

towns of this region are appreciatively described. Travellers of musical inclination will find interest in the collection of old local airs in an appendix.

'Austria: her People and their Homelands.' By J. Baker. (London: Lane. 1913. Pp. xiv., 310. *Map and Illustrations*. 21s. net.) The author comments rightly on the paucity of English works on Austria; he is less fortunate when he adduces as an example of English ignorance certain views as to the extent of the Carpathians, and then describes them as sweeping "round southern and eastern Austria for the length of over eight hundred miles." He has travelled widely to collect material for this volume, which contains a mass of miscellaneous information under a fairly systematic arrangement; there are some excellent illustrations, and it is unfortunate that that chosen as the frontispiece, and representing Cattaro, is quite inaccurate in regard to the position of that town.

'Langholm as it was.' By J. and R. Hyslop. (Sunderland: Hills, etc. 1912. Pp. xv., 922. *Maps and Illustrations*. 7s. 6d. net.) This is a local history of Langholm and Eskdale, beginning from the earliest times, and carried down to the recollections of a lifelong inhabitant but recently dead. It is interesting to trace the development of modern methods of transport in these more remote districts. The whole volume is a monument of patient research; it is also one of the heaviest of its size which has ever come into our hands. Some interesting maps are given, such as the reproduction of Bleau's map of 1662, still retaining miniatures, and, of course, showing relief in perspective.

'A Wanderer in Florence.' By E. V. Lucas. (London: Methuen. 1912. Pp. xi., 391. *Maps and Illustrations*. 6s.) Mr. Lucas is well known as an author of what may be termed "wayside" books, so that, although the subject which he treats in this volume is thoroughly covered by previous writers, it may be taken for granted that what he has to write of it is worth reading. We are also provided with many photographs, of which those showing close details of art are specially good, while some of the coloured pictures are well above the average.

'The Cities of Lombardy.' By Edward Hutton. (London: Methuen. 1912. Pp. ix., 322. *Maps and Illustrations*. 6s.) Mr. Hutton, again, is a writer who is splendidly qualified to deal with Italy on "wayside" lines. The familiar histories of the great Lombard cities of the north Italian plain are here retold, and we find also some pleasing descriptions of the plain itself, given with an intimacy far beyond that of the ordinary traveller. The northern lakes also come in for treatment, and the whole is well illustrated.

## ASIA.

### THE INDIAN SURVEY.

'Records of the Survey of India.' Vol. 1: 1909-10. Prepared under the direction of Colonel S. G. Burrard, C.S.I., R.E., F.R.S. Calcutta. 1912.

The Indian Survey Reports have assumed the above title with the new issue which marks the reorganization of the Department. The report is distinctly technical in character, and it is, at the same time, comprehensive, without including any of those picturesque narratives which enlivened the pages of former publications. A good deal may be said in favour of compressing a report of this class into the smallest compass consistent with full and fair explanation of its subject matter, but there still remains something to be regretted in the loss of much interesting and useful geographical information which, unless it appears in the pages of this report, will certainly never appear at all.

The Record for 1909-10 opens with the Topographical Surveys. Ten parties were at work in the northern, southern, and eastern circles in scattered detachments, the scale of mapping varying between 1 inch, 1½ inches, and 2 inches per mile. Altogether about 34,000 sq. miles of country were mapped (including a certain amount of revision) of which over 5000 miles were in the Punjab. This includes every class of country from the flat and open plains of the north-west to the dense jungle-covered hills of Eastern Bengal and Burma. Naturally the cost per square mile differs accordingly; varying from five and a half to twenty-five rupees per square mile, inclusive of mapping. This, it may be noted, is a very considerable reduction from the costs under similar conditions which obtained some time ago. On the whole, the method adopted for the work of revision was not found satisfactory. The existence of previous mapping, when placed in the hands of the native plane-tables, must undoubtedly prove to be something of a temptation to "fudge"; whilst the introduction of contours practically necessitates a complete re-survey.

Triangulation of a first-class character was extended in Northern Baluchistan, in Kashmir, and along the Irawadi. Apparently no larger instrument than the 8-inch micrometer theodolite was used for observations on certain very high peaks.

With the triangulation, observations to test the value of mercury barometers, aneroids, and hypsometers as height-measuring instruments were recorded, with the result that "the aneroid barometers differed greatly from one another and from the mercury barometers. The mercury barometers, so long as both were intact, gave sensibly the same readings, but the deduced heights were too small. The hypsometers invariably gave a height considerably in excess of that obtained by triangulation. At 16,000 feet the excess was as much as 600 feet." For the ordinary mountain climber these results (which are further elaborated in an appended table) should be most suggestive. There follows in the Records a valuable report on the levelling operations. There, again, a comparison of results with G.T. values is most instructive. The triangulated values were generally in excess (as much as 20 feet on one hill station) of those deduced by levelling, but the error varied between + and - in the Indus flats and seldom exceeded 1 or 2 feet either way. The great difficulty of preserving immovable markstones always faces the Indian surveyor and introduces an element of uncertainty into his results. Even a record graven on native rock may be liable to displacement by earthquake. Observations of latitude for geodetic purposes were systematically continued, and the question of isostasy as applied to India was investigated. In connection with this intricate subject it is worth while to quote a remark of Colonel Burrard's on page 87 of the Record, where he refers to the "weaknesses inherent in all mathematical methods of treating questions regarding the constitution of the Earth's crust. We are attempting to apply invariable rules and methods to a subject where every variety of condition may exist." The pendulum, magnetic, and tidal observations, and the elaborate tables relating thereto, fill quite half the volume. They are doubtless most valuable records, but no new proposition of general interest arises from them. They are simply the records of patient systematic investigation. The few pages devoted to the work of the photo-litho office might well have been extended. Experiments in the direction of colour photography are specially interesting; and we can only hope that the great problem of a system of map reproduction in Calcutta really worthy of the excellent character of the field work may ultimately be solved.

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