GENERAL SCIENCE

14th Annual NSF-I

Forty-six states, Puerto Rico, the District of Columbia, American schools in Germany-France-Italy, Canada, Japan and Sweden sent finalists to this year's NSF-I.

➤ SOME 410 of the most effective and exciting science experiments from this year's nearly one million student-made science fair projects were shown in the 14th National Science Fair-International held under the auspices of SCIENCE SERVICE May 6 to 11, at Albuquerque, N. Mex.

Not more than two finalists from each of 219 regional, state or national science fairs were selected to compete for international honors at Albuquerque.

Can insects be used to test experimental drugs? This question prompted the study of Douglas Koppes, 18, finalist from the Topeka Regional Science Fair, Topeka, Kans. Under qualified supervision, he studied the effects of thalidomide on cockroaches. The young showed some deformities. The most important result could be interference with tyrosine activity which might lead to the study of the drug's effect on cancer.

David Gibbs, 15, West Central Indiana Science Fair finalist from Terre Haute, tested 20 fresh water and marine algae to determine possible inhibitory characteristics against bacteria. He found that three fresh water algae inhibited all bacterial types tested.

Ultrasound was studied by Steven Nedrelow, 17, finalist from the Southeastern Minnesota Science Fair, Rochester. Steve's objective was to build a guidance system for the blind through the transmission of ultrasound. The ultrasound would be reflected back to the guidance system and distances determined by the sound's pitch.

A Tucson boy, Joel Vavich, combined his interest in science and music in a winning project from the Southern Arizona Science Fair. Joel, who has won numerous awards in both science and music, studied the scientific principles involved in the construction of musical instruments and built a Plexiglass model of a bass clarinet with tone quality comparable to a standard instrument. He concludes that science rather than trial and error should be used in the construction of musical instruments.

Kit Staley, 17, winner in the Greater Anchorage Science Fair, Anchorage, Alaska, studied the possibilities of a dietary defense against radiation. She inquired into illnesses similar to radiation sickness and learned that some vitamin deficiency diseases had similarities. She concluded that vitamin supplements might prevent radiation sickness.

Don Bliss, 16, exhibited a radio-controlled peripheral nozzle air cushion vehicle. Don, a winner in the Mobile (Ala.) Regional Science Fair, has won numerous science awards previously and plans a career in aeronautical engineering.

Jill Sunday, 17, won in the Capital Area Science Fair, Harrisburg, Pa., with her study of the effects of plant residues on germination and root growth of certain field crops. While most farmers believe crop stubbles invariably enrich the soil when plowed under, Jill found in her experimenting that soybean residues affect corn seeds beneficially, while corn residues affect other seeds adversely.

Bruce Gaddis, 16, winner in the Tulsa City-County Science Fair, Tulsa, Okla., studied the effects of detergents on plant and animal development. By determining the extent of detergent pollution in streams, Bruce compared the amount of pollution to the growth rate of plants and animals affected by the streams. He determined that an increase in detergent concentration caused a decrease in the growth rate of the plants and animals dependent on the polluted water.

Biological Clocks is the title of a project shown by Jaradine Wirkus, finalist from the Northeastern Idaho Science Fair, Rexburg. She learned that cycles of beans, fruit flies and flying squirrels are so closely related that they respond almost exactly to similar stimuli.

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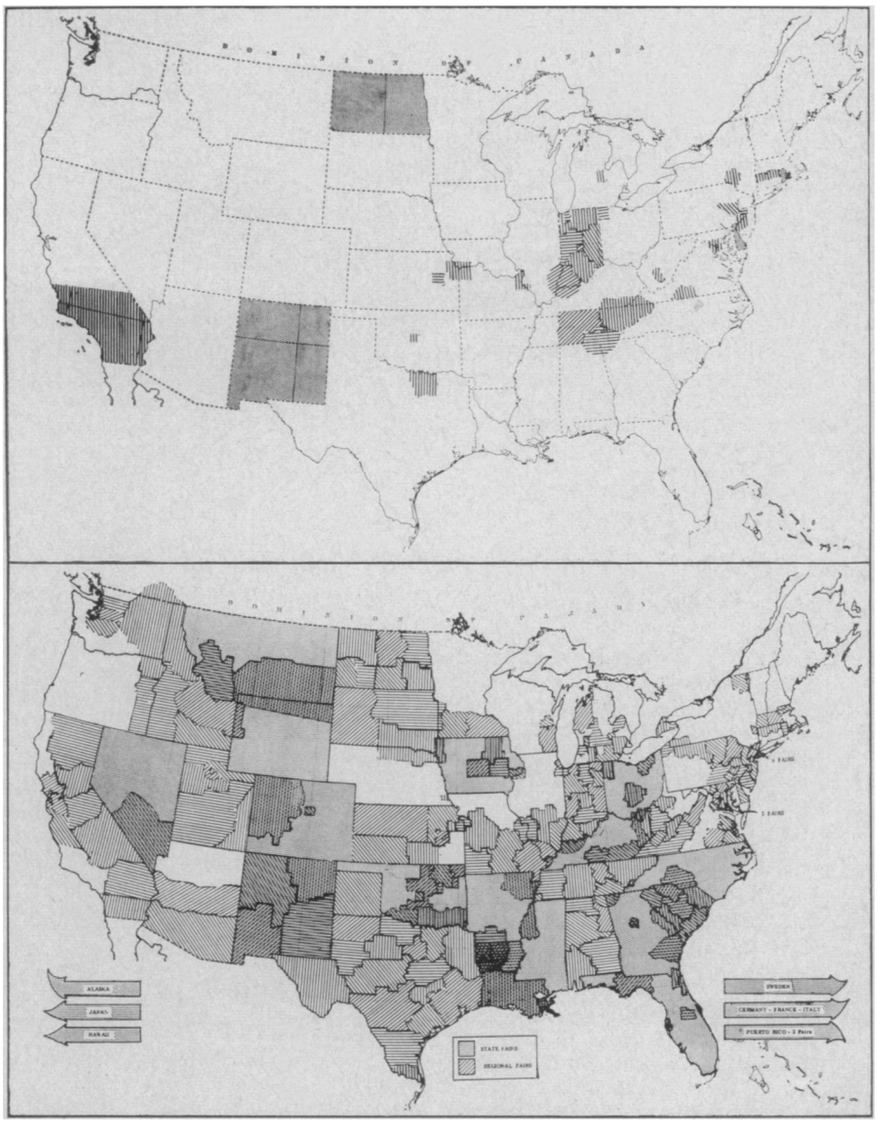

NSF-I GROWTH—The maps showing the distribution of science fairs affiliated with National Science Fair-International in 1953 (upper) and 1963 portray the dramatic growth of the science fair program in the last decade.