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HARVARD ALUMNI BULLETIN



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REV. FREDERICK R. GRIFFIN

REV. SAMUEL GILMAN
AUTHOR OF "FAIR HARVARD"

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A Photograph of one of the Forest Models

The Forest Models

By Albert C. Cline, Assistant Director, Harvard Forest.

THROUGH the generosity of an alumnus, who wishes to remain anonymous, a set of twenty-four small-scale models illustrating the history and silvicultural treatment of central New England forests is being constructed for the Harvard Forest in the studios of the late Samuel J. Guernsey and Theodore B. Pitman, at Harvard Square, Cambridge. Mr. Guernsey's recent death brought to an untimely end his invaluable contribution to the artistic phases of the work. Five years have been required for the artists to finish the first fifteen models. These will be placed on temporary exhibition at the University Museum during the period of the Tercentenary Celebration. It is the plan of the donor that the completed set be installed permanently in a forestry museum to be situated on the Harvard Forest at Petersham, Mass.

The models were designed by the Harvard Forest staff in collaboration with the donor and the artists. The first eight were constructed under the supervision of the late Richard T. Fisher, first director of the Harvard Forest; the remainder of those now ready for exhibition by Albert C. Cline, Assistant Director.

So far as is known, this is the first attempt ever made to portray in miniature, and in exact detail, forest stands and the various conditions and treatments characteristic of their history and development. Each model is complete in itself, with land, sky, trees, men, and animals modeled or painted in realistic form and perspective. The entire scene is done with such fidelity, from both the technological and artistic standpoints, as to convey an accurate picture of the forest and the cultural operations carried on in it. The actual modeling is confined to objects on a semicircular base about six feet long, placed with its straight edge towards the observer. Attached to

the curved rear edge, and rising vertically four feet, is a sheet-metal background on which the distant scene is painted. So skillfully is the modeled foreground blended into the painted background that it is difficult for the eye to discern where the one ends and the other begins.

The first part of the model to be constructed is the terrain. It is formed, in the rough, with small pieces of wood fitted and nailed together in a framework affixed to the flat, wooden base. The framework is then covered with a fine wire screen, and the final contour of the ground is obtained by shaping an overlay of plastic material. The trees are made largely of copper—the boles and branches of fine wire strands in such numbers and lengths as to give the correct size and taper, the leaves of pieces of extremely thin copper produced *en masse* through an etching process. The leaves are attached to the twigs, the twigs to the branches, and the branches to the bole, the whole assembly then being so shaped by twisting and bending as to produce close resemblance to the natural form. Indeed, one familiar with the specific branching habits of native trees may easily identify the several species represented. The bare copper tree is given a coating of solder to smooth any irregularities in the wire structure and to give rigidity, and finally it is hand-painted in the correct colorings of foliage and bark. The modeled figures of men and animals are made of plastic material fashioned over wire armatures, while certain other objects common to forestry operations are carved from wood. The methods employed by the artists will be shown in a special model divided into several sections which demonstrate the progressive steps in construction—from the rough framework and skeleton figures to the finished production.

In their final places the models will be

arranged side by side in orderly sequence, separated from each other by oak paneling, each individually lighted to produce the desired effect of sunlight or shade, and each viewed through a plate glass window. Completely sealed on all sides and constructed wholly of durable materials, the models should indeed be permanent.

Aside from the model which illustrates the method of construction, the entire collection is divided into two parts, one known as the Historical Series of models, the other as the Silviculture Series. The former portrays the most significant stages in the land history of the region in which the Harvard Forest is located, from the year 1700 up to the present time. In the first model appears the virgin forest with veteran white pines towering above the hemlocks and hardwoods. Thereafter come scenes typical of early land clearing (1733), the height of cultivation for farm crops (1830), farm abandonment and the volunteer establishment of a second growth forest of white pine (1850), the logging of the "old field" pine (1910), the ensuing stand of hardwood sprouts and seedlings on the cutover land (1915), and, finally, the same hardwood stand as it appears today, grown to cordwood size.

The Silviculture Series is designed to show the various cultural treatments applicable to present-day forest conditions in central New England, for the most part as they have been developed at the Harvard Forest during the twenty-eight years of its ownership by the University. Included are such operations as planting cutover land, weeding young stands of mixed hardwoods, artificial pruning of pine branches to improve the quality of the wood, thinning middle-aged stands to increase growth rate, and cutting mature stands in ways to insure natural regeneration. Extra space has been devoted to the practice of weeding as applied to existing volunteer stands, a treatment the purpose of which is the control of "weeds"—trees of inferior character or worth, which have multiplied enormously during recent years

and now dominate many young stands on both old fields and cutover land.

The innumerable details of silvicultural technique as developed at Petersham cannot be fully appreciated without explanation by one versed in forestry, but the general conditions or principles involved in the plan of a given model may readily be grasped by reading the descriptive leaflet which has been prepared for distribution at the place of exhibition. In their final repository at Petersham, the models will be of greatest possible educational value by virtue of close proximity to the Forest itself, where members of the resident staff may show a visitor the living exemplification of what a few minutes before was seen wrought in wire and clay.

Harvard Club of Seattle

The spring meeting of the Harvard Club of Seattle, Wash., was held on Friday evening, May 15, at the College Club in that city. Nearly thirty members were present. After dinner Carl Paige Wood, '06, Professor of Music at the University of Washington, played the piano while the company sang and Charles C. Spalding, '24, played a piano solo.

Fred W. Catlett, '04, was appointed a representative of the club to the meeting of the Associated Harvard Clubs in Cambridge next September. Other representatives will be appointed later.

Sound pictures on the history and work of the U. S. Coast Guard were shown.

The following were present:

Lucius E. Marple, '91, Richard B. Harris, '99, Horton C. Force, '01, Daniel B. Trefethen, LL.B. '01, Walter C. Woodward, M.D. '04, Carl Paige Wood, '06, Ernest D. Clark, '08, Paul R. Smith, '10, Leon A. deTurenne, '21, Charles C. Spalding, '24, Arthur C. Jordan, M.D. '25, John H. Demoss, '28, Ernest M. Russell, LL.B. '28, Lightner Smith, LL.B. '28, Gail M. Williams, LL.B. '29, Richard K. Leonard, '30, Gale E. Wilson, M.D. '30, John M. Cooper, Law '30-'32, Philip E. Moore, '31, James E. Prince, LL.B. '33, Thomas Todd, LL.B. '33, John D. Cartano, LL.B. '34, Meredith T. Olinger, M.D. '34.