The History of the Texas Academy of Science

1880-2025

By

Raymond C. Mathews, Jr.

Past-President (2008-2009), Fellow (1992), & Historian, TAS

The history of the Texas Academy of Science (TAS) is complex, intriguing, and has its roots in antiquity. The purpose of the author writing this document is because the TAS history involves some interesting and important characters in the development of Texas science, and there are some elements of our history that I believe every member should be aware of. The Board of Directors of the Texas Academy of Science approved the writing of the TAS history and created the TAS Historian position in 2009, and I have been studying and scanning the historical TAS documents, and writing the history since that time. The early history has some ambiguity associated with it, as there are some conflicting reports of the history by the publications of the Academy from different times. However, there is enough common documentation on many elements about the formation and evolution of the Academy that I have been able to summarize the history.

Historical Documents of the Texas Academy of Science

- Baylor University Library – Texas Collection – TAS Archives
- The oldest TAS document is dated 1894 – Inaugural Address by the President of the Academy
- The 2nd oldest TAS document is dated 1897 – An Address to the TAS by Governor L.S. Ross at TAMU (College Station)
- Next oldest is a Welcome to the TAS – University of Texas (Austin) in 1932 – There may be older Transactions
- A comprehensive early history of the TAS was published in 1945 by S.W. Geiser – The First Texas Academy of Science (1880-1887)
- TAS Happenings – 1932: Overview of Re-Founding in 1918
- Annual Meeting Announcement with historical notes – Rice University (Houston) 1945: Founded 1892, Reorganized 1928

The history of the academy in segments of time are presented below, with summary bullets of important events, milestones, and officers.

The Academy of Science of Texas, 1880-1890

- Formed by university science and math teachers
- 1st president was Texas Governor Roberts in 1880
- The reorganized Academy in 1882 had stated goals:
    - Mutual improvement of its members
    - Inculcation of a desire and taste for scientific knowledge among the public
    - Preserving examples of the state's natural history
    - Identification of natural specimens without outside assistance
    - "Fortifying our people against the false analysis of minerals and mineral waters"

Texas State Geological and Scientific Association, 1884-89

- Also referred to as the Houston Academy of Science was affiliated with the Texas Academy of Science
- Membership dominated by geologists
- Its main purpose was to lobby the state legislature to fund a Geological and Mineralogical Survey of Texas
- In 1888, funding was approved for the Texas Survey

The Texas Academy of Science, 1892-1913

- All meetings at UT Austin indicating primary membership from academia
- Two formal meetings in June and December
- Ordinary meetings on 1st Sat. from Oct. to May
- Informal meetings on 3rd Sat. from Oct. to May
- By 1896, 141 members
- Published the Texas Academy of Science Transactions and Proceedings

Some titles from the early TAS Transactions/Proceedings

- Brown, S. Leroy. 1913. Bernoulli's principle and its application to explain the curving of a baseball.
- Dutton, C.E. 1897. The economics of concentrated capital.
- Halsted, George B. 1896. The culture given by science.
- Mezes, Sidney E. 1907. The essential difference between man and other animals.
- Hilgartner, H.L. and Northrup, E.F. 1897. Experiments with X-rays upon the blind.

Texas Academy of Science, 1929-1988

- Five professors met in San Antonio and signed a Letters of Incorporation in 1932. This event took about a year in planning. The Charter of the TAS was filed in the Office of the Secretary of State on 11-27-1929.
- Charter members:
  - Charles Adkisson, Physicist, Texas State College for Women
  - Clyde Reed, Biologist, Texas College of Arts and Industries at Kingsville
  - W. Joseph McConnell, Mathematician, North Texas State College
  - John Kern Strecker, Biologist, Baylor Museum
  - Harris Parks, Botanist/Entomologist, Texas A&M Expt. Station, San Antonio

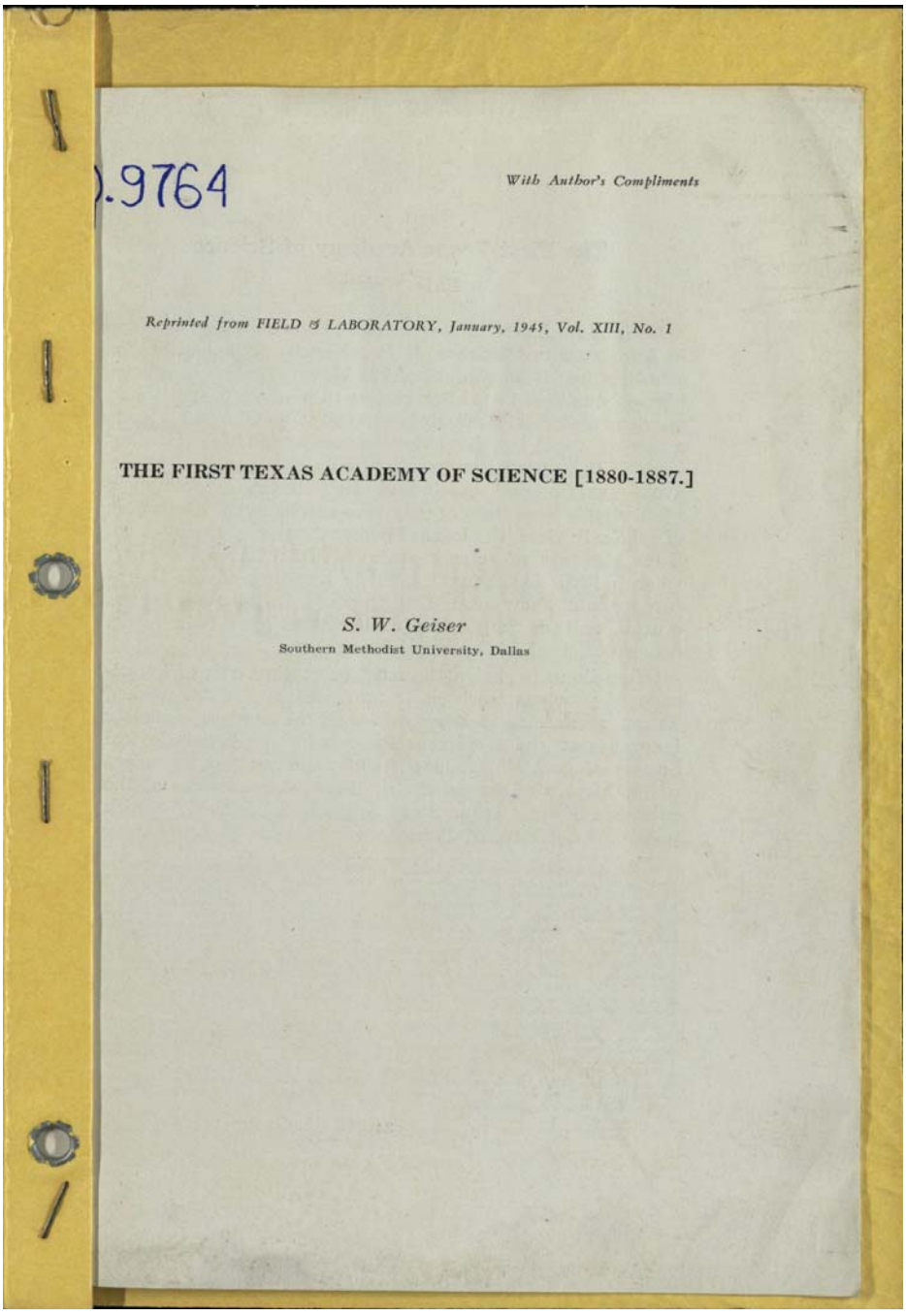
Texas Academy of Science, 1989-2012

- TAS enters technology age with website, Facebook page, and PowerPoint presentations.
- TAS becomes financially affluent allowing the Academy to promote our mission through awards and research grants.
- The Academy becoming more active proponent of science education through support of the Texas Science Olympiad and testimony before Texas Board of Education regarding evolution in textbooks.
- The Academy becomes international by providing grants for Mexican scientist for travel expenses to present papers at annual meetings.
- Annual Meetings setting new records each year for abstract submissions, poster presentations, award presentations, and number of participants.

The Texas Journal of Science

- Quarterly publishing of the Texas Journal of Science (TJS) began in 1949
- Manuscripts were accepted by any scientist whose paper was approved by the Publications Committee
- Cost of publishing the journal resulted in $8000 debt by 1977.
- A letter to the membership resulted in $16,000 of donations!
- More troubles…
  - Membership dropped during the 1980's due to competition from national societies and the "oil bust" that negatively impacted state universities
- Current membership categories:
  - Senior, science professionals
  - Collegiate, undergraduates and graduates
  - Junior, high school students
- The Purpose of TAS:
  - "to encourage excellence in science and in science teaching,
  - to stimulate communication among scientists and between scientists and
  - citizens of the state,
  - and to provide specialists that can be called upon when needed by the executive and legislative branches of state government or by state agencies."

Historical Documents of the Academy with Discussion of Significant Milestones



.9764

With Author's Compliments

Reprinted from FIELD & LABORATORY, January, 1945, Vol. XIII, No. 1

THE FIRST TEXAS ACADEMY OF SCIENCE [1880-1887.]

S. W. Geiser
Southern Methodist University, Dallas

"The First Texas Academy of Science [1880-1887]" is the most definitive document about the early historical development of the Academy. 1945.

According to **"The First Academy of Science,"** reprinted from Field & Laboratory, January, 1945, Volume XIII, Number 1, the Academy was first formed on October 27, 1880, which did not last long. Texas Governor O.M. Roberts was elected President of the Academy at that time mainly because of his political stature. A second more serious attempt at founding the Academy took place in Austin, Texas in 1882 by Dr. Samuel Buckley and Dr. Franklin Yoakum. Dr. Buckley was made President at that time, with Dr. Yoakum serving as Secretary. However, Dr. Buckley died in 1883, and apparently Dr. Yoakum preceded him as President, but the Academy remained inactive until 1886 when he moved the museum of the Academy from Palestine to Tyler, Texas. Dr. Yoakum died in 1891, and the museum collection was salvaged by Dr. Robert Hyer, President of Southern Methodist University. There were actually three formations of the Texas Academy of Science: first Academy (1880-1887), founded by Buckley, Smith, and Yoakum; the second (1892-1912), founded at the University of Texas; and the third and present, which dates from 1929. The 1892 organization at the University of Texas continued until 1912, having published twelve volumes of *Transactions* during that time. To complicate the historical founding, "The First Academy of Science," also reports that Dr. Edgar Everhart, professor of chemistry at the University of Texas is sometimes spoken of as "founder" in 1892, and that he was certainly "the first president of the Academy." These conflicts reported as Academy Presidents is not discussed in the document, but infers that these conflicts may have led to the demise of the organization in 1922. We may never know the exact story of the early history of the Academy, but there were publications of the *Transactions* and these early attempts at bringing the scientific community together were an important step in our history and scientific collaboration within the state. The re-founders of the Academy in 1929 were reportedly unaware of the existence of an earlier organization, and at first approached their founding as a totally new founding. However, the "letters in incorporation" of the new Academy make mention of the old one, and the numbering of the volumes of the *Transactions* of the earlier Academy. In fact, Dr. J.K. Strecker, Professor of Biology at Baylor University, one of the founders/incorporators of the 1929 Academy had in 1901 published a paper in the Transactions of the old Academy, and therefore was aware of the former formation of the previous Academy in 1882.

Dr. Franklin Yoakum
One of Original Founders & Third President of the TAS

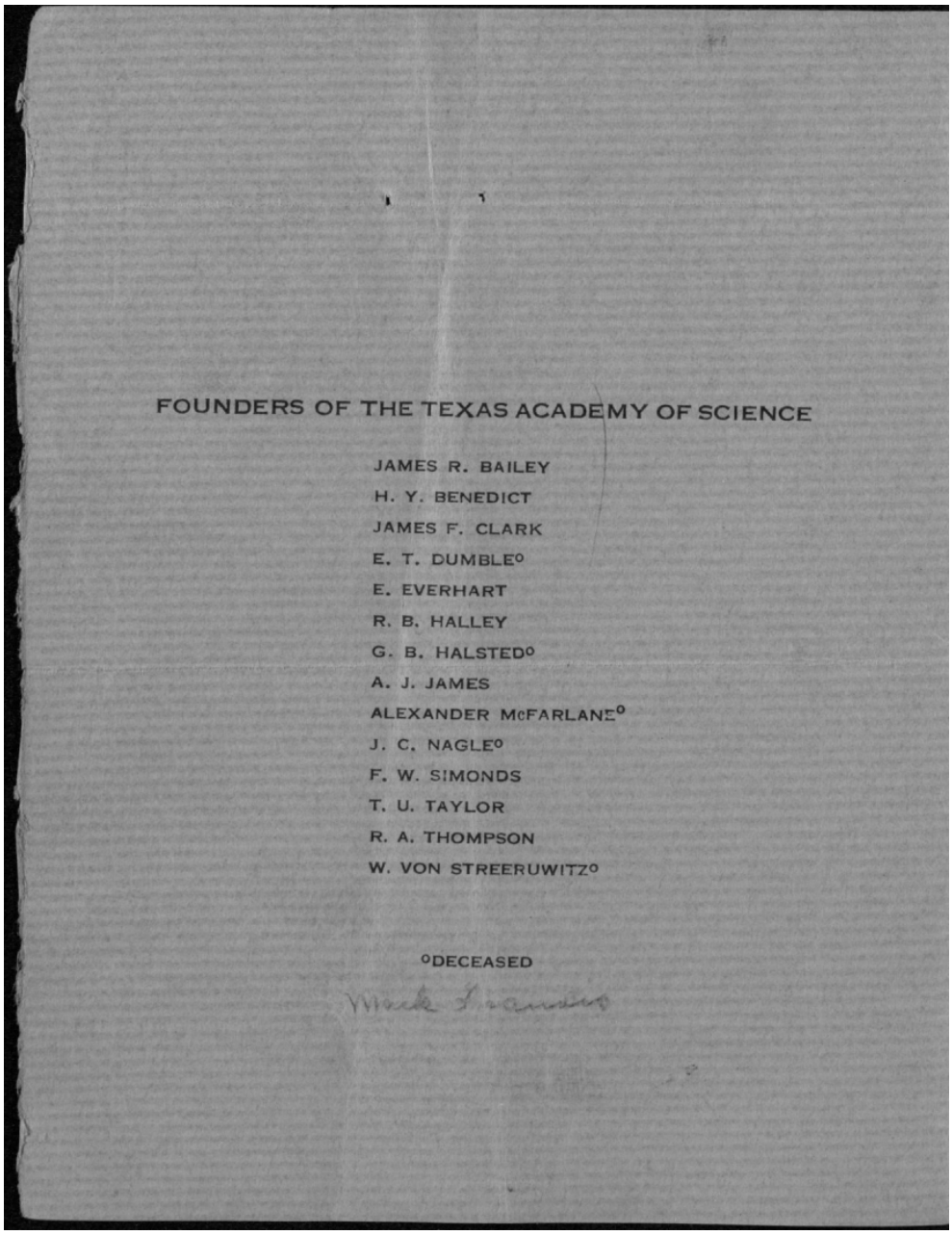
The Texas Academy of Science

In 1891 a small group of Texas teachers —science teachers—joined heads, hearts and hands in an organization they called the "Texas Academy of Science." Through no fault or failure of their own, but because of external resistance and inertia their efforts aborted and in 1912 the organization became defunct. In 1928 another small group of men, mostly teachers—encouraged and assisted by other teachers—met for the common purpose of resuscitating the Academy. The old organization took on new life, a new constitution and by-laws were framed, and a charter was obtained which assured the new Texas Academy of Science legal status and existence for fifty years.

Nearly all the old members rallied to the support of the new organization, which today numbers above two hundred members. The goal is set at a thousand members, and with the cooperation and support of every teacher of science in Texas and of other persons actively engaged in scientific work, as well as those who are interested in science this thousand mark will easily be exceeded.

Recently the Texas Academy of Science became affiliated with the American Association for the Advancement of Science. This is of the greatest significance, both for the Academy and for science in Texas.

This article published in "The Texas Outlook," in January 1931, the formation of the Academy took place in 1891 by a small group of Texas teachers. However, the organization lost support and was aborted in 1912. The article goes on to state that the Academy was reformed in 1928 by another small group of mostly male teachers with new constitution and by-laws, giving it legal status. The Academy became affiliated with the American Association for the Advancement of Science shortly thereafter.



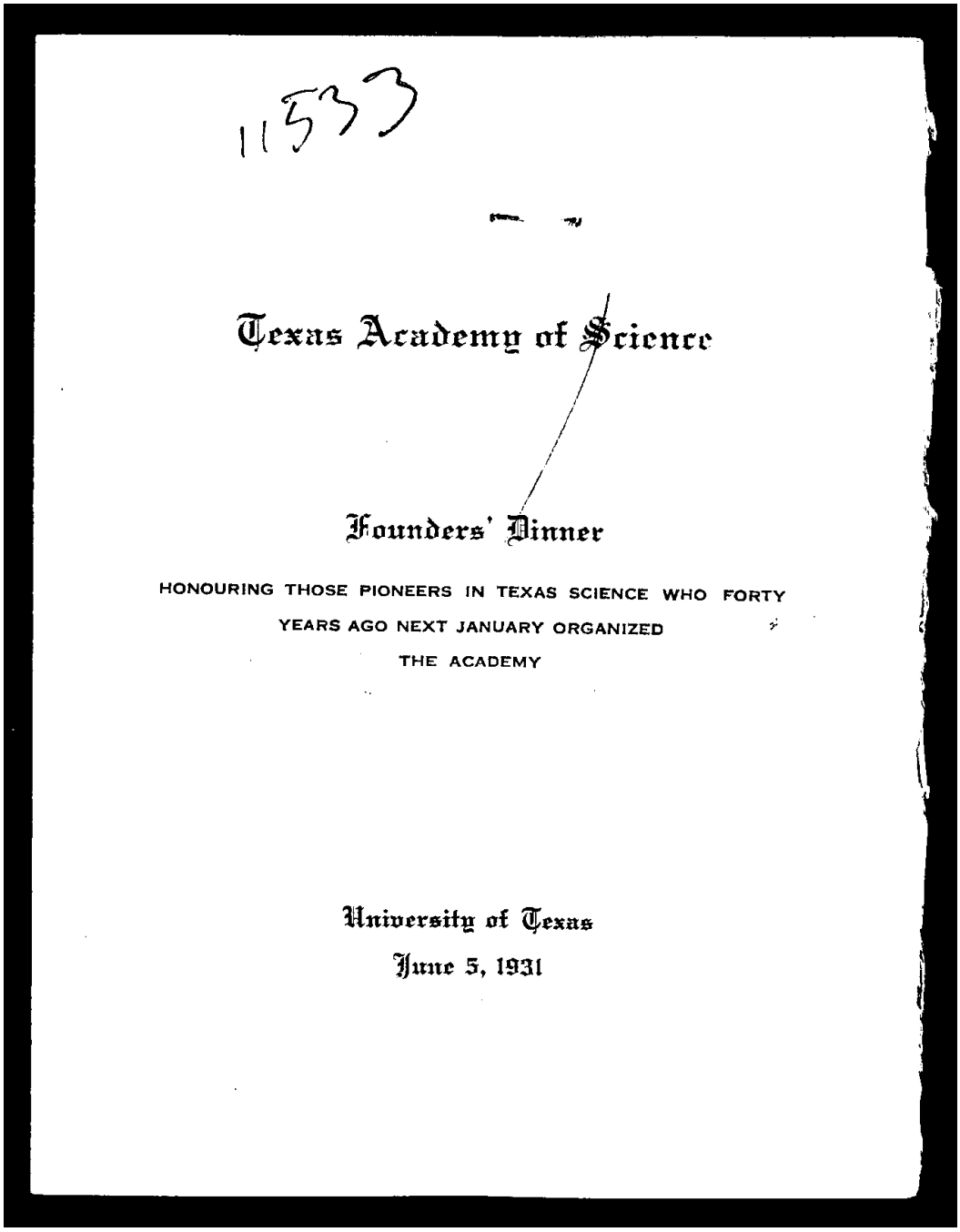
FOUNDERS OF THE TEXAS ACADEMY OF SCIENCE

JAMES R. BAILEY
H. Y. BENEDICT
JAMES F. CLARK
E. T. DUMBLE°
E. EVERHART
R. B. HALLEY
G. B. HALSTED°
A. J. JAMES
ALEXANDER McFARLANE°
J. C. NAGLE°
F. W. SIMONDS
T. U. TAYLOR
R. A. THOMPSON
W. VON STREERUWITZ°

°DECEASED

Mack Francis

Founders of the Re-Organized TAS in 1882, who were recognized at the Annual Meeting in 1931. This list does not include Drs. Buckley, Yoakum, and Smith who were also reported as founders in other documents, nor Dr. Everhart, who has also been recognized.



11533

Texas Academy of Science

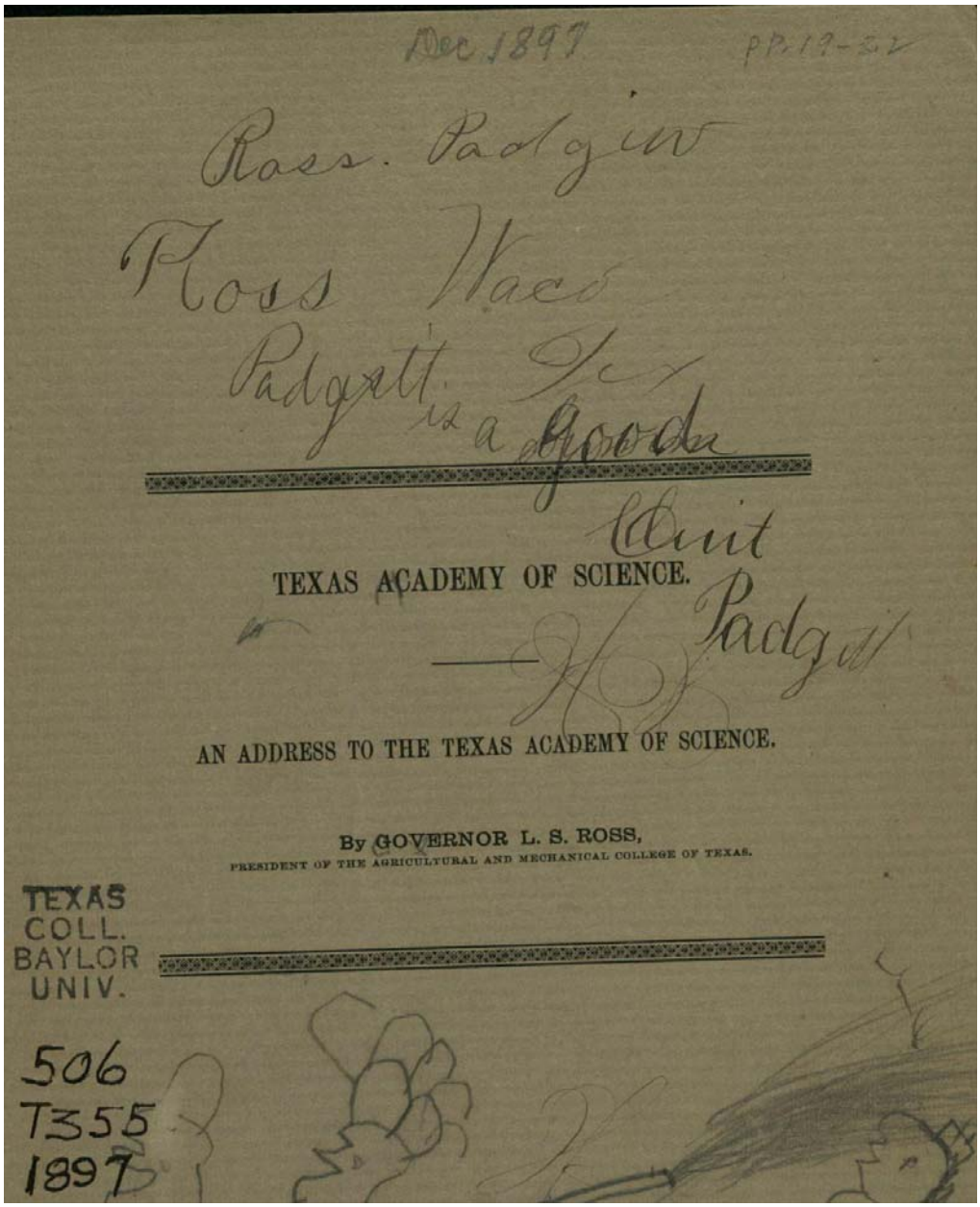
Founders' Dinner

HONOURING THOSE PIONEERS IN TEXAS SCIENCE WHO FORTY YEARS AGO NEXT JANUARY ORGANIZED THE ACADEMY

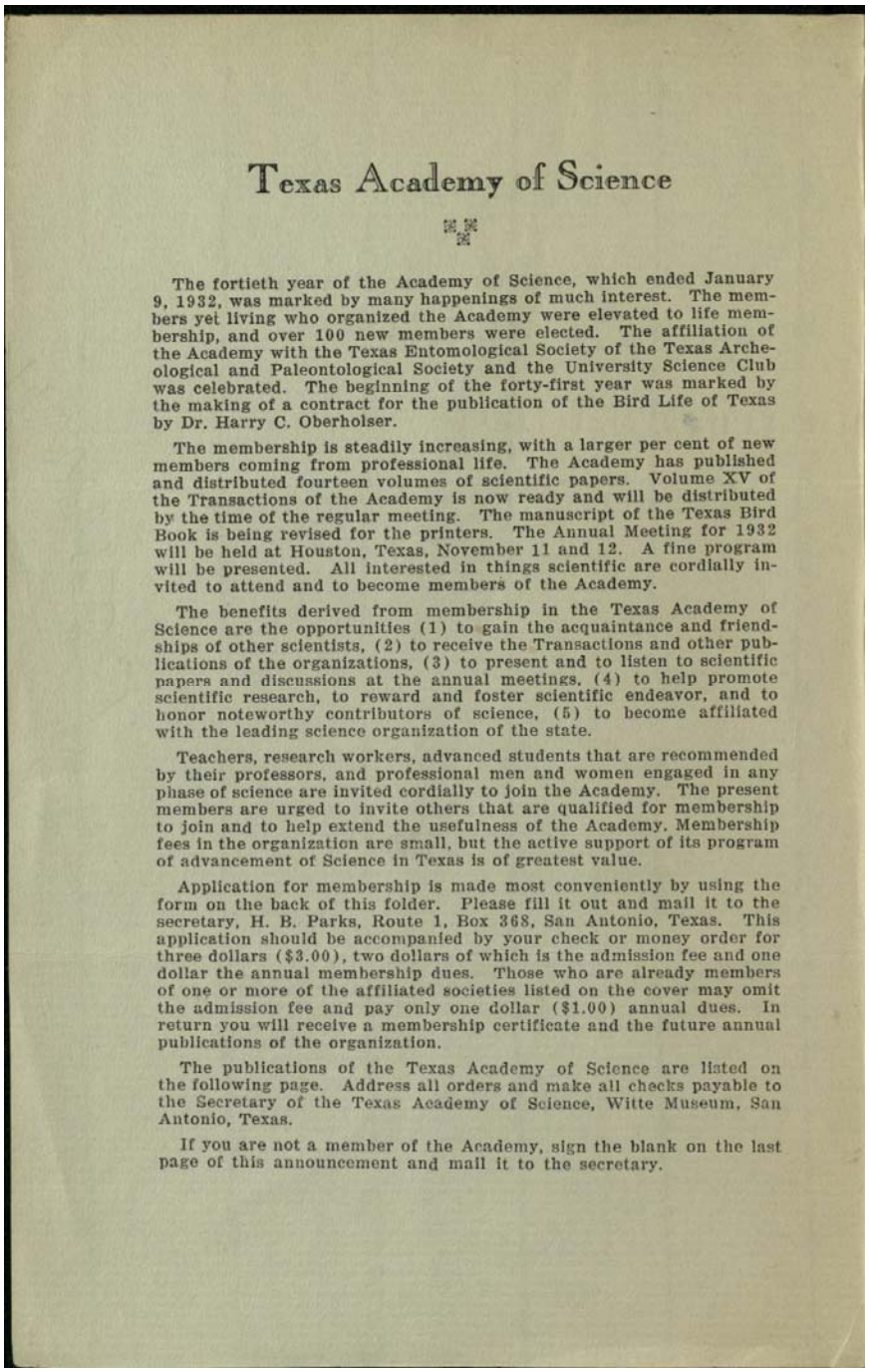
University of Texas

June 5, 1931

Founders Dinner Honoring those pioneers in the Texas Science who forty years ago (prior to 1931, i.e. 1882) organized the Texas Academy of Science.


Dec 1897 pp. 17-32
Ross. Padgett
Ross Waco
Padgett is a Goode
Quit
TEXAS ACADEMY OF SCIENCE.
Padgett
AN ADDRESS TO THE TEXAS ACADEMY OF SCIENCE.
By GOVERNOR L. S. ROSS,
PRESIDENT OF THE AGRICULTURAL AND MECHANICAL COLLEGE OF TEXAS.
TEXAS
COLL.
BAYLOR
UNIV.
506
T355
1897

This was an address to the Texas Academy of Science by Texas Governor L.S. Ross in 1887, at which time he conveyed an interesting concept about the value of science. He stated to the Academy that "I believe that the world owes more to the great inventors than to all its warriors and statesmen, and the prizes of the future will be found upon the highway of scientific education. 1897."



Texas Academy of Science

The fortieth year of the Academy of Science, which ended January 9, 1932, was marked by many happenings of much interest. The members yet living who organized the Academy were elevated to life membership, and over 100 new members were elected. The affiliation of the Academy with the Texas Entomological Society of the Texas Archeological and Paleontological Society and the University Science Club was celebrated. The beginning of the forty-first year was marked by the making of a contract for the publication of the Bird Life of Texas by Dr. Harry C. Oberholser.

The membership is steadily increasing, with a larger per cent of new members coming from professional life. The Academy has published and distributed fourteen volumes of scientific papers. Volume XV of the Transactions of the Academy is now ready and will be distributed by the time of the regular meeting. The manuscript of the Texas Bird Book is being revised for the printers. The Annual Meeting for 1932 will be held at Houston, Texas, November 11 and 12. A fine program will be presented. All interested in things scientific are cordially invited to attend and to become members of the Academy.

The benefits derived from membership in the Texas Academy of Science are the opportunities (1) to gain the acquaintance and friendships of other scientists, (2) to receive the Transactions and other publications of the organizations, (3) to present and to listen to scientific papers and discussions at the annual meetings, (4) to help promote scientific research, to reward and foster scientific endeavor, and to honor noteworthy contributors of science, (5) to become affiliated with the leading science organization of the state.

Teachers, research workers, advanced students that are recommended by their professors, and professional men and women engaged in any phase of science are invited cordially to join the Academy. The present members are urged to invite others that are qualified for membership to join and to help extend the usefulness of the Academy. Membership fees in the organization are small, but the active support of its program of advancement of Science in Texas is of greatest value.

Application for membership is made most conveniently by using the form on the back of this folder. Please fill it out and mail it to the secretary, H. B. Parks, Route 1, Box 368, San Antonio, Texas. This application should be accompanied by your check or money order for three dollars ($3.00), two dollars of which is the admission fee and one dollar the annual membership dues. Those who are already members of one or more of the affiliated societies listed on the cover may omit the admission fee and pay only one dollar ($1.00) annual dues. In return you will receive a membership certificate and the future annual publications of the organization.

The publications of the Texas Academy of Science are listed on the following page. Address all orders and make all checks payable to the Secretary of the Texas Academy of Science, Witte Museum, San Antonio, Texas.

If you are not a member of the Academy, sign the blank on the last page of this announcement and mail it to the secretary.

This article was published in 1932 by the Academy, and provides an update on the status, affiliations and membership benefits. It eludes to a re-founding of the Academy 14 years previous, which would be 1918, and states that the Academy was 41 years old at that time, which would provide a founding in 1892. That date is consistent with other documentation. The Annual Meeting for 1932 was held at Rice University in Houston, Texas.

Announcement of the

Texas Academy of Science

Founded January 9, 1892
Reorganized November, 1928

AFFILIATED WITH

American Association for the Advancement of Science
West Texas Historical and Scientific Society
Texas Folklore Society
North Texas Biological Society
Southwestern Science Society
Texas Entomological Society

J. K. Strecker, Pres.,
Baylor University,
Waco, Texas.

F. B. Plummer, Vice-Pres., Sec. 2,
University of Texas,
Austin, Texas.

J. M. Kuehne, Vice-Pres., Sec. 1,
University of Texas,
Austin, Texas.

W. J. McConnell, Vice-Pres., Sec. 3,
North Texas Teachers College
Denton, Texas.

H. B. Parks, Sec.-Treas.,
Route 1, Box 368,
San Antonio, Texas.

Texas Academy of Science

The Texas Academy of Science will celebrate its fortieth anniversary in January, 1932. Four of the original group of fourteen founders who attended the first meeting are still members contributing actively to the advancement of science and education in Texas. The small group that organized forty years ago has now grown to over three hundred fifty members and fellows scattered throughout the state and drawn from both the professional and amateur ranks.

During the active years of its existence the Academy has published and distributed thirteen volumes of scientific papers. It is now planning ambitiously to issue a two-volume monograph on Texas birds prepared by Dr. H. C. Oberholser.

The Texas Academy of Science is now experiencing a period of growth and expansion. Over fifty new members have been added this year, new affiliations have been established, and successful meetings have been held. The present aim of the Academy is to continue its growth, to extend its activities and its usefulness, and to make it the largest state academy of science.

The benefits derived from membership in the Texas Academy of Science are the opportunities (1) to gain the acquaintance and friendships of other scientists, (2) to receive the Transaction and other publications of the organization, (3) to present and to listen to scientific papers and discussions at the annual meetings, (4) to help promote scientific research, to reward and foster scientific endeavor, and to honor noteworthy contributors of science.

Teachers, research workers, advanced students that are recommended by their professors, and professional men and women engaged in any phase of science are invited cordially to join the Academy. The present members are urged to invite others that are qualified for membership to join and to help extend the usefulness of the Academy. Membership fees in the organization are small, but the active support of its program of advancement of Science in Texas is of greatest value.

Application for membership is made most conveniently by using the form on the back of this folder. Please fill it out and mail it to the secretary, H. B. Parks, Route 1, Box 368, San Antonio, Texas. This application should be accompanied by your check or money order for three dollars ($3.00), two dollars of which is the admission fee and one dollar the annual membership dues. Those who are already members of one or more of the affiliated societies listed on the cover may omit the admission fee and pay only one dollar ($1.00) annual dues. In return you will receive a membership certificate and the future annual publications of the organization.

The publications of the Texas Academy of Science are listed on the following page. Address all orders and make all checks payable to the Secretary of the Texas Academy of Science, Witte Museum, San Antonio, Texas.

The Announcement of the TAS for the Annual Meeting to be held at Rice University, Houston, Texas in 1941 provided a perspective on the formation of the Academy. According to the Announcement, the Academy was founded in 1892, and reorganized in 1928.

Texas Academy of Science

Organized January 9, 1892 Reorganized November 29, 1928

The stationary of the Academy in 1932 states that the Academy was organized on January 9, 1892, reorganized on November 29, 1928.

The University of Texas

THE UNIVERSITY OF TEXAS
OFFICE OF THE PRESIDENT
Austin

November 16, 1934.

TO THE MEMBERS OF THE
TEXAS ACADEMY OF SCIENCE: *Greetings!*

The first meeting of the Texas Academy of Science was held in 1892 in our old Chemical Laboratory. Years later the Academy sank into a coma and the Laboratory burned. Now comes the re-awakened and greater Academy to the enlarged laboratories of the University.

Welcome, many times welcome, members of the Texas Academy of Science. May the Academy and the University live forever, not only undiminished but increasingly at work, nourished by that yearning for knowledge which is an immortal attribute of Man.

H. J. Benedict

President, The University of Texas.

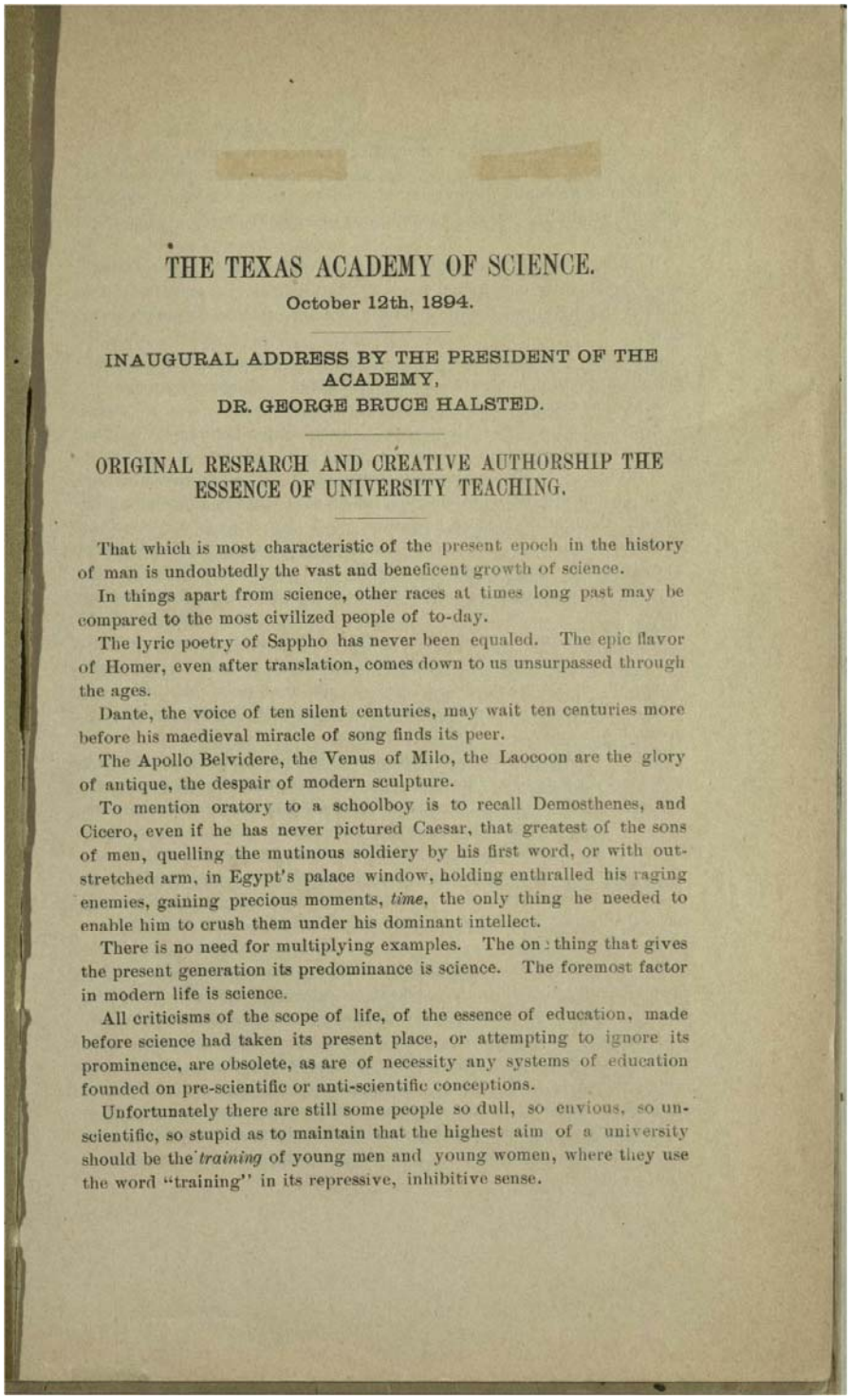
Aims of the University

We would like for you to have a memento of The University of Texas to take home with you, and so we have prepared this pamphlet to give you a brief glimpse into the life of the University.

The University of Texas is the agent of the State. Its primary purpose is to build young men and young women into useful and intelligent citizens, and this it strives to do by providing:

1. Education, both cultural and vocational.
2. Opportunities for training in leadership.
3. Contacts with national and international leaders in science, government, business, economics, literature, religion, and other fields of endeavor.
4. Opportunities for wholesome social contacts through campus organizations and social groups.
5. Systematic recreation through physical training and organized sports aimed at stimulating a desire for good health and supplying a knowledge of how to maintain good health.

The University of Texas welcoming letter the TAS for the 1934 Annual Meeting stated that the first meeting of the Academy was held in 1892 in the university's chemical laboratory.



THE TEXAS ACADEMY OF SCIENCE.

October 12th, 1894.

INAUGURAL ADDRESS BY THE PRESIDENT OF THE ACADEMY,
DR. GEORGE BRUCE HALSTED.

ORIGINAL RESEARCH AND CREATIVE AUTHORSHIP THE ESSENCE OF UNIVERSITY TEACHING.

That which is most characteristic of the present epoch in the history of man is undoubtedly the vast and beneficent growth of science.

In things apart from science, other races at times long past may be compared to the most civilized people of to-day.

The lyric poetry of Sappho has never been equaled. The epic flavor of Homer, even after translation, comes down to us unsurpassed through the ages.

Dante, the voice of ten silent centuries, may wait ten centuries more before his maedieval miracle of song finds its peer.

The Apollo Belvidere, the Venus of Milo, the Laocoon are the glory of antique, the despair of modern sculpture.

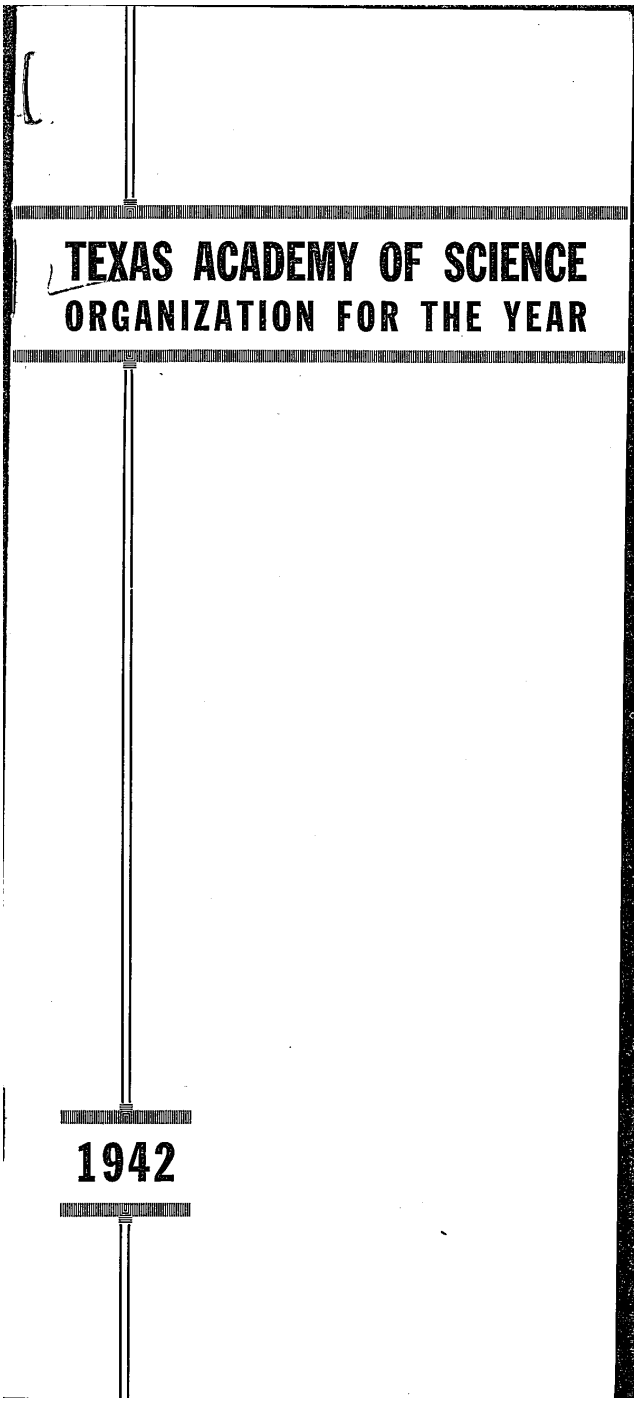
To mention oratory to a schoolboy is to recall Demosthenes, and Cicero, even if he has never pictured Caesar, that greatest of the sons of men, quelling the mutinous soldiery by his first word, or with outstretched arm, in Egypt's palace window, holding enthralled his raging enemies, gaining precious moments, *time*, the only thing he needed to enable him to crush them under his dominant intellect.

There is no need for multiplying examples. The one thing that gives the present generation its predominance is science. The foremost factor in modern life is science.

All criticisms of the scope of life, of the essence of education, made before science had taken its present place, or attempting to ignore its prominence, are obsolete, as are of necessity any systems of education founded on pre-scientific or anti-scientific conceptions.

Unfortunately there are still some people so dull, so envious, so unscientific, so stupid as to maintain that the highest aim of a university should be the *training* of young men and young women, where they use the word "training" in its repressive, inhibitive sense.

The oldest document in the TAS archives (1894) in Baylor University's Texas Collection. This was the Inaugural Presidential Address to the Academy. At this time in history, the Inaugural Address an other reports were read to the entire Academy.



THE TEXAS ACADEMY OF SCIENCE

Affiliated with

The American Association for the Advancement of Science

BRANCHES

East Texas Branch, South Texas Branch, and West Texas Branch

DIVISIONS

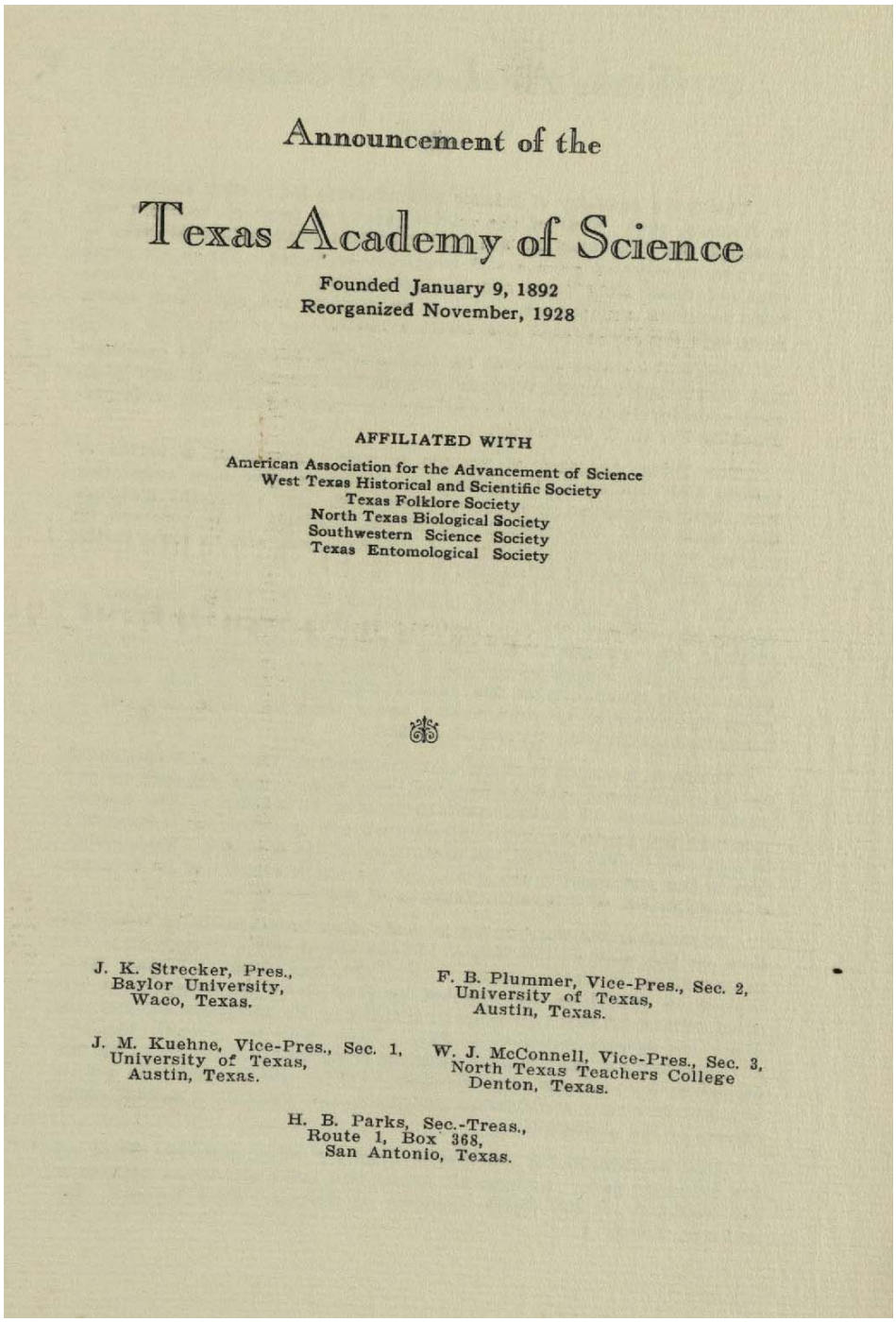
Senior Division, Collegiate Division, and the Junior Academy Division

SENIOR DIVISION

Officers

President, E. P. Cheatum
Executive Vice-President, Frederick A. Burt.
Vice-President for Section I, W. M. Craig.
Vice-President for Section II, Willis G. Hewatt.
Vice-President for Section III, T. H. Etheridge.
Vice-President for Section IV, L. W. Blau.
Vice-President for Section V, Gordon Gunter.
Secretary, Leo T. Murray.
Assistant Secretary, G. E. Potter.
Treasurer, Otto O. Watts.
Editor, Frank J. O'Hara.
Representative to A.A.A.S., S. W. Bilsing.

The organization of the TAS in 1942 differed from that of today, in that it included Branches and Divisions.



Announcement of the

Texas Academy of Science

Founded January 9, 1892
Reorganized November, 1928

AFFILIATED WITH

American Association for the Advancement of Science
West Texas Historical and Scientific Society
Texas Folklore Society
North Texas Biological Society
Southwestern Science Society
Texas Entomological Society

J. K. Strecker, Pres.,
Baylor University,
Waco, Texas.

F. B. Plummer, Vice-Pres., Sec. 2,
University of Texas,
Austin, Texas.

J. M. Kuehne, Vice-Pres., Sec. 1,
University of Texas,
Austin, Texas.

W. J. McConnell, Vice-Pres., Sec. 3,
North Texas Teachers College
Denton, Texas.

H. B. Parks, Sec.-Treas.,
Route 1, Box 368,
San Antonio, Texas.

This Announcement of the 1941 Annual Meeting of the TAS at Rice University in Houston, Texas indicates the Academy in January 1892 and Reorganization in November 1928.

Welcome
To The

95th Annual Meeting

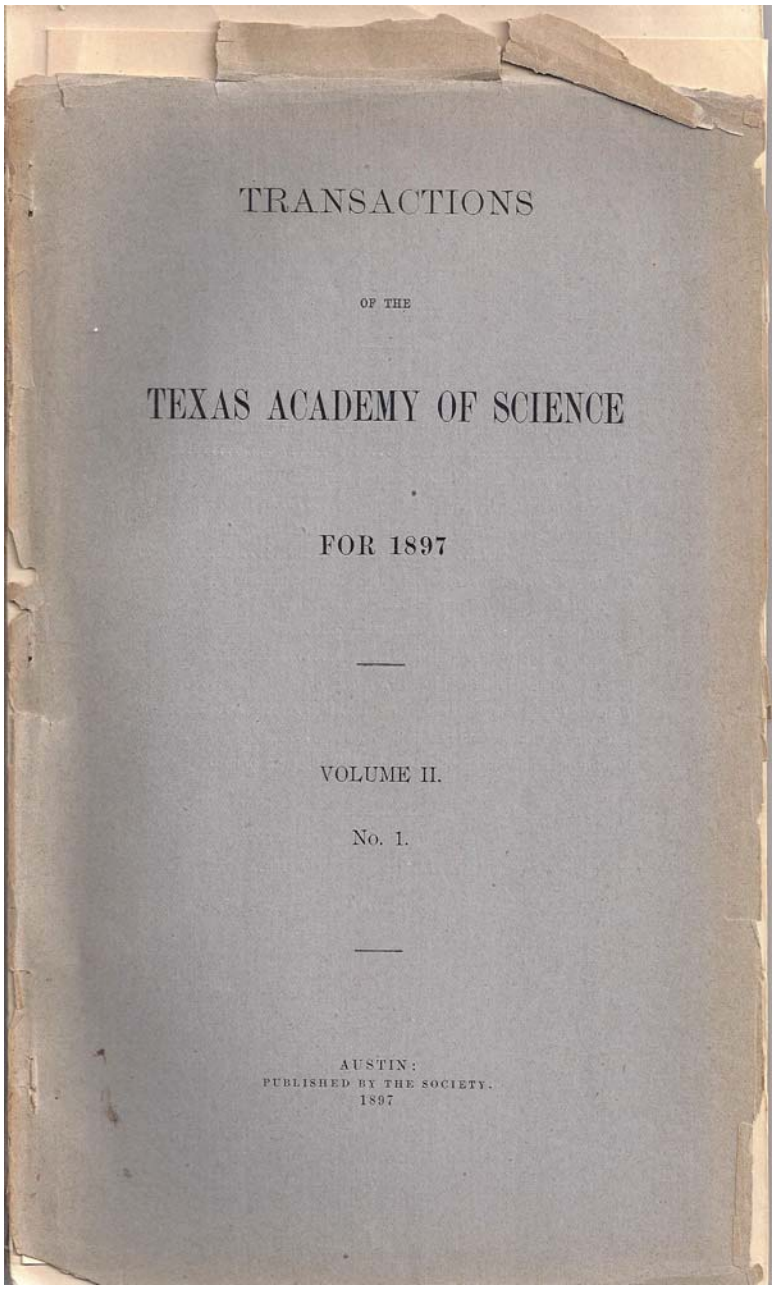
of the

TEXAS ACADEMY OF SCIENCE

The Texas Academy of Science was founded in 1882 and chartered in 1929. Its purposes are to encourage excellence in science and in education, to stimulate communication among scientist and between scientists and citizens of the state, and to provide specialists that can be called upon by the executive and legislative branches of state government or by state agencies

The Final Program of the TAS 95th Annual Meeting (1992) indicates the founding of the TAS in 1982 and charter in 1929.

Timeline Documentation of Events in the History of the Texas Academy of Science



TRANSACTIONS

OF THE

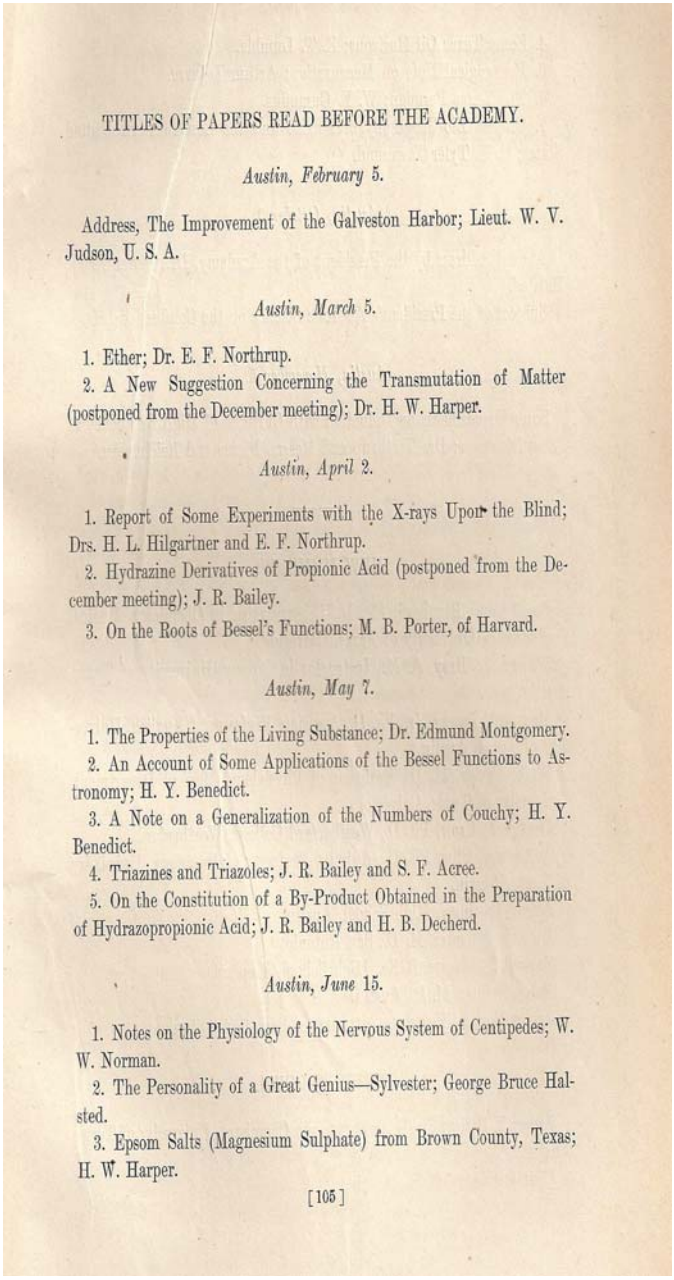
TEXAS ACADEMY OF SCIENCE

FOR 1897

VOLUME II.

No. 1.

AUSTIN:
PUBLISHED BY THE SOCIETY.
1897



TITLES OF PAPERS READ BEFORE THE ACADEMY.

Austin, February 5.

Address, The Improvement of the Galveston Harbor; Lieut. W. V. Judson, U. S. A.

Austin, March 5.

1. Ether; Dr. E. F. Northrup.
2. A New Suggestion Concerning the Transmutation of Matter (postponed from the December meeting); Dr. H. W. Harper.

Austin, April 2.

1. Report of Some Experiments with the X-rays Upon the Blind; Drs. H. L. Hilgartner and E. F. Northrup.
2. Hydrazine Derivatives of Propionic Acid (postponed from the December meeting); J. R. Bailey.
3. On the Roots of Bessel's Functions; M. B. Porter, of Harvard.

Austin, May 7.

1. The Properties of the Living Substance; Dr. Edmund Montgomery.
2. An Account of Some Applications of the Bessel Functions to Astronomy; H. Y. Benedict.
3. A Note on a Generalization of the Numbers of Couchy; H. Y. Benedict.
4. Triazines and Triazoles; J. R. Bailey and S. F. Acree.
5. On the Constitution of a By-Product Obtained in the Preparation of Hydrazopropionic Acid; J. R. Bailey and H. B. Decherd.

Austin, June 15.

1. Notes on the Physiology of the Nervous System of Centipedes; W. W. Norman.
2. The Personality of a Great Genius—Sylvester; George Bruce Halsted.
3. Epsom Salts (Magnesium Sulphate) from Brown County, Texas; H. W. Harper.

[105]

In this old and tattered 1897 Transaction of the TAS is illustrated an example of scientific papers read to the Academy before there was technology for such presentations. These papers were presented at different times initially, and later only at annual and regional meetings.

TRANSACTIONS

OF THE

TEXAS ACADEMY OF SCIENCE

FOR 1899,

TOGETHER WITH THE PROCEEDINGS FOR

THE SAME YEAR.

VOLUME III.

AUSTIN, TEXAS.
PUBLISHED BY THE ACADEMY.
OCTOBER, 1900.

THE TEXAS ACADEMY OF SCIENCE.

[*Annual Address by the President, October 13, 1899.*]

FROM THE STANDPOINT OF A MAN OF SCIENCE.

DR. FREDERIC W. SIMONDS,
University of Texas.

We are living in a great age—the best, perhaps, the world has ever seen—the Age of Scientific Achievement. Compared with the present the past is darkness, or at most, illumined with a dim and feeble light. So marked is the contrast, notwithstanding the high civilization of Rome, Greece, Egypt and India, this, our day, is, by many, regarded as the beginning. If the beginning, what, we may well inquire, will be the end? That wonderful instrument, the human mind, fearless, penetrating, persevering, is wresting from Nature her closest secrets, which, classified and utilized under the name of Science, are of incalculable benefit to the world. Yet, strange as it may seem, by the public at large, and even in the more enlightened countries, Science, though a direct contributor to civilization and happiness, placing at man's disposal resources practically unlimited, is little understood and the Man of Science, at times, positively misunderstood. In this address it is my purpose to point out some of these misunderstandings and to illustrate by example, some of the differences between real science and what is popularly conceived to be science.

THE IDEAL SCIENTIFIC MAN.

At the outset, let me picture the ideal Man of Science. If he be scientific he must be honest—his work must be thorough and well done. Willing to plod, willing to wait—Truth is not an *ignis-fatuus* ever escaping from his hand, but a tangible thing, which, as a reward of patience and industry may, through him, be given to the world. Modest and unassuming, he may not proclaim his own fame from the housetop, he may not advertise his wares, he may not seek notoriety; but rather the quietude of his laboratory, the solitude of the wilderness, or, perchance the presence of death itself. His highest aim is not personal fame, but to add to human knowledge, to contribute something, though it be a mite, to the

The Annual Address by the President of the TAS was another tradition in the early years of the Academy, as provided in this example from the 1899 Transactions & Proceeding at the University of Texas (Austin).

INSTITUTIONS TO WHICH THE TRANSACTIONS ARE SENT IN EXCHANGE.

EUROPE.

AUSTRIA.

Wien—Kaiserl. Akademie der Wissenschaften; K. K. Geologische Reichsanstalt.

BELGIUM.

Bruxelles—Academie Royale des Sciences, des Lettres et des Beaux-Arts.
Liege—Societe Royale des Sciences.
Uccle—Observatoire Royal de Belgique.

BOHEMIA.

Prague—Kon, Böhm, Gesellschaft der Wissenchaften.

ENGLAND.

Cambridge—Cambridge Philosophoical Society.
London—British Museum Library; The Royal Society; Royal Geographical Society; South London Entomological and Natural History Society.
Manchester—Manchester Literary and Philosophical Society.

FRANCE.

Marseille.—La Faculte des Sciences de Marseille.
Paris.—Bibliotheque Nationale; Bibliotheque du Museum d'Histoire Naturelle.
Toulouse.—Academe des Science, Inscription et Belles-lettres; Université de Toulouse, Biblothêque.

GERMANY.

Berlin.—Berliner Anthropologische Gesellschaft; Zeit. f. Wiss. Insektenbiologie.
Giessen.—Oberhessische Gesellschaft fur Natur- und Heilkunde.
Halle.—Naturforschende Gesellschaft.
Kiel.—Der Naturwissenschaftliche Verin.
Leipzig.—Die Naturforschende Gesellschaft.
Rostock.—Verein dèr Freunde der Naturgeschichte in Mecklenburg.

HUNGARY.

Budapest.—Magyar Tudomânyos Akadémia.

IRELAND.

Belfast.—Natural History and Philosophical Society.
Dublin.—Royal Dublin Society; Royal Irish Academy.

Institutional exchange of TAS Transactions & Proceedings was prevalent in the early 1900's (Transactions & Proceedings 1908-09), including 15 countries in Europe, 2 in Asia, 1 in Africa, Canada, Mexico, 4 in South America, Australia, and 21 states in the U.S.

PROCEEDINGS
of the
TEXAS ACADEMY OF SCIENCE

REGIONAL MEETINGS

South Texas Meeting.—This meeting was held at Kingsville, April 26 to 27, W. Armstrong Price presiding. At the technical sessions sixteen papers were presented. The program at the banquet consisted of an illustrated talk by a Junior Academy member and an address by Pres. H. Y. Benedict of The University of Texas on "Early Attempts at Measuring Distances of Stars." At the business session eighteen new members were elected and other business discussed. A field trip over King Ranch filled the afternoon.

East Texas Meeting.—This meeting was held at Huntsville, May 3 and 4, Don O. Baird presiding. At the technical sessions ten papers were presented. The unique feature of the general session was an illustrated lecture by Robert M. Zimmerman, a deep-sea diver, entitled "Down, Down, Down to the Bottom of the Sea." In the business session sixteen new members were elected. A tour of inspection of the State Penitentiary was conducted.

West Texas Meeting.—This meeting was held at Abilene, W. M. Winton presiding. Eleven papers were presented at the technical sessions. After the banquet J. M. Kuehne gave an illustrated lecture, "The McDonald Observatory." At the brief business session four new members were elected.

ANNUAL MEETING

The annual fall meeting of the Texas Academy of Science was held on the campus of Agricultural and Mechanical College of Texas, College Station, November 7–9, 1935, J. C. Godbey, President, presiding. Technical sessions filled most of the second day and business sessions were held on the first and last days. Capt. G. B. Troland was guest speaker after the annual banquet, his title being "The Melting Pot of the Pacific." Another guest speaker at the general session was geologist for the Second Byrd Expedition, Charles G. Morgan, who spoke on his experiences in the Antarctic. Thirteen members were raised to the rank of Fellow, and fifteen new members were elected, making fifty-three new members added during the year. Following the final business session at which new officers were elected field trips in the vicinity were led by members located at College Station.

Officers elected for 1935–1936.—W. Armstrong Price, President; Don O. Baird, Executive Vice-President; W. T. Gooch, W. R. Horlacher, S. B. McAlister, Olin G. Bell, and John G. Sinclair, Vice-Presidents and Chairmen of Sections 1–5 respectively; Frederick A. Burt, Secretary; Mayne Longnecker, Treasurer. (The other officers carry over from the previous year.)

Regional Meetings began in the 1930's and continued through the 1940's. This TAS 1934-35 Proceedings shows three Regional Meetings in South, East, and West Texas. The 1935 Annual Meeting was a two day meeting, and the new Medical Sciences section was created with eight papers presented.

ORGANIZATION
of the
TEXAS ACADEMY OF SCIENCE

MEMBER OF
AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE

AFFILIATED SOCIETIES

Beta Beta Beta, Beta Tau Chapter, Baylor University
Central Texas Section, American Chemical Society
Dallas Astronomical Society
El Paso Archeological Society
Faculty Science Club of University of Texas
Houston Museum and Scientific Society
North Texas Biological Society
Phi Sigma Kappa, Incarnate Word College
Science Club of Texas Technological College
Southwestern Science Society
Texas Archeological and Paleontological Society
Texas Association of Science Teachers
Texas Entomological Society
Texas Folk-Lore Society
Texas Society of College Teachers of Education
West Texas Historical and Scientific Eociety

LOCAL CHAPTERS

Commerce
San Antonio
West Texas

JUNIOR ACADEMIES

Commerce
Brownsville
Austin (3)
Bryan
Canyon
Georgetown
Incarnate Word
Gladewater
Corpus Christi
Marfa
Denton
Galveston

OFFICERS FOR 1936–1937

President, Don O. Baird, Sam Houston State Teachers College.
Executive Vice-President, F. B. Isely, Trinity College.
Vice-President, Chairman of Section 1, Otto O. Watts, Simmons University.
Vice-President, Chairman Section 2, George E. Potter, Baylor University.
Vice-President, Chairman Section 3, O. A. Ullrich, Southwestern University.
Vice-President, Chairman Section 4, Douglas R. Semmes, San Antonio, Texas.
Secretary, F. A. Burt, Agricultural and Mechanical College.
Treasurer, A. J. Kirn, Somerset, Texas.
Editor, Helen Jeanne Plummer, Bureau of Economic Geology.
Representative to American Association for the Advancement of Science, S. W. Bilsing, Agricultural and Mechanical College.

Early TAS organization consisted of many more affiliated societies, local chapters, and Junior Academies than the present organization. There was also a diverse structure of Vice-President positions, which presided over the various Regions in four Sections. Proceedings & Transactions 1935-36.

FOREWORD

In spite of the war and the attendant transportation difficulties, manpower shortages, and the many emotional strains to which all of us have been subjected, the annual meeting of the Academy in November at Austin was well attended, and this volume is as large as last year's. The success of the annual meeting was due in part to the excellent work of the program committee and to a considerable extent to the cooperation of the Gulf Coast, A. & M. College, and East Texas sections of the American Institute of Mining and Metallurgical Engineers which met with the Academy.

President Woolrich and the members of the publications and program committees assisted the editor in the collection of manuscripts; their cooperation is gratefully acknowledged.

This volume appears later in the year than the last. The blame for this must rest on the war and on the editor.

The geophysical contracting companies who made contributions to the publications fund of the Academy last year have helped again; moreover, their gifts were larger this year. The Academy's financial position now rests on a secure foundation; the membership can carry the load in the future. The names of the contributing companies are listed on another page; we thank them and assure them of our appreciation of their support.

The papers and abstracts in the Transactions convey and express the opinions and ideas of the authors; their publication in this volume does not imply endorsement by the Academy and they are not binding on the officers or on the membership. Permission to reprint any material in the volume is granted on the condition that specific reference be made to the source.

Chairman, Publications Committee

Oct. 2, 1944

FOREWORD

The Academy mourns the loss of its treasurer, Curtis J. Hesse. He had ben ill for a short time, but his death came as a shock to all who knew him. When the writer last saw him, ten days before his death, he discussed plans for increasing the activity of the Academy in the service of the people of Texas and for establishing an endowment fund. We considered the desirability of setting up a permanent business manager's office, preferably in Austin, to assume some of the duties which now rest on the treasurer, the secretary, and the editor, such as sending out statements for dues, keeping the rolls of active and inactive members, typing papers for printer's copy, and soliciting advertising.

The present volume includes advertising; the new policy had the enthusiastic approval of the late treasurer from the time when the idea was first suggested. We take this opportunity to thank the advertising firms for their support of the work of the Academy, and we hope that the Academy may receive it in the future.

The war has gradually worsened the conditions attending the publication of the volume. Everyone has more work to do than formerly. Papers come to the editor's desk slowly; President Taylor helped by sending our letters; sincere thanks are hereby extended to him. The mechanics of printing have been made more difficult by the shortages of paper and manpower.

The opinions expressed in this volume are the personal opinions of the authors; they are not binding upon the officers of the Academy or upon the membership, and publication herein is not to be interpreted as approval of any opinion or of any statement by the Academy, its officers, or its members.

CHAIRMAN, *Publications Committee.*

September 29, 1945.

World War II took a toll on the TAS, as stated in these Forwards (Proceedings & Transactions 1944 & 1945). Publication of TAS documents was slowed by shortage of paper, transportation difficulties, emotional strain, and manpower. Many of the papers published during the war had to do with the science of warfare.

FOREWORD

The Academy is entering into its second half century. The semi-centennial program containing some ninety contributions from the senior academy and twenty-seven more from the collegiate and junior academies indicates the degree of growth and maturity. This year the Academy is planning the consummation of an idea which has been in the mind of its older members for many years. It will establish a central headquarters for its far flung offices and activities. It will centralize the work of secretary and treasurer as well as editor in one person. The library will be merged with the University library and student privileges will be granted to Academy members. The Academy will assume a more important part in the life of the State of Texas by setting up a Council on Conservation covering all the important fields of study. It is our hope to greatly expand the Collegiate and Junior Academies and to improve the standards of their activity. In planning our own general programs and the publication of papers we must also raise the standard of performance.

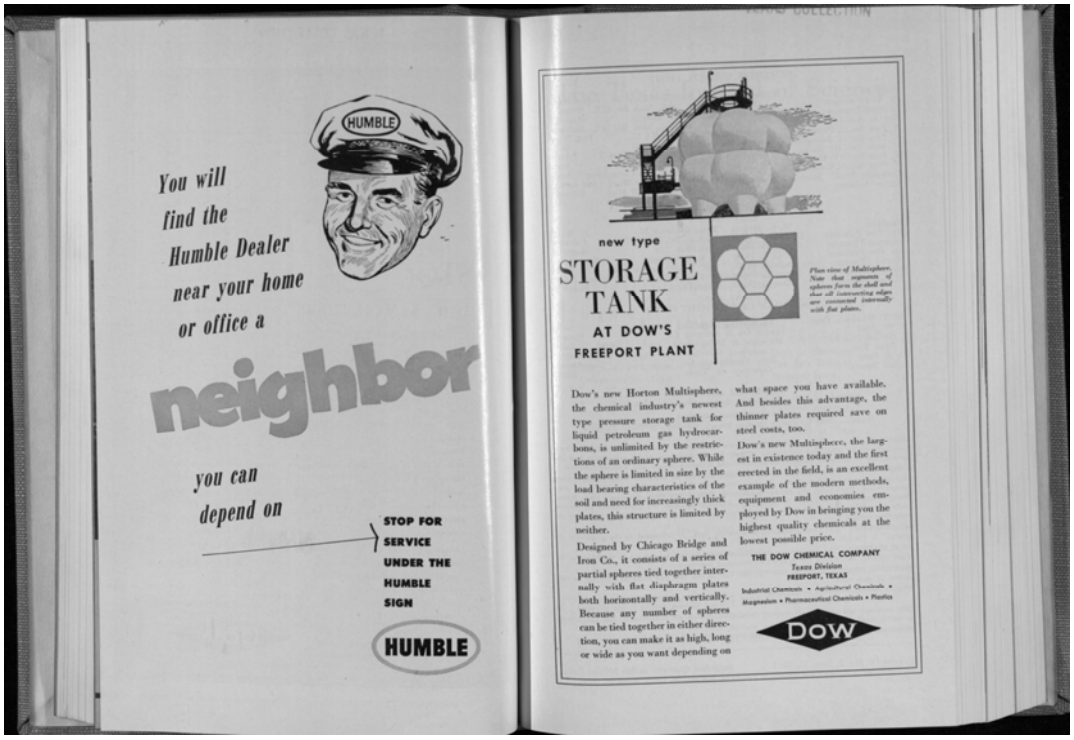
In the initiation of the plans for an expanded Academy we pay homage to the enthusiasm of Dr. Fred Plummer our immediate past president who had vigorously gone out after new members and who had plans for increasing the publications of the Academy.

The papers and abstracts published in this volume represent the unedited opinions of the authors and not the official voice of the Academy.

Texas Academy of Science
John G. Sinclair
President

Sept. 1947

In 1947 (Transactions 1948), the TAS was entering into its second half century, and preparing to celebrate that anniversary at the annual meeting, including a newly formed Council on Conservation to coordinate all science programs in all fields of study. The TAS Committees also included one for "Necrology and History," to account for all deceased TAS members and report on historical events.



Advertisements in the Texas Journal of Science were present during the 1950's and helped fund publication cost, student awards, and operation cost. They disappeared by the early 1960's.

THE TEXAS ACADEMY OF SCIENCE

University of Houston
Cullen Boulevard
Houston 4, Texas
October 15, 1952

Dear Member:

The General Membership Committee of the Texas Academy of Science has sent three letters to all the members of the Academy during 1951 & 1952. The results from these letters have been encouraging.

Again, the Committee urges each member of the Academy to secure one "new member". I have kept a list of all who have complied with this request and will write each a personal note. If you do not get such a note, it will mean that you are not credited on my records for obtaining a new member.

It has been impossible for me to get a complete list of all members printed. It should be done and distributed to each person. But, be patient, maybe by the first of next year this can and will be done. The chairman of each "Local Committee" has a list of membership as of May, 1952.

The effectiveness of the T. A. S. is shown in the excellent publication, "The Texas Journal of Science". This is the best, or one of the best, state journals in the country. Let's keep Texas ahead in science!

Ask yourself these questions. First, whom should I approach for membership? Ans., anyone interested in science. The Governor of the state, college and university presidents, professors, teachers, housewives and others are members. Second, what benefits will new members receive? Ans., all the benefits that any other member receives. But, in addition, if he joins before the Annual Meeting in December, for the year 1953 he will receive the last issue of the Texas Journal of Science for 1952.

Please find an enclosed application blank. Have the applicant fill it in carefully. You sign on the first (1) line, "Recommended by" and have it accompanied by a check made out to "The Texas Academy of Science" and designate "For 1953 dues". Mail to me at the above address. I will send the new member a temporary receipt, and the official receipt will be mailed later by the Treasurer.

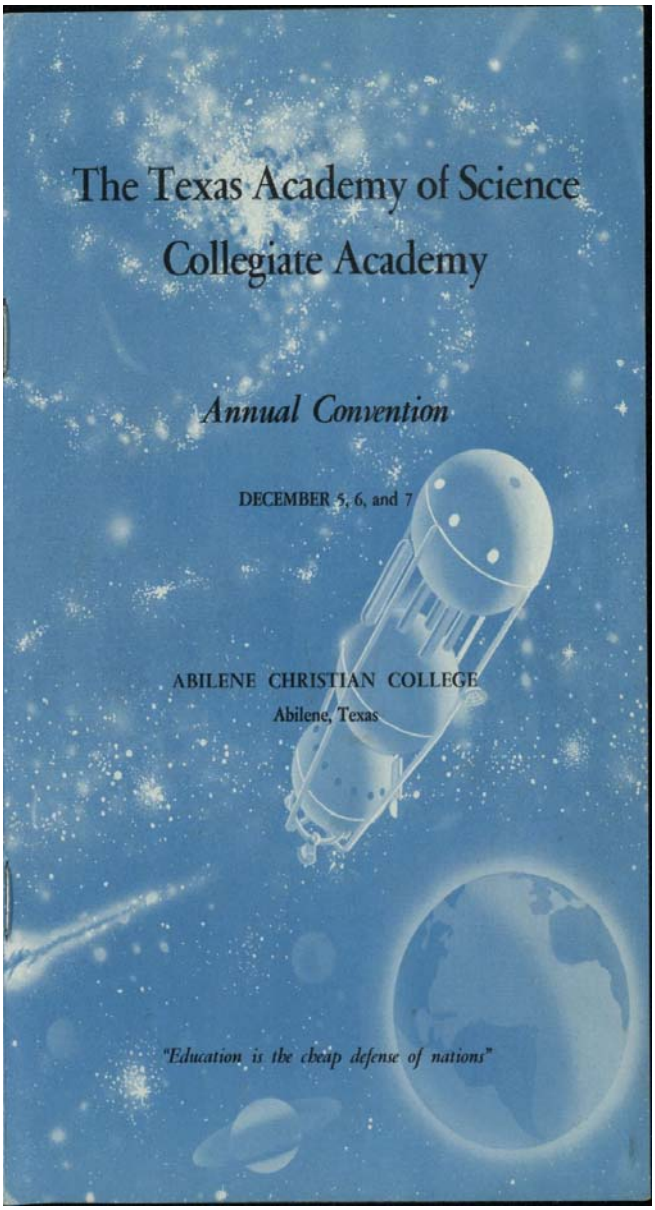
The Annual Meeting will be held at T. C. U., Fort Worth, on December 5 & 6th.

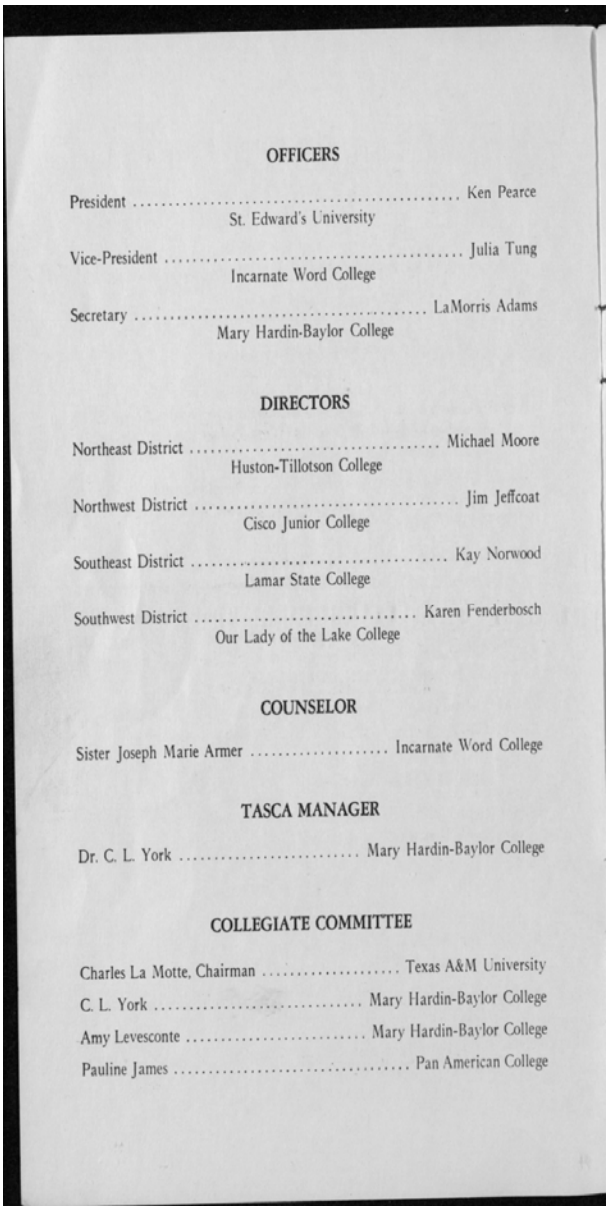
Let us all pull together and increase the membership in the T. A. S.

Sincerely,

A. A. L. Mathews, Chairman
Membership Committee
The Texas Academy of Science

Dues letter and announcement of the TAS 1953 Annual Meeting to be held at Texas Christian University in Fort Worth, Texas by TAS Membership Chair, A.A.L. Mathews.





OFFICERS

President ..... Ken Pearce
St. Edward's University

Vice-President ..... Julia Tung
Incarnate Word College

Secretary ..... LaMorris Adams
Mary Hardin-Baylor College

DIRECTORS

Northeast District ..... Michael Moore
Huston-Tillotson College

Northwest District ..... Jim Jeffcoat
Cisco Junior College

Southeast District ..... Kay Norwood
Lamar State College

Southwest District ..... Karen Fenderbosch
Our Lady of the Lake College

COUNSELOR

Sister Joseph Marie Armer ..... Incarnate Word College

TASCA MANAGER

Dr. C. L. York ..... Mary Hardin-Baylor College

COLLEGIATE COMMITTEE

Charles La Motte, Chairman ..... Texas A&M University
C. L. York ..... Mary Hardin-Baylor College
Amy Levesconte ..... Mary Hardin-Baylor College
Pauline James ..... Pan American College

The Annual Convention of the TAS Collegiate Academy at Abilene Christian College, Abilene, Texas for 1963. The organizational structure for the Collegiate Academy was very complex by today's standards.

Digital Archive of Texas Academy of Science Historical Documents

We are very fortunate that Baylor University's "Texas Collection" housed in the Carroll Library Building, which contains the historical documents of the Texas Academy of Science from 1884-1969. All of the early historical documents were scanned so that the Academy members would have access to their history. In addition, all other important documents, such as the *Transactions* and Proceedings pages announcing Annual Meetings, officers, treasury reports, library reports, and Presidential Addresses were scanned for the future reference. Finally, a cross section of publications from the *Transactions* and Proceedings were scanned, along with contents of other publications so that all interested scientist would have access to these valuable resources. Many of these publications are obviously very important, contain significant scientific data, and may be of great value to the scientific community. While the archives are a significant resource at the Baylor University library's Texas Collection, assess to them is limited and difficult, so making them digitally available to the scientific community is considered important.

The Texas Academy of Science Board of Directors will make a decision on whether to make the digital archive available on the Academy's website or by some other means. The digital archives contain 2,283 files occupying 2.3 gigabytes of memory at this time, and more are to be added over time. This is a significant amount of digital documentation, and making it available to Academy members and other interested scientist may be a challenge. This data has been segmented by decades, beginning with 1800's, 1900-1910, 1911-1920, 1921-1930, etc. until later years, when it is segmented into bi-decades segmented into 1971-1990 and 1991-2011. The later years may be further segmented at a latter time. However, those years have existing digital data of Academy officers, awards, Annual Meeting sites, Treasury/Membership reports, and Texas Journal of Science.

Donated Proceedings of Texas Academy of Science for the Archive

The early archives of the Academy have been well preserved by Baylor University (see Texas Collection inventory below), but the later documents of the Academy have not been archived. Therefore, part of my duties as the TAS Historian were to attempt to obtain donated Proceedings, which provide insight into our history. I have been pleased that donations from Dr. Norman Horner, Midwestern University; Dr. Jeff Kopachena, Texas A&M University at Commerce; Dr. Glenn Longley, Texas State University; and my own archives helped fill in some of the gaps. I wish to acknowledge these TAS members and university professors for their important donations to the TAS archives. It is important to point out that our long line of TAS Executive Secretaries (most recently Andrew Kasner and Fred Stevens) maintained a significant number of *Transactions* and Proceedings in the TAS archives, and I am very grateful to them for essentially serving as TAS archivist. The combination of TAS archived and donated Proceedings are listed in my inventory compilation below. There remains a large gap in missing Proceedings between 1950 and 1990, which leaves a 40-year period of our history without archived Proceedings. Perhaps these will turn up at some point in our members libraries, and we can add them to our Archives. I want to acknowledge the TAS Board of Directors 2009-2011, and especially Dr. Romi Burks, 2011 President, and Andrew Kasner, 2011 Executive Secretary for coordination and assistance in the TAS History Project.

Selected TAS Documents in Digital Archives and Texas Collection

It is interesting to read the early TAS Presidential Addresses, and note how past formalities and lack of technology (no slide shows, PowerPoint, etc.) in historic times affected presentations and how different they were from those of modern times. The published *Transactions* and Proceedings from many years ago are still very important scientific information, and some of those are discussed below. It is also interesting to note that the Academy historically had international exchange of documents with numerous foreign countries, and in many ways had achieved a higher level of stature than the present Academy.

Baylor University Texas Collection staff have accepted TAS request that they receive our archived and member donated Proceedings to add to their already early historical documents of the Academy. Our TAS Board of Directors approved this transfer of TAS archives at my request, and we are very fortunate about this significant historical event in our history. It will insure that are the TAS complete archives are in a secure and well maintained library facility that are cared for by professional library staff. I have discussed scanning of all of the TAS documents beyond what I have already done, which would be a monumental task. The Texas Collection Director, John Wilson, Amie Oliver, Coordinator for User and Access Services, and Tiffany Sowell, Library Information Specialist, are curators of the TAS collection, and they concur with me that scanning all the TAS archives would be an important contribution to science. It may take a lot of planning, but it will be done at some point and be available to all TAS members. I believe this will be a very useful archive for our members and other scientists.

TAS Seal of 1952.

TAS Seal of 2011

Texas Academy of Science (TAS) Transactions & Proceedings & Other Historic Documents

Inventory of Archived Documents
Provided Courtesy of Baylor University Texas Collection

Compiled by Raymond C. Mathews, Jr., Historian, TAS

1887 - Address to TAS by Governor of Texas about value of science (oldest TAS document)
1891 - Checklist of Texas Birds (Baylor University Bulletin)
1892 to 1931 - Original 12 Transactions with Proceedings published by the TAS
1894 - Inaugural Address by TAS President, Address to TAS about need for original science
1896 - List of Organizations affiliated with TAS
1897 to 1921 - First series of TAS Transactions published
1898 - Transactions together with the Proceedings
1893 to 1895 - Transactions together with the Proceedings
1901 to 1907 - Transactions together with the Proceedings
1902 - Inaugural Address by TAS President on applied science
1913 - Transactions together with the Proceedings
1915 - Transactions together with the Proceedings, Reptiles & Amphibians of Texas by John Strecker
1929 - Transactions together with the Proceedings
1931 - The Texas Outlook (TAS history article), Founders of the TAS
1932 - Re-Founding of the TAS
1934 - University of Texas welcoming letter to TAS for annual meeting & historical note
1940 - The 1st Texas Academy of Science (historical document), Academy Handbook, Affiliated Organizations
1940 - Historic Walk along the San Antonio River, TAS WWII wartime publications
1941 - Annual Meeting Announcement at Rice University and historical perspective about TAS founding
1942 - TAS Organization into Branches & Divisions
1942 and 1943 - Transactions together with the Proceedings
1948 - The 1st TAS Newsletter
1949 - Organization Chart, TJS
1950 - Membership List
1951 - Presidential Address about post WWII science, TJS
1952 - 4th publication of the TJS about Dallas Museum of Natural History
1953 - Annual Meeting Announcement at TCU, TJS
1963 - Annual Meeting Announcement of Collegiate Academy at Abilene Christian Academy
1964 - Annual Meeting Announcement
1988 - 1st TAS Teachers Guide about science education

Texas Academy of Science (TAS) Transactions & Proceedings

Inventory of Archived and Donated Documents not in the Baylor University Texas Collection

Compiled by Raymond C. Mathews, Jr., Historian, TAS

1896 - Transactions together with the Proceedings (TAS Archives)
1897 - Transactions together with the Proceedings (TAS Archives)
1899 - Transactions together with the Proceedings (TAS Archives)
1905 - Transactions together with the Proceedings (TAS Archives)
1908 and 1909 - Transactions together with the Proceedings (TAS Archives)
1910 to 1912 - Transactions together with the Proceedings (TAS Archives)
1930 to 1931 - Transactions together with the Proceedings (TAS Archives)
1931 to 1932 - Transactions (TAS Archives)
1932 to 1933 - Transactions (TAS Archives)
1932 to 1933 - Proceedings (TAS Archives)
1933-1934 - Transactions together with the Proceedings (TAS Archives)
1934 to 1935 - Transactions (TAS Archives)
1935 to 1936 - Transactions (TAS Archives)
1936 to 1937 - Transactions (TAS Archives)
1937 to 1938 - Proceedings (TAS Archives)
1938 and 1939 - Transactions together with the Proceedings (TAS Archives)
1940 - Transactions together with the Proceedings (TAS Archives)
1944 - Transactions together with the Proceedings (TAS Archives)
1945 - Transactions together with the Proceedings (TAS Archives)
1946 - Transactions together with the Proceedings (TAS Archives)
1991 - Proceedings (donation by Ray Mathews)
1992 - Proceedings (donation by Ray Mathews)
1993 - Proceedings (donation by Ray Mathews)
1995 - Proceedings (donation by Norman Horner, Midwestern State University)
1995 to 1998 - Proceedings for each individual year (donation by Jeff Kopachena, TAMU-Commerce)
1999 - Proceedings (donation by Ray Mathews)
2000 and 2001 - Proceedings for each individual year (donation by Jeff Kopachena, TAMU-Commerce)
2002 - Proceedings (donation by Ray Mathews)
2003 - Proceedings (donation by Ray Mathews)
2004 - Proceedings (donation by Ray Mathews)
2005 - Proceedings (donation by Ray Mathews)
2006 to 2009 - Proceedings for each individual year (donation by Jeff Kopachena, TAMU-Commerce)
2010 - Proceedings (donation by Ray Mathews)

THE TEXAS ACADEMY OF SCIENCE.

October 12th, 1894.

INAUGURAL ADDRESS BY THE PRESIDENT OF THE ACADEMY,
DR. GEORGE BRUCE HALSTED.

ORIGINAL RESEARCH AND CREATIVE AUTHORSHIP THE ESSENCE OF UNIVERSITY TEACHING.

That which is most characteristic of the present epoch in the history of man is undoubtedly the vast and beneficent growth of science.

In things apart from science, other races at times long past may be compared to the most civilized people of to-day.

The lyric poetry of Sappho has never been equaled. The epic flavor of Homer, even after translation, comes down to us unsurpassed through the ages.

Dante, the voice of ten silent centuries, may wait ten centuries more before his maedieval miracle of song finds its peer.

The Apollo Belvidere, the Venus of Milo, the Laocoon are the glory of antique, the despair of modern sculpture.

To mention oratory to a schoolboy is to recall Demosthenes, and Cicero, even if he has never pictured Caesar, that greatest of the sons of men, quelling the mutinous soldiery by his first word, or with outstretched arm, in Egypt's palace window, holding enthralled his raging enemies, gaining precious moments, *time*, the only thing he needed to enable him to crush them under his dominant intellect.

There is no need for multiplying examples. The one thing that gives the present generation its predominance is science. The foremost factor in modern life is science.

All criticisms of the scope of life, of the essence of education, made before science had taken its present place, or attempting to ignore its prominence, are obsolete, as are of necessity any systems of education founded on pre-scientific or anti-scientific conceptions.

Unfortunately there are still some people so dull, so envious, so unscientific, so stupid as to maintain that the highest aim of a university should be the *training* of young men and young women, where they use the word "training" in its repressive, inhibitive sense.

The first Inaugural Address by the President of the Academy, Dr. George Halsted, is also the oldest document in the TAS archives. His address was read before the academy without any technological aids, and focused on science teaching issues of that era, and shortcomings of the understanding of science education that they faced at that time.

[*Read before the Texas Academy of Science, December 22, 1897.*]

AN ADDRESS TO THE TEXAS ACADEMY OF SCIENCE.

By Governor L. S. Ross,
PRESIDENT OF THE AGRICULTURAL AND MECHANICAL COLLEGE OF TEXAS.

Mr. President and Gentlemen:

The people of Texas have always been noted for a boundless hospitality, where the guest is made to feel that he is at home, and to admire the easy freedom and graceful dignity of a host who banishes all formality in the nobleness of his welcome and the simplicity and generosity of his entertainment.

We trust that there shall be no exception to the general rule, and in making welcome so may representatives of an organization which has to do with the arts and sciences and other allied interests of our State, it will be a source of no small pride to me personally if I shall be able to contribute in an humble way to the success of your meeting. I am keenly alive to the importance of your work, because upon its action depends, in a large measure, not only the extent and degree to which scientific knowledge and research shall be fostered and disseminated among the people, but also the degree of progress which shall be made in all the arts of life—the future development of our untold natural resources, the productiveness of our domain, and the position and power of our State. Only questions pertaining to the existence, integrity, and honor of our commonwealth take higher rank. I believe with Franklin, that the world owes more to great inventors than to all its warriors and statesmen, and that the prizes of the future will be found upon the highway of scientific education. It derogates nothing from the value of your aims, but rather heightens their claim to popular regard to admit that inventions evolved from the brains of unlettered men laid the foundations of our material prosperity, and have been among the most potent factors of the nation's wonderful growth.

The statesmen of the revolutionary period who formulated the self-evident truths upon which is based and framed the Constitution, intended to lay down and define the powers and duties of a mighty govern-

This second Presidential address to the Academy in 1897 is the second oldest document in the TAS archives. Texas Governor L.S. Ross read his report to the Academy in very flowery language, and submitted that he was "contributed in a humble way" to the meeting as non-scientist. He was the first and last President of the Academy apparently appointed (not elected) for his political standing and the benefits that might bring to the Academy.

LIST OF INSTITUTIONS WITH WHICH THE TEXAS ACADEMY OF SCIENCE EXCHANGES PUBLICATIONS.

AUSTRALIA.

Brisbane.—The Royal Society of Queensland.
Melbourne.—The Royal Society of Victoria.

AUSTRIA.

Wien.—Kaiserliche Acadamie der Wissenschaften.
Reichs Geologische Anstalt.

BELGIUM.

Bruxelles.—L'Académie Royale des Sciences, des Letters et des Beaux-Arts de Belgique.
Liege.—La Société Royale des Sciences de Liege.

BOHEMIA.

Prag.—Die Koenigl-boemische Gesellschaft der Wissenschaften.

BRAZIL.

Rio de Janeiro.—Museu Nacional de Rio de Janeiro.

CANADA.

Halifax.—The Nova Scotia Institute of Science.
Montreal.—The Natural History Society.
St. Johns.—The Natural History Society of New Brunswick.
Toronto.—The Canadian Institute.

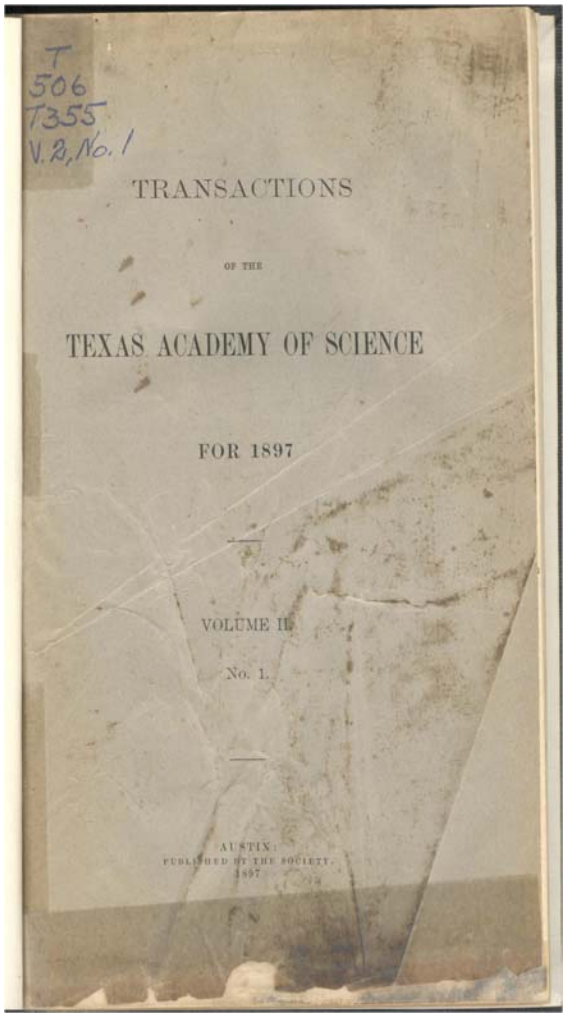
ENGLAND.

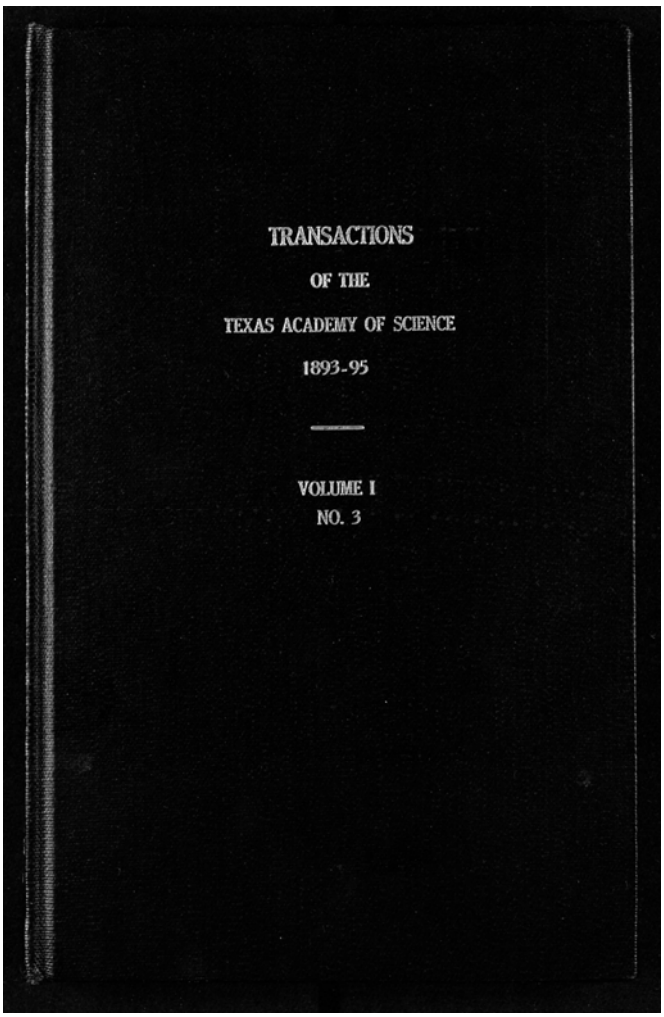
Cambridge.—Cambridge Philosophical Society.
London.—The Royal Geographical Society.
The Royal Society.
South London Entomological and Natural Hist. Society.
Manchester.—The Manchester Literary and Philosophical Society.

FRANCE.

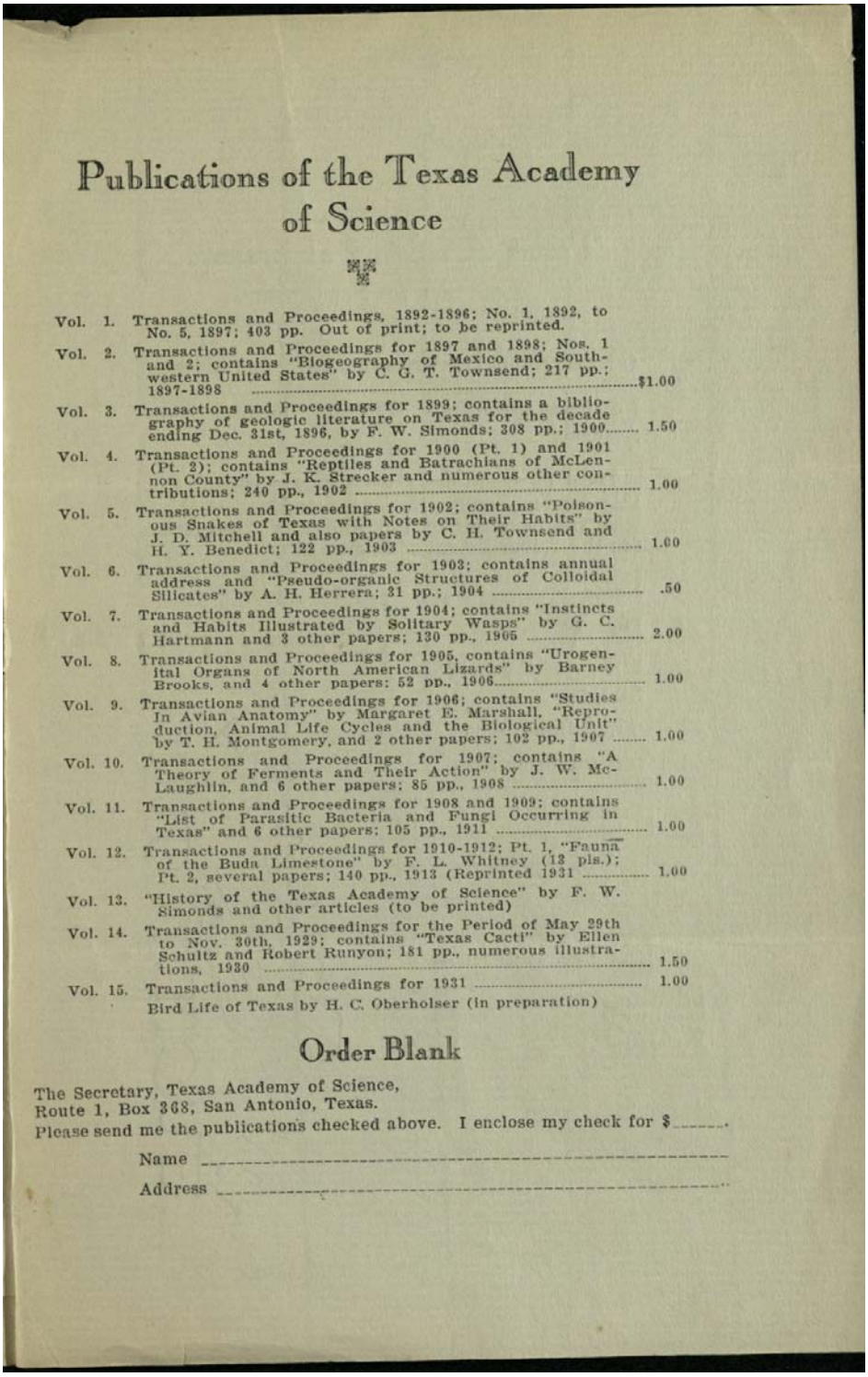
Marseille.—La Faculte des Sciences de Marseille.
Toulouse.—L'Académie des Sciences, Inscriptions et Belles-lettres de Toulouse.

This List of Institutions with which the TAS exchanged publications in 1896 (from *Transactions*) included many foreign countries, and the list goes on for there pages, and included Italy, Mexico, Scotland, Germany, and even the United Nations. That exchange continued until about 1922. Our present day TAS does not have this international prestige.





Transactions of the TAS were bound in different formats, and their archived integrity varies, as can be seen from these examples. The Baylor University library staff make a very commendable effort to maintain the integrity of the TAS archive. There were twelve Transactions published between 1897 and 1921, although there are gaps in the numbering of those Transactions, and not all of them may be in the archives. According to Baylor University staff, the archives may in fact have all of the *Transactions*, because volume numbering in early years of many documents were not consistent. The "First Academy of Science" document states that there were twelve volumes of the *Transactions.*



Publications of the Texas Academy of Science

Vol. 1.	Transactions and Proceedings, 1892-1896; No. 1, 1892, to No. 5, 1897; 403 pp. Out of print; to be reprinted.	
Vol. 2.	Transactions and Proceedings for 1897 and 1898; Nos. 1 and 2; contains "Biogeography of Mexico and Southwestern United States" by C. G. T. Townsend; 217 pp.; 1897-1898	$1.00
Vol. 3.	Transactions and Proceedings for 1899; contains a bibliography of geologic literature on Texas for the decade ending Dec. 31st, 1896, by F. W. Simonds; 308 pp.; 1900	1.50
Vol. 4.	Transactions and Proceedings for 1900 (Pt. 1) and 1901 (Pt. 2); contains "Reptiles and Batrachians of McLennon County" by J. K. Strecker and numerous other contributions; 240 pp., 1902	1.00
Vol. 5.	Transactions and Proceedings for 1902; contains "Poisonous Snakes of Texas with Notes on Their Habits" by J. D. Mitchell and also papers by C. H. Townsend and H. Y. Benedict; 122 pp., 1903	1.00
Vol. 6.	Transactions and Proceedings for 1903; contains annual address and "Pseudo-organic Structures of Colloidal Silicates" by A. H. Herrera; 31 pp.; 1904	.50
Vol. 7.	Transactions and Proceedings for 1904; contains "Instincts and Habits Illustrated by Solitary Wasps" by G. C. Hartmann and 3 other papers; 130 pp., 1905	2.00
Vol. 8.	Transactions and Proceedings for 1905, contains "Urogenital Organs of North American Lizards" by Barney Brooks, and 4 other papers; 52 pp., 1906	1.00
Vol. 9.	Transactions and Proceedings for 1906; contains "Studies In Avian Anatomy" by Margaret E. Marshall, "Reproduction, Animal Life Cycles and the Biological Unit" by T. H. Montgomery, and 2 other papers; 102 pp., 1907	1.00
Vol. 10.	Transactions and Proceedings for 1907; contains "A Theory of Ferments and Their Action" by J. W. McLaughlin, and 6 other papers; 85 pp., 1908	1.00
Vol. 11.	Transactions and Proceedings for 1908 and 1909; contains "List of Parasitic Bacteria and Fungi Occurring in Texas" and 6 other papers; 105 pp., 1911	1.00
Vol. 12.	Transactions and Proceedings for 1910-1912; Pt. 1, "Fauna of the Buda Limestone" by F. L. Whitney (13 pls.); Pt. 2, several papers; 140 pp., 1913 (Reprinted 1931	1.00
Vol. 13.	"History of the Texas Academy of Science" by F. W. Simonds and other articles (to be printed)	
Vol. 14.	Transactions and Proceedings for the Period of May 29th to Nov. 30th, 1929; contains "Texas Cacti" by Ellen Schultz and Robert Runyon; 181 pp., numerous illustrations, 1930	1.50
Vol. 15.	Transactions and Proceedings for 1931	1.00
	Bird Life of Texas by H. C. Oberholser (in preparation)	

Order Blank

The Secretary, Texas Academy of Science,
Route 1, Box 368, San Antonio, Texas.
Please send me the publications checked above. I enclose my check for $_____.

Name _____

Address _____

The twelve Transactions and Proceedings of the Academy from 1892 to 1931 are listed by the Academy in this document, along with the cost for ordering those publications in 1932.

THE TEXAS ACADEMY OF SCIENCE.

[ANNUAL ADDRESS BY THE PRESIDENT.]

THE INFLUENCE OF APPLIED SCIENCE.

J. C. NAGLE,
Agricultural and Mechanical College of Texas,
College Station, Texas.

Were I qualified to attempt it, an exhaustive review even of the most salient features of the subject of this address is precluded by the shortness of the time available. My purpose, therefore, is to touch upon a few only of the general features of the world's progress in which applied science has been an aid not only to material development but to researches in pure science as well, and to suggest, if possible, some means by which the workers in applied science may be brought to contribute more largely towards advancing the purposes and usefulness of the Texas Academy of Science.

If the recorded history of the world's progress in thought and material prosperity for the last two thousand years be roughly divided into two parts—the latter one dating practically from the beginning of the nineteenth century—and if the causes making for the amelioration of man's condition during these two periods be examined, we shall see that a single century of applied science has done more for the world's direct advancement in enlightenment, tolerance and real culture, as well as in material progress, than was accomplished in the preceding nineteen hundred years. Furthermore, a comparison of the opportunities and advantages possessed by man at the beginning, the middle, and the end of the nineteenth century will show how much the rate of progress was accelerated during the latter half of the century, and if, judging by this, any predictions for the future may be ventured, we may gain some faint idea of the place applied science is destined to fill during the next fifty years.

Applied science has placed the world's store of accumulated knowledge in more accessible form, has disseminated it throughout the world, and has caused it to be greatly augmented by reason of the facilities afforded

The Inaugural Address by J.C. Nagle in 1902 showed some changes in language from earlier Addresses, and diverted from philosophical issues to technical ones that set the tone for the remaining years of Academy Addresses.

REPTILES AND AMPHIBIANS OF TEXAS

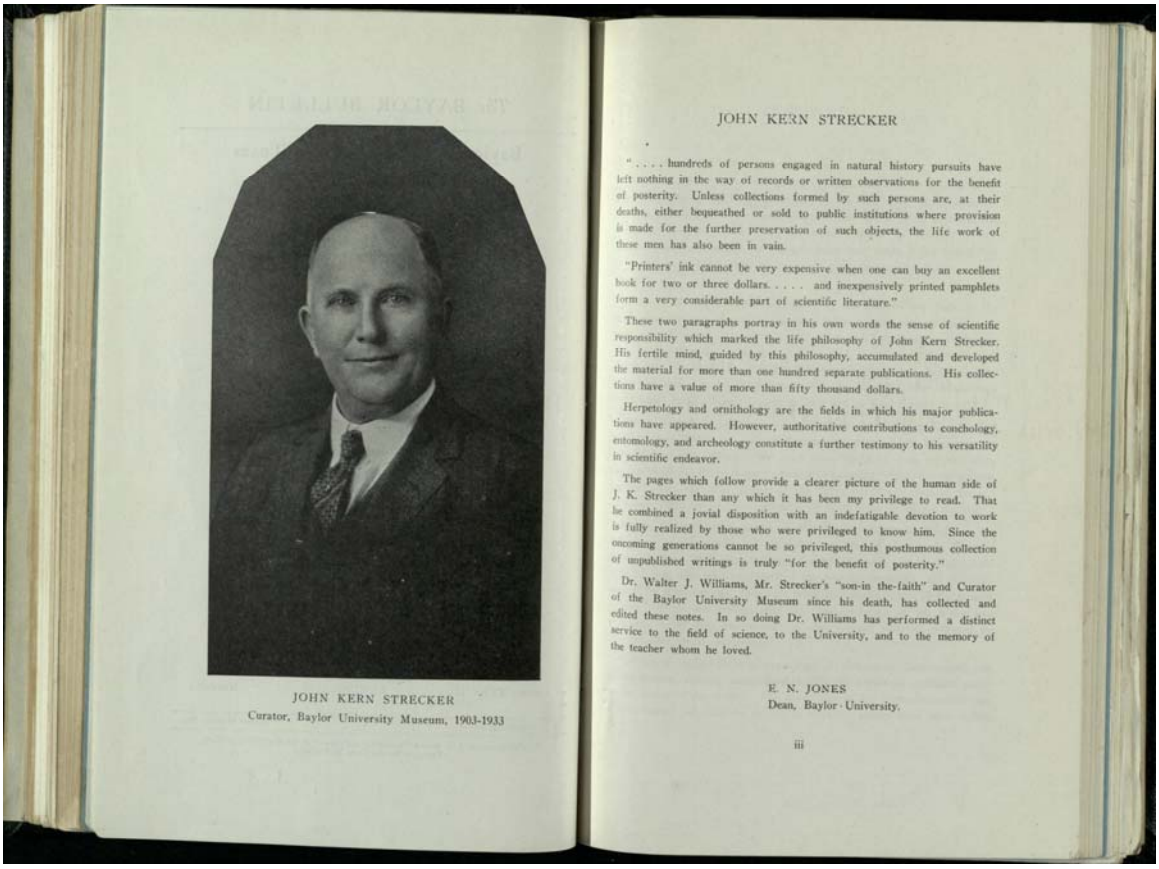
By JOHN K. STRECKER,
Curator of Baylor University Museum

The present catalogue of Texas reptiles and amphibians is compiled as the result of more than twenty years' study in the great field of Herpetology in this State. While I claim that it includes the majority of these animals that inhabit this vast territory, I am willing to confess that in many cases I have not a single record from many large counties, nay, almost entire sections, and that future work will probably result in many additions to the list, not only of known species, but of several new to Science.

I have either personally collected, or handled in the course of my museum work, 141 of the animals here enumerated. By this I mean Texas collected specimens. Of this number, 120 species have been captured in their haunts. I have collected in many different localities in almost every section of the State, including the following counties, arranged by district: Henderson, Cherokee, Smith, Nacogdoches, Angelina, San Jacinto, Liberty, Harris, Bexar, Bandera, Medina, Refugio, Bee, Matagorda, McLennan, Falls, Robertson, Limestone, Bosque, Bell, Coryell, Travis, Burnet, Llano, Hays, Comal, Armstrong, Tarrant, Somervell, Palo Pinto, Midland, El Paso, Presidio, Brewster and Jeff Davis. The number of different species and subspecies collected in McLennan County up to the present time is 81. On two trips to Burnet County, in the years 1902 and 1906, 57 species were collected. My trip to Liberty County in 1912 resulted in the compiling of a list of 40. In some localities only a few species were obtained on account of the limited time at my disposal, but more than 30 species were collected in each of 12 counties in the above list, and more than 10 species in each of 20 of them.

In addition to the above, herpetological material has been received at the Baylor Museum from Cameron, Willacy, Live Oak, Neuces, Victoria, Calhoun, Jefferson, Pecos, Garza,

Publications like those of John Strecker, Curator of Baylor University Museum, in the TAS Proceedings of 1915 have significant scientific merit. Dr. Strecker's published many notable papers in the TAS Proceedings, and his influence is probably responsible for moving the TAS archives to Baylor University from The University of Texas at Austin.



JOHN KERN STRECKER
Curator, Baylor University Museum, 1903-1933

JOHN KERN STRECKER

". . . . hundreds of persons engaged in natural history pursuits have left nothing in the way of records or written observations for the benefit of posterity. Unless collections formed by such persons are, at their deaths, either bequeathed or sold to public institutions where provision is made for the further preservation of such objects, the life work of these men has also been in vain.

"Printers' ink cannot be very expensive when one can buy an excellent book for two or three dollars. . . . . and inexpensively printed pamphlets form a very considerable part of scientific literature."

These two paragraphs portray in his own words the sense of scientific responsibility which marked the life philosophy of John Kern Strecker. His fertile mind, guided by this philosophy, accumulated and developed the material for more than one hundred separate publications. His collections have a value of more than fifty thousand dollars.

Herpetology and ornithology are the fields in which his major publications have appeared. However, authoritative contributions to conchology, entomology, and archeology constitute a further testimony to his versatility in scientific endeavor.

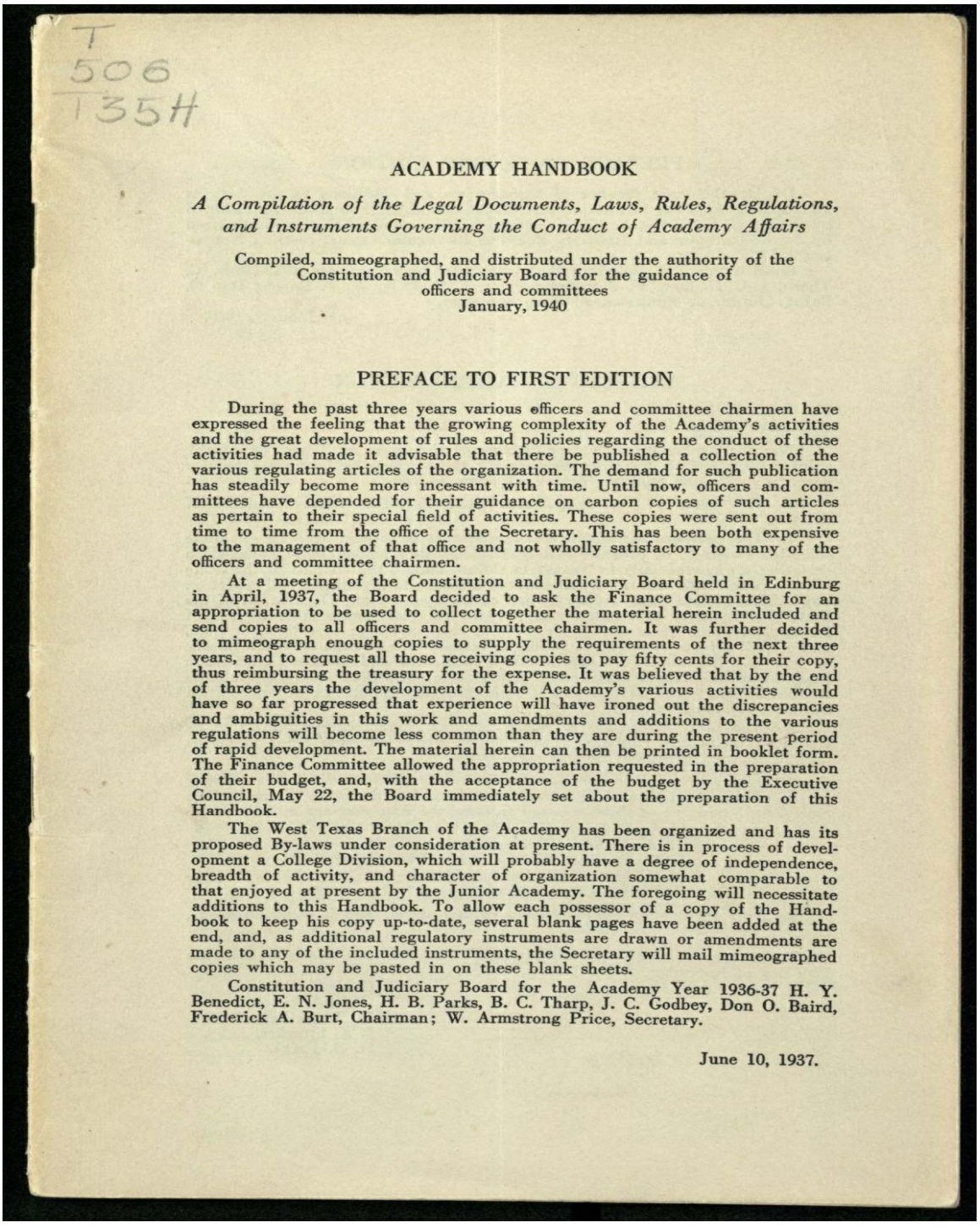
The pages which follow provide a clearer picture of the human side of J. K. Strecker than any which it has been my privilege to read. That he combined a jovial disposition with an indefatigable devotion to work is fully realized by those who were privileged to know him. Since the oncoming generations cannot be so privileged, this posthumous collection of unpublished writings is truly "for the benefit of posterity."

Dr. Walter J. Williams, Mr. Strecker's "son-in the-faith" and Curator of the Baylor University Museum since his death, has collected and edited these notes. In so doing Dr. Williams has performed a distinct service to the field of science, to the University, and to the memory of the teacher whom he loved.

E. N. JONES
Dean, Baylor University.

iii

It is worthy of noting the influence and contributions of Dr. John Strecker, Curator of the Baylor University Museum, for thirty years, 1902-1933.



T
506
T35H

ACADEMY HANDBOOK

A Compilation of the Legal Documents, Laws, Rules, Regulations, and Instruments Governing the Conduct of Academy Affairs

Compiled, mimeographed, and distributed under the authority of the Constitution and Judiciary Board for the guidance of officers and committees
January, 1940

PREFACE TO FIRST EDITION

During the past three years various officers and committee chairmen have expressed the feeling that the growing complexity of the Academy's activities and the great development of rules and policies regarding the conduct of these activities had made it advisable that there be published a collection of the various regulating articles of the organization. The demand for such publication has steadily become more incessant with time. Until now, officers and committees have depended for their guidance on carbon copies of such articles as pertain to their special field of activities. These copies were sent out from time to time from the office of the Secretary. This has been both expensive to the management of that office and not wholly satisfactory to many of the officers and committee chairmen.

At a meeting of the Constitution and Judiciary Board held in Edinburg in April, 1937, the Board decided to ask the Finance Committee for an appropriation to be used to collect together the material herein included and send copies to all officers and committee chairmen. It was further decided to mimeograph enough copies to supply the requirements of the next three years, and to request all those receiving copies to pay fifty cents for their copy, thus reimbursing the treasury for the expense. It was believed that by the end of three years the development of the Academy's various activities would have so far progressed that experience will have ironed out the discrepancies and ambiguities in this work and amendments and additions to the various regulations will become less common than they are during the present period of rapid development. The material herein can then be printed in booklet form. The Finance Committee allowed the appropriation requested in the preparation of their budget, and, with the acceptance of the budget by the Executive Council, May 22, the Board immediately set about the preparation of this Handbook.

The West Texas Branch of the Academy has been organized and has its proposed By-laws under consideration at present. There is in process of development a College Division, which will probably have a degree of independence, breadth of activity, and character of organization somewhat comparable to that enjoyed at present by the Junior Academy. The foregoing will necessitate additions to this Handbook. To allow each possessor of a copy of the Handbook to keep his copy up-to-date, several blank pages have been added at the end, and, as additional regulatory instruments are drawn or amendments are made to any of the included instruments, the Secretary will mail mimeographed copies which may be pasted in on these blank sheets.

Constitution and Judiciary Board for the Academy Year 1936-37 H. Y. Benedict, E. N. Jones, H. B. Parks, B. C. Tharp, J. C. Godbey, Don O. Baird, Frederick A. Burt, Chairman; W. Armstrong Price, Secretary.

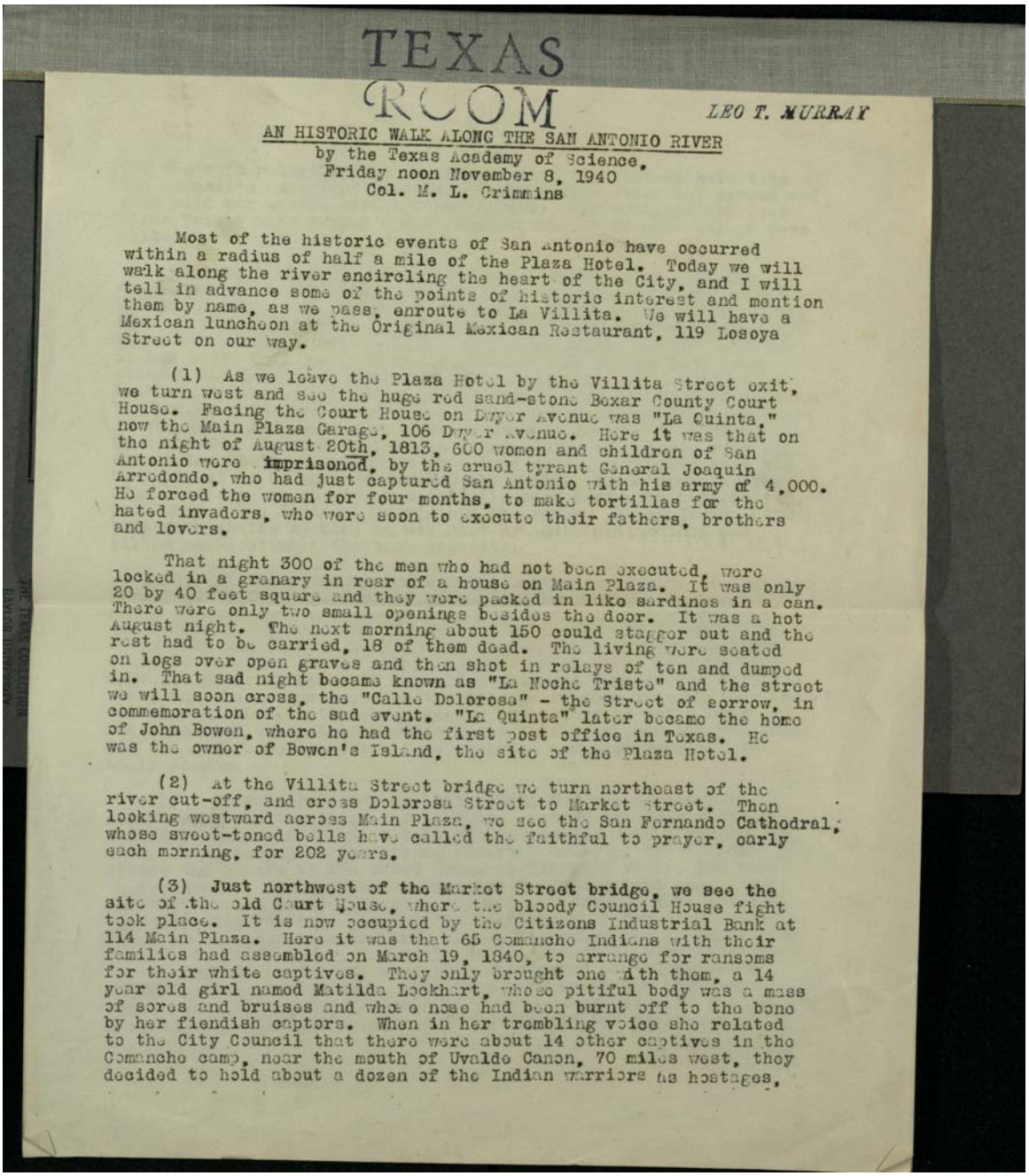
June 10, 1937.

The Academy Handbook, published in 1940, was the first compilation of legal documents, rules, regulations, and instruments of the TAS. There are numerous historical documents in this publication, thanks to the insight of the contributors to this document. The growing complexity and size of the Academy made it important to develop this handbook.

SOCIETIES AFFILIATED WITH THE ACADEMY

Central Texas Section, American Chemical Society
Dallas Astronomical Society
Dallas Nature Study Club
Dallas Ornithological Society
El Paso Archaeological Society
Houston Museum and Scientific Society
North Texas Biological Society
San Antonio Science Club
Texas Archeological and Paleontological Society
Texas Association of Science Teachers
Texas Entomological Society
The Texas Folk-Lore Society
Texas Nature Federation
University Science Club
The Texas Society of College Teachers of Education
West Texas Historical and Scientific Society

The early years of the Academy was influenced by numerous societies affiliated with the Academy. These affiliations from this 1940 Handbook of the Academy were important to the operation of the Academy at that time, sharing resources and expertise to more effectively proceed with the business of the TAS.



TEXAS ROOM

LEO T. MURRAY

AN HISTORIC WALK ALONG THE SAN ANTONIO RIVER
by the Texas Academy of Science,
Friday noon November 8, 1940
Col. M. L. Crimmins

Most of the historic events of San Antonio have occurred within a radius of half a mile of the Plaza Hotel. Today we will walk along the river encircling the heart of the City, and I will tell in advance some of the points of historic interest and mention them by name, as we pass, enroute to La Villita. We will have a Mexican luncheon at the Original Mexican Restaurant, 119 Losoya Street on our way.

(1) As we leave the Plaza Hotel by the Villita Street exit, we turn west and see the huge red sand-stone Bexar County Court House. Facing the Court House on Dwyer Avenue was "La Quinta," now the Main Plaza Garage, 106 Dwyer Avenue. Here it was that on the night of August 20th, 1813, 600 women and children of San Antonio were imprisoned, by the cruel tyrant General Joaquin Arredondo, who had just captured San Antonio with his army of 4,000. He forced the women for four months, to make tortillas for the hated invaders, who were soon to execute their fathers, brothers and lovers.

That night 300 of the men who had not been executed, were locked in a granary in rear of a house on Main Plaza. It was only 20 by 40 feet square and they were packed in like sardines in a can. There were only two small openings besides the door. It was a hot August night. The next morning about 150 could stagger out and the rest had to be carried, 18 of them dead. The living were seated on logs over open graves and then shot in relays of ten and dumped in. That sad night became known as "La Noche Triste" and the street we will soon cross, the "Calle Dolorosa" - the Street of sorrow, in commemoration of the sad event. "La Quinta" later became the home of John Bowen, where he had the first post office in Texas. He was the owner of Bowen's Island, the site of the Plaza Hotel.

(2) At the Villita Street bridge we turn northeast of the river cut-off, and cross Dolorosa Street to Market Street. Then looking westward across Main Plaza, we see the San Fernando Cathodral, whose sweet-toned bells have called the faithful to prayer, early each morning, for 202 years.

(3) Just northwest of the Market Street bridge, we see the site of the old Court House, where the bloody Council House fight took place. It is now occupied by the Citizens Industrial Bank at 114 Main Plaza. Here it was that 65 Comanche Indians with their families had assembled on March 19, 1840, to arrange for ransoms for their white captives. They only brought one with them, a 14 year old girl named Matilda Lockhart, whose pitiful body was a mass of sores and bruises and whose nose had been burnt off to the bone by her fiendish captors. When in her trembling voice she related to the City Council that there were about 14 other captives in the Comanche camp, near the mouth of Uvalde Canon, 70 miles west, they decided to hold about a dozen of the Indian warriors as hostages,

This 1940 historical account of the Missions and Villas along the San Antonio with reference mainly to the era of the Mexican-American War.

Bryce P. Brown

Soc.

TEXAS ACADEMY OF SCIENCE
NEWSLETTER

VOL. 1, NO. 1 JUNE, 1948

GOVERNING BOARDS
BOARD OF DEVELOPMENT

Beauford Jester
Governor of Texas
Austin, Texas

E. D. DeGolyer
Consulting Geologist
Dallas and Houston, Texas

W. R. Woolrich
Dean, Engineering School
University of Texas
Austin, Texas

O. S. Petty
Petty Geophysical Corporation
San Antonio, Texas

L. W. Blau
Head of Geophysical Department
Humble Oil Company
Houston, Texas

BOARD OF DIRECTORS (QUORUM 4)

President.....L. W. Blau, Res. Consult., Humble Co., Houston
Im. Past Pres.....J. G. Sinclair, Med. Branch, U of T, Galveston
Secretary-Treasurer.....Gladys H. Baird, Huntsville
Elected Member.....W. R. Woolrich, Dean of Eng., U of T, Austin—1948*
" " .....E. P. Cheatum, S. M. U., Dallas—1949*
" " .....J. C. Godbey, Chem., Southwestern, Georgetown—1950*

*End of term

EXECUTIVE COUNCIL (QUORUM 4)

President.....L. W. Blau, Res. Consult., Humble Co., Houston
Past Pres.....J. G. Sinclair, Med. Branch, U of T, Galveston
Ex. V. Pres.....L. S. Paine, Agri. Ecs. A & M College, College Station
Sec.-Treas.....Gladys H. Baird, Huntsville
V. Pres. Sec. I.....Roger J. Williams, Chemistry, U of T
V. Pres. Sec. II.....C. W. Pomerat, Medical Branch, U of T, Galveston
V. Pres. Sec. III.....T. H. Etheridge, Dean, Sul Ross College, Alpine
V. Pres. Sec. IV.....F. H. Dotterwich, Engineering, A & I, Kingsville
V. Pres. Sec. V.....Paul H. Walser, U. S. Conservation Service, Temple
Collegiate Div. Charles LaMotte, Biology, A & M, College Station
Junior Div.....Greta Oppe, Chemistry, Ball High, Galveston
Editor.....J. L. Baughman, Chief Marine Biologist, Rockport
Rep. A. A. A. S.....Chauncey Leake, Dean, Med. Branch, U of T, Galveston
Pres. Conservation Council.....J. G. Sinclair, Med. Branch, U of T, Galveston

Dr. John B. Loefer, Chairman
LOCAL ARRANGEMENTS FOR CONVENTION
Foundation of Applied Research
1804 Milam Building, San Antonio

Dr. George Potter, Chairman
MEMBERSHIP COMMITTEE, T. A. S.
Dept. Biology, A. & M. College
College Station

1948 ANNUAL MEETING, SAN ANTONIO, DECEMBER 9, 10, 11

The turning point in the growth of our Academy resulted from the changed emphasis on the function of a State Academy as a scientific society for the dissemination of scientific learning GENERALLY with the object of serving all the people, as clarified and distinguished from a specialized scientific society, the function of which is to give opportunities for exchange of scientific information and opinion that will result in THE EXTENSION OF THE BOUNDRIES OF KNOWLEDGE. In other words, it has been recognized that a state academy is not a competitor of a specialized scientific society, but a colleague. The Texas Academy is more and more a clearing house for scientific workers in the state, consciously making an appeal to all the people. Therefore the specialists are seeking our society as an outlet where their findings can be put into effect.

Send personals and other news of scientific affairs to the Secretary-Treasurer for THE NEXT NEWSLETTER.

The first TAS Newsletter was published in June, 1948, and provided information to members that had long been needed.

frozen and coated with the sugar media has been amply demonstrated (2). Articles from the size of a pea to the limiting dimensions of the freezer tube have been successfully frozen.

References

1. Bartlett, Luis H., and Brown, H. E., "A New Quick Freezing System," Refrigerating Engineering, Vol. 42, pp. 83-87 (1941).
2. Bartlett, Luis H., and Woolrich, W. R., "Polyphase Freezing Process Developed," Food Industries, Vol. 13, No. 12, pp. 60-62.
3. Flint, Lucius S., "Loose-Pack Frozen Foods Provide for Attractive Display," Ice & Refrigeration, Vol. 95, pp. 364 (1938).
4. Herz, O. F., "Frozen Mammoth in Siberia," Annual Report Smithsonian Institution, (1903) pp. 611-625, Government Printing Office, Washington (1904).
5. Luyet, B. J., and Thoennes, G., "The Survival of Plant Cells Immersed in Liquid Air," Science, Vol. 88, pp. 284-285 (1938).
6. Moran, T., "The Effect of Low Temperature on Hen Eggs," Proceedings of the Royal Society of London, Vol. 98.B, pp. 436-456 (1915).
7. Plank, R., Ehrenbaum, E., and Keuter, K., "Die Conservierung von Fischen durch das Gefrieverfahren," pp. 242-244, Abhandlungen der Volksernaehrung, herausgegeben von der Zentral Einkaufsgesellschaft, Berlin (1916).
8. Tressler, D. K., and Evers, C. F., "The Freezing Preservation of Fruits, Fruit Juices, and Vegetables," pp. 133-134 and 224-228 Avi Publishing Company, Inc., New York, N. Y. (1936).

Short Course Training Now and After The War

C. R. GRANBERRY, The University of Texas, Austin

In ordinary times a discussion, concerning short course training, before this Academy would doubtless be of only passing interest. Realizing that members of the Academy have a general interest in all scientific matters which certainly includes training for technical and scientific fields, it seems that a short period of time might be devoted to an examination of the short course training program now under way throughout the country as a part of our war effort and the probable postwar effects of this program. Those even slightly familiar with the program which has been under way since the latter part of 1940 are convinced that the future holds tremendously interesting possibilities in peacetime living for short course technical training. The experience we have gathered and the lessons we have learned over these war years may go as far as to change radically our thinking with regard to the whole structure of scientific and technical education after the war, and it is because of this possibility, more than anything else, that we must begin to pay attention in wartime to postwar activities.

Let us first examine briefly the beginnings and growth of the short course training in the present emergency. As early as the middle of 1940, those in and close to our government saw the long shadow of war approaching fast. The country was relatively unprepared, certainly, to undertake the enormous task of production needed for defense. In taking stock of the technical manpower for defense activities the alarming shortage of

World War II changed not only the American history, but also that of the TAS. The Social Section of the Academy was very active during the 1940's, and many of the publications in the *Transactions* were about the war. Those were not ordinary times, and the Academy was involved in a technical sense and influenced by the war.

HARVESTING THE FRUITS OF SCIENCE IN TEXAS

C. C. DOAK*
Department of Biology
A & M College of Texas

In order to set this talk in its proper perspective both in time and in space, I shall read a few lines from a report of the Institute of Civil Engineers of London, dated November 25, 1851 just one hundred years ago.

"A paper from Colonel Samuel Colt, of the United States, on his revolving fire-arms, was read and highly applauded, as it was the first communication received from America. The manufacturing of firearms, Colt's pistols as well as other firearms, is done in quite a different manner in America from what it is in England. In England the greatest number of all the parts of a gun are made by hand; in America they are made by machinery. The advantages of the latter mode are great, for the lock of one pistol, or any one part of a pistol, will fit the same part of another like pistol equally well."

In this quotation, there are at least four points which history has proved to be of significance.

One—The statement, "First from America", indicates that a new center of scientific research had already taken root in our country more than a hundred years ago.

Two—"Done in a different manner in America". This statement indicates that there had been a liberation from the hampering restrictions of European tradition and orthodox techniques.

Three—"Made by Machinery". This spark of genius lighted the fires of American industry. They now have burned with increasing brilliance for a full century. Machines have lifted burdens both from the backs and minds of Americans.

Four—The "Advantages of standardization." The advantages mentioned in this statement ultimately produced our assembly line techniques. The combination of freedom, ingenuity, and standardization of machinery mentioned here gave America advantages which she now has enjoyed for a hundred years. They gave Texas an effective hand weapon which enabled it to reap a harvest of victories over all enemies. In doing so, Colt's pistol, with notches on the handle, has become, after the Lone Star, perhaps the second best known symbol for our great state.

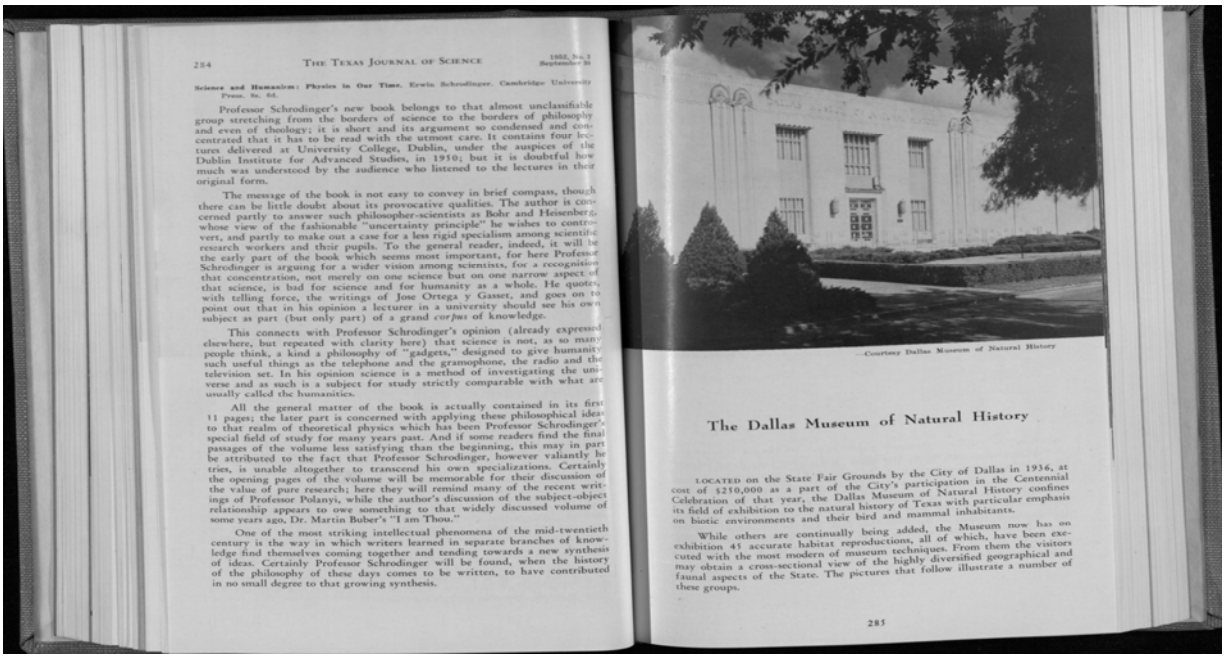
This, too, is no accident. The weapon of personal and home defense seems to symbolize an awareness of the necessity for defending the cradle of science and the fruits of our efforts if Texas was to be given time in which to grow to full scientific stature. So, our assembly lines started with small arms, but now furnish more effective weapons to the fighting sons of Texas; planes and carriers to our Nimitzes, tanks and bazookas to our Eisenhowers, jellied gasoline and jet bombers to our boys in Korea, atom bombs, guided missiles and even biological warfare if the enemy insists and defense demands.

Skipping now a full half century during which blazing guns had almost erased the Texas frontier, I shall read some reports from the *Scientific American*, dated 1901, just fifty years ago.

"A site has been secured in Washington, D. C., for the building of the *Bureau of Standardization*. Two buildings to be erected at a cost of $250,000, have been authorized."

* Presidential address December 8, 1951.

Following WWII, the country and the Academy entered a new era of advancements in science. The Presidential Address by C.C. Doak in 1951 reflected on how to take advantage of those "fruits" of science in Texas.



284 THE TEXAS JOURNAL OF SCIENCE 1952, No. 3 September 30

Science and Humanism: Physics in Our Time. Erwin Schrodinger. Cambridge University Press. 8s. 6d.

Professor Schrodinger's new book belongs to that almost unclassifiable group stretching from the borders of science to the borders of philosophy and even of theology; it is short and its argument so condensed and concentrated that it has to be read with the utmost care. It contains four lectures delivered at University College, Dublin, under the auspices of the Dublin Institute for Advanced Studies, in 1950; but it is doubtful how much was understood by the audience who listened to the lectures in their original form.

The message of the book is not easy to convey in brief compass, though there can be little doubt about its provocative qualities. The author is concerned partly to answer such philosopher-scientists as Bohr and Heisenberg, whose view of the fashionable "uncertainty principle" he wishes to controvert, and partly to make out a case for a less rigid specialism among scientific research workers and their pupils. To the general reader, indeed, it will be the early part of the book which seems most important, for here Professor Schrodinger is arguing for a wider vision among scientists, for a recognition that concentration, not merely on one science but on one narrow aspect of that science, is bad for science and for humanity as a whole. He quotes, with telling force, the writings of Jose Ortega y Gasset, and goes on to point out that in his opinion a lecturer in a university should see his own subject as part (but only part) of a grand *corpus* of knowledge.

This connects with Professor Schrodinger's opinion (already expressed elsewhere, but repeated with clarity here) that science is not, as so many people think, a kind a philosophy of "gadgets," designed to give humanity such useful things as the telephone and the gramophone, the radio and the television set. In his opinion science is a method of investigating the universe and as such is a subject for study strictly comparable with what are usually called the humanities.

All the general matter of the book is actually contained in its first 11 pages; the later part is concerned with applying these philosophical ideas to that realm of theoretical physics which has been Professor Schrodinger's special field of study for many years past. And if some readers find the final passages of the volume less satisfying than the beginning, this may in part be attributed to the fact that Professor Schrodinger, however valiantly he tries, is unable altogether to transcend his own specializations. Certainly the opening pages of the volume will be memorable for their discussion of the value of pure research; here they will remind many of the recent writings of Professor Polanyi, while the author's discussion of the subject-object relationship appears to owe something to that widely discussed volume of some years ago, Dr. Martin Buber's "I am Thou."

One of the most striking intellectual phenomena of the mid-twentieth century is the way in which writers learned in separate branches of knowledge find themselves coming together and tending towards a new synthesis of ideas. Certainly Professor Schrodinger will be found, when the history of the philosophy of these days comes to be written, to have contributed in no small degree to that growing synthesis.

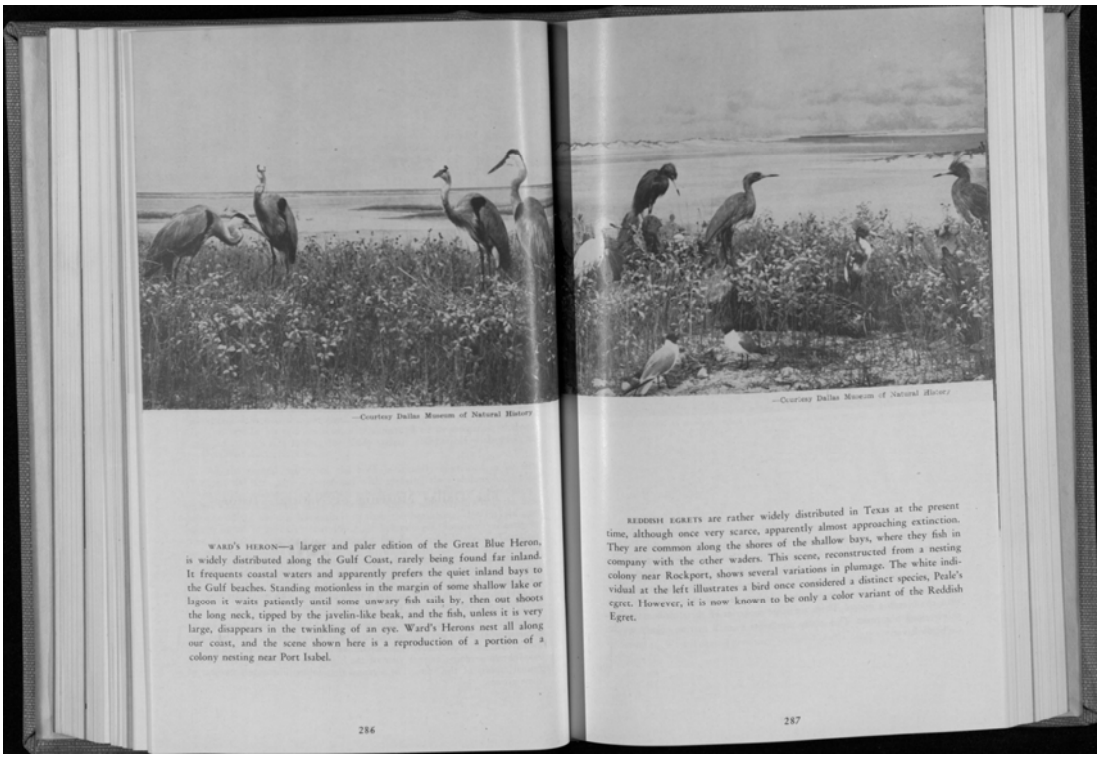
—Courtesy Dallas Museum of Natural History

The Dallas Museum of Natural History

LOCATED on the State Fair Grounds by the City of Dallas in 1936, at cost of $250,000 as a part of the City's participation in the Centennial Celebration of that year, the Dallas Museum of Natural History confines its field of exhibition to the natural history of Texas with particular emphasis on biotic environments and their bird and mammal inhabitants.

While others are continually being added, the Museum now has on exhibition 45 accurate habitat reproductions, all of which, have been executed with the most modern of museum techniques. From them the visitors may obtain a cross-sectional view of the highly diversified geographical and faunal aspects of the State. The pictures that follow illustrate a number of these groups.

285



—Courtesy Dallas Museum of Natural History

WARD'S HERON—a larger and paler edition of the Great Blue Heron, is widely distributed along the Gulf Coast, rarely being found far inland. It frequents coastal waters and apparently prefers the quiet inland bays to the Gulf beaches. Standing motionless in the margin of some shallow lake or lagoon it waits patiently until some unwary fish sails by, then out shoots the long neck, tipped by the javelin-like beak, and the fish, unless it is very large, disappears in the twinkling of an eye. Ward's Herons nest all along our coast, and the scene shown here is a reproduction of a portion of a colony nesting near Port Isabel.

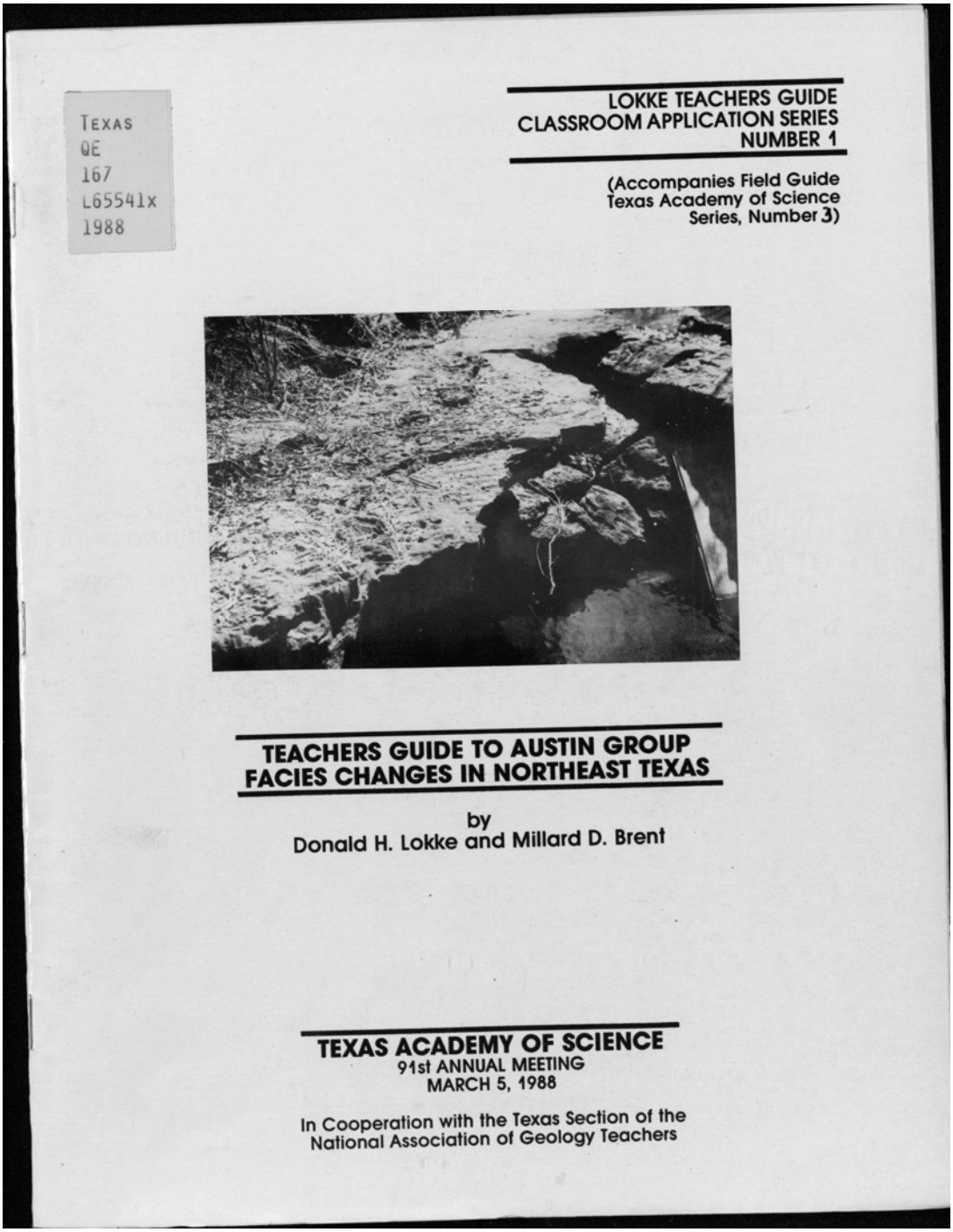
286

—Courtesy Dallas Museum of Natural History

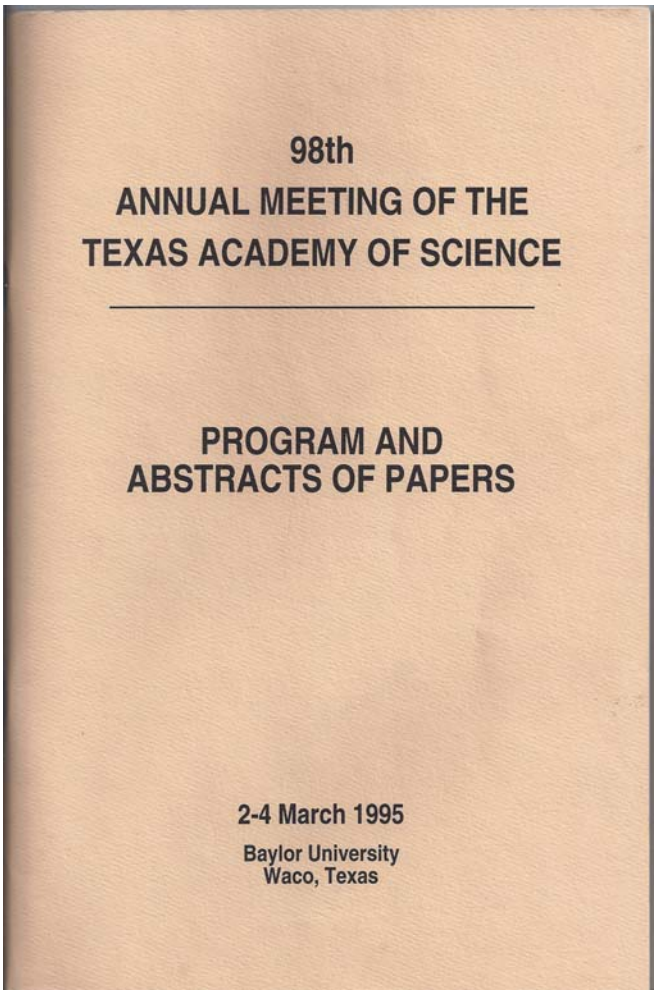
REDDISH EGRETS are rather widely distributed in Texas at the present time, although once very scarce, apparently almost approaching extinction. They are common along the shores of the shallow bays, where they fish in company with the other waders. This scene, reconstructed from a nesting colony near Rockport, shows several variations in plumage. The white individual at the left illustrates a bird once considered a distinct species, Peale's egret. However, it is now known to be only a color variant of the Reddish Egret.

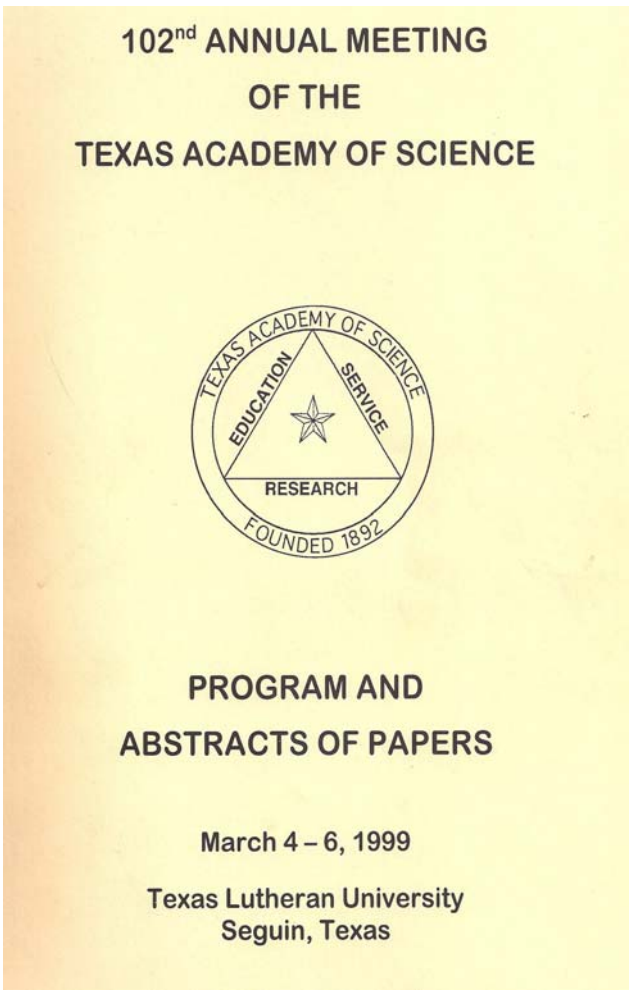
287

The fourth publication of the Texas Journal of Science in 1952 provided a definitive description of the Dallas Museum of Natural History collection.



The TAS 91st Annual Meeting in 1988 prepared a teachers guide to a geological component of Northeast Texas as a special Field Guide Series, Number 3, in cooperation with National Association of Geology Teachers.



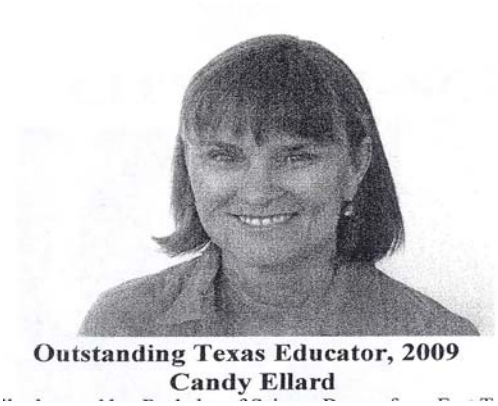


Proceedings of the Texas Academy of Science with program table of contents and abstracts began in 1991 as far as our current archives support. The Program and Abstracts of Papers was the beginning of including welcome letters from the TAS President, City Mayor, Chamber of Commerce, and University President. The Program showed the sections and presentation times, and helped members plan for presentations of interest. The 95th Annual Meeting Proceedings in 1993 was the first year we have records for the selection of a Texas Distinguished Scientist, while both the Texas Distinguished Scientist and Outstanding Educator of the Year started two years later in 1995. Several of our Outstanding Educators of the Year went on to compete for the Presidential Award for Excellence in Mathematics and Science Teaching (PAEMST) award, and five Texas teachers have received both awards between 2000-2012.

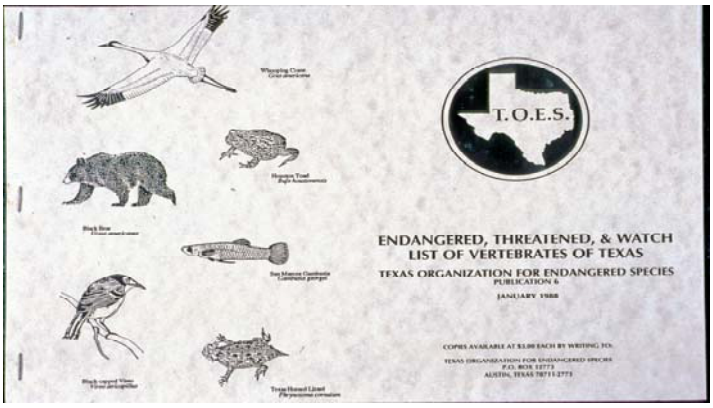
TAS Outstanding Educators of the Year and Presidential Award for Excellence in Mathematics and Science Teaching (PAEMST)

TAS OTE	PAEMST	Name	School	City	Grade
2000		Theresa Deleon Weeks	Sweeny Elementary	Sweeny	K-5
2001	2000	Cathy Mariotti Ezrailson	Oak Ridge High School	Conroe	HS
2002		Bobette Doerrie	Perryton High School	Perryton	HS
2003		Beth Ann Brady	Hillcrest Elementary School	Hillcrest	K-5
2004	2003	Gail Bromiley-McGee	Carnegie Vanguard High School	Houston	HS
2005	2004	Kathy Jean Skinner	Samuel Beck Elementary	Trophy Club	5th
2006		Sandra Laquey	Lamar High School	Arlington	HS
2007		Lynn Seman	City View Elementary	Wichita Falls	5th
2008		Carolyn Kelley Barnes	Vidor Junior High School	Vidor	8th
2009	2008	Candy Ellard	Pillow Elementary School	Austin	K-6
2010		Mila Bersabal	Lee High School	Houston	HS
2011	2010	Martha Elizabeth Fiedler McLeod	Fulton Learning Center	Rockport	2-6th
2012		Joy Killough	Westwood High School	Round Rock	HS

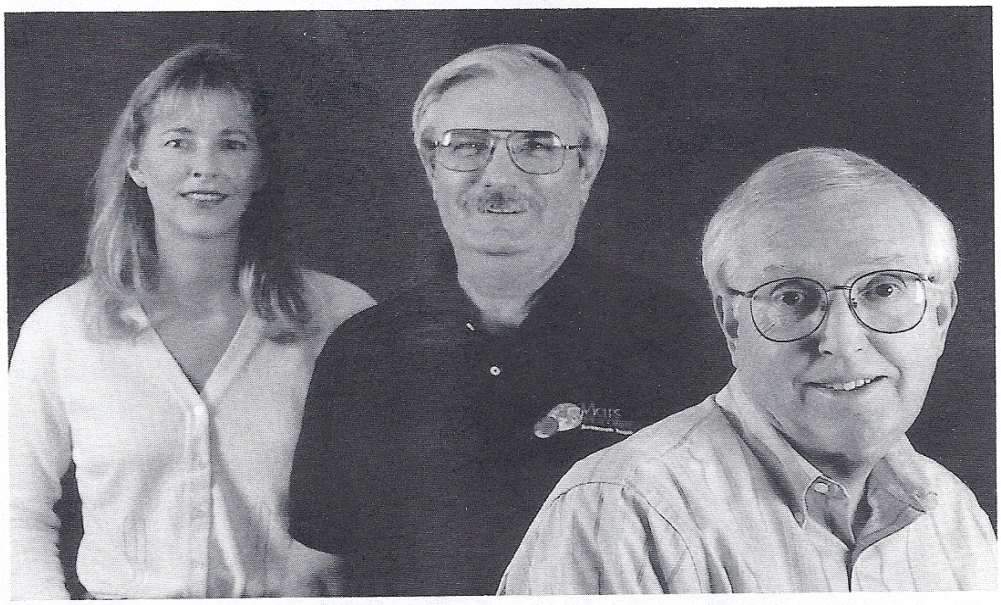
The year 1999 saw the 1st of a series of Texas Organization for Endangered Species (TOES) Symposiums that were the most highly attended sessions of annual meetings. When TOES disbanded, I oversaw the transfer of funds to the TAS for funding a TAS-TOES student research awards on endangered species, which continued through 2011.



Outstanding Texas Educator, 2009
Candy Ellard



2000 TEXAS DISTINGUISHED SCIENTIST



Kathie Thomas-Keprta, Everett K. Gibson, Jr. and David S. McKay

NASA Mars Meteorite Research Team

Search forLife on Mars

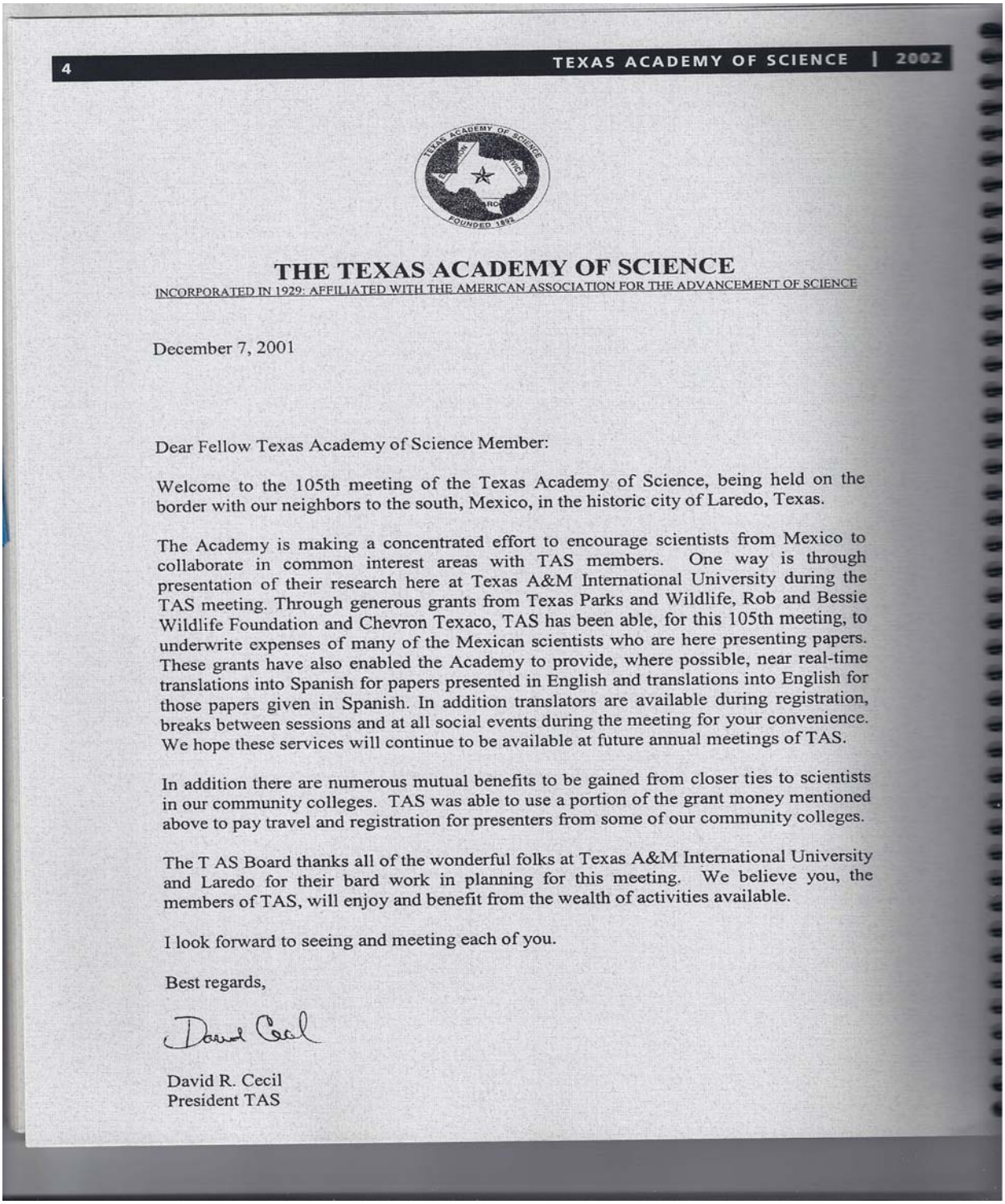
David S. McKay, Everett K. Gibson, Jr. and Kathie Thomas-Keprta were the co-leaders of the Mars Meteorite Research Team at the NASA Johnson Space Center, Houston, Texas. In August 1996, they along with colleagues from Stanford University, University of Georgia and McGill University published in *SCIENCE* information which could be interpreted as evidence of past biogenic activity within a Martian meteorite. Their research has been a catalyst for the beginning of the new interdiscipline research field of Astrobiology.

David S. McKay is the Principle Investigator for JSC's Astrobiology Institute. He has been with NASA for 33 years and has been a lunar sample Principle Investigator for 30 years. Dr. McKay specializes in scanning electron microscopy and the study of evolution of planetary soils and regoliths. He has more than 300 peer reviewed publications. Dr. McKay received his B.S. in Geology from Rice University, M.S. in Geology from University of California, Berkeley and Ph.D. from Rice University in Geology.

Everett K. Gibson, Jr. is a Principle Investigator in NASA's Exobiology Program and directs JSC's Light Element Analysis Laboratory. He was a Lunar Sample Principle Investigator for 20 years and has been studying meteorites for the past 37 years. Dr. Gibson specializes in the study of volatiles and their compounds in terrestrial and extraterrestrial materials. He has more than 200 peer reviewed publications. Dr. Gibson received his B.S. and M.S. in Chemistry and Physical Chemistry from Texas Tech University. He received his Ph.D. in Geochemistry from Arizona State University.

Kathie Thomas-Keprta is a senior scientist with Lockheed Martin at NASA Johnson Space Center. She has more than 15 years experience in the field of transmission electron microscopy and specializes in the analysis of extraterrestrial particles at the atomic scale. Ms. Thomas has more than 140 peer reviewed publications. She received a B.S. in Biochemistry from the University of Illinois and completed all course work for a M.S. in Biochemistry from Texas Women's University.

The 103rd Annual Meeting in 2000 was the first time in TAS history that the Texas Distinguished Scientist award went to a research team. Their presentation was very well received and of great interest by TAS members.



THE TEXAS ACADEMY OF SCIENCE

INCORPORATED IN 1929: AFFILIATED WITH THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE

December 7, 2001

Dear Fellow Texas Academy of Science Member:

Welcome to the 105th meeting of the Texas Academy of Science, being held on the border with our neighbors to the south, Mexico, in the historic city of Laredo, Texas.

The Academy is making a concentrated effort to encourage scientists from Mexico to collaborate in common interest areas with TAS members. One way is through presentation of their research here at Texas A&M International University during the TAS meeting. Through generous grants from Texas Parks and Wildlife, Rob and Bessie Wildlife Foundation and Chevron Texaco, TAS has been able, for this 105th meeting, to underwrite expenses of many of the Mexican scientists who are here presenting papers. These grants have also enabled the Academy to provide, where possible, near real-time translations into Spanish for papers presented in English and translations into English for those papers given in Spanish. In addition translators are available during registration, breaks between sessions and at all social events during the meeting for your convenience. We hope these services will continue to be available at future annual meetings of TAS.

In addition there are numerous mutual benefits to be gained from closer ties to scientists in our community colleges. TAS was able to use a portion of the grant money mentioned above to pay travel and registration for presenters from some of our community colleges.

The T AS Board thanks all of the wonderful folks at Texas A&M International University and Laredo for their bard work in planning for this meeting. We believe you, the members of TAS, will enjoy and benefit from the wealth of activities available.

I look forward to seeing and meeting each of you.

Best regards,

David Cecil

David R. Cecil
President TAS

The 105th Annual Meeting in 2002 included a grant from Texas Parks & Wildlife Department, Rob and Bessie Wildlife Foundation, Chevron and Texaco; thanks to the efforts of Dr. Larry McKinney, TAS Past-President. As a result, TAS was able to provide all the expenses for many Mexican scientist which made it possible for them to present papers at the meeting. This was the 1st time in TAS history that such a grant made it possible to invite papers from our Mexican colleagues.

LETTER OF WELCOME FROM THE TAS PRESIDENT

Welcome to Schreiner University and the 107th Annual Meeting of the Texas Academy of Science. It seems so recently that we were greeting each other in Nacogdoches, but the seasons have changed, the moon has waxed and waned, the tides have flooded and ebbed, and once more we have orbited our sun.

As my year as your President draws to a close, I want to share with you my reflections on what makes this Academy great. First, intentions are important. I like the objectives of the Academy. In the December 1886 edition of Texas Farm and Ranch, the objectives of the Academy of Science of Texas were listed. They were: the mutual improvement of its members, recording (for Texans) Texas natural history before the native species are removed and the land forms altered, and to promoting science and the teaching of science. A fourth objective was "fortifying our people against the false analysis of minerals and mineral waters." The final stated objective was to build scientific expertise in Texas, "thus doing away with the hitherto humiliating inquiry made of other seats of science outside our own state."

These objectives hold up well for today's Academy, though "fortifying our people against the false analysis of minerals and mineral waters" requires a bit of explanation. In the 1870s Sour Lake Texas was a popular destination for people seeking the reputed curative powers of Sour Lake. An 1871 analysis of the Sour Lake waters indicated that the waters were simultaneously acidic and basic. The above objective is apparently a reaction to that report and expresses a desire to educate Texans in scientific matters, so that they will not be easy victims for purveyors of false claims.

Intentions without accomplishments are hollow. How are we doing? TAS remains dedicated to improving our members. This is reflected in the networking that occurs among our members, the opportunity to share with colleagues recent scientific work, and the encouragement, through example and cash support, of young Texas scientists. The Texas Journal of Science continues to record scientific observations of Texans, many of them about the flora, fauna, and landforms of Texas. The outstanding collection of Texas universities and state agencies engaging in science have put an end to our humiliation concerning a lack of expertise within our state. The number of Texans who have been awarded Nobel prizes or hold membership in the National Academy of Sciences is further evidence that Texas more than holds its own in the world of science. Texas and Texans are world renowned in science. Admittedly the Academy is but one many influences that have contributed to the success of science in Texas but the Academy is an important voice for science in Texas and has been true to its goals since the 1880s. That's an enviable record, and one that makes me proud of this organization. With the continued dedication of its members the academy will deliver on its objectives well into the future.

I will leave you with this considerable challenge, from Dr. Franklin L. Yoakum one of the founders of the Academy. "The president wishes it announced to the public, that through the various branches of the Academy of Sciences of Texas can be furnished to enquirers the true technical name, Natural History, and use of every specimen of nature living or dead."

Good luck and best wishes,

John T. Sieben

John T. Sieben
President

THE CITY OF
KERRVILLE, TEXAS

PROCLAMATION

WHEREAS, The Texas Academy of Science has served the scientific and educational communities for over one century;

WHEREAS, The Texas Academy of Science represents active scientists from a variety of institutions of higher education, numerous governmental agencies, and scientists employed in the private sector;

WHEREAS, The Texas Academy of Science serves undergraduate and graduate students enrolled in science programs throughout the State of Texas;

WHEREAS, The Texas Academy of Science provides an opportunity for scientists and students to share the findings of their original research at their annual conference;

WHEREAS, The Texas Academy of Science recognizes and promotes excellence in the endeavors of Texas scientists, college science students and Texas science educators; and,

WHEREAS, The Texas Academy of Science will hold their 107th annual conference in Kerrville on the campus of Schreiner University.

NOW THEREFORE, I, Stephen P. Fine, Mayor of the City of Kerrville, do hereby proclaim March 5, 2004 as

"TEXAS ACADEMY OF SCIENCE DAY"

IN WITNESS WHEREOF, I have hereunto set my hand and caused the Seal of the City of Kerrville to be affixed hereto, this the 18th day of December, 2003.

Stephen P. Fine, Mayor

Perhaps TAS Past-President, Dr. John Sieben, said it best about the history of the TAS when he stated in his letter from the President for the 107th Annual Meeting in 2004 that the objectives of the Academy since the 1880's hold up well for today's TAS, and that TAS has remained dedicated to improving our members through networking and opportunities. The Mayor of Kerrville published a Proclamation that underscores the steadfast dedication of TAS to those objectives.

ACKNOWLEDGEMENTS FROM THE PROGRAM CHAIR

Welcome to the 108th meeting of the Texas Academy of Science. For this meeting, we've prepared one of the larger programs in academy history with a total of 247 papers divided into 175 presentations and 72 posters. As in years past, you will find a healthy mix of papers from Collegiate (N=74) and Graduate Student (N=68) members, as well as Senior Academy (N=85) members and International Guests (N=20). This distribution highlights the importance of the Academy and this meeting as a means to introduce young scientists to the professional community and for the more experienced to share their research. Given our proximity to Mexico, we are especially pleased with the participation from our international guests. International Program Coordinator, Felipe Chavez-Ramirez, is to be commended for his work soliciting papers from our Mexican colleagues. Please make them feel welcome.

It takes a village to raise a program, and I would like to thank all the people who helped raise this one starting with Pati Milligan who made abstract submission possible with her work on the TAS Website and the Section Chairs and Vice Chairs for reviewing and editing the submitted papers. In addition to his local responsibilities, Local Organizing Committee Chair, Hudson DeYoe, provided maps, room schedules, and other supporting material to help make the program complete. This information gathering would have come to naught if not for the support of the Texas Parks and Wildlife Department. Special thanks to Bob Murphy who oversaw program printing, Chris Hunt for graphic design and layout, Clemente Guzman for the cover art, and Larry McKinney for his continued support of the Texas Academy of Science. Finally, I would like to thank last year's Program Chair and our current President, John Ward. His meticulous records and guidance made it easy to pull it all together.

Damon E. Waitt,
TAS Program Chair

The 108th Annual Meeting in 2005 was one of the largest programs in our history with 247 presentations. We had an International Program Coordinator for this meeting, resulting in an unprecedented presentation of papers by our Mexican colleagues. None of these meetings with all the continued improvements would be possible without the many highly skilled volunteers that are acknowledged each year.

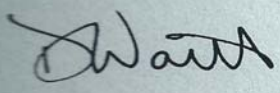
LETTER OF WELCOME FROM THE TAS PRESIDENT

Welcome to the 109th meeting of the Texas Academy of Science. 109 meetings in 126 years! Those are impressive numbers and it is doubtful that many organizations in Texas can claim such an extensive history. One thing that has always amazed the geneticist in me is that the Academy has persisted for such a long time. Unlike a rare allele in a small population subject to loss by random genetic drift, our small organization has remained stable for a large number of years. There are a number of forces that contribute to our stability including our ability to adapt to changing circumstances, a shared commitment to a common purpose, and the widespread willingness of members to devote time and energy to the Academy. The fact we are meeting at a location that only six months ago witnessed a major hurricane is a perfect example of that adaptability, commitment, and dedication. A very special thanks is extended to Lamar University and the local host committee for making this meeting possible.

While it is impossible to predict exactly where the Academy will be one, ten, or a hundred years from now, I have noticed a few trends in the ten years I have been involved with the Academy. Firstly, the Academy has become financially stable. This is due, in large part, to the activities of treasurer, Jim Westgate, and immediate past president, John Ward and has enhanced our ability to promote the mission of the academy through awards and research grants. Secondly, the Academy is becoming a more active proponent for science education. This is evidenced by our support of the Texas Science Olympiad and testimony before the State Board of Education regarding evolution in textbooks and dual credit for High School students. Thirdly, the Academy is becoming more comfortable with technology as evidenced by the online version of the Texas Journal of Science, electronic newsletters, and de facto PowerPoint presentations at annual meetings. Lastly and by far the most encouraging sign for our future is increasing participation by members in the annual meeting. Each year seems to set a new record for abstracts submitted, posters presented, awards given, and numbers of participants.

In the tradition of the Academy, I will pass the gavel and official seal of the Texas Academy of Science to incoming President Dave Marsh at the meeting banquet. It has been my honor to serve the Academy in an executive capacity and a privilege to work with members of the board. In the years to come I hope all members will find ways to help sustain the proud tradition that is the Texas Academy of Science.

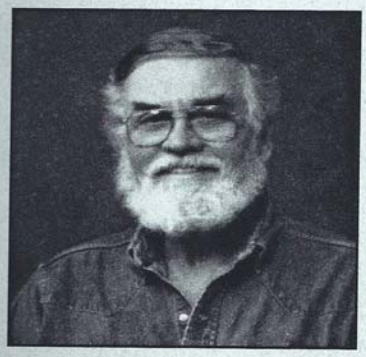
Sincerely,



Damon Waitt, Ph. D.
President, Texas Academy of Science

Predicting the future of TAS is difficult, as Dr. Damon Waitt states in his Letter of Welcome from the President. However, during the 10-years he was a member of the TAS he noticed that the Academy became financially stable allowing the TAS to promote their mission through awards and research grants. In addition, the Academy is becoming a more active proponent of science education, as evidenced by our support of the Texas Science Olympiad and testimony before the State Board of Education regarding evolution in textbooks. The Academy is becoming more comfortable with technology, such as with PowerPoint presentations, Facebook page, and improvements in our website. Finally and most encouraging is the increasing participation by members in the annual meetings. Each year we seem to set new records for abstract submissions, poster presentations, awards presented, and number of participants.

2006 DISTINGUISHED SCIENTIST



Dr. Eric R. Pianka
University of Texas at Austin

Four decades ago, Eric R. Pianka produced the first synthetic review of latitudinal gradients in species diversity which has strongly influenced the field ever since. His own personal long-term panglobal studies of factors influencing desert lizard diversity are widely recognized as a modern-day classic. Pianka has also developed a remote sensing study of the effects of wildfires on spatial-temporal dynamic habitat mosaics as well as the interaction between local and regional phenomena as they affect biodiversity in the Great Victoria Desert of Western Australia. Pianka has demonstrated a determinedness and staying power rare among scientists and still avidly pursues his fieldwork. He invented many new techniques and concepts — his publications, including four "Citation Classics," have changed the way most ecologists think, forever. Pianka's conceptual contributions are wide ranging and include foraging theory, reproductive tactics, allocation theory and optimality, intercontinental comparisons, resource partitioning, community structure, species diversity, and, among his more recent interests, biogeography, landscape ecology, metapopulation structure, and phylogenetic systematics.

Pianka's leadership in ecology is underscored by his classic textbook "Evolutionary Ecology," which has persisted over 25 years (through 6 editions) and has now been translated into Greek, Japanese, Polish, Russian, and Spanish. An entire generation of ecologists have now been educated from this very important book. Pianka has also published several other highly significant books, including a synthesis of his life's research, an autobiography, and a coffee table book on lizards. Many of his ex-graduate students are very well known and highly respected researchers, including Richard D. Howard (Purdue), Nancy T. Burley (U. C. Irvine), Jos. J. Schall (U. Vermont), Anthony Joern (Kansas State U.), Kirk O. Winemiller (Texas A & M.). Daniel T. Haydon (Glasgow), Gad Perry (Texas Tech), Christopher Schneider (Boston U.), Wendy Hodges (U. T. Permian Basin), and W. Bryan Jennings (Harvard).

Pianka holds the Doctor of Science degree (not an honorary, but an earned, degree) from the University of Western Australia. Pianka has given hundreds of invited lectures and keynote addresses at academic institutions all around the world. He has published a dozen papers in the prestigious journal The American Naturalist and has also published numerous times in Ecology (almost a dozen papers) as well as in PNAS, Science, Trends in Ecology and Evolution, among others. He is presently engaged in new path-breaking research exploiting molecular techniques and modern comparative methodology in phylogenetic systematics to trace the actual course of evolution. He has remained at the cutting edge of modern ecology for the last 40 years and is still going strong.

"Pianka" has become a household word to ecologists everywhere. He has been a professor at the University of Texas in Austin since 1968. Clearly, it is high time that he be recognized for his distinguished career and numerous seminal contributions to the burgeoning discipline of ecology.

The 2006 Distinguished Scientist was Dr. Eric Pianka, and his "dooms-day" presentation to the Academy was one of the most interesting and controversial in our history. Dr. Pianka's conceptual contributions have made him internationally famous as an ecologist. His presentation held our student members spellbound, while some members were offended by his message that humans are destroying the earth. Science is not a discipline that is subject to curtailing the message, and the majority of our members appreciated his views.

LETTER OF WELCOME FROM THE TAS PRESIDENT

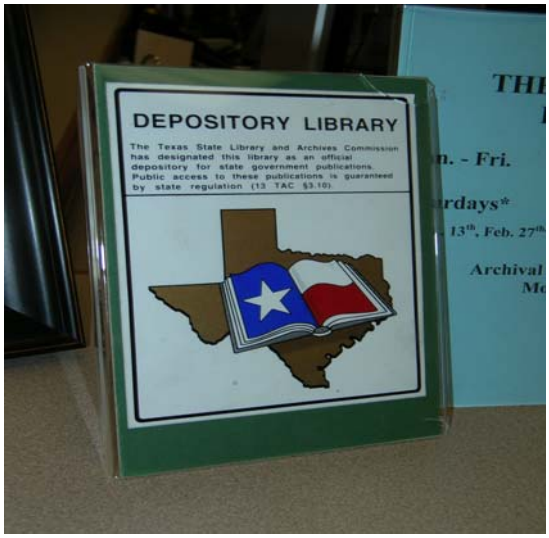
I would like to welcome you to the 112th annual meeting of the Texas Academy of Science. It is our time-honored policy of inviting scientists and mathematicians of all disciplines to interact with each other. Our goal is to provide a forum for both students and seasoned scientists to exchange information in presentations, posters, and personal interaction that will enhance your knowledge and improve your productivity. Many of our dedicated senior members volunteer untold hours to provide an opportunity for students to demonstrate their presentation of scientific research, and be judged among their peers for research awards. Such awards have been valuable to students seeking careers in their discipline, and needing to show a perspective employer that they have what it takes to be a good scientist.

The TAS has been very involved in the issue of science curricula in Texas schools during the past couple of years. Many of us have testified at hearings of the Texas State Board of Education to try to maintain the teaching of evolution as a science, and to keep creationism and intelligent design out of the concept as a kind of science. We have won a significant goal in that effort lately, and the panel discussion on TAS and the State Board of Education Issues on Science Curricula will focus on that issue. While teaching science in the classroom, with special emphasis on evolution, may seem like something that is relatively clear cut, and already addressed by federal law, let me assure you that it is not. It is complicated and political, and the recent achievements do not mean that they will last far into the future. It is important that all scientists be involved and maintain an up to date perspective on this issue.

I hope you have a very enjoyable and interesting meeting on the banks of the South Llano River.
Raymond C. Mathews, Jr.
President

Finally it was my time to serve proudly as the 2009 President of the TAS, and found myself involved in another controversial issue involving hearings of the Texas State Board of Education about teaching of evolution and our attempts to keep creationism and intelligent design out of the concept as a science. While many of us consider religion an important issue in our personal lives, our TAS Board of Directors recognized that those concepts are not science. Numerous TAS scientists helped educate the State Board of Education through our testimony about scientific principles and concepts.

Acknowledgements



Tiffany Sowell (left), Library Information Specialist & Amie Oliver (right), Coordinator for User and Access Services at Texas Collection, Baylor University; staff whose assistance with the TAS archives was invaluable to telling the history of the Academy. *The director of The Texas Collection is John Wilson, who was instrumental in providing approval for TAS donation of archived documents added to the Texas Collection. Pati Milligan, Baylor University computer technology Professor and TAS webmaster was also helpful in coordination with the library staff.*