will produce positive estrus after 96 hours. The animals remain in heat for at least 24 hours with a gradual return to the resting stage. Even on large doses, estrus does not appear earlier than 96 hours, but persists for several days.

The crystals consequently differ both chemically and physiologically from urinary estrogenic substances, such as theelin and theelol.

This work will be reported in greater detail in another journal.

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VISITING LECTURERS AND THE UNIVERSITY'S BUDGET

ONE of the advantages which European universities have over American ones is the tradition that favors itineracy among students. The ballyhoo over football and other forms of activity rooted in provincialism have so conditioned the American student's mind that university loyalties generally outweigh loyalty to intellectual standards and to personal growth. As a consequence a large proportion of graduates and almost all undergraduates, once they are matriculated in one university, will not move to another. Hence little use is made by the student of that variety of background and view-point available in a nation where over fifty thriving universities offer exactly this advantage. Thus once more, though in a new setting, arises the problem of Mohamet and the Mountain.

The relatively few American universities blessed with a very large endowment are enabled to solve this problem by means of separately created visiting lectureships. For budgetary reasons, however, this method is not open on any appreciable scale to most of our institutions.

An alternative is a plan now followed by the Department of Geology and Geography at Northwestern University. Another institution is invited to set up an exchange arrangement involving no cost to either university except the subsistence and transportation of the visitors. Honoraria are not called for and salary items remain as normally fixed in the budget. Exchanges are made for a week of lectures only, and thus the visitor's schedule at his own institution is not badly disrupted, especially if his class work during his absence is shared by his own colleagues. Whenever possible, the exchange is arranged to affect men who are students in the same field and are dealing in their advanced classes with about the same subjects, concurrently. Thus, each visitor stimulates and broadens the view-point of the other's classes. In return he receives the vivifying comments of students reared in a differing tradition. Staff members of the cooperating departments are similarly stimulated.

The plan has been in effect with conspicuous success for five academic years. Exchanges have been effected with the University of Cincinnati, the George Peabody College for Teachers, Harvard University and Washington University in St. Louis. Perhaps by increasing such a practice those American universities which can not defray the cost of expensive visiting lectureships may still be able to spread among their students a healthy appreciation of the catalysis that comes from an exchange of ideas with outsiders.

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THE DOCTOR OF PHILOSOPHY DEGREE AND MATHEMATICS RESEARCH

DEAN RICHARDSON, of Brown University, secretary of the American Mathematical Society, has prepared a careful and interesting report on the doctor's degree and mathematical research, published in the April number of the *American Mathematical Monthly,* which will be of great service to American mathematicians and others. This report and the data available in Dean Richardson's office contain such fundamental statistical information as the names of all Americans who have received the doctorate in mathematics, the names of foreign mathematicians who have joined our American mathematical group, the research papers presented to the society and subsequently published by each of these persons, and the names of all teachers of mathematics in American universities, colleges, normal schools and junior colleges during the year 1935–36.

In the report printed in the *Monthly,* details are given (1) concerning the number of degrees conferred in successive five-year periods from 1870 to 1935 by each American university, (2) concerning research productivity of the doctors of mathematics analyzed in various ways, (3) concerning the productivity of doctors who received their degrees at various leading universities, and (4) concerning the productivity of National Research Council fellows.

According to Dean Richardson's statistics, the total number of doctorates in mathematics conferred by American universities during the period 1862–1934 is 1,267, of which 168 were conferred on women. Foreign universities conferred 114 doctorates in mathematics on persons who have been active in America. The average number of pages of research published annually by persons holding the doctorate in mathematics has been slightly less than five. Over half of those holding the doctorate have published at most one research paper, and only 11 per cent. have published more than ten such papers.

The number of teachers of mathematics in American

and Canadian colleges and universities in 1935 was 4,444, of whom 1,292 possessed the doctor's degree. The number of these teachers who were in junior colleges was 746, in teachers colleges 373 and in other colleges 3,325. The men numbered 3,750 and the women 694; and 1,263 were members of the American Mathematical Society.

E. J. MOULTON

SOCIETIES AND MEETINGS

THE NORTH CAROLINA ACADEMY OF SCIENCE

THE thirty-fifth annual meeting of the North Carolina Academy of Science was held at Duke University, Durham, N. C., on April 24 and 25, 1936. The meeting was unusually well attended. Sixty-five papers and four exhibits made up a full and interesting program. The proceedings, several abstracts and some complete papers will appear at an early date in the *Journal of the Elisha Mitchell Scientific Society.*

The General Section met the first day for the presentation of papers of general interest, after which the annual business meeting was held. This was followed by a tea in the Duke University Medical School Library and a tour through the Medical School and Hospital. The annual show of the School of Engineering was also visited by many of the academy members.

In the evening a complimentary dinner was extended to the academy by Duke University, at which an address of welcome was made by Dr. W. C. Davison, dean of the Duke University Medical School. This was followed by an inspiring address, "The Teacher of Science," by the retiring president, Professor W. L. Porter, of Davidson College.

The forenoon of the second day was set aside for the more technical papers in the meetings of the following sections: General Section (botany, zoology, forestry, geology), Chemistry Section, Mathematics Section and Physics Section. At the conclusion of the sectional meetings a tour was made through Duke Forest.

During the business meeting resolutions of respect were read, honoring the memories of Mr. T. G. Harbison, of Highlands, North Carolina, for several years curator of the Herbarium of the University of North Carolina; Dr. Horace W. Frink, psychoanalyst, connected with the University of North Carolina Medical School and formerly of the faculty of Cornell University, and Charles F. Meserve, formerly president of Shaw University.

The academy elected to life membership Dr. J. S. Holmes, state forester of the North Carolina Department of Conservation and Development, and Dr. I. H. Manning, recently retired dean of the University of North Carolina Medical School. The executive committee reported the election of twenty-five new members during the year and the reinstatement of seven former members.

In the high-school science essay contest, sponsored by the academy, first prize was awarded to Carl Deal, Boyden High School, Salisbury, N. C., for his essay, entitled "The Sea, a Mine." The contest will be continued in 1936 in the fields of biology and geography.

Professor F. G. Hall, of the Department of Zoology, Duke University, was awarded the Phipps and Bird medal for the most noteworthy paper, entitled "Physiological Studies at High Altitudes."

The following officers were elected for the coming year:

GENERAL SECTION

President, P. M. Ginnings, Greensboro College.
Vice-President, C. F. Korstian, Duke University.
Secretary-Treasurer, H. L. Blomquist, Duke University.
Executive Committee, the above officers and W. E. Speas, Wake Forest College; H. R. Totten, the University of North Carolina; W. L. Porter, Davidson College.

CHEMISTRY SECTION

Chairman, Edward Mack, Jr., the University of North Carolina.
Vice-chairman, W. C. Vosburgh, Duke University.
Secretary-Treasurer, E. C. Markham, the University of North Carolina.
Councillor, L. A. Bigelow, Duke University.
Executive Committee, the officers and R. W. Bost, the University of North Carolina; C. S. Black, Wake Forest College; W. A. Reid, North Carolina State College.

MATHEMATICS SECTION

Chairman, J. H. Roberts, Duke University.
Secretary-Treasurer, J. M. Clarkson, North Carolina State College.

PHYSICS SECTION

Chairman, M. L. Braun, Catawba College.
Secretary-Treasurer, J. S. Meares, North Carolina State College.

The thirty-sixth meeting of the North Carolina Academy of Science will be held in 1937 at Catawba College, Salisbury, N. C.

H. L. BLOMQUIST,
Secretary

THE NEBRASKA ACADEMY OF SCIENCE

THE forty-sixth annual meeting of the Nebraska Academy of Science was held at Nebraska Wesleyan University, Lincoln, on May 8 and 9. In spite of rain, the attendance was fully up to normal. The Nebraska