

GENERAL SCIENCE

Top Science Scholarships

Surveyor of shellfish life off Eastern coast, Dwight W. Taylor, received \$2,800 award. Mathematician, Caroline S. Littlejohn, won the \$2,000 scholarship.

See Front Cover

► A CALIFORNIA high school boy who discovered more than 70 types of shellfish new to Nantucket Island, off the coast of Massachusetts, is the nation's top young scientist of 1949.

He is Dwight W. Taylor, 17, of Altadena, Calif., a senior at Webb School, Claremont, Calif. A Westinghouse Grand Science Scholarship of \$2,800 was awarded the youth at the climax of the five-day Science Talent Institute in Washington for winners of the Eighth Annual Science Talent Search.

Runner-up, and winner of a \$2,000 scholarship, is Caroline S. Littlejohn, 16, of Classen Senior High School in Oklahoma City. The two top scholarship winners are shown on this week's cover of the SCIENCE NEWS LETTER.

Eight participants received scholarship awards of \$400 each, and 30 were given \$100 scholarships. All winners will enter approved colleges and universities of their own choice next fall. The Science Talent Search for the Westinghouse Science Scholarships is conducted each year by Science Clubs of America, administered by Science Service.

Mr. Taylor made his choice of a life career very early, as scientists often do; he intends to be a paleontologist, or researcher into the story of ancient life on the earth. He has already made a promising beginning, for he has studied both living and fossil shellfish in several widely separated places.

His special study was made during three summers on the island of Nantucket and in surrounding waters down to a depth of 90 feet. He collected and classified all snails, clams, oysters and related species, studying them with special reference to their ecology, or environmental relations. Up to the time he began his work, only 46 molluscan species were known from Nantucket; he increased the list to 120. He is already a member of the "grown-up" scientific society specializing on mollusks, the American Malacological Union.

Despite the advanced study which he has been able to carry on as a 'teen-ager,

Mr. Taylor is neither a bookworm nor a single-tracker. He likes sports, especially tennis and badminton, is a member of the staffs of both his school paper and annual, and collects stamps as well as shells. He plans to attend the University of Michigan.

Miss Littlejohn looks forward to a career as a theoretical physicist, where she can make use of her already highly developed mathematical talents. In the essay which she submitted as part of the requirements of the Science Talent Search, she posed an unsolved problem in the theory of relativity, having to do with the "clumped" distribution of matter in space. On her own, she studied differential and integral calculus outside of school, to enable herself to make

more rapid progress in physics and physical chemistry.

Despite this intensive interest in mathematics and physics, Miss Littlejohn has found time for independent studies in the outdoor sciences. She has collected plants and insects, made field studies of birds, and carried out projects of her own on the comparative anatomy of mammals, birds, reptiles and fish.

First among the winners of the \$400 scholarships, and named alternate to receive the \$2,000 scholarship if the winner is unable to use it, is Pierre E. Conner, Jr., 16, of Cathedral High School, Lafayette, La. His ambition is for a career in medical research. The study he conducted in connection with his participation in the Science Talent Search, however, was in physics. He experimented with a Hilsch tube, a recently invented, paradoxical contrivance that blows hot air out of one end and cold air out of the other. He suggests that a practical use of this principle might be to supply cool air for airplane cabin ventilations, and at the same time produce heated air for de-icing the wings.

Science News Letter, March 19, 1949

GENERAL SCIENCE

Winners of Scholarships

GRAND SCHOLARSHIP OF \$2,800

Taylor, Dwight Willard, Claremont, Calif.

\$2,000 SCHOLARSHIP AND ALTERNATE

Littlejohn, Caroline Stuart, Oklahoma City, Okla.

ALTERNATE

Conner, Pierre Euclide, Jr., Lafayette, La.

SCHOLARSHIPS OF \$400

Barr, Thomas Calhoun, Jr., Nashville, Tenn.
Conner, Pierre Euclide, Jr., Lafayette, La.
Kimball, John Ward, Andover, Mass.
Landau, Henry Jacob, New York, N. Y.
Martin, Thomas Francis, Cleveland, Ohio
Reinhardt, Nicholas, Terrace Park, Ohio
Shugart, Howard Alan, Glendale, Calif.
Victor, Ursula Vivian, Forest Hills, N. Y.

ALTERNATES

1st alt. Goldman, Alan Joseph, Brooklyn, N. Y.
2nd alt. Bauman, Norman, Brooklyn, N. Y.

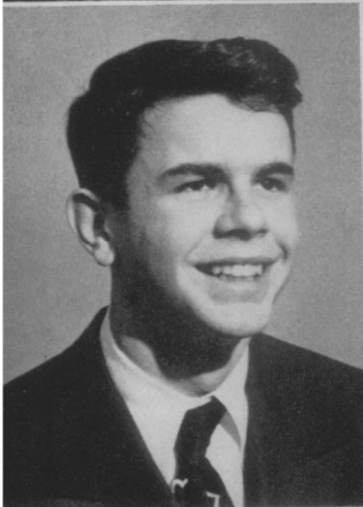
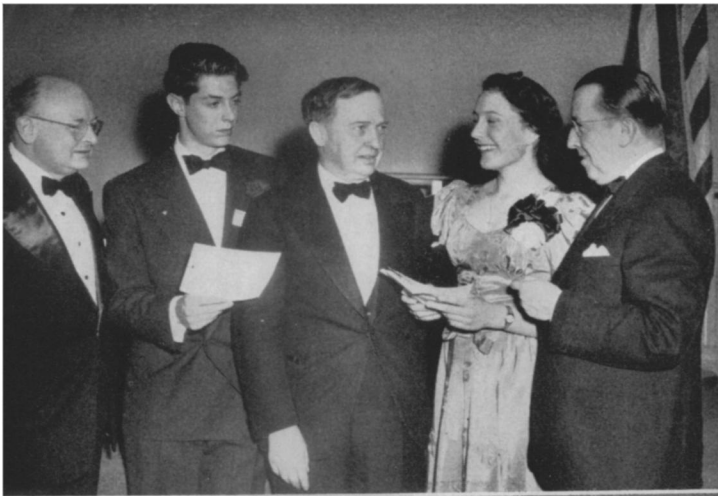
SCHOLARSHIPS OF \$100

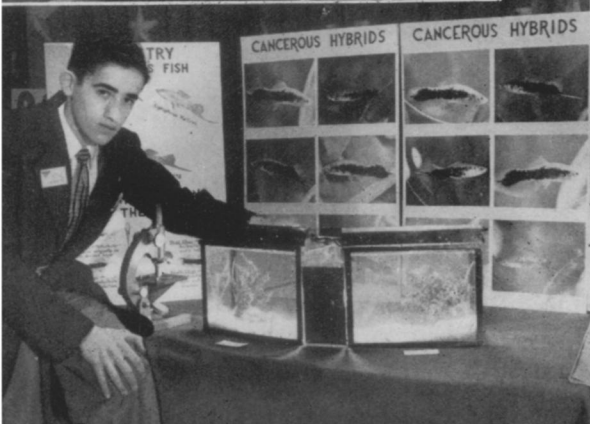
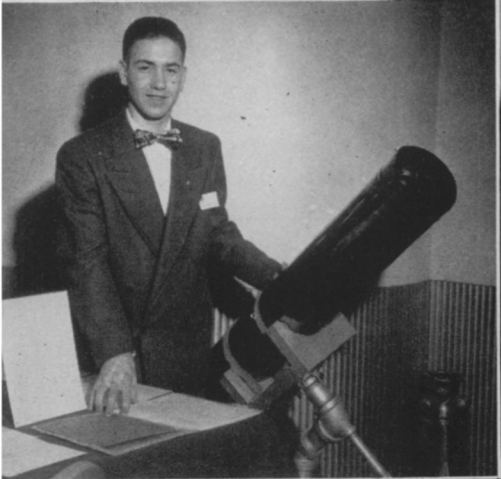
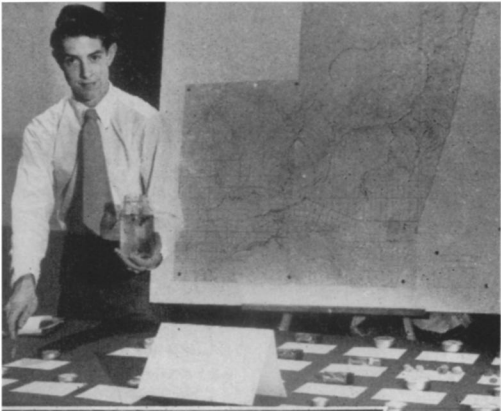
Bohrer, Vorsila Laurene, Arlington Heights, Ill.
Harmon, Margaretta Vanya, Philadelphia, Pa.
Jaburg, Erika Elizabeth, New York, N. Y.

Johnson, Laveta Audrey, Oak Park, Ill.
Oels, Helen Claire, Philadelphia, Pa.
Wagman, Anne, Forest Hills, N. Y.
Zalutsky, Rosalyn Edith, Schenectady, N. Y.
Anigstein, Robert, Galveston, Texas
Bach, Michael Klaus, Forest Hills, N. Y.
Bauman, Norman, Brooklyn, N. Y.
Blattner, Robert James, Shorewood, Wis.
Boldt, Elihu Aaron, New Brunswick, N. J.
Bray, Richard Arthur, Eugene, Ore.
Brett, Jack Samuel, New York, N. Y.
Brilliant, Martin Barry, New York, N. Y.
Clough, Garrett Conde, Newburgh, N. Y.
Dell, Fritz, Galena, Ohio
George, Myron Don, Topeka, Kans.
Gilbert, Walter, Washington, D. C.
Goldman, Alan Joseph, Brooklyn, N. Y.
Kaufman, John David, Grinnell, Iowa
Kriegsman, William Edwin, Scarsdale, N. Y.
Merz, Edwin Henry, Jr., St. Louis, Mo.
Nelson, Roger Hugh, Mt. Pleasant, Utah
Plantz, Charles Arthur, Pittsburgh, Pa.
Shiman, Paul Leonard, Millburn, N. J.
Stout, George Hubert, St. Louis, Mo.
Thorp, Edward Oakley, Lomita, Calif.
Wernitz, Carl Weber, Washington, D. C.
Winston, Herbert, Forest Hills, N. Y.

Science News Letter, March 19, 1949

TOP EIGHT—Left to right: The top winners are congratulated by Watson Davis, Harlow Shapley, and Basil O'Connor. The group is shown the 60-inch cyclotron of the Department of Terrestrial Magnetism, Carnegie Institution of Washington, by Dr. Richard Roberts. Dr. Hazel K. Stiebeling, U.S.D.A., talking to some of the winners. Device for showing the strain patterns in plastic models was demonstrated by Dr. Richard C. Hitchcock of Westinghouse Electric Corp. Alternate to the \$2,000 scholarship, Pierre E. Conner, Jr. Winners of \$400 scholarships are: Pierre E. Conner, Jr., Thomas C. Barr, Jr., John W. Kimball, Henry J. Landau, Thomas F. Martin, Nicholas Reinhardt, Howard A. Shugart, and Ursula V. Victor.





NUTRITION

Eat Well for Long Life

► FORTY high school seniors getting set for careers in science were reminded that they had better drink plenty of milk and eat lots of green and yellow vegetables and fruits containing vitamin C.

The 40 boys and girls are the winners in the eighth annual Science Talent Search conducted by Science Clubs of America for Westinghouse Science Scholarships. The good diet reminder came from Dr. Hazel K. Stiebeling, chief of the Bureau of Human Nutrition and Home Economics, U. S. Department of Agriculture.

With another four to seven years of study ahead, the scientifically talented boys and girls will have passed a third of an average life span before they begin their professional careers, Dr. Stiebeling pointed out. Their highest opportunities may not come until they are 40 or 50 years old.

Best hope for gaining extra years for achievement at that prime period of life

lies in following what is now known about nutrition, she suggested.

Rats have been given much more than a 10% increase in the prime of life by a diet containing two to four times the amount of calcium, vitamin A and riboflavin considered "adequate," she reported. But, she pointed out, "we haven't yet given the human animal a chance to prove its potentiality."

Scientists today know that the human diet must supply some 40 chemical substances in order to have proper functioning of the body. These include eight to 10 amino acids and 12 or more vitamins as well as inorganic salts of various minerals. But just how many nourishing materials are needed and in what amounts and proportions are not yet known. The 40 Science Talent Search winners, she suggested, may help to solve some of these and the other unsolved problems of nutrition.

Science News Letter, March 19, 1949

orous water plant; Thomas Barr, Jr., study of caves, cave animals and plants; Carl Werntz, reflector telescope; Margaretta Harmon, home-built Wimshurst electrostatic generator; Nicholas Reinhardt, homemade apparatus for analyzing motions of rotating or vibrating objects; Herbert Winston, tumor in hybrid tropical fish; Henry Landau, graphs to illustrate integrals; Roger Nelson, three color separation camera and photographic process.

SCIENCE NEWS LETTER

VOL. 55 MARCH 19, 1949 No. 12

52,800 copies of this issue printed

The Weekly Summary of Current Science, published every Saturday by SCIENCE SERVICE, Inc., 1719 N St., N. W., Washington 6, D. C., NORTH 2255. Edited by WATSON DAVIS.

Subscription rates: 1 yr., \$5.50; 2 yrs., \$10.00; 3 yrs., \$14.50; single copy, 15 cents, more than six months old, 25 cents. No charge for foreign postage.

Change of address: Three weeks notice is required. When ordering a change, please state exactly how magazine is now addressed. Your new address should include postal zone number if you have one.

Copyright, 1949, by Science Service, Inc. Reproduction of any portion of SCIENCE NEWS LETTER is strictly prohibited. Newspapers, magazines and other publications are invited to avail themselves of the numerous syndicate services issued by Science Service. Science Service also publishes CHEMISTRY (monthly) and THINGS of Science (monthly).

Printed in U. S. A. Entered as second class matter at the post office at Washington, D. C. under the act of March 3, 1879. Established in mimeographed form March 18, 1922. Title registered as trademark, U. S. and Canadian Patent Offices. Indexed in Readers' Guide to Periodical Literature, Abridged Guide, and the Engineering Index.

Member Audit Bureau of Circulation. Advertising Representatives: Howland and Howland, Inc., 393 7th Ave., N.Y.C., Pennsylvania 6-5566 and 360 N. Michigan Ave., Chicago, STAt 4439.

SCIENCE SERVICE

The Institution for the Popularization of Science organized 1921 as a non-profit corporation.

Board of Trustees—Nominated by the American Association for the Advancement of Science: Edwin G. Conklin, Princeton University; Karl Lark-Horowitz, Purdue University; Kirtley F. Mather, Harvard University. Nominated by the National Academy of Sciences: Harlow Shapley, Harvard College Observatory; Warren H. Lewis, Wistar Institute; R. A. Millikan, California Institute of Technology. Nominated by the National Research Council: Hugh S. Taylor, Princeton University; Ross G. Harrison, Yale University; Alexander Wetmore, Secretary, Smithsonian Institution. Nominated by the Journalistic Profession: A. H. Kirchofer, Buffalo Evening News; Neil H. Swanson, Baltimore Sun Papers; O. W. Riegel, Washington and Lee School of Journalism. Nominated by the E. W. Scripps Estate; H. L. Smithton, E. W. Scripps Trust; Frank R. Ford, Evansville Press; Charles E. Scripps, Scripps Howard Newspapers.

Officers—President: Harlow Shapley, Vice President and chairman of Executive Committee: Alexander Wetmore, Treasurer: O. W. Riegel, Secretary: Watson Davis.

Staff—Director: Watson Davis. Writers: Frank Thone, Jane Stafford, A. C. Monahan, Marjorie Van de Water, Martha G. Morrow, Ron Ross, Lydia Schweiger. Science Clubs of America: Joseph H. Kraus, Margaret E. Patterson. Photography: Fremont Davis. Sales and Advertising: Hallie Jenkins. Production: Priscilla Howe. In London: J. G. Feinberg.

Letters To The Editor

Market for Fish Meal

► THE greatest market for fish meal, at the present time, including menhaden meal, (SNL, Feb. 26, p. 131) is in the animal and poultry feeding industry. We have never been able to obtain statistics indicating the relative proportion entering the fertilizer and animal feeding industries.—A. W. Anderson, Chief, Branch of Commercial Fisheries, Washington, D. C.

In Elephants' Defense

Referring to your article "Elephants Suspected of Spreading Tuberculosis", SNL, Jan. 22, p. 56, I would say the reverse to

be true. From the stated facts it would seem that some dirty, stinking human must have coughed in the poor pachyderm's face.

—Walter L. Hall, bacteriology instructor, John Muir College, Pasadena, Calif.

Science News Letter, March 19, 1949

HOBBIES BRING HONORS—

Read left to right: Dwight Taylor shows distribution of water mollusks; Caroline Littlejohn, representative Okla. insects; Richard Bray, minerals; Edwin Merz, Jr., influence of two compounds on evaporation of water; Ursula Victor, zoophagy in a carniv-

Question Box

AERONAUTICS

What kind of conditions will be studied in the new type wind tunnel? p. 183.

GENERAL SCIENCE

What are the new advances that have been made in the study of blood? p. 186.

MEDICINE

Why is urethane-containing cough medicine dangerous? p. 182.

Photographs: Cover, p. 178, p. 181, Fremont Davis; p. 183, University of California.

ORNITHOLOGY

What is the utilitarian reason that makes birds sing? p. 190.

PHYSICS

Why is there no need to worry about the Soviet's progress with death rays? p. 184.

RADIO

What is a diplexer network and what does it do? p. 185.

WILDLIFE

Why is an increase in coyotes and buzzards feared? p. 190.