less the mutation occurred in a cell generation earlier than that in which the egg itself was differentiated no other germ cells of the parent or collaterals of the eyeless individual should bear the factor for eyelessness.

Observation of the occurrence of an eyeless mutant and the transmission of this characteristic would be of great interest as bearing upon the probable origin of eyeless cave animals. As is well known, many cave animals, particularly crustaceans, are without eyes or have extremely degenerate eyes.

It has been suggested that such cave forms may have arisen by "orthogenesis" (many small mutations) or, by implication, possibly by a single large mutation.[1]

Eyelessness in these forms is associated with lack of body pigment. Pigmentless animals, such as cave amphipods for example, may suffer deleterious effects if they come under the influence of the actinic rays of sunlight. Such animals are conspicuous and an easy prey to their natural enemies. In so far as a general vision may aid such organisms in reaching a suitable locality for securing food eyeless individuals are at a disadvantage in the open in competition with eyed individuals. On the other hand in caves and similar situations they are shielded from light, are not rendered conspicuous by their whiteness and are at no disadvantage in competition for food. It would seem that they have become segregated in caves and other retired situations because they can survive there and are unable to do so elsewhere.

The occurrence in *Drosophila* of a "bar-eyed" mutant (eye much reduced in size and in effective elements) and an "eyeless" mutant (in most cases not really eyeless but eyes more or less rudimentary) lends credence to the theory that eyeless cave animals, or such animals with very defective eyes, may have arisen as the result of mutations. One does not however lose sight of the fact that the eyeless daphnid mentioned may have arisen from a disturbance in development such as the writer has seen in eyeless salamander larvae and as have been found in other experimentally treated material. Of course in such cases one does not in general (Guyer's rabbits possibly form a notable exception) anticipate any degree of inheritance whatever, even if the abnormal individuals were viable and capable of producing young.

In the case of this eyeless daphnid however there were embryos in the brood chamber and there seemed every reason to believe that it possessed the normal capacity for producing young.

ARTHUR M. BANTA

[1] Banta, Carnegie Institution of Washington, Publication No. 67, 1907.

THE EASTER MEETING OF THE AMERICAN MATHEMATICAL SOCIETY AT CHICAGO

THE sixteenth regular Western meeting of the American Mathematical Society was held at the University of Chicago on Friday and Saturday, March 25 and 26, 1921. The meetings were attended by over sixty persons, among whom were fifty-three members of the society.

The session of Friday afternoon was devoted to a lecture by Professor Dunham Jackson on "The general theory of approximation by polynomials and trigonometric sums."

It was voted at this meeting that the Christmas meeting of the Chicago Section be held in Toronto, in affiliation with the Convocation week meetings of the American Association for the Advancement of Science.

A dinner at which forty-seven persons were present was held at the Quadrangle Club on Friday evening.

At the sessions of Friday and Saturday forenoons, the following papers were presented:

1. I. J. Schwatt, "On the expansion of powers of trigonometric functions."
2. I. J. Schwatt, "On the summation of a trigonometric power series."
3. W. B. Ford, "A disputed point regarding the nature of the continuum."
4. Mayme I. Logsdon, "The equivalence of pairs of hermitian forms."
5. C. C. MacDuffee, "Invariants and vector covariants of linear algebras without the associative law."
6. E. J. Wilczynski, "Some projective generalizations of geodesics."
7. W. L. Hart, "Summable infinite determinants."

8. H. Blumberg, "New properties of all functions."
9. E. B. Van Vleck, "On non-loxodromic substitution groups in n dimensions."
10. G. A. Miller, "An overlooked infinite system of groups of order pq^2, p and q being prime numbers."
11. L. E. Dickson, "Fallacies and misconceptions in diophantine analysis."
12. L. E. Dickson, "A new method in diophantine analysis."
13. T. H. Hildebrandt, "On a general theory of functions—preliminary communication."
14. A. Dresden, "Some new formulæ in combinatory analysis."
15. J. B. Shaw, "Generational definition of linear associative hypernumbers."
16. J. B. Shaw, "On Hamiltonian products—Second paper."
17. F. E. Wood, "Congruences characterized by certain coincidences."
18. E. P. Lane, "A general theory of congruences."
19. J. Eiesland, "The group of motions of an Einstein space."

Professor Schwatt's papers were presented by Professor Dunham Jackson; Mr. MacDuffee was introduced to the society by Professor L. E. Dickson and Professor Wood by Professor Wilczynski; the papers of Professors Miller and Lane were read by title. Professor Bliss, president of the society, presided at the meeting of Friday afternoon. The other sessions were presided over by Professor R. D. Carmichael, chairman of the Chicago Section, relieved on Saturday by Professor Dunham Jackson, vice-president of the society.

Arnold Dresden,
Secretary of the Chicago Section

THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE

PACIFIC DIVISION

1. REPORT OF THE SECRETARY-TREASURER FOR THE CALENDAR YEAR ENDING DECEMBER 31, 1920

January 1, 1920, Cash balance		$524.72
Receipts		
Received from the Permanent Secretary's office	$1,764.00	
Affiliated societies	115.00	
Dues and fees	272.00	$2,151.00
		$2,675.72
Expenditures		
Dues remitted to Permanent Secretary's office	$141.00	
Supplies	18.00	
Salary, 1920	825.00	
Salary, 1919	75.00	
Office assistance	300.00	
Postage and express	37.67	
Telephone and telegraph	8.20	
Expense, general	5.40	
Expense, travel	208.50	
Printing	133.40	
Membership campaign	76.25	$1,828.42
January 1, 1921, Cash balance		$847.30

2. BALANCE SHEET, DECEMBER 31, 1920

Assets	
Equipment	$235.73
Cash on hand	847.30
	$1,083.03
Liabilities	
Permanent Secretary's office	$747.30
Investment (equipment)	235.73
Sundry creditors account	100.00
	$1,083.03

3. SUMMARY OF ANNUAL DISBURSEMENTS FOR THE YEAR 1920

Supplies	$18.00	
Salary	900.00	
Office assistance	300.00	
Postage and express	37.67	
Telephone and telegraph	8.20	
Expense, general	5.40	
Expense, travel	208.50	
Printing	133.40	
Membership campaign	76.25	$1,687.42
These disbursements have been made from funds derived as follows:		
Affiliated societies (assessments)	115.00	
Initiation fees	163.00	
Receipts from the Permanent Secretary's office	1,409.42	$1,687.42

W. W. Sargeant,
Secretary, Pacific Division