Dr. W. Maurice Ewing, Chief of the Division of Earth and Planetary Sciences in the Marine Biomedical Institute of the University of Texas Medical Branch at Galveston, and Professor of Geological Sciences at the University of Texas at Austin, was born in Lockney, Texas, on May 12, 1906. He died in Galveston, Texas, on May 4, 1974. He is survived by his widow, Harriett Greene Ewing, whom he married in 1965, two sons, Jerome H.K. Ewing and Peter Ewing, and two daughters, Hope H. Ewing and Margaret S. Ewing.

Dr. Ewing received his B.A. in Physics and Mathematics from Rice University in 1926. He continued his education at Rice University completing his work in Physics for the M.A. in 1927 and the Ph.D. in 1931.

Dr. Ewing taught at Rice University, the University of Pittsburgh, Lehigh University and worked at the Woods Hole Oceanographic Institution for some five years.

Following his stint at Woods Hole Ewing went to Columbia University where, largely through his efforts, the Lamont Geological Observatory was established. He served as its first and only director from its founding in 1949 until he went to Galveston in 1972.

The Observatory quickly forged ahead and became the leading organization for geophysical studies of the ocean basins. By the time Ewing left Lamont its ships had logged far more miles across ocean basins and ridges and its laboratories had developed more instrumentation for these studies than any other comparable group. These accomplishments were due very largely to Ewing’s boundless energy and his unending stream of novel, but workable, ideas.

Such attributes naturally attracted superior students. Ewing worked with more than 200 graduate students while he was at Lamont and they are continuing to develop and teach his ideas, as well as novel ones of their own, over a substantial portion of the globe.

Ewing’s outstanding contributions to Geophysics were recognized by the award of eleven honorary degrees by universities in the U.S. and four foreign countries. He was also given 15 important medals and prizes and was elected to honorary membership in many scientific societies at home and abroad.

Today the Earth Sciences are in the midst of an exciting revolution of thought with the development of the new concept known as plate tectonics. Evidence on which this new scheme is based has come largely from exploration of the deep oceans. It has been said that Maurice Ewing, more than any other single person, laid the foundations for this revolution.
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It has been an honor to serve as President of the Gulf Coast Association of Geological Societies in its Silver Anniversary year. The Association is stronger than ever and this is a tribute to those who have given of their time and talents over the past 25 years.

The Past Presidents of G.C.A.G.S. are the honored guests for this year’s convention. It speaks well of their efforts to find the Association in excellent financial condition and continuing to serve as a forum for technical excellence, and a focus point of fellowship among themselves.

Our program chairman, Emil Monsour, has received an overwhelming response to his call for papers and has put together a program that will do Jackson and the Association proud.

If these past years are any indication of things to come, our next 25 years should be something to look forward to.

William H. Moore
President
Gulf Coast Association of Geological Societies
The theme of the 1975 Annual Meeting of the Gulf Coast Association of Geological Societies and the Gulf Coast Section of the Society of Economic Paleontologists and Mineralogists is for obvious reasons “The Silver Anniversary.” It is a great pleasure and a specific privilege for the Mississippi Geological Society to serve as hosts for this special meeting.

To have served as General Chairman of the Silver Anniversary Meeting and have the privilege of working with those responsible for its success has been a sincere honor. The full credit for the success is due to the diligent and dedicated committee chairmen and their assistants — the results speak for themselves.

Thanks
Charles H. Williams, Jr.
General Chairman
Twenty-Fifth Annual Meeting
REPORT OF THE EDITOR

The Transactions has always been an excellent vehicle for the dissemination of geological knowledge among geologists working in the Gulf Coastal Province as well as a primary source of information for others wishing to become familiar with the geology of the region. It has consisted of papers of local and regional interest, papers of general interest, and papers which relate geological processes of the Gulf Coastal Province to global events.

The diverse and excellent assemblage of papers for the technical session is due largely to the efforts of the program chairman, Emil Monsour, who contacted most of the authors and assisted the editor in obtaining papers by the deadline. Many former editors have called attention to the problems encountered in obtaining suitable illustrations from authors, and the present volume is no exception. The technical assistance of James C. Bishop, Director of Communication Services and Assistant Professor of Journalism at the University of Southern Mississippi, was a key factor in obtaining satisfactory prints from the variety of materials received.

The task of editor has been greatly simplified not only by the efforts of Emil Monsour but also through the assistance of printing chairwoman Sarah Childress.

The editor expresses his sincere appreciation to the authors whose diligence provided us with many pages of near flawless manuscript as well as stimulating reading.

Both editor and authors have experienced the pangs of deadlines and the joys of completing a time-consuming task - the results of which are herein presented for the enjoyment and edification of our readers.

Oscar L. Paulson, Jr.
1975 Transactions Editor
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XI
The A. I. Levorsen Memorial Award, given by the A.A.P.G. for the best paper giving special emphasis to creative thinking in the field of petroleum geology, and also the first place award for G.C.A.G.S. was awarded to Donald H. Kupfer for his paper, "Shear Zones in the Gulf Coast Salt Delineate Spines of Movement."

Professor Donald H. Kupfer has taught Structural Geology at LSU, Baton Rouge since 1955. He came to LSU after ten years with the U.S. Geological Survey, having worked on various mineral deposits, especially the salines. This led him to become interested in the Louisiana salt domes shortly after his arrival at LSU. His interests include the internal structure of salt, methods and times of movement, and the effect of salt on the surrounding sediments and sedimentation processes in general. He has become particularly interested in the Five Island salt domes and their growth history.

Dr. Kupfer has visited and studied the salt domes in Spain, Germany, Iran, Nova Scotia and Mexico, as well as many parts of the United States. His other interests include strike-slip and thrust faulting. He has mapped along the San Andreas and Death Valley strike-slip fault zones and similar faults in New Zealand, Turkey, Scotland, Alaska and Guatemala. As an economic geologist he has explored extensively for molybdenum, copper, boron, ceramic clays, talc, and silica.

Dr. Kupfer graduated from Cal Tech in 1940, UCLA in 1942, and received his Ph.D. from Yale in 1952. He spent two years in the Navy in World War II, and has worked for the U.S. Geological Survey, the National Park Service, and Gladding McBean (Franciscan ware ceramics). His latest interests are geosynclines, the use of computers in structural geology, and the energy reserves of the United States.

Professor Kupfer's early interests were in field geology and the economic geology of the non-metallic minerals, particularly talc, borates, pegmatites, and construction materials. As a structural geologist he has mapped metamorphic and granitic rocks and has been particularly concerned with thrust and strike-slip faults, having mapped the latter in many parts of the world. During the last twenty years his interests have begun to focus more on the Gulf Coast, particularly the tectonics of salt domes, growth faulting, and geosynclines. He has published papers on all of the above and has recently published papers on the tectonic framework of the Gulf Coast.

Recent student research problems have emphasized the use of computers to perform routine tasks such as the preparation of statistical diagrams (stereographic fabric plots, histograms), contour maps (structural, isopachous, trend, residual), and statistical calculations. Recent problems have involved joining in the Colorado Front Range, foliation patterns in the metamorphic rocks of the Wet Mountains, Colorado, and the times and type of movement of salt into salt domes in southern Louisiana.
Second place award was to James M. Coleman (speaker), L.D. Wright, J.N. Schyda, and T. Whelan for their presentation of "Mass Movement of Mississippi River Delta Sediments."


Principal research interests and activities: coastal morphodynamics (deltas). Comparisons and process-form relationships in coastal regions. Field work in Australia, Malaya, Thailand, Bangladesh, Mexico, Romania, Brazil, Spain, Africa (Senegal), Canada, Alaska (Arctic North Slope), Louisiana.

Lynn Donelson Wright, born in Nashville, Tennessee, in 1940, received his B.A. degree from the University of Miami in 1965, M.A. from University of Sydney (Australia) in 1967, and Ph.D. from L.S.U. in 1970. He affiliated with Louisiana State University at his graduation and is now Assistant Professor of Geology, as well as Associate of Research with the School's Coastal Studies Institute. He has conducted several delta seminar groups, and his principal research interests are coastal morphodynamics and water mixing and exchange. He has participated in field studies in Australia, Brazil, Alaska, the Gulf of Mexico and the Atlantic Seaboard.

Dr. Wright is a member of American Geophysical Union and the Association of American Geographers.

J. N. Schyda received his B.S. degree in physics from San Fernando State College in 1966. In 1972 he earned his Ph.D. in physical oceanography from the University of California in San Diego.

Dr. Schyda is presently an Associate Professor at the Coastal Studies Institute of Louisiana State University.

T. Whelan received his B.A. degree in chemistry from Austin College in 1966, his M.A. degree in chemistry from the University of Texas in chemistry in 1968, and his Ph.D. from Texas A & M in 1971 with emphasis on chemical oceanography.

Dr. Whelan is presently an Associate Professor at the Coastal Studies Institute of Louisiana State University.
Third place award, for his paper "Geopressures and Secondary Porosity in the Deep Jurassic of Mississippi", went to Calvin A. Parker.

Cal Parker was born and raised in Chicago, Illinois. He earned a B.S. degree from Northwestern University in 1953 with a major in Geology and minors in Mathematics and Economics. He earned a M.S. in 1956 and Ph.D. in 1958 from the University of Wisconsin with a major in Geology and minor in Soils. In 1957, Dr. Parker joined Shell Oil Company as a Production Engineer and held subsequent working assignments in Midland, Texas, Coral Gables, Florida (research on Recent carbonates), The Hague, The Netherlands (production geology for Middle East), Seria, Brunei (Borneo), Houston, Texas (research on geopressures), and New Orleans, Louisiana where he is currently a Senior Staff Geological Engineer assigned to Shell's Onshore Production Division. Dr. Parker's specialty is oil and gas field development, especially carbonate reservoirs, and he handles reservoir assignments involving specialization in petrography, petrophysics, geophysics and geochemistry. He is a Certified Petroleum Geologist, member of A.A.P.G., Sigma Xi, New Orleans Geological Society, and is listed in American Men of Science.
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 succeed 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 customarily 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 thus 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 affect 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.
ARTICLE VI – Funds
The funds of this Association shall be deposited in any national bank or Federally insured Savings and Loan Association selected by the Executive Committee, to the credit of this Association, or invested in U.S. Government Bonds at the discretion of the Executive Committee.

ARTICLE VII – Amendments
Amendments to this Constitution may be proposed by the Executive Committee, or by any two member societies. Proposed amendments shall be submitted to each of the member societies in writing. It shall require an affirmative vote of three-fourths of the member societies to ratify an amendment to this Constitution.

ARTICLE VIII – Later Affiliation
Non-member Geological Societies in the Gulf Coast Area which are affiliated with AAPG may petition the Executive Committee for membership and shall be accepted by an affirmative vote of three-fourths of the Executive Committee.

AMENDMENT I
Any member society may resign from this Association at any time by written notice to the Executive Committee. There shall be no obligation to transfer to such resigning society any portion of this Association’s funds.

AMENDMENT II
This Association shall terminate at such time as a majority of the member societies shall so vote. Upon dissolution all funds and other property shall be divided equally among the member societies.

BY-LAWS

I. COMMITTEES:
The President, with the approval of the Executive Committee, shall appoint the Annual Meeting Chairman, and the following permanent committees:
   A. Publications
   B. Advertising
   C. Publicity
Appointment to these committees shall be for a term of one year.

1. Annual Meeting Chairman
   The Annual Meeting Chairman shall direct the staging of the annual meeting, and shall have the authority to appoint such additional committees as he deems necessary.

2. Publications
   The Publications Committee shall be responsible for obtaining papers for presentation at the annual meeting, and for editing and publishing the annual Transactions. It shall endeavor to stimulate geologists in the Gulf Coast to prepare papers which can be collected and published in the Transactions, symposium or other form in order to further the object of this Association as set forth in Article II of the Constitution. This committee shall be composed of one member from each of the affiliated societies.

3. Advertising
   The Advertising Committee shall be responsible for obtaining advertisements in the publications of this Association, as directed by the Executive Committee. This committee shall be composed of one member from each of the member societies.

4. Publicity
   The Publicity Committee shall be responsible for obtaining maximum national and local publicity of the activities of this Association. Also it shall be the responsibility of this committee to stimulate interest and participation in association affairs. The Executive Committee shall function as the Publicity Committee.
   The President, with the approval of the Executive Committee, may appoint such additional committees as are necessary to conduct the business of this Association.

II. TREASURER:
The Treasurer shall have the authority to issue checks against the Bank account of this Association on his sole signature, but in the event of his absence or incapacity to act, withdrawals or payments by check may be made on the signature of the President during the continuance of the absence, or incapacity, of the Treasurer. In this event, the identity and authority of the President, and the circumstances relating to the absence or incapacity of the Treasurer, shall be certified by the Executive Committee, if so required by the depository. The Treasurer shall submit a financial report at each meeting of the Executive Committee and shall keep a set of books in accordance with good accounting practices. He shall submit the books for auditing at the end of his term of office.
   The Treasurer shall keep an inventory, and storage record, of back publications and equipment owned by this Association. The office of Treasurer shall be bonded as directed by the Executive Committee.

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

IV. There shall be no dues.
<table>
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<tr>
<th>YEAR</th>
<th>HOST SOCIETY</th>
<th>PRES.</th>
<th>V. PRES.</th>
<th>SEC.</th>
<th>TREAS.</th>
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<td>1951</td>
<td>New Orleans</td>
<td>L. Bowling</td>
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<td>J. S. Spencer</td>
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<td>Houston</td>
<td>W. R. Canada</td>
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<td>W. A. Peterson</td>
<td>F. H. Webster</td>
<td>C. C. Barber</td>
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<td>M. W. Beckman</td>
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<td>A. F. Scott</td>
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<td>1959</td>
<td>Houston</td>
<td>G. C. Hardin, Jr.</td>
<td>L. Harvey</td>
<td>J. F. Moss</td>
<td>J. A. Wheller</td>
<td>O. G. Bell</td>
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<td>M. F. Kirby</td>
<td>D. N. Osburn</td>
<td>W. W. Woolfolk</td>
<td>E. G. Jeffreys</td>
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<td>1967</td>
<td>San Antonio</td>
<td>W. L. Stapp</td>
<td>M. D. Horton</td>
<td>M. L. Frazier, Sr.</td>
<td>L. C. Bryant</td>
<td>M. O. Turner</td>
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<td>1972</td>
<td>Corpus Christi</td>
<td>D. R. Boyd</td>
<td>F. M. Schall</td>
<td>M. H. Oakes</td>
<td>J. E. Meltoni</td>
<td>J. M. Sides</td>
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GULF COAST SECTION
SOCIETY OF ECONOMIC
PALEONTOLOGISTS AND MINERALOGISTS

OFFICERS
President: Adams, Emmett R., Shell Oil Company, P.O. Box 60775, New Orleans, Louisiana 70160.
Vice-President: Coutour, Clifton A., Amoco Oil Company, P.O. Box 50879, New Orleans, Louisiana 70150.
Secretary: Elliott, Herbert A., Jr., Cities Service Oil Company, P.O. Box 50408, Tulsa, Oklahoma 74150.
Treasurer: Curtis, Doris M., Shell Development Company, Box 481BRC, Houston, Texas 77001.
Past President: Picou, Edward B., Jr., Shell Oil Company, P.O. Box 60124, New Orleans, Louisiana 70160.
Program Chairman: Johnson, Wendell, Millsaps College, Jackson, Mississippi 39210.
Editor: Petersen, Lee, Cities Service Oil Company, P.O. Box 12026, Jackson, Mississippi 39211.

BUSINESS REPRESENTATIVES

ALABAMA & GEORGIA
Tuscaloosa: Brett, C. Everett, Department of Geology, University of Alabama, Box 1945, University, Alabama 35486.

FLORIDA
Tallahassee-Gainesville: Wise, Sherwood W., Department of Geology, Florida State University, Tallahassee, Florida 32303.
Tampa-Miami: O'Donnell, Edward, Department of Geology, University of South Florida, Tampa, Florida 33620.

LOUISIANA
Baton Rouge: Phillips, Alvin M., Jr., School of Geosciences, Louisiana State University, Baton Rouge, Louisiana 70803.
Lafayette: Barnett, Richard S., Continental Oil Company, P.O. Box 51266 OCS, Lafayette, Louisiana 70501.
New Orleans: Esker, George C., III, Texaco, Inc., P.O. Box 60252, New Orleans, Louisiana, 70160.

MISSISSIPPI
State College: Russell, Ernest E., Department of Geology and Geography, Mississippi State University, State College, Mississippi 39762.

TEXAS
Austin: McBride, Earl F., Department of Geology, University of Texas, Austin, Texas 78712.
Beaumont: Panpe, William R., Department of Geology, Lamar University, P.O. Box 10031 LU Station, Beaumont, Texas.
College Station: Ahr, Wayne M., Department of Geology, Texas A & M University, College Station, Texas 77843.
Dallas: Morin, Ronald W., Mobil Oil Corporation, Exploration Services Center, Stratigraphic Laboratory, P.O. Box 900, Dallas, Texas 75221.

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

The Gulf Coast Section of the Society of Economic Paleontologists and Mineralogists continues to be the most active section of the SEPM. New Orleans, Lafayette and Houston Chapters were very active again this year. Our members in each city had quarterly luncheon meetings with most interesting speakers. New Orleans was honored to have our national President, Dr. Gerald Friedman, speak at its January luncheon. These local meetings are arranged by our business representatives, whose efforts are most appreciated by the Section membership.

Our 1975 editor, Lee Petersen, and Program Chairman, Wendell Johnson, have arranged an outstanding technical program. Through their efforts, we have had a well rounded program again this year. We have papers on Sedimentation, Stratigraphy, Ecology, Evolution, Paleontology, Petrology, Mineralogy, and Marine Geology, thus covering the SEPM spectrum. Augmenting the technical session, Dr. Tanner has put together a symposium on Beach Erosion in Middle America. Middle America as used in the symposium is the Gulf Coast.

This year our section is co-sponsoring with the GCAGS a field trip to type localities in central Mississippi. The success of this trip is due to the efforts of David Williamson, Jim May, Wylie Poag and Clifton Couture. Many people have not visited or collected from these localities since the 50's.

The membership voted on two important amendments to the Constitution this year. One provided for filling vacancies which occur in the office of vice-president, secretary or treasurer; the other that a president-elect be elected each year so the society will have continuity in the Executive Council. Thanks goes to Jerry Stude for drafting these amendments.

Dick Zingula, our Houston representative, has taken on the task of handling the GCS-SEPM publications. Cambe Geological Services who had handled them in the past wanted them out of their building. Since Dick took over we have sold out of many of our publications and others are in short supply. Thank you, Dick, from the GCS membership.

Our treasurer, Doris Curtis, suggested that we pay off our loan of $1,500 from GCAGS for the printing of the Nannofossil Symposium. This has been accomplished.

I thank William H. Moore, GCAGS president, and Charles Williams, chairman of the 1975 meeting, for their cooperation with me and my committees.

It has been a pleasure and an honor to serve you as president this year. I thank the officers who served with me: Clifton Couture, vice-president, Herbert Elliott, Jr., secretary, Doris Curtis, treasurer, and Ed Picou, past president.

Finally, I salute Harold Anderson and Lyman Toulin to whom we are presenting honorary membership in our Gulf Coast Section, and extend my congratulations to the winners for best papers presented at the 1974 Lafayette meeting: Gerald M. Friedman, first, C.R. Berquist and W.F. Tanner, second, and R.J. Moiola, A.B. Spencer and D. Weiser, third.

Emmett R. Adams
President, Gulf Coast Section - SEPM

XIX
GULF COAST SECTION OF S.E.P.M.
HONORARY MEMBERSHIP AWARDS

In order to honor members of our society who have made outstanding contributions to the sciences 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 the S.E.P.M. is authorized by its constitution to elect honorary members. In recognition of their contributions to the science of Gulf Coast petroleum geology and in appreciation of their untiring efforts on behalf not only of this society but also the American Association of Petroleum Geologists and the Geological Society of America, the Council is pleased to elect Lyman Dorgan Toulmin and Harold Veral Andersen to honorary membership.

Lyman Dorgan Toulmin

Lyman Dorgan Toulmin was born in Mobile, July 4, 1904 and lived his childhood in the Mobile area in a community named for his family, Toulminville. From his earliest childhood Lyman took an interest in Earth Science and was an avid investigator of plants, animals, insects, and later geology. He developed a particularly intensive interest in paleontology.

Lyman received his A.B. degree at Alabama in 1926, a Master's in 1934, and a Ph.D. in geology at Princeton in 1940. Along the way, toward his doctorate, however, he served as a deck boy on a freighter to Europe, and as a teacher in the Mobile County high schools from 1929 to 1934, teaching geology, physics, and chemistry. He also served as Instructor and Professor of Geology at Texas A. & M. from 1938 to 1942.

From 1942 through 1945, Lyman was staff geologist with the Geological Survey of Alabama, during which time he developed a long-range program, mapping the Tertiary and Cretaceous rocks in Alabama. This program has been carried on to completion by the State Survey and the results published as a series of geologic maps for each county in the Coastal Plain area of the state — 1/2" and 1" to the mile.

From 1945 to 1948, he became Associate Professor of Geology at Birmingham Southern. From 1948 to June 1975 and retirement, he was Professor of Geology at Florida State University.

Though throughout his professional career he was primarily a teacher, he was an avid field geologist and worked W.A.E. with the U.S. Geological Survey, Water Resources Division, Tuscaloosa, Alabama, from 1946 to the present. On retirement, beginning October 1, he joined the Geological Survey of Alabama as a senior staff advisor working on his special projects in stratigraphy and paleontology.

Lyman Toulmin, teacher, researcher, persistent explorer of the paleontology and stratigraphy of the Gulf Coastal Plain of the Southeast, wrote many publications, a select reference list of which is attached. He served as professor and advisor on many Master's and Doctoral theses and gave generously of his time teaching others to become good geologists. In addition, he was active in many technical societies, was a Councillor of the Society of Economic Paleontologists and Mineralogists, President of the Gulf Coast Section of the Society of Economic Paleontologists and Mineralogists, Editor of the American Association of Petroleum Geologists, Secretary-Treasurer of the Southeast Section, Geological Society of America, and Fellow of the Geological Society of America. He was a member of Sigma Xi and Phi Beta Kappa.

At the Southeast Section meeting of GSA at Memphis, Tennessee, April 9 - 12, 1975, the symposium, "Ancient Analogies of Depositional Environments," was held in honor of Dr. Toulmin for the contributions he has made to "Coastal Plain Geology in the Southeast" and as a teacher of hundreds of students.
Harold Veral Andersen

Harold Veral Andersen has trained a significant proportion of the micropaleontologists now active in the Gulf Coast. There is hardly an oil company division or office that does not have at least one geologist that went through Doc Andy’s “bug-picker” training program.

Harold Andersen was born in Iowa in 1907, but spent much of his youth in the high plains of eastern Colorado. After completing high school in Yuma, Colorado, he attended the University of Denver on a one-year scholarship. His formative years coincided with the great depression era, and Andy’s education was interrupted numerous times by the necessity of earning a living. During the late 1920s and through the 1930s Andersen worked as a tipple-man in a coal mine, draftsman for a plumbing contractor, grocery clerk, field guide, interior decorator, cabinet maker, and as field supervisor of a statewide archeological investigation of Alabama. During the same interval, he attended the University of Denver, Chicago Institute of Technology, Armour Institute of Technology, and the University of Nebraska.

In 1940 he completed his A.B. degree in geology at Nebraska and started on a graduate program. The graduate work was postponed in order to return to the Alabama Geological Survey as Director of Technical Studies in Archeological Artifacts.

World War II again interrupted Andy’s professional career, and he entered the U.S. Army Corps of Engineers, in which he worked up to the rank of captain and served in Europe until his discharge in 1946. That fall, Andersen, the writer, and a number of other discharged veterans commenced a graduate program in geology at Louisiana State University under the guidance of men such as H.V. Howe, H.N. Fisk, and R.J. Russell. Howe’s influence led Andersen into the field of micropaleontology, in contrast to vertebrate paleontology, which had been an interest at Nebraska. Fisk’s general work in Gulf Coast stratigraphy also influenced Andersen’s studies.

At the time, H.N. Fisk was involved in studies of the Mississippi River valley for the Army Corps of Engineers, and his interest led Andy and the writer into a joint study of the Mississippi delta, with emphasis upon the mudlump islands at the mouth of the passes. Andy discovered a prolific microfauna in some of the diapiric mudlumps, and this became the subject of his doctoral dissertation. Many of you who read this will remember the “mudlump fauna” that played a major role in your initiation to the study of micropaleontology under Doc Andy’s supervision.

Another interruption in Andersen’s career occurred in 1950, when he was recalled to active military duty with the Army Engineers as a consequence of the Korean War. Although he grumbles about the two years wasted, his service with the Engineers Training Publications Department led to his writing a technical manual on geology. The experience renewed Andy’s interest in teaching introductory geology, and for the past two decades at Louisiana State University, he has handled at least one section of historical or physical geology each semester. The records are not exact, but more than 4,000 students have taken freshman geology under his tutelage.

In the early 1950s, Andersen began conducting a summer course for graduate students that involved field geology mapping in Sabine Parish. This continued for a number of years and ultimately led to the publication of Louisiana Geological Survey Bulletin #34, The Geology of Sabine Parish. Similar work in Natchitoches Parish followed. It is a mark of the man that “The Geology of Natchitoches Parish” has not yet been published. There still are a few little geological problems that remain to be “ironed-out” before publication.

Although Harold Andersen is approaching retirement, his interest in paleontology has not slackened. He is one of four Americans invited to attend the 14th Annual Micropaleontological Colloquium to be held in Rumania in September, 1975. By the time of the G.C.A.G.S. meeting, he will have returned with a valuable addition of European type locality samples for the Louisiana State University museum collection.

H.V. Andersen’s career and interest in the SEPM as a long-time member and officer of the Gulf Coast section make it fitting that he be added to the roll of Honorary Members.

James P. Morgan

XXI
First Prize went to Gerald M. Friedman for "What makes and breaks porosity in Limestone."

Friedman is Professor of Geology at Rensselaer Polytechnic Institute. Prior to joining the Faculty at Rensselaer he served as geologist and supervisor with Amoco Oil Company (then Stanolind and Pan American) in Oklahoma, worked as a Consulting Geologist in Canada, and held a teaching position at the University of Cincinnati. He is a past President of the National SEPM, a past Editor of the Journal of Sedimentary Petrology, and a past President of the Association of Earth-Science Editors. At the present time he serves as Vice President of the International Association of Sedimentologists, and is a nominee for the Presidency.

Dr. Friedman received his B.S. degree from the University of London (England) and his M.A. and Ph. D. degrees from Columbia University. His current interests in sedimentology are in the fields of carbonate and evaporite sedimentation and in the diagenesis of limestones. He has just completed a textbook on “Principles of Sedimentology” co-authored with John E. Sanders. He is also editor or co-editor of two symposia volumes on carbonate rocks, and he functions as lecturer in continuing education on exploration in carbonate rocks. Dr. Friedman’s biography is included in Who’s Who in America and Who’s Who in the World.

Second Prize went to William F. Tanner for co-authorship of the paper “Analysis of Water-Level Rise Effects on Littoral Transport.”

Dr. Tanner is Regents professor of geology, Florida State University in Tallahassee. He received his B.A. from Baylor, M.A. from Texas Tech, and Ph.D. from Oklahoma University. He was formerly employed by Texas Tech, Oklahoma Baptist University, Oklahoma University, Shell Oil Company, Carter Oil Company, Humble Oil Company, Arkansas Geological Survey, Oklahoma Geological Survey. Dr. Tanner has served as consultant for various organizations in the general areas of petroleum geology and beach erosion. He has done field work in the United States in the southern and south-western states and the Rocky Mountain area; outside the United States in Canada, Mexico, Panama, Venezuela, Colombia, Ecuador, Peru, Chile, Uruguay and Brazil. His professional publications number 220. Dr. Tanner has been editor of Coastal Research Notes since 1962. Sediment transport is Dr. Tanner’s chief specialty.
To C.R. Berquist, Jr., co-author, second prize paper. Mr. Berquist earned a B.E. degree in Computer Science from Vanderbilt University and an M.S. degree in Geology from Vanderbilt University. He is a doctoral student in geology at Florida State University and is interested in modelling of geologic processes and structural geology.

Third Prize went to Richard J. Moiola, Research Associate, Mobil Research and Development Corporation, Dallas, for co-authorship of the paper "Differentiation of Modern Sand Bodies by Linear Discriminant Analysis." Dr. Moiola received his B.A. and Ph.D. degrees from the University of California, Berkeley. He has been with Mobil since 1963 and was recently a Lecturer at the University of Texas, Dallas. Dr. Moiola's research interests and publications are primarily concerned with the sedimentology of modern and ancient sand bodies.

To Dan Weiser, co-author, third prize paper, who is a Senior Research Mathematician, Mobil Research and Development Corporation, Dallas. Dr. Weiser received his B.A., M.A. and Ph.D. degrees in mathematics from Rice University (1954, 1956, 1958). Since then he has been employed as an applied mathematician by Mobil. Dr. Weiser's research interests include mathematical modeling and probability methods in oil exploration, and his publications range from an evaluation of textural parameters to a model of a geochemical process.
To Alexander B. Spencer, co-author, third prize paper. Dr. Spencer received his B.S. degree from Texas Western College, El Paso in 1955, his M.S. degree from the University of Oklahoma in 1961 and his Ph.D. degree from the University of Texas, Austin in 1966. He was a Senior Research Geologist with Mobil Research and Development Corporation in Dallas from 1967-75, and is presently a Senior Staff Geologist with Mobil Oil in Tripoli, Libya. Dr. Spencer's major interest is the petrology of sandstones.
Type Localities of the Gulf Coast
Units I, II, and III
Description (each) .......................................................... $2.50

Field Trip Guidebooks
1961 - Middle Eocene, Houston County, Texas ........................................ $3.00
1962 - Little Stave Creek—Salt Mountain Limestone,
       Jackson, Alabama ................................................................ $3.00
1967 - Selected Cretaceous and Tertiary Depositional
       Environments of Texas ...................................................... (out of print) $4.00
1969 - Late Cenozoic Stratigraphy of Southwest Florida .......................... $3.00
1969 - Geological Guidebook to Neogene Sections in
       Jamaica, West Indies ....................................................... $1.80
1970 - Lonestar, Texas Iron Ore Deposits ........................................ (out of print) $4.90
1973 - Proceedings of Symposium on Calcareous Nannofossils ............... $5.00

Order from CAMBE Geological Services, Inc., 1809 Louisiana Street, Houston, Texas 77002

Members are entitled to a 20% discount.
Include Sales Tax—Texas 5%; Louisiana 5%.
All foreign orders, add $1.00 per volume.
PUBLICATIONS OF
THE GULF COAST ASSOCIATION OF GEOLOGICAL SOCIETIES

Following is a list of available publications of the G.C.A.G.S. They may be ordered from Cambe Geological Services, Inc., 1809 Louisiana St., Houston, Texas 77002.

TRANSACTIONS

*Volume 1 (1951) New Orleans ................................................. $ 7.00
Volume 2 (1952) Corpus Christi .............................................. $ 7.00
Volume 3 (1953) Shreveport .................................................. $ 7.00
Volume 4 (1954) Houston ..................................................... $ 7.00
Volume 5 (1955) Biloxi ......................................................... $ 7.00
*Volume 6 (1956) San Antonio ................................................ $ 9.00
Volume 7 (1957) New Orleans ................................................. $ 9.00
*Volume 8 (1958) Corpus Christi ............................................ $ 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 14 (1964) Corpus Christi ......................................... $ 9.00
Volume 15 (1965) Houston .................................................... $ 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

Index (1951-65) Comprehensive Index of G.C.A.G.S. Publications ................................................. $ 1.50
Bibliography of Gulf Coast Geology (1970) 2 vol. set ................................................................. $ 9.50
Fault and Salt Map of South Louisiana 52” x 106” edited by M. E. Wallace, Jr. (1966) folded $ 8.00 rolled $ 9.00

Bathymetry of the Gulf of Mexico, Map by Elazar Uchapi (1967) .......................................................... $ 1.50

Lower Wilcox Depositional System, Texas, Map, pp. 106-107, Vol. 17 (1967) ........................................... $ 1.50

Padre Island National Seashore Guidebook (1972) .......................................................... $ 4.75

Include Sales Tax — Texas 5%
— Louisiana 5%

All Foreign orders add $1.00/volume

ALL ORDERS MUST BE PREPAID (EXCEPT STANDING ORDERS)
*Volumes 1, 6, 8 and 14 are out of print.

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