

High School Science Section

THE FIFTEENTH TENNESSEE SCIENCE TALENT SEARCH

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Thirty high school seniors, Class of '60, who made superior records in the Nineteenth National Science Talent Search conducted by Science Clubs of America, Washington, D. C., have received additional recognition through the Tennessee Science Talent Search Committee of the Tennessee Academy of Science. In May this Committee¹ announced the names, and sent the list to some fifty colleges and universities of Tennessee and other states that have standing requests for these names. This fall most of these students are in some college freshman class, many on science scholarships offered by the institution.

All of these students took a stiff examination in science, sent in December by Science Clubs of America to their high school principal at his request. (All high school principals receive notice of the National competition; why do some of them discard the notices, and give their seniors no opportunity to test—and probably prove—their talent? Why also, do many science teachers in our State's high schools ignore the invitation, although among their students there may be a few with outstanding interest and ability in science? This is one of the unhappy facts of our profession.)

With the examination papers an account of an original science project — experimental, not library, study — was transmitted; this gave evidence of resourcefulness. Records of grades for the four high school years established school standing. All of these factors received attention in the Washington offices of Science Clubs of America. Forty top winners were named in March, and received an all-expense trip to Washington where the scholarships — about ten of them — were awarded. The highest of these prizes amounts to \$7,500, enough for four years college attendance.

All of the papers sent in by the Tennessee seniors, and the records were studied by Drs. Buehler, Wood and Newell Bowman

¹The Committee: Thomas C. Barr, Jr., Tennessee Polytechnic Institute, Cookeville; Calvin A. Buehler, University of Tennessee, Knoxville; L. P. Cushman, Oak Ridge City Schools, Oak Ridge; James L. Major, *Chairman* Clarksville High School, Clarksville; Hanor A. Webb, George Peabody College for Teachers, Nashville; J. H. Wood, University of Tennessee, Knoxville.

at the University of Tennessee. From these the thirty seniors to be honored in the Fifteenth Tennessee Science Talent Search were selected. The selection includes twenty-five young men and five young women. They graduated this past spring from 16 high schools in 11 communities.

In the list that follows the sequence is: (a) name of the student (b) title of the original science project (c) name or initials of the teacher, and the school.

Chattanooga: (a) Allen Edward Erickson, (b) Chemical Reactions in Photography, (c) Sister Hyacinth, Notre Dame High; (a) Diana Mary von Wersowetz, (b) Blood Grouping and Testing, (c) Sr. H.

Clarksville: (a) Ronald Arthur Cole, (b) Effects of Heat on Transistors, (c) James L. Major, Joe Minor, Clarksville High; (a) Thomas Mann, (b) Penicillin, the Miracle Drug, (c) J. L. M., J. M.; (a) Larry Dean Partain, (b) Experiment with Ions, (c) J. L. M., J. M.; (a) William Ronald Smithfield, (b) Column Chromatography in Separation of Carotinoids, (c) J. L. M., J. M.

Dyersburg: (a) Richard David Taylor III, (b) Construction of Thermocouples, (c) Mrs. J. M. Boyd, Dyersburg High.

Jefferson City: (a) Samuel Clark Fain, Jr., (b) Design and Construction of an Eight-Tube Receiver, (c) Marian Whitaker, Jefferson High.

Kingsport: (a) Gipsie Ann Bush, (b) Organisms in Water, (c) James T. Davis, Ruth Ramer, Dobyns-Bennett High; (a) Harry Wesley Coover, III, (b) High-Efficiency Transistors, (c) J. T. D., R. R.; (a) Robert Ware Reynolds, (b) Effects of X-rays on Penicillin, (c) R. T. D., R. R.

Knoxville: (a) Arthur Gilbert Frass, (b) Test Stand for a Model Rocket, (c) James T. Hardin, West High; (a) Robert Everist Greene, (b) Stretch Transformation, (c) J. T. H.; (a) Ralph Arnold Smith, (b) Gibberellin on Algae, (c) J. T. H.; (a) Lewis Jackson Bledsoe, (b) Analog Computer Applied to Ecosystem Study, (c) Herman S. Foust, Young High.

Madisonville: (a) Betty Jean Douglas, (b) Negative Factors which Influence High School Students' Work, (c) Reaves Bingham, Madisonville High.

Memphis: (a) Billy Wesley Beyers, Jr., (b) Automatic Brine Shrimp Freeder, (c) Shirley M. Potts, Central High; (a) Robert Gary Loudon, (b) Original Theorems, (c) Laura Mauzy, Central High; (a) Ronald Lee Gilman, (b) 144-Megacycle Radio Station, (c) Brother H. Francis, Christian Brothers High; (a) George Albert Loud, Stereochemistry and Crystallography, (c) Bro. H. F.; (a) Mark Frazer Paris, (b) Charting the Brain of a Mammal, (c) Bro. H. F.; (a) Wilfred John Schwartz, (b) Expansion-Type Cloud Chamber, (c) Bro. H. F.; (a) Gretta Holt Guyton, (b) Laundering Fabrics, (c) J. D. Reding, Treadwell High; (a) Jerry Lynn Vaughan, (b) Embryological Studies, (c),



J. D. R.: (a) Charles Paul Warr, (b) Electrotherapy of Flora in Liquid Nutrient Medium, (c) Frances B. Wild, White Station High.

Nashville: (a) Daniel Wilson Weedman, (b) Ten-Inch Reflecting Telescope, (c) Jacquelyn Ann Turner, Hillsboro High; (a) Robert Melvil Davidson, (b) Photovoltaic Cells, (c) Mrs. Burt R. Francis, Isaac Litton High.

Oak Ridge: Karl Martin Elsa, (b) Chromogenic Transformation in *Serratia Marcescens*, (c) Sherman D. Sheppard, Oak Ridge High; (a) Robin Elizabeth Smith, (b) A Geotropic Experiment, (c) S. D. S.

Wartburg: Forrest Dale Stewart, (b) A Small-tube Radio Receiver, (c) O. R. Jordan, S. D. Knisley, Central High.

Six of these students also received Honorable Mention in the National Science Talent Search: Robert E. Greene, Knoxville; Greta H. Guyton, Memphis; Robert G. Loudon, Memphis; Richard D. Taylor III, Dyersburg; Jerry L. Vaughan, Memphis; Charles P. Warr, Memphis.

Now that fifteen Tennessee Science Talent Searches have been carried out, beginning with 1946 and including 1960, certain interesting data has accumulated. A total of 354 high school seniors have received honors in these Searches; many more have received the reward of effort. The smallest list of the talented was 3 in 1948; the largest, 32 in 1957. The median annual number listed is 25.

Forty-eight of the 354 seniors had previously received Honorable Mention in the National Science Talent Search competition. Six others were winners of National scholarship awards, as delightful recognition while attending the Talent Search banquet

TALENT SEARCH WINNERS AT OAK RIDGE

Students, teachers, and scientists assembled at Oak Ridge National Laboratory, April 22, 1960.

Front row, left to right: C. P. Keim, President, Tennessee Academy of Science, Oak Ridge National Laboratory; James L. Major, Chairman Talent Search Committee, Clarksville; Marian Whitaker, teacher, Jefferson City; Robert E. Greene, Knoxville; Daniel W. Weedman, Nashville; Larry D. Partain, Clarksville; Ronald A. Cole, Clarksville; James T. Mann, Clarksville; Robin Elizabeth Smith, Oak Ridge; Jerry L. Vaughan, Memphis; Greta H. Guyton, Memphis.

Second row, left to right: C. E. Normand, Jr., Oak Ridge National Laboratory; S. D. Knisley, teacher, Wartburg; Mrs. T. R. Loudon, parent, Memphis; R. David Taylor III, Dyersburg; Gary Loudon, Memphis; Harry W. Coover III, Kingsport; Robert Reynolds, Kingsport; Robert Davidson, Nashville; Charles P. Warr, Jr., Memphis; Karl Elza, Oak Ridge; Lewis Bledsoe, Jr., Knoxville; Sandra Smith, Memphis.

Third row, left to right: John Fox, Oak Ridge National Laboratory; Robert M. Reynolds, parent, Kingsport; Joe Minor, teacher, Clarksville; J. D. Reding, teacher, Memphis; R. D. Taylor, parent, Dyersburg; Forrest D. Stewart, Wartburg; Donald Smithfield, Clarksville; Arnold Smith, Knoxville; Arthur Frass, Knoxville; Samuel Fain, Jefferson City.

Photo by *Oak Ridge National Laboratory News*

as guests of Science Clubs of America in Washington. On one memorable occasion in 1959 a Tennessee senior received the top award, a \$7500 scholarship; he was John S. Letcher, Jr., of the Baylor School, Chattanooga. He is now studying in the field of nuclear physics at California Institute of Technology.

Information as to the activities of almost all the honors seniors is available in the files of the Committee's chairman, and analysis of these data is anticipated for publication after twenty annual Talent Searches have been completed (1965). Practically all of these seniors entered college the next fall. The universities of Tennessee accomodated most of them, yet a substantial number entered institutions of note in other states. Most of those listed in the earlier Searches have received their Bachelors Degrees; many have Masters Degrees; a number have Doctors Degrees.

The special areas of these students' studies are chiefly in the sciences, although a modest number have entered other skilled occupations. Teaching at the college level is a favored professional activity. The young women have largely divided their talents among technical laboratories, teaching and the responsibilities of a home and family — which, in certain instances, does not preclude one of the other activities.

The names of certain high school teachers — the sponsors — have appeared on all fifteen of the Talent Search lists! Others have had talented student winners for ten, or five years. Each year the names of new sponsors appear; some of these will continue their interest and stimulation for the next decade or longer.

The influence of the Tennessee Science Talent Searches is obvious, although not readily measurable. It falls in the category of all good teaching — not so much in imparting knowledge as in stimulating the student in its pursuit.

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Biochemistry Laboratory of the National Institutes of Radiological Sciences, Chiba. On September 22, Dr. Makinodan will leave Japan for Honolulu, Hawaii, to confer with scientific investigators at the University of Hawaii. He will return to Oak Ridge October 4.

David M. Prescott attended the Tenth Congress of the International Society for Cell Biology in Paris, France, September 4-9. Dr. Prescott also attended the first symposium on Macromolecular Structure and Biological Function being held at Wenner-Gren Institute in Stockholm, Sweden, September 12-16, where he presented an invited paper entitled "Function of the nucleus in the synthesis of ribonucleic acid and protein." The Stockholm symposium is jointly sponsored by the International Union of Biological Science and the International Union of Biochemistry.

Arthur C. Upton lectured before the Summer Intitute in Radiation Biology at Tulane University, New Orleans, August 7-9, on the following subjects: Effects on prenatal development in mammals; Pathophysiology in mammals; and Relative biological effectiveness. David G. Doherty

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