

Rheum, and to this Arabian rhubarb the species name *Rheum ribes*, in recognition of its ancient Arabic name, and to the currants he gave the genus name Ribes.

An excellent account of *Rheum ribes* was published by Desfontaines in 1803 in *Annales du Museum National d'Histoire Naturelle* (volume 2, pages 261 to 268, plate 49) and a well-executed colored illustration is given in Curtis, *Botanical Magazine*, 1898, plate 7591.

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FAULTING IN THE MOHAWK VALLEY

THE age and origin of the extensive faulting along the southern edge of the Adirondacks in the Mohawk Valley has long been a problem to investigators. It was with the object of obtaining information which might lead to a solution of this problem that the writer spent portions of the summers of 1930 and 1931 in geologic investigation of this area.

The displacements are high-angle normal faults trending generally north northeast—south southwest and cutting pre-Cambrian and lower Paleozoic formations. Most of the faults are upthrown on the western side with the amount of displacement increasing to the northward toward the Adirondacks, but dying out rapidly a few miles south of the Mohawk River.

Since the faults are high-angle (over 80°) with the hanging wall invariably downthrown, they imply tensional stresses and hence are to be correlated with periods of relaxation which usually follow the compressive phases of mountain deformations. That the faults are younger than the Taconic folding is evidenced by their displacing of not merely the Schenectady beds, which are believed to have been deposited during the compressive phase of this deformation, but of the even younger Utica shale. The fact that the faults die out to the south argues for a primary relationship to the Adirondack region. In addition, their proximity to areas to the east which show distinct folding and thrusting as a result of the Taconic revolution bears out the conclusion that the tensional stresses of the period of relaxation following this deformation were responsible for the initiation of this faulting.

During the Taconic disturbance, the forces of compression in the sedimentary troughs were relieved by folding and thrusting. In the much more resistant pre-Cambrian rocks of the Adirondacks, however,

these stresses were resolved so that the eastern part of the massif was uplifted rather than folded and thrust-faulted. The greatest uplift very likely took place northward from the Mohawk Valley and away from the area of thicker sediments. After the Taconic compression had ceased, relaxational movements began, and the east and south sides of the Adirondack area were cut up by normal faults. Most relaxation occurred where the preceding compression had caused greatest uplift, and consequently the throws of these faults increase to the north. Subsequent revolutions may well have caused additional adjustments along these faults.

More than twenty-five of these faults have been mapped in detail, and it is expected that further information regarding them will be published in the near future.

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NORTH AMERICAN FISH-HOOKS

AN ethnographical survey of fish-hooks in North America made by the present writer raises an important question as to the origin of barbed hooks. Until now it has been conjectured that such hooks were introduced among the American natives by European traders.

In different museum collections there are several barbed hooks from the Aleutian Islands and from California, which are of undoubted antiquity. Those from the northwest coast are regularly barbed, whereas the Californian specimens are barbed on the outside.

From a study of these hooks I have come to the conclusion that barbs on fish-hooks might have been an aboriginal invention and that the possible line of distribution was that after the introduction into Alaska from Asia, a branching out in two directions took place—one towards the northeast, extending across the Canadian arctic shores as far as Greenland, and the other almost directly south over Yukon, British Columbia and Washington to Southern California. This is also in accordance with what we know of the migration of the peoples in the North American continent.

This possibility has so far been neglected, and it seems to me that ethnographers and archeologists in the field would do well to bear this in mind.

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THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE

MINUTES OF THE EXECUTIVE COMMITTEE

THE fall meeting of the executive committee was held in Washington, D. C., on October 27, 1935, at the

Cosmos Club, with the following members present: Drs. Cattell, Caldwell, Compton, Conklin, Curtiss, Livingston, McKinley, Ward, Wilson and Woods.

The minutes of the last meeting held in Minneapolis in June were reported as having been approved by mail and published in *SCIENCE*.

It was voted that a committee on membership be appointed to canvass the possibilities of increasing the membership in the association, in cooperation with the permanent secretary's office. It was further voted that the problem of increasing membership in the association be added to the agenda of the Secretaries' Conference at Saint Louis and the committee was instructed to send a preliminary report to each member of the conference before the meeting. The chairman appointed Drs. Livingston (*chairman*), Caldwell, McKinley, Woods and the permanent secretary as members of the Committee on Membership.

The financial reports of the treasurer and the permanent secretary for the fiscal year 1935 were presented, accepted and ordered audited. The treasurer's budget for the fiscal year 1936 was approved as presented.

The budget of the permanent secretary for 1936 was approved with minor adjustments. The budget submitted by the director of exhibits for the Saint Louis exhibition was approved as presented.

The general secretary reported (1) on activities of local branches, (2) on relations with the affiliated state academies, and (3) outlining plans for the Secretaries' Conference at Saint Louis.

It was voted that the membership of the Academy Conference consist of the representatives of the affiliated academies in the council of the association and the members of the executive committee of the association.

A preliminary list of important events in the program of the Saint Louis meeting was presented by the permanent secretary and discussed.

The permanent secretary presented for discussion and action data on future meetings and a list of meeting places which had been either officially or tentatively fixed. He was authorized to publish the list of meeting places, through 1940, as follows:

- St. Louis, Missouri: December 30, 1935, to January 4, 1936.
- Rochester, New York: June 16 to June 18, 1936; Ithaca: June 19 and June 20.
- Washington, D. C.: December 28, 1936, to January 2, 1937.
- Denver, Colorado: June, 1937. Joint meeting with Southwestern and Pacific Divisions.
- Indianapolis, Indiana: December 27, 1937, to January 1, 1938.
- Summer, 1938: Eastern Canada or New England (in June).

Winter, 1938: Richmond, Virginia, December 26 to December 31.

Summer, 1939: Milwaukee, Wisconsin (in June).

Winter, 1939: Columbus, Ohio, December 26 to December 31.

Summer, 1940: Joint meeting with Pacific Division. In Pacific Coast Territory in June.

Winter, 1940: New York City.

The report of the Committee on Exhibits concerning proposed arrangements for the exhibition at Washington in 1936 was approved.

The selection of general hotel headquarters for the Washington meeting was placed in the permanent secretary's hands with power.

The executive committee approved the plan to provide membership in the association for selected agencies in Latin American countries.

The executive committee considered various applications for grants to aid in publishing reports and for printing funds, but with expressed regret voted that under present conditions no funds were available for those purposes.

After some discussion the executive committee approved the organization of subsections under the following designations:

Section of Medical Sciences (N): Subsection on Dentistry; Subsection on Pharmacy.

Section on Engineering (M): Subsection on Aeronautics.

Upon invitation from the American Academy of Tropical Medicine, Drs. McKinley and Ward were named representatives of the association at the meeting of the academy to be held in Saint Louis on November 20, 1935.

Professor R. M. Ogden, Cornell University, was elected chairman of the Section on Psychology to fill the vacancy caused by the death of Dr. Joseph Peterson.

The committee approved the appointment of Professor Charles J. Tilden as a member of the executive committee of the Section on Engineering, to succeed Calvin W. Rice, deceased.

Dr. Edgar Allen, Yale University, was elected a member of the section committee of the Section on Medical Sciences to succeed Dr. George H. Bigelow, deceased, term to expire at the end of 1936.

The permanent secretary presented reports from section secretaries on balloting for section officers for 1936; final action was postponed until the first meeting of the executive committee at Saint Louis.

It was voted to adopt the following rule regarding acceptability of papers offered for the programs of meetings.

Resolved: (1) That papers presented on the programs of the American Association for the Advancement of Science should not refer to commercial trade names of products where this can be avoided, in order to eliminate the criticism which might be made that such reference in scientific papers is in any way associated with advertising.

(2) That papers for the programs be accepted with the understanding that full scientific information is available for presentation and discussion if pertinent to the specific phase of the research being reported or described.

It was voted that nominations for emeritus life memberships under the Jane M. Smith fund be referred to the Committee on Emeritus Life Memberships, with power.

The report of the Committee on Source Books in the History of Science was read and accepted. The general secretary presented a progress report (1) of the Committee on Radio Program at Saint Louis and (2) on the activities of the Committee on the Place of Science in Education. After considerable discussion on the field and the work of the Committee on Adult Education, the report from the committee was accepted.

The Limnological Society of America was accepted as an *affiliated* society. (The society has a total membership of 238 members. Of this number 170 are members of the association, 82 of these being fellows. The society is entitled to one representative in the council of the association.)

The Alpha Chi Sigma Fraternity was accepted as an *associated* society. (This society has a total membership of 10,583. Of this number 1,232 are members of the association, 568 of these being fellows.)

The Chi Beta Phi Scientific Association was accepted as an *associated* society. (This society has a total membership of 1,449. Of this number 36 are members of the association, 31 of these being fellows.)

The permanent secretary reported for record the appointment of Dr. H. S. Jennings as representative of the association to the meeting of the British Association for the Advancement of Science, held in Norwich, September 4-11, 1935.

The permanent secretary reported for record the appointment of Dr. J. McKeen Cattell and Professor

M. S. Vallarta, Massachusetts Institute of Technology, as representatives of the association to the seventh American Scientific Congress held in Mexico City, September 8-17, 1935.

The chairman of the executive committee and the general secretary were appointed a committee to consider the possible relations of the association with scientific organizations and workers in science in Mexico, and to present at a later meeting such recommendations as they feel should be made.

Dr. H. G. Moulton was elected a fellow of the association.

It was voted that the spring meeting of the executive committee in 1936 be held in Lancaster, Pa.

The permanent secretary presented a progress report on the organization of a Southeastern Division.

The permanent secretary reported for record the receipt of the annual report of the Joseph A. Holmes Safety Association.

The following resolutions from the American Pharmaceutical Association were read and placed on record:

Resolved, That the American Pharmaceutical Association desires to express its gratification to the American Association for the Advancement of Science for the creation of a Section on Pharmacy and for the opportunity to present a separate program illustrating the contributions of pharmacy to the advancement of science.

Resolved, That the American Pharmaceutical Association appoint two delegates to the Seventh American Scientific Congress to be held in Mexico City from the 8th to the 17th of September of this year and that those delegates be instructed to participate as fully as possible in all the efforts to make the Congress a success.

Two resolutions were presented from the Ecological Society of America on (1) preservation of natural areas and (2) program of the Quetico-Superior Council. The committee expressed its general approval and indicated that the substance of these resolutions was contained in resolutions previously adopted by the council.

The meeting adjourned, to meet at the Jefferson Hotel in Saint Louis.

HENRY B. WARD,
Permanent Secretary

SPECIAL ARTICLES

FURTHER EVIDENCE FOR THE PRESENCE OF A TOXIC FACTOR IN PERNICIOUS ANEMIA¹

VERY recently, Mermod and Dock² reported their confirmation of Massa and Zolezzi's³ finding that the

¹ From the department of physiology and pharmacology, University of Louisville School of Medicine. This

intravenous injection of repeated doses of the dye, Congo Red, produces effects similar to those of liver

investigation has been made with the assistance of a grant from the Committee on Therapeutic Research, Council on Pharmacy and Chemistry, American Medical Association.

² C. Mermod and W. Dock, *SCIENCE*, 82: 155, 1935.

³ M. Massa and G. Zolezzi, *Klin. Wochenschr.*, 14: 235, 1935.