The council of the American Association for the Advancement of Science called national parks in 1925 "the means of preserving unique representations of the primitive and majestic in nature," and recorded its protest "against additions to the National Parks System, or change in policy, which may tend to lessen in fact or in public estimation their present high value as natural museums, their complete conservation from industrial uses, and their effectiveness as a national educational institution." The same body resolved in December, 1927, that it approved "the creation of those national parks only which meet the highest standards of the system, namely, which are wholly or almost wholly areas of original unmodified natural conditions, each a unique example of its landscape or geologic type," and stated that the system's "facilities for popular education in nature and for inspiration" possessed "incalculable value to individuals and the nation."

Dr. Van Name is overimpressed, in my opinion, by the "catering to vacationists" which characterizes one or two spots in each national park. The overwhelming majority of park visitors are motorists who, from desire and necessity, stick to a few roads and concentration points. All the eleven hundred square miles of Yosemite National Park, for example, remain a splendid wilderness except the eight or nine square miles constituting Yosemite Valley and several outlying public camp sites, together with a few ribbons of road approaching and connecting them. Considering the immensity of the combined park wildernesses enjoyable only by devotees of the trail (averaging two or three passersby to the square mile per season), recreation will be properly classed merely as a by-product.

Dr. Van Name appears to make a mistake too common in Congress, especially among the recently elected. He fails to see our national parks as a system the nature and products of which necessarily will change with alterations in its component elements. That is why scientific men who have the system's great objectives at heart vigorously oppose the slightest alteration in the standards of areas proposed for additions.

I am sure that we all very heartily sympathize with Dr. Van Name's ruling passion to save as much of the country's small remaining primitive forests as is reasonable and practicable, but I am also sure that other means should be sought which will not overburden to distortion, or divert in the least from its great objectives, an institution of unique and inestimable usefulness. Already the national parks system preserves thousands of square miles of noble primitive forest. The floras of the Rockies, Cascades and Sierra, from about 3,500 feet altitude up, are illustrated in full range and remarkable example. Especially are the great forests on the Pacific slope splendidly illustrated. Sugar pine stands of superlative and great size will remain in both Sequoia and Yosemite National Parks even if that comparatively very small portion of the Yosemite forest over which Dr. Van Name is so disturbed should pass into the National Forest.

Let me frankly admit my own greed. I should like to see preserved forever in its original unaltered condition as much of the remaining American primeval forest as can safely be segregated from other necessary uses. But for those parts of it which the national parks system can not admit without endangering its own precious standards, we must find some other method of preservation.

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## THE MOLECULAR SCATTERING OF LIGHT

IN a recent note on the molecular scattering of light (*Comptes Rendus*, 186: 1533, 1928), MM. J. Cabannes and P. Daure report an interesting observation, the interpretation of which seems to present some difficulty.

Gaseous butane was illuminated with the mercury line 4358 A and the scattered light analyzed by the aid of a Fabry and Perot etalon. A wave-length shift towards the red of 0.01 A was observed. With scattering liquids no ring system could be obtained due to a broadening of the scattered line.

The authors do not give the angle of scattering. If we assume that it was 90°, the observed wave-length shift is equal, within the experimental error, to the shift called for by the theory of the Compton effect. However, if the phenomenon is to be interpreted as a Compton effect, there should be an unmodified line; in fact, according to our present conceptions, all the scattered energy should, for a wave-length as long as 4358 A, lie in the unmodified line. No such line is recorded. The fact that P. A. Ross (SCIENCE, 57: 614, 1923) failed to detect any wave-length shift in the light scattered by solid paraffin hardly contradicts the observation made by Cabannes and Daure, since the scattering in solid paraffin is not purely molecular.

An interpretation of the observed wave-length shift in terms of the newly discovered Raman effect seems also impossible. While the Raman effect might lead to an asymmetrical broadening, it can hardly account for a shift greater than the width of the scattered line.

A verification and a more detailed study of the new phenomenon (dependence upon the angle of scattering, etc.) are greatly needed.

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