SCIENCE

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MSS. intended for publication and books, etc., intended for review should be sent to the Editor of SCIENCE, Garrison-on-Hudson, N. Y.

AN EARLY PHYSICAL CHEMIST—M. W. LOMONOSSOFF[1]

AT the present day, it seldom happens that due credit is not given to each chemist for any new facts which he may add to the sum of chemical knowledge and, conversely, it is usually an easy matter to attach to any given fact the name of the investigator who first discovered it. For reasons which, in part, at least, are obvious, these conditions are not always so easy to fulfil in the case of the fathers of the science. It is certain, at all events, that frequently recognition has here been long delayed and, even where the most fundamental facts are concerned, the determination of the parentage has had repeatedly to be revised.

At the very start, there is difficulty in settling what constitutes *discovery.* Scheele's preparation of oxygen undoubtedly took place a year or two before Priestley's, but his publication of the results was delayed until three years after Priestley's, and priority in discovery is generally held to require priority in publication.

Again, Paracelsus obtained what is now known as hydrogen by the action of iron filings upon vinegar, but Cavendish defined the substance by its properties, and so the discovery dates from 1766. Liebig prepared bromine, but set the sample aside, believing it to be a chloride of iodine, and Balard, who prepared the substance later, and recognized it to be a new halogen, became the discoverer. Similarly, a

[1] Presidential address, delivered before the American Chemical Society at Washington, December 28, 1911.

Transfers were never successfully made to "*hard*," that is, well water. I never used distilled water but simply rain or city tap water.

Experiments made with Sticklebacks.—*Gasterosteus aculeatus* and *pungitius* and *Apeltes quadracus* also bear transfer which may ordinarily be made quite suddenly and without great loss. I transferred back an *aculeatus* directly from fresh to salt water; it survived only a few days, but as it was a spent male (in the fresh water) this may not be considered a fair test.

Suddenly transferred fishes drop to the bottom of the tank and slowly move about after some time; this is due to the difference in density chiefly, but differences in the temperatures of the water also have this effect, though it is sooner overcome.

EUGENE SMITH

HOBOKEN, N. J.

SCIENTIFIC BOOKS

The Flora of Boulder, Colorado and Vicinity. By FRANCIS POTTER DANIELS. Volume II., No. 2, University of Missouri Studies. Price, $1.50.

The author of this excellent piece of work is not a professional botanist but a specialist in Romance languages. While engaged in teaching French in the summer session of the University of Colorado in 1906 he made the collections upon which the present report is based. Through the University of Missouri, with which institution Dr. Daniels was formerly connected, his book of over 300 large octavo pages has been issued as a number of the "University of Missouri Studies." It is sumptuously printed in large type with wide margins and generous spacing.

Dr. Daniels collected 1,036 species of plants during the single summer that he was in Boulder. To this number are added in his printed list some species reported from the vicinity in Rydberg's "Flora of Colorado" together with others from various sources. The total number listed seems to be about 1,240. At various points in the body of the list new species and varieties are described. It is unfortunate that because of lack of time Dr. Daniels was unable to consult the university herbarium at Boulder. This collection, containing some 5,000 sheets of Boulder County specimens, is, therefore, not reported upon in the present publication. However, the large number of plants collected by the author himself must surely comprise a very considerable part of the flora. His list is bound to be of great use to students of the local flora.

In addition to the systematic list of species and localities there is a fifty-page introduction in which various ecological matters are discussed. This is evidently not written for the professional botanist for the language is popular, not to say "breezy." One is therefore just a bit surprised by such terms as *Ensiformes, Rimosæ,* etc., which, set in heavy bold-face type, stare uncompromisingly at the patient reader who may happen to be innocent of a knowledge of the classical languages.

A very full index completes this creditable publication.

FRANCIS RAMALEY

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SCIENTIFIC JOURNALS AND ARTICLES

Terrestrial Magnetism and Atmospheric Electricity for September, 1911, contains the following articles:

"Magnetic Chart Errors and Secular Changes in the Indian Ocean," by L. A. Bauer and W. J. Peters.

"Comparisons of Magnetic Observatory Standards by the Carnegie Institution of Washington, No. II.," by J. A. Fleming.

"Data for Abruptly-beginning Magnetic Disturbances, 1906–1909, No. II.": Reports from Batavia-Buitenzorg; Zi-ka-wei and Lu-kia-pang; Kew; Mauritius; Eskdalemuir; Dehra Dun, Kodaikanal, Barrackpore and Toungoo; Tortosa; Samoa; Falmouth; De Bilt; Rud Skov; Pilar; and additional data for Potsdam; Agincourt; Porto Rico, Cheltenham, Baldwin, Sitka and Honolulu.

"Peculiar Magnetic Disturbances of December 28–31, 1908," by R. L. Faris.

"The Magnetic Character of the Year 1910," by G. van Dijk.

"Mean Values of the Magnetic Elements at Observatories," compiled by J. A. Fleming.

Articles in the December issue are:

"On the Magnetic Field of the Earth," by L. Steiner.

"The Physical Theory of the Earth's Magnetic and Electric Phenomena, No. IV.," by L. A. Bauer.

"Atmospheric Electricity Observations on the Second Cruise of the *Carnegie* from New York to Colombo," by E. Kidson.

"On the Normal Magnetic Elements at the Mauritius Magnetic Observatory," by L. A. Bauer.

TREMATODE GENERIC NAMES PROPOSED FOR THE "OFFICIAL LIST OF ZOOLOGICAL NAMES"

1. The International Commission on Medical Zoology, appointed by the Graz International Zoological Congress, has made its first report on the names of Trematode genera parasitic in man.

2. Four members, namely, Blanchard (Paris), Monticelli (Naples), Stiles (Washington) and Zschokke (Basel), unanimously agree that the following eleven names are from the present standpoint of systematic zoology and nomenclature, the correct names for the genera in question, and that the species cited as genotypes are the correct types according to the International Rules of Zoological Nomenclature.

Clonorchis Looss, 1907, Feb. 1, 147–152, type *sinensis.*

Dicrocœlium Dujardin, 1845*a*, 391, type *lanceatum* = *lanceolatum* (= ? *dendriticum* sub judice).

Fasciola Linnæus, 1758*a*, 644, 648–649, type *hepatica.*

Fasciolopsis Looss, 1899*b*, 557, 561, type *buskii* (seu *buski* teste Blanchard).

Gastrodiscus Leuckart in Cobbold, 1877*e*, 233–239, type *sonsinoii* (seu *sonsinoi* teste Blanchard).

Heterophyes Cobbold, 1866*a*, 6, type *ægyptiaca* = *heterophyes.*

Metorchis Looss, 1899*b*, 564–566, type *albidus.*

Opisthorchis Blanchard, 1895*f*, 217, type *felineus.*

Paragonimus Braun, 1899*g*, 492, type *westermanii* (seu *westermanni* teste Blanchard).

Pseudamphistomum Luehe, 1908, 428–436, type *truncatum.*

Watsonius Stiles & Goldberger, 1910, 212, type *watsoni.*

3. The following commissioners have not voted: Jaegerskioeld (Gothenburg), Looss (Cairo), Luehe (Koenigsberg), Pintner (Vienna) and Shipley (Cambridge).

4. Notice is hereby given that the undersigned will wait until July 1, 1912, for any zoologist to raise objection to any portion of this report, and that on that date all names to which valid objection is not raised will be forwarded to the International Commission on Zoological Nomenclature with the motion that these names be included in the "Official List of Zoological Names" provided for by the Graz Zoological Congress.

5. All correspondence on this subject should be addressed to

C. W. Stiles,
Secretary International Commission on Zoological Nomenclature
Hygienic Laboratory,
Washington, D. C.,
November 11, 1911

SPECIAL ARTICLES

NOTES UPON CRONARTIUM RIBICOLA[1]

A number of new points have been worked out in connection with this fungus during the past year. A coarse yellow mottling of pine needles and of the bark on the twigs and leader occurs rarely, but is very characteristic when it does occur. It seems to occur only in trees which have had the disease for more than one year. It has developed in the greenhouse upon plants which were known to be infected and has been found in one lot of trees set out in the field.

In 1910 an attempt was made by the speaker to pick out all the infected trees in a lot of 10,000 three-year-old white pines. The remainder were then planted out by state authorities in a large open field where every tree could be easily found the next year, and in a locality where *Ribes* were absent for a considerable distance. An examination the next summer showed a considerable number which had swellings of the bark, but none were found with fruiting bodies of the *Perider-*

[1] Presented before the American Phytopathological Society, December, 1911.