

or four of the spherules between the successive bubbles of entering air.

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SEASIDE SHRUBS: WIND FORMS VS. SPRAY FORMS

ON the basis of recent observations on the lower Cape Fear Peninsula, we have found that the so-called "wind-form" shrubs owe their form not to the wind *per se* but to the sea spray carried by high winds. Marked injury of all the young shoots exposed on the southeast side of the shrub masses (wax myrtle, yaupon and live oak) was observed following a high southeast wind which persisted for a period of nineteen hours and reached a maximum well above thirty miles per hour. We found this injury only on shrubs located near the strand; those equally exposed to the same wind velocity but at a greater distance from the ocean showed no injury whatever. And the degree of form modification was strictly correlated with the amount of injury found. Relatively low temperatures and cloudy weather prevailed during the time of this wind. Abundant soil moisture was also present, so that the drying effect of the April wind may be ruled out as an important factor.

Injured shoots and slightly protected uninjured ones were washed in distilled water and the water tested for chlorides, using silver nitrate solution. A marked contrast was found in the concentration of chlorides on the surface of exposed shoots *vs.* nearby ones slightly protected.

Immature shoots of a number of woody plants were hand sprayed with sea water and a pattern of injury obtained similar to the injury recently observed on the seaside shrubs.

Plant ecologists have generally attributed the strongly modified form of the seaside woody plants to wind alone. Our observations definitely indicate that the principal factor in producing these "wind forms" is the killing action of sea water carried as fine spray. The young, tender, exposed shoots are so severely injured by the spray that only the protected laterals and leeward terminals develop, resulting in the characteristic, compact, repressed, sloping form.

These peculiarly shaped seaside shrub masses should be called "spray forms" rather than "wind forms."

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THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE

MINUTES OF THE EXECUTIVE COMMITTEE

THE spring meeting of the executive committee of the association was held in the Hotel Commodore in New York City on April 17 and 18. All members of the executive committee were present with the exception of the Pacific Coast representative, who was duly excused. The minutes of the Atlantic City meetings as approved by mail were presented for record.

In response to an inquiry from affiliated state academies it was voted to reaffirm previous action regarding academy research grants to the effect that these are primarily for specific research projects according to the plan approved and transmitted to all academies and not for meeting the costs of printing the publications of any academy.

Itemized statements regarding the finances of the offices of the permanent secretary and the treasurer, in regard to the present status of membership and of means to be taken to extend the membership of the association were laid before the committee and after general discussion approved.

In order to clear up confusion and possible misunderstanding it was voted that section secretaries who prepare the programs and attend the Denver meeting to take charge of the work of the sections are to be

reimbursed for travel and expense in accordance with the by-laws.

Correspondence from Mr. Charles S. Baker, legal counsel, was presented. The permanent secretary reported (1) the receipt of an official ruling from the Massachusetts Department of Public Welfare to the effect that under the law the American Association for the Advancement of Science was not required to file returns; and (2) that affidavits by our officers and power of attorney as requested by the legal counsel had been prepared and sent Mr. Baker for use in discussing the taxation of the American Association for the Advancement of Science before the Bureau of Internal Revenue.

Various requests were presented that the travel expenses of certain speakers at the Denver meeting be paid from association funds. The committee expressed its regret that no funds were available to meet these requests.

An extended report was made by the permanent secretary on Occasional Publication No. 4, which is to contain the papers read at the cancer symposium organized by the Section on Medical Sciences for the Atlantic City meeting.

On recommendations of the respective sections fel-

lows were elected as follows: Section on Mathematics, 1; Section on Psychology, 8; Section on Social and Economic Sciences, 5; Section on Medical Sciences, 1.

Dr. E. G. Conklin was elected as representative of the association on the board of trustees of Science Service in place of Dr. B. E. Livingston, who had resigned.

The Psychometric Society was accepted as an affiliated society. This organization has a total membership of 159. Of this number 74 are members of the association, 58 of these being fellows. The society is entitled to one representative in the council.

The American Philosophical Association expressed its acceptance of the invitation to change its status from that of an associated society to an affiliated society.

It was voted to hold the 1940-41 winter meeting in Philadelphia and to authorize publication of this decision.

It was voted to hold the 1939 summer meeting in

Milwaukee and to authorize publication of this decision.

It was voted to appropriate to *Biological Abstracts* \$150 from the treasurer's funds for general purposes, the officers of the journal to be notified that this is the final grant from the association for this purpose.

The chairman appointed the president and the permanent secretary representatives of the association for the meeting of the British Association for the Advancement of Science, to be held at Nottingham, from September 1 to 8.

Dr. Atherton Seidell was selected as delegate from the association to the Dix-septième Congrès de Chimie industrielle, Paris, from September 26 to October 2.

The committee adjourned at 3:45 p.m., to meet in Denver in June. (The usual program calls for the executive committee to meet on Sunday afternoon and evening prior to the opening of the meeting on Monday, June 21.)

HENRY B. WARD

REPORTS

ACTIVITIES OF MELLON INSTITUTE DURING THE PAST YEAR

THE major event during the past fiscal year of Mellon Institute was the transfer of almost all the organization's activities to its new building, completed after a construction period of six years, and dedicated May 5 to 9 to science and humanity in honor of the institution's founders, Andrew W. Mellon and Richard B. Mellon.

The fiscal year just closed marks the twenty-sixth anniversary of the establishment of the Institute's fellowship system. The expansion of activities made possible by the new building is reflected by the increase in the total sum contributed to the institution by industrial fellowship donors. This sum amounted to \$816,315 for the fiscal year, March 1, 1936, to March 1, 1937, bringing the total for the past twenty-six years to \$11,478,406.

Sixty-nine industrial fellowships—30 multiple and 39 individual fellowships—were in operation throughout the fiscal year, requiring the services of 125 fellows and 52 fellowship assistants. In operation at the close of the year were 64 industrial fellowships—27 multiple and 37 individual fellowships—on which 114 fellows and 41 assistants held positions. Thirty-three fellowships have been in continuous operation for five years or more, and of this number 15 have been active for 10 years, 11 have concluded 15 years or more of research, and 7 fellowships are 20 years of age or older.

During the calendar year 1936, 1 book, 13 bulletins, 17 research papers and 31 other articles were contributed to scientific and technical literature by Insti-

tute members. Fifty United States patents and 14 foreign patents on fellowship inventions came to issue. Since 1911, the total number of publications includes 19 books, 143 bulletins, 744 papers and 1,117 miscellaneous articles. During the same period, 668 United States patents were granted. Bibliographic bulletin 4, to be issued later this year, will cover the Institute's patents and contributions to literature from 1911 to 1936.

Eleven fellowships began operation during 1936-37 on the following subjects: household utilities, plate glass, mineral products, pasteurization, drying, air pollution survey, chain, rayon, surgical supplies, chromium and cork. Investigational programs were concluded by five fellowships: smoke abatement, cosmetics, closure, can and shoes. Three recently accepted fellowships will start work this spring.

The activities of the Institute are described in the annual report of the director; E. R. Weidlein. Releasable facts relating to the institution's investigational progress are here summarized:

Fundamental studies of anthracite fuel beds and heat-transfer methods were made by the anthracite fellowship under H. J. Rose. Through the researches of E. P. Barrett, a process has been commercialized for the removal of taste- and odor-producing substances from protective coating materials for food containers. R. R. Fulton's fellowship has developed a hydraulic pressure transmitting fluid for the brake systems of automobiles and airplanes. A comprehensive study recently completed by the fellowship headed by C. W. Sweitzer on the dispersion behavior of carbon blacks in oil- and varnish-type vehicles will assist