

40 finalists out of 2,323

Have you ever: Located oil globules in the eye of a sea turtle? Investigated the biological clock of a bean? Studied the characteristics of abundant numbers? (Those numbers, like 12, that are smaller than the sum of all their divisors.)

These projects were submitted by four of 40 high school students whose scientific acumen and imagination brings them to Washington next month for the final competition in the Westinghouse Science Talent Search.

Now in its 27th year, the Search, conducted by Science Service, annually skims from high schools around the country 40 students showing promise in science.

The aim is to find students with a potential for research and to spur them on with scholarships and encouragement early in their academic careers.

To win a place among the 40 finalists, a student must submit an original research paper and take a rigorous scientific examination.

In range of subjects and sophistication, the test would challenge a student

in graduate work and it no doubt deters many in high school. This year, for instance, some 23,000 students requested the examination; only 2,323 returned full entries to enter competition.

Applicants are questioned on such things as neurohormones (chemicals that function in the passage of impulses from one nerve cell to another); repulsive coulombic force (an electric force) and racemic (optically inactive) mixtures.

They must read and understand scientific essays dealing with the evolution of bioluminescence and the hydration of ions.

The test has no predetermined passing grade, but is designed to probe logical ability as well as knowledge. Not all students who score well on the test make the finals and not all students who score relatively badly are excluded. Occasionally an applicant may do poorly on the test compared to other finalists, yet submit a research project so good it cannot be turned down.

Finalists are thus selected by a panel of judges on the combined evaluation of

their test scores, original thinking, enterprise, personal data and academic evaluations.

If selection is stiff, rewards are high. This year the number of scholarships awarded by the Westinghouse Educational Foundation has been increased from five to ten and the total scholarship fund almost doubled to \$67,500. The top award, formerly \$7,500, is now \$10,000. Two second place awards bring \$8,000 each, followed by three awards of \$6,000 and four of \$4,000.

Finalists not receiving scholarships are awarded \$250 each and the entire group is brought to Washington for a five-day expense-paid visit which brings the students into contact with leading scientists and administrators.

Recognition by the Science Talent Search also brings many dollars in scholarships to students not included among the 40 finalists. The Board of Judges select an Honors Group—roughly the top 10 percent of contestants or 300—to be specially recommended for scholarships from leading colleges and universities.

This year's finalists:

CALIFORNIA: **George Fong**, Oakland H.S., Oakland; **Teresa Grace Monger**, Presentation H.S., Berkeley; **Penelope Jo Parsons**, Point Loma H.S., San Diego; **David Joseph Alan Vleck**, Granada Hills H.S., Granada Hills; **Bruce Alan Waddington**, Robert A. Millikan H.S., Long Beach.

CONNECTICUT: **Kathleen Ann Sherman**, Avon H.S., Avon.

DELAWARE: **Keith Wightman Haden**, Henry C. Conrad H.S., Wilmington.

FLORIDA: **Richard Squier Hanni**, Nova H.S., Fort Lauderdale; **Glenn Myron Ralston**, Terry Parker H.S., Jacksonville.

ILLINOIS: **Kenneth Jerome Biba**, Notre Dame H.S. for Boys, Niles; **Robert Wayne Guth**, Washington Community H.S., Washington; **Sylvia Piechocka**, Wells H.S., Chicago.

INDIANA: **Stephan Alan Graham**, North H.S., Evansville.

MARYLAND: **Neil Fred Martin**, Bethesda-Chevy Chase H.S., Bethesda.

MASSACHUSETTS: **Noel Peyton Greis**, Wachusett Regional H.S., Holden; **Jeanne Phyllis Margolskee**, Lexington H.S., Lexington; **Elizabeth Ann Poplin**, Newton South H.S., Newton.

MICHIGAN: **Peter Stefan Fajans**, Ann Arbor H.S., Ann Arbor; **Charles Douglas Moss**, Henry Ford H.S., Detroit; **William Leonard Spence**, Farmington H.S., Farmington.

NEVADA: **Carl Philip Constanten**, Edward W. Clark H.S., Las Vegas.

NEW JERSEY: **Stephen Arthur Schifferes**, Livingston H.S., Livingston; **Roger Y. Tsien**, Livingston H.S., Livingston.

NEW YORK: **Rochelle Lory Epstein**, Jamaica H.S., Jamaica; **John Anton Goldsmith**, Forest Hills H.S., Forest Hills; **John Gomori**, Forest Hills H.S., Forest Hills; **Philip David Kanof**, Midwood H.S., Brooklyn; **Perrin Charles**

White, Forest Hills H.S., Forest Hills; **Jerome Bernard Zeldis**, Division Avenue H.S., Levittown.

OHIO: **Mary Clare Lad**, Magnificat H.S., Rocky River; **Stephanie Valerie Seremetis**, The College Preparatory School, Cincinnati.

PENNSYLVANIA: **John Ashmead III**, Harriton H.S., Rosemont; **Katherine Jean Denniston**, Altoona Area H.S., Altoona; **Jonathan Mark Glauser**, Central H.S., Philadelphia; **Robert Paul Hymes**, Central H.S., Philadelphia; **Jonathan Micah Rosenberg**, Taylor Alderdice H.S., Pittsburgh.

TENNESSEE: **Thomas Charles Trauger**, Oak Ridge H.S., Oak Ridge.

TEXAS: **John Steven Arthur**, Brownwood H.S., Brownwood.

VIRGINIA: **James Allen Brown**, George Wythe H.S., Richmond; **Bruce Llewellyn Frostick Jr.**, St. Christopher's School, Richmond.

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