

confined in an aquarium, he points out, was observed by Mobius to seek a sleeping place at night, and to lay itself down to rest on one side. The psychologist and the student of evolution will find in these chapters of Mr. Boulenger a perfect mine of information. No more instructive lessons in adaptation can be gathered than from the descriptions and figures illustrating this part and certain sections of Prof. Bridge's work—as witness the text cuts given herewith.

ABORIGINAL INDIA.<sup>1</sup>

MR. BRADLEY-BIRT'S book dealing with the Santal Parganas merits the success achieved by his former volume on Chota Nagpore. This time, he lays his scene in the mountainous, forest-clad outlier of the Vindhyan range, which stands like an island in the midst of the great Gangetic plain. Dominating the great waterway which leads from the borders of the Punjab to the Bay of Bengal, it has for centuries been the stronghold of the aboriginal tribe who sought refuge in it from the Aryan flood descending from the north-west on the fertile plains of Bengal. From his almost inaccessible stronghold, the Paharia looked down upon the coming and going of the Hindu, the Pathan, and the Moghul. Empires rose and fell before his very eyes whilst he, hating the foreigner of every race and creed, remained wrapped in his primitive barbarism, a hunter living on the produce of the surrounding forest, not to be starved into submission, because he had no need of the produce of the plains. His only dealings with successive invaders were when he swooped on the villages below, killing and robbing their inhabitants, or cutting off travellers and the camp followers of passing armies. Neither Hindu nor Mahomedan could subdue him by main force without extravagant loss.

Attempts to bribe the mountaineer with land around the mountain failed, for he did not care to cultivate, and the keeping of a bargain with the hated foreigner formed no part of his moral code.

At last appeared the British, whose fair complexion impressed the Paharia with an idea that they were of higher origin than the earlier conquerors. In Augustus Cleveland came a man who found a way to tame the savage, to enlist his sympathy, and to offer an outlet for his martial instincts. Some of the Paharias were enlisted as an irregular force, whilst an endeavour was made to isolate the rest in a ring of neutral territory, from which the Hindu and the Mahomedan of the plains were to be excluded. Much of Cleveland's good work was undone by a successor of sterner and less considerate temperament. The solution of the difficulty was finally found, about 1830, when a wandering branch of the Santals, another aboriginal tribe, appeared upon the scene and eagerly accepted the land below the hills which the Paharia, refusing for himself, made untenable for the plainsman. The Santal, an enthusiastic though uncivilised cultivator, recognised as a kinsman by the Paharia,

formed an efficient buffer between the hillman and the inhabitants of the surrounding plain. The Santal, in turn, gave trouble in 1856, when he broke into rebellion directed against the peaceful penetration of the moneylender and the landgrabber.

It is with these two aboriginal tribes that Mr. Bradley-Birt chiefly deals. As men, they are perhaps more interesting to the ethnologist and the philologist than to the ordinary student of human nature, but the author has succeeded in enlisting such interest as we can spare to one tribe still in the purely agricultural stage, and to another which has scarcely as yet progressed beyond that of the hunter.

His picture of village life on, and at the foot of, the Rajmahal hills glows with local colour and swims in the atmosphere of the jungle and the plain. It was scarcely necessary for him to assure his reader that most of the book was written in camp, in the midst of the Paharias and the Santals. As one reads, one seems to inhale the fresh, crisp air of an Indian cold weather morning, or to pant in the heavy atmosphere of the forest as the line of Paharia hunters presses,



FIG. 1.—A Primitive Mode of Irrigation. From Bradley-Birt's "Story of an Indian Upland."

shouting and slaying, through the dense undergrowth.

Much that Mr. Bradley-Birt describes, or depicts in his photographs, is not peculiar to the Santal Parganas. The primitive mode of irrigation, with basket swung by two men, which forms the subject of the illustration here reproduced, is still practised by millions who have never heard of the Santals, or been within a thousand miles of their home. All over India the cultivator watches his crops at night from a rough platform raised on a rickety scaffolding of bamboos. Sometimes it happens, in regions not unlike the Rajmahal hills, that the vigil ends in a tragedy, when the sleepy watcher is torn from his post by the man-eating leopard. But the inclusion of these incidents in no way detracts from the charm of the picture of simple village life, a life of agricultural labour tempered by feasting and dancing in seasons when there is no labour to be performed.

The Paharias' rude religion has drawn nothing from Hinduism or Islam. The Santal equally professes his separation from those creeds, but his love of pleasure has induced him to adopt some of the Hindu festivals, for instance the Jatra, which he celebrates in February.

<sup>1</sup> "The Story of an Indian Upland." By F. B. Bradley-Birt. Pp. xvi+354. (London: Smith, Elder and Co., 1905.) Price 12s. 6d. net.

The history of British administration in this wild tract, up to the time of the Santal rebellion of 1856, can scarcely be held up as a great example. As for the patriarchal system which still prevails, Mr. Risley, in an introduction which, from the pen of so great an ethnological authority, is somewhat disappointing, throws some doubts on its superiority to other methods of dealing with aboriginal tribes. Perhaps, in later years, Mr. Bradley-Birt's enthusiastic admiration of it may cool. As matters stand, his enthusiasm, and his evident sympathy with the simple peoples he describes, serve to enhance the charm of his work.

To the Anglo-Indian this volume will recall much that is pleasant; to the tourist, and even to the stay-at-home Englishman, it will afford a bright glimpse of native country life which is not to be found on the beaten track.

#### NOTES.

At the meeting of the Royal Society on May 18 the following were elected foreign members:—Prof. L. Hermann, Koenigsberg; Prof. H. A. Lorentz, Leyden; Prof. H. Moissan, Paris; and Prof. Hugo de Vries, Amsterdam.

THE annual visitation of the Royal Observatory, Greenwich, will take place on Saturday next, June 3.

THE international conference having for its object the establishment of an international institute of agriculture was opened in Rome on Sunday, May 28, in the presence of the King of Italy. On Monday the conference held a sitting at the Accademia del Lincei, and the Foreign Minister, Signor Tittoni, opened the proceedings with an address.

THE English Arboricultural Society has been granted permission by the King to change its name to the "Royal English Arboricultural Society."

PROF. J. N. LANGLEY, F.R.S., will give one of the general lectures at the meeting of the Association of German Naturalists and Physicians, which will open at Meran on September 24. His subject will be "Recent Researches on the Nervous System."

A REUTER telegram from Portici states that Vesuvius has for some days been in active eruption. At 7 p.m. on May 27 the western side of the small terminal cone collapsed, and a large quantity of lava burst forth, which in an hour's time reached the base of the great cone, at Atrio Cavallo, one kilometer distant.

WE learn from the *Board of Trade Journal* that the *Gaceta de Madrid* for May 11 contained the text of a Royal Order providing for the duty-free admission into Spain of instruments and accessories carried by foreign men of science deputed to observe the eclipse of the sun on August 30.

ACCORDING to a Reuter telegram, dated New York, May 27, the Cunard liner *Campania* reports that she was in continuous communication with land, by wireless telegraphy, throughout her entire voyage from Liverpool. In mid-ocean she had simultaneous communication with America and Europe, a feat which had not previously been accomplished.

A CORRESPONDENT of the *Times* states that in the early part of May enormous shoals of dead fish were thrown up for a considerable distance along the sea coast by Karachi. The whole beach was strewn with dead fish, lying in some places five or six inches deep. The Port Trust authorities had to make arrangements for the removal and burial of these millions of fish. Captain Belton, of the steamship

*City of Dundee*, on arriving at Karachi reported some very curious electrical phenomena about a hundred miles out to sea, repeated flashes of light being observed to pass over the surface of the ocean in a curious way.

AN international congress for the study of radiology and ionisation will be held at Liège on September 12-14 inclusive. The congress will be divided into a physical section and a biological section. The former will be concerned with the physics of electrons, radio-activity and dependent transformations, meteorological and astronomical phenomena and their relation to ionisation and radio-activity. In the biological section the subjects to be considered will include the physiological properties of various radiations and of radio-activity, and their medical value and application. The method of procedure in this section will be determined upon by a special committee presided over by Profs. Bouchard and d'Arsonval. The other members of this committee are Drs. Béclère, Bergonié, Broca, Charpentier, Charrin, Danysz, and Oudin. There will also be a general committee, presided over by M. Henri Becquerel, to examine, classify, and decide upon such reports, papers, and notes as may be offered. The acting president of the congress is to be Prof. H. Kuborn, president of the Royal Medical Society of Belgium, and the general secretary, to whom all communications or contributions should be sent as soon as possible, is Dr. J. Daniel, rue de la Prévôté, 1, Brussels.

MENTION has already been made of the recent visit of British physicians and surgeons to Paris, and the cordial and enthusiastic welcome extended to them by French men of science, as well as by the State and municipal authorities. Further particulars of the visit are given in the *British Medical Journal* of May 20. Among the numerous receptions arranged by the scientific and medical societies and by civil bodies of every kind to do honour and give pleasure to the British visitors, no meeting was more appreciated than that which gave the British men of science the opportunity of paying homage to the memory of Pasteur. On May 11 the visitors attended at the Pasteur Institute to witness the ceremony of placing a wreath upon the tomb of Pasteur in the crypt of the institute by Dr. J. Kingston Fowler, dean of the medical faculty of the University of London. Dr. Roux, the director of the Institute, conducted the visitors and a distinguished party of French medical men to the gates of the crypt, where Dr. Fowler delivered in French the speech referred to in *NATURE* of May 18 (p. 63), in which he craved permission to place a wreath on the tomb of the master, who accomplished so much for science and for humanity, and to whose labours the institute is a fitting memorial. Dr. A. Waller, dean of the faculty of science of the University of London, followed with an eloquent eulogy, also delivered in French. He laid great stress upon the value to humanity of Pasteur's work in the direction of the infinitely little, and spoke of Pasteur as *le médecin de la médecine*. Dr. Waller maintained that in a thousand years' time historians will not speak much of the nineteenth century as remarkable for the invention of the locomotive and other mechanisms, but rather as the epoch in which Pasteur inaugurated so brilliantly the study of the infinitely small. The earnest speeches, and the impressive scene as the visitors passed before Pasteur's tomb in respectful homage to their master, made the occasion a memorable one. The evidence thus given of the reverence in which Pasteur's memory is held should help to cement the friendly relations existing between France and Britain, and to foster that spirit of mutual confidence—that comity of nations—which already exists in the world of science.