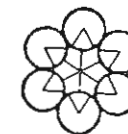


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ASSOCIATION INTERNATIONALE POUR L'ETUDE DES ARGILES - INTERNATIONAL
ASSOCIATION FOR THE STUDY OF CLAYS -- INTERNATIONALE VEREINIGUNG ZUM
STUDIUM DER TONE - МЕЖДУНАРОДНАЯ АССОЦИАЦИЯ ПО ИЗУЧЕНИЮ ГЛИН

newsletter

February, 1986, n° 22

Secr. Gen. A.J. Herbillon, Croix du Sud, 1 - B.1348 Louvain-la-Neuve, Belgium

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PRESIDENT'S PODIUM

Dear Clay Scientists, dear Colleagues,

Like my predecessors in the AIPEA presidential post, I, too was asked to write the first page for the AIPEA Newsletter, this time for the year 1986. It is a good custom in any science that scientists know each other chiefly by their research work. I think that most of you are acquainted with my papers on petrology and geochemistry of clay matter and maybe also with clay conference volumes I edited, just as I am familiar with most of your research production. I feel, however, that this New Year's letter is a good chance to tell you something basic about my descent, about the background of the man whom many of you elected in Denver the President of AIPEA for 1985-1989.

My beloved city Prague is sometimes called the Heart of Europe, a continent relatively small compared to Asia, America or Africa. The people on this small continent have always been relatively close to each other, especially so in once existing large empires and virtually non-existent frontiers. My great-grandfather Giuseppe Conta came to the Czech Lands in 1847 from Lombardy, Italy. My important ancestor on my maternal side, Wilhelm Sandholzer, came early in the 18th century from Potsdam in Northern Germany, as a young gardener to help build a new castle park of one count in Lysá, 40 km east of Prague. Few wonder that both these young men married beautiful Czech girls, my dear mother's and father's ancestors, attractive and intelligent women, and accepted this country for their own.

This is to tell you only that by electing a President based in Prague, you have chosen not only a Czech scientist who warmly loves his country but also an European devoted to our modern, all-embracing, interdisciplinary science and the promotion of contacts and better understanding among scientists of all nations of all continents. AIPEA is a leading international association of clay scientists that perfectly fulfills this role. I am happy to be able to serve our Association's noble objectives.

1985 was the year of the 8th International Clay Conference of AIPEA held in Denver, Colorado, U.S.A., between July 28 and August 2 under the auspices of the Clay Minerals Society of U.S.A.. Our colleagues of the US Geological Survey put a lot of energy into the organization of this very successful meeting of argillologists from 37 countries of all continents. Their technical program consisted of three plenary lectures, 170 oral lectures and 72 posters which represented a total of 242 contributions. Three invited plenary lectures, 45 minutes each, were devoted to two carefully chosen topics calling for extensive basic and strategic research.

They were: (1) J.J. Fripiat (Belgium, France): Internal surfaces of clays and constrained chemical reactions. (2) P.F. Low (USA): The Clay-water interface. (3) V.A. Drits (USSR): Mixed-layer minerals: Diffraction methods of their study and structural peculiarities. It was reiterated that nowadays our present knowledge of the interior of the sheet silicates, occurring mostly as minute crystals and their fragments of the size of colloidal particles or viruses, is much better understood than their internal and external surface, despite of its great influence on many properties of clay minerals. Investigation and understanding of mixed-layer clay minerals still is one of the most difficult chapters of clay science. Many highly interesting 15-minute papers and posters with a wealth of original data and observations were submitted during the AIPEA Conference in Denver. Some of us certainly felt that we have entered into an era of the usage of very effective and costly instruments among which the high-resolution electron microscope occupies one of the most important places. The program of the 8th AIPEA Conference was rich also in other aspects which are discussed in greater detail elsewhere in this issue of Newsletter.

In my new position I was also invited as an official guest to the All-Union Clay Meeting held on September 12-14, 1985 in Alma-Ata, Kazakhstan, USSR. I was very impressed by the warm hospitality, the remarkable nature of the Ilyinsky Ala Tau Nts, and the broad scientific program of the meeting where Dr. Drits gave a thorough survey also on our 8th AIPEA International Clay Conference in Denver.

There is plenty of time before clay scientists from over the world meet at the 6th Euroclay Meeting in Seville, Spain, in September 1987 and at the 9th AIPEA International Clay Conference in Strasbourg, France, in July 1989, but many of us already think of these two important international meetings and which of our best results should be submitted there.

May I wish you and your families a very successful and happy New Year.

Jiri Konta

COUNCIL AFFAIRS

Council meetings in U.S.A.

Two meetings of the AIPEA Council took place during the 8th International Clay Conference in Denver. The major decisions arising from the first meeting have been submitted to the General Assembly (see below the minutes of its business meeting).

The agenda of the second meeting was as follows : 1) Opening and welcome; 2) Appointment of an Editor-in-Chief; 3) 9th Internatio-

nal Clay Conference, Strasbourg, 1989; 4) Appointment of Auditors; 5) Session on Teaching Clay Science; 6) Appointment of the W.F. Bradley Award Selection Committee; 7) Next Council Meeting and 8) Varia.

The next Council Meeting will take place during the Euroclay Conference to be held in Sevilla (Spain) in September 1987.

AIPEA Membership Directory

A new membership directory will be prepared in 1986. All members are urged to pay their dues for past and present years and to renew membership in AIPEA for 1986.

The well being of AIPEA relies on the participation of the members and it is very costly to send many reminders. To improve our efficiency, can we suggest to send a money-order covering the fees for 3 to 5 years.

Money orders are to be sent to Dr. C. De Kimpe, Agriculture Canada, 2560 Bd Hochelagâ, Ste Foy, Québec G1V 2J3, Canada.

International Clay Conference 1993

During the last meeting in Denver, Council noticed that, so far, no firm offer to host this Conference has been received. Any suggestions in this respect are therefore welcome. For firm offers, please refer to article 28 of the AIPEA Statutes.

Teaching Clay Mineralogy

During the same meeting, Council decided to set aside a modest amount of money to encourage the development of any type of teaching aids (visuals, computer software etc..) that could be distributed to teachers on a cost basis by AIPEA. Any person wishing to apply for a minigrant for this purpose, should get in touch with Prof. J.B. Dixon, Soil and Crop Department, Texas A. and M. University, College Station, Texas 77843-2474, U.S.A..

REPORT OF THE GENERAL ASSEMBLY OF AIPEA
Denver (Colorado), Wednesday, July 31th 1985

1. Opening and Welcome

The President, Prof. L. Heller-Kallai opened the meeting at 10.00 a.m. in the Grand Ballroom of the Marriott Southeast Hotel.

2. Minutes of the Business Meeting of the General Assembly - Pavia September 12th 1981

These Minutes, as published in the AIPEA Newsletter Nr 18, were taken as read. There were no comments.

3. President's report

In her report the President reviewed the principal activities of Council since the 1981 International Clay Conference and stressed the following items.

a) The relationship of AIPEA with other International Associations such as I.U.G.S. (International Union of Geological Sciences) and I.M.A. (International Mineralogical Associations).

b) The necessity of amending some details in the regulations for the Bradley Award. She reported that Council decided to delegate the preparation of the amended version of the regulations to Dr Mackenzie, the Secretary General and herself. The modifications will not alter either the philosophy or the objective of the Award.

4. Secretary General's report

Prof. A. Herbillon read the report presented below.

a) AIPEA Newsletter 18-21

During the period under review, a Newsletter was published annually in February. The content of these Newsletter was generally similar to the previous ones with contributions from regional or national Clay Groups forming the major part of the booklets. In this respect it is worth noting that during the 1981-1985 period AIPEA Liaisons Officers from 21 different countries or regions took this opportunity to communicate with our international community.

To the Newsletter nr 18 published in February 1982, three appendices were attached :

- 1) the list of AIPEA members;
- 2) the new AIPEA Statutes (as approved during the 1981 International Clay Conference);
- 3) a leaflet summarizing the recommendation of the AIPEA ad hoc Committee concerning the nomenclature for regular interstratifications.

All published Newsletters also contained a President's Podium and reports on the different international meetings held during the year under review.

b) Membership

The number of members increased steadily during the period 81-85. On July 25th, 878 individual members and 39 Institutional members were affiliated. The individual membership has increased by

about 200 over the past four years. This favourable situation is certainly linked to the fact that national societies and their Liaison Officers are most helpful in recruiting new members.

AIPEA now has individual members in 48 different countries. The list of numbers of members in each country is as follows :

1) Countries having at least five AIPEA individual members :

(1) USA	241	(12) Israel	15
(2) France	157	(13) Yugoslavia	10
(3) Italy	89	(14) Switzerland	9
(4) Belgium	58	(15) Brazil	7
(5) Japan	40	(16) Czechoslovakia	6
(6) Spain	35	(17) New Zealand	6
(7) Germany	33	(18) Norway	6
(8) U.K.	28	(19) Poland	6
(9) Canada	26	(20) South Africa	6
(10) Australia	19	(21) Austria	5
(11) Netherlands	17	(22) Sweden	5

2) Countries with less than 5 individual members :

(23) Argentina	(37) Jamaica
(24) Bulgaria	(38) Jordan
(25) Denmark	(39) Korea
(27) Egypt	(40) Libya
(28) Finland	(41) Mexico
(29) Germany	(42) Nigeria
(30) Greece	(43) Rumania
(31) Hungary	(44) Saudi Arabia
(32) Iceland	(45) Taiwan
(33) India	(46) Turkey
(34) Iran	(47) U.S.S.R.
(35) Iraq	(48) Venezuela
(36) Ireland	

c) Affiliated Societies

During the same period, eleven national or regional Clay Groups took the opportunity offered by Article 3b of the revised AIPEA Statutes to apply for the Status of AIPEA Affiliated Society.

The present list of Societies whose affiliation was accepted by Council (with the year in which their affiliation was accepted, in brackets) is as follows :

- Clay Minerals Group of the Mineralogical Society of Great Britain and Ireland (1982)
- Clay Science Society of Japan (1982)
- Belgian Contact Group on Clays (1982)
- Israel Society for Clay Research (1982)

- Geological Society of China (1982)
- Gruppo Italiano of AIPEA (1983)
- Nordic Clay Group (1983)
- Australian Clay Minerals Society (1983)
- German Clay Groups (FGR) (1984)
- Clay Minerals Society (U.S.A.) (1985)
- Clay Interest Group of MINSA South Africa (1985)

d) W.F. Bradley Award

250 copies of a poster advertising the W.F. Bradley Award were sent to the AIPEA Liaison Officers who distributed them widely in various institutions and laboratories where potential candidates could be found. Similarly, more than 300 copies of the regulations for this Award were distributed.

e) Relations with IUGS

AIPEA is an Association affiliated to IUGS (International Union of Geological Sciences). Reports on AIPEA activities are sent to this Organization annually.

f) Relations with National Clay Groups

Several items in the present report stress the important role played by the AIPEA Liaison Officers to maintain efficient and friendly links between AIPEA and its members throughout the world. As the Secretary General of this association, it is my pleasure to thank all these persons warmly for their constant help during the 1981-1985 period.

There were no comments on this report, which was then adopted.

5. Treasurer's report

Dr H. Kodama presented the following report which had been distributed before the meeting :

Abstract of Income and Expenditure Account for the Period June 1st, 1981 to May 31st, 1985

	INCOME	US \$
Brought forward		15,688
Membership fees		7,485
Proceedings: Back number sales		130
Bank interest		<u>6,337</u>
TOTAL INCOME		29,650

EXPENDITURES

Newsletter, publication and distribution (18, 18 suppl. 19, 20)	3,119
-----------------------------------------------------------------	-------

Statutes and membership list, printing	681	
Travel expenses for the President	754	
Office supplies (address labels, analysis pad, etc.)	256	
Office expenses (postage, bank charge, copying)	150	4,960
EXCESS OF INCOME OVER EXPENDITURE		24,690
TOTAL ASSETS		
Cash in bank		4,863
Travel Fund		12,262
W.F. Bradley Award Fund		4,539
Special Saving Fund		3,026
TOTAL		24,690

There were no comments on the Treasurer's report which was un-animously approved.

6. Editor in Chief's report

Dr. H. van Olphen commented on the philosophy guiding the Editors in their task of publishing the Proceedings of the present conference. He recalled that since the size of the Proceedings is limited, not all the papers presented can be published. Attempt will be made to accomodate papers in each field of our discipline in keeping a balance between the geographic origin of these papers.

7. Report on the informal meeting on "Teaching Clay Mineralogy"

At the request of the President, Prof. J.B. Dixon, who chaired this informal meeting on Tuesday July 30 in the evening, read the following report :

About 40 persons discussed how they teach clay science in various colleges and universities throughout the world. The different types of courses can be grouped into three types :

- 1) courses focussed on engineering and technology;
- 2) general courses for varied students interest and background, mostly in soils departments and;
- 3) basic advanced courses in crystallography and silicate chemistry.

Two reports will be made on the discussions - a general one to be published in the Newsletter and a detailed one to be sent to those who requested it based on the information compiled on forms at the meeting.

The following proposals were made : (1) that AIPEA support,

with some thousands of US \$, the development of new visual aids for teaching clay science for distribution by AIPEA; (2) to organize another meeting on teaching clay science at the next International Conference, where appropriate visuals would be exhibited.

Prof. L. Heller-Kallai thanked Prof. Dixon for his report. She requested the next Council to consider these proposals carefully.

8. 9th International Clay Conference, Strasbourg 1989

The General Assembly gratefully accepted the invitation by the French Clay Group to hold the next Conference in Strasbourg in 1989. On behalf of the French Clay Group, Dr. Pedro warmly thanked the General Assembly for its confidence.

9. Election of New Council

The President reviewed the election procedure as stated in the AIPEA Statutes. She reminded the Assembly that in its proposal Council attempted to select Officers for their personal and professional qualities only, whereas in the nomination of Councillors the geographic distribution of AIPEA members was taken into consideration.

The composition of the New Council, as approved "en bloc" and unanimously by the General Assembly, reads as follows :

President	Professor J. Konta (Czechoslovakia)	
Past President	Professor L. Heller-Kallai (Israel)	
Secretary	Professor A. Herbillon (Belgium)	
Treasurer	Dr. C.R. De Kimpe (Canada)	
Councillors	Dr. J.B. Hayes (U.S.A.)	
	Professor K. Nagasawa (Japan)	second term
	Professor P. de Souza Santos (Brazil)	
	Dr. V.C. Farmer (U.K.)	
	Professor E. Galan Huertos (Spain)	new members
	Professor J.P. Quirk (Australia)	

Two more Councillors have to be appointed by the Organizing Committee of the 9th International Clay Conference. Council also appoints the Editor-in-Chief.

10. Report from the Chairman of the Committee for the Standardization of Preparation Methods (SPT)

At the request of the President, the Secretary General summarized a progress report received from the Chairman of this Committee, Prof. J. Thorez. At the end of 1984, 127 members had manifested their interest in the work of this Committee and had received the sample to be examined. Presently the chairman has 48 answers in hand. He intends to prepare a summary of these answers for publication in the next Newsletters. Further, each participant to

this cooperative program will also receive from Prof. Thorez a more exhaustive evaluation of the work undertaken.

11. Varia

Before the closing of the Business Meeting, the new President, Prof. J. Konta thanked Prof. L. Heller-Kallai warmly and assured the General Assembly of his willingness to serve like all his predecessors.

REPORT ON THE 1985 INTERNATIONAL CLAY CONFERENCE

The 8th International Clay Conference of the Association Internationale pour l'Etude des Argiles (AIPEA) was held in Denver, Colorado, from July 28 through August 2, 1985. The meeting was co-sponsored by the Clay Minerals Society and the U.S. Geological Survey. The Conference incorporated the annual meeting of the Clay Minerals Society. Financial contributions were made by 34 industrial sponsors, and 6 commercial exhibitors, in addition to USGS and CMS. A total of 468 scientists, including about 50 students, plus 66 accompanying members attended; 38 countries were represented. The Denver Marriott/Southeast Hotel supplied excellent facilities and services for the technical and social functions of the Conference.

The official activities of the Conference actually began on July 23 when participants assembled in Great Falls, Montana, for an effective field trip lead by C.G. Whitney and S. Altaner, examining the geology and clay minerals of the Montana Disturbed Belt in and around Glacier National Park. General registration was on Sunday, July 28, as was a successful workshop on Quantitative Mineral Analysis attended by about 100 scientists. The welcoming reception on the evening of July 28 was a gracious function at which previous acquaintances in the international community were renewed by all and new ones made.

The Conference opened formally on July 29 with a plenary session at which welcoming remarks were given by John B. Hayes, General Chairman of the Organizing Committee; Wayne M. Bundy, President of the Clay Minerals Society; and Harry A. Tourtelot, representing the Director of the U.S. Geological Survey. A warm response was given by Lisa Heller-Kallai, President of AIPEA. Dennis Mitchel then presented the newly established AIPEA Presidential Insignia to President Heller-Kallai. These introductory ceremonies were continued by the presentation of the George W. Brindley Lecture by J.J. Fripiat, France, who spoke on "Internal surfaces of clays and constrained chemical reactions". Following this, Philip F. Low, USA, presented an invited plenary lecture on "The clay water interface". The Clay Minerals Society then presented its Distinguished Member Award to Charles E. Weaver. The morning of July 31 was devoted to official functions such as the Annual Meeting of the Clay Minerals Society

and the AIPEA General Assembly. Included, also, was an invited plenary lecture by Victor A. Drits, USSR, on "Mixed-layer minerals: diffraction methods of their study and structural peculiarities".

The technical program consisted of about 240 presentations in oral sessions or poster sessions. Sessions were organized around various topics: catalysts and surface chemistry; Fe-Al oxides and amorphous materials; industrial and environmental aspects of clay minerals; geology and geochemistry, structure and crystal chemistry; genesis, synthesis and thermodynamics; diagenesis; soil mechanics and rheology; mixed-layer clays; soils; and organics on clays. Three oral sessions and one poster session were run concurrently each half day. Sufficient manuscripts were submitted at the Conference to insure a first-rate Proceedings volume, edited by H. van Olphen, L.G. Schultz and F.A. Mumpton, to be published by The Clay Minerals Society.

The program presented a striking array of work in clay science. At one end of the spectrum were descriptions of the distributions of clay minerals in stratigraphic sequence or geographic regions and geologic terranes. At the other, was very sophisticated work in surface chemistry, and in the alteration of clay composition and structure for specific industrial uses. Great interest was shown in the composition and structure of iron-aluminum oxides, for which Mossbauer spectroscopy seems to be a powerful investigative tool. The processes by which smectite becomes increasingly illitized by burial diagenesis or more explicit thermal activity also received a great deal of attention. A number of exceptions to generally understood processes have now been found and the matter does not seem as straightforward as it did just a few years ago. The subject is of great interest because of the thermal history that illite-smectite reactions have the potential of revealing.

The social program was very pleasant and rewarding and led to closer friendships. Accompanying members participated in several local activities, most notable of which was a trip to Colorado Springs, which included a visit to the Air Force Academy, lunch at the famous Broadmoor Resort Hotel, and a tour of the scenic Garden of the Gods. On the afternoon of July 31, the Conference adjourned to Georgetown, one of the nearby historic mining towns of Colorado, where much of the early mining and cultural aspects of Colorado have been preserved. Highlights included a trip on the Georgetown Loop train, one of the local engineering marvels, and an outdoor barbecue with ample refreshments and a country-western band. On Thursday evening, August 1, an elegant banquet and symphony concert were held at the Loretto Center for the Performing Arts. The concert was presented by the Colorado Philharmonic Orchestra under the direction of Maestro Carl Topilow, and featured music by American composers. The Conference closed on August 2 with award ceremonies

conducted by both the Clay Minerals Society and AIPEA. The Bradley Award of AIPEA was presented to Carlos P. Herrero. Commemorative badges of office were then presented to the eleven Past-Presidents of AIPEA and CIPEA, five of whom were in attendance. Lisa Heller-Kallai then transferred the Presidential Insignia to Jiri Konta. A formal farewell luncheon closed the Conference in Denver.

Three successful post-conference field trips were held. J.W. Hosterman, I.E. Odom, and S.H. Patterson conducted a trip dealing with bentonite, coal, and uranium in the Black Hills, South Dakota, and the Powder River Basin, Wyoming. R.B. Hall guided a trip through western Colorado and eastern and central Utah, that gave the participants an opportunity to examine oil shale, mixed-layer clays in shales, tonsteins in coals, and occurrences of fullers earth, bentonite, halloysite, and pyrophyllite- and rectorite-bearing clays. Bruce Bohor led a half-day trip to see clays in the foothills area west of Denver, with special emphasis on the valuable kaolins that have long been the base for a ceramics industry in Denver. The Conference also published a field-trip guidebook on clay related to petroleum production in the Los Angeles Basin, California, and clays and zeolites from Los Angeles to Las Vegas, Nevada, although the trip was not sufficiently subscribed to be conducted. The guidebook was prepared by A.J. Gude, 3rd, and M.G. Reed.

Members of the Organizing Committee were: P.D. Blackmon, treasurer; H.H. Murray, fund raising; R.M. Pollastro, exhibits, poster sessions, workshop; D.R. Pevear, workshop; L.G. Schultz, technical program; M.W. Bodine, facilities; H.A. Tourtelot, field trips; C.A. Watkins, social program; J.B. Hayes, general chairman. The Committee was ably assisted by Western Experience, Ltd., a professional convention management firm, Lois Elms, President.

The Organizing Committee

THE W.F. BRADLEY AWARD

As stated in the minutes of the General Assembly, it was felt necessary to modify some details in the regulations for the Bradley Award. The new version of these regulations is presented herebelow.

1. The object of this award shall be to offer financial assistance to enable the recipient to participate in an International Clay Conference for the purpose of presenting his or her paper.
2. Candidates must submit five copies of a paper of approximately 1500 to 2000 words in English, French, German, Russian or Spanish on a topic relevant to one of the sessions at the Conference. Papers written in a language other than English must be accompanied by an extended summary of not less than 1000 words in English. The paper should be written in a format acceptable for

international journals. Assessment will be on scientific content only and the winning entry shall form the substance of a paper to be presented by the successful candidate at the Conference to which the award relates.

3. The award will normally be made at four-yearly intervals and initially will not exceed \$ 1000, although the value will be reviewed from time to time. An award shall not be made if it is considered that candidates do not reach the required standard.
4. Persons eligible for the award shall be under 35 years of age on the closing date for submissions: no restriction is placed on the sex or nationality of the candidate or the nature of his or her employment. Every application must be supported by two members of AIPEA.
5. The selection committee shall consist of the President of AIPEA and four members nominated by the Council of AIPEA. The paper must be in the hands of the selection committee at least six months before the Conference to which it relates.
6. A suitably inscribed certificate will be presented to the successful candidate during a plenary session to be followed by the oral presentation of the winning paper. A portion of the prize may be sent to the successful candidate in advance in the form of a ticket enabling him or her to travel to the Conference.
7. The attached form must be completed and returned with each entry to arrive before the official closing date. This deadline will be strictly observed.
8. The winning paper, the work described in which must be previously unpublished, must be submitted for publication in the Conference Proceedings.

NATIONAL CLAY GROUPS

Belgium

The annual meeting of the "Belgian Contact Group on Clays" took place in May at the University of Liège. The local organizers were Dr. A. Cornélis and Dr. P. Costanzo. The following papers were presented :

- Plenary lecture : R.F. Giese (Buffalo, U.S.A.) :
"The adsorption and desorption of intercalated small polar organic molecules from the inner surface of kaolinite".
- P. Pennetreau (Liège) :
"Nitration des phénols par clayfen"
- J. Vandormael (Liège)
"Nitration d'hydrocarbures insaturés par clayfen"

- R.W. McCrabe (Aberystwyth; Wales, U.K.):
"Clay-catalyzed cyclic anhydride formation"
- P. Costanzo (Liège)
"Ordered DMSO/Halloysite complexes"
- D. Antenucci (Liège)
"Obtention de dérivés de l'hydroxyméthyl-5-furfuraldehyde à partir de divers sucres en présence d'argiles"
- A. Mathy (Liège):
"Reactions de Friedel et Crafts en présence d'argiles, directement sur un hydrocarbure"
- Plenary lecture : J. Adams (Aberystwyth, Wales, U.K.) :
"Diels Alder reactions catalyzed by Montmorillonites"

The meeting was attended by about 50 scientists.

W. Stone

Canada

A. Clays and clay minerals in agriculture, industry and the environment

A second symposium on applied clay science will be held at the Joint Annual Meeting of the Geological and Mineralogical Associations of Canada (GAC/MAC) at Carleton University, Ottawa, Ontario, May 19-21, 1986.

The symposium will cover topics such as :

- agricultural applications: influence of clay minerals on soil structure, plant nutrients, water supply ...
- industrial uses of clays and clay minerals: ceramics, construction materials, pharmaceuticals, fillers, carriers...
- uses of clay and clay minerals as catalysts, filtering media, drilling muds ...
- geotechnical applications
- environmental applications: disposal of radioactive and liquid wastes ...
- clay and clay mineral characterization as related to optimum utilization.

The organizing committee is composed of Drs G.J. Ross, Chairman, C.R. De Kimpe, Profs. J.E. Gillot, M. Huang and G.K. Rutherford.

Anyone interested is invited to contact Dr. G.J. Ross, C.B.R.I. Agriculture Canada, Central Experimental Farm, Ottawa, Ontario, K1A 0C6.

On that occasion, the founding of a "Canadian Clay Group" will be again considered.

B. The XIIth INQUA Congress will take place in Ottawa, Ontario, July 31-August 9, 1987. Different sessions will be organized and certainly several of them will be of interest to clay specialists.

C. De Kimpe

China

A symposium on "Clay Mineral Analysis by X-Ray Diffraction and their Techniques" was held in Changsha, Hunan Province from October 10-15, 1985. About 50 participants from 26 different Institutes and Colleges attended the symposium, 20 papers were presented. The discussion focused on the identification of mixed-layer minerals.

A symposium on "Kaolins and Quartz Sand along the Shoreline of Zhejiang, Fujian, and Guangdong Provinces" was held in Hangzhou, from October 20-25, 1985. It was organized by the Ministry of Geology and Mineral Resources of People's Republic of China.

Zhenh Zhi

Czechoslovakia

In May 1985, the Czechoslovak Group for Clay Mineralogy and Petrology in cooperation with Dr. J. Fiala (Chief of X-ray laboratory of Skoda works in Plzen) prepared one day symposium on "Possibilities of quantitative determination of minerals by X-ray methods". The session was attended by 50 participants from various laboratories of Czechoslovakia.

In October 1985, the seminar of the Group was held with the following program: J. Konta: The 8th International Clay Conference in Denver. L. Cichovsky and J. Rysavka: Sediments of the river deltas in Yemen. J. Sindelar: Clay raw-materials in Cuba. J. Neuzil : Deposits of hydrothermal kaolins in Mexico.

Both meetings took place at the Department of Petrology, Charles University, Albertov 6, Praha 2.

Every month the Prague's group of the Organizing Committee of the 10th Conference on Clay Mineralogy and Petrology have met. The jubilee Czechoslovak Clay Conference will be held in August, 26-29, 1986, in Ostrava, which is the fourth biggest city in Czechoslovakia and is called the "steel heart" of Czechoslovakia for its well developed metallurgical, machinery and chemical industry and huge deposits of black coal. Till the end of September 1985, the organizers received 162 application forms, among them 71 from foreign countries. Besides two and a half day of lecture sessions and two excursions, the local group of Organizing Committee have prepared a very attractive entertainment program in the area of the Mining University of Ostrava. The Conference fee will not exceed 70 US \$ which will cover 4 nights in student hostel, attendance in the

scientific and excursion program, break refreshments, social events and all relevant documentation including one copy of Proceeding which will be published after the Conference.

The Organizing Committee of the 10th Czechoslovak Clay Conference is working in the following composition:

Chairman and Editor	Prof. Dr. J. Konta
Secretary	Dr. J. Sindelar
Local Chairman in Ostrava	Prof. Ing. M. Dopita
Local Secretary in Ostrava	Ing. J. Kralik
Committee Members	Ing. Z. Fojtik
	Ing. Z. Klika
	Dr. J. Krajicek
	Ing. P. Martinec
	Dr. K. Melka
	Ing. J. Policky
	Dr. V. Pucalka
	Ing. V. Slivka
	Dr. Z. Weiss

In the course of 1985 the Proceedings of the Ninth Conference on Clay Mineralogy and Petrology in Zvolen and of the 5th Meeting of the European Clay Groups, were printed by the Publishing House of Charles University in series Geologica.

The first Proceeding contain 30 papers on 240 pages, the second one brings 78 lectures on its 624 pages apart from the word of the Editor J. Konta, also the opening address to the Fifth Meeting of the European Clay Groups by K. Melka and two plenary lectures: 1. J. Konta : Man and Clay, 2. R.C. Mackenzie : Soil clays: Subjects for chemistry, mineralogy or physics ?

Jiri Sindelar

France

At the annual general Meeting of the Group, on November 1984, the following committees were elected to serve for the 3 coming years :

Chairman	J. Mamy
Treasurer-Secretary	M. Terce

Since the 1/1/1985, the address of the Group Secretary is :

Mrs M. Terce
Station de Science du Sol
I.N.R.A., route de Saint-Cyr
78000 Versailles

The "Groupe Français des Argiles" held its spring Meeting 1985 on March 14.

The following papers were presented :

- Applications of NMR to clay studies : J.M. Serratos;
- Applications of Al and Si NMR to clay studies : J.J. Fripiat;
- Interpretation of celadonites and glauconites IR spectra on the OH stretching frequencies bands : G. Besson, L.G. Dainyak, M.V. Sloninskaya, V.A. Dritz, C. Tchoubar;
- Structure of water films and stacking mode of sheets in Na beidellite with one or two water layers : J. Ben Brahim;
- Chemical, photochemical and catalytic properties of Ru carbonyl smectites : D.J. Challai Djouhra, F. Bergaya, H. Van Damme, J.J. Fripiat;
- Colloidal stability of organic matter and clay suspensions : F. Bartoli, R. Philippy;
- Surface energy of Ca montmorillonite: C. Jouany, P. Chassin.

The autumn Meeting 1985 was replaced by the 8th International Clay Conference, Denver.

The spring Meeting of the French Group will be held at the I.F.P. in Reuil-Malmaison, on the 20 March 1986.

The topic is "Clays and Oil".

Offers of papers should be forwarded as soon as possible to the Group Secretary.

M. Terce

German Democratic Republic

The spring Meeting of the Group "Clay Minerals and Phase Analysis" of the GDR Society of Geological Sciences, held on May 14th, 1985 in Berlin, was devoted to "Structure and Diagnosis of 1:1 Phyllosilicates". There were about 40 participants and 6 papers were read.

A further activity of the group is its work on reference samples, so far comprising 3 kaolins and 2 clays of different composition, for grain size, mineral, and chemical analysis as well as investigations of selected physical and technological properties.

Manfred Störr

Great Britain and Ireland

A joint meeting with the Engineering Group of the Geological Society was held on March 12th, 1985 in Burlington House, London on the theme "Geotechnical Properties of Clays". Professor J.E. Gillot (University of Calgary) gave an invited lecture on "Soil clay related problems in engineering geology in North America" and eight other papers were presented. Over one hundred attended.

A conference organized jointly by the Clay Minerals Group and

the Petroleum Exploration Society of Great Britain attracted about 130 delegates to the Department of Engineering, University of Cambridge on 2-4 April, 1985. The theme was "Features and Problems of Mineral Diagenesis within Hydrocarbon Reservoirs". Twenty-two papers covering many aspects of reservoir diagenesis were read by authors from several European countries. A special issue of Clay Minerals, financed entirely by donations from the oil industry, will be devoted to publication of some of these papers in 1986.

The Autumn Meeting of the Group was held at the Royal Entomological Society, London on 8th November, 1985 on the theme "Particle Movement in Rocks and Soils". Two invited lectures were given, the first by Dr. P. Bullock (Soil Survey of England and Wales) on "Translocation of Particles in Soils", and the second by Professor K.J. Ives (University College London) on "Filtration of Clay Suspensions through Sand". Five other papers were presented and about fifty attended.

At the Annual General Meeting following the Autumn Meeting, the following committee was elected for the next year :

Chairman	Dr. C.V. Jeans
Secretary	Dr. D.C. Bain
Treasurer	Dr. P.J. Loveland
Principal Editor	Dr. D.J. Morgan
Committee Members	Dr. P.L. Hall
	Dr. D.A. Jenkins
	Mr. R.J. Merriman
	Miss N. Pallatt
	Dr. M.J. Pearson
	Dr. K. Pye

Future Meetings

Spring 1986

A residential meeting will be held at the University College of North Wales, Bangor on 25th March, 1986 on the theme "Clay Minerals and Biological Processes". Invited lectures will be given by Dr. Cairns-Smith and Professor Berthelin and five other papers will be presented. An associated field trip will be held on 24th March and further details can be obtained from Dr. D.A. Jenkins, University College of North Wales, Department of Biochemistry and Soil Science, Bangor LL57 2VW.

Autumn 1986

The Group's Autumn Meeting will be held in November in the Meeting Room of the Royal Entomological Society, 41 Queen's Gate, London. There will be no special theme and further details will be available later in the year from the Group Secretary - Dr. D.C. Bain, Department of Mineral Soils, The Macaulay Institute for Soil Research, Aberdeen AB9 2QJ.

D.C. Bain

Hungary

During the sessions of the Section for Clay Mineralogy of the Hungarian Geological Society the following lectures were presented:

February 4

Stefanovits, P., Dombovari, L., Konya, K.: Clay mineral map of soils of Hungary.

Toth, M., Viczian, I.: Information on activity related to clay mineralogy at the 27th International Geological Congress, 1984, Moscow.

March 4

Viczian, I.: Information on the Clay Meeting held at Greifswald, GDR, 1984.

Bidlo, G.: Investigations on decomposition of clay minerals.

September 16

Redler, L., Migali, B.: X-ray diffraction phase analysis in the Research Institute for Silicate Industry, Budapest.

October 7

Csaki-Tombacz, E.: Clay mineral - humate interactions.

Two one-day meetings were held in Budapest :

April 1

"Methods of X-ray diffraction phase analysis of samples containing clay minerals".

10 contributions were presented on that meeting dealing with the following subjects :

- general questions : Nemezc, E., Vassanyi, I.
- applications in soil mineralogy: Hange, F., Beyer, H., Nagy, Z., Kalman, A.
- applications in oil industry: Tasnadi, N.
- high temperature X-ray cameras : Sabo, S.
- quantitative phase analysis by X-ray diffraction: Sasvari, J., Toth, M.
- mixed-layer clay minerals: Szegedi, A., Viczian, I.
- amorphous materials: Rischak, G.

November 4

"New methods in the investigations of clay minerals"

The meeting was introduced by the lecture of Prof. M. Störr (Greifswald, GDR): The development of up to date investigation methods in clay mineralogy. Ten other lectures reviewed recent developments in the following fields of investigation :

- combination of thermal analysis and mass spectrometry :

Gabor, P., Pöpl, L., Székely, T., Till, F., Szabo, P., Nemezc, E., Szöör, Gy.

- "Derivatograph-C", a new microcomputer controlled thermoanalytical apparatus : Paulik, F.
- IR spectroscopic investigations on oriented preparates: Hlavay, J., Vassanyi, I., Csikos-Hartyanyi, Zs, Szabo, S.
- Continuous registration of dehydroxylation: Kristof, J., Vassanyi, I., Nemezc, E., Inczedy, J., Szabo, S., Csikos-Hartyanyi, Zs.
- Measurement of wetting and swelling heat: Dékany, I.
- ICP spectrometry: Fodor, P.

On the meeting of October 7, 1985 a new committee of the Section for Clay Mineralogy was elected to serve for the next 3 years:

Chairman : E. Nemezc, Veszprém University.
Secretary : M. Földvari, Hung. Geol. Institute, Budapest.

On October 31, 1985 a new Working Group for Soil Mineralogy was formed within the frames of the Hungarian Society for Soil Science. During its first session, the following lecture was presented :

Bidlo, G.: Amorphization of skeletal minerals.

The Chairman of the new Working Group is L. Gerei, Inst. of Geogr., Hung. Ac. Sci., Budapest, the Secretary is G. Szendrei, Museum of Natural History, Budapest.

Istvan Viczian

India

A National Symposium on "Mineralogy in Soil Science and Engineering" was held during December 3-4, 1984 at National Academy of Agricultural Research Management, Hyderabad under the joint auspices of the Clay Minerals Society of India and the Department of Science and Technology, Government of India during the annual convention of the Clay Minerals Society of India. The Symposium was attended by about 75 delegates from different Universities and Research Institutes in India, who have presented scientific papers in three technical sessions. The details of the sessions are as follows:

Session 1 - Mineralogy

- I. Genesis and transformation of minerals in associated red and black soils developed on closepet granite in tropical India - S.K. Ghabru and S.K. Ghosh, Nuclear Research Laboratory, IARI, New Delhi.
- II. Clay mineralogy of the semi-arid soils of southern Haryana - V.P. Goyal, V.N. Garalapuri and Mahendra Sing, Department of Soils, Haryana Agricultural University, Hissar.

- III. Distribution of clay minerals in the modern sediments of various sub-environments of the Krishna delta - P. Bhanu Murthy, B. Krishna Rao and M. Poornachandra Rao, Department of Geology, Andhra University, Waltair.
- IV. The nature, properties and distribution of amorphous ferri-aluminosilicates in two pedons from Darjeeling Himalayan Region, West Bengal - S.S. Sahu and S.K. Patra, Department of Agriculture Chemistry & Soil Science, S.C.K.V.V., Kalyani (West Bengal).
- V. Mineralogy of some soils from reddish brown sandy plain of arid Rajasthan - J.S. Choudhari, R.P. Dhir and S.K. Ghosh, Division of Soils, CAZRI, Jodhpur.
- VI. Clay illuviation in sodic soils of north western part of the Indo-Gangetic alluvial plain, D.K. Pal and G.P. Bhargava, Division of Pedology, NBSS & LUP, Nagpur.
- VII. Clay mineralogy of two pelosols of south-west Germany, Y. Nagarajarao, Division of Agricultural Physics, IARI, New Delhi.
- VIII. The nature of soil kaolites of southern India - T.V. Rao, and G.S.R. Krishna Murti, Division of Agriculture Physics, IARI, New Delhi.

Session 2 - Sorption/exchange phenomena

- I. Thermodynamics of Pb (II) exchange with Na, Ca(II) and Mg(II) On illite clay - Samiullah Khan and N. Nazar Khan, Chemistry section, Z.H. College of Engineering & Technology, Aligarh Muslim University, Aligarh.
- II. Sorption of zinc on kaolinite and kaolinitic soil clays - T. G. Sastry and Deopal, Division of Soil Science and Agricultural Chemistry, IARI, New Delhi.
- III. Sorption of isoproturon and methabenzthiazuron on amorphous alumino-silica gels - M.V.R. Sessa Sai and G.S.R. Krishna Murti, Division of Agricultural Physics, IARI, New Delhi.
- IV. Distribution of potassium reserves in some alluvial soils of north-western India and their significance in potassium nutrition of crops - R.K. Maheshwari and G.S. Sakhou. Potash Research of India, Gurgan.
- V. Adsorption of metoxuron on homoionic montmorillonite - Saroja Raman and P. Chandrasekhara Rao, Andhra Pradesh Agriculture University, Hyderabad.
- VI. Zinc adsorption isotherms for soil clays - R. Krishnasamy, K. K. Krishnamoorthy and T.S. Manickam, Department of Soil Science and Agriculture Chemistry, Tamil Nadu Agriculture University, Coimbatore.

Session 3 - Properties of clays

- I. Bioliths in some soils of India - S.K. Ghosh, T. Bhattacharya and Namprakash, Nuclear Research Laboratory, IARI, New Delhi.
- II. Water dispersible clay in relation to irrigation water quality, soil ESP and phosphate application - M.B. Sen Gupta, Division of Soil Science & Agriculture Chemistry, IARI, New Delhi.
- III. Physico-Chemical properties of natural and artificial clay - humus complexes in relation to the soil mineralogy - R.K. Chatterjee and A.R. Srivastava, Division of Agriculture Chemistry, IARI, New Delhi.
- IV. Low frequency dielectric dispersion of water absorbed on clay surfaces - M.C. Jain, Krishan Lal and G.S.R. Krishna Murti, IARI, New Delhi.
- V. DTA Studies on dehydration of some clays and soil minerals - M. Aneesuddin, P.N. Char and P. Basaveswara Rao, RRL, Hyderabad.

The Executive Council of the Clay Minerals Society of India for the year 1984 was :

- President : Prof. S.K. Mukherjee
322 Jodhpur Park
Calcutta - 700 068
- Vice-Presidents : Dr. K.V. Raman (Hyderabad)
Prof. T. Ramamurthy (New Delhi)
- Secretary & Editor : Dr. G.S.R. Krishna Murti
Division of Agricultural Physics
I.A.R.I., New Delhi - 110 012
- Treasurer : Dr. T.V. Rao (New Delhi)
- Joint Secretaries : Dr. S.K. Ghosh
Dr. B.S. Kapoor (New Delhi)
- Members : Dr. P.S. Sidhu (Ludhiana)
Dr. Y.N. Rao (New Delhi)
Dr. D.K. Pal (Nagpur)
Dr. R.P. Dhir (Jodhpur)
Dr. M. Adhikari (Calcutta)
Dr. S.S. Sahu (Kalyani)
Dr. A. Sreedharen (Bangalore)
Dr. V.A.K. Sarma (Bangalore)
Dr. K.V.G.K. Gokhale (Kanpur)
Dr. Dinesh Kumar (Shikohabad)

The Official Publication of the Society "Clay Research" is being published twice in a year. The Volume 3, N° 1 (1984) issue of the Journal was released during the Convention. Research papers on any aspect of Clay Science can be submitted for publication in the

Journal. Detailed information can be obtained from the Editor.

K.V. Raman

Israel

The annual meeting of the Israel Clay Society took place on June 24, 1985 at the Hebrew University of Jerusalem.

The Meeting was organized in collaboration with the Institute of Chemistry and the Department of Inorganic and Analytical Chemistry of the Hebrew University, and the Israel Group for Thermal Analysis, and was attended by over sixty scientists from all the scientific institutes in Israel. It was dedicated to the memory of Dr. W. Bodenheimer, who died ten years ago. Dr. Bodenheimer was one of the founders of the Israel Clay Society and its first president from 1964 to 1967.

A Memorial Lecture was given by Prof. M. Steinberg from the Hebrew University on the subject: "The use of zeolites in the formation of synthetic fuels". Altogether there were fifteen lectures on chemistry, mineralogy, and geology of clays, organo-clay complexes, origin of life and analytical geochemistry.

During the business session a new Council was elected for the next year. Dr. J. Kinsky from the Faculty of Agricultural Engineering at the Technion, Haifa, was elected as the new president of the Israel Clay Society. Mr. Samih A. Mishirky from the Department of Mines, of the Technion, Haifa, was appointed as the new Secretary. Dr. M. Gal from the Institute of Soils and Water at the Volcani Center of Agricultural Science, Bet-Dagan, continues to act as the treasurer of our Society.

Shmuel Yariv

Italy

Report on the activity of the Italian Group of AIPEA

The Council elected for 1985-1989 is :

- President : P. Violante (Istituto Chimica Agraria, Portici-Università Napoli)
- Vice-President : G. Vianelli (Ufficio Cartografia, Regione Emilia-Romagna, Bologna)
- Secretary : A. Pozzuoli (Dipartimento Geofisica e Vulcanologia, Università Napoli)
- Treasurer : E. Arduino (Istituto Chimica Agraria - Università Torino)
- Council Members : G. Bergamaschi (Servizio Chimico Miniere, Roma)
A. Cancelli (Dipartimento Ingegneria Strutturale - Sezione Geotecnica, Politecnico, Milano)
L. Dell'Anna (Dipartimento Geomineralogico, Università Bari)

- O. Ferretti (ENEA - Dipartimento Ambiente, Lerici - La Spezia)
- V. Rizzo (Istituto Ricerca Protezione Idrogeologica - CNR, Cosenza)
- F. Sartori (Istituto Mineralogia-Geologia, Facoltà Agraria, Università Pisa)
- L. Tomadin (Istituto Mineralogia-Petrografia, Università Urbino)
- I. Uras (Istituto Giacimenti Minerari - Facoltà Ingegneria, Università Cagliari)

AIPEA Liaison Officer

F. Veniale (Dipartimento Scienze della Terra - Sezione mineralogia-petrografia, Università Pavia).

A Meeting on "Clay Deposits: Actually and Perspectives" will be organized at the end of September 1986 in Sardinia (probably in Cagliari), with field excursion (1-2 days) after the meeting, concerning kaolin and smectite deposits.

Several distinguished specialists from France, Germany, Spain and United Kingdom will be invited to deliver lectures on advanced methods of micro-analysis of clay particles, and on properties, uses and applications of clay minerals, especially processing for quality improvement.

The chairman of the Organizing Committee is Prof. Ivo Uras.

Fernando Veniale

Japan

Annual Meeting

The 29th annual meeting of the Clay Society of Japan was held from October 28-30, at Okayama University of Science in Okayama.

Two symposia were organized :

- (1) Natural zeolites
 - Occurrence of natural zeolites (A. Iijima)
 - Zeolite as alteration product (K. Nakajima)
 - Crystal growth of natural zeolite-surface microtopography by decoration-SEM method (A. Aoki)
 - Crystal structure and optical property of natural zeolites (M. Akizuki).
- (2) New characterization and utilization of clays
 - Carbonization of clay organic complexes and its use (A. Oya)
 - Metal ion catalysis immobilized in clay interlayers (K. Takagi, Y. Morikawa, T. Ikawa)
 - Reactions of aromatic molecules in the interlayer of metal ion exchanged montmorillonites (Y. Soma, M. Soma, I. Harada)

- EXAFS study on the Cu-montmorillonites and their intercalated compounds with e-Caprolactone (Y. Fukusima, T. Okamoto, S. Inagaki)
- Characterization of natural zeolites and clays by solid state MAS NMR spectroscopy (S. Nakata, S. Asaoka, T. Konndo, H. Takahashi)

In this meeting, in addition, 47 general papers were presented.

Publications

During 1985, the following regular journals of Clay Science Society of Japan were issued.

Mendo Kagaku (Journal of the Clay Society of Japan)

Vol. 25, N° 1. Symposium-Application of Zeolites

- Application of zeolite for the treatment of radioactive waste (T. Kanno)
- Synthesis of molecular sieve zeolites (S. Ueda)
- Application of zeolites to catalysis (T. Yasima)
- Zeolite - a new successful builder for laundry detergents

Vol. 25, N° 2. Symposium-Syntheses of Clays

- Synthesis of allophane and imogolite - reaction between silicic acid and aluminum ions in dilute aqueous solutions (S. Wada)
- Synthesis of kaolinite (S. Tomura)
- Synthesis of trioctahedral smectite (K. Torii)
- Synthesis of interstratified minerals (K. Tomita)

Vol. 25, N° 3. Symposium - Formation of clay minerals under natural conditions and their properties

- Clay minerals produced by weathering and their properties (T. Nisiyama)
- Neoformation and transformation of clay minerals in diagenetic process and their characteristic features (T. Yoshimura)
- Formation of clay minerals by hydrothermal action and their mineralogical properties (H. Shirozu)
- Zoning of authigenic minerals and their genesis (M. Utada)

Clay Science, Vol. 6, N° 4

- Clay mineralogy of some cenozoic sediments and sedimentary rocks in Kakegawa-Omaezaki region, Shizuoka Prefecture, Japan (A.N. Liyanage)
- Origin of the morphology of spherical kaolinite (S. Tomura, Y. Shibasaki, H. Mizutà, I. Sunagawa)
- Infrared spectra of trioctahedral chlorites in relation to chemical composition (H. Shirozu)
- Embryonic halloysites in a paddy soil derived from volcanic ash (K. Wada, H. Yamauchi, Y. Kakuto, S. Wada)
- Infrared spectra of nacrite at room and low temperatures (T. Nisiyama)

M. Sato

Nordic Clay Group

The spring meeting took place in Copenhagen, May 21-22, at the Danish Geological Survey. The program included a visit to the survey's laboratories with special emphasis on clay mineralogical techniques. The following papers were presented :

- Plant available soil water in relation to clay content.
H. Breuning Madsen, University of Copenhagen
- A discussion of clay mineralogical methods.
H. Lindgren, Danish Geological Survey
- Clay mineral developments in Danish podzols.
P. Nørnberg, University of Aarhus
- A survey of clay mineralogy in Danish soils.
Chr. J.W. Koch, Danish Agricultural University
- Diagenesis of Bunter sandstone, Lower Trias, from Denmark.
S. Finne, Danish Geological Survey
- Clay mineralogy of the Fjerritslev formation, Early Jura.
G.K. Federsen, University of Copenhagen
- Lower Paleozoic sediments of Southern Scandinavia: Thermodiagenesis in a natural laboratory.
P. Buchardt, University of Copenhagen
- Clay mineralogy in Tertiary sediments from the North Sea.
O. Bjørslev Nielsen, University of Aarhus.
- Studies of clay mineralogy in recent sediments from the Yellow Sea and northwestern Central Pacific.
Zhang Deya, Danish Institute of Technology

The fall meeting, which was organized by N.A. Shaikh as a special symposium on the theme "Clay Minerals - Modern Society", was held in Uppsala, Sweden, November 20-21, at the Geological Survey of Sweden. The program consisted of four scientific sessions with introductory "state of the art" reviews. The papers presented were as follows :

Session 1. Role of Clay Minerals in Agriculture and the Environment.

- Ivan Rosenqvist, Chairman, State of Art Review
- pH-dependance of sulfate adsorption by clays, in relation to clay-acid rain interaction.
R. Wendelbo, University of Oslo
- Past and current heavy-metal load in sediments of Skagerrak and Kattegatt.
I. Cato, Geological Survey of Sweden
- Smectite formation below stands of 1st, 2nd, and 3rd generation of coniferous forest.
P.A. Melkerud, Swedish University of Agricultural Sciences
- Cation exchange reactions in clay minerals and their influence on deep granitic groundwater composition.
T. Ittner, Chalmers University of Technology, Sweden

Session 2. Role of Clay Minerals in Chemical, Iron and Foundry Industries. Emilio Galan, Chairman, State of Art Review

- Clay in the prehistoric society.
B. Hulthén, University of Lund, Sweden
- Nitrate-reduction capacity in clayey till.
V. Ernstsen, Geological Survey of Denmark
- Bentonite-based isolation of waste products.
R. Pusch, Swedish Geological
- Clay mineralogy of soils developed over Danian chalk.
P. Nørnberg, University of Aarhus, Denmark

Session 3. Role of Clay Minerals in Ceramic and Paper Industries Manfred Störr, Chairman, State of Art Review

- The impact of clay characteristics at modern papermaking.
I. Fineman, Swedish Forest Products Research Laboratory
- China clay for paper filling and coating.
R.E. Brociner, English China Clay International
- Kaolin deposits of Sweden.
N.A. Shaikh, Geological Survey of Sweden
- Some technical aspects on kaolin from the south of Sweden.
E. Mårtensson, State Mining Property Commission, Sweden
- Geotechnical problems in northern Italy.
F. Veniale, University of Pavia

Session 4. Role of Clay Minerals in Petroleum Exploration and Geothermal Energy. Elen Roaldset, Hrefna Kristmannsdóttir, Chairmen, State of Art Review

- Clay minerals stratigraphy of the Triassic-Jurassic Snorrefield North Sea.
H.O. Augedal, Saga Petroleum, Norway.
- Reservoir description: Some applications of sandstone diagenesis.
A. Hurst, Statoil, Norway
- Problems related to clay minerals in hydrocarbon reservoir sands.
N. Gjelsvik, Norsk Hydro, Norway
- Formation water chemistry and stability of diagenetic minerals.
P. Aagaard, University of Oslo
- Swelling behaviour of clays northern North Sea.
H. Augedal, T. Klungsoyr, H. Rueslåtten, Saga Petroleum

The new elected president, H. Kristmannsdottir, National Energy Authority, Iceland, invited the next meeting to be held in Reykjavik, August 18-19, 1986.

Per Aagaard

South Africa

The Clay Interest Group of the Mineralogical Society of South Africa launched in 1985 a programme to characterize clay samples with the aim of providing reference clays. The first two samples

a Ball Clay and a Flint Clay - both used in industry - are homogenised and sent to 13 laboratories throughout southern Africa (12 Republic of South Africa, 1 Zimbabwe), where they will be analysed by various techniques and methods. The XRD analyses will be carried out according to a slightly modified SPT procedure (Thorez, 1984).

During a five day X-ray diffraction course organized jointly by the Mineralogical Association of South Africa and the Crystallographic Society of South Africa, some Clay Interest Group members had the opportunity to meet on 6 November 1985. This day of the course was partly devoted to clay minerals, their preparation prior to XRD analysis and their identification from XRD patterns.

D. Böhmann

South Korea

The Clay Studies Group of Korea has been founded in November 1985. The group consists of 14 members who are working in various fields of clay science. A future schedule of scientific activity will be discussed in January 1986.

Soo Jin Kim

Spain

The annual meeting of the Spanish Clay Society (SEA) took place in Madrid from March 7 to 8th. There were about 50 attendees and the three following lectures were read:

- Geochemistry of Bentonite formation.
Dr. J. Linares
- New Industrial application of Bentonites.
A. Alvarez
- Identification of interstratified minerals by sorption of amines and using Fourier transformed.
Dr. A. Ruiz Amil

The statutes of the Society were modified and the following members of the Executive Council were elected:

- Dr. S. Leguey Jiménez
- Dr. M. Ortega Huertas
- Dr. M. Rodas Gonzalez
- Dr. C. Serna Pereda

C.P. Herrero from the Physicochemistry Mineral Institute of Consejo Superior de Investigaciones Cientificas was awarded with the first W.F. Bradley Award for its work "Monte Carlo simulation and calculation of electrostatic energies in the analysis of Si-Al distribution in Micas."

The Executive Council for the organization of the 6th meeting of the European Clay Group which will take place in Sevilla, Spain,

from September 6 to 10th, 1987 was elected. The announcement of this meeting has been sent to European Clay Mineralogists. For further information please contact:

Prof. E. Galan
Euroclay'87
Dpto de Geologia, Facultad de Quimica
Apartado 553, Universidad de Sevilla
41071 Sevilla, Spain

J.L. Pérez Rodríguez

U.S.S.R.

In 1985 three conferences dealing with clay minerals problems took place in U.S.S.R..

1) The Institute of Oceanology (Ac. Sc. U.S.S.R.) organized an All-Union School on the modern methods of sea-geological studies in Svetlogorsk (near Kaliningrad), 13-18 of May. Prominent specialists presented lectures on the application of X-ray and electron diffraction, electron microscopy and on different spectral methods in the study of fine grained minerals of sea deposits.

2) Under the activity of the All-Union Clay Commission and of the Geological Institute of the Kazakh Ac. Sc. the XIII-th All-Union Clay Conference has taken place in Alma Ata, 12-14 of September. Its main topics were : 1) General problems; 2) Crystal chemistry and structures; 3) Mineralogy; 4) Genesis; 5) Colloid properties and technology; 6) Engineering; 7) Economic significance.

3) The geological faculty of the Leningrad State University has called a conference on the problems of the modern crystallography on the occasion of the 60th anniversary of its department of Crystallography (23-25 of October). Former students and invited lecturers have presented papers including crystal chemistry, crystal structure, polytypism, interstratification, structural defects, identification and quantitative analysis, laboratory and natural formation and transformation of phyllosilicates and clay minerals in particular.

B.B. Zvyagin

VARIA

APPLIED CLAY SCIENCE - An International Journal on the Applications and Technology of Clays and Clay Minerals.

Editors : F.J. Eckhardt, J.E. Gillott and R. Kühnel

This new journal is a medium for scientists, engineers and technologists working in the wide field of clays and clay minerals. It will publish research papers, reviews and short communications in the field of applied clay science in a broad sense. The journal

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Editorial Office APPLIED CLAY SCIENCE
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1000 BX Amsterdam, The Netherlands

CALENDAR OF MEETINGS

1986

- March 16-22 : "Geochemistry of the earth surface and processes of mineral formation"
University of Granada (Spain)
(Dr. R. Rodriguez elemento, CSIC, Jose Gutierrez Abascal, 2 · 28008 Madrid).
- March 20th : Meeting of the french Clay Froup.
Rueil-Malmaison (Mrs M. Terce, INRA, route de St Cyr, 78000 Versailles)
- March 25th : Meeting of the Clay Minerals Group.
University College of North Wales.
"Clay Minerals and Biological Processes"
(Dr. D.A.Jenkins, Department of Biochemistry and Soil Science, Bangor LL57 2VW, U.K.)
- May 19-21 : 2nd Symposium on Applied Clay Science.
Ottawa (Canada)
- August 17-22 : "7th International Zeolite Conference" Tokyo (Japan)
(Prof. Hiro o Tominaga, The University of Tokyo Hongo, Bunkyo-ku, Tokyo 113, Japan).

- August 26-29 : Czechoslovak Clay Conference - Ostrava.
(Dr. J. Sindelar, Charles University, Praha).
- End of September: "Clay deposists : Actuality and perspectives"
Sardinia, Italy.
(Prof. I. Vras, University of Cagliari, Sardinia, Italy).
- September 21-25 : "3rd Symposium on the geology of Libya" Tripoli
(Al. Fatch University, Earth Science Department, p.o. Box 13258, Tripoli, Libya).

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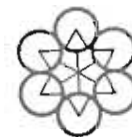
- September 6-10 : "6th Meeting of the European Clay Groups"
Sevilla, Spain.
Prof. E. Galan, Dpt of Geology, Apartado 553,
University of Sevilla, 41071 Sevilla.

NEW BOOK

Robert H.S. Robertson

Fuller's earth. - A history of calcium montmorillonite. 420 p.
Voltura Press (52 Ormonde Road, Hythe, Kent CT 21 6DW, England).
Sterling Pounds 20 (U.K. address) or 25 (overseas addresses).

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