

1966

## A History of the Virginia Academy of Science, 1923-1945

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**A HISTORY OF THE VIRGINIA ACADEMY OF SCIENCE**

**1923 - 1945**

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**A Thesis**

**Presented to**

**The Faculty of the Department of History  
The College of William and Mary in Virginia**

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**In Partial Fulfillment**

**Of the Requirements for the Degree of**

**Master of Arts**

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**By**

**Harry Joseph Staggers**

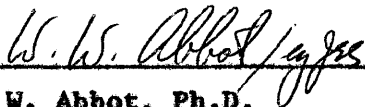
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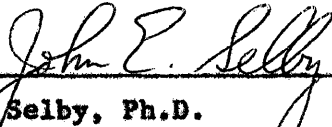
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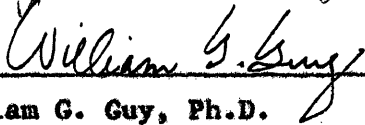
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Master of Arts

  
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## ABSTRACT

The purpose of this study is to survey the history of the Virginia Academy of Science from its inception in the minds of the scientists connected with the Association of Virginia Biologists in the early 1920's on through the second World War.

This essay deals in the main with political events in the history of the Academy. It concerns itself with the men who guided the Academy and the decisions which they made. And it attempts to present chronologically the important developments and concerns of the Virginia Academy of Science.

**A HISTORY OF THE VIRGINIA ACADEMY OF SCIENCE**

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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.<sup>1</sup> 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.<sup>2</sup>

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-

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<sup>1</sup>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 in on the manuscript.

<sup>2</sup>Jeffers, History, 7.



Treasurer, and W. D. Hoyt of Washington and Lee University and F. B. Fromme of Virginia Polytechnic Institute composed a two-man Executive Committee.<sup>3</sup> 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.<sup>4</sup> 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 Evey P. Lewis, to begin working towards the formation of an academy of science for Virginia.<sup>5</sup>

Dr. Davis, as Vice President of the Association of Virginia Biologists from April 1922 until April 1923, played an important part in laying the ground work 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

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<sup>3</sup>Proceedings 1923-1924, 3.

<sup>4</sup>Jeffers, History, 8.

<sup>5</sup>Proceedings 1923-1924, 5.

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.<sup>6</sup>

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.<sup>7</sup>

Dolley, writing to Davis in March of 1923, made his reason for asking Lewis to write the letter quite explicit. "Don't you think," he asked, "that the biologists should have as their representative in

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<sup>6</sup>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.

<sup>7</sup>Ivey F. Lewis to Davis, Charlottesville, Va., Feb. 28, 1923, Davis Papers.

this important movement the most prominent biologist in the state? I feel that Dr. Lewis is the man to attend to this."<sup>8</sup>

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.<sup>9</sup> 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.<sup>10</sup> 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.

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<sup>8</sup>W. L. Dolley to Davis, Ashland, Va., March 8, 1923, Davis Papers.

<sup>9</sup>Davis to Lewis, Williamsburg, March 8, 1923, Davis Papers.

<sup>10</sup>Proceedings 1923-1924, 5.

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."<sup>11</sup>

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.<sup>12</sup>

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

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<sup>11</sup>Proceedings 1923-1923, 6-7.

<sup>12</sup>Ibid. See appendix for list of charter members.

toward that end, Ivey F. Lewis as well as Doctors Davis and Warren of William and Mary, Hoyt of Washington and Lee, and Dolley of Randolph Macon, among them. 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 . . . ." <sup>13</sup> 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

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<sup>13</sup> Jeffers, History, 4.

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 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."<sup>14</sup> As Dr. Lewis was to say some forty years later when recounting the selection of Miller as Secretary-Treasurer: "We hit the jackpot."<sup>15</sup>

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."<sup>16</sup> However, with Miller as the lead horse, the Academy was always to find a sufficient number of other "horses" to fill the traces.

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<sup>14</sup> Jeffers, History, 5.

<sup>15</sup> Ibid., 17.

<sup>16</sup> Ibid., 16.

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.<sup>17</sup> 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.<sup>18</sup> Also at this second meeting of the Academy, the Virginia Society for

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<sup>17</sup> Proceedings 1923-1924, 13-15.

<sup>18</sup> Jeffers, History, 15-16.

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.<sup>19</sup>

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.<sup>20</sup>

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

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<sup>19</sup>Proceedings 1923-1924, 14.

<sup>20</sup>Jeffers, History, 21.



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?"<sup>21</sup>

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'."<sup>22</sup> 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

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<sup>21</sup>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.

<sup>22</sup>Jeffers, History, 21.

violent efforts at repression than ever."<sup>23</sup> 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.<sup>24</sup>

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 . . . ."<sup>25</sup> Lewis held the casting vote: while Young and Smith cautioned against reaction, Miller and Ferguson counselled 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

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<sup>23</sup>H. L. Smith to Lewis, Lexington, Va., April 23, 1924, Lewis Papers.

<sup>24</sup>R. C. Young to Lewis, Williamsburg, April 24, 1924, Lewis Papers.

<sup>25</sup>E. C. L. Miller to Lewis, Richmond, Va., April 23, 1924, Lewis Papers.

must defend itself anew as it has often done in the past."<sup>26</sup> 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?"<sup>27</sup>

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."<sup>28</sup>

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

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<sup>26</sup>Ivey F. Lewis, "Church and Science," Proceedings 1923-1924, 16.

<sup>27</sup>Ibid., 17.

<sup>28</sup>Ibid., 20-21.

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."<sup>29</sup>

In conclusion, Lewis relied on the words of another leader in the struggle against the anti-evolution forces, Dr. William L. Potest, President of Wake Forest College and himself a trained biologist. As Dr. Potest 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."<sup>30</sup>

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 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

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<sup>29</sup>Ivey F. Lewis, "Church and Science," Proceedings 1923-1924, 21.

<sup>30</sup>Ibid., 23.

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 Ehemical Section (which continued to be called the Chemical Section of the American Chemical Society).<sup>31</sup>

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.

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<sup>31</sup>Proceedings 1924-1925, 7.

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.<sup>32</sup>

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.<sup>33</sup> 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.

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.<sup>34</sup> 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

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<sup>32</sup>Proceedings 1924-1925, 7-11.

<sup>33</sup>Ibid., 12.

<sup>34</sup>Ibid., 12.

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.<sup>35</sup> The first motion was carried, the second was laid on the table; both, however, would be heard from again.

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.<sup>36</sup> 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.

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

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<sup>35</sup>Proceedings 1924-1925, 13.

<sup>36</sup>Ibid., 4-5.

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.<sup>37</sup> 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.

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

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<sup>37</sup>Proceedings 1924-1925, 7.



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.<sup>38</sup>

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.<sup>39</sup> 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.<sup>40</sup>

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.

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<sup>38</sup>Proceedings 1925-1926, 10.

<sup>39</sup>Ibid., 9.

<sup>40</sup>Ibid., 7.

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."<sup>41</sup>

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.<sup>42</sup>

The second of Dr. Davis's resolutions, tabled at the preceding meeting, which was 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.<sup>43</sup>

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<sup>41</sup>Walter S. Flory, Research Committee History, 2, 3, 5, Manuscript, Virginia Institute for Scientific Research.

<sup>42</sup>Jeffers, History, 5.

<sup>43</sup>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 Charlottesville numbered 187 and 73 papers, about half presented by scientists from the University, were read at the two-day meeting.<sup>44</sup> 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.<sup>45</sup> The evolution controversy had still not been settled. Dr. Lewis was appointed by President Loving as a committee of one to report to the Triple A-S any attempt made in Virginia to restrain the freedom necessary for teaching or the prosecution of scientific research.<sup>46</sup> 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.

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<sup>44</sup>Proceedings 1925-1926, 12.

<sup>45</sup>Ibid., 3-4.

<sup>46</sup>Ibid., 4-5.

## CHAPTER II

### THE YEARS OF GROWTH AND AGGRESSIVE WORK

As was to be the case so often, action on the part of Secretary Miller highlighted the fifth annual meeting of the Academy held in East Radford and Blacksburg with Radford College and Virginia Polytechnic Institute serving as the host institutions on May 6-7, 1927. Miller reported that the Research Committee, which met in Richmond on October 9, 1926, had established a fifty-dollar research award.<sup>1</sup> Later, Dr. Donald W. Davis of William and Mary, acting chairman of the Research Committee, announced that the first award of fifty dollars in gold had been presented to Dr. C. C. Spiedel of the University of Virginia for his paper on "Regenerative Phenomena Under Conditions of Hyperthyroidism."<sup>2</sup> However, the University of Virginia, even though it could claim the first research award winner, for the first time since the 1923 meeting of the Academy, had to share its domination of the program with another institution: scientists from Virginia Polytechnic Institute read 21 papers while those from the University read 22.

Miller recommended that the Academy, because of the large sum of money collected for the research endowment fund, seek incorporation

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<sup>1</sup>Proceedings, 1926-27, 4.

<sup>2</sup>Ibid., 11.

from the Virginia State Legislature. President Horsley, who was responsible for raising the fund, appointed Miller chairman of a committee to work for the incorporation of the Academy. He also chose Dr. Earl Gregg Swem of William and Mary to head a committee charged with the responsibility of drawing up "suitable certificates," i.e., a seal, for the Academy.<sup>3</sup>

A motion offered by Dr. John H. Yoe of the University of Virginia in behalf of the Resolutions Committee was adopted by the Academy to the effect that a fifth section, to be known as the Section on Miscellaneous Topics, be established.<sup>4</sup> There is no record of the Miscellaneous Topics Section's ever having met as a separate section to hear papers, nor was any mention made of its existence in ensuing copies of the Proceedings.

Dr. Sidney S. Negus of the Medical College of Virginia was nominated on a motion by Dr. Paul A. Warren of William and Mary to be the "publicity man" for the Academy.<sup>5</sup> According to Dr. William G. Guy, chairman of the Department of Chemistry at the College of William and Mary since 1946 and President of the Academy (1957-58), Negus was the "best public relations man an organization ever had. It was the thoughtfulness of Sid Negus which distinguished him from other men. He can't be replaced."<sup>6</sup>

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<sup>3</sup>Proceedings, 1926-1927, 7.

<sup>4</sup>Ibid., 9.

<sup>5</sup>Ibid., 11.

<sup>6</sup>Interview with Dr. William G. Guy, Williamsburg, Va., July 1, 1966.

Secretary Miller had the final word on the 1927 convention when he noted in the Proceedings sometime after the annual meeting closed that "the first three years of the Academy were given up largely to growth. Having attained a membership of more than three hundred, and having become established as a needed and a successful institution, it is entirely appropriate that during this year, our fourth year, the Academy should have undertaken some lines of aggressive work." Specifically what Dr. Miller had in mind was the Academy's appointing committees to compile a flora of Virginia and encourage research in the state.<sup>7</sup> Both were to justify the Secretary's faith in "aggressive work."

The Academy returned to the site of its founding, Williamsburg, for its sixth annual meeting on May 4-5, 1928, when the College of William and Mary served as the host institution. The second Williamsburg meeting was marked by the successful completion of the work of both E. C. L. Miller's and Earl Gregg Swen's committees. Miller reported that with the minor exception of some slight extension of the purpose of the Virginia Academy of Science as stated in the constitution of the organization, the incorporation went through smoothly.<sup>8</sup> Dr. Swen then submitted his report on the seal. The symbols for the seal were drawn in the main from the history of Virginia. The seal consisted

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<sup>7</sup>Proceedings, 1927-1927, 3.

<sup>8</sup>Proceedings, 1927-1928, 10-11.

of three concentric circles, forming two rings around an open area in the center of the seal. In the outer ring was inscribed "Virginia Academy of Science." Printed around the inner ring were the names of four of the Old Dominion's most outstanding scientists: John Clayton, Thomas Jefferson, Matthew Fontaine Maury, and Walter Reed. The circular area in the center of the seal was decorated with the state flower -- dogwood in bloom at the top and a dogwood still in bud at the bottom. In the space remaining between the dogwood emblems the motto of the Academy, Ignorantia supremus tyrannus, was inscribed. Swen noted that the motto was suggested to him by the motto on the Virginia State Seal "Death to tyrants," and that, although the Virginia Academy motto meant "Ignorance is the greatest tyrant," it also implied, "Death to ignorance."<sup>9</sup> The Proceedings 1927-1928 was the first Academy publication embossed with the new seal.

Two more sections were added to the Academy roster, the Geology Section<sup>10</sup> and the Virginia Section of the Society of American Bacteriologists.<sup>11</sup> The Bacteriologists joined through affiliation similar to that arranged in 1924 between the Academy and the Virginia Section of the American Chemical Society. The Bacteriology Section presented a full program at the 1929 meeting in Staunton, but was not active thereafter until 1942 when it was revived. More than one

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<sup>9</sup>Proceedings, 1927-1928, 11.

<sup>10</sup>Ibid., 7.

<sup>11</sup>Ibid., 22.

third of the papers read were prepared by men from the University of Virginia. Both William and Mary and Virginia Polytechnic sponsored 7 speakers, and the University 23.

Several resolutions came before the assembly. Miss Ida Sitler of Hollins College proposed that the Academy go on record in support of wildlife sanctuaries.<sup>12</sup> Miss Sitler's motion was carried as were two resolutions proposed by Dr. W. D. Hoyt of Washington and Lee. Hoyt won Academy support for a proposal which called for the state of Virginia to recognize scientific endeavor as a worthwhile state project and to lend its resources to the fostering and encouraging of such work. Also Hoyt recommended, and the Academy approved, that the Committee on the Preservation of Natural Resources set up in 1926 make a survey of the state for suitable areas of preservation; and, after locating such areas, to begin working immediately for the adoption of a conservation program.<sup>13</sup>

Obviously the meetings of the Executive Committee had begun to take on more significance as Secretary Miller recorded the minutes of the Council meeting for the first time and submitted them to the members in the Proceedings, 1927-1928;<sup>14</sup> and also for the first time, Miller, as Treasurer, was forced to acknowledge a deficit of \$58 for the year. Nevertheless, the Academy still had a \$500 balance.<sup>15</sup>

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<sup>12</sup>Proceedings, 1927-1928, 12.

<sup>13</sup>Ibid., 13.

<sup>14</sup>Ibid., 16.

<sup>15</sup>Ibid., 18.



The President of the Academy was chosen by the delegates as their regular representative to the annual Christmas meeting of the American Association for the Advancement of Science, with the Secretary-Treasurer being designated as the alternate.<sup>16</sup> This procedure, however, was only to be in effect for one year as it was destined to be altered to represent more realistically the organizational structure of the Academy.

Staunton Military Academy and the city of Staunton served as hosts of the seventh annual meeting in 1929. Dr. W. D. Hoyt's work with the Preservation of Natural Resources Committee came before the convention when Dr. Hoyt presented his report and then directed the meeting's attention to the fact that Goshen Pass, an area for whose conservation the committee had been actively engaged, was going to be dammed up and would serve as the site for a power plant. Several comments were made and resolutions adopted which called for the Virginia Academy to resist the planned project.<sup>17</sup> The Academy and the Garden Clubs of Virginia subsequently combined to fight the hydro-electric project. Although there is no way to measure the effect of these two organizations the fact is that there is still no dam at Goshen Pass.<sup>18</sup>

In the 1929 meeting the scientists revealed not only their regard for Virginia's scenic beauty, but also for their own pocketbooks.

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<sup>16</sup>Proceedings, 1927-1928, 17.

<sup>17</sup>Proceedings, 1928-1929, 13.

<sup>18</sup>Jeffers, History, 115.

In meetings of both the Council and the general convention, the delegates opposed the imposition of a duty on imported scientific instruments. Dr. Garnett Ryland of the University of Richmond gave voice to the discontent when he and the Academy resolved: "That the Virginia Academy of Science protests against a higher duty on scientific apparatus and urges the restoration of the former privilege of duty-free importation of scientific supplies for educational and research institutions."<sup>19</sup> The academy thus went on record in opposition to programs of both the state and federal government.

Dr. Miller was the central figure in two acts at this convention. Dr. Ryland moved that the Secretary be paid a flat annual salary which would be more in keeping with the dignity of his office than the forty cents per member which accrued to him each fiscal year under the system in operation.<sup>20</sup> A special session of the Council took this proposal under advisement and set the honorarium for the Secretary's services at \$150 per annum.<sup>21</sup>

Former President R. E. Loving of Richmond succeeded in convincing the Council to rescind the action it took at the 1928 meeting when it had appointed the President of the Academy as the regular

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<sup>19</sup> Proceedings, 1928-1929, 17.

<sup>20</sup> Ibid., 22.

<sup>21</sup> Ibid., 15.

delegate to the annual Triple A-S Christmas convention. This accomplished, Ryland again took the floor and recommended that the Secretary be appointed as the regular Academy delegate to such conventions, and that the Academy pay \$75 to help cover the Secretary's convention expenses.<sup>22</sup> This re-arrangement was satisfactory to the members of the Academy. As Miller became ever more clearly the central figure in the Academy both the deference shown to him and his own myriad responsibilities increased.

Financial matters were the leading topic of discussion at the eighth annual meeting of the Academy which was held in Lynchburg on the campuses of Lynchburg College and Randolph Macon Woman's College, May 9-10, 1930. The Academy sought both to increase its own revenue and to equalize its dues payments since members of the Academy who were also members of the American Association for the Advancement of Science had their dues to the Academy raised from \$1.00 to \$1.50 annually at this meeting. It had been the practice of the Academy to charge Triple A-S members only \$1.00 dues while non-Triple A-S members were required to pay \$2.00, in order to encourage its members to join the American Association, and also because the Triple A-S was in the habit of rebating fifty cents of its \$5.00 per member yearly dues to the local organization of its individual members. With this rebate in effect, the Academy, by raising the dues of its members of Triple A-S

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<sup>22</sup>Proceedings, 1928-1929, 22.

fifty cents, would be collecting the same amount of money, \$2.00, from both its single and dual members.<sup>23</sup> The usual rebate of fifty cents per member, however, was not forthcoming from the Triple A-S in 1930. The depression, it appears, was making itself felt on the local scene as well. Dr. Miller was forced to report that an unusually high number of members failed to pay their dues to the Virginia Academy.<sup>24</sup> One heartening note, however, was struck when it was announced that the Virginia State Legislature had made available \$1,000 of the \$2,000 requested to assist the Committee on the Flora of Virginia under the direction of Dr. Lewis.<sup>25</sup>

Plans concerning Junior Membership in the Academy were an important consideration at the ninth convention of the Virginia Academy held in Norfolk April 24-25, 1931. Miss Nan V. Thornton, who had recently been on the faculty of Randolph Macon Woman's College and who was, in 1931, associated with the University of Chicago, presented a report on Junior Membership. The Academy responded, on a motion by Dr. Paul A. Warren, by authorizing Junior Memberships in colleges at \$1.00 per year, and by voting to continue Miss Thornton in the chairmanship.<sup>26</sup> As Dr. Jeffers has noted, Miss Harriet H. Fillingier of Hollins College served as the first functional head of the committee when Miss

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<sup>23</sup>Proceedings, 1929-1930, 9.

<sup>24</sup>Ibid., 3.

<sup>25</sup>Ibid., 3.

<sup>26</sup>Proceedings, 1930-1931, 16-17.

Thornton was absent from the state.<sup>27</sup>

Junior Membership was not the entire story, however. Ivey F. Lewis proudly reported that the Committee on Flora had seen one of its major goals realized when in February 1931 it had published Flora of Richmond and Vicinity by Professor Paul R. Merriman of Fairport, New York.<sup>28</sup> Dr. J. Shelton Horsley moved, and the Academy accepted the motion, to establish a new section to cover the fundamental medical sciences.<sup>29</sup> This would be the Academy's eighth section, except that the Bacteriological and Miscellaneous sections had never really materialized. On a motion by Dr. Donald W. Davis of William and Mary the Committee on Standard Seven of the Southern Association of Colleges and Secondary Schools, which had been allowed to lapse, was reconstituted with Dr. W. A. Kepner of Virginia again the chairman.<sup>30</sup> At the 1931 meeting, for the first time in Academy history, three colleges sponsored 10 or more papers: University of Virginia (35) Virginia Polytechnic Institute (12) and William and Mary (10). In the preceding meeting University scientists read 46 of the 76 papers presented.

Financial matters were of somewhat more than passing importance at this 1931 meeting. Dr. Miller reported that only the most conservative

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<sup>27</sup> Jeffers, History, 51.

<sup>28</sup> Proceedings, 1930-1931, 18-19.

<sup>29</sup> Ibid., 21.

<sup>30</sup> Ibid., 14.

spending program had allowed the Academy to show a favorable balance.<sup>31</sup> It was also noted that plans once in the offing to get the American Association for the Advancement of Science to hold one of its annual conventions in Richmond had to be shelved because the depression had forced that city's Chamber of Commerce to abandon hope of raising the necessary \$7,000.<sup>32</sup> And last but certainly not least, the 1931 program, as Dr. Jeffers pointed out, almost "surreptitiously" announced for the first time that tickets for the annual dinner would be on sale.<sup>33</sup> Indeed, the depression, if it failed to strike a mortal blow at the Academy as it had at so many other organizations, was, nevertheless, making life a little more uncomfortable than usual for Academy members.

The 1932 meeting of the Academy, its tenth, was held in Roanoke April 22-23 with Hollins College serving as host. Beginning at the Council meeting of this session, the Secretary's annual report became a regular order of business on the Council's program.<sup>34</sup> The great duplication which had existed previously between the Secretary's report and the President's annual report -- or what the President often noted would have been his report if Dr. Miller had not said the

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<sup>31</sup>Proceedings, 1930-1931, 4.

<sup>32</sup>Ibid., 15.

<sup>33</sup>Jeffers, History, 24-25.

<sup>34</sup>Proceedings, 1931-1932, 7.

same thing first -- was somewhat lessened. The President, although he would not always choose to do so, now had the opportunity to address himself specifically to one particular issue instead of simply commenting upon the year's activities. This arrangement appears quite appropriate when one considers that it was the Secretary who was in the best position to make the most complete report on the year's progress, especially since no one could rival Miller's great knowledge of the Virginia Academy.

Dr. Miller reported that the Academy was still in good financial shape and was showing no adverse effects from the general depression. The books were closed with a favorable balance of over \$1,000, which Miller accounted for by a net gain in membership and an unusually good year for dues paying.<sup>35</sup>

Dr. W. A. Kepner of Virginia, whose Committee on Standard Seven had been reactivated a year earlier, submitted his report which the convention endorsed. It called again for a recognition on the part of the Southern Association of Colleges and Secondary Schools that an hour spent in laboratory work was equal to an hour spent in classroom recitation.<sup>36</sup>

Dr. Garnett Hyland, ever watchful of the Academy's parliamentary procedure, offered an amendment to the effect that Section VIII of

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<sup>35</sup> Proceedings, 1931-1932, 7. For a list of all research award winners see appendix.

<sup>36</sup> Ibid., 21.

the constitution of the Academy be revised to allow for a seven-man Council by including the retiring President and a new officer, the President-Elect, for one-year terms. The Academy accepted this amendment without dissent and also agreed unanimously when Ryland moved that a President-Elect be chosen at the 1933 meeting.<sup>37</sup>

Secretary-Treasurer Miller seemed again to have outmaneuvered the depression. He reported at the eleventh annual convention, held on the campus of Fredericksburg State Teachers College, now Mary Washington College, that the Academy had ended the fiscal year 1932-33 some \$60 in the red, but that the deficit appeared to be more the result of additional printing expenses, charged to fiscal 1931-32 for the abstracts of the sectional papers which the Academy first included in the Proceedings, 1930-1931, than the result of the continuing depression.<sup>38</sup> Miller was also able to announce that the Academy was over the 700 mark in membership and that, whereas in 1932 there had been only 18 dues paying Junior members, now in 1933 there were 91.<sup>39</sup>

Chairman Kepner submitted his report and supporting letters to the effect that the Virginia Academy's Committee on Standard Seven had managed, through an Article in Science, the magazine of the Triple A-S, to bring the question of Standard Seven before a large number of vitally concerned individuals and groups. As well as seeking more

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<sup>37</sup> Proceedings, 1931-1932, 23.

<sup>38</sup> Proceedings, 1932-1933, 8.

<sup>39</sup> Ibid., 8.



information on the subject, most letters which Kepner received were in strong agreement with the Virginia Academy that equating two hours of lab work with one hour of lecture in figuring teachers' work loads was manifestly unfair.<sup>40</sup> Kepner's committee "was requested to continue its policy of watchful waiting," and Secretary Miller was authorized to bring this pressing matter before the secretaries' meeting at the annual Christmas week convention of the American Association for the Advancement of Science.<sup>41</sup> It was through the constant agitation by groups like the Virginia Academy of Science that Standard Seven was eventually changed so as not to penalize laboratory instructors.

Another State Teachers College, this one in Harrisonburg, now Madison College, was the location of the twelfth annual meeting of the Academy on May 4-5, 1934. Academy President William A. Kepner seems to have summed up the Academy's year quite succinctly when he noted at the outset of his report that "little has been accomplished this year in the way of extending the work of the Academy."<sup>42</sup> E. C. L. Miller reporting again that the Academy found itself in the red, this time by \$134, advised the members that delinquents would be dropped from the roll.<sup>43</sup>

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<sup>40</sup> Proceedings, 1932-1933, 14-15.

<sup>41</sup> Ibid., 15.

<sup>42</sup> Proceedings, 1933-1934, 6.

<sup>43</sup> Ibid., 8.

Professor Wayne Dennis of the University of Virginia moved that the Psychology and Education Section of the Academy be allowed to separate into two distinct sections.<sup>44</sup> This motion was carried, and thus in 1935 the Academy would have seven functional sections. In addition Dr. Cornelius J. Heatwole, Executive Secretary of the Virginia Education Association, proposed that the Virginia Academy of Science affiliate itself with the education association. This suggestion was referred to a committee.<sup>45</sup>

The thirteenth convention had as its host the University of Richmond and met May 3-4, 1935. The Academy had succeeded not only in staying within the budget during the preceding year but ended its fiscal year with the largest balance it had ever accumulated, \$1,266.95.<sup>46</sup> However, all was not financially bright. The Triple A-S notified Secretary Miller that the practice of rebating fifty cents for each member of the Academy who was a dues-paying member of the American Association would be discontinued. Miller immediately proposed that all dues for Virginia Academy membership be set at \$2.00.<sup>47</sup> Later, at the meeting of the Council, Professor W. H. Keeble of Randolph Macon College made a motion to this effect and the Council approved it, thus raising the dues of Triple A-S members in the Academy another fifty

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<sup>44</sup>Proceedings, 1933-1934, 16.

<sup>45</sup>Ibid., 14-15.

<sup>46</sup>Proceedings, 1934-1935, 7.

<sup>47</sup>Ibid., 8.

cents.<sup>48</sup>

Dr. George W. Jeffers of the State Teachers College at Farmville, now Longwood College, presented the report of his committee, composed of Professors Negus and Keeble, on the affiliation proposed in 1934 of the Academy with the Virginia Education Association. Jeffers' report argued that the growth of the Academy would be hindered through such an affiliation "with a larger organization whose field is somewhat different." It was the considered opinion of the committee that "it would be inadvisable to apply for affiliation with the Virginia Education Association." This report met with the approval of the Council.<sup>49</sup>

Dean Wortley F. Rudd of the Medical College of Virginia announced that the Virginia Section of the American Chemical Society had invited the American Association for the Advancement of Science to hold its annual Christmas meeting in 1938 at Richmond. This would indeed be a feather in the cap of the Old Dominion if it were to come off but, as Dr. Jeffers noted, there was some speculation "that maybe -- just maybe -- the boys had this time bitten off more than they could chew."<sup>50</sup> This fear proved to be unjustified.

Virginia Military Institute was the scene of the fourteenth annual meeting of the Academy on May 1-2, 1936. The Secretary called

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<sup>48</sup>Proceedings, 1934-1935, 10.

<sup>49</sup>Ibid., 11-12.

<sup>50</sup>Jeffers, History, 86.

for all members to pay their two dollar dues and reviewed the financial arrangement with the American Association. After discontinuance of the fifty cent per member rebate, the Triple A-S began the practice of giving member organizations a \$100 research grant each year; but, since this money was specifically earmarked for research, the Academy could not use it for operating expenses.<sup>51</sup> It became imperative that the increased dues be paid.

Phipps and Bird, Incorporated, a scientific apparatus firm in Richmond, announced that it was making available gold medals, to be known as Jefferson Gold Medals, for presentation to the authors of outstanding papers read before the scientific academies of Virginia, North Carolina, South Carolina, and Georgia. The gold medal papers from each of the separate academies were to be entered in a final competition with each other. A central committee chosen from a different academy each year was to serve as a panel of judges empowered to choose the best papers from those nominated. The author of the paper selected as the best was to receive a \$100 prize and the authors of the two runner-up papers were to be awarded \$25 each. North Carolina, South Carolina, and Georgia had already accepted the proposal, and, on the recommendation of the Research Committee, Virginia voted to do likewise.<sup>52</sup>

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<sup>51</sup>Proceedings, 1935-1936, 11.

<sup>52</sup>Ibid., 9-10.

Dr. Ryland of Richmond took the floor to propose that after 13 consecutive years of going it alone, Dr. E. C. L. Miller, permanent Secretary of the Academy, should be given a permanent assistant. This motion was approved but no one was selected at the time to fill the newly created position.<sup>53</sup> President Ida Sitler of Hollins College had noted earlier at the Council meeting the invaluable service which Secretary Miller had rendered to the Academy. It was a point well taken and quite often taken by retiring Academy Presidents. Said Miss Sitler: ". . . the activities of the president of the Virginia Academy of Science are so closely linked with those of the secretary that it is difficult, indeed, to isolate them for a separate report." Miss Sitler further pointed out that "since each year's new presiding officer, by the fact of his unacquaintance with Academy administration, is required, in all his endeavours, to lean heavily upon the experience and judgment of its very capable and generous permanent secretary, it would seem that the custom of an earlier day when the secretary presented a joint report of the activities of both officers might well be revived."<sup>54</sup> The President had reference to the period from 1924 to 1932 when the Secretary's report on the year's activities prefaced the rest of the information in the Proceedings. This form, however, was not reverted to.

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<sup>53</sup> Proceedings, 1935-1936, 23.

<sup>54</sup> Ibid., 6.

The fifteenth annual meeting was held at the University of Virginia May 6-8, 1937, and was distinguished mainly by decisions made prior to the actual convention. President H. E. Jordan of the University of Virginia had seen fit to call a special session of the Council of the Academy on November 28, 1936, at the Farmington Country Club, Charlottesville.<sup>55</sup> Several matters were discussed at the dinner meeting, not the least of which was the selection of an individual to assume the responsibilities of Assistant Secretary-Treasurer which Dr. Ryland had called for at the convention in May. Dr. I. A. Updike of Randolph Macon College was appointed for a period of three years and was given a salary of \$25 per year.<sup>56</sup> The Council also took under consideration the proposal made by Dr. T. McNider Simpson of Randolph Macon at the May gathering to the effect that the Council meeting, which usually preceded the actual convention by one day, be made a part of the regular convention program. It was decided that the name "Academy Conference" would be used to refer to this Thursday evening meeting and that its purpose should be for discussion only. A later meeting of the Council was designated to handle the Academy business matters.<sup>57</sup>

A problem of some interest which the Academy decided would be proper for consideration at the Conference was concerned with the

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<sup>55</sup> Proceedings, 1936-1937, 5.

<sup>56</sup> Ibid., 6.

<sup>57</sup> Ibid., 7.

Teacher's Loyalty Oath which had been successfully instituted in several states. Accordingly, the heads of various scientific organizations in the state were invited to the Conference by President Jordan so that they might fully air their views on this subject.<sup>58</sup> This attempt at consolidated action did not seem to fare too well as no mention was made of a discussion of the matter or any action which might have resulted from such a discussion. However, the state of Virginia did not adopt a Teacher's Loyalty Oath.

Another question which was raised at this first Academy Conference in 1937 concerned the length of the Friday night dinner meeting. It was generally agreed that the dinner agenda was far too long; consequently, President Jordan proposed that since the Academy constitution did not call for an address by the retiring President, he would willingly forego delivering such a speech. The Council voted to leave this up to the President's discretion. Jordan did relinquish his opportunity to speak, but he did not set an Academy precedent by so doing.<sup>59</sup>

Secretary Miller may have been correct when he termed 1937-1938 a "particularly successful year for the Academy"; however, it was not overly eventful. By the time of the sixteenth annual convention in Blacksburg May 5-7, 1938, the 800 member mark had been passed by

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<sup>58</sup>Proceedings, 1936-1937, 7.

<sup>59</sup>Ibid., 9.

the Academy.<sup>60</sup> And the Academy was still growing.

At this meeting Virginia Polytechnic Institute successfully challenged the University of Virginia's domination of the Academy program. Scientists from Virginia Polytechnic Institute presented 47 papers while the men from Virginia accounted for 40. However, throughout the 1930's Virginia had overwhelmingly dominated each of the programs presented at the annual Academy meetings. As early as 1927 Virginia Polytechnic Institute sponsored 21 papers, but it was not until the Medical College of Virginia presented 11, Virginia Polytechnic Institute 12, and the University of Virginia 47, in 1933 that the Academy had three institutions accounting for more than ten papers each. The same three schools presented more than ten or more papers each again in 1936. The high point of Virginia's domination came in 1935 when that University sponsored 64 papers -- a figure which was to go unchallenged until the postwar era.

President D. Maurice Allen of Hampden-Sydney College gave a rather detailed report to the Conference in 1938, but concerned himself primarily with encouraging the scientists to recruit more new members especially in the western part of the state and among high school and industrially connected science personnel.<sup>61</sup> Allen did not continue Jordan's practice of holding a fall meeting of the Council, however, he did follow one Jordan precedent by not giving a presidential

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<sup>60</sup>Proceedings, 1937-1938, 13.

<sup>61</sup>Ibid., 5-8.



address.

Actually the main interest of the Academy was centered on the forthcoming American Association for the Advancement of Science convention scheduled for Richmond in December. All had not been easy sledding in preparing for the meeting.

So it was that in the winter of 1938 one of the major events in the history of science in Virginia occurred in Richmond when the American Association for the Advancement of Science convened its annual meeting in that city. Plans had been underway for the convention from the moment it was learned in 1935 that the Virginia Section of the American Chemical Society had invited the Triple A-S to Richmond. Previous plans for such a convention, it will be remembered, had fallen through in 1930 thanks to the precariousness of the financial situation in Richmond, and at one point a similar end seemed in sight for the 1938 meeting as Washington, D.C., made a belated effort to win the 1938 convention away from the Old Dominion and back to the nation's capital; Washington had lost the convention a year earlier due to the second inaugural of Franklin D. Roosevelt. However, the Virginia Academy committee on arrangements successfully warded off this attempt to sabotage the Richmond plans and at the same time gained invaluable experience in working together under pressure -- experience which would pay off when the meeting was finally staged.<sup>62</sup>

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<sup>62</sup>Jeffers, History, 87-88.

The general chairman appointed by the Virginia Academy for the affair, as well as the business manager it approved, were experienced businessmen and well suited for the task which lay before them. Mr. Lloyd C. Bird, President of the scientific supply company of Phipps and Bird, was named General Chairman, and Mr. H. K. McConnell, President of Tobacco By-Products Corporation, was selected as the Business Manager.<sup>63</sup> The job these two men did, along with the hard work of countless others of the Academy, made the Richmond convention of the Triple A-S a great success.

Perhaps the most outstanding job done by one individual was that turned in by Sidney S. Negus as Chairman of the Press Services Committee. Dr. Negus, who went far beyond previous norms of congeniality and efficiency, housed the delegation from the press, which was large, at the Hotel John Marshall and provided not only an ever-ready supply of coffee but also as many outside telephone circuits as there were typewriters in the huge battery that was constantly clicking away at the John Marshall. "No previous meeting could boast of such complete coverage," was Dr. Jeffers's summary of Negus's work.<sup>64</sup> Because of his achievement in 1938, Dr. Negus became the publicity director for the Triple A-S, a job which he was to hold until his death.<sup>65</sup>

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<sup>63</sup>Jeffers, History, 87.

<sup>64</sup>Ibid., 89.

<sup>65</sup>Interview with Dr. William G. Guy, July, 1966.

In the wake of the winter's success the seventeenth convention of the Virginia Academy of Science was called to order in Danville on May 4, 1939. The Council meeting which had been driven from its regular Thursday night spot on the program when the Academy Conference was instituted was rescheduled for Thursday afternoon and was followed a few hours later by the Conference.<sup>66</sup>

By giving his report to the Academy a title, "The New Frontier," and by adding other formal embellishments to it, President Earle B. Norris of Virginia Polytechnic Institute turned his report into the same sort of speech which President H. E. Jordan had discontinued two years earlier. President Norris's address was a welcome to the newest group affiliated with the Academy, the eighth section, the engineers.<sup>67</sup> Norris noted in his greeting that "in the earlier days our geographical frontiers were invaded first by the scouts who were followed in due course by the pioneers who settled and developed the country. Just so," continued the President, "in developing our scientific frontier the scouts leading the advance are our pure scientists . . . . The pioneers, following these scouts are our research engineers, taking such discoveries of pure science and developing from them new and better things for mankind to use and enjoy."<sup>68</sup>

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<sup>66</sup>Proceedings, 1938-1939, 4.

<sup>67</sup>Ibid., 8.

<sup>68</sup>Ibid., 9.

Later, during the business meeting, the constitution of the Academy was amended to allow for a larger Academy Council by extending the past President's term from one to three years.<sup>69</sup>

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<sup>69</sup>Proceedings, 1938-1939, 20.

### CHAPTER III

#### THE WAR YEARS

Mainly because of dynamic action on the part of President-Elect Wortley F. Rudd of the Medical College of Virginia, the eighteenth annual meeting of the Academy, which convened at the Virginia Military Institute on May 2-4, 1940, was a momentous one in Academy history.

However, even before Dean Rudd took the floor for his thought-provoking address to the Academy, Dr. Ivey F. Lewis was singled out and given special commendation by the Academy for the effort he had exerted in launching the Virginia Journal of Science.<sup>1</sup> Lewis was, as Dr. Boyd Harshbarger of Virginia Polytechnic Institute, a President of the Academy (1948-1949) and editor and founder of the Virginia Journal of Science (new series), has noted in his manuscript history of the Journal, "the guiding spirit and drive for this project."<sup>2</sup> The first number of the Journal came out in January 1940 as the successor to Claytonia, the mimeographed publication of the Committee on Virginia Flora which had already gone through five volumes, its last number

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<sup>1</sup>Proceedings, 1939-1940, 176.

<sup>2</sup>Boyd Harshbarger, The History of the Virginia Journal of Science, 10-11, manuscript in possession of Virginia Academy of Science, Virginia Institute for Scientific Research, Richmond, Va.

appearing in April 1939.<sup>3</sup> Dr. Ruskin S. Freer of Lynchburg College, who became the first editor in chief of the Virginia Journal of Science, had been, since 1934, the able director of Claytonia and had had as his assistant on that project Lt. Col. Robert P. Carroll of Virginia Military Institute. Carroll was to continue as Freer's assistant in the position of managing editor of the new publication.<sup>4</sup>

Editor Freer, who was also serving as Academy President in 1939-40, announced in the first number of the Journal that it was mainly "due to the efforts of Lt. Col. Robert P. Carroll of the Virginia Military Institute" that "the Academy voted to start an official periodical publication." Dean Ivey F. Lewis of the University of Virginia had been appointed chairman of the publications committee chosen by President Freer which authorized the printing of the first Journal. Freer further explained that the Committee on Virginia Flora, "felt that, while its publication was continuing without a deficit, the purposes of the Committee in publishing Claytonia could be met as well in the Virginia Journal of Science, and the new publication would in addition serve much broader needs." The Journal, Freer said, would accept papers from all sections of the Academy; and its editorial board, then being planned, was to include Dr. Miller and representatives from the various sections. The first number of the Journal dealt

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<sup>3</sup>Jeffers, History, 79.

<sup>4</sup>Harshbarger, History of Journal, 2.

entirely with botanical material as the only manuscripts on hand were those that had been submitted for publication in Claytonia.<sup>5</sup> In Dr. Jeffers's words, "the Virginia Journal of Science was but the expanded and more sophisticated off spring of Claytonia."<sup>6</sup>

At the Council meeting in May the appointments of Professor Freer as editor and Lt. Col. Carroll as managing editor were formally announced.<sup>7</sup> Each section of the Academy was requested to elect a section editor who would sit on the board of the Journal, and in addition, the Academy voted to give the Journal \$500 a year for the next two years to help the magazine clear the financial obstacles ahead.<sup>8</sup> Unfortunately the Journal was unable to meet its financial responsibilities with the \$1,000 and was only published until May 1943.

An examination of the papers published in Volume I of the Journal reveals that not all sections of the Academy responded to the editor's call for papers. The engineering, medical sciences, and psychology sections did not contribute any papers. However, the chemical section was responsible for 14 papers; botany, 9; geology and zoology, 4 each; education, 2; and agriculture (which was not a distinct section), as well as astronomy and physics (which were usually combined in the

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<sup>5</sup>Ruskin S. Freer, "An Announcement," Virginia Journal of Science, I (January, 1940).

<sup>6</sup>Jeffers, History, 79.

<sup>7</sup>Proceedings, 1939-1940, 173.

<sup>8</sup>Ibid., 194.

Astronomy, Mathematics, and Physics Section), 1 each.<sup>9</sup>

Following the announcement of the publication of the Virginia Journal of Science George W. Jeffers of Longwood College and R. C. Berry of the Research Laboratory in Richmond proposed the resolution "that the Senior Academy of Science sponsor a Junior Academy of Science, and that the incoming president be empowered to form a committee to work out details."<sup>10</sup> The Academy adopted the resolution committing itself to the formation of a full-fledged Junior Academy instead of merely seeking junior memberships, which had not been a very successful program up to this time.

Competition for the Jefferson Gold Medal which had begun in 1936 was discontinued in 1939. Beginning in 1940 the Jefferson Prize was given as well as the Academy Research Prize -- the winning author having his choice of awards.<sup>11</sup>

With all these various events it still appears that President Elect Rudd was the foremost delegate at this convention. Rudd set a precedent in Academy annals by coming before the Academy Conference "to set forth his views about Academy affairs" in the form of a Report of the President Elect.<sup>12</sup> Dean Rudd's speech challenged the Academy to find cause for its very existence at this crucial time of

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<sup>9</sup>Harshbarger, History of Journal, 5-6.

<sup>10</sup>Proceedings, 1939-1940, 196-197.

<sup>11</sup>Walter S. Flory, Research Committee History, 13.

<sup>12</sup>Proceedings, 1939-1940, 180.



international tension; and, he offered for consideration certain projects which he judged were worthy of the Academy's attention. In his address, Rudd stressed the fact that "it will not be sufficient that we meet once a year and have a wide variety of papers, however strong they may be . . . . An organization like ours may content itself with that sort of existence for the period of its youth, but will most certainly atrophy if it does not in its maturer years set itself resolutely to definitely constructive tasks that lie naturally within its sphere of influence."<sup>13</sup>

Rudd went on to make several suggestions of consequence. He revived the idea of finding Secretary E. C. L. Miller a permanent assistant. The President Elect was looking for a man upon whose shoulders "will probably fall, ultimately, the ever-increasing responsibilities of directing the affairs of the Academy in the second phase of its history as Dr. Miller has done in its formative years."<sup>14</sup> The Council was authorized to select a permanent assistant; such a person they hoped to find in Sidney S. Negus.<sup>15</sup>

Rudd next sought the approval of the Academy for the formation of a new committee the likes of which the Academy had never before seen. Rudd proposed to appoint a Long Range Planning Committee to be truly a cartographer of the future and not simply another committee to deal with specific issues of the present moment.<sup>16</sup> On a motion by

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<sup>13</sup>Proceedings, 1939-1940, 181.

<sup>14</sup>Ibid., 181-182.

<sup>15</sup>Ibid., 194.

<sup>16</sup>Ibid., 182.

Dr. E. Ruffin Jones, Jr., of William and Mary the Council gave Rudd the go-ahead to form his "long range" committee.<sup>17</sup>

Next Rudd singled out two problems which he considered to be both state-wide and justifiably demanding of the Academy's concern. One of these was a lack of vocational training in the high schools of Virginia. Although boys were readily trained for careers in agriculture, Rudd complained that in preparation for careers in industry the State educational program was horribly deficient.<sup>18</sup> Also the new President pointed out that stream pollution should be given greater consideration. With perception Rudd noted: "indeed we venture to assert that it always will be a political matter unless and until some properly qualified and non-partisan group puts it on the proper scientific basis, and working in cooperation with the industrialists, the committees, and the law makers, sees it through to a satisfactory conclusion."<sup>19</sup>

President Rudd's initial comments to the Academy were very well taken. In a month and a half from the time of his remarks France would be tottering on the verge of defeat and no one would be able to call the war in western Europe a "phony war" any longer. A redefinition of values was most certainly at hand; Rudd had voiced the need for

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<sup>17</sup> Proceedings, 1939-1940, 194.

<sup>18</sup> Ibid., 182.

<sup>19</sup> Ibid., 183.

the Virginia Academy of Science to do just that.

A special Council meeting, primarily concerned with the not too successful showing of the Virginia Journal of Science, was held a month in advance of the nineteenth convention, April 5, 1941. Discussion centered on the Journal, and it was generally agreed "that as conducted at present the Journal, will eventually bankrupt the Academy"; but, as Secretary Miller noted, "there was less unanimity as to what should be done with it."<sup>20</sup> No final decision was reached; however, the Council voted to send the second \$500 grant directly to the printer to help pay the large debt which the Journal had run up there.<sup>21</sup>

The annual meeting in 1941 was held in Richmond under the auspices of the Medical College of Virginia on May 1-3. At this meeting the Council adopted a plan advanced by Dr. Miller which would give the Journal one more trial year. There were to be no major restrictions imposed on its management; nevertheless, the magazine was expected to show a marked financial improvement or face discontinuance.<sup>22</sup>

A precedent had not been set in 1940 for the President Elect to address the Academy Conference, for it was the President, Dean Rudd of the Medical College of Virginia, who again stood before the assembled delegates in the spring of 1941. His special point was the

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<sup>20</sup>Proceedings, 1940-1941, 131.

<sup>21</sup>Ibid., 131.

<sup>22</sup>Ibid., 157-158.

challenge which he said faced men of science "to have the courage, and the wisdom, and the devotion to our share of the job in our day and so impress those who are to follow us that there may be no faltering."<sup>23</sup> This theme was not to fall upon deaf ears; one leader after another was to take it up during the trying war years.

Chairman L. C. Bird presented the recommendations of the recently organized Long Range Planning Committee -- the most important of which, at the time, was assumed to be the publishing of a monograph on the James River. A letter from Justus H. Cline of Stuarts' Draft to Ivey F. Lewis was the germ from which the ambitious project grew. Mr. Cline wrote that "a monograph on the James River would perhaps appeal to the imagination of Virginians as much as anything the Academy could do . . . . What civilization has done to this wonderful river, which should be the pride of Virginia and the nation," Cline continued in words that were to win the committee's approval, "would certainly be a fine thing for the Academy to find out and tell about . . . ."<sup>24</sup> Subcommittee chairman Marcellus H. Stow of Washington and Lee University picked up the tenor of Cline's letter when he gave his report on the James River Project. "Only a project of wide range could elicit the active interest of a body such as the Virginia Academy of Science"; and "by setting up some natural and resourceful

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<sup>23</sup>Proceedings, 1940-1941, 137.

<sup>24</sup>Proceedings, 1941-1942, 168-169.

feature of the State, with which everyone is already familiar, and which has played a profound part in scientific, economic, romantic, and social life of the State," pointed out Stow, "the worthy aims of the Academy could be accomplished." The Academy "should study the James River Basin," continued the chairman, "as a human habitat and should indicate, wherever possible practical means for improving this human habitat."<sup>25</sup>

The James River Project Committee appointed by the Long Range Planning Committee in 1941 stayed intact until publication of the monograph nine years later. Although new members were added, chairman Stow had five charter members on his committee: Robert P. Carroll of Virginia Military Institute, Justus H. Cline of Stuarts' Draft, Ivey F. Lewis of the University of Virginia, Foley F. Smith of Richmond, and I. D. Wilson of Virginia Polytechnic Institute.<sup>26</sup>

The Long Range Planning Committee also set up subcommittees concerned with the Junior Academy and Science Club Work, Research, Education and Publicity, Science Museum, and Finance.<sup>27</sup> Some of these committees were to be quite successful in their future endeavors, but none could rival the committee on the James River Project for the spotlight in 1941.

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<sup>25</sup> Proceedings, 1940-1941, 162-163.

<sup>26</sup> Jeffers, History, 128.

<sup>27</sup> Proceedings, 1940-1941, 159.

A Forestry Section, presided over at its first meeting by Forest Supervisor John W. McNair of Jefferson National Forest, was added to the Academy in 1941. The section heard 20 papers presented almost exclusively by state and federal foresters. However, J. B. Grantham of Virginia Polytechnic Institute and Chapin Jones of the University of Virginia, who served as chairman at the second session of the Forestry Section's meeting, were both Professors of Forestry and presented discussions of their respective forestry departments. The Forestry Section managed another program in 1942, but ceased to be active after that convention.<sup>28</sup>

The war had a great deal to do with the activities of the twentieth annual meeting which was hastily planned, but admirably staged in the city of Roanoke. The very fact that the Academy was meeting in Roanoke reflected the intrusion the war had made on civilian matters. The convention had originally been scheduled for Norfolk; however, "by January even the most enthusiastic of Norfolk supporters were ready to admit that the 'Conscripted City' would not be able to entertain the Academy in May."<sup>29</sup>

It was indeed a wartime convention as President George W. Jeffers of Longwood College noted in his comment to the Academy that

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<sup>28</sup>Proceedings, 1940-1941, 208.

<sup>29</sup>Jeffers, History, 29.

"after all this is a war of science . . . . Science can serve by continuing to press forward vigorously with its normal affairs, but at an accelerated pace."<sup>30</sup> Secretary Miller continued in the same tone and pointed out that one thing which Academy members "can and should do" is register in the National Roster of Scientific and Specialized Personnel.<sup>31</sup>

Dr. Leslie A. Sandholzer of the Public Health Department of Norfolk commented extensively on the wartime activities of the Academy. In part he said, "it is the duty of the Academy, therefore, to make the community aware of its scientific needs in the war effort and to promote a program of scientific endeavor in line with this. Failure to do so can only lead to a lessened efficiency of the national war program." Sandholzer was calling for science to fall into line with its research efforts and noted, to emphasize his point, that "the nutritional value of T.N.T. to alligators is not a war research in spite of the use of high explosive." Then Sandholzer reiterated the theme which Rudd, Jeffers, and Miller had been driving home, and which would continue to recur in Academy thinking for the next three years: "It would seem to be," he said, "in the best interest of society as well as of science for us to plan a war and post-war program of scientific endeavor."<sup>32</sup>

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<sup>30</sup>Proceedings, 1941-1942, 152.

<sup>31</sup>Ibid., 154.

<sup>32</sup>Ibid., 193-194.

Later Sandholzer suggested that the Virginia Academy of Science establish cordial relations with the large number of scientists stationed in Virginia during the war, and that the Academy make their laboratory facilities available to these visitors.<sup>33</sup> The Academy empowered the incoming President, Marcellus S. Stow of Washington and Lee, to set up a committee, which became known as the Committee on Wartime Activities, to study both present and postwar problems.<sup>34</sup>

In addition to the discussions relating to the impact of the war, President Jeffers reported that in October 1941 the Academy had presented a symposium on "The Value of Scientific Research to Virginia Industry" in a joint meeting with the Virginia Association of Manufacturers at Roanoke. Dr. Sidney S. Negus of the Medical College of Virginia had been in charge of the Academy's presentation.<sup>35</sup> Jeffers was also able to announce that the state legislature had appropriated \$5,000 for the publication of the monograph on the James River.<sup>36</sup>

In a complete about face from what had been decided in 1937, the 1942 Academy convention voted for the Conference to "be given power to dispose of Academy business."<sup>37</sup> It had only been five years earlier that the Conference had been instituted specifically as a

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<sup>33</sup>Proceedings, 1941-1942, 193-194.

<sup>34</sup>Ibid., 198.

<sup>35</sup>Ibid., 150.

<sup>36</sup>Ibid., 152.

<sup>37</sup>Ibid., 196.



discussion meeting. Also at this meeting another new section was added to the Academy -- Bacteriology.<sup>38</sup> Dr. Leslie A. Sandholzer of Norfolk, a rather conspicuous figure at the 1942 meeting, was chairman of the section. Fourteen papers were presented by scholars from the University of Virginia, Hampton Institute, Virginia Polytechnic Institute, and the United States Public Health Service.<sup>39</sup>

Subcommittees of the Long Range Planning Committee had two major reports to make in 1942. Mr. Hubert J. Davis of Matthew Whaley High School in Williamsburg and chairman of the subcommittee on Science Clubs and a Junior Academy reported that the Junior Academy had held its first meeting in May 1941 at George Wythe High School in Richmond at the same time that the Virginia Academy was meeting in that city. However, the American Institute which was to provide \$100 for the Virginia science clubs had failed to do so and had informed the Virginia Academy of Science that Science Service and its national organization, Science Clubs of America, was the new group with which to affiliate. The American Institute, it seems, had decided to restrict itself to developing scientific interest solely within New York City.<sup>40</sup> At the meeting of the Council on January 16, 1942 the Virginia Academy voted not to affiliate with Science Service. With

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<sup>38</sup> Jeffers, History, 34.

<sup>39</sup> Proceedings, 1941-1942, 204-208.

<sup>40</sup> Jeffers, History, 82-83.

both Science Service and the American Institute as sources of financial aid sealed off, it was obvious that the Academy would have to plan well and work quickly if it hoped to save its Junior Academy. E. C. L. Miller had already assumed the duties of Junior Academy Treasurer and in January Miss Lena Artz of Arlington was appointed Secretary. As Mr. Davis noted, the Junior Academy was actually "begun in earnest" in January 1942 when the Academy realized that the success or failure of the Junior Academy rested squarely upon the shoulders of the Senior Academy.<sup>41</sup>

Chairman Stow, reporting for the committee on the James River Project, was able to announce that the title for the proposed monograph would be The James River -- Past, Present, Future. Stow said that Dr. Sidney Negus had prepared in-depth outlines of the planned study which were published in both Science and the magazine of Virginia, The Commonwealth, and that the outlines had "received exceptionally favorable comment from numerous sources." With a great deal of optimism and enthusiasm, authors for the various chapters, as well as deadline dates for copy, had been announced during the past year; however, manuscripts, as Dr. Stow observed, were slow to come in. One individual, however, was "unique in his interest in the James River Project." Mr. Justus Cline, who had first proposed the endeavor,

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<sup>41</sup> Proceedings, 1941-1942, 169-171.

was singled out by Stow as a man without whom "we would have been unable to do what little has been done on the Long Range Project."<sup>42</sup>

The central location of Richmond, not to the state of Virginia but to the members of the Virginia Academy of Science, made it the scene of not only the twenty-first but also the twenty-second, twenty-third, and twenty-fourth annual meetings of the Academy. Wartime gas rationing was being felt by the Academy.<sup>43</sup>

By May 12-13, 1943, Dr. Ivey F. Lewis was willing to recognize the hopelessness of attempting to continue the Virginia Journal of Science; therefore, he moved that the Journal be allowed to publish two more numbers and that it then be suspended for the duration of the emergency. Dean Wortley F. Rudd seconded the motion and the Council adopted the proposal.<sup>44</sup> Secretary Miller was also experiencing some hardships as he reported that wartime conditions had made the year a particularly lean one financially and had put the Academy some \$20 in the red.<sup>45</sup>

On the brighter side, Dr. Negus was able to report that he had worked out a plan for affiliation which had met with the approval of both the Academy Council and Science Clubs of America, Incorporated. The plan allowed the Virginia Junior Academy of Science to become

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<sup>42</sup>Proceedings, 1941-1942, 180-182.

<sup>43</sup>Interview with Dr. William G. Guy, Williamsburg, July 1, 1966.

<sup>44</sup>Proceedings, 1942-1943, 10.

<sup>45</sup>Ibid., 14.

an affiliate member of the national organization under the auspices of Science Service.<sup>46</sup> And also Dr. Boyd Harshbarger of Virginia Polytechnic Institute was given permission by the Academy to organize a section concerned with statistical method for the next annual convention. Harshbarger's efforts met with success as the Statistics Section was able to present a program of ten papers in 1943.<sup>47</sup>

Retiring President Marcellus H. Stow cited in his report to the Council the rapid progress made by the Virginia Academy in its first twenty years. But Stow looked beyond the history of the Academy and addressed himself, in a series of rhetorical questions, to the harsh realities which had confronted Virginia not only on the eve of the war, but which now seemed to loom even more ominously on the horizon of the postwar era. The President asked: "Will Virginia and the South reap the benefits of these postwar changes? Will Northern industry continue to exploit Virginia resources or even overlook them entirely? Will Virginia students, who desire the best education in the sciences, go to Northern Universities? Will Northern industries and Northern Universities continue to use the lures of higher salaries, more opportunities, or greater encouragement to entice the Virginia scientist to other regions?" Professor Stow offered a partial answer to the perplexing questions which he raised by asserting

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<sup>46</sup>Proceedings, 1942-1943, 19.

<sup>47</sup>Ibid., 9.

that through the combined efforts of Virginia schools and universities and the Virginia Academy of Science these problems could be dealt with.<sup>48</sup>

W. Catesby Jones, who assumed the Presidency in 1943, was somewhat more specific in his comments about postwar Virginia. The new President, who was Chief of the Division of Chemistry of the Department of Agriculture, first spoke concerning the current meeting. "I am of the opinion," Jones said, "the only reason we could justify holding the Academy meeting this year would be to ascertain if we, as scientists, can do more than we are doing to promote the winning of the war, and to set our sails toward postwar planning." Postwar planning was obviously Jones's major concern, "the idea being, when certain defense industries in the Northern congested industrial areas have served their purpose that they be moved South where abundant raw materials can be found, and at the same time give employment to our own boys who have graduated from our Southern Colleges. In other words, move the industries South instead of the boys North."<sup>49</sup>

The twenty-second annual meeting was attended fairly well under the circumstances, in Richmond May 9-10, 1944 -- a Tuesday and Wednesday -- the first time an Academy convention was not scheduled on a weekend.<sup>50</sup> Incoming President Dr. Robert F. Smart of the University

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<sup>48</sup>Proceedings, 1942-1943, 13.

<sup>49</sup>Ibid., 30.

<sup>50</sup>Proceedings, 1943-1944, 9; and Jeffers, History, 31.

of Richmond gave a speech of acceptance in which he called for vigorous Academy action to insure postwar progress for both science and industry in the South.<sup>51</sup> The President also noted that there was ample reason for a meeting in 1944 if the Academy could show some progress towards making things attractive enough for young people in the postwar environment to get them to return to the laboratory.<sup>52</sup>

Secretary Miller reported that although the Academy lost 50 members it still managed to close out the year in the black.<sup>53</sup> Also in 1944 the Academy Prize became the J. Shelton Horsley Research Award in honor of the fourth president of the Virginia Academy -- the man who was responsible for soliciting the Research Endowment Fund. It was also announced that the Jefferson Prize, the successor of the Jefferson Gold Medal, would be discontinued.<sup>54</sup>

Chairman L. C. Bird prefaced the subcommittee reports of the Long Range Planning Committee with the summary comment that "the war has seriously interfered with the plans projected for the Virginia Academy by your Long Range Planning Committee."<sup>55</sup> Dr. Stow of Washington

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<sup>51</sup> Proceedings, 1943-1944, 30.

<sup>52</sup> Jeffers, History, 32.

<sup>53</sup> Proceedings, 1943-1944, 24.

<sup>54</sup> Flory, Research Committee History, 13.

<sup>55</sup> Proceedings, 1943-1944, 11.

and Lee and Mr. Davis of Williamsburg backed up Bird on this count in their respective reports. Davis acknowledged that the Academy had been unable to organize a Junior Academy meeting in either 1943 or 1944 because of the travel difficulties, and that since no dues had been collected, the Juniors were proceeding to run up a debt.<sup>56</sup> Dr. Stow informed the Academy that all the authors concerned with the James River monograph appeared to be directly or indirectly engaged in the war effort as no additional chapters had been turned in to him during the past year.<sup>57</sup> A darker day, however, lay ahead for Chairman Stow.

As the war drew to an end the Virginia Academy of Science was in less than ideal circumstances. Only a handful of scientists were summoned for a special meeting in Richmond. As President Robert F. Smart conceded, the Academy was forced by the exigencies of war to cancel its regular meeting for 1945.<sup>58</sup> It was merely a specially convened Council which perpetuated the continuity of annual spring conferences at this meeting on May 11, 1945, at the Medical College of Virginia.

Secretary Miller reported that Academy membership had fallen from a peak in 1941 of 912 to roughly two thirds of that number, 629,

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<sup>56</sup> Proceedings, 1943-1944, 12-15.

<sup>57</sup> Ibid., 12.

<sup>58</sup> Proceedings, 1944-1945, 11.

in 1945.<sup>59</sup> Dr. Jeffers had announced the past November at the fall Council meeting that his Museum Committee had toned down its proposals considerably. The committee was now willing to take over the Finance Building for its museum after a new office building could be constructed to take the Finance Building's place. "Governor Darden," said the chairman, "went so far as to promise to include such a recommendation in his message to the Legislature which meets in January."<sup>60</sup> However, Virginia is still without a science museum. The outlook was not nearly so bright in 1945 for chairman Stow's James River Project. It was "with the greatest regret" that Dr. Stow reported "that all progress on the Project was suspended during the past year. No manuscripts were received from authors assigned to the various chapters of the proposed Monograph and it should be presumed," he added generously, "that they are devoting their time to direct or indirect war work."<sup>61</sup>

The speeches of the incoming and retiring Presidents of the Academy present an interesting study in continuity -- not only for 1945, or even for the wartime period -- but a continuity of philosophy and purpose which can be traced back to the very founding of the Academy. The war was all but ended in Europe; there was little doubt that the

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<sup>59</sup> Proceedings, 1944-1945, 14.

<sup>60</sup> Ibid., 30.

<sup>61</sup> Ibid., 30.



the combined might of the allies in the Pacific would soon close that theater also. It was a time for starting anew; and what a start it could be for science as a result of the tremendous acceleration of scientific research which took place during the war. But the "war of science," observed Dr. Smart in his retirement address, was not in all ways a success for science; nor was it exactly, as Jeffers put it, "the vindication of science."<sup>62</sup> "It can no longer be accepted," remarked Smart, "that the results of scientific investigation will lead to continuous progressive improvements in conditions of life." Indeed, he continued, "the war has proved this and even now voices are being raised demanding the cessation of scientific research as the only means of preserving mankind." However, Smart came prepared to do much more than merely acknowledge this threat to science -- he offered a plan to stop this antiscientific offensive. Smart announced, with evident pleasure, that the Academy Council had been in joint session with the Executive Committee of the Social Science Association of Virginia. Nothing definite could be reported at the time, nor was any lasting arrangement affected; but most Academy members were certainly in agreement with Dr. Smart in his fervent hope "that the seed of close cooperation planted today will bring forth a rich harvest tomorrow."<sup>63</sup>

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<sup>62</sup> Jeffers, *History*, 33.

<sup>63</sup> Proceedings, 1944-1945, 13.

President Elect H. Rupert Hamner, Director of the American Tobacco Company Research Laboratory, delivered his inaugural address on "The Responsibility of Science in a Postwar World." Hamner's main point was his plea for "a wider dissemination, through youth, of scientific knowledge so that the growing generation may have a clearer understanding of the spirit of Science, the real objectives of scientific effort; to the end that all people may learn to know and respect the world in which they live." It is "knowledge," Hamner concluded, "which will banish fear, respect which will prick the bubble of vanity -- twin viruses which have so long blighted the flower of good will among men."<sup>64</sup>

On these notes of challenge for the future Hamner and Smart brought to a close the war years which Dean Wortley F. Rudd had ushered in at the eighteenth annual meeting by encouraging the Academy to meet a changing world by being itself amenable to change. The Academy had indeed been challenged by new and trying circumstances as Rudd had predicted; but even greater challenges could be forecast for the future. Although the particulars would differ, what Hamner and Smart saw in both the present and the future was nothing more, in essence, than what Dr. Ivey F. Lewis, founder of the Virginia Academy of Science, had already seen so vividly in the past. As Lewis pointed out in 1924: "Science must defend itself anew as it has often done in the past."

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<sup>64</sup>Proceedings, 1944-1945, 10.

The Virginia Academy of Science had to defend itself in 1945 by resisting the "voices . . . being raised demanding the cessation of scientific research." The Academy chose to do this by attempting to destroy the "two viruses," fear and vanity, "which have so long blighted the flower of good will among men."

APPENDIX A

CHARTER MEMBERS OF THE VIRGINIA ACADEMY OF SCIENCE

NAME	ADDRESS	INTEREST
Adair, Miss Cornelia	Richmond	Education
Alden, Harold L.	Univ. of Va.	Astronomy
Ames, Miss Adeline	Sweet Briar	Botany
Anderson, Dice R.	R.M.W.C.	History, Pol. Sci.
Andrews, Ernest L.	Bristol	Chemistry, Biology
Bates, Robert L.	V.M.I.	Psychology, Education
Bean, Robert B.	Univ. of Va.	Anthropology
Bell, Leslie D.	Lynchburg College	Biology
Bennett, H. E.	William and Mary	Education, Psychology
Bird, Lloyd C.	Med. Col. of Va.	Bacteriology
Blackford, Charles M., II	Staunton	Biology, Chemistry
Brown, G. W.	William and Mary	Medical Sciences
Brown, William M.	Washington and Lee	Education, Psychology
Bryce, L. W.	Med. Col. of Va.	Biology
Bryson, Miss Flora	East Radford	Biology, Health
Burrows, W. A.	Richmond	Chemistry
Burwell, Miss Margaret	Roanoke	Zoology
Bushnell, D. I., Jr.	Univ. of Va.	Anthropology
Carter, Gardner L.	Univ. of Va.	Chemistry
Chase, H. M.	Danville	Chemistry, Mathematics
Christian, W. Asbury	Blackstone College	Psychology
Clift, William	Med. Col. of Va.	Chemistry
Cocke, M. Estes	Hollins	Education
Coghill, H. DeJ.	Med. Col. of Va.	Psychology
Cole, Glenn G.	Lynchburg College	Chemistry, Physics
Crawford, S. C.	Univ. of Va.	Zoology
Crockett, W. G.	Med. Col. of Va.	Chemistry
Davis, Donald W.	William and Mary	Zoology, Genetics
Davis, John Staige	Univ. of Va.	Medical Sciences
Davis, W. E.	William and Mary	Biology
Dickerson, L. M.	William and Mary	Biology, Agriculture

NAME	ADDRESS	INTEREST
Dolley, W. L.	R.M.C.	Biology
Dolloff, Albert F.	William and Mary	Bacteriology
Doub, Roscoe M.	Roanoke College	Physics, Geology
Drinkard, A. W., Jr.	Va. Agric. Exp. Sta.	Agriculture
Fackenthall, P. F.	Med. Col. of Va.	Botany
Fattig, P. W.	Farmville Normal	Biology, Entomology
Ferguson, George O., Jr.	Univ. of Va.	Psychology
Fillinger, Miss Harriet	Hollins College	Chemistry
Foster, Spottswood C.	Coleman's Falls	Eng., Math., Chemistry
Freeman, Douglas S.	Richmond	Economics, Pol. Sci.
Fromme, F. D.	V.P.I.	Botany, Phytopathology
Geissler, Ludwig R.	R.M.W.C.	Psychology
Giles, Albert W.	Univ. of Va.	Geology
Goodwin, William H.	Univ. of Va.	Medical Sciences
Grant, Miss Jean	Sweet Briar	Biology
Graves, Kenneth D.	Roanoke	Medical Sciences
Gray, E. W.	Med. Col. of Va.	Chemistry
Halloran, Miss J. H.	Richmond	?
Harris, Miss Isabel	Univ. of Richmond	Mathematics
Hart, M. D.	Richmond	Wild Life Conservation
Hayden, Horace E.	Univ. of Richmond	Invertebrate Zoology
Hitchcock, Miss C. J.	Proffit	Botany
Hodges, J. Allison	Med. Col. of Va.	Medical Sciences
Hoggan, J. A. C.	Med. Col. of Va.	Genetics
Holden, R. J.	V.P.I.	Geology, Mineralogy
Horsley, J. Shelton	Richmond	Medical Sciences
Howe, James L.	Washington and Lee	Chemistry
Howison, Miss Mary S.	Newport News	Biology, Eugenics
Hoxton, L. C.	Univ. of Va.	Physics
Hoyt, William D.	Washington and Lee	Biology
Hutcheson, T. B.	V.P.I.	Agriculture
Johnson, T. C.	Va. Truck Exp. Sta.	Horticulture
Jones, Chapin	Univ. of Va.	Botany, Forestry
Jones, E. Ruffin	Williamsburg	Sociology
Jordan, R. E.	Univ. of Va.	Medical Sciences
Joyner, Houston C.	Amherst	Chemistry
Keeble, W. H.	R.M.C.	Physics
Keister, William S.	Ivy Depot	Biology, Public Health
Kepner, William A.	Univ. of Va.	Lower Invertebrate Zoology

NAME	ADDRESS	INTEREST
Kilby, C. K. King, D. J.	R.M.W.C. Williamsburg	Physics, Astronomy Medical Sciences
Lambert, Miss Maud Lane, Miss Sara Leap, William L. Lee, Claudius Lee, F. A., Jr. Lee, W. McDonald Lewis, Ivey F. Littleton, L. R. Loeber, Charles Lonsdale, John T. Loving, R. E. Lyle, W. L.	Roanoke Hampton Institute Washington and Lee V.P.I. Farmville Normal Richmond Univ. of Va. Emory and Henry College Richmond Univ. of Va. Univ. of Richmond Bedford	Medical Sciences Biology Chemistry Physics Psychology Wild Life Conservation Biology Chemistry Sanitary Engineering Geology, Mineralogy Physics Pharmacy
McConnell, C. H. McConnell, John P. McCrackan, Robert F. McGuire, Stuart Maphis, Charles G. Miller, E. C. L. Mitchell, S. A.	Lynchburg College East Radford Normal Med. Col. of Va. Med. Col. of Va. Univ. of Va. Med. Col. of Va. Univ. of Va.	Chemistry Education Chemistry Medical Sciences Education Bacteriology, Chemistry Astronomy
Noback, Gustav J.	Med. Col. of Va.	Anatomy, Anthropology
O'Connell, D. J. Ogburn, S. C. Olivier, Charles P. Osterud, H. L.	Richmond Washington and Lee Univ. of Va. Med. Col. of Va.	General Chemistry Physics, Astronomy Biology, Biochemistry
Pease, Robert M. Perrow, Mosby G.	Univ. of Va. Lynchburg	Chemistry Public Health
Reddish, George F. Robb, Robert G. Rodman, Walter S. Rudd, Wortley F. Ryland, Garnett	Med. Col. of Va. William and Mary Univ. of Va. Med. Col. of Va. Univ. of Richmond	Bacteriology Chemistry Physics, Mathematics Chemistry Chemistry
Seekford, Ben H. Simpson, T. McN., Jr. Sitler, Miss Ida Smith, Francis H.	Staunton H.S. R.M.C. Hollins College Univ. of Va.	Biology, Chemistry Mathematics, Astronomy Biology Physics, Astronomy, Electricity

NAME	ADDRESS	INTEREST
Smith, Henry L.	Washington and Lee	Physics, Astronomy
Smith, William D.	Scottsville H.S.	Biology
Smyth, Ellison A.	V.P.I.	Entomology, Ornithology
Smyth, Thomas	Ithaca, N.Y.	Biology, Zoology, Ornithology
Spencer, Herbert	Va. Truck Exp. Sta.	Zoology, Entomology
Stahl, Horatio S.	V.P.I.	Botany, Phytopathology
Straus, Aubrey H.	Med. Col. of Va.	Public Health
Swen, Earl G.	William and Mary	Sociology
Talliaferro, E.C.S.	Norfolk	Medical Sciences
Tess, William H.	Marion	Chemistry
Thomas, Miss Sue W.	R.M.W.C.	?
Tucker, Beverly R.	Med. Col. of Va.	Medical Sciences
Turman, A. E.	Richmond	Medical Sciences
Tuttle, A. H.	Univ. of Va.	Histology, Cystology
Underhill, J. B.	Fork Union	Botany, Biology, Entomology
Wakefield, R. A.	Va. Union Univ.	Chemistry
Warren, Paul A.	William and Mary	Biology, Genetics
Watson, John W.	V.P.I.	Chemistry
Weiss, Otto H.	Newport News	Physics, Mathematics
Williams, J. E.	V.P.I.	Mathematics
Wilson, Edward C.	Lynchburg College	Education, Psychology
Winne, A. L. I.	Richmond	Pharmacy
Winston, J. H. C.	Hampden-Sydney	Chemistry, Geology
Wright, Charles C.	Bridgewater College	Economics
Wright, Frank J.	Bridgewater College	Geology, Physiography
Young, R. C.	William and Mary	Physics
Zimmerly, H. H.	Norfolk	Horticulture

APPENDIX B  
OFFICERS OF THE ACADEMY

1923-24	President Secretary Council	Ivey F. Lewis E. C. L. Miller George O. Ferguson Henry Louis Smith R. C. Young	Univ. of Va. Med. Col. of Va. Univ. of Va. Washington and Lee William and Mary
1924-25	President Secretary Council	James L. Howe E. C. L. Miller H. L. Smith R. C. Young Ivey F. Lewis	Washington and Lee Med. Col. of Va. Washington and Lee William and Mary Univ. of Va.
1925-26	President Secretary Council	Robert E. Loving E. C. L. Miller R. C. Young Ivey F. Lewis W. M. Brown	Univ. of Richmond Med. Col. of Va. William and Mary Univ. of Va. Washington and Lee
1926-27	President Secretary Council	J. Shelton Horsley E. C. L. Miller Ivey F. Lewis W. M. Brown Garnett Ryland	Richmond, Va. Med. Col. of Va. Univ. of Va. Washington and Lee Univ. of Richmond
1927-28	President Secretary Council	Donald W. Davis E. C. L. Miller W. M. Brown Garnett Ryland L. G. Hoxton	William and Mary Med. Col. of Va. Washington and Lee Univ. of Richmond Univ. of Va.
1928-29	President Secretary Council	W. M. Brown E. C. L. Miller Garnett Ryland L. G. Hoxton I. D. Wilson	Washington and Lee Med. Col. of Va. Univ. of Richmond Univ. of Va. V.P.I.
1929-30	President Secretary Council	Garnett Ryland E. C. L. Miller L. G. Hoxton I. D. Wilson L. R. Geissler	Univ. of Richmond Med. Col. of Va. Univ. of Va. V.P.I. R.M.W.C.



1930-31	President Secretary Council	L. G. Hoxton E. C. L. Miller I. D. Wilson L. R. Geissler A. H. Straus	Univ. of Va. Med. Col. of Va. V.P.I. R.M.W.C. Med. Col. of Va.
1931-32	President Secretary Council	I. D. Wilson E. C. L. Miller L. R. Geissler A. H. Straus H. E. Jordan	V.P.I. Med. Col. of Va. R.M.W.C. Med. Col. of Va. Univ. of Va.
1932-33	President Secretary Council	T. McNider Simpson E. C. L. Miller A. H. Straus H. E. Jordan Miss Ida Sitler	R.M.C. Med. Col. of Va. Med. Col. of Va. Univ. of Va. Hollins College
1933-34	President Secretary Council	William A. Kepner E. C. L. Miller H. E. Jordan Miss Ida Sitler D. Maurice Allen	Univ. of Va. Med. Col. of Va. Univ. of Va. Hollins College Hampden-Sydney
1934-35	President Secretary Council	William T. Sanger E. C. L. Miller Miss Ida Sitler D. Maurice Allen F. L. Robeson	Med. Col. of Va. Med. Col. of Va. Hollins College Hampden-Sydney V.P.I.
1935-36	President Secretary Council	Miss Ida Sitler E. C. L. Miller D. Maurice Allen F. L. Robeson W. H. Keeble	Hollins College Med. Col. of Va. Hampden-Sydney V.P.I. R.M.C.
1936-37	President Secretary Council	H. E. Jordan E. C. L. Miller F. L. Robeson W. H. Keeble Edward Steidtmann	Univ. of Va. Med. Col. of Va. V.P.I. R.M.C. V.M.I.
1937-38	President Secretary Council	D. Maurice Allen E. C. L. Miller W. H. Keeble Edward Steidtmann Robert F. Smart	Hampden-Sydney Med. Col. of Va. R.M.C. V.M.I. Univ. of Richmond

1938-39	President Secretary Council	Earl B. Norris E. C. L. Miller Edward Steidtmann Robert F. Smart W. Catesby Jones	V.P.I. Med. Col. of Va. V.M.I. Univ. of Richmond
1939-40	President Secretary Council	Ruskin S. Freer E. C. L. Miller Robert F. Smart W. Catesby Jones C. E. Meyers Preston Edwards Marcellus H. Stow	Lynchburg College Med. Col. of Va. Univ. of Richmond  V.M.I. Sweet Briar Washington and Lee
1940-41	President Secretary Council	Wortley F. Rudd E. C. L. Miller W. Catesby Jones C. E. Meyers Preston Edwards Marcellus H. Stow H. H. Zimmerly	Med. Col. of Va. Med. Col. of Va.  V.M.I. Sweet Briar Washington and Lee Norfolk, Va.
1941-42	President Secretary Council	George W. Jeffers E. C. L. Miller C. E. Meyers Preston Edwards Marcellus H. Stow H. H. Zimmerly H. B. Haag	Farmville Normal Med. Col. of Va. V.M.I. Sweet Briar Washington and Lee Norfolk, Va. Med. Col. of Va.
1942-43	President Secretary Council	Marcellus H. Stow E. C. L. Miller Preston Edwards John H. Yoe (for Stow) H. H. Zimmerly H. B. Haag Arthur Bevan	Washington and Lee Med. Col. of Va. Sweet Briar Univ. of Va. Norfolk, Va. Med. Col. of Va. Univ. of Va.
1943-44	President Secretary Council	W. Catesby Jones E. C. L. Miller John H. Yoe H. H. Zimmerly H. B. Haag Arthur Bevan William E. Trout, Jr.	Med. Col. of Va. Univ. of Va. Norfolk, Va. Med. Col. of Va. Univ. of Va. Mary Baldwin College

1944-45	President	Robert F. Smart	Univ. of Richmond
	Secretary	E. C. L. Miller	Med. Col. of Va.
	Council	H. H. Zimmerly	Norfolk, Va.
		H. B. Haag	Med. Col. of Va.
		Arthur Bevan	Univ. of Va.
		William E. Trout, Jr.	Mary Baldwin College
		J. L. Blair Buck	State Board of Education

APPENDIX C

RECIPIENTS OF J. SHELTON HORSLEY RESEARCH AWARD

1927	Carl C. Speidel	Univ. of Va.
1928	John E. Yoe	Univ. of Va.
1929	J. C. Street	Univ. of Va.
1930	H. E. Jordan	Univ. of Va.
	Carl C. Speidel	Univ. of Va.
1931	E. C. Stevenson	Univ. of Va.
1932	James H. Smith	Richmond, Va.
1933	S. A. Wingard	Va. Poly. Inst.
1934	E. P. Johnson	Va. Poly. Inst.
1935	Margaret Hess	Judson Coll., Marion, Ala.
1936	Alfred Chanutin	Univ. of Va.
1937	R. G. Henderson	Va. Poly. Inst.
1938	S. G. Badell	Univ. of Va.
1939	M. J. Murray	Armour Inst. of Tech, Chicago
	F. F. Cleveland	Armour Inst. of Tech, Chicago
1940	Walton C. Gregory	Tenn. Poly. Inst., Cookeville
1941	Charles Ray	Univ. of Va.
1942	No Award	
1943	J. B. Meyer	Blandy Exp. Farm, U. of Va.
1944	J. H. Taylor	Blandy Exp. Farm, U. of Va.
1945	No Award	

## BIBLIOGRAPHY

- Dr. Donald W. Davis Papers, Earl Gregg Swem Library, College of William and Mary, Williamsburg, Virginia.
- Flory, Walter S., Research Committee History. Manuscript in the possession of the Virginia Academy of Science, Virginia Institute for Scientific Research, Richmond, Virginia.
- Harshbarger, Boyd, The History of the Virginia Journal of Science. Manuscript, Virginia Institute for Scientific Research.
- Jeffers, George W., History of the Virginia Academy of Science. Manuscript, Virginia Institute for Scientific Research.
- Dr. Ivey F. Lewis Papers, Virginia Institute for Scientific Research.
- Proceedings 1923-1945. Being the minutes of the Meetings, Conferences, and Council Sessions of the Academy. Published through the office of the Secretary of the Academy in Richmond, and in conjunction with the Virginia Journal of Science 1940-1943.
- Virginia Journal of Science. Vol. I-IV (1940-1943), Lexington, Virginia.

VITA

Harry Joseph Staggers

Born in Waynesburg, Pennsylvania, April 8, 1943. Graduated from Lakeland Senior High School, Lakeland, Florida, June 1961, A.B., Wake Forest College, 1965. M.A. candidate, College of William and Mary, 1965-1966, with a concentration in history. The course requirements for this degree have been completed, but not the thesis: A History of the Virginia Academy of Science, 1923-1945.

In September 1966, the author entered the University of Pennsylvania as a graduate assistant in the Department of History.