CHAPTER I

The Beginning

During Thanksgiving week in November of 1920 nine biologists representing various institutions of higher learning in the state of Virginia met in Richmond at John Marshall High School to plan and organize an association for Virginia biologists. Those in attendance were Flora Bryson, East Radford Normal School; W. L. Dolley, Randolph Macon College at Ashland; P. F. Fackenthall, Medical College of Virginia; H. E. Hayden, Jr., and Paul Merriman, University of Richmond; Ivey F. Lewis, University of Virginia; and Donald W. Davis and E. J. Grimes, College of William and Mary.[1] Professor Hayden of the University of Richmond made the motion that such an association be formed and Professor Dolley of Randolph Macon seconded it. The assembled scientists unanimously adopted the motion.[2]

Dr. Ivey F. Lewis of the University of Virginia was elected president of the new Association of Virginia Biologists. Dr. Horace E. Hayden vice president, Dr. Donald W. Davis of William and Mary secretary-treasurer, and W. D. Hoyt of Washington and Lee University and F. B. Fromme of Virginia Polytechnic Institute composed a two-man Executive Committee.[3] These officers worked swiftly and in two months, on January 29, 1921, the first full meeting of the Association was held at the University of Virginia with twenty biologists in attendance.[4] From that meeting of nine biologists at a Richmond high school in 1920 was to come the Virginia Academy of Science which within twenty years could boast of nearly one thousand members.

In April of 1922 the second annual meeting of the Association of Virginia Biologists was held on the campus of Randolph Macon Woman's College at Lynchburg. At this time the Association authorized its Executive Committee, composed of the recently elected officers—President W. D. Hoyt, Vice President Donald W. Davis, Secretary-Treasurer W. L. Dolley—and Horace E. Hayden of Richmond, J. I. Hamaker of Randolph Macon Woman's College, and former President Ivey F. Lewis, to begin working towards the formation of an academy of science for Virginia.[5]

Dr. Davis, as vice president of the Association of Virginia Biologists from April 1922 until April 1923, played an important part in laying the groundwork for the formation of the Virginia Academy of Science. Davis's correspondence makes it clear that Secretary-Treasurer Dolley and President Hoyt found his counsel both wise and stimulating. As early as the first of November 1922 Davis noted in letters to both Dolley and Hoyt that work on the academy was progressing very well; a list of prospective members was rapidly being compiled by Dr. Paul A. Warren of William and Mary and Dean Wortley F. Rudd of the School of Pharmacy at the Medical College of Virginia. Davis hoped that invitations could be sent to the men selected for academy membership to attend a planning session sometime in November at Richmond.[6]

The Christmas holiday and the beginning of the spring semester in 1923 slipped by with little more being accomplished, as the middle of February found the biologists still concerned with sending out invitations to various scientists in the state. The problem of composing a suitable letter of invitation seems to have devolved on Dr. Dolley of Randolph Macon as secretary of the organization. However, Dolley requested Ivey F. Lewis, the first president of the Association, to draft an invitation over his own signature for the Association of Virginia Biologists. The invitation was also to be signed by leading scientists of other disciplines throughout the state and then circulated among prospective members.[7]

Dolley, writing to Davis in March of 1923, made his reason for asking Lewis

[1] *Organization and Proceedings 1923-1924*, 3; George W. Jeffers, History of the Virginia Academy of Science, 6. Jeffers' manuscript is in the possession of the Virginia Academy of Science, Virginia Institute for Scientific Research, Richmond, Virginia. The paginations refer to the sequential pagination I have pencilled on the manuscript.

[2] Jeffers, History, 7.

[3] *Proceedings 1923-1924*, 3.

[4] Jeffers, History, 8.

[5] *Proceedings 1923-1924*, 5.

[6] Donald W. Davis to W. L. Dolley, Williamsburg, Oct. 31, 1922; and Davis to W. D. Hoyt, Williamsburg, Oct. 31, 1922, both in Dr. Donald W. Davis Papers, Earl Gregg Swem Library, College of William and Mary, Williamsburg, Va.

[7] Ivey F. Lewis to Davis, Charlottesville, Va., Feb. 28, 1923, Davis Papers.

to write the letter quite explicit. "Don't you think," he asked, "that the biologists should have as their representative in this important movement the most prominent biologist in the state? I feel that Dr. Lewis is the man to attend to this."[8]

Dr. Lewis drafted a letter of invitation and sent it from Charlottesville to Dr. Davis in Williamsburg early in March 1923. A few days later Davis wrote back suggesting some minor alterations but on the whole approving what Lewis had done.[9] In addition to Dr. Lewis, who signed for the biologists and their Association, a number of men from other scientific disciplines signed the letter: Graham Edgar, professor of chemistry, University of Virginia; B. G. Childs, professor of education, Randolph Macon College; H. D. Campbell, professor of geology, Washington and Lee University; Joseph E. Rowe, professor of mathematics, College of William and Mary; Wortley F. Rudd, professor of chemistry, Medical College of Virginia (for the medical sciences); George O. Ferguson, professor of psychology and education, University of Virginia; and Frank Bane, commissioner of public welfare, Commonwealth of Virginia (for sociology).[10] The invitational letter was mimeographed and distributed, and on April 26, 1923, scholars representing a full range of scientific interests converged on Williamsburg, both for the third and last annual convention of the Association of Virginia Biologists and for the first annual meeting of the Virginia Academy of Science.

The procedure followed at this organizational meeting of the Academy, although it has been greatly expanded, has remained the standard for all subsequent meetings. Eighteen papers, almost half of which dealt with biology, were presented by those in attendance. Five of those reading papers were from William and Mary and four were from the University of Virginia.

After the papers had been heard and William and Mary's President J. A. C. Chandler had welcomed the Academy on behalf of the College, Dr. W. C. Coker, a former president of the North Carolina Academy of Science, addressed the delegates on "The Scope and Function of a State Academy of Science."[11]

At the conclusion of this first meeting in Williamsburg the charter members of the Academy numbered 135. According to special interest the distribution was as follows: biology, 55; chemistry, 27; medical science, 27; physics and mathematics, 26; psychology and education, 18; geology, 10; and sociology and economics, 9.[12]

The new Academy elected officers for the ensuing year and chose for its president Dr. Ivey F. Lewis whose reputation and hard work had done so much toward making the Virginia Academy of Science a reality. There has been some dispute among Academy members as to whether Dr. Lewis should be considered the founder of the Academy. It appears that several people favored an academy, indeed several people worked tirelessly toward that end: President Lewis, Doctors Davis and Warren of William and Mary, Hoyt of Washington and Lee, Dolley of Randolph Macon and others. However, it was, in the words of Dr. Dolley, "the most prominent biologist in the state," Dr. Lewis, who was requested to assume the leadership of this project. And, although Dr. Lewis certainly could not have accomplished the task alone, it was unquestionably under his immediate guidance that the organization was founded and under his leadership as president that it began its successful career.

Dr. George W. Jeffers, president of the Virginia Academy of Science 1941–42 and the man responsible for collecting much of the information dealing with the Academy's history, described Lewis as "the adept compromiser whose graciousness and gentility of manner commanded the respect of scientists and public alike, and assured that sort of harmony without which no organization can prosper. . . ."[13] Lewis was a man of ability and character; his honored position in the annals of the Virginia Academy of Science is undoubtedly secure.

Another individual elected to office in the Academy at its first meeting in Williamsburg in 1923 was to serve the Academy unselfishly for nearly three decades. In the course of time he was to eclipse everyone in his knowledge of the organization and was to become known in common parlance as "Mr. Academy." This man was the permanent secretary-treasurer of the Academy, Dr. E. C. L. Miller of the Medical College of Virginia. The accolades Dr. Miller received from all who knew him are overwhelming; no man could retire from the presidency of the Academy without recognizing the great debt of gratitude he owed Dr. Miller. "A man of balanced calm and profundity," he "became the Academy's gyroscope

[8] W. L. Dolley to Davis, Ashland, Va., March 8, 1923, Davis Papers.

[9] Davis to Lewis, Williamsburg, March 8, 1923, Davis Papers.

[10] *Proceedings 1923-1924*, 5.

[11] *Ibid.*, 6-7.

[12] *Ibid.* See Appendix A for list of charter members.

[13] Jeffers, History, 4.

as well as its pilot; he mastered every detail of its constitution and of its organization; he came to know its members and he made himself constantly available—to do the chores, to suggest, and to stimulate, and he did everything with becoming modesty, happy only in the success of the new movement."[14] As Dr. Lewis was to say some forty years later when recounting the selection of Miller as secretary-treasurer: "We hit the jackpot."[15]

Also elected at the organizational meeting as members of the Executive Committee were G. O. Ferguson, Jr., of the University of Virginia, Henry Louis Smith of Washington and Lee University, and R. C. Young of William and Mary. Great challenges, some destined to become disappointing failures and others to become exhilarating successes, lay before these elected officers and their young Academy. The organization had been forged, now it was a question of making it function. These men were in the main strangers to each other; "they could not be certain who among them would work well in harness or which ones were likely to break under pressure."[16] However, with Miller as the lead horse, the Academy was always to find a sufficient number of other "horses" to fill the traces.

The second annual meeting of the Academy was held on the campus of Washington and Lee University at Lexington on May 2–3, 1924. About fifty members attended, which indicates that the Academy was on fairly firm ground at the end of its first year of operation. A program of 22 papers and field trips by car from Lexington to Natural Bridge and Goshen Pass were held.[17] It was at this meeting that the University of Virginia began its long, almost uninterrupted, domination of the scholarly program presented at the annual conventions. Virginia accounted for 8 of the 19 papers read, while the Medical College of Virginia, the University of Richmond, Virginia Polytechnic Institute, and Washington and Lee, accounted for two each.

At this stage of the Academy's development, although scientists from various disciplines and even some nonscientists were members, the biology group was, by dint of its earlier organization, far and away the strongest section. In 1924 two more distinct sections were added to the Academy roster. The Virginia Section of the American Chemical Society voted to hold its spring meeting in conjunction with the Virginia Academy. A working affiliation was immediately struck up and the chemists became the Chemical Section of the Academy while retaining their separate identity as a section of the American Chemical Society.[18] Also at this second meeting of the Academy, the Virginia Society for the Study of Education, under the guidance of Dr. John Preston McConnell of the State Teachers College at East Radford, became the Education and Psychology Section of the Academy, thus boosting the number of organized sections in the Academy to three.[19]

There was at the 1924 meeting one issue which stole the show, as it were, from the regular order of Academy business. Dr. George O. Ferguson, a member of the Executive Committee and professor of psychology and education at the University of Virginia, wrote to President Lewis in the summer of 1923 and broached the question of what the Academy might do to thwart the rising tide of anti-evolutionary sentiment that was sweeping across the nation and the South in particular. "If Mr. Bryan comes this way," Ferguson wrote, "I hope we may issue a statement." William Jennings Bryan, it appears, did not make it to the Old Dominion, but, nevertheless, more suggestions were forthcoming that the Academy formulate a definite statement on evolution.[20]

President Lewis came to recognize the issue as one of importance and solicited the advice of his Executive Committee as to what would be the best tack for the Academy to take. In a circular letter dated April 21, 1924, Lewis pointed out that "it has been suggested that the Academy may perform a useful service at this time by drawing up a statement as to the status of the theory of evolution among scientists." Without hesitation Lewis cited what he considered to be the more common misconceptions about evolution: "that evolution teaches that man is descended from the monkey; that evolution is necessarily irreligious; that evolution is synonymous with Darwinism; that there is no evidence for evolution; and that there is a wide difference of opinion among scientists as to its truth." In closing the president summed up by saying, "it is a nice question. May I have the benefit of your opinion as to whether it is wise for the Academy to make any pronouncement on the subject?"[21]

[14] Jeffers, History, 5.

[15] *Ibid.*, 17.

[16] *Ibid.*, 16.

[17] *Proceedings 1923-1924*, 13-15.

[18] Jeffers, History, 15-16.

[19] *Proceedings, 1923-1924*, 14.

[20] Jeffers, History, 21.

[21] Lewis to the Executive Committee of the Virginia Academy of Science, Charlottesville, April 21, 1924, Dr. Ivey F. Lewis Papers, Virginia Institute for Scientific Research.

Dr. George W. Jeffers in his unpublished History of the Virginia Academy of Science has maintained that "the response was not clear-cut: nobody came out with an unequivocal 'no,' most gave a qualified 'yes'."[22] It was abundantly clear that one member of the Executive Committee, Dr. Ferguson of the University of Virginia, wanted to issue a statement. However, two other members of the Executive Committee were somewhat more cautious in their consent. H. L. Smith of Washington and Lee thought that a carefully worded resolution on the controversy "might be wise," but showed evident apprehension as he argued, "on the other hand, in such an ultra-conservative state as Virginia, it might excite the extreme fundamentalists, who I fear are quite numerous in the Old Dominion, to greater alarm and more violent efforts at repression than ever."[23] The third member of the committee, R. C. Young of William and Mary, also appeared cautious when he said "it should be made clear that our purpose in doing this is to give information and allay misapprehension" concerning the evolution issue. Dr. Young was also somewhat ill at ease about the power of an aroused fundamentalist concentration in Virginia; his main concern, it appears, was avoiding a public confrontation on the evolution issue.[24]

Secretary E. C. L. Miller was more positive in his reply to Lewis. "It is hard for me," he said, "to see the necessity for a statement concerning evolution because with me it is as common place and fundamental an assumption as that the sun will rise tomorrow." Miller summed up the dilemma best when he noted that "it is a question whether any statement we could make would have any effect on them"; however, "it certainly would do no harm to state what evolution is. . . ."[25] Lewis held the casting vote: while Young and Smith cautioned against reaction, Miller and Ferguson counseled for action.

Lewis chose to meet the issue head on. In a speech entitled "Church and Science" which he delivered as the retiring president of the Academy, Lewis waded into the evolution melee with both arms swinging. "The alarm that is being felt by many good men over the apparent conflict between things of the intellect and things of the spirit is a recurring phenomenon in human history," he asserted. "Science must defend itself anew as it has often done in the past."[26] Lewis then endeavored to show that the Old Testament was no longer the literal guideline for "morals, religious observance, or even belief." Indeed, he pointed out that killing witches, burning bullocks, and stoning blasphemers were unacceptable to the modern Christian as a means of communion with God; and, if this be the actual circumstance, the president asked, "why do we not trust the spirit of truth to lead us?"[27]

After scanning the history of scientific achievement and dwelling on particular men who suffered for the knowledge they gave mankind, Lewis turned again to the present problem. "There seems, however," he said, "to be some confusion in the minds of the ecclesiastical leaders as to which particular windmill is being tilted at. The words Darwinism and evolution are most frequently used, in evident ignorance that the two are different. The fact of evolution may be regarded as proved, just as the fact of gravitation is proved. Darwin's theory to account for it, on the other hand, is not only not proved, but is subject to revision like any other theory. . . . But the fact of evolution stands on quite other grounds."[28]

The president reached the high point of his address when he charged "that the movement to curb the teaching of evolution is not a trivial thing. . . ." It "has become evident to all who love liberty and believe in truth" that "in the absence of the rack and the thumbscrew, dozens of college professors and many public school teachers have been forced to resign or have been summarily dismissed."[29]

In conclusion, Lewis relied on the words of another leader in the struggle against the anti-evolution forces, Dr. William L. Poteat, president of Wake Forest College and himself a trained biologist. As Dr. Poteat put it: "Christ said Himself, 'I am the Truth.' Welcome Truth. Lay hold upon her. She is your life. And do not stop to calculate the adjustment and revision her fresh coming will necessitate. Welcome her, and the old Truth, after the manner of all life, will organize itself about the new revelation. For Truth is sovereign. She comes from God and bears His message, from whatever quarter her great eyes may look down upon you."[30]

With this admonishment to seek the truth and ever to defend it, President Lewis rang down the curtain on the first year of the Virginia Academy of Science. The

[22] Jeffers, History, 21.

[23] H. L. Smith to Lewis, Lexington, Va., April 23, 1924, Lewis Papers.

[24] R. C. Young to Lewis, Williamsburg, April 24, 1924, Lewis Papers.

[25] E. C. L. Miller to Lewis, Richmond, Va., April 23, 1924, Lewis Papers.

[26] Ivey F. Lewis, "Church and Science," *Proceedings 1923-1924*, 16.

[27] *Ibid.*, 17.

[28] *Ibid.*, 20-21.

[29] *Ibid.*, 21.

[30] *Ibid.*, 23.

Academy was not to have another year as dramatic as its first one until the outbreak of World War II.

Sometime after the first meeting had drawn to a close a 27-page booklet entitled *Organization and Proceedings 1923–1924* was published by the office of the secretary. Both the 1923 and 1924 meetings were covered by this publication; however, in the future the *Proceedings,* as the booklet came to be called, was to be published on an annual basis. The program of the meeting as well as the minutes, reports, and a list of members were included. In time, abstracts of the scholarly papers presented to the Academy would be added and the annual *Proceedings* began to run well over 100 pages.

At the invitation of its Chemical Section, the Academy held its third annual meeting in Richmond on May 1–2, 1925. The University of Richmond, Randolph Macon College, and the Medical College of Virginia all joined forces to sponsor the meeting. Although various groupings of scientists had become members of the Academy, the 1925 meeting was the first at which the various sections or interest groups met separately and held their own programs. The four sections which met individually in 1925 to hear learned papers and to elect section officers were the Astronomy, Mathematics, and Physics Section, the Biology Section, the Psychology and Education Section, and the Chemical Section (which continued to be called the Virginia Section of the American Chemical Society).[31]

[31] *Proceedings 1924-1925, 7.*

Dr. George O. Ferguson of the University of Virginia served as chairman of the Psychology and Education Section meeting at which about forty persons heard five papers. The Astronomy, Mathematics, and Physics Section, apparently operating without a designated chairman, attracted approximately thirty people to a program of nine papers. Dr. Donald W. Davis of William and Mary presided over the Biology Section, which had about 100 persons in attendance to hear the presentation of 15 papers, and the Chemical Section under President H. K. McConnell of Richmond also had about 100 interested listeners for its program of 13 papers.[32]

[32] *Ibid.,* 7-11.

At this annual meeting the Virginia Academy of Science voted to become a member of the American Association for the Advancement of Science, a national organization made up both of individual members and of autonomous state and local science clubs and academies.[33] The American Association for the Advancement of Science, commonly referred to as "the Triple-A S," has published since 1883 a weekly magazine called *Science.*

[33] *Ibid.,* 12.

Three major events occurred at this first Richmond meeting which were to have far-reaching effects on the Academy for years to come. The first came in the form of a motion submitted by Dr. Donald Davis of William and Mary. Dr. Davis's resolution was that the incoming president, Dr. Robert E. Loving of the University of Richmond, be authorized to name a committee to concern itself with the advancement of scientific research in Virginia.[34] Davis was also responsible for a motion to have the Southern Association of Colleges and Secondary Schools amend its Standard Seven entitled "Number of Class Room Hours for Teachers," which read: "Teaching schedules exceeding 16 hours per week per instructor shall be interpreted as endangering education efficiency. In general, two laboratory hours will be counted as equivalent to one recitation hour." Davis sought the deletion of the second sentence, the effect being to count a laboratory hour the same as a recitation hour.[35] The first motion was carried, the second was laid on the table; both, however, would be heard from again.

[34] *Ibid.,* 12.

[35] *Ibid.,* 13.

The event of most consequence at the third meeting of the Academy was the report of the secretary. It was not the factual data which the secretary provided but rather the general tenor of the report which was of most significance. In this, his first such report to the Academy, Secretary E. C. L. Miller summarized the Academy's year, inserted several personal policy suggestions, and announced that he had ordered the identification badges which the delegates were wearing, and, in addition, had had the books audited—all without any specific authorization on the part of the Academy.[36] Miller was beginning with his first report a tradition which was to grow ever stronger during his years as secretary—for the secretary to act with almost complete independence on behalf of the Academy.

[36] *Ibid.,* 4-5.

Presidents were elected on a yearly basis and, in time, a president-elect was designated a year in advance of his term to allow for greater executive continuity. However, the real power in the Academy did not rest with the president,

the president-elect, or with the Council, as the Executive Committee and officers acting in concert were known; the single largest repository of both authority and responsibility was in the office of the secretary-treasurer, and in the person of E. C. L. Miller, who filled that position from 1923 until he became secretary-treasurer emeritus in 1950. The Virginia Academy of Science members willingly deferred to the secretary's sure-handed leadership, to a leadership which increased in ability year after year as the complexities of the Academy multiplied.

The report of the secretary was commended by the convention for the very evident efficient manner in which Dr. Miller had gone about his and the Academy's business.[37] President after president was to pay tribute to, and general meeting after general meeting was to commend, the way in which Miller guided the Academy. The third annual meeting ended, as innumerable more were to end, with E. C. L. Miller receiving the justified applause of the Virginia Academy of Science.

[37] *Proceedings 1924-1925*, 7.

The fourth annual meeting was held at the University of Virginia in Charlottesville on May 7–8, 1926. At this convention the Academy concerned itself with several special projects, all of which were to grow in importance to the scientists of the state in the years ahead. A motion was made by W. D. Hoyt of Washington and Lee and was carried by the members to the effect that the Academy should investigate and work to halt the spoliation of Virginia's natural areas. A committee was appointed for this purpose, and a long history of concern for the preservation of natural resources, which in time was to bring the Academy into league with several other state societies interested in the same problem, began.[38]

[38] *Ibid.*, 10.

Three other major committees received their first formal recognition at this 1926 conclave. The Committee on the Botanic Division of the Biological Section on the preparation of a flora of Virginia was given, through a motion sponsored by Dr. Lewis, a fifty-dollar grant to begin its work.[39] Both of Dr. Davis's motions made at the 1925 meeting were to meet with Academy approval. Strictly speaking the Committee on the Encouragement of Research in Virginia, suggested by Dr. Davis, had already received approval as it had been given the green light to organize in October of 1925. Along with Chairman J. Shelton Horsley, John H. Yoe of the University of Virginia and Frederick W. Shaw of the Medical College of Virginia constituted the committee when it presented its first formal report in 1926.[40]

[39] *Ibid.*, 9.

[40] *Ibid.*, 7.

In addition to its report the committee had a booklet printed containing a summary of the results of a questionnaire sent to the institutions of higher learning in the state. This pamphlet, which was handed out to the delegates, presented detailed information on instructors, persons engaged in research, research apparatus, research funds, student loads, encouragement of research, and scientific libraries. It also made several suggestions, the most important of which called for establishing "an annual award for a 'particularly meritorious' paper read before the Academy." Horsley's report also recommended that a five-member research committee be set up on a rotating basis and that research be encouraged "in every way possible."[41]

[41] Walter S. Flory, Research Committee History, 2, 3, 5, Manuscript, Virginia Institute for Scientific Research.

Dr. Horsley, as well as being chairman of the Research Committee, was a nationally prominent surgeon and was elected the Academy's fourth president at Charlottesville in 1926. It was largely through Dr. Horsley's personal efforts in the ensuing year that an endowment fund of more than $8,000 was solicited and raised for the permanent Research Committee. The J. Shelton Horsley Research Award is presented today by the Academy in honor of Dr. Horsley's contribution to the Academy.[42]

[42] Jeffers, History, 5.

The second of Dr. Davis's resolutions, tabled at the preceding meeting and concerned with Standard Seven of the Southern Association of Secondary Schools and Colleges, was turned over to a committee headed by Dr. W. A. Kepner of the University of Virginia. Dr. Kepner and his committee attempted to get the Southern Association to change its ruling that two hours in the laboratory were equivalent to only one hour spent in the classroom.[43]

[43] *Proceedings 1925-1926*, 5.

Secretary Miller urged that there be more individual Virginia memberships in the American Association for the Advancement of Science and reported that the Virginia Academy had grown from about 150 members in 1923 to some 315 members by the 1926 gathering. Guests and members registered at Charlottes-

ville numbered 187 and 73 papers, about half presented by scientists from the University, were read at the two-day meeting.[44] Seven sustaining colleges, institutions which gave $10 a year to the Academy, were listed on the membership roster. They were the College of William and Mary, Hollins College, Medical College of Virginia, Randolph Macon Woman's College, Sweet Briar College, University of Virginia, and Virginia Polytechnic Institute. The secretary also noted that other colleges should assume such a responsibility.[45] The evolution controversy had still not been settled. Dr. Lewis was appointed by President Loving as a committee of one to report to the AAAS any attempt made in Virginia to restrain the freedom necessary for teaching or the prosecution of scientific research.[46] Thus the first three years of the Academy were brought to a close. The future concealed a depression and a war, but the foundation was strong, the Academy would prosper.

[44] *Proceedings 1925-1926,* 12.

[45] *Ibid.,* 3-4.

[46] *Ibid.,* 4-5.