



Arizona

Academy of Science

The purpose of this Academy shall be to stimulate scientific research and education; to disseminate knowledge in the various fields of science; to promote fraternal relationship among those engaged in scientific work; to assist in developing and in making known the material and other resources of the State; to encourage the publication of reports of scientific investigations; and to unify the scientific interests of the State.

FOUNDED IN 1956

AFFILIATED WITH THE AMERICAN ASSOCIATION FOR
THE ADVANCEMENT OF SCIENCE

AFFILIATED INSTITUTIONS

Museum of Northern Arizona
Arizona-Sonora Desert Museum



Arizona Academy of Science

APPLICATION FOR MEMBERSHIP

Name as Usually Written.....

(With Mr., Mrs., Miss, Prof., Dr., etc.)

Mailing Address.....

Position or Field of Interest.....

Membership Classification Desired:

(Dues are Tax Deductible. Please make check or money order payable to the Arizona Academy of Science.)

Regular, \$3.00
 Sustaining, \$10.00

Life Member, \$100.00
 Patron (person, firm, or institution), \$100.00

Send Application and Membership Dues to the Secretary

EDWIN B. KURTZ
Dept. of Botany, College of Agriculture
University of Arizona, Tucson, Arizona

Date.....

PAST PRESIDENTS

ALAN T. WAGER - - - - -	1956
ALBERT R. MEAD - - - - -	1957
ARTHUR L. PHELPS - - - - -	1958
EDWARD B. DANSON - - - - -	1958

EXECUTIVE COMMITTEE, 1959

PRESIDENT

JOHN I. YELLOTT
Yellott Engineering Associates
901 West El Caminito, Phoenix

PRESIDENT-ELECT

WILLIAM H. WOODIN
Director, Arizona-Sonora Desert Museum
Tucson

PAST PRESIDENT

EDWARD B. DANSON
Director, Museum of Northern Arizona
Flagstaff

SECRETARY

EDWIN B. KURTZ
Department of Botany
University of Arizona, Tucson

TREASURER

ALAN T. WAGER
Department of Physics
Arizona State University, Tempe

EDITOR

ROBERT M. HARRIS
Department of Botany
University of Arizona, Tucson

COUNCILLORS

EDWARD M. GAINES
Director, Fort Valley Forest Experiment Station
U.S. Forest Service, Flagstaff

JAQUES CATTELL
Editor, American Men of Science
820 College Avenue, Tempe

FRANK E. TODD
U.S.D.A. Bee Laboratory
University of Arizona, Tucson

The ARIZONA ACADEMY OF SCIENCE was organized January 28, 1956, at Phoenix College, Phoenix, Arizona. Its avowed purpose is to stimulate research and education in science; to provide a means of disseminating scientific knowledge; to promote fraternal relationships among scientists; and to assist in the development of the State. Any person in sympathy with these objectives may become a member of the Academy.

In its short life the membership of the Academy has grown to several hundred. Numerous activities have become a permanent part of the program and the Academy has become firmly established and recognized as one of the leading scientific organizations in Arizona.

The Arizona Academy of Science is affiliated with the American Association for the Advancement of Science and has a representative on the Council of that organization. The Academy is also represented on the Academy Council of the AAAS and through this group can cooperate with other state academies in various activities.

The Arizona Academy is a non-profit organization and all dues and contributions to it are exempted from taxation.

ANNUAL MEETINGS

The Academy conducts an Annual Meeting which is held in the spring in one of the major scientific areas of the State. The annual business of the organization, such as election of officers of the Academy and its sections, determination of future policies and evaluation of past activities, is acted upon by the membership.

The Annual Meeting also provides for an exchange of scientific information and opinions among members through the presentation of research papers on numerous topics at the Section Meetings.

SECTION MEETINGS

The membership of the Academy, although having mutual interests, is varied and includes persons in numerous fields of science. Sections within the Academy provide members with specialized scientific interests the opportunity of planning programs which will be suited to their interests. Sections meet at the Annual Meeting and may meet more frequently in any area of the State. A new section may be formed upon presentation and approval of a petition signed by 25 or more members interested in the new section.

Section activities may include the presentation of papers, symposia, field trips, and assistance to primary and secondary education. Each section elects one person as associate editor to the Publications Committee.

JUNIOR ACADEMY SECTION

Persons with an active interest in science and who

are 18 years of age or younger may join the Junior Academy. This section is modeled after the Senior Academy and is supervised by a Junior Academy Adviser. The Junior Academy consists of clubs, each club with its own officers, by-laws, and activities. The Annual Meeting and section meetings provide a background of activity for the members on a statewide basis.

EDUCATIONAL PROGRAM

The Academy, in conjunction with the National Science Foundation, has embarked upon a scientific instructional program called the Traveling Science Institute. Popular science and instructional lectures are presented in Arizona communities during the school year. The efforts of all members of the Academy are welcomed in this most important endeavor.

JOURNAL

The JOURNAL OF THE ARIZONA ACADEMY OF SCIENCE provides an outlet for publications by members of the Academy, particularly for articles of interest to fellow Arizonans. News items of interest to the members also appear in the JOURNAL. The JOURNAL has nationwide library distribution which provides that fellow scientists in other states are made aware of the activities and contributions of Arizona Academy members. A subscription to the JOURNAL is included with each membership.

RESEARCH GRANTS-IN-AID

In addition to facilitating contact for research-minded individuals in the State, the Academy has great interest in stimulating research at the Senior and Junior membership levels. The Grants-in-Aid are supported by contributions to the Research Fund and awards are made at semi-annual intervals to members. Application forms may be obtained from the Secretary of the Academy. Proposals are reviewed on February 15 and October 15 of each year.

SCHOLARSHIP

A one-year college scholarship is awarded annually to a graduating Arizona high school senior. The scholarship is awarded on the basis of high school achievement and intention to matriculate as a science major in an Arizona institution. Application forms may be obtained from the Secretary of the Academy.

SECTION OFFICERS

ANTHROPOLOGY

Michael J. Harner, *Chairman*
Donald H. Hiser, *Secretary*
H. Thomas Cain, *Associate Editor*

BIOLOGY

Charles H. Lowe, *Chairman*
Virginia Childs, *Secretary and Associate Editor*

GEOGRAPHY

Raymond White, *Chairman*
John Koerner, *Chairman-Elect*
John Squibb, *Secretary and Associate Editor*
T. Templeton, C. C. Svoboda, Melvin Hecht,
and A. R. Zent, Jr., *Councillors*

GEOLOGY

Donald G. Metzger, *Chairman*
John W. Anthony, *Chairman-Elect*
Paul T. Miller, *Secretary and Associate Editor*
S. F. Turner and Evans B. Mayo, *Councillors*

PHYSICS-ASTRONOMY

Amos H. Hoff, *Chairman*
Clifford Schroeder, *Secretary*
John W. Robson, *Associate Editor*

JUNIOR ACADEMY

Frank Gilleland, *Adviser*

CONSTITUTION and BY-LAWS for the ARIZONA ACADEMY OF SCIENCE

Article I

The name of this organization shall be the Arizona Academy of Science.

Article II

The purpose of this Academy shall be: to stimulate scientific research and education; to disseminate scientific knowledge in the various fields of science; to promote fraternal relationship among those engaged in scientific work; to assist in developing and in making known the material and other resources of the State; to encourage the publication of reports of scientific investigations; and to unify the scientific interests of the State.

Article III

Section 1. The membership shall consist of:

1. Regular Members
2. Life Members
3. Sustaining Members
4. Fellows
5. Honorary Members
6. Patrons
7. Junior Members

Section 2. The manner of nomination and election to all membership grades of the Academy, and provisions concerning fees, shall be incorporated in the By-Laws of the Academy in the regular manner.

Article IV

Officers

Section 1. The elected officers of the Academy shall be a President, a President-elect, a Secretary, and a Treasurer. These officers shall be chosen by ballot at the time of the annual meeting and shall hold office beginning with the date of election and continuing until the next annual meeting.

Section 2. The above officers shall perform the duties usually pertaining to their respective offices as defined in the By-Laws.

Section 3. An Editor shall be appointed by the Executive Committee.

Section 4. Three Councillors-at-large shall be appointed by the President, one member appointed each year and each to serve three years. One councillor will be from each of the geographic areas of the state, Northern, Central and Southern sections and will represent, as far as possible, industry, government and educational institutions.

Section 5. The Executive Committee shall consist of the elected and appointed officers and the immediate Past President. The President shall be an ex officio Chairman of the Executive Committee.

Section 6. Rules governing elections shall be such as are laid down in the By-Laws.

Article V Meetings

A regular annual meeting of the membership shall be held at such time and place as provided for in the By-Laws. Special meetings may also be held as stated in the By-Laws. Prior to each annual meeting of the Academy the Executive Committee and chairman of sections and standing committees will hold a planning meeting at which the agenda for the annual meeting will be arranged.

Article VI Affiliations

The Academy may enter into such relations of affiliation with other organizations of appropriate character as may be recommended by the Executive Committee and ordered by a three-fourths vote of the members present at any regular meeting.

Article VII Amendments

This constitution may be amended by a three-fourths vote of the membership present and voting at an annual business meeting, provided that notice of the proposed change has been sent by the Secretary to all members at least one month before such a meeting.

BY-LAWS

I. Election of Members

a. Regular Members. Persons 18 years or older who are interested in science may make application in writing to the Secretary of the Academy. The application shall be endorsed by two active members who are personally acquainted with the applicant. The applicant shall be elected by a three-fourths majority of the Executive Committee. Annual dues of three dollars (\$3.00) must be paid following notification of election to membership.

b. Life Members. Any regular member who at one time shall contribute to the funds of the Academy the sum of one hundred dollars (\$100.00) shall be declared a life member and shall be exempt from payment of all regular dues thereafter.

c. Sustaining Members. Regular members, organizations, or institutions may secure sustaining membership upon the minimum payment of ten dollars (\$10.00) per year, subject to approval by the Executive Committee.

d. Fellows. Persons who have been members of the Academy for at least five years, and who have successfully engaged in recognized scientific work or who have made noteworthy contributions to the Academy, may be recommended by the Fellows Committee to the membership as Fellows. A majority vote of the membership present at an annual

meeting shall be necessary for election of a Fellow.

e. Honorary Members. Any person who has rendered conspicuous service in the advancement of science may be elected to honorary membership in the Academy. Nominations must be made to the Executive Committee which, upon approval, will present names to the membership at the annual meeting. A majority vote of the members present at this meeting will be necessary for election to membership. Not more than three honorary members can be elected in any one year. Honorary members are exempt from the payment of dues. The President shall appoint a member to present an appropriate citation for each new Honorary Member.

f. Patrons. Any person, firm, institution or business organization contributing one hundred dollars (\$100.00) or more to the Academy and approved by the Executive Committee, becomes a patron of the Academy for one year. Patrons are non-voting members.

g. Junior Members. Members of the Junior Academy are non-voting members of the Academy.

II. Accounts

The fiscal year of the Academy shall end on December 31. All annual dues for the ensuing year shall be due on January 1. Any member in arrears for dues for one year shall be dropped from the roll of members, provided he has had at least two notices of the indebtedness mailed to him. Upon payment of his arrears, however, such person may be restored to membership by majority vote of the Executive Committee.

III. Expulsion of Members

The Executive Committee shall have the right to expel or suspend a member after a hearing at which the accused shall have the right to be present in person. The accused shall be notified by registered mail two months prior to the hearing. A majority vote of all members of the Executive Committee shall be necessary to expel or suspend a member, and an appeal from the decision may be made to the members of the Academy at the following annual business meeting. A majority vote of the members present at such a meeting shall be required to reverse the decision of the Executive Committee.

IV. Duties of Officers

a. The President shall preside over all meetings of the Academy and of the Executive Committee. He shall be responsible for the administration of all activities of the Academy and shall cause the provisions of the Constitution and By-Laws to be executed. He shall call special meetings of the Academy and Executive Committee whenever he shall consider such meetings necessary, or upon written request of the majority of the Executive Committee, or upon written request of twenty-five active members. He shall appoint all standing committees subject to the approval of the Executive Committee. He shall be an ex officio member of all committees except the nominating committee.

b. The President-elect shall serve as the vice-chairman of the Executive Committee and shall, in the absence of the President, preside over all meetings and shall assume the powers of the President. The President-elect shall become the President at the end of one year.

c. The Secretary shall keep a record of all meetings of the Academy and of the Executive Commit-

tee and shall prepare them for publication if required. The Secretary shall conduct all correspondence relating to the Academy. He shall keep a record of the membership of the Academy and shall inform the Treasurer of any changes affecting the status of members. He shall have charge of the preparation, printing, and mailing of circulars, blanks, announcements of meetings and so forth. After each annual meeting he shall send to each incoming member of the Executive Committee and to each section Chairman a copy of the Constitution and By-Laws.

d. The Treasurer shall prepare and mail notices of dues, receive and disburse all of the funds of the Academy, and shall have custody of all funds. He shall keep a record of the dues paid by the members. He shall keep an account of receipts and disbursements in detail, and at the annual meeting present a report of receipts and disbursements to date. In December he shall present to the Executive Committee a detailed written report which has been approved by an auditing committee appointed at the preceding annual meeting.

V. Appointed Officers

a. The Executive Committee shall appoint the Editor for a term of three calendar years. Appointment may be made only upon at least a three-fourths majority approval of the Executive Committee. The Editor shall serve as a chairman of the Editorial Board and shall have charge and manage all publications of the Academy. The Editorial Board shall consist of the Editor and one Associate Editor from each of the sections. Each Associate Editor shall be elected by a majority vote of the membership in his section; and his appointment to the Editorial Board shall be subject to the approval of the Executive Committee.

b. The President may appoint only one Councillor-at-large without the formal approval of the Executive Committee. If the President continues in office for more than one term or if unscheduled vacancies occur in the Councillors-at-large, appointment of additional Councillors-at-large shall be subject to the approval of the Executive Committee.

VI. Executive Committee

a. The Executive Committee shall constitute a Board of Directors of the Academy.

b. The Executive Committee has executive authority with legislative powers of the Academy in the intervals between Academy meetings, but no extraordinary act of the Committee shall remain in force beyond the next following annual meeting without specific ratification by the Academy. Specific duties shall be:

1. To approve research grants made in the name of the Academy.
2. To receive nominations for memberships, and on approval, to submit nominations for honorary memberships to the Academy for action.
3. To fill vacancies ad interim in any office of the Academy.
4. To make recommendations to the Academy on matters pertaining to general policy.
5. To take action on applications of affiliated organizations.
6. To determine the time and place of annual and special meetings.
7. To confirm standing committee members appointed by the President.

8. To make an annual report.

9. To approve editorial policy.

10. In the event of the dissolution of the Arizona Academy of Science, to decide which state or national tax exempt scientific organization is to receive the remaining funds and assets of the Arizona Academy of Science.

c. A majority of the Executive Committee shall constitute a quorum.

d. An "approval" of the Executive Committee shall be construed to mean a majority approval, except where indicated otherwise.

VII. Elections

a. Officers shall be elected at the business session of the annual meeting.

b. The nominating committee of three active members shall be appointed by the President at least two months before the annual meeting. This committee shall nominate officers to serve the Academy during the ensuing year. Nominations may also be made from the floor by any member in good standing. Each nominee shall express his willingness to serve in the office for which he is being nominated before his nomination. The nominee for each office receiving the largest number of votes of the active members present shall be elected.

VIII. Meetings

a. An annual meeting shall be held at a time and place to be determined by the Executive Committee; such time and place is to be determined within ninety days after the preceding annual meeting. The Executive Committee shall be empowered upon a written request of the majority, to have the President call other meetings of the Academy whenever it may seem advisable.

b. Notice of all meetings of the Academy shall be sent to all members at least one month in advance of the date of the meeting.

c. The active members present at the annual meeting shall constitute a quorum.

d. Meetings of the Executive Committee shall be held at the call of the President. The Secretary shall call a meeting of the Executive Committee upon receiving a written request by three members of this committee.

IX. Committees

a. Standing committees shall be appointed by the President subject to the approval of the Executive Committee. These standing committees are as follows:

1. Auditing Committee
2. Fellows Committee
3. Finance Committee
4. Junior Academy Committee
5. Membership Committee
6. Necrology Committee
7. Nominating Committee
8. Program Committee
9. Publicity Committee
10. Research Committee
11. Resolutions Committee

b. Other committees may be appointed by the President when authorized by the Executive Committee.

X. Sections and Affiliated Societies

a. Sections. Upon application to the Executive

Committee by not less than 25 members, permission may be granted to form a section of the academy. Officers of these sections shall be a Chairman, a Secretary and an Associate Editor who is a member of the Editorial Board. Officers and members of a Section may not speak for the Academy or take action affecting Academy policy without prior approval of the Executive Committee. The Executive Committee must approve any change in status of sections and may make such changes as are necessary for the proper functioning of sections. Sections must notify the President of meeting dates prior to such meetings and must forward a copy of the minutes of the meeting to the Academy Secretary.

b. Duties of the Officers of Sections. The duties of the Chairman of a section shall be to preside at sectional meetings and to stimulate participation in the activities of the section. The Secretary of the section shall aid the Chairman of the section by keeping records of the section members, actions, and activities, preparing and submitting to the Academy Secretary reports of all section meetings; and assuming responsibility for assembling titles of papers and reports to be presented at the annual sessions of the section.

c. Affiliated Societies. Any state scientific organization, or part of a national organization may, upon application, be elected an affiliated society by the Executive Committee.

d. Provision is hereby afforded for the sponsorship of a Junior Academy of Science as a section of the Academy and shall operate under its own by-laws within the framework of the constitution and by-laws of the Academy. The activities of the Junior Academy shall be supervised by the Junior Academy Committee of the Arizona Academy of Science.

XI. Publications

The editing of all publications of the Academy shall be the responsibility of the Editorial Board. It shall be the duty of this board to pass on the merits of papers submitted for publication, and establish, with the approval of the Executive Committee, an editorial policy.

XII. Order of Business

a. The order of Business at annual meetings shall be as follows:

1. Calling to order by the President.
2. Reading the minutes of previous meetings.
3. Reports of officers.
4. Election of Honorary Members and Fellows.
5. Business.
6. Reports of committees.
7. Election of officers.
8. Adjournment.

b. The program may be interpolated in the order of business according to convenience.

XIII. Rules of Order

The rules contained in Robert's Rules of Order shall govern the Academy in all cases in which they are not inconsistent with the Constitution and By-Laws of this organization.

XIV. Amendments

By-Laws may be adopted, amended, or repealed at any annual meeting by a majority vote of the active members present, provided that notice of the proposed change has been sent by the Secretary to all members at least one month before such a meeting.

The Arizona Academy of Science was founded in 1956 with the purpose being to stimulate scientific research and education, to disseminate scientific knowledge in the various fields of science, to promote fraternal relationship among those engaged in scientific work, to assist in developing and in making known the material and other resources of the State, to encourage the publication of reports of scientific investigations, and to unify the scientific interests of the State.

These objectives are partly achieved by means of an Annual Meeting of the Academy and Sectional Activities. Please check one or more Sections with which you wish to affiliate:

- Anthropology Geology
- Biology Industrial Research
- Geography Physics - Astronomy

- Junior Academy
(for members under 18 years of age)
- Other, specify.....

APPROVAL OF APPLICATION

According to the By-Laws of the Academy, each application must be endorsed by two active members. If you are unable to obtain two signatures, your application will be endorsed upon receipt by the Secretary.