TRANSACTIONS
of the
Gulf Coast Association of Geological Societies
28th Annual Meeting
NEW ORLEANS, OCT. 11-13
GCAGS & GCS-SEPM

New Orleans Geological Society

Austin Geological Society
Corpus Christi Geological Society
Houston Geological Society
Mississippi Geological Society
South Texas Geological Society

Alabama Geological Society
East Texas Geological Society
Lafayette Geological Society
Shreveport Geological Society
Southeastern Geological Society
VOLUME XXVIII, 1978

PART I

FRANK P. CARAMANICA
Editor

PREPARED FOR THE
Twenty-Eighth Annual Meeting of the
Gulf Coast Association of Geological Societies
AAPG REGIONAL MEETING
AND
The Twenty-Fifth Annual Meeting of the
GULF COAST SECTION OF THE
SOCIETY OF ECONOMIC PALEONTOLOGISTS AND
MINERALOGISTS

JOSEPH E. BOUDREAUX
SEPM Editor

OCTOBER 11, 12, 13, 1978

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A Memorial

LESLEY BOWLING
1908-1977

The Gulf Coast Association of Geological Societies, as an integral part of the geological profession, suffered a tremendous loss on June 12th, 1977 with the untimely death of Leslie Bowling, a man whose guiding genius and foresight had been primarily responsible for the very creation of our organization, and for its actual survival through the initial turbulent years.

Founded initially on basic principles which included the extending to younger geologists of a vehicle for presenting and publishing their technical thoughts, the Gulf Coast Association of Geological Societies attracted early determined opposition from leaders of the American Association of Petroleum Geologists, who viewed the upstart organization as a serious threat to its own continued existence.

Actually, the passage of time has proven the consummate wisdom of Leslie Bowling and the other founding fathers, for both the A.A.P.G. and the G.C.A.G.S. have flourished and prospered greatly during the ensuing twenty-eight years.

It is only fitting that we pause briefly to express a few silent thoughts on behalf of, and in memory of a truly great geologist and a wonderful person, who did so much for the Gulf Coast Association of Geological Societies in its early, formative years.

— Dwight N. Rockwood

Editor's Note: Since 1967, The Gulf Coast Association of Geological Societies has been The Gulf Coast Section of The American Association of Geological Societies. In 1975, Les Bowling was made an Honorary Member of the A.A.P.G.
DEDICATION OF THE 1978
GCAGS TRANSACTIONS VOLUME
TO

M. GORDON FREY
The officers and committee chairmen of the GCAGS for 1978 dedicate the 1978 Transactions Volume to M. Gordon Frey, Geological Consultant for Environmental Affairs with Chevron U.S.A. Inc. in New Orleans. This dedication is in recognition of his contributions to the profession, the Association and the industry.

The most recent contributions of this very likeable and highly-respected geologist have been his helping to explain to the citizens of the states along the Atlantic seaboard that the petroleum industry is a useful facet of society which does not harm the environment, and his chairing of the highly successful national AAPG Convention held in New Orleans in 1976. He has contributed to the profession not only by his many activities with the American Association of Petroleum Geologists and the New Orleans Geological Society, but also as a distinguished professional geologist, teacher, author and speaker.

Gordon was born in Cincinnati, Ohio in 1913 and attended the University of Cincinnati. A combination of Geology and Engineering led to a B.S. degree in Geological Engineering in 1936 and membership in Tau Beta Phi (Honorary Engineering Society) and Sigma Gamma Epsilon. The next three years were spent in graduate work at the University of Minnesota where he received his M.S. degree in Geology, followed by his Ph.D. degree in Geology with a minor in Physics in 1939. During this period Standard of California awarded Gordon one of the first geophysical fellowships ever granted by the Company.

After graduation Gordon joined Standard of California, and the fall of 1939 found him heading for Saudi Arabia to assume his new duties as party chief of a gravity meter crew. Operations in Arabia were curtailed by the war and Gordon boarded a boat for Australia with the hopes of doing geophysical work there. These plans were altered by the looming threat of a Japanese invasion and Gordon eventually arrived in Canada and continued his work as a party chief until the Japanese bombed Pearl Harbor.

From December, 1941, to 1947 Gordon worked on diverse Company assignments involving geophysics and subsurface geology in virtually every oil province in the United States, including assignments in the Gulf Coast, the Rocky Mountain area, and the Appalachians. He was promoted to District Geologist in Casper, Wyoming, in 1947, and a few months later he was transferred to San Francisco to serve as exploration staff advisor to the Vice President of The California Research Corporation (now the Chevron Oil Field Research Co.).

The yen to return to the academic life led to his resignation from the Company in the summer of 1948 and subsequent return to his "Alma Mater", the University of Cincinnati. The next four years were spent teaching geology. Gordon was promoted to Acting Head of the Department in 1952. During each summer academic vacation "Doc" worked as a consultant for Chevron "Calco". One of his more interesting and rewarding summer assignments was that of supervision and subsequent mapping of a seismic refraction survey of the Bay Marchand Salt Dome.

"Doc" rejoined Chevron in 1952, and after several moves came to New Orleans in 1957, as Chief Geologist for The California Company Division. In 1967 he was made Assistant to the Vice President for Exploration, in 1971, Exploration Projects Coordinator, and in 1972 became Geological Consultant for Environmental Affairs.

For the last twenty-five years Gordon has traveled extensively throughout the United States interviewing college students in his quest for geologists, geophysicists and paleontologists for his Company. This assignment has given Gordon the opportunity to canvass a great many earth science departments in the United States. Many remember Gordon for introducing them to both summer employment and permanent employment opportunities with his Company. A significant contribution to his profession has been his ability to form a close liaison between industry and academic institutions and this association has led to a free exchange of ideas regarding the needs of industry and the capability of colleges. He is currently a member of the AAPG Committee for Visiting Petroleum Geologists, a group available to explain the oil industry to university students and faculty.

Gordon has been an active member of the New Orleans Geological Society. He served on many committees, and in 1969 was elected twenty-ninth President of the Society. He was made the fifteenth honorary life member in 1976. As a member of The Society of Exploration Geophysicists, he was one of the founders of the local Southeastern Chapter. He is a Fellow of the Geological Society of America. His AAPG activities have been many and varied. Not only did he serve with distinction as Convention Chairman, but he has also been Vice-Chairman of the Constitutional Revision Committee and a member of the Strategic Committee on Public Affairs. He is currently Chairman of the Committee on Environmental Geology and Chairman of the Legal Subcommittee of the Division of Professional Affairs. The American Petroleum Institute's objectives have been aided by his participation in the Subcommittee on Exploration, the Atlantic Offshore Committee, the Coastal Zone Management Subcommittee, and service as Chairman of the Offshore Tours Subcommittee.

Dr. Frey's contributions to the literature have included papers on the Bay Marchand-Timbalier Bay-Caillou Island salt complex, Appalachian Plateau salt structures, magnetic core orientation, offshore geophysical exploration, professional opportunities in geology, oil in marine waters, and many shorter contributions on oil and the environment.

The Gulf Coast Association of Geological Societies is proud to dedicate this Volume of the Transactions to Dr. M. Gordon Frey.
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GULF COAST ASSOCIATION OF GEOLOGICAL SOCIETIES

PRESIDENT............................................. Raymond W. Stephens
University of New Orleans, New Orleans, Louisiana

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GULF COAST ASSOCIATION OF GEOLOGICAL SOCIETIES

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REPORT OF THE PRESIDENT
GULF COAST ASSOCIATION OF GEOLOGICAL SOCIETIES

For the fifth time in twenty-eight years, New Orleans is privileged to host the Annual Meeting of the Gulf Coast Association of Geological Societies. The convention's technical program, social activities, and Transactions are the result of the planning and hard work of the General Chairman, Jules Braunstein, and scores of committee chairmen and committee members. My thanks to each of them for their dedicated effort.

The G.C.A.G.S. is in a strong financial position and the Executive Committee is working diligently to ensure that the Association's assets are being used in the best interest of the geologic profession. With this goal in mind, the Scholarship Fund Committee awarded six thesis research grants to students from five different Gulf Coast universities. The recently established Finance Committee, under the chairmanship of Bill Tucker, deserves special praise for the manner in which it has consolidated and organized the finances of the G.C.A.G.S. The Finance Committee, which is charged with providing year-to-year continuity for our fiscal state, is functioning efficiently and is a tremendous asset to the Association. After many years of faithful service, Publications Committee Chairman John Pate, and Dorothy Harbison of Seminole submitted their resignations, which necessitated finding a new home for our publications. Bob Boyer agreed to become the new chairman and effected a smooth and orderly move from Houston to Austin. The Executive Committee authorized the reprinting of all out-of-stock Transactions, and the complete series of volumes will be available for purchase in the near future.

Welcome to New Orleans! Enjoy the convention, and please don't wait for the next one to visit our city again. We enjoy having you.

Raymond W. Stephens
President
Gulf Coast Association of Geological Societies

XII
REPORT OF THE GENERAL CHAIRMAN
TWENTY-EIGHTH ANNUAL MEETING—1978

New Orleans has such a large pool of geologists who are both experienced in all aspects of convention planning and willing to work on convention assignments that I had no trouble in finding suitable committee chairmen for this convention scarcely a month after the 1976 AAPG Convention in New Orleans had finished, even though many of them had been involved in that meeting.

The first convention of the GCAGS was held in New Orleans in November, 1951. Chairman of the Steering Committee and first GCAGS President was Leslie Bowling, to whom a memorial appears elsewhere in this volume. Twenty-nine technical papers were delivered, of which 15 were printed in Volume I of the Transactions, edited by Fred Schall. The second meeting here was held in November, 1957. The President of the GCAGS then was Harold Hickey and the meeting Chairman, Thomas Philpott. Forty technical papers were presented, of which 26 were printed in Volume VII of the Transactions which I edited. The volume was dedicated to Dr. Henry Howe. When the Association met here in October-November, 1962, GCAGS President was Thomas Philpott; Annual Meeting Chairman was Lee Meltzer. Of 36 technical papers presented, 27 were printed in Volume XII of the Transactions, which I edited. The last New Orleans meeting took place in 1971. Lee Meltzer was GCAGS President and Robert Williamson General Chairman. Forty-eight technical papers were delivered, of which 35 were printed in Volume 21 of the Transactions, edited by Willis Tyrell. The volume was dedicated to me.

Our organization has grown in size and importance through the years, abundantly fulfilling the aspirations of its founders. The Transactions stand as an invaluable body of geologic data concerning the Gulf Coast. They are in such demand that seven volumes are now out of print, the oldest, Volume 5, and the newest, Volume 21.

In his report in 1962 as Annual Meeting Chairmain, Lee Meltzer wrote: "If we could sustain in the local societies each year a small part of the interest and dedication felt by the host society we could improve our programs and the Transactions, and support a program of related activities to the benefit of our profession and the oil and gas industry". I totally subscribe to this point of view, but do not expect to see it implemented as long as the GCAGS remains a federation of geological societies without individual memberships. Ongoing interest is maintained only in regard to special projects, e.g., the Tectonic Map of the Gulf Coast.

I am pleased to acknowledge the considerable help given me by Jim Seglund, my able Vice Chairman (who suggested the innovative Spouse's Technical Sessions), and the efforts of all of the Committee Chairmen and the members of their several committees. Richard Boebel, Program Committee Chairman, proposed the brilliant convention theme, "The light that failed". The fact that we could not obtain papers describing unsuccessful plays that initially appeared to have all the elements needed for success does not negate the validity of this concept as the theme for a meeting. The Ladies Activities Committees, diligently directed by Olga Braunstein and Beverly Chistina, were an indispensable part of the whole picture. My relations with GCAGS President, Ray Stephens, have been cordial and satisfying: he gave me free rein in the entire operation.

I am especially proud to have served as General Chairman this year because of the many new features we have added to the sum total of activities which have continued to make the annual GCAGS meetings so successful. I say to you as I said to members of the New Orleans Geological Society in my farewell address as President: if any part of these proceedings merits your special praise, thank the Committee responsible for that aspect of the meeting, if any has incurred your displeasure, blame me.

Jules Braunstein
General Chairman
I accepted the responsibility of editing Volume 28 of the Transactions with some trepidation after Willis Tyrell had asked me. As I began to work with other members of the GCAGS however, I soon realized that this represented a unique opportunity to participate in a forum which is open to professionals in both industry and the academic community. The two themes of the New Orleans meeting are timely. One, "The Great Lights That Failed," addresses industry's recent efforts in the MAFLA offshore tracts in the northeastern Gulf of Mexico. Some companies retain acreage in this area and have requested that some information remain confidential. The second theme, "New Plays, Old Pays," highlights current efforts by industry to reevaluate old trends in light of recent exploration technology and present day economics.

I want to thank the members of the Publications Committee — Merle M. Duplantis, Ross H. Lessentine, Kenneth E. Nemeth, and Jesse O. Snowden, who devoted much time and effort to reviewing the manuscripts submitted. Joe Boudreaux served as the capable editor of the SEPM papers in this volume and Mary Pieper, 1977 Transactions editor, and Jules Braunstein, General Chairman, helped provide a sense of continuity and aided me in assuming this task. E. P. (Manny) Rivas, printer, cooperated fully and helped set up a job stream which resulted in short turn around times on the manuscripts and high quality text and illustrations.

Without the contributing authors there would be no volume and I am grateful to them for their striving to honor the necessary deadlines and their cooperation. Due to the rapid turn around of manuscripts, galley and page proofs between the author, printer, and myself, some errors undoubtedly did survive. That responsibility rests with me.

Frank P. Caramanica
1978 Transactions Editor
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TWENTY-EIGHTH ANNUAL MEETING

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JAMES A. SEGLUND—VICE-CHAIRMAN

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GULF COAST ASSOCIATION OF GEOLOGICAL SOCIETIES
BEST PAPER AWARDS, TWENTY-SEVENTH ANNUAL MEETING
AUSTIN, TEXAS

The 1977 GCAGS Awards Committee has awarded first, second, and third place, together with the A. I. Levensen Memorial Award to these authors for their presentations at the 1977 GCAGS Austin Convention.

First place and the A. I. Levensen Award were awarded to Drs. David K. Davies and William R. Almon for their paper entitled "Effects of Sandstone Composition and Diagenesis on Reservoir Quality, Tertiary — Pleistocene Gulf Coast Region."

William R. Almon received his BA degree in Chemistry and MA degree in geochemistry from Washington University (1969, 1971) and his MA degree in chemistry and PhD degree in Geology from the University of Missouri-Columbia (1973, 1974). He is currently a research geologist at Cities Service Company, Energy Resources Group, Exploration and Production Research Laboratory. He is actively involved in research leading to the application of geochemistry to improved stimulation and completion designs for low permeability, sensitive oil and gas reservoirs. He is also concerned with the application of organic and inorganic geochemistry to sedimentologic problems such as the prediction of reservoir extent and quality.

David K. Davies is presently Professor and Chairman of the Department of Geosciences at Texas Tech University. He received his B.S. and Ph.D. degrees in Geology from the University of Wales (1962, 1966) and his M.S. in Geology from Louisiana State University (1964). He spent four years as Assistant and Associate Professor of Geology at Texas A&M University, and seven years as Professor of Geology at the University of Missouri-Columbia. For the past eleven years he has served as consulting geologist for major oil companies, state surveys, and foreign governments on stratigraphy and sedimentation. Dr. Davies has conducted extensive research on oil and gas reservoirs. Financial support of his research has been received from the National Science Foundation, Petroleum Research Fund of the American Chemical Society, major oil companies, and state surveys. He is contributor to numerous AAPG, SEPM, and GSA publications establishing methods and techniques for environmental and diagenetic analysis. Dr. Davies' current research involves him in studies of the quality of hydrocarbon reservoirs in the Gulf Coast, Permian Basin, Rocky Mountain, Canada, and Central America.
The second place award was presented to James O. Lewis for his paper on "Stratigraphy and Entrapment of Hydrocarbons in the San Miguel Sands of Southwest Texas."

James Lewis was born in Owensboro, Kentucky in 1922, served in the United States Navy from 1943 to 1947, and attended the University of Kentucky where he received the B.S. in Mechanical Engineering in 1947 and his M.S. in Geology in 1949. He has been a consultant geologist since 1955 and has served in an executive capacity for the American Association of Petroleum Geologists, The Society of Independent Professional Earth Scientists, and the Houston Geological Society.

The Third place award was presented to Jesse O. Snowden, William B. Simmons, E. Berkley Traughber, and Raymond W. Stephens for their timely paper on "Differential Subsidence of Marshland Peat as a Geologic Hazard in the Greater New Orleans Area, Louisiana."

Jesse O. Snowden received a B.S. degree in geology from Millsaps College in 1959, and the M.S. and Ph.D. degree from the University of Missouri at Columbia in 1961 and 1966. Experience includes employment with Sun Oil Company in Jackson, Mississippi, and teaching posts at Mississippi State University and Millsaps College before coming to the University of New Orleans in 1969. His research interests include: clay petrology, sediment and soil geochemistry, and environmental geology. Society memberships include SEPM and the Clay Minerals Society. He was editor of the 1968 GCAGS Transactions, and is on the editorial committee for the 1978 Transactions.

William Bruce Simmons, Jr. was born in Bay City, Texas in 1943. He received his Ph.D. in Mineralogy from the University of Michigan in 1971 and is currently an Associate Professor at the University of New Orleans. He is the author of numerous papers relating to Mineralogy and is the recipient of numerous scientific awards.
E. Berkley Traughber obtained his B.S. and M.S. in Civil Engineering from the University of Mississippi and a Ph.D. in the same field from Stanford University. After having worked as a structural engineer and taught at the University of New Orleans, he is presently head of a civil engineering firm.

Raymond W. Stephens is currently President of the GCAGS and was recently President of the New Orleans Geological Society. He has had considerable experience both in the oil industry and in academia. He is currently Associate Professor of Earth Sciences at the University of New Orleans and a consulting Petroleum Geologist. Ray is author of numerous publications dealing with sedimentation and petroleum exploration.
CONSTITUTION AND BY-LAWS
GULF COAST ASSOCIATION OF GEOLOGICAL SOCIETIES

ARTICLE I — Name
This is a non-profit organization and shall be known as the "Gulf Coast Association of Geological Societies." It is hereinafter referred to as "This Association."

ARTICLE II — Object
The object of This Association is to provide for discussion and publication of papers on subjects and problems coming within the scope of the Geological profession and with particular emphasis on Gulf Coast geology.

ARTICLE III — Organization
This Association is an organization of AAPG-affiliated Geological Societies in the Gulf Coast Area.

SECTION 1.
The business of This Association shall be transacted by an Executive Committee composed of one representative from each member society and the President, Vice President, Secretary, Treasurer, and Past President. The Secretary and Treasurer shall be non-voting members of the Executive Committee. The Vice President, Secretary, and Treasurer shall be elected by the Executive Committee at the annual meeting. The Secretary and Treasurer shall be nominated by the Executive Committee of the local Geological Society next in line to host the annual meeting. The Vice President shall be nominated by the Executive Committee of the host society for the annual meeting two years hence and shall accede to the Presidency. Thus each year the President, Secretary and Treasurer will be from the host society with the Vice President providing continuity with the Executive Committee as he assumes the Presidency in the ensuing year. The duties of these officers shall be those customary to their respective offices.

The GCAGS representative to the Advisory Council of the American Association of Petroleum Geologists shall be selected by the Executive Committee of GCAGS and shall be an ex officio, non-voting member of the GCAGS Executive Committee.

Each member society shall designate a representative to the Executive Committee and in the event the chosen representative cannot attend any given Executive Committee meeting, an alternate representative shall be appointed by the member society to attend and vote in the absence of the representative. The representative, when practicable, shall be an officer or past officer of the society he represents.

Each society shall have one vote on actions taken by the Executive Committee with the exception that the host society, the next annual host society and the immediate past host society will be entitled to two votes by virtue of their members holding the offices of President, Vice President and Past President. The officers of the Executive Committee shall be elected for a term of one year. They shall be elected and assume their duties as soon after the annual meeting of This Association as is practicable. Any vacancies shall be filled by the Executive Committee as provided above in Paragraph 1.

SECTION 2.
The business of This Association shall be conducted by the Executive Committee. A simple majority vote of the members present at meetings is required to effect decisions, except in those matters which require a greater majority, as set forth in the Constitution and By-Laws.

A quorum shall consist of more than one-half of the voting members of the Executive Committee.

ARTICLE IV — Meetings

SECTION 1.
There shall be an annual meeting of This Association, the time and place of which shall be determined by the Executive Committee.

ARTICLE V — Publications
There shall be an annual Transactions published by This Association, which shall contain papers presented at the annual meeting, and such other material as selected by the Executive Committee. The Executive Committee is authorized to have published additional bulletins, and other material which they feel will further the object of This Association.
be bound as directed by the Executive Committee. The office of Treasurer shall be held by a member of the Board of Directors who shall submit a financial report on the annual meeting of the Executive Committee and shall keep a set of books in accordance with good accounting practice. The books shall be open to inspection of the Executive Committee and shall be kept in a place of public record. If the Treasurer shall be elected by the Executive Committee in the event of the resignation or disability of the Treasurer, and the Executive Committee shall be responsible for the continuance of the business of the association in the event of the vacancy of the office. The Treasurer shall be held responsible for the accounting of the funds of the association and its books shall be audited at least once a year. The Treasurer shall cause the annual meeting to be held annually on such date as is determined by the Executive Committee. The Treasurer shall cause the association to file with the Secretary of State of the state of incorporation an annual report of its activities, and shall keep the association's records open to public inspection.

I. ADJUDICATION

II. AMENDMENT

A. Articles of Incorporation

B. Amendments

C. By-laws

D. Amendment

E. By-laws

F. Amendments

G. Amendments

H. Amendments

I. Amendments

J. Amendments

K. Amendments

L. Amendments

M. Amendments

N. Amendments

O. Amendments

P. Amendments

Q. Amendments

R. Amendments

S. Amendments

T. Amendments

U. Amendments

V. Amendments

W. Amendments

X. Amendments

Y. Amendments

Z. Amendments
V. These By-Laws may be amended by an affirmative vote of three-fourths of the Executive Committee.

VI. Finances Committee — These shall be appointed a Finance Committee whose primary responsibility
Past Officers and Convention Chairmen

Gulf Coast Association of Geological Societies
REPORT OF THE PRESIDENT
GULF COAST SECTION
SOCIETY OF ECONOMIC
PALEONTOLOGISTS AND MINERALOGISTS

GERALD R. STUDE

Twenty-five years ago, a small group of Houston paleontologists founded the Gulf Coast Section of SEPM. The objective for forming the society was "to promote the science of stratigraphy in the Gulf Coast states through research in paleontology and sedimentary petrology, especially as it relates to petroleum geology."

The period from 1953 has been a time of growth and progress. The Gulf Coast Section affiliated with GCAGS in 1953 to hold business meetings and to present technical papers. In 1956, the section established the separate technical session as part of the GCAGS convention program. We are now an important part of the conventions as our contributions have expanded to approximately half of the presented papers. We now plan our section's technical program and edit our session papers for Transactions printing; we have representatives on the convention committee, sponsor separate or joint field trips and participate in the opening session. The section has also published separate papers and articles on well-sample catching techniques, type localities, field trips, paleoecological zones and nannofossils.

Communications among Gulf Coast Section members has been established by a membership mailing of two newsletters and a membership list each year. Also, ten to fifteen business representatives are appointed to serve as coordinators and spokesmen between local geographic groups of the section and the section's council; they organize local meetings in areas where there is a large concentration of members, collect items for newsletters and recruit new members. Local group meetings with programs are held throughout the year in Houston, Lafayette, and New Orleans.

The success and contributions of the society has been through the personal sacrifice of time by past officers, business representatives and various committee members, through the affiliation with GCAGS and by the support of SEPM. Companies and institutions, by supporting and encouraging their employees to serve on various section capacities, also have been a part of our success. As spokesman for the Gulf Coast Section, I express my appreciation to individuals and organizations for your help in the success of the Gulf Coast Section of SEPM.

The celebration of our 25th anniversary has been highlighted by several activities. At our anniversary dinner, three of our founders, Stuart A. Levinson, Fred L. Smith, Jr. and Charles W. Stuckey, Jr., were presented honorary membership awards for their contributions to the Gulf Coast Section and to the science of geology.

XXV
REPORT OF THE PRESIDENT
GULF COAST SECTION
SOCIETY OF ECONOMIC
PALEONTOLOGISTS AND MINERALOGISTS

GERALD R. STUDE

Twenty-five years ago, a small group of Houston paleontologists founded the Gulf Coast Section of SEPM. The objective for forming the society was "to promote the science of stratigraphy in the Gulf Coast states through research in paleontology and sedimentary petrology, especially as it relates to petroleum geology."

The period from 1953 has been a time of growth and progress. The Gulf Coast Section affiliated with GCAGS in 1953 to hold business meetings and to present technical papers. In 1956, the section established the separate technical session as part of the GCAGS convention program. We are now an important part of the conventions as our contributions have expanded to approximately half of the presented papers. We now plan our section's technical program and edit our section papers for Transactions printing; we have representatives on the convention committee, sponsor separate or joint field trips and participate in the opening session. The section has also published separate papers and articles on well-sample catching techniques, type localities, field trips, paleoecological zones and nannofossils.

Communications among Gulf Coast Section members has been established by a membership mailing of two newsletters and a membership list each year. Also, ten to fifteen business representatives are appointed to serve as coordinators and spokesmen between local geographic groups of the section and the section's council; they organize local meetings in areas where there is a large concentration of members, collect items for newsletters and recruit new members. Local group meetings with programs are held throughout the year in Houston, Lafayette, and New Orleans.

The success and contributions of the society has been through the personal sacrifice of time by past officers, business representatives and various committee members, through the affiliation with GCAGS and by the support of SEPM. Companies and institutions, by supporting and encouraging their employees to serve on various section capacities, also have been a part of our success. As spokesman for the Gulf Coast Section, I express my appreciation to individuals and organizations for your help in the success of the Gulf Coast Section of SEPM.

The celebration of our 25th anniversary has been highlighted by several activities. At our anniversary dinner, three of our founders, Stuart A. Levinson, Fred L. Smith, Jr. and Charles W. Stuckey, Jr., were presented honorary membership awards for their contributions to the Gulf Coast Section and to the science of geology.

XXV
Charles W. Stuckey, Jr. and Kenneth A. Hodgkinson have completed a paper pertaining to the section’s history. Two additional historical papers on stratigraphy and economic paleontology will be presented by others at our opening technical session.

The convention committee under the leadership of Vice-Chairmen Lawrence C. Menconi and John B. Dunlap, Jr. has done an outstanding job. Program Chairman Edward B. Picou, Jr. and Editor Joseph E. Boudreaux have arranged an excellent technical program of twenty-nine papers, and James L. Lamb has brought together a group of authors who will present a special session on paleoecology and ecology. Awards Chairman Ralph Biel initiated the awards plaque on which is mounted a disk of our recently adopted emblem. The section is co-sponsoring with GCAGS three field trips at this convention and will underwrite four field trips during the 1979 Houston AAPG-SEPM convention under the direction of Charles C. Albers and Lynn E. Baker.

Our business representatives have provided Secretary Gary D. Roberson with informative items resulting in two newsletters. The hard work of Vice-President William P. S. Ventress and the business representatives has resulted in over 170 new members this year. Sherwood W. Wise, Jr. and Ramil C. Wright, as co-chairmen, have reactivated the type-locality project.

I attended the special meeting of SEPM President Doris M. Curtis and section presidents as well as two SEPM council meetings at the 1978 Oklahoma City AAPG-SEPM convention. The SEPM council is quite concerned and is placing emphasis on improving SEPM activities so that the SEPM can better serve micropaleontologists as well as other groups.

It has been my pleasure to serve as your 25th president. I express my appreciation to the appointed committee members and to the elected council for their fine work and cooperation. I also thank Convention General Chairman Jules Braunstein and members of the convention committees for their aid, guidance and cooperation.

Gerald R. Stude
President, GCAGS-SEPM
GULF COAST SECTION
SOCIETY OF ECONOMIC PALEONTOLOGISTS AND MINERALOGISTS
HONORARY MEMBERSHIP AWARDS

In order to honor members of our society who have contributed distinguished service to the science of stratigraphy, paleontology or sedimentary petrology, especially as they relate to petroleum geology in the Gulf Coast, the Executive Council of the Gulf Coast Section of SEPM is authorized by its constitution to elect honorary members. In appreciation of being founders of this society and in recognition of their untiring efforts on behalf of this society and of their contributions to the science of Gulf Coast petroleum geology, the Council is proud to elect Stuart A. Levinson, Fred L. Smith, Jr. and Charles W. Stuckey, Jr. to honorary membership.

STUART ALLAN LEVINSON

Stuart Allan Levinson was born and raised in Detroit, Michigan, and first attended Wayne State University in 1936. His undergraduate studies were interrupted by four years in the Army during World War II, most of which was spent in the South Pacific. After returning to Wayne State, he received his bachelor's degree in geology in 1947. He received an M.A. in 1949 and the doctorate in 1951 from Washington University. While a graduate student, he held the rank of Assistant Professor from 1949 to 1951.

In 1951, Stuart joined Humble Oil & Refining Company in Houston as a paleontologist. He is now a Research Associate at Exxon Production Research Company, the successor to the Houston Research Center of Humble Oil & Refining Company. For most of his professional career, Stuart has worked with ostracodes, at first with Paleozoic and later with Tertiary and Recent forms. In more recent years he has made ample use of computer science to aid in the interpretation of past geologic environments, using not only ostracodes, but other micropaleontological groups as well. Over the years, Stuart has authored numerous papers on ostracodes, ranging from thin section morphology of Paleozoic forms to descriptions of deep-water Pleistocene species.

Stuart was chairman of the original Steering Committee whose tireless efforts established the Gulf Coast Section of SEPM. He was then elected the section's first president. During the fifties, Stuart became involved in various other society organizational duties, among which were associate editor of the Journal of Paleontology (1953), correspondent for Micropaleontology (1953-1962), and from 1955 to the present member of the editorial board of Micropaleontology. In 1955 he was chairman of the Membership Committee of the Gulf Coast Section-SEPM and in the same year he was chairman of the Nominating Committee of SEPM and of a special committee of the SEPM redefining the duties of president, vice-president, etc.

He was also a contributing author for the Treatise of Invertebrate Paleontology, Part 2, Arthropoda 3, Crustacea Ostracoda from 1955-1961. Through the years 1956 to 1967 he was in charge of, or a member, of several committees which are as follows: member of the SEPM Research Committee (1956-1958), chairman of the Special Publications Committee of the SEPM (1956), vice-president of SEPM (1957), SEPM representative of the Joint Advisory Committee (Treatise) (1958-1964), SEPM Program Committee (1962), Nominating Committee Gulf Coast Section-SEPM (1964), and, finally, member of Best Paper Committee (1967).

In the past ten years Stuart has turned more and more to an avocation that has always interested him, enology, a science that deals with wine. He has become an internationally known expert and is sought after widely as a lecturer and has conducted courses on wine for various organizations.

Stuart Grossman
Fred L. Smith, Jr., one of the native Houstonians, was born on April 1, 1916. He attended public schools in Houston and enrolled in Texas A & M at Bryan, Texas in 1934. He received his Bachelor of Science degree in geology from Texas A & M in 1938. After graduation, Fred joined the Atlantic Refining Company in their Houston office as a paleontologist and later did subsurface geological work. In 1947 Fred left Atlantic and worked for several other exploration companies, and finally going on his own in December, 1952, he became a consultant in geology and paleontology and is still so engaged in Houston.

He has been very active in the Houston Geological Society since 1938 and has served that society in various capacities such as Secretary, First Vice-President and President. Fred has worked in the Houston Geological Society Boy Scout Program and is still serving on the AAPG Boy Scout Committee. Fred has co-authored several field paper reports on Texas Gulf Coast oil and gas fields. He has been a member of the AAPG since 1939 and of the SEPM since 1953.

He has been very active in the Gulf Coast Section of SEPM since it was founded; he is one of the founders and served on the original Steering Committee that established the Gulf Coast Section in 1953. He has served in all offices of the section except Secretary; he was Treasurer in 1954-1955, Vice-President in 1957-1958 and President in 1969-1970. In addition to the elected offices, he has served on various committees and as Gulf Coast Section Transactions and session editor in 1965. He was also Chairman of the Gulf Coast Section SEPM Paleocology Committee from the Houston area; this resulted in a co-authored paper on depositional environments of the Gulf Coast area which was published in the 1966 Transactions.

Claude M. Quigley
Charles Wainwright Stuckey, Jr. was born May 24, 1908 in Shreveport, Louisiana. Charlie, as he is known to his many friends, graduated from Shreveport High School in 1925. After attending Centenary College for one year, Charlie entered Louisiana State University. This began a lifelong association with the "Ole War School," that flourishes to this day. A very serious injury, as a result of an automobile accident at geology camp, prevented Charlie from attending work or school for an extended period. After completing additional correspondence courses, he graduated with a Bachelor of Science degree in geology from Louisiana State University in 1936. Charlie also worked as a micropaleontologist with the Louisiana Geological Survey from 1934 to 1936.

As was the case with many young graduates, and with great enthusiasm, Charlie found employment with an oil company in February 1936. This association with Amoco (Stanolind Oil and Gas) lasted until December 1946 when he joined Union Oil Company of California, to start a Paleontology Department for that organization. Charlie continued his career as a micropaleontologist and stratigrapher with Union Oil until his retirement on June 1, 1973. He has authored several papers on benthonic foraminifers and stratigraphy of the Gulf Coast area.

Charlie has been active in several societies and organizations. He is one of the founders of the Gulf Coast Section of SEPM; he served on the original Steering Committee that established the Gulf Coast Section. He has served on various section committees including the Field Trip and Type Locality Committees and was elected the section's second President for the 1954-1955 term.

Charlie was elected Second Vice-President of the Houston Geological Society, President of Louisiana State University Geological Alumni, President of the Houston Chapter of Louisiana State University Alumni, President of ATO Houston Chapter, ATO of the year 1969 and Vice-President of L'Alliance Francaise de Houston. Since retirement, Charlie has made numerous trips abroad but still finds time to give talks on dinosaurs, rocks and minerals at public schools. Recently he completed two years as editor of the Newsletter for the Texas Section of Association of Professional Geological Sciences.

Joseph W. Wardell
FIRST PLACE: to Charles D. Winker and James D. Howard for their paper entitled “Plio-Pleistocene paleogeography of the Florida Gulf Coast interpreted from relict shorelines.” Charles D. Winker completed his undergraduate work at Antioch College and University of Georgia. He received his B.S. in geology from the University of Georgia in 1977. The research for his paper was conducted while he was employed as a research technician at Skidaway Institute of Oceanography from 1972-1977. Charles is currently doing graduate work at the University of Texas at Austin and is employed by the Bureau of Economic Geology. His interests are coastal and fluvial geomorphology, and engineering geology.

James D. Howard is a Senior Marine Scientist at Skidaway Institute of Oceanography and University of Georgia Marine Institute. He earned his B.A. degree from Drury College and his M.A. degree from University of Kansas. He took his Ph.D. at Brigham Young University in 1965. Dr. Howard has been very active in the Society of Economic Paleontologists and Mineralogists as: Secretary-Treasurer, member and Chairman of Research Committee, Chairman of Trace Fossil Research Group, member of Finance Committee and Associate Editor for Journal of Sedimentary Petrology. He has authored or co-authored fifty-five papers on modern and ancient shoreline sedimentary environments, estuarine sedimentation, and physical and biogenic sedimentary structures. He has organized or co-led several short courses and numerous field trips and has participated in several scientific cruises.
SECOND PLACE: to Wayne C. Isphording for his paper entitled "Petrology and stratigraphy of the Alabama Miocene." Wayne C. Isphording earned his B.S. and M.S. degrees from the University of Florida, where he majored in geology and minored in physics. He took his Ph.D. at Rutgers University in 1964 and presently holds the rank of Professor of Geology in the geology department at the University of South Alabama in Mobile. His interests include geochemistry and diagenesis of carbonates, tropical soil genesis, and applications of statistical and computer techniques to geological problems. He has carried out geochemical and mineralogical research on residual soil’s in the Caribbean region and is now completing a study of their physical and engineering properties.

THIRD PLACE: to R. Michael Looney and Victor R. Baker for their paper entitled "Late Quaternary geomorphic evolution of the Colorado River, Inner Texas Coastal Plain." R. Michael Looney attended the University of Texas at Austin where he received his B.S. degree in 1971. He worked briefly for the United States Geological Survey and returned to graduate school at the University of Texas where he received his M.A. degree in 1977. During his graduate studies he was employed part time by Radian Corporation of Austin, Texas. Upon completion of course work in 1975, he joined the Gulf Coast Division of Exxon Company, U.S.A. in Houston, Texas. He was transferred to Exxon's Corpus Christi Exploration District in 1977, where he is currently involved in the exploration of the Oligocene in South Texas. Mr. Looney is a member of the American Association of Petroleum Geologists, Sigma Gamma Epsilon, and the Corpus Christi Geological Society.

Victor R. Baker is presently an Associate Professor of Geological Sciences, the University of Texas at Austin. He received a B.S. degree from Rensselaer Polytechnic Institute in 1967 and a Ph.D. degree from the University of Colorado in 1971. Prior to joining the faculty of the University of Texas at Austin in 1971, he worked as a geophysicist for the U.S. Geological Survey (1966-1969) and served as City Geologist for Boulder, Colorado (1969-1971). His research and publications concern geomorphic effects of modern and ancient floods, drainage basin and river morphology, fluvial paleohydraulics and sedimentology, remote-sensing applications to environmental geology, geological hazards, karst hydrology, and surficial processes on Mars. In 1977 Dr. Baker was named a Guest Investigator on the Orbital Imaging Team for N.A.S.A.’s Viking Space Program.
GULF COAST SECTION
SOCIETY OF ECONOMIC
PALEONTOLOGISTS AND MINERALOGISTS

CONSTITUTION

ARTICLE I — Name
The Section shall be known as the Gulf Coast Section of the Society of Economic Paleontologists and Mineralogists.

ARTICLE II — Object
The object of the Section is to promote the science of stratigraphy in the Gulf Coast states through research in paleontology and sedimentary petrology, especially as it relates to petroleum geology. The Section will be closely associated with the Gulf Coast Association of Geological Societies and will cooperate with it, and with the local geological societies of which it is composed, for the furtherance of mutual objectives.

ARTICLE III — Membership
1. The Section shall be composed of members, associate members, charter members, and honorary members.

2. Members shall be persons engaged in paleontologic, petrographic or stratigraphic studies that have application to the geology of petroleum who are members or associate members of the Society of Economic Paleontologists and Mineralogists and who work or reside in the Gulf Coast province of the states of Texas, Louisiana, Mississippi, Alabama, Georgia or Florida, or whose interest or work is principally within these states. Membership, once obtained, shall not be dependent upon continued residence in the aforementioned States.

3. Associate members shall be persons engaged in paleontologic, petrographic or stratigraphic studies that have application to the geology of petroleum, who work or reside in the Gulf Coast province of the above mentioned states, and who are not members or associate members of the Society of Economic Paleontologists and Mineralogists. Associates shall enjoy all the privileges of membership, save that they shall not hold office. Election to membership in the Society of Economic Paleontologists and Mineralogists will automatically advance associates to members.

4. Charter members are those whose applications for membership were received before the first nomination of officers. They shall enjoy all the privileges of members, and hereinafter are included in all references to "members."

5. The Council may elect as honorary members persons who have contributed distinguished service to the science of stratigraphy, paleontology or sedimentary petrology, especially as they relate to petroleum geology in the Gulf Coast. Honorary members shall not be required to pay dues.

6. Each candidate for membership shall submit to the secretary an application on a form authorized by the Council for this purpose.

7. New members and associates enrolled after September 15 shall be considered as having paid their dues for the next calendar year.

ARTICLE IV — Officers
1. Executive authority of the Section is vested in a Council consisting of six members, duly elected officers, as follows: president, president-elect, vice-president, secretary, treasurer, and the most recently retired past president.

2. The president shall discharge the usual duties of a president, as well as act as presiding officer at all meetings of the Section and Council. He shall appoint an editor, program chairman, committee chairmen and business representatives.

3. The vice-president shall assume the duties of the president in the case of the absence or disability of the latter. He shall also be chairman of the membership committee and chairman of the employment counseling committee.

4. The secretary shall keep records of the proceedings of the Section and a complete list of the membership. He shall attend to the preparation and mailing of notices, membership application blanks and other materials necessary to the business of the Section.
5. The treasurer shall have custody of all funds of the Section. He shall keep account of the receipts and disbursements, and submit his account to the membership at the end of each year.

6. The Council shall consider all candidates for membership and pass on the qualifications of the applicants; shall have control and management of the affairs and funds of the Section; shall designate the time and place of the Annual Meeting.

7. The president and vice-president shall not serve for more than one year, except that if the vice-president succeeds to the position of acting president, he may be elected to a full term as president.

8. In the event that neither the president nor vice-president is available to serve as presiding officer of the Section, the immediate past president shall assume the president's duties.

9. The president-elect shall serve for one (1) year as such, and in the following year he shall assume the office of president. He shall have no administrative authority except as a member of the Council. He shall acquaint himself with all the details of the office of president and generally prepare himself to serve as president. He shall be responsible for the preparation of the annual meeting for the ensuing year.

ARTICLE V — Meetings

1. The Section shall hold at least one stated meeting each year, which shall be known as the Annual Meeting. This meeting will usually be held in conjunction with the Annual Meeting of the Gulf Coast Association of Geological Societies.

2. The program for the Annual Meeting shall be arranged by the program chairman, in conjunction with the chairman designated by the Gulf Coast Association of Geological Societies to arrange its own program. In general, it will be desirable that the contributions for members of the Section will be included in the main program, rather than being allotted to a separate session.

3. At the time of the Annual Meeting, a Business Meeting shall be held for the transaction of Section business.

ARTICLE VI — Amendments

The constitution may be amended by a two-thirds vote of returned mail ballots received by the secretary sixty days after proposal of amendments with provision for vote is mailed to the members. Any proposed amendments must have the approval of a majority of the Executive Council before being submitted to the members.

BY-LAWS

ARTICLE I — Dues

1. The fiscal year of the Section shall commence on October 1 and expire on September 30 of the following year.

2. The annual dues of members and associates of the Section shall be two dollars. Penalty of 50¢ shall be assessed for late payments of dues. The 50¢ late penalty shall be waived upon payment of dues for two or more years.

3. A bill for dues shall be mailed to each member and associate before January 1 of each year. Members and associates who have not paid their annual dues by April 1 shall be dropped from the membership rolls.

4. Members and associates dropped for non-payment of dues may apply to the Council for reinstatement, and be reinstated by majority vote of the Council.

5. Members or associates may, at their discretion, pay their annual dues in advance for periods of up to five years.

ARTICLE II — Financial Procedure

No officer or member shall enter into contract to disburse any of the Section's funds without the co-signature of a member of the Council. Disbursal of a sum in excess of $50.00 must be approved by a majority of the Council.

ARTICLE III — Elections

1. The president shall appoint two nominating committees, instructing each committee to submit nominations for president-elect, vice-president, secretary, and treasurer. These nominations shall be in the secretary's hands before July 15. If desired, the same person may be nominated by the two committees for the offices of secretary and treasurer, but the nominations for president-elect and vice-president shall not include the names of the same person on the two slates. The nominations of the first committee to file its report will have precedence in case of overlapping nominations, and the other committee shall then be requested to change its nomination. A candidate for office must be an active member and reside in the Gulf Coast at the time of his nomination.
2. Ballots containing the nominations for officers, arranged alphabetically under each office, shall be prepared by the secretary and mailed to each member of the Section on or before July 15. The ballots received by the secretary before September 15 shall be counted by him. Receipt of a plurality of the votes cast for any office shall constitute election. In case of a tie vote, members of the Council shall cast one additional deciding vote.

3. Results of balloting shall be announced at the Annual Meeting, and the new officers shall enter upon duty at the adjournment of the Meeting.

ARTICLE IV — Publications

1. The Section editor, appointed by the president, shall actively solicit papers from the Section membership for presentation at the Annual Meeting. He shall cooperate with the editor of the Gulf Coast Association of Geological Societies’ annual Transactions volume in preparing papers delivered at the meeting for publication in this volume. He shall cooperate with the editors of the Society of Economic Paleontologists and Mineralologists’ Journals by helping to arrange for publication in these periodicals of suitable papers which come to his attention.

2. Members of the Section may purchase one copy of each Section publication at a discount of 20% off the advertised price.

ARTICLE V — Business Representatives

The president shall appoint one representative from each group of members in each local geological society affiliated with the Gulf Coast Association of Geological Societies and in other localities as needed. Each representative shall have an up-to-date list of the members residing in his vicinity. He will notify these members concerning any matters of Section policy which may be relayed to him by the president, and shall have the authority to convene a meeting of these members to determine their views concerning Section affairs. He will report the results of such meetings to the president of the Section. He will cooperate with the Section editor in soliciting papers to be presented at the Annual Meeting, and with the chairman of the membership committee in recruiting new members for the Section.

ARTICLE VI — Amendments

1. The by-laws may be amended by a two-thirds vote of returned mail ballots received by the secretary within sixty days after proposal of amendments with provision for vote is mailed to the members. Any proposed changes must have the prior majority approval of the Executive Council.

2. A petition containing the signatures of twenty active members is considered sufficient to bring before the Council a proposed change in the constitution or by-laws. A majority vote of the Council is also considered sufficient to initiate a proposed change.

ARTICLE VII — Audit

The president shall appoint an auditing committee which shall review the accounts presented by the treasurer. The approval of the treasurer’s books by this committee shall be required before his final report will be accepted. The treasurer may submit a provisional report at the Annual Meeting, and his final audit shall be accomplished not later than 30 days thereafter.

ARTICLE VIII — Vacancies

1. A vacancy occurring in the offices of vice-president, secretary or treasurer shall be filled by Executive Council appointment.

2. A vacancy occurring in the office of president-elect shall be filled by mail ballot by membership, through a special election called by the Executive Council.

This constitution was adopted in 1954.


XXXIV
## GULF COAST SECTION — SEPM
### PAST OFFICERS

<table>
<thead>
<tr>
<th>Year</th>
<th>President</th>
<th>Vice-President</th>
<th>Secretary</th>
<th>Treasurer</th>
</tr>
</thead>
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<tr>
<td>1953-54</td>
<td>Stuart A. Levinson</td>
<td>Grover E. Murray</td>
<td>William H. Akers</td>
<td>Frank V. Stevenson</td>
</tr>
<tr>
<td>1955-56</td>
<td>E. H. Rainwater</td>
<td>Frank S. Westmoreland</td>
<td>Hugh A. Bernard</td>
<td>Eleanor T. Caldwell</td>
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<tr>
<td>1956-57</td>
<td>Lloyd M. Pyeatt</td>
<td>J. O. Cole</td>
<td>H. Dillingham, Jr.</td>
<td>Eleanor T. Caldwell</td>
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<tr>
<td>1959-60</td>
<td>David E. Pope</td>
<td>A. D. Ellis, Jr.</td>
<td>Gordon C. Munsey</td>
<td>H. A. Chun</td>
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<tr>
<td>1960-61</td>
<td>Claude M. Quigley</td>
<td>Harold V. Andersen</td>
<td>E. Ann Butler</td>
<td>Edward Marks</td>
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<tr>
<td>1961-62</td>
<td>Harold V. Andersen</td>
<td>Theodore D. Cook</td>
<td>Benjamin J. Petrusek</td>
<td>Albert D. Warren</td>
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<tr>
<td>1963-64</td>
<td>Lyman D. Toulmin</td>
<td>E. Ann Butler</td>
<td>Charles C. Albers</td>
<td>John E. Kilgore</td>
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<td>1964-65</td>
<td>Howard L. Tipsword</td>
<td>Benjamin J. Petrusek</td>
<td>D. Jeter Smith</td>
<td>Emmett R. Adams</td>
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<tr>
<td>1968-69</td>
<td>William A. Atlee</td>
<td>Edgar B. O'Quinn</td>
<td>James W. Fowler</td>
<td>William E. Steinkraus</td>
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<td>1971-72</td>
<td>William W. Hay</td>
<td>William E. Steinkraus</td>
<td>Karl J. Koenig</td>
<td>Gerald R. Stude</td>
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<td>1973-74</td>
<td>Edward B. Picou, Jr.</td>
<td>Walter H. Trenchard</td>
<td>Joan B. Stough</td>
<td>Joan B. Stough</td>
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<td>1975-76</td>
<td>James L. Lamb</td>
<td>Lawrence C. Menconi</td>
<td>Doris M. Curtis</td>
<td>Doris M. Curtis</td>
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<td>1976-77</td>
<td>Clifton A. Couture</td>
<td>Herbert A. Elliott, Jr.</td>
<td>John L. Carney</td>
<td>Henry V. Howe*</td>
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<td>1977-78</td>
<td>Gerald R. Stude</td>
<td>William S. Grubb</td>
<td>Joseph E. Boudreaux</td>
<td>Grover E. Murray</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sherwood W. Wise, Jr.</td>
<td>George C. Esker, III</td>
<td>H. B. Stenzel</td>
</tr>
</tbody>
</table>

## HONORARY MEMBERS
- Harold V. Andersen
- Alva C. Elsior*
- Hedwig T. Kniker
- E. H. Rainwater*
- Charles W. Stuckey, Jr.

*deceased

- Esther R. Applin*
- J. B. Garrett, Jr.
- Stuart A. Levinson
- John R. Sandidge
- Lyman D. Toulmin

- Jules Braunstein
- Marcus A. Hanna
- Winnie McGlamery*
- Fred L. Smith, Jr.

- Doris M. Curtis
- Henry V. Howe*
- Grover E. Murray
- H. B. Stenzel
PUBLICATIONS
of the
GULF COAST ASSOCIATION OF GEOLOGICAL SOCIETIES

Following is a list of available publications of the GCAGS. They may be ordered from the Department of Geological Sciences, The University of Texas at Austin, P. O. Box 7909, Austin, TX 78712.

TRANSACTIONS

Volume 2 (1952) Corpus Christi ........................................... $ 7.00
Volume 3 (1953) Shreveport .................................................. $ 7.00
Volume 4 (1954) Houston ..................................................... $ 7.00
Volume 7 (1957) New Orleans ................................................ $ 9.00
Volume 9 (1959) Houston ..................................................... $ 9.00
Volume 10 (1960) Biloxi ....................................................... $ 9.00
Volume 11 (1961) San Antonio ............................................... $ 9.00
Volume 12 (1962) New Orleans ............................................. $ 9.00
Volume 13 (1963) Shreveport ............................................... $ 9.00
Volume 16 (1966) Lafayette .................................................. $ 9.00
Volume 17 (1967) San Antonio .............................................. $11.00
Volume 18 (1968) Jackson .................................................... $11.00
Volume 19 (1969) Miami ....................................................... $12.00
Volume 20 (1970) Shreveport ............................................... $12.00
Volume 21 (1971) New Orleans ............................................. $13.00
Volume 22 (1972) Corpus Christi ......................................... $13.00
Volume 23 (1973) Houston .................................................. $13.00
Volume 24 (1974) Lafayette ................................................ $15.00
Volume 25 (1975) Jackson ................................................... $17.50
Volume 26 (1976) Shreveport ............................................... $17.50
Volume 27 (1977) Austin ..................................................... $18.50

Comprehensive Index (1951-65) ........................................... $ 1.50

Bibliography of Gulf Coast Geology (1970) Volume 1 & 2 Set ..................... $ 9.50
Bibliography of Gulf Coast Geology (1976) Volume 3 ................................ $ 5.50
Bibliography of Gulf Coast Geology — Vols. 1, 2 & 3 (Combination Price) ....... $12.50

Fault and Salt Map of South Louisiana 52” x 106”
edited by W. E. Wallace, Jr. (1966) ......................................................... rolled $12.00

Faults of South and Central Texas, Map compiled by Delos R. Tucker (1967) .......... $ 1.50
Bathymetry of the Gulf of Mexico, Map by Elazar Uchupi (1967) .......... $ 1.50

Include Sales Tax — Texas 5%
All Foreign orders add $1.00/volume

Volumes 1, 6, 8, 14 and 15 are out of print

Tectonic Map of the Gulf Coast ............................................. (Members) $7.50
.................................................. (Non-members) $9.00

Order Tectonic Map from AAPG, P. O. Box 979, Tulsa, OK 74101

ALL ORDERS MUST BE PREPAID

XXXVI
PUBLICATIONS
of the
GULF COAST SECTION-SEPM

TYPE LOCALITIES OF THE GULF COAST
Units I, II, and III
Description (each) ................................................................. $0.50

FIELD TRIP GUIDEBOOKS
1961 — Middle Eocene, Houston County, Texas ................................ $1.50
1963 — Guidebook; Stratigraphic Study of Pleistocene to Middle Eocene, Houston, Texas $1.50
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