

## NEWS

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### CLAYS AND CLAY MINERALS

Two procedural changes are of interest to contributors and subscribers.

The first change should already be apparent. With issue No. 1 of Vol. 21, Pergamon Press started shipping *Clays and Clay Minerals* to the United States by air freight. The copies are grouped by Zip Code and air-freighted to four U.S. distribution centers located in various wide-spread parts of the country. From these central points the copies are sent by surface mail to the subscribers. This procedure should reduce substantially the elapsed time between publication and receipt by the subscriber.

The second item concerns the mechanism of assembling a particular issue. At present the Editor receives manuscripts, enters these in the refereeing and revision process, and eventually compiles sufficient revised, edited papers for a particular issue. Pergamon will place the manuscript into the typesetting operation and promptly send proofs to the author and to the Editor, with the usual admonition for return with minimum delay. A given issue will then be assembled from the corrected proofs on hand at the time of production deadline for that issue. Thus, undue delay by an author in return of proofs may in turn delay publication until a later number. Those papers on hand at deadline will usually be ordered in a sequence governed by the date that the manuscript was first received by the Editor, unless sufficient reason exists for temporarily following some other order. Correspondence between Pergamon and the Editor, as deadline approaches, will permit continuation of *Clays and Clay Minerals at a glance* and the *News* feature.

With issue No. 3, of Vol. 21 this procedure will be changed somewhat. Manuscripts will be forwarded to the publisher as soon as the reviewing/editing/revision process is complete, with no attempt at that stage to accumulate papers for a particular issue. Pergamon will place the manuscript into the typesetting operation and promptly send proofs to the author and to the Editor, with the usual admonition for return with minimum delay. A given issue will then be assembled from the corrected proofs on hand at the time of production deadline for that issue. Thus, undue delay by an author in return of proofs may in turn delay publication until a later number. Those papers on hand at deadline will usually be ordered in a sequence governed by the date that the manuscript was first received by the Editor, unless sufficient reason exists for temporarily following some other order. Correspondence between Pergamon and the Editor, as deadline approaches, will permit continuation of *Clays and Clay Minerals at a glance* and the *News* feature.

With luck we may even learn to anticipate receipt of a particular issue at a specified time.

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### PRESENTATION OF THE DISTINGUISHED MEMBER AWARD OF THE CLAY MINERALS SOCIETY TO GEORGE W. BRINDLEY

Thomas F. Bates, Department of Geosciences, The Pennsylvania State University

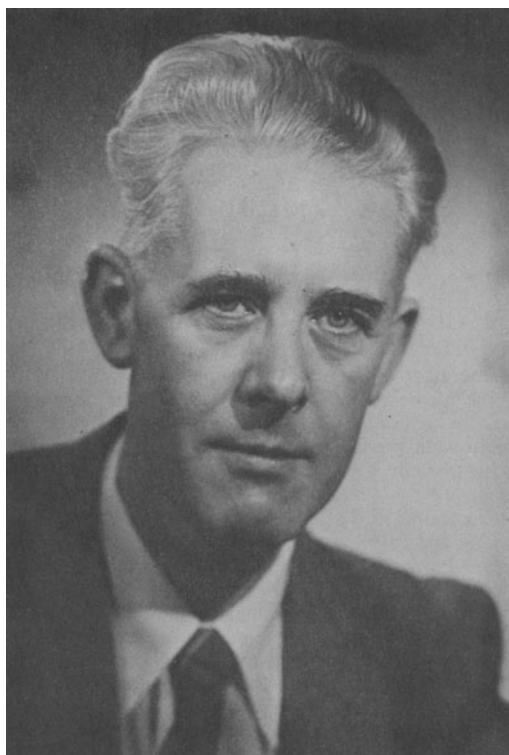
For the next few minutes put yourself in a binary mode mood: in other words, *think two*. This shouldn't be *too* hard to do, for often our world seems to rotate around twosomes, *to* wit: Where would Adam have been without Eve? And the animals boarded the ark, two by two. And famous twosomes fight and/or love their way through the history of mankind. As they say, "it takes two to tango". But more seriously, and perhaps scientifically, it comes as somewhat of a shock in this complicated world to realize that the most complex and useful of machines, the computer, operates on a simple 0, 1 binary system; as indeed does your mind in the sense that if I am getting *all* of your attention, then at this particular instant your world consists of "me" and "thee" and the rest is "environment" (or noise, if you prefer to be more technical). Furthermore, without "thee", the presence of me, by myself, standing here alone, unheard, unobserved unrecorded would be as naught. (You may want to contemplate this philosophically at some other time). For now let me get to the specific binary system that is really the subject of this oration. For our present purpose, thee and me join forces to represent, for here and now, one unit of our binary: the Clay Minerals Society. As that Society we interface, in our binary mode mood, with the other unit, George W. Brindley, this year's recipient of the Society's Distinguished Member Award. In attaining this distinction, George has reached another high plateau in his climb toward summits that are always out ahead. The record of heights attained over just the past two and a half years has been somewhat staggering:

Penn State bestowed upon him an outstanding teaching award in May 1969;

The University of Louvain, Belgium made him Doctor of Science, *honoris causa*, the following December;

The Ceramic Association of Brazil granted him Honorary Membership in March, 1970;

And in November of that year the Mineralogical Society of America gave him its highest honor, the Roebling Medal; Not to be outdone the Mineralogical Society of Great Britain granted him honorary membership last January, an honor restricted to not more than 15 persons residing outside of Great Britain and Ireland.



GEORGE W. BRINDLEY

And now, we of the Clay Minerals Society, formalize what most of us as individuals have known all along, that George W. Brindley is truly a Distinguished Member of our group.

Indeed, in speaking of George's binary relationships, we can justifiably claim professional preference; for it is fair to state that, to the extent that a man like this has a base in any one professional society, this man is our man. Further, it is evident that many of the attributes that make our Clay Minerals Society unusual are those exemplified and promoted by this man. Time permits me to touch on just three of the binary linkages that relate this man to this society: the interdisciplinary, the interpretive, and the international.

First, our society is interdisciplinary and interinstitutional. One reason I have always been proud of my association with this group is because of the unusually wide diversity of individuals, institutions and disciplines brought together by common interest in clays. Turning to our recipient, I challenge anyone to be more constructively interdisciplinary than he. Starting with classical problems of the physics and crystallography of crystals in the late twenties and early thirties he soon began to concentrate upon the irregularities rather than the regularities of crystal structure. As I pointed out in a previous introduction, it was almost as if "he had said to himself: 'I say, old boy, enough of this perfect crystal stuff, let's get after the sanguinary anomalies!'" and from that day forth, George Brindley, in the best tradition of his fictitious countryman, Sherlock Holmes, has spent his life snooping through the kingdom of reciprocal space; tracking down atomic, molecular and layer lattice deviates; and exposing them to the harsh glare of the academic sun in the scientific tabloids of the day." His magnifying glass has been an X-ray beam probing the labyrinthian interlayer darkness. "My dear Watson" is the graduate student—or indeed the colleague—at his elbow, improving the perspicacity as each clue is explained but rarely achieving the acuity of the master. For the man's success, like Sherlock's, stems not just from his glass and tape measure, not just in his tireless attention to detail, not even in the lifetime of laboratory experience; but rather in his diagnostic intuition to sniff out the lurking presence of an irregularity; and in his superior capacity to put two and two together to make one-fourth. (We're in reciprocal space.)

With such propensities it was inevitable that George would ultimately get his feet stuck in the muddy mess that we know scientifically as clay mineralogy. Consequently, since the late thirties he's been in that bog with the rest of us; but doing much more than most to lead the way out.

It is pointless to attempt to detail before this group even the major topics of his 240-publications, over 150 of which have been published since he came to this country in the early fifties. There is hardly a layer silicate that has escaped his scrutiny; and as if the natural ones weren't bad enough, he has had to boil many of them up with ketones, amines, purines and pyrimidines, fatty acids and monohydric alcohols to make them more interesting. His works over the years have ranged the gamut of metallurgy, ceramics, solid state science, mineralogy and organic chemistry—all, of course,

with a crystallographic twist. Their importance is perhaps best attested by the fact that the *Citation Index* for 1971 lists 98 articles by other authors published in that one year that refer to Brindley's papers.

Thus, our first binary linkage, joining this man and our Clay Minerals Society through common interdisciplinary attributes, is a strong one.

Secondly, our Society, like most, exists to foster communication and interpretation. But our Society differs from many others in that it encompasses in its scope and representation all components of the spectrum from theoretical to applied. We all know how much of the success of this particular organization has been the result, right from the start, of the interdependence of the scholar and the practitioner, the crystallographer and the engineer. We spend much of our time at these meetings interpreting, for mutual benefit, the possible significance of scientific findings to the solution of practical problems, and on the contrary, the challenges that the problems of industry pose for our science. When it comes to George Brindley, few of us who have attended these meetings or read his papers would contest his ability to hold his ground with the best of theorists. But George is also eminently practical. (In fact we can perhaps bestow the ultimate verbal accolade by saying: "This man is *really* an operator".) No matter how technical the subject, he can put it across in simple terms. Furthermore he can readily diagnose an industrial problem, for example, and effectively relate the practical to the theoretical. And his practical streak shows up in a myriad of other ways. As a member of the Council of this Society for eight years and its Vice President, then President in 1969–1970, his ideas, advice and administration have been sound and solid. Having just inspired, organized and helped run a U.S.-Japan seminar on Clay Organics he is now working with Italian colleagues to set one up on "*The Application of Clay Mineralogy to Ceramic Processes*". Finally if ability to get oneself around the world is any measure, this man is one of the most artfully practical that I know.

This leads me to the last binary linkage that time permits me to discuss, the international. There is no nationalism in clay minerals and our Society has recognized this from the start. Much support money for these meetings, has, over years, provided for the attendance of experts from abroad. Our relations with the International Society (AIPEA) are strong.

One of the major services our recipient has performed on behalf of our Society has been to serve as an ambassador without peer, for clay mineralogy as it is practiced in America and represented at these meetings. Brazil, Taiwan, Korea, Japan, England, France, Italy, Spain—the list is long, his relations strong. In these countries he has worked and published with our colleagues there, lectured in their universities, trained some of their students in his laboratories and visited and counseled with their clay industries (and I might add following Madrid, been received by their royalty). Furthermore, he brings back to those of us here and the institutions we represent the forenotice and wise assessment of clay mineral developments on the international scene. His success is due to attributes we have already talked about but also because of the simple fact that he enjoys his work, enjoys people and has an eye for the interesting and unusual, whether in work or people. Perhaps it was best summarized by our esteemed Belgian colleague, J. J. Fripiat, when, on the occasion of Brindley's receipt of the honorary Doctor of Science degree from Louvain, he said: "Cette présentation serait incomplète si l'on passait sous silence les qualités humaines du Professeur Brindley. Les nombreuses personnes rassemblées dans cette salle qui ont eu le privilège de travailler avec lui ainsi que tous ceux qui l'ont approché connaissent sa profonde courtoisie, son intégrité intellectuelle et sa grande simplicité et son sens profond de l'humour."

Mr. President, it is my pleasure and honor to present for the Distinguished Member Award of the Clay Minerals Society, Dr. George W. Brindley.

#### ANNUAL SUSTAINING MEMBERS OF THE CLAY MINERALS SOCIETY

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Amoco Production Company  
 Anglo-American Clays Corporation  
 Babcock and Wilcox Company  
 Continental Oil Company  
 Freeport Kaolin Company  
 General Refractories Company  
 Georgia Kaolin Company  
 A. P. Green Refractories Company  
 Halliburton Company  
 J. M. Huber Corporation, Clay Division  
 Magco Operations, Dresser Industries  
 Marathon Oil Company  
 Thiele Kaolin Company  
 Union Oil Company of California  
 United Sierra Division, Cyprus Mines Corporation