

ACADEMY NEWS LETTER

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ACADEMY'S EXHIBIT ON TREASURE ISLAND

THE CALIFORNIA ACADEMY OF SCIENCES again, as last year, has an educational exhibit in the Hall of Science at the Golden Gate International Exposition on Treasure Island. The San Francisco Aquarium Society has generously contributed fourteen tanks of tropical fishes which form a pleasing and colorful background to the departmental exhibits. In the latter, certain phases of work carried on by the various research departments of the Academy are depicted in individual cases.

There is an attractive exhibit illustrating protective coloration in nature, as exemplified by certain birds, insects and plants. It shows how very brilliantly colored organisms may, when seen against their normal background, blend perfectly with their environment. A small but select display of some of the William B. Pitts collection of semi-precious stones has likewise been installed.

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CALIFORNIA ACADEMY OF SCIENCES

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August Announcement

THE REGULAR AUGUST MEETING of the California Academy of Sciences will be held in the Assembly Room (third floor) of the San Francisco Public Library on Wednesday evening, August 7, 1940, at eight o'clock. The speaker of the evening will be Mr. Dudley Moulton, whose subject will be "The Thysanoptera—Their Economic Importance, and Their Relation to Other Insects."

Mr. Moulton, a graduate of Stanford University, was at one time Entomologist for the City and County of San Francisco and later became Director of Agriculture for the State of California. He has gained worldwide fame as an authority on "thrips."

A pest of extreme devastation appeared in the fruit orchards of the Santa Clara Valley about thirty-five years ago and spread into the Sonoma and Vaca valleys and along the Sacramento River. It was called a "thrips" but no one knew from whence it had come or how to control it.

At about the same time, another "thrips" pest appeared in citrus orchards in the San Joaquin Valley and again no one knew what it was or how to control it.

Mr. Moulton made the first life-history studies of these insects and his findings were published by the Bureau of Entomology in Washington.

Since that time he has been receiving specimens of thrips from all over the world and has published numerous papers not only in this country but in England, Australia, Japan, India, South America and other places. The collections of thrips forwarded from many foreign countries has made his one of the outstanding world collections of these insects.

The thrips are a group of small insects, usually characterized by two pairs of peculiarly fringed wings and belonging to a separate order of insects known as the Thysanoptera. A few species prey upon mites and small insects, but the great majority feed upon plant juices. Among the latter group are a good many forms which are very harmful to farm crops and at times become serious pests.

Some species destroy the buds and blossoms of fruit trees, particularly citrus fruits and pears. Others are injurious to tobacco, onions, beans, cotton and grain, as well as various types of fruit trees. In many instances thrips will depend upon native wild vegetation until these plants begin to dry up in early summer. They will then migrate to adjacent orchards or cultivated fields where serious losses will soon result. Certain types of sprays and dust powders, containing nicotine sulfate, have proven very effective in controlling these insects.

Mr. Moulton has given much time to photomicrography and will display enlarged photographs of some of these insects which are hardly visible to the naked eye.



AQUARIUM RECEIVES FISHES FROM FIJI

THE MANY PEOPLE who have admired the tank of brilliant Blue and Sapphire Damsel Fishes in the foyer to the left of the main entrance of the Aquarium will be delighted to know that this exhibit has been augmented by the addition of one hundred twenty-one new specimens, representing both species, brought in from the Fiji Islands by the steamer *MARIPOSA* on its last arrival. This shipment, brought through under the watchful care of Chief Engineer Charles Knudsen, also included forty-three Sea Horses and numerous other interesting specimens.

The attention of Academy members is called to the new fluorescent lighting that has been installed over several of the tanks in the Aquarium. One of the tanks thus illuminated contains a beautiful exhibit of Turkey Fish. Less conspicuous, but equally interesting, in this same tank is an example of the Scorpion Fish which resembles a piece of coral more than anything else and is capable of changing its color rather rapidly so as to blend with its environment.



ACADEMY REPRESENTED AT SEATTLE MEETING

DR. ROBERT C. MILLER and Mr. H. Walton Clark represented the Academy at the meeting of the American Association for the Advancement of Science held in Seattle, June 22-27. Dr. Miller, who presided at two of the sectional meetings, was elected a member of the Executive Committee of the Pacific Division, and vice-president of the Oceanographic Society of the Pacific.