

## GENERAL SCIENCE

# Science Talent Search Winners

Forty promising high school scientists have been picked from a field of 2,883 fully qualified entrants as winners of this year's Science Talent Search and will travel to Washington, D.C. in March to participate in the Science Talent Institute.

ARIZ.	Phoenix	Stevenson, John Alfred	17	North Phoenix H.S.	1421 E. Hoover Ave.	85006
CALIF.	San Diego	*Saarni, Elizabeth Strandell	17	Point Loma H.S.	1569 Catalina Blvd.	92107
COLO.	Grand Junction	Larson, Arden Lawrence	17	Central H.S.	571 30¼ Rd.	81501
FLA.	Tallahassee	Gilberg, Andrew Nicholas	17	Leon H.S.	1148 Circle Dr.	32301
GA.	Atlanta	Brogdon, William Gail	17	Cross Keys H.S.	1562 Grant Dr., N.E.	30319
		*Beech, Theo Marilyn	17	Fulton H.S.	2659 Lois Lane, S.E.	30315
ILL.	Chicago	Hoffenberg, Leslie Irwin	16	Mather H.S.	6145 N. Fairfield	60645
	La Grange	Lozar, Robert Carl	17	Lyons Twp. H.S.	702 N. Spring Ave., La Grange Park	60528
IND.	Auburn	Cripe, Jerry Dale	17	Auburn H.S.	108 S. Wilson St.	46706
	Clinton	Nardi, Jim Benjamin	17	Clinton H.S.	R.R. 1, Rosedale	47874
IOWA	Des Moines	Binns, Kevin R.	18	Theodore Roosevelt H.S.	321 Glenview Dr.	50312
KY.	Louisville	Goad, Larry Edward	17	Mayme S. Waggener H.S.	67 West Wind Rd.	40207
LA.	New Orleans	Lee, Robert Emile Jr.	17	St. Augustine H.S.	2234 Upperline St.	70115
	Opelousas	*Donatto, Brenda Marie	17	Holy Ghost H.S.	Rt. 3, Box 380	70570
MD.	Beltsville	Jefferson, David Randolph	17	High Point Sr. H.S.	4922 Prince Georges Ave.	20705
	Bethesda	Levintow, Michael Harvey	16	Walt Whitman H.S.	5604 Vernon Pl.	20034
MASS.	Andover	*Briggs, Sharon Kay	17	Andover H.S.	49 Wildwood Rd.	01810
	Braintree	Vitta, Paul Sears	17	Braintree H.S.	53 Parkside Cir.	02184
	Needham	*Weller, Nancy K.	17	Needham H.S.	56 Winding River Rd.	02192
MINN.	Richfield	Anderson, Floyd Owen	17	Richfield H.S.	7545 Park Ave.	55423
	Roseville	Videen, Tom Otis	17	Alexander Ramsey H.S.	2204 N. Oxford St.	55113
N.J.	Long Branch	Jacobs, Stephen Alan	17	Long Branch H.S.	3 Van Court Ave., Elberon	07741
N.Y.	Amityville	*Silkworth, Mary Lou	18	Amityville H.S.	21 Rochelle Ct.	11701
	Brooklyn	Offenbach, Howard A.	17	Erasmus Hall H.S.	901 Washington Ave.	11225
	Forest Hills	Edelstein, William	17	Midwood H.S.	2303 Ave. D	11226
	Huntington	Klyde, Barry J.	17	Forest Hills H.S.	141-15 72nd Ave., Flushing	11367
	Jamaica	Silverman, David Lee	16	Half Hollow Hills H.S.	4 Bramble Lane, Melville	
	New York	Frank, Richard Alan	17	Jamaica H.S.	159-21 71st Ave., Flushing	11365
	Spring Valley	Fishman, Norman	17	Bronx H.S. of Science	1236 Burke Ave.	10469
		*Winikoff, Janet	17	Hunter College H.S.	45 Park Terrace W.	10034
		MacCarry, Timothy James	17	Spring Valley Sr. H.S.	18 Lenore Ave., Monsey	10952
OHIO	Cleveland	*Loynachan, Louise Ann	17	Mayfield H.S.	1271 Sunset Rd.	44124
	Dayton	Morse, Larry Eugene	18	Belmont H.S.	1027 Hampshire Rd.	45419
	Minford	*Gilbert, Joy Diane	17	Minford H.S.	Rt. 2	45653
OKLA.	Norman	*Cosgrove, Ann M.	17	Norman H.S.	1212 Cruce St.	73069
PA.	Ambler	Wagner, Henry Jr.	16	Wissahickon H.S.	Grasshopper Lane, Gwynedd Valley	19437
	Philadelphia	Rafsky, Lawrence Craig	16	Central H.S.	3461 School House Lane	19144
VA.	Alexandria	Duggan, James	16	Groveton H.S.	2214 Lida Ct.	22306
	Arlington	Grossman, Jerrold Wayne	17	Wakefield H.S.	2113 S. Dinwiddie St.	22206
W. VA.	Beckley	*Powers, Linda Sue	17	Woodrow Wilson H.S.	128 Mankin Ave.	25801

\*Indicates girls

HOME ADDRESS follows name of school

► THE SILVER ANNIVERSARY group of the most promising high school seniors in the field of science has been selected. Dr. Watson Davis, director of SCIENCE SERVICE, announced the names of the 40 winners who were chosen from 2,883 completely qualified entrants in the nation's top science competition, and were judged best among the Honor Group of 300.

The winners, 11 girls and 29 boys, have been invited to Washington to attend the Science Talent Institute, a five-day expenses-paid session, March 2 through 7. During the Institute they will be judged for \$34,250 in Westinghouse Science Scholarships and Awards in the final phase of the Science Talent Search conducted by Science Clubs of America, a SCIENCE SERVICE activity.

The names of the winners and the schools which they attend are listed in the columns to the left.

They come from 40 schools in 37 communities in 20 states. Thirty-three of the 40 rank in the top 5% of their graduating classes which range in size from 39 to 1,514 students, while 20 of the winners rank first, second or third in their classes.

Twenty-five of the 40 schools in this year's Search did not place winners in previous years. Dr. Davis commended these schools for encouraging and supporting top-level students and making it possible for them to gain this honor and recognition.

The 25 schools appearing on the winning list for the first time this year are:

CALIFORNIA: Point Loma H.S., San Diego

COLORADO: Central H.S., Grand Junction

FLORIDA: Leon H.S., Tallahassee

GEORGIA: Cross Keys H.S., and Fulton H.S., both in Atlanta

INDIANA: Auburn H.S., Auburn, and Clinton H.S., Clinton

IOWA: Theodore Roosevelt H.S., Des Moines

LOUISIANA: St. Augustine H.S., New Orleans, and Holy Ghost H.S., Opelousas

MARYLAND: High Point Sr. H.S., Beltsville

MASSACHUSETTS: Andover H.S., Andover; Braintree H.S., Braintree, and Needham H.S., Needham

MINNESOTA: Richfield H.S., Richfield, Alexander Ramsey H.S., Roseville

NEW YORK: Amityville H.S., Amityville; Half Hollow Hills H.S., Huntington, and Spring Valley Sr. H.S., Spring Valley

OHIO: Mayfield H.S., Cleveland; Belmont H.S., Dayton, and Minford H.S., Minford

PENNSYLVANIA: Wissahickon H.S., Ambler

VIRGINIA: Groveton H.S., Alexandria

WEST VIRGINIA: Woodrow Wilson H.S., Beckley

Grand totals for the schools placing additional winners this year show the Bronx High School of Science, in New York City, at the top of the list with 32 winners in the 25 years of the Science Talent Search. Erasmus Hall H.S., Brooklyn, N.Y., is second with 30. Forest Hills (N.Y.) H.S. is third with 25, followed by Midwood H.S., Brooklyn, N.Y., with 14 winners over the years.

Nine winners each have been claimed by North Phoenix H.S. in Phoenix, Ariz., and Jamaica (N.Y.) H.S.

Seven, six, five, four, and three winners were credited to Lyons Twp. H.S., La-Grange, Ill.; Central H.S., Philadelphia, Pa.; Wakefield H.S., Arlington, Va.; Hunter College H.S., New York City, and Mayne S. Waggener H.S., Louisville, Ky., respectively.

Two winners are claimed by each of the four other schools repeating past wins. They are Mather H.S., Chicago, Ill.; Walt Whitman H.S., Bethesda, Md.; Long Branch (N.J.) H.S., and Norman (Okla.) H.S.

The 300 most promising science students from whom the 40 winners were selected come from 193 communities in 45 states and the District of Columbia.

These outstanding student scientists include 82 girls and 218 boys. The students selected represent the best of their graduating classes, with 71% of the boys and 88% of the girls in the top 5% of their classes.

All members of the Honors Group will be recommended for admission and scholar-

ship awards to the nation's colleges and universities. Many will receive further recognition in state Science Talent Searches conducted in most states as a part of the national Search.

Already at the work on the world of tomorrow, these students have submitted project reports, required as part of the Science Talent Search entry, which are dramatic evidence of the scope and depth of their interest and ability.

All but 10 of the 300 Honors Group members definitely plan scientific careers. First choice is medical science, by 67 of the group. Second is physics with 28, followed by teaching, chosen by 27. Chemistry, biology and mathematics follow closely, with 26, 25 and 23 aspirants, respectively. Biochemistry is the choice of 21, while 15 plan engineering careers. The remainder cover nearly every other scientific field.

Of the 10 not specifying plans for a career in science, seven still are undecided, while

the other choices were the military, priesthood and journalism.

These young scientists who have a wide variety of interests have been active in extra-curricular activities and their science interest has been heightened by membership in science clubs for 247 of the 300, while 254 have participated in science fairs.

Of the 25,798 sets of aptitude examinations and other entry materials requested for the Science Talent Search, 2,883 fully qualified entries were judged. Requirements included taking the Science Aptitude Examination, submission of school records and faculty recommendations and writing a report on an individual science research project.

For a copy of the honors and winners lists of this year's Science Talent Search, send a self-addressed, long envelope, 10-cent stamped, to Science Service, 1719 N St., N.W., Washington, D.C. 20036.

• Science News Letter, 89:85 February 5, 1966

#### TECHNOLOGY

## New Wind Tests Devised

See Front Cover

► THE NATIONAL PHYSICAL LABORATORY in England learned a hard lesson. It had tested a new type of a very high electric-power station cooling tower which wind tunnel tests indicated would stand up to winds above 275 miles per hour. Six such towers were built, but so close together that three of them collapsed when a wind of only about 100 mph ricocheted between them.

That catastrophe showed that every structure and every collection of structures must be tested en masse.

The lesson learned from those tumbled-down cooling towers is likely to pay off handsomely in the construction of the new complex of buildings planned in New York, as a World Trade Center.

On Jan. 18, 1964, the Port of New York Authority announced a massive building project to be known as the World Trade Center. As its name implies, this new center is intended to become the focus of the administration of the enormous volume of international trade passing through the Port of New York.

To provide the necessary accommodation, the Port Authority proposed to erect the world's tallest buildings, a pair of skyscrapers, each 208 feet square and 1,350 feet in height. These buildings will be at least 100 feet taller than the Empire State Building, the world's tallest building for the past 35 years.

The consulting engineers, Worthington, Skilling, Helle and Jackson, requested the British National Physical Laboratory to undertake a study of the oscillatory behavior of the two skyscrapers.

After a visit to the United States, C. Scruton, one of the chief scientific officers from the NPL Aerodynamics Division, started an involved program of wind-tunnel work.

In addition to the observations of oscillation amplitude made in the smooth uniform flow normally present in the wind tunnel, part of the program required the use of a wind structure more representative of that likely to occur at the site.

This involved the introduction of both turbulence and shear into the wind stream which was achieved by the use of a grid of tubes, a nonuniform spacing, placed normal to the flow up wind of the models.

The introduction of high turbulence had a marked effect on the amplitudes of oscillation. The peaked response due to vortex shedding normally found in wind with low turbulence was replaced by a continuous increase in amplitude with wind speed in the highly turbulent wind.

Using streams of water with minute particles of plastics materials floating in it, as shown on this week's front cover, the National Physical Laboratory in England has been able to see how winds may affect the high towers in New York. The wind tunnel tests revealed that there would be extreme turbulence from certain directions.

The mishaps with British power-station cooling towers will hopefully prevent similar accidents in the United States.

• Science News Letter, 89:86 February 5, 1966

#### BIOCHEMISTRY

## Snail Research May Lead To Rheumatism Cure

► SNAIL RESEARCH will hopefully provide basic knowledge leading to a greater understanding of rheumatic diseases.

The British Arthritis and Rheumatism Council made a grant to the Department of Human Biology and Anatomy at Sheffield University to support the work of Dr. Geoffrey Meek, senior lecturer in electron microscopy, on the synthesis of collagen in snails.

• Science News Letter, 89:86 February 5, 1966



National Physical Laboratory

**WIND TESTING**—World Trade Center skyscrapers will be 400 times the height of the scale models being tested at the National Physical Laboratory in England