

PSYCHOLOGY

Study Science Interest

► **WHAT MAKES** a child suddenly announce: "I want to be a scientist!"

Is it an influence at home or school? Is it a talk with a friend, or a gift of scientific equipment? Is it a science club or just a personal drive?

It can be any one or all of them, and perhaps none of them.

This seeming paradox turned up in the answers to a questionnaire sent to the 95 finalists of the 1954 National Science Fair, conducted by SCIENCE SERVICE's Science Clubs of America.

The young scientists were asked: "What or who sparked your first interest in science, and how?"

Of the 79 teen-age finalists who answered the question, 36.7% gave credit to schools and their teachers for triggering their first interest in the world of chemistry, biology, physics, or other specialties.

The next greatest source of inspiration, as expressed by these young scientists, was home influence. Father turned out to be much more influential than he usually gives himself credit for being.

"My father," one youngster wrote, "would ask me questions and try to get me to argue on certain points, such as an object being every color except as it appears."

But father was by no means the only family influencer, knowingly or not.

"My older brother had been interested in astronomy but dropped it," another finalist said, "I read all of his books and began where he left off."

Giving a chemistry set can do the trick, too, the report shows. At least four of the teen-agers questioned replied that their first interest was sparked by such a gift.

Others credited magazine articles and science clubs. One wrote:

"The meteor shower, 1945, started my interest. I was not satisfied with merely seeing it. I wanted to know what was occurring and why, so I went to the public library and checked out some books on astronomy, then physics, then mathematics and, from there, well, you probably know how science just 'grows' on a person."

Science Clubs of America, sponsoring organization of the National Science Fair, is administered by SCIENCE SERVICE. The 1955 National Science Fair is to be held at the Case Institute of Technology and Western Reserve University, Cleveland, Ohio, May 12 to 14. A record number of finalists representing local fairs from coast to coast is expected to attend the national event.

Science News Letter, March 19, 1955



AN EASY LIFE — Prof. S. Dillon Ripley 2d of Yale University, shows a specimen of the frog mouth, a rare bird from the South Pacific that doesn't have to sing for its supper. It merely sits quietly on the ground in the shadowy jungle and opens its mouth. Attracted by the bird's colorful palate, insects fly in. The frog mouth is one of the birds brought to Yale's Peabody Museum by Prof. Ripley, who recently returned from a five-month expedition to Indonesia.

NUTRITION

Irradiated Food Harmful?

► **FOOD STERILIZED** by atomic radiation for preservation might be harmful to eat, two Massachusetts Institute of Technology scientists reported to the American Chemical Society in Washington.

Possible subtle changes in a relatively few molecules of a food or drug subjected to radiation could result in products that are harmful to the consumer, Samuel A. Goldblith and Dr. Bernard E. Proctor of MIT's department of food technology warned. The scientists issued their warning in the form of a question aimed at agencies concerned with public health.

Irradiation is known to cause a change in the molecular composition of food. Just how much of a change, the scientists claimed, has been impossible to determine because modern analytical measurements are limited. However, the change has been evidenced in a distinct difference in flavor and odor of food before and after radiation.

Reviewing the present status and problems of radiation preservation of foods and drugs in the society's journal, *Agricultural and Food Chemistry* (March), the Massachusetts scientists said that the biggest problem facing commercial use of radiation is eliminating the production of undesirable side effects.

These unwanted by-products such as a change in taste, texture, odor and color

come about when the food is bombarded at dose levels needed to bring about complete sterilization.

Three methods have been found to be potentially effective at getting rid of the side reactions, they are: irradiating when the food is frozen, removing oxygen from the process and/or adding free-radical acceptors that block the action producing the changes.

Although complete sterilization of foods presents several problems, the food technologists pointed out that subjecting foods and drugs to lesser doses of atomic radiation, which could roughly be compared to pasteurization, are feasible.

These uses for temporary preservation are:

1. Reducing the surface contamination of foods such as hot dogs to increase their shelf life.
2. Increasing the shelf life of meats fivefold with low doses of gamma radiation.
3. Deinfesting cereals of injurious insects.
4. Inhibiting sprouting of potatoes, thereby increasing storage life by many months.
5. Sterilizing pharmaceuticals.

Science News Letter, March 19, 1955

The dollar value of farm woodland products has increased sevenfold since 1940, and they now bring farmers \$700,000,000 a year.

PUBLIC HEALTH

Leukemia Showing Up In A-Bomb Survivors

► **LEUKEMIA**, ALWAYS fatal cancer of the blood, is showing up in survivors of the world's first military atom bombing.

Of Hiroshima survivors who were within the first thousand meters of the explosion, 15 have developed leukemia within the past five to seven years. One of these was among the survivors who showed minor symptoms. The other 14 were among 750 survivors who showed major signs of radiation damage such as loss of hair. This last gives a very greatly increased incidence, for leukemia, of one in 53.

Another 500 meters out, the leukemia rate among survivors changes to one in 150 who showed symptoms of radiation damage and one in 917 of survivors without symptoms.

These are among findings by Drs. William C. Moloney and Marvin Kastenbaum for the Atom Bomb Casualty Commission. Dr. Moloney was medical director for two years but is now at Tufts College Medical School and Boston City Hospital, Boston. Dr. Kastenbaum is now at the University of North Carolina, Chapel Hill, N. C.

Science News Letter, March 19, 1955