This meeting will bring to a close a half century of scientific progress in Indiana. Many noted men, such as David Starr Jordan, Barton W. Evermann, John M. Coulter, John C. Branner, T. O. Mendenhall, O. P. Hay, J. C. Arthur, W. A. Noyes, Harvey W. Wiley, W. S. Blatchley and others have been active in the development of the academy, and it is the intention to honor these men at this semi-centennial meeting.

WILL E. EDINGTON,
Press secretary

THE COLORADO-WYOMING ACADEMY OF SCIENCE

THE seventh annual meeting of the Colorado-Wyoming Academy of Science was held on December 1 and 2, 1933, at the University of Wyoming, Laramie, Wyoming.

Friday afternoon and Saturday morning were given over to the reading of papers in section meetings. A total of 118 papers were presented—in chemistry 15; education 11; geology-geography 11; physics 16; plant science 25; psychology 9; social science 6; zoology 25. About 200 members and students attended the sessions.

At the annual dinner Dr. Aven Nelson, of the University of Wyoming, reported on "The Fifth Pacific Science Congress." Robert Niedrach, of the Colorado Museum of Natural History, showed moving pictures of Colorado wild life.

The officers for 1933–4 are: *President,* R. J. Gilmore, Colorado College; *vice-president,* H. M. Barrett, University of Colorado; *secretary,* W. C. Service, Colorado College; *treasurer,* C. T. Hurst, Western State College; *chairman of publications,* C. A. Hutchinson, University of Colorado; *representative to the conference of state academies,* J. C. Stearns, University of Denver. Members of the executive committee are: F. F. Ramaley, University of Colorado; A. S. Adams, the Colorado School of Mines; T. R. Garth, University of Denver; F. P. Goeder, Colorado Agricultural College; Laura A. White, University of Wyoming; P. E. Boucher, Colorado College; F. C. Jean, Colorado State Teachers College, *retiring president.*

The 1934 meeting will be held on November 30 and December 1, 1934, at the Colorado School of Mines, Golden, Colorado.

RALPH J. GILMORE,
Secretary

SCIENTIFIC APPARATUS AND LABORATORY METHODS

A METHOD FOR STUDYING SOIL–PLANT NUTRIENT RELATIONSHIPS

SOIL investigators have given considerable attention to methods for displacing the soil solution, that may be comparable to the effect of plants in drawing nutrients from soils. The use of air pressure applied to soils in order to force nutrients in solution from the soil into plant roots and thence up through the stem of the plant to be collected and analyzed, is thought to be a new method of studying the relation between soil conditions and the intake of various soil solubles.

Briefly, the procedure consists of placing a suitable receptacle containing the root systems of plants grown in a nutrient medium, after the tops have been removed, into a pressure chamber and connecting the plant stubs to receiving flasks outside of the pressure chamber by means of glass and rubber tubing, then applying air pressure to the closed chamber. Field bean plants grown in soils were used in an investigation by this method and a relatively large volume of solution was obtained by the application of thirty pounds per square inch of air pressure to the soil at optimum moisture content in from twelve to twenty-four hours. Interesting data relative to soil and plant treatments and the growth of plants were obtained by analyzing the solutions collected.

This method offers a profitable means of attack in the investigation of problems in soil fertility and plant nutrition. Some special problems to which it may be applied are as follows: (a) The relation of the concentration of substances entering plant roots to their concentration in the nutrient medium; (b) the effects of the presence and concentration of an essential or non-essential element in the nutrient medium on the intake of other elements; (c) the specific nature of the ions that enter plant roots and the physical or chemical processes involved; (d) the effect of various soil conditions on the intake of soil solubles by plant roots.

The results of the investigation with bean plants, using the air pressure method for obtaining the solutions, will be published at an early date.

C. W. LAURITZEN
MICHIGAN STATE COLLEGE

A SIMPLE STAIN FOR NUCLEAR STRUCTURES IN LIVING AMOEBAE AND CYSTS

AMONG the practical methods for the identification of intestinal amoebae, iodine solutions have been much used. They are simple, act immediately and show the nuclear chromatin distribution well enough for purposes of differentiation between species. Eosin or