



FOLLOWING IN DAD'S FOOTSTEPS—Paul Condon and his brother Joe, sons of Dr. Edward U. Condon, director of the National Bureau of Standards, display their projects at a Washington, D. C., Science Fair.

other pursuit outside science. For these non-professional scientists of tomorrow, the serious fun they have in science clubs is one of the richest experiences of their youth. They will be better equipped to live in a scientific world and control the results of science so that civilization will progress rather than be wiped out.

Science fairs are fun for young scientists who enter—and for their parents and friends and the adult sponsors of the fairs—but they are also an important event in

building intelligent leaders of the future.

Anyone interested in science clubs can get information by writing to Science Service, 1719 N St., N. W., Washington 6, D. C.

Science News Letter, November 13, 1948

MEDICINE

Outbreak of Rash Among Sailors Traced to Moths

➤ A SKIN ERUPTION which attacked about two-thirds of an American merchant marine crew which entered a Venezuelan port was traced to a tropical moth. Three Boston physicians suggest that in any outbreak of rash the moth should be suspected, especially in crew members of ships or airplanes which enter South American ports.

On the first night the American crew anchored in port, a swarm of moths invaded the ship. The sailors killed them by crushing them between their fingers. Shortly afterwards some of the men noticed "small white itching bumps" on their skins and on the following morning their bodies were covered with a rash except for the face, palms and soles of the feet.

Other crew members noted the eruption on arising in the morning. This was traced to the bed linen which had been changed the night before. The closet in which fresh sheets were stored was made of meshed metal which permitted the entrance of the moths, several of which were found on the closet floor and some suffocated between the stacked sheets.

Twenty-nine of the 31 sailors who got the rash were treated at the United States

Marine Hospital in Brighton, Mass., by Drs. William R. Hill, A. Daniel Rubenstein, and Joseph Kovacs, Jr., who present their report in the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION (Nov. 6).

The eruption developed from a few minutes to a few hours after contact with the moth or with moth-stained bed sheets, the physicians state. Removal of the patient from the source of contact, a soap and water bath, a change to clean clothing and application of an alkaline wash usually brought relief. The patients became well in four to seven days.

The moth has been identified as the female of the genus *Hylesia* by V. Nabokov of the Museum of Comparative Zoology, Harvard University. These moths belong to the family Saturniidae, sometimes called, in English, peacock or silk moths, according to the report. They are attracted by light which explains their being on board ship, as the vessel had powerful lights.

Science News Letter, November 13, 1948

PLANT PHYSIOLOGY

Radioactive Molybdenum Shows Need of It in Plants

➤ MOLYBDENUM, the steel-maker's "seasoning," is also needed in extremely small amounts by plants—as little as ten parts per billion by fresh weight. To trace these minute quantities into and through plants, Drs. P. R. Stout and W. R. Meagher, University of California plant physiologists, have made use of radioactive molybdenum isotopes, supplied to plants that had been deprived of even the slightest speck of the element.

Molybdenum-starved plants show two outstanding symptoms: they lose the green color in their leaves, and they become unable to make use of nitrates taken up by their roots, piling these necessary salts up in their leaves to as much as 12 times normal concentration.

When molybdenum is supplied in even very low concentration these conditions are corrected in a matter of hours. The healthy green color re-develops in the leaves, and the abnormal concentration of nitrates is reduced to a more usual level.

When the radioactive molybdenum was

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Do You Know?

Tea and butter *rationing* will continue through 1949 in Australia.

Among the most pugnacious of the carnivorous insects is the *tiger beetle*, which feeds exclusively on other animals.

Decorative *evergreens*, around the house, are often damaged by snow breakage during the winter; this can be largely prevented by winding them with a soft cord to bind the tops together.

Wafers with a cheese-like flavor and the texture of potato chips contain one-third skim-milk solids and two-thirds potato solids; boiled potato and skim-milk are thoroughly mixed and seasoned, then spread thin, dried and toasted.

Sponge iron, so called from its spongy character, is metallic iron extracted from ore without bringing it to the melting point; by using coal, char, or gas as a reducing agent, oxygen is taken from the ore at temperatures below the melting point of iron oxide.

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traced in plants by placing them on photographic film and letting the radioactivity register itself in the sensitive emulsion, it was found that the element becomes concentrated almost entirely in the leaves, especially in the spaces between the veins. Very little of it remains in the stems, or even in the leaf-veins.

In another series of experiments in the same laboratory, Dr. Richard B. Walker, now of the University of Washington, studied the effects of supplemental supplies of molybdenum on plants growing in molybdenum-deficient soils. Here again, the plants grew pale and sickly-looking, and were restored to normal by the treatment. It was even possible to give them their restorative doses of molybdenum by painting a solution containing it on their leaves.

Results of both these research projects are presented in the journal, *SCIENCE* (Oct. 29).

Science News Letter, November 13, 1948

MEDICINE

Tantalum Foil Tubes for Nerve Surgery Patented

► TUBES of thin tantalum metal foil, for use in nerve surgery, have been patented by Dr. Paul A. Weiss, the University of Chicago neurologist who devised the method. Rights in U. S. patent 2,451,703, just granted, are assigned to the government.

Tantalum, a grayish-white metal little known until recently, has become a preferred material in many surgical uses because it does not corrode in the presence of any of the body fluids and has no irritating action on the tissues. For nerve surgery it must be used exceedingly thin; five thousandths of an inch has been found the best thickness. It must also be heat-treated to increase its resilience.

To make his nerve-mending tubes, Dr. Weiss wraps a piece of tantalum foil around a quartz tube of the desired diameter, binding it on with fine steel wire. He runs a steel rod through the quartz tube, for heat-conducting purposes, and puts the whole into an electric furnace for a minute or so at 800 degrees Centigrade. After cooling, the tube is stripped off and trimmed ready for use.

Dr. Weiss has also used nylon and short pieces of artery in his nerve-mending procedure. These materials, however, are not considered in the present patent.

Science News Letter, November 13, 1948

ORNITHOLOGY

If Pheasant Is Purple, You Aren't Seeing Things

► IF A PHEASANT with purple, green or blue feathers crosses your path, you may not be "seeing things." The bird will be real—and the rainbow feather-colors will be real, too.

Outdoor scientists sometimes dye birds' feathers with hues not found in nature as

a means of quick identification at a distance. This enables them to keep track of their movements and learn the extent of their range.

Newest techniques and dyes useful in this particular branch of applied ornithology were described in the *JOURNAL OF WILDLIFE MANAGEMENT* (October) by Dr. L. A. Wadkins of Washington State College. He has made use of 14 different dyes in a variety of solvents. Best results, on the whole, were obtained with 33% alcohol.

Science News Letter, November 13, 1948

AGRICULTURE

More Sunshine Puts More Sugar in Apples

► APPLES have more sugar if they get more sunshine during the growing season. This was learned at Cornell's Agricultural Experiment Station, Ithaca, N. Y., in a long-time study aimed at correlating some of the factors like rainfall, amount of sunshine, and temperatures to the keeping quality of apples.

Another discovery was that the higher the temperatures during the last six weeks before harvest, the greater has been the amount of scald in storage. The scientists will test this information further during the 1948-49 storage season, based on predictions made the last six weeks before harvest. Such knowledge, they say, will be of value to growers, who could move scald-susceptible varieties out of storage rapidly if considerable scald were expected.

Science News Letter, November 13, 1948

The mysteries of mathematics are revealed in a series of twenty chapters on "THE MEANING OF COURSES IN MATHEMATICS" now running in the *MATHEMATICS MAGAZINE*. If you never understood mathematics well or want to understand it better, here is your opportunity at trivial cost. No special training is required to understand and enjoy these articles, ranging from beginning algebra through most graduate courses, and colored by the individualities of the sixteen mathematicians who are writing them.

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