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IV. On some of the leading Plants of the lowest zone in Teneriffe

Professor C. Piazzì Symth

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tion of 10,000 feet, where the lucerne still attains a perfect growth in a clear but cool atmosphere of about 60° Fahrenheit. And, then, as we descend into yet deeper valleys at only 6000 or 7000 feet elevation, where the rains of the so-called wet season are only slight and transitory, and not to be compared to those that fall at twice this height, the sun is seen throughout the year, and, in the dry months, actually dazzles in reflected brilliancy from every stone and rock. In these favoured inland valleys there is a predominating sun all the year over; and, in the dry season especially, a profusion of sun by day, followed by a most luminous moonlight, with a calm, clear sky. Here, then, so liberal a supply of light from sun, moon, and stars, appears to be singularly favourable to vegetation; and the lucerne yields inland, two crops to one on the coast, though the temperature of the air on the coast be in the shade 10° or 12° higher during the dry season than in the inland valleys under consideration, and this, too, on soil generally inferior to that of the coast now compared with it in strength of vegetation. The author concluded by some observations on the effect of light in promoting the discharge of oxygen from the leaf tissues of plants, showing that light, independently of heat, increased their vital actions.

Professor Piazzzi Smyth, in remarking upon Dr Smith's paper, made some observations on the amount of heat given by the moon, and shortly traced the history of this inquiry, detailing many experiments by himself and others, and alluding particularly to the researches of Sir John Herschell, Professor J. D. Forbes, &c.

IV. *On some of the leading Plants of the lowest zone in Teneriffe.* By Professor C. PIAZZI SYMTH.

The author described the manner and characteristics of growth of the chief plants met with in advancing from the sea-coast inland, and found both the indigenous and cultivated plants to exhibit a poverty of growth as compared with many other lands in the same latitude, or 28 degrees. The cause of this, he thought, was owing to the special predominance of the trade-wind throughout the Archipelago of the Canaries during the whole of the summer season, and to the

want of rain, and the low temperature which the said wind produces, both primarily and secondarily. In the details of the native plants, the author treated at length on the *Dra-cæna Draco*, as being, *par excellence*, the characteristic plant of the lowest zone of Teneriffe, and having in one of its specimens, the "Great Dragon Tree of Orotavo," acquired more fame than any other individual specimen of the vegetable kingdom; and he concluded with an exhibition of the forms of the dragon tree at different ages, and other Teneriffe plants optically projected on a screen eight feet square, from photographs of which the original negatives had been prepared by himself last summer, and positive copies had been made with much skill and success by M. Orange, in the course of the winter.

Professor Balfour read the following analysis of specimens of volcanic sand from the Andes, sent by Professor Jameson of Quito, and analyzed by Mr Bloxam, assistant in the Industrial Museum:—By qualitative analysis it appears to be composed of silicic acid, peroxide of iron, alumina, carbonate of lime, and small quantities of potassa and soda. A stream of carbonic acid passed through water, in which the sand was suspended, dissolved out much carbonate of lime. The sand contains small quantities of the protoxide of iron. Its quantitative composition is as under:—

Silica,	68·00
Peroxide of iron, and alumina,	21·20
Carbonate of lime,	9·10
Magnesia and alkalies,	1·70
	<hr/>
	100·00

14th June 1857.—Professor FLEMING, Pres., in the Chair.

The following Candidates were balloted for and duly elected—

As Ordinary Resident Fellows.

John Stoddart, Esq., surgeon, Kirkcaldy.

Æneas M'Leod Ross, Esq., 3 East Claremont Street.

Professor Balfour stated that the following donations had