

GENERAL SCIENCE

# Talent Search Has 25th Year

**Survey of Science Talent Search winners shows all go to college while 90% get advanced degrees. Most teach, do research or serve the Government.**

## See Front Cover

► THE PIONEERING SEARCH for science talent has reached its 25th anniversary with an extraordinary record of ability to pick those successful in scientific research.

A survey of the Science Talent Search winners shows 100% of the 960 who have won top honors in the first 24 years have attended or are attending college. Only 5% of the high school graduates of the nation usually go on to graduate study. Contrasted with this is the fact that approximately 90% of these young national Science Talent Search winners go on to graduate degrees of PhD, MD, etc.

About 40% of the Science Talent Search winners are employed in education, primarily as college professors. Nearly a quarter are employed by industry, often as research scientists. Eight percent serve the Government, mostly in science capacities. A few, 2.6%, are self-employed, in most cases as practicing physicians. Those who have forsaken scientific employment are mostly the female winners who, over the years, have won about a quarter of the honors. Women who have temporarily given up a scientific career in order to become wives and mothers represent 10.3%.

There are at least five couples who met at the Science Talent Institute and subsequently married.

## Technique Used as Model

The technique of selection of the STS winners, developed and refined by the Science Talent Search, has been widely used as a model for other scholarship projects. The Science Talent Search developed by SCIENCE SERVICE and financed by the Westinghouse Educational Foundation, was the first nationwide attempt to select from among the seniors of secondary schools those whose scientific skill, talent and ability indicate potential creative originality. No other science test has been so widely used, not only to select the Science Talent Search honors and winners, but also for preliminary qualifications of all sorts of other contests in schools, areas, regions and states.

While nearly half a million dollars has been earned by the Science Talent Search winners of the past in Westinghouse Scholarships and Awards, more than five million dollars in financial aid have been added to this by colleges and other groups as a result of the participation of the winner in the Science Talent Search. In addition, one of the great values of being one of the approximately 300 honorable mentions awarded each year is the weight

that colleges give to such success in admitting students—a valuable prize in these days of intense competition for going to college.

Of all winners beyond the graduate-school age level, 94.4% are married, and they have, on the average, 1.65 children. Boys slightly predominate among the winners' offspring.

All but about 1% of Science Talent Search winners choose some branch of science as their major field of study and continue in science and engineering as a career. Their interests are about equally divided between the physical sciences, such as physics and chemistry, and the biological sciences and medicine. In recent years, they have shown increased participation in the fields of mathematics, biochemistry and biophysics. Their peak scientific productivity, as measured by their technical publications, is among the 1945 through 1948 winners, who now are about 38 to 41 years of age.

Of the 1,000 winners, 767 are men and 233 are women. They have come from 48 states and the District of Columbia. New

York has produced the most winners, a total of 310. Illinois has had 75; California, 68; New Jersey, 48; Pennsylvania, 47; Ohio, 43, Massachusetts, 37, and Wisconsin, 31.

Figures developed are based on a return of 82.1% of the 960 winners of past years.

Harvard University is the most popular educational institution at which Science Talent Search winners earn the PhD degree. Eighteen percent of the doctorates reported were granted there. Next in popularity by a slight margin is Massachusetts Institute of Technology, and tied for third place are California Institute of Technology, Princeton University and the University of California at Berkeley. The universities of Columbia, Chicago and Yale, and then Wisconsin follow in that order. The most popular medical schools are Columbia, Harvard and Yale. Science Talent Search winners reported earning their doctorates at 67 different universities in the United States and abroad.

Harvard, California (Berkeley), MIT, Stanford and Princeton lead the 56 universities in which Science Talent Search winners are currently enrolled for advanced degrees. The most widely attended undergraduate schools are Harvard, MIT, Columbia, Princeton and Stanford. Radcliffe College is the most popular institution attended by women winners.

Phi Beta Kappa keys belong to 22%, and



Fremont Davis

**FIRST TOP WINNERS**—After the two top scholarships for the first Science Talent Search were announced on a hot summer night in the war year of 1942, the boy and girl winners joyfully ask the director of Science Service for autographs. Left to right: Paul E. Teschan, Watson Davis and Marina Prajmovsky.

26.3% have been elected to the honorary scientific research society, Sigma Xi.

The average winner beyond graduate school belongs to 1.6 professional societies, has produced 5.5 technical papers and one out of 14 has written a book.

As has been the case for the past 25 years, the nation's 40 most outstanding high school scientists have been selected from the graduating classes of the public, parochial and private schools through the annual Science Talent Search. The 40 winners will attend the Science Talent Institute to be held in Washington March 2 through 7 where they will be further judged for \$34,250 in Westinghouse Science Scholarships and Awards.

### Top Winners Speakers

This year's silver anniversary group will be addressed by the two top winners of the first Search of 1942 at the concluding awards banquet March 7 in Washington. Both top winners of the first Search have enjoyed considerable success.

Marina Prajmovsky of Farmingdale, N.Y., now is Mrs. John Meyers of Glen Cove, N.Y. Mrs. Meyers earned her MD from Yale Medical School in 1950, and is a practicing ophthalmologist. Her husband was a Yale classmate, and also is an MD specializing in allergies.

The 11 girls in this year's group of winners will be interested in learning how Mrs. Meyers has successfully combined a career in medicine with being a wife and mother. The Meyers have a five-year-old daughter.

Lt. Col. Paul E. Teschan, seen on this week's front cover, was top boy of 25 years ago. He also has made his mark through a medical career. Dr. Teschan is a kidney specialist of considerable renown, with a long listing of published articles resulting from his prolific research. In the Army's Medical Corps, Dr. Teschan now is stationed at the Walter Reed Army Institute of Research in Washington, D.C., where he is deputy director of the division of surgery and also chief of the department of surgical physiology. He has served overseas. He, too, is married to an MD, and they have two sons.

### Highly Respected Astronomer

Another STS winner, Class of '46, is Elizabeth Roemer, who is now a highly respected astronomer at the Flagstaff (Ariz.) station of the U.S. Naval Observatory. Miss Roemer, acting director of the station, specializes in comets, especially small, indistinct ones.

Col. Teschan, Dr. Roemer and Dr. Meyers are but a representative sample of 24 years of STS "graduates" whose success in the areas of their endeavor reflects the same ambition and dedication that singled them out as the STS winners of yesterday.

A random sampling of STS "graduates" reflects their scholarship, their human knowledge and the academic honors heaped upon them.

Dr. Donald B. McCormick, Class of '50,

is now an associate professor of biochemistry and molecular biology, Graduate School of Nutrition, Cornell University. The father of three children, he has published articles in more than 50 major journals in the area of biochemistry and has made significant contributions in the advanced area of coenzyme-enzymology.

### Nuclear Physicist

Representative of the Class of '53 is Dr. Virgil E. Barnes Jr., assistant physicist, Brookhaven National Laboratory. He participated in the discovery of new nuclear resonances and particles. One of the top winners from the Class of '42 is Dr. Mary Ann Williams, an associate professor of nutrition, University of California. Miss Williams was a Guggenheim fellow and has published 32 papers in the area of her interest. Another woman winner, Class of '43, is Dr. Constance Sawyer Warwick, an astronomer at the National Bureau of Standards, Boulder, Colo., where she directs research in sun-earth relations and has published 28 papers in that field.

Dr. Eberhardt Reichtin, also from the Class of '43, is assistant director of the Jet Propulsion Laboratory, California Institute of Technology. He conceived the basic principles and developed and managed the NASA deep space network, permitting the exploration of the moon and the planets by unmanned spacecraft radioing information to earth and being tracked and guided to destination by deep space network.

### Professor of Physics

A professor of physics at the University of California is Dr. Michael Tinkham, Class of '45, who has published 56 scientific papers. His work has helped make clear the implications of the energy gap in superconductors, demonstrated the existence of far-infrared magnetic resonances in magnetic materials, and pointed the way for other far-infrared studies on solids. An archaeologist from the Class of '46 is Mrs. Joan Lines Oates, who received her PhD from Cambridge University in England. She is currently assistant curator, Near East archaeology, Metropolitan Museum. She has published articles on Assyrian and prehistoric Mesopotamian archaeology in Iraq.

An assistant professor of zoology at the University of Kentucky is Dr. Thomas C. Barr, Class of '49. He has contributed to the study of cave biology and the problems of taxonomy and speciation of carabid beetles of the southeastern United States. He has published 34 papers on these subjects. Dr. Andrew S. Kende, Class of '48, is a research associate at Lederle Laboratories, division of American Cyanamid Company. He heads the theoretical organic chemistry section of the organic chemistry research laboratory. He has published 24 scientific papers and has had four patents issued to him.

A top winner in the Class of '45 is Dr. Edward M. Kosower, now professor of chemistry at the State University at Stony Brook, L.I. His research indicates that proteins, life's prime substances, can be

changed in ways to improve medical techniques from cancer treatment and tissue transplants.

In recent years, youthful STS winners, keeping abreast with the diversifying world of science have shown increased participation in the fields of mathematics, biochemistry and biophysics. Of the 40 winners this year, 12 chose mathematics, physics and biological research as their life's work.

One of this search's winners, whose project involved a chemical analysis of vegetable and flower seeds, hopes to follow in the footsteps of her Nobel Prize winning father. Another student unearthed a perplexing riddle from an old Indian burial ground. He discovered Christian crosses in the graves, although the tribe had become extinct about 1550 A.D.—long before the first Caucasian-Christians entered the area. Another conducted a study of the geological formations of the Palisades formation, which outcrops along the west bank of the Hudson River across from New York City. And one of the girls conducted studies on the effects of a plant killer on a yeast.

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### VITAL STATISTICS

## Nonsmokers Given Lower Life Insurance Rates

► IF A PERSON HAS NOT smoked cigarettes for at least a year, some life insurance companies will reduce his life insurance premiums. However, he will have to keep paying until he is 95.

The Life Insurance Institute in New York City told SCIENCE SERVICE that most big companies shy away from such policies, one reason being that there is no way to follow up the policy-holder to be sure he is not cheating. Also, many statisticians cannot agree on whether life expectancy is really reduced by not smoking. There is always an old man of 101 who has smoked all his life.

The leading insurance company to issue non-cigarette-smoker preferred protector policies is the State Mutual Life Assurance Company of America, Worcester, Mass. The company has issued nearly 6,000 policies to nonsmokers in the 21 months during which the policy has been available. The average policy size was \$24,000 in 1965, 36% larger than the company's average for all policies.

The other companies listed by the Life Insurance Institute as issuing policies to those who do not smoke are Executive Life, Beverly Hills, Calif.; Life Insurance Company of Florida, Miami, and Lincoln Liberty Life, Topeka, Kans.

"We are disappointed that more big companies have not gone into this type of policy," an official of State Mutual said.

"We believe that eventually they will issue nonsmokers' policies, especially when we have shown statistically that life expectancy does increase among this special group. The Surgeon General's Smoking and Health Report indicated that this was true, but companies really have had no experience to go on statistically. We happen to have an especially aggressive development staff."

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