

the publisher are both to be congratulated upon the real excellence of their work.

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BOTANICAL NOTES

AN EXPERIENCE AND A SUGGESTION

It was the writer's good fortune to be asked to take part in the work of the first week of the fourth session of the Graduate School of Agriculture held at the Iowa State College, Ames, Iowa, during July.

Having had no previous experience with this national school, which meets biennially, the writer was not prepared to find, as he did, the work of such high grade. There were lectures on plant breeding, plant physiology, the soil scientifically considered, the scientific basis of "hardiness" of plants, the scientific basis of animal husbandry, agricultural economics, the bacteriology of dairying, the scientific breeding of poultry, irrigation, etc. In addition to the lectures, which were usually scheduled for the forenoon and the early part of the afternoon, there were held in each subject two-hour seminars in which the topics which had been presented by the lecturers were freely discussed by the listeners, and the lecturer was asked to present more in detail the matter presented in a general way in the lecture. This proved to be very helpful to lecturers and audience.

The week's experience of the writer leads him to the conclusion that in the Graduate School of Agriculture, as now managed, the scientific men of the country have an organization of very great importance. The lectures and the discussions were of such a high order as would have taxed the knowledge of any of the larger scientific bodies which meet annually in this country. The writer suggests that in the meetings of the American Association for the Advancement of Science something of the plan carried out in this School of Agriculture should be adopted. One who has attended the meetings of the American Association for many years realizes that much is lost by the fact that usually there is no unity in the program for any day; occasionally in

the later years we have had a symposium on one subject, and it has been the general feeling that the symposia have been the most successful parts of the programs. The writer suggests that there might well be several subjects (in botany, for example) which should receive especial attention in the week given to the presentation of papers. Thus there might be at a stated hour each day a lecture by a master on, say, the subject of cytology, and another lecture each day at a stated hour, on morphology, while another might be given on physiology, and possibly more, and then for each evening in some convenient room, a seminar meeting could be held on one of the subjects presented by the lecturers.

The writer feels that his experience at Ames, where the air was full of the most modern science, warrants him in suggesting that the men who constitute the membership of the scientific societies have something to learn from this Graduate School of Agriculture.

THE ACTION OF THE BRUSSELS CONGRESS

FROM the reports which have reached us regarding the action taken by the International Botanical Congress at Brussels it is evident that while gratifying progress has been made in the attempt to reduce the nomenclature of botany to uniformity much still remains to be done. However, we must not overlook the fact that to have come to some agreement, and to have formulated rules covering so many points is itself a triumph for those who have insisted upon the need of rules. It is not so very long ago that certain botanists were "a law unto themselves," to the disgust and indignation of others who were the advocates of the application of a general law. That was a condition of anarchy, which happily we are now delivered from. The Vienna Congress, and later the Brussels Congress, have emphasized the fact that botanists the world over are willing to come to an agreement in this matter of nomenclature. And this is a great gain. Once this is accomplished it will be only a question of time as to the enactment of the best rules. To be will-

ing to come together at all is the first requisite, and when once that is attained the rest will follow as a matter of course.

Now all of this does not imply that the writer is satisfied with all that was done in Vienna and Brussels. Far from it. The writer's feelings are very much like those he experiences where he contemplates the actions of, say, the last session of congress. He fully believes in the making of laws by legislative action, but he does not approve of all that legislative bodies do. Yet while he withholds his approval he recognizes the binding force of these same disapproved laws. So it is and must be with these rules made by the botanical congresses. Many of them are good, in fact the great majority of them meet with the approval of all botanists. Some of them are no doubt unwise, but that is to be expected from human legislation. Thus, in the opinion of the writer, the Brussels Congress erred in designating so many beginning dates, but even this is to be preferred to having *no agreement whatever*. It is really quite absurd in the Algæ, for example, to have beginning dates all the way from 1753 to 1900! Yet that is not so absurd as having no agreement at all as to beginning dates.

Then the adoption of so many lists of *nomina conservanda* looks very much like an acknowledgment of the inability of the leaders to successfully lead the mass of delegates. These lists are so many exceptions to the rules, and so far are pitiful exhibitions of weakness on the part of the lawmakers. And yet the writer remembers that in his old English grammar there were similar troublesome exceptions to the precisely stated rules.

What shall we do with these rules is a question which comes to every thinking botanist, and some in their disappointment and chagrin are boldly saying that they will ignore them. This course does not seem wise to the writer, who confesses to a very strong dislike of some of the rules. So much has been accomplished by the agreement to refer nomenclatural matters to international congresses, that we must not overturn it all because we did not get everything we asked. Let us regard these

rules as valid, but retain our right to "cry aloud" our disapproval. Had the writer been in Brussels he would have voted against every one of the *nomina conservanda*, but when outvoted he would have accepted (with a wry face, perhaps) the dictum of the congress, and he would have given notice—as indeed he does now—of his intention to work to secure the reduction and final abolition of all such lists. The duty of every botanist appears to be plainly to accept the rules as given us, but to seek to convert enough other botanists to our way of thinking so that eventually we shall be in the majority, while those who hold contrary opinions shall be in the minority.

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A NOTE ON TRAUBE'S THEORY OF OSMOSIS AND "ATTRACTION-PRESSURE"

PROFESSOR ISIDOR TRAUBE, of the Technische Hochschule at Charlottenburg, is the author of a series of interesting investigations¹ on the relation of the phenomena of surface-tension to osmosis, digestion, narcosis, hæmolysis and serodiagnosis, the most significant practical outcome of which is the so-called "meios-tagmin" (little drop) reaction,² a blood serum test recently devised by Professor Ascoli, of Pavia, to confirm the diagnosis of malignant tumors, syphilis, typhoid and other diseases. Experiment has shown that there is some measurable variation in the surface-tension of such body-fluids as the urine, gastric juice, milk, blood, under different conditions, and it seems likely that this physical constant may play some part in the diagnostic procedure of the future. A striking example of this is the Matthew Hay test for biliary acids in the urine.³ If flowers of sulphur be sprinkled on

* ¹ *Biochem. Ztschr.*, Berlin, 1908, X., 371; 1909, XVI., 183; 1910, XXIV., 323, 341.

² From *μείων*, little, and *σπάω*, drop.

³ Printed as a private communication by Professor Hay in the second edition of Landois and Stirling's "Physiology," London, 1886, p. 381; Philadelphia, 1886, p. 294. Spivak claims the test is delicate to the limit of one part of glycocholic or taurocholic acid in 120,000 parts of water (*J. Am. Med. Ass.*, Chicago, 1902, XXXIX., 630).