The award in horticulture in the field of vegetable crops for 1943 has been made to Dr. Henry A. Jones and Dr. Alfred E. Clark, of the U. S. Department of Agriculture, Beltsville, Md., for their paper entitled "Inheritance of Male Sterility in the Onion and the Production of Hybrid Seed," and in the field of floriculture to Dr. L. F. Randolph and Dr. Leland G. Cox, of Cornell University, for their paper entitled "Factors Influencing the Germination of Iris Seed and the Relation of Inhibiting Substances to Embryo Dormancy."

THE NORTH AMERICAN ARCTIC

THE war has focussed attention anew upon North America's last frontier—the Far North. It is inevitable that this attention will grow into deep interest in the post-war years. The development of the areas involved should be based upon careful planning, which in turn demands as a background the best and broadest scientific study that can be brought to bear on the Arctic regions.

A meeting was held in New York City on May 13 to consider the feasibility of establishing a regional North American Arctic Institute with scientific objectives in view. The following men were present:

Major Patrick D. Baird, Ottawa, Canada.
Dr. E. Gordon Bill, Hanover, N. H.
Dr. R. W. Boyle, Ottawa, Canada.
Dr. Charles Camsell, Ottawa, Canada.
Lt. Colonel William S. Carlson, New York, N. Y.
Major Richard F. Flint, New York, N. Y.
Dr. L. M. Gould, New York, N. Y.
A. D. P. Heeney, Ottawa, Canada.
Dr. Diamond Jenness, Ottawa, Canada.
W. L. G. Joerg, Washington, D. C.
Dr. Hugh Keenleyside, Ottawa, Canada.
Dr. Trevor Lloyd, Hanover, N. H.
G. R. Parkin, Montreal, Canada.
Erling Porsild, Ottawa, Canada.
Walter Rogers, New York, N. Y.
Dr. V. Stefansson, New York, N. Y.
Lt. A. L. Washburn, New York, N. Y.
Colonel J. T. Wilson, Ottawa, Canada.
Dr. John K. Wright, New York, N. Y.
Dr. V. C. Wynne-Edwards, Montreal, Canada.

Further consideration of the ideas and suggestions made at the meeting will be given by a small continuing committee. Communications should be addressed to L. M. Gould, 446 East 66th Street, Apt. 2-J, New York 21, New York.

SCIENTIFIC NOTES AND NEWS

THE Sociedad Mexicana de Historia Natural at a meeting held in Mexico City on May 12 conferred honorary membership on Dr. Richard B. Goldschmidt, professor of zoology at the University of California at Berkeley. Dr. Goldschmidt made an address on "Genes and Chromosomes."

THE Ohio State University will confer at its commencement in June the doctorate of science on Thomas Midgley, Jr., vice-president of the Ethyl Gasoline Corporation, president of the American Chemical Society, and on Dr. Arno Carl Fieldner, chief of the Fuels and Explosives Service of the U. S. Bureau of Mines.

RUSSELL SAGE COLLEGE at its twenty-seventh commencement exercises on May 14 conferred the doctorate of science on Dr. Katharine B. Blodgett, research physicist of the General Electric Company.

THE degree of doctor of science was conferred at the sixty-sixth annual commencement of Smith College on Sophie Satina, research associate in cytogenetics in the department of botany.

THE Howard Taylor Ricketts Prize of the University of Chicago has been awarded to Dr. Paul Everett Thompson, of the university, in recognition of "outstanding research on malaria."

THE Bessemer Gold Medal for 1944 of the British Iron and Steel Institute has been awarded to Essington Lewis, director-general of munitions and of aircraft production for Australia, "in recognition of his outstanding services to the iron and steel industry of Australia."

DR. WARFIELD T. LONGCOPE, professor of medicine in the School of Medicine of the Johns Hopkins University, was elected at the Atlantic City meeting president of the Association of American Physicians.

GEORGE F. BATEMAN, dean of the Schools of Engineering of Cooper Union, has been elected president of the New York Electrical Society; Dr. Colin G. Fink, professor of electrochemistry at Columbia University, first vice-president, and Dr. Ernst Weber, research professor in electrical engineering at the Polytechnic Institute of Brooklyn, second vice-president.

DR. CHARLES R. DOWNS, consulting chemical engineer, has been elected president of The Chemists Club, New York City. He succeeds Carl Raymond DeLong.

DR. SANFORD S. ATWOOD, who has been associated with the U. S. Regional Pasture Research Laboratory at the Pennsylvania State College since 1937, has become assistant professor in the department of plant

breeding of Cornell University, where he will conduct cytogenetic and breeding investigations with forage crops. Dr. Atwood took up the work on May 1.

DR. MARION MURPHY BROOKE, associate in parasitology at the School of Hygiene and Public Health of the Johns Hopkins University, has been appointed associate professor of preventive medicine at the School of Medicine at Memphis of the University of Tennessee.

WALTER FITZGERALD, senior lecturer of the University of Manchester, England, has been appointed professor of geography to succeed Professor H. J. Fleure, who retires in September.

DR. ROBERT C. MILLER, director of the California Academy of Science, Golden Gate Park, Calif., has been elected secretary of the Pacific Division of the American Association for the Advancement of Science in succession to Dr. J. Murray Luck, professor of biochemistry at Stanford University, who has resigned as of June 30. After July 1 all communications pertaining to the Pacific Division should be directed to Dr. Miller at the above address.

FOLLOWING the recent reorganization of the various departments of the Library of Congress, Frederick E. Brasch, formerly chief of the Smithsonian Division, has been advanced and now assumes the title of consultant in the history of science.

DR. MARSTON TAYLOR BOGERT, professor emeritus of organic chemistry at Columbia University, was re-elected president of the Supervisory Board of the American Year Book at its annual meeting in New York on May 16. This board is composed of representatives of forty-six national learned societies, which cooperate in the editing of this annual record of events and progress.

DR. GEORGE H. YOUNG has been appointed executive assistant of the Mellon Institute of Industrial Research, Pittsburgh. He has been associated with the institute since 1935, first as industrial fellow, then as senior fellow, on the Stoner-Mudge, Inc., Multiple Industrial Fellowship on Protective Coatings. He will take up the management of the research programs of the institute on June 1. During the past three years he has been occupied almost exclusively with problems closely connected with the war effort.

DR. HENRY C. SHERMAN, chief of the Bureau of Human Nutrition and Home Economics of the U. S. Department of Agriculture, has resigned effective in June and will return to his professorship at Columbia University. He will be succeeded at the bureau by Dr. Hazel K. Stiebeling, now assistant chief.

DR. HARVEY N. DAVIS, director of the Office of Production Research and Development of the War Production Board since 1942, has submitted his resignation to take effect on June 1, when he expects to return to his work as president of the Stevens Institute of Technology.

THE *Journal* of the American Medical Association reports that Major General Norman T. Kirk, Surgeon General of the Army, has appointed five science writers as civilian consultants. The men, who are also members of a subcommittee of the Division of Medical Sciences of the National Research Council and members of the National Association of Science Writers, are David Dietz, science editor, Scripps-Howard Newspapers, Cleveland; James C. Leary, science editor, Chicago *Daily News;* Robert D. Potter, science editor, *American Weekly,* New York; Lawrence C. Salter, associate director of press relations, American Medical Association, Chicago, and William L. Laurence, science news editor, *The New York Times.* These writers will work with the Surgeon General and his staff in the preparation of information for the public on new developments in medical research in the Army.

PROFESSOR L. W. BUTLER, of the department of physics of the Iowa State College, has leave of absence to enable him to take up research on naval equipment at the Naval Ordnance Laboratory in Washington.

R. J. KOWAL, of the Bureau of Entomology and Plant Quarantine, U. S. Department of Agriculture, has been assigned to Barro Colorado Island in the Canal Zone to make a series of tests relative to the injection of chemicals into the sap stream of living trees to determine the effectiveness of this method to protect tropical wood from termites.

WILLIAM C. COOPER, of the Office of Foreign Agricultural Relations, is visiting the Cooperative Experiment Station at Tingo María, Peru. While there he will conduct agronomic studies in connection with the complementary-crops program.

SEÑOR EMILIO PINEL, professor of physics at the University of Honduras and professor of agriculture at the Tegucigalpa High School, recently arrived in the United States as the guest of the Institute of Inter-American Affairs to study the organization of field centers of the U. S. Department of Agriculture. Señor Pinel was recently appointed director of agriculture of the Republic of Honduras.

DR. LOYAL DAVIS, professor of surgery at the Medical School in Chicago of Northwestern University, gave the annual Walter L. Niles Memorial Lecture at Cornell University Medical College on May 18. He spoke on "Experiences as Consultant in Neurological Surgery in the European Theater of Operations."

DR. T. M. SONNEBORN, of the department of zoology of Indiana University, spoke on April 27 before the Science Club of Vanderbilt University on "The Structure of the Gene and the Nature of Gene Action in Relation to Work on Paramecium."

DR. HUGH STANNUS delivered on April 18 and 20 the Lumleian lectures of the Royal College of Physicians, London. He discussed problems in riboflavin and allied deficiencies.

THE twenty-fifth annual meetings of the American Geophysical Union and of its eight sections will be held in the Hall of Government, George Washington University, Washington, D. C., on June 1 and 2, and on June 3 a joint meeting with the Section of Seismology and the Eastern Section of the Seismological Society of America.

THE *Journal* of the American Dental Association announces that, as a result of new regulations of the War Department, dental schools throughout the country will suffer a fifty per cent. reduction in the Army quota of students scheduled to enter next year.

IT is reported that Kemper K. Knapp, a lawyer of Chicago, who died on February 23, bequeathed "in excess of $1,000,000" to the University of Wisconsin. He indicated a wish that part of the fund be used for scholarships in the undergraduate or law departments for graduates of Illinois and Wisconsin high schools.

ACCORDING to the will of the late Dr. Charles W. Burr, professor emeritus of mental diseases of the School of Medicine of the University of Pennsylvania, the sum of $200,000 is bequeathed to the endowment fund of the university. His library of about 19,000 volumes is also left to the university.

THE *Journal* of the American Medical Association reports that fellowships in graduate health education leading to a master of science degree in public health are being offered by the U. S. Public Health Service through funds made available by the W. K. Kellogg Foundation. The training provides nine months in academic work in public health and public health education and three months of supervised field experience. A stipend of $100 per month is provided for twelve months, free tuition and travel for field experience. Candidates must pay their traveling expenses to and from the university at the beginning and end of training. Fellowships, which will be available for the fall quarter of 1944, are extended at this time only to qualified American women between the ages of nineteen and forty. Men can not be considered because of the demand for manpower for military service. Qualifications should include a bachelor of science degree or its equivalent from a recognized college or university. Additional information may be obtained from the Office of the Surgeon General, U. S. Public Health Service, Washington 14, D. C. Applications must be accompanied by a transcript of college credits and a small photograph, and must be received not later than August 1.

THROUGH the development of a new American War Standard-Coordination of Graphical Symbols for electrical and electronic equipment, a consistent set of symbols has been issued by the American Standards Association. Previously one symbol was sometimes used to indicate two different pieces of apparatus, and in some cases two different symbols meant the same thing. This standard, in the development of which many national groups and representatives of the Armed Forces cooperated, is admittedly a compromise.

AT the Scientific Exhibit to be held at the Palmer House in connection with the meeting in Chicago of the American Medical Association, emphasis will be placed on war medicine with exhibits from the Army and the Navy. Special exhibits include fractures, the treatment of burns, chemotherapy, infectious diseases and rehabilitation. There will also be a group of exhibits on tropical medicine, and lectures and conferences on rheumatic fever and heart disease.

THE *Journal* of the American Medical Association reports that a cancer control foundation has been established in Ontario. A legislative appropriation of $500,000 will assist in its support. The foundation has been empowered to acquire lands and buildings and to employ a director, officers and the necessary clerical staff. Lieutenant Colonel A. L. Bishop, Toronto, is chairman of the foundation. Other members include Arthur Ford, London; Dr. George S. Young, Toronto; Malcolm Cochrane, Port Arthur; Robert Brown, Toronto; R. E. Stratford, Sarnia, and Kenneth Emerson Deacon, Unionville.

A WHITE paper issued by the British Government on April 6, as reported in *The Times,* London, gives an account of the Government organizations which are concerned with research and development related to the problems of industry. For fundamental research and for the education of research workers, responsibility largely rests with the universities. For these purposes assistance is given by the government. There are now in existence in Great Britain more than twenty agricultural research institutes and stations covering a wide variety of subjects. Most are not owned or managed directly by the State; some are attached to the universities, and others are owned by associations representing branches of the agricultural and horticultural industries. The Minister of Agriculture and the Secretary of State for Scotland have recently set up new machinery designed to ensure

that the results of research are applied as rapidly as possible in farming. The agricultural improvement councils appointed by these ministers will keep in close touch with experiments in new farming methods and will advise, after testing, on their introduction into ordinary farming practice.

DISCUSSION

INTERPENETRATING CLIMAXES IN QUEBEC

AN accurate mapping of the climax areas of vegetation is possible to date only in the North Central States. Phytosociological work in New England, Quebec, Ontario and the Maritime Provinces is still fragmentary. The general limits of the Canadian forest (*piceetum*), of the lake forest (*tsugetum*) and of the oak-hickory forest (*quercetum*) are fairly well known. But their ultimate reaches in the Northeast have not been thoroughly investigated.

Recent exploration has revealed that the sugar maple community extends quite to the tip of the Gaspé Peninsula. It is absent from the immediate coastline all the way from Saint-Jean-Port-Joli, but occupies the hinterland in a more or less continuous strip on the foothills. It is true that beech (*Fagus grandifolia*) drops out at the beginning of the peninsula, but these maple woods are otherwise typical, with *Acer saccharophorum, Betula lutea, Acer pennsylvanicum, Cornus alternifolia, Dicentra Cucullaria,* etc. It is also noteworthy that, when tapped, they seem to yield an average quantity of sugar.

This poses the question of interpretation of interpenetrating climaxes. Potzger and Friesner[1] have shown that, in Indiana, conditions can be such that the more "favorable" sites will be occupied by the mesophytic *aceretum,* and the less favorable but topographically mature will be colonized by the *quercetum.* It may be that such circumstances prevail in the Gaspé in reference to the *aceretum,* occupying the sheltered, well-drained foothills, whilst the more hygric *piceetum* dominates elsewhere.

Again, north of Lake Saint-Jean, the same relationship obtains between the boreal forest and the taiga or hudsonian zone. The new road built by the Aluminum Company of Canada to its barrage at Passes Dangereuses (latitude 50° N) offers a good cross-section through virgin forest. At about latitude 49°, one can witness the contact of three climaxes: (1) immense stretches of very typical Canadian forest; (2) isolated stands of taiga; (3) restricted stands of deciduous forest. The last true maple grove occurs at Metabetchouan, on the shores of Lake Saint-Jean itself. Gradually the typical elements fall out: *Acer saccharophorum* a few miles north of the lake, *Acer rubrum* 20 miles, and finally *Betula lutea* 38 miles. The last named, with hardly any admixture of fir (*Abies balsamea*), forms pure stands at the aforementioned point of contact.

Just what climatic interpretations are warranted by the distribution of these phytosociological groups in the Province of Quebec? There is some evidence that our climate is getting colder and moister (Cooper,[2] Sears[3]), at least in the east (Griggs,[4] Raup[5]). The distribution just outlined is certainly consistent with that theory. Also the existence in the Gaspé Peninsula of a few isolated and evidently relict colonies of red oak (*Quercus borealis*[6]) seems to indicate formerly warmer and drier conditions. It is not unlikely that species of wide midland distribution, such as *Hamamelis virginiana, Celtis occidentalis, Andropogon furcatus, Sorghastrum nutans, Camptosorus rhizophyllus* and others apparently introduced through the Ottawa Valley, are equivalent in Quebec to prairie relicts in Ohio and Indiana[7] and owe their extension to a former period of reduced precipitation. There is evidence also that the "lake forest" reached much further to the north and east, since *Tsuga canadensis* once occurred at Matamek,[8] several hundred miles beyond its present distribution.

Interpenetrating climaxes therefore may be indicative of former conditions and their moving borderlines are likely to follow the fluctuations of climatic trends. The relative vitality within a given area and on comparable topography and soil of the elements respectively characteristic of each climax is an indication of the immediate trend of the locality. It has been shown, in Alaska,[9] for instance, that local factors can be active in a sense (warming or cooling) opposite to the general trend.[10]

Many factors, therefore, must be taken into consideration to correctly interpret the present pattern of vegetational types in Quebec. The first is cohesion of the climax complex. Of course, the climax association, for instance, *Aceretum saccharophori,* on the edge of its range in Gaspé and Lake Saint-Jean, tends to disintegrate. It can still be said to represent the climax association, however, as long as it is not conspicuously invaded by the elements of the neighboring

[1] J. E. Potzger and R. C. Friesner, *Butler Univ. Bot. Stud.,* 4: 181–185, 1940.

[2] W. S. Cooper, *Jour. Geol.,* 50: 981–994, 1942.
[3] P. B. Sears, *Bot. Rev.,* 8: 708–736, 1942.
[4] R. F. Griggs, SCIENCE, 95: 515–519, 1942.
[5] H. M. Raup, *Jour. Arn. Arb.,* 18: 79–117, 1937.
[6] E. Campagna, *Ann. de l'Acfas,* 5: 104, 1939.
[7] N. E. Transeau, *Ecology,* 16: 423–437, 1935.
[8] Paul W. Bowman, *Ecology,* 12: 694–708, 1931.
[9] R. F. Griggs, *Ecology,* 15: 80–96, 1934.
[10] W. S. Cooper, *Ecol. Monogr.,* 12: 1–22, 1942.