

achievements is in the art of communication, of which for nearly fifty years he was an outstanding leader; in the citations by which a large number of great institutions justified their grants to him of honorary degrees or medals of distinction and in the archives of the Departments of State of his own and other nations which conferred upon him high orders in recognition of services rendered in the cause of making this world a better place in which to live.

To General Carty, science and the methods of scientific thought were never narrow things or things apart from the great problems of a fuller life. Nor were the great institutions and academies of science mere machinery for putting the capstones of acknowledged

success on recognized achievement. To him their *raison d'être* was their unique opportunity for service.

It was in this light that he looked upon the National Academy of Sciences, an essentially undemocratic institution in a democratic country. It was knowledge of this feeling which caused his associates to create there the medal which bears his name and of which the academy later made to him its first award. It was for him the most pleasurable and satisfying token of love and esteem which those associates could render since it gave assurance of enhanced opportunity to the academy for lasting service. That he did not live to receive the medal is a source of regret to his friends. To him it mattered little.

F. B. JEWETT

## SCIENTIFIC EVENTS

### THE NATURAL HISTORY OF MOUNT EVEREST

IN view of the forthcoming Everest Expedition, a small selection of the specimens brought back by the expeditions of 1921, 1922 and 1924 has been arranged at the British Museum (Natural History), South Kensington, to illustrate conditions upon the mountain. According to the *London Times*, the general appearance of the upper ranges of Everest is excellently illustrated in a number of enlarged photographs. One of these shows how the high winds, even outside the seasons of the monsoon, give rise to whirling clouds of dry snow. The article in the *Times* continues:

A sectional elevation shows the altitudes up to which various forms of life were found, and objects from every department indicate the peculiarities of the natural history of the mountain. Beetles were found at a height of 16,500 feet, butterflies up to 17,000 feet, moths as far up as 18,000 feet. Each of these specimens had its idiosyncrasies; the butterflies and moths clung with their wings to the mountain side against the high wind; the beetles stiffened out and rolled; and even the ants were remarkably torpid.

The grasshoppers shown from the higher altitudes are all wingless, but are related, save for one endemic group, to winged varieties elsewhere. It is curious to note how much smaller were two specimens, within the same species, which were found at 10,000 feet, than two similar examples from the 7,000-foot level. Spiders were found above the snowline and up to 22,000 feet; they live, apparently, upon diminutive insects which themselves must exist on inconspicuous vegetable life.

Sheep were found up to 20,000 feet on the borders of the lichen-zone, but the highest recorded altitude to be reached by a mammal (20,100 feet) was attained by the Royle's pika or Wollaston's pika (mouse-hare), of which a number are on view.

In general, the fauna below 16,000 feet is of essen-

tially the same type as that of the adjacent areas of Central and Southern Asia, while above 16,000 feet its affinities are predominantly Palearctic. The animals are, however, frequently of smaller size than their lowland relatives. The highest nesting birds were found at 17,000 feet; finches were seen migrating at 21,000 feet, and choughs followed the climbers as high as they went.

The plants found on Everest include willows, primulas, gentians, blue poppies and others known to Western gardeners. The short duration of the growing season (three to four months), the exposure to wind and cold, the brightness of the light, the pressure of snow, the distance of water from surface, the scarcity of insects and the poorness of soil, however, all help to make plant life difficult. The plants on scree and cliffs have a very long, spongy taproot, enabling them to reach down to the moisture and to resist the movement of the loose stony material.

The Himalayan range is comparatively Recent, and reached its present form only in Pliocene times. Fossil ammonites from the 14,000-foot level of the Tibetan plateau show the creatures which formerly lived in the sea, which covered the site of the great range. Examples of Recent rocks were collected up to 27,000 feet.

The exhibition, which has been arranged in the Insect Gallery by Dr. Anna B. Hastings and M. M. Burton, will remain open between six months and a year.

### FORESTRY PROGRAM FOR THE SOUTHEASTERN STATES

A FORESTRY program designed to meet the needs of the eight southeastern states has been adopted by the Southeastern Council according to an announcement made by Colonel J. W. Harrelson, director of the North Carolina State Department of Conservation and Development. This program is given below.

1. Encouragement of teaching forestry in public schools and colleges and the development of an appreciation on the part of the general public of the benefits of forest conservation.

2. Speedy extension of each state's forest fire prevention and control system to include all forest lands needing systematic protection.

3. Promotion of comprehensive economic surveys to provide for land-use zoning to designate areas best suited to agricultural development, private forestry and public forests.

4. Development of a coordinated system of publicly owned forests, national, state and local, to be used for timber production, demonstration of improved timber growing and fire control methods, wild life conservation, public hunting grounds and recreation.

5. Equalization of taxes so that forest property will not carry a greater burden, in proportion to its value, than do other classes of property.

6. State-wide assistance to landowners in the handling of their forestry problems.

7. Encouragement of reforestation of idle and eroding lands by maintaining state forest tree nurseries to provide suitable planting stock.

8. Extension of investigations by federal forest experiment stations and suitable state research agencies upon the various subjects fundamental to economic handling of forest lands.

9. Speedy extension to the entire southeast of a survey inaugurated under the McNary-McSweeney Act to supply information now woefully lacking as to the present quantity and condition of standing timber, its rate of growth and rate of depletion and market demands for the several types of timber.

10. Recognition by the Federal Government of landowners engaged in the practice of forestry as eligible for the same loans, assistance, grants and privileges as are accorded to the producers of other crops that spring from the soil.

#### THE WISCONSIN ALUMNI RESEARCH FOUNDATION

A PATENT on another important scientific discovery which will aid in the restoration and protection of health has been assigned to the Wisconsin Alumni Research foundation at the University of Wisconsin, according to an announcement made by Dr. Harry L. Russell, director of the foundation.

A broad basic patent on inorganic compounds of iron and copper for the prevention and treatment of anemia has been granted to Professor Edwin Bret Hart, of the department of agricultural chemistry, University of Wisconsin, and has been assigned to the foundation, becoming one of a number of health-giving discoveries controlled by the foundation in the interests of public welfare. Among the most important of these discoveries is Professor Harry D. Steenbock's process for imparting the health-giving vitamin D properties to food.

The latest patent assigned to the foundation covers various aspects of Professor Hart's discovery of the effect which copper has on unlocking the therapeutic powers of iron in restoring proper hemoglobin content

to the blood of anemia patients. Professor Hart made his discovery in 1928 after three years of research and the patent application has been pending since that time.

The foundation has obtained patent control of the discovery, Dr. Russell explained, in order to insure the therapeutic presentation of the compounds in accord with the proper formula. This control is gained through a system of granting licenses for the use of the discovery and other patented articles, and thus the foundation is able to make available these discoveries to the public, while at the same time protecting the public from fraudulent and unchecked exploitation of uncontrolled commercial use.

Professor Hart's experiments showed that iron, long accepted as beneficial in some cases of anemia, required the addition of copper as a catalytic agent, and that "iron" which proved actively useful in treatment of anemias contained traces of copper as a contaminant. The research was narrowed to a study of inorganic materials when vegetable and animal tissues were burned to an ash before being fed and the catalytic properties were found to persist. The blue appearance of such ash led to successful experiments with copper.

Rabbits, chicks and rats developed severe anemia when placed on an exclusive diet of milk, a food naturally deficient in copper, but they evidenced rapid hemoglobin improvement to normal when minute quantities of copper were introduced in their foods.

In application to a hundred cases of secondary anemia in children, it was found in a New York hospital that the administration of copper and iron together increased the hemoglobin content from 64 per cent. to 84 per cent. in four weeks. The red blood cells gained in numbers accordingly. The appetite of the children treated improved materially, and they gained in alertness, weight and color. The copper-iron preparation was mixed with their milk or other foods which it was found neither to discolor nor to alter in taste.

#### THE PACIFIC DIVISION OF THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE

By invitation of the University of Utah, the seventeenth annual meeting of the Pacific Division of the American Association for the Advancement of Science and associated societies will be held in Salt Lake City. The period June 12 to 15, 1933, has been approved for the meeting. Up to the present time the following societies have announced their intention to participate:

American Association of Economic Entomologists, Pacific Slope Branch. *Chairman*, Program Committee: G. I. Reeves, University of Utah, Salt Lake City.