tute of Technology, and Professor H. E. Clifford, professor of electrical engineering at the institute, have been elected professors at Harvard University, in the School of Applied Science established under the McKay bequest.

Dr. Arthur William Meyer, professor of anatomy in the Northwestern University, has been called to the chair of human anatomy in Stanford University.

Harold D. Newton, assistant in chemistry at Yale University, has been elected professor of chemistry at the State College at Storrs, Conn.

Discussion and Correspondence

Convocation Week

To the Editor of Science: The leading editorial in your issue of January 8 contains much food for reflection. Those of us who were at the Baltimore meetings were offered a very unusual menu from which to choose according to our individual tastes and needs. Though one may sometimes have had to deviate from a normal ration, there is no reason why any one should have left the great meeting just closed with his hunger and thirst after knowledge unsatisfied.

Perhaps never before have there been so forcefully illustrated the advantages and disadvantages of a great program with multiple divisions and subdivisions, geographic segregation of the less loosely allied interests, and more or less effective contiguity of those more closely connected.

The purpose of this letter is to call attention to the loss experienced by a large part of the persons present of some of the choicest special "courses of the day." You enumerate interesting public lectures on several questions of broad scientific interest. Charged with the duty of attending executive sessions and the meetings of special sections and affiliating societies, I question whether a tithe of those participating in the great gathering knew of most of these opportunities until they had missed them. This resulted through no fault of officers, but through the common habit of men of looking first to the things that most immediately concern them—and, finding so much of immediate concern, failing to look further.

Why can not the American Association provide best for such lectures by suspending all section sessions before eleven o'clock, and holding a general session of forty-five minutes' duration every morning at ten for the presentation of a masterly address? The possibilities of interesting people who are not specialists in the work of the association seems to me likely to be furthered more by such a daily broad-subject large-man address, protected from encroachment of the special sections, than by any other one step which is feasible. Evening engagements are always likely to interfere with such lectures, and the evenings are becoming more and more the property of the affiliating national societies.

Complaint is made of the multiplicity of subjects and papers offered the various sections and societies. There is little profit in quarreling with the increasing scientific activity of the country. It has come and we all want it to stay. In my own field, the secretaries in Section G and the Botanical Society of America cooperated so well that the joint program was found workable to an unusual degree; and the special Darwin and ecology sessions of the national society, devoted to papers prepared on invitation, contrasted with the more democratic sessions of the section in a way very suggestive of a good outcome from a general differentiation of society and section activities along these cleavage lines.

Wm. Trelease

Gray's New Manual of Botany[1]

The writer of this note is not aware whether the authors have printed an unillustrated edition of their revised edition or not. Indeed, for the purpose of this criticism this would make little difference, that is, if the present illustrated copy is to be available for purchase by students. The writer may have a misconception of the value of Gray's "Manual," but takes this opportunity to allow that misconception to be made known, if it is to be classed as a misconception. He has

[1] By Robinson and Fernald, seventh edition, illustrated.

thought the great value of Gray's "Manual of Botany" as a guide for young students of the science has been that in the fewest words possible, and in the most exact manner those old manuals from year to year have always served as a guide for the young student to find the position of the plant in which he is interested in the plant kingdom. But in order to do this he has always had to work, except in the particular cases in which the common names were given. I note with a feeling of real regret and a feeling of real apprehension for the value of the "Manual" in training young students, that the authors have added pictures of many of the common species of plants. The best training in science that I have was given me through my personal efforts to identify plants in which I was interested. I feel, if at that time I had had Gray's "New Manual," seventh edition, illustrated, that much of any ability that I may now have along the line of noting fine distinctions in the structure of plants and details of variation, would never have been developed. There never was a time when I was not hunting for a shorter road, and had I had this well-illustrated "Manual" to look at I certainly should not have struggled up through the details of structure and wording. I could not have done so had I wished, for there would have been the pictures staring at me warning of a seeming waste of time. I could not have made errors which in the very making impressed the inefficiency of my work upon me. Though the drawings which the authors have given do not show the features and variations which the natural plant should bring to the student, yet they nevertheless show the general characters so plainly that when the pages open the student will have the name of his species lying immediately before him. My belief is that the value of the old "Manual," unillustrated, consisted essentially in the fact that it compelled the student to study out every detail of the plant before him in order to prevent the possibility of going astray in the divergent lines. Some one may say, now the work will be upon species and not upon genera and families. This must certainly be the result, for there will be no possible way for a teacher to prevent the student from tracing his plant backward. In this it would appear that the author believed that the actual fact of knowing the name of the plant will be of more value to the student than the digging out of the detailed characters observed in the specimens, and comparing these with the fine gradations in the meaning of the words of the descriptions. What teacher of botany has not had difficulty in getting the average student to study the characters of the dandelion for the reason that the common name has always been appended? To illuslustrate my point, I think I am safe in saying that many fairly well-trained botanists would have difficulty in determining the position of the plant known as ball-mustard (*Neslia paniculata*) if they should chance to have parts of the fruiting stalks only for examination. Yet the high-school teacher will only need, now with the "New Manual," to turn the question over to the most simple-minded of his pupils and he will settle it within the space of a few minutes by the simple process of comparing the picture with the plant. I ask, will the pupil have any more knowledge of plants when through?

Teachers of botany in agricultural colleges have long contended that much of the old-line botany is a waste of time, but I believe the readers of this note will have hard work to find a botanist of any intelligence who will agree that the pictures add to Gray's "Manual" as a student's text or reference book, or will in any way tend towards the improvement in the thinking ability of high-school students.

It is much to be hoped that high school superintendents and high-school teachers will not have the desire to have their pupils learn how to work by an easy road of picture comparison, and will still continue to use unillustrated manuals that their pupils may not be deprived of one of the finest sources of botanical education. Plant anatomy and plant physiology may have been greatly aided by the development of well illustrated texts, and the studies may have been popularized somewhat thereby, but the writer can not be-

lieve but that the illustrations of species published in connection with the "Manual" will do away with most of the usefulness it may have had as a training subject preliminary to advanced studies upon plant life.

Henry L. Bolley
North Dakota Agricultural College,
December 26, 1908

DISTRIBUTION OF THE NOBEL PRIZE

To the Editor of Science: In his interesting and important address as retiring president of the American Association for the Advancement of Science, printed in your issue of January 1, Professor Nichols makes two statements regarding which I wish to submit a bit of confirmatory evidence, derived from the awards of the Nobel prizes for the eight years that they have been established.

The two statements are: (1) "The men who have laid the foundations upon which civilization is built have nearly all been teachers and professors." (2) "We have less than our share of men of science."

Each year five Nobel prizes of a value of about $40,000 each are awarded, three of which alone, those in physics, in chemistry, and in physiology and medicine, concern us at present. These are awarded to the persons who have been most serviceable to mankind during the preceding year by making the most important discovery, invention or improvement in the designated field. The other two prizes are for work in literature and for work in the interest of international peace. Of the 24 prizes for scientific work of this description 16½ have been awarded to university professors, 3 more to directors of scientific research institutes, 3 more to teachers in scientific schools of high grade, viz., Royal Institution of London, École Polytechnique, and School of Physics and Industrial Chemistry of Paris (a divided prize) and the Academy of Military Medicine in St. Petersburg, and only 1½ to persons apparently not engaged in teaching. Even if allowance is made for one or two cases, like that of Major Ronald Ross, in which the scientific work was done first and the position as a teacher resulted from it, it seems clear that at least four fifths of these prizes have been awarded to teachers in institutions designed to encourage research.

With reference to the second point quoted above it should be noticed that the Swedish committees of award have shown no tendency to favor Swedish or Scandinavian scientists. They have allotted the prizes to persons in the various countries as follows:

Germany	8	Sweden	1
England	5½	United States	1
France	4½	Italy	½
Denmark	1	Spain	½
Netherlands	1	Total	24
Russia	1		

Does not the above grouping correspond roughly to the order in which most scientists would arrange the great countries with reference to their important contributions to the advance of knowledge and support in an interesting way the second claim of Professor Nichols?

Walter F. Willcox
Cornell University,
January 11, 1909

QUOTATIONS

HARVARD UNIVERSITY AND THE MASSACHUSETTS INSTITUTE OF TECHNOLOGY

It seems probable that the taking from the institute by Harvard of two of its leading professors will bring up again the question of a consolidation or of an alliance between these two educational institutions. Recognizing the position occupied by the institute, President Eliot, of Harvard, throughout the whole of his long administration has refrained from developing technical education along extensive lines. His attitude in this respect is the more noticeable when the great development of the university in all other professional fields is considered, and it is also remarkable because during this period there has been great development in technical education in almost all other institutions, the students in technical subjects forming in many institutions by far the larger part of the undergraduate department.