CHAPTER VII

The Early Seventies

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At the October 25, 1969, Council meeting at Washington & Lee University, Lexington, President Rae Carpenter announced that past-President Paul Siegel had been appointed officially a science advisor to the Governor, and that efforts were now underway to have the science advisor appointed to membership on the state's Research and Development Advisory Committee.[1] At that same meeting, Executive Secretary-Treasurer Rodney Berry reported that the Academy had received $8,000 from the Foley F. Smith estate. This money had been deposited in a savings account and was drawing 5¼ per cent interest. Mr. Berry moved that the $420 income on this investment be used for general purposes, and Council approved the motion.

A new category of membership, the Fellow, had been under discussion for the past year or two. It had been suggested at least as early as the spring of 1968 in the report of Dr. W. M. Hinton, Chairman of the Long Range Planning Committee,[2] and probably earlier. At the October 25 Council meeting it was decided to install the first class of Fellows at the 1970 Annual Meeting, with all nominations to be in the hands of the Awards Committee by March 1, 1970.[3] Other decisions regarding Fellows and their selection were approved at the same meeting, with stipulations to be included in the Academy Constitution and Bylaws, then in the process of revision. The revised Academy Constitution, adopted May, 1970, in Article V: Fellows, provided that "from active membership, there shall be a body of scholars knowns as 'Fellows of the Virginia Academy of Science' selected because of their contributions to science in one or more of the following ways: (a) outstanding scientific research, (b) inspirational teaching of science, (c) significant leadership in the Academy. Rules and procedures for selection of Fellows shall be specified in the Academy Bylaws."[4] The Academy Bylaws approved by Council November 1, 1970, under Article V: Rules and Procedures for Selecting Fellows, stipulated: "A 'Fellow' must be nominated by at least three members of the Academy. The Academy Council must approve each Fellow by a majority vote, and establish a limiting date annually for receipt of nominations. It will be the usual procedure to announce new Fellows at an Annual Meeting."[5] It was further stipulated in Section 2, of Article V of the Bylaws, that "no more than 25 fellowships will be approved the first year. After the first year, no more than one-half of one per cent of the total active membership shall be selected in any one year. The limiting number of Fellows shall not exceed five per cent of the total active membership of the Academy."[6] It may be stated here that the first class of duly elected Fellows were approved by Council on March 15, 1970, to be the following: Jesse Wakefield Beams, John Campbell Forbes, Thomas E. Gilmer, Boyd Harshbarger, Roscoe D. Hughes, Clyde Young Kramer, J. Douglas Reid, and William T. Sanger.[7]

At the October 25 Lexington Council meeting Mr. Stuart Ware reviewed events leading to growth of interest in botany and a botany section, and Council voted to support the formation of a Botany Section for the purpose of presenting a program at the May, 1971, meeting, possibly leading to the formal establishment of a Botany Section of the Academy.[8]

The 1970 Virginia General Assembly demonstrated its scientific awareness by creating the Science Museum of Virginia. An item in the winter of 1970 issue of the *Journal* included the statement: "It was primarily the scientists of Virginia acting in concert through the Virginia Academy of Science that spearheaded the victory. Indeed, the success of this venture portends well for the future for the VAS, because it shows what a group of unreconstructed scientists can do when act-

[1] *VJS*, New Ser. 21: 24. 1970.

[2] *VJS*, New Ser. 19: 160. 1968.

[3] *VJS*, New Ser. 21: 25. 1970.

[4] *VJS*, New Ser. 22: 25. 1971.

[5] *Ibid.*, 23.

[6] *Ibid.*, 24.

[7] *VJS*, New Ser. 21: 100. 1970.

[8] *Ibid.*, 25.

ing together in a good cause. Careful planning by experts in the Museum field under the direction of a nine-man Board of Trustees to be appointed by the Governor, and the staff of the Museum, constitute the next order of business."[9] At March 15, 1970, Council meeting, Dr. Austin Grigg reported that the Museum of Science had been approved by the State Legislature and the requested initiating fund had been appropriated.[10] At the 1970 Annual Meeting of the Academy a number of nominations were received from various sections for the Virginia Museum Board of Trustees to be appointed by the Governor. It was moved in Council meeting that Dr. Roscoe Hughes' name be placed at the top of the list and this was passed by acclamation.[11] At the November 1, 1970, Council meeting, Dr. Hughes and Mr. Rowe reported on the latest information concerning the Virginia Museum of Science. President Rowe indicated that the Governor had made his decision with respect to the Trustees of the Museum, and Dr. Hughes pointed out that there was still a Museum of Science Committee of the Academy.[12] At that time, Governor Linwood A. Holton had named seven of the nine Trustees of the planned Science Museum of Virginia. These included two members of the Academy, Dr. Roscoe D. Hughes, a member of the Science Museum Study Commission, and Dr. Avery Catlin of the University of Virginia, representing the Materials Science Section. Others appointed by Governor Holton included Mrs. J. T. Bird of Salem, Mrs. William A. Stuart of Rosedale, Harold Soldinger of Portsmouth, William J. Vaughan of Virginia Beach and Mrs. William T. Reed, Jr., of Manakin-Sabot. The General Assembly had appropriated $66,500 in planning money for the proposed Museum with a portion of the money to be used in hiring an Executive Director. A site for the proposed Museum had not yet been selected.[13]

Two additional articles concerned with the story of the Dismal Swamp appeared in the *Journal* in the spring of 1970. "Waters of the Dismal Swamp" by Elmer W. Ramsey, Kenneth R. Hinkle and Lawrence E. Benander, was one of these articles,[14] and "Soils of the Dismal Swamp of Virginia" by Elvin F. Henry[15] was the title of the other. Several additional articles in the series had been promised and were in varying stages of preparation.

The forty-eighth meeting of the Academy was held in Richmond, May 6–8, 1970, under the presidency of Dr. Rae Carpenter of Virginia Military Institute. There were 20 commercial exhibits on display at the John Marshall Hotel, which was headquarters for the meeting.[16] These exhibits, coupled with the continuing business memberships, the grants for special projects which were occasionally received from certain industrial companies, as well as the strong interest and leadership from many members in industry and state government, served to emphasize the important part which all phases of scientific interest in the state played in science and in the Virginia Academy of Science.

At the 1970 meeting, 352 papers were presented before 14 different Sections of the Academy. Especially strong programs were held in the Sections of Geology (with 54 papers) and of Medical Sciences (with 42 papers). Between thirty and forty papers were presented in each of the Sections of Biology (39 papers), Astronomy, Mathematics and Physics (35 papers), and Chemistry (33 papers). A full program of 25 papers was presented by the botanists meeting in sessions Thursday morning, Thursday afternoon, and again for most of Friday morning, May 7 and 8. On the basis of this record Council on May 8 approved the acceptance of Botany as a new Section of the Academy. Stewart A. Ware had been elected as first Section Chairman and Leonard Morrow as the first Council representative of the new Section.[17] At the Academy Conference, among other things, the proposed revision of the Academy Constitution was reviewed as amended and adopted, the motion for adoption being approved without dissent.[18] The membership of the Academy was reported as 1,767.[19]

The 1970 Sidney S. Negus Memorial Lecture was delivered before the Academy Assembly by Dr. Robert M. Wood of MacDonald Douglas Astronautics Company; this lecture was entitled "Giant Discoveries of Future Science," and was the first lecture by an engineer to be delivered before the Academy Assembly for some time. The J. Shelton Horsley Research Award went to I. Gordon Fels of the Virginia Institute for Scientific Research for the paper which he presented before the Section of Chemistry entitled "A Model System for Molecular Aging and Senescence." The Ivey F. Lewis Distinguished Service Award was presented to Roscoe D. Hughes, a past-President of the Academy, a Chairman or past Chairman of many of the

[9] *Ibid.*, 31.

[10] *Ibid.*, 70.

[11] *Ibid.*, 94.

[12] *VJS*, New Ser. 22: 19. 1971.

[13] *Ibid.*, 30.

[14] *VJS*, New Ser. 21: 81–83. 1970.

[15] *Ibid.*, 41–46.

[16] *Ibid.*, 93–94.

[17] *Ibid.*, 94; 118–121.

[18] *Ibid.*, 95.

[19] *Ibid.*, 96.

important committees of the organization, and a member outstandingly active in connection with many of the projects of the Academy.[20]

At the Virginia Junior Academy of Science meetings, 132 member schools were represented, and 285 papers were submitted. Registration was slightly over 700, of which 600 were students. During the year a *Proceedings* as well as two issues of the *Junior Science Bulletin* were published, and the *Handbook* was revised. The first E. C. L. Miller Trophy Cup was retired by Denbigh High School for winning the cup three years in succession. A new cup was being secured to continue the competition. The V. J. A. S. operated on a $7500 budget, with $2500 provided by the senior Academy, $2000 by a grant from the National Science Foundation, $2000 by industry and individual gifts, and with the remainder coming from registrations. In the Science Talent Search Virginia had 116 completed entries in the National Competition. The 116 students represented 49 different high schools scattered through the state. While Virginia did not have any students this year among the forty National winners, it did have twenty students from fifteen different high schools in the National Honors group of 300.[21]

An important change occurred in the office of the Executive Secretary-Treasurer during the year. It will be recalled that Mr. Rodney Berry had held this position for a number of years following his retirement from the State Department of Agriculture. Now, Mr. Blanton M. Bruner, who was retiring from his position with the American Tobacco Company, was made Associate Executive Secretary-Treasurer of the Academy.[22] A few months later, when Mr. Berry retired from his position as Executive Secretary-Treasurer, Mr. Bruner took over this position.[23] This has been another of the Academy's great strengths—the fact that men of outstanding ability have been willing and glad to donate, chiefly as a labor of love, their talents to the betterment and improvement of the Academy.

As Mr. Berry was leaving his position as Executive Secretary-Treasurer, the Council and Academy voted him an honorary life membership, with an appropriate certificate and wallet membership card, and also presented him a silver tray bearing both Mr. and Mrs. Berry's names in appreciation of their services to the Academy.[24]

A long-time patron of the Academy, Mrs. Alfred I. du Pont (Jessie G. Ball du Pont) died—at the age of 86—on September 26, 1970, at her home near Wilmington, Delaware. A native of Ditchley in Northumberland and a graduate of Longwood College, Mrs. du Pont was not only a benefactor of the Academy but also of a number of educational institutions in Virginia[25] Mrs. du Pont had responded generously to Dr. J. Shelton Horsley's early request for endowment research funds, and at that time had written to Dr. Horsley: "Am glad to note that you realize that Virginia's most important asset is the quality of her people, and I earnestly trust we can hold more of our scientifically and professionally trained young people in the state."[26]

Building for science research and instruction continued at an accelerated rate in Virginia. The Medical College of Virginia, the Health Sciences Division of Virginia Commonwealth University, in 1970 was awarded more than $7.6 million in federal funds by the Department of Health, Education and Welfare for two major construction projects. The grants provided $6,354,002 for construction of a 15-story addition to Sanger Hall, to provide space for the departments of anatomy, biochemistry, microbiology, physiology, radiology and some medical subspecialties. The remaining $1,294,720 awarded was to provide for expansion and modernization of the Tompkins-McCaw Library.[27] The Medical College of Virginia also built a new Animal Research Facility in Hanover County, 9 miles north of Richmond, erected at a cost of $396,350, with funds provided by the State.[28] At the same institution, the new $4 million addition to the School of Dentistry was named the Lyons Building, in honor of Dr. Harry Lyons who retired July 1, 1970, after serving as dean of the MCV School of Dentistry for nearly twenty years. The addition gave the School of Dentistry 130 per cent more floor space.[29]

The first issue of Volume 22 of the *Journal*, 1971, carried news of the death of one of the few surviving charter members of the Academy, Miss Harriett Huldah Fillinger, who had passed away on December 26, 1970, in Oak Ridge, Tennessee. Miss Fillinger had been on the Hollins College staff for the thirty-five years from 1921 to 1956, having served that institution as a professor and as Chairman of the Department of Chemistry. When the General Chemistry Laboratory Building was

[20] *Ibid.*, 99–100.

[21] *Ibid.*, 96–97.

[22] *Ibid.*, 70.

[23] *VJS*, New Ser. 22: 19. 1971.

[24] *VJS.*, New Ser. 21: 70–71. 1970.

[25] *Ibid.*, 211.

[26] Proceedings 1937–38: 22.

[27] *VJS*, New Ser. 21: 28–29. 1970.

[28] *Ibid.*, 211.

[29] *Ibid.*, 212.

dedicated at Hollins in 1967, it had been named in honor of Miss Fillinger.[30] A few months later the Academy received news of the death of yet another charter member; Mr. S. C. Crawford of Franklin, Virginia, who died on October 9, 1971.

Several items in the News and Notes Section of the *Journal,* Volume 22, indicated that Virginia scientists, as well as other scientists in the country and the world, were having an enlarged awareness of environmental and ecological problems. (1) President Maurice B. Rowe, who was also Commissioner of the Virginia Department of Agriculture and Commerce, announced the establishment of an environmental planning committee under auspices of the State Department of Agriculture. The five-man committee was headed by Academy member J. W. Midyette, Jr., Director of Technical Services in the Agriculture Department. The committee was studying such subjects as pesticides and disposal of animal and industrial wastes.[31] The Academy's Committee on Conservation and Natural Resources assembled various items of ecological interest around Virginia. Several of these were described in Volume 22 of the *Journal.* (2) The Virginia Institute of Marine Science was being responsible for planning and conducting basic and applied research on the environments and resources of the Commonwealth's tidal waters and adjacent waters of the Atlantic Ocean. (3) The Board of Visitors of Virginia Polytechnic Institute and State University, in May 1970, authorized The Center for Environmental Studies to coordinate research activities at V.P.I., oriented toward the solution of specific environmental problems and also for the purpose of providing counsel and guidance about environmental problems to the government, industry, the University, and other educational institutions of the state. (4) A new Division of Aquatic Biology was formed by the Virginia Institute for Scientific Research. This group was conducting both laboratory and field investigations in aquatic ecology with particular emphasis on determination of the degree and kind of industrial use to which bodies of water can be put without degrading their quality for recreation, food production, and other uses. (5) Mary Washington College received a National Science Foundation grant of approximately $50,000 to apply to their Rappahannock River Ecosystems Project. This was a cooperative project effort by the Departments of Geology, Chemistry and Biology of that institution. (6) Sweet Briar College received a three-year National Science Foundation grant for improvement of the social and natural sciences. A major project supported by this grant was an environmental study using the college's 3400 acres as well as a part of the neighboring county as study areas. (7) Still another state college, Randolph-Macon Woman's College in Lynchburg, received a grant from the National Science Foundation in order to conduct an ecological study, this time on the Blackwater Creek Basin in Lynchburg. This $16,760 grant was for a summer study by students. The data gathered was to be submitted to the Lynchburg Planning Commission in connection with the Commission's study of a proposed 250-acre park development in the area. (8) The paper-lumber complex of The Union Camp Corporation in Franklin, Virginia, formed a special department for environmental protection, designated as the Environmental Engineering Department.[32]

Interest in the environment was well represented in the programs of the Virginia Junior Academy of Science. Dr. E. L. Wisman of V.P.I. had been Chairman of the VJAS Committee since 1965, and had carried out, expanded and broadened the interest in and the interests of this important group. In his 1971 report on the Juniors, Dr. Wisman wrote: "In keeping with the changing times, the program shows a change in paper categories. The Astronomy and Space Science category has been replaced by a new one—Environmental Science. Last year, five papers were submitted in Astronomy and Space Science; this year, 35 were submitted in Environmental Science. We note that the interest in our junior scientists is no longer all 'up in the stars' but rather, is turning more towards ecology and problems of 'down to earth' concern."[33]

William Allison Kepner, eleventh President of the Virginia Academy of Science, died on March 24, 1971, at Charlotte, North Carolina. He was almost ninety-six years of age. The second issue of Volume 22, 1971, of the *Journal* was dedicated to this great teacher. Dr. Kepner had taught thousands of students in Biology 1–2 at the University of Virginia, had trained over 300 students in his advanced course, Invertebrate Zoology, and had been the Major Professor of many graduate students. He had played a vital part in the formation of the Virginia Academy of Science.[34]

President Maurice B. Rowe called the forty-ninth Annual Meeting to order at

[30] *VJS,* New Ser. 22: 28. 1971.

[31] *Ibid.,* 30.

[32] *Ibid.,* 64–66.

[33] *Ibid.,* 74–75.

[34] *Ibid.,* 37.

Blacksburg where the Academy members were guests of the Virginia Polytechnic Institute and State University for its May 12–14, 1971, meeting. At the May 12 Council meeting, Boyd Harshbarger, Chairman of the Awards Committee, reported that the following had been nominated for Fellows of the Academy: Robert Clifton Carter, Edward S. Harlow, W. T. Harnsberger, Jr., A. M. Harvill, Colonel S. M. Heflin, George W. Jeffers, Harry G. M. Jopson, and E. L. Wisman. All were approved by Council. Walter Flory reported for the Publications Committee that the tenure of Dr. Lynn Abbott as Editor of the *Journal* would expire in August of 1971, and that Dr. Abbott had requested to be relieved of the editorship. The committee recommended that Dr. Charles H. O'Neal, biophysicist of Virginia Commonwealth University, Health Sciences Division, be appointed to the position of Editor beginning in September, 1972. Dr. O'Neal was to be in England until August of that year and Dr. Abbott had agreed to an interim appointment to fill the position until Dr. O'Neal returned from England. Council approved the arrangement made by the Publications Committee, while highly commending Dr. Abbott for a difficult job well done.[35]

A total of 415 papers—by far the largest number for any meeting in the history of the Academy—was presented before the 13 sections at the Blacksburg meeting. More than 30 papers were given before each of eight different sections. There were 58 papers in Biology (and another 23 in Botany), 45 in Agriculture, 44 in Chemistry, 41 in Statistics.[36]

In reporting for the Research Committee at the Academy Conference, Chairman W. Dexter Whitehead stated that during the year $2,637.40 had been awarded in research grants to support six different studies, and that 18 papers had been submitted in the Horsley Award competition. Later at the Academy Assembly, it was reported that the 1971 J. Shelton Horsley Award winning paper was "The Unusual Electrical Effects in Arsenic-Tellurium Semiconducting Glasses" which was presented in the Materials Science Section by L. R. Durden, L. H. Slack, and P. R. Eusner of Virginia Polytechnic Institute and State University.[37]

Also at the Academy Assembly Dr. Horton H. Hobbs, Jr., was presented the Ivey F. Lewis Distinguished Service Award, and the newly elected Fellows of the Academy were presented to the membership.[38] The Sidney S. Negus Memorial Lecture was delivered by Nyle C. Brady, Associate Dean of the College of Agriculture at Cornell University and Chairman of the Agriculture Board of the National Academy of Science. His scholarly address "The Role of Agriculture in Improving Environmental Quality" was well received by the large group at the banquet and Assembly.[39]

The Virginia Junior Academy of Science celebrated its 30th Anniversary at the Blacksburg meeting. While the total membership of the Junior Academy had decreased 6 per cent from 1970, the number of research papers submitted for the Annual Meeting increased by 15 per cent. A total of 200 papers was programmed, out of 325 submitted, and an obvious improvement in the quality of papers was noted. A total of 714 attended the VJAS meetings, of which 580 were students, 89 teacher-sponsors, and 45 Senior Academy supporters.[40]

"The Science Museum of Virginia" titled the lead editorial in issue four of Volume 22, 1971, of the *Journal,* tracing the history of the effort to establish the Museum. This pointed out that "more than a quarter-century ago a five-member Museum of Science Advisory Commission reported to the Governor and General Assembly of Virginia that 'few agencies can be devised to (better) advertise what we have to offer ourselves, or others, and to direct the interest of both young and old in building a greater Virginia than . . . . a properly set up and administered State Museum of Science.' " It further pointed out that two of the original leaders—Dr. George W. Jeffers and Dr. William T. Sanger—remain active Museum supporters of vision and imagination . . . . Senate Bill No. 8 created the Science Museum of Virginia, outlined its purposes and authorized appointment of a nine-member Board of Trustees. "Spearheaded by the Virginia Academy of Science and other learned organizations, a comprehensive Museum Study Commission report in 1969 was the basis for concrete action by the General Assembly in 1970." Trustee appointments were completed by the Governor in February, 1971. While some of these have been mentioned earlier, they will be repeated. The first Board of Trustees of the new Museum was made up of: Dr. Roscoe D. Hughes, Richmond, Chairman; Dr. T. Dale Stewart, McLean, Vice-Chairman; Mrs. Wiliam A. Stuart, Jr., Rose-

[35] *Ibid.*, 73.

[36] Program 49th Ann. Meeting, V.A.S., May 11–14, 1971.

[37] *VJS*, New Ser. 22: 76. 1971.

[38] *Ibid.*, 78.

[39] *Ibid.*, 166–171.

[40] *Ibid.*, 74–75.

dale, Secretary; Mrs. J. T. Bird, Salem; Dr. Avery Catlin, Charlottesville; Lyons Davidson, Lynchburg; Mrs. William T. Reed, Jr., Manakin-Sabot; Harold Soldinger, Norfolk; and William J. Vaughan, Virginia Beach.[41]

[41] *Ibid.*, 165.

The new Board of Trustees of the Museum had now reached several positive policy decisions. They agreed that the Museum system should include facilities in three or four population centers around the state, with other "outreach" centers. Also, they approved an appropriations request of $432,197 from the state for 1972–74 for acquisition of basic staff and facilities; set a fund raising goal of $5 million during 1972–75 to supplement state revenue; and further launched a preliminary feasibility study of sites in three areas—Lynchburg, Norfolk and Roanoke. Each initial Museum facility would provide a different feature. Several Museum areas had been approved by the General Assembly. These include (1) Physical Sciences, to include a planetarium and depict the history, concepts, and basic principles of the chief sciences; (2) Botanical Sciences, primarily to educate in the kinds and uses of Virginia flora; (3) Natural History, which would be devoted primarily to Virginia's natural resources, as well as paleontological and archeological artifacts and specimens; (4) Industry and Technology, to communicate the history and development of Virginia's industry; (5) Oceanography and Limnology, which would include an oceanarium and be concerned with Virginia's total aquatic life and environment; and (6) Zoological Gardens, for the preservation of wildlife and viewing it in its natural habitat.[41]

The fall Council meeting was called to order in Newcomb Hall at the University of Virginia by President Edward F. Turner, Jr., at 10:30 A.M. on November 7, 1971. A number of committees had reports and recommendations, which for the most part were handled with dispatch. In addition, it was moved and passed that the desk registration fee for the 1972 meeting be set at $4, and the preregistration fee be $3. Dr. Alex M. Clark, Chairman of the Visiting Scientists Program, distributed a list of scientists who had volunteered their services to high schools. It was moved and passed that non-commercial institutions be allowed to exhibit at the Annual Meeting for a fee of $50.[42]

[42] *VJS.*, New Ser. 23: 27–28. 1972.

The spring 1972 issue of the *Journal* carried the news of the untimely death of Dr. John Gibbs Mahan (1919–1971), Professor of Biology at Lynchburg College. A native Virginian, educated at Lynchburg College and the University of Virginia, he had served on the 1951 Local Arrangements Committee for the Lynchburg meeting and had long been a quiet but effective supporter of the Academy.[43]

[43] *Ibid.*, 28.

The fiftieth Annual Meeting was held in Lexington, Virginia, May 3–5, 1972, with President Edward Turner of Washington and Lee University as presiding officer. The Virginia Military Institute and Washington and Lee University were joint hosts of the meeting.[44]

[44] *Ibid.*, 93–98.

Academy interest in conservation and environmental problems remained strong. Roscoe Hughes, Chairman of the *ad hoc* committee on Conservation and Natural Resources had distributed literature to Council members relative to national wilderness areas, prior to the Lexington meeting. This literature was reviewed and discussed at the May 3, 1972, Council meeting. The following motion was carried without dissent: "The Virginia Academy of Science recognizes the importance of preserving our wilderness area and therefore urges its members to write the President of the United States requesting him to utilize the powers of his office to accelerate the programs of review of lands covered by the Wilderness Act of 1964." It was also approved that the motion be submitted to the Academy Conference for endorsement and that copies of the motion be sent to President Nixon, and to the Senators and Congressional Representatives of Virginia.[45] The following morning, May 4, a colloquim on "Virginia's Environment: Where Do We Stand Today?" with six speakers from institutions scattered across the state, was a main feature of the Academy program.[46]

[45] *Ibid.*, 93.

[46] Program 50th Ann. Meeting, V.A.S., May 2–5, 1972. (P. 1.)

Sectional and paper interest continued at a high level. A total of 349 papers was delivered before the thirteen sections. There were 67 papers presented before the Section of Biology, while more than 30 papers were presented in each of the Sections of Chemistry, Psychology, Materials Science, and Botany.[46] I. J. Good of V.P.I. and S.U. and R. A. Gaskins of Hampden-Sydney College received the 1972 J. Shelton Horsley Research Award for their paper "Global Nonparametric Estimation of Probability Densities," presented in the Statistics Section.[47]

[47] *VJS*, New Ser. 23: 97. 1972.

The 1972 Class of Fellows annouced at the Academy Assembly on May 4 in-

cluded: Lynn D. Abbott, Jr., Rodney C. Berry, Lloyd C. Bird, Robert P. Carroll, James W. Cole, Jr., Walter S. Flory, Mary E. Kapp, and Paul B. Siegel—bringing the number of elected Fellows of the Academy to 32. The Sidney S. Negus Memorial Lecture delivered before the Assembly by Dr. Peter van de Kamp of Swarthmore College was on the subject "The Search for Extra-solar Planets in our Stellar Neighborhood."[48]

As with some of the earlier meetings held at Lexington, members of the Virginia Junior Academy of Science were housed at Natural Bridge and held some of their successful meetings at the Natural Bridge Hotel, with others being staged at Washington and Lee University. The annual Junior Academy lecture, this year entitled "Sickle Cell—A Model of Human Genetic Disorders," was given in the ballroom of the Natural Bridge Hotel by Dr. Paul R. McCurdy of Georgetown University Medical Center.[46]

Shortly after the Lexington meeting, Dr. E. L. Wisman resigned as Chairman of the Virginia Junior Academy of Science Committee. Dr. Wisman had successfully directed the activities of the Junior Academy for eight years. He had expanded the publications of the group, had secured considerable amounts of support for Junior Academy programs from the National Science Foundation—and from other sources, and left this most important activity of the Virginia Academy of Science with a vigorous program and interest high. Dr. Lee S. Anthony of Roanoke College succeeded Dr. Wisman in this important position, effective June 1, 1972.[49]

Another of the stalwarts and member of the 'old guard' of the Academy passed away with the death of Dr. Orland E. White on January 10, 1972.[50] From 1927 until 1955, Dr. White had been Professor of Agricultural Biology at the University of Virginia and Director of the Blandy Experimental Farm. He was Chairman of the Biology Section of the Academy in 1931. For a number of years he served on the Research Committee. Some six or seven Blandy Fellows, or former Fellows, were winners of Academy Research Awards.

Another long-time Academy member, Dr. J. Stanton Pierce, died on July 22, 1972. Dr. Pierce had served on the Chemistry faculty at the University of Richmond for thirty-four years before his 1971 retirement. He had served the Virginia Academy of Science as Treasurer and also as Secretary and Chairman of its Chemistry Section.[51]

New national honors came to several Virginia scientists during 1972. Dr. Jesse W. Beams, Professor Emeritus of Physics at the University of Virginia, Academy President in 1947–48, and winner of the National Medal of Science in 1968, now received a citation from the U. S. Atomic Energy Commission in ceremonies November 2 for his work in the development of the gas centrifuge for separating isotopes and in the AEC's use of the process for separating uranium isotopes. Dr. Beams was one of only three scientists selected to receive the AEC citations. Also, Dr. Paul B. Siegel, Professor of Poultry Science at V.P.I., was elected President of the Poultry Science Association at the Society's 1972 meeting at Ohio State University.[52]

We have seen that in 1923 there were 134 charter members at the organizational meeting of the Virginia Academy of Science. Ten years later, in 1933, membership in the Academy had climbed to 743. In the fifth edition (1933) of Cattell's *American Men of Science* there were 617 scientists listed as being born or educated in Virginia or as being resident in Virginia at that time.[53] The 1923 and 1933 membership numbers in the Academy, and Cattell's 1933 listings of Virginia scientists, may be compared with the 1632 Academy members in 1972, down slightly from the highest recorded membership of 1767, in 1970.

The number of scientists in Virginia has doubtless increased at a considerably higher rate than the population as a whole. It has been fortunate that scientists of the state, whether they be from academia, from industry, from state government, or other source, have cooperatively, unselfishly and successfully worked together to form and develop a strong state Academy of Science. The Academy has had outstandingly successful Annual Meetings, with numerous papers presented in many areas; sponsored a successful and improving Journal of Science; developed a strong interest in science among high school students of the state, resulting in a large and virile Junior Academy of Science; led to the establishment of the Virginia Institute of Scientific Research; sponsored successful studies of the James River Basin, of the Dismal Swamp, and of other natural areas; sponsored many symposia,

[48] *Ibid.*, 97.

[49] *Ibid.*, 83.

[50] *Ibid.*, 86.

[51] *Ibid.*, 205.

[52] *Ibid.*, 206–7.

[53] K. M. B. Crooks, Va. Jour. Ed. 33: 136–139. 1938.

all of which have been of more or less wide ranging interest and importance to the state and its development; sponsored and taken steps leading to the establishment of a State Museum of Science; paid increasing attention to problems of conservation and environmental import, and in short has interested itself in all phases of science and of scientific development in the state. This history has been an attempt to present a concise record and chronology of these and other activities of the Academy. If successful, it is a record which can be turned to for useful reference in connection with the history of this organization. The following and final chapter attempts to summarize and place on record for ready reference a number of factors in connection with the first fifty years of the development and history of the Virginia Academy of Science.