple Pachet Hill Mark
<b>TINSMAL, VII</b> Gongtoris Bobári Banda Dholpáhári Saugor, V Richondá Benáiká Fort Budhon, III Pátan Temple Raagir, X Raagir Panchamnagar Temple Himilín, IX Pathariá Behrá Mandra, VIII Bedráni Pagoda Choká Temple	251 229 266 239 7 212 242 7 243 12 302 271 11 238 270 8 264 269	h.s. 5 0 12 " 11 7 31 s. 21 15 49 h.s. 25 54 6 " 35 24 36 36 " 46 54 36 " 85 18 54 " 85 34 7 81 " 92 5 20 h.s. 285 50 40 61 " 285 50 45 " 290 41 37 " 318 46 20 11 " 324 20 14 s. 330 30 35 " 347 49 19 97 " 357 24 42 " 357 57 29	h.s. 55 36 27 77 36 45 315 36 50	568 564 563	UTRARATI s. Kasiátu, XLIV Udewá Hill Mark Patál, LIII
<b>TORA h.s.</b> Richái Teonda, I Kondá Fort Budhon, III Pipalkheri Chandámanu Lohári Temple Narauli Barodiá Tius, IV	48 525 523 48 527 542 49 548 550 558 53 57	88 15 51 40 95 3 44 132 35 5 144 22 25 17 149 20 25 168 30 35 218 19 38 28 242 1 23 256 52 34 269 22 38 270 38 14 29 314 4 41 96	h.s. 85 29 43 146 28 14 167 35 32 h.s. 185 9 11 211 9 11 259 9 43 271 6 45	918 902 904 903 901 901	UTTARPARA s. Balúhál Temple Bhadrakáli Flag Kutrang Agarpára Dhakanser Bally
<b>TURER, XLI</b> Gobra, XXXVII Tattápáni Hill Mark Hará Sidá Hill Flag Sewádhi, XXXVIII Ranká Fort Hartá Bagí Hill Flag Huriláong, XLII Tungári Hill Mark Kumandi Hill Mark Narjú Hill Mark Bulbul, XLIII Birpokbar, XLV	153 155	h.s. 40 24 51 47 51 12	h.s. 85 29 43 146 28 14 167 35 32 h.s. 185 9 11 211 9 11 259 9 43 271 6 45	123 121 126 121 122 124 126	UWAR h.s. Imlandá Building Gárgaja, I* Murádpur Pagoda Bilái Teonda, I Garaspur Fort Garaspur Hill Mark

\* Of the Great Arc Meridional Series—Section 16° to 24°.

June 1877.

J. B. N. HENNESSEY,  
In charge of Computing Office.

## CALCUTTA LONGITUDINAL SERIES.

## CO-ORDINATES AND DESCRIPTIONS OF ALL STATIONS AND POINTS.

The following table gives the co-ordinates of all the stations and other fixed points, arranged in alphabetical order, also the descriptions of the secondary and intersected (or unvisited) points, and references to the preceding pages where the descriptions of the principal stations are given. In certain instances numbers are added which have reference to the given data of the triangles by which the station or point has been fixed; when these numbers are omitted it is to be understood that no triangles are given.

NOTE.— $\lambda$  stands for Latitude North; L for Longitude East of Greenwich; H for Height of station in feet above mean sea level if determined trigonometrically, H<sub>s</sub> for the Height when found by spirit leveling and *h* for Height of station tower or pillar. For visited stations and for other points of superior accuracy the values of  $\lambda$  and L are given to two places of decimals; for well determined objects to one place, and for the remaining points to the nearest second. Principal stations are distinguished by the Roman numerals I, II, &c.; secondary stations by the letters, h.s., t.s. and s.

Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.
<b>Afzalpur Flag.</b> ( <i>Sonthal Pergunnahs</i> ) $\lambda$ 23 48 9.2 L 87 10 42.6 No. 716	<b>Agerá House,</b> ( <i>Beerbhoom</i> ) N. Pediment. $\lambda$ 23 36 8.8 L 87 8 26.1 Nos. 703, 704	<b>Ákra Khál.</b> ( <i>24-Pergunnahs</i> ) Flag at the mouth of the khál. $\lambda$ 22 31 28.4 L 88 17 19.2
<b>Ágarpára Church,</b> ( <i>24-Pergunnahs</i> ) N.W. corner. $\lambda$ 22 41 16.6 L 88 24 37.3	<b>Ajegarh Tree,</b> ( <i>Lohardugga</i> ) On hill. $\lambda$ 23 24 55.6 L 85 43 40.6 No. 643	<b>Ákra s.</b> ( <i>24-Pergunnahs</i> ) $\lambda$ 22 30 23.22 L 88 17 35.99 No. 929
<b>Ágarpára Church,</b> ( <i>24-Pergunnahs</i> ) Steeple. $\lambda$ 22 41 16.4 L 88 24 37.4 Nos. 772, 773	<b>Aknápur, LXXVI.</b> ( <i>Vide page 18—B.</i> ) $\lambda$ 22 54 22.85 L 88 5 33.84 H 98 <i>h</i> 45 No. 94	<b>Alampur Hill Mark.</b> ( <i>Bankoora</i> ) $\lambda$ 23 26 3.20 L 87 25 8.05 No. 745
<b>Ágarpára s.</b> ( <i>24-Pergunnahs</i> ) Close to church on E. bank of river. $\lambda$ 22 41 16.67 L 88 24 35.71 No. 903	<b>Ákra Farm,</b> ( <i>24-Pergunnahs</i> ) Chimney. $\lambda$ 22 32 15.1 L 88 17 30.5	<b>Amarpur Fort,</b> ( <i>Jubbulpore</i> ) Gateway. $\lambda$ 23 57 37.8 L 80 56 35.0 Nos. 422, 423

Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.
<b>Amarpur s.</b> ( <i>Jubbulpore</i> ) $\lambda$ 23 56 28.82 $L$ 80 57 18.79 No. 421	<b>Asláná Temple.</b> ( <i>Damoh</i> ) $\lambda$ 23 56 3.4 $L$ 79 21 9.3 No. 300	<b>Badráná Pagoda.</b> ( <i>Saugor</i> ) $\lambda$ 23 57 51.2 $L$ 79 2 40.1 Nos. 284, 285
<b>Amhetá Hill Mark.</b> ( <i>Jubbulpore</i> ) $\lambda$ 23 34 29.68 $L$ 80 29 48.91 Nos. 381, 382	<b>Asorá h.s.</b> ( <i>Rewa</i> ) $\lambda$ 23 56 43.96 $L$ 81 0 0.34 Nos. 430, 431	<b>Badúá h.s.</b> ( <i>Hasáribágh</i> ) $\lambda$ 24 10 11.47 $L$ 86 19 39.69 No. 875
<b>Amúa, XVII.</b> ( <i>Vide page 8—B.</i> ) $\lambda$ 23 59 56.24 $L$ 80 31 44.44 $H$ 2113 $h$ 2 Nos. 19, 21	<b>Asoríá Dargah.</b> ( <i>Bankoora</i> ) $\lambda$ 23 23 47.3 $L$ 87 29 54.0 No. 743	<b>Bagadí s.</b> ( <i>Rewa</i> ) On a great rock in centre of village. $\lambda$ 24 12 34.34 $L$ 82 26 21.54 Nos. 479, 480
<b>Angwáí Bungalow s.</b> ( <i>Hasáribágh</i> ) $\lambda$ 23 43 44.74 $L$ 86 1 48.45 Nos. 650, 651	<b>Aunri, XXXIII.</b> ( <i>Vide page 11—B.</i> ) $\lambda$ 24 12 19.63 $L$ 82 46 16.22 $H$ 1873 $h$ 5 Nos. 36, 41	<b>Bagai Hill Mark.</b> ( <i>Rewa</i> ) S.W. of Chapri Principal Station. $\lambda$ 24 13 38.26 $L$ 82 12 28.21 Nos. 455, 456
<b>Anoti Hill,</b> ( <i>Saugor</i> ) Knob with a tree. $\lambda$ 23 44 45.7 $L$ 78 47 12.4	<b>Babúdí Semaphore.</b> ( <i>Mandhoom</i> ) $\lambda$ 23 34 34.9 $L$ 86 20 1.1 Nos. 668, 669	<b>Bagodá h.s.</b> ( <i>Saugor</i> ) $\lambda$ 23 59 55.32 $L$ 78 15 21.72 Nos. 130, 131
<b>Ará Hill Mark.</b> ( <i>Garhjat States, Chota Nagpore Division</i> ) Under the chiefship of Bhokár. $\lambda$ 23 36 27.08 $L$ 81 46 50.75 Nos. 443, 444	<b>Babúká h.s.</b> ( <i>Saugor</i> ) $\lambda$ 23 42 22.13 $L$ 78 24 0.82 Nos. 158, 159	<b>Bagodar Bazar Tree Flag.</b> ( <i>Hasáribágh</i> ) On Grand Trunk Road. $\lambda$ 24 4 54 $L$ 85 52 35
<b>Arápur Peak.</b> ( <i>Lohardugga</i> ) $\lambda$ 24 13 27 $L$ 84 4 40	<b>Báburbárá s.</b> ( <i>Hooghly</i> ) $\lambda$ 22 51 20.79 $L$ 88 16 30.50 No. 884	<b>Bagrod Dome.</b> ( <i>Gwalior Territories</i> ) $\lambda$ 23 43 10.5 $L$ 78 15 45.0 No. 150
<b>Arhará Semaphore.</b> ( <i>Mandhoom</i> ) $\lambda$ 23 21 52.3 $L$ 86 55 7.4 Nos. 693, 694	<b>Báburbárá Village Tree Flag.</b> ( <i>Hooghly</i> ) $\lambda$ 22 51 46 $L$ 88 17 14	<b>Bagrod E. Temple.</b> ( <i>Gwalior Territories</i> ) On hill. $\lambda$ 23 43 7.2 $L$ 78 15 45.5 No. 151
<b>Aríd Hill Mark.</b> ( <i>Hasáribágh</i> ) $\lambda$ 23 39 9.51 $L$ 85 14 5.77 Nos. 590, 591	<b>Badanpur s.</b> ( <i>Mysore</i> ) In village. $\lambda$ 24 9 0.43 $L$ 80 51 36.44 Nos. 425, 426	<b>Bagrod h.s.</b> ( <i>Gwalior Territories</i> ) $\lambda$ 23 43 0.76 $L$ 78 15 53.99 Nos. 152, 153
<b>Arwárá h.s.</b> ( <i>Hasáribágh</i> ) $\lambda$ 24 7 21.74 $L$ 85 52 32.97 No. 861	<b>Badanpur Temple,</b> ( <i>Mysore</i> ) Eastern. $\lambda$ 24 9 44.1 $L$ 80 52 17.7 No. 427	<b>Bagrod W. Temple.</b> ( <i>Gwalior Territories</i> ) $\lambda$ 23 43 8.1 $L$ 78 15 43.0 Nos. 148, 149

Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.
<b>Bágru, XLVI.</b> ( <i>Vide page 18—B.</i> ) $\lambda$ 23 29 14'24 $L$ 84 38 26'97 $H$ 3475 $h$ 7 No. 58	<b>Balkukri Tree Flag.</b> ( <i>Hooghly</i> ) $\lambda$ 22 55 39 $L$ 88 17 53  <b>Ballabhpur Flag.</b> ( <i>Hooghly</i> ) In front of Mr. Woollen's house. $\lambda$ 22 44 54'8 $L$ 88 23 56'1 No. 910	<b>Banda s.</b> ( <i>Saugor</i> ) $\lambda$ 24 2 39'40 $L$ 79 0 16'52 Nos. 266, 267
<b>Baindú Hill Mark.</b> ( <i>Rewá</i> ) On a great wooded height. $\lambda$ 23 49 48'97 $L$ 82 24 4'46 Nos. 498, 499	<b>Bally s.</b> ( <i>Hooghly</i> ) In village on W. bank of river. $\lambda$ 22 38 39'77 $L$ 88 23 43'23 No. 899	<b>Bandanharia Tree Flag.</b> ( <i>24-Pergunnahs</i> ) $\lambda$ 22 28 23 $L$ 88 13 16
<b>Baismarma Village.</b> ( <i>Gya</i> ) $\lambda$ 24 20 14 $L$ 83 55 38	<b>Balúkhál Chimney,</b> ( <i>Hooghly</i> ) Of sugar works. $\lambda$ 22 39 25'3 $L$ 88 23 9'6 Nos. 774, 775	<b>Bandogarh Temple.</b> ( <i>Rewá</i> ) $\lambda$ 23 41 5'1 $L$ 81 4 49'7
<b>Bálákot s.</b> ( <i>Damoh</i> ) $\lambda$ 23 42 5'71 $L$ 79 22 59'25 No. 815	<b>Balúkhál Temple.</b> ( <i>Hooghly</i> ) N. of two temples on S. side of the mouth of the khál. $\lambda$ 22 39 9'0 $L$ 88 23 37'2 No. 918	<b>Bandrautá Fort,</b> ( <i>Saugor</i> ) S.W. angle. $\lambda$ 24 2 28'5 $L$ 78 16 45'5 No. 167
<b>Balampur Tree Flag.</b> ( <i>24-Pergunnahs</i> ) $\lambda$ 22 28 56 $L$ 88 16 7	<b>Bamangúá h.s.</b> ( <i>Rewá</i> ) $\lambda$ 23 57 2'10 $L$ 81 3 17'48 Nos. 415, 416	<b>Banía Tree Flag.</b> ( <i>Hooghly</i> ) $\lambda$ 22 53 47 $L$ 88 17 16
<b>Bálánagar Temple No. 1,</b> ( <i>Hooghly</i> ) Spire. $\lambda$ 22 38 11'8 $L$ 88 24 23'6 No. 916	<b>Bámáni, LVI.</b> ( <i>Vide page 14—B.</i> ) $\lambda$ 24 26 34'23 $L$ 85 48 32'58 $H$ 1559 $h$ 4 No. 78	<b>Banía Pokar Semaphore.</b> ( <i>Bankoora</i> ) $\lambda$ 23 3 18'7 $L$ 87 26 24'9 No. 751
<b>Bálánagar Temple No. 2.</b> ( <i>Hooghly</i> ) Spire of temple at Rám Lochan Ghose's ghát. $\lambda$ 22 38 50'0 $L$ 88 24 9'5 No. 917.	<b>Bamaniá h.s.</b> ( <i>Hazáribágh</i> ) $\lambda$ 24 3 52'15 $L$ 86 14 36'89 Nos. 870, 871	<b>Baniban, LXXXIV.</b> ( <i>Vide page 19—B.</i> ) $\lambda$ 22 31 23'63 $L$ 88 7 13'29 $H$ 60 $h$ 40 No. 100
<b>Baleho Fort s.</b> ( <i>Damoh</i> ) $\lambda$ 23 38 47'93 $L$ 79 15 21'53 Nos. 290, 291	<b>Bamorá Temple.</b> ( <i>Saugor</i> ) In village. $\lambda$ 24 3 18'1 $L$ 78 7 48'8 Nos. 115, 116	<b>Banjári, XX.</b> ( <i>Vide page 9—B.</i> ) $\lambda$ 23 12 52'61 $L$ 80 33 25'73 $H$ 2223 $h$ 3 No. 27
<b>Báli h.s.</b> ( <i>Hazáribágh</i> ) $\lambda$ 23 54 7'68 $L$ 85 32 34'06 No. 820	<b>Banda Hill Mark.</b> ( <i>Hazáribágh</i> ) $\lambda$ 24 28 52'70 $L$ 85 38 5'59 No. 625	<b>Banjári Fort,</b> ( <i>Jubbulpore</i> ) N.W. angle. $\lambda$ 23 59 15'2 $L$ 80 39 21'0 Nos. 404, 405
<b>Balihri Fort,</b> ( <i>Jubbulpore</i> ) Flag. $\lambda$ 23 46 53'4 $L$ 80 18 51'9 No. 387		<b>Bankoora Semaphore.</b> ( <i>Bankoora</i> ) $\lambda$ 23 14 5'3 $L$ 87 6 31'3 No. 733

Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.
<b>Banpára Tree Flag.</b> (24-Pergunnahs) $\lambda$ 22 27 44 $L$ 88 16 0	<b>Bargáon s.</b> (Rewá) 20 feet N.E. of stump of a great Banian tree S. of tank. $\lambda$ 24 11 48.20 $L$ 82 29 25.21	<b>Barpahári Hill Mark.</b> (Beerbhoom) $\lambda$ 23 43 37.50 $L$ 87 16 31.47 Nos. 718, 719
<b>Bansíbhá Hill Mark.</b> (Jubbulpore) $\lambda$ 23 34 24.52 $L$ 80 27 25.26 Nos. 371, 372	<b>Barí Rámpur s.</b> (Lohardugga) $\lambda$ 23 43 51.76 $L$ 84 44 27.48 Nos. 556, 557	<b>Barrackpore Flag Staff.</b> (24-Pergunnahs) $\lambda$ 22 45 37.1 $L$ 88 23 52.0 Nos. 768, 769
<b>Báoli Building.</b> (Gwalior Territories) $\lambda$ 23 54 1 $L$ 78 9 53	<b>Barjana, XXIV.</b> (Vide page 9—B.) $\lambda$ 23 9 29.57 $L$ 81 18 3.73 $H$ 35.13 $h$ 3 No. 30	<b>Barrackpore, Golá Ghát s.</b> (24-Pergunnahs) In Barrackpore. $\lambda$ 22 45 55.54 $L$ 88 23 10.66 No. 911
<b>Bárágáon, LV.</b> (Vide page 14—B.) $\lambda$ 23 32 56.36 $L$ 85 29 38.92 $H$ 3445 $h$ 2 No. 67	<b>Barjorá s.</b> (Bankoora) $\lambda$ 23 25 21.15 $L$ 87 18 40.58 Nos. 735, 736	<b>Barrackpore Park, House.</b> (24-Pergunnahs) Governor's house, centre of pediment. $\lambda$ 22 45 33.3 $L$ 88 23 59.7 No. 924
<b>Baráí Tiled Building.</b> (Jubbulpore) $\lambda$ 23 54 32 $L$ 80 51 19	<b>Barkherá Fort,</b> (Gwalior Territories) S.W. angle. $\lambda$ 23 55 12.0 $L$ 78 13 44.1 No. 132	<b>Barrackpore Park s.</b> (24-Pergunnahs) $\lambda$ 22 45 16.70 $L$ 88 24 10.85 No. 909
<b>Barailí h.s.</b> (Rewá) On the highest and most conspicuous part of a low range of hills, about $\frac{1}{2}$ mile S.W. of Barailí village, 1 mile S.S.E. of Rámpur village, and 3 miles N. of Singrauli village; pargana Karúa. A triangular paká pillar 2 feet high, with mark-stones at top and bottom, and surrounded by an earthwork platform, marks the station. $\lambda$ 23 27 40.79 $L$ 81 29 54.69 $H$ 2126 See Synoptical Vol. of the Biláspur Meridional Series.	<b>Barmá Hill Mark.</b> (Rewá) On great hill. $\lambda$ 24 5 55.67 $L$ 82 31 6.60 No. 490	<b>Barrackpore Semaphore.</b> (24-Pergunnahs) $\lambda$ 22 45 38.3 $L$ 88 23 50.7 Nos. 770, 771
<b>Baraset Flag.</b> (24-Pergunnahs) On Magistrate's Kachahri. $\lambda$ 22 43 20.6 $L$ 88 31 44.4 No. 767	<b>Barodiá h.s.</b> (Saugor) $\lambda$ 23 54 21.24 $L$ 78 32 1.96 No. 178	<b>Barrackpore s.</b> (24-Pergunnahs) On W. bank of river, near Barrackpore. $\lambda$ 22 38 0.95 $L$ 88 23 58.85 No. 898
<b>Bardáí Hill Flag.</b> (Damoh) $\lambda$ 23 49 52.0 $L$ 79 18 16.2 Nos. 296, 297	<b>Barodiá, N. Turret,</b> (Saugor) Tiled. $\lambda$ 24 12 53.6 $L$ 78 37 12.9 No. 183	<b>Barsot Hill Tree.</b> (Hazribágh) $\lambda$ 24 13 8 $L$ 85 33 10
<b>Bareta Hill Tree.</b> (Saugor) $\lambda$ 24 5 59 $L$ 78 7 56	<b>Baronda Palace.</b> (Rewá) $\lambda$ 24 7 35 $L$ 81 9 41	<b>Basinpat Hill Mark.</b> (Garhjat States, Chota Nagpore Division) In the chiefship of Bhokár. $\lambda$ 23 45 17.10 $L$ 82 12 26.36 Nos. 461, 462
		<b>Basodá Hill Mark.</b> (Gwalior Territories) $\lambda$ 23 55 11.77 $L$ 78 11 53.75 No. 127



Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.
<b>Basodá Mausoleum.</b> ( <i>Gwalior Territories</i> ) $\lambda$ 23 51 3·8 $L$ 77 58 18·5 Nos. 140, 141	<b>Bhadrakáli Flag.</b> ( <i>Hooghly</i> ) In village. $\lambda$ 22 40 30·5 $L$ 88 23 49·6 No. 902	<b>Bharí s.</b> ( <i>Gwalior Territories</i> ) On height near Malhargarh. $\lambda$ 24 16 23·69 $L$ 78 4 11·44 Nos. 117, 118
<b>Batীগárh Staircase.</b> ( <i>Damoh</i> ) $\lambda$ 24 6 48·5 $L$ 79 23 29·7 Nos. 320, 321	<b>Bhagni Hill Mark.</b> ( <i>Jubbulpore</i> ) $\lambda$ 23 31 45·84 $L$ 79 46 30·81	<b>Bharí Tree.</b> ( <i>Tonk</i> ) On height near Bhaorása. $\lambda$ 24 11 38 $L$ 78 0 46
<b>Baubazar Khál Flag.</b> ( <i>Hooghly</i> ) N. of the khál. $\lambda$ 22 44 51·2 $L$ 88 24 33·8 Nos. 922, 923	<b>Bhainsákhand h.s.</b> ( <i>Jubbulpore</i> ) $\lambda$ 23 45 54·55 $L$ 80 15 27·75 No. 865	<b>Bharkata Dák Bungalow,</b> ( <i>Hasáribágh</i> ) N. corner. $\lambda$ 24 9 53·3 $L$ 85 40 8·8 Nos. 617, 618
<b>Báura Hill Mark.</b> ( <i>Rewá</i> ) $\lambda$ 24 12 20·79 $L$ 82 9 44·75 Nos. 453, 454	<b>Bháiki, LXVIII.</b> ( <i>Vide page 16—B.</i> ) $\lambda$ 23 27 57·94 $L$ 87 39 23·80 H 268 h 39 Nos. 82, 86	<b>Bharpáni Idgah.</b> ( <i>Saugor</i> ) $\lambda$ 23 49 5·8 $L$ 79 4 5·0 No. 261
<b>Behrá s.</b> ( <i>Saugor</i> ) $\lambda$ 24 1 40·22 $L$ 79 5 37·33 No. 270	<b>Bhalua h.s.</b> ( <i>Hasáribágh</i> ) $\lambda$ 24 0 41·83 $L$ 86 10 2·77 Nos. 864, 865	<b>Bhatgaon Hill Mark.</b> ( <i>Jubbulpore</i> ) $\lambda$ 23 41 16·66 $L$ 80 30 0·75 Nos. 379, 380
<b>Bejwásan Tree.</b> ( <i>Gwalior Territories</i> ) In village. $\lambda$ 23 45 43 $L$ 78 6 24	<b>Bháno Hill Centre.</b> ( <i>Gwalior Territories</i> ) $\lambda$ 24 0 30·3 $L$ 78 14 11·6	<b>Bhaurgára, XI.</b> ( <i>Vide page 7—B.</i> ) $\lambda$ 23 31 18·79 $L$ 79 22 41·79 H 1440 h 8 No. 15
<b>Bená Pagoda.</b> ( <i>Saugor</i> ) $\lambda$ 23 21 34·3 $L$ 79 7 10·0 No. 282	<b>Bhánsa Hill Bar Tree.</b> ( <i>Saugor</i> ) $\lambda$ 23 42 21 $L$ 78 35 27	<b>Bhiláwá h.s.</b> ( <i>Jubbulpore</i> ) On a low range of hills E. of Gosápur and N. of Lálpur village. $\lambda$ 23 24 3·98 $L$ 80 24 56·99 See Synoptical Vol. of the Jabápur Meridional Series.
<b>Benáiká Fort,</b> ( <i>Saugor</i> ) Flag. $\lambda$ 24 6 34·2 $L$ 78 53 40·5 No. 242	<b>Bhaorása, (V).</b> ( <i>Vide page 5—B.</i> ) $\lambda$ 24 8 3·73 $L$ 78 3 7·91 H 1387 h 11 No. 1	<b>Bhírpur h.s.</b> ( <i>Tonk</i> ) $\lambda$ 24 5 32·84 $L$ 77 59 5·25 No. 113
<b>Berokar s.</b> ( <i>Rewá</i> ) On rock about centre of village. $\lambda$ 24 13 37·26 $L$ 82 31 44·47	<b>Bhánpail h.s.</b> ( <i>Saugor</i> ) $\lambda$ 23 48 56·30 $L$ 78 40 37·89 Nos. 208, 209	<b>Bhitrí h.s.</b> ( <i>Jubbulpore</i> ) $\lambda$ 23 36 38·33 $L$ 80 27 44·89 Nos. 373, 374
<b>Betá s.</b> ( <i>Hooghly</i> ) $\lambda$ 22 55 14·75 $L$ 88 16 53·90 No. 880	<b>Bharargerí Tree Flag.</b> ( <i>Hooghly</i> ) $\lambda$ 22 56 13 $L$ 88 15 6	
<b>Betá Tree Flag.</b> ( <i>Hooghly</i> ) $\lambda$ 22 55 12 $L$ 88 16 42		

Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.
<b>Bhola, LXXX.</b> ( <i>Vide page 18—B.</i> ) $\lambda$ 22 49 28.02 $L$ 88 13 57.85 $H$ 110 $h$ 75 Nos. 96, 104	<b>Bilitpur Tree Flag.</b> ( <i>Hooghly</i> ) $\lambda$ 22 52 36 $L$ 88 17 16  <b>Birpokhar, XLV.</b> ( <i>Vide page 13—B.</i> ) $\lambda$ 23 25 9.87 $L$ 84 17 57.24 $H$ 3622 $h$ 6 No. 57	<b>Bowá Hill Mark.</b> ( <i>Manbhoom</i> ) $\lambda$ 23 26 41.26 $L$ 86 18 45.56 Nos. 670, 671  <b>Budhon, III.</b> ( <i>Vide page 6—B.</i> ) $\lambda$ 24 5 8.41 $L$ 78 33 39.07 $H$ 1867 $h$ 9 No. 2
<b>Bhot Bágán Flag.</b> ( <i>Hooghly</i> ) On paka ghát. $\lambda$ 22 36 49.8 $L$ 88 24 5.8 No. 896	<b>Bishanpur Building,</b> ( <i>Bankoora</i> ) Dome. $\lambda$ 23 4 18.5 $L$ 87 22 11.1 No. 750	<b>Búdí Paturíá Bungalow,</b> ( <i>Saugor</i> ) Fakír's. $\lambda$ 24 11 6.8 $L$ 78 25 31.5 No. 175
<b>Bhursu, XLIX.</b> ( <i>Vide page 13—B.</i> ) $\lambda$ 23 15 57.13 $L$ 84 46 46.39 $H$ 2271 $h$ 4 No. 62	<b>Bisrámpur Hill Tree.</b> ( <i>Lohardugga</i> ) $\lambda$ 24 13 25.4 $L$ 83 59 10.1 No. 536	<b>Buj-Buj s.</b> ( <i>24-Pergunnahs</i> ) Marked by an iron nail driven in on roof of Mr. Dickens' house. $\lambda$ 22 28 50.00 $L$ 88 13 0.89 No. 934
<b>Bihárináth, LXIII.</b> ( <i>Vide page 16—B.</i> ) $\lambda$ 23 34 30.04 $L$ 86 59 9.35 $H$ 1471 $h$ 2 No. 78	<b>Bistápur Pagoda.</b> ( <i>Beerbhoom</i> ) $\lambda$ 23 36 31.6 $L$ 87 29 43.0 No. 730	<b>Buj-Buj Tree Flag.</b> ( <i>24-Pergunnahs</i> ) $\lambda$ 22 29 20 $L$ 88 13 51
<b>Bijká Hill Mark.</b> ( <i>Lohardugga</i> ) $\lambda$ 23 46 47.28 $L$ 83 56 55.35 Nos. 540, 541	<b>Bodma Hill Mark.</b> ( <i>Sonthal Pergunnahs</i> ) $\lambda$ 23 54 10.88 $L$ 86 52 19.70 Nos. 709, 710	<b>Bulbul, XLIII.</b> ( <i>Vide page 12—B.</i> ) $\lambda$ 23 37 44.63 $L$ 84 28 41.12 $H$ 3352 $h$ 3 No. 53
<b>Biktamb Hill Stone.</b> ( <i>Gya</i> ) $\lambda$ 24 14 9.8 $L$ 83 48 7.3 Nos. 530, 531	<b>Bohári h.s.</b> ( <i>Saugor</i> ) $\lambda$ 23 49 32.69 $L$ 78 58 25.80 Nos. 228, 229	<b>Bulbul Hill Mark.</b> ( <i>Revá</i> ) $\lambda$ 23 32 17.36 $L$ 81 4 37.60 No. 440
<b>Bilái h.s.</b> ( <i>Gwalior Territories</i> ) $\lambda$ 23 52 16.41 $L$ 78 9 29.57 Nos. 119, 120	<b>Bokpurá h.s.</b> ( <i>Saugor</i> ) $\lambda$ 23 48 31.34 $L$ 78 57 27.49 Nos. 280, 281	<b>Calcutta, Armenian Church,</b> ( <i>24-Pergunnahs</i> ) Steeple. $\lambda$ 22 34 43.9 $L$ 88 23 40.9 Nos. 796, 797
<b>Bililrá Temple,</b> ( <i>Saugor</i> ) Northern. $\lambda$ 23 38 40.6 $L$ 78 46 36.6 Nos. 223, 224	<b>Boríban Temple.</b> ( <i>Jubbulpore</i> ) $\lambda$ 23 39 56.8 $L$ 80 6 17.5 No. 354	<b>Calcutta, Bágbazar Temple.</b> ( <i>24-Pergunnahs</i> ) $\lambda$ 22 35 47.4 $L$ 88 24 37.7 Nos. 789, 790
<b>Bilitpur s.</b> ( <i>Hooghly</i> ) $\lambda$ 22 52 54.80 $L$ 88 17 21.70 No. 882	<b>Bothri Hill Mark.</b> ( <i>Hazáribágh</i> ) $\lambda$ 24 9 55.47 $L$ 85 37 18.62	

Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.
<p>Calcutta base-line, North End, LXXXII. (<i>Vide page 19—B.</i>)</p> <p>λ 22 42 31'80 L 88 25 3'74 H 91 h 75 Nos. 98, 108</p> <p>Calcutta base-line, South End, LXXXV. (<i>Vide page 19—B.</i>)</p> <p>λ 22 36 55'68 L 88 25 21'61 H<sub>s</sub> 13'00* h 74 No. 99</p> <p>Calcutta, Bishop's College. (24-<i>Pergunnahs</i>) Lightning conductor on E. side of building.</p> <p>λ 22 33 13'3 L 88 20 52'9</p> <p>Calcutta, Boithakkháná Church. (24-<i>Pergunnahs</i>)</p> <p>λ 22 33 57'7 L 88 24 43'6 No. 818</p> <p>Calcutta, Building. (24-<i>Pergunnahs</i>) Gilt kalas with a white flag.</p> <p>λ 22 34 47'1 L 88 23 49'3 No. 804</p> <p>Calcutta, Chandpál Ghát. (24-<i>Pergunnahs</i>) Water pump chimney.</p> <p>λ 22 34 3'0 L 88 23 5'9 Nos. 818, 814</p> <p>Calcutta, Currie's Factory. (24-<i>Pergunnahs</i>) Workshop chimney.</p> <p>λ 22 35 11'8 L 88 23 16'5 No. 791</p> <p>Calcutta, Dharmatala Church. (24-<i>Pergunnahs</i>) Vane on steeple of Roman Catholic Church.</p> <p>λ 22 33 50'5 L 88 23 45'9 Nos. 825, 826</p> <p>Calcutta, Exchange Semaphore. (24-<i>Pergunnahs</i>)</p> <p>λ 22 34 11'8 L 88 23 27'2 Nos. 816, 817</p>	<p>Calcutta, Fort William Chimney, (24-<i>Pergunnahs</i>) Circular.</p> <p>λ 22 33 33'8 L 88 22 51'9 No. 829</p> <p>Calcutta, Fort William Flagstaff. (24-<i>Pergunnahs</i>)</p> <p>λ 22 33 32'1 L 88 22 42'3 Nos. 831, 832</p> <p>Calcutta, Fort William s. (24-<i>Pergunnahs</i>) On Semaphore; the site of the station is within 3 feet of the position occupied in 1869 by the Time Ball for shipping.</p> <p>λ 22 33 22'03 L 88 22 40'92 Nos. 927, 928</p> <p>Calcutta, Foundry Chimney, (24-<i>Pergunnahs</i>) Mr. Jessop's.</p> <p>λ 22 34 38'3 L 88 23 33'3 No. 803</p> <p>Calcutta, Free Church of Scotland. (24-<i>Pergunnahs</i>) Vane on steeple.</p> <p>λ 22 33 27'1 L 88 24 4'9 Nos. 835, 836</p> <p>Calcutta, Free School Church. (24-<i>Pergunnahs</i>) Vane on steeple.</p> <p>λ 22 33 26'7 L 88 23 54'0 Nos. 833, 834</p> <p>Calcutta, General Post Office, (24-<i>Pergunnahs</i>) Dome.</p> <p>λ 22 34 19'2 L 88 23 27'9 No. 805</p> <p>Calcutta, Government House. (24-<i>Pergunnahs</i>) Head of Britannia.</p> <p>λ 22 33 59'0 L 88 23 26'7 Nos. 823, 824</p> <p>Calcutta Jail. (24-<i>Pergunnahs</i>) Centre of upper story in jail.</p> <p>λ 22 32 33'5 L 88 23 7'8 No. 846</p> <p>Calcutta, Kidderpore Bridge. (24-<i>Pergunnahs</i>) Hastings' suspension bridge, S.W. square pillar.</p> <p>λ 22 32 55'4 L 88 22 5'3</p>	<p>Calcutta, Kidderpore Chimney, (24-<i>Pergunnahs</i>) Of Mr. Teil's Tannery.</p> <p>λ 22 32 41'2 L 88 22 1'0 No. 841</p> <p>Calcutta, Kidderpore Church. (24-<i>Pergunnahs</i>) Vane on steeple.</p> <p>λ 22 32 22'1 L 88 22 17'5 Nos. 844, 845</p> <p>Calcutta, Latitude s. (24-<i>Pergunnahs</i>) About 25 yards E. of the building known as No. 9 Park street, occupied in 1865 by the Govt. Mathematical Instrument Department. The station is denoted by ⊙ engraved on stone.</p> <p>λ 22 32 54'67 L 88 23 55'95 Nos. 939, 940</p> <p>Calcutta, Loretto Convent. (24-<i>Pergunnahs</i>) Church steeple, in Park street.</p> <p>λ 22 32 58'1 L 88 23 44'0 No. 985</p> <p>Calcutta, Maharajpur Cenotaph. (24-<i>Pergunnahs</i>) On fort point.</p> <p>λ 22 33 35'6 L 88 22 38'2 No. 830</p> <p>Calcutta Mint, Middle Chimney. (24-<i>Pergunnahs</i>)</p> <p>λ 22 35 0'8 L 88 23 43'1 No. 794</p> <p>Calcutta Mint, N. Chimney. (24-<i>Pergunnahs</i>)</p> <p>λ 22 35 2'3 L 88 23 43'7 Nos. 792, 793</p> <p>Calcutta Mint, S. Chimney. (24-<i>Pergunnahs</i>)</p> <p>λ 22 35 0'4 L 88 23 43'2 No. 795</p> <p>Calcutta, No. 7 Park Street s. (24-<i>Pergunnahs</i>) On S.W. angle of the highest roof of the building. The usual ⊙ indicates the position of it.</p> <p>λ 22 32 56'45 L 88 23 51'04 No. 938</p>

\* This height refers to the upper surface of the stone let into the ground floor of the tower, which carries the dot on silver used in the measurement of the base-line.

Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.
<p>Calcutta Observatory s. (24-Pergunnahs) Unmarked station employed by Mr. Olliver in 1832, situated on the house known as No. 35 Park street.</p> <p>λ 22 32 57.65 L 88 23 58.58 Nos. 811, 812</p>	<p>Calcutta, St. Saviour's Church. (24-Pergunnahs) Spire of steeple.</p> <p>λ 22 33 19.2 L 88 24 8.0 Nos. 837, 838</p>	<p>Chainpur, LVIII. (Vide page 15—B.)</p> <p>λ 23 33 16.51 L 85 53 46.41 H 2085 h 3 No. 68</p>
<p>Calcutta, Ochterlony Monument. (24-Pergunnahs)</p> <p>λ 22 33 43.7 L 88 23 33.6 Nos. 890, 891</p>	<p>Calcutta, St. Thomas' Church. (24-Pergunnahs) Spire of steeple.</p> <p>λ 22 32 58.1 L 88 23 43.9 Nos. 839, 840</p>	<p>Chainpur Hill Stone. (Mirzapur)</p> <p>λ 23 56 16.2 L 83 13 0.9 No. 518</p>
<p>Calcutta, Old Church. (24-Pergunnahs) Also called Mission Church; vane on steeple.</p> <p>λ 22 34 15.8 L 88 23 41.0 Nos. 808, 809</p>	<p>Calcutta, Scotch Kirk. (24-Pergunnahs) Also called St. Andrew's Church; vane on steeple.</p> <p>λ 22 34 20.1 L 88 23 39.5 Nos. 806, 807</p>	<p>Chalkarí Semaphore. (Hazáribágh)</p> <p>λ 23 45 11.1 L 85 59 53.8 Nos. 648, 649</p>
<p>Calcutta, Prinsep's Ghát, (24-Pergunnahs) N.W. corner.</p> <p>λ 22 33 16.1 L 88 22 27.7</p>	<p>Calcutta, Strand Mills. (24-Pergunnahs)</p> <p>λ 22 34 43.0 L 88 23 32.4 Nos. 798, 799</p>	<p>Chamki, XXV. (Vide page 9—B.)</p> <p>λ 23 34 9.96 L 81 40 43.29 H 2261 h 3 Nos. 26, 31</p>
<p>Calcutta, Race Stand s. (24-Pergunnahs) On centre of building.</p> <p>λ 22 32 28.43 L 88 22 34.49 No. 815</p>	<p>Calcutta, Sudder Dewani Court. (24-Pergunnahs)</p> <p>λ 22 32 17.3 L 88 22 56.1 No. 847</p>	<p>Chanchal h.s. (Hazáribágh)</p> <p>λ 24 29 45.94 L 85 50 7.30 No. 628</p>
<p>Calcutta, R. C. Cathedral. (24-Pergunnahs) Also known as Portuguese Church; vane on steeple.</p> <p>λ 22 34 41.3 L 88 23 46.6 Nos. 800, 801</p>	<p>Calcutta, Surveyor General's Office s. (24-Pergunnahs) Is denoted by a dot and two concentric circles cut on the upper floor of the observatory which stands on N.W. side of the roof of the three-storied building now known as No. 35 Park street. A slab of stone, with the usual ⊙—in the normal of the first mentioned mark—and having the words "Determined by Mr. E. C. Ryall, Civil Assistant G. T. Survey of India, in March 1865" engraved thereon, is imbedded in the roof of the building itself, 10 feet east of the position then occupied by the fixed Transit Instrument.</p> <p>λ 22 32 57.65 L 88 23 58.57 Nos. 936, 937</p>	<p>Chánda Tree Flag. (Hooghly)</p> <p>λ 22 54 9 L 88 17 31</p>
<p>Calcutta, Sailors' Home, (24-Pergunnahs) Flagstaff.</p> <p>λ 22 34 18.1 L 88 23 46.3 No. 810</p>	<p>Calcutta, St. James' Church. (24-Pergunnahs) Vane on steeple.</p> <p>λ 22 33 56.7 L 88 24 28.4 Nos. 821, 822</p>	<p>Chandámau h.s. (Saugor)</p> <p>λ 23 56 58.31 L 78 31 33.50 No. 179</p>
<p>Calcutta, St. John's Cathedral. (24-Pergunnahs) Vane on steeple.</p> <p>λ 22 34 9.3 L 88 23 21.1 Nos. 819, 820</p>	<p>Calcutta, Thompson's Ghát, (24-Pergunnahs) Flag.</p> <p>λ 22 35 45.4 L 88 23 50.7 No. 913</p>	<p>Chandpurí Pagoda. (Saugor)</p> <p>λ 23 33 9.5 L 79 7 59.3 No. 283</p>
<p>Calcutta, St. Paul's Cathedral. (24-Pergunnahs) Vane on steeple.</p> <p>λ 22 32 36.6 L 88 23 23.7 Nos. 842, 843</p>	<p>Calcutta, Town Hall s. (24-Pergunnahs) On N.W. corner.</p> <p>λ 22 34 2.94 L 88 23 17.92 No. 802</p>	<p>Chandrí h.s. (Hazáribágh)</p> <p>λ 24 8 22.00 L 85 42 7.88 Nos. 615, 616</p>

Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.
<b>Changara Hill Mark.</b> ( <i>Hazáribágh</i> ) $\lambda$ 23 37 28.79 $L$ 85 26 38.94 Nos. 680, 681	<b>Chendíá Fort,</b> ( <i>Rewá</i> ) S.W. angle. $\lambda$ 23 39 17.0 $L$ 80 45 2.1 Nos. 410, 411	<b>Chíno h.s.</b> ( <i>Hazáribágh</i> ) $\lambda$ 24 0 35.26 $L$ 86 3 23.34 No. 860
<b>Chapára Building.</b> ( <i>Gwalior Territories</i> ) $\lambda$ 23 57 35 $L$ 78 15 1	<b>Chendíá Pagoda.</b> ( <i>Rewá</i> ) $\lambda$ 23 39 7.4 $L$ 80 45 36.7 No. 412	<b>Chinsura, LXXXI.</b> ( <i>Vide page 19—B.</i> ) $\lambda$ 22 52 55.87 $L$ 88 26 38.51 $H_s$ 86.40* $h$ 9 No. 105
<b>Chapri, XXIX.</b> ( <i>Vide page 10—B.</i> ) $\lambda$ 24 18 46.71 $L$ 82 16 13.30 $H$ 1862 $h$ 3 No. 88	<b>Chendwár, LIII.</b> ( <i>Vide page 14—B.</i> ) $\lambda$ 23 57 13.75 $L$ 85 28 36.47 $H$ 2817 $h$ 3 No. 66	<b>Chinsurah Church,</b> ( <i>Hooghly</i> ) Steeple. $\lambda$ 22 52 58.1 $L$ 88 26 39.9
<b>Chapsara Tree Flag.</b> ( <i>Hooghly</i> ) $\lambda$ 22 52 33 $L$ 88 14 37	<b>Chendwár h.s.</b> ( <i>Hazáribágh</i> ) $\lambda$ 23 57 13.62 $L$ 85 28 36.44 $H$ 2822 Nos. 582, 583	<b>Chinsurah Church.</b> ( <i>Hooghly</i> ) Steeple of Armenian Church. $\lambda$ 22 53 26.9 $L$ 88 26 40.3 Nos. 760, 761
<b>Chás Bungalow s.</b> ( <i>Manbhoom</i> ) S. of road. $\lambda$ 23 38 7.30 $L$ 86 12 32.47 Nos. 661, 662	<b>Chhatarpur h.s.</b> ( <i>Hazáribágh</i> ) $\lambda$ 23 34 44.67 $L$ 85 42 3.38 Nos. 638, 639	<b>Chinsurah s.</b> ( <i>Hooghly</i> ) On Mr. Barber's house; once used as a survey office. $\lambda$ 22 53 20.41 $L$ 88 26 34.34 No. 762
<b>Chátra Flag.</b> ( <i>Hooghly</i> ) In village. $\lambda$ 22 45 49.8 $L$ 88 22 47.6 No. 926	<b>Chhátna Semaphore.</b> ( <i>Manbhoom</i> ) $\lambda$ 23 18 43.3 $L$ 87 0 28.3 Nos. 695, 696	<b>Chípú h.s.</b> ( <i>Hazáribágh</i> ) On a detached peak N. of the Barákar river. $\lambda$ 24 9 6.57 $L$ 86 17 13.60 Nos. 873, 874
<b>Chátra, Judge's House.</b> ( <i>Hazáribágh</i> ) $\lambda$ 24 12 45 $L$ 84 54 15	<b>Chilinghí h.s.</b> ( <i>Hazáribágh</i> ) $\lambda$ 24 2 22.22 $L$ 86 15 56.35 No. 872	<b>Chirárá Fort s.</b> ( <i>Damoh</i> ) $\lambda$ 23 35 0.36 $L$ 79 11 6.03 Nos. 286, 287
<b>Chaukundi Tree Flag.</b> ( <i>Hooghly</i> ) $\lambda$ 22 51 55 $L$ 88 16 31	<b>Chilpari Tiled Building.</b> ( <i>Saugor</i> ) $\lambda$ 24 0 0 $L$ 79 2 27	<b>Chirárú h.s.</b> ( <i>Saugor</i> ) $\lambda$ 24 1 48.42 $L$ 78 36 26.04 No. 180, 181
<b>Chauráí Fort,</b> ( <i>Damoh</i> ) East building, N.E. angle. $\lambda$ 23 42 42.6 $L$ 79 24 35.3 No. 814	<b>Chingriháta t.s.</b> ( <i>24—Pergunnahs</i> ) About $\frac{1}{2}$ of a mile from the junction of the old and new Beliagháta canals, and 850 yards from the new one. A mark-stone having the usual circle and dot is fixed into the upper surface of foundation, and another mark-stone similarly marked being imbedded 3 feet below. An archway 2 x 3 $\frac{1}{2}$ feet leads to the upper mark-stone. The tower is a simple square pillar 17 feet high. $\lambda$ 22 33 42.36 $L$ 88 27 20.16 No. 943	<b>Chiriábhar Hill Mark.</b> ( <i>Jubbulpore</i> ) $\lambda$ 23 32 58.94 $L$ 80 32 51.37 No. 383, 384
<b>Chaurí Hill Mark.</b> ( <i>Rewá</i> ) On range S. of the Gopat river. $\lambda$ 23 59 53.62 $L$ 82 2 13.31 No. 452	<b>Chíru Village.</b> ( <i>Lohardugga</i> ) $\lambda$ 23 52 29 $L$ 84 43 51	

\* This height refers to the mark-stone let into the upper surface of the pillar.

Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.
<b>Chitáwag Hill Mark.</b> (Lohardugga) λ 23 47 45·51 L 84 47 39·58 Nos. 571, 572	<b>Cossipore, E. Mill,</b> (24-Pergunnahs) Chimney. λ 22 37 4·0 L 88 24 47·6 Nos. 786, 787	<b>Damoh Mosque.</b> (Damoh) On hill. λ 23 50 20·3 L 79 29 15·9 Nos. 306, 307
<b>Chitpore Bridge,</b> (24-Pergunnahs) Flag; S. of the khál. λ 22 36 24·8 L 88 24 38·0 No. 914	<b>Cossipore Foundry,</b> (24-Pergunnahs) Chimney. λ 22 37 10·5 L 88 24 49·5 Nos. 784, 785	<b>Damoníchatí s.</b> (Beerbhoom) In village. λ 23 45 19·71 L 87 3 59·32 Nos. 701, 702
<b>Chitpore s.</b> (24-Pergunnahs) E. of Rice Mill. λ 22 36 35·07 L 88 24 43·01 No. 895	<b>Cossipore Highest Chimney.</b> (24-Pergunnahs) λ 22 37 3·9 L 88 24 47·6 No. 788	<b>Danajpur Tree Flag.</b> (Hooghly) λ 22 56 45 L 88 17 26
<b>Choká Temple.</b> (Saugor) λ 24 2 6·4 L 79 2 24·4 Nos. 268, 269	<b>Cossipore, Loharkhána Ghát.</b> (24-Pergunnahs) λ 22 37 8 L 88 24 43	<b>Danaujá Hill Mark.</b> (Rewá) On detached peak. λ 24 3 31·78 L 82 14 15·99 Nos. 463, 464
<b>Choládhár Hill Mark.</b> (Garhjat States, Chota Nagpore Division) The hill is also known as Mairgarh; on an extraordinary peak of great height, in Kauriya. λ 23 38 6·40 L 82 25 25·52 Nos. 500, 501	<b>Daharsení Hill Mark.</b> (Hazáribágh) λ 24 17 25·42 L 85 59 47·54 No. 629	<b>Dándiá Hill Mark.</b> (Rewá) λ 23 26 56·52 L 80 53 14·66 Nos. 413, 414
<b>Cholko Hill Tree.</b> (Hazáribágh) λ 24 22 40 L 85 50 56	<b>Dakrái h.s.</b> (Saugor) λ 23 43 27·14 L 78 32 10·32 Nos. 194, 195	<b>Dangarh Building,</b> (Saugor) Highest. λ 24 6 31·3 L 78 22 19·6 No. 170
<b>Chúrí h.s.</b> (Rewá) On a remarkable, conical hill 6 miles E. of Gurwáni Principal Station. λ 23 58 48·42 L 82 25 11·61 Nos. 492, 493	<b>Dalla Village.</b> (Gya) λ 24 20 20 L 83 57 20	<b>Danwár Hill Mark.</b> (Garhjat States, Chota Nagpore Division) In Sirgúja. λ 23 57 33·50 L 83 30 9·24 Nos. 519, 520
<b>Churilí s.</b> (Sonthal Pergunnahs) In village. λ 23 46 50·00 L 87 6 47·21 Nos. 711, 712	<b>Dalpatpur Fort.</b> (Saugor) On hill. λ 23 59 10·7 L 78 20 2·9 No. 168	<b>Dáo Hill,</b> (Saugor) Single tree. λ 23 45 45·7 L 78 43 41·6
<b>Chúrí s.</b> (Garhjat States, Chota Nagpore Division) In village, in Sirgúja. λ 23 54 56·46 L 83 17 27·60 Nos. 521, 522	<b>Damoh Dák Bungalow.</b> (Damoh) A mark-stone, with ☉ inscribed thereon, is sunk to level of ground in the Dák Bungalow compound. λ 23 49 50·8 L 79 29 8·0	<b>Dastánpur, LXXVII.</b> (Vide page 18—B.) λ 23 2 53·63 L 88 8 10·94 H 95 h 35 No. 102
<b>Cossipore, Colvin Ghát s.</b> (24-Pergunnahs) On paká ghát on E. bank of river. λ 22 37 33·61 L 88 24 35·29 No. 897	<b>Damoh h.s.</b> (Damoh) On an isolated hill round which the town of same name is built. The platform lies W. of Pír Ghází's tomb which occupies the highest part of the hill. λ 23 50 20·28 L 79 29 15·22 No. 305	<b>Datorá Building,</b> (Gwalior Territories) Highest and easternmost; in Kurwai. λ 24 0 2·2 L 78 10 27·6 No. 133

Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.
Delá h.s. (Lohardugga) λ 24 2 2'92 L 84 16 0'42 No. 562	Desarman Temple. (Burdwan) λ 23 46 47'1 L 87 8 53'6 No. 715	Digwar Staging Bungalow. (Hazáribágh) λ 23 59 17 L 85 33 36
Delwára Fort. (Gwalior Territories) λ 23 50 58 L 78 8 58	Dhakanser s. (24-Pergunnahs) Close to Mr. Hastings' house on E. bank of river. λ 22 39 22'05 L 88 24 1'05 No. 900	Dilakás, LXXIX. (Vide page 18—B.) λ 22 43 4'11 L 88 4 17'58 H 106 h 81 No. 95
Deolí Semaphore. (Manbhoom) λ 23 33 9'4 L 86 30 24'0 Nos. 672, 673	Dhakanser Sugar Factory, (24-Pergunnahs) Chimney with cornices. λ 22 38 33'3 L 88 24 17'2 Nos. 776, 777	Dilchaurí h.s. (Saugor) λ 23 44 47'08 L 78 36 5'49 Nos. 190, 191
Deopahár h.s. (Jubbulpore) λ 23 32 0'95 L 80 22 48'42 Nos. 356, 357	Dháná Cupola, (Saugor) Highest; of building to W. λ 23 44 48'8 L 78 54 26'6 Nos. 247, 248	Domrá, E. Temple. (Manbhoom) Also called Nowagarh. λ 23 47 38'6 L 86 15 29'9 No. 666
Deora Fort, N.E. Bastion. (Jubbulpore) λ 23 57 14'5 L 80 34 41'9 No. 397	Dháná Dome, (Saugor) Of Rájá's house. λ 23 44 43'1 L 78 54 19'6 Nos. 249, 250	Domrí h.s. (Hazáribágh) λ 24 7 16'48 L 86 6 37'17 No. 859
Deora Fort, S.W. Bastion. (Jubbulpore) λ 23 57 13'2 L 80 34 40'3 Nos. 402, 403	Dhanserá Fort, (Saugor) S.W. angle. λ 24 2 49'4 L 78 12 32'6 No. 134	Donaktad h.s. (Manbhoom) Also called Dhanak h.s. λ 23 35 53'73 L 86 41 13'92 Nos. 657, 658
Deora Temple. (Rewá) λ 24 8 23'9 L 81 14 47'1	Dhansimilá h.s. (Bankoora) λ 23 14 11'06 L 87 31 20'06 Nos. 752, 753	Dora Tiled Building. (Saugor) λ 23 52 30 L 79 4 0
Deori Hill Mark. (Jubbulpore) λ 23 42 10'84 L 80 9 21'64 Nos. 362, 363	Dhanúdi Village. (Gya) λ 24 19 32 L 83 58 13	Doranda Church. (Lohardugga) Centre of belfry. λ 23 21 21'6 L 85 22 4'8 No. 856
Deori h.s. (Rewá) λ 24 5 45'51 L 82 23 40'95 Nos. 481, 482	Dhobi Temple. (Jubbulpore) λ 24 2 47'9 L 80 56 9'2 No. 428	Doranda House. (Lohardugga) Marked by ⊙ cut on S.E. corner of roof of the Reverend Herzog's paká house. λ 23 20 13'78 L 85 21 52'70 No. 855
Deori Pagoda, (Saugor) Northern. λ 23 23 48'8 L 79 2 30'6 No. 281	Dholpahári h.s. (Saugor) λ 23 58 41'28 L 78 57 42'04 Nos. 239, 240	Dubráchati Bungalow. (Manbhoom) λ 23 32 39'7 L 86 34 0'6 No. 683

Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.
<p>Dubráchati s. (<i>Mambhoom</i>)</p> <p>λ 23 32 32·41 L 86 33 49·43 Nos. 680, 681</p> <p>Dubrájpur h.s. (<i>Beerbhoom</i>)</p> <p>λ 23 47 7·32 L 87 24 55·11 Nos. 723, 724</p> <p>Dugáo Fort. (<i>Saugor</i>) N.W. angle of high square building.</p> <p>λ 24 9 39·6 L 78 27 56·3 No. 176</p> <p>Dulabpur s. (<i>Beerbhoom</i>)</p> <p>λ 23 50 56·94 L 87 28 43·59 No. 727</p> <p>Dúmádolá s. (<i>Rewá</i>) W. of village.</p> <p>λ 24 3 1·48 L 82 17 24·61 Nos. 485, 486</p> <p>Dum-Dum Church, (<i>24-Pergunnahs</i>) Steeple.</p> <p>λ 22 37 48·5 L 88 27 51·2 Nos. 782, 783</p> <p>Dum-Dum Monument. (<i>24-Pergunnahs</i>)</p> <p>λ 22 37 49·4 L 88 28 0·6 Nos. 780, 781</p> <p>Dum-Dum Roman Catholic Chapel. (<i>24-Pergunnahs</i>)</p> <p>λ 22 38 8·5 L 88 27 49·3 No. 778</p> <p>Dum-Dum Tomb, (<i>24-Pergunnahs</i>) Pearce's.</p> <p>λ 22 37 49·4 L 88 27 54·5 No. 779</p> <p>Dumraon Semaphore. (<i>Hazáribágh</i>) Also called Ranjita Semaphore.</p> <p>λ 24 4 34·0 L 85 23 36·1 Nos. 600, 601</p>	<p>Dumrí Bazar. (<i>Hazáribágh</i>) Tree flag on Grand Trunk Road.</p> <p>λ 23 59 24 L 86 2 37</p> <p>Dungasráo Building, (<i>Saugor</i>) Staircase.</p> <p>λ 23 51 58·1 L 78 56 18·9 No. 232</p> <p>Dungería Hill Tree. (<i>Jubbulpore</i>)</p> <p>λ 23 38 21 L 80 18 26</p> <p>Durgápur, I.XII. (<i>Vide page 15—B.</i>)</p> <p>λ 23 49 40·94 L 86 49 2·86 H 1182 h 2 Nos. 71, 77</p> <p>Dusári Turret. (<i>Gwalior Territories</i>) Broken turret of building in village on height.</p> <p>λ 23 44 13·5 L 78 6 52·9</p> <p>Etwa Tiled Building. (<i>Rewá</i>)</p> <p>λ 24 10 18 L 81 0 55</p> <p>Fort Gloucester (Glo'ster) Chimney. (<i>Hooghly</i>)</p> <p>λ 22 29 24·1 L 88 12 57·5</p> <p>Fort Gloucester s. (<i>Hooghly</i>)</p> <p>λ 22 29 23·02 L 88 12 58·43 Nos. 932, 933</p> <p>Gambería Building, (<i>Saugor</i>) High and square.</p> <p>λ 24 4 58·9 L 78 23 59·2 No. 171</p> <p>Gambería Hill Mark. (<i>Saugor</i>)</p> <p>λ 23 47 38·10 L 78 34 39·93 Nos. 199, 200</p>	<p>Ganjua, LXXII. (<i>Vide page 17—B.</i>)</p> <p>λ 22 58 26·91 L 87 36 2·38 H 199 h 69 No. 88</p> <p>Ganwás Hill Mark. (<i>Jubbulpore</i>)</p> <p>λ 23 32 0·94 L 80 22 48·46</p> <p>Garaspur Fort, (<i>Gwalior Territories</i>) Flag on building.</p> <p>λ 23 40 4·2 L 78 9 35·5 No. 124</p> <p>Garaspur Hill Mark. (<i>Gwalior Territories</i>)</p> <p>λ 23 39 48·22 L 78 10 11·71 No. 125</p> <p>Garáwa Building. (<i>Lohardugga</i>)</p> <p>λ 24 9 50 L 83 51 8</p> <p>Garhákota Fort Flag. (<i>Saugor</i>)</p> <p>λ 23 47 17·2 L 79 11 4·7 Nos. 292, 293</p> <p>Garhákota Ramná Spire. (<i>Saugor</i>)</p> <p>λ 23 49 8·2 L 79 10 56·3 Nos. 288, 289</p> <p>Garhpára Hill Pagoda. (<i>Gwalior Territories</i>)</p> <p>λ 24 19 53 L 77 53 18</p> <p>Garhpára Pagoda, (<i>Saugor</i>) Easternmost, on hill.</p> <p>λ 23 54 49·0 L 78 45 37·4 No. 210</p> <p>Garísaram h.s. (<i>Hazáribágh</i>)</p> <p>λ 24 3 6·91 L 85 34 15·13 No. 619</p>



Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.
<p>Garolá Palace, (Saugor) Staircase.</p> <p>λ 24 1 28·7 L 78 28 58·4 No. 177</p> <p>Gaura h.s. (Jubbulpore)</p> <p>λ 23 33 37·58 L 80 7 32·54 Nos. 337, 338</p> <p>Gholsara Tree Flag. (Hooghly)</p> <p>λ 22 55 42 L 88 16 42</p> <p>Ghoránji, LIX. (Vide page 15—B.)</p> <p>λ 24 33 34·54 L 86 10 46·97 H 1984 h 3 No. 75</p> <p>Ghorbí h.s. (Rewá) Or Jeraila h.s.</p> <p>λ 24 13 3·75 L 82 38 58·34 Nos. 506, 507</p> <p>Ghúngútí h.s. (Rewá) On the highest part of the northeasternmost bluff of the Maikal plateau, about 1½ miles W. of village of that name, 1 mile N. of Kánchodar, and 2 miles E. of Túmi village; thána and tahsil Sohág-pur. Marked by a triangular paká pillar 2 feet high, with marks at top and bottom, and surrounded by an earthwork platform.</p> <p>λ 23 19 16·91 L 81 12 51·60 H 2747</p> <p>See Synoptical Vol. of the Biláspur Meridional Series.</p> <p>Gidelá Hill Mark. (Rewá)</p> <p>λ 24 14 53·96 L 81 11 51·69 Nos. 445, 446</p> <p>Girá s. (Rewá) At the N. E. extremity of village.</p> <p>λ 24 7 56·63 L 82 10 25·54 Nos. 459, 460</p> <p>Girpahár Hill Mark. (Rewá) On a great peak.</p> <p>λ 23 50 55·74 L 82 16 34·60 Nos. 496, 497</p>	<p>Gobra, XXXVII. (Vide page 11—B.)</p> <p>λ 23 37 4·98 L 83 31 26·56 H 3220 h 0 Nos. 44, 46</p> <p>Gohar Building. (Saugor)</p> <p>λ 23 44 34 L 78 44 12</p> <p>Gola h.s. (Jubbulpore)</p> <p>λ 23 37 37·71 L 80 14 44·25 Nos. 360, 361</p> <p>Gola s. (Hazáribágh) In village.</p> <p>λ 23 32 9·24 L 85 45 26·61 Nos. 643, 644</p> <p>Gomia Bungalow. (Hazáribágh)</p> <p>λ 23 47 34·7 L 85 52 16·3 No. 645</p> <p>Gongtoría h.s. (Saugor)</p> <p>λ 23 53 2·16 L 79 0 51·45 Nos. 251, 252</p> <p>Gora, XXXV. (Vide page 11—B.)</p> <p>λ 24 4 55·71 L 83 16 40·65 H 1828 h 3 No. 48</p> <p>Gorá Hill Mark. (Rewá) On hill N. E. of village.</p> <p>λ 24 3 15·30 L 82 19 13·44 Nos. 483, 484</p> <p>Gorá s. (Rewá) E. of village.</p> <p>λ 24 2 28·27 L 82 19 8·63 No. 487</p>	<p>Goretá Fort, (Saugor) Turret.</p> <p>λ 23 49 17·9 L 78 56 56·9 Nos. 259, 260</p> <p>Gosalpur h.s. (Jubbulpore) On staircase of building.</p> <p>λ 23 23 57·21 L 80 6 7·51 Nos. 341, 342</p> <p>Govindpur Semaphore. (Hazáribágh)</p> <p>λ 23 48 20·6 L 85 55 46·4 Nos. 646, 647</p> <p>Gúdá No. 1 h.s. (Lohardugga)</p> <p>λ 24 11 53·26 L 83 56 43·27 Nos. 534, 535</p> <p>Gúdá No. 2 h.s. (Rewá)</p> <p>λ 24 8 58·58 L 81 12 6·21</p> <p>Gumería Mosque. (Saugor)</p> <p>λ 23 51 19·3 L 78 50 55·5 Nos. 233, 234</p> <p>Gunpala Tree Flag. (Hooghly)</p> <p>λ 22 55 20 L 88 15 14</p> <p>Gurdía Hill Mark. (Manbhoom) Also called Belámu Hill Mark.</p> <p>λ 23 27 55·60 L 86 5 30·84 Nos. 663, 664</p> <p>Gurwáni, XXX. (Vide page 10—B.)</p> <p>λ 24 1 25·71 L 82 19 55·52 H 2083 h 3 Nos. 34, 39</p> <p>Gurwáni Hill Mark. (Rewá) On E. hill.</p> <p>λ 24 1 20·88 L 82 21 44·45 No. 489</p>

Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.
<p>Gurwáni Staff. (Rowá) In village.</p> <p>λ 24 0 7 L 82 20 38</p>	<p>Hartá Bági Hill Flag. (Lohardugga)</p> <p>λ 23 50 39'0 L 84 0 46'5 Nos. 542, 543</p>	<p>Hazáribágh Temple No. 1; (Hazáribágh) White, pointed spire south of dome.</p> <p>λ 24 0 1'3 L 85 24 2'3 No. 608</p>
<p>Gusuríá Chimney. (Hooghly) Also called Shalkia; chimney of Sugar Works.</p> <p>λ 22 36 44'2 L 88 23 56'0</p>	<p>Hatíádúhá Hill Mark. (Beerbhoom)</p> <p>λ 23 36 24'49 L 87 19 40'34 Nos. 725, 726</p>	<p>Hazáribágh Temple No. 2, (Hazáribágh) Black, pointed spire.</p> <p>λ 23 59 59'1 L 85 23 45'7 No. 604</p>
<p>Gusuríá (Puráná) Flag. (Hooghly) In village.</p> <p>λ 22 37 13'5 L 88 24 17'0 No. 915</p>	<p>Hatta Jail. (Damoh)</p> <p>λ 24 7 34 L 79 38 59</p>	<p>Himilia, IX. (Vide page 7—B.)</p> <p>λ 23 44 59'10 L 79 23 20'97 H 1490 h 25 No. 11</p>
<p>Gutehí h.s. (Jubbulpore)</p> <p>λ 23 34 25'31 L 80 7 25'82 Nos. 843, 844</p>	<p>Hatta, Magistrate's House. (Damoh)</p> <p>λ 24 7 7 L 79 38 30</p>	<p>Hindoríá Hill Mark. (Damoh)</p> <p>λ 23 53 17'16 L 79 37 51'97 Nos. 324, 325</p>
<p>Hákistápur, LXXIV. (Vide page 17—B.)</p> <p>λ 23 4 7'19 L 87 58 54'33 H 122 h 46 Nos. 90, 93</p>	<p>Hatta, N. Temple, (Damoh) Spire, N. of Jail.</p> <p>λ 24 8 23'33 L 79 38 49'16 Nos. 331, 332</p>	<p>Hinotá Temple. (Damoh)</p> <p>λ 23 48 33'9 L 79 23 0'5 Nos. 312, 313</p>
<p>Harai, XXXVI. (Vide page 11—B.)</p> <p>λ 23 29 18'30 L 83 0 37'29 H 2681 h 3 No. 45</p>	<p>Hatta, S. Temple. (Damoh)</p> <p>λ 24 7 43'9 L 79 38 25'1 No. 330</p>	<p>Hiran Pagoda, (Saugor) Pointed.</p> <p>λ 24 5 23'9 L 78 13 0'7 No. 165</p>
<p>Hará Sidá Hill Flag. (Lohardugga)</p> <p>λ 23 56 11'2 L 83 42 2'8 Nos. 523, 524</p>	<p>Hazáribágh Cenotaph. (Hazáribágh) On parade ground.</p> <p>λ 23 59 53'1 L 85 24 30'4 No. 606</p>	<p>Hírápur h.s. (Saugor)</p> <p>λ 23 37 51'51 L 78 49 48'65 Nos. 225, 226</p>
<p>Harat Tree Flag. (Hooghly)</p> <p>λ 22 53 6 L 88 15 13</p>	<p>Hazáribágh Church. (Hazáribágh)</p> <p>λ 23 59 19'0 L 85 24 33'1</p>	<p>Honársí Fort s. (Tonk)</p> <p>λ 24 1 33'97 L 77 52 28'37 See Synoptical Vol. of the Great Arc Meridional Series, Section 18° to 24°.</p>
<p>Hariharpur, L. (Vide page 13—B.)</p> <p>λ 23 16 31'03 L 85 4 17'69 H 2665 h 3 No. 63</p>	<p>Hazáribágh House, (Hazáribágh) Commanding officer's; E. face chimney.</p> <p>λ 23 59 35'1 L 85 24 34'0 No. 605</p>	<p>Howrah s. (Hooghly) On roof of Rustamji's house.</p> <p>λ 22 35 12'41 L 88 23 12'10 Nos. 893, 894</p>
	<p>Hazáribágh Mausoleum, (Hazáribágh) Dome spire.</p> <p>λ 23 59 58'5 L 85 24 9'1 No. 602</p>	

Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.
<b>Hurdag Hill Mark.</b> (Lohardugga)                    ° ' " $\lambda$ 23 38 52.50 $L$ 84 42 9.04 Nos. 578, 574	<b>Jagannáthpur Temple,</b> (Lohardugga) Spire.           ° ' " $\lambda$ 23 18 58.42 $L$ 85 19 28.79 Nos. 851, 852	<b>Jarímo h.s.</b> (Hasdríbágh)                    ° ' " $\lambda$ 24 8 6.37 $L$ 85 46 17.26 No. 609
<b>Hurfláong, XLII.</b> (Vide page 12—B.) $\lambda$ 24 2 5.99 $L$ 84 24 17.76 $H$ 1378 $h$ 3 Nos. 49, 52	<b>Jagobar h.s.</b> (Rewá) On peak S. of village. $\lambda$ 24 10 36.35 $L$ 82 26 47.14 Nos. 474, 475	<b>Jatásankar Fort.</b> (Damoá) $\lambda$ 24 13 43.6 $L$ 79 36 5.2 Nos. 334, 335
<b>Ichák Palace No. 1.</b> (Hasdríbágh) S.W. corner of staircase. $\lambda$ 24 5 23.7 $L$ 85 28 6.5 No. 607	<b>Jagobar s.</b> (Rewá) In middle of village. $\lambda$ 24 11 27.50 $L$ 82 26 54.15 No. 505	<b>Jharpo House.</b> (Hasdríbágh) Paká. $\lambda$ 24 2 30.3 $L$ 85 35 56.9 No. 621
<b>Ichák Palace No. 2.</b> (Hasdríbágh) $\lambda$ 24 5 39 $L$ 85 28 6	<b>Jágrí Tiled Building.</b> (Saugor) $\lambda$ 23 59 0 $L$ 79 0 24	<b>Jheriá Hill Mark.</b> (Jubbulpore) $\lambda$ 23 52 12.86 $L$ 80 46 22.17 Nos. 419, 420
<b>Ichák Temple.</b> (Hasdríbágh) S.E. of village. $\lambda$ 24 4 50.6 $L$ 85 28 30.6 No. 608	<b>Jaimula Tree Flag.</b> (Hooghly) $\lambda$ 22 51 33 $L$ 88 14 42	<b>Jhobí Fort,</b> (Rewá) S.W. angle. $\lambda$ 24 3 8.4 $L$ 81 0 42.1 No. 429
<b>Imlaudá Building,</b> (Gwalior Territories) Pointed roof. $\lambda$ 23 39 31.6 $L$ 78 3 59.2 No. 128	<b>Jaisinghnagar Fort,</b> (Saugor) Southern cavalier. $\lambda$ 23 37 34.8 $L$ 78 36 56.9 Nos. 204, 205	<b>Jhúj h.s.</b> (Jubbulpore) On a hill S.W. of village of the same name. $\lambda$ 23 20 15.47 $L$ 80 30 34.53 See Synoptical Vol. of the Jabalpur Meridional Series.
<b>Indráná No. 1 h.s.</b> (Jubbulpore) $\lambda$ 23 24 1.22 $L$ 79 56 22.21 Nos. 339, 340	<b>Jajnágrá Hill Mark.</b> (Jubbulpore) $\lambda$ 23 35 2.61 $L$ 80 24 14.37 Nos. 369, 370	<b>Jiwár h.s.</b> (Jubbulpore) $\lambda$ 23 56 29.15 $L$ 80 37 21.40 Nos. 400, 401
<b>Isarwar Pagoda.</b> (Saugor) On hill. $\lambda$ 23 57 39.0 $L$ 78 34 59.9 Nos. 185, 186	<b>Jálve, LX.</b> (Vide page 15—B.) $\lambda$ 24 22 37.87 $L$ 86 39 23.60 $H$ 1284 $h$ 2 No. 76	<b>Jogí h.s.</b> (Hasdríbágh) $\lambda$ 24 22 43.42 $L$ 85 44 0.53 No. 623
<b>Ishárá s.</b> (Hooghly) On paká ghát in village, on W. bank of river. $\lambda$ 22 43 24.74 $L$ 88 23 55.43 No. 907	<b>Jamaniá h.s.</b> (Damoá) $\lambda$ 23 57 26.68 $L$ 79 43 38.17 Nos. 326, 327	<b>Jordag Tiled Building.</b> (Hasdríbágh) $\lambda$ 23 53 14 $L$ 85 6 9
<b>Itiká h.s.</b> (Lohardugga) $\lambda$ 24 2 41.14 $L$ 84 0 56.86 Nos. 544, 545	<b>Jámgarí s.</b> (Rewá) On rock N. of village. $\lambda$ 24 3 18.62 $L$ 82 22 11.05 No. 438	<b>Jortalá Temple.</b> (Damoá) $\lambda$ 23 52 20.8 $L$ 79 24 15.1 No. 399

Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.
<p><b>Jukehí h.s.</b> (<i>Panna-Myhora</i>)</p> <p>λ 24 0 11'03 L 80 27 36'81 Nos. 887, 888</p>	<p><b>Kanáo Fort.</b> (<i>Saugor</i>) S.W. angle of high turret.</p> <p>λ 24 0 12'5 L 78 25 51'8 No. 169</p>	<p><b>Kariápahár h.s.</b> (<i>Gwalior Territories</i>)</p> <p>λ 23 52 49'58 L 78 10 48'85 Nos. 142, 143</p>
<p><b>Kadpára Tree Flag.</b> (<i>Hooghly</i>)</p> <p>λ 22 53 53 L 88 15 24</p>	<p><b>Kanáo Hill Mark.</b> (<i>Rowá</i>) On great mountain.</p> <p>λ 24 13 40'07 L 82 34 43'43 Nos. 502, 503</p>	<p><b>Karidá Hill Mark.</b> (<i>Hasdríbhá</i>)</p> <p>λ 24 7 10'57 L 86 1 59'18 Nos. 862, 863</p>
<p><b>Kahmár h.s.</b> (<i>Lohardugga</i>) On a rocky projection and towards the western extremity of a remarkably high hill, being in continuation of the same range of hills as that on which the Principal Station of Bágru is. Kahmár village from which the station is named lies about 2 miles S., and the large villages of Salgi and Salala lie S.E. and S. respectively, about 2½ miles. A ⊙ engraved on the rock is <i>sité</i> and surmounted by a pile of stones, defines the station.</p> <p>λ 23 36 19'01 L 84 43 17'73 No. 575</p>	<p><b>Kanera Hill Tree.</b> (<i>Saugor</i>)</p> <p>λ 23 54 12 L 78 34 32</p>	<p><b>Karinpahár Peak No. 1.</b> (<i>Rowá</i>) Needle shaped rock.</p> <p>λ 24 14 22'66 L 82 21 33'62 No. 470, 471</p>
<p><b>Káiro Hill Mark.</b> (<i>Lohardugga</i>)</p> <p>λ 23 26 4'99 L 84 56 25'14 Nos. 579, 580</p>	<p><b>Kanrodí h.s.</b> (<i>Rowá</i>)</p> <p>λ 23 33 45'97 L 81 24 26'36 H 2598 Nos. 438, 439</p>	<p><b>Karinpahár Peak No. 2,</b> (<i>Rowá</i>) Eastern; point of rock.</p> <p>λ 24 14 20'09 L 82 22 50'04 Nos. 476, 477</p>
<p><b>Kálúa Peak.</b> (<i>Gwalior Territories</i>)</p> <p>λ 23 40 9 L 78 12 52</p>	<p><b>Kanwára Fort,</b> (<i>Jubbulpore</i>) N.W. angle.</p> <p>λ 23 55 19'9 L 80 29 18'8 Nos. 394, 395</p>	<p><b>Káritalái Fort,</b> (<i>Rowá</i>) S.W. angle.</p> <p>λ 24 3 15'5 L 80 45 6'5 No. 408</p>
<p><b>Kalúmar, XII.</b> (<i>Vide page 7—B.</i>)</p> <p>λ 23 27 52'28 L 79 46 50'98 H 2467 h 3 Nos. 14, 16</p>	<p><b>Karápúr Temple.</b> (<i>Saugor</i>)</p> <p>λ 23 56 51'3 L 78 54 27'3 Nos. 235, 236</p>	<p><b>Karónda House,</b> (<i>Gwalior Territories</i>) Highest in village.</p> <p>λ 23 45 15 L 78 3 29</p>
<p><b>Kalúmar h.s.</b> (<i>Damoh</i>)</p> <p>λ 23 27 52'36 L 79 46 50'95 Nos. 808, 809</p>	<p><b>Karásoli, LXIX.</b> (<i>Vide page 17—B.</i>)</p> <p>λ 23 14 15'12 L 87 27 37'65 H 340 h 12 No. 81</p>	<p><b>Kasiátu, XLIV.</b> (<i>Vide page 12—B.</i>)</p> <p>λ 23 58 29'68 L 84 56 46'76 H 2650 h 3 No. 54</p>
<p><b>Kámkhera, (IV).</b> (<i>Vide page 6—B.</i>)</p> <p>λ 23 59 44'93 L 77 45 34'03 H 1780 h 10 No. 1</p>	<p><b>Karárá, XXIII.</b> (<i>Vide page 9—B.</i>)</p> <p>λ 24 4 42'01 L 81 18 14'47 H 1966 h 3 No. 25</p>	<p><b>Kasirberi Tree Flag.</b> (<i>Hooghly</i>)</p> <p>λ 22 50 59 L 88 15 35</p>
	<p><b>Karásoli, LXIX.</b> (<i>Vide page 17—B.</i>)</p> <p>λ 23 14 15'12 L 87 27 37'65 H 340 h 12 No. 81</p>	<p><b>Kasmár Hill Mark.</b> (<i>Lohardugga</i>) Also called Jashpura hill.</p> <p>λ 24 7 40'01 L 84 32 40'59 Nos. 565, 566</p>
	<p><b>Káris Hill Flag.</b> (<i>Rowá</i>)</p> <p>λ 23 54 29'55 L 82 46 8'34 Nos. 513, 514</p>	<p><b>Katkamsandí Semaphore.</b> (<i>Hasdríbhá</i>)</p> <p>λ 24 8 56'6 L 85 13 21'8 Nos. 598, 599</p>

Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.
<b>Kauriya Temple No. 1.</b> (Jubbulpore) $\lambda$ 23 38 35.6 $L$ 80 11 50.6 No. 355	<b>Khogwár h.s.</b> (Garhjat States, Chota Nagpore Division) In Birgúja. $\lambda$ 23 55 7.68 $L$ 82 47 33.68 Nos. 515, 516	<b>Kokraha Village Tree Flag.</b> (Hasaribágh) $\lambda$ 24 0 0 $L$ 86 15 25
<b>Kauriya Temple No. 2,</b> (Rewá) Black. $\lambda$ 23 35 47.5 $L$ 80 41 58.4 No. 409	<b>Khorí s.</b> (Hooghly) $\lambda$ 22 54 18.25 $L$ 88 17 6.63 Nos. 888, 889	<b>Kola h.s.</b> (Bankoora) $\lambda$ 23 23 19.74 $L$ 87 9 37.91 Nos. 731, 732
<b>Kauwái h.s.</b> (Rewá) $\lambda$ 23 53 18.82 $L$ 82 29 1.08 Nos. 509, 510	<b>Kimlásá Fort,</b> (Saugor) Cupola. $\lambda$ 24 13 20.4 $L$ 78 24 16.6 No. 174	<b>Komdhara Tree Flag.</b> (Hooghly) $\lambda$ 22 52 46 $L$ 88 16 23
<b>Khaira Pándu, XL.</b> (Vide page 12—B.) $\lambda$ 24 20 35.45 $L$ 83 58 41.84 $H$ 1865 $h$ 3 No. 51	<b>Kimlásá Pagoda.</b> (Saugor) $\lambda$ 24 12 21.2 $L$ 78 24 24.9 Nos. 172, 173	<b>Kona Peak,</b> (Gwalior Territories) N. extremity. $\lambda$ 23 49 45 $L$ 78 11.29
<b>Kharári Hill Tree.</b> (Gwalior Territories) $\lambda$ 23 45 13 $L$ 78 7 46	<b>Kishnaghur Flag.</b> (Beerbhoom) $\lambda$ 23 46 46.9 $L$ 87 27 42.0 No. 755	<b>Kondaulí h.s.</b> (Hasaribágh) On a remarkable, pointed and de- tached hill. $\lambda$ 24 13 59.03 $L$ 86 22 55.95 No. 876
<b>Khardaha s.</b> (24-Pergunnahs) On E. bank of the Hooghly. $\lambda$ 22 43 19.30 $L$ 88 24 20.77 No. 906	<b>Kishnaghur s.</b> (Burdwan) On staircase of Indigo Factory. $\lambda$ 23 13 2.46 $L$ 87 35 39.33 No. 754	<b>Konnagar Ghát,</b> (Hooghly) S.E. angle. $\lambda$ 22 41 38.4 $L$ 88 24 14.0 No. 919
<b>Khardaha Temple,</b> (24-Pergunnahs) Spire; N. of the khál. $\lambda$ 22 43 26.4 $L$ 88 24 21.5 No. 921	<b>Kistásair Hill Mark.</b> (Bankoora) $\lambda$ 23 16 24.44 $L$ 87 20 2.36 Nos. 746, 747	<b>Konnagar Temple,</b> (Hooghly) Southernmost spire. $\lambda$ 22 42 20.7. $L$ 88 24 5.6 No. 920
<b>Kharení Temple.</b> (Jubbulpore) $\lambda$ 23 40 27.9 $L$ 80 17 6.8 No. 868	<b>Kistonagar Tree Flag.</b> (24-Pergunnahs) In centre of village. $\lambda$ 22 31 4 $L$ 88 17 8	<b>Kopai Tree Flag.</b> (Hooghly) $\lambda$ 22 56 15 $L$ 88 17 23
<b>Kharma Semaphore.</b> (Hasaribágh) $\lambda$ 23 54 23.8 $L$ 85.46 54.4	<b>Kochea, XXXIX.</b> (Vide page 12—B.) $\lambda$ 24 18 25.05 $L$ 83 40 44.44 $H$ 1648 $h$ 2 No. 50	<b>Korá Koh s.</b> (Rewá) On elevation at village. $\lambda$ 24 16 29.79 $L$ 82 22 15.39 Nos. 472, 473
<b>Khatras Temple.</b> (Mandhoom) $\lambda$ 23 48 48.7 $L$ 86 20 32.6 No. 667	<b>Kodá h.s.</b> (Jubbulpore) $\lambda$ 23 41 31.93 $L$ 80 40 4.03 Nos. 398, 399	<b>Kori Tree.</b> (Rewá) On hill. $\lambda$ 24 10 35 $L$ 81 24 13
		<b>Koria, XXVII.</b> (Vide page 10—B.) $\lambda$ 24 24 27.30 $L$ 81 32 58.42 $H$ 1973 $h$ 3 No. 37

Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.
<b>Koria Hill Mark.</b> ( <i>Jubbulpore</i> ) $\lambda$ 22 39 14'36 $L$ 80 14 41'88 Nos. 375, 376	<b>Kurhurbaree Bungalow,</b> ( <i>Hazáribágh</i> ) Flag. $\lambda$ 24 10 35'9 $L$ 86 17 56'7 Nos. 877, 878	<b>Lakhanpur Building.</b> ( <i>Saugor</i> ) $\lambda$ 23 50 23 $L$ 78 31 38
<b>Kotan Hill Stone.</b> ( <i>Lohardugga</i> ) $\lambda$ 24 6 2'2 $L$ 83 44 34'0 Nos. 528, 529	<b>Kurwaí Fort,</b> ( <i>Gwalior Territories</i> ) S. minaret; in Kurwaí. $\lambda$ 24 7 11'4 $L$ 78 5 7'6 No. 114	<b>Lakhanpur h.s.</b> ( <i>Sonthal Pergunnahs</i> ) $\lambda$ 23 48 36'74 $L$ 87 11 44'33 Nos. 707, 708
<b>Kudrí h.s.</b> ( <i>Panna-Jubbulpore</i> ) $\lambda$ 23 59 42'46 $L$ 80 12 44'74 Nos. 389, 390	<b>Kusdí Village Flag.</b> ( <i>Lohardugga</i> ) $\lambda$ 24 2 5 $L$ 84 22 27	<b>Lakní h.s.</b> ( <i>Saugor</i> ) $\lambda$ 23 44 45'70 $L$ 78 47 12'40 Nos. 221, 222
<b>Kuliaba Tree Flag.</b> ( <i>Hooghly</i> ) $\lambda$ 22 52 40 $L$ 88 16 4	<b>Kutrang s.</b> ( <i>Hooghly</i> ) In village on W. bank of river. $\lambda$ 22 41 22'72 $L$ 88 24 14'64 Nos. 904, 905	<b>Lakoli, II.</b> ( <i>vide page 6—B.</i> ) $\lambda$ 23 29 22'06 $L$ 78 8 27'41 $H$ 2184 $h$ 3 No. 4
<b>Kumandí Hill Mark.</b> ( <i>Lohardugga</i> ) $\lambda$ 23 42 34'88 $L$ 84 24 51'31 Nos. 550, 551	<b>Kutrí Semaphore.</b> ( <i>Hazáribágh</i> ) $\lambda$ 23 41 12'8 $L$ 86 5 6'6 Nos. 659, 660	<b>La Martiniere, LXXXVI.</b> ( <i>vide page 19—B.</i> ) $\lambda$ 22 32 29'00 $L$ 88 23 59'84 $H$ 111 $h$ 0 No. 107
<b>Kumárháti Temple.</b> ( <i>Hooghly</i> ) Spire of northernmost of a row of temples. $\lambda$ 22 40 12'9 $L$ 88 24 14'7	<b>Labar Pandu Village.</b> ( <i>Lohardugga</i> ) $\lambda$ 24 18 58 $L$ 84 0 32	<b>Laskarhát s.</b> ( <i>24 Pergunnahs</i> ) About the centre of an open plain skirted by the villages of Laskarhát, Mazurda, and Kusba. Marked by a paká pillar about 8 feet high having 8 mark-stones, the lower below the foundation level, the middle flush with the ground and the upper upon the surface of the pillar, and surrounded by a kachá platform. $\lambda$ 22 30 40'88 $L$ 88 26 28'11 No. 944
<b>Kumbhí Building,</b> ( <i>Jubbulpore</i> ) Staircase. $\lambda$ 23 27 35'2 $L$ 80 17 50'3 No. 353	<b>Lachmanpur h.s.</b> ( <i>Manbhoom</i> ) $\lambda$ 23 54 14'51 $L$ 86 21 27'84 Nos. 655, 656	<b>Latágáon Tiled Building,</b> ( <i>Myhere</i> ) Southern. $\lambda$ 24 5 51 $L$ 80 53 14
<b>Kundalpur Temple,</b> ( <i>Damoh</i> ) Highest, on hill. $\lambda$ 23 58 53'6 $L$ 79 46 3'7 No. 329	<b>Ladorá Temple.</b> ( <i>Saugor</i> ) $\lambda$ 23 51 2'4 $L$ 78 55 22'5 Nos. 255, 256	<b>Látehár s.</b> ( <i>Lohardugga</i> ) 9 feet 8. of tree. $\lambda$ 23 44 32'68 $L$ 84 32 36'61 Nos. 558, 559
<b>Kundar h.s.</b> ( <i>Rewá</i> ) $\lambda$ 23 30 42'40 $L$ 81 33 29'74 No. 441	<b>Lakanpúra, XIX.</b> ( <i>vide page 8—B.</i> ) $\lambda$ 24 2 49'92 $L$ 80 49 51'67 $H$ 1780 $h$ 4 No. 23	<b>Láválaung Hill Mark.</b> ( <i>Hazáribágh</i> ) $\lambda$ 23 43 13'07 $L$ 85 43 15'93 Nos. 634, 635
<b>Kurai s.</b> ( <i>Saugor</i> ) On N.E. angle of fort. $\lambda$ 24 3 23'91 $L$ 78 22 20'56 Nos. 163, 164	<b>Lakarkundá Flag.</b> ( <i>Beerbhoo.n</i> ) $\lambda$ 23 48 28'3 $L$ 87 18 1'6 No. 720	

Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.																										
<b>Leslieganj Kachahri.</b> (Lohardugga) <table> <tr><td>λ</td><td>24 2 38</td></tr> <tr><td>L</td><td>84 15 11</td></tr> </table>	λ	24 2 38	L	84 15 11	<b>Lul, XXXII.</b> (Vide page 10—B.) <table> <tr><td>λ</td><td>23 44 52.79</td></tr> <tr><td>L</td><td>82 32 58.80</td></tr> <tr><td>H</td><td>30.47</td></tr> <tr><td>h</td><td>3</td></tr> <tr><td colspan="2">No. 85</td></tr> </table>	λ	23 44 52.79	L	82 32 58.80	H	30.47	h	3	No. 85		<b>Máigúá Temple.</b> (Jubbulpore) <table> <tr><td>λ</td><td>23 24 57.4</td></tr> <tr><td>L</td><td>80 14 33.0</td></tr> <tr><td colspan="2">No. 851</td></tr> </table>	λ	23 24 57.4	L	80 14 33.0	No. 851							
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<b>Lobasan Tree Flag.</b> (Hooghly) <table> <tr><td>λ</td><td>22 53 37</td></tr> <tr><td>L</td><td>88 15 17</td></tr> </table>	λ	22 53 37	L	88 15 17	<b>Madhpur, LXX.</b> (Vide page 17—B.) <table> <tr><td>λ</td><td>23 9 53.06</td></tr> <tr><td>L</td><td>87 47 4.47</td></tr> <tr><td>H</td><td>180</td></tr> <tr><td>h</td><td>49</td></tr> <tr><td colspan="2">No. 87</td></tr> </table>	λ	23 9 53.06	L	87 47 4.47	H	180	h	49	No. 87		<b>Majíáon Fort s.</b> (Lohardugga) <table> <tr><td>λ</td><td>24 19 17.65</td></tr> <tr><td>L</td><td>83 51 48.59</td></tr> <tr><td colspan="2">Nos. 537, 538</td></tr> </table>	λ	24 19 17.65	L	83 51 48.59	Nos. 537, 538							
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Nos. 537, 538																												
<b>Lohardugga s.</b> (Lohardugga) On the third story of the only paká-roof Haveli in the place, belonging to Gajádlhar Sáu Mahájan. A ⊙ by which the station is marked and on which the theodolite was centred, was found engraved on the roof. <table> <tr><td>λ</td><td>23 25 47.73</td></tr> <tr><td>L</td><td>84 43 15.94</td></tr> <tr><td>H</td><td>2205</td></tr> <tr><td colspan="2">No. 576</td></tr> </table>	λ	23 25 47.73	L	84 43 15.94	H	2205	No. 576		<b>Madhuban Temple.</b> (Hazáribágh) Spire of highest of a group of Jain temples. <table> <tr><td>λ</td><td>24 0 13.31</td></tr> <tr><td>L</td><td>86 11 30.29</td></tr> <tr><td colspan="2">Nos. 866, 867</td></tr> </table>	λ	24 0 13.31	L	86 11 30.29	Nos. 866, 867		<b>Majolí Temple,</b> (Jubbulpore) Southern. <table> <tr><td>λ</td><td>23 29 56.5</td></tr> <tr><td>L</td><td>79 58 2.8</td></tr> <tr><td colspan="2">No. 845</td></tr> </table>	λ	23 29 56.5	L	79 58 2.8	No. 845							
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<b>Lohári Temple.</b> (Saugor) <table> <tr><td>λ</td><td>23 57 58.4</td></tr> <tr><td>L</td><td>78 39 27.5</td></tr> <tr><td colspan="2">No. 189</td></tr> </table>	λ	23 57 58.4	L	78 39 27.5	No. 189		<b>Maháhal h.s.</b> (Hazáribágh) <table> <tr><td>λ</td><td>24 10 38.85</td></tr> <tr><td>L</td><td>85 36 7.33</td></tr> <tr><td colspan="2">Nos. 612, 613</td></tr> </table>	λ	24 10 38.85	L	85 36 7.33	Nos. 612, 613		<b>Maktuma Flag.</b> (Hazáribágh) <table> <tr><td>λ</td><td>24 2 47</td></tr> <tr><td>L</td><td>85 32 59</td></tr> </table>	λ	24 2 47	L	85 32 59										
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<b>Lora, XVI.</b> (Vide page 8—B.) <table> <tr><td>λ</td><td>23 29 41.53</td></tr> <tr><td>L</td><td>80 12 24.50</td></tr> <tr><td>H</td><td>1923</td></tr> <tr><td>h</td><td>4</td></tr> <tr><td colspan="2">No. 18</td></tr> </table>	λ	23 29 41.53	L	80 12 24.50	H	1923	h	4	No. 18		<b>Máhesh s.</b> (Hooghly) E. of village. <table> <tr><td>λ</td><td>22 44 13.65</td></tr> <tr><td>L</td><td>88 24 4.63</td></tr> <tr><td colspan="2">No. 908</td></tr> </table>	λ	22 44 13.65	L	88 24 4.63	No. 908		<b>Málan, XLVII.</b> (Vide page 13—B.) <table> <tr><td>λ</td><td>23 39 0.49</td></tr> <tr><td>L</td><td>84 53 24.39</td></tr> <tr><td>H</td><td>2307</td></tr> <tr><td>h</td><td>4</td></tr> <tr><td colspan="2">Nos. 55, 59</td></tr> </table>	λ	23 39 0.49	L	84 53 24.39	H	2307	h	4	Nos. 55, 59	
λ	23 29 41.53																											
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<b>Lora Fort.</b> (Gwalior Territories) In Kurwal. <table> <tr><td>λ</td><td>24 10 21</td></tr> <tr><td>L</td><td>78 8 1</td></tr> </table>	λ	24 10 21	L	78 8 1	<b>Mahúda, LIV.</b> (Vide page 14—B.) <table> <tr><td>λ</td><td>24 11 32.21</td></tr> <tr><td>L</td><td>85 14 26.93</td></tr> <tr><td>H</td><td>2410</td></tr> <tr><td>h</td><td>3</td></tr> <tr><td colspan="2">No. 72</td></tr> </table>	λ	24 11 32.21	L	85 14 26.93	H	2410	h	3	No. 72		<b>Malhargarh Temple,</b> (Gwalior Territories) Pointed; on hill. <table> <tr><td>λ</td><td>24 17 5.7</td></tr> <tr><td>L</td><td>78 6 46.7</td></tr> <tr><td colspan="2">No. 135</td></tr> </table>	λ	24 17 5.7	L	78 6 46.7	No. 135							
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<b>Lora Hill Tree.</b> (Saugor) <table> <tr><td>λ</td><td>23 55 19</td></tr> <tr><td>L</td><td>78 30 17</td></tr> </table>	λ	23 55 19	L	78 30 17	<b>Mahúda Hill Mark.</b> (Hazáribágh) <table> <tr><td>λ</td><td>24 11 30.64</td></tr> <tr><td>L</td><td>85 14 18.71</td></tr> </table>	λ	24 11 30.64	L	85 14 18.71	<b>Maliádi, E. Pediment.</b> (Bankoora) <table> <tr><td>λ</td><td>23 28 26.3</td></tr> <tr><td>L</td><td>87 15 55.0</td></tr> <tr><td colspan="2">Nos. 739, 740</td></tr> </table>	λ	23 28 26.3	L	87 15 55.0	Nos. 739, 740													
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<b>Lorgarha Village.</b> (Lohardugga) <table> <tr><td>λ</td><td>23 39 43</td></tr> <tr><td>L</td><td>84 17 27</td></tr> </table>	λ	23 39 43	L	84 17 27	<b>Mahudpur W. Building.</b> (Damoh) <table> <tr><td>λ</td><td>23 55 7</td></tr> <tr><td>L</td><td>79 29 57</td></tr> </table>	λ	23 55 7	L	79 29 57	<b>Malpára E. Village Tree Flag.</b> (Hooghly) <table> <tr><td>λ</td><td>22 57 23</td></tr> <tr><td>L</td><td>88 17 20</td></tr> </table>	λ	22 57 23	L	88 17 20														
λ	23 39 43																											
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<b>Lotna Lotni Tiled House.</b> (Saugor) <table> <tr><td>λ</td><td>23 50 29</td></tr> <tr><td>L</td><td>78 37 41</td></tr> </table>	λ	23 50 29	L	78 37 41	<b>Máhwári, XLVIII.</b> (Vide page 13—B.) <table> <tr><td>λ</td><td>23 26 5.16</td></tr> <tr><td>L</td><td>84 56 28.93</td></tr> <tr><td>H</td><td>3153</td></tr> <tr><td>h</td><td>4</td></tr> <tr><td colspan="2">No. 60</td></tr> </table>	λ	23 26 5.16	L	84 56 28.93	H	3153	h	4	No. 60		<b>Malpára s.</b> (Hooghly) <table> <tr><td>λ</td><td>22 56 56.43</td></tr> <tr><td>L</td><td>88 16 54.52</td></tr> <tr><td colspan="2">No. 887</td></tr> </table>	λ	22 56 56.43	L	88 16 54.52	No. 887							
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L	78 37 41																											
λ	23 26 5.16																											
L	84 56 28.93																											
H	3153																											
h	4																											
No. 60																												
λ	22 56 56.43																											
L	88 16 54.52																											
No. 887																												
<b>Lugu Hill Mark.</b> (Hazáribágh) <table> <tr><td>λ</td><td>23 46 53.17</td></tr> <tr><td>L</td><td>85 43 45.02</td></tr> <tr><td colspan="2">Nos. 636, 637</td></tr> </table>	λ	23 46 53.17	L	85 43 45.02	Nos. 636, 637																							
λ	23 46 53.17																											
L	85 43 45.02																											
Nos. 636, 637																												

Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.
<b>Malúncha, LXIV.</b> ( <i>Vide page 16—B.</i> ) $\lambda$ 23 54 29.02 $L$ 87 8 9.04 $H$ 970 $h$ 4 No. 83	<b>Masanjír h.s.</b> ( <i>Saugor</i> ) $\lambda$ 23 46 1.05 $L$ 78 46 37.99 Nos. 215, 216	<b>Modiá Temple.</b> ( <i>Damoh</i> ) $\lambda$ 23 57 15.3 $L$ 79 31 19.0 No. 323
<b>Malwária Village.</b> ( <i>Lohardugga</i> ) $\lambda$ 24 19 51 $L$ 83 55 29	<b>Masjidpur h.s.</b> ( <i>Gwalior Territories</i> ) In Kurwal. $\lambda$ 24 0 36.97 $L$ 77 58 42.59 No. 112	<b>Mohári Temple.</b> ( <i>Damoh</i> ) $\lambda$ 23 45 36.6 $L$ 79 42 35.5 No. 336
<b>Mandra, VIII.</b> ( <i>Vide page 7—B.</i> ) $\lambda$ 23 38 41.66 $L$ 79 8 53.32 $H$ 1648 $h$ 3 Nos. 8, 10	<b>Masúriái Building.</b> ( <i>Saugor</i> ) On hill. $\lambda$ 23 46 40.3 $L$ 78 33 32.4 No. 197	<b>Morchíá h.s.</b> ( <i>Bewa</i> ) Mark on hill 3 miles S.E. of Pokra village. $\lambda$ 24 16 34.49 $L$ 82 34 9.12 No. 504
<b>Manjíá Hill Mark.</b> ( <i>Bankoora</i> ) $\lambda$ 23 33 7.05 $L$ 87 10 38.29 Nos. 705, 706	<b>Maulí h.s.</b> ( <i>Bewa</i> ) On hill also called Tábéla. $\lambda$ 24 11 48.74 $L$ 82 7 55.20 Nos. 450, 451	<b>Mostikrí s.</b> ( <i>Hooghly</i> ) $\lambda$ 22 52 6.66 $L$ 88 15 33.02 No. 883
<b>Manjíái s.</b> ( <i>Bardwan</i> ) On tank bank. $\lambda$ 23 33 4.78 $L$ 87 17 34.70 Nos. 737, 738	<b>Mero Village Tree Flag.</b> ( <i>Hazáribágh</i> ) $\lambda$ 24 0 29 $L$ 85 30 43	<b>Mubárákpur, LXXV.</b> ( <i>Vide page 18—B.</i> ) $\lambda$ 22 50 28.31 $L$ 87 49 58.26 $H$ 121 $h$ 74 No. 89
<b>Mánkheri Village.</b> ( <i>Lohardugga</i> ) $\lambda$ 23 41 25 $L$ 84 29 16	<b>Metiaburuj Ghát.</b> ( <i>24-Pergunnahs</i> ) $\lambda$ 22 33 3 $L$ 88 19 41	<b>Múdiá Building,</b> ( <i>Saugor</i> ) Double-roofed. $\lambda$ 24 2 35 $L$ 78 25 14
<b>Marámoko Rock,</b> ( <i>Hazáribágh</i> ) Sharp pointed; on a detached hill. $\lambda$ 24 34 12.0 $L$ 85 42 19.8 No. 627	<b>Mirchádhi, XXXIV.</b> ( <i>Vide page 11—B.</i> ) $\lambda$ 23 48 13.17 $L$ 82 56 11.41 $H$ 2292 $h$ 1 No. 43	<b>Muhammadgarh Basodá,</b> ( <i>Gwalior Territories</i> ) Flag. $\lambda$ 23 38 40.8 $L$ 78 12 35.0 Nos. 144, 145
<b>Maretí Temple.</b> ( <i>Jubbulpore</i> ) $\lambda$ 23 30 54.5 $L$ 80 3 46.6 Nos. 346, 347	<b>Mirgnáth Peak.</b> ( <i>Gwalior Territories</i> ) $\lambda$ 23 51 24 $L$ 78 10 42	<b>Munderí Mosque.</b> ( <i>Saugor</i> ) $\lambda$ 23 45 24.2 $L$ 78 33 44.0 No. 198
<b>Marwás, XXVI.</b> ( <i>Vide page 9—B.</i> ) $\lambda$ 24 4 59.33 $L$ 81 49 2.46 $H$ 1776 $h$ 4 No. 32	<b>Mirzapur Hill Mark.</b> ( <i>Saugor</i> ) $\lambda$ 23 45 53.14 $L$ 78 22 27.11 Nos. 156, 157	<b>Murádpur Pagoda,</b> ( <i>Gwalior Territories</i> ) White, in village. $\lambda$ 23 52 3.6 $L$ 78 5 21.0 No. 126
	<b>Móáso Building.</b> ( <i>Saugor</i> ) On hill. $\lambda$ 23 48 55.1 $L$ 78 31 18.9 No. 196	<b>Múrergerh, XXVIII.</b> ( <i>Vide page 10—B.</i> ) $\lambda$ 23 35 34.74 $L$ 82 0 15.48 $H$ 3027 $h$ 4 No. 33



Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.
<b>Murwára Building,</b> (Jubbulpore) E. cupola. $\lambda$ 23 50 12'0 $L$ 80 25 56'3 Nos. 392, 393	<b>Narsingharh Fort,</b> (Damoh) Flag. $\lambda$ 23 59 55'4 $L$ 79 26 24'4 Nos. 316, 317	<b>Nibria, LXXXIII.</b> (Vide page 19—B.) $\lambda$ 22 35 33'92 $L$ 88 17 9'61 H 102 h 88 No. 97
<b>Nagar Temple.</b> (Damoh) $\lambda$ 24 3 15'1 $L$ 79 29 28'9 No. 322	<b>Narwára Hill Tree.</b> (Rewá) $\lambda$ 24 4 44 $L$ 81 14 25	<b>Nigri s.</b> (Rewá) On detached hill about 2 miles E. of the Gopat river. $\lambda$ 24 9 41'05 $L$ 81 57 53'23
<b>Nágarh Hill Mark.</b> (Lohardugga) $\lambda$ 24 11 6'15 $L$ 84 31 26'56 No. 567	<b>Naudía Hill Tree.</b> (Rewá) $\lambda$ 23 53 17 $L$ 81 58 36	<b>Nishchindeepore Tree Flag.</b> (24-Pergunnahs) $\lambda$ 22 27 17 $L$ 88 12 7
<b>Nagar Kíari s.</b> (Mandhoom) $\lambda$ 23 53 7'61 $L$ 86 30 36'19 Nos. 678, 679	<b>Naugúá h.s.</b> (Myhere) $\lambda$ 24 4 56'25 $L$ 80 57 34'88 Nos. 417, 418	<b>No. 1 s.</b> (Hooghly) Or Chara s.; flag near Albion Foundry in Howrah. $\lambda$ 22 34 40'32 $L$ 88 23 1'54
<b>Náharman, VI.</b> (Vide page 6—B.) $\lambda$ 23 30 18'14 $L$ 78 52 16'31 H 2240 h 2 No. 9	<b>Nawáb Basodá,</b> (Gwalior Territories) Staircase. $\lambda$ 23 36 38'9 $L$ 78 14 5'2 Nos. 146, 147	<b>No. 2 s.</b> (Hooghly) Or Seebpore No. 1 s.; flag on top of a large house near the Sugar Work. $\lambda$ 22 34 18'61 $L$ 88 22 31'65
<b>Naktí Hill Stone.</b> (Lohardugga) $\lambda$ 23 34 23'8 $L$ 85 0 16'1 Nos. 577, 578	<b>Nawágáon, LXVII.</b> (Vide page 16—B.) $\lambda$ 23 38 6'97 $L$ 87 35 17'01 H 251 h 32 No. 85	<b>No. 3 s.</b> (Hooghly) Or Seebpore No. 2 s.; flag on W. bank of the Hooghly river. $\lambda$ 22 33 46'41 $L$ 88 22 13'66
<b>Nanní Deori Pagoda.</b> (Saugor) $\lambda$ 23 31 5'4 $L$ 78 48 58'1 No. 227	<b>Nawágarh Hill Building.</b> (Lohardugga) $\lambda$ 23 40 56 $L$ 84 30 41	<b>No. 4 s.</b> (24-Pergunnahs) Or Calcutta Fort William s., near water-gate. $\lambda$ 22 33 36'23 $L$ 88 22 41'52
<b>Narainpára Tree Flag.</b> (Hooghly) $\lambda$ 22 54 0 $L$ 88 15 42	<b>Nayagáon h.s.</b> (Panna) $\lambda$ 24 1 50'25 $L$ 79 50 8'12 No. 333	<b>No. 5 s.</b> (24-Pergunnahs) Or Kidderpore No. 1 s.; N. of the suspension bridge. $\lambda$ 22 33 3'04 $L$ 88 22 13'52
<b>Naraulí h.s.</b> (Saugor) $\lambda$ 23 54 16'02 $L$ 78 37 46'95 Nos. 187, 188	<b>Nero Hill Mark.</b> (Hazáribágh) $\lambda$ 24 28 22'05 $L$ 85 42 9'12 No. 624	<b>No. 6 s.</b> (24-Pergunnahs) Or Kidderpore No. 2 s.; flag on front of Major Irvine's house in Waigauj. $\lambda$ 22 32 50'66 $L$ 88 21 39'32
	<b>Niborá Temple,</b> (Damoh) Staircase. $\lambda$ 24 0 55'0 $L$ 79 20 22'3 Nos. 303, 304	<b>No. 7 s.</b> (Hooghly) Or Harpára s. $\lambda$ 22 33 17'86 $L$ 88 21 46'08

Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.
<p>No. 8 s. (Hooghly) Or Shálimar s.; flag at bend of the river Hooghly and in front of Mr. Sutherland's house.</p> <p>λ 22 33 6'10 L 88 21 22'76</p>	<p>No. 18 s. (24-Pergunnahs) Or Nidili s.; in village on E. bank of the river Hooghly.</p> <p>λ 22 33 19'77 L 88 18 28'66</p>	<p>No. 28 s. (Hooghly) Or Mánikpur No. 1 s.; on W. bank of the river Hooghly.</p> <p>λ 22 31 59'85 L 88 16 52'57</p>
<p>No. 9 s. (24-Pergunnahs) Or Moti Jhil s.</p> <p>λ 22 32 43'51 L 88 20 54'29</p>	<p>No. 19 s. (Hooghly) Or Pachpára (W) s.; in village on W. bank of the river Hooghly.</p> <p>λ 22 33 37'06 L 88 18 26'34</p>	<p>No. 29 s. (24-Pergunnahs) Or Manikháli s.; on E. bank of the river Hooghly; marked by a little brick platform.</p> <p>λ 22 31 18'74 L 88 17 10'79</p>
<p>No. 10 s. (Hooghly) Or Bishop's College s.; on S. side of the college, near bank of the river Hooghly.</p> <p>λ 22 33 11'84 L 88 20 49'62</p>	<p>No. 20 s. (24-Pergunnahs) Or Pachpára (E) s.; on E. bank of the river Hooghly.</p> <p>λ 22 33 24'81 L 88 18 2'74</p>	<p>No. 30 s. (Hooghly) Or Mánikpur No. 2 s.; on W. bank of the river Hooghly.</p> <p>λ 22 31 50'56 L 88 16 54'67</p>
<p>No. 11 s. (24-Pergunnahs) Or Muehikhola s.; on E. bank of the river Hooghly.</p> <p>λ 22 32 58'58 L 88 20 13'62</p>	<p>No. 21 s. (Hooghly) Or Jangalpur s.; on W. bank of the river Hooghly.</p> <p>λ 22 33 48'80 L 88 17 49'80</p>	<p>No. 31 s. (24-Pergunnahs) Or Kistanagar s.; marked by a little brick platform.</p> <p>λ 22 31 2'53 L 88 16 43'14</p>
<p>No. 12 s. (Hooghly) Or Botanical Garden s.; close to Dr. Wallich's house.</p> <p>λ 22 33 15'22 L 88 19 40'08</p>	<p>No. 22 s. (24-Pergunnahs) Or Bádaltala No. 1 s.; in village on E. bank of the river Hooghly.</p> <p>λ 22 33 27'15 L 88 17 47'72</p>	<p>No. 32 s. (Hooghly) Or Pír Sarang s.; at N. end of the village on W. bank of the river Hooghly.</p> <p>λ 22 31 15'24 L 88 15 57'57</p>
<p>No. 13 s. (24-Pergunnahs) Or Dhobápára s.; in village on E. bank of the river Hooghly.</p> <p>λ 22 33 11'82 L 88 19 3'90</p>	<p>No. 23 s. (Hooghly) Or Rajganj s.; at mouth of the khál in village on W. bank of the river Hooghly.</p> <p>λ 22 33 45'61 L 88 17 1'61</p>	<p>No. 33 s. (24-Pergunnahs) Or Hulúdánga s.; at W. end of the village on E. bank of the river Hooghly.</p> <p>λ 22 30 57'86 L 88 16 29'08</p>
<p>No. 14 s. (Hooghly) Or Nasriganj s.; in village on W. bank of the river Hooghly.</p> <p>λ 22 33 21'89 L 88 19 15'57</p>	<p>No. 24 s. (24-Pergunnahs) Or Bádaltala No. 2 s.; in village on E. bank of the river Hooghly.</p> <p>λ 22 33 27'10 L 88 17 35'86</p>	<p>Noáda t.s. (24-Pergunnahs)</p> <p>λ 22 40 7'37 L 88 25 6'37 Nos. 765, 766</p>
<p>No. 15 s. (24-Pergunnahs) Or Gobria Ghát s.; on E. bank of the river Hooghly.</p> <p>λ 22 33 17'44 L 88 18 39'78</p>	<p>No. 25 s. (Hooghly) Or Sakral s.; at mouth of the khál of that name on W. bank of the river Hooghly.</p> <p>λ 22 33 30'68 L 88 16 39'23</p>	<p>Nowádí Hill Mark. (Lohardugga)</p> <p>λ 23 55 56'92 L 83 55 51'49 No. 539</p>
<p>No. 16 s. (Hooghly) Or Podara No. 1 s.; in village on W. bank of the river Hooghly.</p> <p>λ 22 33 27'38 L 88 18 54'82</p>	<p>No. 26 s. (24-Pergunnahs) Or Bághmári s.; in village on E. bank of the river Hooghly.</p> <p>λ 22 33 11'56 L 88 17 5'23</p>	<p>Núrpur Fort Flag. (Gwalior Territories)</p> <p>λ 23 50 13 L 78 8 52</p>
<p>No. 17 s. (Hooghly) Or Podara No. 2 s.; in village on W. bank of the river Hooghly.</p> <p>λ 22 33 31'11 L 88 18 43'15</p>	<p>No. 27 s. (Hooghly) Or Singimári s.; at mouth of the khál on W. bank of the river Hooghly.</p> <p>λ 22 32 41'36 L 88 16 33'51</p>	<p>Opartá Hill Mark. (Hazáribágh)</p> <p>λ 24 15 39'56 L 85 35 56'48 No. 614</p>

Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.
<b>Pabái Great Bar Tree.</b> ( <i>Gwalior Territories</i> ) $\lambda$ 23 45 13 $L$ 77 59 19	<b>Pahrá, W. Temple.</b> ( <i>Mambhoom</i> ) $\lambda$ 23 30 38.8 $L$ 86 33 10.8 No. 682	<b>Panchamnagar Temple.</b> ( <i>Damoh</i> ) $\lambda$ 24 3 41.6 $L$ 79 12 21.1 Nos. 271, 272
<b>Pabái h.s.</b> ( <i>Rewá</i> ) Also called Paugarh h.s. The station is marked by a $\odot$ cut on stone imbedded in the ground. $\lambda$ 24 18 20.38 $L$ 81 57 17.36 No. 449	<b>Páikpára s.</b> ( <i>24-Pergunnahs</i> ) $\lambda$ 22 28 17.37 $L$ 88 14 52.73 $H$ 60 No. 931	<b>Panchipukur Village Tree Flag.</b> ( <i>Hooghly</i> ) $\lambda$ 22 54 19 $L$ 88 17 37
<b>Pabrá Hill Mark.</b> ( <i>Bankoora</i> ) $\lambda$ 23 32 36.45 $L$ 87 4 30.85 Nos. 697, 698	<b>Páikpára Village Tree.</b> ( <i>24-Pergunnahs</i> ) $\lambda$ 22 28 21 $L$ 88 15 17	<b>Pandrináth Pagoda.</b> ( <i>Saugor</i> ) $\lambda$ 23 37 39.7 $L$ 79 5 45.9 Nos. 277, 278
<b>Pachet Hill Mark.</b> ( <i>Mambhoom</i> ) $\lambda$ 23 37 11.16 $L$ 86 49 12.94 Nos. 676, 677	<b>Painári Temple,</b> ( <i>Saugor</i> ) On hill. $\lambda$ 24 1 20.4 $L$ 78 54 58.2 No. 241	<b>Panwání Temple.</b> ( <i>Jubbulpore</i> ) $\lambda$ 23 24 22.8 $L$ 80 14 48.6 No. 852
<b>Páda Rasoi Building.</b> ( <i>Saugor</i> ) $\lambda$ 23 50 3 $L$ 78 34 17	<b>Paintal s.</b> ( <i>Hooghly</i> ) On semaphore on the line from Calcutta to Benares. $\lambda$ 22 39 44.51 $L$ 88 10 52.22 Nos. 758, 759	<b>Párasnáth (Pareshnáth), LVII.</b> ( <i>Vide page 14—B.</i> ) $\lambda$ 23 57 34.89 $L$ 86 10 38.04 $H$ 4481 $h$ 1 Nos. 69, 74
<b>Padári Fort,</b> ( <i>Rewá</i> ) S.W. angle. $\lambda$ 24 11 35.1 $L$ 82 35 4.0 No. 508	<b>Palamow Hill Fort,</b> ( <i>Lohardugga</i> ) Flag. $\lambda$ 23 53 41.3 $L$ 84 16 22.8 No. 554	<b>Pareshnáth Temple Spire.</b> ( <i>Hazáribágh</i> ) On highest and westernmost peak of the mountain. $\lambda$ 23 57 47.27 $L$ 86 10 18.15 Nos. 868, 869
<b>Padári h.s.</b> ( <i>Rewá</i> ) $\lambda$ 23 58 33.42 $L$ 81 9 2.05 Nos. 432, 433	<b>Palándú Bungalow.</b> ( <i>Lohardugga</i> ) S. end of gable of Mr. Grose's bungalow in the Tea Plantation. $\lambda$ 23 16 53.5 $L$ 85 27 23.0 No. 858	<b>Párhát, LXXI.</b> ( <i>Vide page 17—B.</i> ) $\lambda$ 23 21 16.42 $L$ 87 53 18.74 $H$ 151 $h$ 40 No. 91
<b>Paderiá Building,</b> ( <i>Saugor</i> ) Staircase. $\lambda$ 23 52 13.6 $L$ 79 0 21.6 Nos. 262, 263	<b>Pálganjo Temple No. 1.</b> ( <i>Hazáribágh</i> ) $\lambda$ 24 4 45.6 $L$ 86 15 35.2 No. 665	<b>Partkolá h.s.</b> ( <i>Hazáribágh</i> ) $\lambda$ 24 14 34.78 $L$ 85 42 43.84 Nos. 610, 611
<b>Pádhar Hill,</b> ( <i>Gwalior Territories</i> ) With an arm. $\lambda$ 23 51 39.8 $L$ 78 8 4.0	<b>Pálganjo Temple No. 2.</b> ( <i>Hazáribágh</i> ) Spire of black temple in the large village of Pálganjo. $\lambda$ 24 4 43.3 $L$ 86 15 35.6 No. 879	<b>Parwatá Hill Mark.</b> ( <i>Rewá</i> ) On great bluff E. of Gurwání Principal Station. $\lambda$ 24 1 37.15 $L$ 82 30 16.69 Nos. 494, 495
<b>Pahárpur h.s.</b> ( <i>Mambhoom</i> ) $\lambda$ 23 51 28.73 $L$ 86 40 26.02 Nos. 674, 675	<b>Palwá Temple.</b> ( <i>Myhere</i> ) $\lambda$ 24 1 22.9 $L$ 80 29 4.2 No. 896	

Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.
<b>Patái South Building.</b> ( <i>Saugor</i> ) $\lambda$ 23 36 49 $L$ 78 59 48	<b>Pemákherí Flag.</b> ( <i>Saugor</i> ) $\lambda$ 23 48 46 $L$ 78 52 15	<b>Pokpári Village Tree Flag.</b> ( <i>24-Pergunnahs</i> ) $\lambda$ 22 29 10 $L$ 88 14 44
<b>Patái, LII.</b> ( <i>Vide page 14—B.</i> ) $\lambda$ 23 40 25.58 $L$ 85 9 54.14 $H$ 2165 $h$ 3 Nos. 56, 61, 65	<b>Phulbária Village Flag.</b> ( <i>Hazáribágh</i> ) $\lambda$ 24 28 10 $L$ 85 47 2	<b>Pokra, XXXI.</b> ( <i>Vide page 10—B.</i> ) $\lambda$ 24 18 47.97 $L$ 82 31 5.68 $H$ 2207 $h$ 3 No. 40
<b>Pátan Building.</b> ( <i>Saugor</i> ) $\lambda$ 23 50 9 $L$ 78 39 42	<b>Pimai Village Tree Flag.</b> ( <i>Hazáribágh</i> ) $\lambda$ 24 4 33 $L$ 85 34 28	<b>Pokra s.</b> ( <i>Rewá</i> ) Mark at the village. $\lambda$ 24 18 19.48 $L$ 82 31 38.26
<b>Pátan Temple.</b> ( <i>Saugor</i> ) $\lambda$ 24 7 27.7 $L$ 78 54 47.0 Nos. 243, 244	<b>Pindaruá Fort,</b> ( <i>Saugor</i> ) Flag. $\lambda$ 24 6 22.8 $L$ 78 44 52.5 No. 213	<b>Pondrá Temple.</b> ( <i>Manbhoom</i> ) $\lambda$ 23 48 3.1 $L$ 86 46 2.5 No. 686
<b>Patáí h.s.</b> ( <i>Gwalior Territories</i> ) In Patáí. $\lambda$ 23 55 37.52 $L$ 78 15 27.08 Nos. 110, 111	<b>Pípalkherí h.s.</b> ( <i>Saugor</i> ) $\lambda$ 23 58 10.04 $L$ 78 30 2.97 Nos. 128, 129	<b>Popáí Hill Mark.</b> ( <i>Rewá</i> ) On hill N.E. of Gurwáni Principal Station. $\lambda$ 24 4 24.18 $L$ 82 30 7.44 No. 491
<b>Paterá h.s.</b> ( <i>Damoh</i> ) $\lambda$ 24 4 30.47 $L$ 79 26 40.91 Nos. 318, 319	<b>Pipráí Fort,</b> ( <i>Gwalior Territories</i> ) Flag. $\lambda$ 23 46 31.5 $L$ 78 16 53.2 Nos. 154, 155	<b>Powá h.s.</b> ( <i>Hazáribágh</i> ) $\lambda$ 23 33 46.02 $L$ 85 40 42.50 Nos. 640, 641
<b>Paterá Temple.</b> ( <i>Damoh</i> ) $\lambda$ 23 59 40.6 $L$ 79 43 36.2 No. 328	<b>Piprod Hill Mark.</b> ( <i>Jubbulpore</i> ) $\lambda$ 23 43 50.67 $L$ 80 22 51.81 Nos. 377, 378	<b>Punchi, XVIII.</b> ( <i>Vide page 8—B.</i> ) $\lambda$ 23 32 8.54 $L$ 80 40 47.28 $H$ 2271 $h$ 3 No. 23
<b>Pathariá h.s.</b> ( <i>Damoh</i> ) $\lambda$ 23 53 45.02 $L$ 79 12 42.79 Nos. 237, 238	<b>Pithauria, LI.</b> ( <i>Vide page 13—B.</i> ) $\lambda$ 23 31 58.51 $L$ 85 19 24.24 $H$ 2603 $h$ 2 No. 64	<b>Púper h.s.</b> ( <i>Gwalior Territories</i> ) On summit of an isolated hill about 2 miles in length at the N.E. foot of which lies the village of Púper from which the station is distant about $\frac{1}{2}$ mile nearly S. $\lambda$ 23 54 34.12 $L$ 77 51 31.95 See Synoptical Vol. of the Great Arc Meridional Series, Section 18° to 24°.
<b>Pathariá Temple.</b> ( <i>Damoh</i> ) $\lambda$ 23 53 49.0 $L$ 79 14 5.7 Nos. 294, 295	<b>Pithoriá (Pitihra) Fort,</b> ( <i>Saugor</i> ) N.W. angle; in the Zamíndári Pitihra. $\lambda$ 24 3 19.3 $L$ 78 37 14.5 No. 184	<b>Rádhámádhupur, LXVI</b> ( <i>Vide page 16—B.</i> ) $\lambda$ 23 31 55.24 $L$ 87 21 4.36 $H$ 385 $h$ 14 Nos. 80, 84
<b>Pátol h.s.</b> ( <i>Rewá</i> ) $\lambda$ 24 14 47.17 $L$ 81 4 24.19 No. 435	<b>Pokarná Building,</b> ( <i>Bankoora</i> ) Staircase. $\lambda$ 23 25 27.5 $L$ 87 24 46.7 No. 744	

Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.
<p><b>Raghunáthpur Semaphore.</b> (Mandhoom)</p> <p>λ 23 31 28.2 L 86 42 32.4 Nos. 689, 690</p>	<p><b>Ranchee Hill Temple,</b> (Lohardugga) Spire. The temple overlooks the town of Ranchee.</p> <p>λ 23 22 29.03 L 85 21 13.84 H 2444 Nos. 853, 854</p>	<p><b>Rehli Fort,</b> (Saugor) Flag on E. staircase.</p> <p>λ 23 38 1.2 L 79 6 21.2 Nos. 279, 280</p>
<p><b>Raghunáthpur Temple,</b> (Mandhoom) Jaikund.</p> <p>λ 23 31 26.5 L 86 42 32.0 Nos. 687, 688</p>	<p><b>Ranchee s.</b> (Lohardugga) On the upper story of the Ka-hahri in Ranchee. The exact place, where the instrument was put up, is towards S. W. corner of the building, and is marked by the usual ⊙ engraved on the paká roof. The town of Ranchee lies to S. W. about ¼ a mile. Height of building above the level of the ground is 40½ feet.</p> <p>λ 23 22 37.61 L 85 22 5.78 H 2169 No. 850</p>	<p><b>Rerúpára Village Tree Flag.</b> (Hooghly)</p> <p>λ 22 53 24 L 88 15 14</p>
<p><b>Rámgar s.</b> (Hazáribágh) On fort.</p> <p>λ 23 38 20.01 L 85 34 5.72 Nos. 632, 633</p>	<p><b>Rangír, X.</b> (Vide page 7—B.)</p> <p>λ 24 0 20.37 L 79 28 26.43 H 1184 No. 12</p>	<p><b>Rewas Hill.</b> (Rewá)</p> <p>λ 24 24 27 L 81 32 59</p>
<p><b>Rámgara Fort.</b> (Panna)</p> <p>λ 24 4 25 L 80 24 6</p>	<p><b>Rangír h.s.</b> (Damoh) Destroyed.</p> <p>λ 24 0 20.35 L 79 28 26.40 Nos. 801, 802</p>	<p><b>Rhol Flag.</b> (Burdwan)</p> <p>λ 23 9 51.1 L 87 40 50.0 Nos. 756, 757</p>
<p><b>Rámnagar Dome.</b> (Rewá)</p> <p>λ 24 11 30.3 L 81 11 39.9 Nos. 436, 437</p>	<p><b>Rangír Temple.</b> (Saugor)</p> <p>λ 23 36 54.2 L 78 59 35.8 No. 275</p>	<p><b>Richái h.s.</b> (Gwalior Territories)</p> <p>λ 23 47 3.36 L 78 12 3.92 Nos. 138, 139</p>
<p><b>Rámpur, XXII.</b> (Vide page 9—B.)</p> <p>λ 23 40 39.11 L 81 6 31.58 H 2376 h 3 Nos. 24, 29</p>	<p><b>Ranká Fort,</b> (Lohardugga) S. W. bastion, 22 feet square.</p> <p>λ 23 59 20.6 L 83 49 48.4 No. 527</p>	<p><b>Richáwar Cupola,</b> (Saugor) Highest.</p> <p>λ 23 48 57.0 L 78 55 50.9 Nos. 257, 258</p>
<p><b>Rámpur Temple.</b> (Saugor)</p> <p>λ 23 46 13.3 L 78 37 21.5 No. 202</p>	<p><b>Ratanpur Hill Mark.</b> (Lohardugga) Also called Chendwár hill.</p> <p>λ 23 58 1.46 L 84 27 1.50 Nos. 560, 561</p>	<p><b>Richondá h.s.</b> (Saugor)</p> <p>λ 23 54 6.54 L 78 46 58.88 Nos. 211, 212</p>
<p><b>Rámságar s.</b> (Bankoora) On semaphore.</p> <p>λ 23 6 57.57 L 87 19 0.24 No. 748</p>	<p><b>Ratgarh Palace,</b> (Saugor) Centre of, in fort.</p> <p>λ 23 46 38.3 L 78 26 10.0 Nos. 161, 162</p>	<p><b>Rock on Hill,</b> (Gya) Temple-shaped.</p> <p>λ 24 35 54.6 L 85 37 41.9 No. 626</p>
<p><b>Ranchee Bungalow.</b> (Lohardugga) S. E. chimney of Judicial Commissioner's bungalow.</p> <p>λ 23 22 50.2 L 85 21 38.6 No. 857</p>	<p><b>Ratgarh Palace,</b> (Saugor) Centre of, in fort.</p> <p>λ 23 46 38.3 L 78 26 10.0 Nos. 161, 162</p>	<p><b>Rondá Fort,</b> (Saugor) S.W. angle.</p> <p>λ 24 10 36.3 L 78 32 39.7 No. 182</p>
		<p><b>Rudní Hill Mark.</b> (Lohardugga)</p> <p>λ 23 20 49.95 L 84 51 53.99 No. 581</p>

Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.
<p>Saikherí Pediment. (Saugor)</p> <p style="text-align: center;">o ' "</p> <p>λ 23 50 1'9 L 78 54 21'3 Nos. 253, 254</p>	<p>Samáná h.s. (Damoh)</p> <p style="text-align: center;">o ' "</p> <p>λ 23 50 43'98 L 79 31 35'14 Nos. 310, 311</p>	<p>Sarkandí Temple. (Damoh)</p> <p style="text-align: center;">o ' "</p> <p>λ 23 47 34'5 L 79 20 39'4 No. 298</p>
<p>Sainagar Fort, (Panna) E. bastion.</p> <p>λ 23 59 19'3 L 80 20 41'3 No. 391</p>	<p>Sámpur s. (24-Pergunnahs)</p> <p>λ 22 29 12'84 L 88 14 32'38 H 60 No. 930</p>	<p>Sarob Village Tree Flag. (Hooghly)</p> <p>λ 22 54 49 L 88 16 33</p>
<p>Saipur Fort. (Rewá)</p> <p>λ 24 2 44'3 L 82 44 12'0 Nos. 511, 512</p>	<p>Sanodá Fort, (Saugor) Flag.</p> <p>λ 23 53 15'5 L 78 57 4'0 Nos. 245, 246</p>	<p>Sarol h.s. (Lohardugga) On a small hill and little more than 2 miles E. of the village from which it derives its name. The small village of Rámpur lies due N. about ¼ mile, and the Tea Factory of Palándú to the N.N.W. 2 miles. A ⊙ engraved on the rock in situ, and covered by a pile of stones, defines the place of observation. The station is in the grounds appertaining to the Palándú Tea Plantation.</p> <p>λ 23 15 26'38 L 85 28 12'92 H 2274 No. 849</p>
<p>Saiwái Hill Tree. (Walior Territories)</p> <p>λ 23 52 34 L 78 7 3</p>	<p>Sanpura s. (Lohardugga) Near tree.</p> <p>λ 24 10 23'07 L 83 51 45'07 Nos. 532, 533</p>	<p>Satíria, XIII. (Vide page 8—B.)</p> <p>λ 23 54 21'71 L 79 41 20'66 H 1572 h 7 No. 13</p>
<p>Sajpur h.s. (Saugor)</p> <p>λ 23 32 24'80 L 79 4 28'58 Nos. 273, 274</p>	<p>Saráipahári New Semaphore. (Manbhoom)</p> <p>λ 23 37 22'2 L 86 10 40'1 Nos. 653, 654</p>	<p>Sátten, LXXXVIII. (Vide page 18—B.)</p> <p>λ 22 58 35'02 L 88 16 53'25 H 80 h 44 No. 103</p>
<p>Salaia, XIV. (Vide page 8—B.)</p> <p>λ 23 49 51'07 L 79 58 30'89 H 1672 h 5 No. 17</p>	<p>Saráipahári Old Semaphore. (Manbhoom)</p> <p>λ 23 37 27'0 L 86 10 5'8 No. 652</p>	<p>Saugor, V. (Vide page 6—B.)</p> <p>λ 23 49 48'07 L 78 48 45'34 H 2033 h 2 No. 6</p>
<p>Salaia Village Tree Flag. (Hazáribágh)</p> <p>λ 24 11 21 L 85 38 49</p>	<p>Saraskundá Hill Mark. (Sonthal Pergunnahs)</p> <p>λ 23 51 12'94 L 87 8 37'04 Nos. 713, 714</p>	<p>Saugor Cantonment, (Saugor) Flagstaff.</p> <p>λ 23 50 32'4 L 78 47 49'3 Nos. 219, 220</p>
<p>Sálgháti Semaphore. (Bankoora)</p> <p>λ 23 9 58'3 L 87 13 4'0 No. 749</p>	<p>Sarjú Hill Mark. (Lohardugga)</p> <p>λ 23 38 14'14 L 84 26 22'79 Nos. 552, 553</p>	<p>Saugor Magazine, (Saugor) N.W. angle, in fort.</p> <p>λ 23 50 8'0 L 78 46 50'8 No. 214</p>
<p>Samalia, LXXXVII. (Vide page 19—B.)</p> <p>λ 22 25 41'14 L 88 18 9'90 H 75 h 63 Nos. 101, 108</p>	<p>Sarkandí Red Tiled Building. (Saugor)</p> <p>λ 23 44 12 L 78 37 33</p>	

Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.
<p>Saugor Pagoda. (Saugor) On hill.      °   '   ''</p> <p>λ            23 50 34·7 L            78 48 2·7 Nos. 217, 218</p> <p>Saukherí Peak. (Gwalior Territories)</p> <p>λ            23 37 3 L            78 2 32</p> <p>Sauntá s. (Burdwan) In village.</p> <p>λ            23 41 16·07 L            86 57 47·24 Nos. 699, 700</p> <p>Sealdah s. (24-Pergunnahs) On northern of two turrets of the building well known as Sealdah Railway Terminus. A nail driven into the centre of the roof of the turret indicates the position of the station.</p> <p>λ            22 34 4·41 L            88 24 54·86 Nos. 941, 942</p> <p>Seebpore Distillery. (Hooghly) Chimney of Liquor Distillery.</p> <p>λ            22 33 46·0 L            88 21 58·0 No. 828</p> <p>Seebpore Temple. (Hooghly) On W. bank of the Hooghly river.</p> <p>λ            22 33 43·2 L            88 21 42·7 No. 827</p> <p>Sejpurí Building. (Saugor) On hill.</p> <p>λ            23 35 33·0 L            78 44 56·1 Nos. 206, 207</p> <p>Semo h.s. (Lohardugga) On a small isolated hill on the boundary line of Semo and Singhpur villages; the former of which lies about 2 miles N. and the latter the same distance S.W. A stone, with ⊙ engraved thereon and imbedded in the ground, marks the station.</p> <p>λ            23 16 40·81 L            85 16 30·96 H            24·58 No. 848</p> <p>Semrí Panárí h.s. (Saugor)</p> <p>λ            23 40 56·61 L            78 41 7·83 Nos. 192, 193</p>	<p>Senpukur Village Tree Flag. (24-Pergunnahs)      °   '   ''</p> <p>λ            22 28 55 L            88 14 25</p> <p>Seogarh h.s. (Rewá) Also known as Kanáwar hill.</p> <p>λ            24 2 33·99 L            82 11 6·01 Nos. 457, 458</p> <p>Serampore Building. (Hazáribágh)</p> <p>λ            24 7 14 L            86 22 47</p> <p>Serampore Chimney, (Beerbhoom) South-western.</p> <p>λ            23 50 19·5 L            87 13 19·3 No. 717</p> <p>Serampore Church, (Hooghly) Steeple.</p> <p>λ            22 45 23·02 L            88 23 9·89 Nos. 763, 764, 912</p> <p>Serampore Flagstaff. (Hooghly)</p> <p>λ            22 45 25·5 L            88 23 15·2 No. 925</p> <p>Serwás Turret, (Bhopál) Flag.</p> <p>λ            23 36 11·0 L            78 22 44·2 No. 160</p> <p>Sewádhi, XXXVIII. (<i>See page 11—B.</i>)</p> <p>λ            23 58 24·17 L            83 47 40·02 H            19·56 h            2 No. 47</p> <p>Sháhpur s. (Lohardugga) On building.</p> <p>λ            24 1 45·50 L            84 5 55·96 Nos. 546, 547</p> <p>Shalkiá s. (Hooghly) On a large red building used as a Hemp Manufactory.</p> <p>λ            22 36 0·71 L            88 23 33·42 No. 892</p>	<p>Sihora Temple No. 1. (Saugor) W. of village.      °   '   ''</p> <p>λ            23 47 45·2 L            78 36 59·9 No. 201</p> <p>Sihora Temple No. 2. (Jubbulpore)</p> <p>λ            23 29 26·8 L            80 8 35·1 No. 348</p> <p>Sihora Tiled Building. (Jubbulpore)</p> <p>λ            23 29 1 L            80 9 6</p> <p>Silegáon Building, (Saugor) W. turret.</p> <p>λ            24 5 6·1 L            78 16 22·2 No. 166</p> <p>Silwárá Semaphore. (Hazáribágh)</p> <p>λ            23 59 38·9 L            85 28 55·0 Nos. 592, 593</p> <p>Sindúr h.s. (Hazáribágh)</p> <p>λ            24 0 47·21 L            85 26 7·27 Nos. 594, 595</p> <p>Sindwar Semaphore. (Hazáribágh)</p> <p>λ            24 13 54·5 L            85 5 24·7 Nos. 596, 597</p> <p>Singhpur Fort, (Mirzapur) Highest building.</p> <p>λ            24 6 20·9 L            82 52 46·0 No. 517</p> <p>Singondí Temple, (Jubbulpore) Black.</p> <p>λ            23 56 6·6 L            80 42 50·2 Nos. 406, 407</p> <p>Singorgarh Tiled Building. (Damoh)</p> <p>λ            23 32 6 L            79 47 39</p>

Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.
<p>Singpur, XXI. (<i>Vide page 9—B.</i>)</p> <p>λ 23 15 50'46 L 80 55 37'47 H 2886 h 3 No. 28</p> <p>Singulpatan Village Tree Flag. (<i>Hooghly</i>)</p> <p>λ 22 52 7 L 88 15 57</p> <p>Sirá s. (<i>Hooghly</i>)</p> <p>λ 22 56 35'62 L 88 18 3'93 No. 886</p> <p>Sirá s. (<i>Rewá</i>) S. of road through village.</p> <p>λ 24 2 31'61 L 82 14 43'64 Nos. 465, 466</p> <p>Siwar s. (<i>Rewá</i>) Mark 20 yards S.W. from the stump of a pipal tree.</p> <p>λ 24 17 52'42 L 82 20 54'30 No. 469</p> <p>Slemanabad Temple, (<i>Jubbulpore</i>) Spire.</p> <p>λ 23 38 32'5 L 80 17 57'0 No. 364</p> <p>Sohágpur Motí Mahal. (<i>Rewá</i>)</p> <p>λ 23 19 3'6 L 81 23 42'1 No. 442</p> <p>Sohágpur s. (<i>Rewá</i>) On the roof of the highest building at the S.E. corner of the fort, owned by Bijai Bahádur Singh, Thákur of Rewá. A mark engraved on the paká roof denotes the station.</p> <p>λ 23 18 59'72 L 81 23 40'97 H 1533 See Synoptical Vol. of the Biláspur Meridional Series.</p> <p>Sonákúr, LXXIII. (<i>Vide page 17—B.</i>)</p> <p>λ 23 13 17'91 L 88 0 20'25 Hs 84'25* h 40 No. 92</p>	<p>Sonápur Village Tree Flag. (<i>Hooghly</i>)</p> <p>λ 22 54 24 L 88 16 39</p> <p>Soory Jail, (<i>Beerbhoom</i>) Flag.</p> <p>λ 23 54 19'8 L 87 34 14'3 Nos. 728, 729</p> <p>Srí Samad Hill Mark. (<i>Lohardugga</i>)</p> <p>λ 23 58 17'98 L 84 45 26'69 Nos. 569, 570</p> <p>Súkrádání h.s. (<i>Jubbulpore</i>)</p> <p>λ 23 38 20'22 L 80 18 25'79 Nos. 358, 359</p> <p>Sungará h.s. (<i>Panna</i>)</p> <p>λ 23 55 52'95 L 80 21 13'72 Nos. 385, 386</p> <p>Sungarh Hill Mark. (<i>Rewá</i>) At W. end of Karinpahár hill and about 3 miles S.S.E. of Sungarh village.</p> <p>λ 24 14 55'05 L 82 19 46'71 Nos. 467, 468</p> <p>Sungarh Hill Tree. (<i>Rewá</i>)</p> <p>λ 24 14 21 L 82 21 50</p> <p>Suríbhāng Village Flag. (<i>Lohardugga</i>)</p> <p>λ 24 3 45 L 84 22 42</p> <p>Surond Building. (<i>Panna</i>)</p> <p>λ 23 57 47 L 80 19 48</p> <p>Súsinia (Shushunia), LXV. (<i>Vide page 16—B.</i>)</p> <p>λ 23 23 42'97 L 87 1 40'31 H 1444 h 2 No. 79</p>	<p>Sutábái Semaphore. (<i>Manbhoom</i>) Also called Gaurandehi Semaphore.</p> <p>λ 23 24 10'1 L 86 49 50'3 Nos. 691, 692</p> <p>Talampur Building, (<i>Saugor</i>) Staircase.</p> <p>λ 23 37 44'2 L 79 2 49'8 No. 276</p> <p>Taláo Temple. (<i>Jubbulpore</i>)</p> <p>λ 23 31 46'2 L 80 9 31'1 Nos. 349, 350</p> <p>Talchinan s. (<i>Hooghly</i>)</p> <p>λ 22 55 35'86 L 88 15 55'56</p> <p>Talchinan Village Tree Flag. (<i>Hooghly</i>)</p> <p>λ 22 56 17 L 88 15 58</p> <p>Taraba Village Tree Flag. (<i>Hazáribágh</i>)</p> <p>λ 24 1 31 L 85 31 59</p> <p>Tattápání Hill Mark. (<i>Garhjat States, Chota Nagpore Division</i>) In Sirgúja.</p> <p>λ 23 39 39'80 L 83 43 20'29 Nos. 525, 526</p> <p>Tehera Building. (<i>Saugor</i>)</p> <p>λ 23 46 1 L 78 30 49</p> <p>Telanga Hill Mark. (<i>Lohardugga</i>) Also called Salain hill.</p> <p>λ 24 18 45'23 L 84 29 18'03 No. 568</p> <p>Tendúá s. (<i>Hazáribágh</i>) In village.</p> <p>λ 23 50 34'11 L 85 3 29'00 Nos. 586, 587</p>

\* This height refers to the mark-stone let into the ground floor of the tower.



Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.
<p>Tentikálú Hill Mark. (Burdwan)</p> <p>λ 23 31 11'13 L 87 23 11'66 Nos. 741, 742</p> <p>Teonda, I. (Vide page 6—B.)</p> <p>λ 23 48 33'01 L 78 13 59'92 H 1866 h 4 No. 1</p> <p>Tesbar Village. (Lohardugga)</p> <p>λ 24 19 20 L 83 57 23</p> <p>Tetriá s. (Hooghly)</p> <p>λ 22 53 45'78 L 88 16 17'88 No. 881</p> <p>Thakbali h.s. (Hazáribágh)</p> <p>λ 24 4 50'01 L 86 11 46'23</p> <p>Tikaria, XV. (Vide page 8—B.)</p> <p>λ 24 7 40'45 L 79 56 18'39 H 1700 h 7 No. 20</p> <p>Tikeriá Temple. (Jubbulpore)</p> <p>λ 23 45 47'6 L 80 17 40'3 No. 866</p> <p>Tikhí Hill Pagoda. (Saugor)</p> <p>λ 23 36 31'3 L 79 7 36'8 Nos. 284, 285</p> <p>Tikúri Fort, (Rewá) N.E. angle.</p> <p>λ 23 58 22'8 L 80 59 4'7 No. 434</p>	<p>Tilabani, LXI. (Vide page 16—B.)</p> <p>λ 23 24 59'87 L 86 35 41'82 H 1329 h 2 No. 70</p> <p>Tindotá h.s. (Myhere)</p> <p>λ 24 11 52'83 L 80 55 39'37 No. 424</p> <p>Tins, IV. (Vide page 6—B.)</p> <p>λ 23 38 24'53 L 78 29 31'24 H 2264 h 9 Nos. 3, 5</p> <p>Tinsmál, VII. (Vide page 7—B.)</p> <p>λ 24 7 12'97 L 79 2 12'45 H 2139 h 9 No. 7</p> <p>Torá Fort. (Saugor)</p> <p>λ 23 40 17'0 L 78 32 26'3 No. 203</p> <p>Torá h.s. (Saugor)</p> <p>λ 23 54 43'74 L 78 26 43'82 Nos. 136, 137</p> <p>Tungári Hill Mark. (Lohardugga)</p> <p>λ 23 43 29'89 L 84 14 44'84 Nos. 548, 549</p> <p>Turási s. (Lohardugga) In old fort.</p> <p>λ 24 5 11'43 L 84 21 0'16 Nos. 563, 564</p> <p>Turer, XLI. (Vide page 12—B.)</p> <p>λ 23 38 2'11 L 84 3 33'75 H 3098 h 3 No. 48</p>	<p>Tutki Semaphore. (Hazáribágh)</p> <p>λ 23 56 59'6 L 85 40 3'3 No. 623</p> <p>Udepur Hill Mark. (Gwalior Territories) On summit of hill and distant ½ mile due S. of the large village of that name.</p> <p>λ 23 53 26'20 L 78 6 2'31 No. 109</p> <p>Udewá Hill Mark. (Hazáribágh)</p> <p>λ 23 56 58'09 L 85 15 9'04 Nos. 584, 585</p> <p>Ujain Hill Mark. (Rewá)</p> <p>λ 24 10 59'12 L 82 25 44'37 No. 478</p> <p>Ujain Village Tree. (Rewá)</p> <p>λ 24 10 11 L 82 25 29</p> <p>Ukhara Building, (Burdwan) N. W. corner.</p> <p>λ 23 38 43'7 L 87 17 12'3 No. 721</p> <p>Ukhara Palace. (Burdwan)</p> <p>λ 23 38 42'9 L 87 17 13'8 No. 734</p> <p>Ukhara Temple. (Burdwan)</p> <p>λ 23 38 55'4 L 87 18 2'1 No. 722</p> <p>Umendanda Palm Tree, (Lohardugga) Northern.</p> <p>λ 23 37 30 L 85 12 13</p> <p>Umeriá Hill Mark. (Rewá)</p> <p>λ 24 3 45'78 L 81 41 18'78 Nos. 447, 448</p>

CO-ORDINATES AND DESCRIPTIONS OF ALL STATIONS AND POINTS.

Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.
<p>Upchuríá s. (<i>Mandhoom</i>) In village.    "    "    "</p> <p>λ            23 49 34'41 L            86 44 57'81 Nos. 684, 685</p> <p>Urgiri s. (<i>Rowá</i>) In village.</p> <p>λ            24 13 26'30 L            82 27 29'10</p>	<p>Utrátí s. (<i>Hasdríbágh</i>) In village.    "    "    "</p> <p>λ            23 47 54'40 L            85 4 57'40 Nos. 588, 589</p> <p>Uttarpára s. (<i>Hooghly</i>) In village.</p> <p>λ            22 39 47'95 L            88 23 39'00 No. 901</p>	<p>Uwar h.s. (<i>Gwalior Territories</i>)    "    "    "</p> <p>λ            23 39 50'29 L            78 8 16'40 Nos. 121, 122</p> <p>Yaktá Hill Mark. (<i>Lohardugga</i>)</p> <p>λ            23 55 51'11 L            84 21 16'31 No. 555</p>

July 1877.

J. B. N. HENNESSEY,

In charge of Computing Office.



## NOTE TO CHART NO. 3.

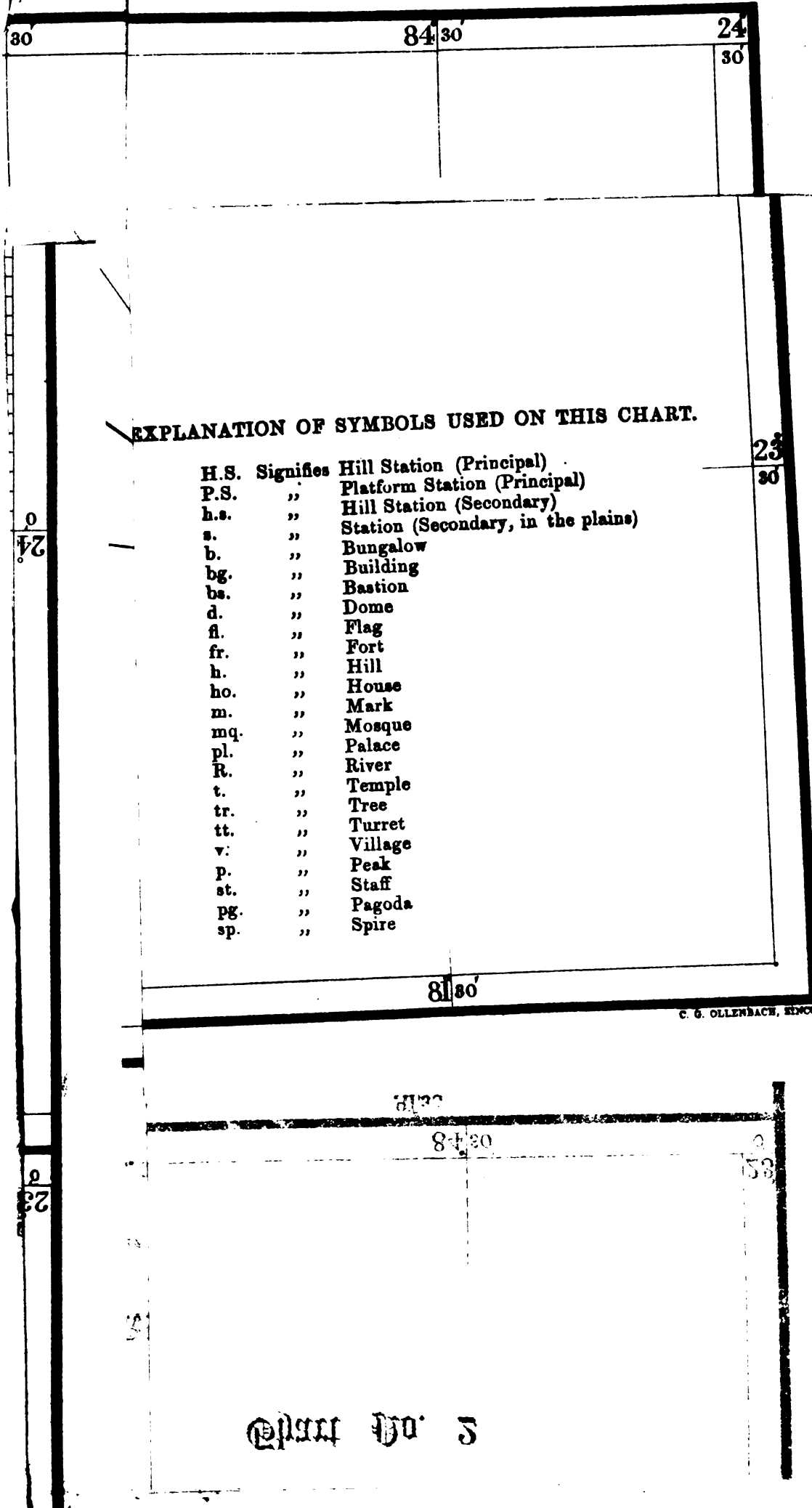
*Alphabetical List of Stations and Points omitted on the Chart from want of space on which to project them.*

Ágarpára Church	N.W. Corner.	Calcutta	Ochterlony Monument.	No. 2	s.
"	Steeple.	"	Old Church.	No. 3	"
Anoti	Hill.	"	Prinsep's Ghát.	No. 4	"
Balampur	Tree Flag.	"	Race Stand s.	No. 5	"
Bálánagar	Temple No. 1.	"	R. C. Cathedral.	No. 6	"
"	" No. 2.	"	Sailors' Home.	No. 7	"
Balkukri	Tree Flag.	"	St. James' Church.	No. 8	"
Ballabhpur	Flag.	"	St. John's Cathedral.	No. 9	"
Balúkhál	Chimney.	"	St. Paul's Cathedral.	No. 10	"
"	Temple.	"	St. Saviour's Church.	No. 11	"
Bandanharía	Tree Flag.	"	St. Thomas' Church.	No. 12	"
Banía	"	"	Scotch Kirk.	No. 13	"
Banpára	"	"	Strand Mills.	No. 14	"
Baraset	Flag.	"	Thompson's Ghát.	No. 15	"
Barrackpore Park	House.	Chánda	Tree Flag.	No. 16	"
Barrackpore	Semaphore.	Chapsara	"	No. 17	"
Baubazar	Khál Flag.	Chátra	Flag.	No. 18	"
Betá	Tree Flag.	Chaukundi	Tree Flag.	No. 19	"
Bhadrakáli	Flag.	Chingriháta	t.s.	No. 20	"
Bhot Bágán	"	Chitpore	Bridge.	No. 21	"
Buj-Buj	Tree Flag.	Cossipore	Colvin Ghát s.	No. 22	"
Calcutta	Armenian Church.	"	E. Mill.	No. 23	"
"	Bágbazar Temple.	"	Foundry.	No. 24	"
"	Boithakkhána Church.	"	Highest Chimney.	No. 25	"
"	Building.	"	Loharkhána Ghát.	No. 26	"
"	Chandpál Ghát.	Danajpur	Tree Flag.	No. 27	"
"	Currie's Factory.	Dhakanser	Sugar Factory.	No. 28	"
"	Dharmatala Church.	Dum-Dum	Church.	No. 29	"
"	Exchange Semaphore.	"	Roman Catholic Chapel.	No. 30	"
"	Fort William Chimney.	Fort Gloucester (Glos'ter)	Chimney.	No. 31	"
"	" Flagstaff.	Gholsara	Tree Flag.	No. 32	"
"	Foundry Chimney.	Gunpala	"	No. 33	"
"	Free Church of Scotland.	Gusuríá	Chimney.	Páikpára	Village Tree.
"	Free School Church.	Gusuríá (Puráná)	Flag.	Panchipukur	Village Tree Flag.
"	Government House.	Harat	Tree Flag.	Pokpári	"
"	Kidderpore Bridge.	Kadpára	"	Rerúpára	"
"	" Chimney.	Kistonagar	"	Sarob	"
"	" Church.	Komdhara	"	Sealdah	s.
"	Latitude s.	Konnagar	Ghát.	Seebpore	Distillery.
"	Loretto Convent.	Kopai	Tree Flag.	"	Temple.
"	Muharajpur Cenotaph.	Kuliaba	"	Senpukur	Village Tree Flag.
"	Mint, Middle Chimney.	Kumárháti	Temple.	Serampore	Flagstaff.
"	Mint, N. Chimney.	Lobasan	Tree Flag.	Shalkiá	s.
"	Mint, S. Chimney.	Metiaburuj	Ghát.	Singulpatan	Village Tree Flag.
"	No. 7 Park Street s.	Nishchindeepore	Tree Flag.	Sonápur	"
"	Observatory s.	No. 1	s.	Uttarpára	s.

November 1880.

J. B. N. HENNESSEY,  
In charge of Computing Office.

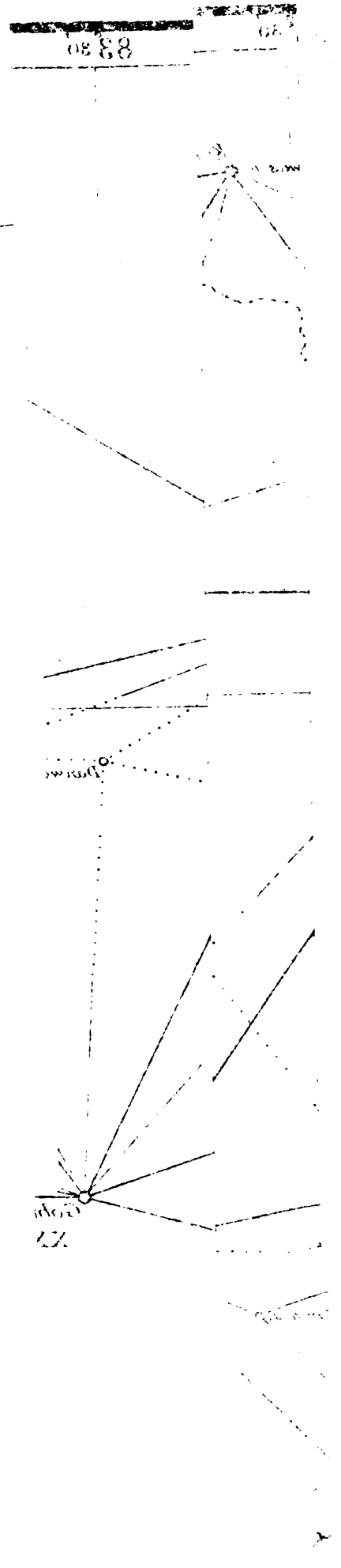


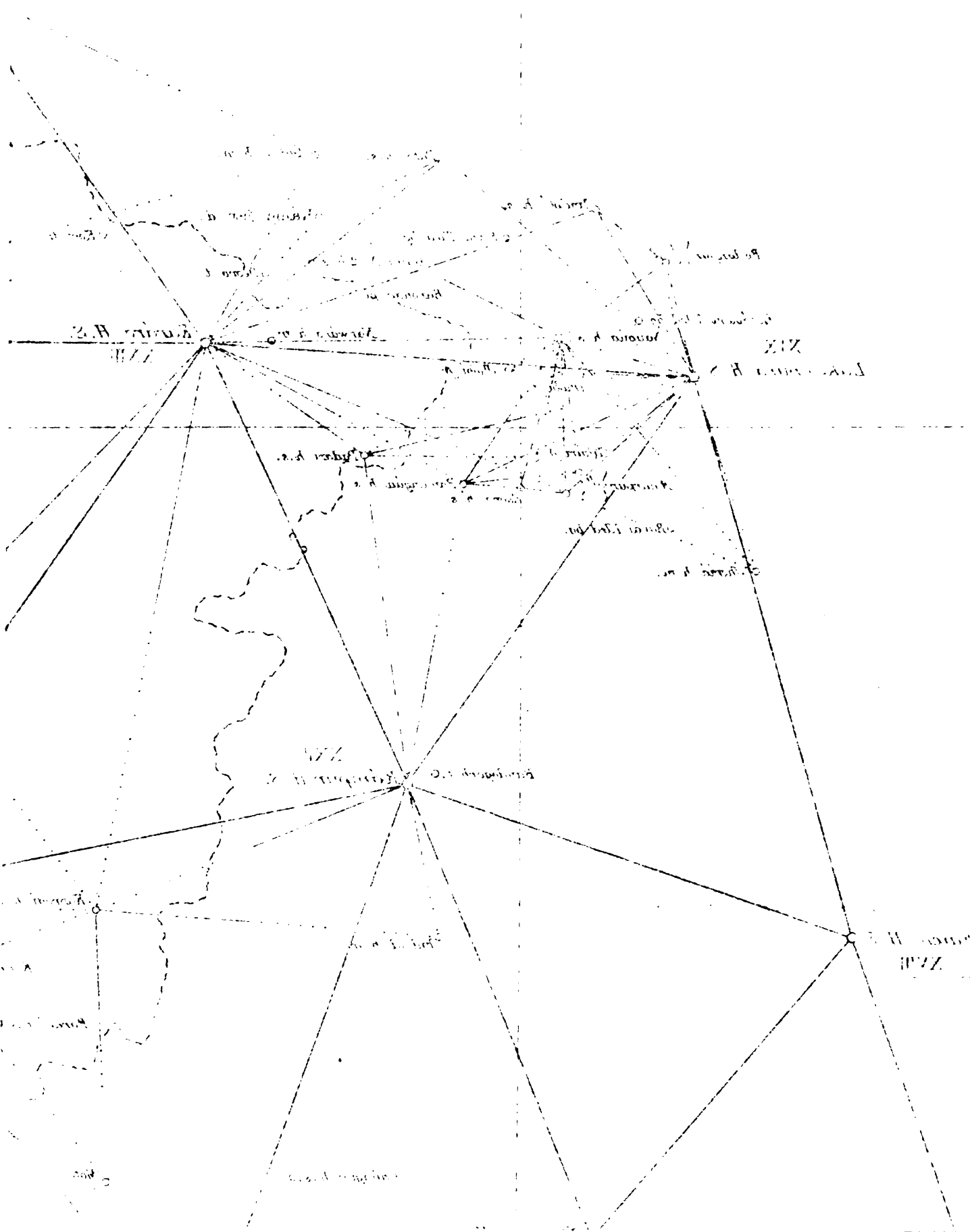


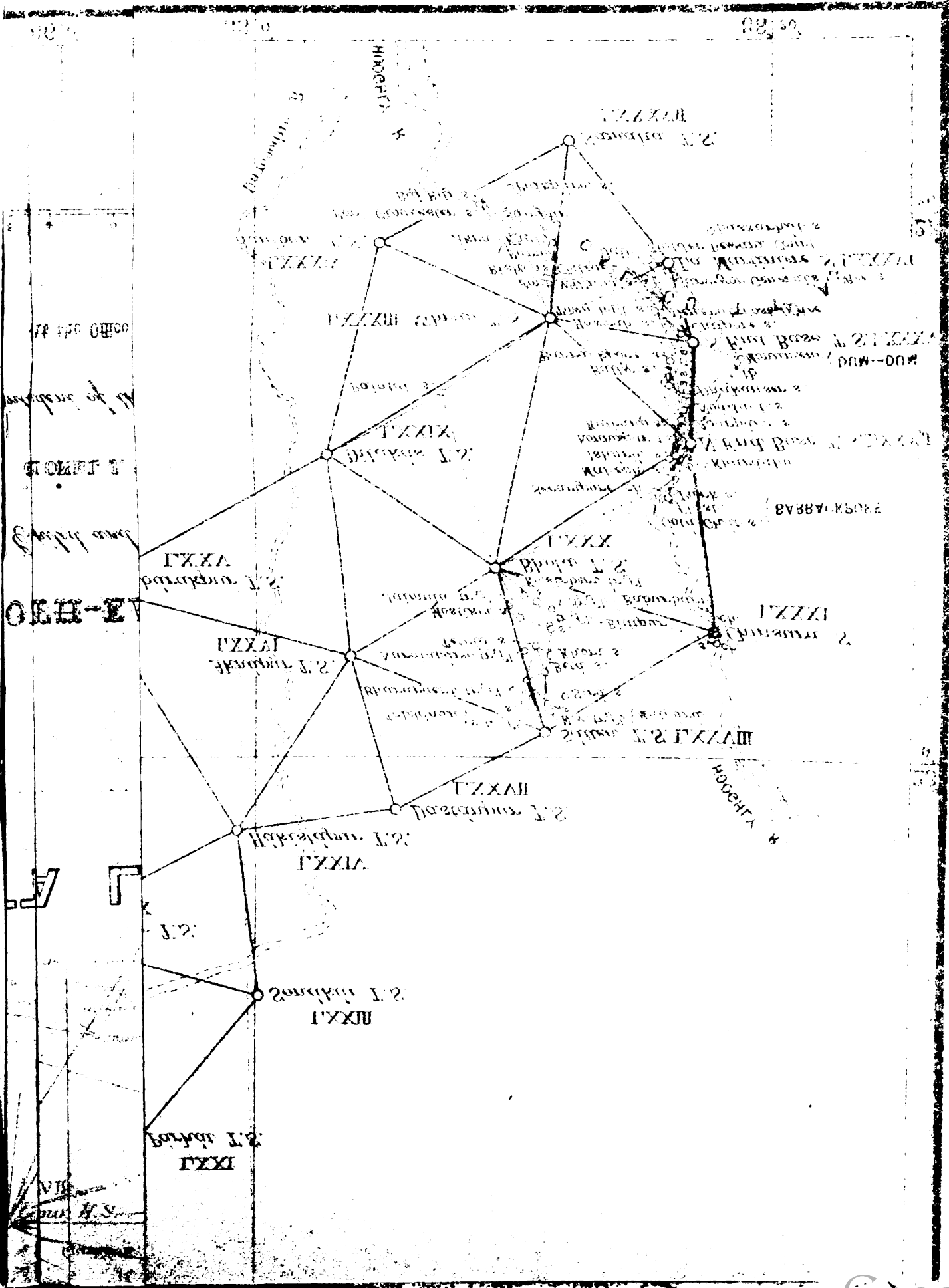
**EXPLANATION OF SYMBOLS USED ON THIS CHART.**

H.S.	Signifies	Hill Station (Principal)
P.S.	"	Platform Station (Principal)
h.s.	"	Hill Station (Secondary)
s.	"	Station (Secondary, in the plains)
b.	"	Bungalow
bg.	"	Building
bs.	"	Bastion
d.	"	Dome
f.	"	Flag
fr.	"	Fort
h.	"	Hill
ho.	"	House
m.	"	Mark
mq.	"	Mosque
pl.	"	Palace
R.	"	River
t.	"	Temple
tr.	"	Tree
tt.	"	Turret
v.	"	Village
p.	"	Peak
st.	"	Staff
pg.	"	Pagoda
sp.	"	Spire

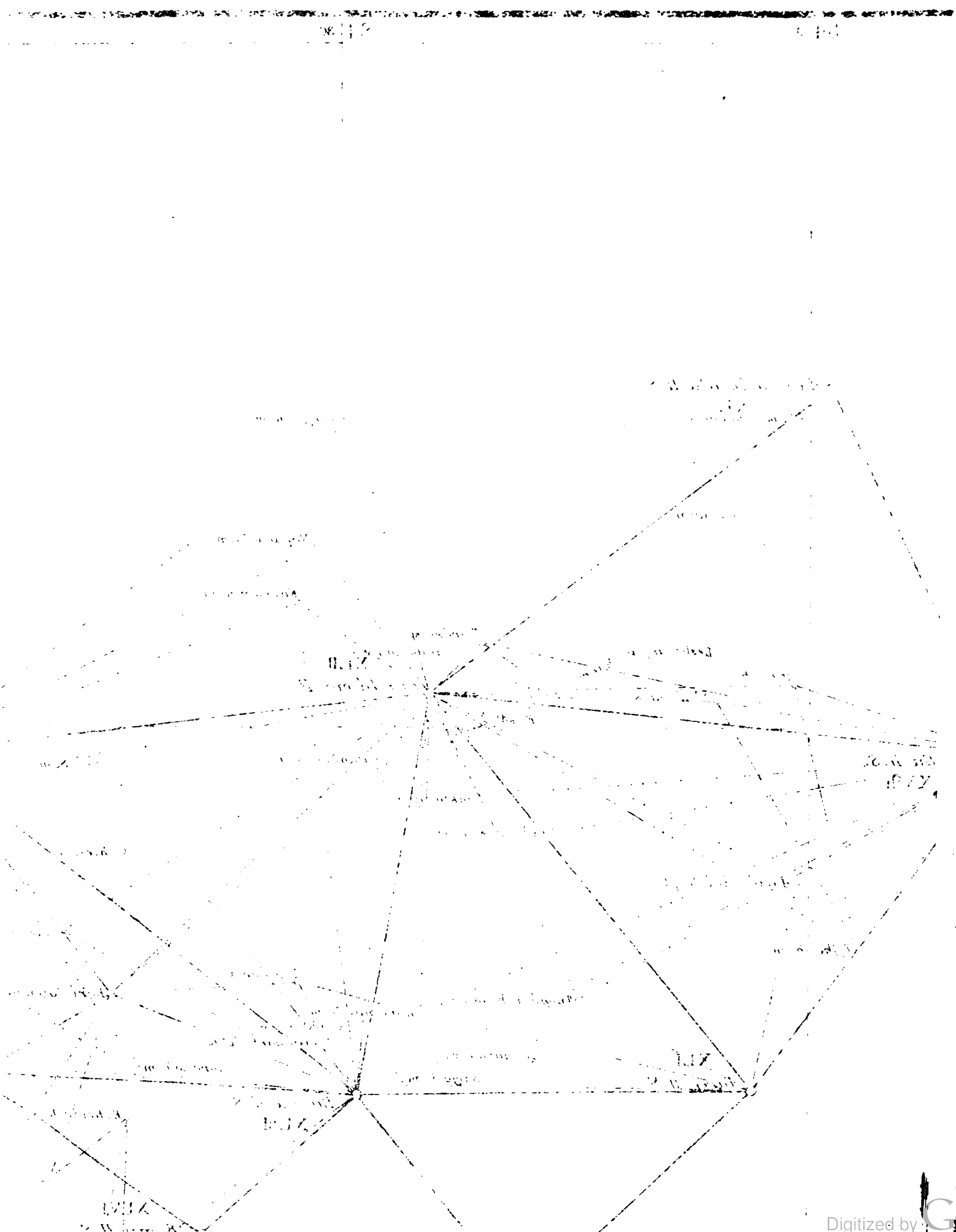
C. G. OLLENBACH, EDVCO.











*List of Published Works of the Great Trigonometrical Survey of India.*

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An Account of the Measurement of an Arc of the meridian between the parallels of  $18^{\circ} 3'$  and  $24^{\circ} 7'$ , being a continuation of the Grand Meridional Arc of India as detailed by the late Lieutenant-Colonel Lambton in the Volumes of the Asiatic Society of Calcutta. By Captain George Everest, of the Bengal Artillery, F.R.S., &c. London, 1830.

An Account of the Measurement of two Sections of the Meridional Arc of India, bounded by the parallels of  $18^{\circ} 3' 5''$ ;  $24^{\circ} 7' 11''$ ; and  $29^{\circ} 30' 18''$ . By Lieutenant-Colonel Everest, F.R.S., &c., late Surveyor General of India, and his Assistants. London 1847.

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Account of the Operations of the Great Trigonometrical Survey of India.

- Volume I. The Standards of Measure and the Base-Lines, also an Introductory Account of the early Operations of the Survey, during the period of 1800-1830. By Colonel J. T. Walker, R.E., F.R.S., &c., &c., Superintendent of the Survey. Dehra Dún, 1870.
- Do. II. History and General Description of the Principal Triangulation and of its Reduction. By Colonel J. T. Walker, C.B., R.E., F.R.S., &c., &c., Surveyor General of India and Superintendent of the Survey, and his Assistants. Dehra Dún, 1879.
- Do. III. The Principal Triangulation, the Base-Line Figures, the Karáchi Longitudinal, N.W. Himalaya, and Great Indus Series of the North-West Quadrilateral. By Colonel J. T. Walker, R.E., F.R.S., &c., &c., Superintendent of the Survey, and his Assistants. Dehra Dún, 1879.
- Do. IV. The Principal Triangulation, the Great Arc (Section  $24^{\circ}$ - $30^{\circ}$ ), Rahún, Gurhágárh and Jogí-Tíla Meridional Series, and the Sutlej Series of the North-West Quadrilateral. By Colonel J. T. Walker, R.E., F.R.S., &c., &c., Superintendent of the Survey, and his Assistants. Dehra Dún, 1879.
- Do. V. Details of the Pendulum Operations by Captains J. P. Basevi, R.E., and W. J. Heaviside, R.E., and of their Reduction. Prepared under the directions of Major-General J. T. Walker, C.B., R.E., F.R.S., &c., &c., Surveyor General of India and Superintendent of the Trigonometrical Survey. Dehra Dún and Calcutta, 1879.
- Do. VI. The Principal Triangulation of the South-East Quadrilateral including the Great Arc—Section  $18^{\circ}$  to  $24^{\circ}$ , the East Coast Series, the Calcutta and the Bider Longitudinal Series, the Jabalpur and the Biláspur Meridional Series, and the details of their Simultaneous Reduction. Prepared under the directions of Major-General J. T. Walker, C.B., R.E., F.R.S., &c., &c., Surveyor General of India and Superintendent of the Trigonometrical Survey. Dehra Dún, 1880.
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*List of Published Works of the Great Trigonometrical Survey of India.—(Continued).*

Synopses of the Results of the Great Trigonometrical Survey of India, comprising Descriptions, Co-ordinates, &c., of the Principal and Secondary Stations and other Fixed Points, of the several Series of Triangles, as follows;—

- Volume I. The Great Indus Series, or Series *D* of the North-West Quadrilateral. By Colonel J. T. Walker, R.E., F.R.S., &c., &c., Superintendent of the Survey, and his Assistants. Dehra Dún, 1874.
- Do. II. The Great Arc—Section 24° to 30°, or Series *A* of the North-West Quadrilateral. By Colonel J. T. Walker, R.E., F.R.S., &c., &c., Superintendent of the Survey, and his Assistants. Dehra Dún, 1874.
- Do. III. The Karáchi Longitudinal Series, or Series *B* of the North-West Quadrilateral. By Colonel J. T. Walker, R.E., F.R.S., &c., &c., Superintendent of the Survey, and his Assistants. Dehra Dún, 1874.
- Do. IV. The Gurhágárh Meridional Series, or Series *F* of the North-West Quadrilateral. By Colonel J. T. Walker, R.E., F.R.S., &c., &c., Superintendent of the Survey, and his Assistants. Dehra Dún, 1875.
- Do. V. The Rahún Meridional Series, or Series *E* of the North-West Quadrilateral. By Colonel J. T. Walker, R.E., F.R.S., &c., &c., Superintendent of the Survey, and his Assistants. Dehra Dún, 1875.
- Do. VI. The Jogí-Tíla Meridional Series, or Series *G*, and the Sutlej Series, or Series *H* of the North-West Quadrilateral. By Colonel J. T. Walker, R.E., F.R.S., &c., &c., Superintendent of the Survey, and his Assistants. Dehra Dún, 1875.
- Do. VII. The North-West Himalaya Series, or Series *C* of the North-West Quadrilateral, and the Triangulation of the Kashmir Survey. By Major-General J. T. Walker, C.B., R.E., F.R.S., &c., &c., Surveyor General of India and Superintendent of the Survey, and his Assistants. Dehra Dún, 1879.
- Do. VIII. The Great Arc—Section 18° to 24°, or Series *A* of the South-East Quadrilateral. By Colonel J. T. Walker, C.B., R.E., F.R.S., &c., &c., Superintendent of the Survey, and his Assistants. Dehra Dún, 1878.
- Do. IX. The Jabalpur Meridional Series, or Series *E* of the South-East Quadrilateral. By Colonel J. T. Walker, C.B., R.E., F.R.S., &c., &c., Surveyor General of India and Superintendent of the Survey, and his Assistants. Dehra Dún, 1878.
- Do. X. The Bider Longitudinal Series, or Series *D* of the South-East Quadrilateral. By Major-General J. T. Walker, C.B., R.E., F.R.S., &c., &c., Surveyor General of India and Superintendent of the Survey, and his Assistants. Dehra Dún, 1880.
- Do. XI. The Biláspur Meridional Series, or Series *F* of the South-East Quadrilateral. By Major-General J. T. Walker, C.B., R.E., F.R.S., &c., &c., Surveyor General of India and Superintendent of the Survey, and his Assistants. Dehra Dún, 1880.

29th November 1880.







