

On the 18th, a record left by Sir George Nares was discovered on Brevoort Island, and a small depôt of provisions from the *Discovery* was found in fairly good condition on a neighbouring island. By the 25th, there were many signs of approaching winter. The vegetation was faded and brown, the flowers had disappeared, the ducks had taken their departure, and the summits of Cape Kenrick and the Crystal Palace Cliffs were covered with snow. So as the advancing season precluded all hope of reaching Lady Franklin Bay, Lieutenant Beebe decided to land the stores and boats as far north as possible, and caches were accordingly established on Cape Sabine and Lyttelton Island, the presence of a hunting party of Etah Esquimaux necessitating extra precaution. A whale-boat was also left on Cape Isabella, and Lieutenant Beebe considers that, should Lieutenant Greely's party reach Cape Sabine next year before the arrival of the relief ship, they will scarcely fail to find the depôts. On the 4th of September, new ice formed to a thickness of four inches; and as the engineer reported a leak in the boiler, and the officers unanimously considered that further delay would not only be useless, but extremely hazardous, Lieutenant Beebe reluctantly gave orders to turn the ship's head towards home. The highest point attained by the *Neptune* was 12 miles from Cape Hawkes, and 17 miles from Cape Prescott.

Death of Franz Wittl in North Borneo.—A circumstantial account in the *Daily Telegraph* of the 11th ult., received from Singapore, leaves no room for doubting that this energetic traveller was treacherously murdered, by Muruts or Tanjoeing Dyaks, with several of his native attendants, while making his way to the head of the Sibuco river, the southern boundary of the territory of the British North Borneo Association, in whose service he was engaged. His former journeys, from Marudu Bay in the north of the territory to Papar, round the eastern slopes of Kinabalu and to Sandakan (during which he effectually disproved the existence of Lake Kinabalu), and from the same point northwards to the upper waters of the Labuk, and eastwards to Sebanggan, have been noted in detail in our 'Proceedings' for February last (pp. 117 and 118). Mr. Wittl, a Hungarian by birth, was formerly a Captain in the Austrian Imperial Navy, of considerable scientific attainments, being a contributor to the service Manual of his country; before sailing for Borneo he availed himself largely of the resources of our Society (to which he came with good introductions from Vienna), both in the library and map room; and if he had lived would have doubtless fulfilled his promise to communicate in return for the preliminary aid received, any geographical facts of importance which he might have been at liberty to publish.

Major Holdich on Indian Frontier Surveys.—Major Holdich, well known for his surveys in Afghanistan during the late war, in a lecture

recently delivered at Simla emitted some suggestive views on the subject of frontier surveys. Speaking of the present frontier west of the Indus, he is emphatically of opinion that it is not a "haphazard" one. The present demarcation, coinciding as it does with the transition from the cultivated land to the stony and barren highland beyond, he considers to be an excellent natural boundary. Although here and there it might be advantageous to secure the summits rather than the bases of the boundary hills, so as to ensure a better watch over the border, it would be of little use to do this where there are ranges of hills like steps rising one behind the other, and where consequently nearly every exalted position would be commanded by one higher and further inland. To hold both ends of all the numerous practicable passes which intersect the border between Peshawar and the sea would be simply impossible on account of the magnitude of the task. There are, however, two weak points on our frontier, viz. where a promontory of Jowaki land about 12 miles wide, juts out into our territory between Peshawar and Kohat, and, secondly, further south, where the direct road from Thal to Bannu, which approximately follows the line of the Kurram river, is cut off by a sort of reversed bastion of Waziri country stretching into British territory in the neighbourhood of Bahadur Khel. The rough wilderness of hills in Jowaki and the Kaffir Kot peak and the rugged hills and spurs surrounding it are both strong vantage points for marauders and border ruffians, and in war time these two points constitute a serious weakness in an otherwise scientific frontier. Turning attention to the less known passes, one notices that immediately opposite Bannu there is a direct route following the course of the Tochi river, through the Dawar Valley, then across the Paltu Hills, and over fairly open ground to Ghazni. The Tochi Valley is, generally speaking, an open, well-cultivated, and fairly wide valley, full of big villages and easy gradients, so far as has been seen, while the pass over the Paltu range is several thousand feet lower than the Shutargardan. There are several passes between Dera Ismail Khan and Jacobabad which are worth examination on account of the connection which we know exists between them and the Zhob Valley route from Pishin, now thoroughly explored, and the Bori and Thal-Chotiali routes a little further south. Another route, nearly wholly explored, is the direct route from Kandahar to Dera Ismail via Maruf and the Sharan river, a tributary of the Gomul. In order, however, to complete the mapping of the region, fixed points are much needed south of Waziristan, and the Takht-i-Suliman offers a good opportunity to a surveyor, who could easily ascend it under permission from a local chief, and so secure an admirable position whence to tie together and close the whole triangulation. Southward of Thal-Chotiali there are many routes and passes lately traversed by our troops, and now well known. Major Holdich recommended the engagement of small local chiefs with a thirst for adventure, or travelling

priests, or any sort of people already accustomed to travel and with sufficient intelligence to read and write, as native explorers, who should map out the trans-frontier tracts now closed to British officers. In conclusion, he urged that a closer connection should be established between the Survey and Intelligence Branches with a view to mutual assistance and to improvement in the quality of the work which more properly belongs to one or the other.

The Burma-Manipur Frontier Survey.—We glean from a communication in the Allahabad *Pioneer* some interesting details regarding the measures taken last season to define the boundary line between Manipur and Upper Burma, a step rendered necessary by the raids of the Chins or Kukis, a tribe who have lately settled in the country north of the Kobo valley.—When the Kobo valley was retransferred from Manipur to Burma, the boundary was laid down in 1834 by Captains Grant and Pember-ton, in concert with an official from Ava, but as the tracts north of the Kobo valley were uninhabited, and the neighbouring hill-tribes savage and unruly, these were left unsurveyed, and an approximate boundary drawn north up to a range called Sheriferar. It had become necessary to decide exactly how this line ran in order to know on whom would fall the responsibility of keeping the Chins in order in future. The demarcation party was composed of Colonel Johnstone, c.s.i., Boundary Commissioner, Mr. R. Phayre, Major Badgley, and Mr. Ogle of the Survey Department, Dr. Watt, medical officer and botanist, two other officers and a geologist, and 250 men of the 12th Khelat-i-Ghilzai Regiment and Frontier Police.—The party arrived in Manipur by the end of November. Manipur covers a large area of ground, each house having a separate compound. The city proper, or inner city, occupied by the rajah and his attendants; is quadrangular, and surrounded by moat and rampart like Mandalay. The people are like the Burmese in feature, but the male dress is the dress of the native of India, and they are strictly orthodox Hindus in religion. Two survey parties under Major Badgley and Mr. Ogle were despatched by southerly and northerly routes respectively, while the main party under Colonel Johnstone made its way to Kongal-thanna at the head of the Kobo valley, where the return of the survey parties was awaited. Mandalay having declined to send a representative, the task of defining the boundary was performed *ex parte*, with assistance from the Burmese frontier officials. The Kobo valley, as seen from the Yoma range, presented the aspect of a vast expanse of primeval *sal* forest, with clearances here and there, as it did to Penuberton, nearly 50 years ago. The large Burmese armies formerly stationed here to invade Manipur have given place to small villages of Shans, cultivating rice and manufacturing salt. The Shans of the Kobo valley are descendants of an ancient race whose records go back as far as the 80th year of the Christian era, and whose territory once extended from the Assam valley to the 22nd parallel, and from the Yoma range to Yunnan.