

A HISTORY OF THE  
ALABAMA ACADEMY  
OF SCIENCE

Edited

by

CLYDE H. CANTRELL

PAUL C. BAILEY

S. B. BARKER

Alabama Academy of Science

Auburn, Alabama

1963

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Portrait of Wright A. Gardner, taken about 1924, when he was the key Founding Member of the Alabama Academy of Science.

## DEDICATION

To Wright A. Gardner, whose imagination, enthusiasm, and assiduous efforts resulted in the organization of the Alabama Academy of Science; to past and present officers and division chairmen, whose work has sustained and perpetuated the Academy; and to benefactors and friends, whose financial assistance and interest are hereby acknowledged.

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## PREFACE

One of the happiest aspects of the accident of being President of the Alabama Academy of Science during 1959-60 is the opportunity to supply a Preface to this history. I make this point in order to be able clearly to assign the credit to Clyde H. Cantrell and those of our members who have contributed directly to its achievements.

At the end of 35 years of continuous existence and activity of the Academy, it is well to weave the many-colored threads from the past into an obvious pattern of advance of science. Whether you read through conscientiously or merely dip here and there, the names and deeds of those who established our Academy and contributed to its growth are here. In fact, the chapters which follow are, in most instances, documentations from these very men themselves. Three of the authors are charter members of the Academy.

One point must be made lest the history be misinterpreted. It was necessary to set a deadline; as a result, events beyond 1960 are not recorded. Such important action in the last few years as expansion of the *Journal* to a quarterly and the establishment of the first Regional Junior Academy in Mobile are indications that things are not static with the Academy. We should study the past with an eye to the potential areas of greater accomplishment in the future.

S. B. Barker

President, Alabama Academy  
of Science, 1959-60

## EDITORS' NOTES

Since the Alabama Academy of Science was organized in 1924, its history, activities, and accomplishments have been a matter of interest not only to scientists of Alabama, but to the scientifically and intellectually minded lay persons of the State. It is, therefore, meet and right that the History of the Alabama Academy of Science should be published and made readily available. The History which follows is a joint product, representing many hours of work and research by a considerable number of persons. As Editor of this project, it has been Mr. Cantrell's privilege and pleasure to have been associated with the excellent and cooperative Historical Committee of the Alabama Academy of Science.

The appointment of the Historical Committee was recommended by W. T. Wilks, then President of the Academy, who conceived the idea of this project. Mr. Wilkes' recommendation was formally approved in an Executive Committee meeting held in Birmingham, December 4, 1954, naming Mr. Cantrell Chairman of the Historical Committee. At the 1955 annual meeting of the Academy, areas of responsibility were defined and certain key persons within the Academy designated to write specific chapters. It was impossible for all members of the Committee to begin their work immediately. The archival records of the Academy, located at Auburn, were not properly organized for serious study. In fact, during the greater part of 1955 work was done to prepare the records for research purposes. The entire Committee met in Auburn on January 14, 1956, as guests of the Alabama Polytechnic Institute (now Auburn University). Much progress was made at this meeting in determining the scope and char-

acter the work was to take. Later, during the annual meeting of the Academy at Montevallo, a special meeting of the Historical Committee was held on March 29, 1956.

Since the 1956 meetings, the Committee has been enlarged to include more persons who are eminently qualified to write on various phases of the Academy. The untimely death of Madison L. Marshall necessitated the recruitment of Arthur B. Beindorff for this assignment. When the various chapters were finally assembled, in 1959, it became apparent that the project was so extensive that it would require financing far beyond the Academy's modest abilities. After considerable debate, it was finally decided that Professors Bailey and Barker should undertake a drastic reduction of the manuscript which then would be published as a supplement to the Journal of the Academy. Such has been done, with the help of other interested members, and the result is offered herewith. Although not as complete nor as elaborately documented as originally envisioned, the History which follows is an adequate treatment of all phases of the history of the Academy. The Editors wish to express their deep appreciation to all members who have cooperated in this enterprise and especially for their willingness to see their word-children severely reduced in size. To the officers, past and present, as well as to other members of the Academy who offered advice and counsel during the course of the study, the Editors are grateful.

Clyde H. Cantrell

Paul C. Bailey

S. B. Barker

## INTRODUCTION

By Peter A. Brannon

(*Edited by S. B. Barker*)

Contemplating the story of the Alabama Academy of Science prompts a preface by calling attention to the comments of those several travellers through, and commentators on Alabama, as well as the Alabamians who worked here from the coming of the first whites to this area in 1528. The chroniclers of the Spanish expeditions along the Gulf Coast in the 1520's, the account of exploration by the De-Soto expedition of 1540, the de Luna expedition story of 1559-1560, and subsequent Spanish travellers who noted the flora and fauna of this area and those writers of later date, have presented different phases of scientific interest, therefore we have a fine opportunity to visualize in a perspective way that interested these people before 1924, and prompted that group of students, in 1924, to more formally go ahead with the study.

The British traders out of Charleston, the Spaniards who came north out of Pensacola and St. Marks, the Frenchmen who came into the interior from the Gulf Coast were the pioneers in preserving our conditions and they have presented the beginnings of our research in the science of anthropology, archaeology, botany, ornithology, mammology and most of the phases of scientific investigation that have appealed to Alabamians. The fossil remains of that time when this area was in a great measure under the sea, (or at least under the ice floe) has interested students over the entire period of prehistoric primitive and prewhite Alabama and have left much on the basis of which we have done research.

William Bartram's travels here, about the beginning of the American Revolution, furnished the great source material for our botanical researchers. Timothy Conrad, who studied our fossil remains with Judge Charles Tait as early as 1820, pioneered in that field. Dr. Charles Mohr studied and recorded his plant life of Alabama prior to 1900, and left much to be proud of in the field of his researchers. Dr. Eugene Allen Smith, who went with the Alabama Geological Survey as early as 1871, developed previous studies on that subject in a great manner. He had an able staff, and following his old preceptor, Dr. Michael Toumey, our first State Geologist, he placed Alabama in the forefront in the science of geological investigations.

Dr. William C. Avery, ornithologist, Dr. A. R. Grote, entomologist, James Lewis, a pioneer conchologist of the period of 1876, were forerunners in their fields of energy. Later students including Frederick McCormack, Arthur H. Howell, Lewis S. Golsan, Ernest S. Holt and others of us, were pioneers in contributing of our researchers to the scientific journals.

The organization of the Alabama Anthropological Society in 1909, at Montgomery, the organization of the Birmingham Academy of Science a few years later, the organization of the Bartram Natural History of Society at Montgomery in 1914, and the recording of the investigations of these amateur scientists in a great measure prompted the efforts of the pioneers, Dr. Wright A. Gardner, the leader among them, to strive toward a formal organization of the Alabama Academy of Science, at Montgomery, during a meeting of the Alabama Education Association, on 4 April 1924. The *Montgomery Advertiser* (5 April 1924) said of that organization:

#### ALABAMA ACADEMY OF SCIENCE LAUNCHED

New Section of Alabama Education Association Formed  
During Convention Here

The Alabama Academy of Science was organized by a group of scientists and persons interested in science at a meeting of the science section of the A. E. A. at Sidney Lanier High School, Friday, the purpose of the organization being the study and advancement of this subject. Dr. Wright A. Gardner, of Auburn, was elected president, H. D. Pallister, of the University of Alabama, first vice-president, Dr. Walter C. Jones, of Birmingham-Southern College, second vice-president, and Dr. Sumner A. Ives, of Howard College, Birmingham, secretary-treasurer.

By unanimous vote of the assembly, Dr. Eugene A. Smith, geologist of the University of Alabama, was declared honorary dean of the academy.

Through application presented by Dr. Jones, the Birmingham Scientific Society immediately became affiliated with the Alabama Academy of Science upon its formation here Friday. Constitution and by-laws of the new organization were adopted. The organization was temporarily set up at the morning meeting with the temporary chairman and secretary later elected as permanent.

From this modest beginning has grown the present Alabama Academy of Science, the Junior Academy, and indirectly such affiliated or related organizations as the Alabama Regional Science Fairs and the Gorgas Scholarship Foundation. After more than 35 years, it is highly desirable that the history of these developments be related.

## CHAPTER I

### EARLY HISTORY OF THE ALABAMA ACADEMY OF SCIENCE

By Clyde H. Cantrell

(*Edited by S. B. Barker*)

#### BEGINNINGS OF THE SCIENTIFIC MOVEMENT

The scientific movement begun by the Egyptians and Greeks came to a period of stagnation on the decline of Greek culture during the Dark Ages. The invention of printing from movable type brought about a vigorous revival which was spurred on by the inquiring minds of Francis Bacon, Descartes, and numerous scholars of less importance. During the sixteenth, seventeenth, and eighteenth centuries there was a steady advance in the investigation of natural phenomena. During the post-Renaissance period, scientific disciplines were established "on broad and realistic bases" (1). Despite the fact that scientific thinking had its inception in antiquity, certain branches of science are still relatively young as may be proved by the dates of some of the pioneering work done by great scientists. Physics is dated largely from the researches of Newton (1687), chemistry from Lavoisier (1687), and geology from Hutton (1800). Although *homo sapiens* may be about 100,000 years old, most branches of science are comparatively young.

Plato's Academy (387 B.C.) and Aristotle's Lyceum (355 B.C.) were the early forerunners of the modern scientific academy, but similar groups, subsequently organized, were abolished by Justinian (2). During the Dark Ages, scientific thought had little or no means of expression or development.

Although Leonardo da Vinci founded, in the fifteenth century, the first academy which was concerned extensively with science, the Renaissance provided the impetus for the development of academies. During the sixteenth and seventeenth centuries several academies of note were started. Among them were the *Academia Secretorium Naturae* (founded in Naples in 1560), requiring some original research or natural discovery for membership; the Royal Society of London (1662); and the French Academy (1666). Of the academies begun in the eighteenth century, important on the American scene were

the American Philosophical Society (1774) and the American Academy of Arts and Sciences (1780).

The American Association for the Advancement of Science, founded in 1848, has exerted a tremendous influence upon, and given strong impetus to the activities of the various regional and state academies of science. The centennial of the founding of the AAAS was celebrated September 13-17, 1948, in Washington, D. C. (3). Two accounts of the activities and accomplishments of the AAAS have appeared. (3, 4).

In 1951, Bevan (1) reported the existence of fourteen city academies and six regional academies of science in the United States. Most of the states now have their own academies, since there are thirty-eight individual academies. Colorado and Wyoming have a joint academy, while Washington and Idaho are members of the Northwest Scientific Association.

#### ESTABLISHMENT OF STATE ACADEMIES

The oldest state academies are those of Maryland (1797) and Connecticut (1799). Nine were organized during the period from 1850 to 1894, and between 1902 and 1919 nine more were established. In the 1920's ten academies began, in the 1930's four were organized, and four were started in the 1940's.

Bevan's study (1) included the purposes and objectives of the various state academies. Of those supplying information, their objectives were.

"Stimulation of research in science (15); promotion of scientific interchange and acquaintance among scientists (10); diffusion of scientific knowledge (10); unification of scientific interests in the state (8); stimulation of interest in science (5); encouragement of publication (5); interpretation of science to the public (2); promotion of formal education in science (2); cooperation of science and industry (1); and assistance to state government (1)".

The state academies of science have sections concerned with all major scientific disciplines. Bevan has pointed out the desirability of having science education sections in all state academies. There is little doubt that many academies will be increasingly concerned with the improvement of science teaching as we advance farther in the "outerspace" era. It should be noted that about ten per cent of all

professional scientists are members of state academies of science. All of them should be interested in Sinnott's very provocative article (5) dealing with the potential value of science in obliterating indifference, intolerance, and restlessness. With all scientists thinking as Sinnott does, the doors of opportunity for personal and human advancement should be opened to all our citizens. There is a recent study by Skallerup on the publications of the American State Academies of Science (6).

#### THE BEGINNINGS OF THE ALABAMA ACADEMY OF SCIENCE

In the early 1920's, Alabama experienced considerable educational and industrial development. Members of the faculty and research appointees at the University of Alabama, the Alabama Polytechnic Institute (now Auburn University), and other institutions of higher learning in the State, as well as other scientists and industrialists, began to realize that considerable value might be received from scientific meetings and through the organization of appropriate scientific societies. These interested individuals considered state academies of science as the best medium for the regional dissemination of scientific and technical information. In such societies could be enrolled scientists of all types—biologists, botanists, chemists, conservationists, engineers, foresters, industrialists, social scientists, zoologists, etc.

One person deserves especial credit for taking the lead in forming the Alabama Academy: Wright A. Gardner, a Ph.D. from the University of Chicago, who became Professor and Head of Botany and Plant Physiology at the Alabama Polytechnic Institute in 1917. As a member of numerous scientific societies, he had attended many national and regional meetings and was able to visualize advantages to the State of Alabama and to the entire Southeastern region through the formation of a state scientific society.

Some scientists in Alabama questioned the advisability of attempting to form such a society. In January, 1891, the Alabama Industrial and Scientific Society had been founded and existed for nine years until dwindling membership and general lack of interest caused it to disband. Eugene A. Smith, State Geologist at the University of Alabama, pointed out to Gardner (7) that some thought had been given to calling it the Alabama Academy of Science and expressed the fear that "the new organization would go about the way that the earlier one did." At first, Smith could not "write out anything concerning the Alabama Industrial and Scientific Society" because he



could not find his "old secretary book." Later on, he located his notes and sent them to Sumner A. Ives, head of the department of biology at Howard College, who urged that they "be included in the proceedings of the new Alabama Academy of Science."

As the first statewide scientific group in Alabama, the Alabama Industrial and Scientific Society had not been especially successful. Nonetheless, Gardner felt that, twenty-odd years later, the State was on the verge of expansion in science and industry and that a state academy of science could and should be established. He therefore began a campaign of letter writing, contemplating either "reviving an old organization which became extinct about 1900, or to proceed from an entirely new beginning," as he wrote Dr. Clyde Brooks, Dean of the University of Alabama School of Medicine. Other letters in 1923 indicate a growing interest in a scientific meeting and include reiterated thanks for offers of help.

Since the Alabama Education Association met annually, Gardner saw this as an opportunity for scientists to come together to read papers and to discuss problems of mutual interest. He considered that they might meet for a few years as a science section of the A. E. A., and then, as the membership increased, establish an academy of science. Exploration of the possibility of meeting in conjunction with the A. E. A. met a cordial reception, especially from H. G. Dowling, Secretary-Treasurer of the organization, who offered to help set up a program and to recognize the new group as a science section.

The following letter (apparently incorrectly dated January 9, 1923) was sent out in mimeographed form to many individuals in the state:

ALABAMA POLYTECHNIC INSTITUTE

College of Agriculture and  
Agricultural Experiment Station  
Auburn, Alabama

Department of Botany

January 9, 1923

Dear Sir:

A number of teachers and other workers in scientific subjects have expressed a desire to organize an Alabama Academy of Science. It seems that the best time for the organization meeting is at the time of the meeting of the Alabama Educational [sic] Association in Montgomery, April 3-5. We have had a very friendly and cordial letter from the Secretary, H. G. Dowling, assuring us of cooperation and recognition as a section of the A. E. A.

as soon as request is formally made. He states that programs are nearly completed and that ours should be submitted at an early date. Please send the title of a paper to be presented by you before the proposed Science Section. Reports of progress in research or interesting observations will be acceptable.

May we count on you to spread the good news and to persuade your scientific friends to take part in the initial program.

Trusting that I may hear from you at an early date, I am

Very truly yours,

Wright A. Gardner,  
Acting Secretary

As can be seen, Gardner was concerned with the double problem of collecting papers for the initial meeting in April and of working up enthusiasm for a permanent membership. On the same day, Gardner addressed a letter to H. G. Dowling, expressing appreciation for Dowling's "friendly attitude toward our proposed Alabama Academy of Science and Section of the Alabama Education Association . . . ; have set the wheels in motion to develop our program . . ."

He also wrote to Frank L. Grove, then Principal of the Mobile High School, that ". . . scientists of this State are planning to organize an Academy of Science and hope to meet in Montgomery April 3 to 5 in conjunction with the meeting of the Alabama Educational [sic] Association." He told Grove that as soon as the group was properly organized "We hope to apply for recognition as a section of your organization." He asked Grove to make arrangements for the meetings of the science section, stating that two sectional meetings would be necessary; one for an organizational meeting and another at which papers were to be presented. Gardner said he would prepare a program and send it to Grove at once.

Also in January, 1924, Gardner wrote S. A. Ives, Walter C. Jones and W. A. Whiting, all in Birmingham, that he would be in that city to attend a meeting of the Association of Southern Agricultural Workers and wanted to "talk over the matter of forming the Alabama Academy of Science." He wrote Earl A. Sechriest, a science teacher at Ensley High School, that a paper on audio-visual education or radio transmitting and receiving would be of interest, urging Sechriest to stir up enthusiasm among his friends for an "Academy of Science to the extent of persuading them to become members." In a letter to Eugene A. Smith, of the University of Alabama, he said he was glad that Smith would report at the forthcoming meeting on "the early history of the Alabama Industrial and Scientific Society." Gardner

said it was good to have Smith's words of warning and advice concerning the difficulties and obstacles in the way of such Societies. He continued by saying "I trust we will escape extinction for a time at least by reason of the fact we will be affiliated with the Alabama Education Association and thereby have the advantage of some publicity . . ."

The early correspondence of the Alabama Academy of Science contains many letters which Gardner wrote to others in and out of the State seeking advice and attempting to develop interest in the proposed organization. The records show correspondence with C. M. Farmer, Troy State Normal School; Miss Arah H. Hubbard, Judson College; Stewart J. Lloyd, University of Alabama; Charles K. Zeilman, Birmingham-Southern College; Fred Allison, then at the University of Virginia, later head of the Physics Department at the Alabama Polytechnic Institute, and now affiliated with Huntingdon College; John Y. Graham, University of Alabama; Mrs. S. J. Price, Florence Normal School; I. T. Quinn, Commissioner of Conservation, Montgomery; A. St. Charles Dunstan, Alabama Polytechnic Institute; Thomas A. Wood, Marion Institute; P. H. Smythe, Meteorologist in Montgomery; Peter A. Brannon, Curator of the Department of Archives and History, Montgomery; H. P. Loding, Mobile; and countless others. In most of the letters Gardner solicited aid and advice in the formation of a state academy of science, and also requested that they be prepared to present papers at the first meeting. Gardner felt that the youthful organization should be broad in its base and thereby be of interest to scientists of all types regardless of their specialties. "For the time being it seems to me that all the sciences should be included. Should our organization grow too large, a cleavage can be made later," he wrote.

C. A. Basore, Professor of Chemical Engineering at the Alabama Polytechnic Institute, apparently was the first to submit a title for the program, on "Low Temperature Precipitation of Iron," less than one week following the January 9 call. By dint of correspondence and visits, Gardner was able to send Frank L. Grove, Chairman of the A. E. A. Program Committee, on 30 January 1924, the program which the new science group wished to have printed. Activities continued up to a few days of the first meeting-date, to insure maintenance of interest as many as possible.

The initial meeting of the new group was held at the Sidney Lanier High School, Montgomery, 4 April 1924, at first for organizational purposes. Machinery was set up for the election of officers and

plans made for a committee to draw up a constitution. The first President was, as one would expect, Wright A. Gardner, the person who had done more than anyone else to bring the organization into existence. S. A. Ives was selected Secretary-Treasurer. The remainder of the program consisted of the reading of papers. The titles (8) indicate that, from the very first meeting, there was an interest in a variety of fields of scientific endeavor:

- "Some Effects Produced in Man by Eating Velvet Beans," by Emerson R. Miller
- "Velvet Beans as a Ration for Brood Sows," by Emerson R. Miller
- "Abnormal Deviations of the Spine," by Charles K. Zeilman
- "Low Temperature Precipitation of Iron," by C. A. Basore
- "Electrolytic Calcium Arsenate," by Stewart J. Lloyd
- "The Distribution of and the Damage Done by the Dry-Rot Fungus, *Poria Incrassata*, in Alabama," by L. E. Miles
- "The Eye is the Window of the Mind," by E. E. Sechrist
- "The Chemical Composition of Acorns and Their Value as Feed Stuff," by Emerson R. Miller and S. J. Marion
- "The State Mine Experiment Station and its Relation to the Mining and Metallurgical Industries," by H. P. Pallister
- "Leukocytic Indices of the Body Resistance, With Report of a New Index," by Walter Clinton Jones
- "An Interesting Volatile Oil Plant of Alabama," by Emerson R. Miller
- "The Mexican Cotton Boll Weevil as a National Problem," by W. E. Hinds
- "The Decomposition of Organic Toxins by Soil Organisms," by Wright A. Gardner
- "Historical Sketch of the Alabama Industrial and Scientific Society," by Eugene Allen Smith
- "Ozone Manufacture and the Energy Relations in its Formation," by P. C. Saunders
- "Ecological Survey of the Flora of the Birmingham District," by Sumner A. Ives.

Abstracts were published in Volume 1 of the new Academy Journal for the first thirteen papers (8); the last three appeared only as titles.

This first conference of the Alabama Academy, really held as a science section of the A. E. A., proved to be a great success, although notes on a carbon copy of a letter from Gardner to the manager of the Exchange Hotel in Montgomery indicate only ten persons attended the luncheon ("Luncheon 12:30. 10 plates at 1.50. So. chicken dinner with grapefruit. demitasse & ice cream. very good."). However, between thirty and forty persons participated in the two sessions and were enthusiastically in accord that a golden opportunity existed for the formation and development of a state scientific society which would tend to tie together the scientific interests of the various teachers, scientists, and research workers within the State. To stimulate research in science, to promote the exchange of scientific information, to encourage scientific publications, to promote better instruction in science—these were the objectives of the new group. The success which the Alabama Academy of Science was to enjoy, developing from year to year, would be ample proof that the judgment of those at the first conference was sound and accurate. A report of the first organizational meeting appeared in *Science* (9).

After adjournment of the 1924 conference, President Gardner continued the work commenced prior to the Montgomery meeting. The archives of the Academy, in the custody of the Archivist at Auburn University, show that, from 5 April 1924 to 21 December 1925, he wrote about forty letters in regard to Academy affairs. Gardner and Secretary-Treasurer Ives made a special effort to increase membership as much as possible before 5 June 1924, since it had been agreed that any persons whose applications were received within sixty days after the April 4th meeting would be accepted as charter members. Later, Gardner and Ives decided to extend this period "a few days more."

On 12 June 1924, a letter from Gardner to Ives indicated that there were forty-five members duly enrolled in the organization. However, the sole authoritative list in existence, published in the *Academy Journal* in 1934 (10), contains only thirty-five names. It is not certain whether ten names have been lost, or Gardner's statement was over-enthusiastic. The names of charter members on the published list are included in Appendix I, set in bold face type.

Both Gardner and Ives wrote numerous letters to persons within the State, not only asking that they become members but requesting them to prepare papers for reading at the next conference. Ives made contact with H. G. Dowling, Secretary of the Alabama Education Association, requesting a morning session from nine to eleven

and an afternoon session at two for the second conference of the Alabama Academy of Science. After considerable work, Ives was able to report that a tentative program for the second conference of the Academy, to be held in Mobile in connection with the annual meeting of the Alabama Education Association, had been sent to Mr. Dowling for listing in the printed program. A membership list corrected to that date was sent for Gardner's examination, including forty-seven scientists and others interested in the AAS.

The program was published in the *Alabama School Journal* in sufficient time to enable all members of the Alabama Education Association to know in advance that the second conference of the new Academy of Science was to be held during their annual meeting (11). This second meeting of the Alabama Academy of Science was called to order by President Gardner at 9:20 a.m. on 3 April 1925, at the Scottish Rite Cathedral in Mobile. Eleven members and several visitors were present for this session. Fifteen papers were presented during the morning and afternoon sessions.

The third annual meeting was called to order in the Phillips High School in Birmingham at 8:00 a.m. on 26 March 1926. Fifty members and eighty visitors were present, by far the largest and most enthusiastic group in attendance up to this time. The Secretary-Treasurer of the Academy, John R. Sampey, who called the meeting to order, relinquished the chair to Vice-President W. C. Jones; the latter presided until President Gardner arrived from Auburn to take charge of the meeting. At this conference twenty-one papers were presented. New members elected to the Academy totaled twenty-seven. It was at this third meeting that the membership voted to file application for membership in the American Association for the Advancement of Science.

Gardner had for some time been a member of the American Association for the Advancement of Science. In fact, it was through attendance at meetings of this Association that he conceived the idea of organizing an Alabama Academy of Science. It is not surprising that after the first organizational meeting Gardner should begin investigating the possibilities of having the Alabama Academy of Science affiliate with the American Association for the Advancement of Science. After the AAS actually became a member of the AAAS, Gardner himself was made the first AAAS Councilor. On 11 April 1927, Secretary John R. Sampey, notifying Gardner of his appointment as AAAS Councilor, wrote: "We rightly consider you as found-

er of the organization, and we need your council [sic] in shaping the new policies . . . ”

#### CHARTER MEMBERS

Considerable confusion and misunderstanding clearly existed in the early years of the Academy regarding the keeping of records, the classification of members, etc. As already mentioned, it is not exactly clear in the records of annual meetings, nor in the *Journal* itself, what date finally was used as the terminal period for the payment of dues by those who were to be considered as charter members. In the business session of 20 March 1942, the motion was passed “that we recognize as charter members of the Academy those whose names are published in volume 5 of the *Journal* on page eight and any others who may be found later to have been at the Montgomery organizational meeting and to have paid their membership dues before June 4, 1924, the day agreed on to close for the charter membership roll.” The names of persons listed in volume 5 who are designated as charter members will be found in the composite membership list of the Alabama Academy of Science, Appendix I. Reference is also made to Professor Farmer’s Chapter on this subject.

#### RECORDS OF THE ACADEMY

In the early years of the Alabama Academy of Science it was recognized that someone should be designated as custodian of the records of the new organization. At the 1926 meeting held in Birmingham a motion was passed making the secretary-treasurer the official custodian of all records of the Academy. However, at the 1932 conference the Executive Committee authorized the appointment of the editor of the *Journal* to care for the records. Later, Editor E. V. Jones indicated that he needed help from anyone who could assist him in locating some of the lost records. After Jones assumed all responsibility for records of the Academy, he worked assiduously to organize them for permanent preservation. The available correspondence prior to and immediately following the organization of the Academy was bound for permanent preservation. Probably no one deserves as much credit as Mr. Jones for the care with which he attended to preserving Academy records. In 1947, when the depository library of the Academy was placed in the care of Clyde H. Cantrell, Director of Libraries at the Alabama Polytechnic Institute (now Auburn University), the early records were sent to Auburn. Further work was done at Auburn in organizing correspondence and other materials for the period immediately prior to 1947. Since that time,

it has become customary for the president and others to deposit Academy correspondence and other records at Auburn for possible future use.

#### CONSTITUTIONS

The constitution under which the Academy has operated since 1924 has been revised from time to time. The first formal constitution, as adopted in 1924, was published in 1930. For the record, a copy of this constitution is listed in Appendix II. By the time of the thirteenth annual meeting, held at the Alabama Polytechnic Institute in 1936, a new constitution was adopted which more nearly fitted the needs of the Academy at that time. The amended Constitution (embodied in the Articles of Incorporation) and By-Laws in effect in 1960 are found in Appendix III.

#### MEMBERSHIP DUES

Membership dues, when the Academy began in 1924, were listed at \$1 per year. However, as the cost of publishing the *Journal* continued to keep the treasury depleted, dues were soon increased to \$2. At a business meeting held at the Tutwiler hotel in Birmingham, on 2 May 1947, an attempt to increase membership dues to \$3 was defeated and this change was not achieved until January 1952. Dues were increased to \$5 in 1962. Further details regarding the financial structure of the Academy will be found in the chapter by Mr. Steele.

#### EXCHANGE LIBRARY

As a part of this introductory chapter, some mention should be made of the development of the exchange library of the Academy. Started under the able direction of J. L. Brakefield, while Secretary of the Academy from 1927 to 1932, the library consisted at first of only a few journals turned over to Jones in 1933. Early in his editorship of the *Journal* of the Alabama Academy of Science, Professor Jones corresponded with similar state academies for a mutual exchange of publications. Some of the academies placed Editor Jones on their mailing list and sent current issues to him from the time such agreements were made; others attempted to supply back files in order that the Alabama Academy might have as complete as possible their entire list of publications. At the 1939 meeting the editor was able to report that “our library now consists of over four hundred exchange titles together with small reserves of all numbers of our *Journal*.” At the 1941 meeting, he stated that “The library now contains

nearly 650 exchanges [volumes] and at least a few copies of each number of our own Journal. We also have bound files of the official correspondence of the Academy for the first ten years—up through 1940 are about ready to be bound . . . ”

The good work started by Brakefield and Jones was continued by E. B. Carmichael after he assumed the editorship of the *Journal* in 1942. Complete files of the *Journal* were sent by Carmichael to libraries and learned societies both at home and abroad. However, no change was made in the storing of the Alabama Academy of Science library until 1947. At the final business meeting, held in the Colonial Room of the Tutwiler Hotel in Birmingham, on 2 May 1947, “Dr. E. V. Jones reported that the committee appointed to consider the location of the exchange Journals recommends the acceptance of the offer made by the Library at Alabama Polytechnic Institute, and suggests that Dr. J. P. Reynolds be authorized to see to the shipment of those at Birmingham-Southern College to Alabama Polytechnic Institute . . . ” This was formally approved and Professor Reynolds was asked to see that the publications were sent to Auburn.

Since 1947, the library of the Alabama Academy of Science has been housed at the Library of the Alabama Polytechnic Institute at Auburn, which became Auburn University in 1960. The material has been organized, and, through the Director of Libraries, who is archivist of AAS, the publications received on exchange, as well as the other scientific and technical material are made available to scientists and others in Alabama. At present strenuous efforts are being made to enter into exchange relations with many additional societies which publish material of scientific interest.

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This initial chapter has sketched the objectives and planning of those people who in the mid-1920's conceived the idea of organizing an Alabama Academy of Science. The archives of the Academy have been examined and an effort has been made to record herein the significant facts regarding the organization of the Academy. The chapters which follow will discuss in more detail special phases of the work of the Academy written by those who have worked closely with certain facets of these activities. These various chapters, when combined with the historical background contained in this chapter, should give the reader a fairly accurate picture of the origin, development and accomplishments of the Alabama Academy of Science.

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## CHAPTER II

### DEVELOPMENT OF MEMBERSHIP AND ORIGIN OF SECTIONS

By

C. M. Farmer

(*Edited by Paul C. Bailey*)

#### DEVELOPMENT OF MEMBERSHIP

On April 4, 1924, the first meeting of the Alabama Academy of Science was held in Montgomery. The program for this first meeting included the reading of sixteen papers. By May 19 of that year thirty-six scientists had paid membership dues. From this beginning there was a steady growth in membership until in 1928 there were one hundred twelve members of the Academy.

In the beginning there was only one type of membership. The constitution of 1924 provided: "Membership shall be open to any one vitally interested in science." The membership dues were one dollar per year, and all who paid their dues within sixty days after the organization meeting were to become charter members. At the fourth annual meeting, held at Phillips High School, Birmingham, April 8-9, 1927, "it was voted that members who fail to pay their dues for two years be automatically dropped from the Academy."

At the sixth annual meeting, held March 22-23, 1921, a committee of three Academy members—Emmett B. Carmichael, Wright A. Gardner, and John R. Sampey—was appointed "to work out a definite scheme of membership to include active and associate members and to recommend dues for each type of membership." This committee reported at the next annual meeting, which was held at Auburn, April 18-19, 1930. The report called for five types of membership: Honorary, Life, Fellows, Members, and Associate Members. Qualifications for each were recommended. A fee of \$50 was required for Life Members; \$2 for Honorary Members, Fellows, and Members; and \$1 for Associate Members. A Membership Committee was provided for. This committee was to consist of three members with the Secretary of the Academy serving as Chairman. The duty of this committee was to examine the qualifications of candidates for mem-

bership and recommend the names of those found eligible to the Executive Committee.

At the eighth annual meeting, held at the University of Alabama, April 13-14, 1931, Professor Edwin Eustice Reinke, of Vanderbilt University, was elected an Honorary Member, the first to be elected by the Academy. By this time the total membership had increased to one hundred forty-one. In 1935, the current list of members of the Alabama Academy of Science recorded thirty-one Associate and one Honorary Member. The total membership at that time was one hundred forty, one fewer than in 1931.

The qualifications for membership were revised in the constitution adopted at the thirteenth annual meeting, held at Auburn on March 20-21, 1936 (1). This revision provided a category for Junior Members in addition to those already available, such a member being a recent graduate from a high school whose science club was an affiliate in good standing with the Alabama Junior Academy of Science. The membership dues for Junior Members were to be \$1 per year. This revision also increased the membership dues for Honorary Members, Fellows, and Members to \$2 annually.

The second Honorary Member of the Alabama Academy of Science was Professor Edgar Allen, of Yale University, who was elected at the fourteenth annual meeting, held at the University of Alabama, April 2-3, 1937, where he addressed a principal session. The total membership at that time had increased to one hundred fifty-six, twenty-four of whom were Associate Members. The fifteenth annual meeting was held at Troy State Teachers College, April 8-9, 1938. At that time, the total membership was one hundred seventy, of whom twenty-five were Associate and two Honorary Members. Peter A. Brannen was requested "to compile the activities of Charter Members and founding of the society, the information to be presented at a charter membership meeting to be held in connection with the 1939 meeting of the Academy in Montgomery. He agreed to do so." In 1939 a membership of two hundred five was represented, twenty-one of whom were Associate and two Honorary.

A committee on promotion of membership was appointed at the 1939 meeting and in 1940, at the annual meeting held at Birmingham-Southern College, this committee reported much progress. A motion was passed at the 1940 meeting granting "Sustaining Membership either to individuals, organizations or institutions, at the minimum rate of \$10 per annum." John Y. Graham and Wright A. Gardner were

elected Honorary Members at this meeting. A motion stating that not more than two Honorary Members could be elected in any one year was passed. The membership reported at the 1940 meeting included four Honorary Members, thirty-one Associate and two hundred fifty-nine Active Members, a total of two hundred ninety-four.

By the time of the 1941 meeting, held at Mobile on March 20-22, eleven Sustaining Members had been added to the roll. The report of the Membership Committee at this time was very encouraging and the committee was enlarged to get a wider representation. A motion was passed requiring that completed applications for membership be signed by three active members of the Academy in good standing, one of these being the Secretary. At this meeting the Committee on Associate Membership recommended that college students be eligible for this type of membership. The *Academy Journal* in 1941 listed the complete membership of the Academy as four Honorary Members, seventeen Sustaining, two hundred eighty-eight Active and thirty-seven Associate Members, making a total of three hundred forty-six.

By 1942 the total membership had decreased to three hundred seventeen, twenty-two of whom were Sustaining Members composed of the colleges and industries of the State, two hundred seventy-two Active and nineteen Associate Members. The number of Honorary Members remained at four.

Because of World War II, the Academy did not hold an annual meeting during 1943; however, the Executive Committee did meet. For that year there were only two hundred nineteen Active Members, twenty-three Sustaining Members, and, as Edgar Allen had died on February 3, 1943, there were only three Honorary Members, making a total membership of two hundred forty-five. There were no Associate Members listed. A motion was passed at the 1944 meeting which stated "that it shall be the policy of the Academy not to accept members residing outside the state." By this time the Sustaining Members had increased to twenty-four, the Active Members numbered one hundred seventy-four, and the Honorary Members remained at three. No Associate Members were listed. The war situation had unfavorably influenced the number of members in the Academy.

Volume 19 of the *Journal*, 1947, published the new constitution and by-laws providing for (a) Individual Members, (b) Associate Members, (c) Collegiate Members, (d) Junior Members, (e) Honorary Members, (f) Patrons, (g) Life Members, (h) Fellows, (i) Sustaining Members, and (j) Industrial Members. The conditions for

each of these types of membership, the requirements and privileges of each, were set out in detail. For the first time the Academy had taken cognizance of Alabama's industrial growth and had provided membership for those interested. A Committee on Membership was provided for and this committee was charged with the responsibility of passing on the qualifications of applicants and keeping a complete and up-to-date record of the membership of the Academy. In Volume 19 of the *Academy Journal*, two Honorary Members, one patron, twenty-two Sustaining Members, seven Industrial, and three hundred sixteen Active Members were listed. Nineteen deceased members were also listed, some of whom had been included in previous issues.

By 1952 the number of Industrial Members had increased to eight and Sustaining Members to seventeen, while the number of Individual Members was two hundred sixty-eight. In 1954 the membership included three hundred forty regular members, six Industrial, and fifteen Sustaining Members. The *Journal* reported for 1955 a total of four hundred seventy-four members, forty of them being new. Since this time the Academy has continued to increase its membership. The 1960 membership list carried in the *Journal* (2) shows six Industrial Members, eleven Sustaining, and five hundred eighty-three members. Of the latter number, four are Honorary and seventy-five Collegiate Members. (See Appendix I for a composite membership list for 1927-1960, indicating Charter Members, Honorary Members and Deceased Members.)

#### ORIGIN OF SECTIONS

In the early days of the Academy the membership was small and few papers were presented. No sections were organized, but all papers were presented at the same time and place to the entire Academy. At the fifth annual meeting, which was held at Phillips High School in Birmingham, March 30-31, 1928, the advisability of having sectional meetings was discussed but no action was taken. At the sixth annual meeting it was voted to separate the Academy from the Alabama Education Association and to have separate meetings. Up to this time the Academy had been a division of the Association. At this meeting it was voted to raise the annual dues for individual members to \$2.

The seventh annual meeting, the first after separating from the Alabama Education Association, was held at Auburn, April 18-19, 1930. The conference was divided into two sections; one Biology, and the other Chemistry and Mathematics. The eighth annual meeting

was held at the University of Alabama, March 13-14, 1931. In the minutes of this meeting is recorded this statement: "The secretary reported three sections, namely, Biology, Chemistry and Mathematics, and Industrial, and stated that other sections would probably be formed during the following year." Prior to the next meeting there had been some reorganization of sections.

By the time of the ninth annual meeting, held at Howard College in Birmingham, March 11-12, 1932, the section on biology was expanded to include medicine. Chemistry, Geology, Mathematics and Physics, and Industrial were the other sections, all meeting at separate places and each with its own program. It was voted at the tenth annual meeting to add Anthropology and Archaeology to the Geology section, making that section Geology, Anthropology and Archaeology. During the eleventh annual meeting, held at Spring Hill College, a motion was passed that a committee be appointed by the President to study available sections for the Academy and to further study the relationship of existing sections to other organizations.

At the twelfth annual meeting, held at Florence State Teachers College, action was taken to formalize the inclusion of medicine by renaming section one into Biology and Medical Sciences. That plan continued until the meeting at Montevallo, in the spring of 1956. On the program of the Florence meeting section four was listed as Industry and Economics. The constitution, adopted at the thirteenth annual meeting, in session at the Alabama Polytechnic Institute (now Auburn University), March 20-21, 1936, provided in Article VII for only the four existing sections; however, there was no prohibition of other sections. Volume nine of the *Journal* listed the four sections as: Biology and Medical Sciences; Chemistry, Physics and Mathematics; Geology, Anthropology and Archaeology; and Industry, Economics and Geography.

There were no further changes in the sections until the 1940 meeting in which there was a revision of sections and with a new one being added. The sections then became: (1) Biology and Medical Sciences; (2) Chemistry; (3) Anthropology and Archaeology; (4) Geography, Conservation and Allied Subjects; (5) Physics and Mathematics; (6) Industry and Economics; (7) Science Education; and (8) Social Sciences.

At the 1953 meeting, held at Sheffield, March 12, 1953, the report of a "special committee for studying papers and attendance in the various sections over the past several years" suggested reorgani-

zation of sections as follows: Biology and Medicine, Forestry and Plant Sciences; Chemistry; Geology, Geography and Conservation; Physics and Mathematics; Industry and Economics; Science Education, and Social Science. The sections would remain eight, but named differently. There was no motion recorded on the recommendations of this special committee.

Persistently from the first, the largest section has been that of Biology and Medicine. In recent years, especially since the establishment of the four-year medical and dental institutions at Birmingham, there has been a great increase in papers on medical research. Because of this interest, there had been suggestions from time to time that this section be divided into the two parts of biology, and medicine. Such a division was made at the meeting held at Montevallo in the Spring of 1956.

From the beginning of the Academy there have been changes in the various sections, in the expected directions of combining related sections, and adding new sections. As the membership increased, interested persons in different fields desired sections of their own, or their formal inclusion with related fields. From time to time various changes were made, resulting in the sections as listed in the 1960 annual program: (I) Biological Sciences; (II) Chemistry; (III) Geology and Anthropology; (IV) Forestry, Geography and Conservation; (V) Physics and Mathematics; (VI) Industry and Economics; (VII) Science Education; (VIII) Social Sciences; and (IX) Medical Sciences. Any member of the Academy may belong to more than one section if he so chooses. In every meeting a few members present papers in more than one section. This will undoubtedly continue to lead to new alignments of interests.

Each of the sections has depended upon its elected Chairman and Vice-Chairman for conduct of its affairs, primarily obtaining new members and assembling a program of papers as the section's part of the annual meeting of the entire Academy. The degree of responsibility shown by these officers is usually reflected in the size and activity of the section. The Chairman of each section presides over its sessions; he is quite properly *ex officio* a Vice-President of the Academy and a member of the Executive Committee. Most of the Academy's other officers, such as President, Secretary, Treasurer, etc., have been drawn from this group of devoted members.

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## CHAPTER III

### DOLLARS FOR SCIENCE

By

H. Ellsworth Steele

(Edited by Paul C. Bailey)

The achievements of the Alabama Academy of Science cannot be measured in monetary terms. Nevertheless, their significance is governed in part by the financial support available to carry on the Academy's activities. This chapter will examine the financial affairs of the organization and will attempt to show how the Academy has sought to stimulate greater interest and higher attainments in the various scientific fields despite its modest resources. This account will reveal that, at times, the lack of funds has limited the Academy's activities; however, in each instance the difficulties were surmounted and the program expanded.

The growth of the Academy's income and expenditures is shown in Appendix V. These figures indicate that the organization has pressed forward in its program as swiftly as its means would permit, and after thirty-six years of existence, the Academy can boast a substantial balance at its annual spring meeting.

Even though the figures in the Appendix include extraneous items, they reveal the major areas in which the Academy has spent its money and the important sources of its income. Total expenditures have climbed steadily from \$27 in 1927 to nearly \$2,400 in 1959-60 because of the increasing cost of publishing the *Journal* and greater support to the Junior Academy. In addition, substantially more money is being used now to promote research, and administrative costs have mounted.

#### THE STRUGGLE FOR GREATER INCOME

The dues of the Academy have always been low. The constitution adopted in the organization's first year, 1924, called for membership dues of only \$1. The officers appear to have had difficulty in collecting even this small amount, for in 1927 the annual meeting decided "... that members who failed to pay dues for two years would be automatically dropped from the Academy." Furthermore, the treasurer declared at this meeting that, after outstanding bills were

paid, the Academy would have a deficit of \$13.77. These were "psychological gestures"—as some of the older members recall the day—aimed at bringing in dues. Apparently they were successful for the new treasurer for 1927-28 was able to report a beginning balance of \$15.03 as he took over his duties. As Appendix V suggests, the financial affairs of the Academy slowly improved until 1935 despite the loss of approximately \$80 when the Woodlawn Bank, in which the Academy's funds were then deposited, closed its doors on July 6, 1929.

Some of the improvement in the financial status of the Academy resulted from the adoption of a new classification of members and dues in 1930. Under the new system, Life Members were to pay \$50, Honorary Members, Fellows and Members, \$2, and Associate Members, \$1. In 1933 students with their first degree who were pursuing graduate work or serving as fellowship students or student assistants were permitted to join for \$1. Under this rule members in the various Alabama institutions of higher education encouraged graduate students, including a significant number at the Medical College of Alabama, to become members. These measures enabled the Academy to grow despite the financial difficulties of the 1930's.

The depression years found the Executive Committee concerned over scientists who wished to present papers to the annual meeting but who neglected to join the organization or to maintain their dues. The subject was broached in Executive Committee meeting in 1936 and the president and secretary were asked to write a clarifying letter to each section chairman. The next year the organization agreed to let delinquent members present papers if they would pay dues for the preceding and current year. In 1938 the Treasurer reported that "... five papers on the program were from ineligible individuals, four of whom, however, were presenting them by invitation, the fifth was expected to pay at the meeting." By 1941 the financial pressure had eased somewhat and the Executive Committee decided to allow non-members to present papers upon invitation.

In 1939 the Academy's counselor to the American Association for the Advancement of Science, J. H. Coulliette, brought back word that, "Five of the state academies receive aid from their state legislatures in the form of a definite appropriation. Other academies receive aid through the medium of the state university or the state museum." Accordingly, he moved in Executive Committee that "... the President appoint a committee to secure money from the legislature or from some other source, in order that the *Journal* may print in

full worthwhile research papers." The Committee agreed, but a motion to seek from \$400 to \$500 a year from the legislature was voted down in the general meeting.

In 1940, the members of the Academy proved to be just as reluctant to increase their own dues to finance the organization's work. That year the general meeting rejected a proposed registration fee of fifty cents for the annual meeting, which the Executive Committee had approved. Instead, the group agreed to ask financial support from private sources through newly created Sustaining Memberships (see Appendix VI). The next year, after this move had proved modestly successful, James L. Brakefield recommended ". . . that the question of state subsidy for the Academy be dropped and that instead we encourage securing of Sustaining Memberships." This suggestion was approved and the attempt to secure funds from the legislature was temporarily shelved.

As we have seen, even at \$2 the dues from regular members had fallen short of the Academy's needs, and scientists throughout the state had shown an understandable reluctance to become Life Members at a cost of \$50. The members apparently did not wish either to approach the legislature or to pay more themselves. A solution to the problem in the form of Sustaining Memberships at \$10 or more per year was proposed in 1940. A committee was set up to seek such members among ". . . individuals, organizations and institutions." This group reported in 1941 that the "Responses from industry have been a bit disappointing . . ." but the record reveals that 17 Sustaining Memberships had been obtained. In 1942 with its war-induced prosperity, the Treasurer was able to report that the Sustaining Memberships were bringing in substantial sums and that ". . . the members are paying dues better than formerly . . ."

In the next years, war-time pressure severely hampered the work of the Academy. Indeed, the meetings for 1943 and 1945 had to be abandoned. Many members had been called into service and the energies of those remaining were needed in other causes. Furthermore, transportation was difficult. In 1943, after the decision to forego the annual meeting had been made, the officers became concerned over the effect on payment of dues. E. D. Emigh and Treasurer John Xan felt it advisable to ask the Executive Committee to remind the members that ". . . funds are needed for the work of the Academy," even though no meeting was to be held, and that they should ". . . pay dues as usual." The same year the Executive Committee agreed that ". . . the dues of members in military service be suspended for

the duration of that service." In 1944 the Treasurer reported that the measure had caused the income of the Academy to be reduced "somewhat."

Despite this loss of income, the treasury was temporarily in good shape in 1944. Indeed, Treasurer Xan could say that even after matching \$200 of the Goethe research funds, ". . . there will still be a good balance." It was in this setting that "Dr. Xan moved, seconded by Dr. (James L.) Kassner, that a Finance Committee composed of five members be appointed to promote the financial welfare of the Academy, with an industrial man as chairman." Milton H. Fies was asked to serve in this post.

The Finance Committee was unable to stem the adverse trends which soon set in. By 1947 the Treasurer was forced to point out to the general meeting that ". . . there is a balance of only \$200 after the *Journal* and other expenses are paid, and that this will not be sufficient to meet the expenses of the oncoming year." Reacting logically, "Dr. (Robert D.) Brown (the new treasurer) moved, Mr. Emigh seconded, that the dues for individuals be increased from \$2 to \$3 annually." The members disagreed, however, and defeated the motion. The meeting then proceeded to make appropriations until finally "Dr. John Xan mentioned that the membership should keep the deficit in mind when considering new expenditures." Possibly the members were relying on the measures then being taken to strengthen the Academy. These actions led to the incorporation of the Academy in May, 1947, and the institution of new membership classifications. Most notable of these were Patrons (those who contribute \$100) and Industrial Members (industries contributing \$25 or more a year). Implementing the new program, 300 letters were mailed to selected Alabama industrial firms, but only seven Industrial Members were secured that year. These firms and the others which have at one time or another held Industrial Memberships are shown in Appendix VII. There have not been any Patrons to date.

Again in 1948 mounting expenses forced the Treasurer to soberly remind the members that ". . . after the bills for this meeting and for the publication of the *Journal* have been paid, there will be very little money left to carry on for the rest of the year and to match any research funds which may be granted to the Academy." In the ensuing discussion the former president, E. V. Jones, said that ". . . some action should be taken with regard to the financial situation of the Academy which, in view of the Treasurer's report, did not seem

too sound." With this understatement, the problem was referred to the Long Range Planning Committee.

Before long range solutions could be advanced, however, President E. D. Emigh found it necessary to send out a circular letter appealing for contributions. This effort brought in approximately \$100, making it possible for the Treasurer to report to the Executive Committee in February, 1949 an actual balance of approximately \$275. There still remained, though, \$150 of the Goethe research funds to be matched. Speaking to the Executive Committee, the President emphasized the results of a membership poll sanctioning a doubling of dues and urged that action be taken. The Committee agreed to submit such a proposal to the annual meeting. From the Special Industrial Membership Subcommittee came discouraging news. "The gist of the report was that no new members have been obtained, and that it did not seem likely that any would."

At this juncture, "Mr. Jennings, reporting for the Finance Committee, announced that plans were under way to ask the State Legislature for funds to support the *Journal*. Following a short discussion, it was resolved that the Executive Committee of the Alabama Academy of Science is in favor of applying to the Legislature for state aid to publish and distribute its journal." The Executive Committee also approved the suggestion of Mr. Brown that "... sustaining members such as the large universities and colleges in the state ... subscribe by schools or departments."

The 1949 annual meeting was favorably inclined toward increasing dues, but only if funds could not be obtained from the legislature. The meeting approved requests to the legislature of \$2,000 each for 1950 and 1951 for the *Journal* and gave the Executive Committee authority to raise dues if nothing was appropriated. In 1950 Mr. Roberts Brown, of Lee County, introduced a legislative bill for the Academy but the legislature's finance committee turned it down without a hearing. The issue was not pressed again in 1951. Nor did any large educational institution take out multiple memberships. Still dues were not raised.

The Academy was unable to publish the *Journal* in 1949 and 1950 and the legislature was showing no signs of willingness to come to the rescue. Reluctantly, the decision was made in 1950 to try self-help. The Finance Committee was requested "... to draw up a specific range of graduated contributions which shall be suggested to members in addition to annual dues." A registration fee of \$1 was

adopted for all persons attending the annual meetings, except students and interested non-members. The Executive Committee even agreed to individually promote personal Sustaining Memberships of \$10 per year. The Academy began collecting the registration fee, but the *Journal* carries no record of funds received from graduated voluntary contributions and shows no new personal Sustaining Memberships in the year 1951-52.

Finally in October, 1951, the Executive Committee took the plunge and raised dues to \$3 a year on a motion by John Xan, seconded by Ralph L. Chermock. The Secretary tells us that the "discussion which followed brought out the fact that the increase in dues would make it possible to publish back issues of the *Journal* and to operate 'in the black' from now on. There seemed to be agreement that the increase in dues would go into effect January 1, 1952."

During 1953 and early 1954 three volumes of the *Journal* appeared and with them came a financial crisis. By October, 1953, the Executive Committee faced a deficit of \$300. President J. F. Volker announced his plan to send out a plea for contributions and Mr. Jennings, chairman of the Finance Committee, assured the Executive Committee that he believed the contributions would meet the deficit. Accordingly appeals were made to educational institutions and the individual members. The requests proved to be "moderately successful," bringing in \$413 and securing a number of continuing institutional memberships. When coupled with an increase in dues payments and postponement of some obligations, this money enabled the Academy to weather the storm.

At this point in April, 1954, the Special Committee on the *Journal* reported to the Executive Committee that "Since another college has indicated a desire to make a substantial contribution to the publication of the *Journal* in return for the privilege of keeping the Archives of the Academy and in having the advantage of the exchange volumes, we recommend that the Academy inquire of the possible desire of the Alabama Polytechnic Institute to do likewise. The present archives are in the library at Auburn." That recommendation was adopted and Mr. William T. Wilkes commented "that A.P.I. has indicated a willingness to contribute to the expense of the *Journal*." In December, 1954, the Executive Committee authorized negotiations with A.P.I. for \$400 to \$500. By July, 1955, an annual subsidy had been arranged. Five hundred dollars was to be granted through the A.P.I. Library budget, \$250 in cash and \$250 in services and postage. The mailing of the *Journal*, exchange correspondence, binding and

housing of the Academy's library and archives, as well as all postage charges, are handled by the Library of the Alabama Polytechnic Institute (renamed Auburn University on January 1, 1960).

Thus, at last, the state subsidy first advocated in 1931 by AAAS counselor J. H. Coulliette was achieved through the medium of a state institution of higher learning.

#### SAFEGUARDS FOR ACADEMY FUNDS

The efforts which the officers have made throughout the Academy's history to protect its funds are reflected in the constitution and the reports of its meetings.

The 1924 constitution established a Secretary-Treasurer with a one-year term of office. In 1947, when the organization was incorporated, the term was lengthened to three years. Meanwhile, in 1931, the work of the office was divided between a Secretary and a Treasurer. In 1949, however, the two positions were again combined with the hope that "... the work of the Academy might be more efficiently handled..." The very next year the incumbent, W. T. Wilks, asked that the office be separated, "... due to the large amount of work required."

Each year the Academy President appoints an auditing committee which examines the Treasurer's report and approves it.

The records reveal a number of interesting procedural safeguards which the Academy has thrown about its fund. The 1924 constitution required that all disbursements be approved by the President. In 1934, the requirement was made that all disbursements be by check. Treasurer John Xan moved in 1939 "... that at all times hereafter both President and Treasurer approve all bills in advance of their being made." The members agreed. In 1953 the rules became even more strict. At that time the Academy decided that "no debt shall be incurred for the Academy without prior authorization of the President. Any request for expense items of over \$20 (except postage) shall be based on a quotation and shall require the approval of both president and treasurer." Small routine expenses needed for efficient operation were exempted from this rule.

To clarify a confusing situation, the Academy in 1935 gave the responsibility for all printing to the Editor of the *Journal*. Ten years later, at the request of the Editor, the Secretary was given authority to handle all printing matters other than the *Journal*.

In 1931 the Academy approved plans to award a "shingle" to new members. The first ones were apparently given out in 1932. By 1955 interest in "membership certificates," as the shingles were then called, had so declined that the Secretary obtained permission to economize by issuing them to new members only upon request.

#### JOURNAL

The major financial problem of the Academy has always been its *Journal*. The scope and the cost of the *Journal* have steadily increased since the publication of the first volume in 1927. In 1925 the annual meeting instructed the Secretary "... to attempt to secure the publication of the proceedings..." of the meetings. Curiously, when the *Journal* appeared it carried abstracts for the years 1924 through 1926, but no proceedings! In 1928 the organization voted "... to publish abstracts at intervals when funds and materials were sufficient." Two years later the Academy authorized a volume of "Abstracts and Proceedings" for each year. It was 1932 and Volume 4, however, before abstracts were again included. Since that date, a volume has appeared for each year, although some have been late and volumes 21-22 and 23-24 were combined and printed in two volumes.

In 1934 the Editor announced that he was able to supply "... reprints of abstracts at a very attractive rate..." The next year "it was voted on motion of Mr. Brakefield that the annual address of the President of the Academy be published in full in the *Journal* if he so desires." Accordingly Volume IX carried the 1936 Presidential Address of Walter B. Jones, State Geologist, on "Conservation of our Natural Resources."

The Publications Committee in 1941 recommended the publication of the best paper in each section, and in 1942 these papers appeared. In 1946 Editor Emmett B. Carmichael declared, "It is hoped that in the future emphasis will be placed on complete papers in the *Journal* instead of abstracts..." The Academy is financially able to print a *Journal* with twice the number of papers that we have been printing." This recommendation has been followed; the *Journal* has increased in size from 32 pages printed in Volume 1 to 475 pages in Volume 31 (1959-60).

A preliminary volume of the *Journal*, to appear before the annual meeting, carrying the program and, if possible, abstracts of papers to be presented, was proposed in 1935 by Editor E. V. Jones. Such an issue would enable the members to select the meetings they