

imals, the other of parasitic plants. The 'animals' treated of are mainly insects, and the various orders taken up are Lepidoptera, Coleoptera, Orthoptera, Hemiptera and Arachnida. Under each of these heads the species belonging to the orders are discussed, and facts are given regarding their life history, geographical distribution, natural enemies, influence of external conditions on development, means of destruction and bibliography. The cryptogamic enemies of the vine form the subject of the second part, and we have here discussions of *Oidium*, mildew, anthracnose, pourridie (caused by *Agaricus melleus*), *Vibrissia hypogea*, melanose, black rot and one or two others. There are no especially new facts given in the volume as far as observed. The plates are beautifully drawn and colored and have the merit of being mainly new, only a very few figures having been copied from other authors.

J. F. JAMES.

*Icones fungorum ad usum Sylloges Saccardianae Accommodatae.* A. N. BERLESE. Vol. 2, fasc. 1, pp. 28, pl. 45.

This, the first part of a new volume of this sumptuous work, has just been published. It sustains the high character of the first volume. In it Dr. Berlese discusses the species of Saccardo's section *Diclyospora* of the *Sphaeriaceae*, giving diagnosis of the species of *Pleomassaria*, *Karstenula* and *Pleospora*. Only two new species are described, viz., *Pleospora parvula* on stems of *Berberis vulgaris*, and *P. magnusiana* on culms and leaves of *Glyceria vahliana*. The latter name is proposed for *P. pentamera* of Berlese's monograph, as the form is now considered distinct from Karsten's species of this name. *Pleospora carpinicola* Ell. & Ever. is transferred to the genus *Karstenula*; and *P. hysteroidea* Ell. & Ever. is regarded as a sub-species of *P. andropogonis* Niessl. These are all the changes proposed,

which seems quite remarkable in these days. The illustrations are excellent, and while some species seem to be perilously near others, doubtless a carefully discriminating eye would be able to separate them.

JOSEPH F. JAMES.

WASHINGTON, D. C.

#### NOTES AND NEWS.

GENERAL JOHN NEWTON, U. S. A., engineer, died on May 1, at the age of seventy-two years. He was elected a member of the National Academy of Sciences in 1876.

DR. KARL LUDWIG, professor of physiology in the University of Leipzig, died on April 27, at the age of seventy-nine years.

THE *Johns Hopkins University Circular* for April contains the address made by President Low on the Nineteenth Commemoration Day, February 22. The address was entitled 'A City University,' and gives an admirable review of the scope of a great university and its relation to the city in which it is situated. After describing the different plans of the American, German, French and English university, Mr. Low continued: "The aim which the German university has set before itself and which it has very largely realized under the conditions natural to German life, is the aim, in my judgment, which the American university also should set before itself, and which it must realize under the conditions natural to American life. Because, after all has been said, the world is ruled by its thinkers, and civilization is carried forward by the patient investigators of natural laws; the lives of men are largely shaped by the teachings of experience as revealed by historic study; and the literature of men is enriched by every addition to our knowledge of the literature and language of the past. Nature's craftsmen in all these directions will produce results according to their gifts outside of a university if they get no opportunity within it. But the history

of Germany clearly shows that the opportunity to serve mankind along such lines is much enlarged if to train such men is the chosen aim of the university; in part, because, in that case, the university affords the material apparatus by the aid of which the natural thinker or investigator can best do his work, and, most of all, because, in a university so constituted, the atmosphere of the place and the spirit of the men who work there are friendly to such labors."

THROUGH the courtesy of the Assistant Secretary of the Royal Meteorological Society, we are informed that at the meeting of that Society on April 17th Messrs. A. C. Bayard and W. Marriott communicated a paper on 'The Frost of January and February, 1895, over the British Isles.' It was stated that the cold period which commenced on December 30th and terminated on March 5th was broken by a week's mild weather from January 14th to 21st, otherwise there would have been continuous frost for 66 days. Temperatures below 10° Fahrenheit, and in some cases below zero, were recorded in parts of England and Scotland between January 8th and 13th, while from the 26th to the 31st, and from February 5th to 20th, temperatures below 10° occurred on every day in some part of the British Isles. The coldest days were February 8th to the 10th. The lowest temperatures recorded were —17° at Braemar, and —11° degrees at Bucton and Drumlanrig. The mean temperature of the British Isles for January was about 7°, and for February from 11° to 14°, below the average, while the mean temperature for the period from January 26th to February 19th was from 14° to 20° below the average. The distribution of atmospheric pressure was almost entirely the reverse of the normal, the barometer being highest in the north and lowest in the south, the result being a continuance of strong, northerly and easterly winds. The effect of the cold on

the public health was great, especially on young children and old people. The number of deaths in London due to diseases of the respiratory organs rapidly increased from February 2d to March 2d, when the weekly number was 1448, or 945 above the average. From a comparison of previous records the authors are of opinion that the recent frost was more severe than any since 1814.

THE *Popular Science Monthly* for May prints an interesting account of the naturalist Conrad Gesner, by Professor W. K. Brooks. It is illustrated by twelve photo-engravings taken from the original wood cuts in his work, *Historia Animalium*, published in the latter half of the sixteenth century.

IN the *Atlantic Monthly* for May Mr. Percival Lowell begins a series of articles on the planet Mars. He concludes that we have proof positive that Mars has an atmosphere, that the air is thinner at least by half than that on the summits of the Himalayas, that in constitution it does not differ greatly from our own, and that it is relatively heavily charged with water vapor. Professor Holden, on the other hand, in the May number of the *North American Review*, concludes from the observations on the spectrum of Mars made by Professor Campbell, and printed recently in the *Publications of the Astronomical Society of the Pacific*, that there is no more evidence of aqueous vapor nor of an atmosphere in Mars than there is in the case of the Moon.

THE American Academy of Medicine met at Johns Hopkins University on May 4th and May 6th, under the Presidency of Dr. J. McF. Gaston.

MR. HENRY SEEBOHM will write the text for a new work on the eggs of British Birds, to be published by Pawson and Brailsford, of Sheffield, England. The work will contain colored illustrations of the eggs of 400 species.

PROFESSOR F. N. COLE, now of the University of Michigan, has been appointed Professor of Mathematics in Columbia College and Barnard College, filling one of the three new chairs recently endowed in Barnard College.

PROFESSOR FRANZ POSEPNY, known for his researches on mineral deposits, died on March 27th, at the age of fifty-nine years.

THE Association of Military Surgeons of the United States will meet at Buffalo, New York, on May 21st, 22d and 23d, under the Presidency of Dr. George M. Sternberg.

THE twenty-second National Conference of Charities and Correction will be held in New Haven during the week beginning May 24th.

Gov. MORTON has signed the bill incorporating the New York Zoölogical Society and providing for the establishment of a Zoölogical Garden in New York.

MR. ROBERT FITCH, antiquarian and geologist of Norwich, England, died recently at the age of 93 years.

THE death is announced of Lothar von Meyer, Professor of Chemistry at the University of Tübingen, at the age of 65.

THE presidential address delivered before the recent meeting of the American Society of Naturalists by Professor C. S. Minot on The Work of the Naturalist in the World is printed in the May number of the *Popular Science Monthly*.

THE tenth annual meeting of the American Association for the Advancement of Physical Education was held at the Teachers' College, New York, on April 25, 26 and 27. The program included a large number of papers of scientific interest.

DR. KURT RUMKER has been called to a professorship of agriculture in the University of Breslau.

COMMISSIONERS are being appointed by Governor Morton with a view to the acqui-

sition of the Hudson River Palisades by the United States.

MR. M. S. READ, now of Cornell University, has been appointed Professor of Philosophy in Colgate University.

THE departments of Mining and Geology of Columbia College will hold their annual summer school in Colorado. The School in Practical Mining will be in Central City under the charge of Professor Peele, and the Geological School will meet at Golden under the charge of Professor Kemp.

DR. HANS THIERFELDER has been appointed Director of the Chemical Department of the Physiological Laboratory in Berlin.

THE Amherst Summer School of Library Economy, under the direction of Mr. William I. Fletcher, will be in session from July 1 to August 3.

THE April number of the *Bulletin of the Torrey Botanical Club* contains a biographical notice of John H. Redfield by Mr. William M. Canby. There is an excellent portrait and a bibliography containing fifty-four titles.

THE presidential address on 'The United States Geological Survey,' given before the Geological Society of Washington, on December 18, 1894, by Mr. Charles D. Walcott, and published in the February number of the *Popular Science Monthly*, has been reprinted. It should be in the hands of all who are interested in the great work accomplished and in progress under the direction of the United States Geological Survey.

WITH the permission of the Prussian Minister of Education the University of Göttingen has conferred the degree of doctor of philosophy on Miss Grace Chisholm. This is a first degree conferred on a woman since Göttingen became a Prussian university.

PROFESSOR HALSTED writes to *Garden and Forest* that the late winter has been very

trying upon the English Ivy which covers many of the older buildings in New Brunswick, New Jersey. The leaves are mostly brown, many of them dead, and have the appearance of having been scorched by fire. It may be that the plants will revive with warm weather, but these old vines, which have been the pride of the city, are just now anything but attractive.

#### SOCIETIES AND ACADEMIES.

##### BIOLOGICAL SOCIETY OF WASHINGTON.

At the meeting of April 20 Dr. Frank Baker exhibited specimens and gave descriptions of two anomalous forms of human lumbar vertibræ hitherto undescribed.

Dr. Theobald Smith read a paper entitled 'An Infectious Entero-hepatitis of Turkeys, Caused by Protozoa.'

The first intimation of the existence of this hitherto unrecognized disease was given by some diseased organs sent by Mr. Samuel Cushman of the Rhode Island Experiment Station in 1893. In 1894 the speaker had an opportunity of studying a number of cases in various stages of the disease.

This begins in the cæca and manifests itself by a more or less uniform thickening of the wall. When this has continued for some time an exudate is poured out from the mucous membrane, which coagulates firmly and occludes the tube itself more or less completely. The cause of the thickening of the cæcal wall is a protozoon from 6 to 10  $\mu$  in diameter, which multiplies very rapidly within the connective tissue interstices of the mucous and submucous tissue. The irritation produced by these bodies induces proliferation of the connective tissue cells. The thickening is further increased by cell infiltration, due to inflammatory processes which appear later on, and which may be due to the absorption of bacterial products from the denuded mucosa.

In almost every case the liver is secondarily and usually very severely involved by

the transportation of these protozoa from the seat of the disease in cæca through the portal system. The liver becomes covered with round isolated and confluent patches of a yellowish or brownish color, which represent necrotic foci in the substance of the liver itself. Within these, in the earlier stages, large numbers of the same protozoa may be found.

The protozoon, as stated above, is a spherical or slightly oval body, of a homogeneous appearance and containing an exceedingly minute ring-like nucleus. It has shown none of the characters of sporozoa. Its rapid multiplication within the tissue spaces, where it may be seen either isolated or in groups of two, three, four or many individuals, as well as the absence of any intercellular stage, has induced the writer to place it, at least provisionally, in the genus *Amœba*, and, in consultation with Dr. Stiles, to denominate it *Amœba meleagridis*. A detailed account of this investigation is to appear in a forthcoming bulletin of the Bureau of Animal Industry.

Dr. G. Browne Goode read a paper on 'The Horizontal and Vertical Distribution of Deep Sea Fishes.' The paper had for its object to demonstrate that the accepted ideas in regard to the distribution of deep sea fishes, having been founded on incomplete data, are erroneous; and that, contrary to the commonly accepted opinion, no separation of deep sea fish life into horizontal strata is possible. On the other hand, the idea that the fish fauna of the depths of the sea is the same in all parts of the world is without foundation.

Through the application of a percentage method eleven well marked faunal regions were shown to exist, as well as two sub-regions. The regions proposed were as follows:

1. Boreal Atlantic.
2. Eastern Atlantic or Lusitanian, with a Mediterranean sub-region.