parts of plants from untreated seeds. The area of each leaf that developed during this period was increased by the seed treatment. Ten days after treatment, the plants from treated seeds had a total leaf area that was 27.6% greater than that of plants from untreated seeds.

Additional experiments are necessary to determine the effect of the seed extract on seed production of bean plants and to learn whether the growth of other crop plants, such as cereals, can be stimulated by phytohormones obtained from their seeds.

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Comments and Communications

Discriminatory Practices

ONE aspect of scientific life that seems to our department to require more general notice is that of eliminating discrimination against Negro scientists. Such discrimination occurs in many ways. Even when individual Negroes succeed in breaking through the barriers of economic, political, and academic discrimination sufficiently to acquire scientific training, they find employment opportunities severely restricted. In mathematics, at least, most qualified Negroes who find employment commensurate with their qualifications teach in Southern colleges. In attempting to participate in scientific life by way of the scientific societies, they become discouraged at the numerous restrictions placed on their participation and, in most instances, soon desist.

It is our view that the scientific societies, with their talk of the international character of science, must recognize its interracial character and put an end to discriminatory practices at meetings, etc. Accordingly, we have sent the attached letter to each member of the executive bodies of the two chief national mathematics organizations, and request you to publish it.

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DEPARTMENT OF MATHEMATICS,
FISK UNIVERSITY,
NASHVILLE, TENNESSEE
April 20, 1951

Executive Council, American Mathematical Society
Board of Governors, Mathematical Association of America

GENTLEMEN:

The Fisk Mathematics Department hereby requests the American Mathematical Society and the Mathematical Association of America to insert into the respective bylaws of the two organizations explicit and effective protection of the rights of all members to participate fully, freely and equally in the affairs of the organizations without regard to race, creed or color. It should be stated flatly that meetings, and teas, receptions, luncheons, dinners, etc., associated with meetings, shall be held only at institutions, hotels, etc., where prior assurance is given that there will be no discrimination. In keeping with such a policy, it should also be voted that persons holding office shall not participate in any way in any meeting of the organization until they have been assured of full compliance with the letter and spirit of this bylaw, failure in this respect to be construed as resignation from office.

The adoption of such bylaws is necessary for the protection of the rights of members and of the mathematical community generally, as the episode related below will establish. It is also necessary for the growth of membership and participation among Negro mathematicians, nearly all of whom teach in Southern schools and who will need such specific assurances before they will feel inclined to participate in the work of these organizations. It would follow the lead of other professional societies which have already codified this basic policy, for example, the American Psychological Association (*Am. Psychol.*, 5, 548 [1950]).

One of the events which demonstrate the need for such official action occurred in connection with the annual meeting of the southeastern region of the Association, March 16–17, 1951, with Peabody and Vanderbilt as hosts. The official program of the meeting announced a dinner at which the national President of the Association would be the speaker. The chairman of the Fisk department requested four reservations in a note handed personally, on March 10, to the individual specified on the announcement. On March 15, the day before the banquet, the chairman of the arrangements committee telephoned Fisk to inquire if any of the four reservations would be used by Negroes. On receiving an affirmative reply, he declared the reservations cancelled, stating that the arrangements committee would issue no tickets to Negroes.

Two of the undersigned, acting for the department, then requested the national President to act against this discrimination. He spoke to the arrangements committee chairman and then reported that the latter was determined to exclude Negroes. Thereupon our committee requested the President to withdraw from the dinner in order to avoid giving the impression that the national officers sanction or tolerate such discrimination or, if unwilling to withdraw, to make his disapproval of discrimination clear in his speech at the dinner. He felt that he could not do either, holding the view that such acts would be discourteous to his hosts.

Some further clarifying remarks may be in order. There is no state law or city ordinance which prohibits interracial dinners. Of this we have been assured by local attorneys with long experience in such matters. There is substantial precedent for such dinners, which have been held even in some local hotels, which are frequent in some churches and other semiprivate dining halls and which are daily events at Fisk.

On November 6–7, 1950, Peabody and Vanderbilt were hosts to the Southern College Personnel Association. This organization's banquet was nonsegregated.

The point here is not that the hotel at which the Association held its banquet discriminates against Negroes. The point is that it was up to the arrangements committee to find a place, on the campus of one of the host institutions or elsewhere, where all mathematicians could participate.

Sincerely yours,

EVELYN BOYD
Associate Professor
WALTER BROWN
Assistant Professor
H. M. HOLLOWAY
Assistant Professor
LEE LORCH
Associate Professor and Chairman

Nuttall Memorial Celebration

THE year 1951 marks the end of the first half-century of systematic serology. In 1901 Nuttall first reported the results of testing precipitin antisera with a variety of antigens of animal origin, and with these reports and the researches that made them possible the science of comparative or systematic serology may be said to have been founded.

Appropriate observance of the half century of systematic serology is being made at Rutgers University's Serological Museum this year. On March 19 a Nuttall Memorial Celebration was held, with an exhibition of the work of the museum and of its Nuttall historical materials. The latter included some of Nuttall's original fluid sera, four of his charts, and two sets of protocols relating to the researches in blood relationship, all of which were given to the director of the Serological Museum during his visits to Cambridge in August 1950. Thanks and sincere appreciation are due to D. D. Keilin and Cambridge University for both the preservation and the gift of these historic materials.

The celebration was concluded with a symposium sponsored by the Rutgers Chapter of Sigma Xi, entitled "A Half-Century of Systematic Serology; the Work of Nuttall and his Associates at Cambridge and of his Successors in America." Those participating were: T. C. Nelson, whose account of Nuttall was based on his visits to Nuttall's laboratory and home in 1931; P. A. Moody, who reported on researches in systematic serology carried on under his direction; and Alan Boyden, who briefly summarized the more important work in the field and gave an appraisal of the significance of Nuttall's contributions to it:

Nuttall himself was aware of some of the limitations of his techniques. In 1902, after completing a series of quantitative tests in which he measured the volumes of settled precipitates, he said, "I do not wish these numbers to be taken as final; nevertheless, they show the essential correctness of the previous crude results. To obtain a constant it will be necessary to make repeated tests with the bloods of each species and with different antiserums of one kind, making the tests with different proportions of antiserum. I am inclined to believe that with care we shall perhaps be able to measure species by this method, for it appears from the above results that there are measurable differences in the reactions obtained with related bloods, in other words, determinable degrees of blood relationship which we may be able to formulate."

These words were prophetic—they pointed the way to future progress, and especially to the developments of the last decade. In spite of the obvious limitations of Nuttall's own techniques, he is unquestionably the founder of systematic serology and his contributions to the subject are many:

1) He was the first to have the insight to appreciate the potential significance of systematic serology and the enthusiasm to undertake an extensive study of its problems.

2) He inspired a small band of workers, Dinkelspiel, Graham-Smith, Strangeways, and Sanger, to join him in his studies of blood relationship and they worked effectively together in building the foundation for the future.

3) Nuttall and his associates did demonstrate a general parallelism between the systematic positions of animals, where they seemed to be relatively certain, and the precipitin tests of their sera. In fact, among the quantitative tests, only about 10% are obvious errors in view of modern knowledge in regard to the relationships of the species tested.

4) Nuttall and his associates provided evidences bearing upon the systematic positions of species or groups of doubtful relationship. Thus it was found that:

a) Antilimulus serum reacted more strongly with arachnid sera than with decapod sera.

b) The sera of whales were more similar to the sera of eventoes ungulates than to those of any other orders of Mammalia tested, (which we have recently confirmed).

c) The serum and egg proteins of Aves show some evidences of similarity to those of Chelonia and Crocodilia.

The greatness of a man does not depend alone upon his contribution of detailed fact to a subject; it also depends upon the kind of foundation he lays upon which others may build. Entirely aside from his great creative works in the field of parasitology and public health, we attest to his eminence in the field of systematic serology of which he was the founder. A half century of substantial progress has followed his lines of thought. And, as he considered his own work to be of a preliminary nature and looked to us to carry on, we, in turn, look to the future and to others with hope and confidence. Keen young men and women have been and are being prepared to continue the study of comparative serology. It will be both their pleasure and obligation to celebrate the Nuttall centenary at the appropriate time, and to recount the further developments which will then have been made manifest.

A fuller account of the celebration, including the reports of the principal speakers, together with other matters of significance relating to the half-century's developments in systematic serology, will be published in the *Bulletin of the Serological Museum*. Copies are available upon request.

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