cating that the ammonium ions and sodium ions are hydrated to a greater extent than the oxalate ions and that the nitrate ions are hydrated to a greater extent than the cupric ions; that the transport of water is due to this greater hydration of the ammonium and sodium cations of the oxalates, thus causing transport of water to the cathode side, and to the greater hydration of the nitrate anion, thus causing transport of water to the anode side in the cupric nitrate experiments.

There are two possible paths by which the water may be transported. The hydrated ions may actually move through the body of the intervening liquid membrane or they may pass along the outer edge of the liquid between the liquid and the glass wall. The liquid membrane takes on a cloudy appearance both with the benzaldehyde and the carbon tetrachloride; but this might occur in either type of movement of the hydrated ions. In any event, by whatever path the ions are transported, there results an increase of acid in the anode side and an increase of base in the cathode side, indicating that the transport of water is accompanied by the transport of the cations to the cathode side and anions to the anode side of the liquid membrane, that it is not a simple case of electroendosmosis of the water but rather the movement of hydrated ions. Another point that would seem to rule out the idea of electroendosmosis is that in the experiments with ammonium oxalate in water over benzaldehyde, deposits of benzaldehyde were detected on the cathode, even though it had never been in direct contact with the benzaldehyde. No such deposit of benzaldehyde was found on the anode. This seems to indicate that the benzaldehyde bears a positive charge and tends to move toward the cathode. In electroendosmosis the water moves in a direction opposite to the direction in which a colloidal membrane tends to move. Therefore, water would be expected to move toward the anode if it moved essentially by electroendosmosis; whereas, water was actually transported to the cathode side in this experiment.

Preliminary quantitative determinations of the amounts of ammonium ion, oxalate ion and water transported indicate that in electrolyzing ammonium oxalate through benzaldehyde two oxalate ions migrate, while one ammonium ion migrates. This would seem to indicate a rather high degree of hydration of the ammonium ion producing a large, heavy, slow-moving ion. Though it appears rather high, preliminary determinations of the number of water molecules transported for each ammonium ion transported give a value of 892.

Other experiments of a similar nature are being conducted by the author in the hope that it may become possible to measure directly the degrees of hydration of the various ions, a subject of great importance to all who work with aqueous solutions.

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PROPOSING THE TERM, PREDATEE

FOR those working in ecology or fields of animal control there has developed a need for a term to designate animals preyed-upon, corresponding to "predator" for those which do the preying. The word "predatee" would be the logical one, and we propose it for the purpose.

The word predator has only comparatively recently been included in the dictionaries. It of course appeared as an answer to the need for a noun growing out of the word predatory. Now, as an outgrowth of ecological studies requiring an expression of both sides of this food relationship among animals, there comes the need for the other word, namely, predatee. Like the terms, employer and employee, the two terms are necessary to each other. One can not very well exist without the other. They express complementary parts of a single concept. Hence this proposal for recognition of the word.

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SOCIETIES AND MEETINGS

THE AMERICAN PHILOSOPHICAL SOCIETY

THE annual general meeting of the American Philosophical Society was held on April 20, 21 and 22 in its Hall on Independence Square, where its meetings have been held for almost one hundred and fifty years, for it was on November 13, 1789, that the society first met in the then newly finished building which has ever since been its home. The meeting this year was attended by about 200 members and invited guests, while approximately twice that number were present at the Penrose Memorial Lecture on Friday evening, which was given by Dr. Eduard Benes, formerly president of Czecho-Slovakia, who spoke in a notably calm and scholarly manner on "Politics as Science and Art." Thirty-five papers were presented in four half-day sessions; two of these papers were in mathematics, two in astronomy, six in physics, two in geology, six in botany and genetics, four in zoology and physiology, three in anthropology, three in modern history, three in ancient history and archeology, two in philology and literature and one in music. Several of these overlapped two or more fields and are therefore hard to classify.

The fact that the membership of the society includes all these fields of learning, as well as several others, tends to make the presentation of papers less technical and more generally intelligible than is the case in the meetings of more highly specialized societies. This is one of the peculiar charms of these general meetings

which is frequently commented on. At an open forum discussion of the activities of the society which was held on Saturday afternoon, many members said they enjoyed most the papers in fields other than their own, while those who present papers find it profitable and stimulating to attempt to make plain to scholars in other fields the results of their special studies. Some technical societies are at present lamenting the fact that their meetings have become so highly specialized that their programs are uninteresting or unintelligible to many of their own members and they are calling for papers of more general interest. Important discoveries can usually be presented in a manner that is intelligible to scholars in other fields, and if this can not be done they are not suitable for public presentation. Lord Kelvin is reported to have said on one occasion: "That physicist, who, having completed a research no matter how attenuated, on reaching the street can not explain his finding and its usefulness to the first man he meets, should return to his laboratory; his research is not complete."

It is probably true that general societies with non-technical programs do not notably increase knowledge in special subjects, but this is not their function. They do render an important service in stimulating wider interests and in promoting helpful associations among scholars in different fields. A society is first of all a social organization and not a library or laboratory. Information may be obtained in printed form, but nothing can be substituted for the social contacts which are promoted by such meetings.

The hospitality of Philadelphia to learned societies is proverbial, and this makes meetings in the Quaker City most enjoyable. Several years ago, when an international scientific congress was held in this country and was being entertained in various cities the general secretary of the congress telegraphed to the Washington committee asking what entertainment would be provided there. They replied that Washington would do whatever Philadelphia did. The general secretary telegraphed, "Philadelphia meets all hotel and other expenses." At once came back the answer, "Not on your life will we follow Philadelphia." The hospitality of the American Philosophical Society is probably unique among learned societies in this country; its luncheons, receptions and annual dinners are justly famous. But these are not merely gastronomic events but, much more, delightful occasions for social intercourse and scientific conferences. In addition to these general entertainments, the annual dinner given to the council of the society by one of its Philadelphia members is an event which no councillor would ever willingly miss. During the meetings all out-of-town members of the society and their wives as well as other persons who are invited to read papers are the guests of the society at a leading hotel. Undoubtedly this hospitality gives an air of friendliness to the meetings which is most delightful.

The annual business session was held on Friday morning, April 21. The president, Roland S. Morris, in his annual report stated that the invested funds of the society now amount to more than $7,000,000, with an annual income of approximately $200,000 available for general purposes. The budget allots about one half of this sum for grants-in-aid of research, $38,000 for the library, $25,000 for the publications of the society, $6,000 for the expenses of the meetings, about $10,000 for the executive office, $6,000 for the treasurer's office, $4,000 for the maintenance of the building, $6,000 for repairs and about $10,000 for miscellaneous expenses.

The committee on finance, consisting of eight of the leading financiers of Philadelphia who are devoted members of the society, meets regularly once a month and gives constant attention to the finances of the society. The committee on research, publications and library meet five times a year and devote much thought and care to these activities of the society. All committee members serve without personal compensation beyond actual expenses in attending meetings.

On Saturday afternoon, April 22, an open forum of the members for the discussion of the four principal activities of the society was held, and valuable suggestions were made for the improvement of the meetings, the library, the support of research and of publications.

The closing event of the meeting was the annual dinner, at which about 200 persons were present. The John F. Lewis Prize of $300 and diploma for an important contribution made at a stated meeting of the society, was awarded to Professor Henry Norris Russell for his lecture on February 17, 1939, on "Stellar Energy." The citation was made by Professor Harlow Shapley in an unusually happy and instructive speech and was responded to by Professor Russell. Other after-dinner speakers were Victor G. Heiser on his experiences on International Health Board, Jesse S. Reeves on "Neutrality," and Vannevar Bush on "Research and National Defense."

EDWIN G. CONKLIN

THE NATIONAL ACADEMY OF SCIENCES

ABSTRACTS OF PAPERS READ AT THE ANNUAL MEETING

(*Continued*)

Auto-equivalent functions: GEORGE D. BIRKHOFF. An analytic function $f(z)$ of a single complex variable z is called auto-equivalent if there exists a one-to-one analytic deformation $\bar{z}=\varphi(z)$ of the neighborhood of $z=\infty$ which modifies $f(z)$ only by a factor $a(z)$ analytic or with a pole at $z=\infty$: $f(\varphi(z))=a(z)f(z)$. The class of auto-equivalent functions, together with its natural extension to matrices, includes an extraordinary variety of functions having fundamental importance in analysis.