Morce's Gap, whose tropical conditions I have described above; close to Morce's Gap you make the ascent to John Crow Peak (6000 feet), through a forest of tropical luxuriance. Below is Mabess River (3000 feet), with similar but lower-level vegetation. At about the same distance from Cinchona (three miles) is New Haven Gap (5500 feet), with a similar but higher-altitude flora. Still higher altitudes are accessible at Portland Gap and Blue Mountain Peak at a distance of eight to ten miles.

"There are no human habitations above Cinchona, so that the Clyde River, which supplies it with water, is pure and without sources of contamination; a more healthful location could not be found in all the American tropics."

Briefly expressed, the above scheme offers the investigator residence accommodations and laboratory facilities at Cinchona under the most pleasant and advantageous conditions, from which place he may quickly transfer his work to more pronounced tropical conditions at Hope in a dry climate, or to Castleton in an extremely humid locality. The marine flora is equally accessible.

The locality furnishes easy access to an immense number of species of plants different from those available at any other similar institution; travelling and living expenses are very reasonable, and Jamaica may be reached at intervals of only a few days by numerous steamers from England, Germany (Hamburg), and nearly all ports of eastern America.

Yours sincerely,
N. L. BRITTON.

New York Botanical Garden, Bronx Park,
New York City, August 13.

Training of Forest Officers.

Is a sympathetic notice in the *Indian Forester* of the late distinguished Inspector-General of Forests in India, Mr. H. C. Hill, Sir Dietrich Brandis stigmatises as "absurd" "the idea which, until a short time ago, was current in England, and which to this day is held by many English botanists, that a good botanist must necessarily be a good forester." I quite agree that the idea is absurd; but as I am probably better acquainted with the English botanical world than Sir Dietrich Brandis, I doubt very much whether the idea was ever current in this country, or is held at the moment by many English botanists. For my part I entirely dissociate myself from it, as I know many accomplished botanists who would probably make very indifferent forest officers.

I am more able to agree with Sir Dietrich Brandis when he says, "A forester, more than almost anybody else, must use his eyes and must be able on the spot to draw conclusions from what he has observed." But the power of observation is by no means possessed by everyone. A further requisite, in which I think Sir Dietrich Brandis also agrees, is sympathy with and pleasure in forest nature for its own sake. It appears to me that neither point is kept in view in the present mode of recruiting the Indian Forest Service.

Sir Dietrich Brandis lays great stress on sport, and unless it becomes too absorbing a pursuit, it undoubtedly fulfils the conditions I have stated. It would, however, be as undesirable to insist that every forest officer should be a sportsman as that he should be a botanist.

But I entertain a very strong opinion that a forest officer will never rise to the highest level of efficiency in his work unless he has a scientific grasp of the principles which underlie it. He should be able to identify the trees which compose the forest vegetation under his charge, and for this purpose he should have such an elementary acquaintance with botany as will enable him to use intelligently the book which Sir Dietrich Brandis has been for several years occupied at Kew in preparing for the purpose. He should further have some knowledge of the nature and conditions of vegetable life; he should grasp the idea that a tree is a living organism the growth and development of which are subject to adverse or favourable conditions. He should further have some idea of the enemies and diseases by which trees are liable to be attacked, and of how these attacks can be met. All this a man of ordinary intelligence can acquire if he possesses a real taste for nature without rising to the

level of the professional botanist, which it would be absurd to demand of him.

There is the same fallacy underlying the view that mere administrative efficiency is sufficient for a good forest officer as in thinking that mere mechanical drill, without resource or initiative, will make a good soldier.

As I have felt it my duty to urge these views officially, I should be glad to state them more publicly.

I should like to take the opportunity of expressing my regret at the untimely death of Mr. H. C. Hill, the late Inspector-General. Largely as the result of my personal persuasion he accepted a mission in 1900 to initiate a scientific forest administration in the Straits Settlements. His reports were of the highest value, and will be a permanent basis for the future forest policy of that part of the Empire.

W. T. THISELTON-DYER.

Kew, August 28.

Peculiar Clouds.

CAN any of your correspondents explain the following phenomenon? At 5.20 p.m. to-day, the sky to the W. and S. being covered with a dense and unbroken mass of cloud, and the sun, therefore, entirely obscured, I saw a broad patch of iridescent colours like a piece of a rainbow on the clouds to N.N.E., many points more to N. than a rainbow would have been had the sun been shining. No part of the sky was clear, but the clouds were lighter in the N.W.

I saw a similar phenomenon at Colwyn Bay on December 17, 1898, the iridescent cloud being due E. at 2.45 p.m., the sun shining intermittently. I know true "iridescent clouds" well, but they are generally near the sun.

ALFRED O. WALKER.

Ulcombe, Maidstone, August 30.

THE EARTHQUAKE OBSERVATORY IN STRASSBURG.

NOW that the earthquake observatory in Strassburg has been offered as a centre for the proposed international association for seismological research, at which the work of the world so far as it bears upon earthquakes and kindred phenomena may be concentrated, a short description of this institution and its present output may not be devoid of interest.

The building stands in the back part of the University gardens, and lies between two streets, along which heavy traffic is forbidden. Externally it measures 19×15m., and essentially consists of four rooms, round the walls of which there is a passage or air space 1m. in width, walls, a second air space, and the outer walls. In short, it is a building with its floor 1.50m. below the surface, within two other buildings.

The object of the construction is to obtain rooms which are light tight, free from currents of air, and in which changes of temperature and moisture should be small. For certain classes of observations these conditions may be imperative, but when recording earthquakes, which is the chief work at Strassburg, gloom and a still atmosphere are distinctly undesirable. In the early days of seismometry the proper place for an earthquake recorder was considered to be a cellar, and when we find instruments with complicated parts which frequently require inspection, and which write their records on smoked paper, together with photographic apparatus designed to be used in broad daylight, relegated to darkness, we realise that traditions still survive.

Although it is well known that different results are obtained from similar instruments installed on different formations, the choice of site at Strassburg was apparently governed by the advantages offered by proximity to its University. In consequence of this, town traffic, which includes that of an electric service,