

forepaws whilst peering at the intruder. In E. T. Seton's "Life-histories of Northern Animals," the story is repeated from Coues, but in the index the entry is credited to J. G. Lockhart. In the Encyclopædia Americana, the only J. G. Lockhart is the biographer of Sir Walter Scott.

Is it possible to get a line on this "Mr. Lockhart" who saw the wolverene on two occasions shading its eyes with a paw?

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JONATHAN EDWARDS AS A FREUDIAN

SINCE Jonathan Edwards has been brought forward as a precursor of Einstein, I wish to file a claim in his behalf as a pre-Freud Freudian. In that very remarkable record of autoanalysis, his Diary, he notes under date of May 2, 1722:

I think it a very good way to examine dreams every morning when I awake; what are the nature, circumstances, principles and ends of my imaginary actions and passions in them; in order to discern what are my prevailing inclinations, etc. Not only did Edwards use dream analysis for the discovery of his secret sins, but he also employed the Freudian therapeutics of frank self-examination starting with random reverie and following the thread of association until he reached the complex that he desired to eradicate by confession and sublimation. For instance, the entry dated "Saturday August 10, about sunset," reads:

As a help against that inward shameful hypocrisy, to confess frankly to myself all which I find in myself, either infirmity or sin; also to confess to God and open the whole case to him, when it is what concerns religion, and humbly and earnestly implore of him the help that is needed; not in the least to endeavor to smother over what is in my heart but to bring it all out to God and my conscience. By this means I may arrive at a greater knowledge of my own heart.

When I find difficulty in finding a subject of religious meditation in vacancies, to pitch at random on what alights in my thoughts, and to go from that to other things which that should bring into my mind, and follow this progression as a

clue, till I come to what I can meditate on with profit and attention and then to follow that.

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SCIENTIFIC BOOKS

Plant Indicators. The Relation of Plant Communities to Process and Practise. By FREDERIC E. CLEMENTS. 388 pages, 92 plates. Publication 290 of the Carnegie Institution of Washington, Washington, D. C.

This is a companion volume to Dr. Clements's book on *Plant Succession*.¹ The aim of the present work is to show the value of the natural vegetation as indicating climatic and soil conditions, and hence, indirectly, the suitability of the areas covered for agriculture, grazing and forestry.

The earlier literature is briefly reviewed, with especial emphasis upon publications which have appeared since the plant indicator concept became definitely established (Hilgard, 1860, Chamberlin, 1877), and especially since quantitative methods began to be employed in the study of vegetation. The indicator concept is discussed on pages 28-34, stress being laid upon the superiority of the plant community to any single species. The author's point of view is illustrated by the following quotations:

As is shown later, plants may indicate conditions, processes, or uses. The simplest of these is the first, the most practical is the last. The plant may indicate a particular soil or climate, or some limiting or controlling factor in either. This would seem to be axiomatic, but it is well known that grassland, which is typically a climatic indicator, often occupies extensive areas in forest climates. Thus, the presence of a plant, even when dominant, is only suggestive of its meaning. It is necessary to correlate it with the existing factors and, better still, to check this correlation by experimental planting, or an actual tracing of the successional development.

Indicators of processes usually require a double correlation, namely, that of the plant with the controlling factor, and that of the factor with the causal process, such as erosion, disturbance, fire,

¹ Clements, F. E., "Plant Succession," Publication 242, Carnegie Institution of Washington, 1916.