always and in all climates, in desert, arid, and wooded regions or plain alike. An enumeration of the more or less poisonous plants of Michigan by Woodcock (*Amer. Jour. Botany,* Feb., 1925) extends to 156 species above the algae and fungi. Most are angiospermous; but as the case may be, either horses, cattle, sheep, goats or people need to avoid three species of ferns, the field horsetail, two junipers, and the American yew. Leaves of all species of oak are poisonous, when forming the sole food of animals. Many of the various species listed yield prussic acid, and the flowers of the "lily of the valley" and the "meadow saffron" toxic honey.

The dinosaur range was more than once narrowed by geologic events; but Africa and South America, half the land area of the globe, always remained tropic. Dinosaurian life having shown no visible sign of failure to adjust itself to relatively modern environments, loss of either food or habitat does not satisfactorily explain the extinction of the entire race; although it is thinkable that time being long, with waning appearance of new species the ordinary course of geologic change would tend to localize and thin out the older numbers.

Nor is it certain that the dinosaurs were as dependent on warmth as is usually assumed. As Lucas suggested, the lungs may have been more bird-like, the blood warmer than in existent reptiles. Moreover the growth rings of the conifers of the Como in any case indicate sharp seasonal change, and there is no known feature of the vegetation in the Freeze Out Hills or of that further north in the Como dinosaurian range, precluding heavy frosts. Whence one must imagine the Como sauropods retreating into the waters of the protected bayous in the colder season, and stretching their long necks to crop the masses of shore vegetation in the springtime; while as the hot dry summer advanced these animals would venture landward into different herbage for egglaying and any care of the young. Other types of medium size like the orthopoda would perhaps hibernate like tortoises about the edges of the low wooded lands.

The really important phase of dinosaurian dietetics must therefore be the comparative odontography measured in terms of present day life and food,—at least with rare exceptions. Plant fossils record only a small percentage of the floras of dinosaur times; while the dinosauria were so varied of structure that they could live in all the terranes of their day from the rivers and lakes to the borders of the plains, and through the shady forests to the edge of the dry desert. Until a greater floral record is revealed in the course of the years, the *menu* of the dinosaur must remain somewhat in the same category as that of Thomas Hood's Mylodon, which was generous, abundant, and only lacked preparation by a modern *chef!* Neither harsh "abrasive" foods, nor thyroid-reactive iodine need be looked upon as elements of dinosaurian diet to any extent. Dinosaurs trampling the earth till the grasses grew is only fair evolutionary phantasy. The grasses may be as old as any larger reptiles.

Not to close this suggestion too hastily it is connoted that the lacertilia afford near views of dinosaur-like food habits. Their habits are most varied, and aside from the many insectivores, larger forms like the Algerian Agamids eat, besides dates, berries, grass and various flowers.

Then amongst the Varanids, the monitors are exceedingly rapacious, at times becoming scavengers. They prey on all animals they can master, and are very active; from which it appears that certain fossil Varanids vieing in size with present day crocodilians, were formidable reptiles which may easily have accounted for some of the past extinction of water fowl and mammals.

More aquatic than any of the monitors, the Galapagos Island Iguanoid, *Amblyrhynchus cristatus,* is semi-marine, feeding on sea weeds below tide. This animal is an expert swimmer. The teeth are trilobate; the head is covered by low conical scales. And herein lies a further suggestion. The famous Maidstone Iguanodon of the lower Greensand might just as readily have led an aquatic life, feeding on sea weeds, as the turtles or an Iguanoid. A few of the armored dinosaurs also suggest algal pasturage. Such are Hierosaurus of the Niobrara chalk and certain allied European types. The marine occurrence of the dinosaurs has never been closely considered. Though of course, such occasional occurrences as that of the Hadrosaurs in the New Jersey Greensand, in the Niobrara chalk, and again in the upper Pierre, may be without bearing on food habits.

G. R. WIELAND

YALE UNIVERSITY

SCIENTIFIC EVENTS

ROBERT SIMPSON WOODWARD

THE following resolution was adopted at the annual meeting of the American Geophysical Union, May 1, 1925:

WHEREAS, We, the members of the American Geophysical Union, have learned with deep regret of the death of our associate, Robert Simpson Woodward, who, after a lingering illness of 18 months, peacefully passed away on June 29, 1924, in the seventy-fifth year of his age, therefore, be it

Resolved, That we express our deep sorrow in this loss of one who took a prominent part in the formulation of the initial plans which led to the ultimate establishment

of this union. Dr. Woodward's contributions to the various branches of geophysics, notably geodesy, are too well known to require enumeration here. He held positions of responsibility, both in governmental and university affairs, and was president of the Carnegie Institution of Washington from December, 1904, to January 1, 1921, when he voluntarily relinquished this position. He was the recipient of many honors, both from universities and learned academies. We cherish the memory of our late fellow member, not alone for his scientific achievements, but also for his sturdy philosophy and ever hopeful outlook.

Resolved, Further, that the secretary of the union be instructed to transmit a copy of this resolution to Mrs. Woodward and that it be spread on the minutes of the union.

LISTER MEMORIAL LECTURE[1]

THE first Lister Memorial Lecture was delivered by Sir W. Watson Cheyne, Bart., F.R.S., on May 14, at the Royal College of Surgeons. This lecture forms part of the memorial to Lord Lister which was decided upon so long ago as October, 1912. Part of the funds raised were devoted to placing a medallion in Westminster Abbey, part to the monument unveiled in Portland Place, London, in March, 1924 (see *Nature,* March 22, 1924, p. 430), and the remainder formed an International Lister Memorial Fund for the advancement of surgery. The Royal College of Surgeons of England became trustees for this latter fund, and it was resolved to award a bronze medal, with a sum of £500, every three years, in recognition of noteworthy contributions to surgery. Sir W. Watson Cheyne is the first recipient of the medal, and the award is particularly appropriate, apart from Sir William's scientific achievements, in that he was, with the late Sir Rickman Godlee, assistant to Lister in London. Sir William's lecture on the occasion of the presentation of the medal was a general account of Lister's aims and achievements, and the full and detailed story is promised in a forthcoming volume. Lister's early work at Glasgow is passed in review, leading up to the time when he learned of the work of Pasteur on fermentation and putrescence. The use which Lister made of this knowledge and the wonderful extensions of the work in surgery caused a revolution in surgical methods, for, as Sir William Cheyne says, "not only has his work led to the practical disappearance of septic diseases after operations, but it has enabled the surgeon to perform many operations which prolong life, restore movements, rectify deformities and add to the usefulness and comfort of mankind." The complete lecture appears in the *Lancet* of May 16.

[1] From *Nature.*

THE SEISMOLOGICAL SOCIETY OF AMERICA

THE directors of the Seismological Society of America, meeting in San Francisco on April 30, elected the following officers to serve during the succeeding twelve months: *President,* Dr. Bailey Willis; *First vice-president,* Mr. H. O. Wood; *Second vice-president,* Captain N. H. Heck; *Third vice-president,* Mr. M. Hall McAllister; *Secretary-Treasurer,* Dr. S. D. Townley. By request of the president, Dr. Arthur L. Day will continue to act as chairman of the scientific committee and Dr. Townley as chairman of the committee on publications. Since both the president and secretary are connected with Stanford University that institution remains the center of administration. The activity of earthquakes in California naturally focuses the work of investigation in that state. The society has, however, broader interests and affiliations with seismological research in general. Its activities are divided between two branches of the subject, scientific research, which it seeks to promote by the publication of the *Bulletin* of the society, and education toward safety, which it strives to advance through the study and discussion of practical measures for safeguarding communities against earthquake damage and conflagration. The membership is now about 650 and is widely distributed throughout the world. All who are interested in matters pertaining to earthquakes are eligible to membership.

S. D. TOWNLEY,
Secretary

STANFORD UNIVERSITY

TRANSFER OF THE BUREAU OF MINES TO THE DEPARTMENT OF COMMERCE

PRESIDENT COOLIDGE on June 4 by executive order transferred the Bureau of Mines from the Department of the Interior to the Department of Commerce, Attorney General Sargent having decided that the action was authorized by law. In furtherance of the same purpose the president some months ago transferred the Patent Office, and other bureaus will be similarly treated when the required legislation is obtained under the reorganization act. Two offices of the Bureau of Mines will remain under the Interior Department, those having to do with coal, oil and other mineral land leasing. These offices, not being engaged in scientific research, under the law can not be transferred.

Secretary Hoover, of the Department of Commerce, said that he soon would appoint a committee representative of organizations of mining engineers and the mining industry to study ways and means to increase the efficiency of the Bureau of Mines and divi-