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The Organization of General Botany Courses in the United States and Canada

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In 1906, President Charles W. Eliot of Harvard University said: "There are then two quite distinct functions which schools and college laboratories perform. They tend to raise the observational powers of the average, and they give a chance to men of remarkable capacities to develop these capacities" (Eliot, 1906). In making this statement, President Eliot imputed to a particular method of instruction certain values which he had evidently believed peculiar to that method. Whether or not this statement was based upon more than personal opinion and observation is not known. That it had not been subjected to experimental verification is almost certainly true. It is with the answers to problems such as this that the study of methods and procedures of teaching college botany is concerned. The study of the effectiveness of the various methods of teaching botany now employed by botany instructors in higher institutions lends itself well to experimental and quantitative measurement and is receiving some attention at the present time.

To make an all-inclusive or general statement of the aims and objectives of college botany teaching is very difficult, if not impossible. Institutions of higher learning have grown up more or less independently; they have built their curricula with different objectives in view;— "they have never had the motivating force of a function, such as college preparation, as secondary schools have had, and they consequently have never been approached by standardizing agencies to the extent that secondary schools have been approached" (Noll, 1932). Their function has been, broadly stated, that of preparation for life, since they have been the last stage in the educational scheme. They have developed a multiplicity of curricula and courses as varied as life itself. At least three broad types of functions are at once evident: first, the cultural or liberal education; second, the teacher training; and third, the highly specialized, or technical. In the attempt to fulfill these functions, courses of all varieties have been developed, from the most specialized and technical to the most general.

Every teacher of college or university general botany courses, at one time or another, becomes curious as to the aims, methods, and procedures that are used by others in the profession. This curiosity is only natural, and is often the result of the teacher desiring to perform a better job of teaching. It appears that one of the best available means of attaining an insight into the aims, methods, and procedures used in the teaching of general

botany courses is to resort to an analytical survey of present authorities in the field; the use of a questionnaire is a good method of reaching such authorities.

The proportions of the total time in the course which are devoted to each method vary greatly between different subjects and with different instructors. These time arrangements have been presumably worked out through the experience and judgement of the instructors, and it can undoubtedly safely be assumed that in most cases they have exercised much care and have devoted a large amount of thought to these arrangements. However, as to just how much difference an hour or more less of lecture, recitation, individual laboratory, or any other method will make in the final achievement of the student, is something that apparently has never been worked out. For example, what evidence has actually been accumulated in favor of individual laboratory work as a teaching method in botany? Much has been said and written about it, both for and against it, but how much of this has been based upon more than just opinion? The question then resolves itself as to what is the relative effectiveness of each of these in teaching the same or different types of subject matter? What combinations of methods are most effective? How much of the total time in a botany course should be devoted to each method? These are questions which are needed in accumulating objective evidence.

A brief enclosure in the form of a letter was attached to each questionnaire and addressed to the chairman of the respective departments of botany. A stamped, self-addressed envelope was enclosed as a means of facilitating a prompt reply. The questionnaire itself consisted of only 25 rather general questions involving some three pages. The following is an alphabetical listing of the institutions to which the questionnaire was sent:

Cornell University	North Carolina State College
Dartmouth College	Northwestern University
Duke University	Ohio State University
Eastern Illinois State College	Pennsylvania State College
Harvard University	Pomona College
Indiana University	Rhode Island University
Iowa State College	Rutgers University
Louisiana State College	Stanford University
Massachusetts State College	Vanderbilt University
McGill University	Washington State College
Michigan State College	Yale University

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Plant Science Bulletin

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University of Alaska	University of Nebraska
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University of Colorado	University of Oklahoma
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University of Kansas	University of Texas
University of Kentucky	University of Toronto
University of Miami	University of Utah
University of Michigan	University of Virginia
University of Minnesota	University of Washington
University of Mississippi	University of Wisconsin
University of Montana	

It should be pointed out that only those institutions that actually teach courses in general botany are included in the final tabulation of results given below. Where botany is taught as part of the biology course, no results were compiled. Also, some institutions conducted their teaching of general botany in a manner quite different from that of the majority and consequently some of the totals do not coincide with the entire number of returns.

Each question follows the chronological order of the questionnaire and the comments, facts, or figures are given at the end of the question(s). The questions are stated exactly as they appear in the questionnaire.

Question 1. Number of class meeting per week: lectures; laboratories; length of each session (hours).

Number of institutions	Lectures per week	Duration (minutes)	Number of institutions	Labs per week	Number of institutions	Lab duration (hours)
3	0	0	1	0	1	0
1	1-2	50	12	1	2	1
14	2	50	9	2	1	1-2
1	2-3	50	1	2-3	13	2
1	4	50	4	3	2	2½
5	5	50	1	5	3	2-3
—	—	—	1	6	10	3

Question 2. Units of credit given for the term or semester.

Nine institutions were on the quarter system and 23 institutions had the semester system. One institution had neither, but taught general botany on a school year basis.

Number of institutions	Units of credit
1.....	2-4
9.....	3
1.....	3½
2.....	3-4
10.....	4
7.....	5
1.....	6

Question 3. On what basis do you section your General Botany students, i.e., alphabetically, pre-testing, A. C. E. ratings, etc.?

Replies deleted from this report.

Question 4. What has been the approximate percent of freshman General Botany enrollments, in comparison with the school's total freshman enrollment, during the past three years?

Replies deleted from this report.

Question 5. Is the course considered by the school administration as a general "service course?"

Yes—20; no—6; partly—2.

Question 6. Is it primarily a survey type of course; preparatory course, for further study and specialization in botany (or other sciences); teacher-training course?

Primarily a survey course—13; preparatory—20; teacher-training—3; combination of all three—1.

Question 7. Is the course taught as part of a liberal arts and sciences program, or as part of a technical curriculum?

Liberal arts and sciences curriculum—31; also part of technical program—9.

Question 8. What attempt is made on the part of the teacher to determine the individual interests, goals, etc. of his (her) General Botany class students?

No attempt—14; some attempt—17; every attempt—1.

Question 9. How is the course introduced, i.e., what is taken up at the first or second class meeting?

- 6 gave brief surveys of the plant kingdom.
- 4 went on field trips.
- 4 held general discussions.
- 2 gave demonstrations of plant forms and types.
- 1 presented a film.

Question 10. What phase of study is undertaken first? Why? What sequence is followed?

- 1 began with plant evolution.
 - 2 replied that it was left up to the individual instructor.
 - 2 began with plant physiology.
 - 4 began with a study of the seed.
 - 4 started with the plant organs.
 - 5 began with a study of the cell.
 - 9 began with plant morphology and anatomy.
- As to just why a certain phase of study was taken up first, the reasons were quite numerous and variable. To present them all would be rather awkward here, but they range from a feeling that "they are the most familiar" to the feeling that "they have proven the most successful in the past." Many follow the sequence or outline of the text that is being used.

Question 11. Are all aspects of General Botany taught during a single term or semester? If not, how is the material covered?

- 11 institutions covered the bulk of material in 1 semester.
- 1 covered it in 1-2 semesters.
- 8 covered it in 2 semesters.
- 1 covered it in 2 quarters, while 6 used 3 quarters.

1 used the entire school year (not being on a term or semester basis).

Question 12. What teaching procedure(s) or method(s) is (are) used; e.g., formal lecture only, lecture-demonstration, etc.?

19 institutions adhered to the formal lecture-laboratory method.

4 used the lecture-laboratory-demonstration method.

3 used the demonstration-discussion method.

1 used the formal lecture-demonstration method.

1 used the group conference method.

Question 13. Is any one particular teaching method or procedure followed throughout the course? If so, what is it?

No one particular method was used by 22 institutions.

2 institutions chose to present their laboratories *before their lectures.*

1 institution used the group-conference method solely.

Question 14. What are the *main* objectives of the course, i.e., teaching objectives?

15 institutions felt that the ultimate was to present the students with the principles or fundamentals of botany.

9 institutions felt that the objective was to round out the student's general education.

7 felt that the teaching of the scientific method was the important thing.

6 institutions were preparing the students for professional training.

Question 15. What texts and laboratory manuals are being used?

10 institutions used Fuller and Tippo—*College Botany.*

7 used Wilson—*Botany.*

5 used Transeau, Sampson, and Tiffany—*Textbook of Botany.*

3 used Robbins and Weier—*Botany.*

2 used Hill, Overholts, and Popp—*Botany.*

2 used Fuller—*The Plant World.*

2 used a general reading list of books.

1 used Smith, Gilbert, *et al.*—*A Textbook of General Botany.*

1 used Weatherwax—*Plant Biology.*

1 used Holman and Robbins—*Textbook of General Botany.*

The majority of institutions used their own laboratory manuals.

Question 16. What use is made of laboratory or teaching assistants? Do they actually teach the laboratory sessions or merely act as assistants to the teacher? Do the teaching assistants ever deliver formal lectures? Are the assistants used as readers—laboratory exams only, lecture exams, both lecture and laboratory exams?

At 12 institutions the assistants actually teach the lab sessions.

14 institutions permit their assistants to assist only in the labs.

At 5 institutions the assistants do both.

At 25 institutions the assistants never deliver formal lectures, while at 4 others they do so occasionally.

At 12 institutions the assistants were readers for both the lecture and lab exams.

At 8 they read only the lab exams, while at 2 they assisted the instructor in all exams; and at 4 the assistants did not act as readers at all.

Question 17. Are laboratory drawings required?

16 institutions—yes; 8—no; 8—occasionally.

Question 18. Are term papers required?

31 institutions—no; 1—yes; 1—occasionally.

Question 19. How are examinations given? "Pop" quizzes (i.e., without forewarning), in laboratory and/or lecture; "practicals," midterms; final comprehensives; others.

12 institutions gave no "pop" quizzes, while 10 did.

24 gave "practicals" in lab or lecture, or in both;

3 gave them occasionally and 2 never.

21 gave midterm exams, 3 did not.

All institutions gave final examinations.

Some institutions gave a short exam at the end of each unit of work; and others had a variety of exams during a quarter or semester.

Question 20. Are grades based on a curve?

17 institutions—no; 14 did so in part; 3—definitely yes.

Question 21. Is any one type of objective examination utilized more so than others, i.e., true-false, completion etc.?

6 institutions replied that they never gave true-false exams.

4 utilized more frequently the completion and multiple choice types of exams.

4 used the multiple choice almost exclusively.

4 used a variety of objective exams.

2 used the completion type more often than any others.

Question 22. Are essay type questions ever used in your General Botany courses?

11 institutions never used the essay type, while 15 did.

7 replied that they used them occasionally.

Question 23. What phase(s) of the course is (are) considered to be the most difficult to "get across?"

There were a large variety of answers, some stating that they were not aware that any one particular phase was any more difficult than any other; others felt that it varied with the class; and still others felt that it was the fault of the instructor and not the students.

12 institutions replied that getting the plant physiology aspects "across" was the most difficult.

8 replied that their difficulty was with anatomy and morphology.

7 replied that genetics was the most difficult.

2 replied that plant reproduction aspects gave the most difficulty.

Question 24. What percentage of your freshman General Botany students actually choose to make botany (not counting applied fields) their career?

16 - 9 1/2 columns 6 55 words

There were a variety of answers, however, the average was around 1-4 percent.

Question 25. Is work leading to an advanced degree in botany available at your institution? M.A., M.S., Ph.D.

- 14 institutions offered the Master of Arts degree.
- 25 offered the Master of Science degree.
- 28 offered the Ph.D. degree.
- 8 offered all three degrees.

The question was also asked as to whether or not the chairman of the particular department of botany was also teaching any courses, and if so, what?

Twenty-nine institutions replied that their department heads or chairmen taught either general botany, or their own special fields, or both. In the majority of replies, they taught at least general botany, and one or more other courses. At 5 institutions the head of the department did no teaching.

It should be borne in mind that the answers may not necessarily reflect the exact attitudes assumed by all members of the department teaching general botany, but rather only that of the individual completing the questionnaire. However, it is to be assumed that in the greater majority of cases the exact situation is given as it exists at the particular institution.

It does not have to be pointed out that the teaching of botany (or any laboratory science for that matter) is expensive. Because of the methods used, the materials needed, the space required, and the time involved, science subjects cost more than any others. Consequently, studies which present objective evidence on the relative effectiveness of different methods of teaching botany (or science) hold possibilities of indicating in what ways time and money can be saved. It is not meant to imply that this alone is sufficient justification for changing methods of instruction in botany, but its importance cannot be denied as a reason for experimental investigations.

Another factor of importance in the study of college botany (or science) teaching is the development of valid and reliable measuring instruments. These are felt to be essential in the proper evaluation of different methods of teaching, as well as in studies of the curriculum.

It was gratifying to receive a 70 percent return when consideration is given to the short time that was available in preparing and mailing out the letters and questionnaires to 53 colleges and universities of the United States and Canada. It was even further gratifying to receive considerable evidence of interest and requests for the final results obtained.

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THE RESPONSIBILITIES CONTINGENT UPON THE SOLICITATION OF APPLICATIONS

(EDITOR'S NOTE: This brief paper, submitted by two former graduate students who have recently received their Ph.D. degrees from large state universities—not the University of Illinois!—and who wish to remain anonymous, presents a viewpoint which might have a message for some academic administrators.)

The magic phrase of the academic counterpart of the Sorcerer's Apprentice is "We have a position open . . ." Sometimes the fateful phrase is directed generally to all members of a certain academic field; at other times it is directed to a small group of pre-selected potential candidates in this given field. If the position is in the lower academic ranks the results in the latter case are only slightly less astounding than in the former, and thus these postal deluges represent more than an excellent start on the road to philately for some department chairman—they represent literally scores of scientific man-hours spent in getting recommendations, reprints, transcripts, and all the other inanimate yardsticks of accomplishment together and into the hands of the appropriate person.

All too often the "appropriate person" apparently feels that all of these hours of labor are put in by the eager candidate and that since the candidate "probably has applied everywhere else" his application was only routine and should be acknowledged accordingly, if at all. And this brings us to the title topic.

One of the anomalies of etiquette is that it is quite improper to call a person's breach of the rules of decorum to his attention. Even if this were not so, however, no applicant in his right mind would dare endanger his position by writing anything but the most discreet note asking whether his application had been received and, possibly, whether or not it was being considered. True, some administrators promptly acknowledge the receipt of completed application blanks, and also each further addition of letters of reference, reprints etc. to the candidates file. In many cases selection of a candidate cannot and should not be rushed; so a "waiting period" cannot be avoided. However, the proper acknowledgment of receipt of all applications and supporting papers is the least an administrator can do for the people who have submitted applications, whether they were solicited directly or not. In instances where the administrator, not the applicant, writes for the reference, a short acknowledgement is also in order. These communications do not have to be lengthy literary masterpieces, but they should at least express some degree of appreciation based possibly on the value of the information received, for several hours' assistance.

Several of us have compared our application correspondence over the past few years and find that this "solicit and forget" attitude is not limited by university size or geographic location. North, east, south or west, the story is commonly the same. The date of an applicant's application is February 23—the next communication from the application's solicitor is April 5 and reads in part ". . . your recent letter . . ." The following line of this particular letter gets to the point and says, in effect, that the job has been filled anyhow.

In another instance a letter, asking a pre-selected candidate if he would be interested in applying for a certain position, was answered affirmatively and reprints sent on February 19. No acknowledgement of any kind was ever made! Even in our relatively small sample there was one other such case of complete absence of any acknowledgement whatsoever.

In the field of simple inquiry also the time schedule would often do justice to a sleepy snail. One such simple inquiry about an application was made on November 24. The answer was received (via airmail) the following February 12!

If such treatment is intentional, perhaps as a form of academic natural selection in which only the most stubborn stay in the race, there may be some merit to the procedure. If, on the other hand, this is not the idea behind such treatment we should imagine that botany chairmen the country over are becoming afraid ~~to look a stranger in the eye—it might be that applicant~~ they just never bothered to write. In any event the actions of some administrators on this score certainly cannot be said to be beneficial to our science. Aside from the low salaries, the very least that a prospective colleague should expect from the profession he has chosen is a moderate amount of consideration at a relatively critical point in his career.

EQUALITY FOR SCIENTISTS

(EDITOR'S NOTE: *This editorial, reprinted from Chemical and Engineering News of August 9, 1954, with permission of Walter J. Murphy, editor of that journal, should be of interest to botanists, and should call for individual and organizational action.*)

Our tale today deals with those government chemists and other Ph.D. scientists whose salaries are lower than several other groups of professionally trained men in allied fields but whose work and experience are identical. In some instances the situation is so absurd that a chemist project officer receives less money than professional men working under his supervision.

The story behind this Alice in Wonderland situation has its inception in the period following World War II. At that time (1947) the Armed Services were encountering great difficulty in obtaining and retaining personnel for the Medical Corps and Dental Corps of the Armed Services and the Public Health Service. The reason given was that physicians and dentists felt that they were better off financially in civilian life.

To overcome this problem, the Secretary of Defense requested legislation authorizing additional pay of \$100 a month for all medical and dental officers on active duty. A law including this provision was passed in September 1947 and was to be effective for five years. A similar provision was enacted in the Career Compensation Act of 1949.

In the summer of 1953 the Universal Military Training and Service Act was amended (Public Law 84). This amendment not only extended the extra pay provision for physicians and dentists to July 1, 1955, but also blanketed in veterinarians.

There are good arguments, pro and con, with respect to the question of whether preferential treatment should

be given to one or more groups of professionally trained people. We do not wish to argue this point. We do feel, however, that our laws should be fair.

In this case we feel that all the arguments advanced to support extra pay for physicians and dentists and, particularly, veterinarians, apply equally well to chemists and other scientists. These include higher costs of education. To obtain a Ph.D. in science takes as long as to attain the education required of physicians, dentists, and veterinarians by the present law. The argument concerning personnel shortages is still acute with respect to scientists. A few months ago, the Secretary of Defense said that there was a surplus of medical personnel in the Armed Services.

Another supporting argument advanced is the contribution to national defense. We feel that scientists contribute as much as those covered by the law.

One reason that veterinarians were included was because of inequalities in pay structure and professional standing. This argument certainly applies to Ph.D. scientists.

The law does not specify that recipients must be doing work in their own field but only that they hold degrees in that field. In government facilities such as the Public Health Service's National Institutes of Health, physicians and dentists are often engaged in research projects exactly the same as those carried out by chemists, biochemists, and other scientists. In some such cases project directors are scientists and some of the subordinates are physicians and dentists. Yet the latter get \$1200 a year more than their project supervisors.

It is noted that this bonus pay provision applies only to those men who are on active uniformed duty and not to physicians and dentists who may be employed as civilians.

We believe that in all fairness Congress should give equal treatment to government employees with comparable education, training, and experience. This could be done by extending the provisions of Public Law 84 to cover scientists who hold earned doctor's degrees and who hold active commissions in the Armed Services or the Public Health Service.

Personal

Dr. Harvey E. Stork, Chairman of the Department of Botany and Director of the Arboretum, Carleton College, retired from his academic post in June, after having been a faculty member at Carleton since 1926. A graduate of Indiana State Normal School, with his M.A. from Indiana University and his Ph.D. from Cornell, Dr. Stork is widely known as one of the country's most able teachers of botany and has served as president of the National Association of Biology Teachers. In addition to his effective teaching of botany and of biology, Dr. Stork has maintained wide interests in conservation, in wood anatomy, and in the flora of Central America, which he has visited on several occasions.

Dr. Leland Shanor, Professor of Botany, University of Illinois, was elected president of the Illinois State Academy of Science at its annual meeting in May.

Recent deaths: John A. Borneman, professor-emeritus at Hahnemann Medical College, Philadelphia, Pa.; Mary C. Blair (life member), Nora, Illinois; E. W. Robbins, Philadelphia, Pa.; Evelyn I. Fernald (formerly of Rockford College), San Leandro, Calif.; George J. Peirce, professor-emeritus, Stanford University; Ernest Babcock, professor-emeritus, University of California.

Dr. G. M. Armstrong, Chairman, Department of Botany, Clemson College, has been elected president of the South Carolina Academy of Science.

Only botanist elected to membership in the National Academy of Sciences at its 92nd annual meeting in Washington was Dr. Lawrence R. Blinks, Professor of Biology, Stanford University, and Director, Hopkins Marine Station, Pacific Grove, California.

Dr. W. C. Steere, Editor of the American Journal of Botany, is in Chile on a special project as adviser to the Chilean government, which has decided to set aside 0.5% of its total income for the next 20 years for research in science, this sum to be administered through the various Chilean universities. The rector of the University of Chile is *ex officio* chairman of the Consejo de Rectores of all the universities, which will be the actual group to make decisions. Seeking advice in the disbursement for this money, the Consejo requested the aid of the National Science Foundation; Dr. Steere thus represents that foundation in his advisory work. Dr. Steere writes: "My function is not to tell them what to do, but to explain the structure of NSF and other research-supporting organizations in the U. S. and elsewhere. As I tell them, all I can do is to help them define their problems, which must be done before they can be solved, and they are responsible for the solutions." Dr. Steere will return to the U. S. in late summer.

Professor Edward M. Palmquist is on leave from his academic post as chairman of the Department of Botany at the University of Missouri to serve as Program Director for Education in the Sciences of the National Science Foundation.

Members of our society who are interested in the place of botany in the Graduate Record Examination should read the paper of Professor Lloyd H. Shinnors of Southern Methodist University in the April, 1955 number of the AIBS Bulletin. To say that our discipline received short shrift in this examination is to understate the case!

Hiden T. Cox, professor of botany at Virginia Polytechnic Institute and deputy director of AIBS for 1953-54, has been appointed as permanent director of AIBS and will assume his new post on July 1, 1955. On January 1, 1955, AIBS became independent of the National Research Council and is now a separate organization of professional biological societies.

Loren C. Petry, Professor of Botany at Cornell and one of our country's best-known teachers of botany, will retire on June 30th and will become *pro tem*.

successor to Professor Palmquist at the University of Missouri.

A. G. Norman has been appointed director of the Botanical Gardens and professor of botany at the University of Michigan.

Harley H. Bartlett, for many years on the faculty of the University of Michigan, will retire on July 1st and will be succeeded by A. G. Norman.

Among recipients of Guggenheim fellowships for 1956 are the following: John G. Bald (University of California at Los Angeles); Robert T. Clausen (Cornell); William Z. Hassid (University of California, Berkeley); Harold E. Moore, Jr. (Cornell); M. Rosalind Morris (Nebraska); Lindsay S. Olive (Columbia); Eugene Rabinowitch (Illinois); Rudolf M. Schuster (Duke); John M. Tucker (University of California at Davis). Awards to plant scientists constitute 4% of the total number of awards.

Lincoln Constance, chairman of botany at the University of California (Berkeley) had been appointed Dean of the College of Arts and Sciences at that institution. Adriance Foster will succeed Dr. Constance as chairman of the department of botany.

Hugh Iltis, Assistant Professor of Botany at the University of Arkansas, has resigned that position to become Assistant Professor of Botany and Curator of the Herbarium at the University of Wisconsin, effective September 1, 1955.

Last-Minute Personal Items

Lawrence Heckard has been appointed instructor in Botany at the University of Illinois.

Adrian W. Poitras of Duquesne University will join the faculty of Alabama Polytechnic Institute, Auburn, Alabama, in September.

Irwin Perlis, holder of a post-doctoral fellowship at California Institute of Technology during 1954-55, has joined the research staff of the General Cigar Co., Lancaster, Penn. (somewhat north of the Great Smokies).

Justin Reinhart has resigned his post at Camp Detrick, Maryland, to become a member of the research staff of the Olin-Mathiesen Corporation at Cockeysville, Md.

Myron Brakke, research associate in botany at the University of Illinois, has resigned that appointment to join the staff of the Dept. of Plant Pathology, University of Nebraska, Lincoln.

Cheng-Lee Lee, research associate in botany at the University of Illinois, has resigned his post to assume a research position at Yale University.

Leo F. Koch of the Department of Botany, Tulane University, has been appointed to a post in the general biology course of the Division of General Studies, University of Illinois, effective September 1.

Cornelius H. Muller, Santa Barbara College, represented the Botanical Society at the inauguration of Dr. Clark Kuebler as Provost and the dedication of the new campus of Santa Barbara College, Univ. of California at Goleta, on March 28, 1955.

Edward F. Castetter, Dean of the Graduate School, University of New Mexico, was the official representa-

tive of the Botanical Society at the International Arid Lands Meeting, held at Albuquerque and Socorro, New Mexico, April 26 to May 4.

INTERNATIONAL SOCIETY FOR HUMAN AND ANIMAL MYCOLOGY

The International Society for Human and Animal Mycology was founded on July 6, 1954, by scientists of 10 nations meeting at the 8th International Botanical Congress in Paris. Officers of the Society are President—P. Redaelli (Milan); Vice-Presidents—C. W. Emmons (Bethesda, Md., U.S.A.), G. T. Ainsworth (Exeter, England), P. Negrone (Buenos Aires), G. Segretain (Paris); General Secretary—R. Vanbreuseghem (Antwerp). The aims of the new society are: to unify scientists interested in fungi living on human beings and animals, to encourage formation of regional groups of these scientists, to organize meetings of the society at future International Botanical Congresses, and to publish as soon as possible, a bulletin devoted to human and animal mycology. All persons interested in becoming members of the new society are invited to send their requests for membership to the General Secretary, together with statements concerning their qualifications and lists of publications. Annual membership dues are \$3.00; international checks or bank drafts should be sent to the General Secretary, Institut de Medicine, 155 Rue Nationale, Antwerp, Belgium.

RESEARCH ITEMS WANTED

Dr. A. R. Krukeberg, Dept. of Botany, Univ. of Washington, Seattle 5, wants seeds or living plants of any native perennial species of *Silene* (Caryophyllaceae), and offers collections of northwestern plants in exchange for these.

AN IMPORTANT NEW JOURNAL

A new journal, *Virology*, is being published by Academic Press Inc., 125 East 23rd St., New York 10, N. Y. Editors are George K. Hirst (Public Health Res. Institute of New York), Lindsay M. Black (Univ. of Illinois), and S. E. Luria (Univ. of Illinois). Subscription price is \$9.00 per year. Information concerning policies of the journal may be obtained from the editors.

New Books in Plant Sciences

- Hill, Robin and C. P. Whittingham—*Photosynthesis*. Methuen's Monographs on Biochemical Subjects. (John Wiley & Sons, U. S. agents).
- Smith, Gilbert M.—*Cryptogamic Botany*. Vol. I, Algae and Fungi. Vol. II, Bryophytes and Pteridophytes. 2nd ed. McGraw-Hill.
- Forest, Herman Silva—*Handbook of Algae*. Univ. of Tennessee Press.
- Jones, G. N. and G. D. Fuller—*Vascular Plants of Illinois*. Univ. of Illinois Press.
- Leopold, A. C. (Purdue)—*Auxins and Plant Growth*. Univ. of Calif. Press.

Cultural Note

Plant taxonomy has made the *New Yorker*. Page 24 of the June 4th number of that scientific journal bears an account of an interview with Bassett Maguire (New York Botanical Garden) concerning Dr. Maguire's collecting expeditions into Venezuela, the Guianas, and Brazil. The article has overtones of plant physiology, ecology, and culinary arts.

EDITOR'S REQUESTS

The Editor has two requests to make of Society members: 1. That members of Botany Departments which have prepared brochures on careers in our science send him copies for the Bulletin's files, in accordance with the request appended to Dr. Hulbary's paper in the April number of the Bulletin. This published request has brought three such documents to the Editor, who, believing that many more departments have prepared such vocational guides, urges that departments which have not yet done so send copies of their guides to him. Publication of Dr. Hulbary's paper has brought several requests from botanists for more information about vocational opportunities in botany. The Editor would like to publish another paper on this subject, using an assortment of brochures on botanical vocations from a number of Botany Departments as a basis for this second paper. Please! 2. That members of the Society do their bit toward making the Bulletin a successful venture by sending news items, notices of meetings, information about election of members to offices in scientific and scholarly organizations, awards, etc., to the Editor. The Editor also urges that members of the Society submit to him or the Editorial Board manuscripts suitable for lead articles in future numbers of the Bulletin. The Editor (whose chores are fuller than yours) is having a difficult time serving as both Editor and reportorial staff of the Bulletin. Help, please!

MIDWESTERN PLANT PHYSIOLOGISTS MEETING

A meeting of Midwestern Plant Physiologists was held on June 13-14 at the University of Illinois under joint sponsorship of the Purdue and Illinois Sections of the American Society of Plant Physiologists. General chairmen of the meeting were R. W. Howell, Chairman of the Illinois Section, and G. Gries, Chairman of the Purdue Section. Co-chairmen of the Program Committee were A. C. Leopold and J. F. Nance, of the Committee to Draft Constitution, R. E. Girton and R. H. Hageman. The committee on local arrangements consisted of J. B. Hanson, R. H. Hageman, and J. P. McCollum. The following round-table discussions were held: Photosynthesis and Flowering (N. J. Scully, chairman), Fruit Set (B. E. Struckmeyer, chairman), Respiration (H. Beevers, chairman), Herbicides (F. W. Slife, chairman), Morphogenesis and Cell Wall Physiology (F. L. Crane, chairman), Post-Harvest Physiology (R. V. Lott, chairman), Water Relations (M. B. Russell, chairman), and Physiology of Parasitism (F. G. Smith, chairman). Two symposia were held in addition to the round-table discussions: one on Auxins

and Growth (chairman R. M. Muir; participants: S. A. Gordon, F. G. Teubner, and E. H. Newcomb), the other on Photosynthesis (chairman A. S. Holt; participants: K. A. Clendenning, B. L. Strehler, and S. Aronoff).

COMMITTEE ON CELEBRATION OF 50th ANNIVERSARY

Hidden T. Cox, executive director of AIBS, has been appointed chairman of a special committee which will make plans to celebrate the 50th anniversary of the Botanical Society of America in 1956. Among the suggestions under consideration is one to award commemorative medals to outstanding contributors in the several fields of plant science. If you have other suggestions, send them to Dr. Cox, 2000 P Street NW, Washington 6, D. C. or to Harold Bold, Secretary of the Society, Vanderbilt University, Nashville 5, Tenn.

REMINDER—ANNUAL MEETING

The 1955 meeting of the Society is scheduled for September 5-9 at Michigan State University, East Lansing. Information on room reservations appeared in the April number of AIBS Bulletin. The complete program will be published in the August number of AIBS Bulletin. **BE SURE TO BRING YOUR PROGRAM WITH YOU!**

The Council of the Society will meet at 2 p.m., Monday, September 5, in East Lansing, in connection with the AIBS meetings.

CORRECTION

The Editor apologizes for an error made in his summary of the 1954 Council meetings as a result of some breakdown in the chain of communications. John R. Reeder of Yale, not A. C. Smith, was appointed to represent the Society in working with the Chemical-Biological Coordinations Center on taxonomic coding.

Thoughts for the Day

"Botany: the science of vegetables—those that are not good to eat, as well as those that are. It deals largely with their flowers, which are commonly badly designed, inartistic in color, and ill-smelling." From Ambrose Bierce's "*The Devil's Dictionary*."

"The study of Botany seems peculiarly adapted to females; the objects of its investigation are beautiful and delicate; its pursuits, leading to exercise in the open air, are conducive to health and cheerfulness. It is not a sedentary study which can be acquired in the library, but the objects of the science are scattered over the surface of the earth, along the banks of the winding brooks, on the borders of precipices, the sides of mountains, and the depths of the forest. . . . Animals, though affording the most striking marks of designing wisdom, cannot be dissected and examined without painful emotions. But the vegetable world offers a boundless field of inquiry, which may be explored with the most pure and delightful emotions." From Mrs. Almira H. Lincoln's "*Familiar Lectures on Botany*," 1838. (Ed. note: what is the mutation rate of American females?)

"Botany I rank with the most valuable sciences, whether we consider its subjects as furnishing the principal subsistence of life to man and beast, delicious varieties for our tables, refreshments from our orchards, the adornments of our flower borders, shade and perfume of our groves, materials for our buildings, or medicaments for our bodies." (Ed. note: the Editor will give a good cigar to the first person who, at East Lansing, can identify the source of this quotation.)

