

destroyed many vineyards. The fresh fruit is exported to Simla for sale in kiltas or large hill baskets, and the small seedless grapes, dried, are also sold there as "fine Zante currants," at 2 rupees per pound. At Akpa and Poari the price of fresh grapes is about one rupee for a kiltas-full, say 30 pounds. "Sungnam is the highest point in the valley where the vine thrives." (*Jacquemont's Letters*, p. 286.)

Useful Plants of Kunawar.—An admirable description of the configuration of the hills, and of the botanical features of the valley of the Sutlej, is contained in Thomson's "Travels in the Western Himalaya." In determining the native names of the plants of Bussahir, much assistance may be derived from consulting the copious Index of Royle's "Illustrations of the Botany of the Himalaya," and Jameson's "Report of the Botanical Gardens, North-West Provinces, 1855." A tolerably complete list of the useful plants between Rampur and Sungnam, which the traveller along the Hindostan and Thibet road may expect to find, has appeared in the present volume of the Transactions of this Society, page 77.

II. *Notes on the Forests of India.* By Dr BRANDIS,
Inspector-General of Forests in India.

The author described the characteristic vegetation of the different classes of forests in Burmah, which he has superintended for ten years, and contrasted their general appearance with those of the Sal forests at the foot of the Himalaya and the less luxuriant forests of the Central Provinces; he also adverted to the system of valuation surveys, which has been introduced into British India, as the only safe basis of conservancy.

Professor Balfour, in remarking on Dr Cleghorn's and Dr Brandis' papers, observed that the Society were glad to welcome Dr Cleghorn back from India, where he had attained high eminence as conservator of forests. They had also the satisfaction of seeing this evening among them Dr Brandis, the head of the department, who is charged with organising the conservancy of forests for all India;

and Dr John Kirk, who had gone through all the trials of the African expedition with Dr Livingstone; and Dr Wight, the distinguished author of various works on Indian botany.

III. *On the Influence of Forests on Climate.* By M. BECQUEREL. Translated by G. M. LOWE, Esq.

Mr Lowe gave a condensed account of M. Becquerel's paper on "Forests and their Effects on Climate," read before the French Academy in May. The first portion of the paper gives an account of the extent of forest land in France from the time of Julius Cæsar; the second is on the action of forests on climate. This, he says, depends, *firstly*, on their extent; *secondly*, on the height of the trees and their nature, whether having caducous or persistent leaves; *thirdly*, on the amount of evaporation by the leaves; *fourthly*, on their capability of absorbing and radiating heat; and *fifthly*, on the nature and physical condition of the soil and subsoil. This influence is also exerted on running streams and springs.

As a shade against winds, the action of forests is incontestable, and this preservative action is of course enhanced by the increased height of the trees.

Evaporation by the leaves is a powerful and incessant cause of humidity, the least atmospheric cold precipitating the moisture evaporated, and the rain which results penetrates the soil directly, if it is permeable, and by the intervention of the roots if it is not.

The calorific state of the trees is shown by means of the electric thermometer, which has been employed for this purpose for many years; the result of numerous experiments being that the trunks, branches, and leaves grow warm or cold in air like inorganic bodies. The mean temperature above the trees is, towards the north, a little higher than that of the air at a distance from the trees.

The trunk, when its diameter measures 3 or 4 centimetres, does not acquire its maximum temperature until after sunset. In summer, this occurs about nine o'clock in the evening, whilst the atmospheric temperature attains its