works back onto the track of the cyclone. Thus a cyclone may have loops in its path.

JOURNAL OF THE SCOTTISH METEOROLOGICAL SOCIETY

THE annual volume (Vol. XVI., 3d Series, XXX.) of this society including rainfall returns and meteorology of Scotland for 1912 has recently appeared. There are seven special articles. Agricultural meteorology is touched in three—Dr. W. N. Shaw, "On Seasons and Crops in the East of England" (pp. 179–183), A. Watt, "On the Correlation of Weather and Crops in the East of Scotland" (pp. 184–187), and Dr. H. N. J. Miller, "The Composition of Rain Water Collected in the Hebrides and in Iceland, with Special Reference to the Amount of Nitrogen as Ammonia and as Nitrates" (pp. 141–158). Dr. Shaw has another article, "Upper Air Calculus and the British Soundings during the International Week (May 5–10, 1913)" (pp. 167–178). The other papers are—M. M'C. Fairgrieve, "A Possible Two-hourly Period in the Diurnal Variation of the Barometer" (pp. 158–166), Dr. E. M. Wedderburn, "On the Appearance of the Surface of Freshwater Lochs in Calm Weather" (pp. 189–193), and Dr. G. A. Carse, "Note on Atmospheric Electric Potential Results at Edinburgh during 1912" (pp. 188–189).

NOTES

ON January 1, 1914, the United States Weather Bureau began to issue daily weather maps of the Northern Hemisphere with pressures indicated in millibars and temperatures in Absolute Centigrade degrees. This map is printed on the back of the usual Washington weather map of the United States.

THE Central Meteorological Bureau of France has created a special forecast service for aeronauts.

MR. R. C. MOSSMAN, of the Argentine Weather Service, is acting editor of *Symons's Meteorological Magazine* and director of the British Rainfall Association during the temporary absence of Dr. H. R. Mill on account of ill-health.

THE Italian Meteorological Society will hold an international congress in Venice in September, 1914. The higher atmosphere, climatology, aerology, meteorology and maritime meteorology will receive particular attention.

IN connection with studies of air currents, pilot balloons are used extensively in Germany. Vertical currents are determined by comparing the observed rate of ascent of the balloons with the theoretical. The turbulent meeting planes of opposing vertical currents are usually marked by clouds.[4]

THE daily synchronous weather charts of the southern part of the Southern Hemisphere, October 1, 1901, to March 31, 1904, compiled from the observations of ships and the numerous Antarctic expeditions give the first extensive (though general) information concerning the cyclones of the south temperate and sub-antarctic zones. The paths of these cyclones lie far south, particularly in summer, when they are beyond latitude 60 degrees. The average rate of progression is about 20 kilometers per hour—about the same as ocean cyclones elsewhere.[5]

CHARLES F. BROOKS
HARVARD UNIVERSITY

SPECIAL ARTICLES

THE SYSTEMATIC POSITION OF THE ORGANISM OF THE COMMON POTATO SCAB

SCAB is probably the most widely distributed disease of the potato tuber. We are indebted to Professor Roland Thaxter for associating a specific organism with the cause of this disease. His description of the morphological and biological characters of this organism are so careful and his substantiation of the same as causal agent, so conclusive, that we are unable to add anything of material importance—at any rate here—from our own study of the organism.

Professor Thaxter named the organism *Oospora scabies*[1] by which "provisional"

[4] Dr. A. Peppler, *Deutsche Luftfahrer Zeitschrift*, November 26, 1913, pp. 578–580.

[5] See *Nature*, London, December 4, 1913, pp. 393–395.

name the disease organism has since been known. "Provisional" because Thaxter himself expresses his doubt as to the correctness of referring the organism to the genius *Oospora,* remarking that the genus *Oospora* as given by Saccardo has no scientific value.

We had occasion to carefully study this organism recently, and from our observations desire to rectify the nomenclature.

From Saccardo's interpretation of the genus *Oospora,* and from its numerous species, we must consider it as a fungus pure and simple, a hyphomycete of the Mucidineæ-Amerosporæ. The organism of potato scab proves not to be a fungus. It differs in morphological characters considerably from what is our present conception of an *Oospora.* Mr. G. C. Cunningham at the meeting of the American Association for the Advancement of Science in Washington, D. C. (1911), expressed his opinion that the potato-scab organism belongs to the "higher bacteria" and he proposes to place it in the genus *Streptothrix.* We are also inclined to regard it as a Schizomycete of the filamentous kind, belonging to the Chlamydobacteriaceæ. On endeavoring to place the organism in its proper genus, we found ourselves confronted by one of the most perplexing problems of botanical nomenclature, which promises a rich harvest to those who are fond of such study.

At first we considered *Streptothrix* Cohn[2] the correct genus, but found later that Corda[3] in 1839 founded this genus for another hyphomycetous fungus of which *S. fusca* was his species. Hence, according to the Vienna rules, this name was no longer available for another plant genus. Saccardo still considers this name as given by Corda valid, including four species all of which are distinct from our organism. Furthermore, *Streptothrix,* as erroneously used by Cohn, possesses no "sheaths," whereas our organism does, however delicate they may appear.

Other names such as *Cladothrix, Nocardia* and *Actinomyces* have also been loosely used for members closely related to the organism of potato scab. *Cladothrix* is out of the question owing to its false branching and ciliate spores.

Actinomyces was established by Harz in 1878[4] and his description undoubtedly shows generic relationship to our organism. Harz describes *A. bovis* as causing "lump jaw" or actinomycosis.

Homer Wright, M.D.,[5] pleads in favor of the name *Actinomyces* for use only in connection with the organism causing actinomycosis, and suggests that all other organisms of this genus should be known as *Nocardia* "because the use of the generic term *Actinomyces* for them logically leads to giving the name actinomycosis to those cases of suppurative processes due to infection with certain members of the group." This point of view is opposed to even the most elementary conception of botanical nomenclature.

Now *Nocardia* is the name at present in use by Saccardo for members of our group of organisms.[6] It was established by Trevisan in 1889; "he considered the generic name *Actinomyces* untenable because the generic name *Actinomyce* (without the terminal 's') was given by Meyen in 1827 to a fungus (*Hydrotremellinæ* (*Carus*)) described by him (*'Actinomyce Horkelii'*)."[7] According to Article 57 of the International Rules of Vienna, it is distinctly laid down that two generic names, even though differing by one letter only, are to be regarded as distinct, which applies in this case.

Hence *Nocardia* Trev. is untenable and *Actinomyces* Harz must stand for these organisms. The organism of potato scab properly belongs to this genus; in consequence I feel justified in correcting the nomenclature as follows:

[1] Ann. Rep. Conn. Exp. Station for 1891, p. 153.

[2] *Beiträge zur Biol. d. Pflanzen,* Heft 3, pp. 186 and 202.

[3] "Prachtflora europ. Schimmelpilze," p. 23.

[4] *Jahresb. Münchener Central Tierarzneischule.*

[5] *Journal Med. Res.,* Vol. VIII., May, 1905, No. 4.

[6] Saccardo, "Sylloge, etc." VIII., p. 927.

[7] Linnæa, Vol. 2, pp. 433.

Actinomyces scabies (Thaxter) Guessow = *Oospora scabies,* Thaxter.

At the same time I shall rectify the genus and species as far as given by Saccardo under *Nocardia* as follows:

Actinomyces Harz 1878 = Streptothrix Cohn 1875; Rossi Doria 1891 = Bacterium Afanasiev 1888 = Oospora Sauvageau et Radis 1892; Thaxter 1891 = Discomyces Rivolta 1878; R. Blanchard 1900 = Nocardia de Toni et Trevisan 1889; R. Blanchard 1900 = Actinomyces Gasperini 1894 = Actinomyce Meyen 1827 = Cladothrix Macé 1897.

Actinomyces farcinica (Trev.) Guessow = *Nocardia farcinica* Trev.

Actinomyces bovis (Harz) Guessow = *Nocardia Actinomyces* Trev.

Actinomyces Foersteri (Cohn) Guessow = *Nocardia Foersteri* (Cohn) Trev.

Actinomyces arborescens (Edingt.) Guessow = *Nocardia arborescens* (Edingt.) Trev.

Actinomyces ferruginea (Trev.) Guessow = *Nocardia ferruginea* Trev.

H. T. Güssow

DIVISION OF BOTANY,
EXPERIMENTAL FARMS,
OTTAWA, CANADA

THE AMERICAN SOCIETY OF ZOOLOGISTS

THE Central and Eastern Branches of The American Society of Zoologists met in joint session at the University of Pennsylvania, Philadelphia, December 29, 1913, to January 1, 1914, inclusive, in conjunction with The American Society of Naturalists, The American Society of Anatomists and the Federation of American Societies for Experimental Biology.

At the meeting for business, held during the afternoon of December 30, the following persons were elected to membership in the society:

CENTRAL BRANCH

James Edward Ackert, Kansas State Agricultural College, Manhattan, Kan.
Robert Chambers, University of Cincinnati, Cincinnati, Ohio.
John Morton Elrod, Missoula, Montana.
E. H. Harper, Northwestern University, Evanston, Ill.
Frederick Isely, Central College, Fayette, Mo.
Ruth Marshall, Rockford College, Rockford, Ill.
H. L. Wieman, University of Cincinnati, Cincinnati, Ohio.

EASTERN BRANCH

Gardiner C. Bassett, Carnegie Station for Experimental Evolution, Long Island, N. Y.
Raymond Binford, Guilford College, North Carolina.
Maynie R. Curtis, Agricultural Experiment Station, Orono, Me.
Hubert Dana Goodale, Amherst College, Amherst, Mass.
B. H. Grave, Knox College, Galesburg, Ill.
Emily Ray Gregory, Buchtel College, Akron, Ohio.
Louise Hoyt Gregory, Barnard College, New York.
George Lester Kite, Wistar Institute, Philadelphia.
C. C. Little, Harvard College, Cambridge, Mass.
E. Carlton McDowell, Yale University, New Haven, Conn.
Norman Eugene McIndoo, Bureau of Entomology, Washington.
Edith M. Patch, University of Maine, Orono, Me.
Alice Robertson, Wellesley College, Wellesley, Mass.

The "committee on organization and policy," appointed at the meeting held at Princeton in 1911, submitted its report in the form of a new constitution, the text of which had been printed and distributed to all members of the society several days prior to the meeting. This proposed constitution was considered section by section and, with certain amendments, was unanimously adopted. In its adopted form, it is as follows:

THE AMERICAN SOCIETY OF ZOOLOGISTS' CONSTITUTION

Article I

Name and Object

Sec. 1. The society shall be called the American Society of Zoologists.

Sec. 2. The object of the society shall be the association of workers in the field of zoology for the presentation and discussion of new or important facts and problems in that science and for the adoption of such measures as shall tend to the advancement of zoological investigation in this country.

Article II

Membership

Sec. 1. Members of the society shall be elected from persons who are active workers in the field of zoology and who have contributed to the advancement of that science.

Sec. 2. Election to membership in the society shall be upon recommendation of the executive committee.

Sec. 3. Each member shall pay to the treasurer an annual assessment as determined by the society. This assessment shall be considered due at the annual meeting and the name of any member two years in arrears for annual assessments shall be erased from the list of members of the society; and no such persons shall be restored to membership unless his arrearages shall have been paid or he shall have been reelected.