

still improving, he cleared the wooded region, but night coming on quickly returned to its edge and encamped. All were on foot early on the 11th. After passing the last plants to be seen on the ascent, viz : a gigantic composite (*Argyrophyton Douglasii*) and a small *Juncus* he begins his scientific remarks.

“ The great difference produced on vegetation by the agitated and volcanic state of the mountain is very distinctly marked. Here there is no line between the phenogamous and cryptogamous plants, but the limits of vegetation itself are defined with the greatest exactness, and the species do not gradually diminish in number and stature, as is generally the case on such high elevations.”

“ The line of what may be called the woody-country, at the upper verge of which the barometer expresses 21.450 inches, thermometer 46° at 2 P. M., is where we immediately enter on a region of broken and uneven ground, with here and there lumps of lava rising above the general declivity to a height of three hundred to four hundred feet, intersected by deep chasms, which shew the course of the lava when in a state of fluidity. This portion of the mountain is highly picturesque and sublime. Three kinds of timber of small growth are scattered over the low knolls, with one species of *Rubus* and *Vaccinium*, the genus *Fragaria*, and a few *Graminia*, *Filices*, and some alpine species. This region extends to bar. 20.020 in., air 40°, dew point 30°. There is a third region, which reaches to the place where we encamped yesterday, and seems to be the great rise or spring of the lava, the upper part of which at the foot of the first extinct peak is bar. 20.010 in., air 39°.”

“ 12th. At six o'clock, accompanied by three Islanders, and two Americans, I started for the summit of the mountains; bar. at that hour indicated 20.000 inches, therm. 24°; hydr. 20°; and a keen west wind was blowing off the mountain, which was felt severely by us all, and especially by the natives, whom it was necessary to protect with additional blankets and great coats. We passed over about five miles of gentle ascent, consisting of large blocks of lava, sand, scorixæ, and ashes, of every size, shape and color, demonstrating all the gradations of calcination, from the mildest to the most intense. This may be termed the table land or platform, where spring the great rent holes of the subterranean fire or numerous volcanoes. The general appearance is that of the channel of an immense river heaved up. In some places the