National University, Bogota, Colombia, where he will work on the collections of reptiles and amphibians from the eastern slope of the Andes. He will also collect specimens in the field.

A POSTGRADUATE Assembly on Nutrition in Wartime will be held by the Institute of Medicine of Chicago on Wednesday and Thursday, November 17 and 18. It will be devoted to phases of nutrition that are of particular interest at this time to practicing physicians, dentists, nutritionists and dietitians. There will be no fees of any kind and all members of these professions in Chicago and the Midwest are invited to register. The assembly will present five addresses on each of two mornings and on one afternoon; six panel discussions on the afternoon of the second day, and a "Nutrition Information, Please" program on the first evening. The First William Hamlin Wilder Memorial Lecture will be given on the evening of the second day by Dr. Russell M. Wilder, chief of the Civilian Food Requirements Branch, War Food Administration, Washington.

A BILL signed by the Governor of Alabama appropriates, to establish the Medical College of Alabama, a million dollars for land, buildings and equipment and $366,760 for each of the fiscal years ending September 30, 1944, and September 30, 1945. A building commission to select a site for the school, which will be conducted as a part of the University of Alabama, will be appointed. The bill authorizes the board of trustees of the university to establish a scholarship for each county in the state in the amount of $400 a year for the benefit of one resident of each county, payable from the annual state appropriation to the School of Medicine.

DRAKE UNIVERSITY, Des Moines, has announced receipt of a gift of $200,000 to build and equip after the war a new science building to be known as "Harvey Ingham Science Hall." The building is the gift of the Gardner Cowles Foundation, and the equipment will be given by the Register and Tribune Corporation. Mr. Ingham, in whose honor the new science hall is to be named, became editor emeritus of the Register and Tribune newspapers last January after serving as editor for forty years. The present Science Hall houses (with the exception of physics and astronomy) the science departments of the university and the College of Pharmacy.

THE Research Laboratory of the General Electric Company, Schenectady, N. Y., announces that 100,000,000-volt x-rays were produced on August 21 for the first time in the history of science. They were obtained from the large induction electron accelerator recently completed. The characteristics of this new type of radiation will be published as fast as they can be determined. The first few observations suffice to show, it is said, that these characteristics differ radically from those with which physicists are familiar.

THE Connecticut Agricultural Experiment Station at New Haven will hold an "Open House" on the station grounds on September 8. Departing from its traditional Field Day at the Mount Carmel farm, the station is this year setting aside half a day for the public to visit the station proper with its four laboratory buildings and six acres of ground. Open house will begin at 1:30 P.M. with a brief welcome by Director William L. Slate and a talk on "Plants and People" by Montague Free, horticulturist of the Brooklyn Botanic Garden. Following the program, visitors will have an opportunity to see the laboratories and greenhouses at work. Staff members will be on hand to explain the work in progress and answer questions on farm and garden subjects. Picnic tables and coffee will be available for early arrivals who bring box lunches. Because of the war limitation, no food will be served. To help to satisfy interest in home vegetable gardening, the "Victory Garden Clinic" will be provided. To the clinic, amateurs are invited to bring problems on soil, diseases and insect pests and any other phases of vegetable or flower gardening. The field work of the staff will be illustrated by moving pictures of forestry and mosquito control and by kodachrome slides of the Mount Carmel experimental grounds and the Tobacco Substation at Windsor. A number of exhibits, including the wood-burning unit for household furnaces, Japanese beetle control and the development of hybrid corn and squash, will be on view.

DISCUSSION

PREVENTION OF ORAL LESIONS IN B_1 AVITAMINOTIC DOGS[1]

IN the course of studies on shock induced by hemorrhage,[2] we have had occasion to produce avitaminosis in dogs. This has been done in two ways: first by the feeding of the diet suggested by Goodsell[3] which contains casein, sucrose, cottonseed oil, agar and cod liver oil, with autoclaved brewer's yeast to supply the other B complex vitamins, and second, by supplying the diet of Schaefer, McKibbin and Elvehjem,[4] in which, instead of brewer's yeast, the dogs were given

[1] The work described in this paper was done under a contract, recommended by the Committee on Medical Research, between the Office of Scientific Research and Development and Vanderbilt University.

[2] W. M. Govier, *Jour. Pharmac. and Exper. Therap.*, 77: 40, 1943.

[3] J. Goodsell, *Am. Jour. Physiol.*, 134: 119, 1941.

[4] A. E. Schaefer, J. M. McKibbin and C. A. Elvehjem, *Jour. Biol. Chem.*, 144: 679, 1942.

riboflavin, nicotinic acid, pantothenic acid, pyridoxine and choline, in adequate amounts by stomach tube twice weekly. Many of the animals in both groups developed necrotic erosions beginning around the teeth and sometimes becoming so severe as to extend almost entirely around the lower jaw. Most of these lesions showed a thin mucopurulent discharge and a mildly fetid odor. We had supposed that these lesions, when they occurred in animals on the diet of Goodsell, were produced by the failure of the animals to eat the B complex vitamins contained in the autoclaved yeast, since it is well known that B_1 avitaminotic animals have little appetite. However, when, with the diet of Schaefer *et al.*, B complex vitamins were supplied by stomach tube, the lesions still occurred.

Although dogs normally synthesize their own vitamin C, the work of Sure *et al.*[5] suggested to us that perhaps, under the experimental conditions named above, they were unable to do so. These workers showed that various members of the vitamin B complex, including thiamin, were necessary for synthesis of vitamin C in the rat, another animal normally synthesizing its own ascorbic acid.

On this basis all the dogs were given 10 mg of ascorbic acid twice weekly with the other vitamins by stomach tube. Those animals showing the oral lesions promptly healed, and no more lesions appeared in the other dogs.

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THE GROWTH OF AN ICE SHEET

A REVIEW

IN a convocation address at Chicago Professor Flint announced a new theory of the growth of the ice sheet that had spread itself over most of North America that lies to the north of the Ohio and Missouri rivers.

This theory has now been published *in extenso* in both of the two most authoritative geological journals,[1] and, four months later, in the most authoritative and widely circulated journal of geography.[2] It is thus to have a publicity altogether exceptional for a technical discussion.

After picturing the development of an ice sheet from mountain glaciers in the highlands of Labrador, Flint proceeds to explain the manner of its expansion until its western boundaries had reached to what is now Wisconsin and Illinois. This had been brought about, claims Flint, by a process which is simplicity itself. The migrating low pressure areas of the atmosphere (cyclones) were presumably then as now charged with moisture and moving in an east northeasterly direction. They arrived at the western margin of the ice sheet where with the greatest of ease they advanced over the glacier to drop their moisture as snow a good part of the way in to the boss of the central ice dome. By processes generally understood for mountain glaciers this snow was transformed into glacier ice and by internal glacier flow it expanded the glacier boundaries westward and southward into the mid-Mississippi valley.

This theory thus takes full account of the studies of mountain glaciers made in the Alps by Agassiz during the early 1840's, but it ignores completely what has since been learned, particularly during the last quarter century, from studies of the existing continental glaciers of Greenland and the Antarctic.

The glacial anticyclone, a system of fierce outward-blowing storm winds which is fixed in position over a continental glacier, renders the cyclones powerless to invade it save in a waning stage of glaciation. The glacial anticyclone is nowhere discussed in Flint's theory and the extensive literature of the subject is not included in his three-page bibliography.

Those who read the exposition of Flint's amazing theory should be advised that studies made in Greenland by the German and American expeditions during the last decade have traced the paths of the cyclones which approach the glacier. These studies have shown that the cyclones are powerless to advance over the glacier more than a few tens of miles, and then only during the brief summer season and in south Greenland alone. As the cyclones approach the glacier they are shunted northward along its border and pass up Davis Strait and Baffin Bay. Where they impinge upon the glacier they deposit their moisture, not as snow to nourish it, but as rain to bring about its wastage. In fact, it now appears that this is the principal way in which the dissolution of an ice sheet is accomplished.

Of course during an advancing hemicycle of glaciation when ice sheets were growing, the vigor of the glacial anticyclone must have been much greater and cyclones, instead of being shunted away along the glacier margin, must have been repelled farther out during the near approach. This is the period to which Flint's theory applies.

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[5] B. Sure, R. M. Theis and R. T. Harrelson, *Jour. Biol. Chem.*, 129: 245, 1939.

[1] Richard Foster Flint, "Progress and Problems in the North American Pleistocene," *Journal of Geology*, 50: 575–578, Aug.–Sept., 1942. "Growth of North American Ice Sheet during the Wisconsin Age," *Bulletin of the Geological Society of America*, 54: 325–362, March 1, 1943. 1 plate, 5 figures, 3 pages of bibliography.

[2] Richard Foster Flint, *The Geographical Review*, 33: 3, 479–481, July, 1943.