only more subject to frost, but the winter temperature is lower than for the mountains." This is a common result of inversions of temperature, generally noted in mountainous regions everywhere.

RAILROADS AND VEGETATION IN THE TROPICS

ONE of the chief difficulties in the maintenance of way along railroads in the moist tropics is the constant struggle against tropical vegetation. This is also a source of great expense. Along the Tehuantepec Railroad, as pointed out by Dr. E. O. Hovey (*Bull. Amer. Geogr. Soc.*, February, 1907), mechanical means have proved inadequate, although they are still used, and the railroad company has adopted a chemical which is applied, from a tank car, at a high temperature and under pressure, by means of a steam sprayer. This kills the roots, as well as the superficial growth.

NOTES

BULLETIN 59, New Mexico College of Agriculture, by J. D. Tinsley, contains the meteorological observations taken at the experiment station between 1892 and 1905; also the results of temperature and rainfall observations at various stations in the Mesilla Valley for most of the years 1851–1890, previously published in Gen. Greely's Report on the Climate of New Mexico some years ago.

Dr. W. N. Shaw, director of the British Meteorological Office, has been appointed reader in meteorology in the University of London.

R. DEC. WARD

*EXPERIMENTS ON HUMAN NUTRITION*

THE Carnegie Institution of Washington has for several years been interested in the study of problems in human nutrition, which it has aided with grants. One of its first undertakings in that line was in connection with the investigation carried on by Professor W. O. Atwater, at Middletown, Conn., in cooperation with this department, the work being continued under his successor, Dr. F. G. Benedict. This joint effort has been directed to increasing the efficiency and precision of the respiration calorimeter, previously developed with the aid of this department, and especially to providing the oxygen annex, making it a closed-circuit apparatus.

So great has been the interest of the institution in this work and its belief in the possibilities open to it, that it has decided to establish it as one of its permanent lines of research and to provide a special laboratory for it, as has already been done for a few other lines. The nutrition laboratory will probably be located in New York, in connection with one of the large hospitals, and will be devoted particularly to inquiries in relation to medicine, physiology and hygiene. The fitting up of the apparatus and laboratory will be in charge of Dr. Benedict, who will direct the subsequent investigation.

There are many problems concerned with nutrition in disease and convalescence, and with the energy output and hence the food requirements of the body under various pathological conditions, as well as many questions of ventilation and other branches of hygiene, to the study of which the respiration calorimeter is especially adapted. Such questions have a wide interest and are of far-reaching importance, and as the department's researches have developed there have been urgent requests that they be taken up. They are, however, distinctly separate from the investigations of the nutritive value of agricultural food products, to which the department's efforts have been directed, and have seemed rather to belong to some other agency than one working primarily in the interests of agriculture and looking to annual appropriations for continuation.

It is especially gratifying, therefore, to all interested in the subject of nutrition in its broadest aspects, that the Carnegie Institution should have recognized its importance and decided to provide for it as one of its special departments of research. It is thus given greater permanency and greater freedom in scope than could be the case under legislative appropriation, and the possibilities are opened for extending the investigation into theoretical lines where it is much needed.

Especially is this departure gratifying to

those who have been interested in the nutrition investigations under the department, for it is a direct outgrowth of the latter's work which has led up to it and made it possible. The development of the respiration calorimeter under the department's cooperation, and the fundamental inquiries which have been conducted with it for several years past, have stimulated research in this field; and as the apparatus has remained the only one of its kind in the country it has been looked to as the means of putting to exact test the deductions and conclusions from other investigation.

The wide interest awakened in nutrition studies, and the experimental methods which have been elaborated, are substantial products of the department's work and influence in this line, and the step taken by one of the highest research institutions of the country is an indication of the way in which the department's work may prepare the way for and stimulate research in the broader fields of science.

While plans for the continuation of these studies are not fully matured, it is expected that the respiration calorimeter at Middletown will be moved to Washington and installed in the new laboratories now building on the department grounds.—*Experiment Station Record.*

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## *COMMEMORATION OF THE TWO HUNDREDTH ANNIVERSARY OF THE BIRTH OF LINNÆUS*

THE committee of the New York Academy of Sciences having in charge the commemoration of the two hundredth anniversary of the birth of the eminent Swedish naturalist Linnæus has completed a program of exercises and exhibits, the main features of which are as follows:

Observance of the anniversary, May 23 next, will begin at the American Museum of Natural History with an exhibition from 10 A.M. to 12 M. of specimens of American animals known to Linnæus, in charge of Frank M. Chapman, Professor W. M. Wheeler, William Beutenmueller and L. P. Gratacap, curators of the museum. These exhibitions are to be continued until May 30. At 10:30 A.M., Dr. Hovey, as secretary of the New York Academy of Sciences, will read letters concerning the anniversary received from other societies. Mr. Archer M. Huntington, president of the American Geographical Society, will deliver at 11 A.M. an address on 'North American Geography in the Time of Linnæus.' Dr. Joel A. Allen, curator of ornithology and mammalogy in the Museum of Natural History, who is one of the oldest members of the Linnæan Society of New York, has been invited to make an address at 11:30 on 'Linnæus and American Zoology.'

In the museum building of the New York Botanical Garden, from 2 to 3:45 P.M. there will be an exhibition of American plants known to Linnæus, in charge of Professor L. M. Underwood, Dr. John K. Small, Dr. P. A. Rydberg, Dr. M. A. Howe, Dr. C. B. Robinson and George V. Nash, all of the Garden staff, and an exhibition of the botanical writings and of portraits of Linnæus in charge of Miss Anna M. Vail, librarian of the garden, and Dr. John H. Barnhart, editor of the publications of the Torrey Botanical Club.

At 2:45 P.M. Dr. Per Axel Rydberg, curator of the Garden herbarium, will deliver an address on 'Linnæus and American Botany,' and an hour later there will be an exhibition of selected lantern slides of flowers of North America known to Linnæus, in charge of Professor H. H. Rusby, honorary curator of the Garden's economic museum and dean of the College of Pharmacy.

From 3:45 to 4:30 P.M. such visitors as desire will walk south from the museum building through the grounds of the garden, and Dr. W. A. Murrill, first assistant to the director, will point out characteristic American trees with which Linnæus was acquainted. Carriages will be at hand for persons who prefer to ride.

A bronze tablet commemorative of Linnæus, a gift to the city from the New York Academy of Sciences, will be unveiled, at 4:30 P.M. at the bridge over the Bronx River in Pelham Parkway. The position selected for the tablet, on the bridge itself, has been approved by Samuel Parsons, landscape architect of the park department, and the design is now before