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Note On New Disease On Picea Pungens

Dr. A. W. Borthwick

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water and then the determination of their several capacities, whether these made for health or disease in the user of the water containing them. But it was the kind of work in which Marshall Ward revelled. Such of the results as are published in the Reports of the Royal Society are compendious and thorough. With his characteristic intuition, Marshall Ward did not fail to follow up clues that might lead to framing of a general conclusion, and one of the most valuable products of this bacteriological work was his demonstration that light arrests development of the bacteria and ultimately kills them. This was no more than might be expected, and had indeed been vaguely forestated. But Marshall Ward went further, and by an elaborate series of experiments proved beyond question that the bactericidal action lay in the blue region of the spectrum. As a side issue the question of colour in bacteria in its relation to the action of light was a subject of investigation, and its parasolar value was demonstrated. The line of work initiated by this discovery Marshall Ward had proposed to follow up through other processes of the vegetable kingdom, but had not accomplished this at the time of his death.

The references that have been made will suffice to indicate the extent and far-reaching character of Marshall Ward's work in Mycology, and one cannot but feel assured that they establish his claim to be reckoned one of the great investigators of our time, who has not only added to the sum of knowledge, but opened up new avenues to further victories over the unknown.

The following communications were read :—

NOTE ON NEW DISEASE ON *PICEA PUNGENS*.

By Dr. A. W. BORTHWICK.

The disease is caused by a fungus which attacks the buds and produces large, black, conical swellings in which numerous fructifications of the fungus occur. The bud is either immediately destroyed, or it may produce a very much twisted and cankered shoot which frequently dies off at an early period. The fungus is one of the ascomycetes, and shows characteristics resembling those of the genus *Cucurbitaria*.