

THE FIRST HALF-CENTURY OF THE INTERNATIONAL ASSOCIATION OF SEDIMENTOLOGISTS (IAS) 1952-2002

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ABSTRACT

“On 1 September 1948, directly after the closing of the 18th International Geological Congress in London, UK, the British sedimentary petrologists, headed by P. Allen, arranged a meeting for the sedimentary petrologists who had participated in the Congress. P. Allen raised the following points for discussion: (a) is some sort of a international union in sedimentary petrology desirable? (b) Should some kind of international meeting of sedimentary petrologists be held regularly in the future?” (Doeglas 1976).

At the International Geological Congress in Algeria in 1952, the International Association of Sedimentologists was formally founded.

“At the start of 1972 there were about 700 members, 400 of whom took the journal *Sedimentology*” (Reading 1976).

In much of 1962 IAS's journal *Sedimentology* was first published, and in 1973 National correspondents were appointed to represent sedimentologists in different countries.

Scientists of eminent distinction in sedimentology became eligible to receive the Sorby Medal, named in honor of H.C. Sorby (1826-1908), prominent sedimentologist, or were

awarded Honorary Membership in the Association (Friedman and Sanders 1978).

Changes in the late 1980s and throughout the 1990s included the introduction of regional meetings, such as in Heidelberg, Germany and in Jerusalem, Israel. The last few International Sedimentological Congresses were held in England (1990), Brazil (1994), Spain (1998), and South Africa (2002).

IAS' total publications include about 180 newsletters, 30 special publications, and 4 volumes of the journal *Sedimentology*, plus guidebooks for the International Sedimentological Congresses and regional meetings.

IAS is a truly international association. It has about 2000 members involving about 100 countries. Forty-six National correspondents are active. The length of the journal has increased from a standard 1280 pages per year to 1440 pages (Best et al. 2003).

EARLY DAYS OF IAS AND RESEARCH INTERESTS

The International Association of Sedimentologists (IAS) was born on September 11, 1952 at the 19th International Sedimentological Congress in Algiers. My name appears on the list of invited participants to the congress, but after obtaining passport and ordering tickets, I could not attend the meeting.

André Vatan (Fig. 1), of France truly may be considered father of the IAS. In the mid-1940s he recognized the need for the creation of a worldwide association of sedimentologists. This concept was advanced at the International Sedimentological Congress in London in 1948, where together with P. Allen (Fig. 2) and D.J. Doeglas, he laid the groundwork for the creation of the Association.

The sedimentological discussion at the 1948 International Sedimentological Congress was the mid-wife to the birth of IAS at the 1952 International Sedimentological Congress.

At the 1948 International Sedimentological Congress, the Dutch scientist Philip H. Kuenen (1902-1976) (Fig. 3), was scheduled to read a paper on the role of density currents in cutting submarine canyons (Shepard 1948). When the speaker on the program before him failed to appear F.P. Shepard (1897-1985), the first IAS President (Fig. 4), from the Scripps Institution of Oceanography, filled in by showing underwater photographs of the steep and massive walls of submarine canyons.

When Kuenen's turn came next, he confessed that the underwater pictures overawed him and that he would like to withdraw his paper. Density currents could not possibly carve out such huge underwater structures! The audience, however, encouraged Kuenen to present his paper and pretend that he had not seen Shepard's photographs. So Kuenen went on to discuss the erosive potential of high-density currents, and argue that they could indeed create submarine canyons.

When Philip H. Kuenen resumed his experiments, he used a density current consisting of a mixture of sediment and water (1964). Kuenen, of course, initially focused on the erosive potential of density currents. After the 1948 International Sedimentological Congress, he began examining the characteristics of sediments deposited by these experimental currents. To record the data, he shot a movie showing the action of turbidity currents and the graded layers they deposited in a meters-long ditch built outside of his laboratory.

Bruce C. Heezen (1924-1977) (Fig. 5) heard Kuenen lecture; he found this scientist's work an explanation of the breaking of submarine cables off the Grand Banks in 1929. Heezen linked the broken cables to a giant turbidity current triggered by the Nov. 18, 1929, Acadian-Newfoundland earthquake (Heezen and Ewing 1952). He went on (with others) to develop the concept of geostrophic or contour currents and explain their role in reworking sediments on the continental rises (Heezen, Ericson, and Ewing, 1954).

M.L. Natland (1906-) (1963) also attended Kuenen's lectures and discovered therein the

key to understanding the petroleum-reservoir sandstones he was studying in California. Natland had observed that the sandstones were intercalated with shales that contained what appeared to be deepwater Foraminifera. He concluded that the sandstones themselves must have been deposited in deep water. His colleagues, enamored of the idea of deep-sea tranquility, rejected this explanation. Kuenen gave Natland (1963) the needed evidence to show that sands can indeed be deposited in deep water. Further research, both on turbidites and their associated sediments in the modern oceans and on exposed examples of inferred ancient analogues, has supported- and elaborated on the systematic relationships, among the three associated suites of deep-water coarse clastic sediments that Sullwold (1961) outlined: (a) submarine-canyon-axis channel deposits, (b) sea-floor fans at the mouths of submarine canyons, and (c) the deposits underlying basin-floor plains (Sanders and Friedman 1997).

A.H. Bouma, a student of Kuenen, studied graded deposits and turbidity-current deposits and developed a vertical sequence model for such deposits - a model that formed the basis for all modern studies of turbidite sequences. Bouma (1962) (Fig. 6) defined his vertical sequence as “a fixed characteristic succession of five intervals that make up a sequence of a turbidite.” Forty years after defining the term Bouma sequence he answered one of my students that “such a sequence does not exist”, but he would not explain why.

In the 1960s and 1970s, Bouma's work led to attempts to explain not only the vertical sequences of strata that certain processes might deposit, but also the three-dimensional relationships of strata that accumulate under the influence of multiple processes, affecting the same part of the basin floor. In the case of turbidites, the early work culminated in seminal studies of the depositional patterns and sediment features that characterize submarine fans - the great bodies of sediment found at the mouths of submarine canyons and elsewhere on the sea floor.

A.H. Bouma served as IAS Treasurer after the 1963 International Sedimentological Congress.

The field of sedimentology and the intricacies of publishing have changed considerably during the past 50 years – our field has rapidly advanced ---- but the original concepts of Kuenen, Shepard, Heezen, and Natland still attract attention today. Turbidites, edited by A.H. Bouma and A. Brouwer, Elsevier Publishing Company (1964) was published on behalf of the IAS. The term turbidite had only just been introduced, and this gave it worldwide prominence (Einsele and Seilacher 1982). Kuenen’s paper in this book was titled “Deep-sea sands and ancient turbidites.”

Meanwhile the debate of dispelling the myth of sea-floor tranquility which the 1948 International Sedimentological Congress meeting ignited continued. F.P. Shepard’s paper on deep-sea sediments was published at the International Geological Congress in 1961 and was followed by IAS’s first presidential address which Shepard (1964) titled “Criteria in modern sediments useful in recognizing ancient sedimentary environments”. Following the presidential address John E. Sanders presented a motion picture on sand transport and ripple formation in the laboratory and in natural settings.

In March of 1962 IAS’s journal *Sedimentology* was first published by Elsevier Publishing Company, Amsterdam, Holland. The journal became an instant success. Thereupon Elsevier created a second journal *Sedimentary Geology* (1967). Elsevier decided unilaterally that SEPM’S *Journal of Sedimentary Petrology* (now *Journal of Sedimentary Research*) and IAS’s *Sedimentology* should only publish on subjects of fundamental value to the progress of the science, whereas *Sedimentary Geology* will serve as the international outlet for papers in regional and applied sedimentology. At the time I served as Editor of the *Journal of Sedimentary Petrology* and was appointed to the editorial board of *Sedimentary Geology*. Problems arose between publisher and the societies.

At the International Sedimentological Congress in Algiers in 1952, when IAS was formally founded, Vatan was elected its first General Secretary (Fig. 1). For a few years these were trying times for IAS: funds and interest were lacking. Only a few stalwarts, like Vatan, kept

the Association alive and moving. Vatan's term as General Secretary lasted a total of eight years which marked the transition, in the history of the Association, between birth and maturity. Vatan earned the gratitude of IAS for without him it may never have been born or may have foundered in its early days. IAS met informally with the World Petroleum Congress in 1951 (The Hague), 1955 (Rome), and 1958 (Geneva)(Doeglas 1976). The Fifth World Petroleum Congress was in New York in 1959, where IAS met once again with the World Petroleum Congress. Mme Gubler (Fig. 7) (later IAS president) convinced me to join IAS.

The IAS symposium in 1959 was "Sedimentology and the Oil Industry" (Fig. 8). Its printed discussion is reminiscent of a beginning sedimentology book of the 1950's and 1960's (Fig. 8).

Following the founding event of the IAS at Algiers in 1952, the next (4th) International Sedimentological Congress was held in Göttingen, Germany, in 1954, and the 5th International Sedimentological Congress was in Geneva (Switzerland) in 1958. The 6th International Sedimentological Congress was held in Belgium and in the Netherlands in 1963. The elected officers were President, F.P. Shepard (U.S.A.); Vice President, L. Trevisan (Italy); Secretary General, D.J. Doeglas (The Netherlands); Treasurer, A.H. Bouma (The Netherlands) (Fig. 6); Members, A. Bersier (Switzerland), J. Bourcart (France), H. Harder (Germany), I. Hessland (Sweden), W.P. van Leckwijck (Belgium), and L.V. Pustovalov (U.S.S.R.).

The 7th International Sedimentological Congress was held in the United Kingdom in 1967 (at Reading and Edinburgh) and completed the first fifteen years of the existence of IAS. The 8th International Sedimentological Congress was scheduled for 1971 to be held in Heidelberg in Germany under the chairmanship of German Müller (Fig. 9). The following Council was elected in the United Kingdom: President, H.R. Reineck (Germany); Vice President, Mme Y. Gubler (France); Secretary General, P. Allen (United Kingdom) (Fig. 2); Treasurer, D.J.G. Nola (The Netherlands); Members, P.V. Dehadral (India), K.O. Emery

(U.S.A.), Dan Jipa (Romania), G.V. Middleton (Canada) (Fig. 10), J.J. Veevers (Australia), and V.S. Yablokov (U.S.S.R.).

The history of IAS from 1952-1967 was documented in 1976 by D.J. Doeglas. Some of the data in this paper relating to dates of congresses and elected councils were taken from his published version. An important move was made to appoint National correspondents to represent the sedimentologists in different countries.

At about this time IAS moved its journal *Sedimentology* from Elsevier to Blackwell Scientific Publications. The editor and others, including Harold G. Reading (Fig. 11), IAS General Secretary, were dissatisfied with Elsevier's handling of our journal.

MY PERSONAL INVOLVEMENT

My involvement as an officer of IAS presented its opportunity through the back door. In 1967-68, when I served as Editor of the *Journal of Sedimentary Petrology* (now *Journal of Sedimentary Research*) on the Council of the SEPM (Society of Economic Paleontologists and Mineralogists, now Society for Sedimentary Geology) a request came to SEPM Council from the IAS Bureau to extend an invitation to hold the 8th International Sedimentological Congress during 1975 in the United States. By 1970 I had advanced to the Vice Presidency of SEPM and the SEPM Council acted with urgency on the IAS request. The President, Ed Dapples, asked me to devote my time to this invitation. SEPM Council stipulated that because of a summer schedule, climatic constraints force the Congress to a site in the northern United States. The SEPM Council was very strict in its request: the invitation must be backed by financial responsibility, formal invitations from the president of the host institution, the mayor of the host city, and a detailed analysis of convention facilities, hotel and dormitory spaces, food services, and other relevant amenities. I spent days on the phone and wrote letters to find a host for the International Sedimentological Congress, but to no avail. There were simply no takers.

At this time the SEPM President Ed Dapples challenged me: 'how about your institution serving as host,' he said: 'you are located in an unsurpassed summer resort area where cultural facilities include the New York City Ballet, Philadelphia Symphony, and summer opera in the midst of a beautifully scenic geologic setting: the Taconics (Caledonides), Adirondack and Catskill Mountains, the Mohawk and Hudson River Valleys-all in an area in which, historically, sedimentary geology emerged in North America and the 19th century pioneers established their stratigraphic framework.' Somehow I succumbed and accepted his challenge. Ultimately I presented the SEPM Council a report which weighed several pounds, complete with statistical data, statements of financial responsibility, and signatures from the President of my University, the Director of the New York State Geologic Survey, the mayor of Troy, and the mayor of the City of Albany (capital city of the State of New York). The SEPM Council was elated and sent the whole package to the IAS Bureau which according to the understanding of SEPM Council formalized acceptance. The SEPM Council spent considerable time at its meetings to act positively on the IAS request, took this request for an invitation very seriously.

In 1971 at the 8th International Sedimentological Congress in Heidelberg, Germany, the IAS President asked me to extend formally the SEPM invitation to General Assembly, but a revolt was underway. These were the now long-forgotten days of easy money at academic institutions in the United States, and many young American sedimentologists attended this congress-with all expenses paid. They objected to the next meeting being held in the United States, because they cherished another opportunity for a trip to Europe. As a result of their larger participation they had strong voting power, and an on-the-spot invitation (illegal according to IAS statutes) was drawn up to hold the 9th International Sedimentological Congress in Nice, France. The General Assembly accepted this illegal invitation and spurned that of SEPM. At the same time I was nominated and elected IAS Vice President.

When news reached SEPM, the council was stunned and in an ugly mood. By coincidence

SEPM just then happened to be in an expansionist frame. It had decided to establish European sections and requests had already arrived from European countries for SEPM affiliation as regional sections. 'We will beat them on their own turf' became the cry. However at that time I wore two hats, (1) that of SEPM Vice President and soon-to-be elected SEPM President-Elect, and thereafter SEPM President and (2) that of IAS Vice President. This dual function allowed me to stem the tide of reaction because I could counter offensive proposed actions and remarks by saying 'You are now addressing the IAS Vice President.' To overcome IAS's snub at SEPM and improve relationships, we established a SEPM-IAS Coordinating Committee on which I served for many years. We formulated an agreement whereby an officer of SEPM would sit in on IAS Bureau meetings and an IAS officer would attend SEPM Council meetings. For six or seven years as a member of this Coordinating Committee I attended SEPM Council meetings twice a year as well as the semi-annual or annual IAS Bureau meetings. After SEPM approved the formation of a Coordinating Committee, I set out for Paris, France to meet with IAS President Mme Gubler. As a surprise to me she was not at her home base: she was at Oxford, England, chairing an IAS Bureau meeting of which I had not been notified on the assumption that being from North America I would not attend. When Mme Gubler returned to France we met at the apartments of the Geological Society of France to lay the groundwork for the SEPM-IAS Coordinating Committee.

During my four years as IAS Vice President, the Bureau searched for a sponsor for its 9th International Sedimentological Congress to be held in 1978. Once again there were no takers. All kinds of leads proved unsuccessful. In 1973, President Mme Gubler asked me to visit Israel and request the Geological Survey of Israel to extend an invitation. To be honest I did not think that I would meet with success. However, I convinced the Director of the Geological Survey, Eli Zohar, of the opportunity to hold a Congress in Israel.

In 1975 Israel's invitation was accepted by the General Assembly at the 8th International Sedimentological Congress in Nice, France. At that Congress I was elected IAS President for the 1975-78 term. The 9th International Sedimentological Congress in Jerusalem ,

Israel, in 1978 was a splendid success. At that Congress I became Past-President and a 'has been.' However, I was called back into service for the 10th International Sedimentological Congress in Hamilton, Canada, and served on the excursions committee as field-trip leader, and co-author of a guidebook for a six-day field excursion.

During my period as IAS President, membership of IAS increased from 886 in 1975 to 1358 in 1978. I served as instigator for both the Sorby Medal and Honorary Membership to honor achievement of distinction in Sedimentology. I also brought together IAS and SEPM, links which have continued.

SORBY MEDALISTS

The IAS awards the Sorby Medal to scientists of eminent distinction in sedimentology. The medal is presented every four years at the International Sedimentological Congress. Previous Sorby Medalists are: R.A. Bagnold, 1978; F.P. Shepard, 1978; F.J. Pettijohn, 1982; R.G.C. Bathurst, 1986; R.L. Fok 1990; J.R.L. Allen 1994; R.N. Ginsburg 1998; and Roger Walker 2002. H.C. Sorby began to use the petrographic microscope for studying thin sections cut from sedimentary rocks, such study has become an essential part of sedimentology. Although Sorby was not the first to recognize the importance of the petrographic microscope, in his presidential address before the Geological Society of London, published in 1879, Sorby (p. 57) admonished his listeners that: "it is absolutely necessary to avail ourselves of all the resources of polarized light" (Friedman and Sanders 1978).

At the 10th International Sedimentological Congress meeting in Jerusalem, Israel in 1978 Brigadier Ralph A. Bagnold received the Sorby Medal (Fig. 12). As his citationist L.B. Leopold (1978) stated: "Today's recipient of the Sorby Medal is not only the foremost theoretician in sediment-transport mechanics, but stands alone in the conception, apparatus design, and laboratory techniques for critical experiments in this field." I shall never forget his tales emanating from hide-outs in the North African desert during World

War II, where he used geological skills to help defeat the German troops of Rommel.

The second recipient of the Sorby Medal at the 10th International Sedimentological Congress meeting was Francis P. Shepard (Fig. 4) whose geological exploits have already been related.

At the 11th International Sedimentological Congress in 1982 in Hamilton, Canada, Francis J. Pettijohn was the Sorby Medallist (Fig. 13). I felt close to Pettijohn, for he stated “like Gerry Friedman, I was trained in petrology - hard rock petrology.” But there was more to it than that: we were both students of Frank F. Grout and both of us have written textbooks for students in sedimentology. Pettijohn asked how and why had sedimentology advanced so fast and gave two reasons. One is the petroleum industry that grew to be a giant. The second was renaissance of oceanography, marine geology, and study of modern sediments.

At the 12th International Sedimentological Congress in Canberra, Australia in 1982, Robin G.C. Bathurst received the Sorby Medal. I have known Bathurst since 1945 (Fig. 14), when we were both students together at Chelsea Polytechnic - Chelsea College, University of London. I liked field work with him in Wales, U.K. – we stayed at the same hostice and enjoyed a 1½ hour walk to and from the field, when others enjoyed the local bar. Fifteen years later, I worked as a research sedimentologist and supervisor of research for Pan American and Amoco Petroleum Corporation in Tulsa, Oklahoma. On one occasion I read and enjoyed a short carbonate paper in the *Liverpool and Manchester Geological Journal*. I contacted the author whose name I did not recognize and invited him to visit me in the Bahamas for joint field work. When he arrived, I recognized him as my old friend and colleague from Wales and London. At the time he was a candidate for a position at the University of Liverpool whose chair was Wallace Pitcher, likewise a fellow student from Chelsea Polytechnic. As in our earlier days we shared a room in the Bahamas, but then he moved out because he could not tolerate air conditioning.

In his acceptance speech Bathurst has reference to the first meeting of carbonate sedimentologists in 1972 in Pau, France. I was present at this meeting. Bathurst gave his talk in French, of which he was proud. A young French sedimentologist asked him a question of which Bathurst could not make sense. He answered in French that he did not understand the question, when the truth hit him: the question posed by the young Frenchman had been spoken in flawless English.

Another fellow student at Chelsea Polytechnic-Chelsea College was Douglas J. Shearman (Fig. 14) later the distinguished carbonate sedimentologist of Imperial College, University of London.

In my view Robin Bathurst is as one of the modern fathers of world carbonate sedimentology. He is also the father of the Bathurst Conference, a meeting of carbonate geologists that takes place every four years in England.

At the 13th International Sedimentological Congress in Nottingham, England, in 1990 Robert L. Folk received the Sorby Medal (Fig. 15). Folk is the most colorful and one of the the most stimulating sedimentary geologists. I remember him as a graduate student at Columbia University, where his office was next to mine. Later when I worked in industry industrial colleagues made fun of him, his sedimentary rock terminology, his study of so-called bacteria in rocks, the fact that editors turned down his papers which later received major awards. I like to quote from his acceptance speech at the 1990 International Sedimentological Congress in England.

“If Bob Folk can be considered to be working on currents, then who is not?”

“Everyone should have the right to publish, at least once in his life, a paper of which in his old age he will be completely ashamed!”

“The things Folk says that are right are already well known; and everything he says that is new is totally wrong!”

“This paper is complete rubbish; it will bring discredit to him and embarrass the journal.”

“Well, thanks to the courage of the editors, this paper got published anyways.” (Folk 1990)

As long-term editor of the *Journal of Sedimentary Petrology*, now *Journal of Sedimentary Research*, Associate editor for 30 years of *Sedimentary Geology*, editor for sedimentology in *Earth-Science Reviews*, and several other journals I wish to comment that I am jealous of Bob Folk. He expresses himself skillfully and gracefully and makes a fool of those wishing to reject his papers. I will never forget an IAS council meeting in Bochum, Germany, when Fuechtbauer was a member of the Council. The whole meeting related to one of Bob Folk’s rejected papers in *Sedimentology*. The council overrode the editors.

At the 14th International Sedimentological Congress in Recife, Brazil, John L.R. Allen, received the Sorby Medal (Fig. 16). Allen is a geologist whom I admire, but do not really know in person. In the first edition of our textbook Principles of Sedimentology (Friedman and Sanders 1978) we refer to 52 of Allen’s papers published between 1960 and 1976. How does he do it? I once served as visitor in his university department (University of Reading, England), and several of us stood at the half-open door of his office, savoring the view of Allen at the typewriter completing a paper. His typing speed was fantastic.

But my real sense of jealousy dates to the middle of the 1960's, when Allen and Peter Friend came to exposures in New York State less than an hour’s drive from my office and home and completed their classical paper on the Catskill Facies. Twice each year my students study these same exposures and ask the question “how long did it take them to complete this 54-page manuscript?”. My answer is that “although I do not know the details they did spend two or three weeks in America.” No wonder John Allen is known as the undisputed leader in physical sedimentology, especially his studies of Devonian fluvial facies, sedimentary structures, and sediment transport. When my students chide me for my lack of achievement by comparing me with Allen I point out that his first international award was from SEPM for the Best Paper published in 1962 in the *Journal of Sedimentary Petrology*, but that I have beaten him by one year. I received the same award during the previous year – in 1961.

At the 15th International Sedimentological Congress in Alicante, Spain, Robert N. Ginsburg received the Sorby Medal (Fig. 17). When I attended the Awards presentation at the International Sedimentological Congress in Alicante, Spain, I was thrilled. The medalist was my old friend and fellow student from the University of Wyoming Bob Ginsburg. When I first met him he had recently returned from France and told me in French “Je suis un étudiant” (“I am a student”). The Sorby Medal confirms that he is now more than a student. The awards that he has received (SEPM President, SEPM Honorary Member, Twenhofel Medallist, IAS Vice President, AAPG and IAS Distinguished Lecturer) emphasize his prestige and our esteem.

In one week after writing these words I will phase out as chair of the history of petroleum geology division of the American Association of Petroleum Geologists. Bob Ginsburg will be my replacement. Congratulations Bob. Once again a society selects the kind of individual whose commitment to purpose advances the field.

HONORARY MEMBERSHIP

We have already noted two important members who received the award of honorary membership in IAS: André Vatan (Fig. 1) who received his award in the United States at Rensselaer Polytechnic Institute, and Mme. Gubler (Fig. 7) who was recipient at the 1978 IAS convention in Jerusalem, Israel (Burolet 1979).

In 1978 Percival Allen was awarded Honorary Membership (Fig. 2). Harold G. Reading serving as General Secretary provided the following citation:

“Percy Allen was born and bred in the Weald and it is there that his interest in geology was aroused first as a boy and then as a student at Reading University. It is also on the Wealden that most of his scientific research has been carried out, in particular on the Hastings Beds, which he has shown may be interpreted in a number of ways, first by

various transgressive/regressive delta models and lately as a Brahmaputra-type braided river. After posts at Reading and then at Cambridge he returned as head of the Department of Geology at Reading in 1952, where he has developed the Sedimentary Research Laboratory.

“As one of that rare breed, in 1948, of ‘sedimentary petrologists’ he headed a group of British sedimentary petrologists which arranged a meeting at the 18th International Sedimentological Congress in London. At this meeting, he suggested that an international union in sedimentary petrology might be desirable and that it might arrange international meetings. He served on a preliminary committee prior to the International Sedimentological Congress in Algiers in 1952 during which the International Association of Sedimentologists was founded. He was Chairman of the Organizing Committee for the 7th International Sedimentological Congress held in 1967 in Reading and Edinburgh, which must rank as one of the most memorable Congresses of the IAS and from 1967 to 1972 he was General Secretary of the Association. Since then he has helped to found the European Geophysical Union and is currently President of the Geographical Society of London.” (Reading 1979).

I was awarded the third Honorary Membership of IAS at the International Sedimentological Congress in Canberra, Australia (Fig. 18).

Another Honorary Membership at the same International Sedimentological Congress went to Gerard V. Middleton (Fig. 10). I met Gerard during an interval at an SEPM meeting after giving a paper. In the discussion of my paper two geologists expressed their opinion that the results of my paper were impossible. Gerard, Bob Folk, and I retired to my hotel room and continued our discussion and became friends. A year later the written version of my paper received the “Best Paper Award of the Journal of Sedimentary Geology”.

Gerry’s interest in sedimentology was aroused by courses given by Douglas J. Shearman (Fig. 14) of Imperial College, University of London. In addition to Doug Shearman (Fig. 14)

Gerry is grateful to Francis P. Shepard (Fig. 4) and Philip H. Kuenen (Fig. 2) for inspiration.

Gerry served as IAS Vice President for 8 years and did an outstanding job as Chairman of the Organizing Committee for the 11th International Sedimentological Congress which was held in Hamilton, Ontario, Canada. With thirty field trips and published guidebooks, twelve simultaneous sessions with forty themes, and symposia, and the largest number of geologists attending, Gerry's International Sedimentological Congress was an outstanding success.

At the 15th International Sedimentological Congress in Alicante, Spain Hans Fuechtbauer (Fig. 12) and Kenneth Jingwha Hsü (Fig. 19) became Honorary Members.

I have always felt close to Hans Fuechtbauer. We were born in the same year (which I will not reveal) in Germany within easy commuting distance of one another. We both spent a part of our life in the petroleum industry, and there learned sedimentology. He served as editor of *Sedimentology* and I was editor of SEPM's *Journal of Sedimentary Petrology*. We are both former IAS presidents. Fuechtbauer nominated me as Vice President at the International Sedimentological Congress in Heidelberg. This nomination led to my involvement in IAS for thirteen years as Vice President (1971-1975), President (1975-1978), and Past-President (1978-1982). Thus my IAS contributions stem from Hans' original nomination. My visit of his headquarters in Bochum, Germany, was one of the highlights of my membership in the IAS Bureau.

Following his academic studies, Kenneth Jingwha Hsü (Fig. 19) joined Shell Development Company in Houston, Texas, before moving on to academic positions. While I worked for Amoco and he for Shell we had many overlapping interests. When we both had become professors we became involved in similar research. I studied carbonate rocks and evaporites of the Western Mediterranean Sea and concluded "the evidence is that, during formation of the rocks studied, the areas of what is now the Mediterranean Sea at Sites 124, 132, and 134 almost completely lacked a cover of water" (Friedman 1972). Hsü took off from there to speculate about huge waterfalls in the area of the Strait of Gibraltar. He

also served as Editor of the Mediterranean Project. As his citationist Judith A. McKenzie said “Ken’s contributions to sedimentology have been broad and many” (McKenzie 1998).

INTERNATIONAL SEDIMENTOLOGICAL CONGRESSES AND PUBLICATIONS

The 10th International Sedimentological Congress which was held in Jerusalem, Israel, in 1978, was a first IAS event to be held outside Europe. In fact, however, in the following years the International Sedimentological Congress met in Canada in 1982, in Australia in 1986, Brazil in 1994, and in South Africa in 2002.

European congresses during these years were held in England (1990) and Spain (1998). Changes in the late 1980's and throughout the 1990's included the introduction of regional International Sedimentological Congress meetings, such as in Italy 1981, Switzerland 1985, Tunisia 1987, Belgium 1988, Hungary 1989, Norway 1991, Morocco 1993, France 1995, Tunisia 1996, Germany 1997, Denmark 1999, Argentina 2000, and Switzerland 2001.

In addition to *Sedimentology* IAS members may subscribe, at reduced rate, to the journal *Basin Research*. Publications include newsletters about meetings and activities, special publications and reprint volumes, field-trip guidebooks, and abstract volumes. Total publications to date include about 180 newsletters, 30 special publications, and 49 volumes of the journal *Sedimentology*. The association has at present 2120 members and approximately 900 institutes subscribe to the journal *Sedimentology*.

The IAS Bureau and council for 1998-2002 has the following composition: President: Maurice E. Tucker (UK); Treasurer: Isabelle Cojan (France); General Secretary: André Strasser (Switzerland); Editors: James L. Best (UK); Ian Jarvis (UK); Christopher Fielding (Australia); and Peter Mosley (USA); Special Publications Secretary: A. Guy Plint (Canada); Vice-Presidents: Gail M. Ashley (USA); David Ulicny (Czech Republic); and Bruce Cairncross (South Africa); Past President: Alfonso Bosellini (Italy); Council: M.E.

Hedi Ben Ismail (Tunisia); Li Renwei (China); Ryo Matsumoto (Japan); V.B. Kurnosov (Russia); S.M. Casshyap (India); and M. Suarez (Chile).

ACKNOWLEDGMENTS

I wish to express my thanks to the Bureau of IAS for inviting me to compile this history of the past fifty years of the Association. I have been a member for 45 years. My membership in IAS has been one of the highlight of my life.

My thanks are extended to Ellis L. Yochelson for serving as reviewer of this manuscript and to M.E. Tucker, Past President of IAS for asking me to prepare this paper and present it at the 16th International Sedimentological Congress in Johannesburg, South Africa.

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FIGURES

Figure 1. André Vatan, left, accepts plaque from IAS President Gerald M. Friedman on the occasion of his award of honorary membership.

Figure 2. Percival Allen on receipt of Honorary Membership in IAS at the 1978 International Sedimentological Congress in Jerusalem.

Figure 3. Philip H. Kuenen helped debunk the myth of deep-sea tranquility with his groundbreaking studies of turbidity currents.

Figure 4. When Francis P. Shepard showed underwater photos of submarine canyons at the 1948 International Sedimentological Congress, Kuenen almost withdrew his paper in which he planned to describe how density currents carved out these massive structures.

Figure 5. Bruce C. Heezen linked turbidity currents with the 1929 breaking of submarine cables off the Grand Banks, and helped develop the concept of geostrophic or contour currents.

Figure 6. A.H. Bouma, elected IAS Treasurer at the 6th International Sedimentological Congress in 1963. Bouma developed a model that describes the vertical sequence of turbidity deposits and became known as Bouma Sequence.

Figure 7. Mme. Yvonne Gubler (IAS President 1975-78) (center) on receipt of Honorary Membership at IAS at the Convention in Jerusalem. Mrs. Sue Friedman (on left) presents flowers for Mme. Gubler. Gerald Friedman (on right) presents plaque.

Figure 8. First page of IAS 1959 symposium. With its French designation, and the names of the first president, vice president, and general secretary treasurer of the association. The first IAS article is by the first IAS president F.P. Shepard; note abstract of article.

Figure 9. German Müller addressing IAS members at the 1971 International Sedimentological Congress in Heidelberg.

Figure 10. Gerard V. Middleton, recipient of honorary IAS membership at the 1986 International Sedimentological Congress in Australia.

Figure 11. Harold Reading (on left), president of IAS (1986-1990), chair, publications committee, and General Secretary, with the author (on the right), and a colleague from Oxford (in middle). Students and other IAS members are in the background.

Figure 12. IAS Sorby Medalist R.A. Bagnold (left) and Vice President H. Fuechtbauer (right) at the 9th International Sedimentological Congress (1978) in Jerusalem.

Figure 13. Francis J. Pettijohn, recipient of the Sorby Medal at the 11th International Sedimentological Congress (1982) in Canada.

Figure 14. Fellow students of carbonates and evaporites, and cohorts at Chelsea Polytechnic – Chelsea College, University of London, England in the mid - 1950's. From right to left Robin G.C. Bathurst, father of the Bathurst carbonate conferences in the United Kingdom, Gerald M. Friedman, editor of "Carbonates and Evaporites" and IAS Past President, and Douglas J. Shearman, father of Persian Gulf evaporite studies, and dolomite/dedolomite research. Photographed at Bathurst Conference, University of Cambridge, United Kingdom, 1999.

Figure 15. Robert L. Folk, recipient of the Sorby Medal at the 13th International Sedimentological Congress (1990) in Nottingham, England.

Figure 16. John R.L. Allen, recipient of the Sorby Medal at the 14th International Sedimentological Congress (1994) in Recife, Brazil.

Figure 17. Robert N. Ginsburg, recipient of the Sorby Medal at the 15th International Sedimentological Congress (1998) in Alicante, Spain.

Figure 18. Gerald M. Friedman, IAS Past President speaking at 12th International Sedimentological Congress (1986) in Canberra, Australia.

Figure 19. Kenneth Jingwha Hsü, recipient of Honorary IAS Membership at the 15th International Sedimentological Congress (1998) in Alicante, Spain.