terms of increased production, to provide a highly nutritious lunch free of charge to their employees. Few firms would want to go that far, but I think it is clear that the whole problem of industrial feeding has been sorely neglected. Good food has a direct equivalent in more airplanes and tanks, in addition to better health.

One may quarrel with the philosophy of government subsidies, but in Britain they are reported to be spending 125 million pounds per year in food subsidies and they believe that the expenditure is well justified. Sir John Orr has recently given us some very interesting figures concerning what is being done in England, Scotland and Wales with the problem of food supplies, and he urged particularly the need for a world-wide food policy that is based upon the physiological need of the individual person, rather than upon more superficial considerations, such as convenience and temporary economy. He was on solid ground, was he not, when he suggested that item No. 1, in applying and clarifying the Atlantic Charter, might well be to free every nation from the fear and the physiological handicap of an inadequate food supply?

By making special provision for feeding children and pregnant or nursing mothers, and assuring them first call on such items as milk, eggs and citrus fruits, the British have accomplished the remarkable feat of lowering the infant death rate in the midst of the war period. During 1939, 1940 and 1941 the infant death rate rose steadily, but as a result of their nutrition program, primarily, the rate has fallen sharply in 1942, so that it has now reached a level about 20 per cent. better than in the pre-war period. Accomplishments like that, in behalf of the civilian population, merit our attention, even in the midst of war.

I doubt whether any of us here realizes how far the government is planning to go in directing and modifying our civilian food supply. Such changes as restriction of meat, milk, butter, cream, coffee, canned fruits, canned vegetables, canned fish, dehydrated fruits and vegetables are already apparent. In so far as each step is clearly contributory to winning the war, I think there will be hearty cooperation all along the line. It may sound trite, but it will bear repeating, that by far the most critical point in the entire picture is the care and common sense used in setting up the plans in Washington.

In July alone, nearly 600,000,000 pounds of food were dispatched to the Allied nations by the Agricultural Marketing Authority.

During the summer quarter of the year, three and a half tons of vitamin C and two and three quarter tons of vitamin B_1 were sent to our Allies.

Ninety per cent. of the dehydrated skim milk has been removed from the American general supply.

Such changes call for careful planning, both in the government offices and in industry, and they will call for increasing patience on the part of our civilian population.

In conclusion, I would like to suggest first, that we have an unfinished and very serious job ahead of us in providing food that is adequate for the armed forces; and second, that if we could adopt for ourselves, in our own way, and then work with the rest of the world along the lines that were suggested by Sir John Orr, and by Dr. Frank Boudreau of the National Research Council, in planning a food supply adequate for all physiological needs, the gain from this program alone would go a long way toward winning the war and toward ridding the world of war in the future.

OBITUARY

MAX HARRISON DEMOREST

ON November 30, 1942, according to a brief notice from the War Department, Max Harrison Demorest lost his life in Greenland, as the result of a motor-sled accident. The details have not been revealed. Demorest, in order to serve his country, had given up the glaciologic research in which he had been engaged at Yale University for several years; he was commissioned a First Lieutenant in the Army Air Corps and was stationed at a remote outpost. His previous experience in Greenland, as assistant meteorologist and aerologist with the University of Michigan Greenland Expedition of 1930–31 and as glaciologist and assistant meteorologist of the Pan-American Airways Polar Year Expedition of 1932–33, had fitted him, one might say, directly for the specialized work he was called upon to do for the armed forces. He is survived by his wife, Rebecca Humphreys Demorest, and their young daughter.

Demorest was born in Flint, Michigan, on February 18, 1910. In 1934 he received the degree of B.A. at the University of Michigan; in 1936 he received the degree of M.S. at the University of Cincinnati, and in 1938 Princeton University conferred upon him the degree of Ph.D. In that year he became assistant professor in geology at the University of North Dakota, but in 1939 he went to Yale in order to avail himself of its laboratory facilities for the research on glacier ice which he wished to undertake. This research he carried on during the succeeding years with financial aid from a Sterling Fellowship in geology, from a National Research Fellowship, and,

lastly, from a Guggenheim Fellowship. In 1941–42 he also taught geology at Wesleyan University. Demorest was a member of the Research Committee on Glaciers of the American Geophysical Union and likewise a member of the International Commission of Snow and Glaciers. He was at the time of his death a candidate for election as fellow in the Geological Society of America.

The glaciologic research in which he was so deeply interested was of a kind which no one on this side of the Atlantic had yet undertaken. By the methods of optical crystallography he sought to study the crystal fabric of glacier ice and the changes which it suffers by the differential stresses incidental to glacier motion. To do this he cut selected pieces of ice from the glaciers of Mount Rainier, shipped them, encased in "dry ice," to New Haven, and there, in a subfreezing laboratory, examined thin sections of them under a specially adapted polarizing microscope. He thus verified the results obtained by Gerald Seligman's party of British scientists who, in 1938, did the first research of this type, in a high-altitude laboratory hewn in the ice at the head of the Aletsch Glacier, in Switzerland. But Demorest went further than they, for he succeeded in recording on motion film the process of recrystallization as it goes on in the ice under differential pressure, and he thus produced the first ocular evidence of the molecular adjustments that take place in the individual crystals and permit them to yield by continuous deformation to the stresses imposed.

Demorest, however, did more than prove that glacier motion is primarily of the nature of plastic flowage. He also outlined deductively the mechanics of two distinct modes of glacier flow—direct gravity flow, such as is characterisic of valley glaciers descending steep gradients, and extrusion flow, such as is induced in ice caps by differential pressures, as an indirect result of gravity. Best of all, he explained why glacier ice, though capable of plastic deformation, nevertheless shears as a brittle substance under certain conditions—namely, wherever in glaciers or ice caps normal flowage is obstructed. And thus he provided the key to the solution of a baffling problem that has been the subject of controversies between opposing schools of thought for more than a hundred years—ever since the days of Agassiz, Tyndall and Forbes.

These fundamentals of the mechanics of glacier motion Demorest set forth in his part of the paper on "Glacier-thinning During Deglaciation" which he and Richard Foster Flint produced together. So eminently sound, however, did his exposition seem to the present writer, who had the privilege of reading the manuscript before it was published, that he immediately secured Demorest's consent to the incorporation of the basic principles in the chapter on "Glaciers" which was being prepared for the volume on "Hydrology," No. 9 of the Physics of the Earth series of the National Research Council. And as a result Demorest's conception of the laws of glacier motion was made known through two different publications in quick succession. It seems almost providential, now that Max is gone, that acceptance of the principles he laid down was thus announced without delay, while he was still living.

In the death of Max Demorest both glaciology and glacial geology have lost a master mind who, even before the age of thirty-two, brought clarity where there had been much confusion. He will be remembered by his colleagues as one who did not engage in disputation, who by his calm, convincing reasoning caused no rancor nor ever lost a friend.

FRANÇOIS E. MATTHES
U. S. GEOLOGICAL SURVEY

RECENT DEATHS

DR. HARRY H. LAUGHLIN, of Kirksville, Mo., geneticist, formerly associate director in charge of the Eugenics Record Office of the Department of Genetics of the Carnegie Institution of Washington at Cold Spring Harbor, Long Island, N. Y., died on January 26. He was in his sixty-third year.

DR. HOWARD M. RAYMOND, who retired ten years ago as president of the Armour Institute of Technology, Chicago, died on January 24. He was seventy years old.

Nature announces the death of Professor Rudolf Abel, the German bacteriologist, formerly professor of hygiene in the University of Jena, at the age of seventy-four years; of Sir Bryce Chudleigh Burt, director of animal feeding stuffs, Ministry of Food, India, from 1921 to 1928 secretary of the Indian Central Cotton Committee, on January 2, at the age of sixty-one years, and of F. W. Harbord, the metallurgist, on December 27, at the age of eighty-two years.

SCIENTIFIC EVENTS

THE INTER-AMERICAN INSTITUTE OF AGRICULTURAL SCIENCES

THE special correspondent at St. José, Costa Rica, of *The New York Times* calls attention to the fact that the agricultural development of the Americas has begun to take tangible form in the Inter-American Institute of Agricultural Sciences now being developed at Turrialba, Costa Rica.