

because he finds that it is the only flowering plant which has a wind-borne pollen during the period between July 1 and September 15. Goldenrod is dismissed as a causative factor because its pollen is not wind-borne. The ragweed pollen is distributed when the sun warms up the air held in its oily envelope and its production is most prodigious. Ulrich is convinced that it is constantly in the air of the country and the city and estimates that 1 gm. contains 172,800,000 pollen grains. He has made extracts according to Dunbar's method and treated twelve cases with considerable success in giving relief from the symptoms. He is convinced from the manner of its production and its short duration that he was producing a refractory or inhibitory phase of hypersensitivity. The difficulty of proving this statement lies in the lack of experimental evidence, and the growing belief seems to exist that the anti stages of anaphylaxis are more difficult to produce and more temporary than is the case in infectious processes. Ulrich differs from Dunbar, Clowes and some others in believing it to be a protein toxin instead of a microbe. Two clinical studies suggest themselves from his point of view. "1. If it can be shown that the muscle-reactions in hay-fever patients are modified just as they are in spasmophilias we shall have added another link to the chain of evidence. 2. Recent reports of eosinophilia in animals sensitized to foreign proteins have led observers to think that an increase in oxyphils in the blood is an indication of this condition. If this can be shown to occur in hay-fever, another clinical test can be added to our list. As a matter of fact, Dr. George D. Head has verbally communicated to me that eosinophilia is a common occurrence in those cases giving asthmatic symptoms. In one of my cases under complete control I had the blood studied before and during the season. At no time did eosinophils go above 4.5 per cent." In conclusion, Ulrich says, there are three ways of meeting autumnal hay-fever: 1. The eradication of ragweed. 2. The removal of the patient from the ragweed environment. 3. The production of an anti-hypersensitivity. The first of these is more practicable than is commonly realized. Ragweed can be exterminated. The second method is available only to the favored few, while in the third he sees a glimmer of hope for the many thus afflicted.