York; W. S. Richhart, Fort Wayne, Indiana, and Christian E. Brown, Newark, New Jersey.

DR. C. A. SCHENCK, former director of the Biltmore Forest School, will guide the party of students from the Pennsylvania State Forest School at Mont Alto, on their annual tour of the forests of Germany and Switzerland. Dr. J. V. Hofmann, former director of the U. S. Wind River Forest Experiment Station, will have charge of the party, which will consist of not more than twenty men, and will include as many members of other forest schools as can be accommodated. The party will sail from New York on March 28 and Dr. C. A. Schenck will conduct lectures in silviculture and management on the outward voyage, continuing the series of lectures given at Mont Alto early in January. During the tour through the German and Swiss forests with the Mont Alto forest school students last year, Dr. Schenck was able to secure the services of the forester in charge, with the history and working plans, and often invaluable historical maps. The tour will also include some of the French forests.

IN conjunction with the Development Commission, the Departments of Agriculture for England and Wales and Scotland, have instituted a new class of scholarships with the object of training those who desire eventually to take up posts as agricultural organizers under county councils or as lecturers, whether at agricultural departments of universities, agricultural colleges or farm institutes. The scholarships are of two years' duration. The first year of the scholarship will be spent on investigational work in this country and the second year will be spent abroad. The scholarship allowance in the first year will normally be £200; the allowance in the second year will include provision for extra cost of travel and other expenses abroad.

PLANS have been perfected for the establishment of a Bureau of Industrial Standards in the Pennsylvania State Department of Labor and Industry, Harrisburg, to function at an early date. The bureau has been arranged to carry out a policy of having inspectors act as expert advisors in safety work in all branches of manufacture throughout the state; it will be for research, educational and similar purposes, keeping in close touch with the development of standards for health and safety, working, as well, with plant managers and superintendents. Cyril Ainsworth, secretary of the labor department, has been appointed director of the new bureau.

THE *Experiment Station Record* states that the first range livestock experiment station in this country has been established at Miles City, Montana, where a tract of 55,000 acres of grazing land and 2,000 acres of irrigated land formerly occupied by the Fort Keogh Military Reservation was transferred by act of Congress in April, 1924, to the U. S. Department of Agriculture. Buildings and equipment valued at more than $200,000 are available, including two barns built in 1920 at a cost of $12,000 each and about 75 miles of fencing. The station will be devoted to a study of range livestock problems and will be under the immediate supervision of the Animal Husbandry Division of the Bureau of Animal Industry with the cooperation of the Montana Experiment Station and other bureaus and divisions of the department interested in livestock problems. Plans have been made to maintain an initial stock of 1,000 beef feeding cattle, a band of sheep, hogs, horses and turkeys.

UNIVERSITY AND EDUCATIONAL NOTES

THE University of Chicago has received from an anonymous donor the sum of $1,000,000, in connection with its campaign to raise $17,500,000.

CLEVELAND H. DODGE, of New York, president of the Board of Trustees of Robert College, Constantinople, has given $500,000 to the fund for Near East colleges.

THE sum of $100,000 has been given to Boston University by an anonymous donor.

THE governor of New Jersey, in his message to the State Legislature, has recommended appropriations to Rutgers University totalling over $800,000. The items include $200,000 for a new Physics Building for Rutgers College and $200,000 for a new Recitation Building for the College for Women.

DR. LEBARON R. BRIGGS, dean of the faculty of arts and sciences at Harvard University, will resign at the end of the present academic year. His place will be taken by Clifford H. Moore.

DR. WALTER S. HUNTER, head of the department of psychology of the University of Kansas, has been appointed to the G. Stanley Hall chair of genetic psychology at Clark University, established in memory of the first president of the institution, and supported by the income of funds left by him.

DR. HENRY BLUMBERG, of the University of Illinois, has been appointed professor of mathematics at Ohio State University.

DR. ROBERT MAXWELL HARBIN, of Rome, Georgia, has accepted an appointment as professor of orthopedic surgery, Western Reserve University School of Medicine, Cleveland, and orthopedic surgeon to Lakeside and Rainbow Hospitals.

JAMES MCDOWELL, of Boston, a consultant in textile

manufacturing, has been appointed director of research, Textile School, North Carolina State College.

DR. J. A. MILROY has been appointed J. C. White professor of biochemistry, at Queen's University, Belfast, Ireland, and Dr. V. D. Allison lecturer in bacteriology.

DR. PERCY BRIGL, first assistant at the institute of physiological chemistry in the University of Tübingen, has been nominated professor and director of the Institute of Agricultural Chemistry at the Agricultural Hochschule at Hohenheim.

PROFESSOR WIELAND, of Königsberg, has been offered the chair of pharmacology at the University of Frankfurt.

DISCUSSION AND CORRESPONDENCE

HEMERARCH AND FERALARCH, TWO ADDITIONAL TERMS IN ECOLOGY

IN a paper in the July, 1923, number of *Ecology*, Professor Harshberger[1] proposes a new prefix *hemer* to use in connection with practical or applied ecology.

Although many examples are given of the usefulness of the prefix—a few of which are hemerecology, hemerphysiographic, hemerbiotic, hemerfloristics and hemerrotation—an additional term, *hemerarch*, suggested itself to cover the series of successions taking place on cultivated land or elsewhere where the anthropeic factor is of almost paramount importance.

The contrast thus set up necessitated a corresponding term to designate the genetic series of natural origin. For this purpose the term *feralarch* is proposed—the first part from the Latin *fera*, wild, denoting the absence of the anthropeic factor, the second *arch*, series, as first used by Cooper.[2]

Examples of feralarch series include such xerarch series as that from open sand dunes to tree-covered ground; and such hydrarch series as that from open water to land; while hemerarch series would include such series as a study of the successions among weeds of arable land, crop rotations, etc.

FRANK C. GATES
KANSAS STATE AGRICULTURAL COLLEGE

THE EFFECT OF NOISE ON HEARING

REFERRING to the letter of Dr. G. W. Boot in SCIENCE of October 17, and especially to that of Dr. F. W. Kranz in SCIENCE of December 12, it would seem that the following observations are sufficiently germane to be of interest. It chances that your correspondent has suffered from defective hearing in both ears since boyhood. The secondary complication which seems to be immediately responsible for the impairment of hearing is the nearly complete destruction of the tympanic membrane of one ear, and its deformation in the other, with of course more or less accompanying ankylosis of the ossicles in each instance. The failure of function becomes therefore a purely mechanical matter due wholly to injury to the delicate machinery which transmits the perceptible vibrations to the receptor itself. The true auditory organ remains unimpaired.

Now my personal experience ever since I can remember to have thought about it has been that in the presence of *heavy* vibrations—on board a moving trolley car, in a power house, in an automobile, and especially on board a moving train—my hearing at once becomes sensibly more acute, often quite surprisingly so. On frequent occasions, when traveling in a Pullman car, I have heard whisperings, never intended for my ears, on the part of people in neighboring seats, which at ordinary times would have been well below my perceptive horizon, but now embarrassed me by the distinctness of the words. In such situations ordinary conversation is understood by me with the utmost ease, and I frequently find myself forced to request my seatmate to reduce his voice, the while he is just as apt to be asking me to elevate mine. During intervals when the train comes to rest, the conversation becomes immediately unintelligible to me and is best held in abeyance until the train sees fit to start up again.

More than once on board train I have participated in the identical experiment suggested by Dr. Kranz, *i.e.*, conversation with another person subject to an impediment of hearing similar to or greater in degree than my own. If the organ of Corti and the auditory nerve are unaffected the consequences have generally been the same as I have related except that the phenomena described become mutual, little adjustment to one another's peculiarities becomes necessary, and normal people usually find our conversation carried on far too quietly for them. A somewhat intuitive lip reading is a considerable aid to me in everyday life, but in such situations as these I do not have recourse to it or need it.

A similar phenomenon becomes apparent at symphony orchestra concerts. Instruments of relatively softer tone or lower pitch, which I attend with difficulty in the quieter parts of the program, I am often able to pick out with exquisite clearness against the rich tonal background of the full orchestra in fortissimo. As a consequence I always enjoy numbers for the full orchestra best. Also at such times the

[1] Harshberger, John W., "Hemerecology: the ecology of cultivated fields, parks and gardens," *Ecology*, 4: 297–306, 1923.

[2] Cooper, Wm. S., "The climax forest of Isle Royale, Lake Superior, and its development," *Bot. Gaz.*, 55: 1–44, 115–140, 189–235, 1913.