first part to be evidently affected. They are the reservoir which the cell draws upon for carbohydrates and proteids. Depleted plastids have a tendency to agglutinate as the neighboring cytoplasm assumes the structure of a network around a number of small vacuoles, which contents become richer in water soluble peptides, as first the plastids, and then the cytoplasm itself, undergo proteolysis.

Death may abruptly affect the cell as a whole, "fixing" the various cell constituents in the place they occupied at the moment death occurred; or death may affect the cell slowly during which agony the constituents have time to undergo changes. Premortal changes are fundamentally alike, whatever the cause of death: their results mainly depend on how long the cell endured.

Lethal factors which act very slowly (malnutrition of adult cells, infection by endophytes or viruses), will first produce increased respiration in the affected cell when part at least of the cytoplasm will become spongy. Proteolytic processes, being enhanced, result in the formation of more water soluble peptides which may accumulate in the vacuolar sap. Finally, large vacuoles are partitioned off into a number of smaller ones by the extension and branching of cytoplasmic strands.

CONCLUSION

Death is the change from the clearly visible harmonious arrangement of homogeneous living parts of the cell into crowding of microscopically heterogeneous material.

The living cell is a harmonious building, coordinating a number of homogeneous materials, the contour of which can be made out under the microscope or the ultramicroscope, making the architectural design of the living cell observable. Killing the cell suddenly by proper cytological technique preserves the architectural disposition of the cell materials, making those materials themselves visible through ultramicroscopical changes of structure admitting of staining. Slow death of the cell preserves neither the architectural disposition of the cell material nor even its microscopical structure, as premortal changes are mainly concerned in the splitting of the homogeneous unstainable living complex into a coarse, granular collection of its constituents.

SCIENTIFIC EVENTS

REFORESTATION BY THE TENNESSEE VALLEY AUTHORITY

TEN thousand bushels of pine cones and other seeds are being harvested by the members of the Civilian Conservation Corps for use in reforestation work in the Tennessee Valley, according to an announcement made by Robert Fechner, director of emergency conservation work. The seeds are being gathered largely in Virginia, West Virginia, North Carolina and Arkansas. The program calls for planting the seeds in nurseries this winter. Later the seedlings will be transplanted in the areas to be reforested by the Tennessee Valley Authority.

Five thousand members of the Civilian Conservation Corps have been assigned to Tennessee Valley work by Director Fechner. These men will be distributed among twenty camps in Tennessee and five in Alabama. One of the major tasks assigned will be that of combatting soil erosion through tree planting, this being part of a general erosion control program to be carried on in the central, southern and western states.

To obtain the amount of seed necessary for the reforestation of the valley, the collection has been apportioned among the four national forests in the states specified on a quota basis. The total harvest will include 600 bushels of yellow poplar seed pods, 4,000 bushels of short-leaf pine, 2,600 bushels of Virginia pine, 2,900 bushels of black locust pods, all capable, under proper care, of producing 2,000,000 yellow poplar, 10,000,000 short-leaf, 8,000,000 Virginia pine and 6,000,000 black locust tree seedlings. Pitch pine cones, of which there is a limited supply in the forests of this region, will be collected in lots of 25 bushels or more.

As soon as the ripe cones are picked, they are shipped to the three southern nurseries of the U. S. Forest Service for drying and seed extraction. These nurseries are at Parsons, West Virginia; Russellville, Arkansas, and Catahoula, Louisiana, which is a new federal nursery. The prepared seeds are forwarded to the Tennessee Valley Authority and probably will be planted in two new nurseries which that organization is planning to establish in the Tennessee Valley.

Although it is often easier to pick cones from trees felled in lumbering operations, most of this year's collections will have to be picked from standing timber. Where it is necessary to climb high trees or ladders the Forest Service has ordered that safety belts be supplied. State and private land camps in the vicinity of the national forests are to be enlisted with those on the national forests during the harvest.

AN AMERICAN DECIMAL-METRIC CODE

PROPOSING that the United States shall make general use of metric weights and measures, an American Decimal-Metric Code has been drafted and urged for adoption, to assist the administration in effecting eco-