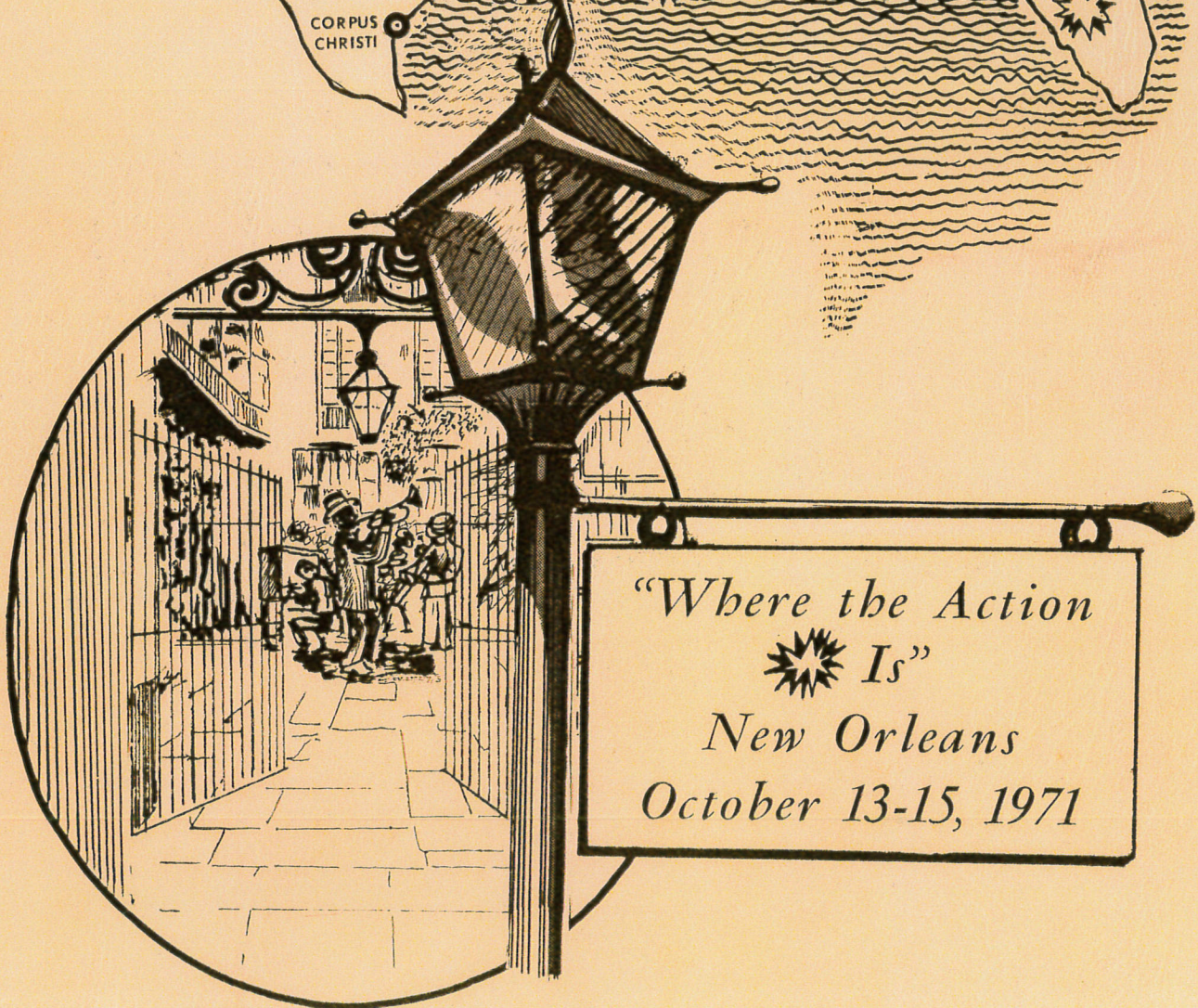


Neil M. Lathvan

GULF COAST ASSOCIATION OF GEOLOGICAL SOCIETIES TRANSACTIONS

21st ANNUAL MEETING

ROBERT G. JACOBSEN



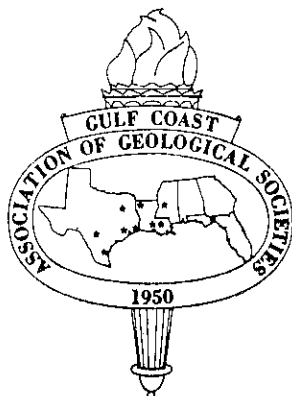
*"Where the Action
★
Is"*
New Orleans
October 13-15, 1971

Will M. Sullivan

TRANSACTIONS

Gulf Coast Association of Geological Societies

VOLUME XXI 1971



A Section of the American Association of Petroleum Geologists

WILLIS W. TYRRELL, JR.

Editor

HARRY W. ANISGARD, SEPM Editor

Prepared for the

TWENTY-FIRST ANNUAL MEETING OF THE GULF COAST ASSOCIATION OF GEOLOGICAL SOCIETIES

AND REGIONAL A.A.P.G. MEETING

held in cooperation with the

SOCIETY OF ECONOMIC PALEONTOLOGISTS AND MINERALOGISTS

OCTOBER 13, 14, 15, 1971

NEW ORLEANS, LOUISIANA

Published at

New Orleans, Louisiana

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DEDICATION OF 1971 TRANSACTIONS VOLUME TO JULES BRAUNSTEIN



The dedication of TRANSACTIONS has become an important way of honoring outstanding Gulf Coast geologists with a lasting tribute to the man and his work.

To this list of distinguished scientists, it is a pleasure to add Mr. Jules Braunstein, Shell Oil Company, New Orleans, Louisiana.

Mr. Braunstein has worked for thirty-four years on Gulf Coast geological problems and lived and worked in four of the ten GCAGS cities. During his tenure in the Gulf Coast, he has worked on special problems from Mexico to Florida with the primary emphasis on the Eastern Gulf Coast. His contributions to the geology of the Gulf Coast are widely recognized, but also important are his contributions to the geological community through his tireless efforts toward a better relationship between the disciplines that make up the Petroleum Exploration team. Mr. Braunstein has participated as a leader of and contributor to numerous local and regional professional societies, and can be considered the premier editor of the Gulf Coast Geological community.

Active in community affairs, he has exhibited a zest and energy for getting things done that is not often encountered. Knowledge and ability coupled with a zestful approach has produced a man of considerable accomplishments, a man of professional stature, and a man who has made an important and lasting contribution to the Gulf Coast Association of Geological Societies.

BIOGRAPHY AND BIBLIOGRAPHY — JULES BRAUNSTEIN

BORN:

Buffalo, New York, November 4, 1913.

EDUCATED:

Buffalo public schools.
University of Buffalo 1929-1931.
George Washington University 1931-1933
(B. S. Geology, 1933).
Columbia University 1933-1937
(M. A. Geology, 1936).

EMPLOYMENT:

Shell Oil Company, September 1937-present.
1937-1941—Micropaleontologist, Houston
1941-1943—Stratigrapher, Shreveport
1943-1952—Stratigrapher, Jackson
1952-1957—Geologist, New Orleans
1957-1964—Area Stratigrapher, New Orleans
1964-present—Staff Geologist, New Orleans

MEMBERSHIP IN PROFESSIONAL SOCIETIES:

AAPG, AAAS (Fellow), GSA (Fellow),
SEPM, SEPM—Gulf Coast Section, American Society for Oceanography, Assoc. Mexicana Geologos Petroleros, International Association of Sedimentologists.

ACTIVITIES IN GCAGS MEMBER SOCIETIES:

Mississippi Geological Society:
Co-Chairman Cretaceous Committee
1946.
Contributions to Field Trip Guidebooks
1948, 1950, 1952.
New Orleans Geological Society:
Vice President 1958.
President 1960.
Director 1961, 1969-1972.
Editor, Oil and Gas Fields of Southeast Louisiana, Vol. I, Vol. II.

GCAGS:

Editor, Transactions, 1957.
Editor, Transactions, 1962.
Editor, Bibliography of Gulf Coast Geology, 1970.
Member of Board, representing New Orleans Geological Society 1962-1963.

ACTIVITIES IN OTHER SOCIETIES:

GSA:

Co-Chairman, Registration Committee, 1955 meeting.
Co-Chairman, Technical Program Committee, 1967 meeting.

AAPG:

General Editor, 1964-present.
Chairman, Technical Program Committee, and Coordinator Technical Program, 1965 meeting.
Chairman, Committee for Publication, 1970-present.
Editor, Memoir 8, Diapirism and Diapirs (with G. D. O'Brien).

AGI:

Member of Publication Committee.

SEPM:

Chairman Technical Program Committee (Mineralogy and Sedimentary Petrology), 1960 meeting.
SEPM, Gulf Coast Section:
Member, Constitution Committee.
President, 1970-1971.
American Society for Oceanography, New Orleans Area Chapter:
Charter Member, Board of Directors.
President, 1968-1969.
Honorary Adviser, Board of Directors, 1970-present.

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- 1946 Cretaceous correlation chart: Mississippi Geological Society.
- 1948 Bibliography, Catahoula — Chickasawhay — Vicksburg — Jackson of Mississippi: Mississippi Geological Society Guidebook, 6th Field Trip, p. 37-48.
- 1949 Bibliography, Paleozoic and Pre-Cambrian rocks of north Alabama, northeast Mississippi, and west-central Tennessee: Mississippi Geological Society Guidebook, 7th Field Trip, p. 72-83.
- 1950 Subsurface stratigraphy of the upper Cretaceous in Mississippi: Mississippi Geological Society Guidebook, 8th Field Trip, p. 13-24.
- 1952 Notes on stratigraphy of the Claiborne Group in the subsurface of Mississippi and Alabama: Mississippi Geological Society Guidebook, 9th Field Trip, p. 44-45.
- 1953 Fracture-controlled production in Gilberttown field, Alabama: Am. Assoc. Petroleum Geologists Bull., v. 37, no. 2, p. 245-249.
- 1955 Habitat of oil in the eastern Gulf Coast, in Habitat of oil: Am. Assoc. Petroleum Geologists, p. 511-522.
- 1957 The habitat of oil in the Cretaceous of Mississippi and Alabama, in Mississippi Geological Society, Mesozoic-Paleozoic Producing Areas of Mississippi and Alabama, v. 1, p. 1-11.
- 1958 Eastern Gulf Coast oil and gas geology: World Oil, v. 146, no. 7, p. 133, 135-139, 158; reprinted in Georgia mineral Newsletter, v. 12, no. 1, p. 12-16, 1959.
- 1959 Subsurface stratigraphy of the Upper Cretaceous in Mississippi, in Upper Cretaceous outcrops, northeast Mississippi, west-central Alabama: Miss. Geol. Soc. Guidebook, 14th Field Trip.
- 1961 Calciclastic and siliciclastic: Am. Assoc. Petroleum Geologists Bull., v. 45, no. 12, p. 2017.
- 1962 (With J. W. Low) — Constructing a technical article: Trans. Gulf Coast Assoc. Geol. Socs., v. 12, p. 1-8.
- 1964 (With J. W. Low) — Preparation of a technical article: Am. Assoc. Petroleum Geologists Bull., v. 49, no. 11, p. 1837-1846.

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¹Presented at G.C.A.G.S. program

²Presented at G.C.S.—S.E.P.M. program

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¹Presented at G.C.A.G.S. program

²Presented at G.C.S.—S.E.P.M. program

³Keynote address

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SECRETARY.....Jimmy Jones, Quintana
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REPORT OF THE PRESIDENT

The 21st annual meeting of GCAGS is being held again in New Orleans, the site of the first one. This is the fourth time the New Orleans Geological Society has had the privilege of acting as host society and the present occasion is after an interval of nine years. During these nine years profound changes have occurred in the oil industry and petroleum geologists have had to adjust to the changing circumstances at least as much as any other group within the industry.

GCAGS has continued to fulfill its primary purposes of furnishing a forum for new work and new ideas and of building the major geological literature of the Gulf Coast through its annual Transactions. It too, however has been changing with the times. This past year it published its two-volume "Bibliography of Gulf Coast Geology". It has also built a new tectonic map of the Gulf Coast which it will publish jointly with AAPG. Now a Section of AAPG it is in the process of taking on the responsibility of acting as host for the national conventions when AAPG meets in the Gulf Coast. This will be more often than in the past and will require a larger effort by many of the local societies as well as by Houston, New Orleans and San Antonio, where the national meetings will be held.

This convention and its Transactions volume are the creation of Bob Williamson and Bob Jemison and all of the convention chairmen and committee members who have been working for a year and a half. We think they have put together a geological program which is outstanding in its timeliness and are offering a series of social functions which we hope you will remember with pleasure. On behalf of the New Orleans Geological Society and these dedicated members, the officers of GCAGS welcome you to the 21st Annual Meeting.

Lee H. Meltzer
President

Gulf Coast Association of Geological Societies

REPORT OF THE GENERAL CHAIRMAN 21st Annual Meeting — 1971

Approximately eighteen months ago when efforts were begun for the planning and staging of this 21st Annual Meeting of the G.C.A.G.S. our convention theme "Where the Action Is" was adopted. It was mainly the idea of Dr. Ray Stephens, our Program Chairman, that a program of technical papers emphasizing those areas throughout our region that at this point in time were receiving the major portion of our exploration efforts would be of interest and that their subsequent publication in this volume would provide a significant contribution to the literature. We further agreed to assemble the program by soliciting one third of the papers to be presented by invitation and the remaining two thirds through responses to a general call for papers. We feel that the results of this approach have been gratifying.

Mainly because of an increase in the amount of income generated through the sale of advertising in the Transactions and Exhibit Booths at the Convention we were able to reverse a recent trend and reduce the registration fee for this year's meeting. This was due primarily to the efforts of Mr. Karl Pilati, our Advertising Committee Chairman, and the cooperation he received from the advertising representatives from some of the member societies. It is felt that because of the rising costs involved in staging the Convention each year cooperation from the non-host societies in this regard will become increasingly important in future years.

It is sincerely hoped that this 1971 Convention has been an enjoyable experience for all those who have attended and that we who have planned it have been able to add in some way to the successful achievements of the previous twenty annual G.C.A.G.S. meetings. I would like to express my deep appreciation to all of those members of the New Orleans Geological Society, and wives of members, who have worked on the various convention committees for their hard work and cooperation. I would like to also thank Mr. John Goffe of the Shreveport Geological Society, last year's General Chairman, for his most helpful assistance when we were just beginning and for the cooperation and support of this year's G.C.A.G.S. President, Mr. Lee Meltzer, whose contributions to this organization over the past years are well known.

Robert G. Williamson
General Chairman

REPORT OF THE EDITOR

It was gratifying that the majority of scheduled speakers submitted manuscripts for publication in the 1971 Transactions. The authors are to be commended for their efforts in adhering to schedules and their cooperation. This is the first publication for some of the authors, and this was the first full scale editing responsibility for me. Therefore many of us learned together.

I quickly learned that a great deal of time is spent helping solicit papers, working with and encouraging authors, working with the printer, as well as editing papers. Therefore, it was rewarding to find so many geologists willing to help in all phases of preparing the Transactions. Fortunately, "Mr. Gulf Coast Editor", Jules Braunstein, always was available for advice and consultation and our printer, Mr. E. P. Rivas, Jr., had experience in publishing previous volumes of the Transactions.

Harry Anisgard did an outstanding job of associate editor in charge of editing all papers included in the Gulf Coast Section-S.E.P.M. program. Thus, he and his helpers had the responsibility of handling slightly over half the papers submitted. From the start there was excellent cooperation between the G.C.A.G.S. and S.E.P.M. program chairman (Ray Stephens and Ben Petrussek) and editors in organizing the program and urging speakers to submit their papers for publication in the Transactions.

Bob Ardell and Joe Snowden served as assistant editors. Bob handled the editing and arrangement of the advertising, the introductory pages, and helped solicit printing bids. Joe did preliminary editing of the papers solicited for the G.C.A.G.S. program by Ray Stephens. I also wish to thank the local society editors who helped solicit papers and encourage authors to submit manuscripts. They include: Joseph Banks, Tallahassee; Verne Culbertson, Jackson; Don Napp, Corpus Christi; John Schoelen, Lafayette; Wayne Wood, San Antonio; Clyde Beckwith, Houston; Robert Wheeler, Beaumont; Allan Talley, Shreveport; George Lamb, Mobile; Bruce Fox, Tyler. There is a need for the local society editors to search for new talent and good papers throughout the year to insure continued good programs for the annual meetings.

I want to thank Amoco Production Company for giving me the opportunity to be editor; permission for Ann Crosby, Betsy Watson, and Joann Wilson to help with the typing and correspondence; and permission for Gordon Downs, Clarence Jameson, and George Geier, to make "last minute" drafting corrections. Gordon Downs created the cover design. Appreciation is given several of my colleagues who helped in editing. These geologists include: Ed Bates, Paul Benson, Jim Classen, Ed Clements, Cliff Couture, Don Riddle, Ken Schwarz, Neil Turner, Leroy Tydlaska, Bob Violette, and others.

The S.E.P.M. editor is for all practical purposes a co-editor of the Transactions. The G.C.A.G.S. and G.C.S.-S.E.P.M. have a tremendous source of potential authors of worthwhile papers but commonly they won't volunteer papers without being asked, and some waited until the "last minute" to submit manuscripts. Although we encourage the publication of all papers selected for oral presentation, the size of the Transactions can be a problem. This is difficult to control because manuscripts are received piecemeal and some "theme" papers are received late. Manuscripts received early are edited and submitted to the printer without knowing how many additional papers will be received nor their length. This year we experienced a last minute "panic" primarily because of an under-estimation of the size of the 1971 Transactions. Unfortunately, it became necessary to sacrifice some needed editorial work and preferred format in order to publish the Transactions in time for the annual meeting. In order not to exceed our publication budget and exceed the maximum number of pages that could be bound by side stitching it was impossible to include the text of four important, but long, manuscripts that were submitted to the printer late.

Willis W. Tyrrell, Jr.
1971 Transactions Editor

ORGANIZATION TWENTY-FIRST ANNUAL MEETING

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BEST PAPER AWARDS TWENTIETH ANNUAL MEETING— SHREVEPORT, LOUISIANA

At the annual GCAGS meetings, awards for the papers judged best presented, most significant and timely have been given to outstanding geologists for many years. The Twentieth Annual Convention Awards Committee has selected the following men.



J. J. AMORUSO

FIRST PRIZE AND A. I. LEVORSEN AWARD: John J. Amoruso, Independent Geologist, Houston, Texas, for his paper **Possible Future Petroleum Provinces of the Gulf Coast-Jurassic**. Mr. Amoruso is a graduate of Tufts College and has earned a M. S. degree in geology from the University of Michigan. He joined Pan American Petroleum Corporation in 1957 and continued with Pan Am (Amoco) in various assignments in the Four Corners area, the Uinta Basin, the West Texas area and the East Texas-North Louisiana area until 1969 when he opened his own office in Houston as an independent geologist.

Mr. Amoruso is a Certified Petroleum Geologist as well as a Certified Professional Geologist and is currently First Vice-President of the Houston Geological Society. He has served the HGS as Second Vice-President and Editor and is a member of the East Texas Geological Society.

SECOND PRIZE: Robert R. Berg, Head, Department of Geology, Texas A&M University, for his paper entitled **Criteria for the Identification of Sedimentary Environments in Reservoir Sandstones**.

Mr. Berg is a University of Minnesota graduate earning both his B. A. and Ph. D. from the same school. He went to work for the California Company (Standard Oil Company of California) as a geologist in 1951 and in 1957 became a consulting geologist in the Rocky Mountain area. Mr. Berg is presently Professor and Head of the Department of Geology, Texas A&M University, Bryan-College Station, Texas.

Dr. Berg is a Fellow in the GSA, and a member of AAPG, AIPG and the Rocky Mountain Association of Geologists and has served the RMAG as President. He is currently President of the AIPG and has previously served that group as Secretary-Treasurer.

A serious researcher, he has published on Cambrian rocks of the Upper Mississippi Valley, Lower Cretaceous oil sands of the Rocky Mountains and the structure and origin of the Wind River Range, Wyoming.



R. R. BERG



J. F. HARRIS

THIRD PRIZE: John F. Harris for his paper entitled **The Search for the Subtle Clue—Carbonate Exploration in the Seventies**.

A native of Oklahoma, Mr. Harris graduated with both a Bachelors and Masters degree from the University of Tulsa and joined Stanolind (Amoco) upon leaving school. In common with all three award winners this year, he worked in the Rocky Mountain area serving in Salt Lake City, Bismarek and Tulsa before becoming a consulting geologist in Tulsa, Oklahoma in 1959.

Mr. Harris is a Certified Petroleum Geologist and a Certified Professional Geologist and is a member of the Tulsa Geological Society, Oklahoma City Geological Society and the Michigan Basin Geological Society. He has published on several specialties involving carbonate porosity, fracturing and stratigraphy and has served as a Continuing Education Lecturer for AAPG in Mexico, Canada, Europe and Africa.

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- San Antonio: P. A. Montgomery, Jr., Montgomery's Stratigraphic Service, 1517 Milam
Building, San Antonio, Texas 78205

REPORT OF THE PRESIDENT, GULF COAST SECTION — SEPM

Our section is now 19 years old. This is the eighteenth GCAGS meeting in which we have participated. Since the first one, our membership has trebled, and our contribution to the program has expanded from approximately one-tenth of the number of papers presented to the current rate of about half. This ratio has been constant for the past three years despite the fact that our total membership remains about one-tenth of the combined GCAGS member societies.

Of the programs initiated by this administration when it took office, at least two should continue to benefit our membership. One of these is the Employment Counseling Service which has been so ably organized by our Vice-President, Douglas Jones. Members who are seeking employment send résumés of their education and experience to the Vice-President of the Section, who is designated as the Chairman of the service, and he makes their qualifications known to prospective employers.

The other one is the movement toward ending the estrangement which has grown up between paleontologists and other geologists. To this end, I have urged our Section members to join their local geological societies and participate in the activities of those societies. I have suggested that we provide at least one program a year to each local geological society in a city where we have a substantial number of members. The New Orleans Geological Society had its second annual SEPM-sponsored talk last month. Another manifestation of this spirit is the increased importance of our role in this GCAGS meeting. The section's contribution to previous meetings has generally been limited to arranging its own program and field trips. Even the editing of SEPM papers for the Transactions was often left to the Transactions editor. This year, on the other hand, the President, Editor, and Program Chairman have been privileged to participate in meetings of the convention committee; the Section editor has worked over each abstract and full paper before it was turned over to the Transaction editor; and the field trip committee was jointly GCAGS-SEPM.

As I finish my term in office, I extend my thanks for helping me in many ways to the officers who served with me: Douglas Jones, vice-president, Walter Trenchard, secretary, and Gerald Stude, treasurer. The conscientious devotion to their responsibilities provided by our editor, Harry Anisgard, and our program chairman, Ben Petrusek, you may judge by the quality of the program as printed in the Transactions and presented at this meeting.

Not least, my gratitude goes to Lee Meltzer, GCAGS President and Bob Williamson, Chairman of this meeting, for their unflinching cooperation with me and my committees, and for the opportunity to deliver my report at the opening session.

In closing, I salute Henryk Stenzel, to whom we are presenting Honorary Membership in our Section, and the winners of awards for best papers presented at the 1970 meeting: S. W. Wise, Jr., R. D. Stieglitz, and W. W. Hay, first, J. B. Dunlap, Jr., second, and W. L. Fischer, C. V. Proctor, Jr., W. E. Galloway, and J. S. Nagle, third.

Jules Braunstein

REPORT OF THE EDITOR, GULF COAST SECTION — S.E.P.M.

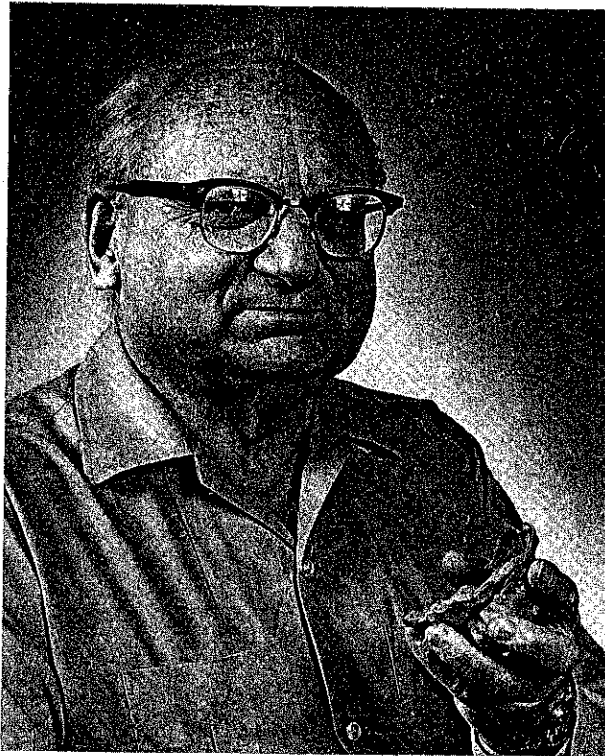
To those authors of S.E.P.M. articles who adhered to the deadline and checked their manuscripts, many thanks. Such papers are not only easy to edit and a delight to read, but also insure that they receive proper attention en route to the final printing in the Transactions. Late arrivals and sloppy papers become an editor's (and printer's) nightmare, and the problems they create have plagued editors from the time Gutenberg gave the world the printing press in the 15th century.

A definite standardization of style, using the A.A.P.G. Bulletin as a basis would help eliminate many of the editing difficulties. A more complete guide, detailing the style-standards, could be mailed out initially to prospective authors with the "Request for Papers" notice.

The overall experience of editing was enjoyable and informative, despite the last-minute May-day alarms. Without the unlimited help and patience of Marie Henry, of Humble Oil & Refining Company, the job never would have been completed. Audrey Davis, a Humble summer employee, contributed to the typing and assembling of S.E.P.M. manuscripts. Ralph Biel, also of Humble, pinch-hit for me while I was away on vacation, and Dick Zingula, Humble in Houston, helped in putting together the information on type sections. Thanks are also due to Humble's drafting section in New Orleans for correcting original illustrations. Last, but by no means least, I want to express my appreciation to Humble's Exploration Management in New Orleans for their understanding and cooperation in the process of getting out this volume of the Transactions.

HARRY W. ANISGARD
1971 S.E.P.M. Editor

HONORARY MEMBER



HENRYK BRONISLAW STENZEL,

GULF COAST SECTION, SOCIETY OF ECONOMIC PALEONTOLOGISTS AND MINERALOGISTS

Henryk Bronislaw Stenzel is an outstanding geologist, teacher, and scholar. It is particularly appropriate that the Gulf Coast Section of SEPM add its recognition to Dr. Stenzel's other honors, because he has been studying and teaching in the Gulf Coast for more than 45 years.

Perhaps it was inevitable that Henryk Stenzel become a stratigrapher and paleontologist, for as a child in Pabianice, Poland, where he was born in 1899, he played with Jurassic fossils in the creek beds near his home. However, at the Schliesische Friedrich Wilhelms Universität in Breslau, Silesia, his doctoral research under the supervision of Hans Cloos was on granite tectonics. When he arrived at College Station, Texas, on August 18, 1925, he found the granites of the Llano Uplift to be too far away to receive his continuous attention, so he began to concentrate on the closer-at-hand Claiborne section on the Brazos River. Confronted with the problem of deciphering stratigraphic successions in the flat-lying, soil-covered Texas Coastal Plain formations, he soon applied methods that had already earned him distinction as a young man in his hard-rock days: close observation; meticulous attention to detail; careful recording; logical analysis. To this day, he has found that these procedures serve him well.

Since the day he began his studies of the Tertiary at Texas A & M, Dr. Stenzel has worked with intensity and creativity in the field, in the laboratory, and in the class-room. His many contributions to the solution of formation boundary problems, to paleoecology, and to the understanding of moluscan evolution have already been documented in the dedication to him of the 1965 volume of the G.C.A.G.S. Transactions. A most significant addition is his latest work, the volume on the oysters to be published this year as part of the Treatise on Invertebrate Paleontology. His earliest Gulf Coast publication, on the Claiborne, appeared 40 years ago.

The intervening years have been filled with challenging responsibilities. In 1934, Dr. Stenzel left College Station to join the Texas Bureau of Economic Geology. He remained in Austin until 1954 (except for a brief period in 1937 as a "special problem" geologist with Shell Oil Company), successfully combining teaching with field work and research when he became Professor of Geology at the University of Texas in 1948. In the classroom he taught the same close observation, attention to detail, and logical reasoning that he applied in the field. In 1954, he left Austin to become Chairman of the Geology Department at the University of Houston, and Consultant to Shell Development Company. A heart attack, suffered in 1957, forced him to resign from the University post. He resumed teaching in 1962 when he became a Visiting Lecturer at Rice University. Leaving Rice and Shell in 1967 to accept a Visiting Professorship at LSU, he has remained in Baton Rouge, where he was given his present title of "Consulting Professor" at the time of his mandatory retirement last year.

It is difficult to single out a few of Dr. Stenzel's contributions and designate them as the most outstanding, but perhaps such a list should include (1) his surface mapping techniques which include identification of formation contacts by vegetation, and recognition of disconformities, (2) his work on "successional speciation" in paleontology, and (3) his profound influence on several generations of students who will remember how he taught them to observe, record, and interpret data.

In conferring honorary membership on Henryk Bronislaw Stenzel in recognition of a long and distinguished career, and of his contributions to the principles of Gulf Coast stratigraphy and paleontology, the Gulf Coast Section, S.E.P.M. brings distinction to itself; and Dr. Stenzel honors us by accepting.

Doris Malkin Curtis

**BEST PAPER AWARDS TWENTIETH ANNUAL MEETING —
SEPM SECTION — SHREVEPORT, LOUISIANA**



S. W. WISE, JR.



R. D. STIEGLITZ



W. W. HAY

FIRST PRIZE: To Sherwood Willing Wise, Jr., teaching assistant at the University of Illinois, Urbana, for co-authorship of the paper entitled "Scanning electron microscope study of fine-grain size biogenic carbonate particles." Dr. Wise received his B. S. degree of geology from Washington and Lee University, and his M. A. and Ph. D. (February 1971) degrees from the University of Illinois. At both institutions he was honored by scholarships and fellowships. He interrupted his academic career with Army service from 1965-1967. Dr. Wise joins the faculty of Florida State University in the fall of this year.

To Ronald D. Stieglitz, co-author. Since September, 1971, Dr. Stieglitz has been a member of the faculty of the Department of Geological Sciences, University of Wisconsin-Milwaukee. He received his B. S. degree in geography from the University of Wisconsin-Milwaukee, and his M. A. and Ph. D. degrees from the University of Illinois. Dr. Stieglitz has served in the Army. He has authored papers on sedimentary structures, and surface textures of sand grains and carbonates.

To William Winn Hay, co-author. Dr. Hay is Professor of Geology at the University of Illinois and Professor of Marine Geology at the Rosenstiel School of Marine and Atmospheric Sciences of the University of Miami. Dr. Hay received his B. A. degree in biology from Southern Methodist University, his M. S. degree from the University of Illinois, and his Ph. D. degree from Stanford University. Dr. Hay has been awarded study fellowships to the Swiss Federal Institute of Technology and the University of Basel. He serves on the Planning Committee of JOIDES and has participated on 2 Legs of the drilling projects. Dr. Hay has authored numerous papers, but his specialty is the study of calcareous nannoplankton.



J. B. DUNLAP, JR.

SECOND PRIZE: To John B. Dunlap, Jr., a partner in the consulting firm of Paleo-Data, Inc., of New Orleans, Louisiana, for his paper "Paleoecology as an Exploration tool." He received B. S. and M. S. degrees in geology from Texas A&M in 1954 and 1955, respectively. After Army services, John worked from 1957 to 1965 as a geologist and paleontologist for Humble Oil & Refining Company. He resigned in 1965 to become a consulting paleontologist. In 1968, he and T. Wayne Campbell formed Paleo-Data, Inc., to undertake world-wide consultation.

THIRD PRIZE: To W. L. Fisher, now Director of the Texas Bureau of Economic Geology and a Professor in the Department of Geologic Sciences, The University of Texas, Austin, for co-authorship of the paper entitled "Depositional systems in the Jackson Group of the Texas Gulf Coast Basin." Dr. Fisher received his B. S. from Southern Illinois University, and both his M. A. and Ph. D. from the University of Kansas.

To Cleo V. Proctor, Jr., co-author, a Research Scientist Associate with the Texas Bureau of Economic Geology, which he joined in 1967. Mr. Proctor has a B. S. and M. S. from Baylor University, and now is completing his Ph. D. at The University of Texas.

To W. E. Galloway, co-author, with Continental Oil Company at Ponca City, Oklahoma. Dr. Galloway has worked with the Texas Bureau of Economic Geology and Mobil Oil. He earned a B. S. at Texas A&M University, and his M. A. and Ph. D. at The University of Texas.

To J. S. Nagle, co-author, now completing his Ph. D. at The University of Texas. Mr. Nagle holds a B. A. and M. S. from Lehigh University. He has had experience with the Texas Bureau of Economic Geology, Guyton and Associates, and Carleton Speed.



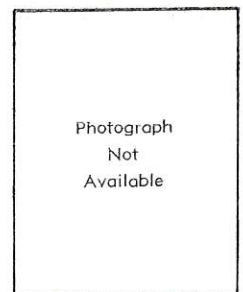
W. L. FISHER



C. V. PROCTOR, JR.



W. E. GALLOWAY



J. S. NAGLE

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E R R A T A

- Page 1, under "Abstract", 5th line down: read "updip" for "undip";
4th paragraph: read "_____ depositional slope was
reduced; thus less sands were carried down slope
into the basin. In Cibicides hazzardi time,
gradation was achieved and _____".
- Page 30, under "Abstract": read "Flomaton" for "Flomation".
- Page 100, captions for Figures 2 and 3 are reversed.
- Pages 109 and 110 are Figures 1 and 2 respectively; explanation
is on page 113.
- Page 154, right side, 4th paragraph, 2nd line, read "Chester" for
"Cherter".
- Page 223, left side, last paragraph, 2nd line, read "Idolo" for
"Odolo"
- Page 233, 1st author should read "J. A. Gilreath".
- Page 293, right side, 2nd line, read "Globorotalia" for "G1".
- Page 355, Figure 2, opposite payout time-years, read .3858, .2314
for 3858, 2314.
- Page 381, right side, under "Alluvial Channel Environment", 2nd line,
read "sedimentologists studying" for "sedimentologists'
study".
- Page 390, Figure 3 caption, add "3" before "mm".
- Page 393, Figure 7, top of photograph is nearest the page number.
- Page 416, left side, next-to-last paragraph, 1st line, read "Plio"
for "plio"; 10th line from bottom read "Emilian" for
"Emiliani", right side, 1st paragraph, 7th line, read
"Emilian" for "Emiliani".
- Page 417, 3rd paragraph, 1st line, read "Emilian" for "Emiliani";
4th paragraph, 3rd line, read "Emilian" for "Emiliani".