the teaching staff and graduates. The principal article in the first number will be an illustrated paper on "Architectural Acoustics" by Professor W. C. Sabine, with a practical discussion of a number of recent theaters, lecture halls and churches. The number will also contain several drawings of important examples of European architecture and an essay on "The Mediæval Town Halls of Italy" by H. E. Warren, S.M. in Architecture, 1905. Early numbers of the *Quarterly* will contain examples of recent work in architectural design by students of the school, a paper on professional practise, the substance of three lectures recently delivered before the school by Mr. Cass Gilbert, of New York (lately president of the American Institute of Architects), and papers on the teaching of architectural design by Professor Duquesne, on the study of architectural history in its relation to the professional study of architecture by Professor H. L. Warren, and further papers on acoustics by Professor Sabine.

THE PRESENT KNOWN DISTRIBUTION OF THE CHESTNUT BARK DISEASE.

THE writers published in Farmers' Bulletin 467, page 6 (issued October 28, 1911), a map showing the distribution of the chestnut bark disease as known in June, 1911. Since that time the disease has spread considerably, also our detailed knowledge of its distribution has increased. In the map here published, thin horizontal lines show the general distribution of uninfected *Castanea dentata*. Thick lines variously arranged in concentric bands indicate general regions of gradually increasing infection which culminate in the region of practically complete destruction of the tree about New York City. Black dots represent the location of advance infections, many of which have already been eradicated. The writers are under obligations to Dr. Perley Spaulding, Professor A. H. Graves, Mr. I. C. Williams, Mr. S. B. Detwiler and the members and employees of the Chestnut Tree Blight Commission of Pennsylvania, Mr. W. H. Rankin, Mr. J. F. O'Byrne, Mr. F. W. Besley, Dr. Ernest S. Reynolds, Mr. H. G. MacMillan, Professor H. R. Fulton and Mr. A. B. Brooks, for much of the data used in compiling this map.

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SPECIAL ARTICLES

SENILITY IN MERISTEMATIC TISSUE

MERISTEMATIC tissue in perennial plants is commonly believed to retain its embryonic condition unchanged. Senility is considered to occur only in specialized cells. A twig cut from a mature tree and planted or grafted is said to produce a new tree as youthful in its protoplasmic vigor as a seedling. While these are almost the unanimous opinions of the botanists, it is interesting to note that many fruit growers and gardeners have always held that vegetatively propagated plants tended to run out, as if through senility.

In order to determine, if possible, which of these views is better justified, a series of investigations on meristematic tissue in perennials of different ages have been carried out, and this article is a brief preliminary statement of one of the more obvious results.

The structure of the adult leaves gives valuable insight into the meristematic tissue, since any minute changes occurring in the latter will be made larger and more obvious in the leaves, just as the inherent characteristics of seeds become more apparent in the plants into which they grow. If, therefore, the meristematic tissue of a perennial is changing with the increasing age of the plant, the new leaves appearing each year should reveal differences. In order to eliminate differences due to external factors, leaves were taken from cuttings of *Vitis riparia* of different ages grown under identical conditions. Comparisons were also made between leaves borne by vines growing wild, side by side under apparently identical conditions, and on many other kinds of trees and vines.

An interesting condition in the venation of the compared leaves was one of the results