GENERAL SCIENCE

Science Fair Winners

Competitors from four states are judged top winners in National Science Fair at Washington. Showed molds from soil, life cycle of fish and gaseous discharge unit.

➤ TWO BOYS and two girls, from San Marino, Calif., Denton, Texas, Martinsville, Va., and Allentown, Pa., were judged first place winners in the Third National Science Fair at the Smithsonian Institution in Washington.

They are: Gretchen Koosmann, 16, South Pasadena-San Marino High School junior, first place girl in the biological sciences section; Elton Stubblefield, 16, junior at Denton Senior High School, first place boy in the biological sciences; Doris Jean Hermes, 16, sophomore at Martinsville High School, first place girl in the physical sciences; and Raymon P. Oberly, 17, senior at Parkland High School at Allentown, first place boy in the physical sciences.

Each wins $125 in scientific equipment and books of his own choosing. They earned the right to compete in the National Science Fair by becoming finalists in local fairs. The national event is sponsored by SCIENCE SERVICE with local newspapers and science educators from all over the nation cooperating.

Miss Koosmann was one of the 42 finalists from local science fairs to attend the national event. The exhibit that won her first place grew out of her curiosity to learn what molds existed in her own back yard. It consisted of displays of the various mold cultures she had grown from soil. Her trip was sponsored by the Los Angeles Times.

All Fair participants were asked to "make a wish" as to the kind of prizes they wanted if they won. Miss Koosmann wished for a microscope and slide-making equipment.

Mr. Stubblefield has served as a laboratory assistant in a research nutrition laboratory at Texas State College for Women in Denton. His exhibit, on the life of the Three-Spot Gourami, was designed to show the life cycle of that tropical fish as seen through a microscope with polarized light. He wished for a microscope as a prize. Mr. Stubblefield was sponsored by The Fort Worth Press.

Miss Hermes, who has competed in horse shows and races, owns three horses of her own that she and her father trained. She has been active in previous science fairs, having won first place while a freshman. The exhibit which won her first girl's prize in the physical sciences showed an original process for printing patterns on acetate and viscose rayon. Her trip to Washington was sponsored by the Martinsville Bulletin, and she wanted as her prize an 8 mm. movie camera.

Mr. Oberly previously won an Honorable Mention in the 11th Annual Science Talent Search in 1952, and has been active in science fairs for some time. He was sponsored by the Call-Chronicle Newspapers, and exhibited a gaseous-discharge unit. He has been accepted at Carnegie Institute of Technology where he will study physics. He will be awarded a build-it-yourself oscilloscope kit, a tube tester kit, a radio frequency signal generator kit, an electromagnetic spectrum chart, a soldering iron and a book on atomic energy.

Four second prize winners will receive $75 worth of scientific equipment and books of their own choosing. They are:

Betty Lee Eckler, 16, a sophomore at St. Charles High School, St. Charles, Mo. Her trip to Washington was sponsored by the St. Louis Post-Dispatch and she will receive prism binoculars and a dissecting set.

Henry H. Eichelberger, 16, a sophomore at Christchurch School, Christchurch, Va., was sponsored by the Daily Press, Newport News, Va. He demonstrated his work on the fleas, ticks and mites that infest the white-footed mouse. He wished for a camera and a developing tank.

Roseann Marie Baselice, a junior at Hallahan Catholic Girls' High School in Philadelphia, sponsored by the Philadelphia Inquirer. She is active in her church theatrical group, and studies singing and accordian. She belongs to the Science Club, affiliated with Science Clubs of America. She exhibited a collection of home-made weather instruments. She requested equipment for her school laboratory if she won.

Edmund Arthur Richards, 17, is a junior at Belleville (Ill.) Township High School. His trip to Washington was sponsored by the St. Louis Post-Dispatch. He spends his summers traveling and working at boy scout camps. He placed first last year in the physical science competition of the National Science Fair held in St. Louis, Mo. He exhibited a display on uranium fission and isotope production. He plans to study nuclear physics at Washington University in St. Louis. He will be given a ¼ horsepower metal lathe and associated equipment.

Third place winners, entitled to $50 in equipment and books each, are:

Henry O. Imus, Jr., 17, Glendale, Calif., who exhibited an arrangement for showing a bean plant growing by time-lapse movies, and who was sponsored by the Los Angeles Times.

(Turn to Page 310)

FAIR FINALISTS—The finalists at the National Science Fair in Washington were guests at a guided tour of the National Bureau of Standards. They saw the U. S. standards of length and mass against which secondary standards are calibrated, including the recently developed method of using a mercury 198 light source as a standard. Among other laboratories visited were those showing the atomic clock, the betatron and SEAC, the Bureau's electronic computer.

Science Fair Winners

(Continued from Page 307)

Dan Edward Sharknas, 15, Gage Park High School in Chicago, Ill., exhibited sources of electricity and was sponsored by the Chicago High School Physics Teachers Association.

Robert H. Higgins, 17, Nelson W. Aldrich High School at Warwick, R. I., exhibited a temperature diagram of lead-tin alloys. He was sponsored by The Providence Journal-Bulletin.

Melicent K. Rupp, 17, Western High School, Washington, D. C., exhibited a model of a mathematical figure called an "icosahedron," and was sponsored by The Washington Daily News.

Robert R. Coons, 16, Gage Park High School in Chicago, tied for third place with his exhibit on electricity sources. He was sponsored by the Chicago High School Physics Teachers Association.

Don Davis, 18, Capitol Hill Senior High School in Oklahoma City, Okla., also tied for third place with an exhibit on zoology, with emphasis on entomology. The exhibit showed eight snake species common to Oklahoma City, a mounted cat skeleton and some insects. He was sponsored by the Oklahoma City Times.

Fourth place winners of $15 in SCIENCE SERVICE materials, and sponsoring papers, are:

Alesandra M. Schmidt, 16, Rockville (Conn.) High School, and Joseph R. Terranova, 17, Farmington High School, Unionville, Conn., both sponsored by The Hartford Times. James Brent, 21, Phelps Vocational High School, Washington, D. C., Mary Jeanne Kreek, 15, and Joel Shappirio, 17, of Woodrow Wilson High School, Washington, all sponsored by The Washington Daily News. William Eykamp, 15, Benjamin Bosse High School, Evansville, Ind., The Evansville Press. Murray Joe Casey, 15, Wayne Huffman, 18, and Areta Tonkinson, 16, all of the Chanute (Kans.) Senior High School, sponsored by The Chanute Tribune. Arvey I. Andrews, 17, Sumner High School, Kansas City, Kans.; Jerry Clack, 16, and Russell D. Etzenhouser, III, 17, both of William Chrisman High School, Independence, Mo., and John W. Nebgen, 16, Northeast High School, Kansas City, Mo., all sponsored by The Kansas City Star. William D. Carragan, 14, Troy (N. Y.) High School, The Knickerbocker News. Joseph E. Dolfini, 15, Middletown (N. Y.) High School, and Alice Louise Shaffer, 15, Union Endicott (N. Y.) High School, both sponsored by The Oneonta Star. Mavis L. Johnson, 17, Central High School, Devils Lake, N. D., and Charles A. Ordahl, 17, Grafton Central High School, Grafton, N. D., both by The Grand Forks Herald. Robert M. Herman, 17, Napoleon (Ohio) High School, and Annabelle Stuckey, 16, Archbold (Ohio) High School, The Archbold Buckeye. Jean Ireton, 18, Classen High School, Oklahoma City, sponsored by the Oklahoma City Times. Jessica Heimbach, 17, Quakertown High School, the Call-Chronicle Newspapers. William Alwine, Jr., 16, Audubon (N. J.) High School; Howard A. Link, 17, Friends Select School, Philadelphia, and Janice McLaughlin, 15, John W. Hallahan Catholic Girls' High School, all sponsored by The Philadelphia Inquirer. Mary J. O'Rourke, 17, West Warwick High School, The Providence (R. I.) Journal-Bulletin. Carolyn Evans, 16, Martinsville (Va.) High School, Martinsville Bulletin. Webster R. Hughes, 17, Mathews (Va.) High School, The (Newport News) Daily Press.

Science News Letter, May 17, 1952

MEDICINE

Blood Flow Unharmed by Getting Little Drunk Fast

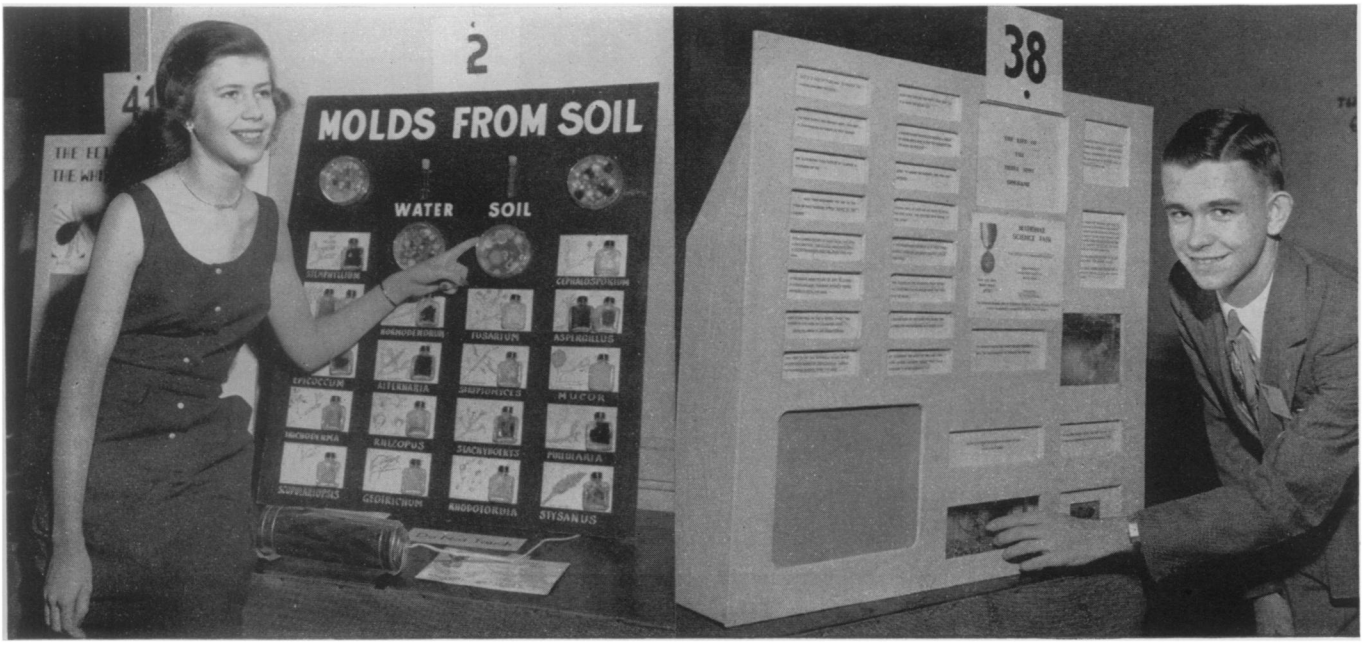
➤ GETTING A little drunk quickly has little effect on the circulation of blood through the brain or on the brain's vital chemical processes. But the brain's chemical activities are usually markedly depressed and its blood vessels dilated in severe alcoholic intoxication.

Repeated episodes of such depression of the brain's chemical processes, however, may play a part in bringing on the mental changes that come after a time in chronic alcoholism.

Studies showing this were reported by Drs. Louis L. Battey, Albert Heyman and John L. Patterson, Jr., of Emory University School of Medicine, Atlanta, Ga., at the meeting of the American Federation for Clinical Research in Atlantic City.

Science News Letter, May 17, 1952

BIOLOGISTS — On the left is Gretchen Koosmann of San Marino, Calif., with the molds she grew from soil in her backyard. Right, Elton Stubblefield, of Denton, Texas, showing the life cycle of the Three-Spot Gourami. These, with the two shown on the facing page, won top honors at the National Science Fair in Washington.



PHYSICISTS—Doris Jean Hermes, left, demonstrating a new method of printing on acetate and viscose rayon. Raymon P. Oberly, right, is presenting his gaseous discharge unit.

BIOCHEMISTRY

Red Color Test Spots Cancer Involved Chemical

➤ A RED COLOR method of measuring a compound believed involved in cancer has been devised by Dr. H. S. Bennett of the University of Washington, Seattle, working under a grant from the American Cancer Society.

The compound is called sulfhydryl and consists of an atom of hydrogen with an atom of sulfur. It appears to be the compound which turns on and off enzyme systems essential to the life and growth of cells, both normal and cancerous. It may do this by forming bonds which tighten or relax components of the protein molecule or which bind the protein molecule to other chemicals which make it function.

Some scientists elsewhere have tentatively concluded that patients with cancer and some other diseases have more sulfhydryl in their blood than healthy persons.

To measure accurately the concentrations of sulfhydryls in specimens of blood and other tissues, Dr. Bennett adds a red mercury compound to protein. This stains the sulfhydryl groups red so that under the microscope they "stand out like flags at Stalin's birthday party," as one observer puts it.

Muscles showed between six and seven times as much sulfhydryl as did blood proteins when the groups were counted by Dr. Bennett's colorimetric tests.

Science News Letter, May 17, 1952

GENERAL SCIENCE

Scientist Shortage Pinch

➤ ARMED FORCES procurement agencies and the large corporations which are expected to produce the weapons are now definitely feeling the pinch of the shortage of scientific, engineering and technical manpower.

The shortage, which almost certainly will soon be evidenced in slower production, is graphically illustrated by two examples: One large company, 95% of its work being for the Armed Forces, tried to hire 700 scientists and engineers from this spring's crop of graduates. So far they have commitments from only 72 seniors. The dean of engineering of one school, with 116 engineering graduates coming up, reported that 220 firms actually sent representatives to his campus to recruit graduates. That is about one-half a graduate per firm.

"Even though salary offers in industry are approximately $50 per month higher than a year ago," said Dr. M. H. Trytten, director of the Office of Scientific Manpower of the National Research Council, "many of these young men are considering offers of direct commissions in the Armed Forces.

"This is causing real concern in those divisions of the military establishment which must contract for equipment and for its installation," he went on.

On top of this, the number of engineering graduates this year will be considerably below that of 1951, which in turn was far short of the number of jobs waiting to be filled. Similar shortages in the number of graduating scientists and technicians exist.

Draft calls are expected to go up after July 1, when the rate at which men are discharged will sharply increase. This will add to the problems of industries producing materiel for the Armed Forces.

Dr. Trytten hopes that this combination of circumstances will "secure concerted action regarding the establishment of a consistent national policy for the proper utilization of technically qualified personnel."

In the past, he has advocated the establishment of a national scientific personnel board which could direct such personnel to where they are most needed—to the Armed Forces, to industry or to the colleges and universities.

Science News Letter, May 17, 1952

MEDICINE

Radiation Blood Damage Spares Transfused Cells

➤ THE MECHANISM that destroys red blood cells and causes anemia following exposure to irradiation, from atom bombs or X-rays, is selective.

It acts to destroy cells in the body at the time of the irradiation but does not act against normal red cells introduced by transfusion after the irradiation.

A technique of telling the difference between the normal, transfused cells and the original cells in the blood by how they clump together showed this difference in the cell-destroying mechanism, Drs. Scott N. Swisher and Frank W. Furth of the University of Rochester School of Medicine and Dentistry reported to the American Federation for Clinical Research meeting in Atlantic City.

Science News Letter, May 17, 1952