

A Job of Work To Do

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The Virginia Academy of Science had undergone difficult times during the World Conflict of the early 1940's. As summarized in Chapter III of this History, Annual Meetings had been curtailed, and the membership had decreased from a high of 912 in 1941, to 629 in 1945. But the sound foundation laid by the early leaders, officers and members of the Academy insured a strong and continuing interest in a state-wide scientific organization. With the war past, advancement of Academy objectives could again be approached unhampered by a prime consideration of national military needs and demands. The Academy could and would emerge from the quiescent period enforced upon it by conditions of war. Actually, this more or less static period was to serve as a stimulus eventuating in a much more dynamic and vital organization.

President H. Rupert Hanmer presided over the Twenty-Fourth Annual Meeting of the Virginia Academy of Science at Richmond, in May, 1946. In his address the retiring President summed up the recent years of trial and tribulation for the Academy members. "Within our province," he began, "we know that the fields of research have lain fallow. . . . No one is more keenly aware of this than members of the Academy and no one is more relieved to cast off the shackles of restraint and secrecy within which the spirit of research cannot flourish. We know," he concluded by pointing to the future, "that there is a job of work to do. Perhaps we can best express our thankfulness by getting on with it."¹ Probably not since the first gathering in Williamsburg in 1923 had a challenge of the present magnitude confronted the Virginia Academy of Science.

Secretary-Treasurer E. C. L. Miller, now in his seventy-ninth year, reported that membership and finances both appeared to be on sound footing. "It gives me pleasure," he said, "to put these facts on the record since I have resigned as Secretary-Treasurer and am trying to retire and so am delighted to see others taking up the work with such commendable spirit, energy and wisdom."² Earlier, President Hanmer had announced Dr. Miller's intention and described it as "a matter of startling and vital importance."³ Actually, at the time Dr. Miller gave his report he had already been nominated and reelected.⁴ The Virginia Academy of Science had weathered its first postwar crisis.

It was, however, with something more than sorrow that the members of the Academy passed a resolution memorializing the late Dr. J. Shelton Horsley, Virginia's foremost surgeon, the fourth President of the Academy and long a valuable counsellor to the organization, who died April 7, 1946. In conclusion the resolution read: "The members of the Virginia Academy of Science mourn his loss but count themselves fortunate to have numbered him as one of them."⁵ Edward S. Harlow of Richmond moved, and Dr. Ivey F. Lewis seconded, a recommendation by the Academy officers that the Academy Research Award be renamed "The J. Shelton Horsley Research Award." This was unanimously accepted.⁶

Dr. Horsley had been the first Chairman of the Research Committee of the Academy. He had instigated, and with his great prestige he had personally solicited and raised, the initial endowment fund which has had so much to do with the effectiveness of the committee. Until his death he presided over this fund, as Chairman of the Research Committee. This committee made research grants which, over the years, stimulated and made possible the special projects and research of many young Virginia scientists. The committee also guided the procedure leading to selection of an "especially meritorious paper" (as Dr. Horsley always stated it) presented before some Section at the annual Academy meeting each year. To have a paper

¹ *Proceedings, 1945-1946*, 17.

² *Ibid.*, 46-47.

³ *Ibid.*, 20.

⁴ *Ibid.*, 46.

⁵ *Ibid.*, 55-56.

⁶ *Ibid.*, 16.

selected for the J. Shelton Horsley Research Award soon came to be considered the top scientific honor granted in Virginia.

The first Academy prize under the new title was a joint award. The 1946 honor went to two different Virginia Polytechnic Institute scientists, for separate papers presented, with each paper judged as being "distinctly superior," and apparently of very equal quality. The two winning scientists, and their papers, were Drs. Boyd Harshbarger writing on "Rectangular Lattices," and D. B. DeLury whose contribution was entitled "The Analysis of Latin Squares When Some Observations are Missing."⁷

The status of the James River Project, which had been in abeyance during the war years, was carefully considered by Chairman Marcellus H. Stow of Washington and Lee and his committee. Agreement was reached to press on for completion of the Monograph, even though it was noted that the annual \$5,000 appropriation granted by the Virginia General Assembly had not been requested in 1946. Some of Stow's wartime patience with his chapter authors had finally worn thin: "If lack of interest was shown in some cases," he announced, "new assignments of authorship should be arranged."⁸

The Virginia Junior Academy of Science celebrated its fifth birthday at this 1946 meeting. The Junior Academy was one segment of Academy activities that had a nearly normal tenure during the war years. Junior Academy Chairman Hubert J. Davis of Portsmouth reported that 132 science clubs were members. Davis also suggested means by which the Junior Academy might be strengthened.⁹ A short time later the Council passed a motion made by Dr. R. F. Smart resulting in a more formal organization, with more definite objectives, for the guidance of the steering committee of the junior organization.¹⁰

Dr. Sidney S. Negus reported on the Virginia Science Talent Search. The idea of the "Search," Negus noted, had come from Hubert Davis at a Council Meeting in May, 1944.¹¹ On October 26, 1945, a letter was sent by the State Department of Education "to principals of all white and negro public high schools in Virginia, to headmasters of all private schools, and to rectors of all parochial schools announcing the Virginia Science Talent Search."¹² The state science search was held in conjunction with the fifth national science search. Four Virginians received national "honorable mention," and the Academy threw its prestige behind the fifteen state winners in the young scientists' efforts to get scholarships.¹³

In January, 1943, the Academy's Research Committee had established a prize of \$50 to recognize "outstanding work by any science club in the state."¹⁴ This award was named in honor of Dr. E. C. L. Miller. It was first presented to the Warren County Society of Scientists, Front Royal (Miss Vada C. Miller, Sponsor), in 1944. In 1945 no award was made as only a skeleton meeting of the Academy was held.¹⁵ However, in 1946 the award took on an annual character and was presented that year to the Newport News High School Science Club (Miss Susie V. Floyd, Sponsor).

Among the first indications of a quickening and broadening of Academy interests was brought to the membership at the Thursday night General Meeting in a talk by Dr. Allan T. Gwathmey of the University of Virginia, presented as a part of the report of the Research Committee. "During the past few years, Virginia has been making all too few contributions to the intellectual and social development of the world,"¹⁶ said Dr. Gwathmey as he spoke about the need to establish a research institute in Virginia. The institute, reported Dr. Gwathmey, would have two divisions: basic science and applied science; and once viable would become independent of the Academy. "At the present time, regardless of the immediate difficulties we may be having as a result of the war, the world is passing from an age of scarcity to an age of relative abundance. The significant factor which is making this change possible," Gwathmey asserted, "is the application of scientific knowledge to our system of production. Only when Virginia is making significant contributions to the world of science," he concluded, "can she play her proper role in promoting the political and social changes which are now taking place."¹⁷ Dr. Gwathmey's dream was not to be realized for two more years; but it did come to pass, and its realization stands today near the University of Richmond campus.

Another measure of renewed activity was the attention given to reviving the *Virginia Journal of Science*, which had been dormant since 1943. Discussion of the revival of the Academy journal was led by Dr. Ivey F. Lewis. Dr. Lewis, long

⁷ *Ibid.*, 51.

⁸ *Ibid.*, 27.

⁹ *Ibid.*, 29-30.

¹⁰ *Ibid.*, 52.

¹¹ *Ibid.*, 30.

¹² *Ibid.*, 31.

¹³ *Ibid.*, 33-35.

¹⁴ Thelma C. Heatwole, History of the Virginia Junior Academy of Science, 15. Mrs. Heatwole's manuscript is in the possession of the Virginia Academy of Science, Virginia Institute for Scientific Research, Richmond, Virginia.

¹⁵ *Ibid.*, 15-16; *Proceedings*, 1945-1946, 28-29.

¹⁶ *Proceedings*, 1945-1946, 51.

¹⁷ *Ibid.*, 42-43.

a supporter of an Academy journal, and earlier chairman of the committee which initiated *The Virginia Journal of Science* in 1940, delivered an emotional and eloquent plea that the Virginia Academy of Science Journal resume publication. "All we need is to face the future with a high heart," said the first Academy President. "What if there is an atomic bomb! We have met trouble before. We can meet it again. The Academy is more needed now than ever before, and we should support it with high courage."¹⁸ More discussion followed until Dr. Garnett Ryland of the University of Richmond moved the adoption of the Planning Committee's resolution: "That the publication of *The Virginia Journal of Science* be resumed—that a committee of three be appointed by the incoming president to make plans for this and to report at the 1947 meeting." Dr. Boyd Harshbarger of Virginia Polytechnic Institute seconded the motion and it carried unanimously.¹⁹ The result of this action can be seen on our library shelves today as "*The Virginia Journal of Science, New Series*" (with 23 volumes completed through 1972).

Dr. Arthur Bevan, Virginia State Geologist, and the Academy President, 1946–47, echoed the sentiments of several members when he called for more intensified education in Virginia, for the sort of education that would produce a new breed of social scientist capable of making man "master of his fate upon this planet." Dr. Bevan went on to say: "The scientific study of modern social problems is essential."²⁰ Dr. Bevan may have been correct, but unfortunately his call to arms was not taken up. He himself had commented on what he termed "the dawning of a so-called 'atomic age'." Clearly, the atomic age had more than dawned almost a year earlier on August 6, 1945.²¹ And it was this fact, more than any other, which was to influence the role of science in the ensuing years.

The Academy made substantial progress during 1946–47 according to the report submitted by the venerable Dr. E. C. L. Miller at the Charlottesville meeting. However, he admonished this twenty-fifth meeting of scientific Virginians when he noted: "The world is entering a new era, an era of science. Most of our people in Virginia know little or nothing about it but are still living in the age-old traditions of their fathers. Is it not peculiarly our duty as a state academy of science," he asked, "to assume some responsibility for the enlightenment of the people of our state? . . . I would urge that the Academy take thought in this matter and find some way to function more effectively."²²

In that year, too, more pressure was brought to bear on authors working on the James River Project. At a meeting held in Richmond in April, 1947, Chairman Marcellus H. Stow had "emphasized that the Project should *not* be involved with what somebody may be interested in doing *to* the James River Basin; it should be concerned solely with presentation of factually accurate information." The Chairman was to receive all the completed manuscripts by May, 1948.²³ However, Dr. Stow's optimism was again to be diminished by the slow pens of his colleagues.

A rather thorough discussion of the Virginia Science Talent Search took place at Charlottesville. It was decided to expand the Search to include members of the junior as well as of the senior high school classes. Science open houses to interview contestants had been held during the spring at The College of William and Mary, Virginia Polytechnic Institute, University of Virginia, Medical College of Virginia, University of Richmond and Virginia State College. Forty-two boys and girls received awards from the Academy. Edward Minter Foley of George Washington High School, Danville (Mr. G. L. Thomasson, Sponsor), and Melissa Anthony Warfield of Granby High School, Norfolk (Miss Sybil Boggs, Sponsor), were singled out as "first prize" winners. Mrs. W. Catesby Jones presented Foley with an award in honor of her late husband who was President of the Virginia Academy of Science 1943–44.²⁴ The W. Catesby Jones Prize was to become an annual presentation. Granby High School Science Club of Norfolk won the E. C. L. Miller Award for 1947.²⁵

Virginia Research Institute subcommittee Chairman Dr. Allan Gwathmey made several modest suggestions to get the proposed institute off the drawing board and into operation as soon as possible. Gwathmey's proposals were accepted and his subcommittee was instructed to continue its work.²⁶ Dr. Ivey F. Lewis, commenting on the much discussed Academy journal, said that two mandatory conditions had to be met before publication could begin: 1) there must be sufficient financial support, and 2) agreement must be reached on the nature of material to be published.²⁷

¹⁸ *Ibid.*, 44–45.

¹⁹ *Ibid.*, 45.

²⁰ *Ibid.*, 12.

²¹ Samuel Eliot Morison, *The Oxford History of the American People*. New York: Oxford University Press, 1965, 1044.

²² *Proceedings, 1946–1947*, 17.

²³ *Ibid.*, 27–28.

²⁴ *Ibid.*, 35–45; 51.

²⁵ *Ibid.*, 50.

²⁶ *Ibid.*, 29; for full report see 30–31.

²⁷ *Ibid.*, 34.

²⁸ *Ibid.*, 13-14.

²⁹ *Proceedings, 1947-1948*, 14, 49-50.

³⁰ *Ibid.*, 15.

³¹ *Ibid.*, 23.

³² *Ibid.*, 54.

³³ *Ibid.*, 23; Sidney S. Negus, Statement concerning the Virginia Institute for Scientific Research before the General Laws Committee on January 30, 1958. Paper in the possession of the Virginia Academy of Science, Virginia Institute for Scientific Research, Richmond.

³⁴ *Proceedings, 1947-1948*, 37.

³⁵ *Ibid.*, 47-48.

³⁶ *Ibid.*, 47.

It is interesting to note that the idea of an Academy history was voiced in 1947. President Arthur Bevan, now of the Illinois Geological Survey, suggested that "Charter Secretary" Miller prepare a brief history for the Quarter Centennial.²⁸ It would be a decade before the Academy gave any serious thought to compiling its history, and two decades before such a project was to become a reality.

Members of the Academy attending the twenty-sixth Annual Meeting in 1948 were greeted in the lobby of the Hotel Roanoke by the first exhibit that the American Association for the Advancement of Science had ever displayed at a state academy meeting. The exhibit material was equally divided between national and local Academy displays. This also marked the first time that the Academy's Research Committee had sponsored an exhibit of general interest—"Phase Contrast Microscopy."²⁹

In giving his report to President Jesse W. Beams of the University of Virginia, Secretary Miller credited Chairman Foley F. Smith of the Membership Committee with pulling postwar memberships from 835 to 1007. The Secretary continued his report by saying: "Perhaps the most important accomplishment this year is the launching of the Virginia Institute for Scientific Research. It is now incorporated, independent and functioning and we wish it vigorous growth."³⁰

Dr. Gwathmey's dream had been realized. On July 1, 1947, Dr. John C. Strickland of the Biology Department of the University of Richmond became the new Institute's first full time employee. Dr. Strickland availed himself of the temporary laboratory facilities provided by the University of Richmond to pursue research on "cell growth in the blue-green algae." Eight months later, on March 6, 1948, as Dr. Gwathmey reported, "the Virginia Institute for Scientific Research was incorporated as an independent non-profit organization operating under its own board of trustees, for the purpose of conducting and promoting research in the natural sciences."³¹ Two days later, "through the efforts of the Academy's loyal member, Senator Bird of Chesterfield," a bill was introduced in the General Assembly requesting a \$40,000 appropriation covering the two years 1948-49 and 1949-50. Senator Bird, with the support of Senator John Stewart Battle of Charlottesville, was able to secure a \$20,000 grant for the Institute for the two-year period.³²

Dr. Henry Leidheiser of the University of Virginia was the recipient of the 1948 J. Shelton Horsley Award for his paper read before the Section on Chemistry. The prize winning paper was entitled "Generalizations Concerning the Surface Behavior of Single Crystals of the Face-Centered Cubic Metals."³³

Chairman Marcellus H. Stow was forced to report that, by the May 1, 1948, deadline he had set, only four chapter manuscripts had reached his hands. However, Stow was still optimistic and said that he thought it reasonable to assume that he would receive ten more chapters by January, 1949. In total, the work was to be composed of twenty-four chapters, two of which would not be written until the other twenty-two had come in. There was another reason for trying to wrap up this stage of the James River Project in addition to its already being long overdue. The Virginia General Assembly had appropriated \$5,000 for publication of the monograph during previous bienniums. In 1948, however, a sum of \$10,000 was set aside to aid the Academy, and as Dr. Stow pointed out: "Of course none of this money has been spent, but it is extremely vital that the Academy complete the work on the monograph to assure publication during the current biennium."³⁴

The Academy had long been working for the establishment of a state museum of science through the efforts of a committee chaired by Dr. George W. Jeffers, Academy President 1941-42. However, by 1948 the proposal for a science museum had been taken up by the state of Virginia and was at that time in the hands of a commission appointed by Governor Tuck.³⁵ Consequently there was no report from Dr. Jeffers. Nor was there much of substance reported by Dr. Ladley Husted of the University of Virginia, the Chairman of the committee investigating the resumption of publication of an Academy journal. The Chairman did say that "a great deal of exploratory work was done," but no other report was given.³⁶

Regulations governing the Virginia Science Talent Search were again revised in 1948, so as to again include only seniors in high school who had entered the National Science Talent Search. The interview system was again employed in centers at the University of Virginia, Virginia Polytechnic Institute, University of Richmond, William and Mary and Hampton Institute to select the fifteen winners

invited to the Academy meeting.³⁷ The E. C. L. Miller Award went to Wilson Memorial High School of Fishersville (Mrs. B. G. Heatwole, Sponsor); and the W. Catesby Jones Memorial Prize to Millard C. Townsend of William Fleming High School of Roanoke. Townsend had the highest rating in the 1948 Virginia Science Talent Search.³⁸

In concluding his report on the Virginia Junior Academy of Science, Chairman James W. Cole, Jr., of the University of Virginia, pointed out that "it is very disquieting to see a youngster highly elated over being a winner and then to see him when he finds that only a tuition scholarship might be available. Along this line," continued Cole, "the great need is for several *full subsistence scholarships* for the talented young people who cannot attend college unless such help is available."³⁹

One of the unforgettable and moving moments of the Academy meeting occurred on May 7 at the dinner session when an oil portrait of Dr. E. C. L. Miller painted by Herbert E. Ives, a physicist connected with the development of television, was presented. In his presentation address Dr. Ivey F. Lewis remarked: "I think it may fairly be said of Dr. Miller as of Sir Christopher Wren, the famous architect who rebuilt London after the Great Fire of the seventeenth century and whose influence extended to Virginia, 'If you would see his monument, look around you'."⁴⁰ As Dr. Lewis spoke, Dr. Miller wept silently.⁴¹ Dr. Miller, often referred to as "Mr. Academy," was 81 years of age at this time.

The most significant piece of business transacted at the twenty-seventh Annual Meeting, presided over by Dr. Sidney S. Negus at Richmond in 1949, concerned the reestablishment of *The Virginia Journal of Science*. Chairman Ladley Husted presented the Publication Committee's report covering many problems that an Academy journal would have to deal with. It was a challenging report, filled with recommendations and offered many examples from other state academies engaged in publication.⁴² After Dr. Husted concluded, Dr. Lewis moved that the Academy Conference recommend to the Council adoption of the Committee's report that the Council revive publication of *The Virginia Journal of Science* by January 1, 1950.⁴³ This was seconded and passed by a rising vote.

At a Council meeting held in Charlottesville on June 19, 1949, the decision was reached to launch the *Journal* through a subsidization by the Academy membership. This agreed upon, Dr. Boyd Harshbarger of Virginia Polytechnic Institute and Academy President 1949-50 was unanimously elected Editor-in-Chief for a five-year term. Dr. Horton Hobbs of the University of Virginia was chosen for the position of Technical Editor and Wilbert Schaal of Washington, D. C., became the Assistant Technical Editor.⁴⁴

Dr. Harshbarger, Academy President 1949-50, together with Dr. Ivey Lewis, immediately instituted a letter writing campaign to the Academy members soliciting financial contributions for *The Virginia Journal of Science*, New Series. The Academy members responded with gifts totalling over \$3,000 and this money served as a financial backlog which assured the successful revival of the *Journal*.

The *Journal*, however, was not the only success story at this Annual Meeting. Dr. Allan T. Gwathmey, President of the Board of Directors of the Virginia Institute for Scientific Research, gave an encouraging if not entirely satisfying report. After much negotiating and a few false starts it appeared that the Institute had secured the Museum Building in the R. E. Lee Camp Memorial Park for its laboratory and administrative facilities. However, Dr. Gwathmey told the Academy, Mrs. Daisy Avery, Chairman of the committee responsible for operating the museum, had announced that she would ask for an injunction to halt the Institute's use of the building. At the time of Dr. Gwathmey's report a hearing on the question was pending.⁴⁵

The hearing was held shortly thereafter and resulted in a victory for the embryonic Institute. As the 1950 Institute report relates: "On June 1, 1949, after a protracted controversy between the State of Virginia and a branch of the United Daughters of the Confederacy, the Research Institute opened its headquarters in the old Museum Building in the R. E. Lee Memorial Park on the Boulevard in the City of Richmond."⁴⁶ The new Institute offered the Virginia Academy of Science a third floor room in the building for an office or repository.⁴⁷

A note of optimism was also obvious as Marcellus Stow reported that the James River Monograph was approaching publication. Chairman Stow suggested that two volumes be published because many of the chapters were already in final form,

³⁷ *Ibid.*, 27-31; Heatwole, 19.

³⁸ *Ibid.*, 51-52.

³⁹ *Ibid.*, 32.

⁴⁰ *Ibid.*, 52-53.

⁴¹ *Virginia Journal of Science*, New Ser. 6: 1, 2, 1950. Hereinafter cited *VJS*.

⁴² *Proceedings, 1948-1949*, 51-58.

⁴³ *Ibid.*, 60.

⁴⁴ *Ibid.*, 72-73.

⁴⁵ *Ibid.*, 27-28.

⁴⁶ *VJS*, New Ser., 1: 298, 1950.

⁴⁷ *Ibid.*, 299.

⁴⁸ *Proceedings, 1948-1949*, 42.

⁴⁹ *VJS, New Ser.*, 1: 78, 1950.

⁵⁰ *Proceedings, 1948-1949*, 58.

⁵¹ *Ibid.*, 17; Samuella Crim, History of the Section of Science Teachers of the Virginia Academy of Science, 1; Robert M. Hubbard, Virginia Academy of Science History of the Section of Engineering, 1. Both manuscripts in the possession of the Virginia Academy of Science, Virginia Institute for Scientific Research, Richmond.

⁵² *Proceedings, 1948-1949*, 67.

⁵³ *Ibid.*, 29; 61.

⁵⁴ *Ibid.*, 32-36.

⁵⁵ *Ibid.*, 40-41.

⁵⁶ *Ibid.*, 18.

⁵⁷ *Ibid.*, 62.

⁵⁸ *Ibid.*, 61.

⁵⁹ *Ibid.*, 63-65.

⁶⁰ Justus H. Cline to Lloyd C. Bird, Stuarts Draft, Va., June 6, 1949. Folder A. Virginia Academy of Science Papers, Virginia Institute for Scientific Research.

and also because "the Academy is obligated to show specific accomplishment on the Project before the General Assembly convenes in January, 1950, as a justification for the appropriation of \$10,000 in 1948 for publication of the monograph."⁴⁸ Less than a week later, at an Academy Council meeting, Dr. Stow announced that the monograph, *The James River Basin—Past, Present and Future*, was set for a January, 1950, publication date.⁴⁹

The Museum Committee did not appear to be fairing as well as the James River Project Committee. Chairman George W. Jeffers turned the floor over to Mrs. Alice Pollard Stryker, a member of Governor Tuck's commission on a State Museum of Science. Mrs. Stryker reported that sometime in the future, after the construction of the new State Office Building, the State Finance Building in Capital Square would be available as a State Science Museum.⁵⁰

A new section was instituted at the twenty-seventh Annual Meeting and another section was reorganized. The Section of Science Teachers held its first meeting at Richmond in 1949, while the Section of Engineering, founded in 1939 but not active since 1943, also met at Richmond.⁵¹

Two new honors were established at this Academy meeting. The first "Honorary Life Membership" in the history of the Academy was bestowed on John B. Lewis of Broadnax, a member of the Agricultural Sciences Section.⁵² Also at this meeting Dr. Guy W. Horsley reported that the Finance and Endowment Committee had authorized the drawing up of certificates to be presented to all the Academy Prize and "J. Shelton Horsley Research Award" winners since 1927. The first of these certificates went to Walter S. Flory of the University of Virginia, when he was presented with the 1949 J. Shelton Horsley Research Award for his prize winning paper "Pollen Condition in Some Species and Hybrids of *Rosa* with a Consideration of Associated Phylogenetic Factors." At the same time Mr. Hanmer, Chairman of the Research Committee, "noted that other scrolls were being mailed to the previous recipients" of the Award.⁵³

Seventeen top winners in the Virginia Science Talent Search were named along with winners in the various Junior Academy competitions. The E. C. L. Miller Award went to the Newport News Science Club (Miss Susie Floyd, Sponsor), and the Major W. Catesby Jones Prize to the first place winner in the individual exhibit category, Bennett Johnson, Armstrong High School, Richmond.⁵⁴

Dr. James W. Cole of the University of Virginia again noted that the tangible award for a winner was no more than a diploma. He pointed out that no aid was given to defray travel or research expenses of the entrants. Moreover, the Academy had no funds to assist a worthy but needy student in his quest for knowledge.⁵⁵

The Academy found itself in 1949 with a new Secretary-Treasurer. Foley F. Smith, formerly the Assistant Secretary-Treasurer, had taken up the responsibilities of Secretary Miller. "As of September 28, 1948," reported Smith, "Dr. E. C. L. Miller, Secretary-Treasurer of the Academy since its organization in 1923, requested that the duties of this office be taken over by the Assistant Secretary-Treasurer. His persistence that this change be made finally persuaded those in authority to make it reluctantly."⁵⁶ In the nominations for Academy officers for 1949-50, Dr. Miller was singularly honored by being selected for the position of "Secretary-Treasurer Emeritus."⁵⁷

The scientists attending the dinner meeting were addressed by Dr. Howard A. Meyerhoff, Administrative Secretary of the American Association for the Advancement of Science, on the subject of "The Scientist in Politics." Dr. Meyerhoff announced the formation of a new agency to help those scientists squeezed between "governmental directed research and industrial research. To help the scientist in this 'narrow corridor' a new agency, the National Science Foundation, was being organized. This foundation has as its purpose the development of scientific research, and the promotion of this research by providing funds."⁵⁸

After his installation as President, Dr. Boyd Harshbarger of Virginia Polytechnic Institute spoke concerning the need for making better use of young scientists trained in Virginia graduate schools, and he also addressed himself to the improvement of secondary science education.⁵⁹ A few weeks later, Justus H. Cline of Stuarts Draft had an opportunity to talk with Dr. Harshbarger and then wrote to Senator Bird concerning his delight that the Academy had "taken on the science instruction problem we've agitated ourselves about for so long."⁶⁰

A significant milestone in the history of the Virginia Academy of Science was

reached on January 30, 1950, when *The Virginia Journal of Science*, volume 1, new series, number 1, edited by Dr. Harshbarger, was mailed from Blacksburg to the members of the Academy. The printing was done by the Graphic Arts Department of the *Radford News Journal*. The first issue was composed of four articles and a section entitled "News and Notes" which included general information for Academy members and news from the Sections.⁶¹

The first number of the *Journal* carried a notice of a change in the procedure in the competition for the J. Shelton Horsley Research Award. Since "few individuals were actively competing" for the award, it was decided by the Research Committee that "every paper composing a report of original research performed by its author, which is presented before any Section of the Academy during the 1950 May session, will be eligible for the Award."⁶²

The second issue of the *Journal* illustrated more uses to which this organ of communication among Academy members could be put. The complete program for the Academy's twenty-eighth Annual Meeting was published.⁶³ It became a standard procedure, followed for some years, to thus inform the members of the May program. In addition, this issue introduced the question of a constitutional revision, since the Academy was operating under rules last revised in May, 1939.⁶⁴ Later, at the Annual Meeting, a revised constitution, as well as certain by-law changes, were accepted.⁶⁵

The highlight of the Academy meeting in 1950 at Roanoke came when Chairman Stow presented an analysis of the progress of the James River Project and showed the members a printed copy of the advertising brochure.⁶⁶ An interesting discussion of the events surrounding the report given by Dr. Stow was published by Dr. Sidney Negus shortly after the meeting. As Dr. Negus relates the story, Chairman Stow, scheduled to report to the Academy at approximately 10 P.M. on the evening of May 12, 1950, found himself in a somewhat embarrassing position at 9:30 P.M. A year earlier Stow had more or less predicted that his next report would be to the effect that the monograph had been published. However, as Stow sat empty-handed at 9:30 his appearance was somewhat misleading. The Chairman had arranged for one of his students at Washington and Lee, Richard McDonald, to pick up some of the completed books at the bindery in Baltimore and to rush them to Roanoke. McDonald arrived from the Albrecht Company at 9:45 P.M., and thus Dr. Stow was able to give his report with a copy of *The James River Basin—Past, Present and Future* in his hands. "At the close of this report, he presented this copy number one to Justus H. Cline, and copy number two to Dr. Rudd, the men to whom the Monograph is dedicated."⁶⁷

Mr. Hubert J. Davis reported that the "First Annual Tidewater Fair," sponsored by the *Norfolk Ledger-Dispatch*, had been held April 22–25, 1950. It was the first attempt, Davis said, at a science fair by any city in the southeastern United States.⁶⁸

Science open houses were held in the spring of 1950 at Medical College of Virginia, William and Mary, Bridgewater College, Virginia Polytechnic Institute, University of Virginia, University of Richmond and Saint Paul's School, Lawrenceville, "for negro students." The records of the Academy show that there was some confusion in the presentation of awards to Junior Academy winners. Charles Moncure of Radford High School took first place in the "individual exhibits" category, but there is no record of his having received the W. Catesby Jones Prize—often presented to the junior who distinguished himself in that competition. In addition, the E. C. L. Miller Award, annually given to the outstanding science club, instead was presented in 1950 to the club sponsor, Mr. J. L. Perry of the Booker T. Washington High School Science Club, Norfolk,⁶⁹ where it apparently should have gone to the school club—not the sponsor.

Dean Ivey F. Lewis and Dean Wortly F. Rudd, the first and eighteenth Presidents of the Academy, were both made Honorary Life Members in 1950.⁷⁰ The Horsley Research Award went to Erling S. Hegre of the Medical College of Virginia for his study "A New Research Tool and Technique for the Biologist." Honorable Mention went to Donald M. Britton, Blandy Research Fellow of the University of Virginia for his paper on "Cytogenetic Studies on the Boraginaceae."⁷¹ Also in 1950 the Academy found itself with two "Official Collegiate Chapters" when petitions for affiliation from groups at Virginia Military Institute and Virginia Polytechnic Institute were approved.⁷²

⁶¹ *VJS*, New Ser. 1: inside front cover. 1950.

⁶² *Ibid.*, 68. For full list of J. Shelton Horsley Award Winners see Table V, Chap. VIII.

⁶³ *VJS*, New Ser. 1: 147–76. 1950.

⁶⁴ *Ibid.*, 133–37.

⁶⁵ *Ibid.*, 308–314. It should be noted that the fourth number in each volume of the *VJS* carries the Proceedings of the annual Academy meeting.

⁶⁶ *Ibid.*, 302–8.

⁶⁷ Sidney S. Negus, "The James River Project," *VJS*, New Ser. 1: 194–195. 1950. Note that number three in each volume of the *VJS* is published in July after the annual meeting, but before the full record of that meeting is made available in number four which comes out in September.

⁶⁸ *VJS*, New Ser. 1: 272–273. 1950.

⁶⁹ *Ibid.*, 284–85.

⁷⁰ *Ibid.*, 322.

⁷¹ *Ibid.*, 316.

⁷² *Ibid.*, 300.

	Dr. Guy W. Horsley of Richmond was chosen the twenty-eighth President of the Academy, 1950–51. His election marked the first time a son of a former President, Dr. J. Shelton Horsley (fourth President, 1926–27), had been so honored. ⁷³
⁷³ <i>Ibid.</i> , 318	
	Shortly after the twenty-eighth meeting the Virginia Academy of Science was saddened by the deaths of two former Presidents. Dr. Donald W. Davis, Chairman of the Biology Department at the College of William and Mary, passed away on June 30, 1950. Dr. Davis was quite instrumental in the founding of the Academy, was one of the charter members, and served as the fifth President, 1927–28. ⁷⁴ Less than one month later, July 26, 1950, Dr. Wortly F. Rudd, Dean of the School of Pharmacy at Medical College of Virginia, 1920–1947, a significant figure in the history of the James River Project, and Academy President 1940–41, passed on. ⁷⁵
⁷⁴ <i>VJS</i> , New Ser. 2: 62. 1951.	
⁷⁵ <i>Ibid.</i> , 129.	
	Much of the Academy's activity at the 1951 meeting, held at Lynchburg, was with regard to students. One aspect of student involvement concerned foreign exchange students. For some years a committee, chaired in 1951 by Dr. Edgar J. Fisher of Sweet Briar College, had been keeping records on foreign students—how many there were, where they were from, their distribution among schools in the United States and in Virginia, and the course of study they pursued. In his report to the Academy, Fisher pointed out that "the significance of the foreign student movement obviously transcends statistics. . . . The enlightened resources of the community should be brought to bear in the academic and non-academic phases of community life. . . . It is by no means sufficient," he concluded, "that these young people from other lands should have merely a successful academic experience. . . . The purely academic should be supplemented by fruitful experiences in the civic, industrial, recreational, religious, and social phases of American life." ⁷⁶
⁷⁶ <i>Ibid.</i> , 266–67.	
	The Collegiate members of the Academy, although not a large group, decided to continue their activities for another year. They affirmed that a definite effort would be made to attract new members, and that a separate Section meeting, replete with papers, would be held at the 1952 meeting. ⁷⁷ A notch lower, in the high school competition fostered by the Junior Academy, the Wilson Memorial Science Club of Fishersville (Mrs. B. G. Heatwole, Sponsor), won the E. C. L. Miller Award. The W. Catesby Jones Prize was presented on a different criterion in 1951. The award was given for the best essay in chemistry and was won by Marcella M. Eubank of Wilson Memorial High School at Fishersville for her paper "Reactions in Gels." ⁷⁸
⁷⁷ <i>Ibid.</i> , 281–82.	
⁷⁸ <i>Ibid.</i> , 262–65.	
	Dr. Stow reported that the press reception of <i>The James River Basin—Past, Present and Future</i> was quite enthusiastic; however, only 226 copies of the book had been sold. ⁷⁹ Another part good-part bad report was presented concerning the Academy's membership. By revising the constitution so as to drop any member in financial arrears for one year, instead of three years as was formerly the case, some ninety-two members were lost; however, membership recruitment had been good and the Academy found that it had only ten less members than in 1950. ⁸⁰ The honorarium for Secretary-Treasurer Foley F. Smith was increased from \$300 to \$400. ⁸¹
⁷⁹ <i>Ibid.</i> , 276–79.	
⁸⁰ <i>Ibid.</i> , 267–68.	
⁸¹ <i>Ibid.</i> , 280.	
	At the Lynchburg meeting, the coveted research honor went to D. B. Duncan. The title of the V. P. I. statistician's Horsley Award winning paper was "A Significance Test for Differences Between Ranked Treatments in an Analysis of Variance: the Properties of the Multiple Comparison Test." ⁸²
⁸² <i>Ibid.</i> , 258.	
	The thirtieth Annual Meeting in 1952 was called to order at Old Point Comfort by President Paul M. Patterson, the second person and the second biologist from Hollins College to serve in this office. Again a substantial amount of the Academy's attention was focused on students.
	President Patterson recommended to the Academy Conference that the Committee on Exchange of Foreign Students, first mentioned in the <i>Proceedings 1946–1947</i> , be discontinued as its function no longer appeared necessary. ⁸³ The committee apparently was organized primarily to investigate and report on foreign students engaged in study in the United States. Several agencies of the state and national government kept similar records; nowhere, however, does a clear-cut explanation of the committee's responsibilities appear. The President's recommendation, although no word of decisive action taken on it is found in the records of the Academy, obviously was accepted as the Committee on Exchange of Foreign
⁸³ <i>VJS</i> , New Ser. 3: 236. 1952.	

Students was not among those continued by Senator L. C. Bird, President of the Academy 1952-53.⁸⁴

Dr. Edgar Fisher, in what was to be his last report to the Academy concerning foreign students, pointed out that the state of Virginia was woefully lacking in drawing students from the uncommitted world, especially from the Arab Middle East which was represented by only four students in Virginia. "Virginia should do its part better," said Fisher, "in helping to train the young men and women from this crucial area. . . . On such a modest basis we cannot do our proper part in liberalizing the thinking of that part of the world or in developing democracies with satisfactory restraint and justice."⁸⁵

For some years the "Speakers Bureau" of the Academy had been compiling lists of available speakers from the academic and industrial fields to address interested groups throughout the state. Chairman Frank C. Vilbrandt of V. P. I. reported at the Lynchburg meeting. It was pointed out that sometimes a speaker was objected to by high school principals on the grounds that he tried "to sell the idea of science to high school students." In addition principals complained that guidance work should continue to be totally within the province of their own staffs.⁸⁶ New committee Chairman Dr. S. S. Obenshain, of Virginia Polytechnic Institute, reported to the Academy that quite often the opportunity to make use of a competent speaker was simply ignored. However, Dr. Obenshain recommended "that once more this service be offered to various groups of the state and unless the demand for speakers is fairly large that the committee be discontinued."⁸⁷

The 1952 Horsley Research Award was won by Dr. D. R. H. Gourley, Jr., of the University of Virginia's Pharmacology Department, for his paper on "The Mechanism of the Uptake of Radioactive Phosphate by Human, Rabbit and Chicken Erythrocytes."⁸⁸

For the first time since the Academy inaugurated the Virginia Science Talent Search in 1946 a student from Virginia was named as a winner in the National Science Talent Search. She was Miss Ruth Flinn Harrell of Maury High School, Norfolk. The emphasis which the academy placed on the science search began paying off in other ways as well. Twenty-eight institutions of higher learning in Virginia made over one hundred scholarships available to the top science students, and industries contributed \$1,300 to defray the expenses of the finalists.⁸⁹ The E. C. L. Miller Award went to the Science Club of Martinsville High School (Felix Sanders, Sponsor).⁹⁰ No mention was made of the W. Catesby Jones Prize.

Dr. Marcellus H. Stow, reporting for the Long Range Planning Committee announced that two major subcommittee projects were underway. One was a study of secondary school science teaching under the direction of Dr. F. G. Lankford of the University of Virginia, and the other the establishment of a Dismal Swamp Project with Dr. J. T. Baldwin of William and Mary as the Chairman.⁹¹ Both would be heard from again.

Between the 1952 and 1953 meetings, the Academy Conference was streamlined. The Council, meeting on October 12, 1952, adopted a suggestion made by Dr. Stow that committee reports be mimeographed in advance and made available to the members. In addition, it was decided that the reading of all reports, except those by the Chairmen of the Finance and Research Committees and the Academy Secretary, would be dispensed with.⁹² Also, "after considerable discussion" a motion was introduced and passed which eliminated the annual dinner for both the Junior and Senior Academy.⁹³

At a later meeting, in April 1953, the Council members agreed that a new approach for finding a location for a state Museum of Science was essential, "as it was felt that the State Finance Building would not be available at any time in the near future."⁹⁴

It was indeed a streamlined Academy Conference that President L. C. Bird convened at the Virginia Military Institute in 1953. With the new procedure in effect the meeting lasted only one hour and five minutes; the previous year the Conference had dragged on for two hours and forty-five minutes, not adjourning until 10:45 P.M. Business of consequence, however, was still transacted at the speeded-up meeting—the fiscal year of the Academy was changed to coincide with the calendar year.⁹⁵

Chairman Lankford of the Committee on Science Teaching in Secondary Schools presented a disquieting report to the Academy. Dr. Lankford pointed out that

⁸⁴ *Ibid.*, 223-26. Note that the *Proceedings* are incorrectly printed to be for 1952-53, when they are for 1951-52; and that the committees appointed by President Bird (see *VJS*, Vol. 4: 157-160) are for 1952-53, not as printed for 1951-52.

⁸⁵ *Ibid.*, 254-55.

⁸⁶ *VJS*, New Ser. 2: 263-64. 1951.

⁸⁷ *VJS*, New Ser. 3: 249. 1952.

⁸⁸ *Ibid.*, 247.

⁸⁹ *Ibid.*, 252-54.

⁹⁰ *Ibid.*, 251.

⁹¹ *Ibid.*, 246-47.

⁹² *VJS*, New Ser. 4: 141. 1953.

⁹³ *Ibid.*, 142.

⁹⁴ *Ibid.*, 144.

⁹⁵ *Ibid.*, 169-70.

⁹⁶ *Ibid.*, 195-98.

⁹⁷ *Ibid.*, 189.

⁹⁸ *Ibid.*, 168.

⁹⁹ *Ibid.*, 182.

¹⁰⁰ *Ibid.*, 188, 202.

¹⁰¹ *Ibid.*, 186.

¹⁰² *Ibid.*, 202.

¹⁰³ *Ibid.*, 193-94.

¹⁰⁴ *Ibid.*, 140.

scientific subjects did not occupy a significant portion of high school curriculums, that secondary school science teachers were often not fully qualified even though they possessed certificates permitting them to teach science, and that relatively few students elected to take science courses. Recommendations for further study, especially concerning teacher certification, were made by the committee.⁹⁶

The report of the Committee on Activities for Collegiate Members, presented by Dr. W. Schyler Miller of Randolph-Macon College and Mr. Robert P. Carroll of Virginia Military Institute, was straightforward, but was certainly neither bright nor promising. "Graduate students," said Miller and Carroll, "seemed to appreciate the value of Academy work, but with few exceptions . . . undergraduates seemed satisfied to do the minimum work required to get by, and were too busy with their own fraternity and other extracurricular activities to bother with anything more serious. . . . With the students between high school and graduate school," they concluded, "we must again report failure." The two men went on to suggest a review of the committee's purpose and a reorganization of its personnel and methods.⁹⁷ At a council meeting shortly afterwards a motion was made that the "Committee on Collegiate Activities be abolished"; it was passed.⁹⁸

The 1953 J. Shelton Horsley Research Award was won by Mr. Stephan Berko and Dr. Frank L. Hereford, Department of Physics, University of Virginia, for their joint paper "Deflection of High Energy Electrons in Magnetized Iron."⁹⁹

Virginia's Juniors again were represented in the elite winners' circle of the twelfth National Science Talent Search. In 1953 the winning Virginian was Miss Merle A. Mitchell of Booker T. Washington High School, Norfolk, for an essay on "Mass Analysis of Crude Oil."¹⁰⁰ For the first time in its history the E. C. L. Miller Award was presented to two outstanding science clubs: The Newport News High School Science Club (Miss Susie Floyd, Sponsor) and the Buckingham Central High School Science Club (Mr. O. P. Sadler, Sponsor).¹⁰¹

At this thirty-first meeting of the Academy Justus H. Cline was awarded an Honorary Life Membership by the Academy Council.¹⁰² Dr. Cline, educated at Bridgewater College, Northwestern University, and the University of Virginia, had been a geologist with the Dutch Shell Oil Company, before retiring to Stuarts Draft in 1929. He was a pioneer during the 1920's in conservation, having promoted the 32,000 acre Big Levels Wildlife Refuge, in the George Washington National Forest, as well as initiating The Unita Basin, and the dam for the South River Water Supply System. As noted earlier in this history, it was his original idea that the Academy develop the study leading to the volume "The James River Basin, Past, Present and Future." He was prolific in ideas, in several fields, which were later to be seized upon and developed by others.

It was this thirty-first meeting which found the ageing Dr. Miller absent for the first time in Academy history.¹⁰³

In the summer of 1953 President Allan T. Gwathmey of the University of Virginia addressed his colleagues through a message in *The Virginia Journal of Science*. Wrote Dr. Gwathmey: "Because of the increasing importance of science to our military and economic security it has become more centralized, more secretive, and more mercenary. Consequently, science is having less and less intellectual and spiritual appeal to the individual. . . . It may be that such modest local organizations as the Virginia Academy of Science, which brings science down to earth and which relates it to the individual and the local community, will in time save the day for science and democracy."¹⁰⁴

During the eight years from 1946-1953, covered by this chapter, the Academy had made significant progress, advances which could be measured by several yardsticks. A most significant achievement was the firm establishment of *The Virginia Journal of Science*, New Series, which had completed four volumes, of four issues each, by the end of 1953. In these four volumes had appeared 1544 pages, including 67 excellent scientific papers, most of them by Academy members. During this eight year period one new section, the Science Teachers Section, was added, and the Engineering Section, dormant since 1942, was rejuvenated. Before twelve different sections, at eight Annual Meetings, a total of 1515 scientific papers were presented. The abstracts of 823 of these appeared in the first four volumes of *The Virginia Journal of Science*, New Series, and abstracts of the other 692 papers had already appeared in the Annual Proceedings for 1946, 1947, 1948, and 1949. The number of papers presented before Annual Meetings of the Academy increased

from 130 in 1946 to 225 in 1950, and averaged 189 per year for the eight year period. Among other fine achievements, the Virginia Institute for Scientific Research became a reality; and, "The James River Basin—Past, Present and Future" was published.

Seven years earlier Academy President H. Rupert Hanmer stood before his colleagues and spoke about the war imposed but still evil "shackles of restraint and secrecy" which thwarted the spirit of research, as well as of a "job of work to do." Clearly by 1953 there was much evidence to show that the Academy had taken Hanmer's advice and gotten on with its work, but just as clearly some of the stifling control which Hanmer expected to be left in the past was still in existence, and was still considered a threat by some members of the Academy.